# Appendix C – Modeling

## Attachment 3-1 – Storage and Elevation Results (CalSim II)

***NOTE: Attachment 3-1 is a new attachment that has been added to the DEIR since initial publication, as part of the FEIR process. The additional attachment is not shown in underline for ease of reading.***

The following results of the CalSim II model are included for reservoir storage conditions for the following alternatives:

- Existing Conditions
- Refined Alternative 2b

| Title | Model Parameter | Table Numbers | Figure Numbers |
|---|---|---|---|
| San Luis Reservoir Storage | S11+S12 | 1a-1 | 1a-1 to 1a-18 |
| San Luis Reservoir Elevation | Post-processed | 1b-1 | 1b-1 to 1b-18 |
| SWP San Luis Reservoir Storage | S12 | 1c-1 | 1c-1 to 1c-18 |

Report formats

- Monthly tables comparing two scenarios (exceedance values, long-term average, and average by water year type)
- Monthly exceedance charts (all months) including all scenarios

## Table 1a-1. San Luis Storage (CVP and SWP), End of Month Storage

### Existing

| Statistic | End of Month Storage (TAF) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 712 | 873 | 1,152 | 1,609 | 1,840 | 2,039 | 1,780 | 1,416 | 1,144 | 903 | 631 | 699 |
| 20% | 599 | 734 | 1,065 | 1,375 | 1,637 | 1,930 | 1,724 | 1,284 | 958 | 712 | 515 | 607 |
| 30% | 529 | 654 | 968 | 1,274 | 1,533 | 1,839 | 1,630 | 1,225 | 840 | 653 | 457 | 500 |
| 40% | 485 | 618 | 902 | 1,198 | 1,492 | 1,712 | 1,496 | 1,148 | 810 | 597 | 398 | 449 |
| 50% | 443 | 543 | 850 | 1,103 | 1,402 | 1,644 | 1,424 | 1,108 | 774 | 498 | 349 | 411 |
| 60% | 362 | 463 | 762 | 1,022 | 1,291 | 1,507 | 1,347 | 1,021 | 708 | 469 | 322 | 353 |
| 70% | 314 | 422 | 684 | 959 | 1,222 | 1,378 | 1,221 | 950 | 630 | 438 | 284 | 304 |
| 80% | 255 | 393 | 574 | 884 | 1,124 | 1,306 | 1,173 | 860 | 567 | 398 | 215 | 240 |
| 90% | 213 | 301 | 464 | 776 | 1,041 | 1,266 | 1,103 | 788 | 469 | 309 | 188 | 187 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 473 | 591 | 844 | 1,138 | 1,407 | 1,617 | 1,435 | 1,103 | 796 | 581 | 408 | 446 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 546 | 675 | 896 | 1,223 | 1,521 | 1,790 | 1,576 | 1,207 | 909 | 707 | 564 | 639 |
| Above Normal (15%) | 479 | 599 | 912 | 1,200 | 1,471 | 1,682 | 1,443 | 1,034 | 689 | 482 | 390 | 489 |
| Below Normal (17%) | 416 | 542 | 803 | 1,076 | 1,367 | 1,587 | 1,378 | 1,013 | 664 | 523 | 409 | 418 |
| Dry (22%) | 448 | 572 | 844 | 1,130 | 1,359 | 1,546 | 1,400 | 1,102 | 801 | 586 | 280 | 293 |
| Critical (15%) | 410 | 489 | 711 | 976 | 1,212 | 1,316 | 1,244 | 1,057 | 807 | 469 | 276 | 246 |

### Alternative 2B

| Statistic | End of Month Storage (TAF) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 917 | 1,195 | 1,479 | 1,853 | 2,037 | 2,039 | 1,919 | 1,702 | 1,387 | 1,049 | 785 | 818 |
| 20% | 822 | 1,072 | 1,357 | 1,628 | 1,846 | 2,036 | 1,864 | 1,587 | 1,148 | 899 | 646 | 703 |
| 30% | 730 | 1,006 | 1,249 | 1,492 | 1,723 | 1,907 | 1,781 | 1,490 | 1,061 | 798 | 585 | 664 |
| 40% | 646 | 870 | 1,183 | 1,423 | 1,665 | 1,782 | 1,703 | 1,449 | 1,015 | 726 | 499 | 595 |
| 50% | 581 | 747 | 1,006 | 1,242 | 1,524 | 1,688 | 1,593 | 1,312 | 936 | 667 | 458 | 489 |
| 60% | 384 | 522 | 781 | 1,057 | 1,349 | 1,597 | 1,469 | 1,265 | 875 | 553 | 361 | 349 |
| 70% | 288 | 424 | 554 | 896 | 1,182 | 1,319 | 1,352 | 1,096 | 702 | 452 | 229 | 252 |
| 80% | 216 | 323 | 482 | 818 | 1,061 | 1,209 | 1,124 | 894 | 562 | 380 | 195 | 206 |
| 90% | 188 | 233 | 356 | 651 | 896 | 1,002 | 918 | 729 | 485 | 278 | 162 | 181 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 561 | 742 | 958 | 1,228 | 1,468 | 1,600 | 1,516 | 1,285 | 942 | 692 | 475 | 506 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 682 | 908 | 1,119 | 1,420 | 1,685 | 1,860 | 1,813 | 1,592 | 1,256 | 1,001 | 733 | 776 |
| Above Normal (15%) | 575 | 760 | 1,006 | 1,279 | 1,509 | 1,659 | 1,573 | 1,334 | 959 | 720 | 517 | 619 |
| Below Normal (17%) | 520 | 704 | 927 | 1,178 | 1,459 | 1,576 | 1,485 | 1,246 | 877 | 679 | 540 | 539 |
| Dry (22%) | 531 | 677 | 918 | 1,186 | 1,379 | 1,471 | 1,350 | 1,097 | 757 | 479 | 199 | 224 |
| Critical (15%) | 378 | 505 | 654 | 884 | 1,101 | 1,199 | 1,100 | 902 | 602 | 332 | 209 | 194 |

### Alternative 2B minus Existing

| Statistic | End of Month Storage (TAF) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 206 | 322 | 327 | 244 | 197 | 0 | 139 | 286 | 243 | 146 | 154 | 119 |
| 20% | 223 | 338 | 292 | 253 | 209 | 106 | 140 | 303 | 190 | 187 | 131 | 96 |
| 30% | 202 | 351 | 281 | 219 | 190 | 68 | 152 | 265 | 221 | 145 | 128 | 164 |
| 40% | 161 | 252 | 281 | 225 | 173 | 70 | 207 | 301 | 205 | 130 | 101 | 146 |
| 50% | 139 | 204 | 156 | 139 | 122 | 44 | 169 | 205 | 162 | 169 | 109 | 78 |
| 60% | 22 | 59 | 19 | 35 | 59 | 90 | 122 | 245 | 168 | 84 | 39 | -4 |
| 70% | -27 | 2 | -131 | -64 | -40 | -59 | 131 | 146 | 72 | 15 | -55 | -52 |
| 80% | -39 | -70 | -91 | -66 | -62 | -97 | -49 | 34 | -5 | -18 | -20 | -34 |
| 90% | -25 | -68 | -108 | -125 | -145 | -264 | -185 | -59 | 16 | -30 | -26 | -7 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 88 | 150 | 114 | 90 | 61 | -17 | 81 | 182 | 146 | 111 | 67 | 60 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 135 | 233 | 223 | 198 | 165 | 71 | 238 | 385 | 347 | 293 | 169 | 137 |
| Above Normal (15%) | 96 | 161 | 94 | 79 | 37 | -23 | 130 | 300 | 270 | 238 | 127 | 130 |
| Below Normal (17%) | 104 | 161 | 124 | 102 | 92 | -12 | 107 | 233 | 213 | 156 | 130 | 120 |
| Dry (22%) | 83 | 105 | 74 | 55 | 19 | -75 | -49 | -5 | -44 | -107 | -81 | -70 |
| Critical (15%) | -31 | 16 | -57 | -92 | -111 | -116 | -144 | -156 | -205 | -137 | -67 | -53 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

Figure 1a-**1**. San Luis Storage (CVP and SWP), End of October Storage

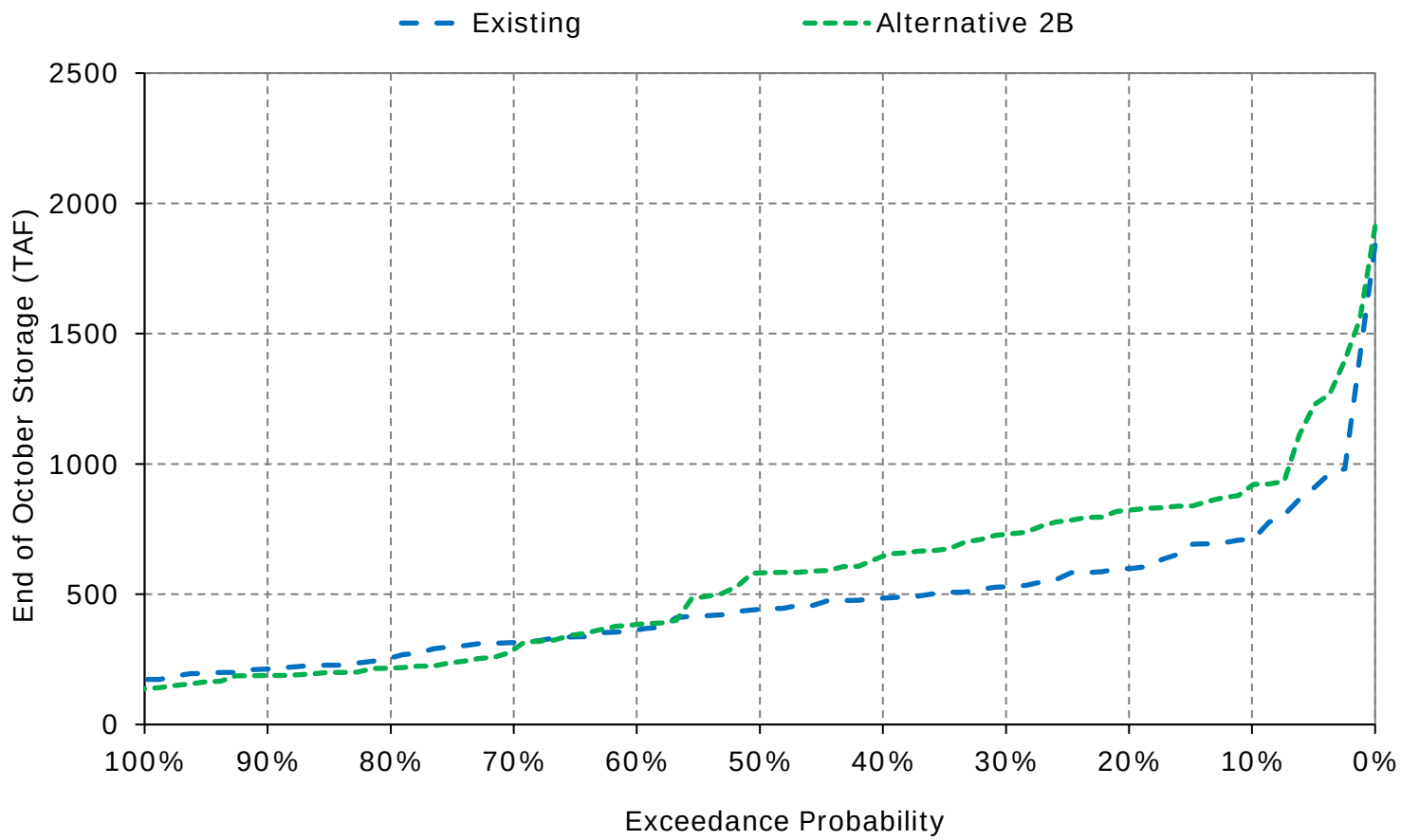


Figure 1a-**2**. San Luis Storage (CVP and SWP), End of November Storage

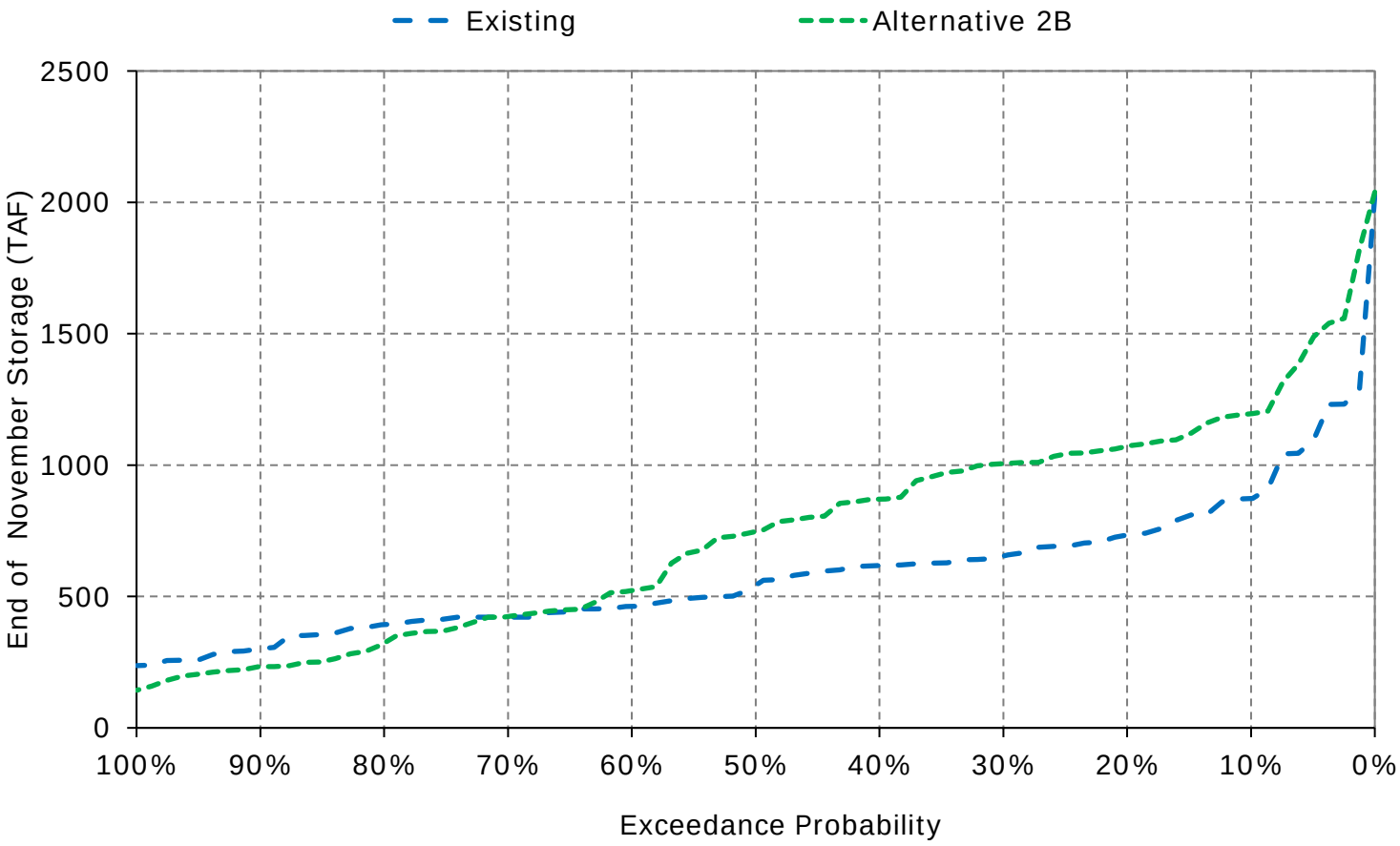


Figure 1a-**3**. San Luis Storage (CVP and SWP), End of December Storage

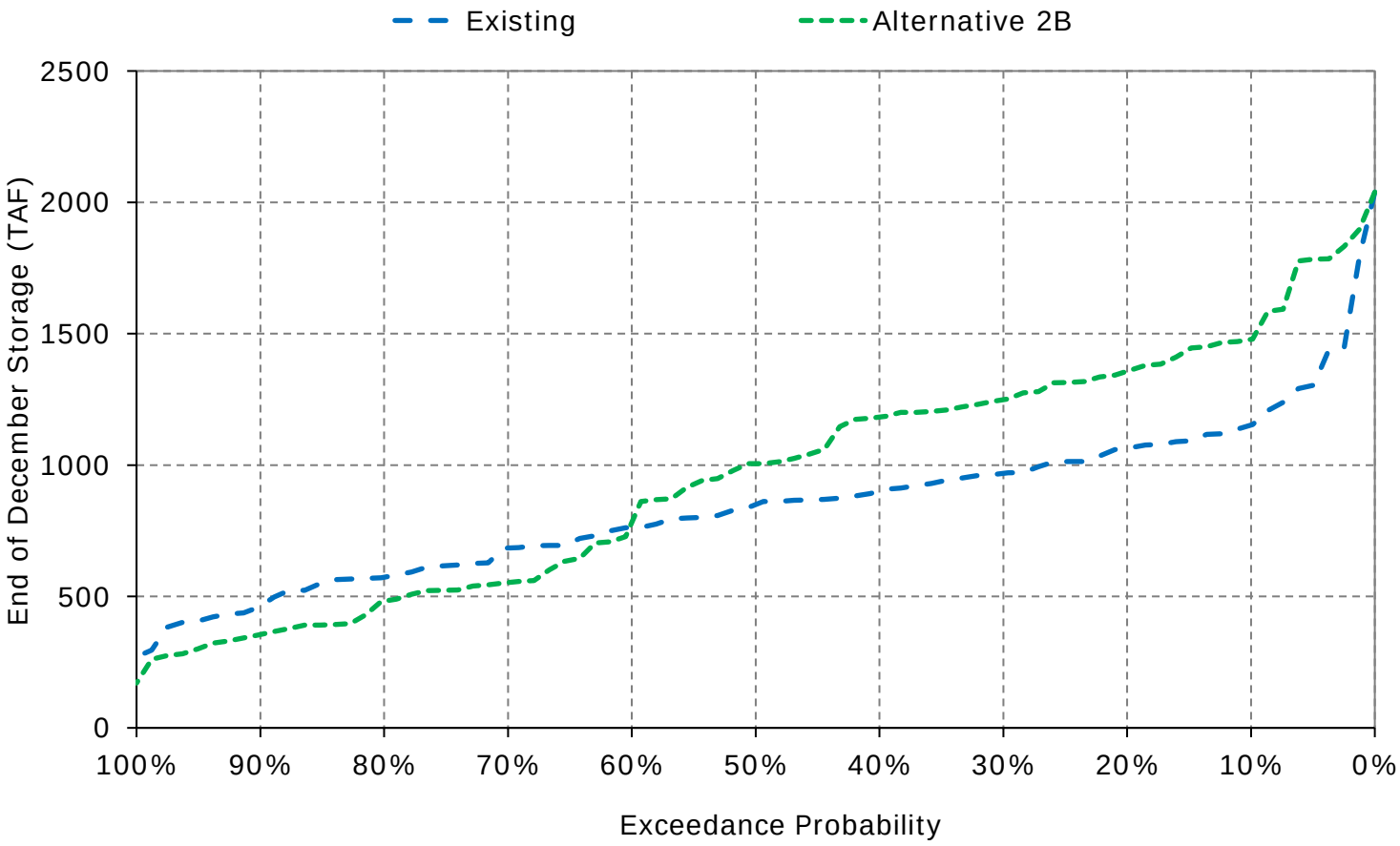


Figure 1a-**4**. San Luis Storage (CVP and SWP), End of January Storage

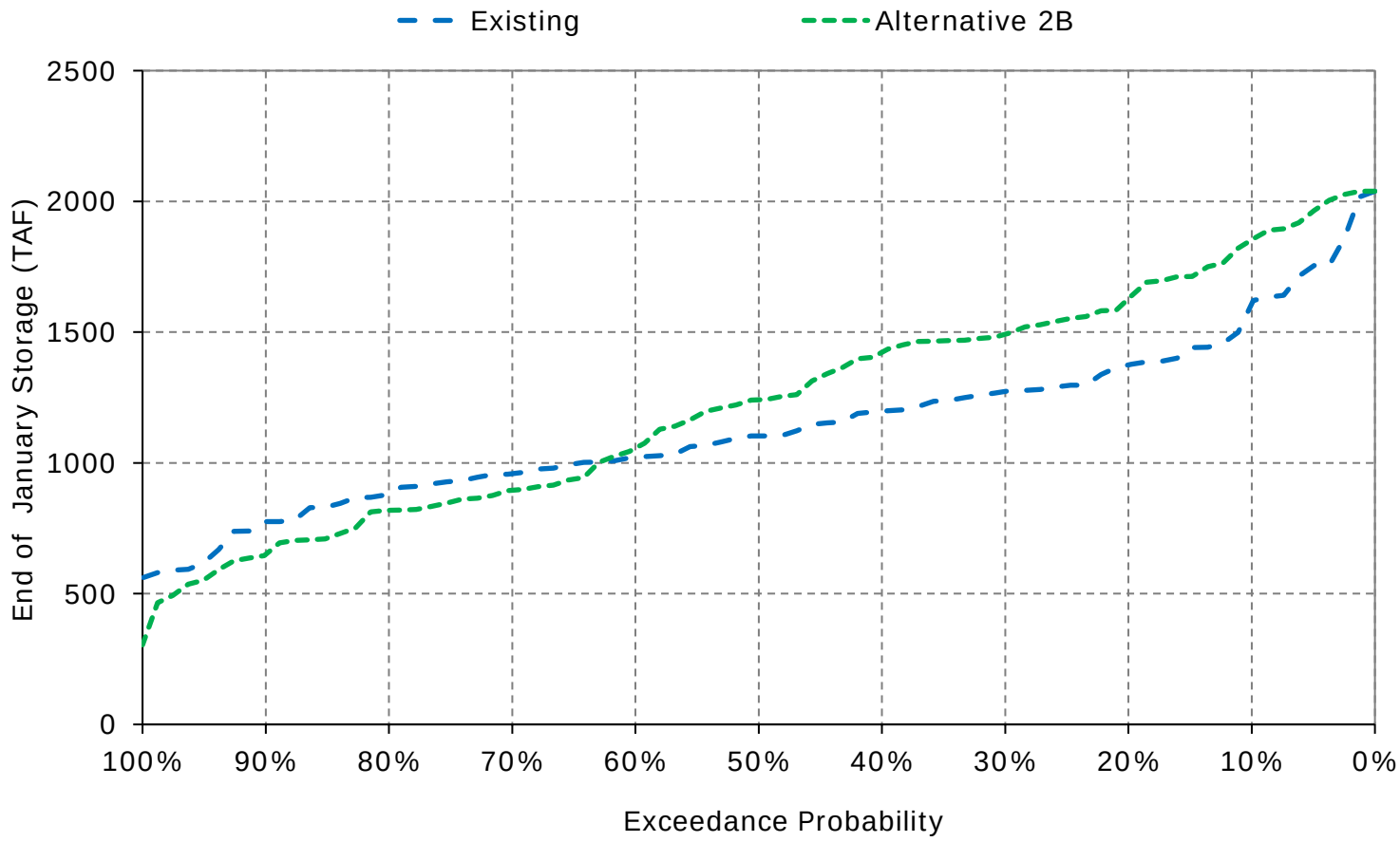


Figure 1a-**5**. San Luis Storage (CVP and SWP), End of February Storage

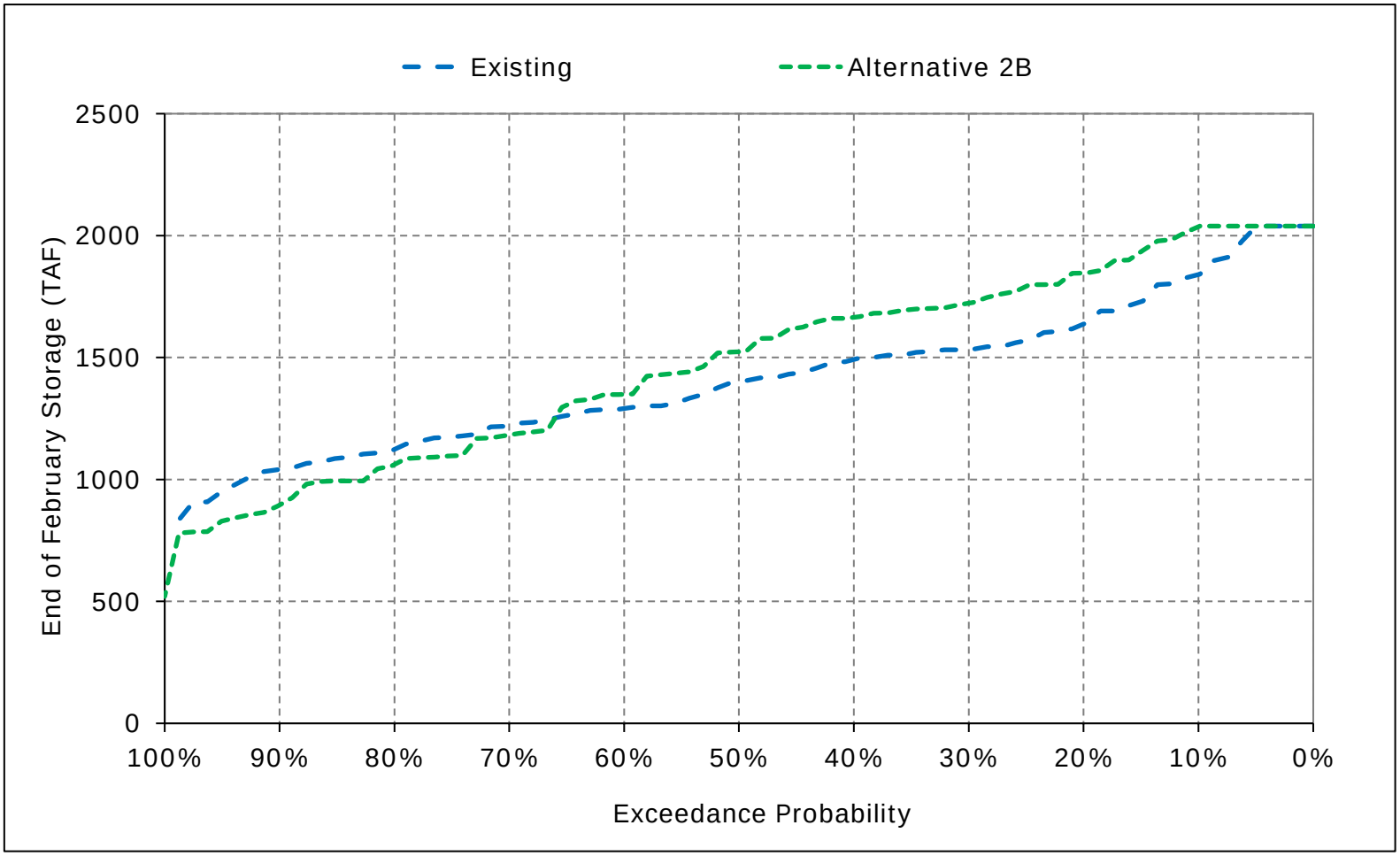


Figure 1a-**6**. San Luis Storage (CVP and SWP), End of March Storage

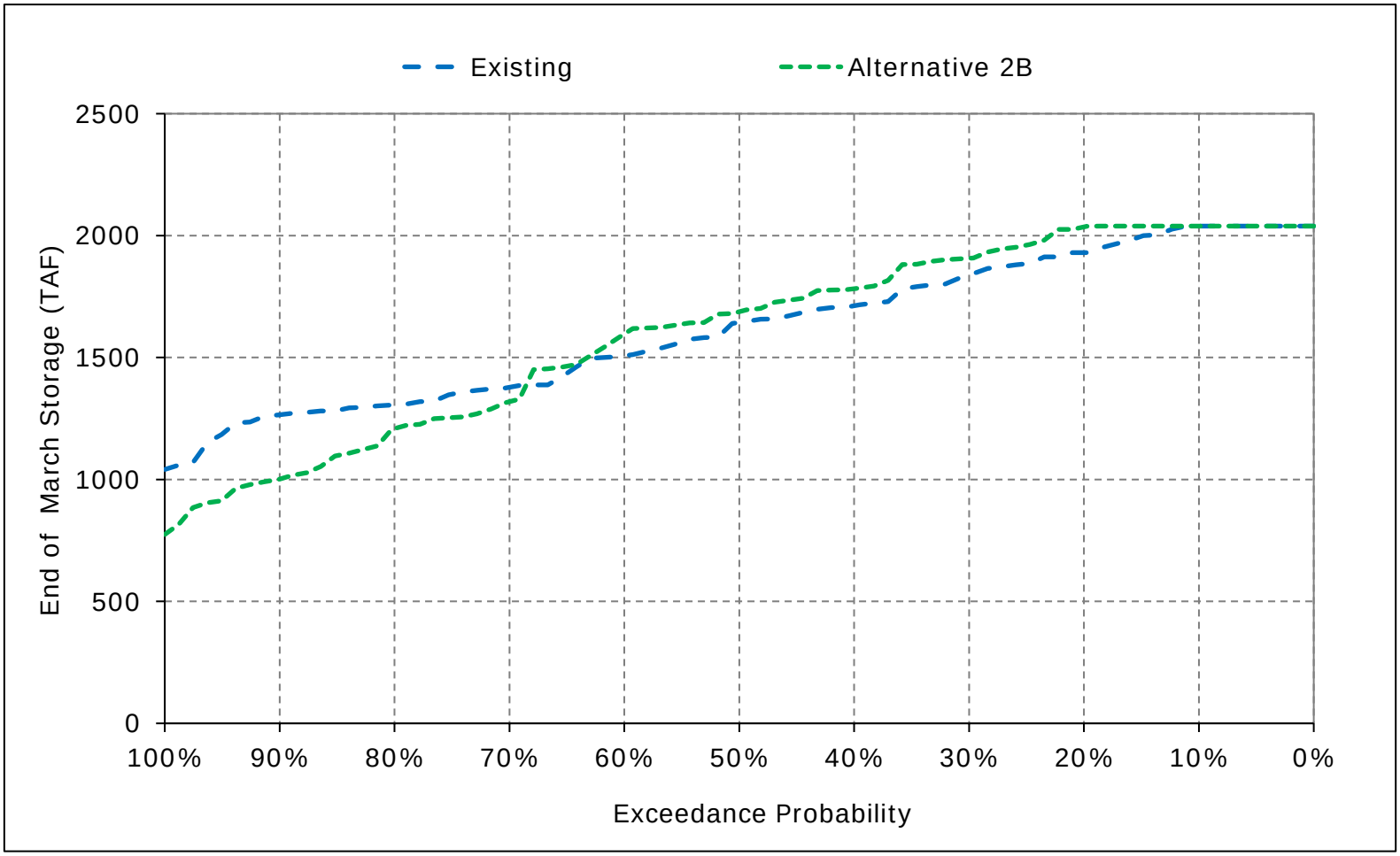


Figure 1a-**7**. San Luis Storage (CVP and SWP), End of April Storage

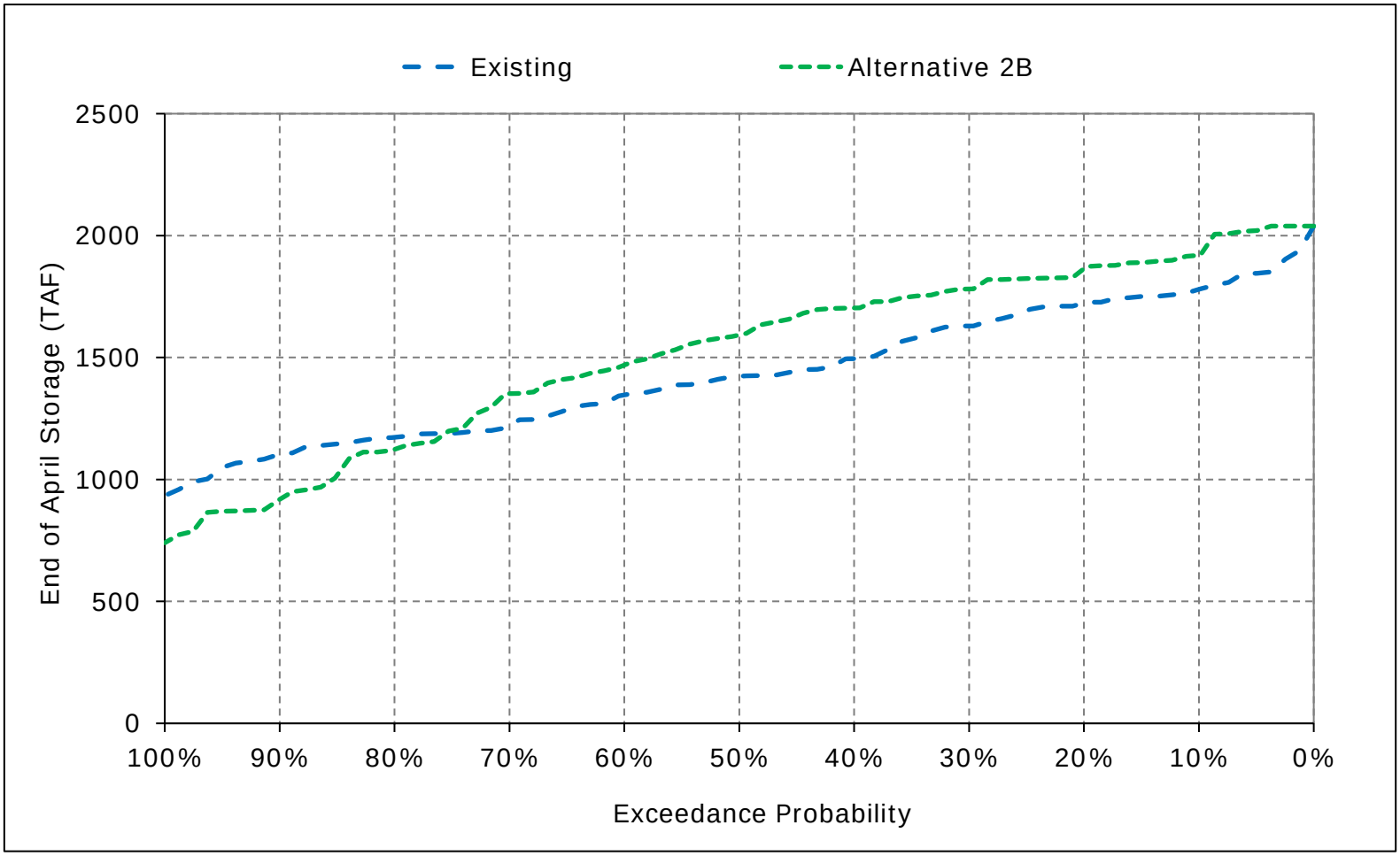


Figure 1a-**8**. San Luis Storage (CVP and SWP), End of May Storage

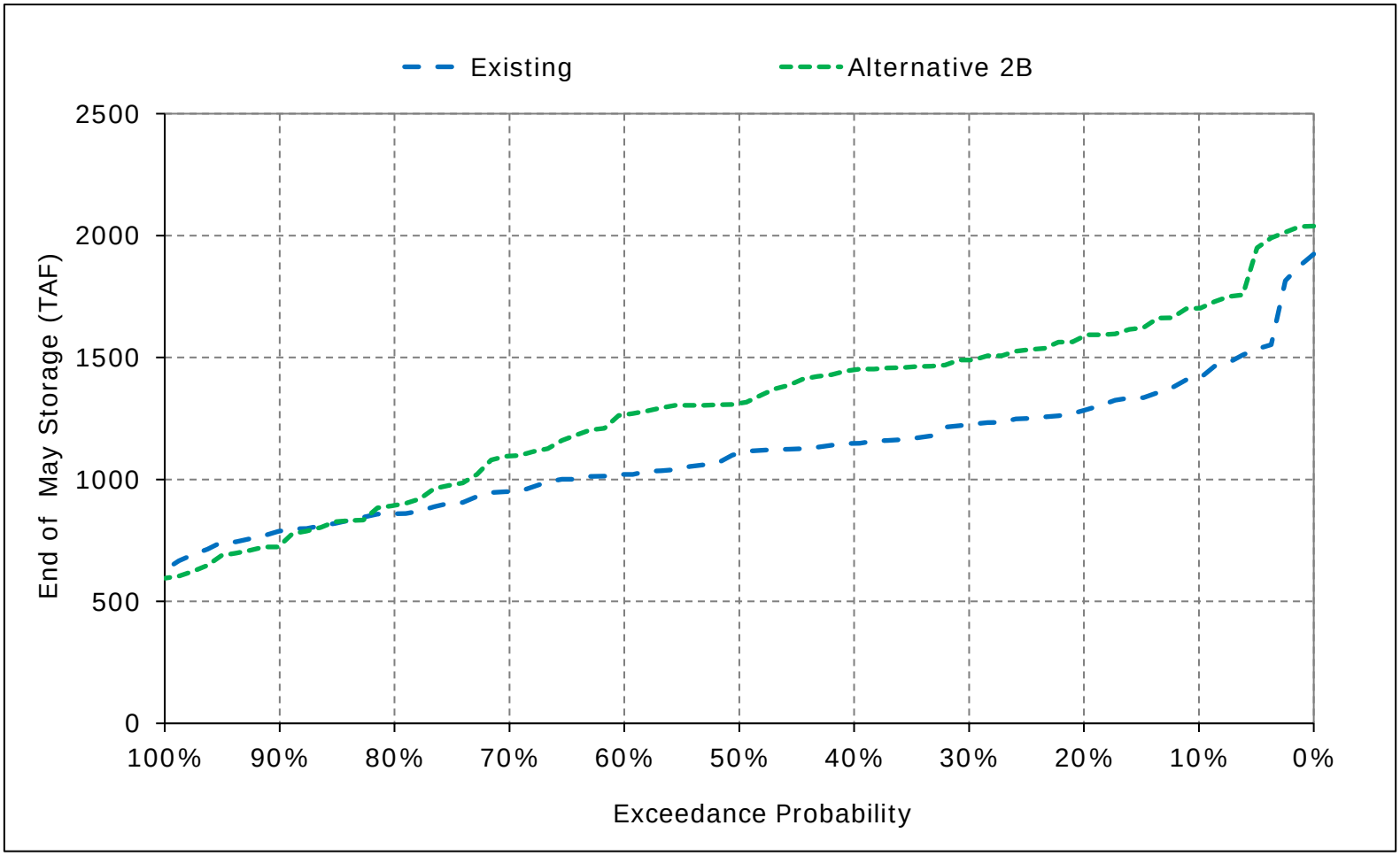


Figure 1a-**9**. San Luis Storage (CVP and SWP), End of June Storage

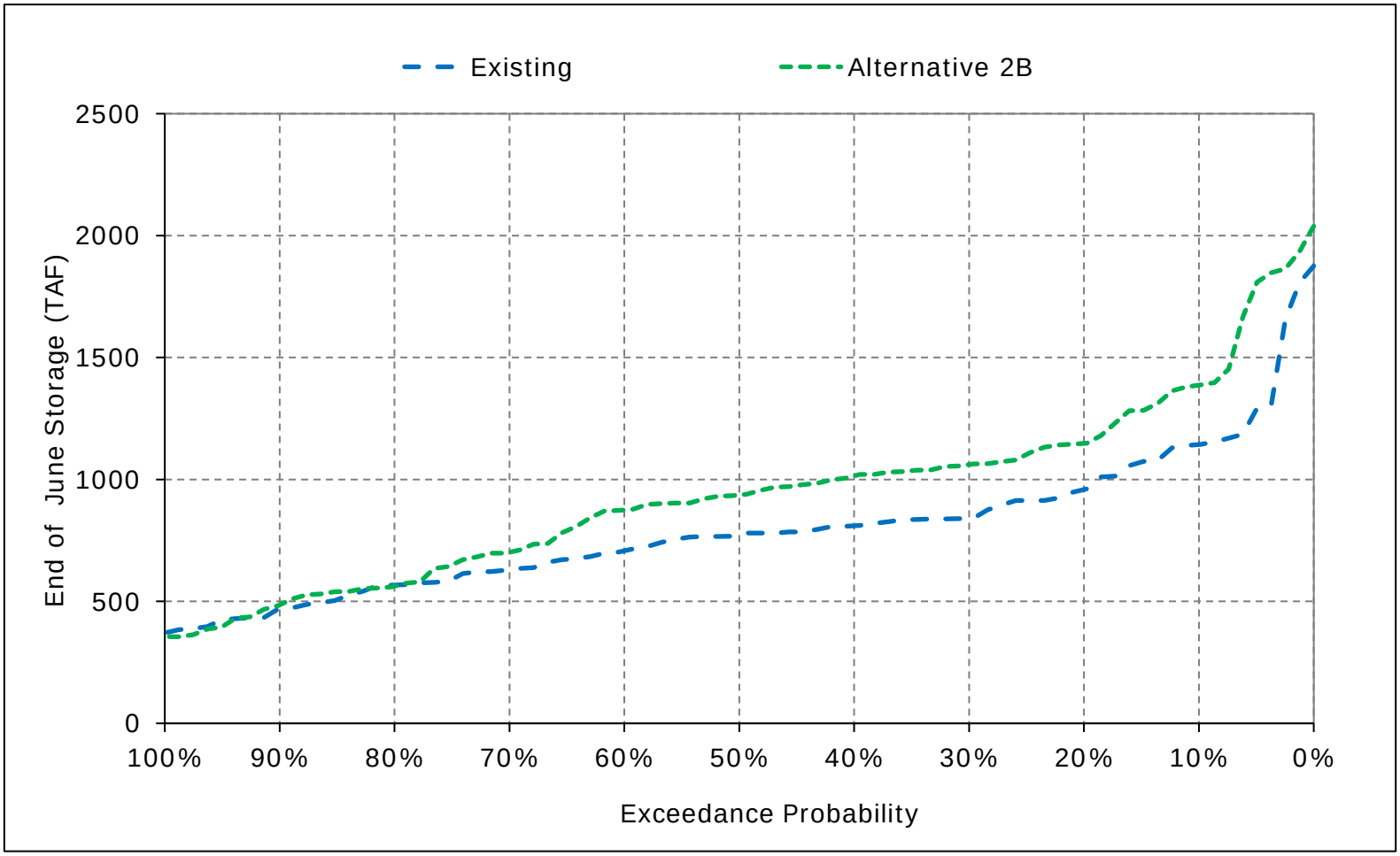


Figure 1a-10. San Luis Storage (CVP and SWP), End of July Storage

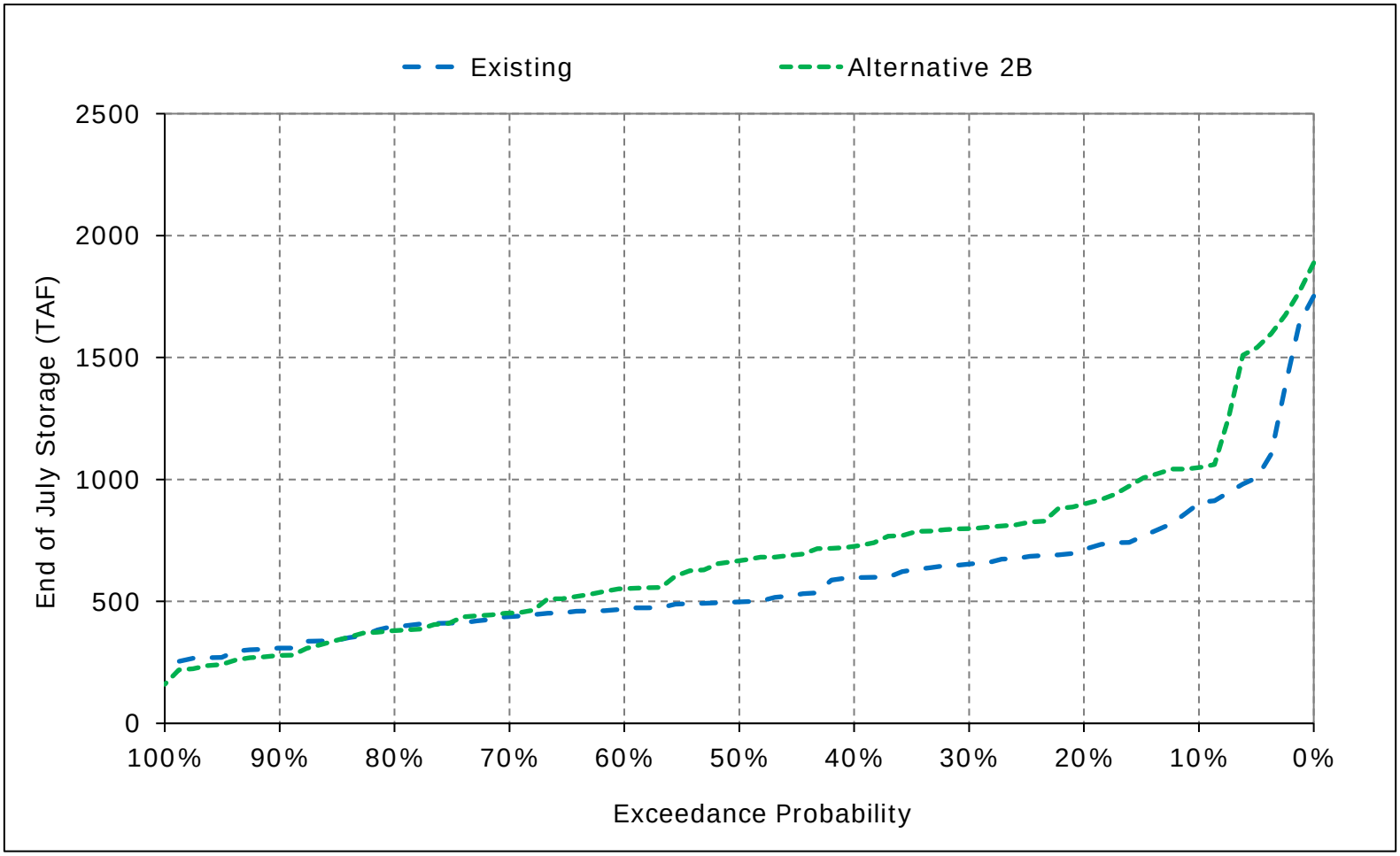


Figure 1a-11. San Luis Storage (CVP and SWP), End of August Storage

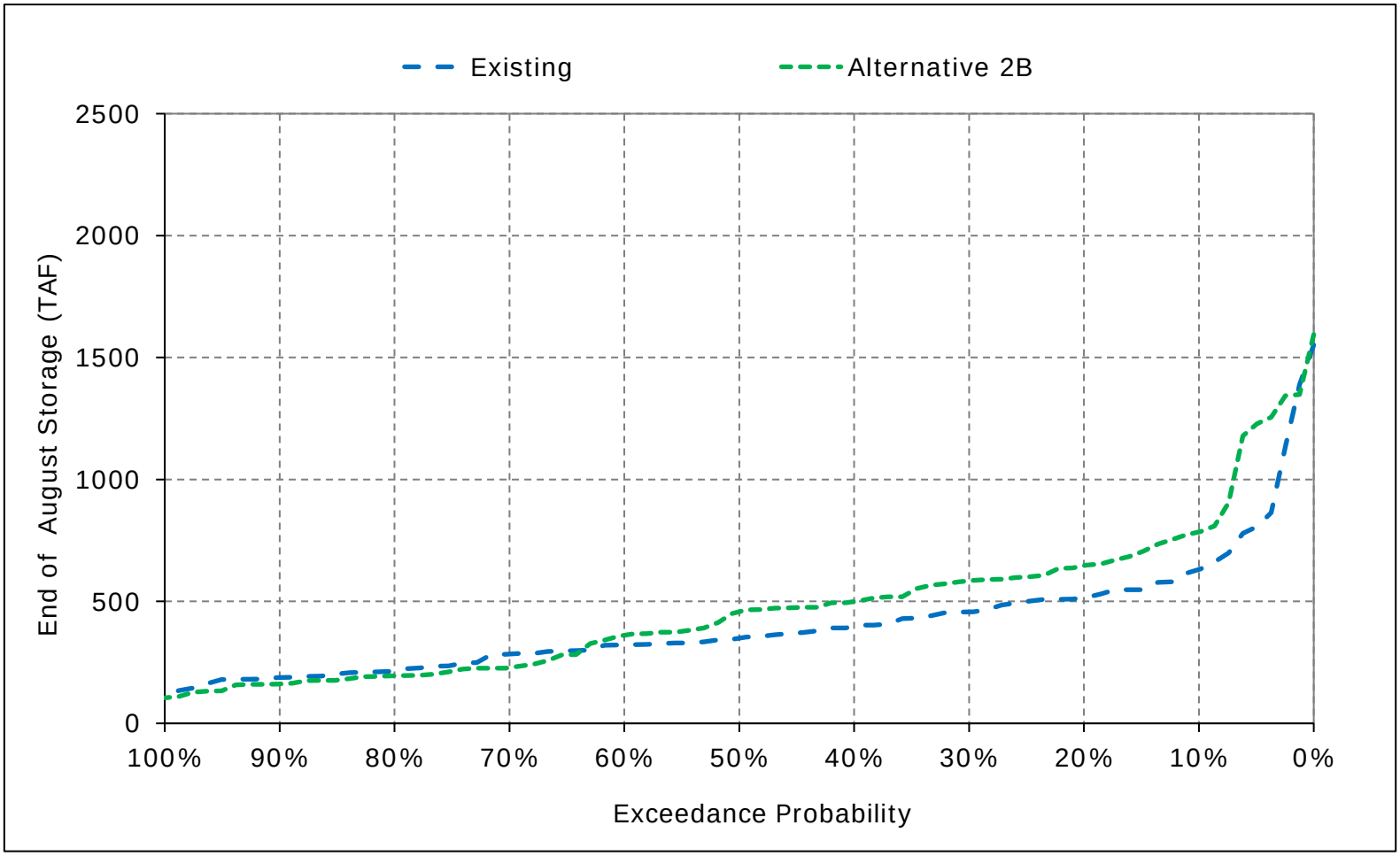
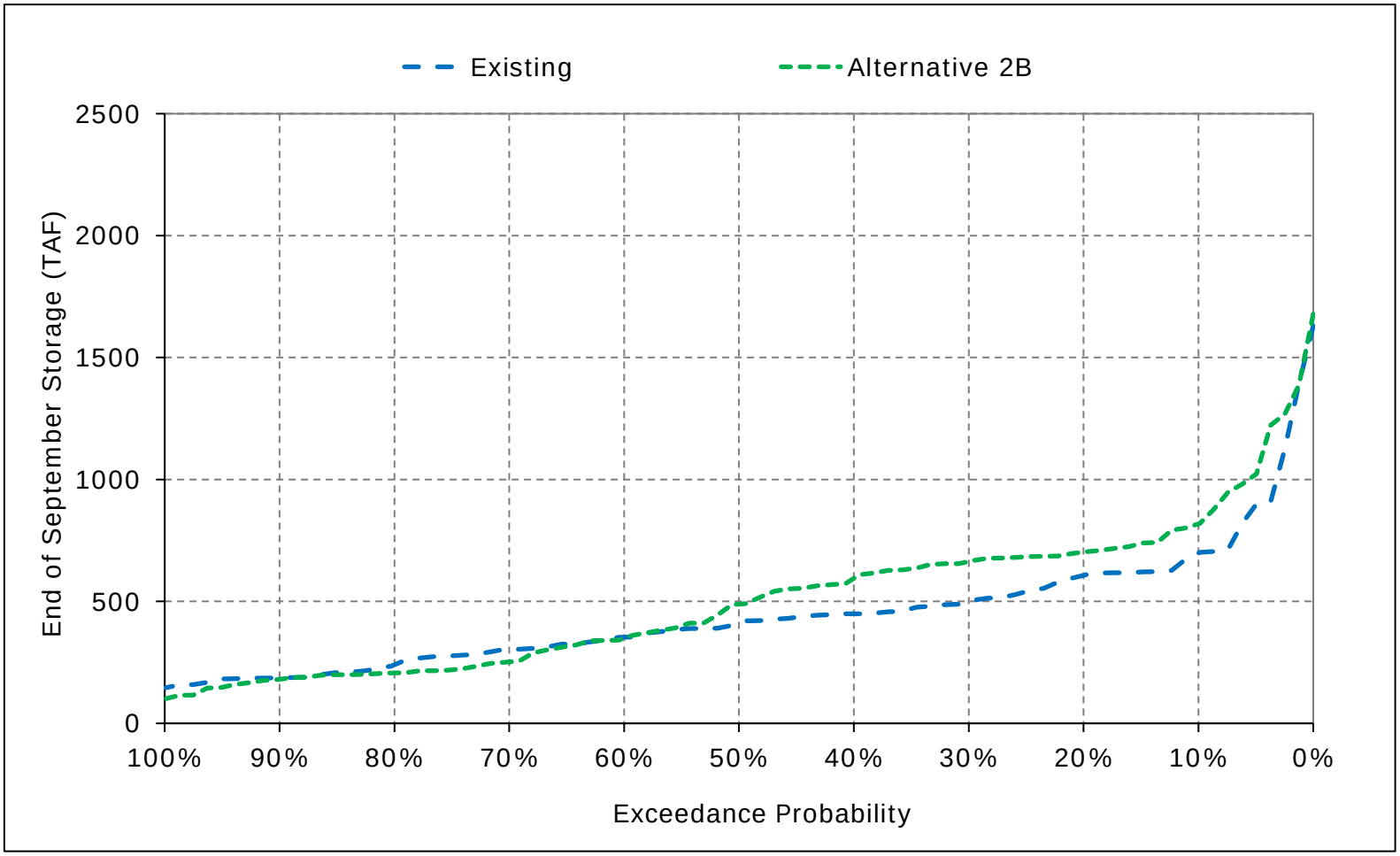


Figure 1a-12. San Luis Storage (CVP and SWP), End of September Storage



# Table 1b-1. San Luis Reservoir (SWP and CVP), End of Month Elevation

## Existing

| Statistic | End of Month Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 428 | 442 | 484 | 517 | 544 | 544 | 537 | 514 | 494 | 436 | 401 | 407 |
| 20% | 409 | 429 | 471 | 504 | 534 | 544 | 526 | 502 | 472 | 421 | 390 | 390 |
| 30% | 396 | 429 | 468 | 502 | 526 | 544 | 523 | 493 | 457 | 406 | 374 | 384 |
| 40% | 388 | 429 | 468 | 495 | 520 | 540 | 521 | 487 | 454 | 403 | 363 | 376 |
| 50% | 383 | 427 | 466 | 493 | 513 | 534 | 517 | 481 | 444 | 400 | 360 | 372 |
| 60% | 381 | 418 | 459 | 486 | 506 | 529 | 513 | 476 | 435 | 394 | 356 | 367 |
| 70% | 379 | 412 | 453 | 484 | 502 | 523 | 506 | 469 | 432 | 389 | 352 | 364 |
| 80% | 376 | 397 | 437 | 472 | 497 | 516 | 500 | 463 | 430 | 382 | 345 | 358 |
| 90% | 371 | 382 | 422 | 445 | 477 | 498 | 481 | 456 | 420 | 377 | 339 | 353 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 392 | 420 | 458 | 488 | 512 | 528 | 513 | 482 | 450 | 404 | 368 | 378 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 397 | 426 | 465 | 496 | 520 | 538 | 525 | 496 | 467 | 419 | 380 | 389 |
| Above Normal (15%) | 385 | 415 | 456 | 488 | 513 | 533 | 516 | 479 | 446 | 393 | 358 | 372 |
| Below Normal (17%) | 393 | 422 | 458 | 487 | 512 | 528 | 510 | 475 | 442 | 399 | 359 | 376 |
| Dry (22%) | 392 | 418 | 458 | 488 | 509 | 524 | 508 | 474 | 440 | 396 | 357 | 369 |
| Critical (15%) | 389 | 411 | 444 | 475 | 499 | 507 | 494 | 474 | 443 | 397 | 377 | 374 |

## Alternative 2B

| Statistic | End of Month Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 443 | 474 | 503 | 534 | 544 | 544 | 544 | 544 | 522 | 464 | 422 | 425 |
| 20% | 417 | 447 | 486 | 514 | 543 | 544 | 544 | 538 | 501 | 440 | 394 | 401 |
| 30% | 408 | 437 | 476 | 502 | 523 | 543 | 542 | 529 | 487 | 429 | 383 | 393 |
| 40% | 401 | 429 | 468 | 496 | 517 | 533 | 535 | 515 | 465 | 410 | 378 | 384 |
| 50% | 388 | 423 | 462 | 490 | 511 | 525 | 528 | 502 | 459 | 405 | 369 | 378 |
| 60% | 381 | 418 | 454 | 483 | 508 | 522 | 515 | 494 | 454 | 401 | 364 | 373 |
| 70% | 377 | 412 | 446 | 477 | 496 | 516 | 510 | 488 | 450 | 396 | 354 | 366 |
| 80% | 374 | 397 | 428 | 463 | 488 | 499 | 497 | 475 | 442 | 390 | 348 | 360 |
| 90% | 365 | 376 | 410 | 442 | 474 | 485 | 474 | 460 | 431 | 379 | 339 | 348 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 398 | 425 | 460 | 488 | 509 | 521 | 518 | 503 | 468 | 416 | 376 | 384 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 410 | 440 | 476 | 503 | 523 | 536 | 539 | 529 | 494 | 439 | 396 | 401 |
| Above Normal (15%) | 389 | 416 | 453 | 484 | 507 | 523 | 526 | 512 | 472 | 413 | 370 | 378 |
| Below Normal (17%) | 400 | 428 | 460 | 488 | 512 | 522 | 522 | 508 | 470 | 416 | 373 | 387 |
| Dry (22%) | 389 | 416 | 454 | 483 | 502 | 510 | 502 | 481 | 446 | 400 | 363 | 374 |
| Critical (15%) | 387 | 414 | 442 | 466 | 489 | 499 | 487 | 469 | 438 | 389 | 363 | 362 |

## Alternative 2B minus Existing

| Statistic | End of Month Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 15 | 32 | 19 | 17 | 0 | 0 | 8 | 30 | 29 | 29 | 20 | 18 |
| 20% | 8 | 18 | 16 | 9 | 9 | 0 | 18 | 36 | 29 | 19 | 4 | 11 |
| 30% | 12 | 8 | 8 | 1 | -3 | -1 | 19 | 36 | 30 | 23 | 8 | 9 |
| 40% | 13 | 0 | 0 | 0 | -3 | -7 | 13 | 28 | 11 | 7 | 15 | 9 |
| 50% | 5 | -4 | -4 | -3 | -2 | -8 | 10 | 21 | 16 | 5 | 9 | 5 |
| 60% | 0 | -1 | -4 | -3 | 2 | -7 | 2 | 18 | 18 | 7 | 8 | 6 |
| 70% | -2 | 0 | -7 | -7 | -6 | -7 | 3 | 19 | 18 | 7 | 2 | 2 |
| 80% | -2 | 0 | -9 | -10 | -9 | -17 | -3 | 12 | 12 | 9 | 2 | 2 |
| 90% | -5 | -5 | -12 | -3 | -3 | -13 | -7 | 5 | 10 | 2 | 1 | -4 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 5 | 5 | 3 | 0 | -3 | -7 | 6 | 22 | 18 | 12 | 9 | 6 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 14 | 14 | 11 | 7 | 3 | -2 | 14 | 33 | 28 | 20 | 16 | 12 |
| Above Normal (15%) | 4 | 1 | -3 | -4 | -6 | -9 | 11 | 33 | 26 | 20 | 12 | 6 |
| Below Normal (17%) | 7 | 6 | 2 | 1 | -1 | -6 | 11 | 32 | 28 | 17 | 13 | 11 |
| Dry (22%) | -2 | -3 | -3 | -5 | -6 | -14 | -5 | 7 | 6 | 4 | 6 | 5 |
| Critical (15%) | -2 | 3 | -1 | -9 | -10 | -8 | -7 | -5 | -6 | -8 | -14 | -12 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

Figure 1b-**1**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, October

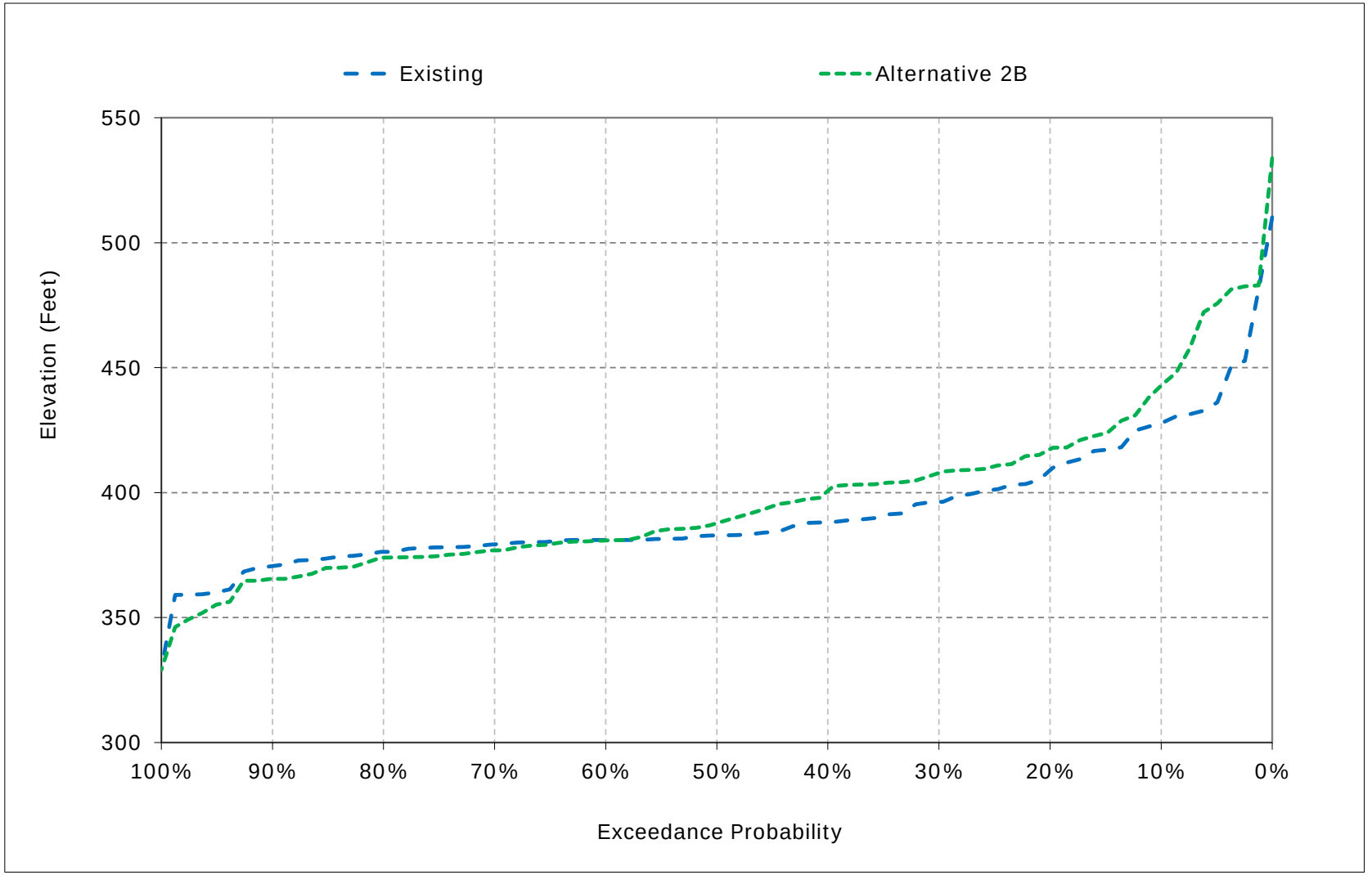


Figure 1b-**2**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, November

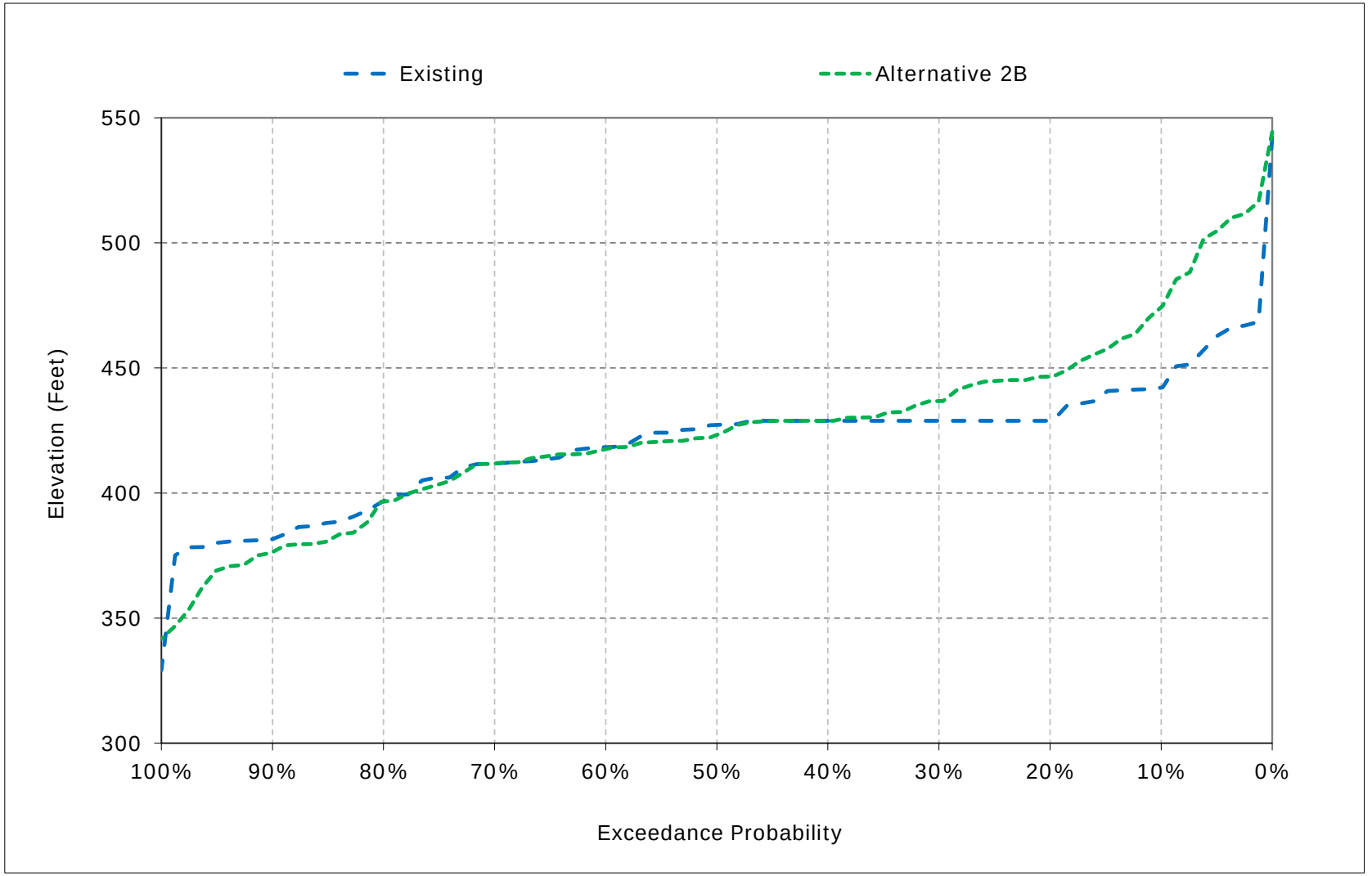


Figure 1b-**3**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, December

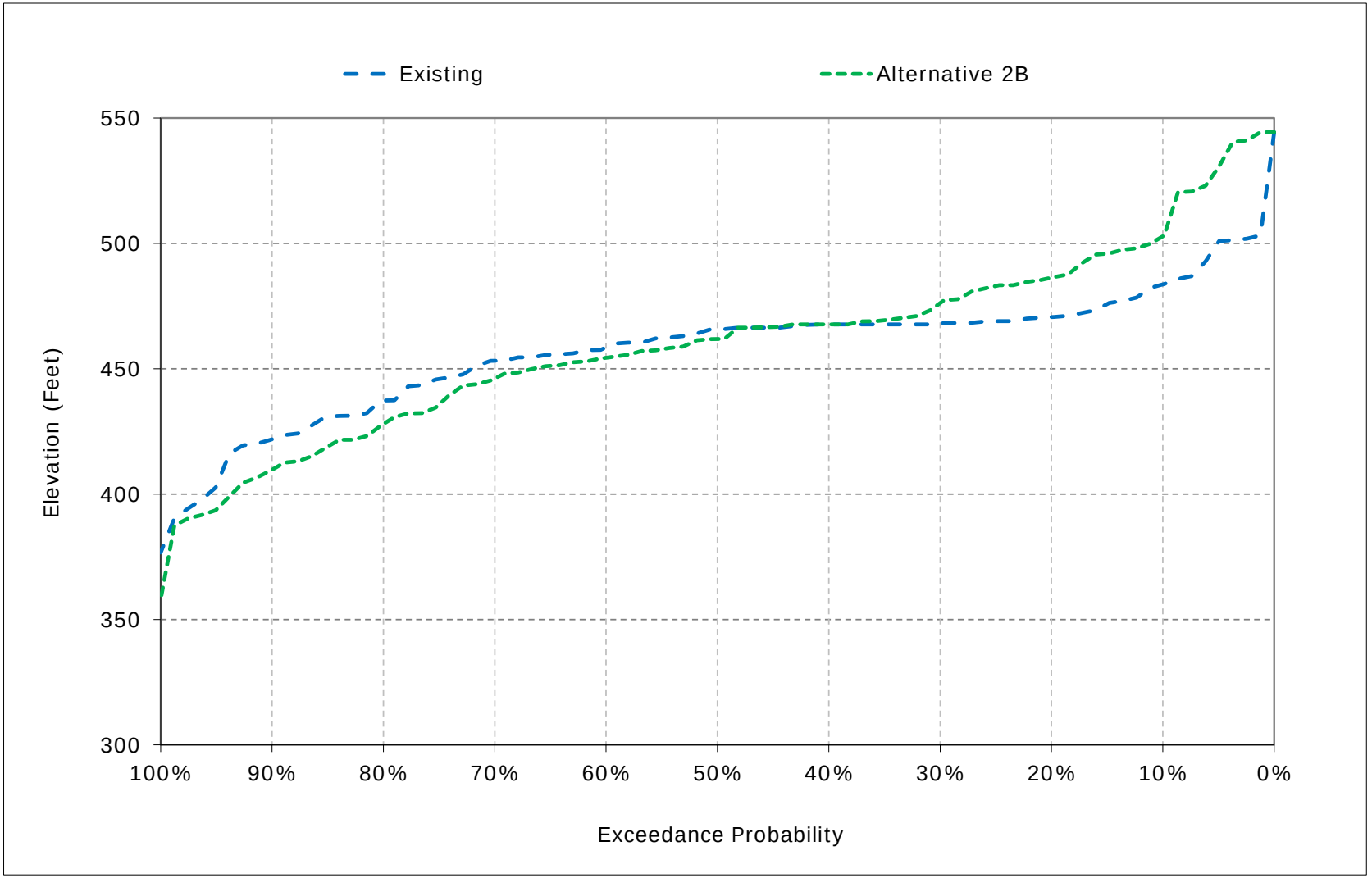


Figure 1b-**4**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, January

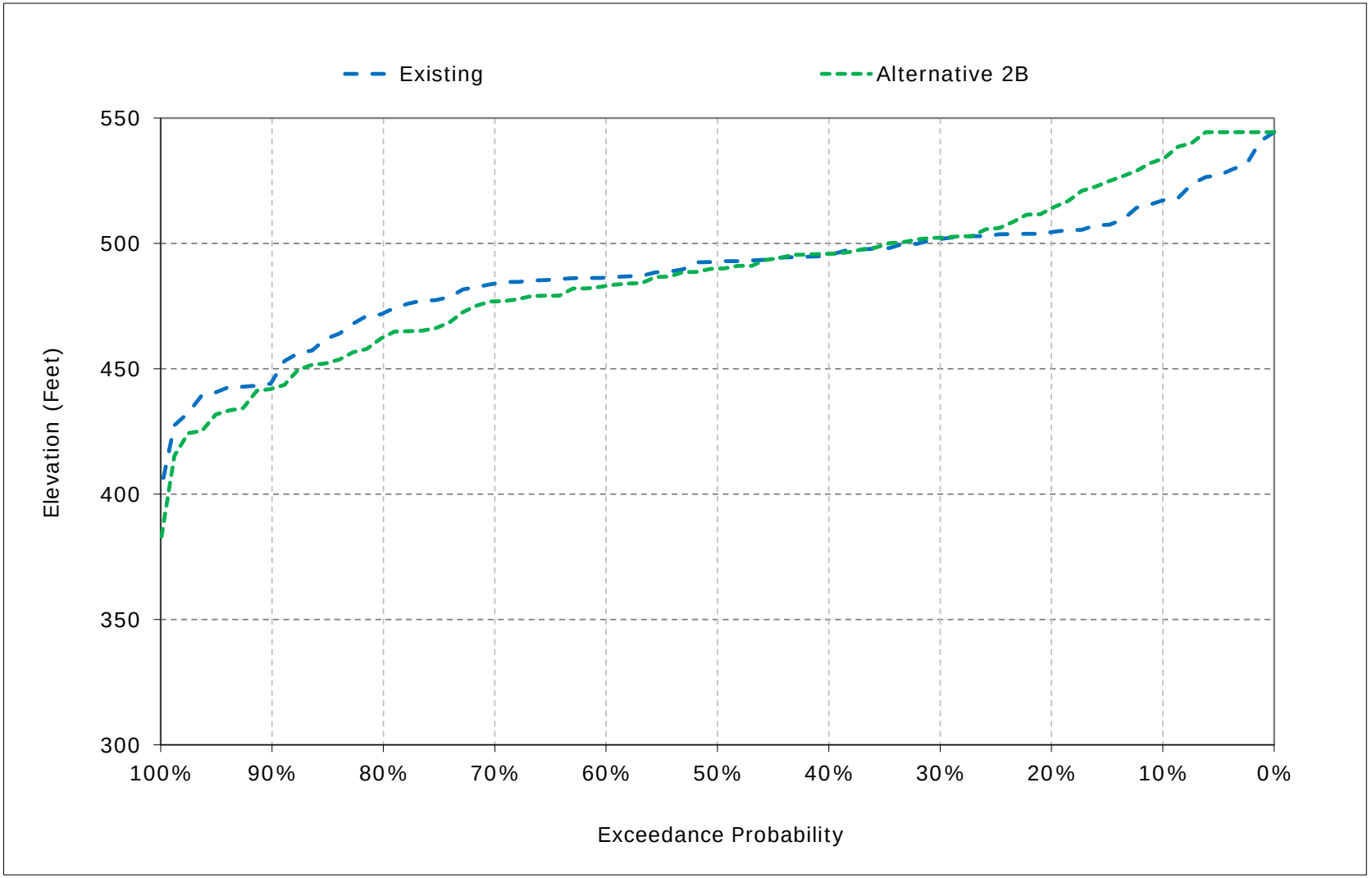


Figure 1b-**5**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, February

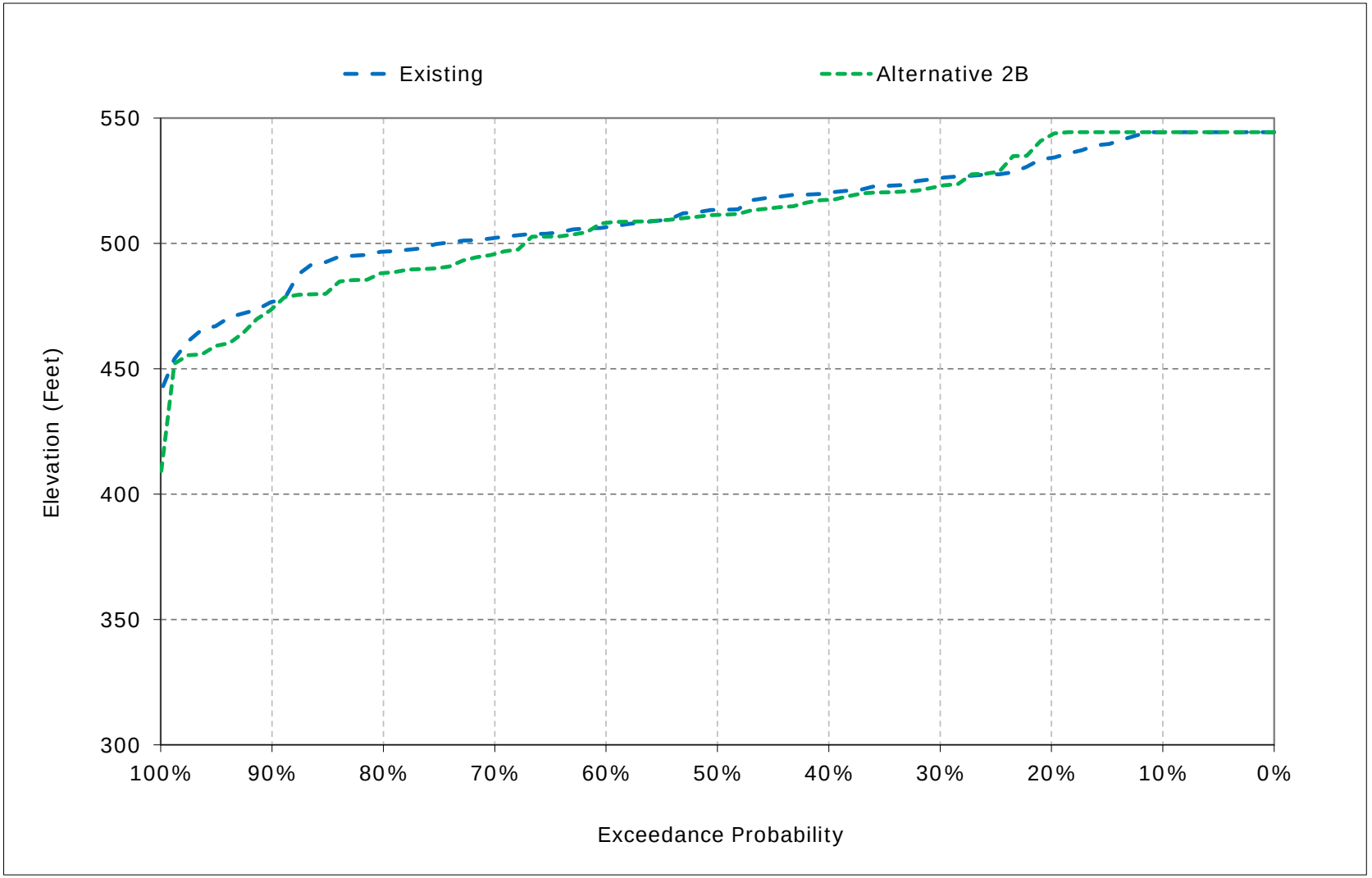


Figure 1b-**6**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, March

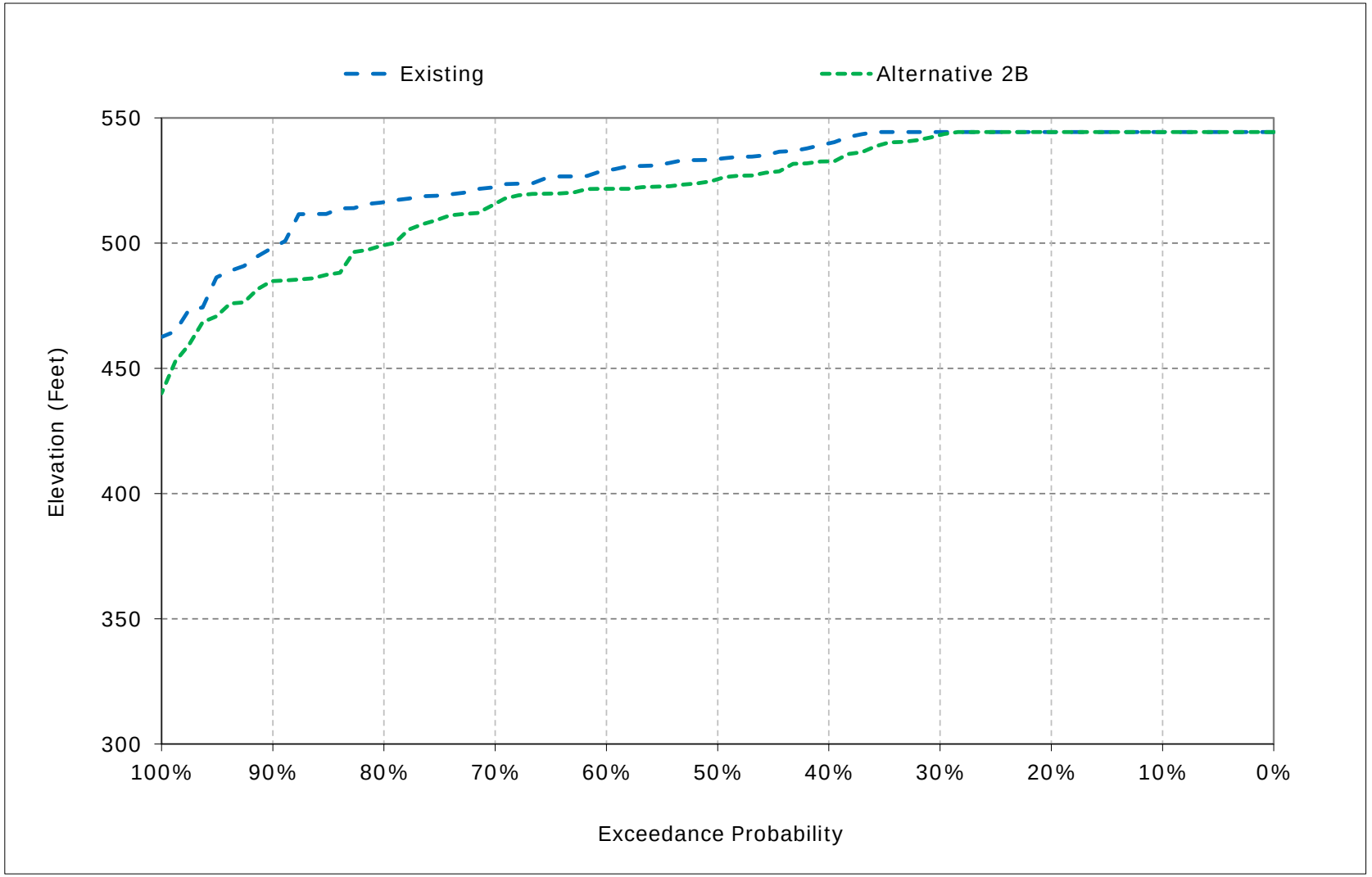


Figure 1b-**7**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, April

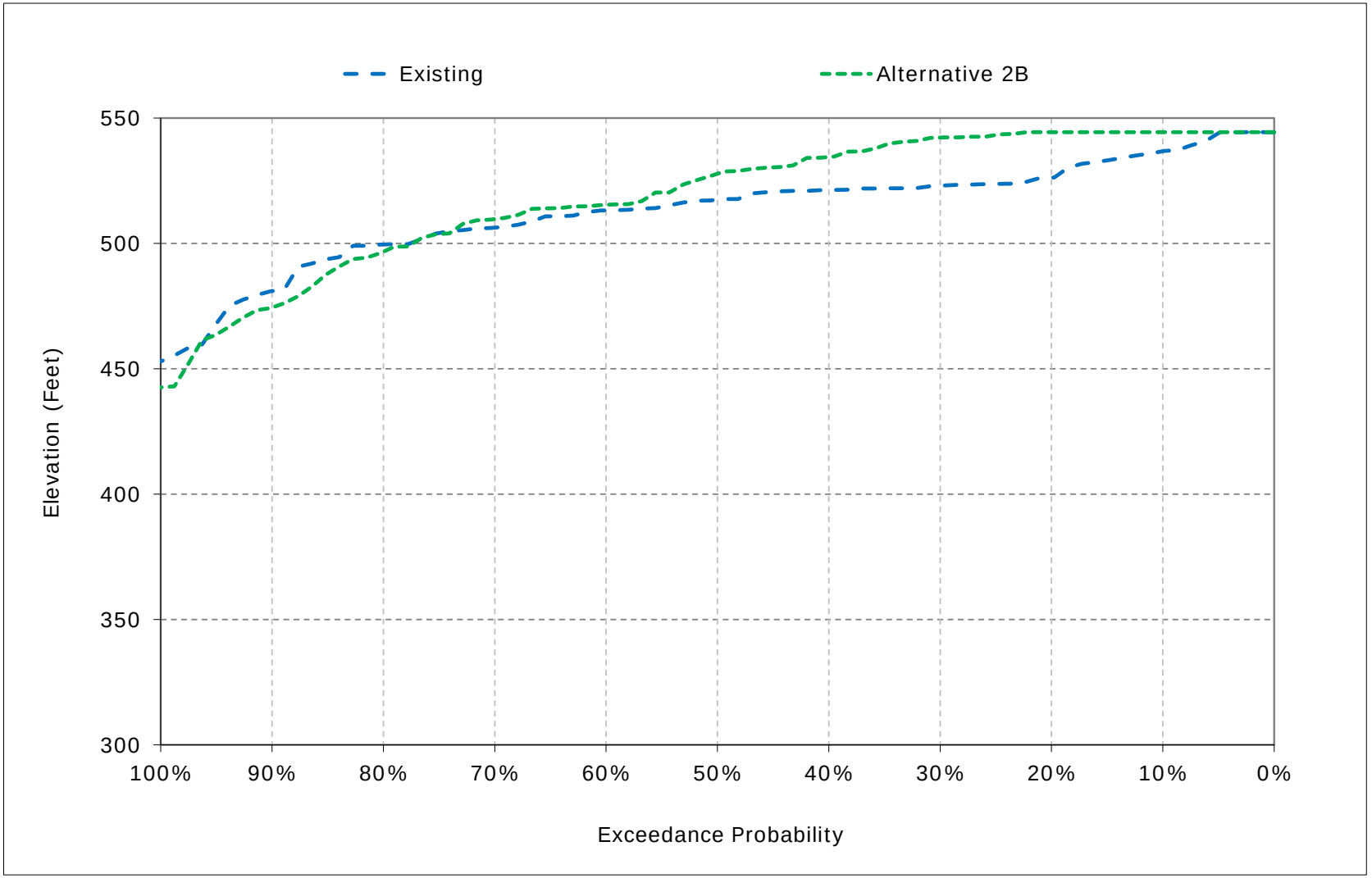


Figure 1b-**8**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, May

Figure 1b-**9**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, June

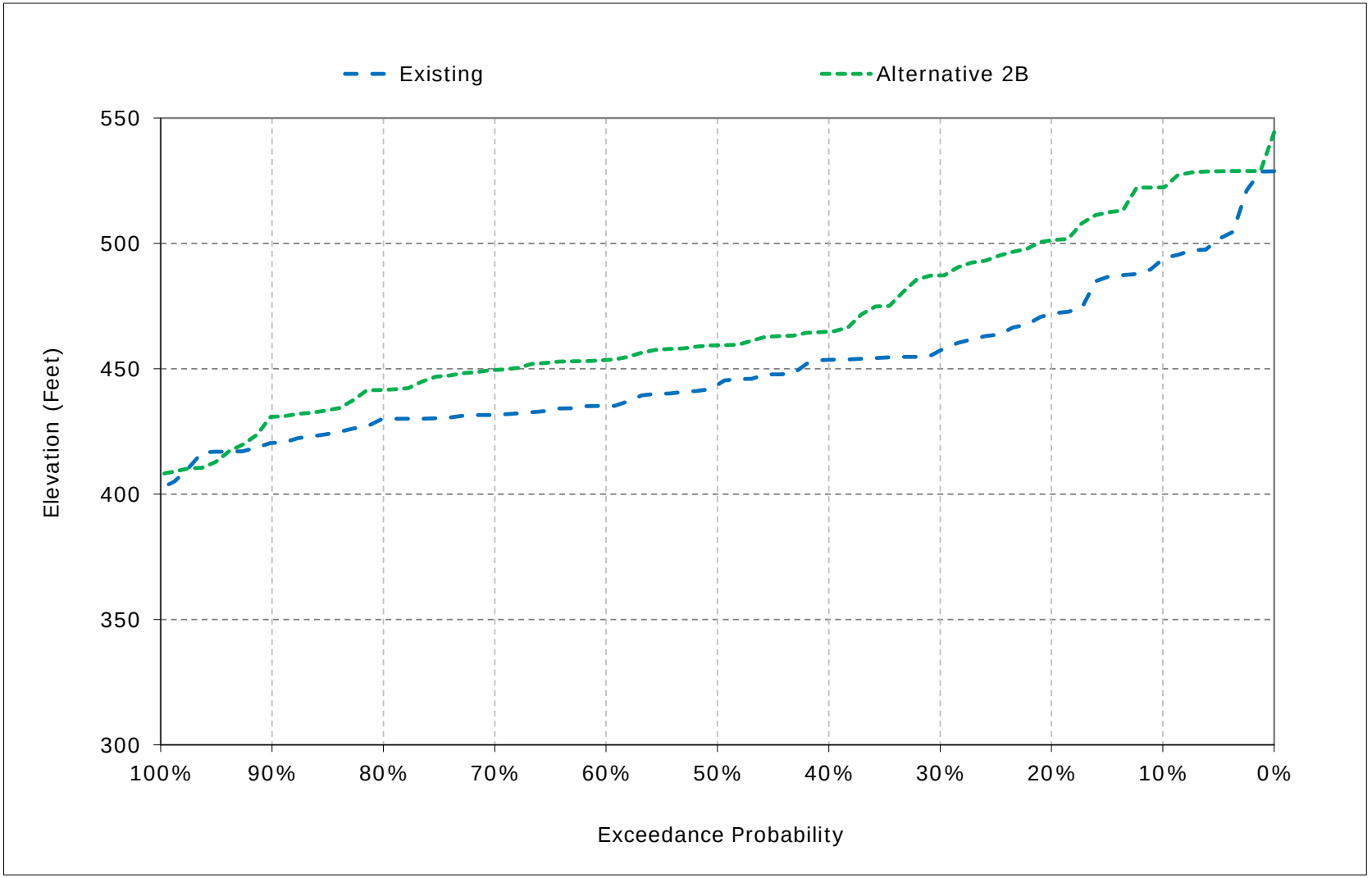


Figure 1b-10. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, July

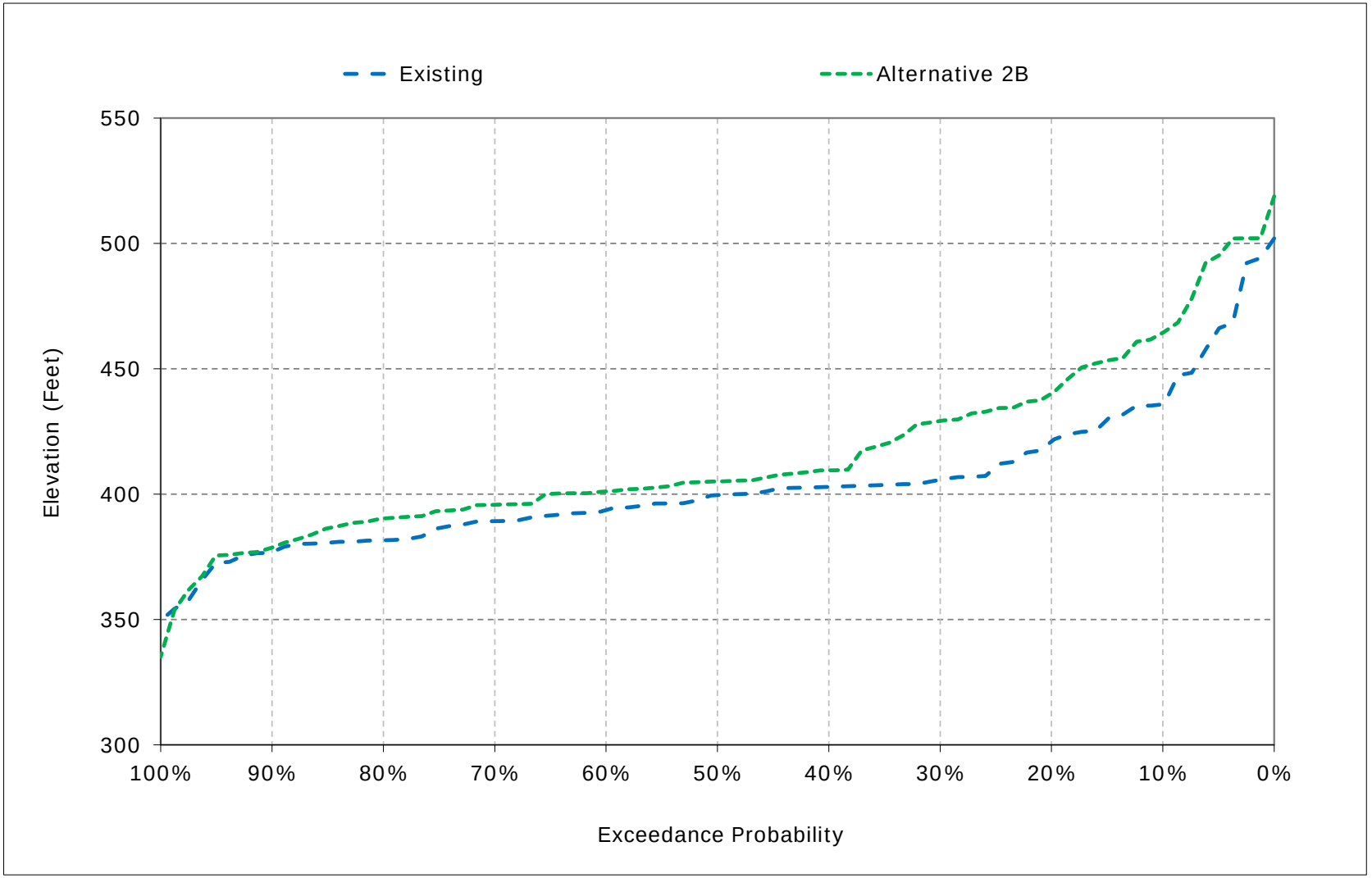


Figure 1b-**11**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, August

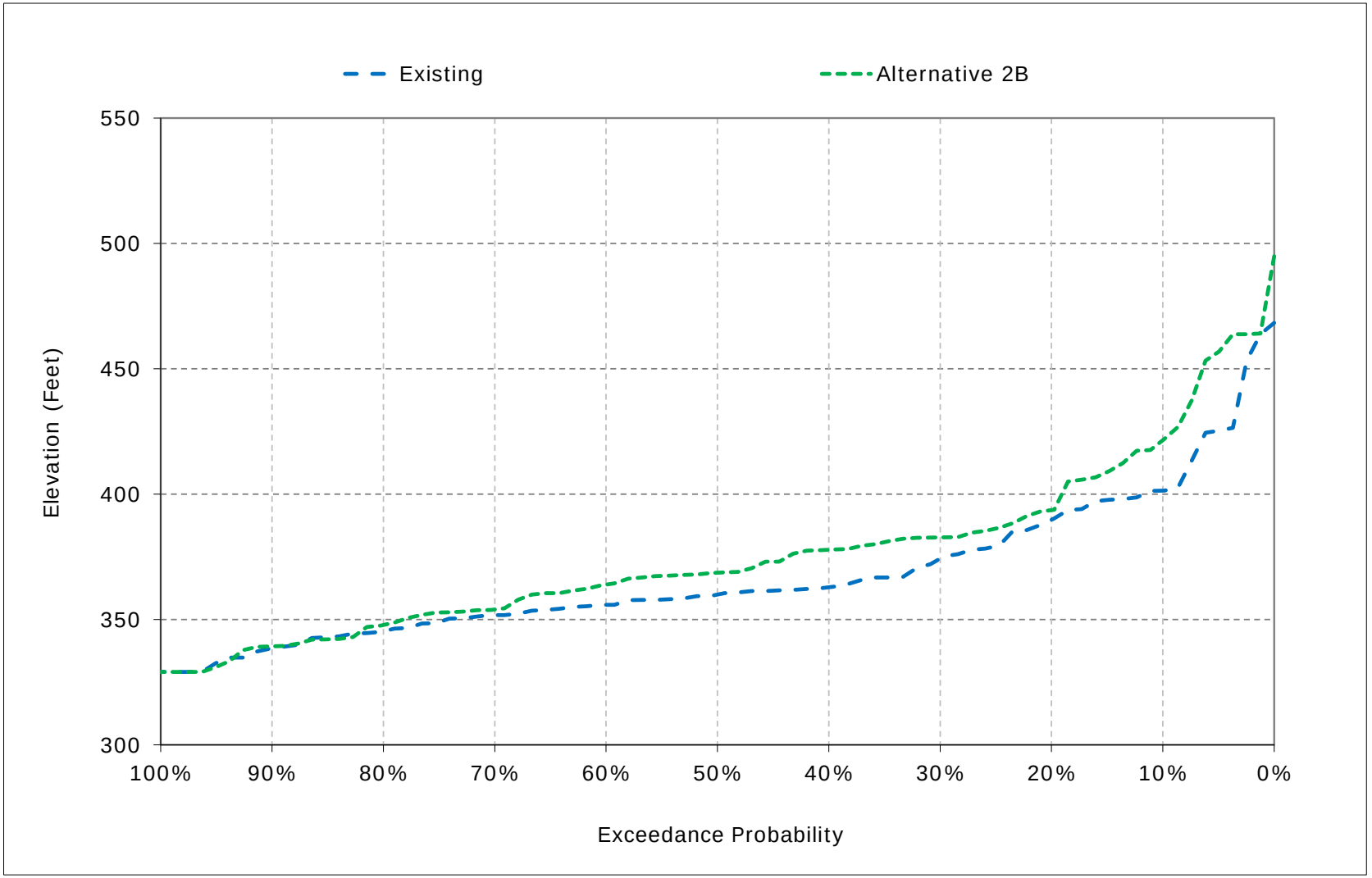
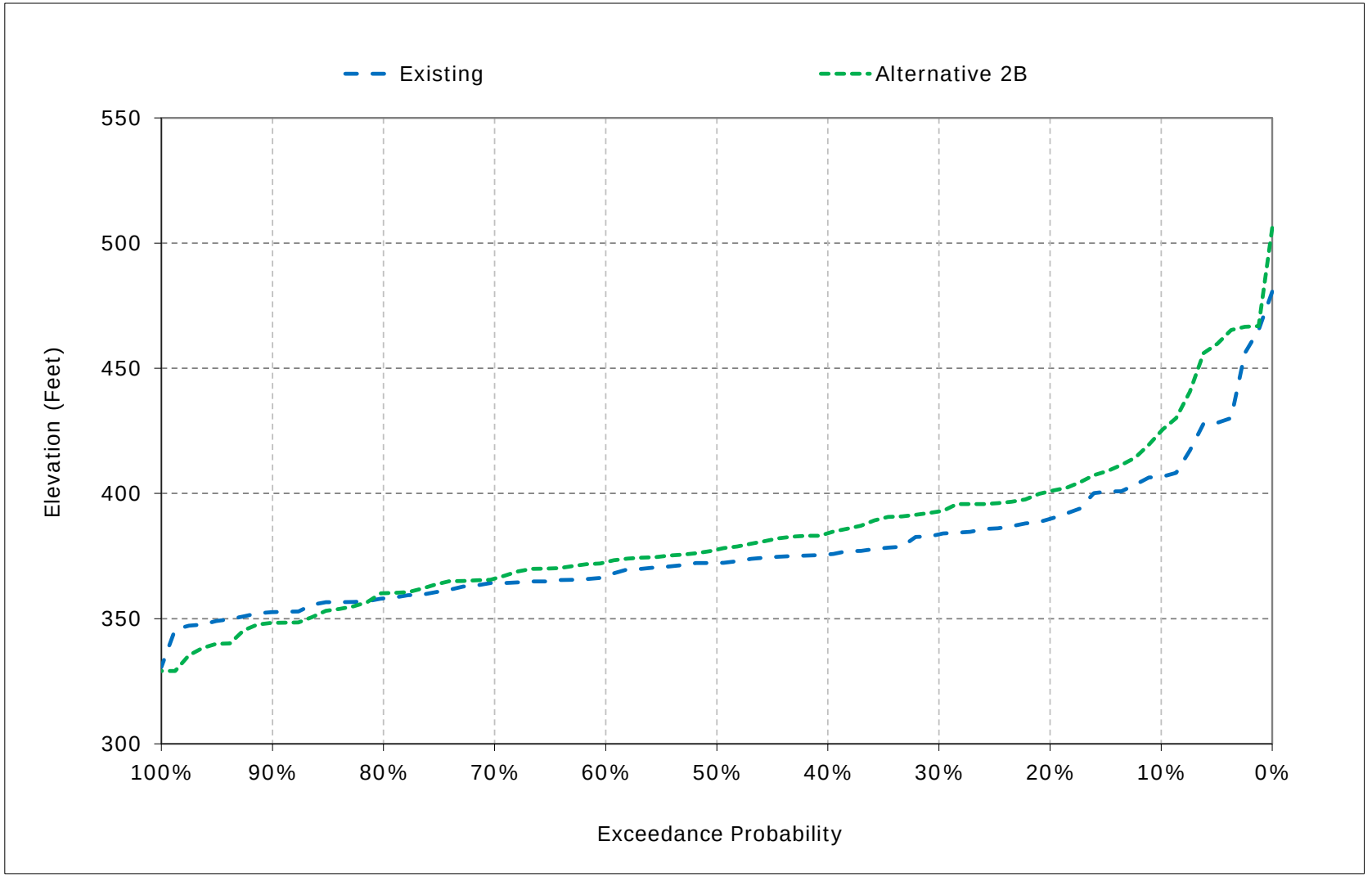


Figure 1b-**12**. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, September



# Table 1c-1. San Luis SWP Storage, End of Month Storage

## Existing

| Statistic | End of Month Storage (TAF) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 508 | 498 | 626 | 794 | 1,008 | 1,067 | 904 | 668 | 547 | 554 | 462 | 532 |
| 20% | 372 | 396 | 539 | 676 | 843 | 1,020 | 877 | 638 | 455 | 427 | 385 | 426 |
| 30% | 316 | 329 | 433 | 566 | 694 | 921 | 810 | 590 | 392 | 373 | 317 | 332 |
| 40% | 269 | 252 | 352 | 486 | 655 | 809 | 725 | 531 | 361 | 315 | 258 | 285 |
| 50% | 211 | 196 | 328 | 439 | 596 | 716 | 583 | 480 | 323 | 272 | 223 | 237 |
| 60% | 153 | 145 | 275 | 383 | 542 | 659 | 565 | 398 | 256 | 234 | 195 | 188 |
| 70% | 85 | 97 | 186 | 313 | 455 | 565 | 521 | 347 | 206 | 207 | 130 | 129 |
| 80% | 55 | 55 | 85 | 230 | 379 | 507 | 447 | 318 | 156 | 158 | 84 | 55 |
| 90% | 55 | 55 | 55 | 199 | 345 | 444 | 378 | 267 | 95 | 100 | 55 | 55 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 244 | 255 | 339 | 479 | 619 | 740 | 645 | 478 | 326 | 309 | 255 | 266 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 297 | 310 | 357 | 525 | 687 | 856 | 718 | 505 | 355 | 365 | 365 | 414 |
| Above Normal (15%) | 276 | 279 | 414 | 545 | 681 | 779 | 638 | 425 | 242 | 249 | 268 | 330 |
| Below Normal (17%) | 187 | 201 | 295 | 422 | 579 | 709 | 601 | 421 | 233 | 275 | 290 | 251 |
| Dry (22%) | 225 | 246 | 342 | 476 | 593 | 692 | 638 | 521 | 383 | 349 | 166 | 147 |
| Critical (15%) | 190 | 191 | 268 | 383 | 497 | 554 | 552 | 475 | 372 | 227 | 98 | 77 |

## Alternative 2B

| Statistic | End of Month Storage (TAF) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 606 | 763 | 910 | 1,043 | 1,067 | 1,067 | 988 | 784 | 599 | 581 | 543 | 589 |
| 20% | 497 | 637 | 756 | 883 | 1,011 | 1,067 | 925 | 727 | 531 | 536 | 488 | 479 |
| 30% | 467 | 558 | 652 | 821 | 926 | 1,004 | 896 | 695 | 479 | 485 | 387 | 442 |
| 40% | 398 | 531 | 584 | 696 | 835 | 925 | 811 | 646 | 447 | 430 | 328 | 401 |
| 50% | 325 | 369 | 471 | 583 | 728 | 849 | 754 | 577 | 401 | 378 | 291 | 321 |
| 60% | 137 | 196 | 272 | 400 | 608 | 686 | 641 | 497 | 339 | 287 | 230 | 139 |
| 70% | 55 | 77 | 57 | 252 | 457 | 563 | 525 | 379 | 227 | 201 | 55 | 55 |
| 80% | 55 | 55 | 55 | 212 | 335 | 419 | 359 | 249 | 139 | 144 | 55 | 55 |
| 90% | 55 | 55 | 55 | 199 | 318 | 371 | 319 | 215 | 79 | 55 | 55 | 55 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 308 | 376 | 434 | 568 | 695 | 763 | 691 | 542 | 383 | 369 | 292 | 301 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 373 | 476 | 518 | 680 | 836 | 936 | 876 | 708 | 560 | 568 | 471 | 497 |
| Above Normal (15%) | 354 | 435 | 516 | 640 | 748 | 809 | 707 | 547 | 384 | 412 | 358 | 440 |
| Below Normal (17%) | 259 | 325 | 400 | 518 | 674 | 728 | 642 | 480 | 310 | 361 | 380 | 333 |
| Dry (22%) | 311 | 352 | 428 | 555 | 644 | 695 | 616 | 478 | 308 | 226 | 68 | 61 |
| Critical (15%) | 169 | 195 | 217 | 335 | 437 | 482 | 446 | 345 | 193 | 119 | 73 | 62 |

## Alternative 2B minus Existing

| Statistic | End of Month Storage (TAF) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 98 | 265 | 284 | 249 | 59 | 0 | 84 | 116 | 52 | 27 | 81 | 57 |
| 20% | 125 | 241 | 217 | 207 | 168 | 47 | 48 | 89 | 76 | 109 | 103 | 53 |
| 30% | 151 | 229 | 219 | 255 | 232 | 82 | 86 | 105 | 87 | 111 | 70 | 110 |
| 40% | 129 | 279 | 231 | 210 | 180 | 116 | 86 | 115 | 86 | 115 | 70 | 116 |
| 50% | 114 | 173 | 143 | 144 | 132 | 133 | 171 | 97 | 79 | 106 | 68 | 84 |
| 60% | -16 | 51 | -3 | 17 | 66 | 26 | 77 | 99 | 83 | 54 | 35 | -49 |
| 70% | -30 | -20 | -129 | -61 | 2 | -2 | 4 | 32 | 21 | -6 | -75 | -74 |
| 80% | 0 | 0 | -30 | -18 | -43 | -88 | -88 | -70 | -17 | -13 | -29 | 0 |
| 90% | 0 | 0 | 0 | 0 | -27 | -73 | -59 | -51 | -16 | -45 | 0 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 64 | 121 | 95 | 89 | 76 | 23 | 47 | 64 | 56 | 60 | 37 | 35 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 76 | 166 | 161 | 155 | 149 | 81 | 158 | 203 | 205 | 202 | 106 | 83 |
| Above Normal (15%) | 78 | 157 | 102 | 95 | 67 | 30 | 70 | 122 | 142 | 163 | 90 | 110 |
| Below Normal (17%) | 72 | 124 | 105 | 96 | 94 | 19 | 41 | 59 | 77 | 86 | 90 | 82 |
| Dry (22%) | 86 | 106 | 85 | 78 | 51 | 3 | -23 | -43 | -75 | -123 | -98 | -86 |
| Critical (15%) | -21 | 5 | -51 | -48 | -59 | -73 | -106 | -129 | -179 | -108 | -25 | -14 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

Figure 1c-**1**. San Luis SWP Storage, End of October Storage

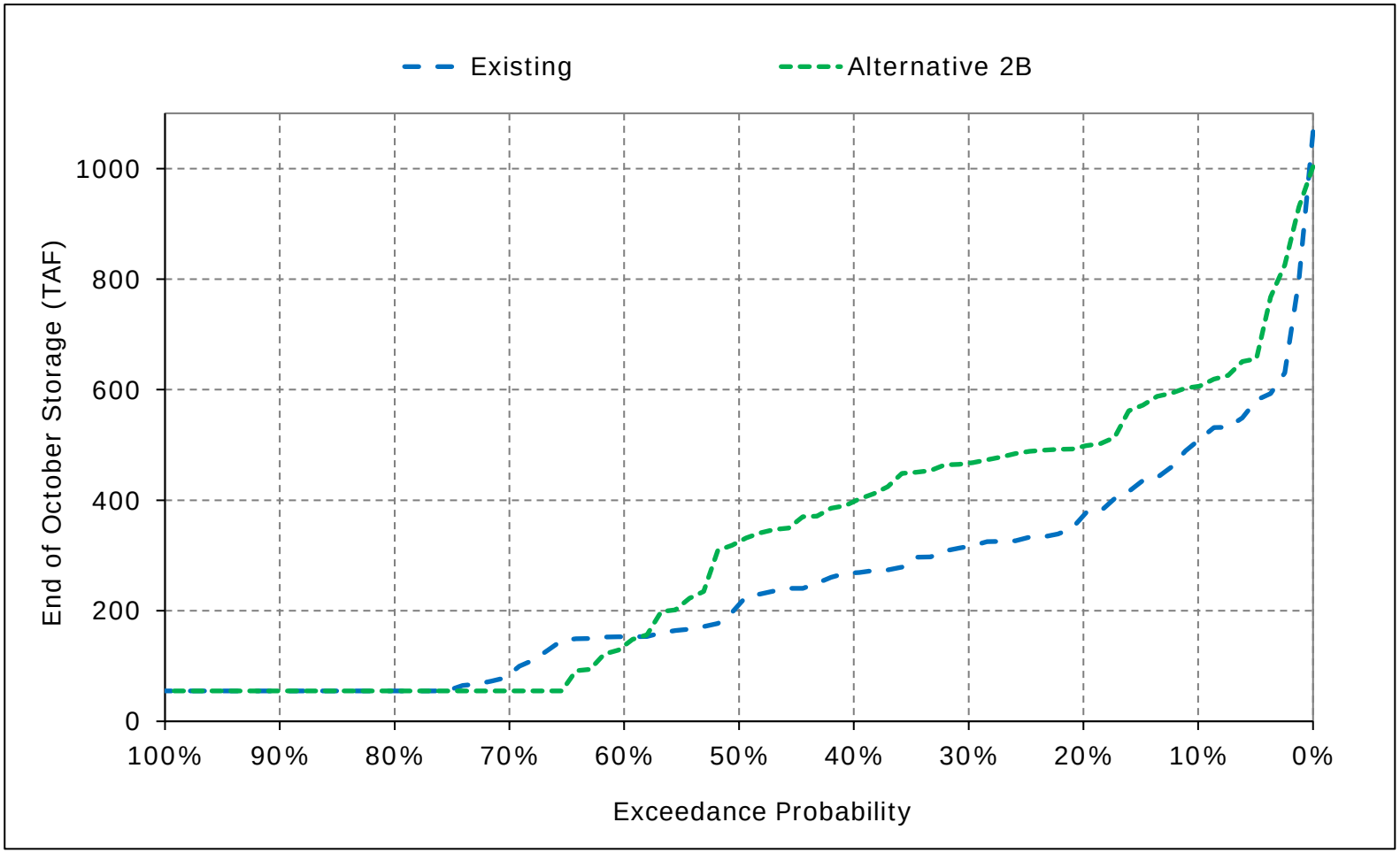


Figure 1c-**2**. San Luis SWP Storage, End of November Storage

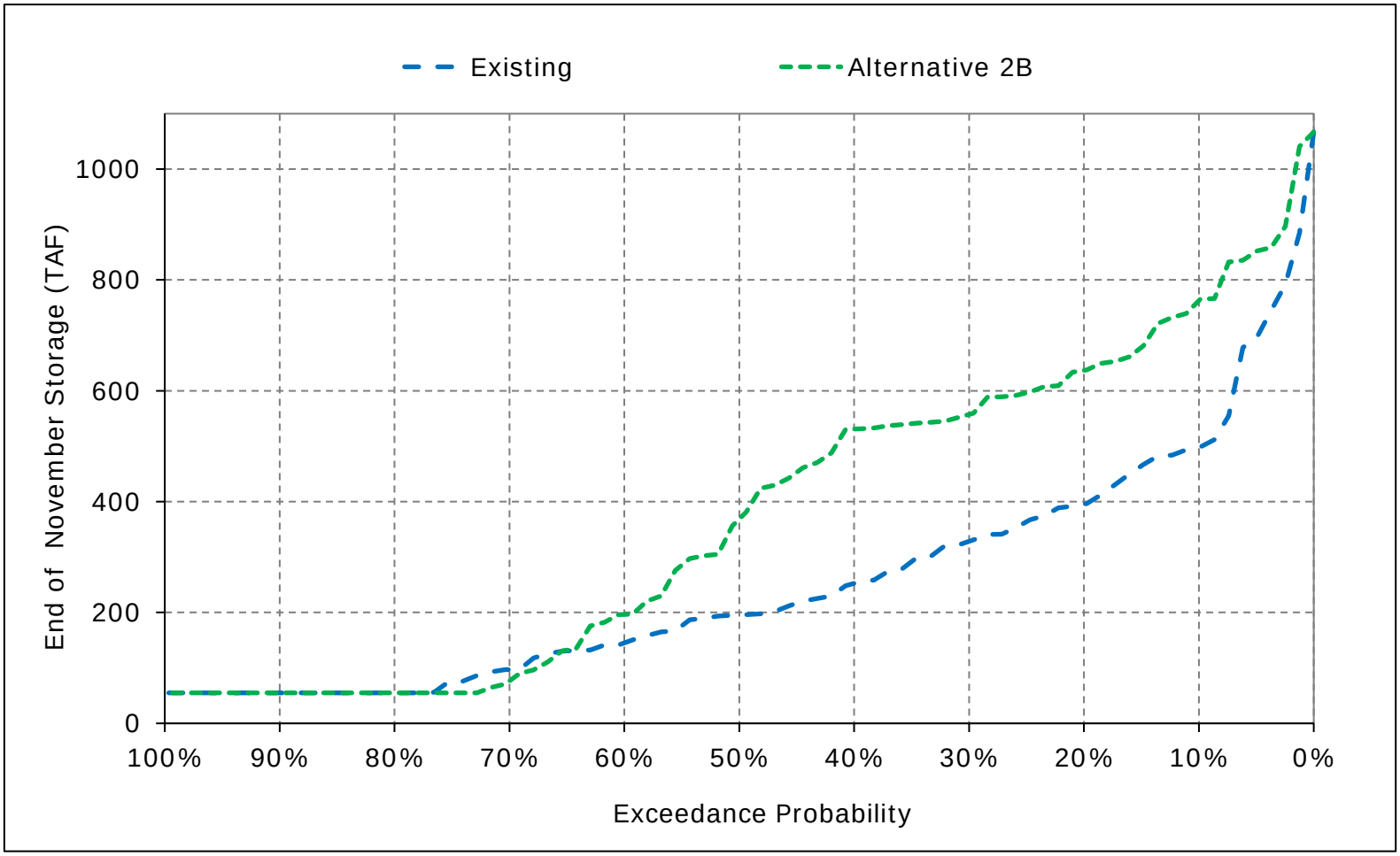


Figure 1c-**3**. San Luis SWP Storage, End of December Storage

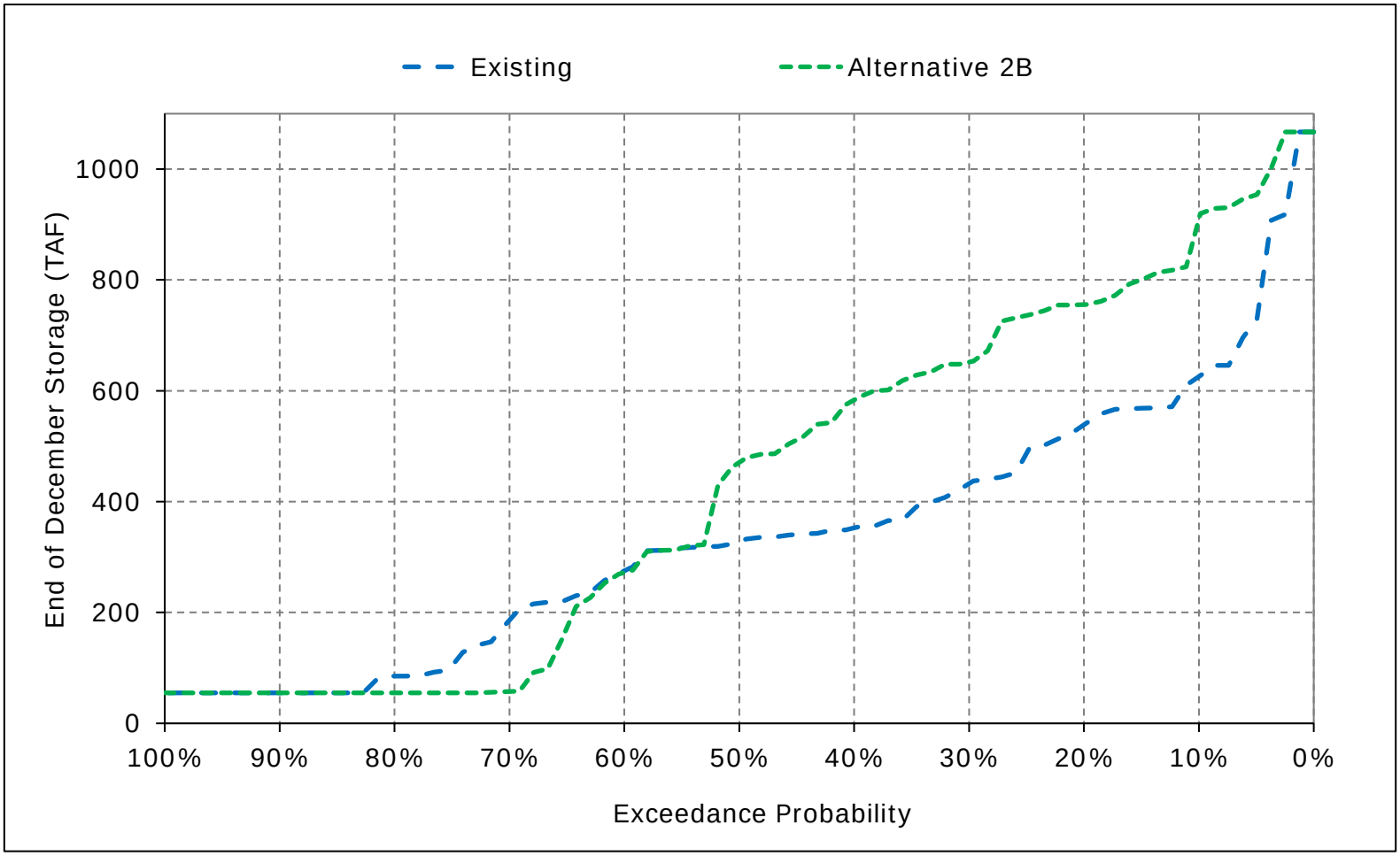


Figure 1c-**4**. San Luis SWP Storage, End of January Storage

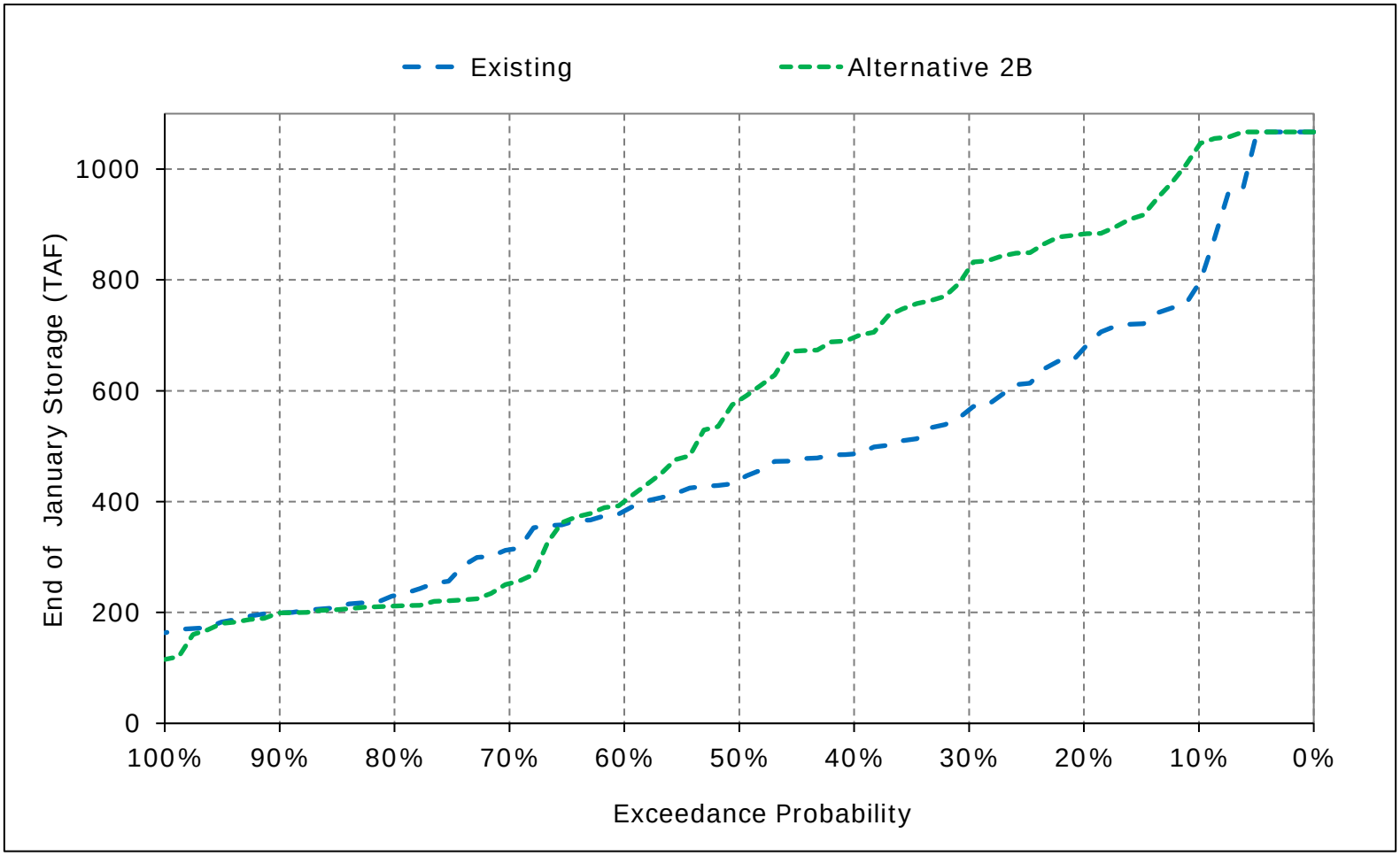


Figure 1c-**5**. San Luis SWP Storage, End of February Storage

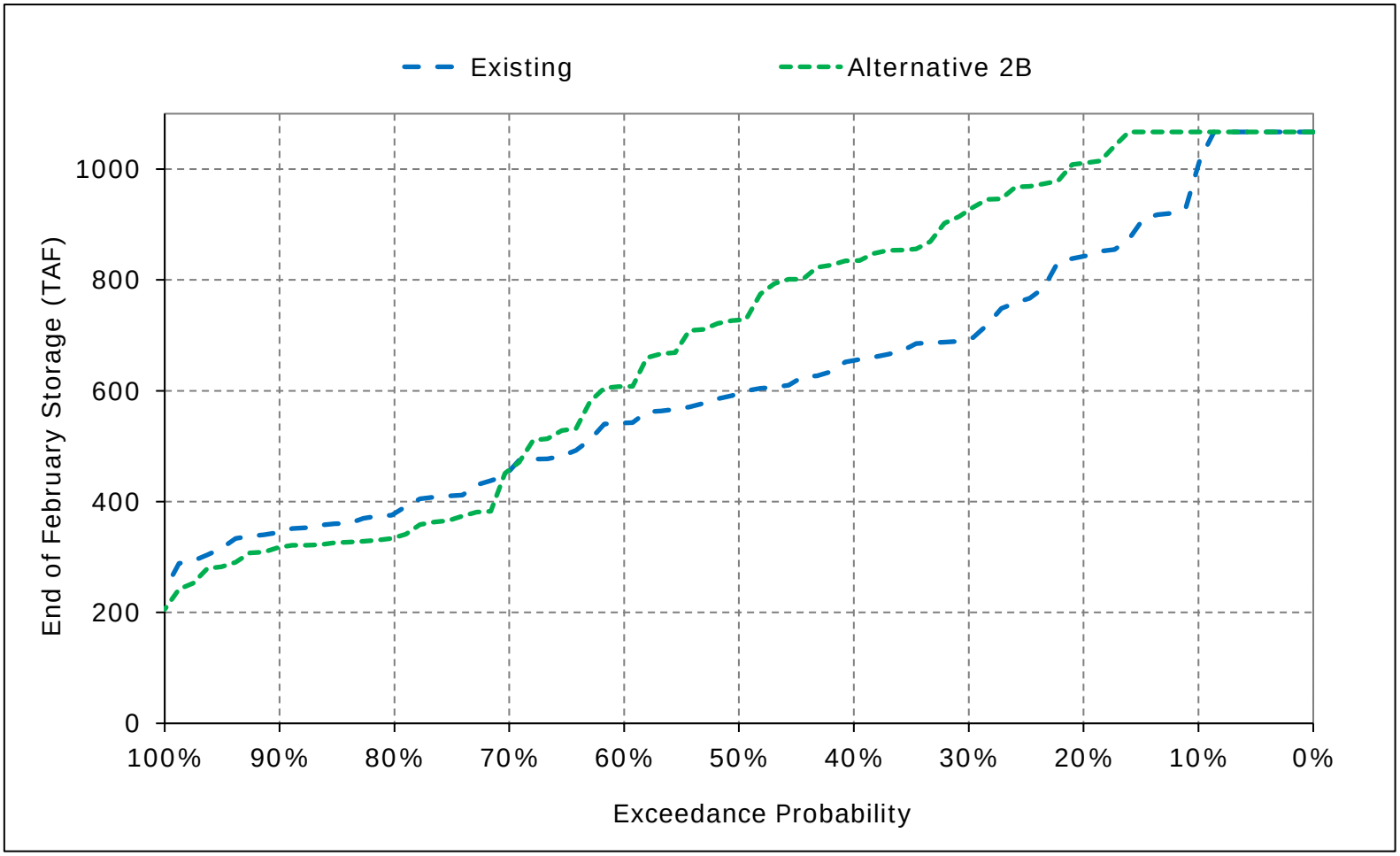


Figure 1c-**6**. San Luis SWP Storage, End of March Storage

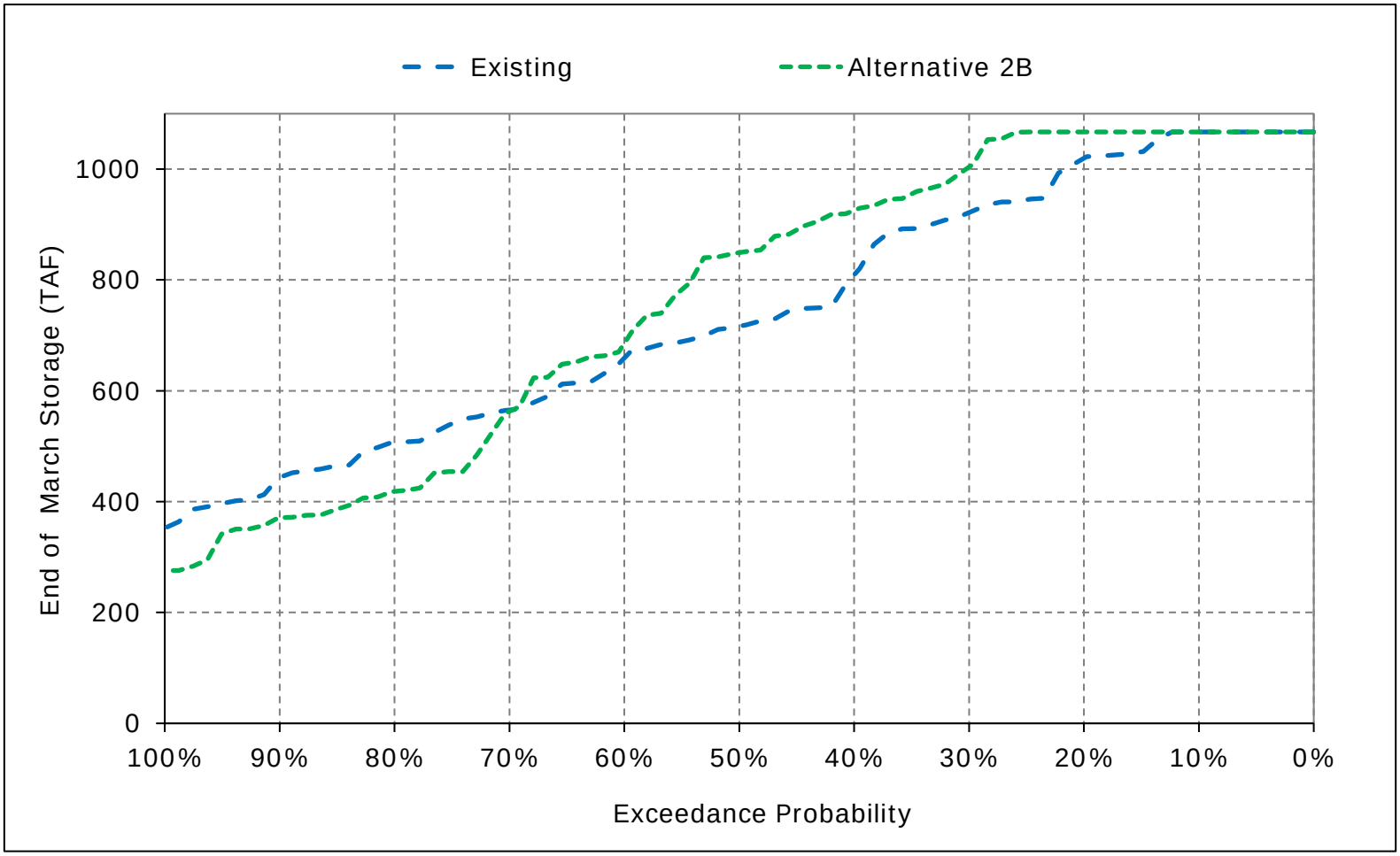


Figure 1c-**7**. San Luis SWP Storage, End of April Storage

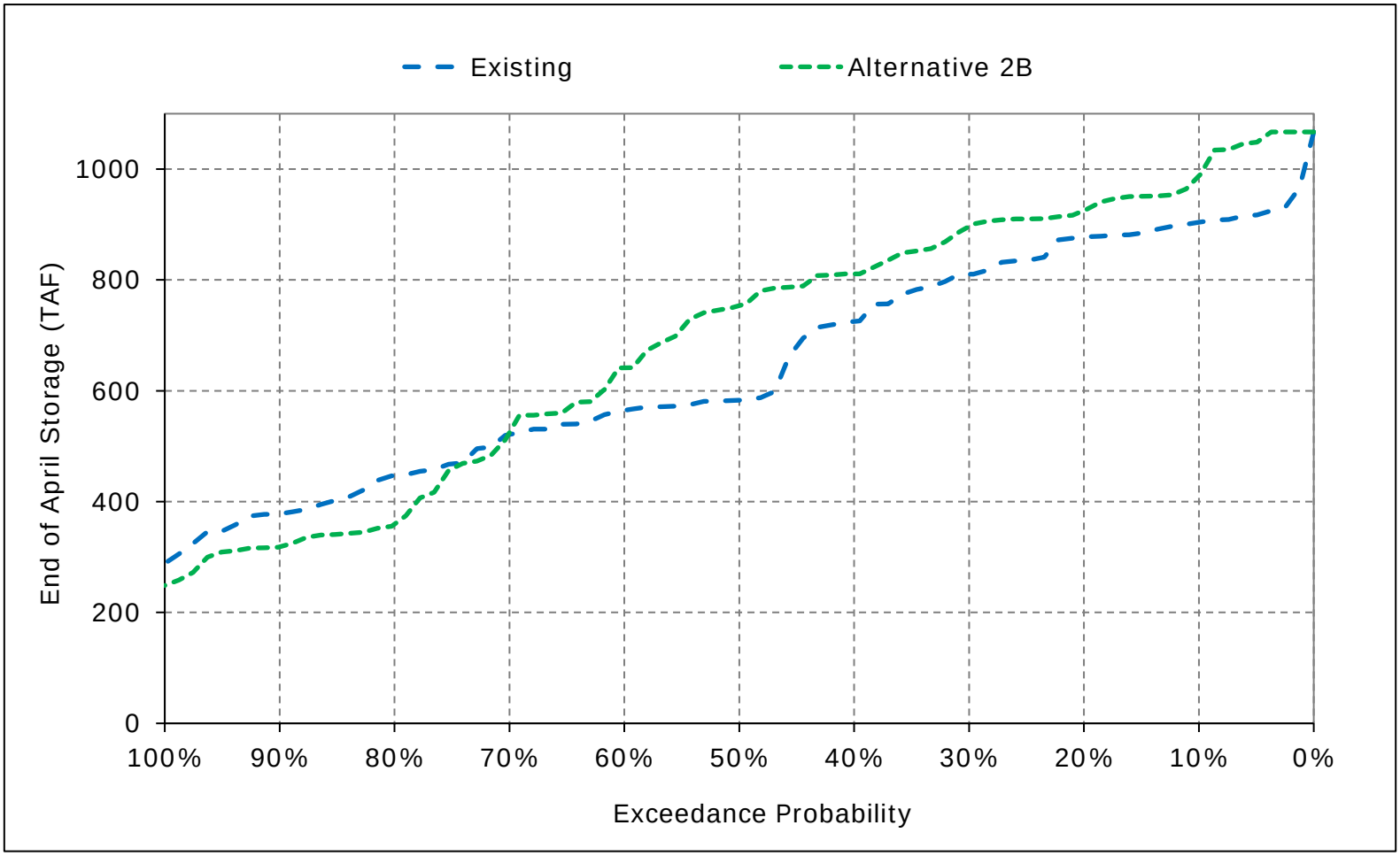


Figure 1c-**8**. San Luis SWP Storage, End of May Storage

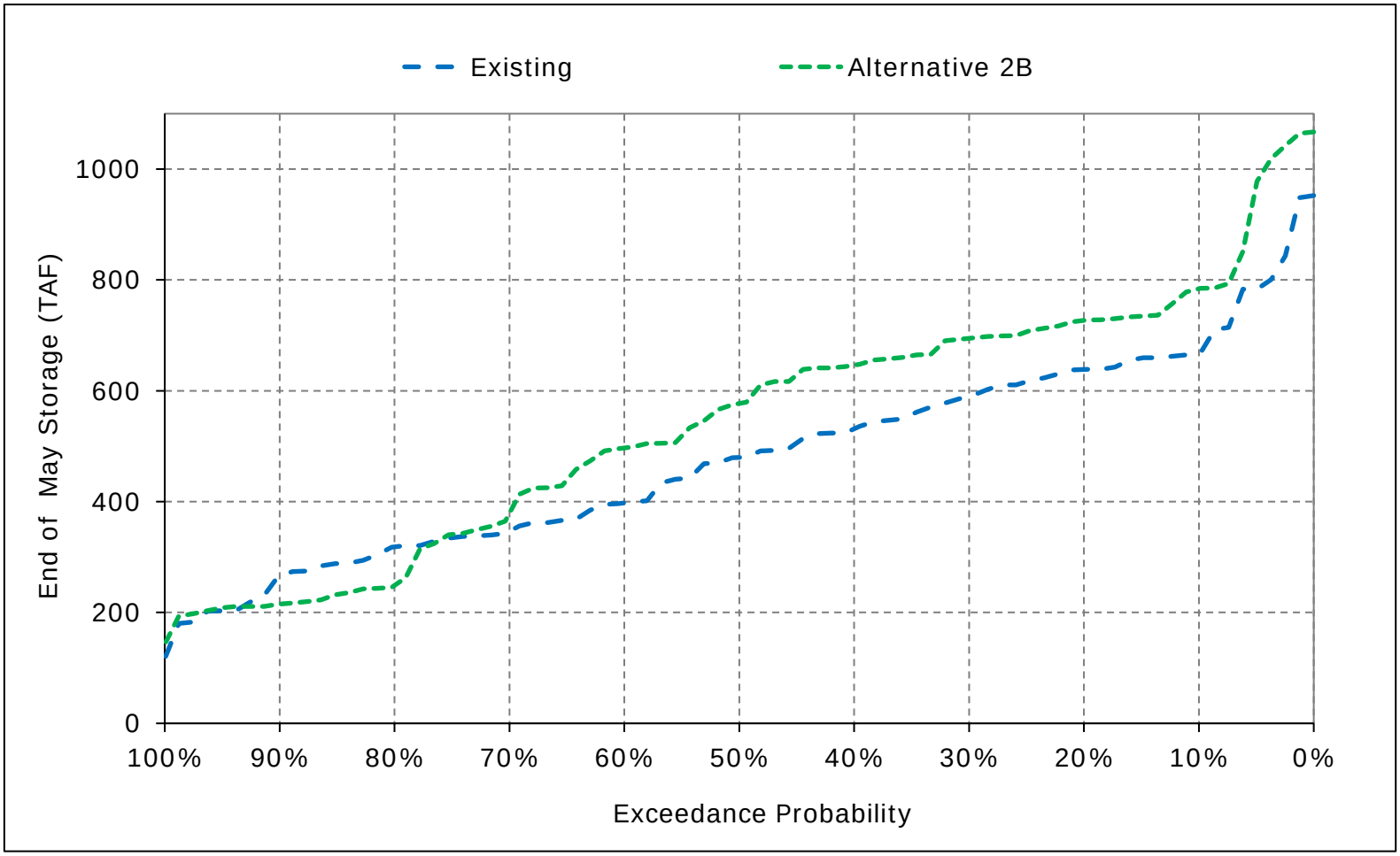


Figure 1c-**9**. San Luis SWP Storage, End of June Storage

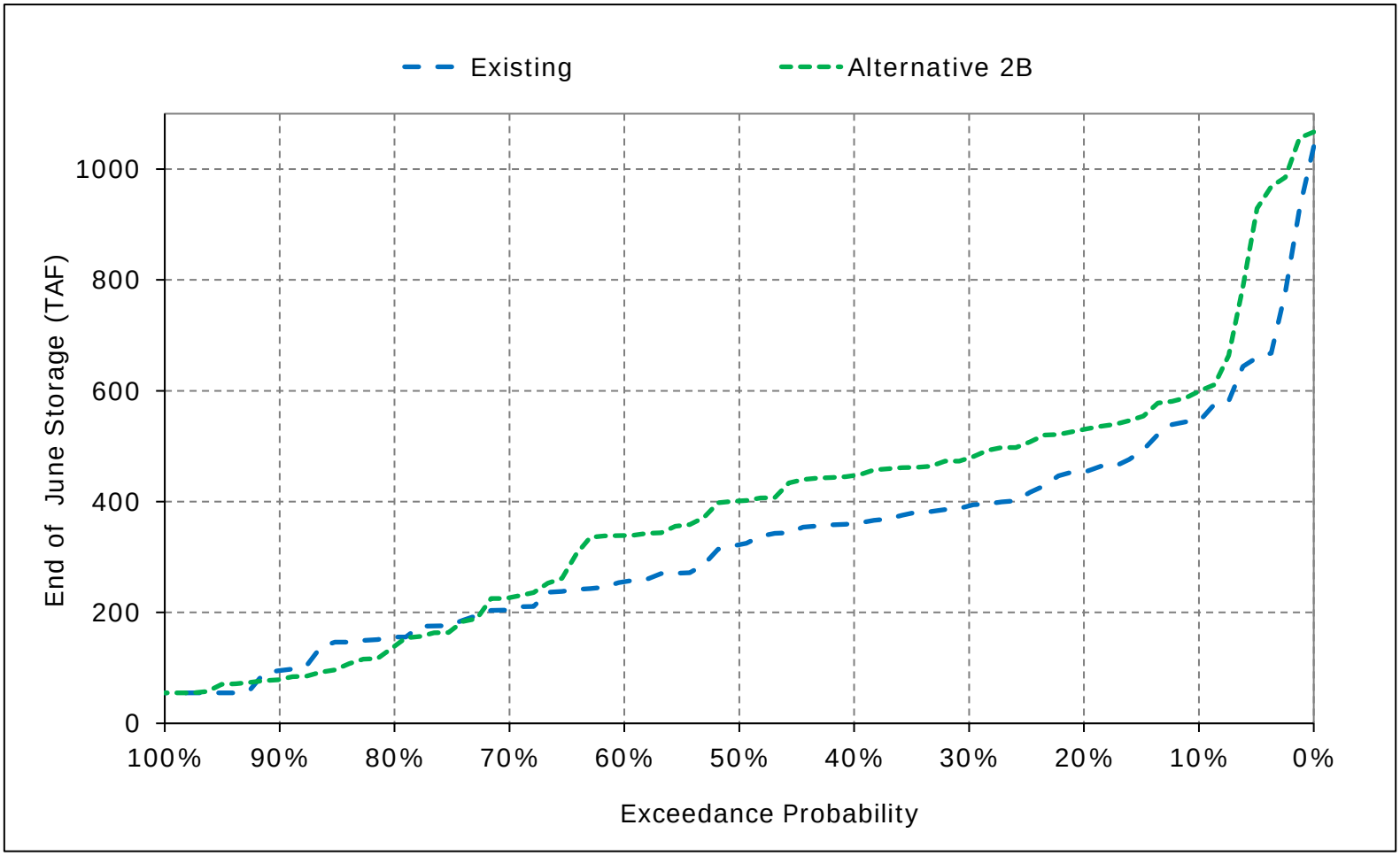


Figure 1c-**10**. San Luis SWP Storage, End of July Storage

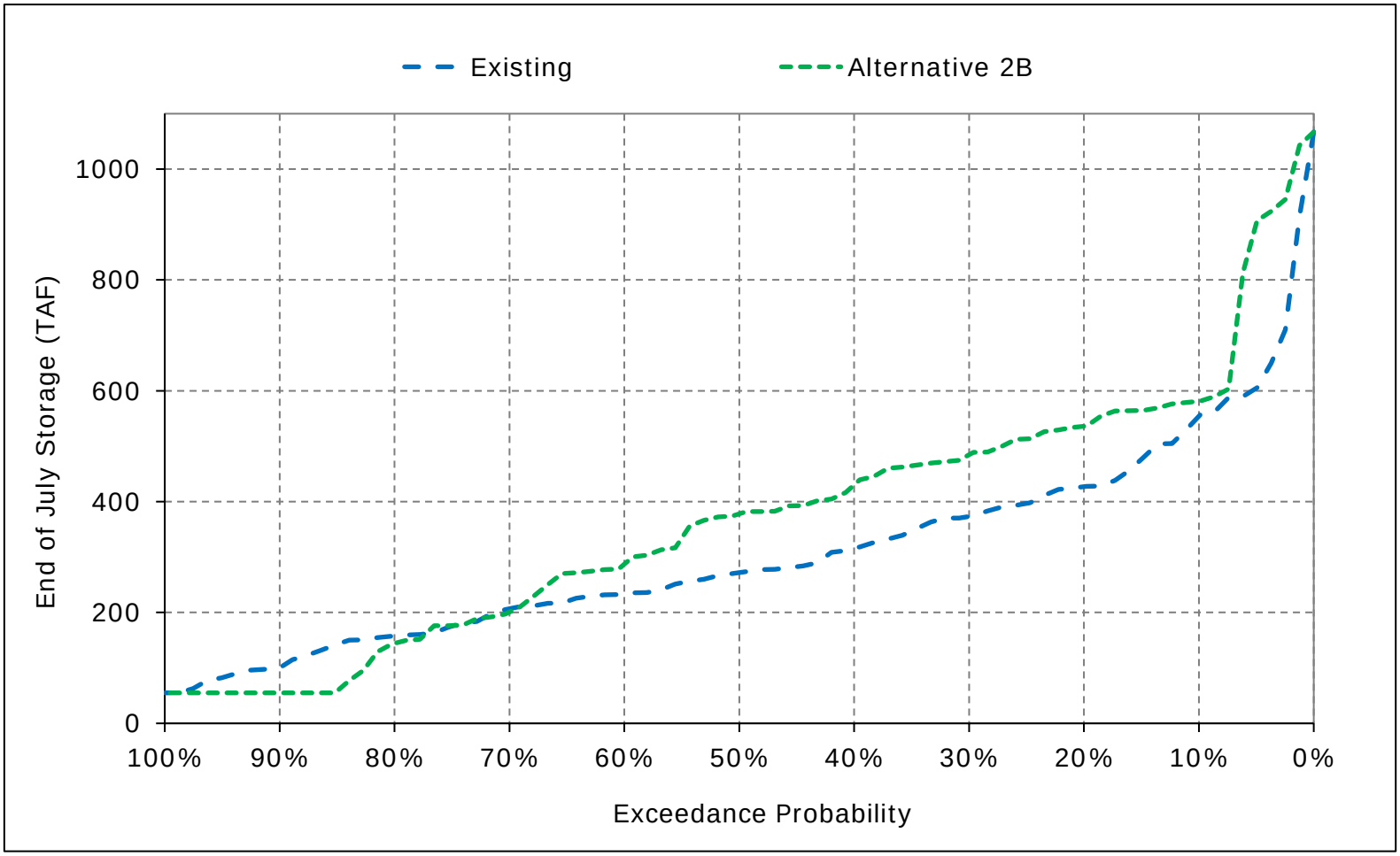


Figure 1c-**11**. San Luis SWP Storage, End of August Storage

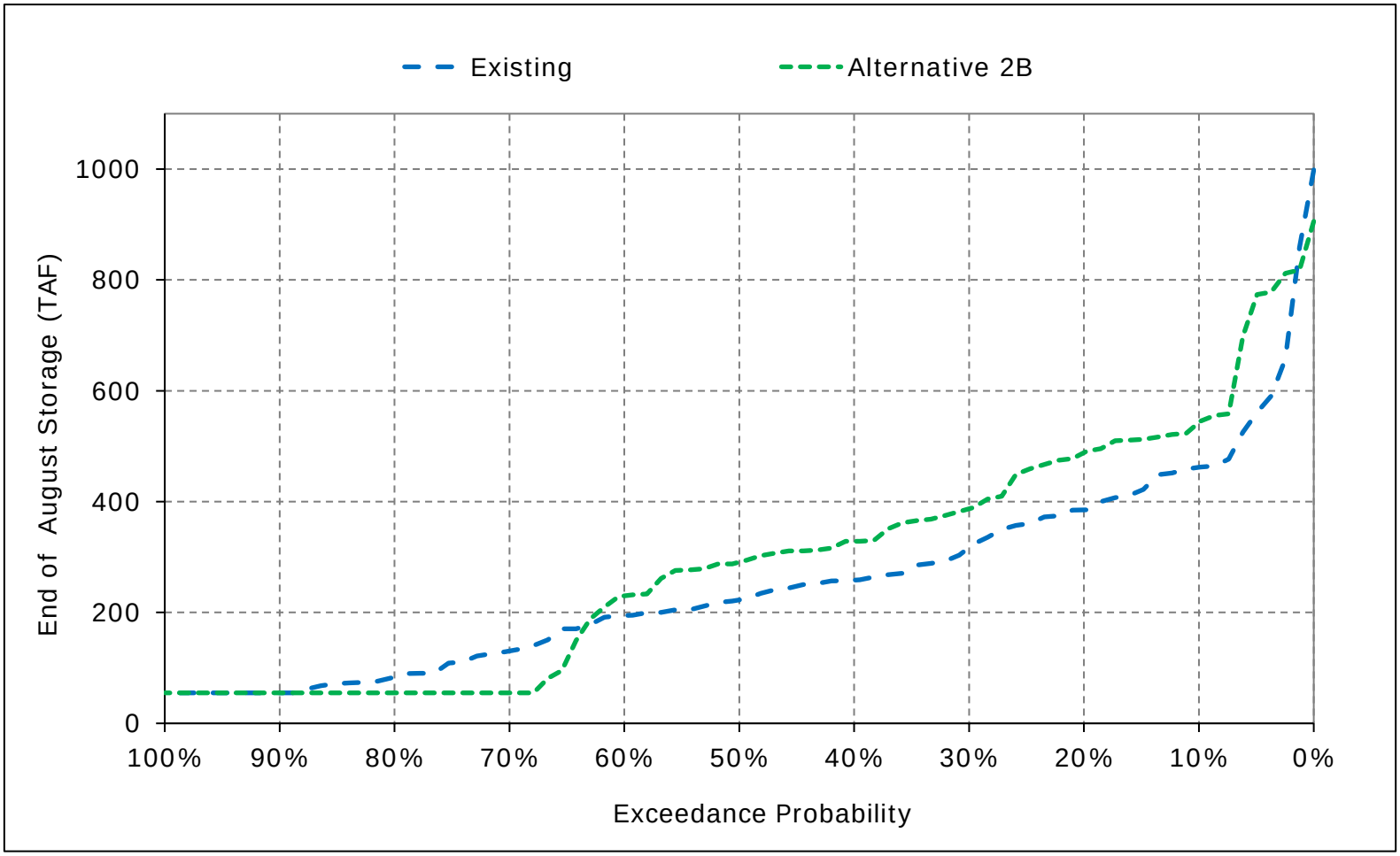
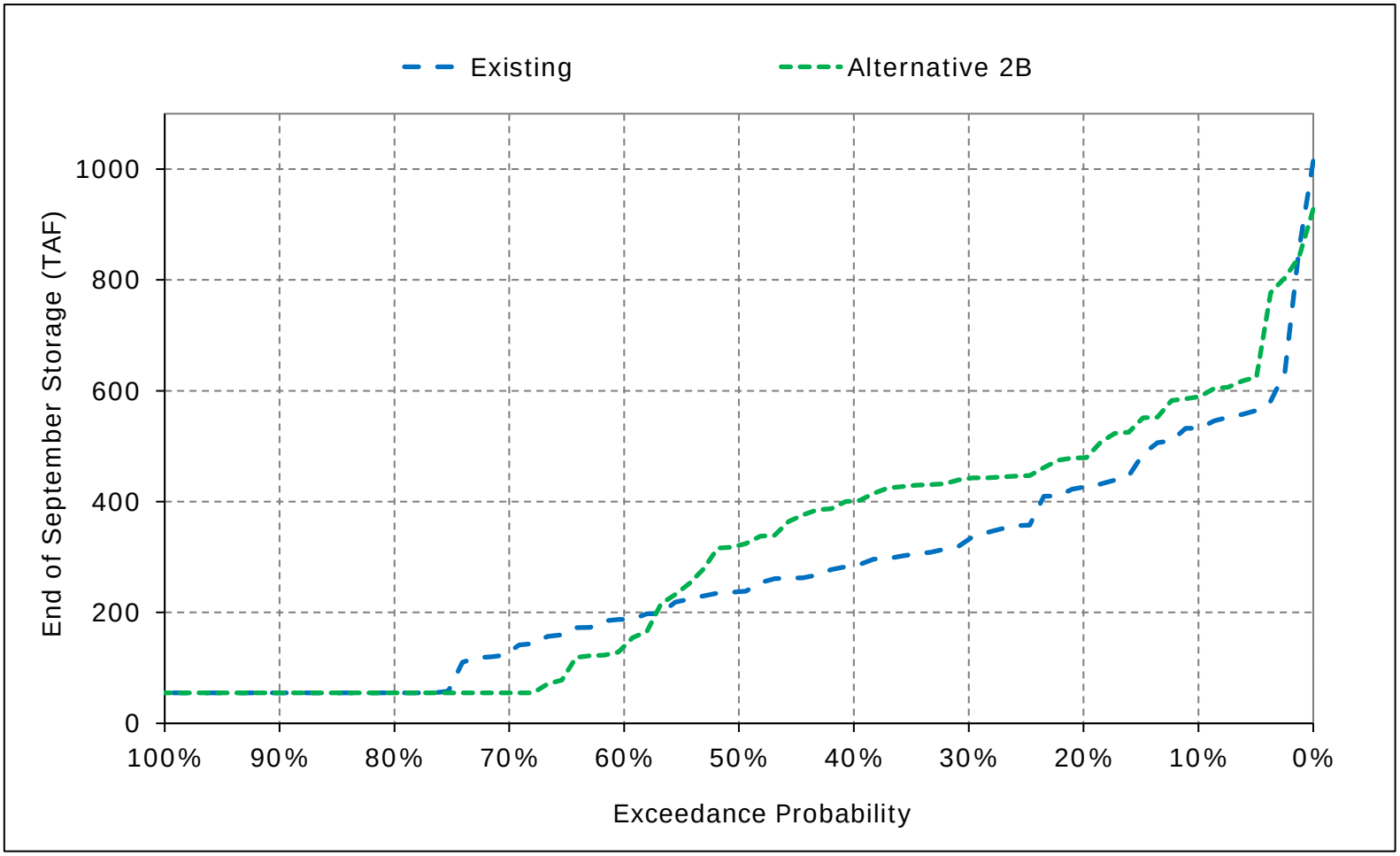


Figure 1c-**12**. San Luis SWP Storage, End of September Storage



**Appendix C – Modeling**

**Attachment 3-2 – Flow Results (CalSim II)**

***NOTE: Attachment 3-2 is a new attachment that has been added to the DEIR since initial publication, as part of the FEIR process. The additional attachment is not shown in underline for ease of reading.***

The following results of the CalSim II model are included for river flow conditions for the following alternatives:

- Existing Conditions
- Refined Alternative 2b

| Title | Model Parameter | Table Numbers | Figure Numbers |
|---|---|---|---|
| Sacramento River Flow at Freeport | C169 | 1-1 | 1-1 to 1-18 |
| Georgiana Slough Flow | D401B_GEO | 2-1 | 2-1 to 2-18 |
| Yolo Bypass Flow | C157 | 3-1 | 3-1 to 3-18 |
| Sacramento River Flow at Rio Vista | C405 | 4-1 | 4-1 to 4-18 |
| San Joaquin River at Vernalis | C639 | 5-1 | 5-1 to 5-18 |
| Mokelumne River Below Consumnes | C504 | 6-1 | 6-1 to 6-18 |
| Old and Middle River Flow | C408 | 7-1 | 7-1 to 7-18 |
| Qwest | C416A | 8-1 | 8-1 to 8-18 |
| Delta Outflow | C406 | 9-1 | 9-1 to 9-18 |

Report formats

- Monthly tables comparing two scenarios (exceedance values, long-term average, and average by water year type)
- Monthly pattern charts (long-term average and average by water year type) including all scenarios
- Monthly exceedance charts (all months) including all scenarios

## Table 1-1. Sacramento River Flow at Freeport, Monthly Flow

### Existing

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 13,766 | 22,073 | 48,752 | 63,157 | 68,384 | 62,394 | 52,923 | 41,803 | 26,593 | 24,522 | 16,963 | 30,152 |
| 20% | 13,332 | 19,621 | 32,185 | 55,411 | 60,806 | 52,865 | 40,600 | 29,832 | 19,988 | 22,968 | 16,238 | 29,429 |
| 30% | 12,763 | 18,605 | 21,963 | 38,417 | 49,902 | 39,929 | 26,021 | 19,236 | 15,420 | 21,584 | 16,006 | 24,061 |
| 40% | 11,546 | 16,220 | 18,343 | 26,706 | 45,009 | 33,941 | 23,119 | 14,886 | 14,831 | 19,917 | 15,770 | 21,992 |
| 50% | 10,520 | 14,888 | 15,589 | 20,626 | 34,615 | 26,439 | 18,461 | 12,887 | 14,467 | 19,155 | 15,543 | 14,610 |
| 60% | 9,213 | 12,135 | 15,117 | 18,712 | 26,295 | 21,695 | 15,302 | 11,820 | 14,035 | 17,518 | 14,469 | 11,310 |
| 70% | 8,522 | 10,419 | 13,252 | 14,718 | 20,073 | 19,289 | 13,396 | 10,805 | 13,099 | 16,490 | 10,614 | 9,977 |
| 80% | 8,051 | 9,021 | 10,982 | 13,213 | 16,888 | 15,732 | 11,576 | 10,231 | 12,322 | 14,778 | 9,349 | 9,445 |
| 90% | 6,705 | 7,877 | 9,715 | 12,233 | 14,026 | 11,430 | 10,003 | 8,633 | 11,596 | 10,527 | 8,394 | 7,551 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 10,902 | 16,017 | 22,564 | 30,820 | 37,978 | 32,595 | 24,891 | 19,312 | 17,132 | 18,361 | 13,660 | 17,819 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 12,658 | 21,062 | 36,113 | 50,121 | 57,672 | 49,926 | 40,193 | 31,908 | 23,827 | 20,207 | 16,271 | 28,817 |
| Above Normal (15%) | 10,615 | 16,983 | 22,363 | 37,320 | 45,427 | 43,052 | 27,490 | 21,850 | 16,431 | 21,886 | 16,401 | 22,366 |
| Below Normal (17%) | 10,453 | 14,106 | 16,596 | 21,953 | 32,254 | 22,985 | 19,573 | 14,371 | 14,588 | 20,870 | 15,568 | 12,979 |
| Dry (22%) | 10,048 | 13,410 | 15,147 | 16,518 | 23,267 | 20,656 | 14,489 | 10,764 | 14,050 | 16,782 | 9,809 | 9,645 |
| Critical (15%) | 9,190 | 10,263 | 11,497 | 14,298 | 16,601 | 13,704 | 10,947 | 8,065 | 10,921 | 10,281 | 8,813 | 7,354 |

### Alternative 2B

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 14,459 | 22,449 | 50,117 | 63,822 | 68,599 | 62,744 | 52,929 | 41,804 | 26,592 | 23,560 | 16,996 | 23,905 |
| 20% | 13,638 | 14,921 | 34,374 | 56,356 | 61,305 | 52,989 | 40,605 | 29,978 | 19,993 | 22,601 | 16,377 | 23,463 |
| 30% | 12,797 | 14,022 | 22,526 | 40,735 | 51,638 | 42,464 | 25,791 | 19,236 | 16,005 | 21,385 | 16,040 | 22,610 |
| 40% | 11,583 | 13,562 | 18,479 | 27,733 | 45,949 | 33,989 | 23,092 | 14,881 | 15,321 | 19,655 | 15,851 | 19,792 |
| 50% | 10,895 | 12,892 | 15,584 | 24,423 | 34,563 | 26,432 | 18,441 | 14,059 | 15,002 | 19,122 | 15,534 | 14,649 |
| 60% | 9,172 | 11,599 | 14,382 | 18,977 | 26,316 | 22,026 | 14,928 | 12,794 | 14,575 | 17,656 | 14,259 | 10,821 |
| 70% | 8,302 | 10,545 | 13,710 | 15,064 | 21,642 | 19,325 | 13,211 | 11,324 | 13,915 | 16,209 | 10,840 | 10,039 |
| 80% | 8,039 | 8,636 | 12,069 | 12,606 | 17,575 | 14,985 | 11,932 | 10,280 | 12,750 | 14,059 | 9,677 | 9,351 |
| 90% | 6,781 | 7,351 | 9,703 | 11,650 | 14,458 | 11,769 | 10,431 | 9,366 | 11,963 | 10,689 | 8,917 | 7,552 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 11,062 | 14,367 | 23,049 | 31,196 | 38,389 | 32,894 | 24,912 | 19,653 | 17,529 | 18,126 | 13,704 | 15,845 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 12,986 | 18,883 | 37,747 | 50,658 | 57,990 | 50,104 | 40,145 | 31,946 | 23,900 | 19,872 | 16,229 | 22,196 |
| Above Normal (15%) | 10,781 | 14,693 | 22,118 | 38,421 | 46,034 | 44,018 | 27,453 | 21,893 | 17,206 | 21,372 | 16,467 | 23,388 |
| Below Normal (17%) | 10,714 | 12,604 | 16,519 | 23,195 | 33,497 | 23,267 | 19,556 | 14,972 | 15,473 | 20,680 | 15,488 | 12,665 |
| Dry (22%) | 9,922 | 12,243 | 15,318 | 16,291 | 23,145 | 20,773 | 14,643 | 11,598 | 14,508 | 16,365 | 9,974 | 9,663 |
| Critical (15%) | 9,289 | 9,498 | 11,346 | 13,493 | 16,848 | 13,899 | 11,019 | 8,320 | 10,981 | 10,760 | 8,981 | 7,526 |

### Alternative 2B minus Existing

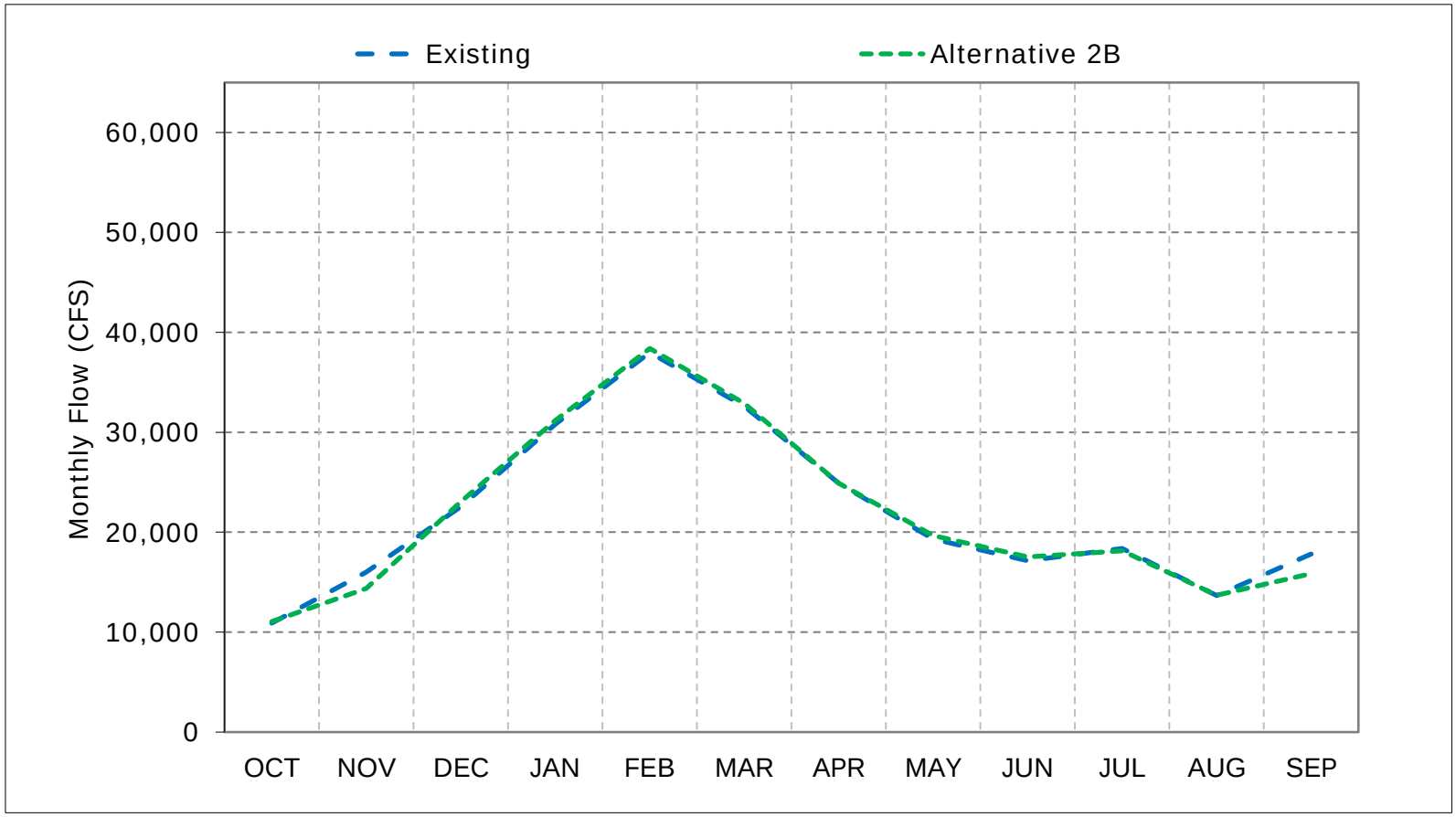
| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 693 | 375 | 1,365 | 665 | 216 | 350 | 6 | 2 | -1 | -963 | 32 | -6,247 |
| 20% | 306 | -4,700 | 2,189 | 945 | 499 | 124 | 5 | 145 | 5 | -367 | 139 | -5,966 |
| 30% | 34 | -4,583 | 563 | 2,318 | 1,736 | 2,535 | -230 | 0 | 585 | -199 | 34 | -1,451 |
| 40% | 37 | -2,658 | 136 | 1,028 | 940 | 48 | -27 | -5 | 490 | -262 | 81 | -2,200 |
| 50% | 375 | -1,996 | -5 | 3,797 | -52 | -7 | -19 | 1,172 | 534 | -33 | -9 | 39 |
| 60% | -41 | -536 | -734 | 265 | 21 | 331 | -374 | 973 | 540 | 139 | -210 | -489 |
| 70% | -220 | 127 | 458 | 346 | 1,569 | 36 | -185 | 519 | 817 | -281 | 226 | 61 |
| 80% | -12 | -386 | 1,087 | -607 | 687 | -747 | 356 | 49 | 428 | -719 | 328 | -94 |
| 90% | 76 | -525 | -13 | -583 | 432 | 340 | 429 | 734 | 367 | 162 | 523 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 160 | -1,650 | 484 | 376 | 411 | 300 | 21 | 341 | 397 | -235 | 43 | -1,974 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 328 | -2,179 | 1,634 | 538 | 318 | 178 | -49 | 37 | 73 | -335 | -41 | -6,621 |
| Above Normal (15%) | 166 | -2,290 | -245 | 1,101 | 607 | 965 | -37 | 43 | 775 | -514 | 65 | 1,022 |
| Below Normal (17%) | 261 | -1,502 | -77 | 1,242 | 1,243 | 282 | -17 | 601 | 886 | -190 | -81 | -314 |
| Dry (22%) | -125 | -1,167 | 172 | -227 | -121 | 117 | 154 | 834 | 457 | -417 | 165 | 18 |
| Critical (15%) | 99 | -765 | -152 | -805 | 247 | 195 | 72 | 255 | 61 | 479 | 167 | 172 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

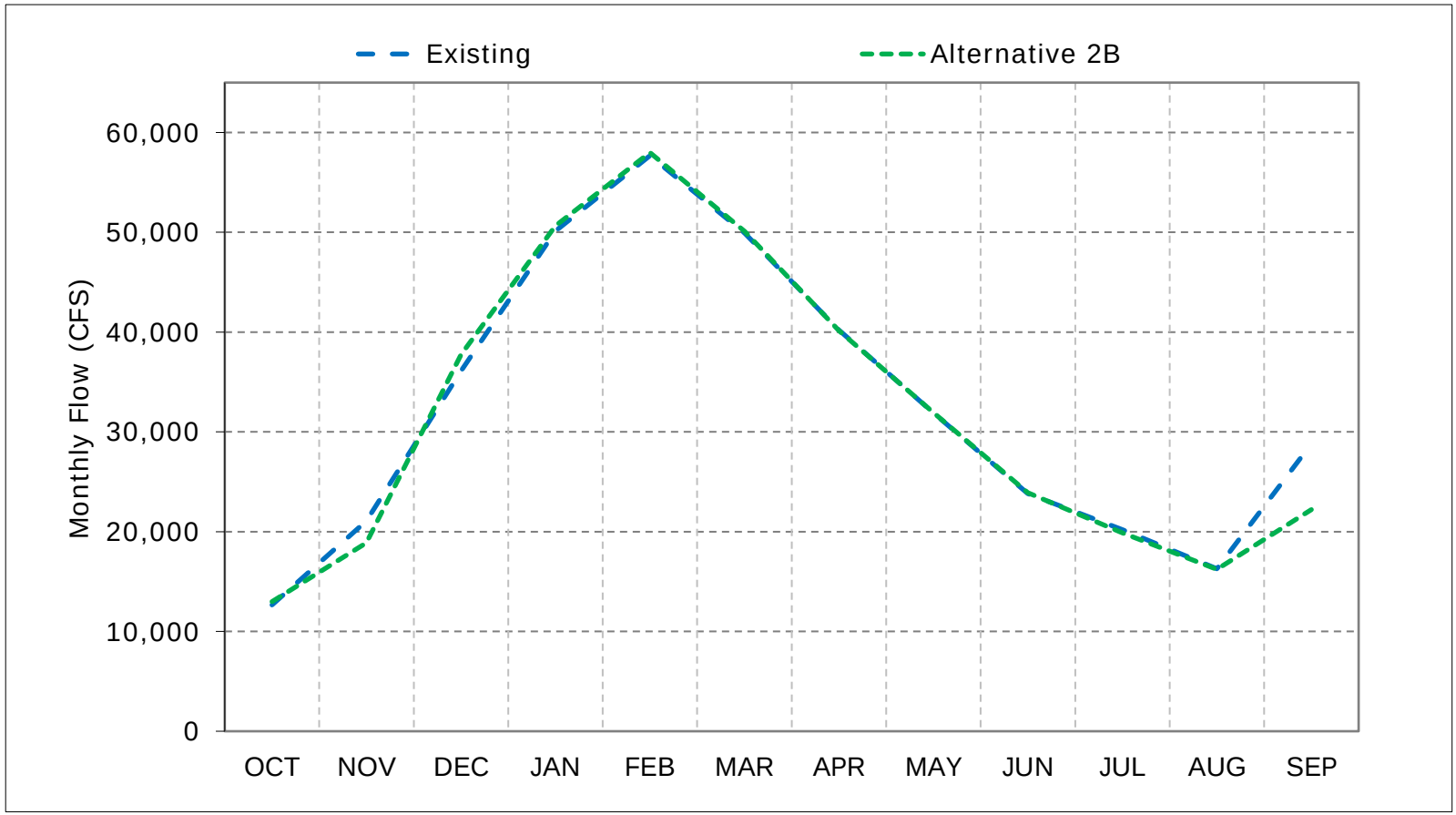
Figure 1-1. Sacramento River Flow at Freeport, Long-Term Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

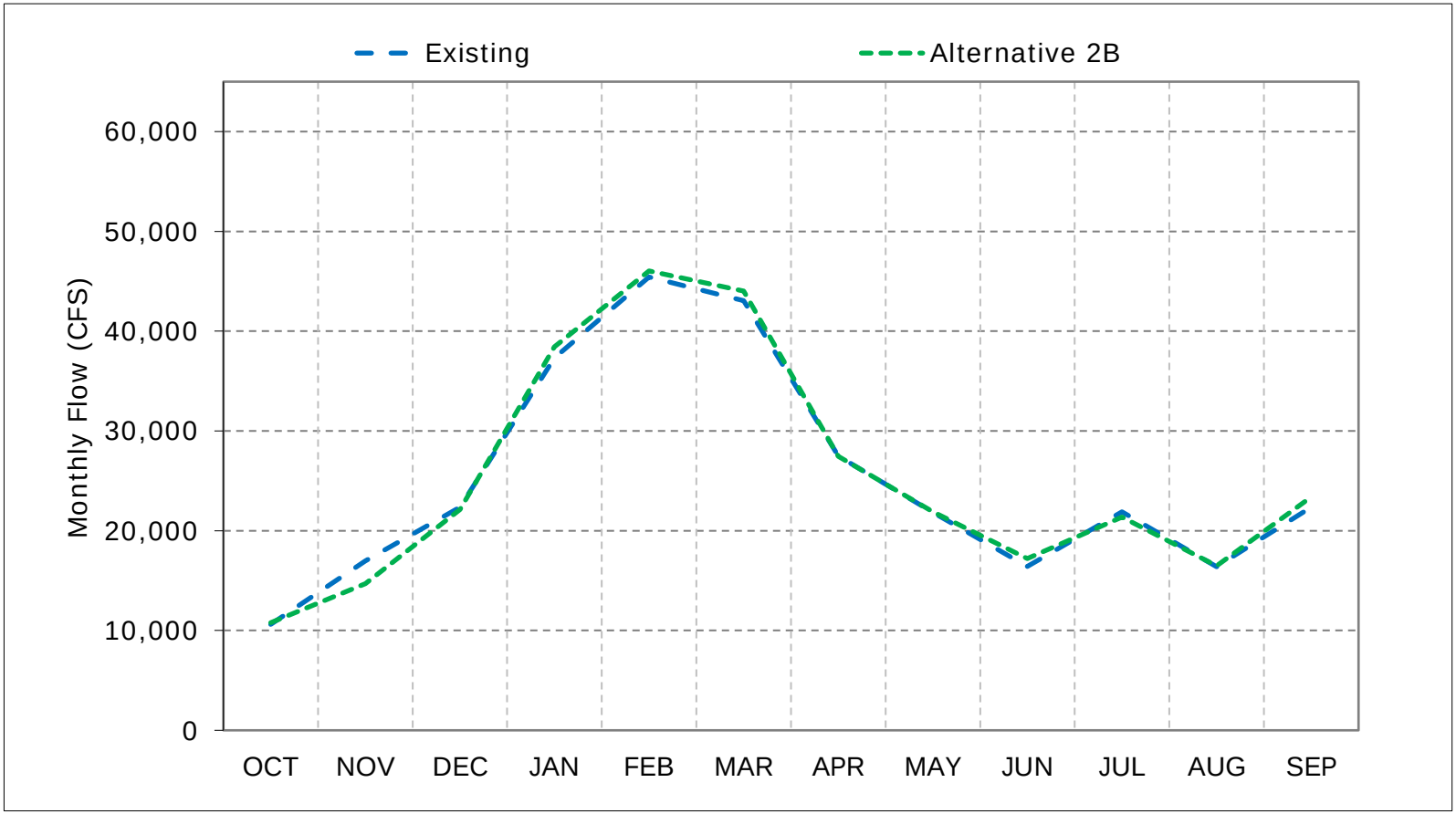
*These results are displayed with water year - year type sorting.

Figure 1-2. Sacramento River Flow at Freeport, Wet Year Average Flow



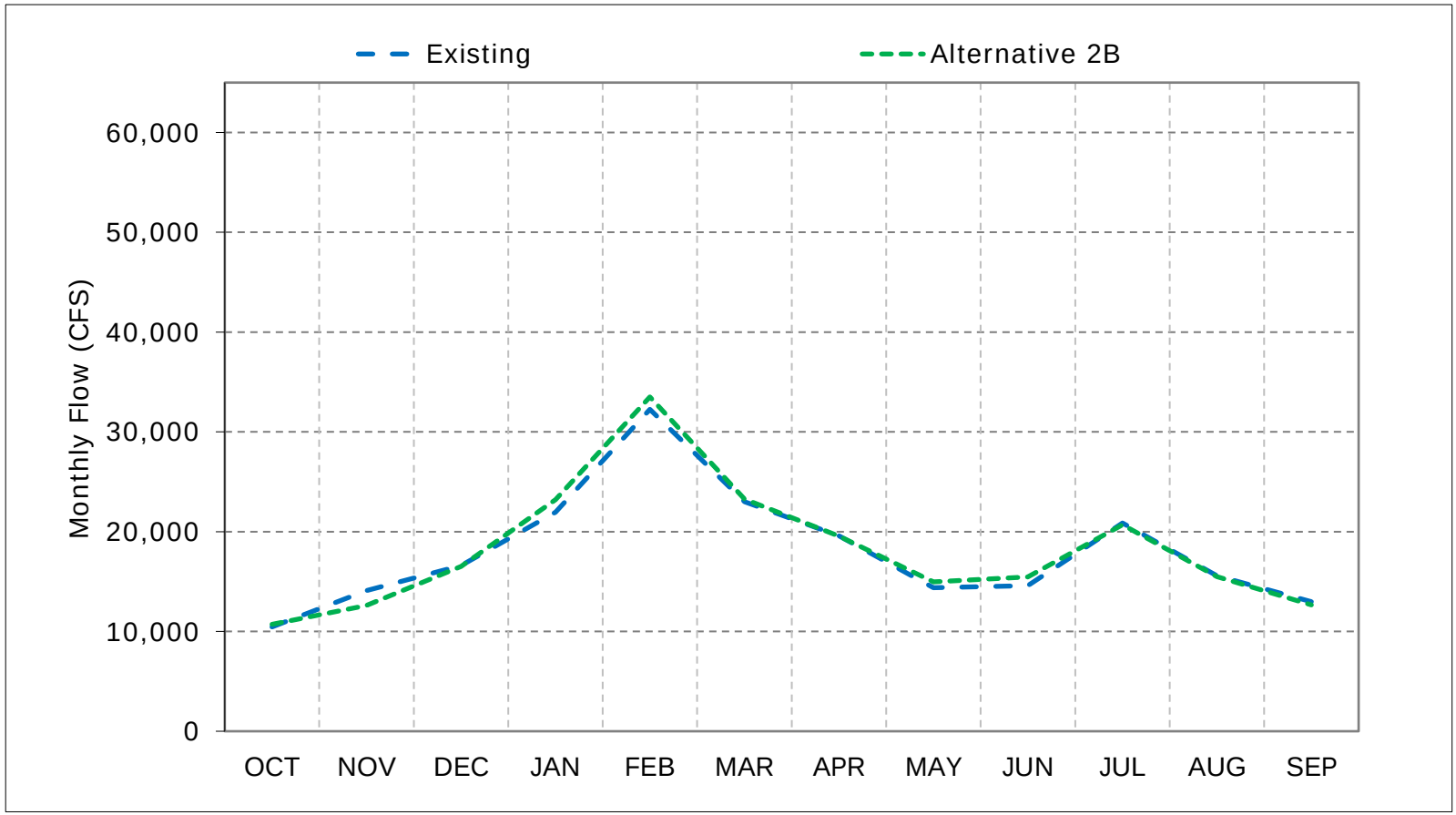

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-3. Sacramento River Flow at Freeport, Above Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

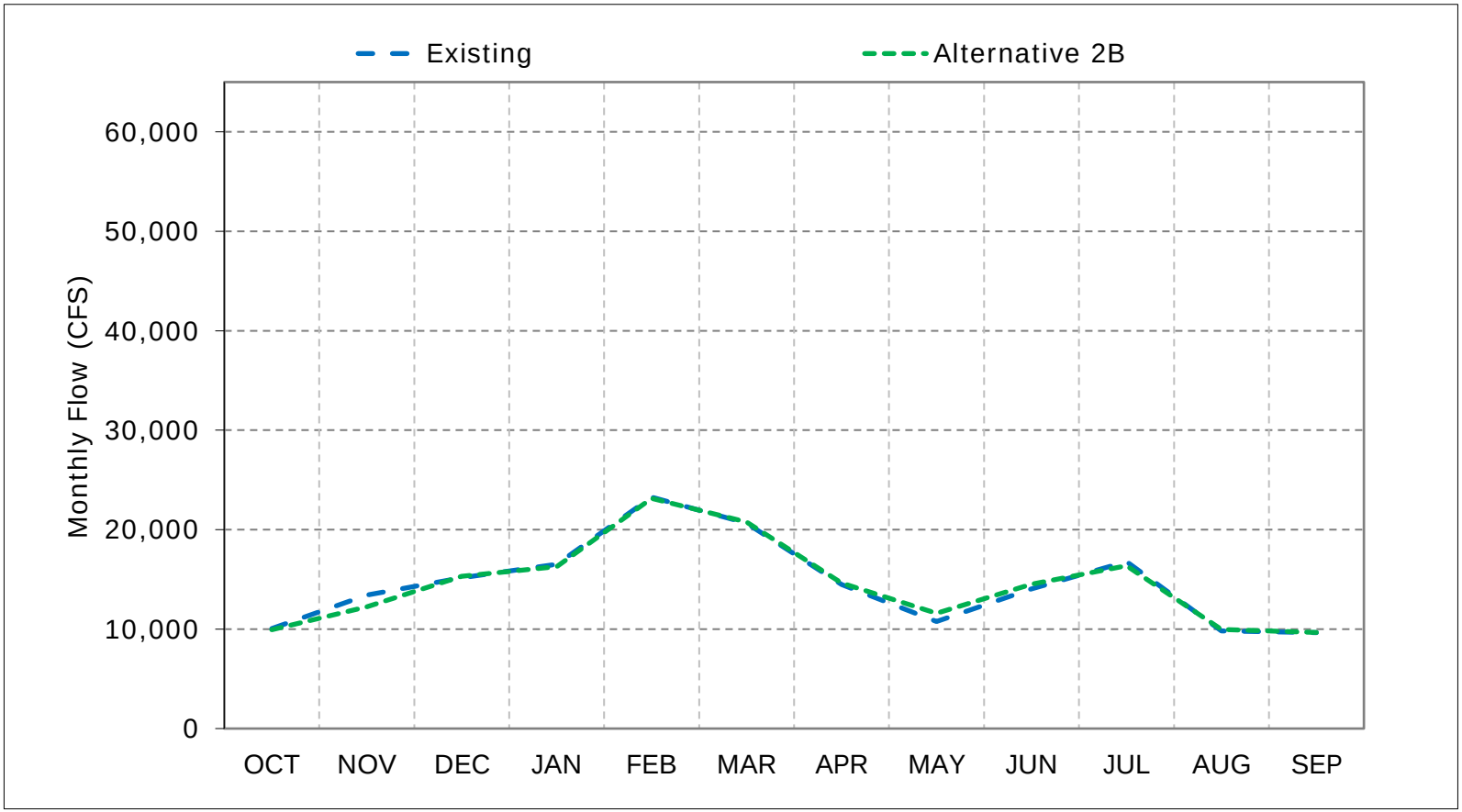
Figure 1-4. Sacramento River Flow at Freeport, Below Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

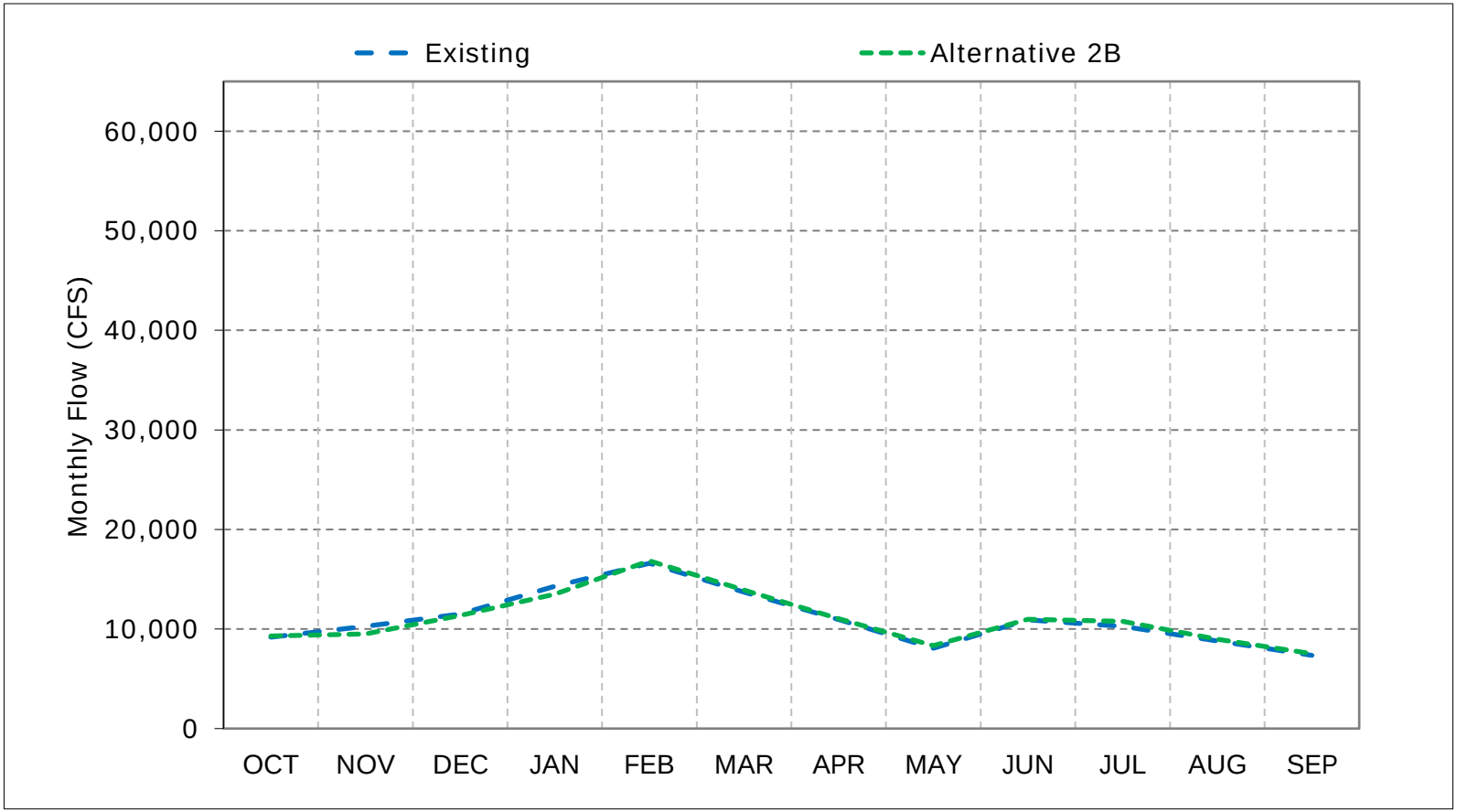
*These results are displayed with water year - year type sorting.

Figure 1-5. Sacramento River Flow at Freeport, Dry Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-6. Sacramento River Flow at Freeport, Critical Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-7. Sacramento River Flow at Freeport, October

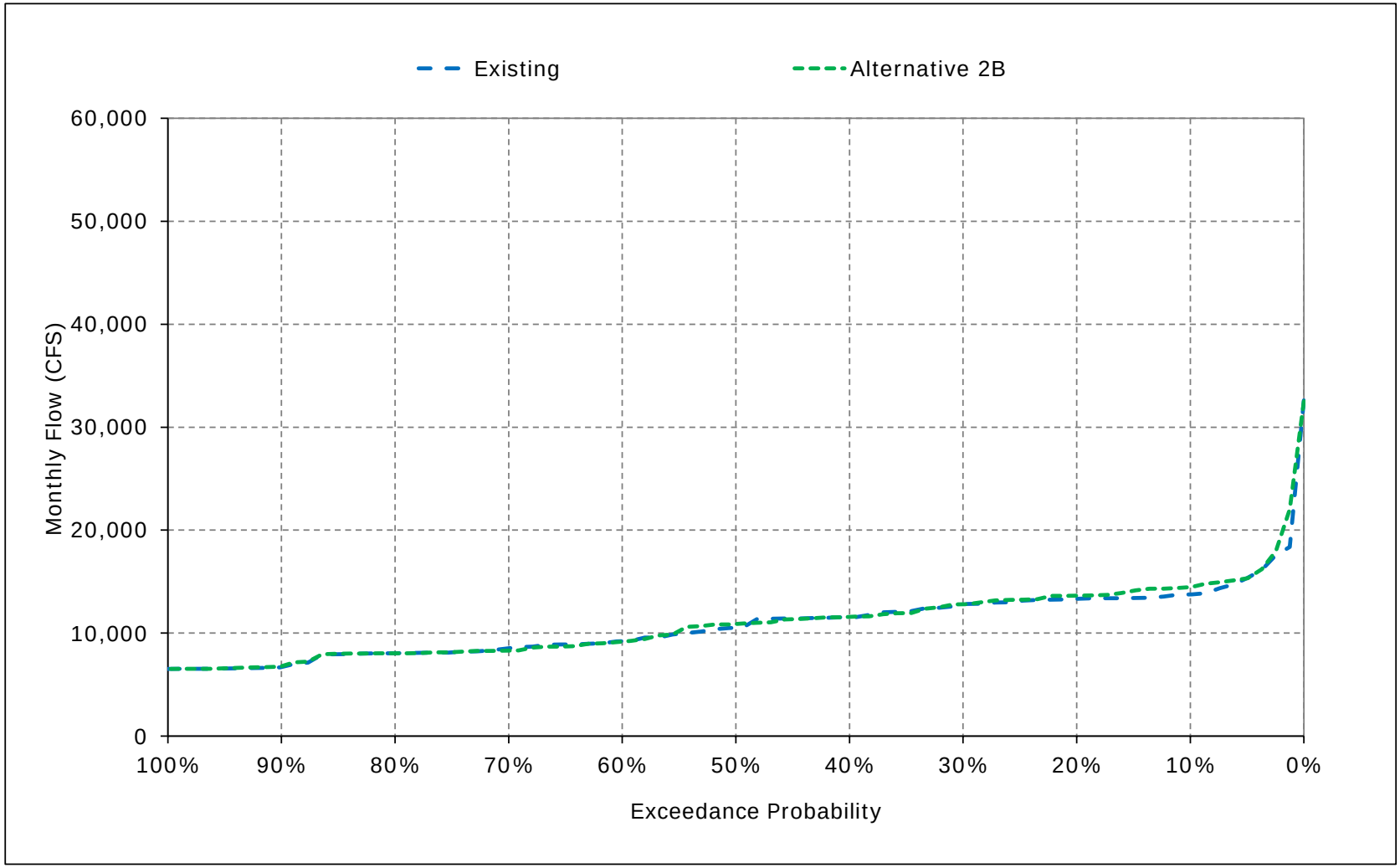


Figure 1-8. Sacramento River Flow at Freeport, November

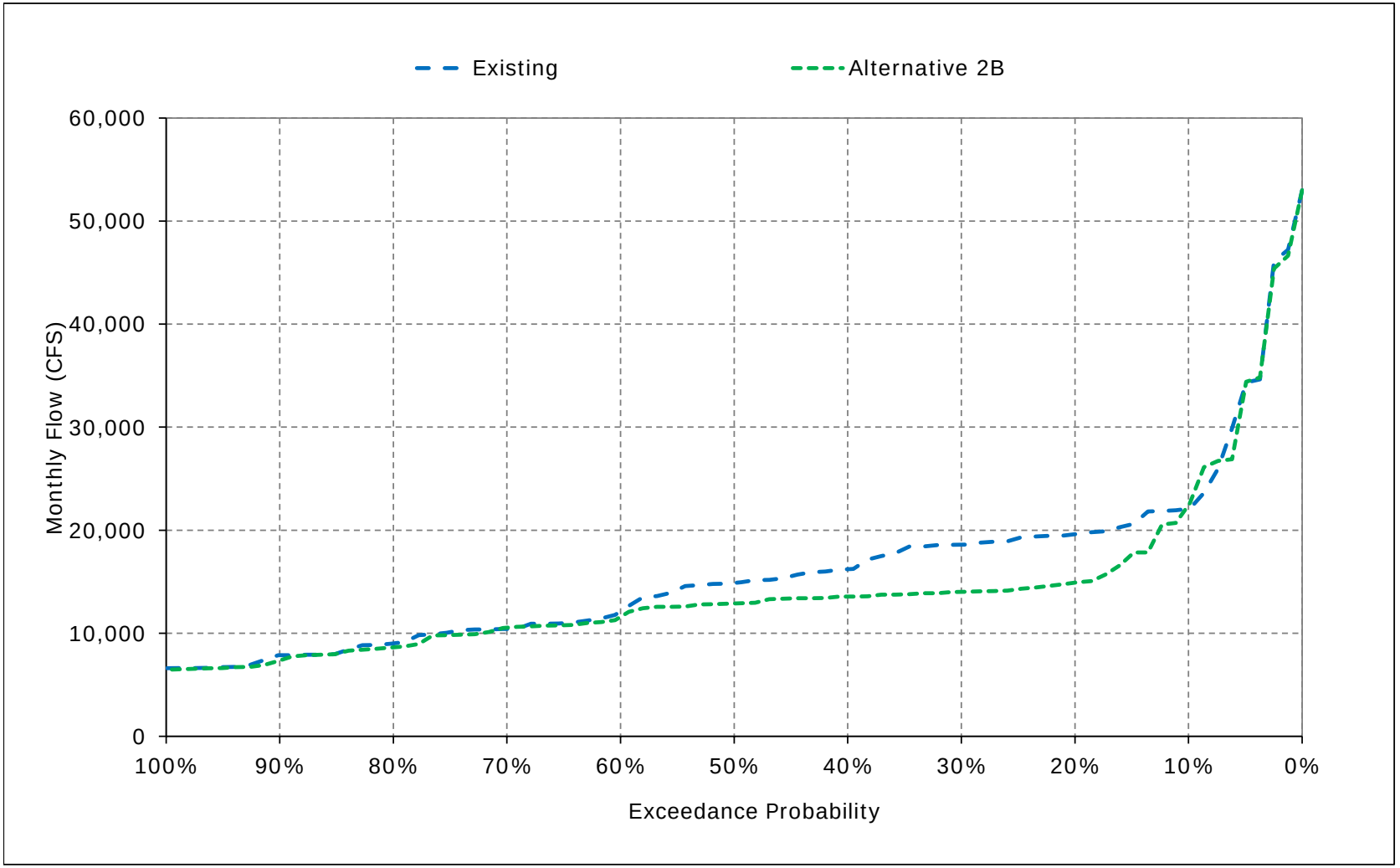


Figure 1-9. Sacramento River Flow at Freeport, December

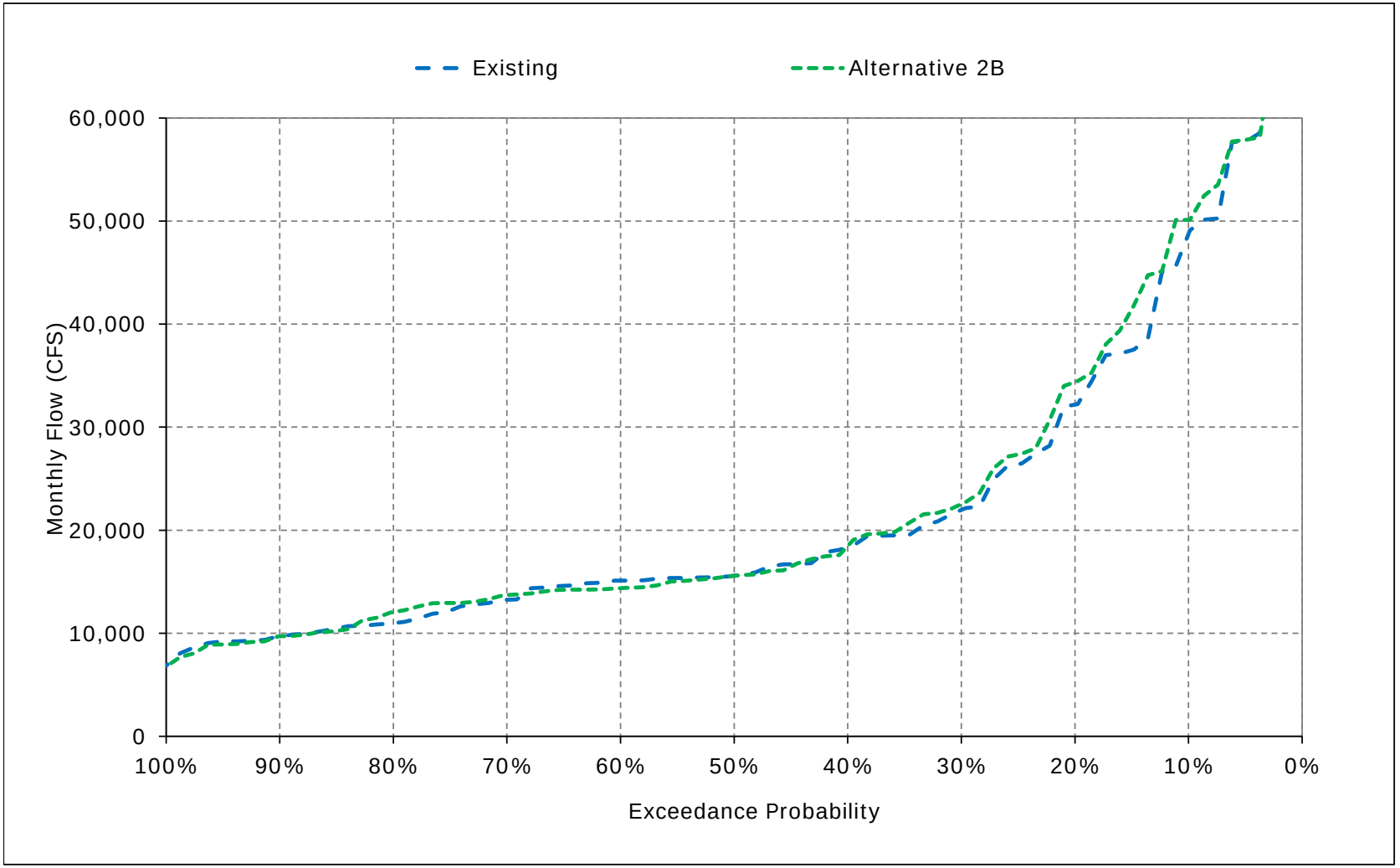


Figure 1-10. Sacramento River Flow at Freeport, January

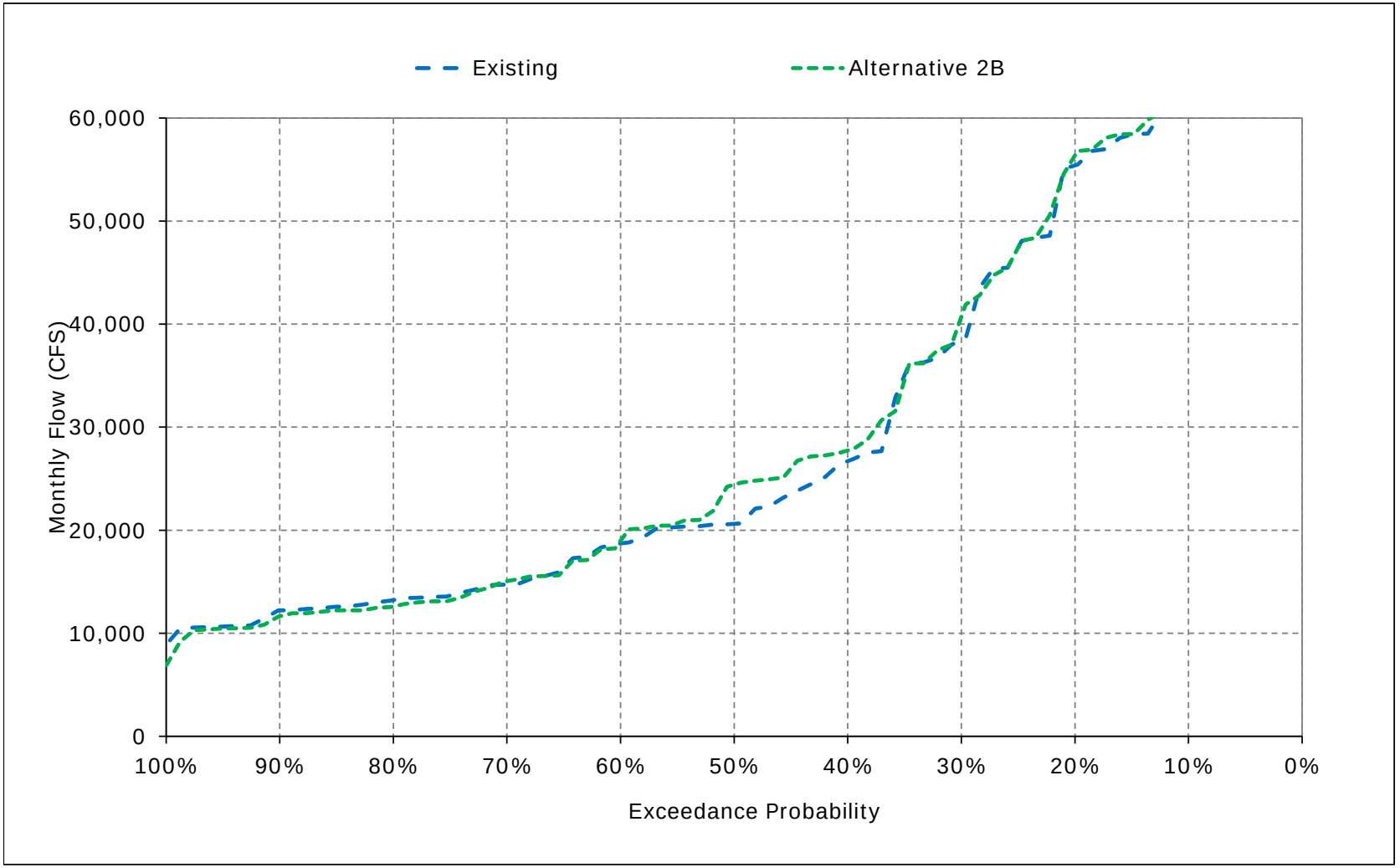


Figure 1-11. Sacramento River Flow at Freeport, February

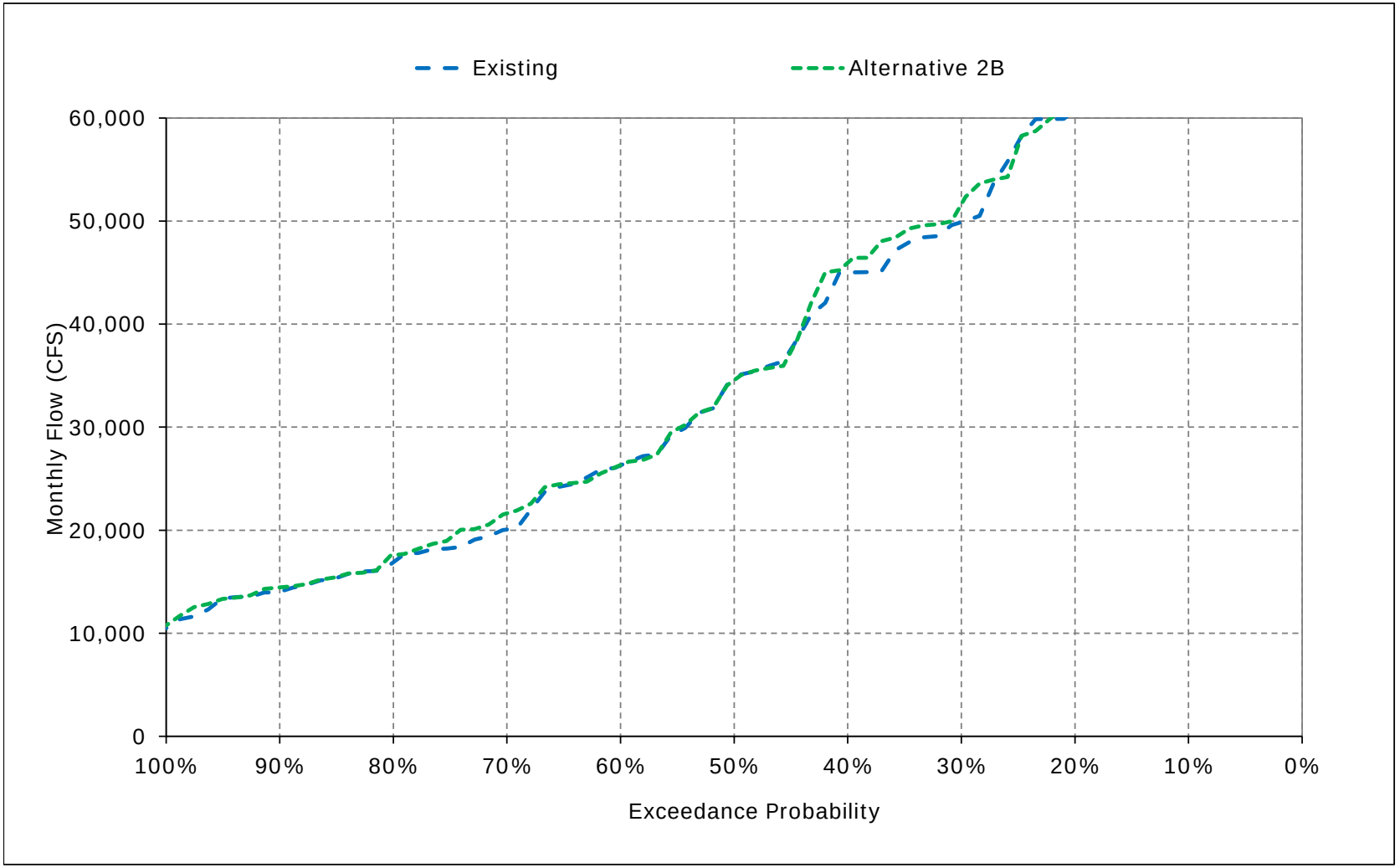


Figure 1-12. Sacramento River Flow at Freeport, March

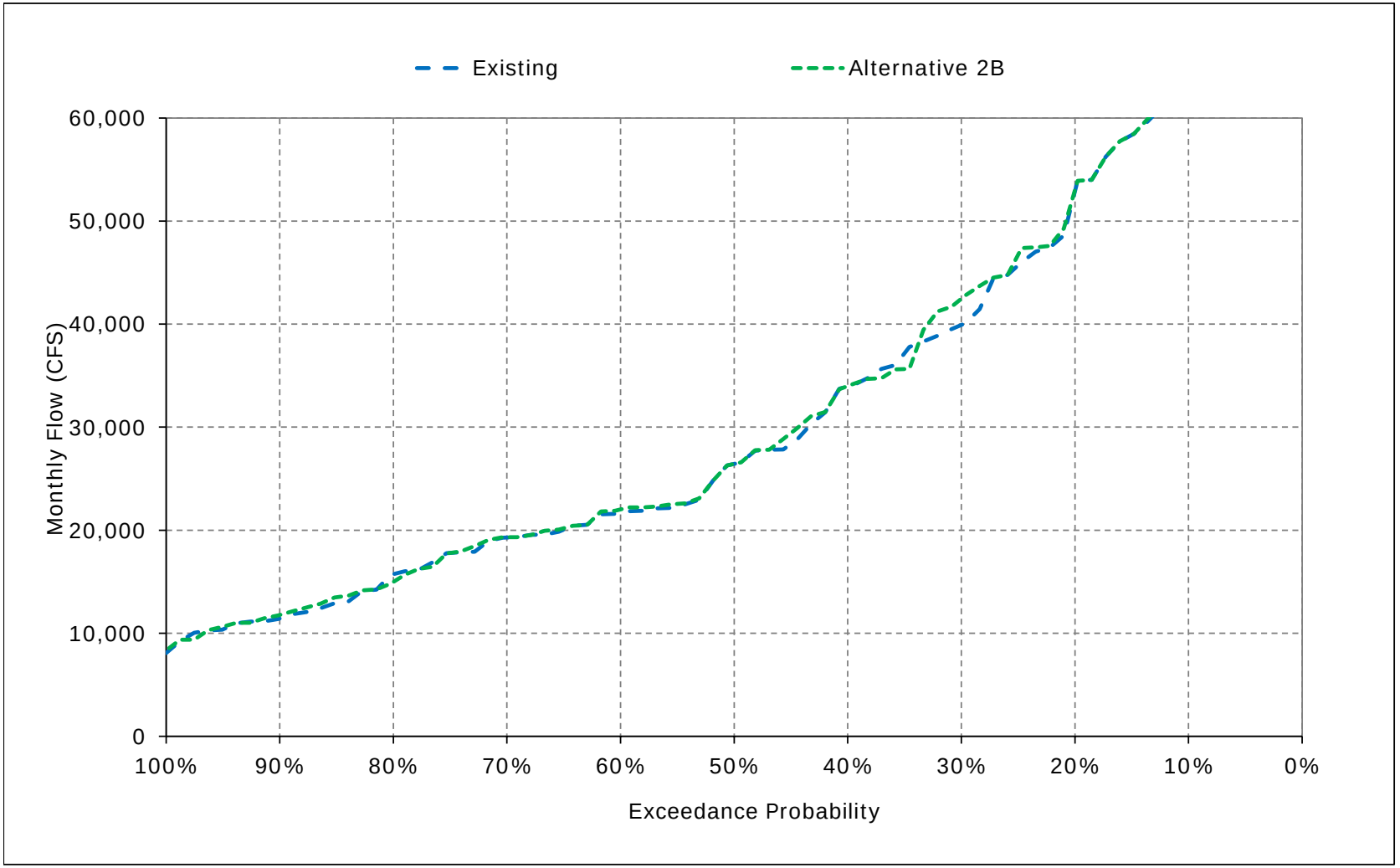


Figure 1-13. Sacramento River Flow at Freeport, April

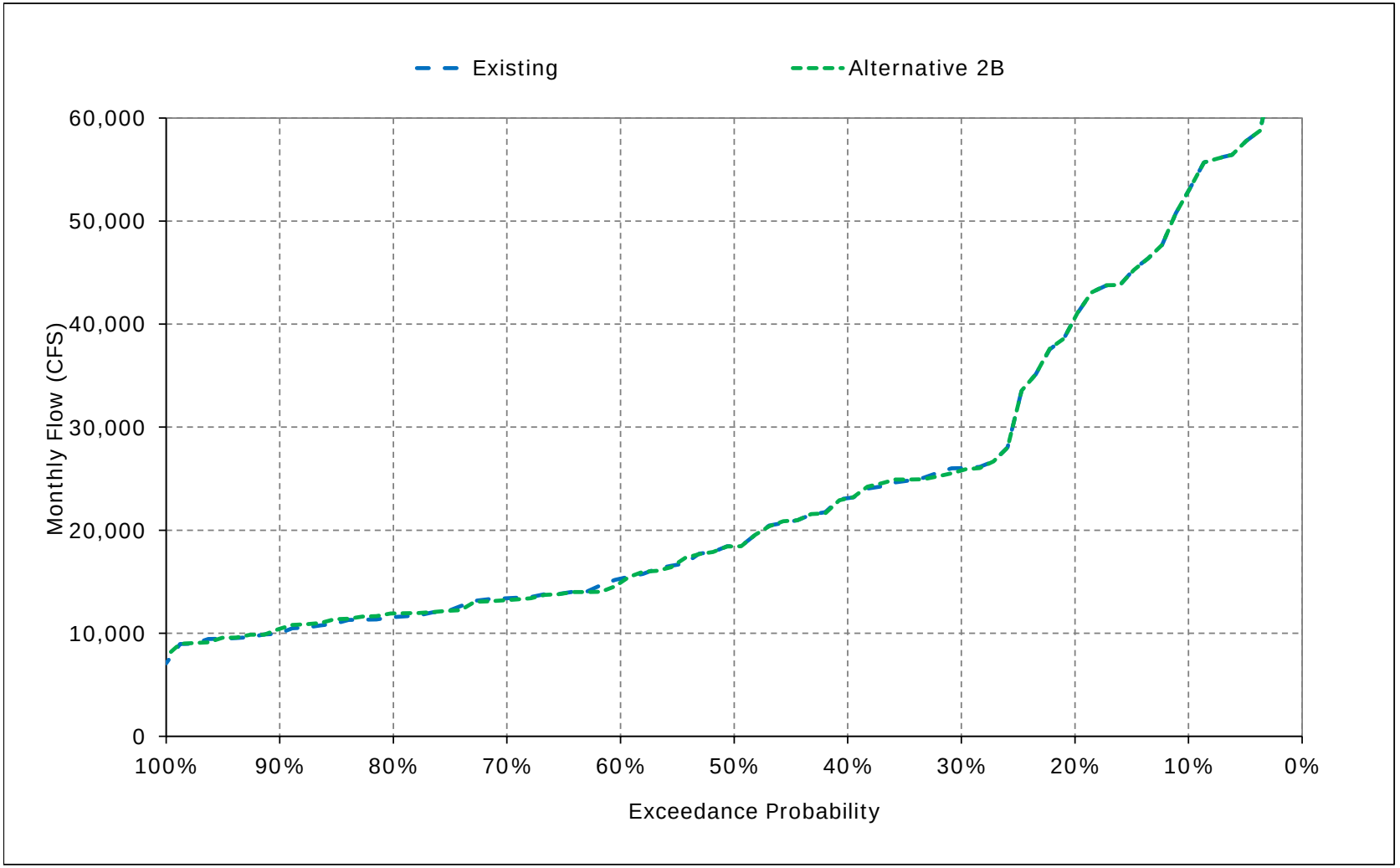


Figure 1-14. Sacramento River Flow at Freeport, May

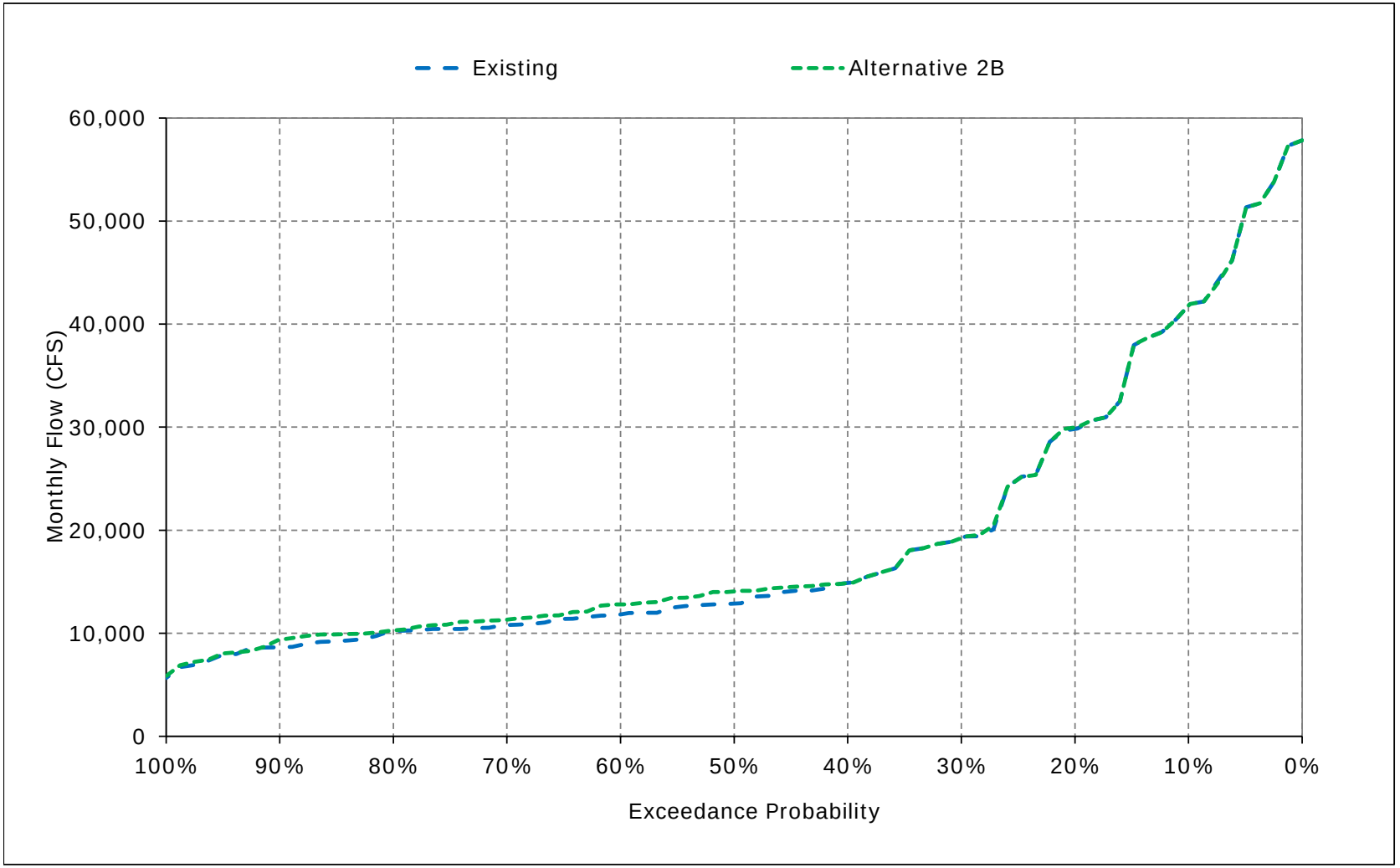


Figure 1-15. Sacramento River Flow at Freeport, June

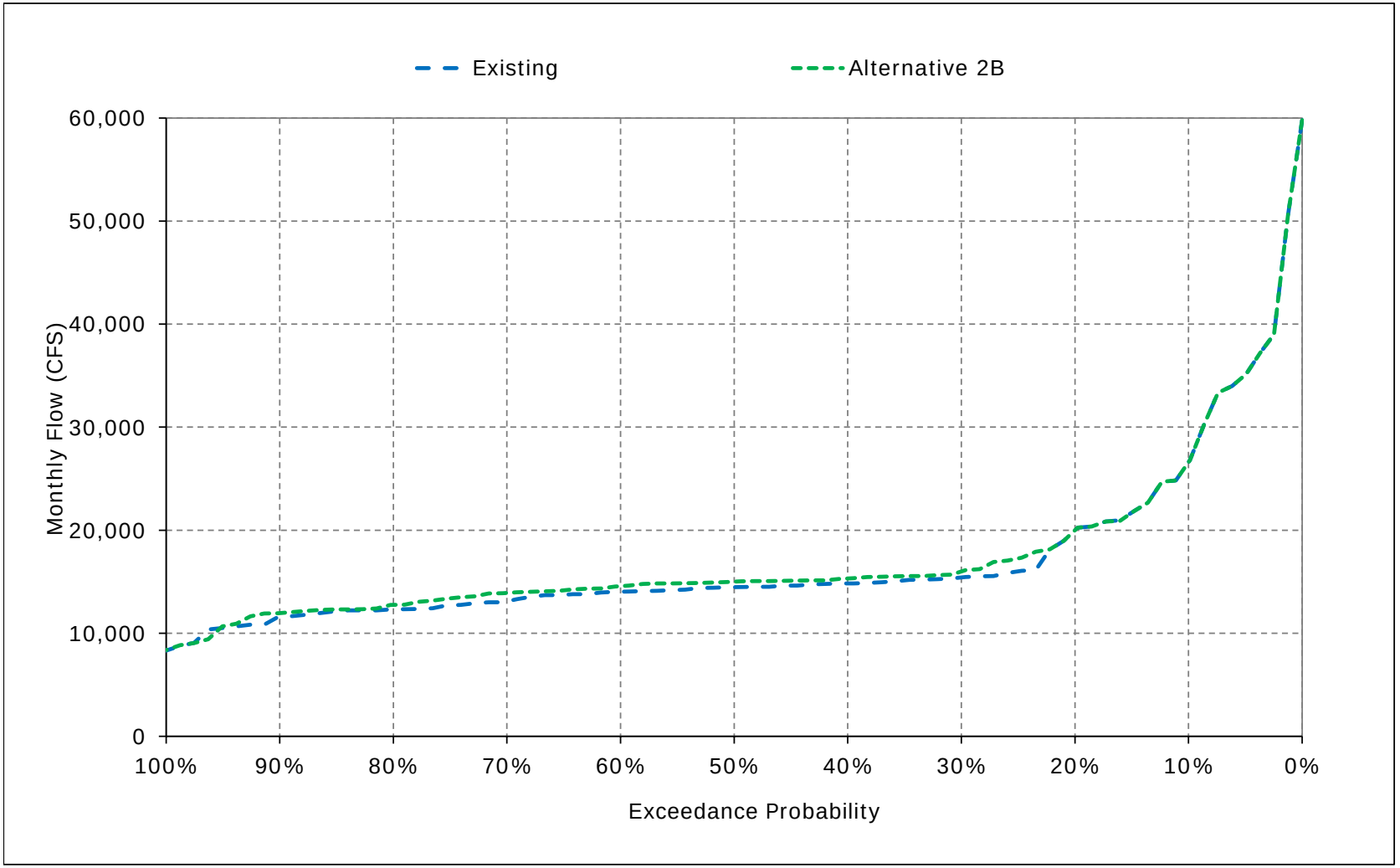


Figure 1-16. Sacramento River Flow at Freeport, July

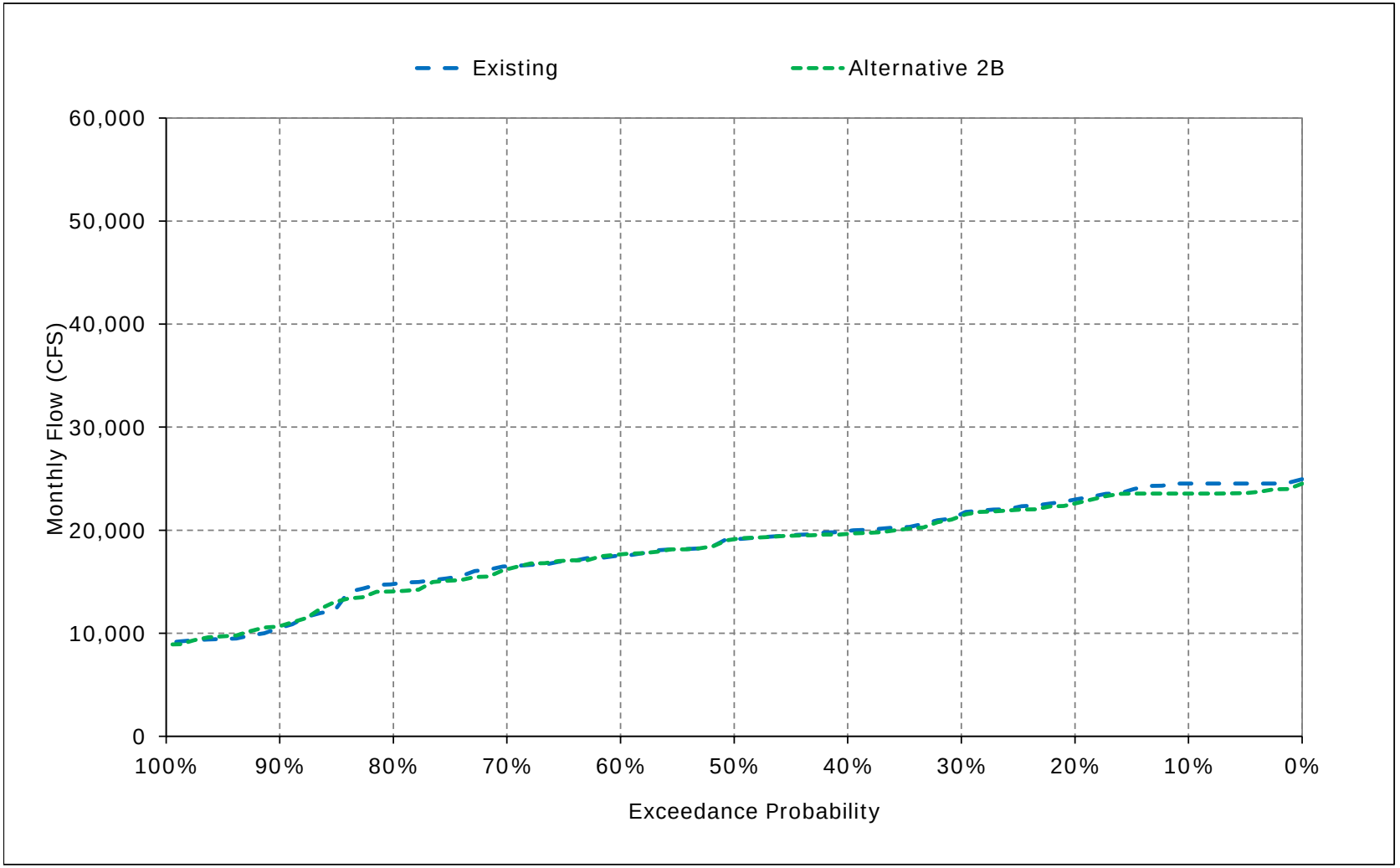


Figure 1-17. Sacramento River Flow at Freeport, August

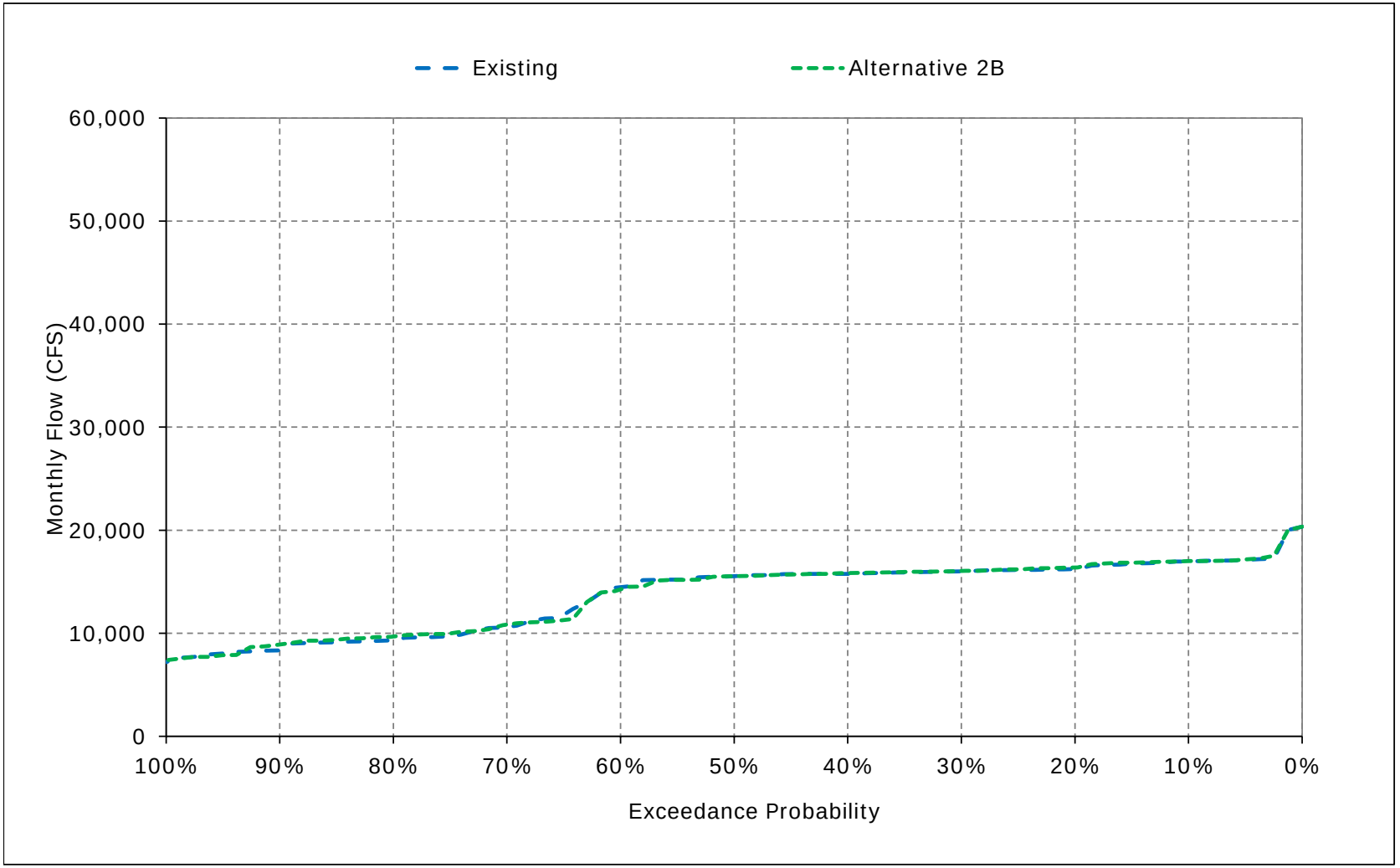
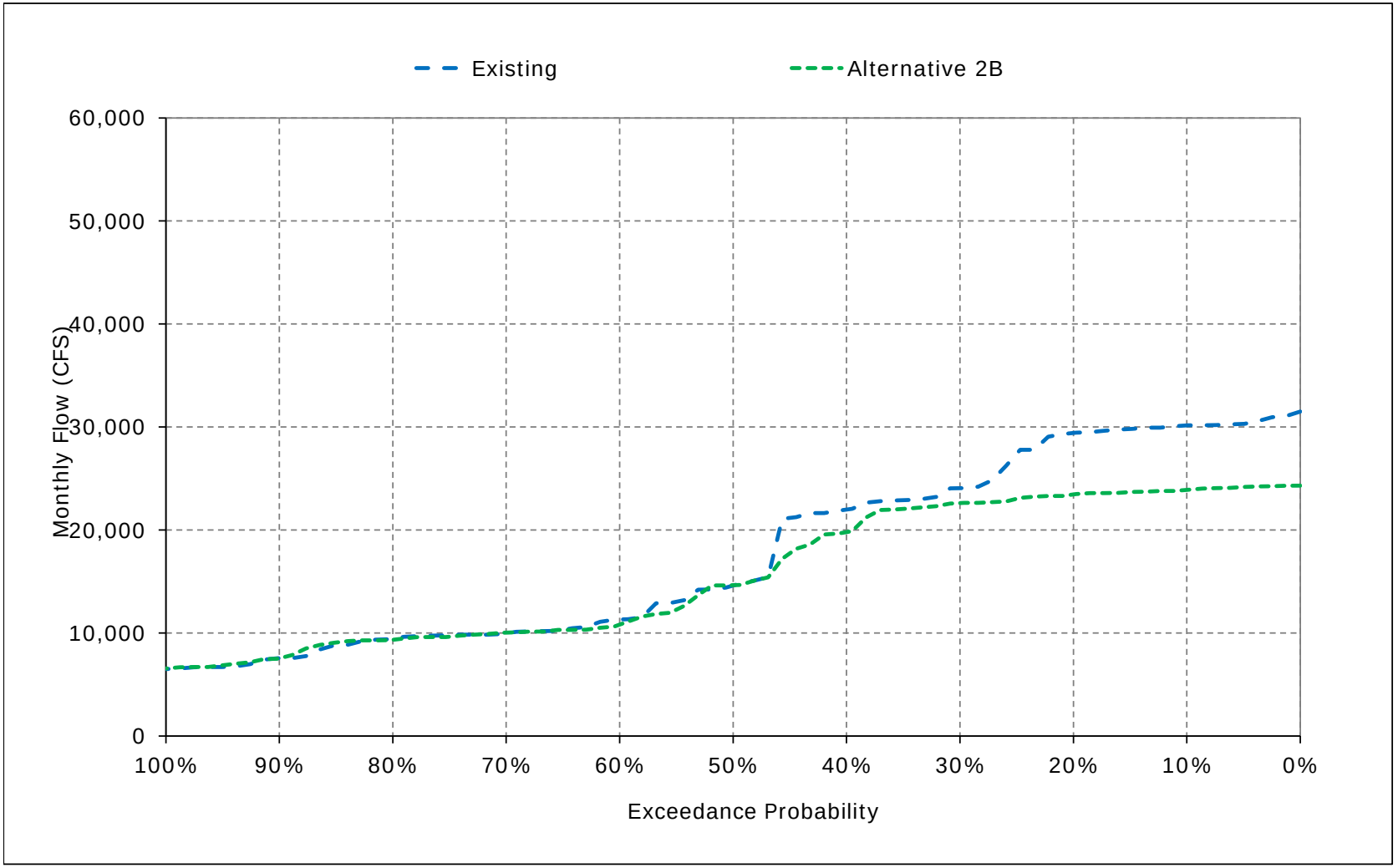


Figure 1-18. Sacramento River Flow at Freeport, September



## Table 2-1. Georgiana Slough, Monthly Flow

### Existing

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2,894 | 4,016 | 7,532 | 9,442 | 10,171 | 9,326 | 8,070 | 6,594 | 4,577 | 4,298 | 3,309 | 5,056 |
| 20% | 2,838 | 3,672 | 5,350 | 8,425 | 9,129 | 8,051 | 6,444 | 5,015 | 3,701 | 4,091 | 3,213 | 4,961 |
| 30% | 2,761 | 3,549 | 3,984 | 6,172 | 7,686 | 6,360 | 4,518 | 3,610 | 3,093 | 3,908 | 3,181 | 4,254 |
| 40% | 2,601 | 3,219 | 3,504 | 4,639 | 7,040 | 5,565 | 4,133 | 3,038 | 3,020 | 3,691 | 3,150 | 3,979 |
| 50% | 2,467 | 3,047 | 3,144 | 3,834 | 5,668 | 4,581 | 3,519 | 2,772 | 2,970 | 3,588 | 3,122 | 3,004 |
| 60% | 2,293 | 2,686 | 3,074 | 3,562 | 4,573 | 3,949 | 3,099 | 2,627 | 2,912 | 3,372 | 2,979 | 2,568 |
| 70% | 2,203 | 2,455 | 2,835 | 3,037 | 3,735 | 3,629 | 2,844 | 2,491 | 2,789 | 3,236 | 2,469 | 2,395 |
| 80% | 2,138 | 2,273 | 2,526 | 2,837 | 3,316 | 3,159 | 2,605 | 2,421 | 2,682 | 3,011 | 2,302 | 2,321 |
| 90% | 1,960 | 2,118 | 2,364 | 2,700 | 2,935 | 2,586 | 2,397 | 2,213 | 2,592 | 2,441 | 2,176 | 2,071 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2,516 | 3,197 | 4,067 | 5,171 | 6,112 | 5,389 | 4,366 | 3,621 | 3,321 | 3,483 | 2,872 | 3,428 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 2,749 | 3,866 | 5,862 | 7,729 | 8,718 | 7,680 | 6,391 | 5,287 | 4,208 | 3,727 | 3,217 | 4,881 |
| Above Normal (15%) | 2,478 | 3,324 | 4,042 | 6,036 | 7,102 | 6,770 | 4,710 | 3,958 | 3,229 | 3,949 | 3,235 | 4,029 |
| Below Normal (17%) | 2,457 | 2,943 | 3,277 | 3,997 | 5,357 | 4,119 | 3,663 | 2,967 | 2,986 | 3,815 | 3,124 | 2,789 |
| Dry (22%) | 2,403 | 2,852 | 3,084 | 3,275 | 4,164 | 3,812 | 2,991 | 2,492 | 2,913 | 3,274 | 2,363 | 2,349 |
| Critical (15%) | 2,290 | 2,434 | 2,598 | 2,978 | 3,277 | 2,890 | 2,521 | 2,133 | 2,497 | 2,411 | 2,232 | 2,046 |

### Alternative 2B

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2,987 | 4,053 | 7,736 | 9,530 | 10,199 | 9,377 | 8,071 | 6,595 | 4,577 | 4,170 | 3,313 | 4,233 |
| 20% | 2,879 | 3,049 | 5,623 | 8,539 | 9,204 | 8,068 | 6,445 | 5,038 | 3,702 | 4,046 | 3,230 | 4,174 |
| 30% | 2,765 | 2,932 | 4,069 | 6,479 | 7,910 | 6,690 | 4,486 | 3,610 | 3,173 | 3,883 | 3,187 | 4,061 |
| 40% | 2,608 | 2,869 | 3,544 | 4,764 | 7,164 | 5,572 | 4,129 | 3,037 | 3,080 | 3,655 | 3,161 | 3,690 |
| 50% | 2,514 | 2,779 | 3,143 | 4,321 | 5,661 | 4,580 | 3,516 | 2,925 | 3,042 | 3,584 | 3,119 | 3,010 |
| 60% | 2,289 | 2,610 | 2,982 | 3,597 | 4,576 | 3,993 | 3,049 | 2,761 | 2,986 | 3,389 | 2,950 | 2,504 |
| 70% | 2,172 | 2,470 | 2,892 | 3,076 | 3,945 | 3,634 | 2,820 | 2,566 | 2,895 | 3,200 | 2,500 | 2,402 |
| 80% | 2,138 | 2,219 | 2,670 | 2,756 | 3,409 | 3,058 | 2,651 | 2,425 | 2,742 | 2,914 | 2,349 | 2,310 |
| 90% | 1,971 | 2,049 | 2,362 | 2,629 | 2,994 | 2,634 | 2,450 | 2,303 | 2,636 | 2,463 | 2,245 | 2,071 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2,537 | 2,979 | 4,131 | 5,221 | 6,166 | 5,428 | 4,369 | 3,666 | 3,374 | 3,452 | 2,878 | 3,168 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 2,792 | 3,578 | 6,078 | 7,800 | 8,760 | 7,703 | 6,384 | 5,292 | 4,217 | 3,683 | 3,211 | 4,006 |
| Above Normal (15%) | 2,500 | 3,022 | 4,010 | 6,182 | 7,182 | 6,897 | 4,705 | 3,964 | 3,332 | 3,881 | 3,243 | 4,164 |
| Below Normal (17%) | 2,491 | 2,744 | 3,267 | 4,161 | 5,521 | 4,157 | 3,661 | 3,047 | 3,103 | 3,790 | 3,113 | 2,748 |
| Dry (22%) | 2,386 | 2,698 | 3,107 | 3,245 | 4,148 | 3,827 | 3,011 | 2,602 | 2,974 | 3,219 | 2,385 | 2,351 |
| Critical (15%) | 2,303 | 2,333 | 2,578 | 2,872 | 3,310 | 2,916 | 2,530 | 2,167 | 2,505 | 2,474 | 2,254 | 2,069 |

### Alternative 2B minus Existing

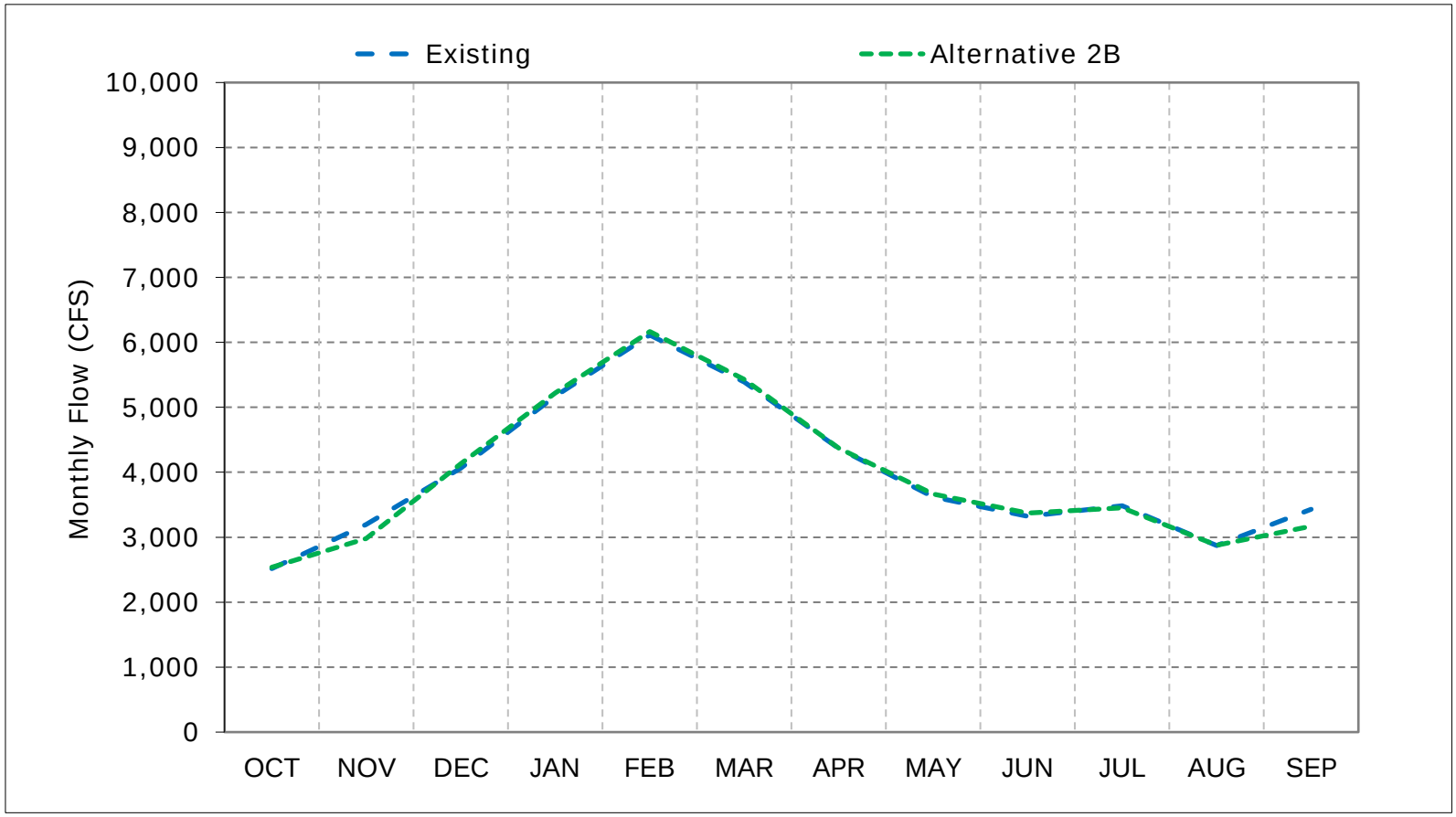
| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 93 | 36 | 204 | 88 | 28 | 50 | 1 | 0 | 0 | -128 | 4 | -824 |
| 20% | 41 | -624 | 273 | 114 | 75 | 17 | 1 | 22 | 1 | -45 | 17 | -787 |
| 30% | 4 | -618 | 85 | 306 | 225 | 330 | -32 | 0 | 81 | -25 | 6 | -192 |
| 40% | 7 | -350 | 40 | 125 | 124 | 6 | -4 | -1 | 60 | -36 | 11 | -289 |
| 50% | 47 | -268 | -1 | 487 | -7 | -1 | -3 | 153 | 72 | -3 | -3 | 6 |
| 60% | -5 | -75 | -92 | 35 | 3 | 44 | -49 | 134 | 73 | 16 | -30 | -64 |
| 70% | -30 | 15 | 57 | 39 | 210 | 5 | -24 | 75 | 106 | -37 | 32 | 7 |
| 80% | 0 | -53 | 144 | -81 | 93 | -102 | 47 | 4 | 60 | -97 | 46 | -12 |
| 90% | 11 | -69 | -2 | -72 | 59 | 49 | 53 | 90 | 44 | 22 | 69 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 21 | -218 | 64 | 50 | 54 | 40 | 3 | 45 | 52 | -31 | 6 | -261 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 43 | -288 | 216 | 71 | 42 | 23 | -6 | 5 | 10 | -44 | -5 | -875 |
| Above Normal (15%) | 22 | -303 | -32 | 145 | 80 | 128 | -5 | 6 | 102 | -68 | 9 | 135 |
| Below Normal (17%) | 35 | -198 | -10 | 164 | 164 | 37 | -2 | 79 | 117 | -25 | -11 | -41 |
| Dry (22%) | -17 | -154 | 23 | -30 | -16 | 15 | 20 | 110 | 60 | -55 | 22 | 2 |
| Critical (15%) | 13 | -101 | -20 | -106 | 33 | 26 | 10 | 34 | 8 | 63 | 22 | 23 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

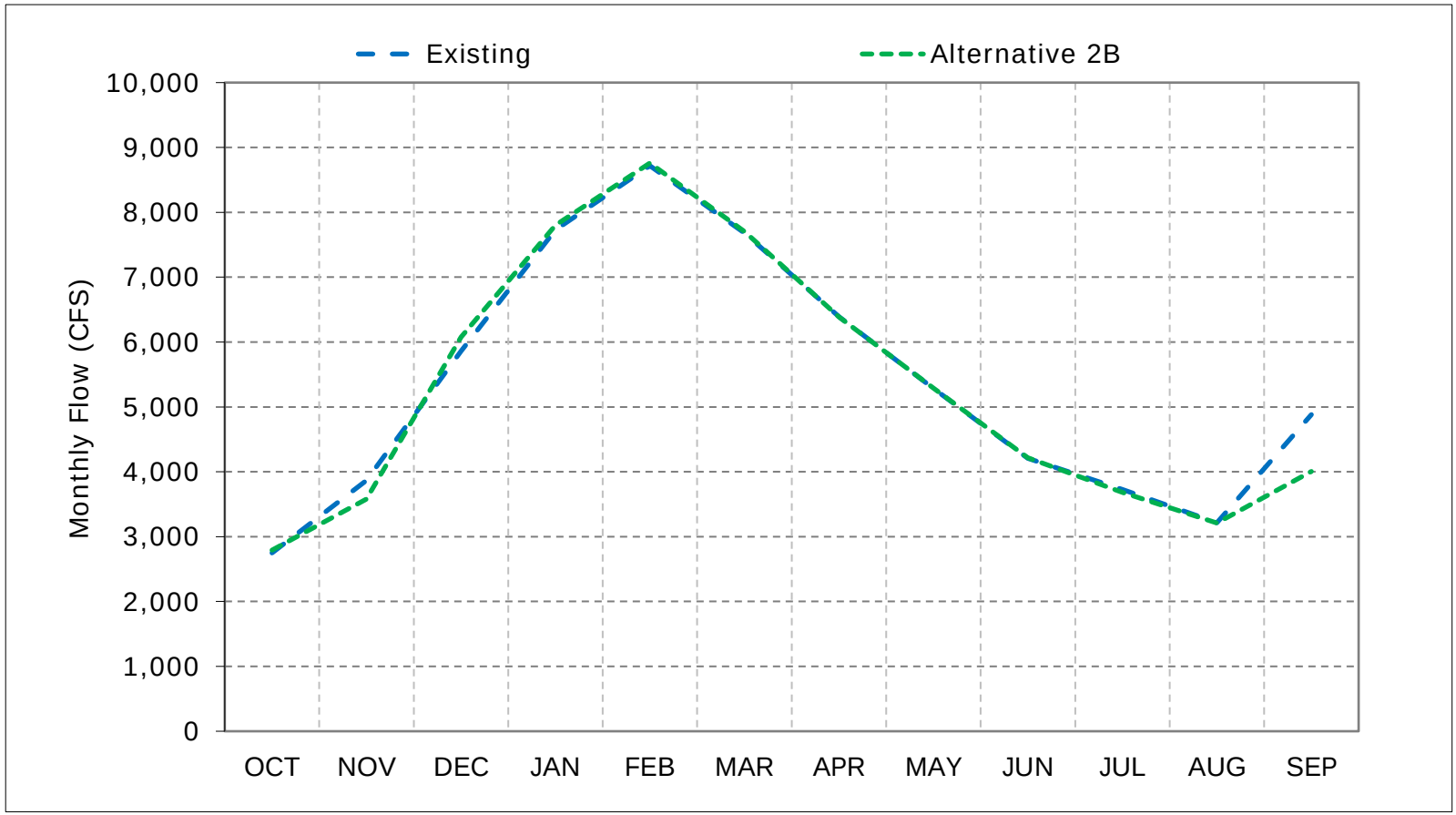
Figure 2-1. Georgiana Slough, Long-Term Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

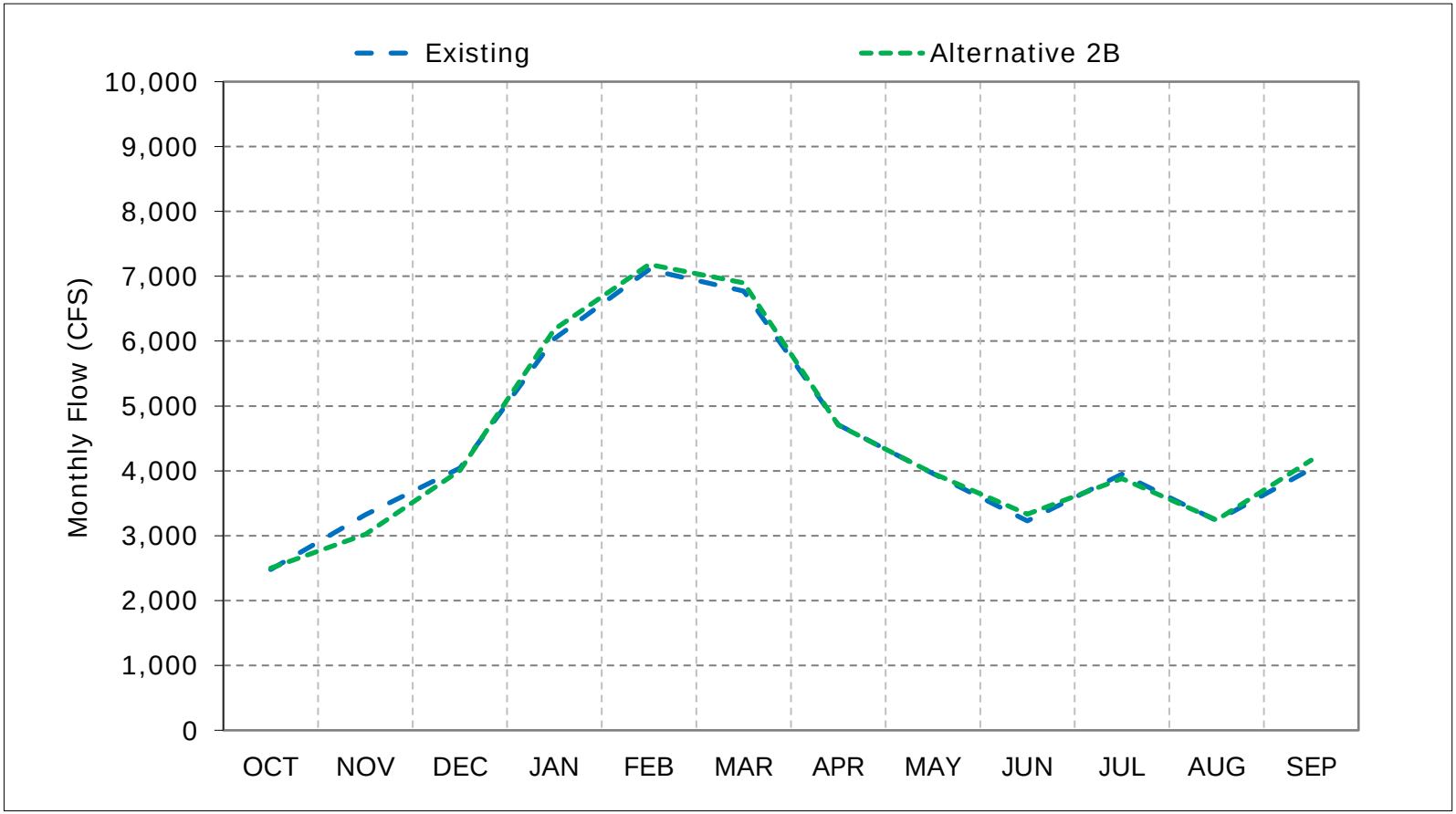
Figure 2-2. Georgiana Slough, Wet Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

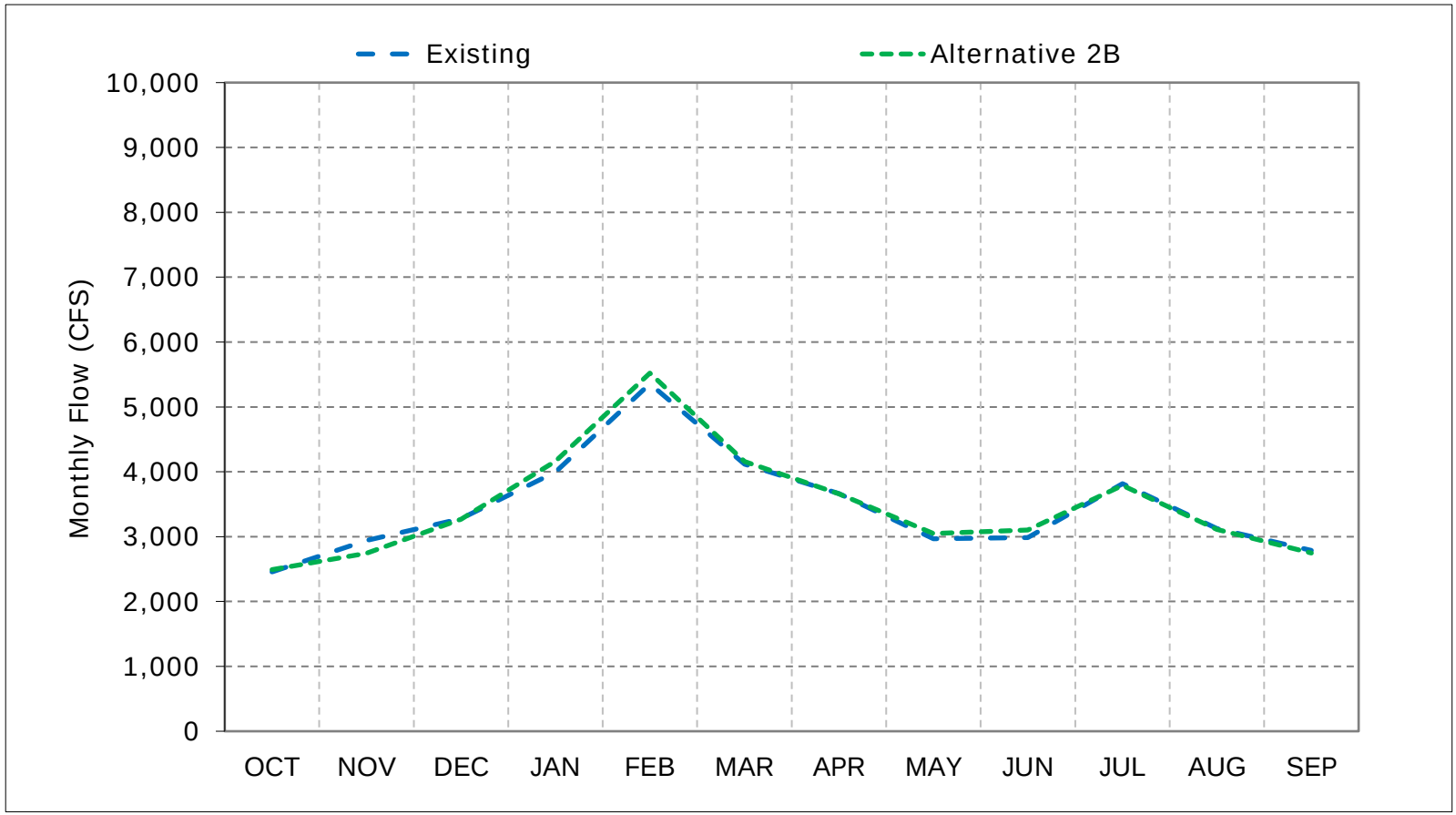
*These results are displayed with water year - year type sorting.

Figure 2-3. Georgiana Slough, Above Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

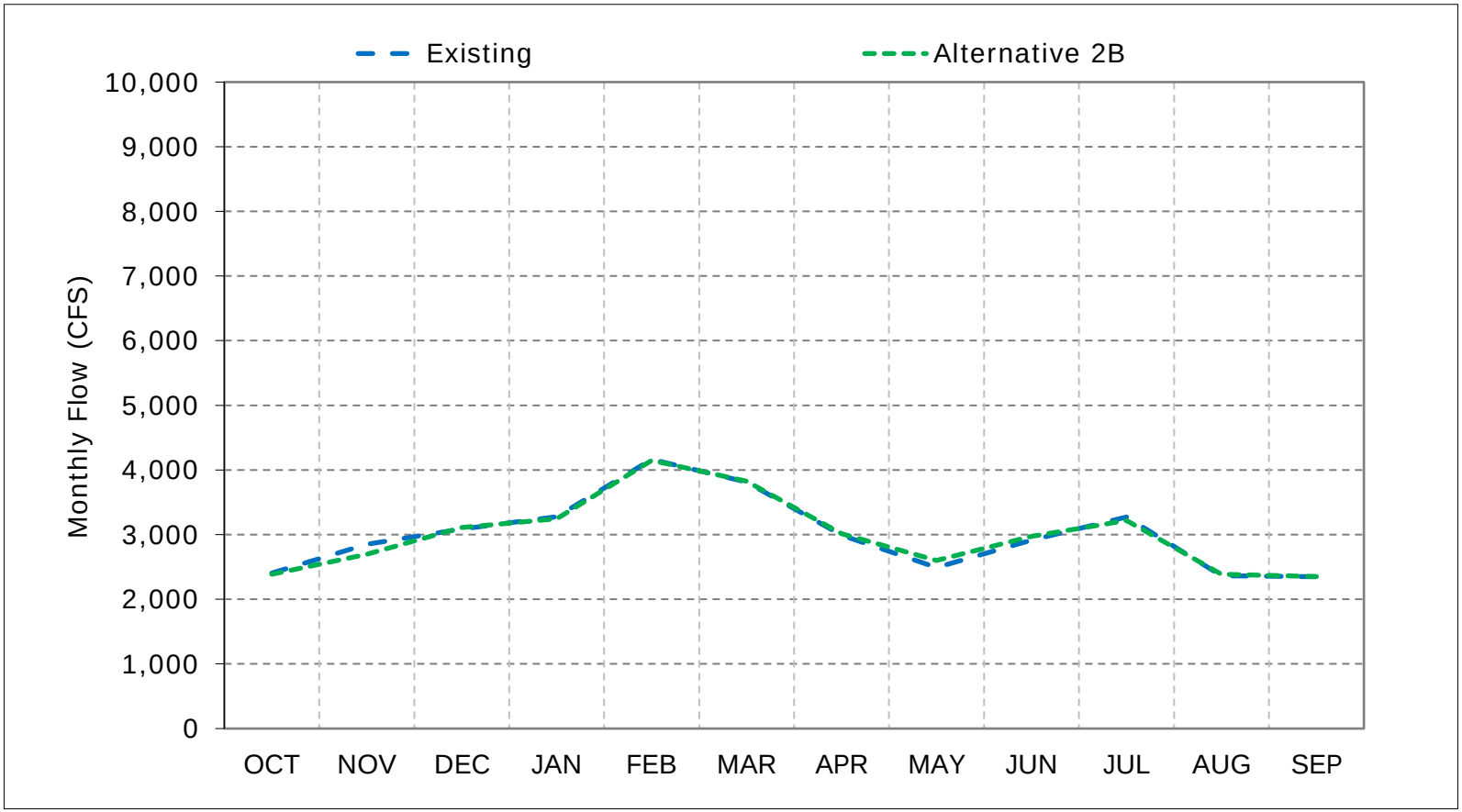
Figure 2-4. Georgiana Slough, Below Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

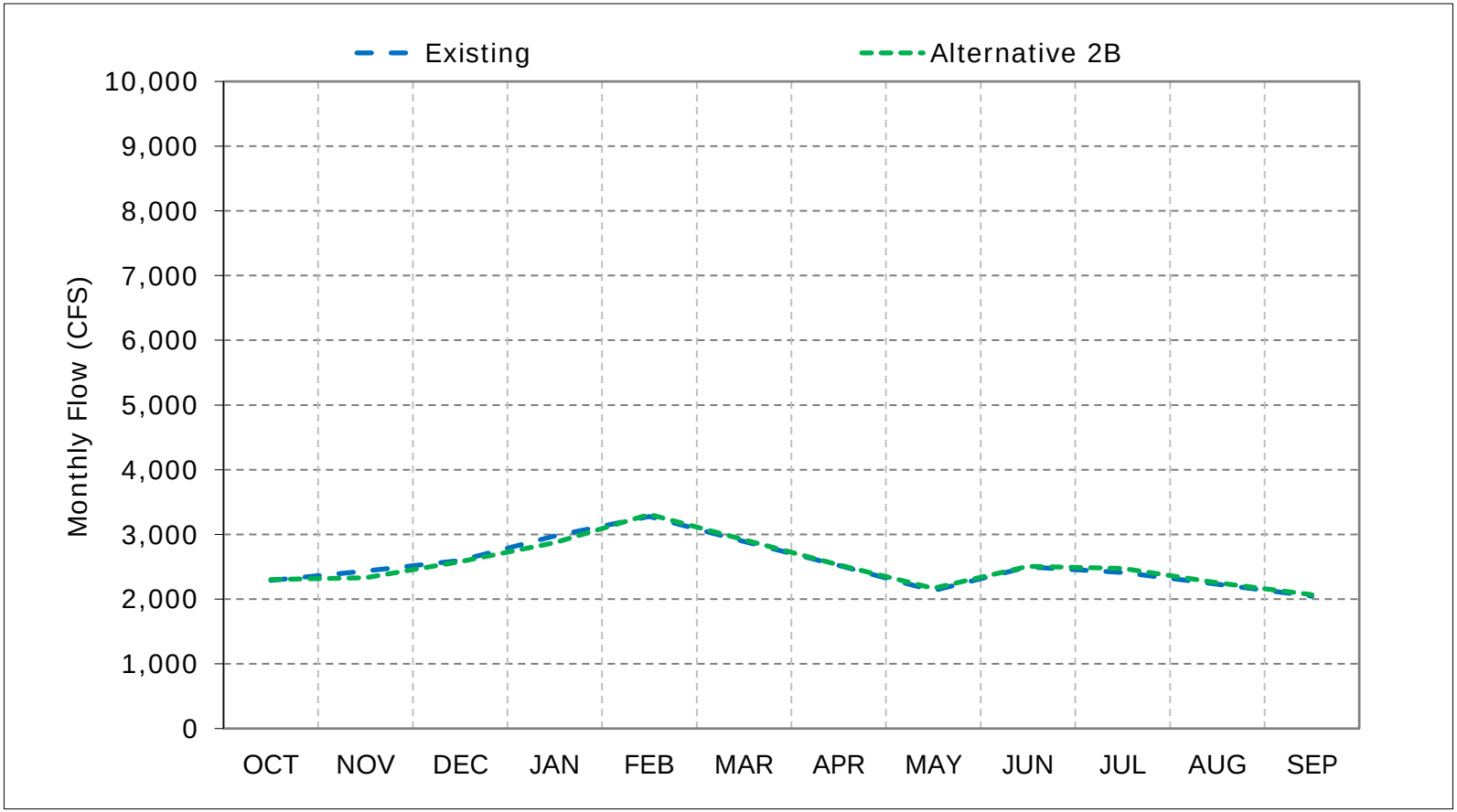
*These results are displayed with water year - year type sorting.

Figure 2-5. Georgiana Slough, Dry Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-6. Georgiana Slough, Critical Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 2-7. Georgiana Slough, October

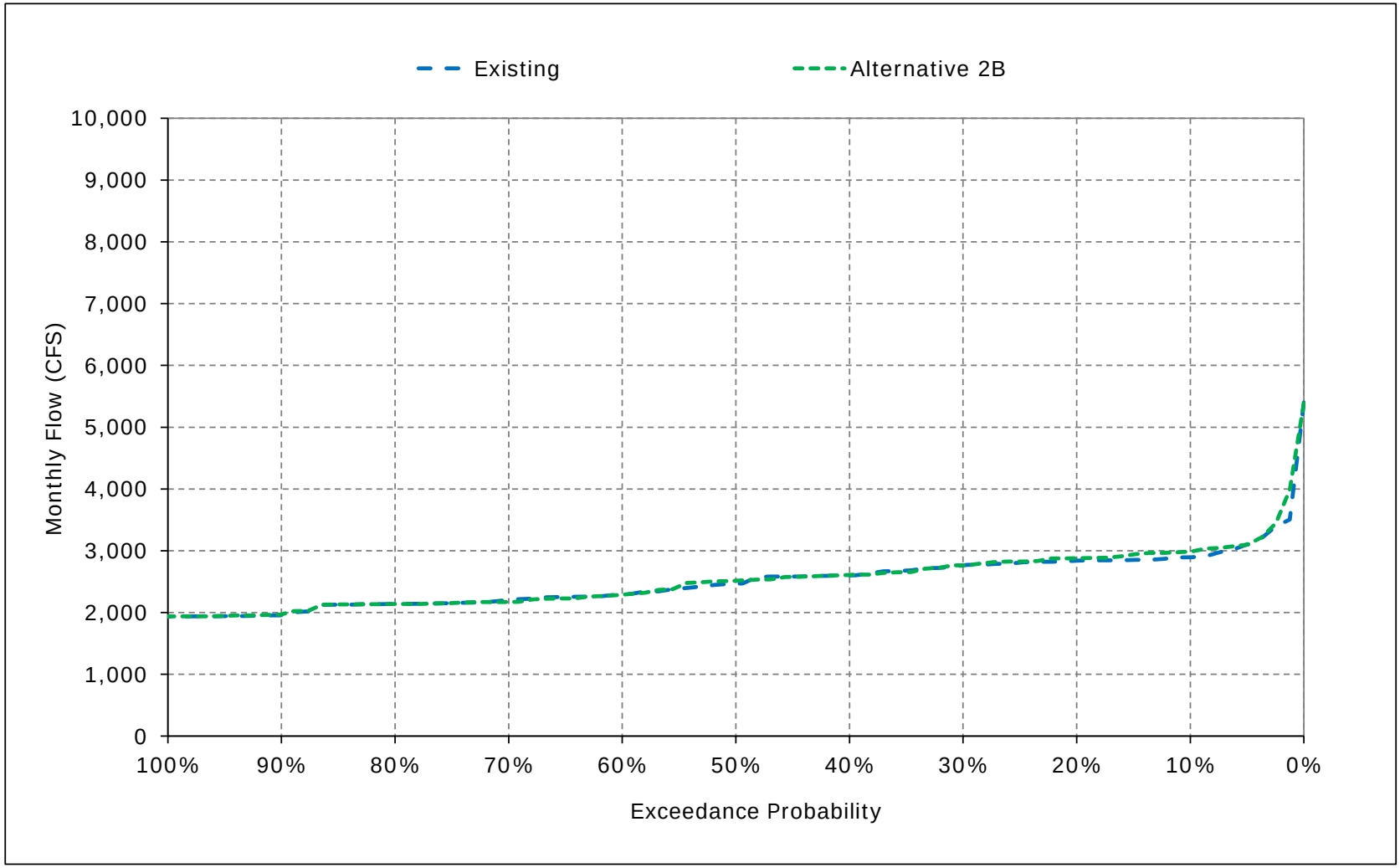


Figure 2-8. Georgiana Slough, November

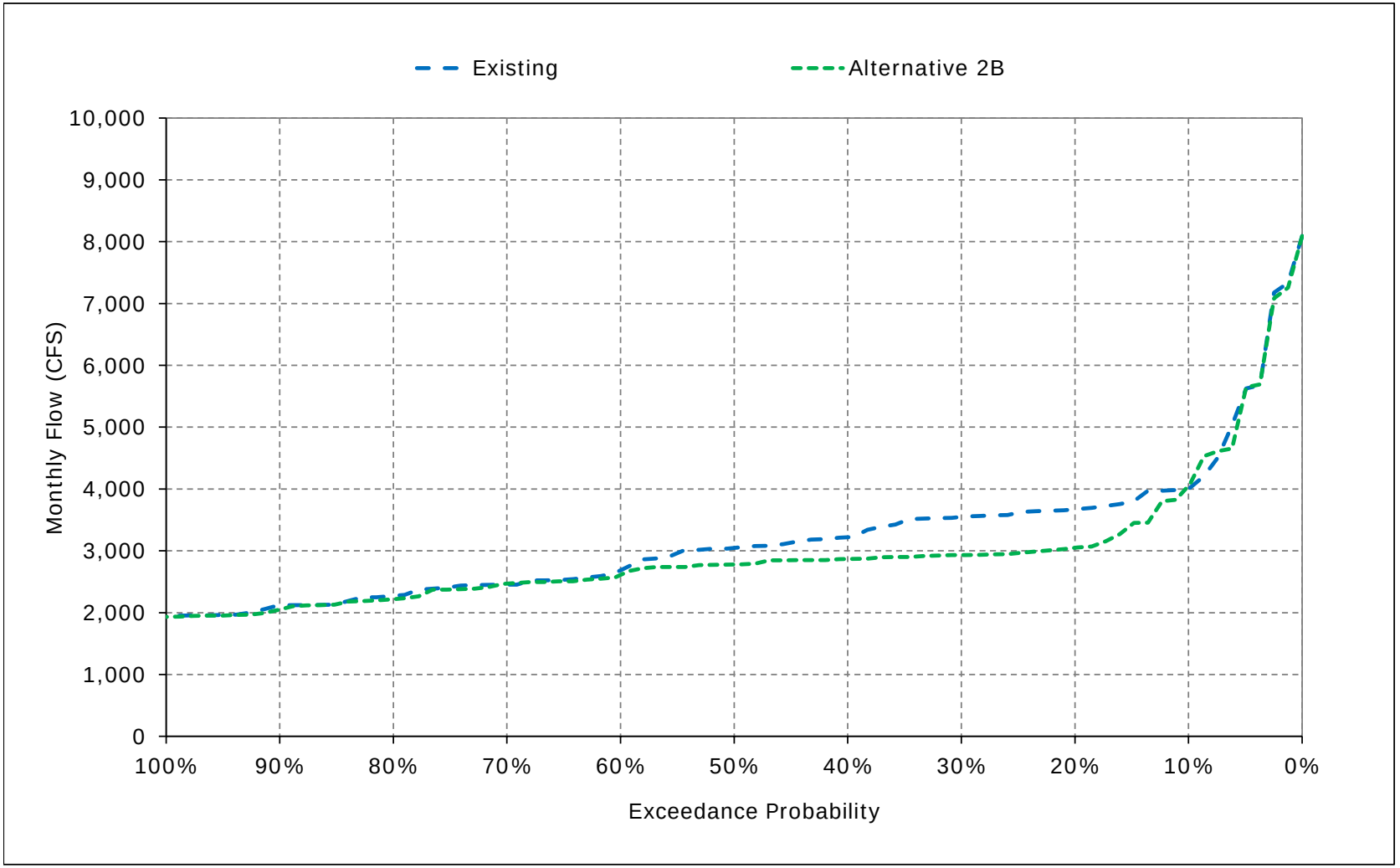


Figure 2-9. Georgiana Slough, December

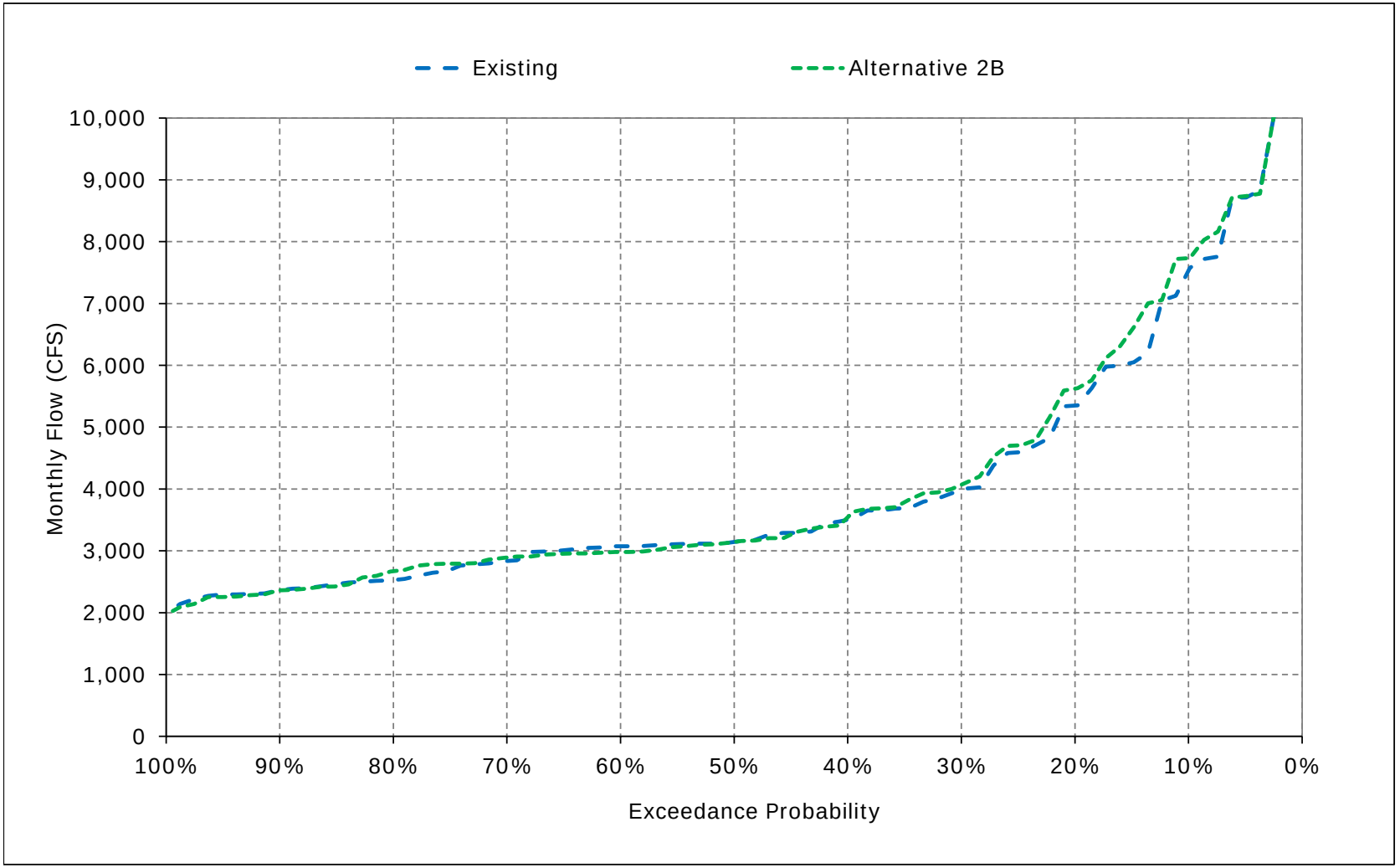


Figure 2-10. Georgiana Slough, January

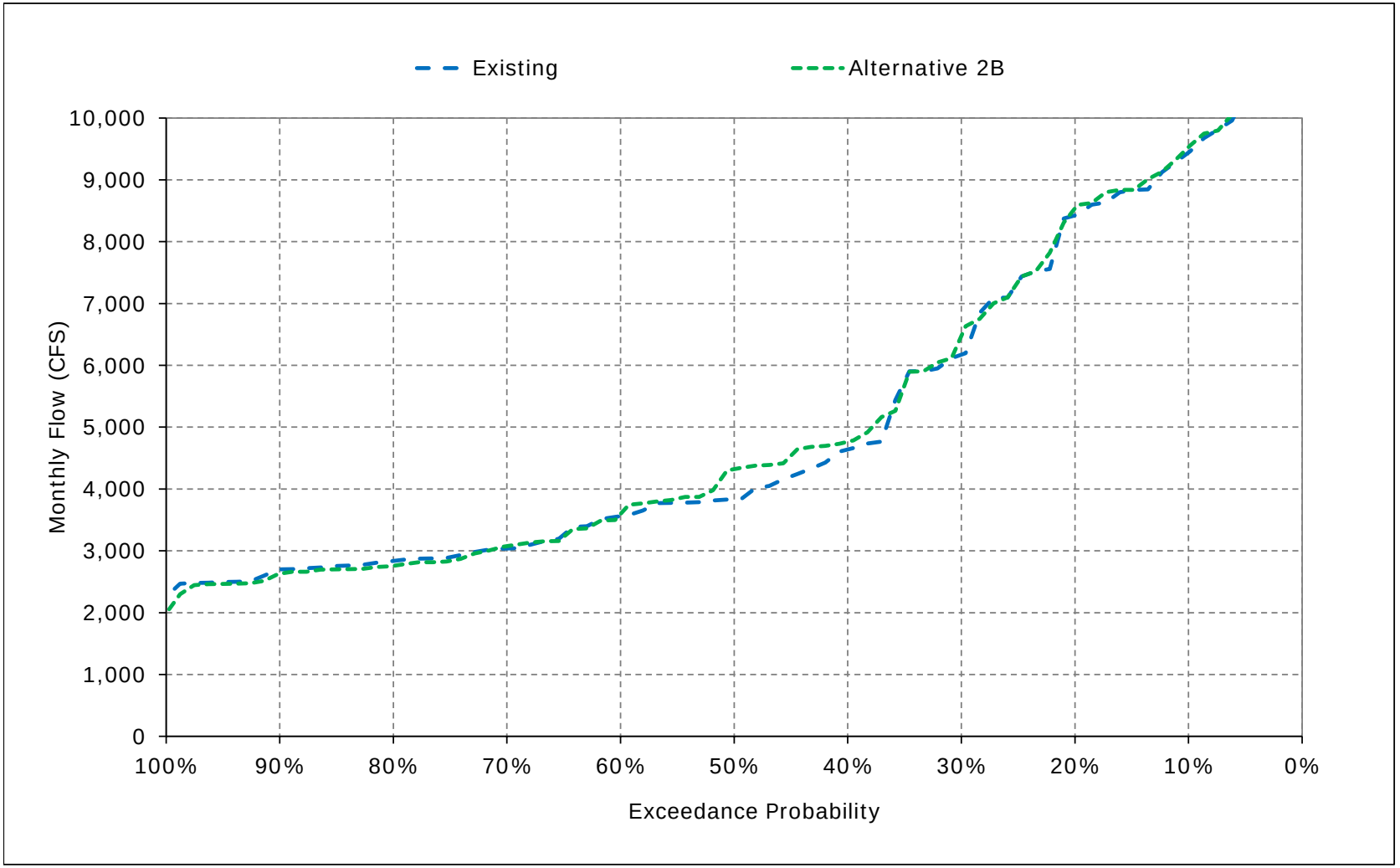


Figure 2-11. Georgiana Slough, February

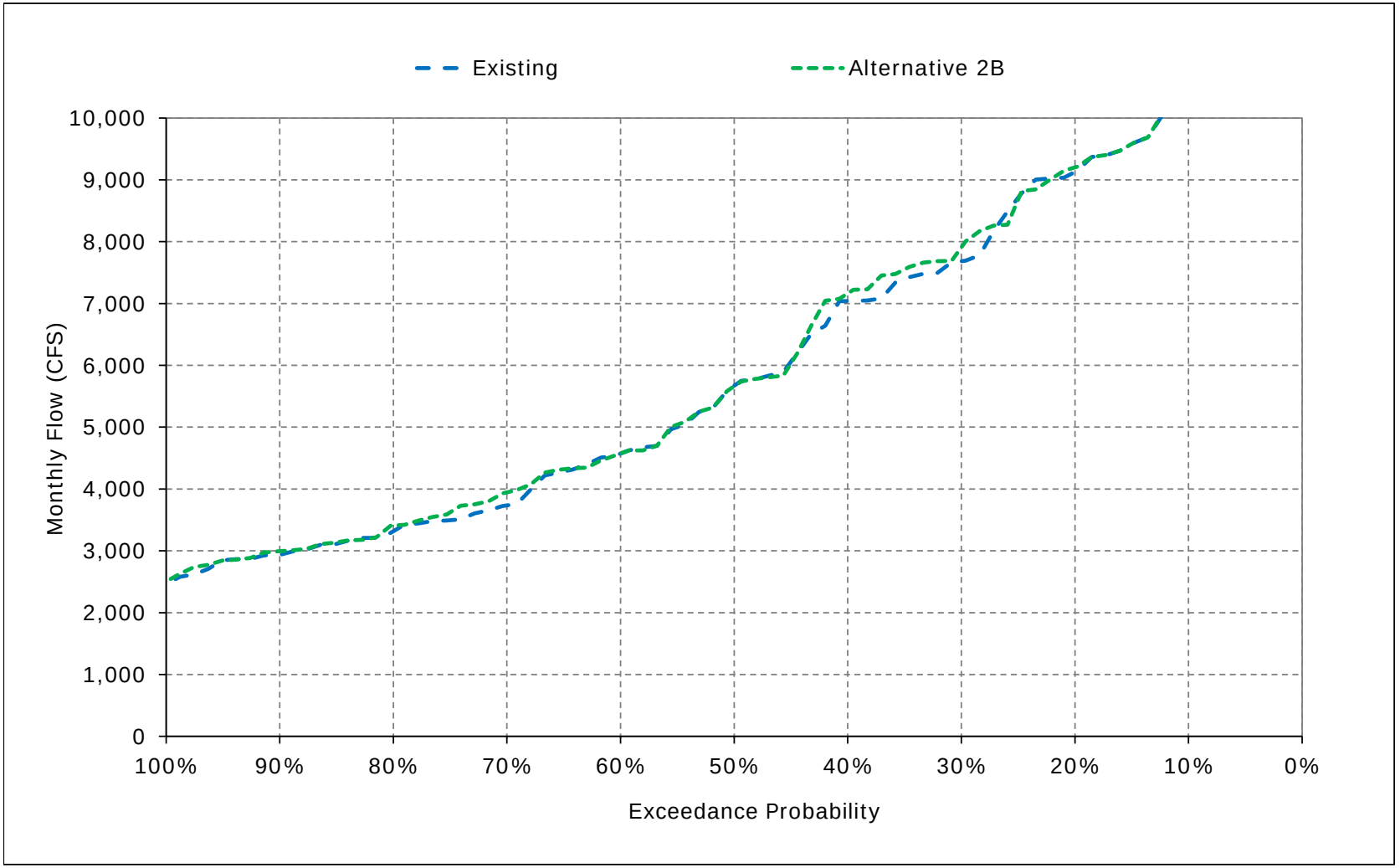


Figure 2-12. Georgiana Slough, March

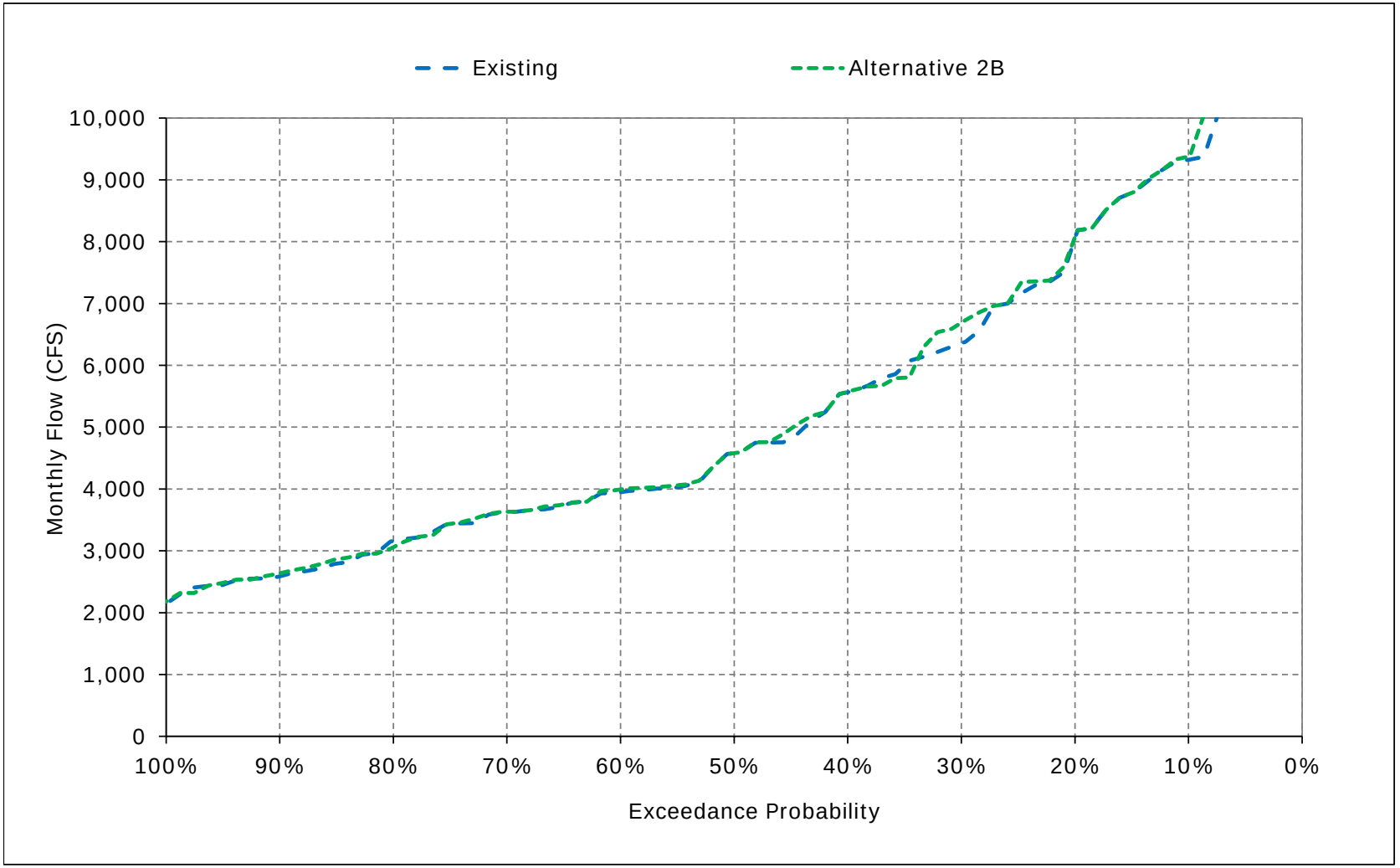


Figure 2-13. Georgiana Slough, April

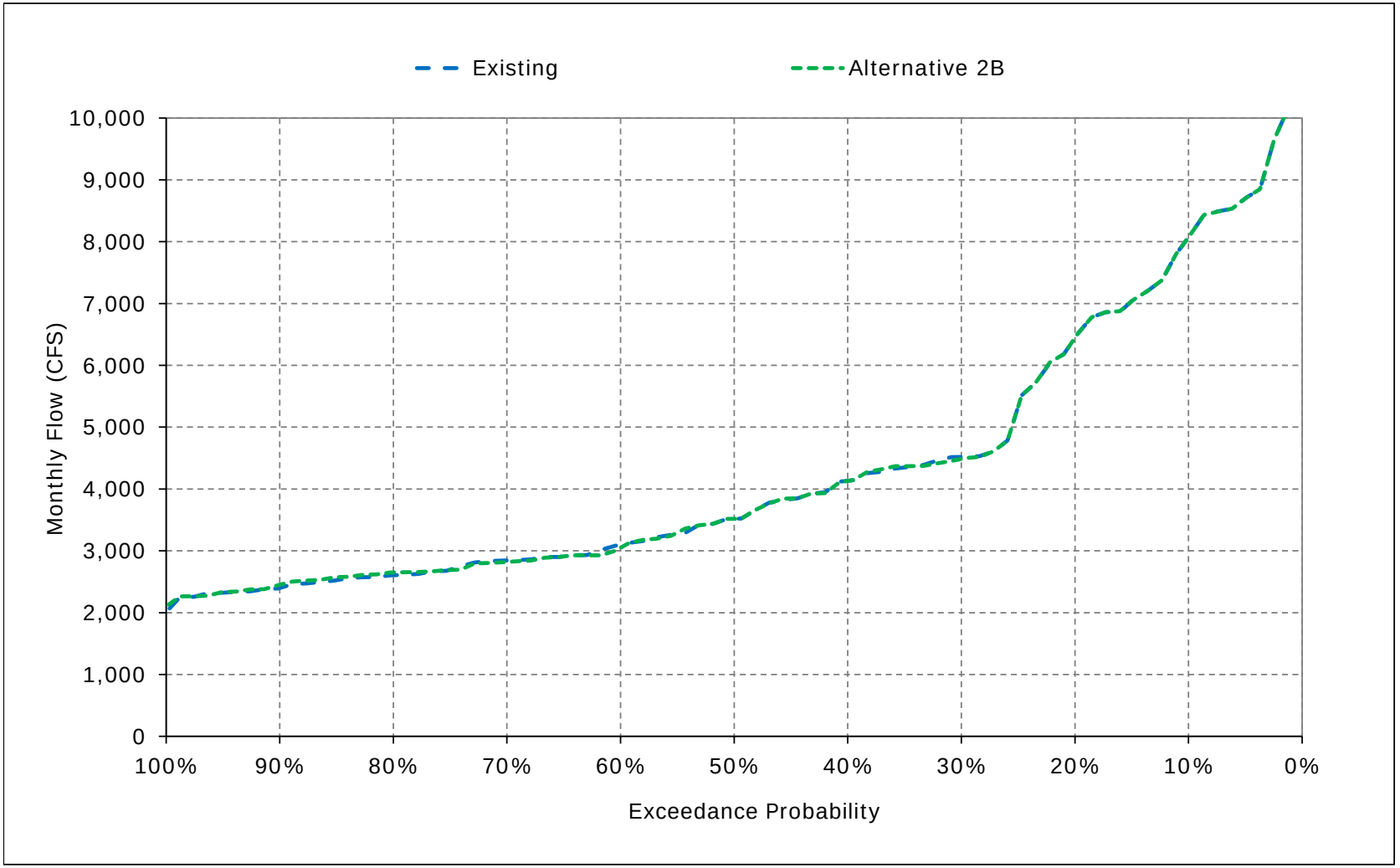


Figure 2-14. Georgiana Slough, May

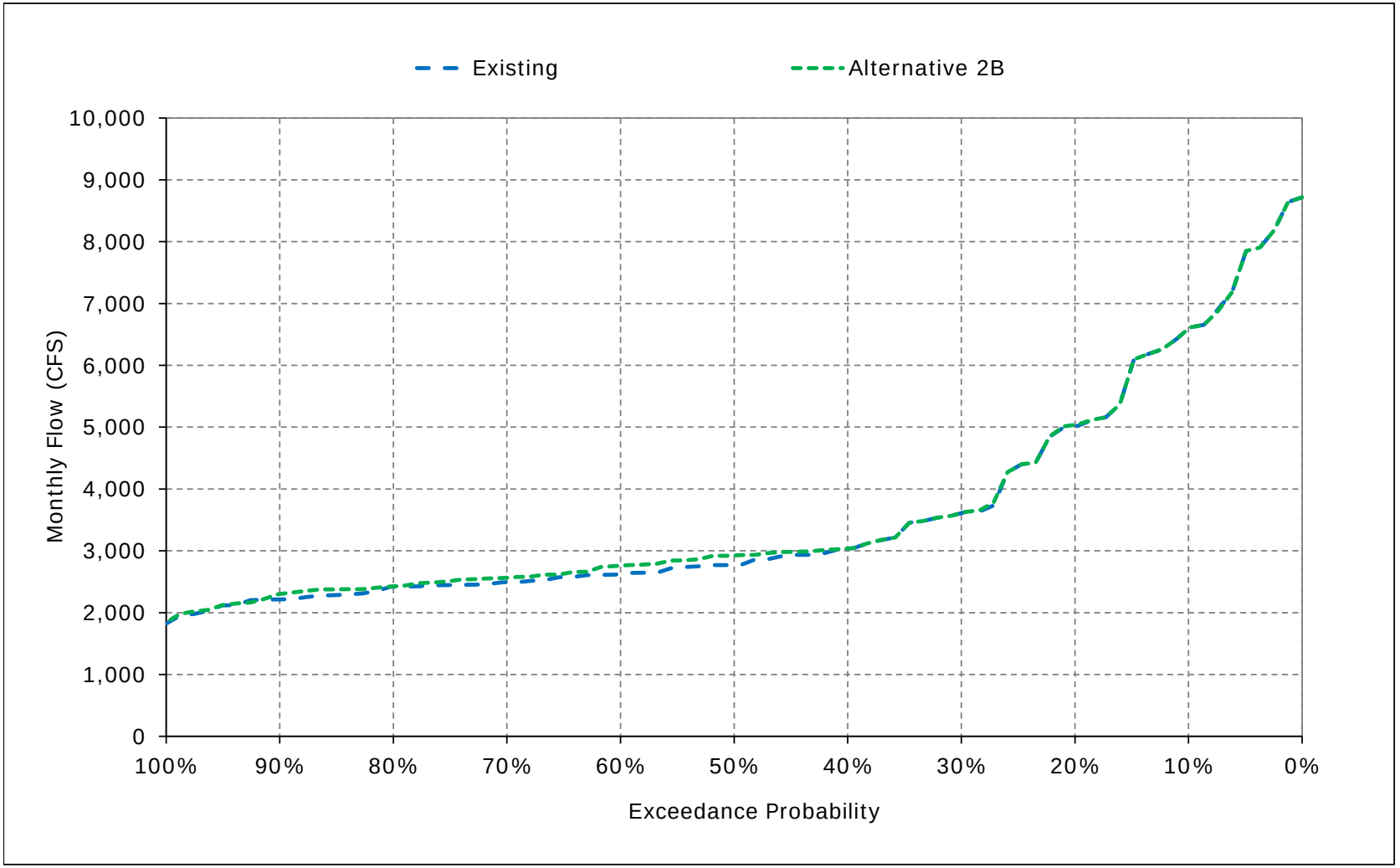


Figure 2-15. Georgiana Slough, June

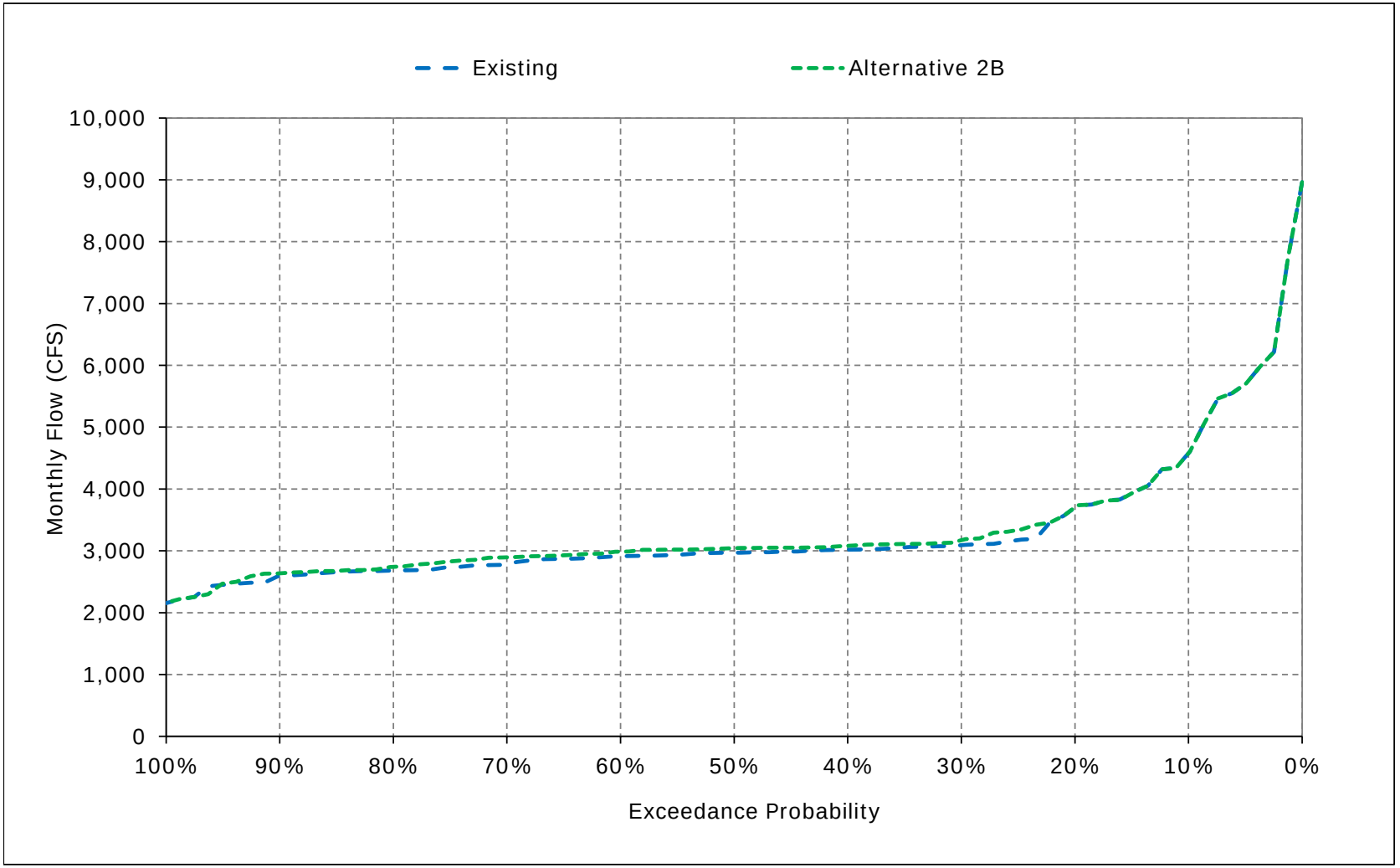


Figure 2-16. Georgiana Slough, July

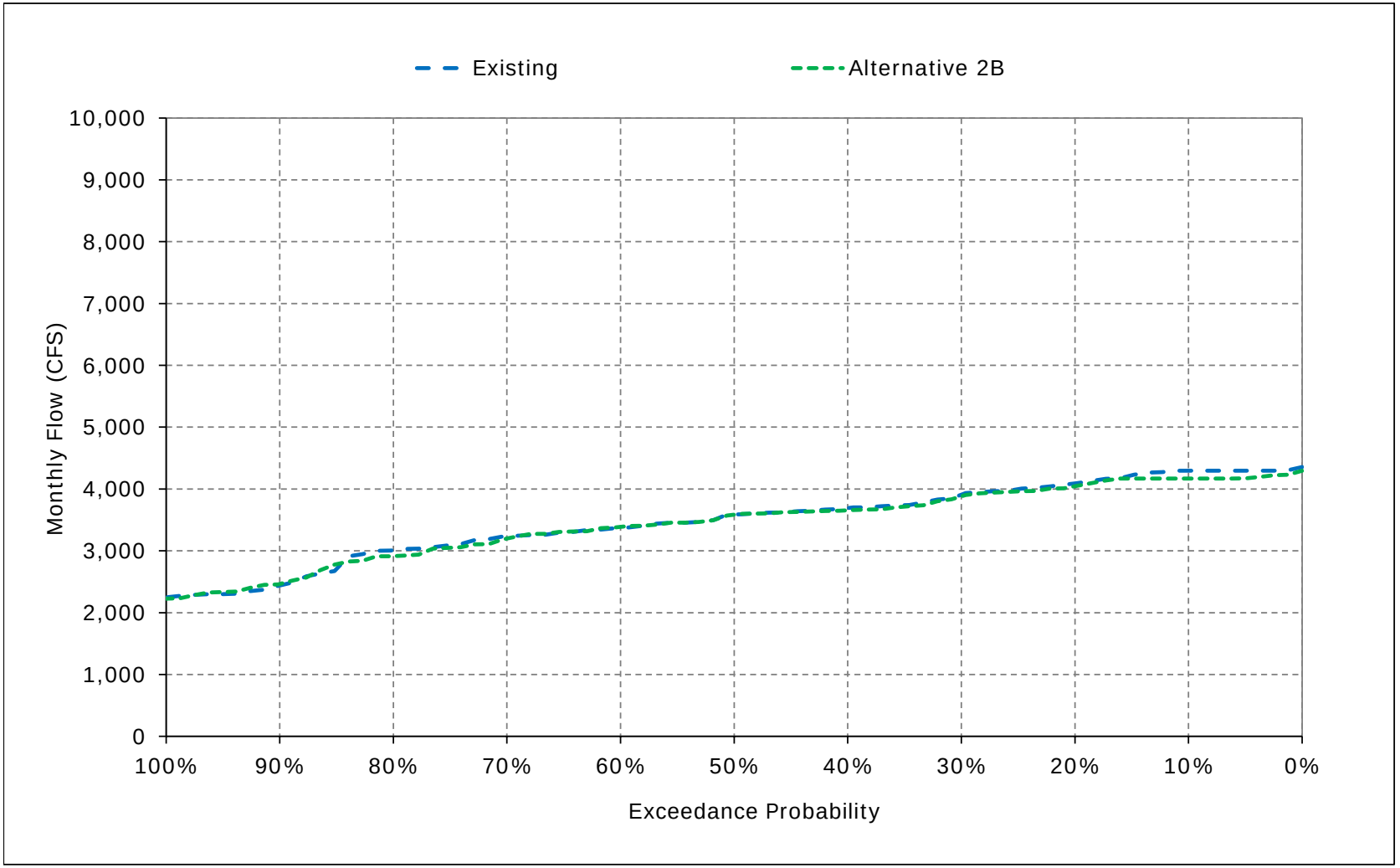


Figure 2-17. Georgiana Slough, August

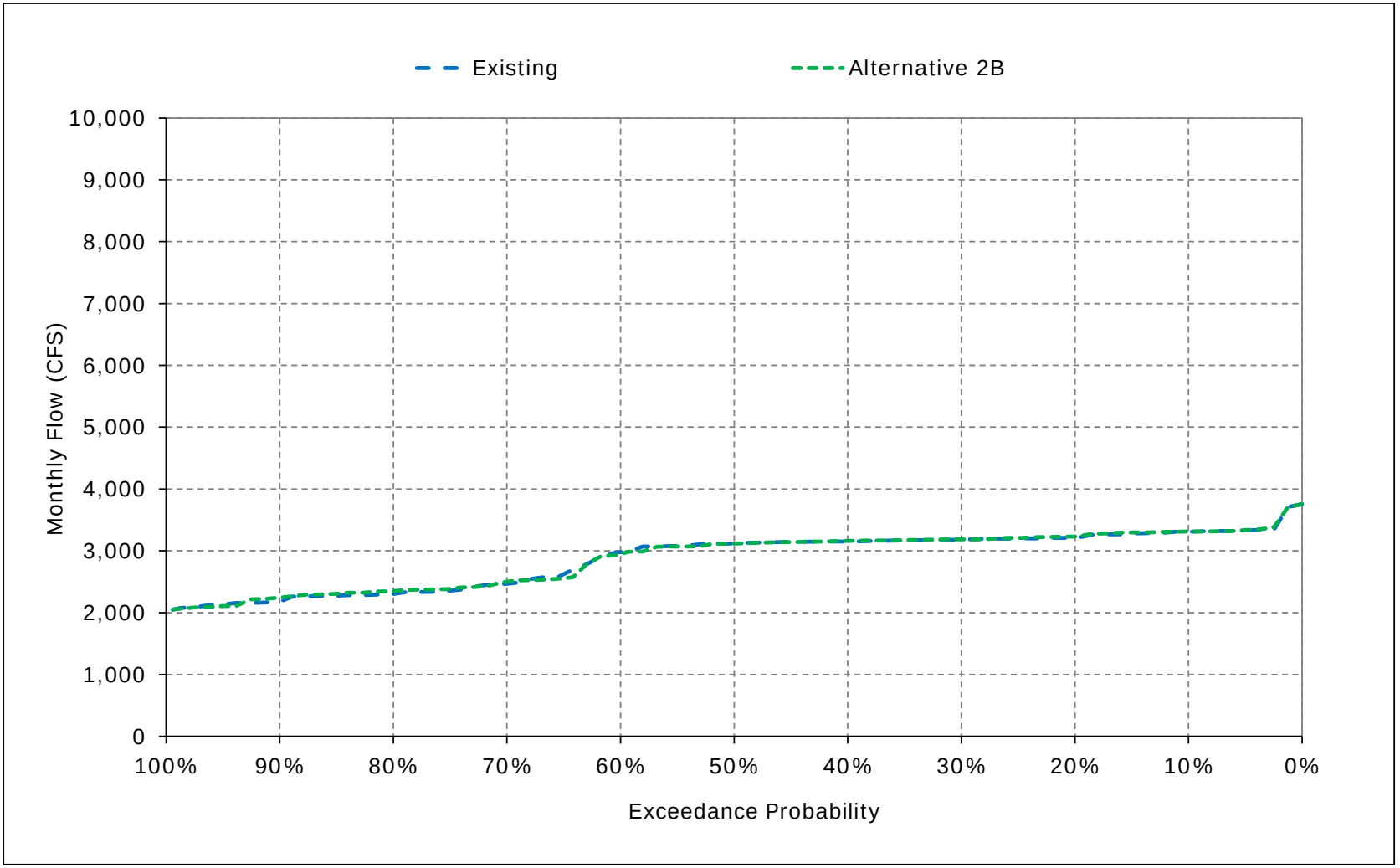
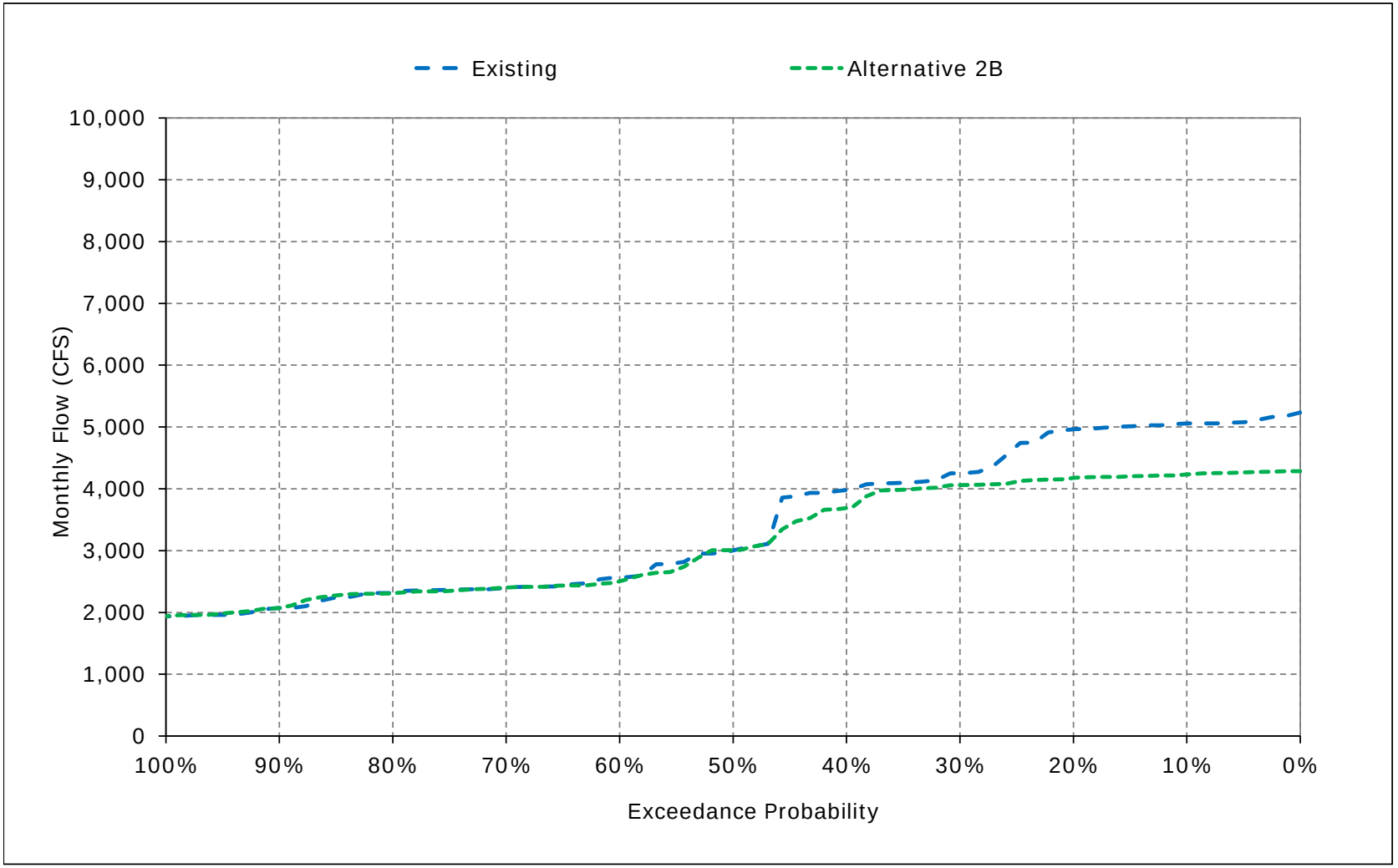


Figure 2-18. Georgiana Slough, September



## Table 3-1. Yolo Bypass Flow, Monthly Flow

### Existing

| | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 63 | 475 | 7,065 | 32,116 | 44,401 | 22,630 | 7,266 | 275 | 68 | 48 | 183 | 190 |
| 20% | 61 | 145 | 2,778 | 10,983 | 16,552 | 8,079 | 3,162 | 78 | 68 | 48 | 55 | 110 |
| 30% | 58 | 46 | 917 | 3,830 | 7,981 | 3,276 | 1,068 | 73 | 68 | 48 | 55 | 59 |
| 40% | 53 | 10 | 316 | 1,912 | 4,787 | 1,767 | 229 | 70 | 68 | 48 | 55 | 59 |
| 50% | 45 | 8 | 148 | 495 | 2,163 | 918 | 135 | 68 | 67 | 48 | 55 | 59 |
| 60% | 40 | 5 | 60 | 269 | 609 | 279 | 111 | 65 | 67 | 48 | 55 | 59 |
| 70% | 29 | 0 | 15 | 62 | 233 | 115 | 88 | 63 | 66 | 48 | 55 | 58 |
| 80% | 16 | 0 | 0 | 27 | 82 | 45 | 78 | 59 | 64 | 48 | 55 | 56 |
| 90% | 5 | 0 | 0 | 0 | 0 | 7 | 56 | 53 | 62 | 48 | 54 | 52 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 128 | 384 | 3,071 | 9,666 | 12,947 | 8,304 | 2,671 | 284 | 126 | 48 | 100 | 105 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 263 | 1,057 | 8,104 | 26,331 | 32,235 | 21,722 | 7,047 | 684 | 255 | 48 | 143 | 177 |
| Above Normal (15%) | 32 | 176 | 1,191 | 6,758 | 11,720 | 7,440 | 1,747 | 194 | 66 | 48 | 95 | 65 |
| Below Normal (17%) | 47 | 33 | 1,415 | 932 | 3,239 | 704 | 574 | 67 | 66 | 48 | 114 | 85 |
| Dry (22%) | 116 | 68 | 331 | 557 | 1,842 | 751 | 308 | 77 | 67 | 48 | 62 | 65 |
| Critical (15%) | 41 | 19 | 89 | 317 | 365 | 292 | 107 | 68 | 64 | 48 | 54 | 70 |

### Alternative 2B

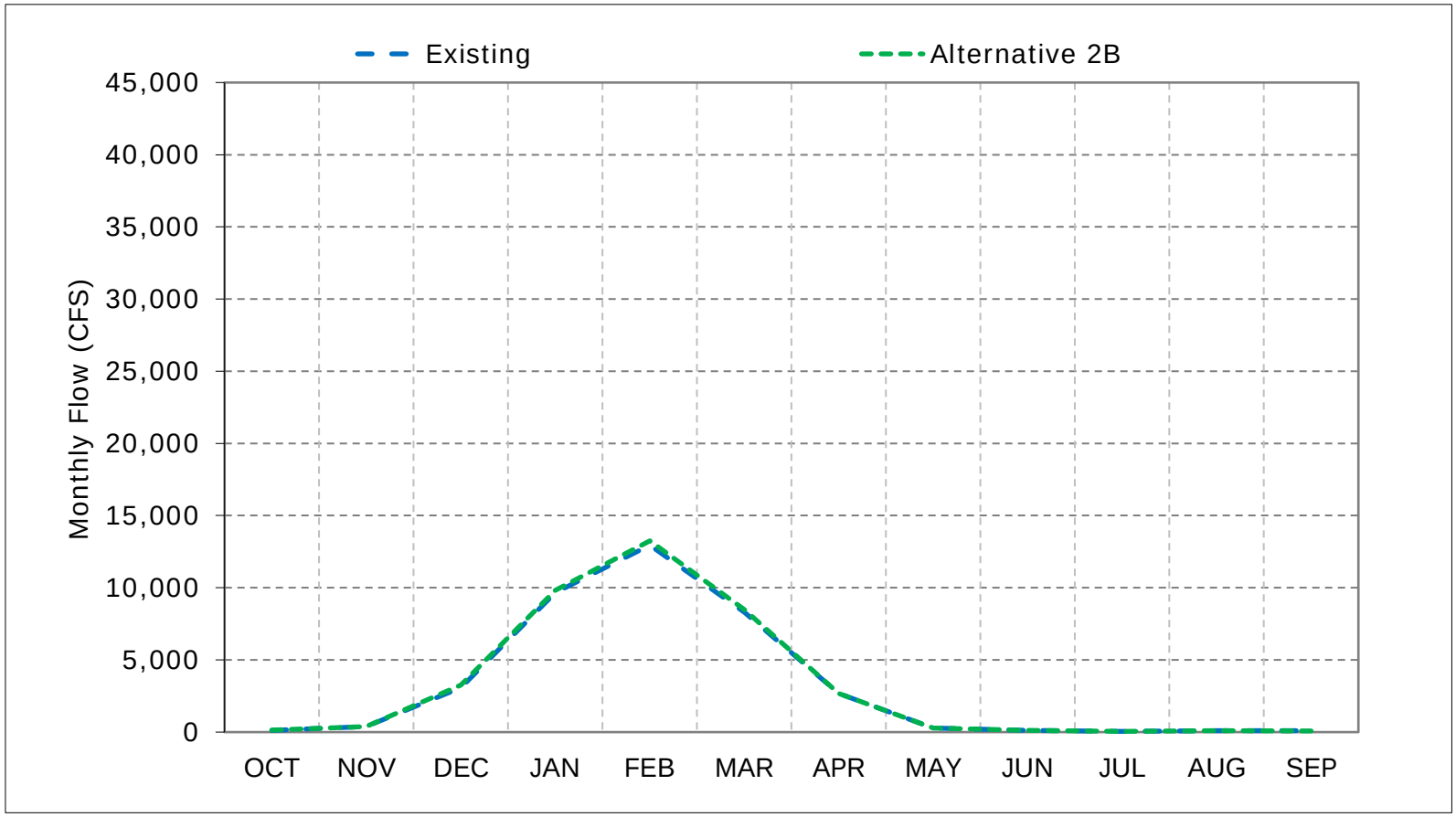
| | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 63 | 475 | 8,672 | 32,210 | 45,210 | 23,613 | 7,264 | 275 | 68 | 48 | 183 | 127 |
| 20% | 62 | 145 | 2,779 | 11,177 | 16,677 | 8,265 | 3,162 | 78 | 68 | 48 | 55 | 59 |
| 30% | 59 | 50 | 917 | 3,878 | 8,107 | 3,320 | 1,068 | 73 | 68 | 48 | 55 | 59 |
| 40% | 53 | 17 | 316 | 1,912 | 6,161 | 1,804 | 229 | 70 | 68 | 48 | 55 | 59 |
| 50% | 46 | 9 | 148 | 509 | 2,334 | 1,005 | 135 | 68 | 67 | 48 | 55 | 59 |
| 60% | 40 | 5 | 60 | 327 | 729 | 373 | 111 | 65 | 67 | 48 | 55 | 59 |
| 70% | 31 | 0 | 15 | 80 | 261 | 122 | 88 | 63 | 66 | 48 | 55 | 57 |
| 80% | 16 | 0 | 0 | 51 | 82 | 47 | 78 | 59 | 64 | 48 | 55 | 55 |
| 90% | 5 | 0 | 0 | 13 | 0 | 7 | 56 | 53 | 62 | 48 | 54 | 52 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 130 | 378 | 3,263 | 9,825 | 13,249 | 8,486 | 2,671 | 284 | 126 | 48 | 100 | 72 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 269 | 1,007 | 8,707 | 26,795 | 32,585 | 21,863 | 7,047 | 684 | 255 | 48 | 143 | 73 |
| Above Normal (15%) | 32 | 155 | 1,202 | 6,765 | 12,428 | 8,298 | 1,747 | 194 | 66 | 48 | 95 | 65 |
| Below Normal (17%) | 47 | 33 | 1,412 | 1,015 | 3,771 | 703 | 574 | 67 | 66 | 48 | 114 | 85 |
| Dry (22%) | 118 | 120 | 331 | 543 | 1,827 | 805 | 308 | 77 | 67 | 48 | 62 | 65 |
| Critical (15%) | 41 | 27 | 89 | 316 | 367 | 292 | 107 | 68 | 64 | 48 | 54 | 75 |

### Alternative 2B minus Existing

| | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0 | 0 | 1,607 | 94 | 808 | 983 | -3 | 0 | 0 | 0 | 0 | -63 |
| 20% | 0 | 0 | 2 | 194 | 125 | 186 | 0 | 0 | 0 | 0 | 0 | -51 |
| 30% | 1 | 5 | 0 | 47 | 125 | 44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40% | 0 | 7 | 0 | 0 | 1,374 | 37 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50% | 1 | 0 | 0 | 14 | 171 | 87 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60% | 0 | 1 | 0 | 57 | 120 | 94 | 0 | 0 | 0 | 0 | 0 | -1 |
| 70% | 1 | 0 | 0 | 18 | 28 | 8 | 0 | 0 | 0 | 0 | 0 | -1 |
| 80% | 0 | 0 | 0 | 24 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | -1 |
| 90% | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2 | -6 | 192 | 159 | 302 | 182 | 0 | 0 | 0 | 0 | 0 | -33 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 6 | -50 | 603 | 464 | 350 | 141 | 0 | 0 | 0 | 0 | 0 | -105 |
| Above Normal (15%) | 0 | -21 | 12 | 7 | 708 | 859 | 0 | 0 | 0 | 0 | 0 | 0 |
| Below Normal (17%) | 0 | 0 | -3 | 83 | 532 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dry (22%) | 2 | 53 | 0 | -15 | -15 | 54 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical (15%) | 0 | 8 | 0 | -1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |

a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

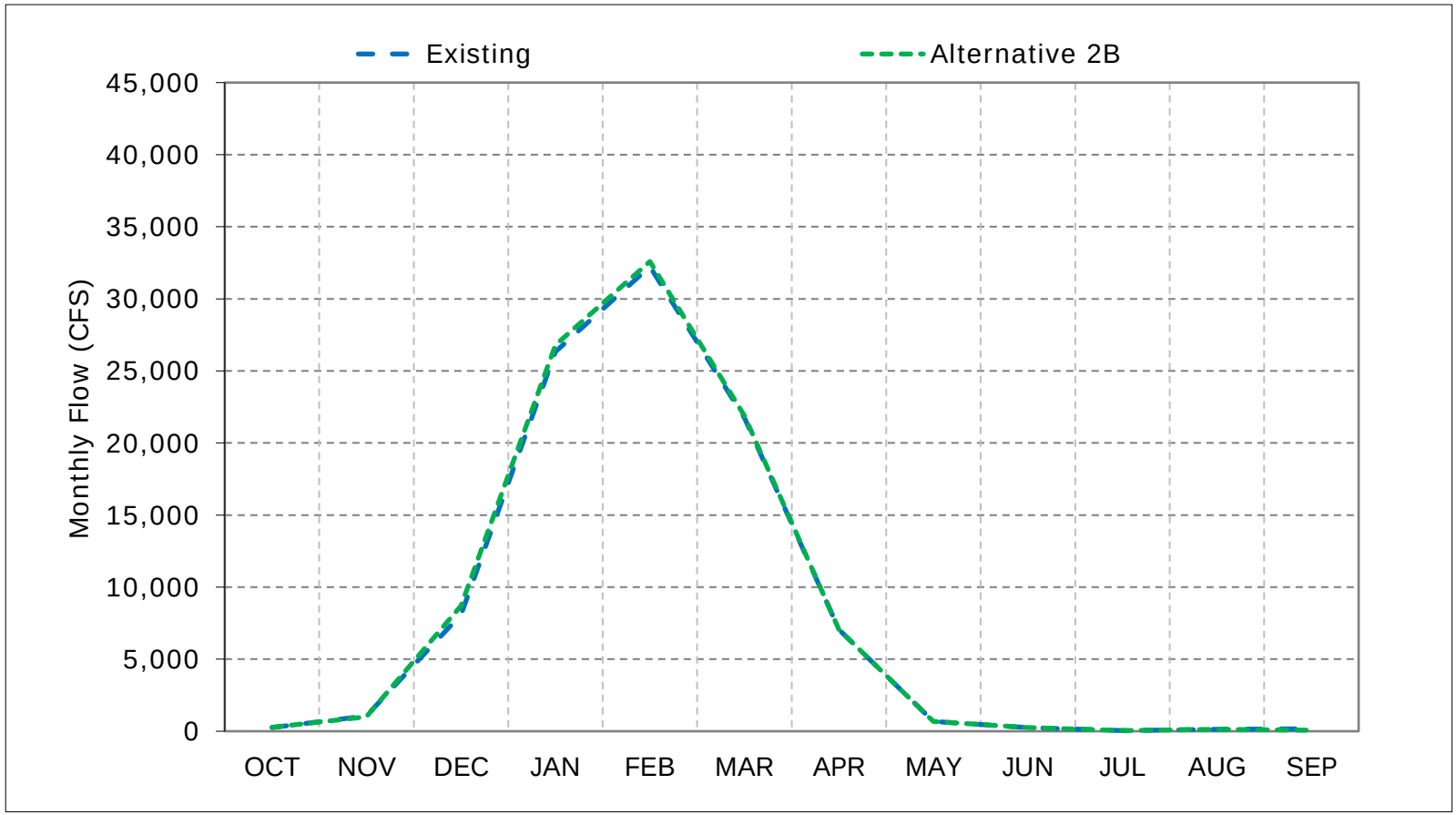
Figure 3-1. Yolo Bypass Flow, Long-Term Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

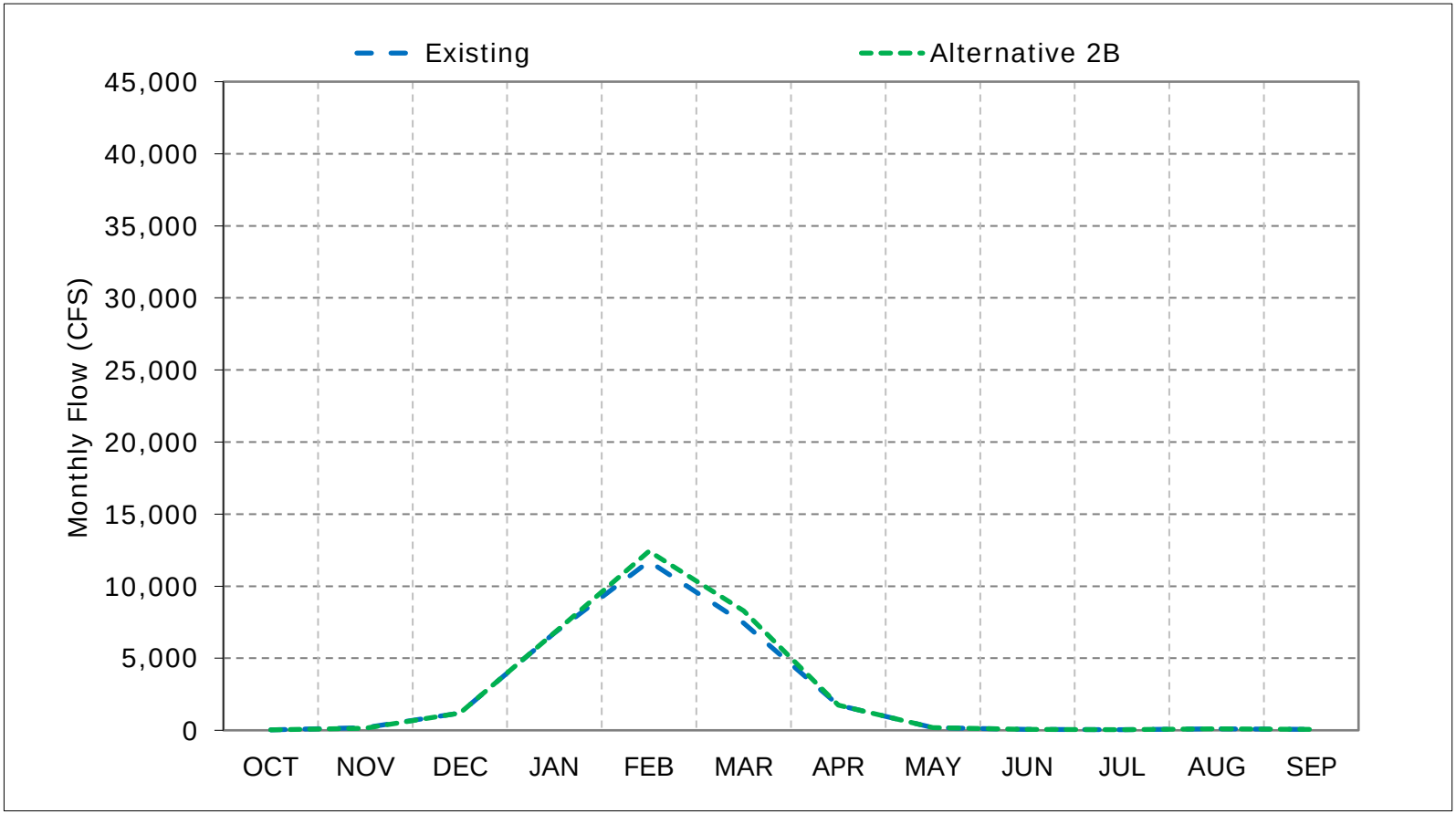
Figure 3-2. Yolo Bypass Flow, Wet Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

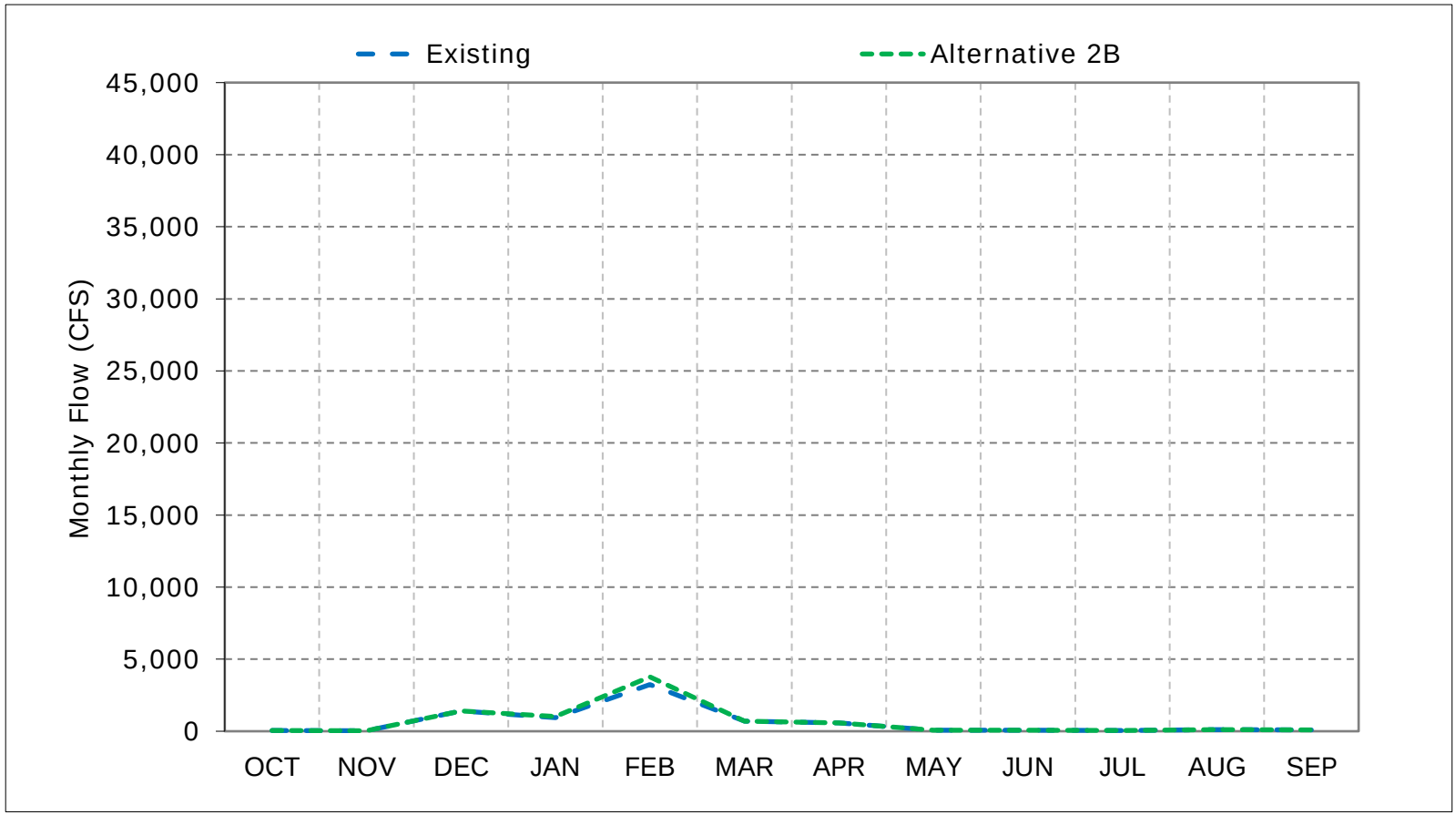
Figure 3-3. Yolo Bypass Flow, Above Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

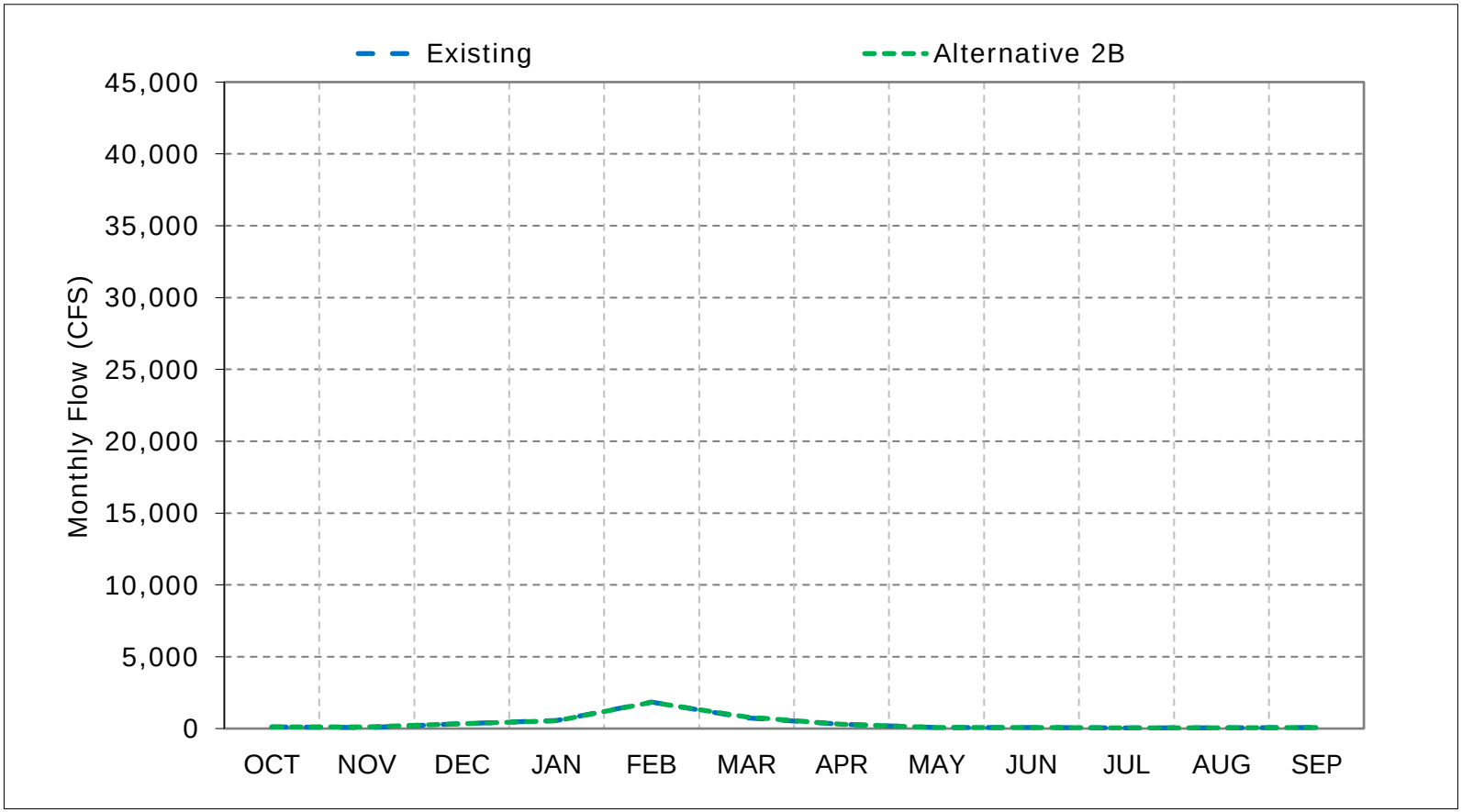
Figure 3-4. Yolo Bypass Flow, Below Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

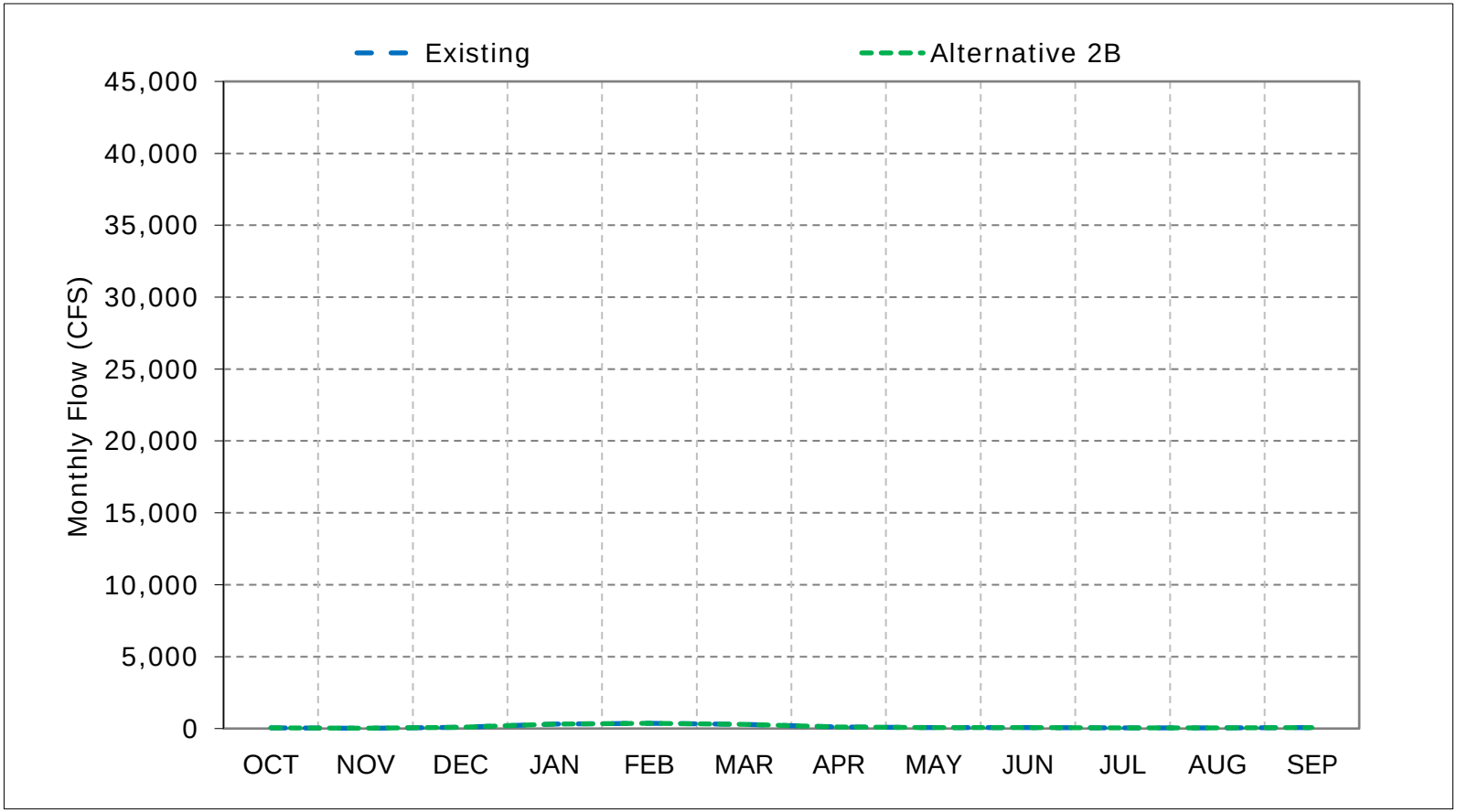
*These results are displayed with water year - year type sorting.

Figure 3-5. Yolo Bypass Flow, Dry Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-6. Yolo Bypass Flow, Critical Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 3-7. Yolo Bypass Flow, October

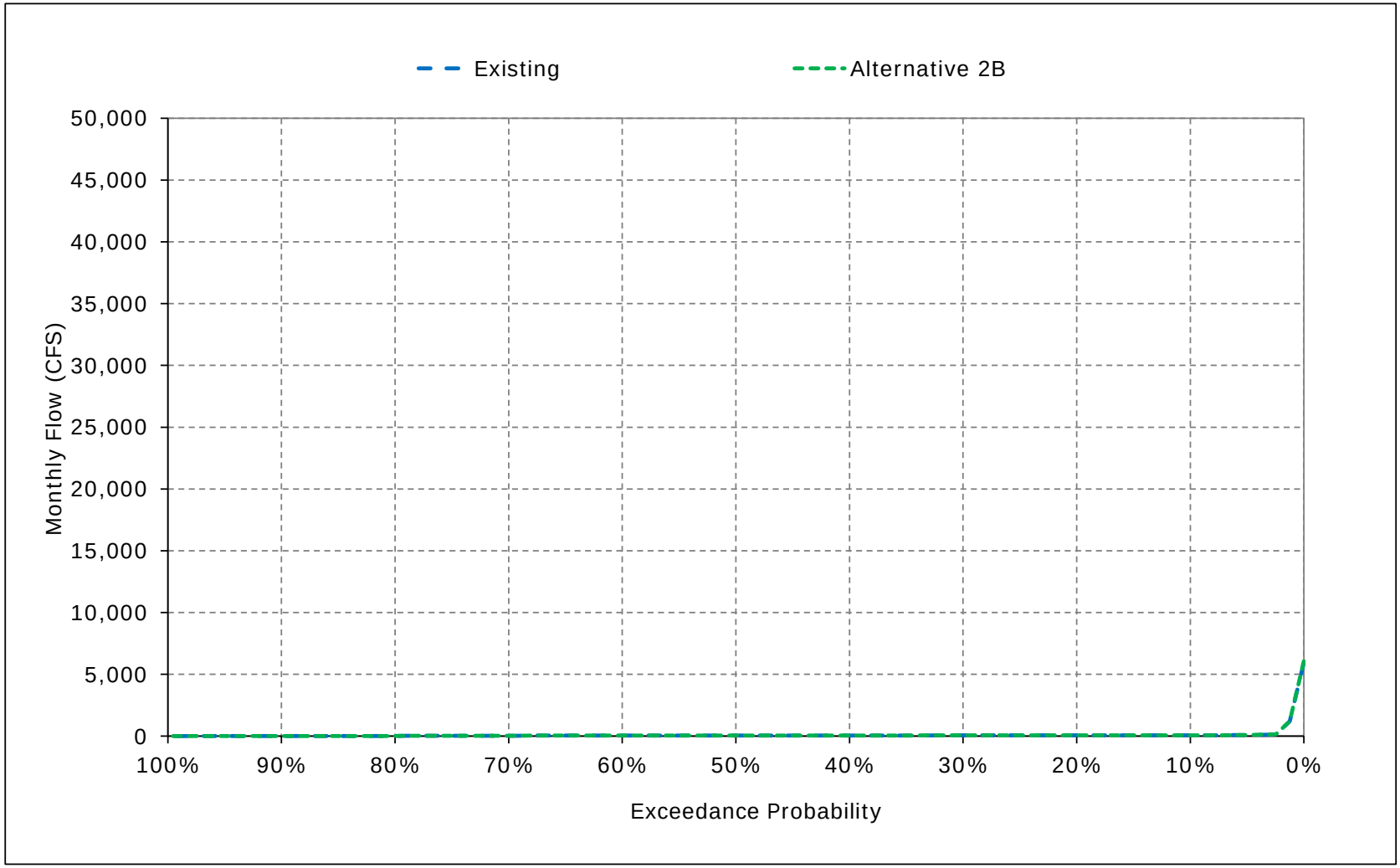


Figure 3-8. Yolo Bypass Flow, November

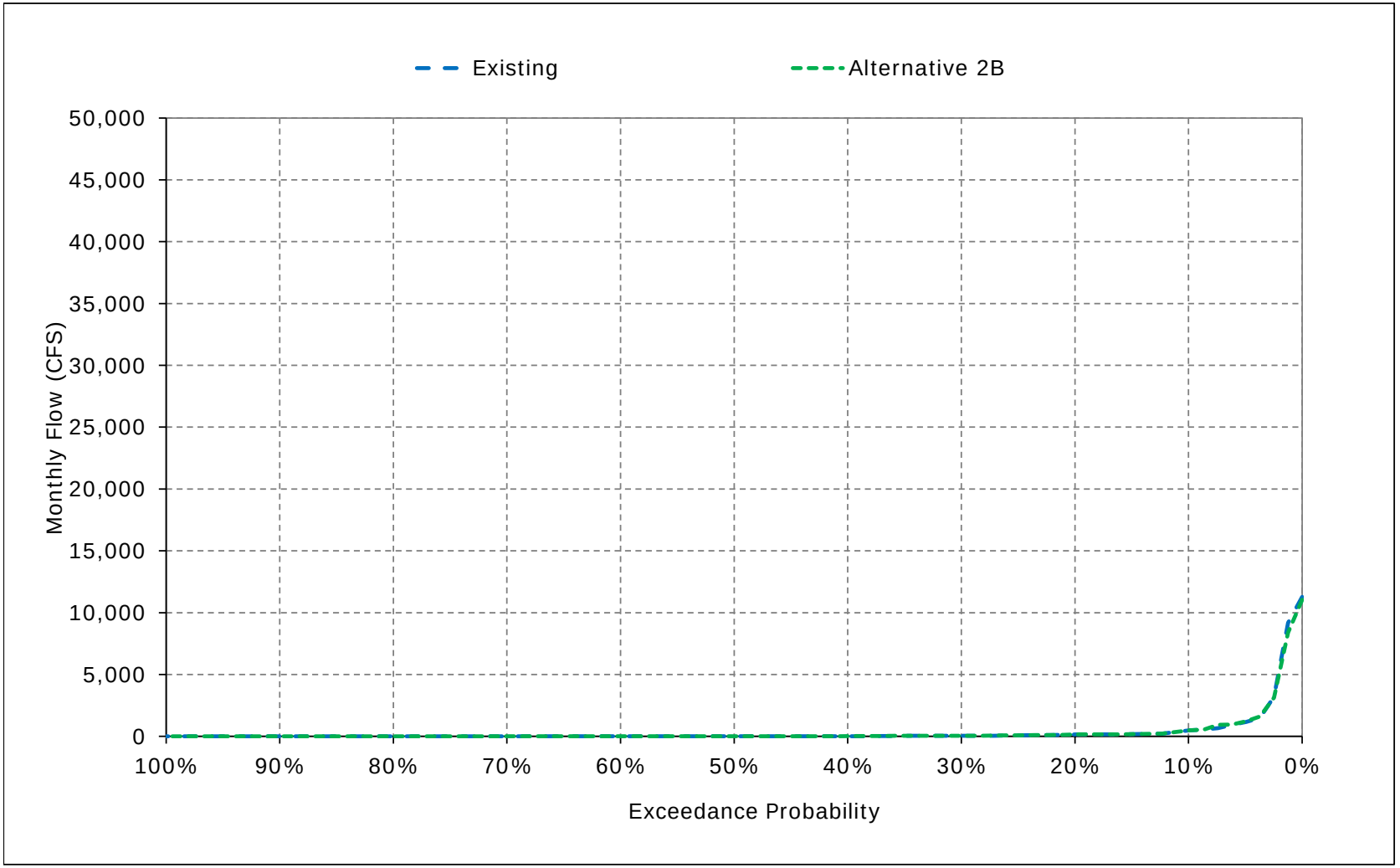


Figure 3-9. Yolo Bypass Flow, December

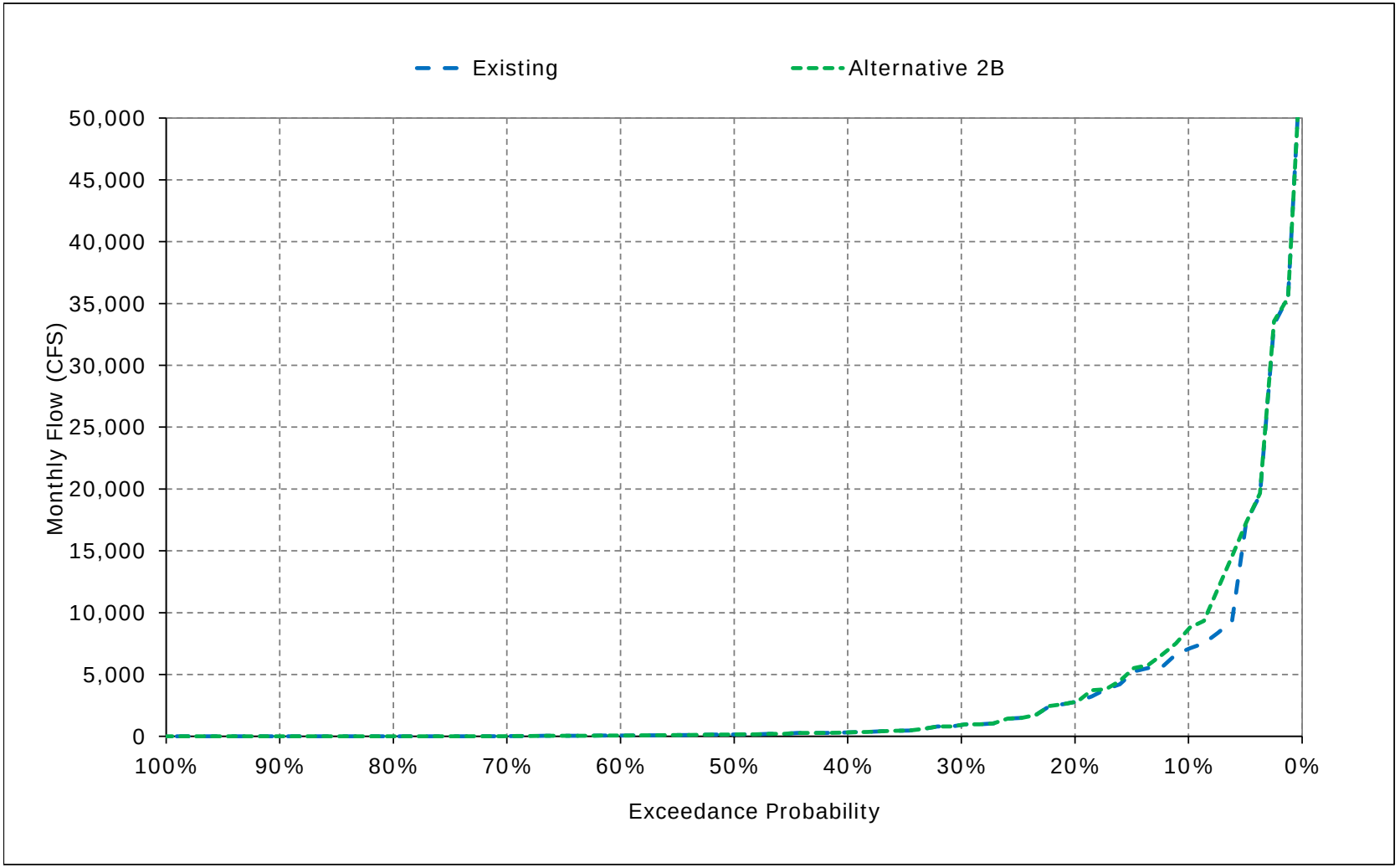


Figure 3-10. Yolo Bypass Flow, January

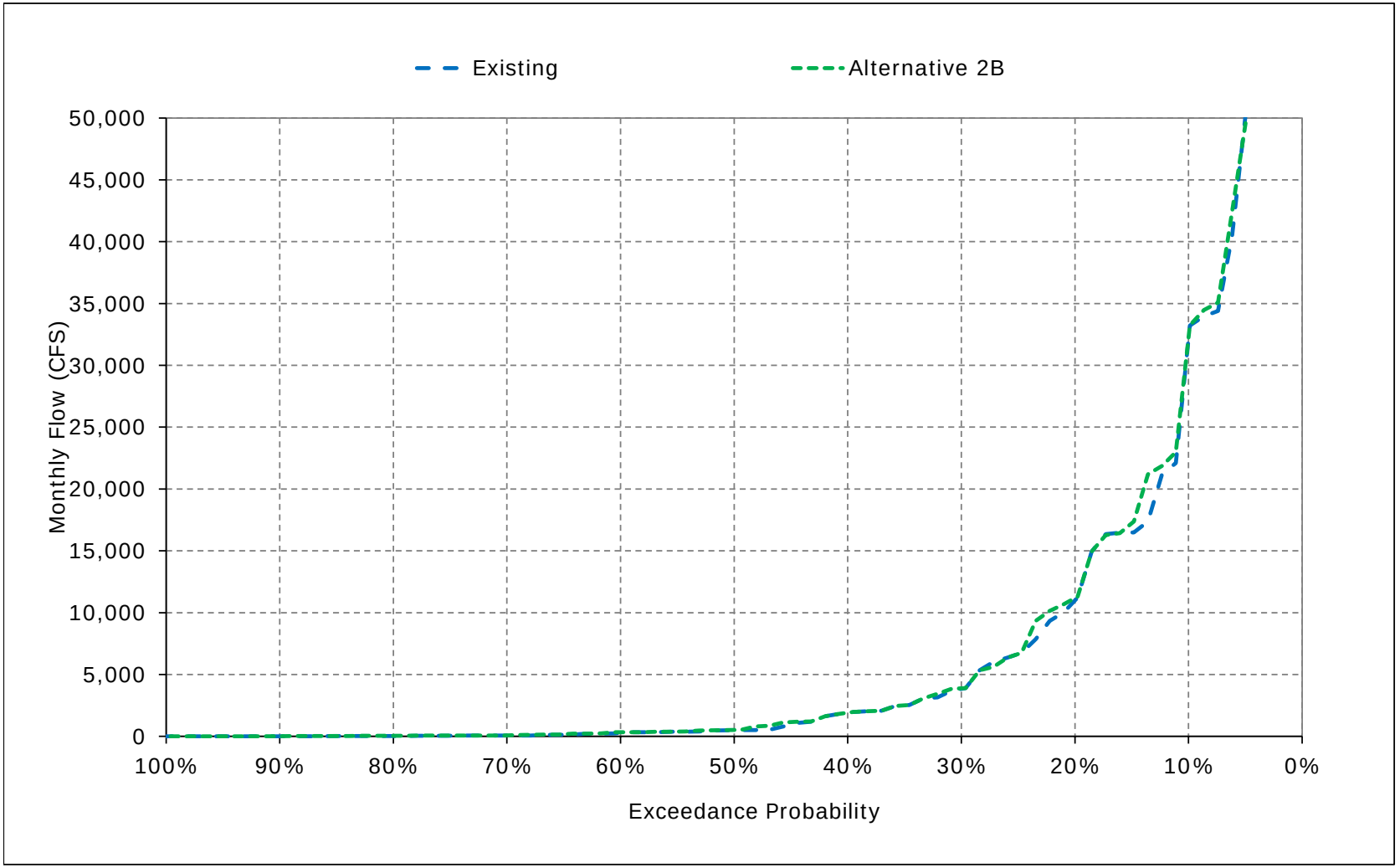


Figure 3-11. Yolo Bypass Flow, February

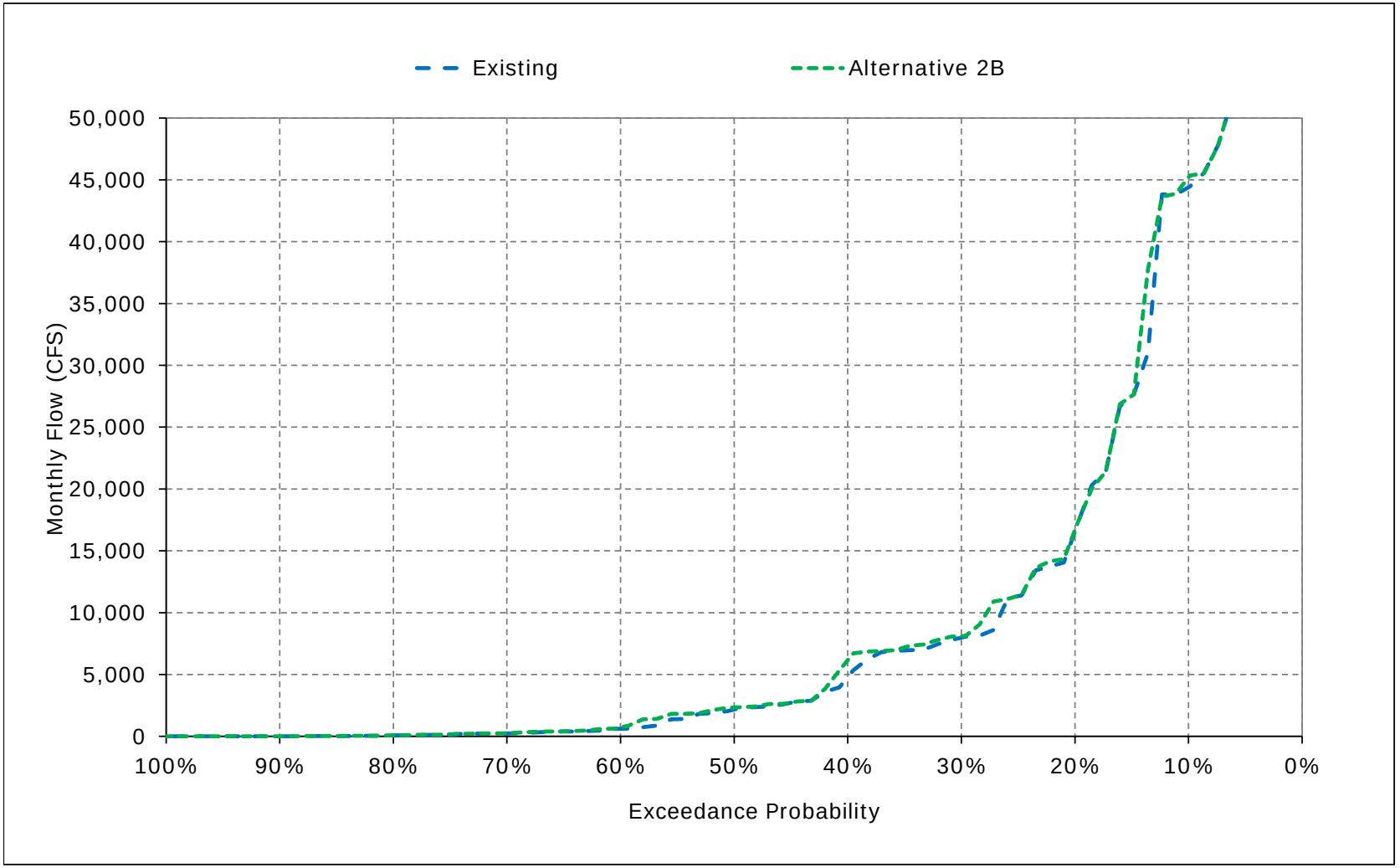


Figure 3-12. Yolo Bypass Flow, March

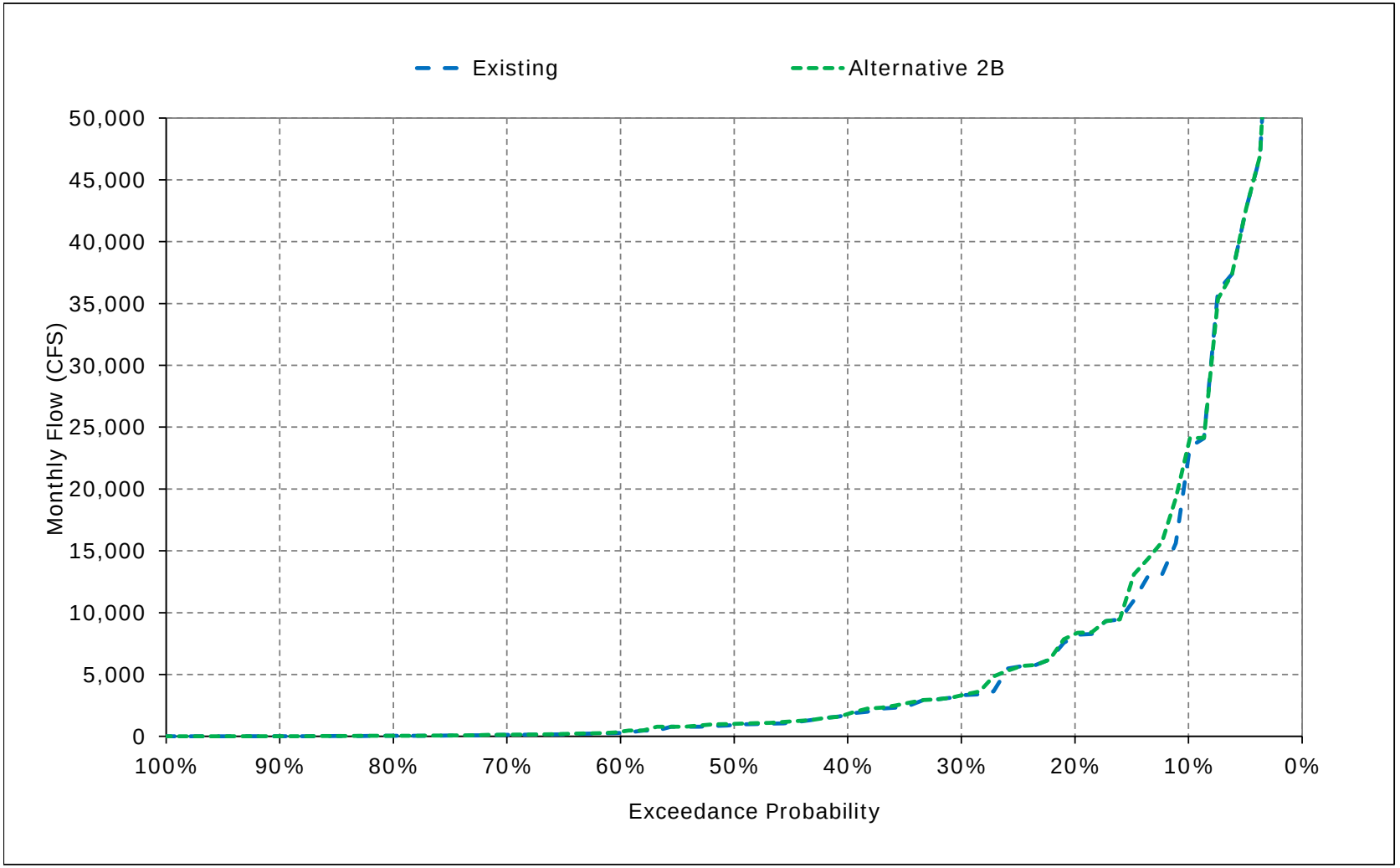


Figure 3-13. Yolo Bypass Flow, April

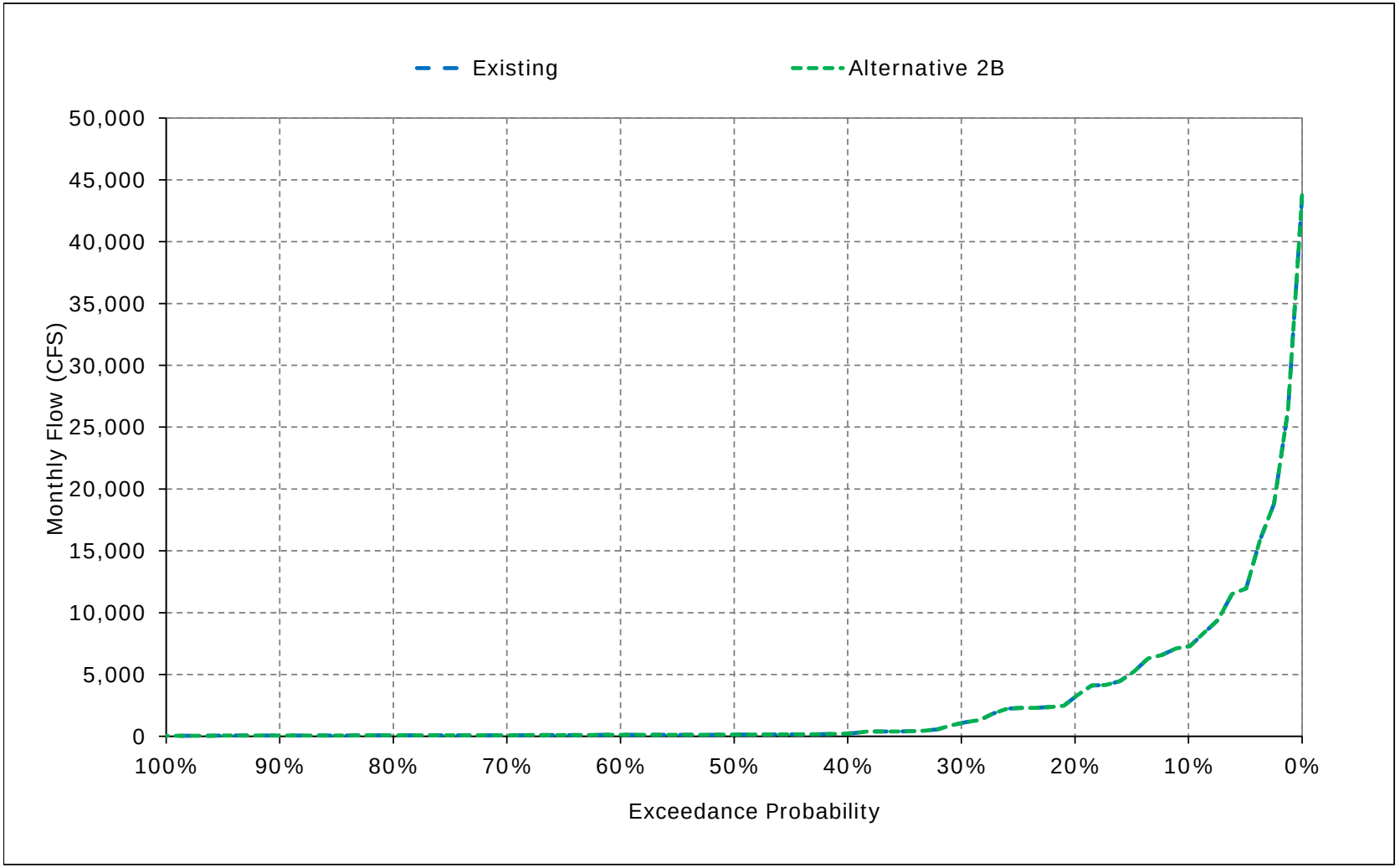


Figure 3-14. Yolo Bypass Flow, May

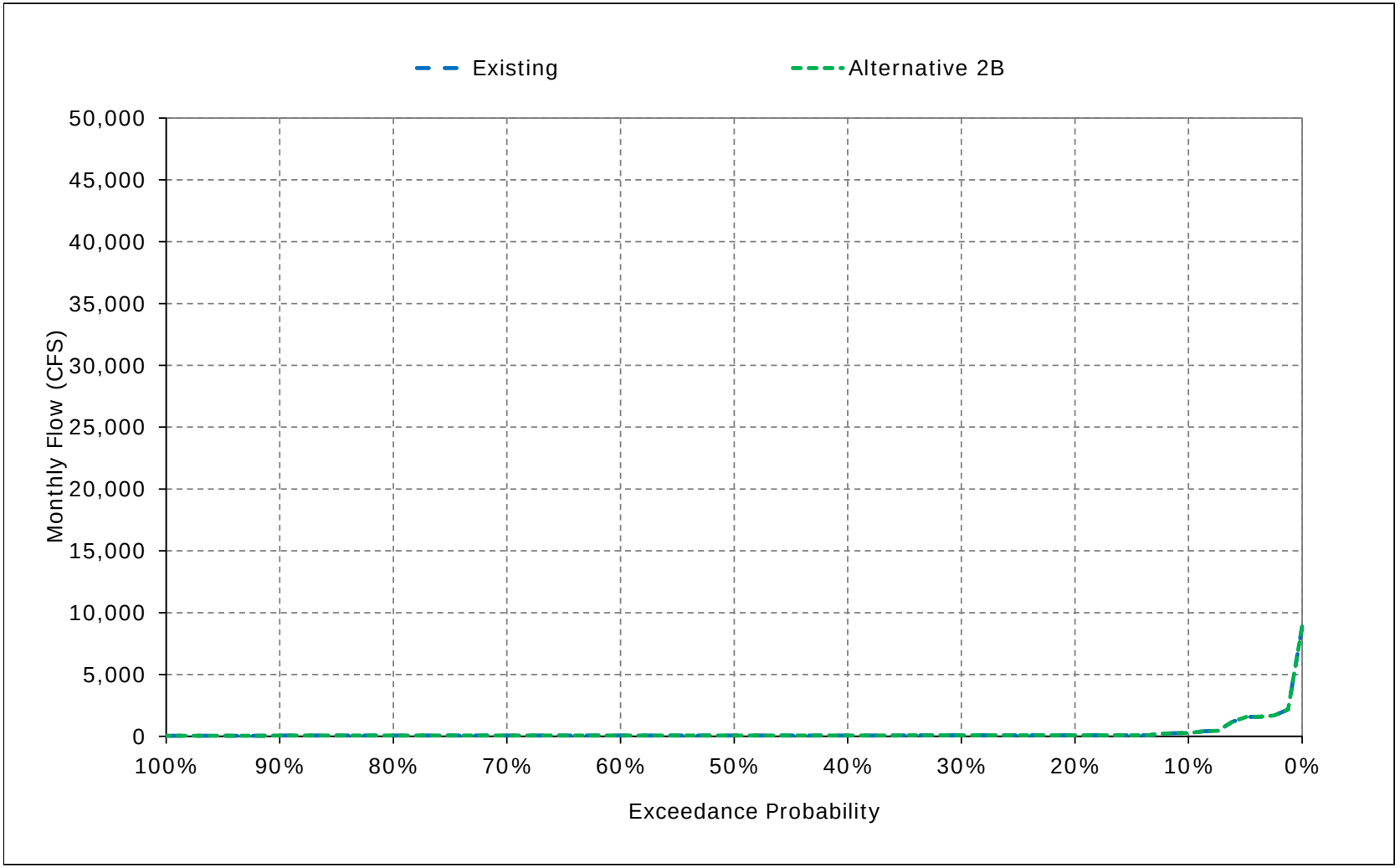


Figure 3-15. Yolo Bypass Flow, June

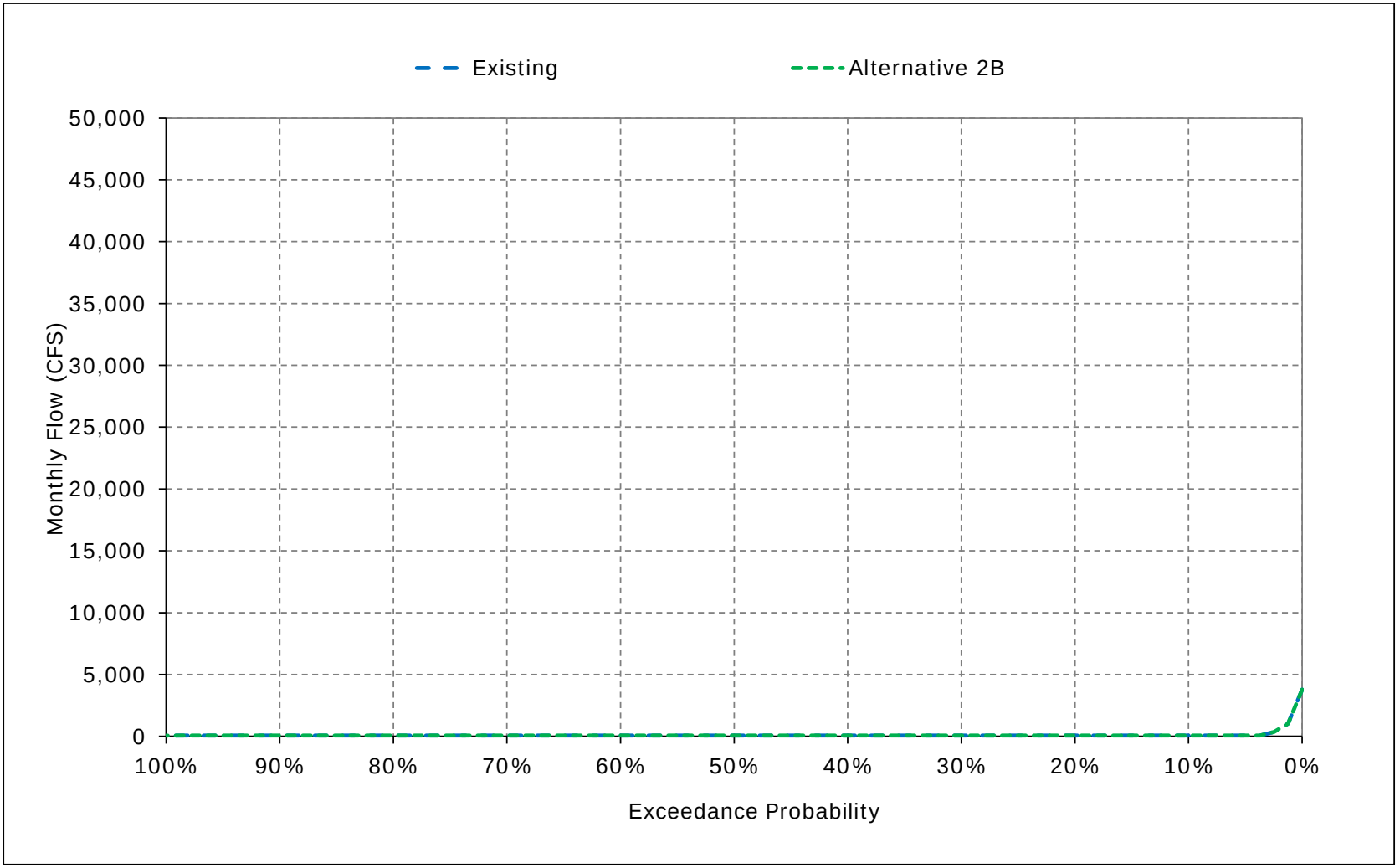


Figure 3-16. Yolo Bypass Flow, July

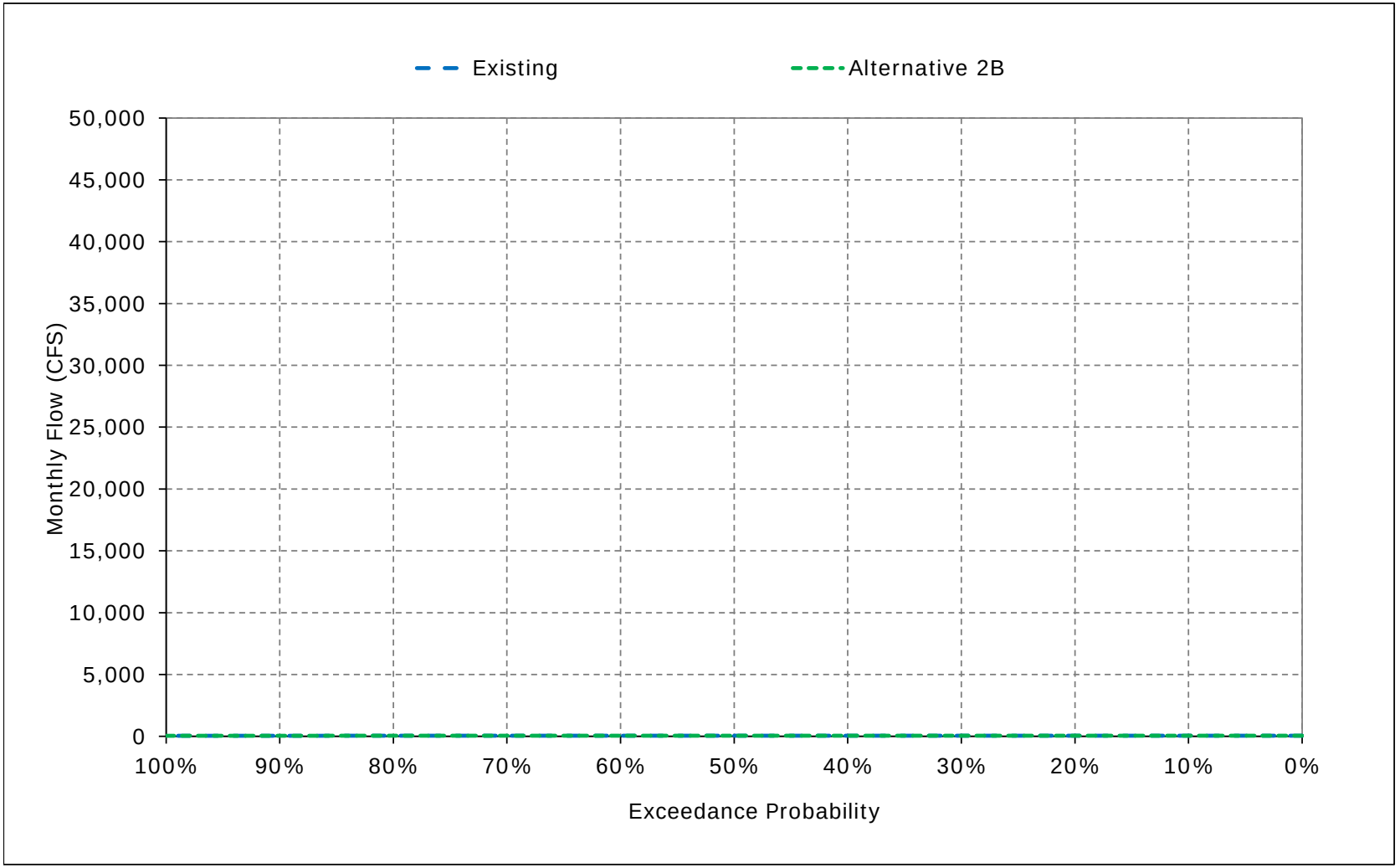


Figure 3-17. Yolo Bypass Flow, August

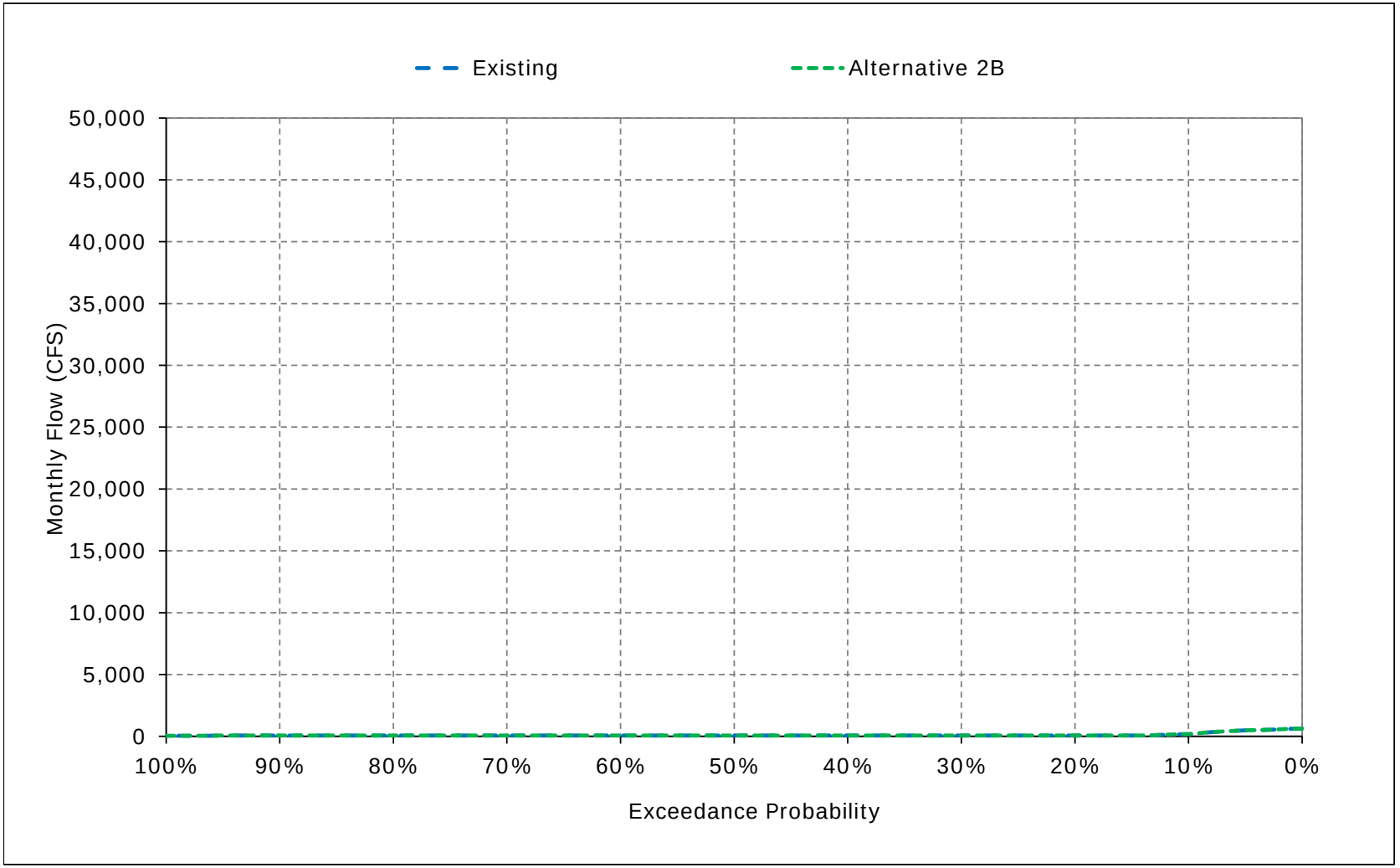
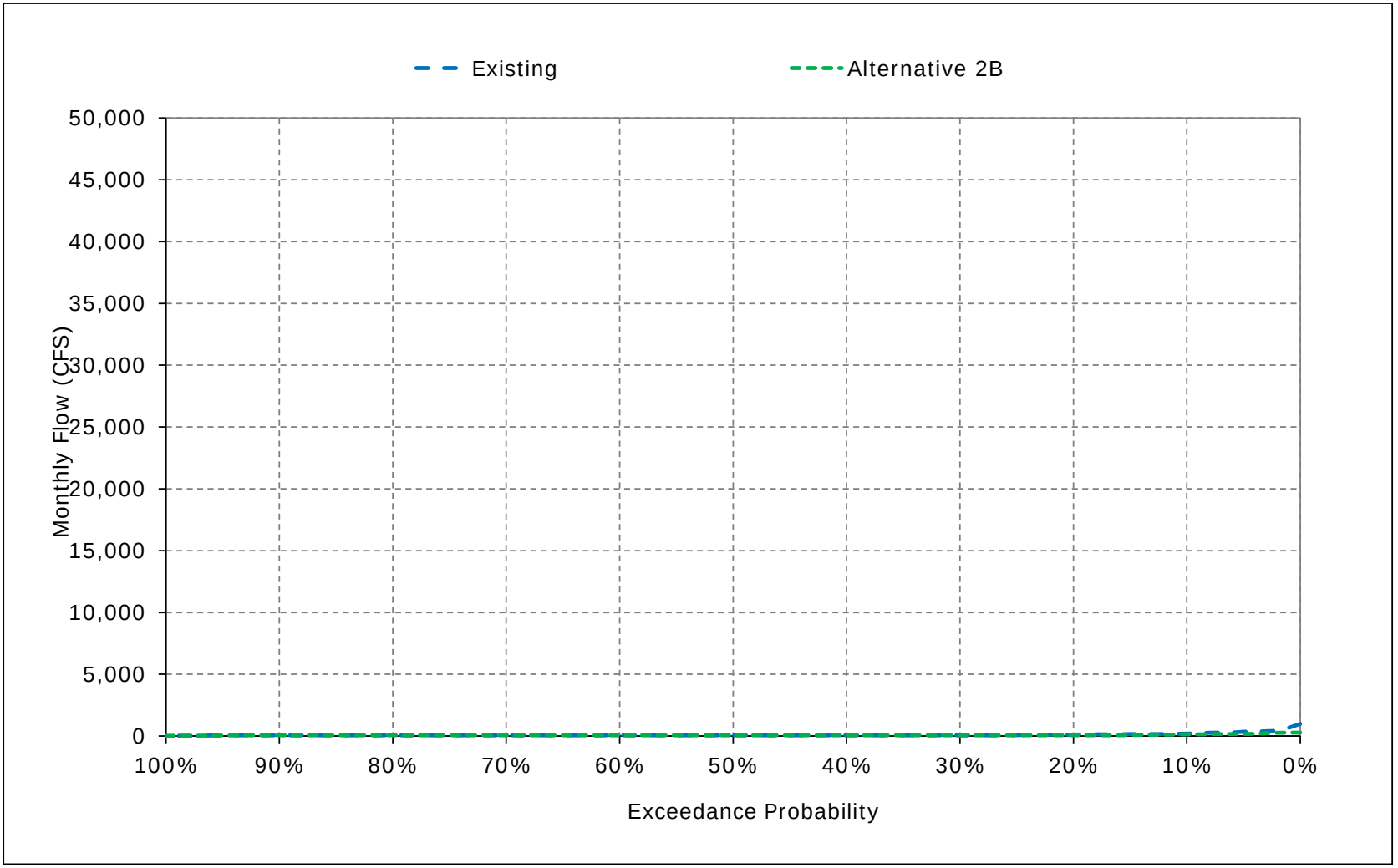


Figure 3-18. Yolo Bypass Flow, September



## Table 4-1. Sacramento River Flow at Rio Vista, Monthly Flow

### Existing

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 9,140 | 18,806 | 52,284 | 86,457 | 105,186 | 73,918 | 54,112 | 34,926 | 20,648 | 14,280 | 9,718 | 24,620 |
| 20% | 8,138 | 15,685 | 29,468 | 55,667 | 67,393 | 52,550 | 37,257 | 24,211 | 11,911 | 13,237 | 9,428 | 23,952 |
| 30% | 7,537 | 14,649 | 18,168 | 40,343 | 52,127 | 35,838 | 21,850 | 14,901 | 8,567 | 12,292 | 9,053 | 14,756 |
| 40% | 6,476 | 12,272 | 14,804 | 25,624 | 42,524 | 30,001 | 19,665 | 11,196 | 8,253 | 11,254 | 8,870 | 13,303 |
| 50% | 5,940 | 10,585 | 12,150 | 18,372 | 30,086 | 22,487 | 14,597 | 9,601 | 7,982 | 10,683 | 8,695 | 8,343 |
| 60% | 4,923 | 7,745 | 10,857 | 15,373 | 22,618 | 17,884 | 11,737 | 8,431 | 7,635 | 9,608 | 7,960 | 6,083 |
| 70% | 4,401 | 6,657 | 9,754 | 12,155 | 16,358 | 15,500 | 10,094 | 7,427 | 6,990 | 8,871 | 5,327 | 5,285 |
| 80% | 4,000 | 5,787 | 7,341 | 10,446 | 13,659 | 12,316 | 8,529 | 7,028 | 6,450 | 7,752 | 4,466 | 4,822 |
| 90% | 3,039 | 4,471 | 6,370 | 9,425 | 11,071 | 8,460 | 7,156 | 5,787 | 6,145 | 4,765 | 3,992 | 3,521 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 6,443 | 12,240 | 21,031 | 35,843 | 45,193 | 35,436 | 22,760 | 15,220 | 10,618 | 10,157 | 7,442 | 12,045 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 8,294 | 17,532 | 38,344 | 69,721 | 81,768 | 64,062 | 40,542 | 26,583 | 16,592 | 11,403 | 9,239 | 22,778 |
| Above Normal (15%) | 6,029 | 13,013 | 19,036 | 38,894 | 50,702 | 43,650 | 24,065 | 17,363 | 10,171 | 12,539 | 9,314 | 13,569 |
| Below Normal (17%) | 5,727 | 10,062 | 13,889 | 19,160 | 30,527 | 19,416 | 15,992 | 10,661 | 8,060 | 11,839 | 8,755 | 7,242 |
| Dry (22%) | 5,567 | 9,566 | 11,619 | 13,948 | 21,093 | 17,438 | 11,327 | 7,586 | 7,664 | 9,106 | 4,779 | 4,991 |
| Critical (15%) | 4,995 | 6,556 | 7,962 | 11,698 | 13,697 | 10,887 | 7,974 | 5,223 | 5,535 | 4,689 | 4,142 | 3,451 |

### Alternative 2B

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 9,941 | 18,358 | 56,362 | 86,648 | 105,354 | 76,142 | 54,108 | 34,927 | 20,647 | 13,648 | 9,720 | 14,626 |
| 20% | 8,824 | 10,629 | 32,104 | 57,576 | 67,494 | 52,551 | 37,260 | 24,435 | 11,912 | 13,107 | 9,437 | 14,347 |
| 30% | 7,805 | 9,424 | 19,282 | 40,706 | 54,857 | 39,587 | 21,359 | 14,901 | 9,001 | 12,182 | 9,167 | 13,736 |
| 40% | 6,603 | 8,756 | 15,314 | 26,116 | 44,822 | 29,831 | 19,751 | 11,192 | 8,504 | 11,084 | 8,896 | 11,861 |
| 50% | 6,098 | 8,506 | 11,741 | 20,595 | 30,101 | 22,481 | 14,580 | 10,360 | 8,337 | 10,663 | 8,671 | 8,412 |
| 60% | 4,957 | 7,628 | 10,318 | 15,715 | 23,097 | 18,289 | 11,413 | 9,269 | 8,105 | 9,691 | 7,740 | 5,782 |
| 70% | 4,246 | 6,681 | 9,591 | 12,158 | 17,589 | 15,529 | 9,994 | 8,035 | 7,601 | 8,743 | 5,500 | 5,239 |
| 80% | 4,052 | 5,256 | 8,148 | 9,937 | 14,131 | 11,638 | 8,849 | 7,066 | 6,825 | 7,212 | 4,771 | 4,826 |
| 90% | 3,150 | 4,031 | 6,295 | 9,126 | 11,406 | 8,846 | 7,460 | 6,286 | 6,226 | 4,981 | 4,172 | 3,530 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 6,739 | 10,512 | 21,660 | 36,328 | 45,852 | 35,878 | 22,781 | 15,518 | 10,897 | 9,997 | 7,472 | 9,178 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 8,714 | 15,230 | 40,390 | 70,652 | 82,393 | 64,357 | 40,500 | 26,616 | 16,644 | 11,175 | 9,209 | 13,463 |
| Above Normal (15%) | 6,302 | 10,678 | 18,881 | 39,856 | 51,937 | 45,346 | 24,033 | 17,401 | 10,718 | 12,191 | 9,359 | 14,262 |
| Below Normal (17%) | 6,221 | 8,468 | 13,829 | 20,322 | 32,134 | 19,660 | 15,977 | 11,187 | 8,682 | 11,713 | 8,700 | 7,029 |
| Dry (22%) | 5,548 | 8,339 | 11,771 | 13,737 | 20,972 | 17,594 | 11,467 | 8,314 | 7,985 | 8,823 | 4,893 | 5,005 |
| Critical (15%) | 5,289 | 5,768 | 7,824 | 10,995 | 13,921 | 11,050 | 8,044 | 5,450 | 5,578 | 5,011 | 4,255 | 3,576 |

### Alternative 2B minus Existing

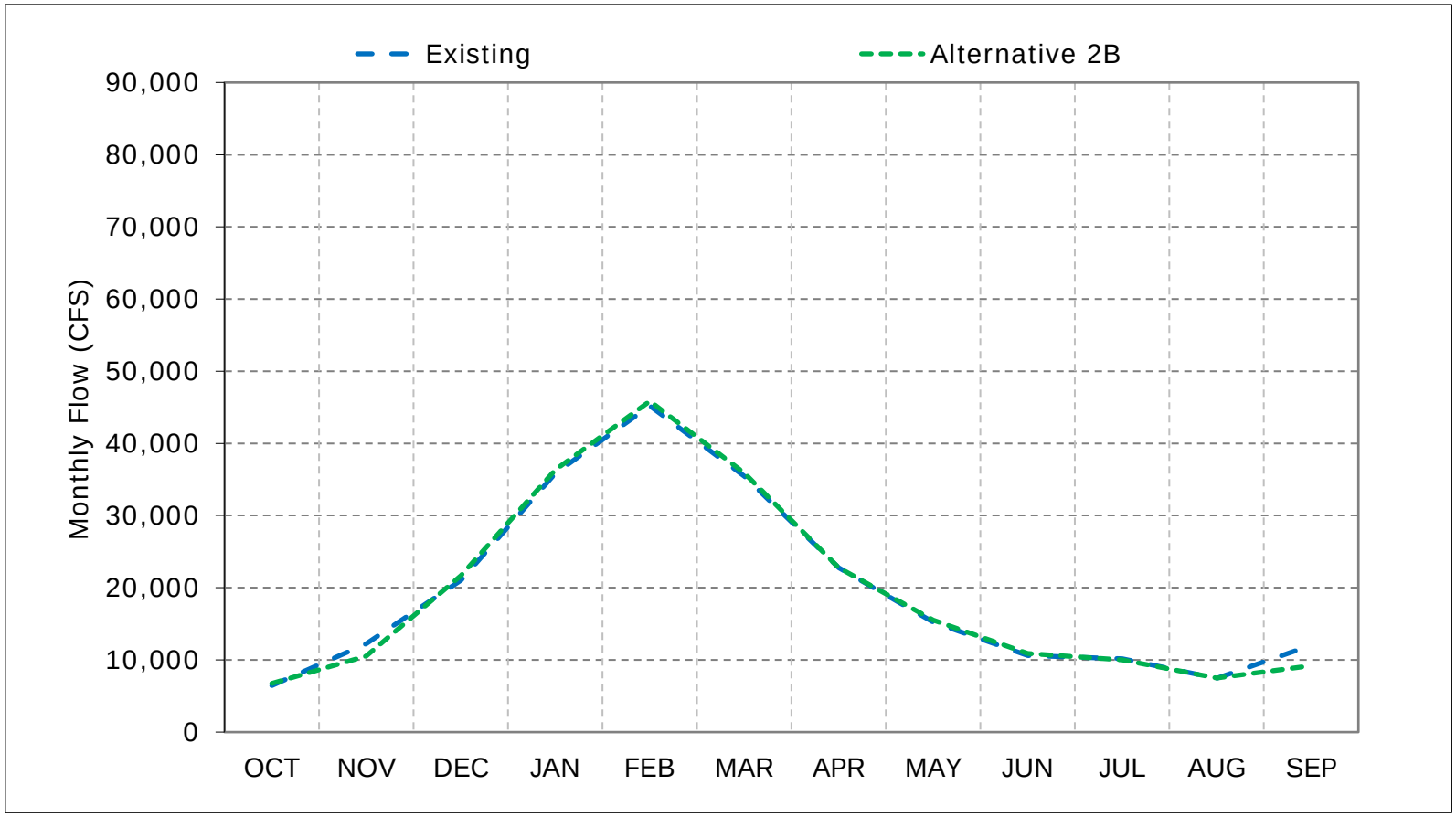
| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 801 | -447 | 4,079 | 191 | 168 | 2,225 | -4 | 1 | -1 | -633 | 2 | -9,994 |
| 20% | 686 | -5,056 | 2,637 | 1,909 | 101 | 0 | 2 | 224 | 0 | -130 | 10 | -9,605 |
| 30% | 268 | -5,225 | 1,114 | 363 | 2,731 | 3,749 | -491 | 0 | 434 | -110 | 114 | -1,020 |
| 40% | 126 | -3,516 | 511 | 492 | 2,298 | -170 | 86 | -5 | 251 | -171 | 27 | -1,442 |
| 50% | 158 | -2,078 | -409 | 2,224 | 15 | -6 | -17 | 759 | 356 | -20 | -24 | 69 |
| 60% | 34 | -117 | -539 | 342 | 479 | 405 | -325 | 839 | 470 | 83 | -220 | -301 |
| 70% | -155 | 24 | -163 | 3 | 1,231 | 29 | -100 | 608 | 610 | -128 | 174 | -45 |
| 80% | 52 | -531 | 807 | -509 | 472 | -678 | 321 | 38 | 376 | -539 | 306 | 4 |
| 90% | 111 | -439 | -75 | -299 | 335 | 385 | 304 | 499 | 80 | 217 | 181 | 9 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 296 | -1,728 | 629 | 485 | 660 | 441 | 20 | 299 | 280 | -160 | 29 | -2,867 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 419 | -2,301 | 2,046 | 931 | 625 | 295 | -43 | 32 | 52 | -228 | -30 | -9,315 |
| Above Normal (15%) | 274 | -2,334 | -155 | 962 | 1,235 | 1,696 | -32 | 38 | 547 | -349 | 44 | 693 |
| Below Normal (17%) | 494 | -1,594 | -60 | 1,162 | 1,607 | 244 | -14 | 525 | 622 | -126 | -55 | -213 |
| Dry (22%) | -19 | -1,227 | 151 | -212 | -120 | 156 | 139 | 728 | 322 | -283 | 114 | 13 |
| Critical (15%) | 293 | -789 | -138 | -703 | 224 | 163 | 70 | 227 | 43 | 322 | 113 | 125 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

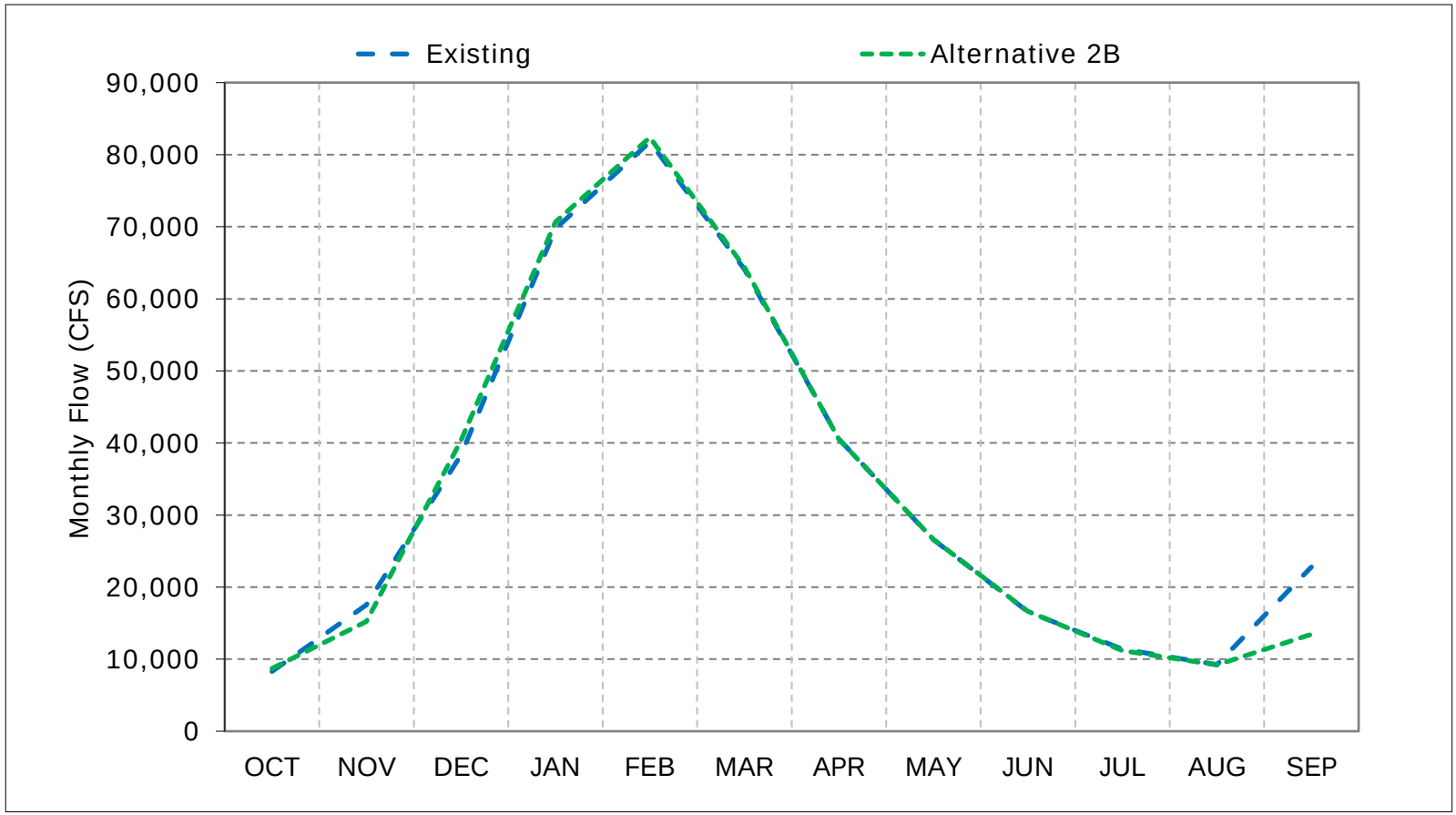
Figure 4-1. Sacramento River Flow at Rio Vista, Long-Term Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

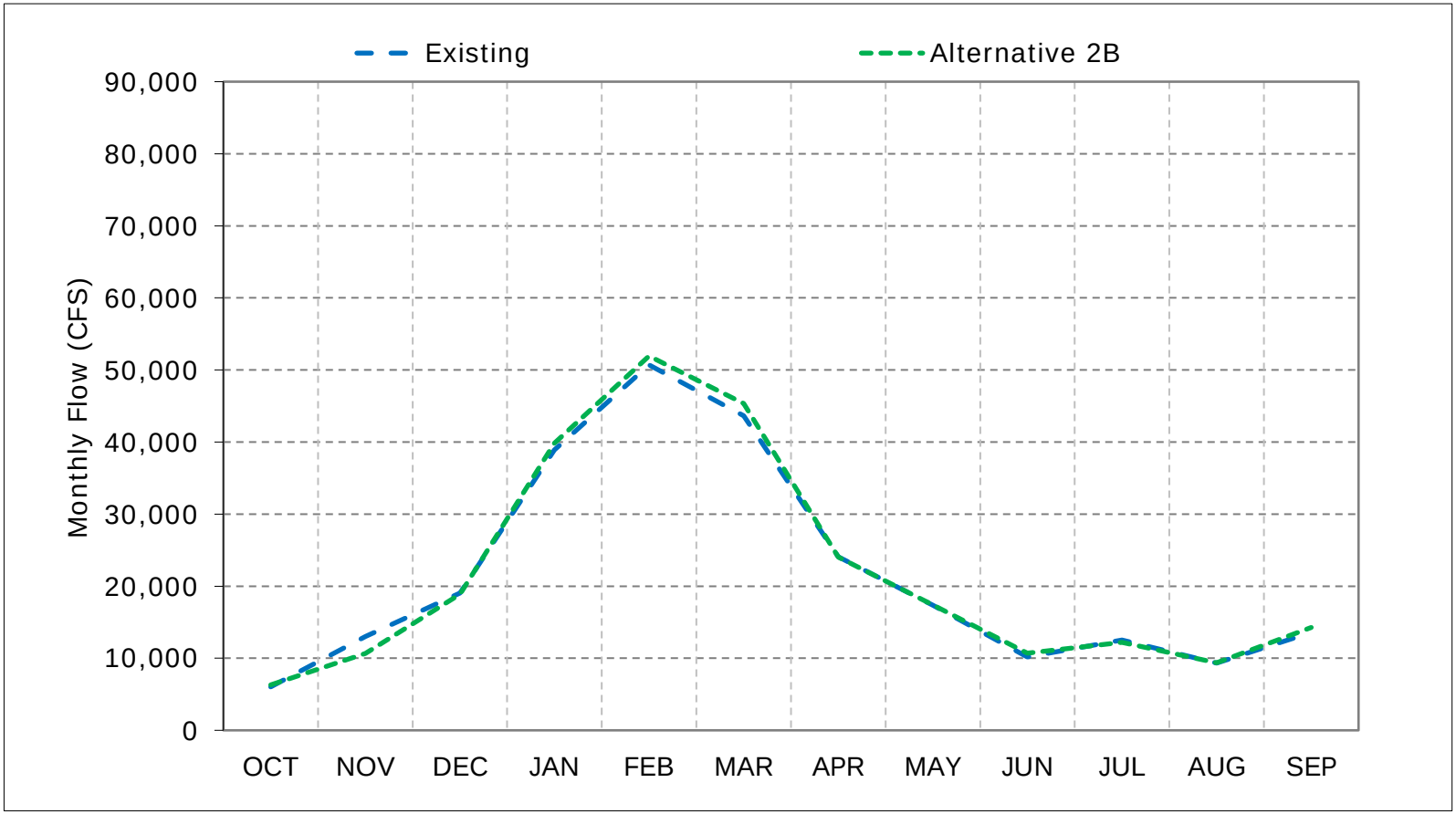
Figure 4-2. Sacramento River Flow at Rio Vista, Wet Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

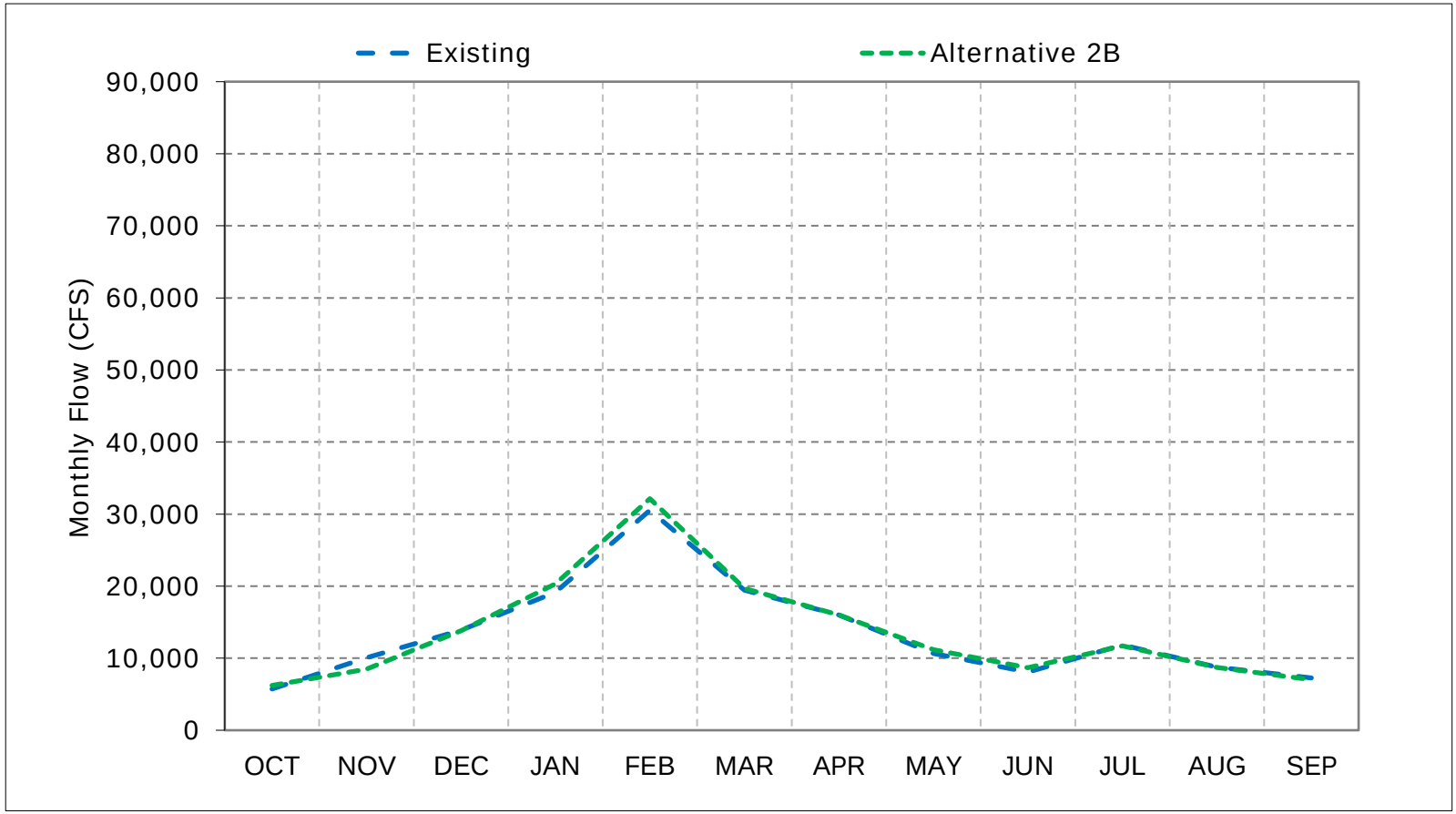
Figure 4-3. Sacramento River Flow at Rio Vista, Above Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

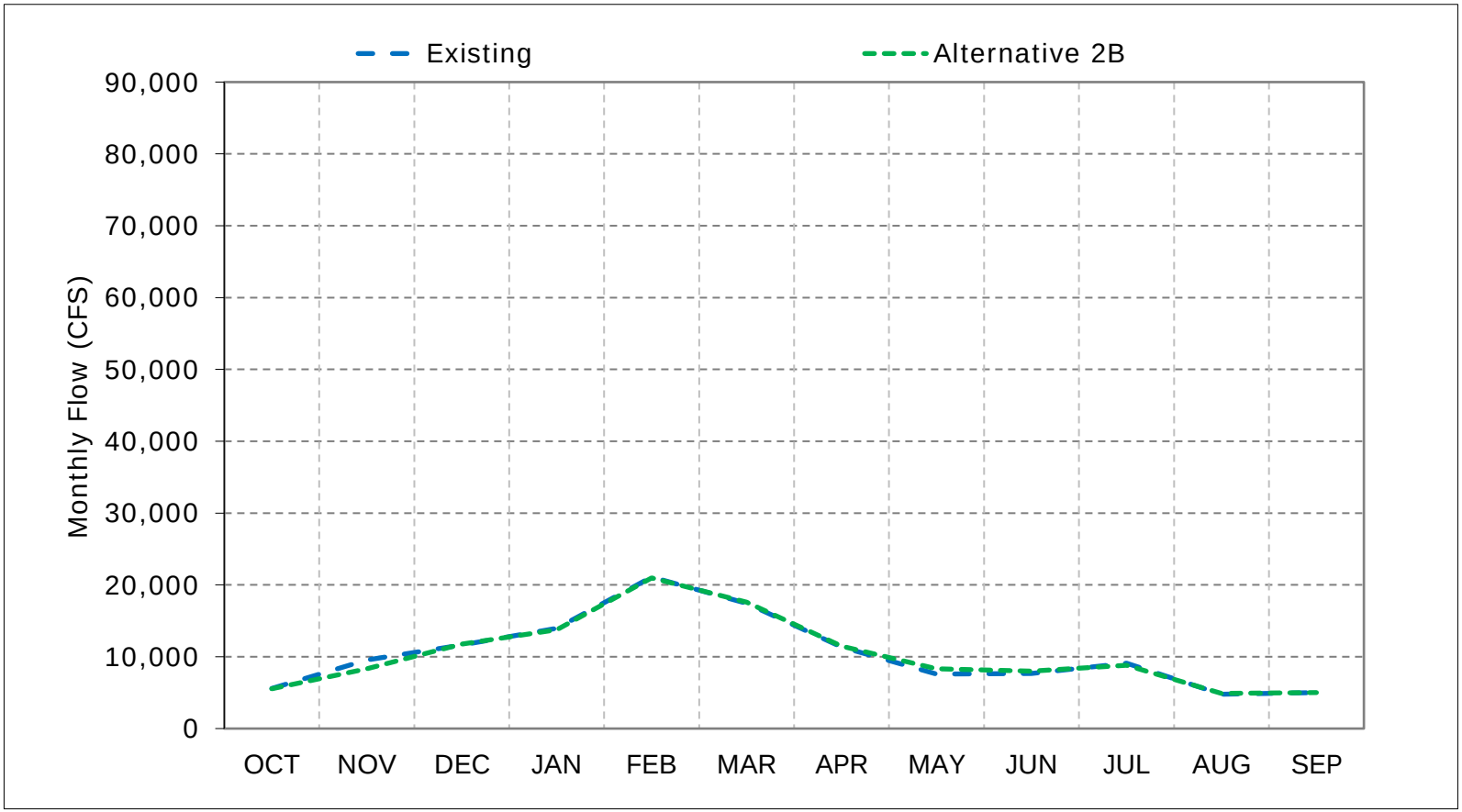
Figure 4-4. Sacramento River Flow at Rio Vista, Below Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

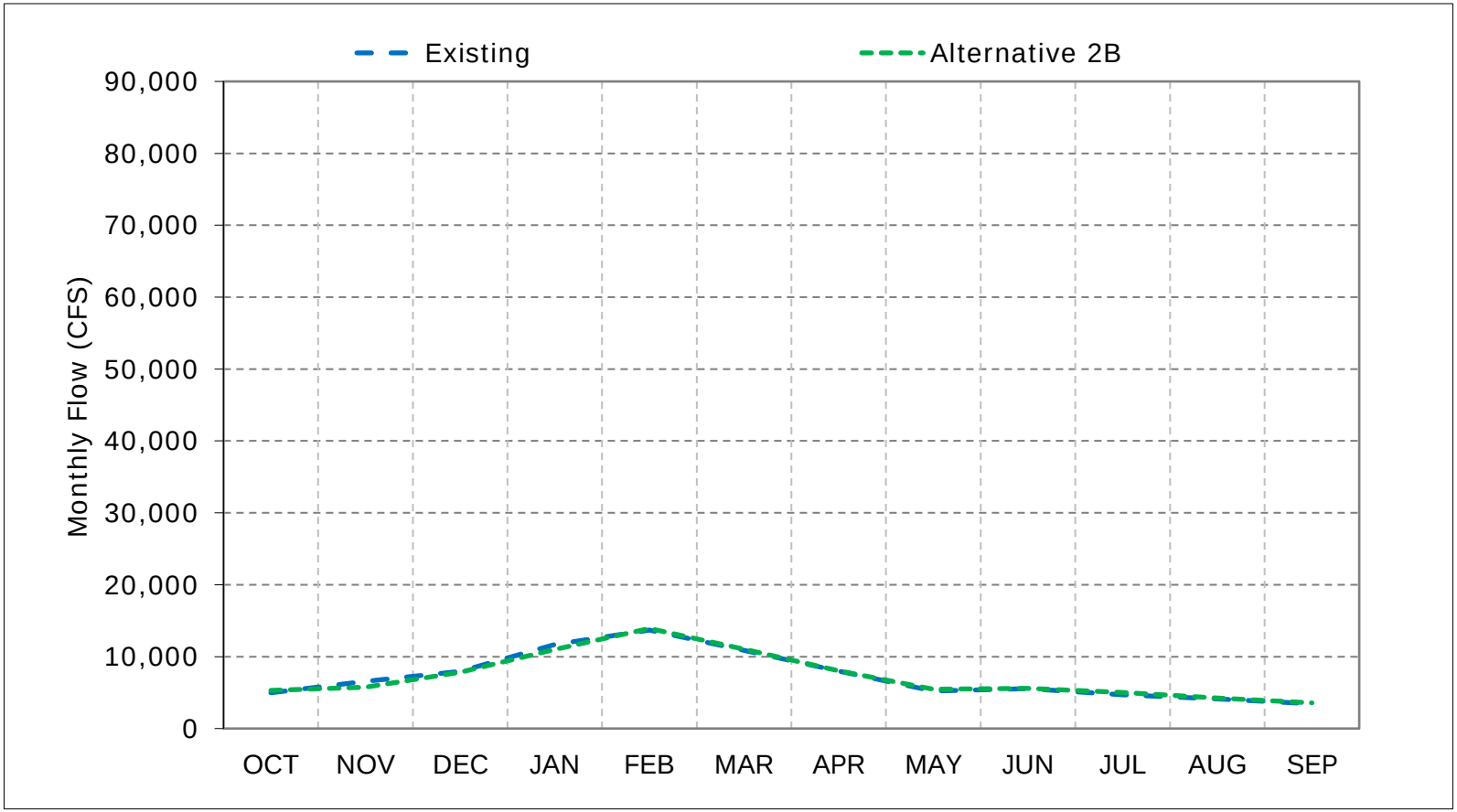
*These results are displayed with water year - year type sorting.

Figure 4-5. Sacramento River Flow at Rio Vista, Dry Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-6. Sacramento River Flow at Rio Vista, Critical Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-7. Sacramento River Flow at Rio Vista, October

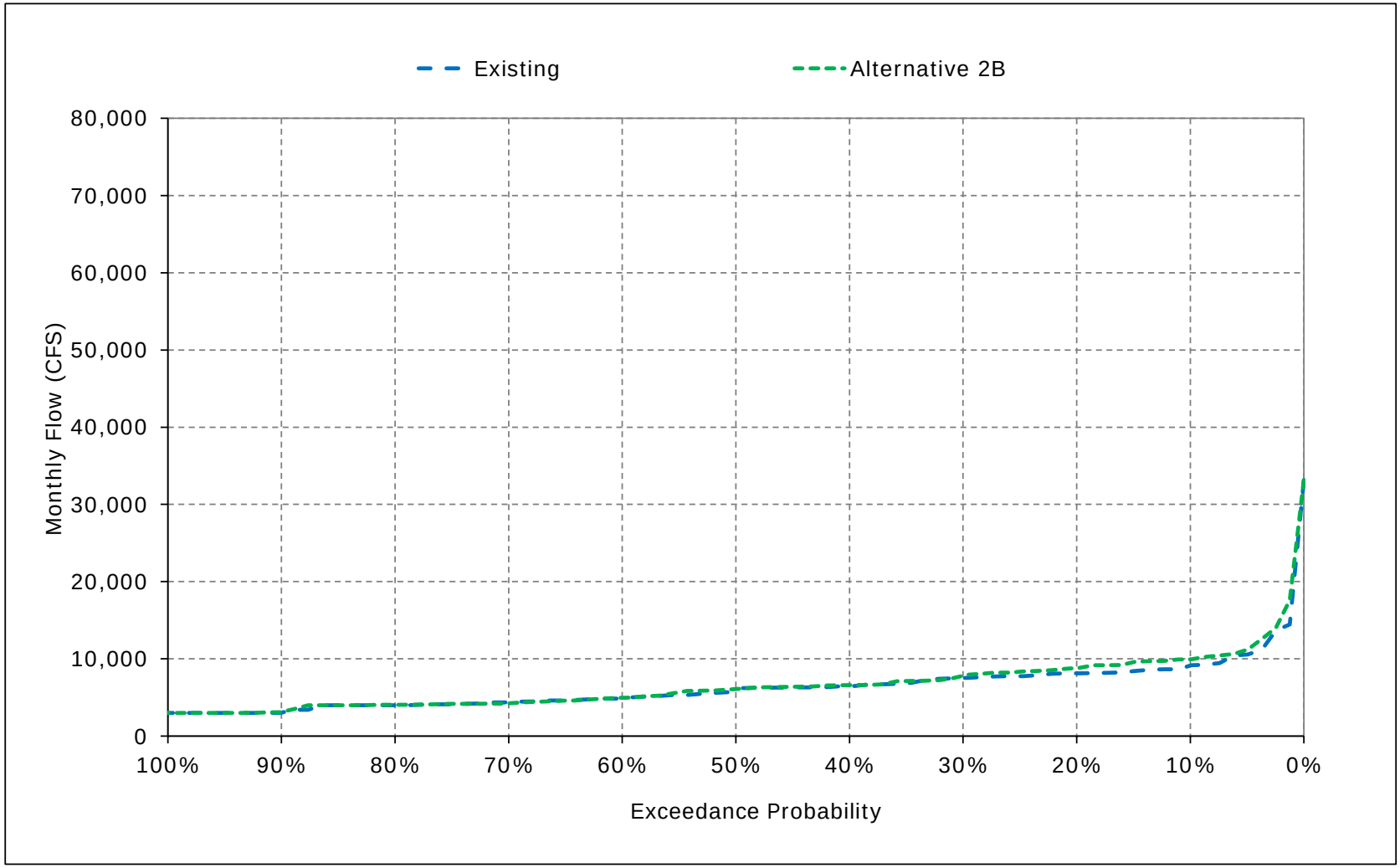


Figure 4-8. Sacramento River Flow at Rio Vista, November

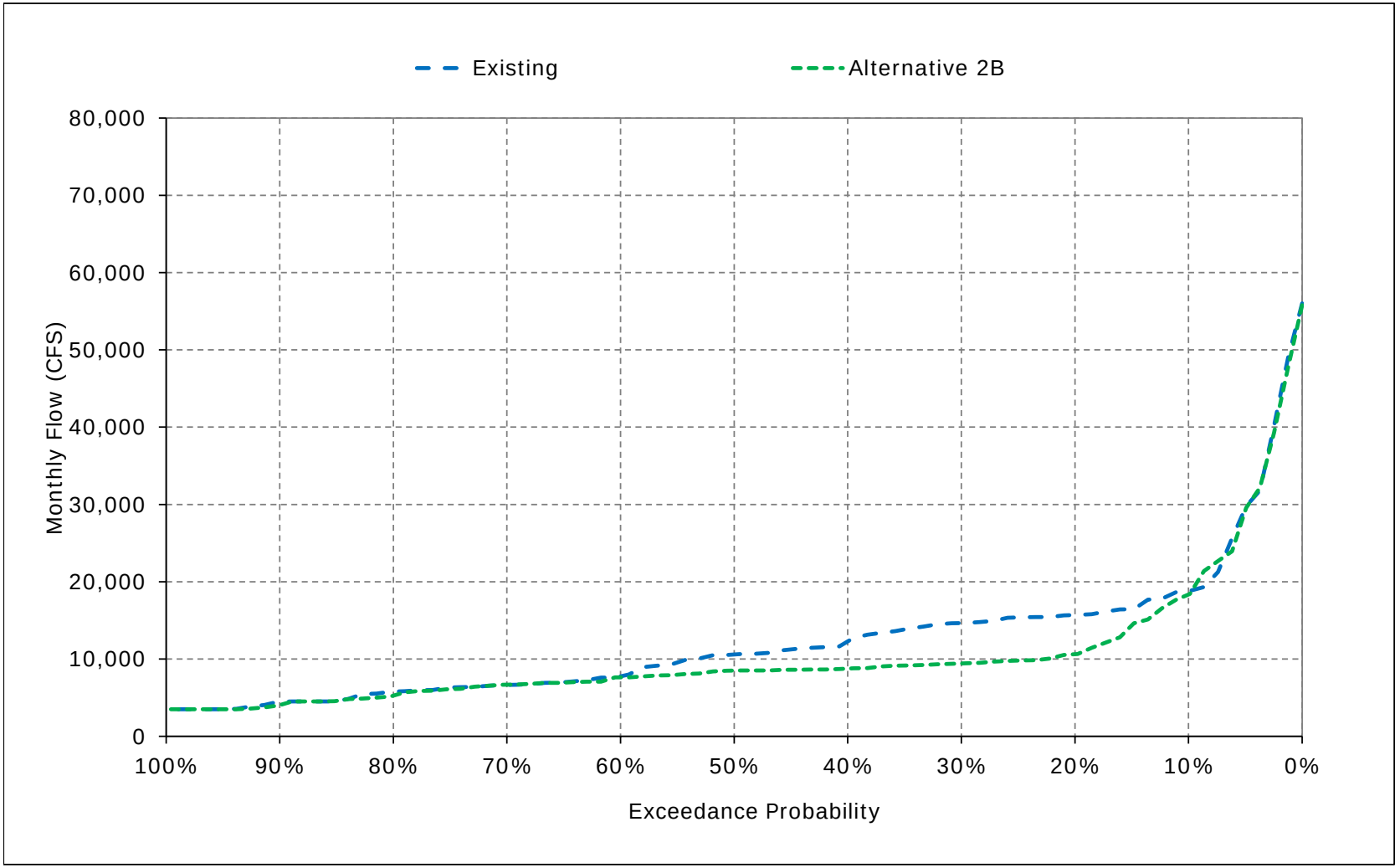


Figure 4-9. Sacramento River Flow at Rio Vista, December

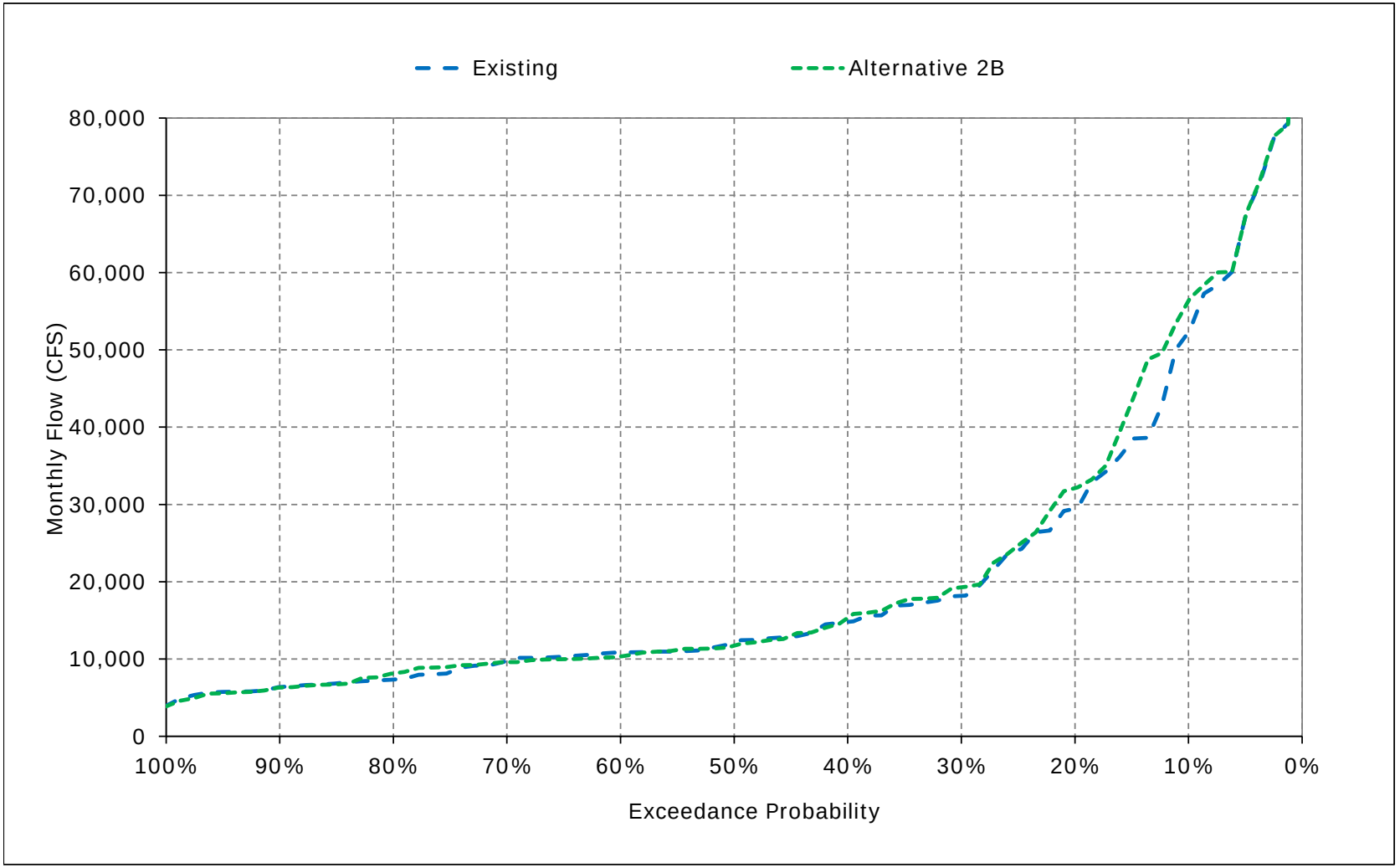


Figure 4-10. Sacramento River Flow at Rio Vista, January

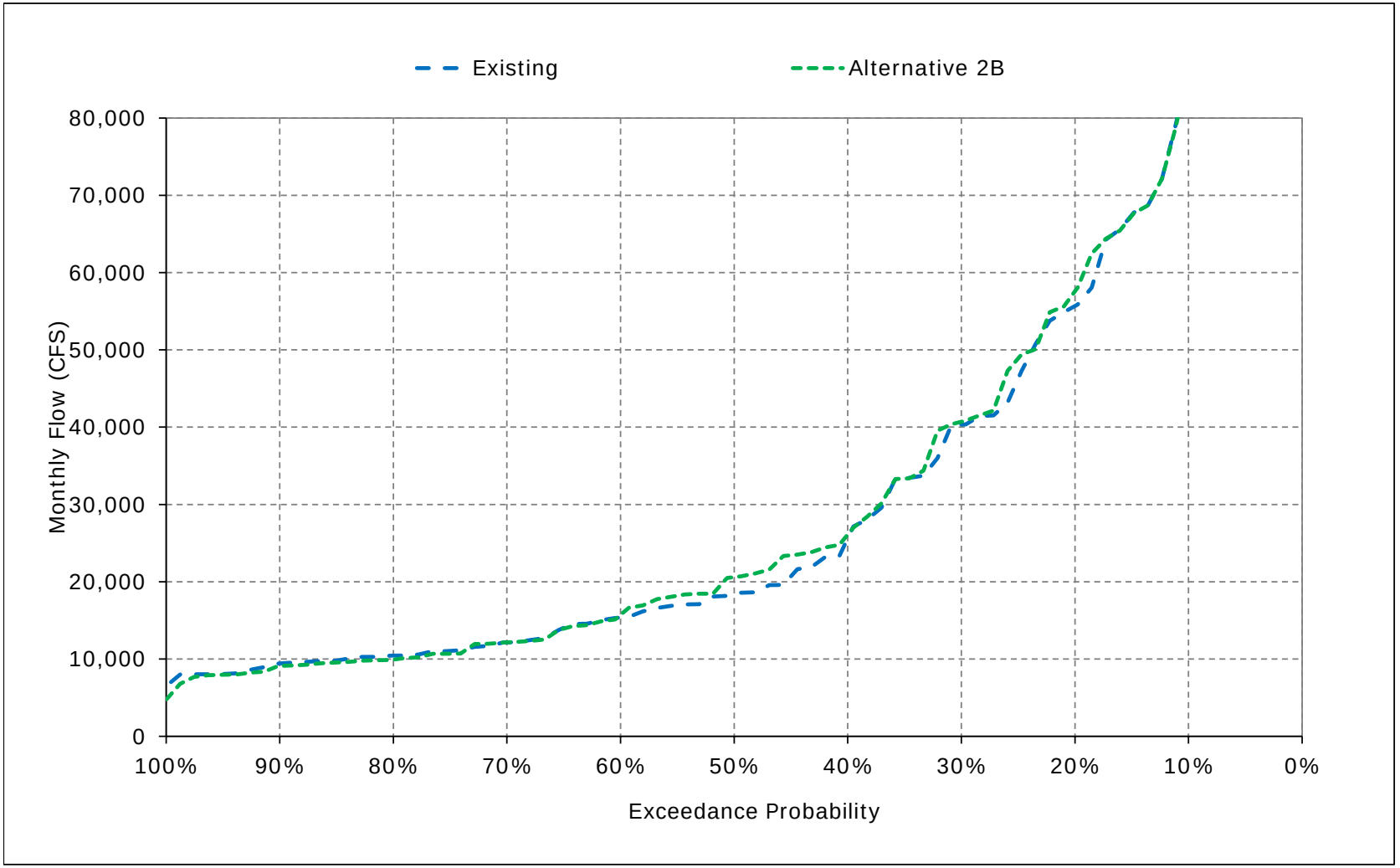


Figure 4-11. Sacramento River Flow at Rio Vista, February

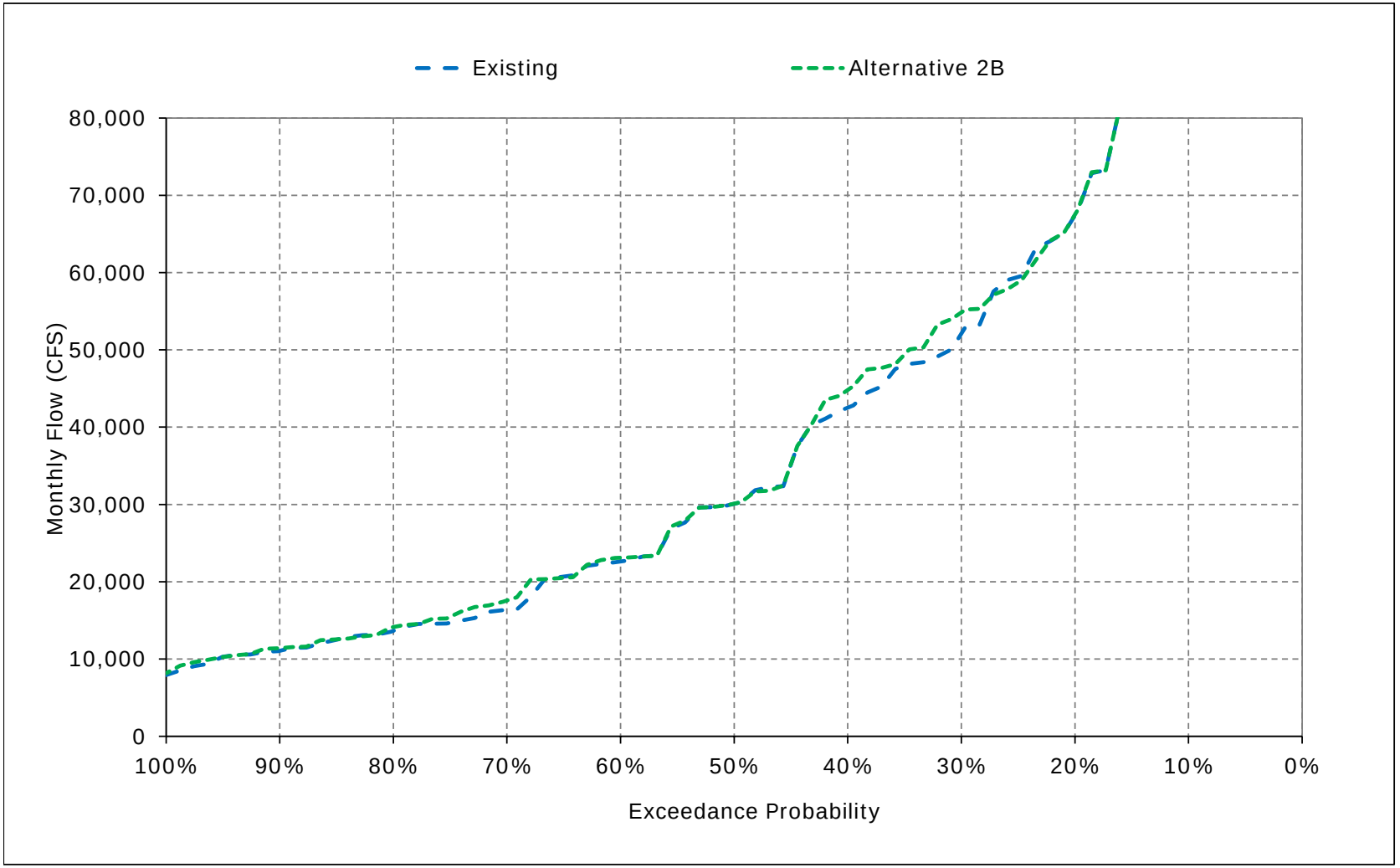


Figure 4-12. Sacramento River Flow at Rio Vista, March

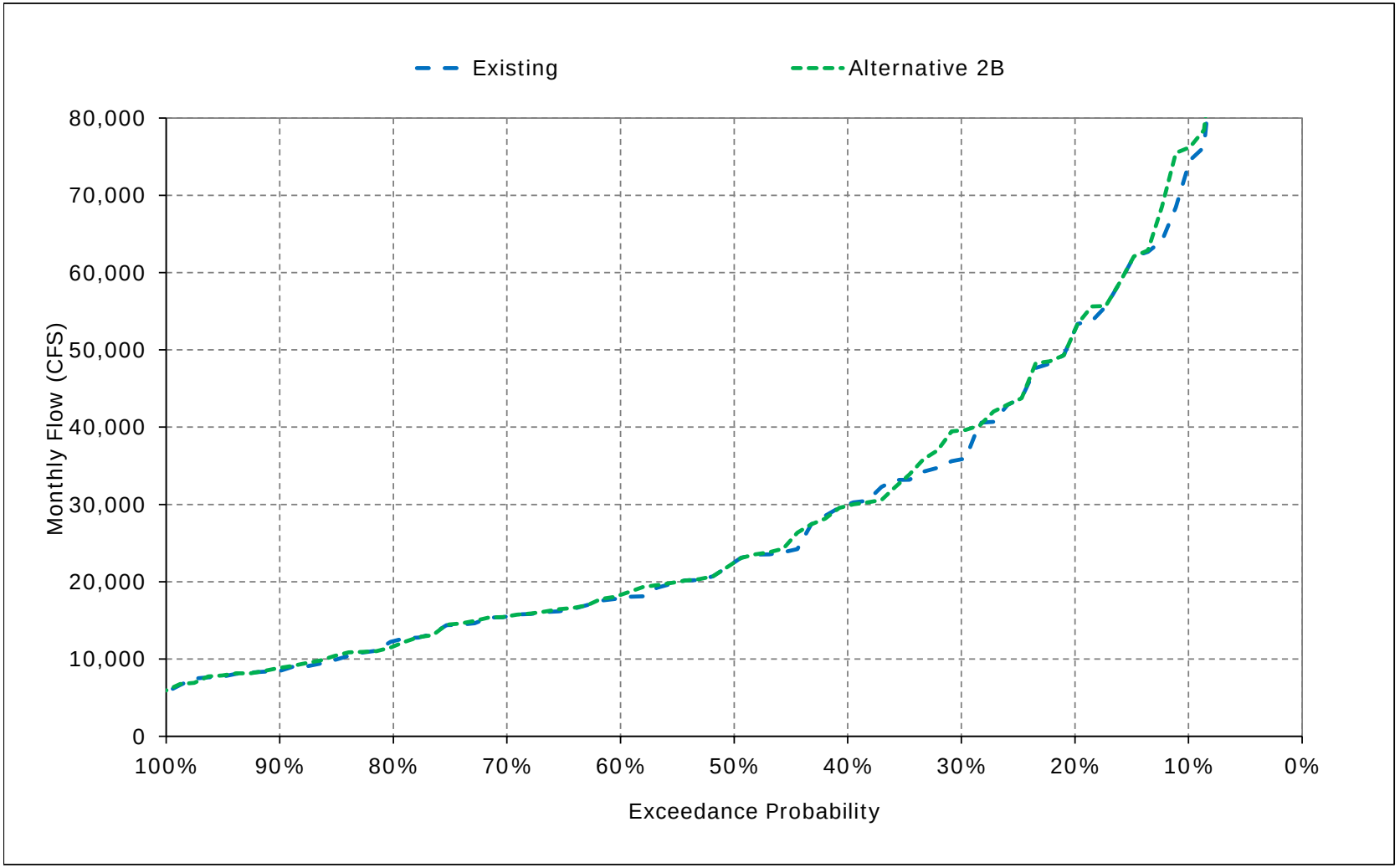


Figure 4-13. Sacramento River Flow at Rio Vista, April

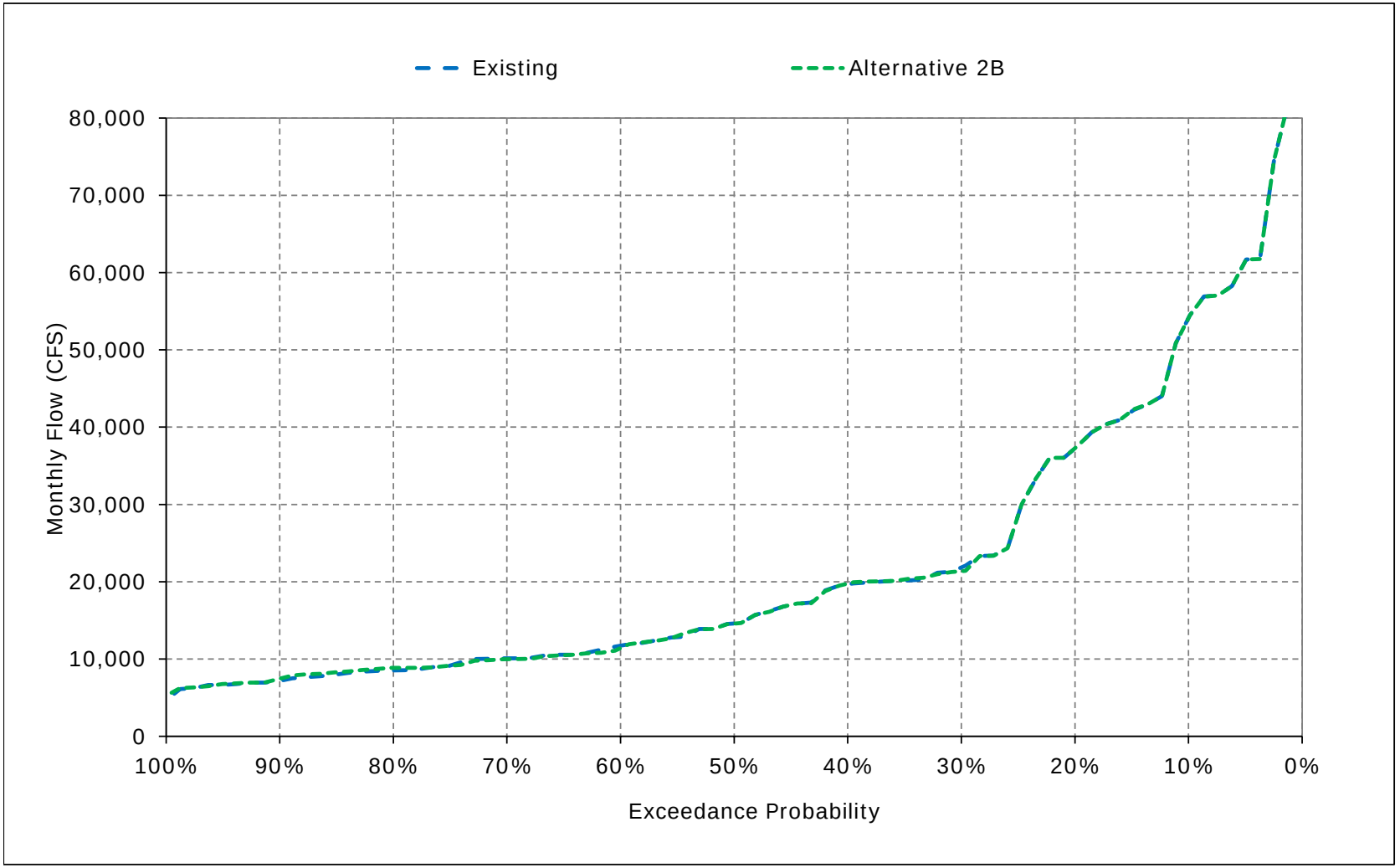


Figure 4-14. Sacramento River Flow at Rio Vista, May

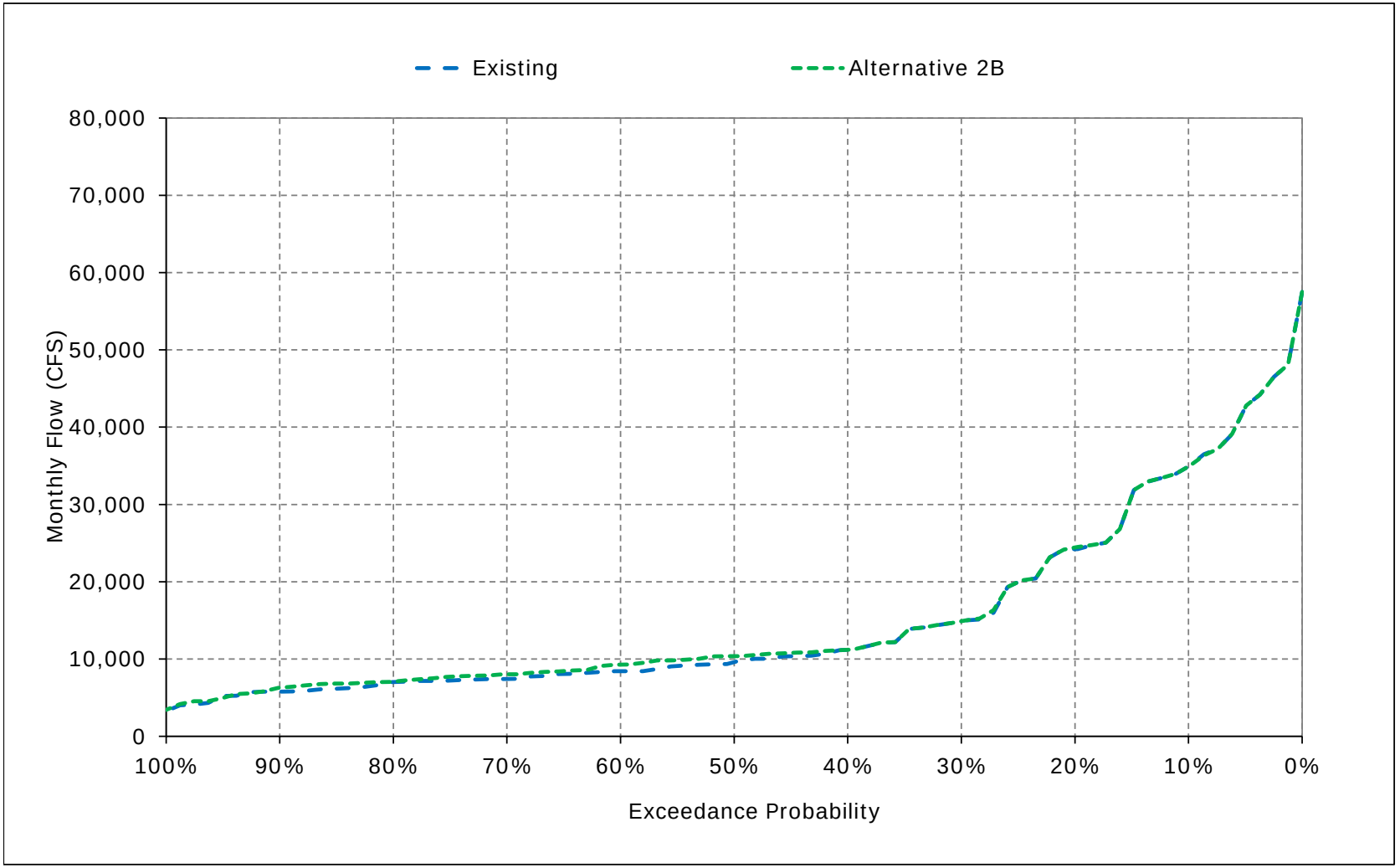


Figure 4-15. Sacramento River Flow at Rio Vista, June

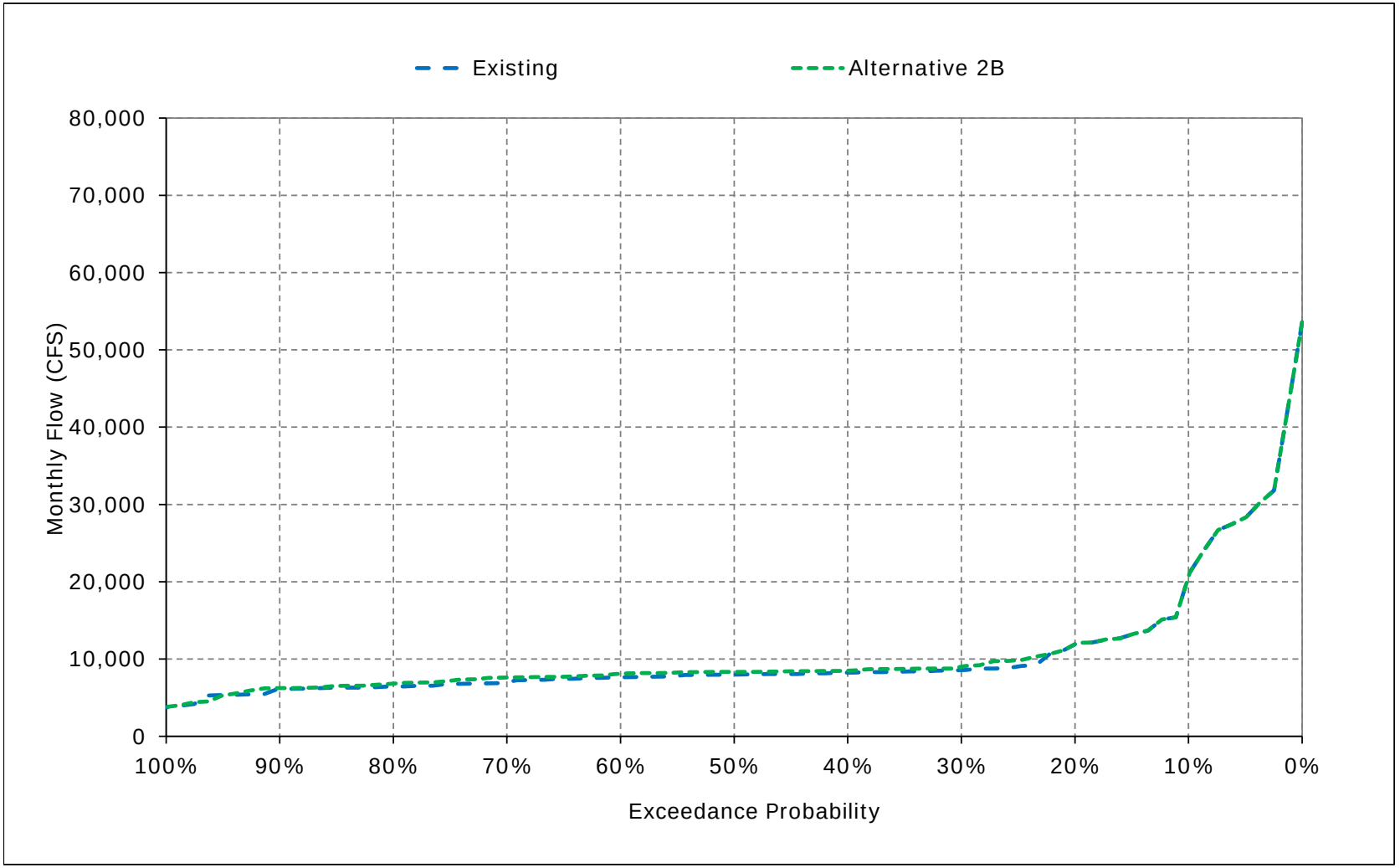


Figure 4-16. Sacramento River Flow at Rio Vista, July

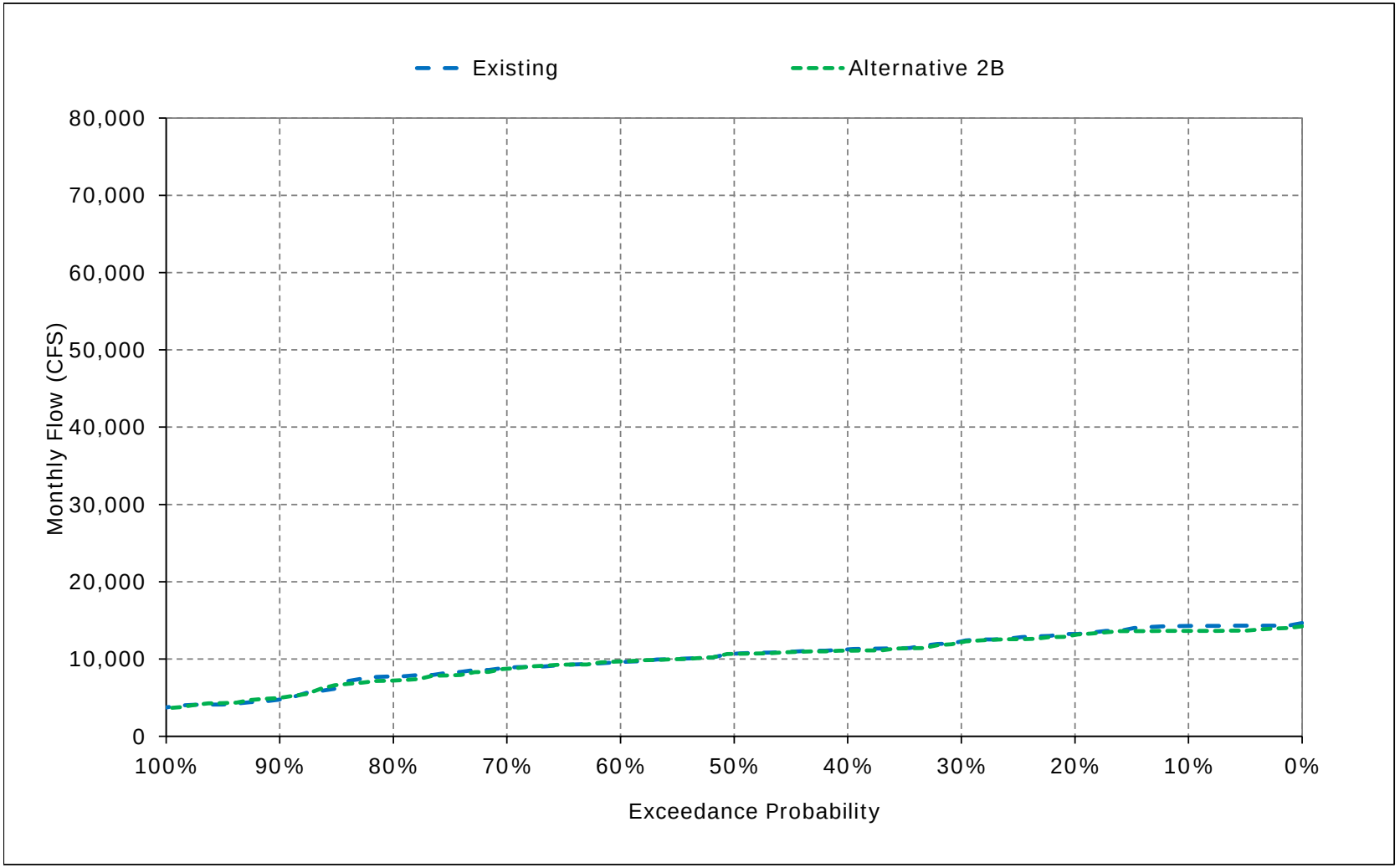


Figure 4-17. Sacramento River Flow at Rio Vista, August

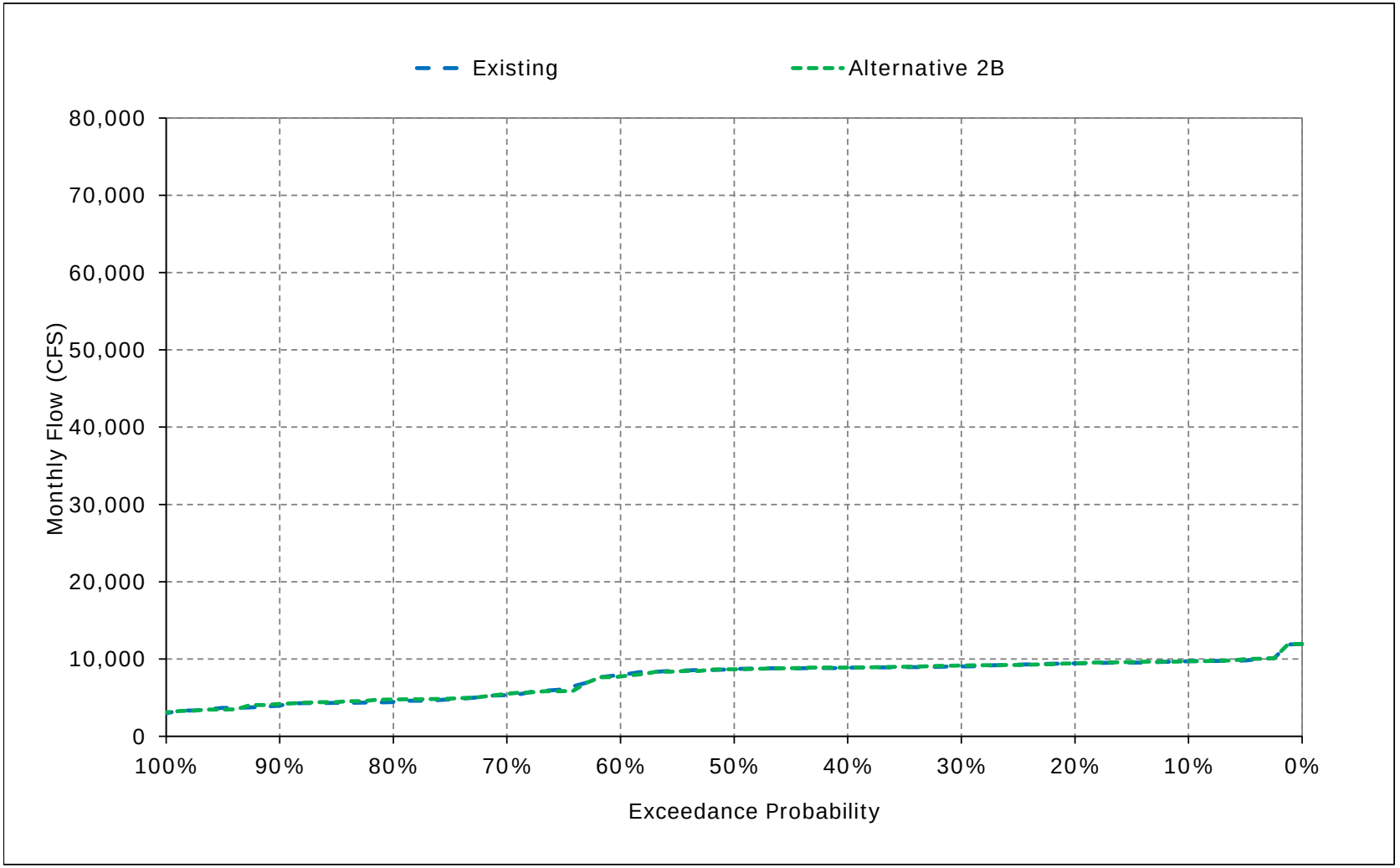
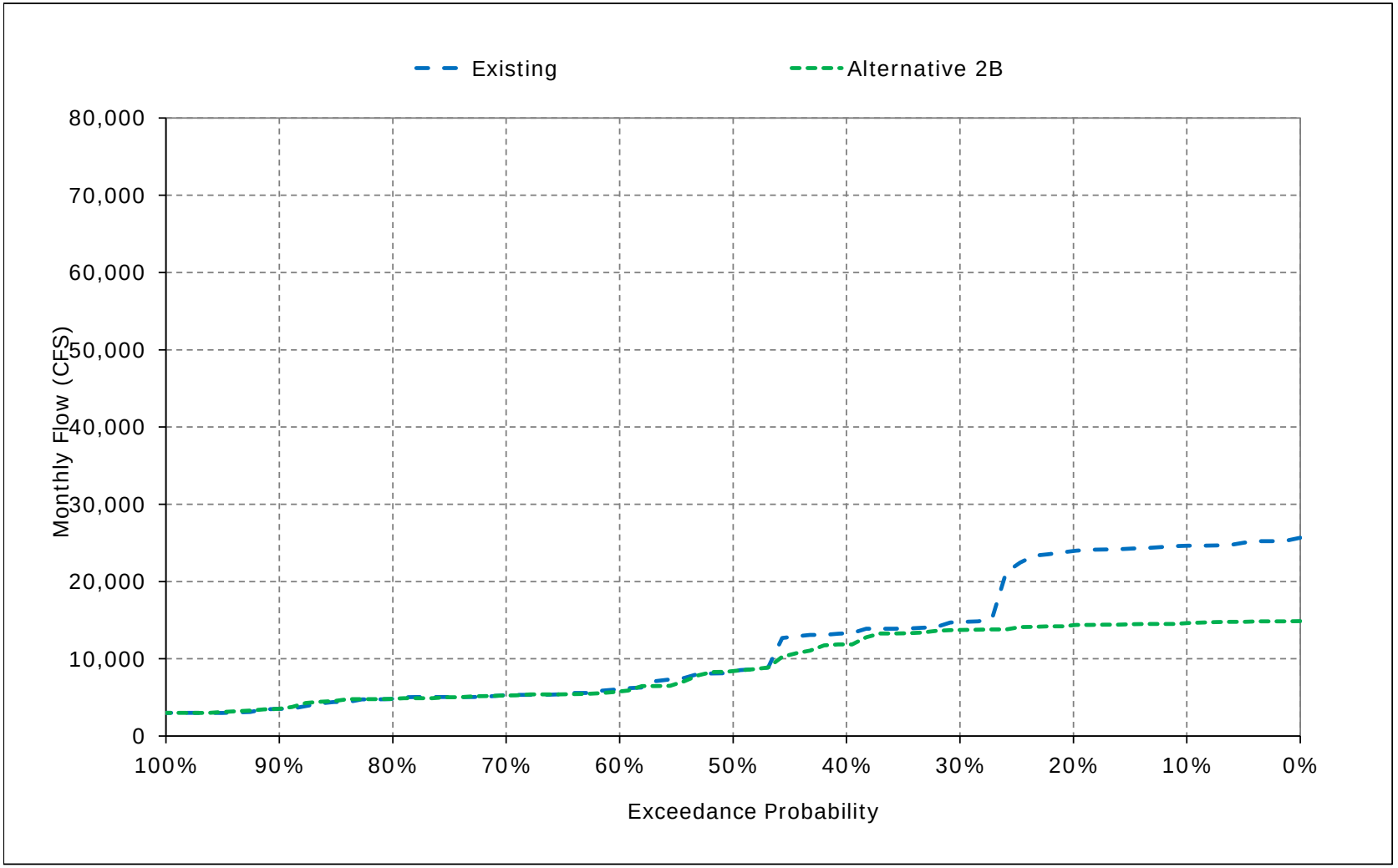


Figure 4-18. Sacramento River Flow at Rio Vista, September



## Table 5-1. San Joaquin River at Vernalis, Monthly Flow

### Existing

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3,478 | 2,775 | 4,265 | 10,211 | 14,013 | 14,227 | 12,024 | 11,059 | 10,024 | 7,130 | 3,076 | 3,290 |
| 20% | 3,115 | 2,561 | 2,816 | 5,121 | 9,911 | 9,351 | 7,937 | 7,369 | 6,949 | 3,529 | 2,780 | 2,817 |
| 30% | 2,940 | 2,367 | 2,311 | 3,370 | 6,914 | 8,049 | 6,466 | 5,322 | 3,334 | 2,404 | 2,422 | 2,570 |
| 40% | 2,757 | 2,182 | 2,116 | 2,572 | 4,292 | 6,202 | 5,382 | 4,426 | 2,962 | 1,783 | 1,880 | 2,321 |
| 50% | 2,531 | 2,028 | 2,006 | 2,324 | 3,522 | 3,942 | 4,391 | 3,685 | 2,323 | 1,587 | 1,520 | 1,940 |
| 60% | 2,405 | 1,957 | 1,936 | 2,179 | 2,808 | 3,420 | 3,513 | 2,937 | 1,845 | 1,393 | 1,437 | 1,842 |
| 70% | 2,219 | 1,853 | 1,840 | 1,955 | 2,280 | 2,363 | 3,001 | 2,618 | 1,505 | 1,209 | 1,345 | 1,779 |
| 80% | 2,049 | 1,746 | 1,740 | 1,749 | 2,228 | 1,888 | 2,262 | 2,176 | 1,426 | 1,140 | 1,265 | 1,670 |
| 90% | 1,780 | 1,609 | 1,612 | 1,575 | 1,956 | 1,674 | 1,622 | 1,680 | 1,043 | 923 | 1,087 | 1,495 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2,647 | 2,387 | 3,115 | 4,766 | 6,366 | 6,884 | 5,961 | 5,364 | 4,211 | 3,170 | 2,057 | 2,345 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 2,976 | 3,062 | 4,916 | 9,348 | 11,567 | 13,134 | 10,528 | 9,615 | 8,281 | 6,511 | 3,177 | 3,318 |
| Above Normal (15%) | 2,337 | 1,975 | 2,828 | 4,077 | 6,178 | 7,223 | 5,874 | 5,054 | 4,541 | 2,744 | 2,026 | 2,377 |
| Below Normal (17%) | 2,623 | 2,191 | 2,628 | 3,008 | 5,667 | 4,920 | 4,897 | 4,380 | 2,478 | 1,779 | 1,840 | 2,096 |
| Dry (22%) | 2,632 | 2,157 | 2,036 | 2,065 | 2,477 | 2,650 | 3,125 | 2,672 | 1,589 | 1,220 | 1,330 | 1,767 |
| Critical (15%) | 2,293 | 1,907 | 1,686 | 1,627 | 1,937 | 1,643 | 1,646 | 1,652 | 1,021 | 907 | 1,004 | 1,358 |

### Alternative 2B

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3,479 | 2,776 | 4,265 | 10,216 | 14,896 | 14,724 | 12,155 | 11,839 | 10,077 | 7,137 | 3,464 | 3,511 |
| 20% | 3,111 | 2,546 | 2,824 | 5,151 | 9,879 | 9,600 | 8,478 | 7,364 | 6,957 | 3,546 | 2,798 | 2,829 |
| 30% | 2,941 | 2,353 | 2,291 | 3,541 | 7,093 | 7,868 | 6,634 | 5,277 | 2,857 | 2,424 | 2,431 | 2,528 |
| 40% | 2,793 | 2,183 | 2,106 | 2,630 | 4,533 | 6,153 | 5,518 | 4,506 | 2,411 | 1,776 | 1,870 | 2,295 |
| 50% | 2,556 | 2,028 | 2,006 | 2,407 | 3,487 | 3,942 | 4,457 | 3,530 | 2,101 | 1,579 | 1,519 | 1,944 |
| 60% | 2,400 | 1,957 | 1,936 | 2,183 | 2,685 | 3,280 | 3,748 | 3,197 | 1,790 | 1,378 | 1,426 | 1,836 |
| 70% | 2,198 | 1,853 | 1,840 | 1,941 | 2,272 | 2,362 | 2,799 | 2,355 | 1,438 | 1,207 | 1,347 | 1,746 |
| 80% | 2,034 | 1,747 | 1,740 | 1,753 | 2,005 | 1,733 | 2,004 | 2,067 | 1,318 | 1,105 | 1,250 | 1,671 |
| 90% | 1,758 | 1,609 | 1,612 | 1,569 | 1,769 | 1,498 | 1,515 | 1,524 | 998 | 908 | 1,075 | 1,480 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2,650 | 2,383 | 3,103 | 4,759 | 6,446 | 6,776 | 5,970 | 5,328 | 4,070 | 3,189 | 2,068 | 2,360 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 2,976 | 3,059 | 4,886 | 9,328 | 11,915 | 13,096 | 10,523 | 9,494 | 8,147 | 6,606 | 3,236 | 3,378 |
| Above Normal (15%) | 2,320 | 1,975 | 2,828 | 4,075 | 6,267 | 7,189 | 6,110 | 5,220 | 4,353 | 2,751 | 2,032 | 2,380 |
| Below Normal (17%) | 2,660 | 2,191 | 2,628 | 3,013 | 5,574 | 4,753 | 5,178 | 4,554 | 2,275 | 1,782 | 1,843 | 2,095 |
| Dry (22%) | 2,611 | 2,147 | 2,025 | 2,061 | 2,405 | 2,510 | 2,887 | 2,501 | 1,455 | 1,199 | 1,309 | 1,754 |
| Critical (15%) | 2,322 | 1,907 | 1,686 | 1,628 | 1,856 | 1,431 | 1,513 | 1,554 | 968 | 851 | 973 | 1,351 |

### Alternative 2B minus Existing

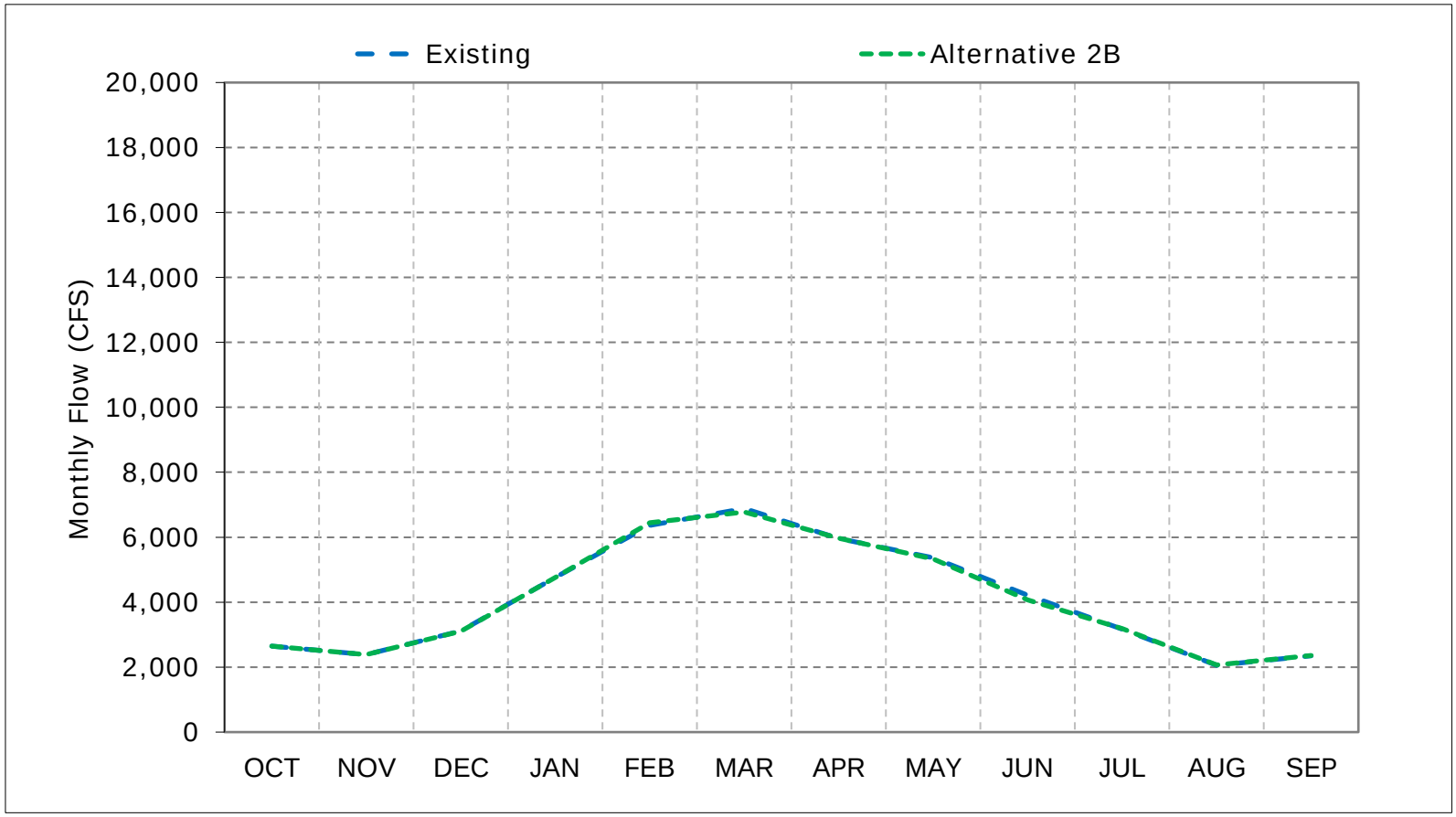
| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0 | 0 | 0 | 5 | 883 | 496 | 131 | 780 | 54 | 8 | 388 | 222 |
| 20% | -5 | -15 | 8 | 30 | -31 | 250 | 541 | -6 | 8 | 18 | 18 | 11 |
| 30% | 2 | -14 | -21 | 172 | 179 | -180 | 167 | -45 | -477 | 20 | 9 | -43 |
| 40% | 36 | 0 | -10 | 58 | 241 | -48 | 136 | 80 | -551 | -7 | -10 | -27 |
| 50% | 26 | 0 | 0 | 83 | -36 | 0 | 66 | -155 | -222 | -9 | -1 | 4 |
| 60% | -5 | 0 | 0 | 4 | -123 | -140 | 235 | 260 | -55 | -14 | -11 | -6 |
| 70% | -21 | 0 | 0 | -14 | -8 | 0 | -203 | -263 | -67 | -1 | 1 | -33 |
| 80% | -15 | 0 | 0 | 3 | -223 | -155 | -258 | -109 | -108 | -35 | -15 | 2 |
| 90% | -21 | 0 | 0 | -6 | -187 | -175 | -107 | -156 | -44 | -16 | -12 | -16 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3 | -3 | -12 | -7 | 80 | -107 | 9 | -36 | -142 | 19 | 11 | 15 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 0 | -3 | -30 | -21 | 348 | -38 | -5 | -122 | -133 | 95 | 59 | 60 |
| Above Normal (15%) | -17 | 0 | 0 | -2 | 89 | -33 | 236 | 166 | -188 | 7 | 5 | 3 |
| Below Normal (17%) | 36 | 0 | 0 | 5 | -93 | -167 | 280 | 174 | -204 | 3 | 3 | -1 |
| Dry (22%) | -21 | -11 | -11 | -4 | -72 | -140 | -238 | -171 | -134 | -21 | -21 | -13 |
| Critical (15%) | 29 | 0 | 0 | 2 | -81 | -212 | -132 | -98 | -53 | -56 | -31 | -7 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

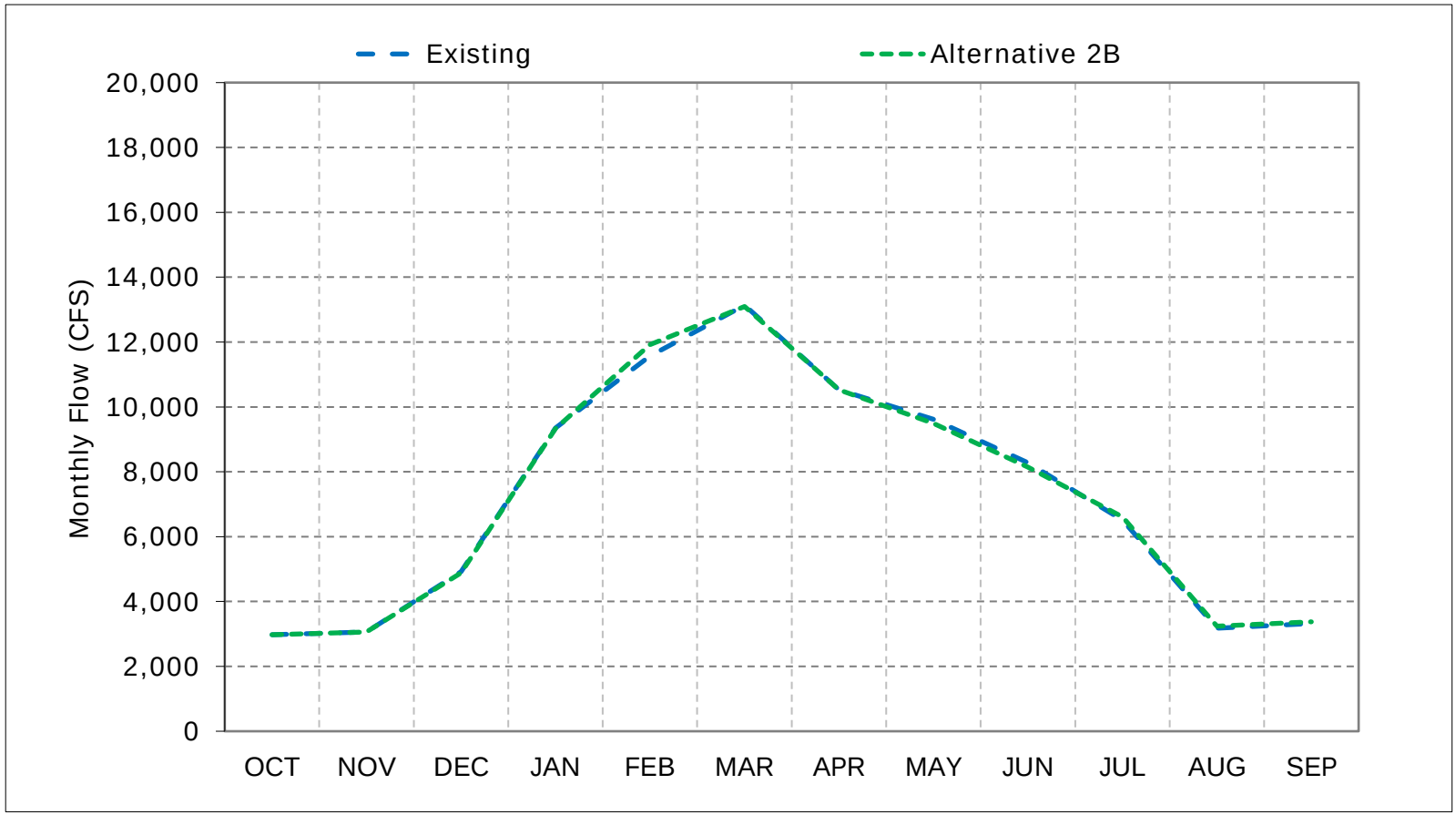
Figure 5-1. San Joaquin River at Vernalis, Long-Term Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

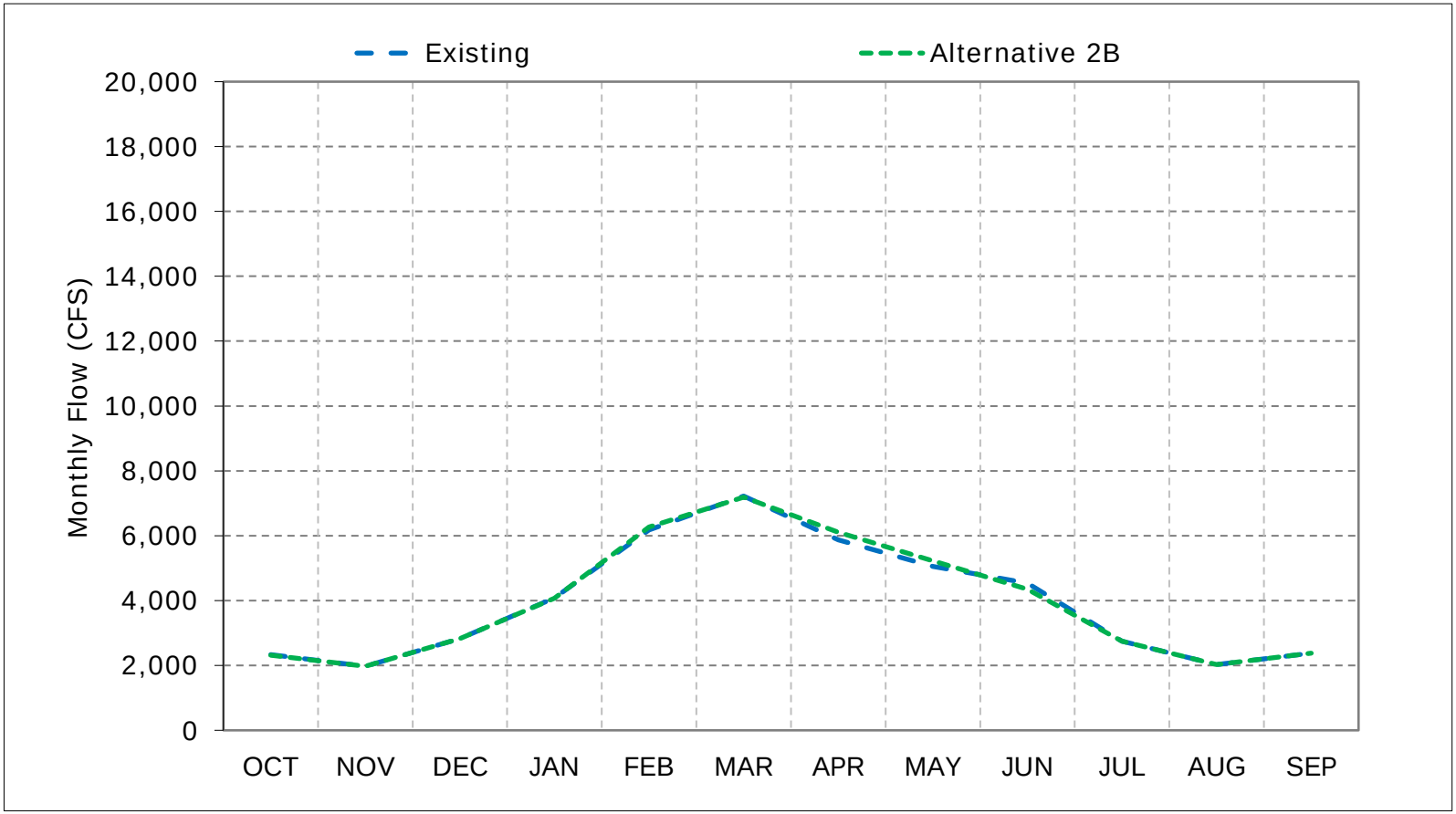
Figure 5-2. San Joaquin River at Vernalis, Wet Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

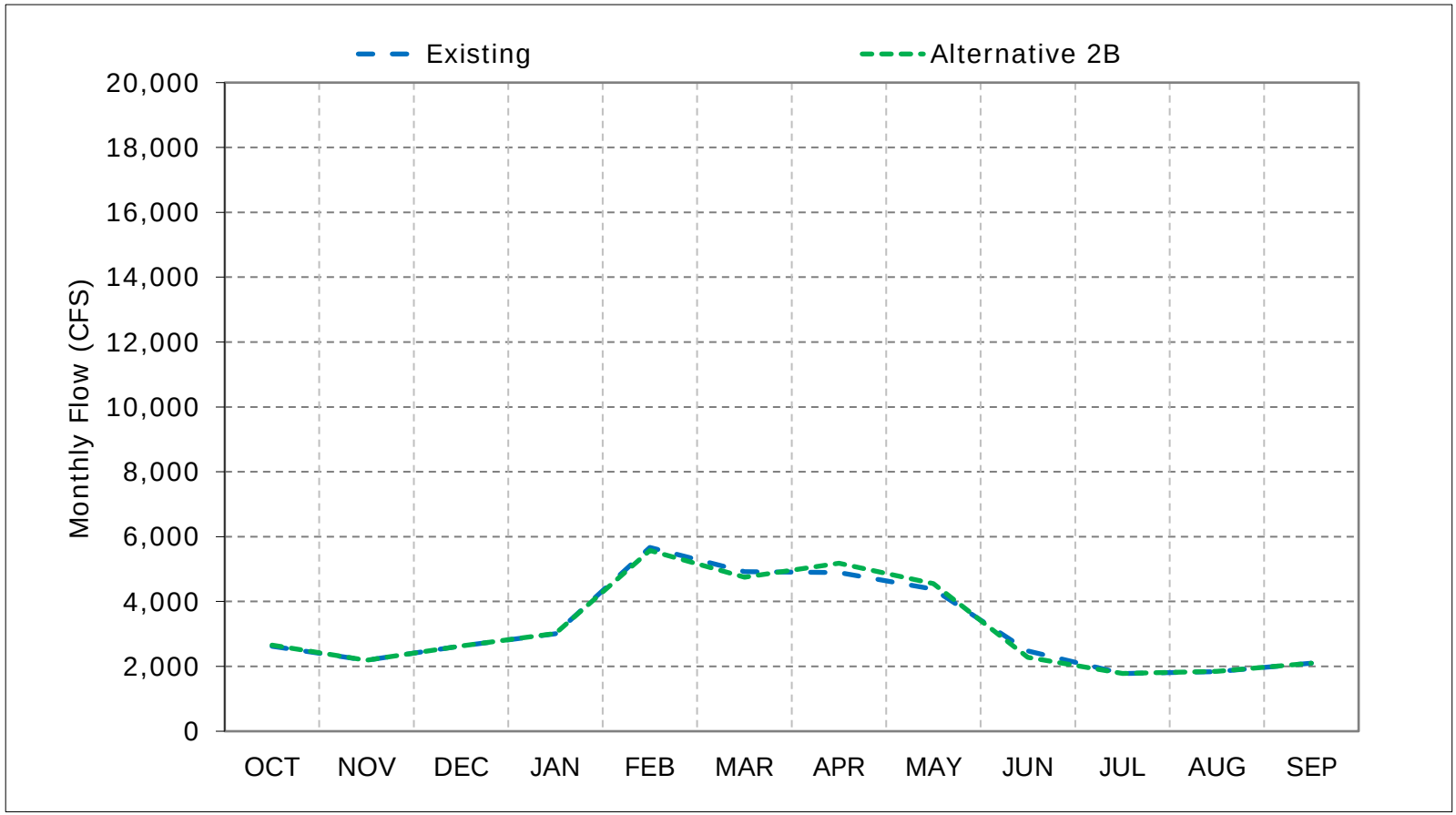
Figure 5-3. San Joaquin River at Vernalis, Above Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

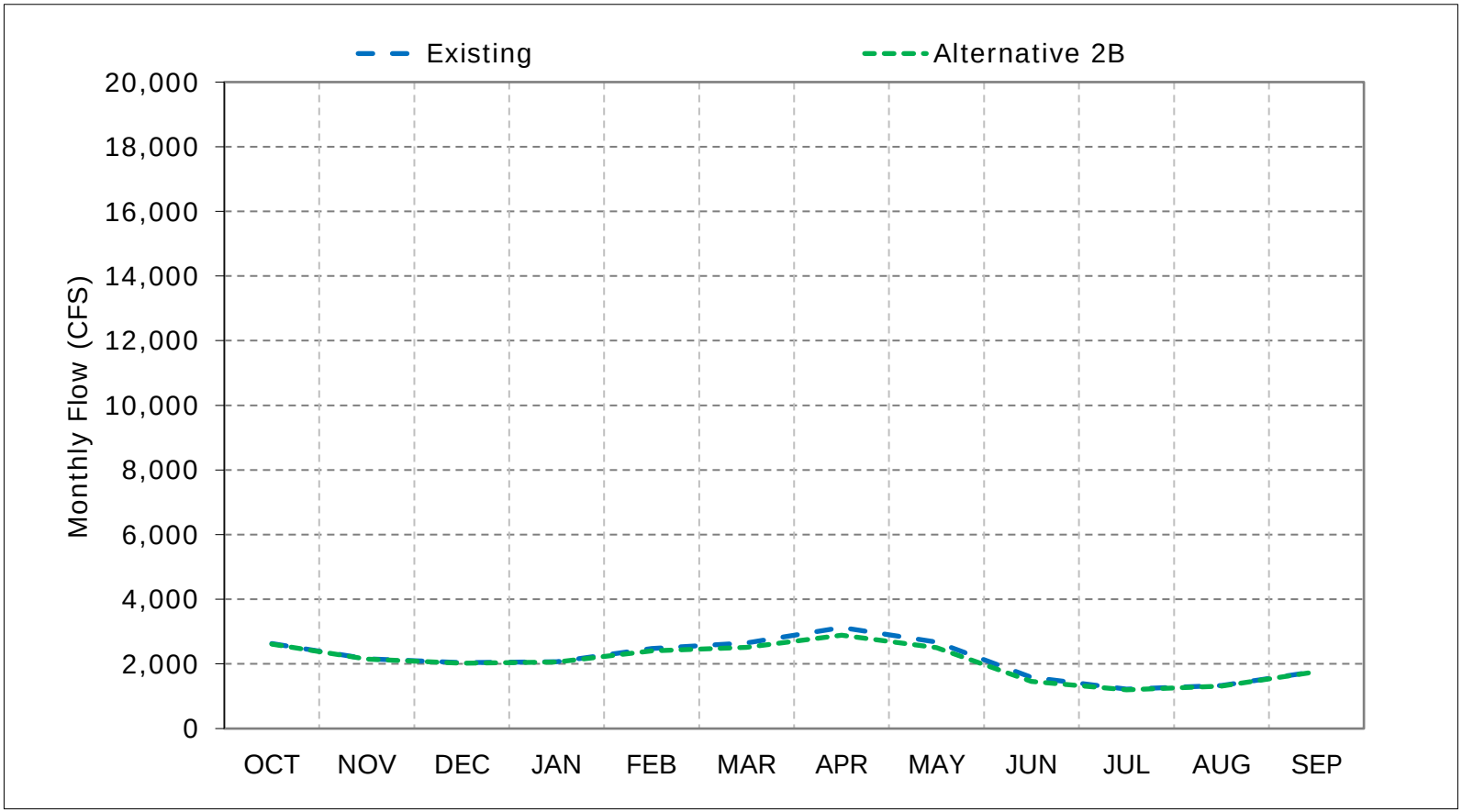
Figure 5-4. San Joaquin River at Vernalis, Below Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

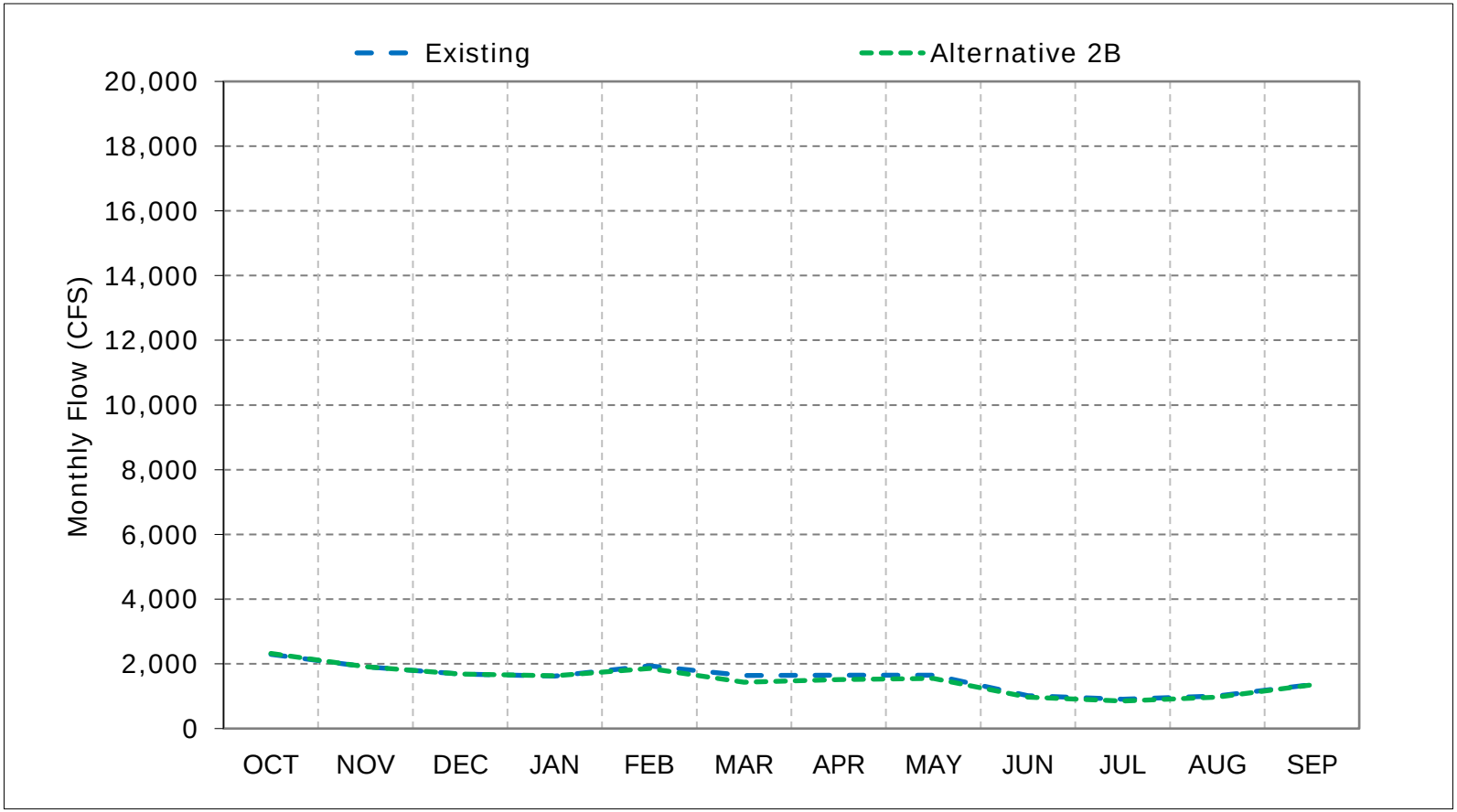
Figure 5-5. San Joaquin River at Vernalis, Dry Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 5-6. San Joaquin River at Vernalis, Critical Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 5-7. San Joaquin River at Vernalis, October

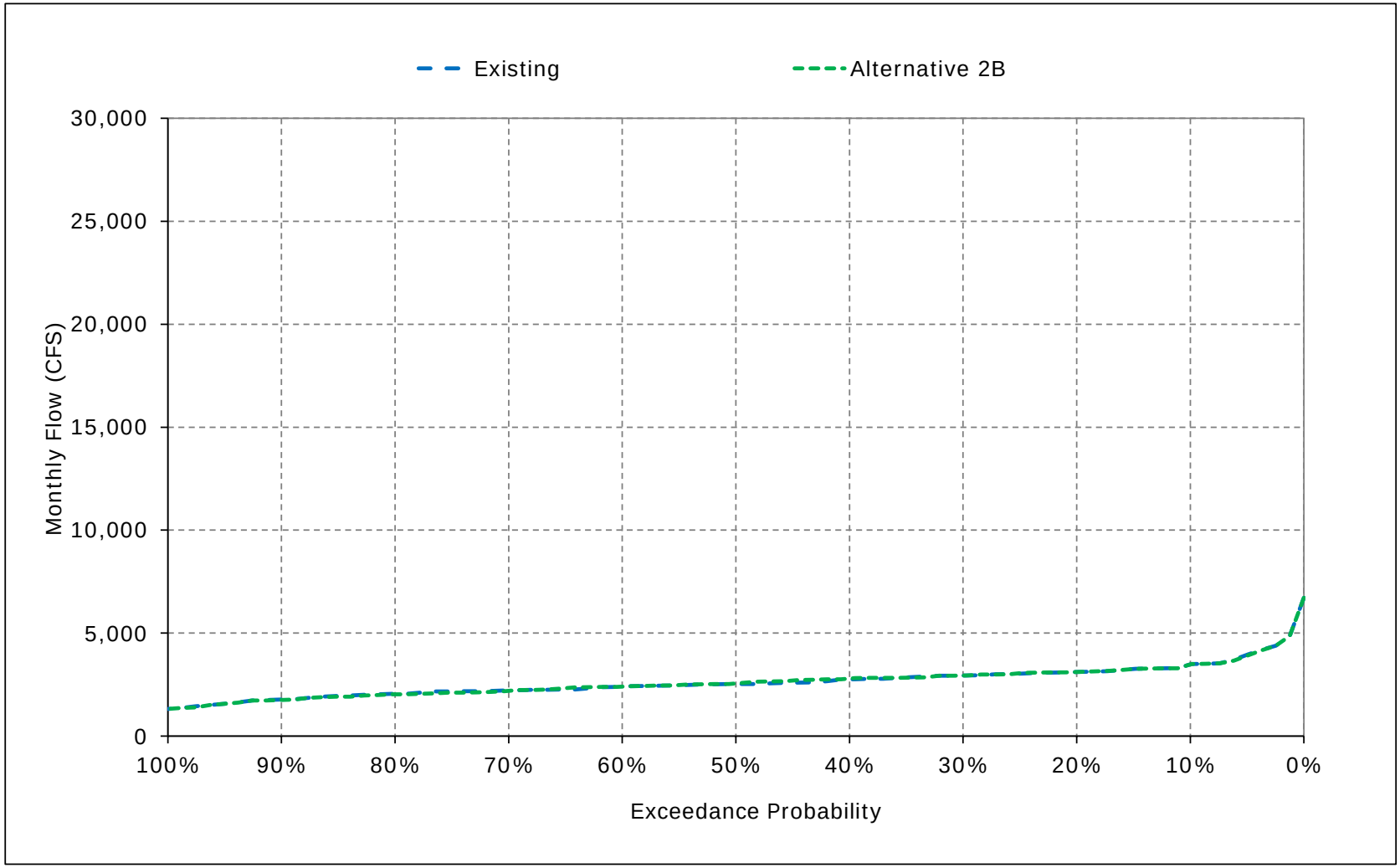


Figure 5-8. San Joaquin River at Vernalis, November

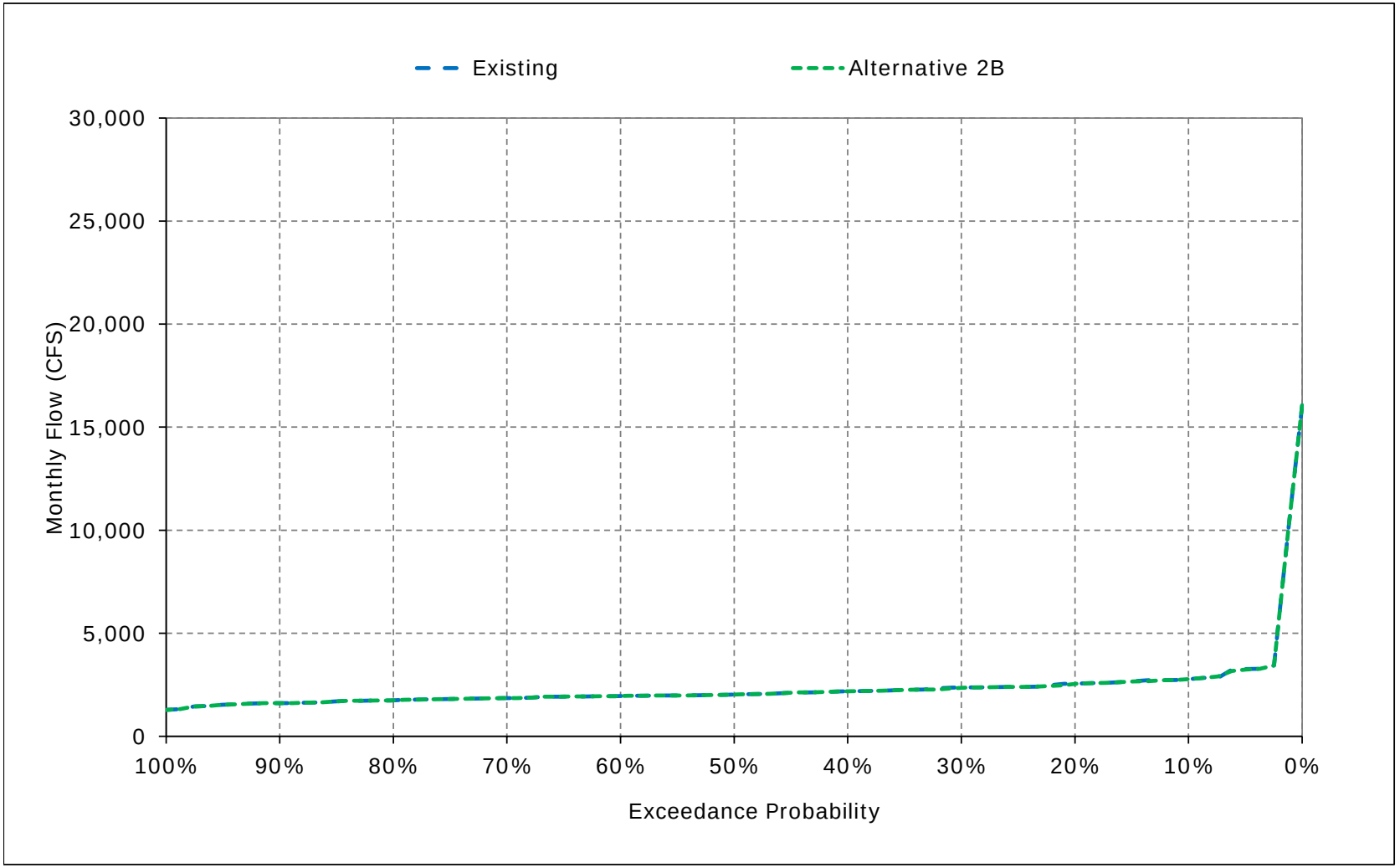


Figure 5-9. San Joaquin River at Vernalis, December

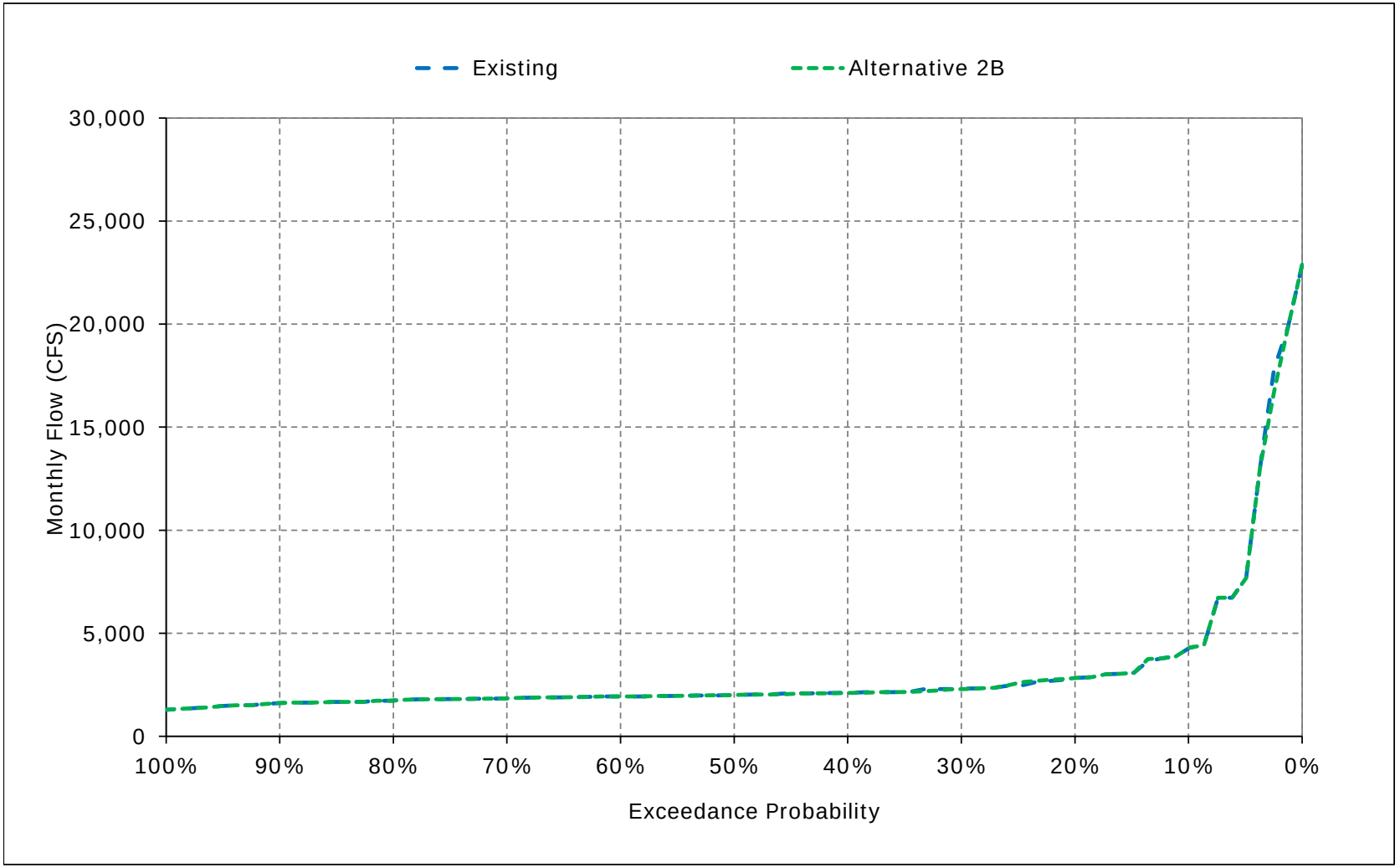


Figure 5-10. San Joaquin River at Vernalis, January

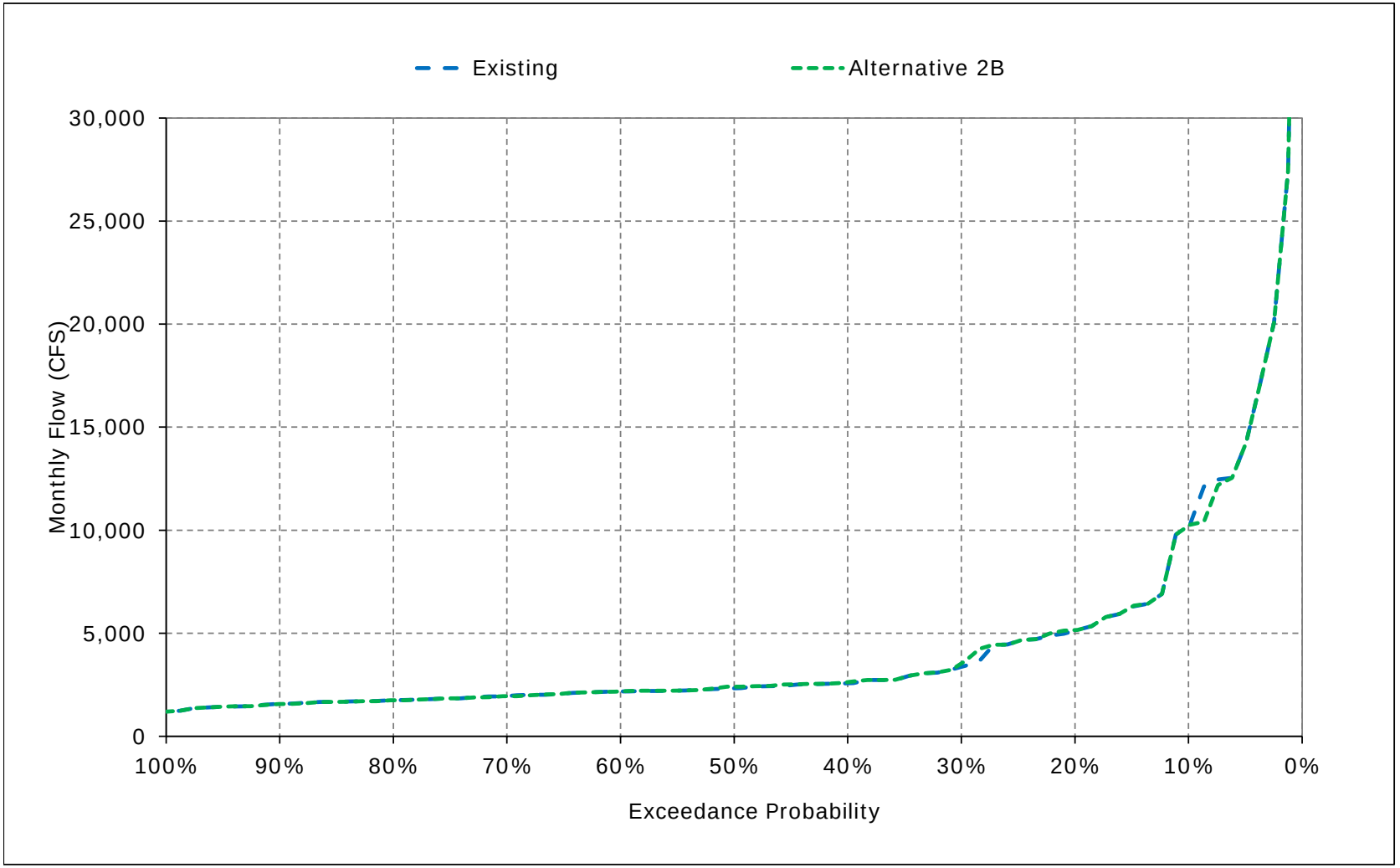


Figure 5-11. San Joaquin River at Vernalis, February

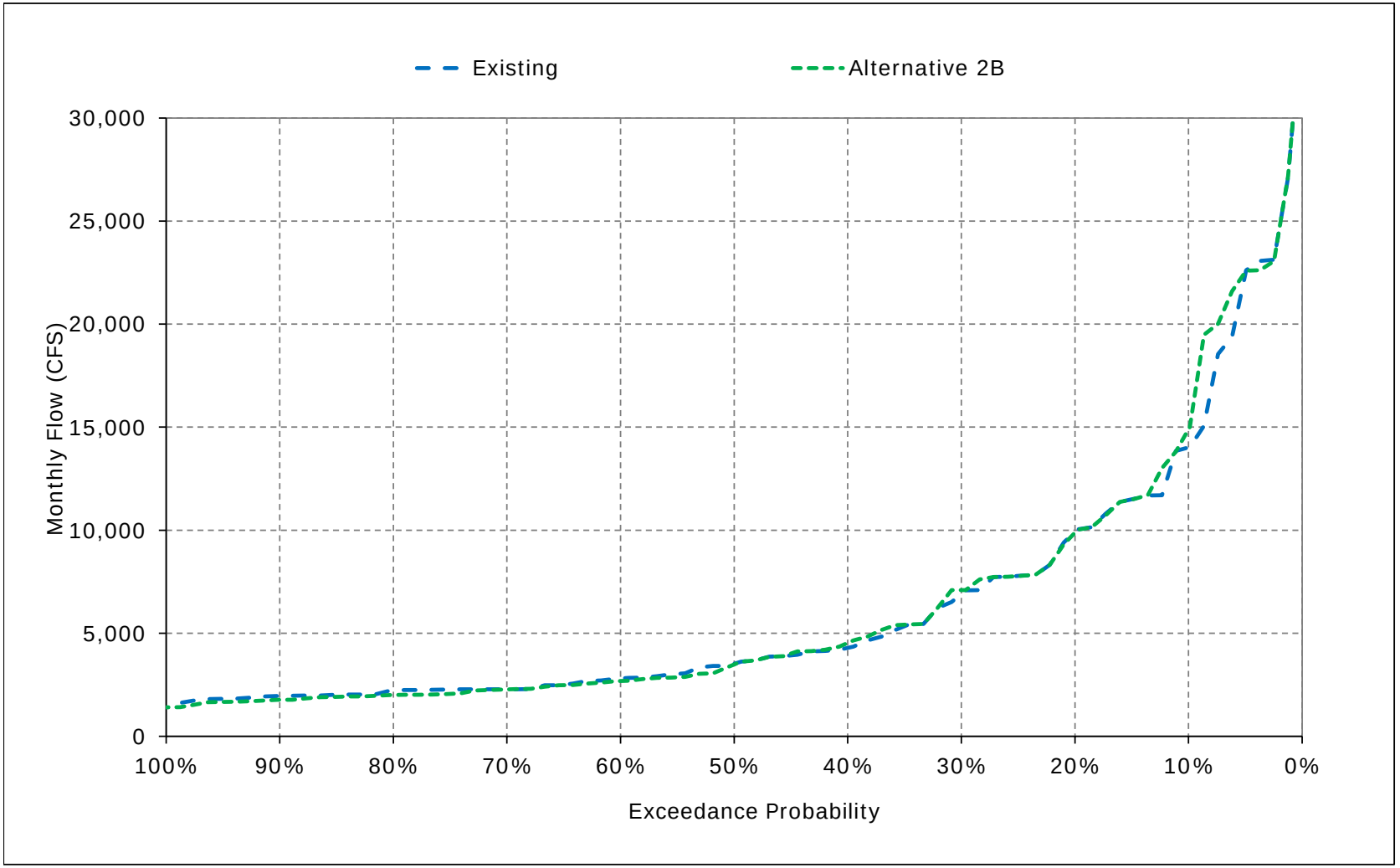


Figure 5-12. San Joaquin River at Vernalis, March

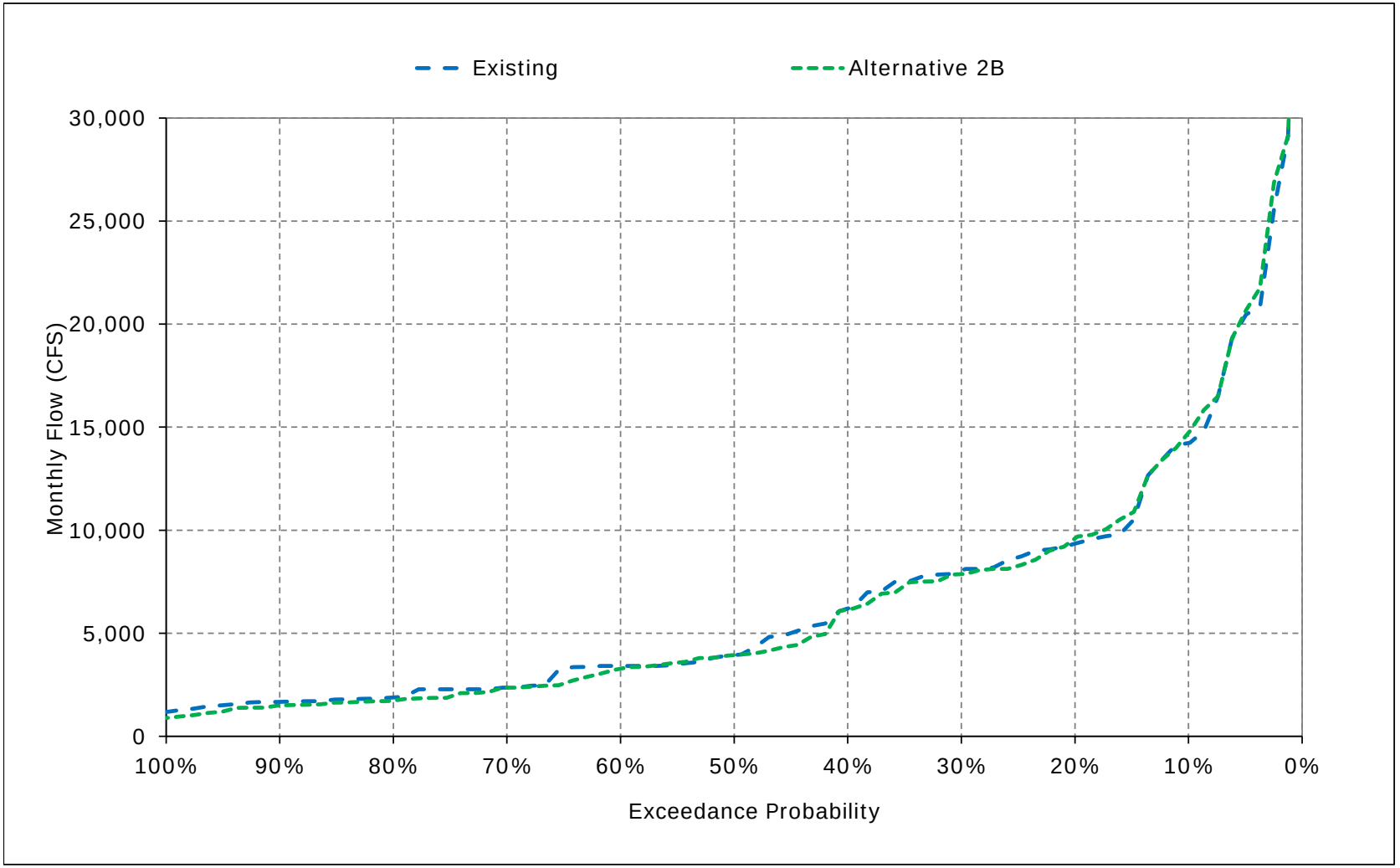


Figure 5-13. San Joaquin River at Vernalis, April

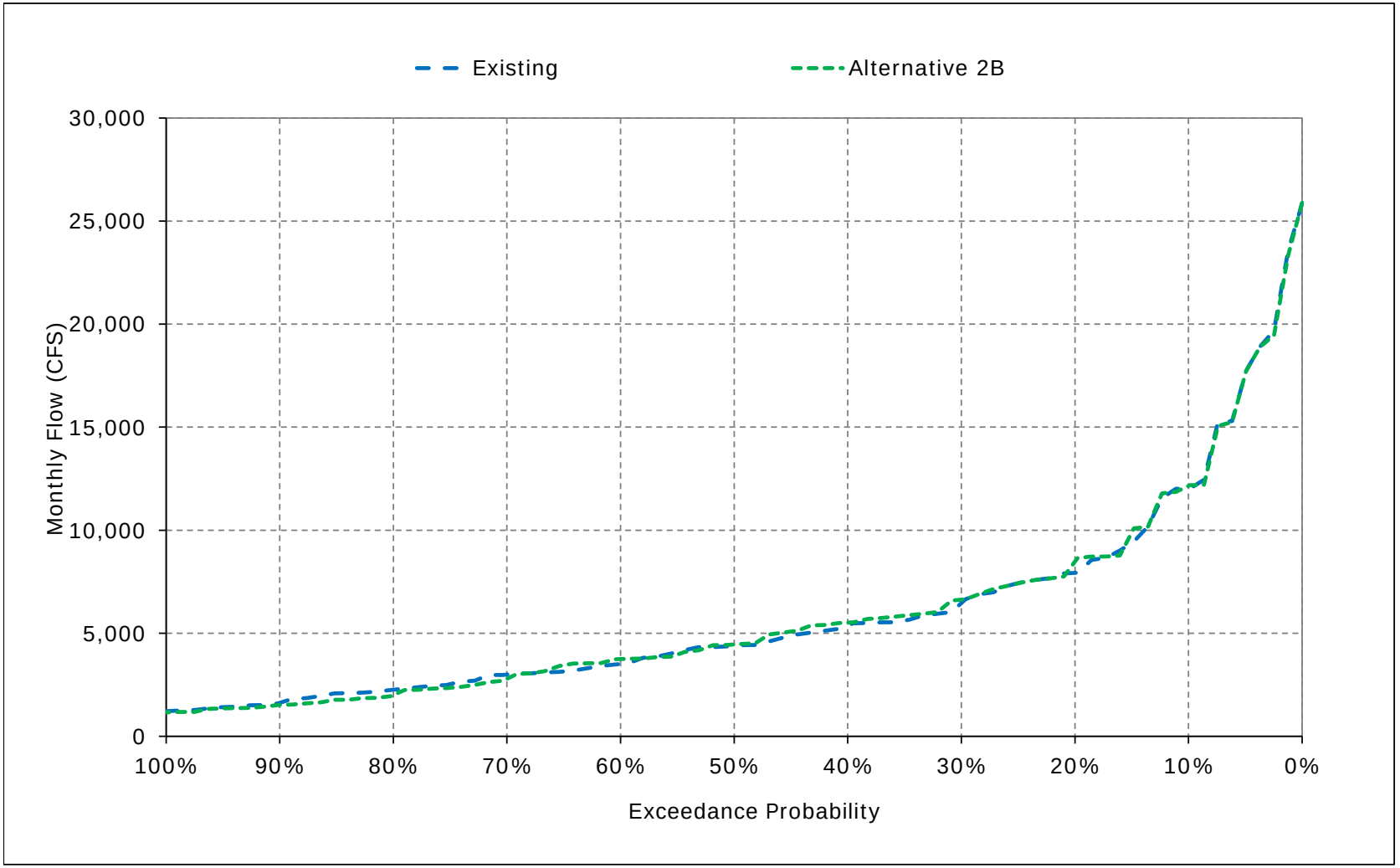


Figure 5-14. San Joaquin River at Vernalis, May

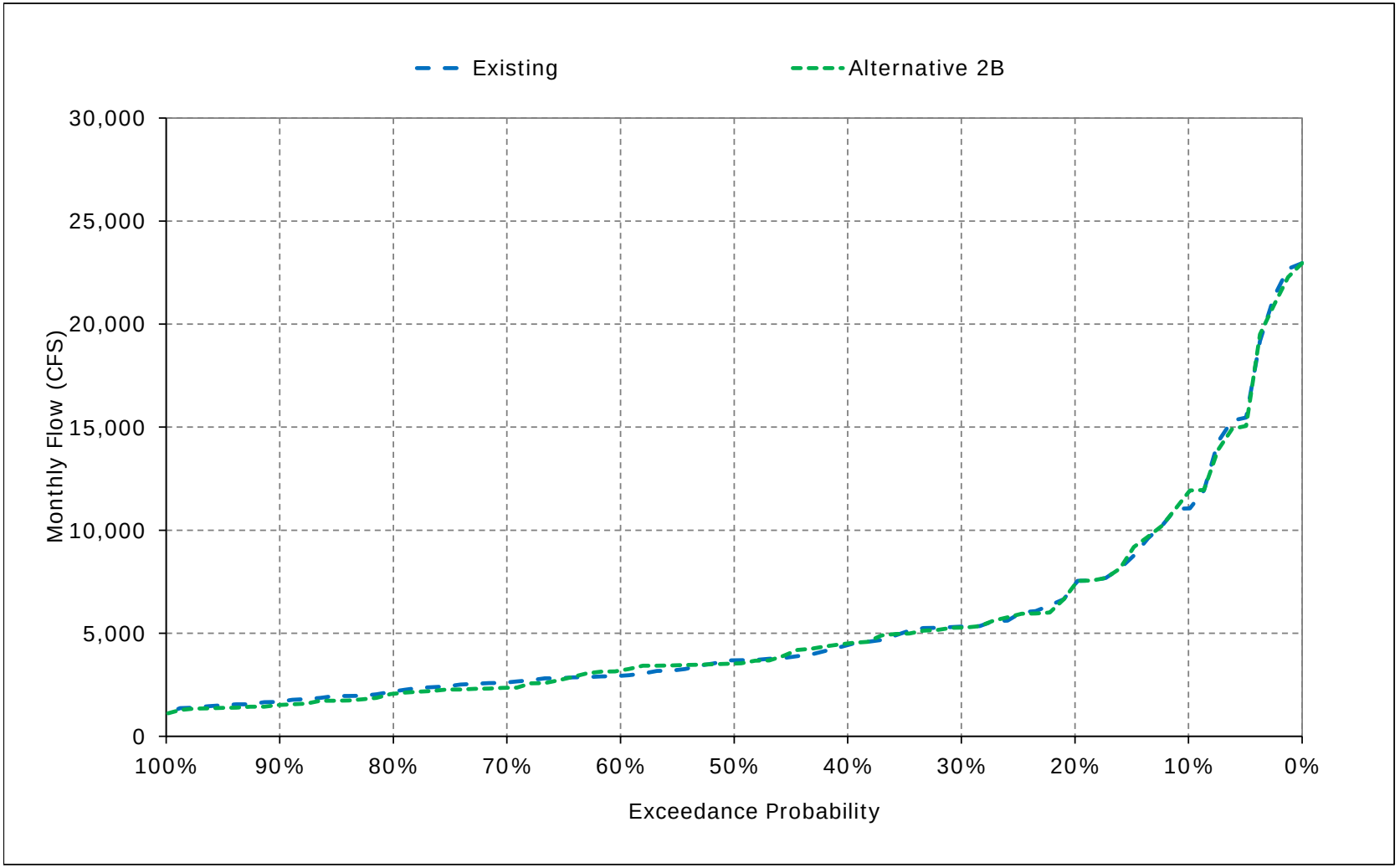


Figure 5-15. San Joaquin River at Vernalis, June

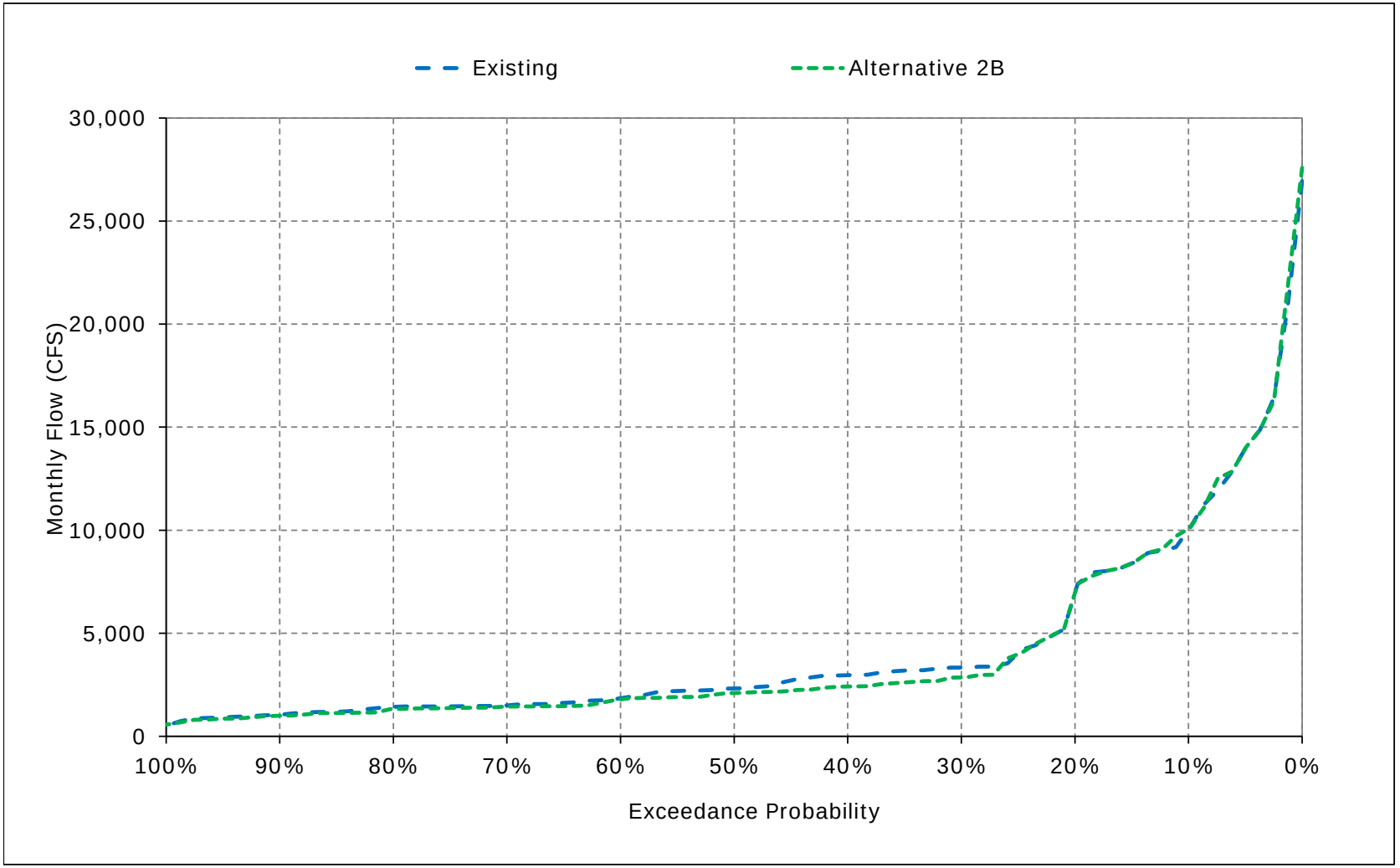


Figure 5-16. San Joaquin River at Vernalis, July

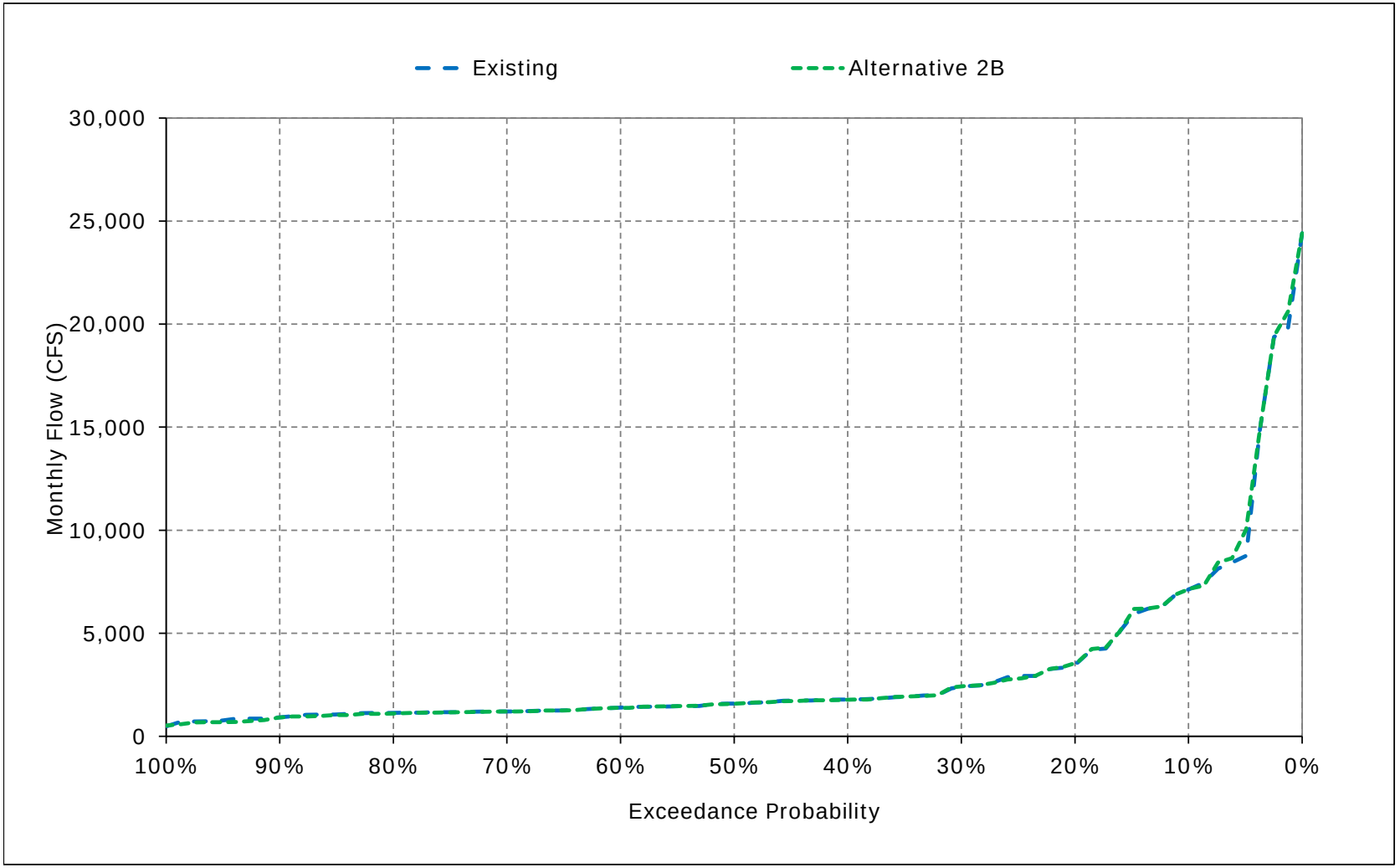


Figure 5-17. San Joaquin River at Vernalis, August

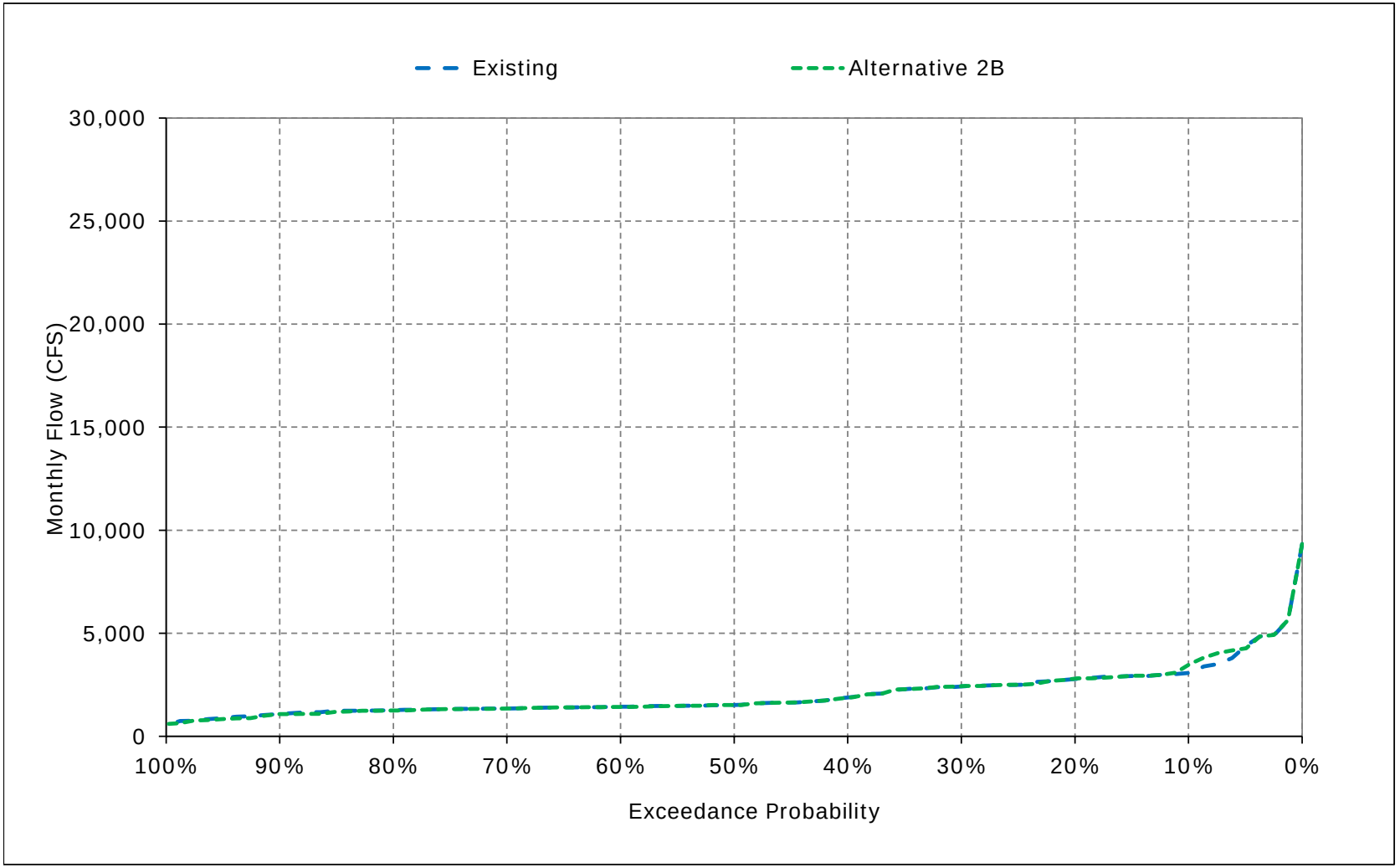
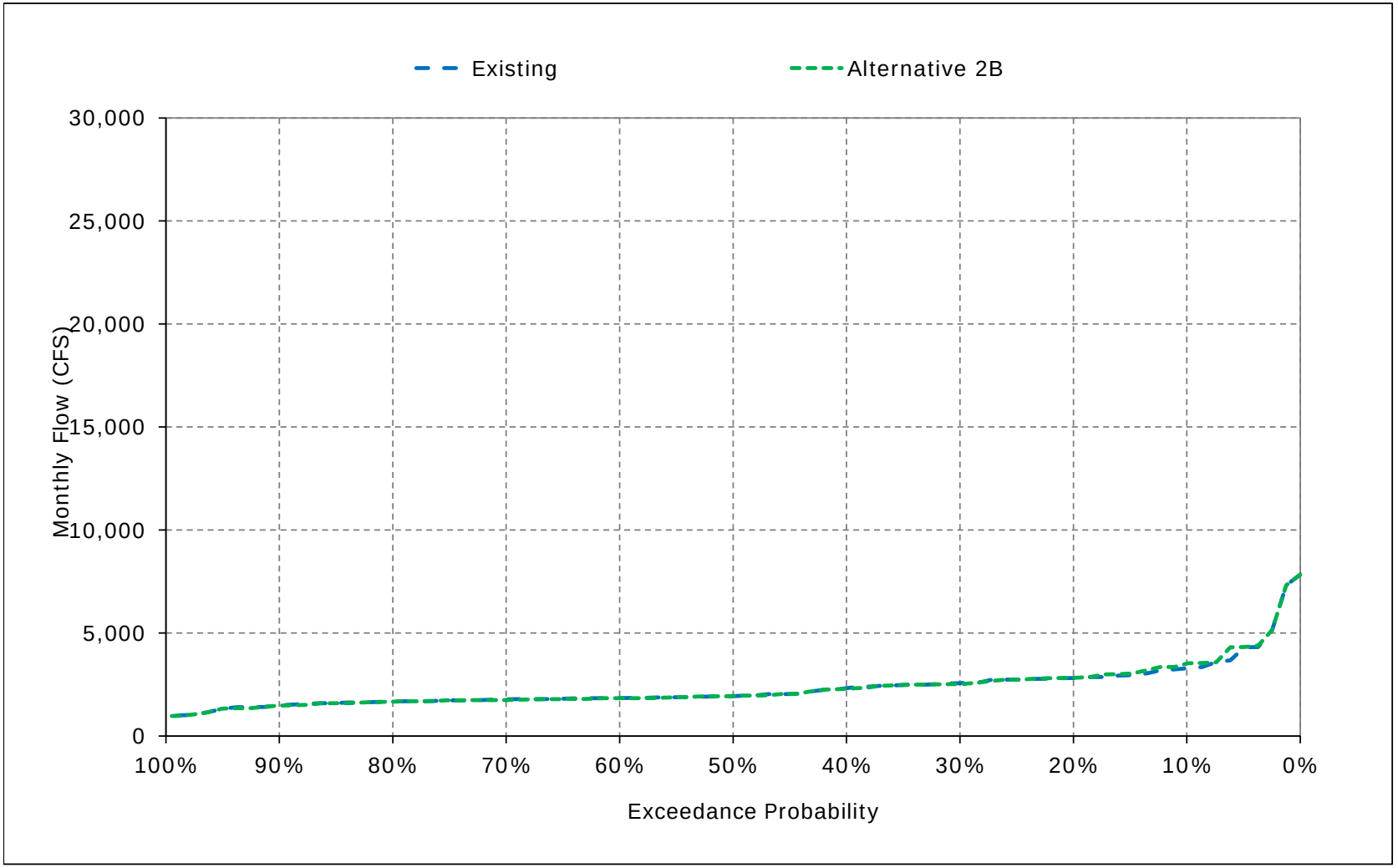


Figure 5-18. San Joaquin River at Vernalis, September



## Table 6-1. Mokelumne River below Consumnes, Monthly Flow

### Existing

| | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 803 | 1,033 | 2,131 | 3,558 | 4,038 | 3,475 | 3,831 | 3,723 | 2,588 | 828 | 305 | 385 |
| 20% | 631 | 714 | 879 | 2,337 | 3,063 | 2,618 | 2,518 | 2,729 | 1,706 | 578 | 237 | 282 |
| 30% | 556 | 571 | 581 | 1,479 | 2,338 | 2,419 | 2,004 | 1,769 | 1,308 | 340 | 143 | 219 |
| 40% | 475 | 509 | 488 | 886 | 1,605 | 1,704 | 1,592 | 1,406 | 713 | 268 | 73 | 164 |
| 50% | 414 | 459 | 435 | 703 | 1,246 | 1,297 | 1,322 | 1,029 | 465 | 95 | 54 | 102 |
| 60% | 321 | 407 | 388 | 520 | 868 | 1,018 | 923 | 790 | 349 | 56 | 46 | 85 |
| 70% | 277 | 365 | 330 | 432 | 685 | 842 | 707 | 502 | 163 | 50 | 44 | 50 |
| 80% | 222 | 241 | 265 | 355 | 509 | 687 | 607 | 354 | 83 | 46 | 41 | 42 |
| 90% | 183 | 188 | 216 | 292 | 393 | 522 | 313 | 200 | 53 | 43 | 37 | 38 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 444 | 598 | 902 | 1,479 | 1,858 | 1,892 | 1,693 | 1,527 | 977 | 385 | 136 | 172 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 545 | 831 | 1,643 | 2,918 | 3,368 | 3,357 | 2,962 | 2,824 | 2,025 | 905 | 276 | 318 |
| Above Normal (15%) | 398 | 773 | 966 | 1,811 | 2,019 | 2,280 | 1,836 | 1,627 | 1,083 | 331 | 129 | 174 |
| Below Normal (17%) | 464 | 529 | 702 | 833 | 1,536 | 1,325 | 1,596 | 1,314 | 670 | 151 | 72 | 107 |
| Dry (22%) | 404 | 413 | 377 | 455 | 775 | 889 | 739 | 620 | 215 | 79 | 46 | 68 |
| Critical (15%) | 305 | 280 | 257 | 315 | 422 | 495 | 345 | 225 | 103 | 44 | 50 | 85 |

### Alternative 2B

| | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 803 | 1,033 | 2,131 | 3,558 | 4,038 | 3,475 | 3,831 | 3,723 | 2,588 | 828 | 305 | 385 |
| 20% | 631 | 714 | 879 | 2,337 | 3,063 | 2,618 | 2,518 | 2,729 | 1,707 | 578 | 237 | 282 |
| 30% | 556 | 571 | 581 | 1,479 | 2,341 | 2,421 | 2,005 | 1,769 | 1,309 | 342 | 143 | 219 |
| 40% | 475 | 509 | 488 | 886 | 1,605 | 1,704 | 1,592 | 1,406 | 713 | 268 | 73 | 164 |
| 50% | 414 | 459 | 435 | 704 | 1,246 | 1,297 | 1,322 | 1,030 | 465 | 95 | 54 | 102 |
| 60% | 322 | 409 | 388 | 520 | 868 | 1,019 | 923 | 792 | 349 | 56 | 47 | 86 |
| 70% | 277 | 365 | 331 | 433 | 685 | 843 | 707 | 502 | 165 | 50 | 44 | 51 |
| 80% | 222 | 242 | 267 | 355 | 509 | 687 | 609 | 354 | 83 | 46 | 41 | 42 |
| 90% | 184 | 188 | 219 | 293 | 393 | 522 | 313 | 200 | 53 | 44 | 38 | 39 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 444 | 599 | 903 | 1,479 | 1,858 | 1,893 | 1,694 | 1,527 | 977 | 385 | 136 | 172 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 546 | 831 | 1,643 | 2,919 | 3,369 | 3,357 | 2,962 | 2,824 | 2,025 | 905 | 276 | 318 |
| Above Normal (15%) | 398 | 773 | 967 | 1,812 | 2,020 | 2,281 | 1,836 | 1,627 | 1,083 | 331 | 129 | 174 |
| Below Normal (17%) | 464 | 529 | 702 | 834 | 1,536 | 1,326 | 1,596 | 1,315 | 670 | 152 | 72 | 107 |
| Dry (22%) | 404 | 413 | 378 | 455 | 776 | 890 | 740 | 621 | 216 | 81 | 47 | 68 |
| Critical (15%) | 305 | 280 | 257 | 315 | 423 | 495 | 345 | 225 | 103 | 44 | 51 | 85 |

### Alternative 2B minus Existing

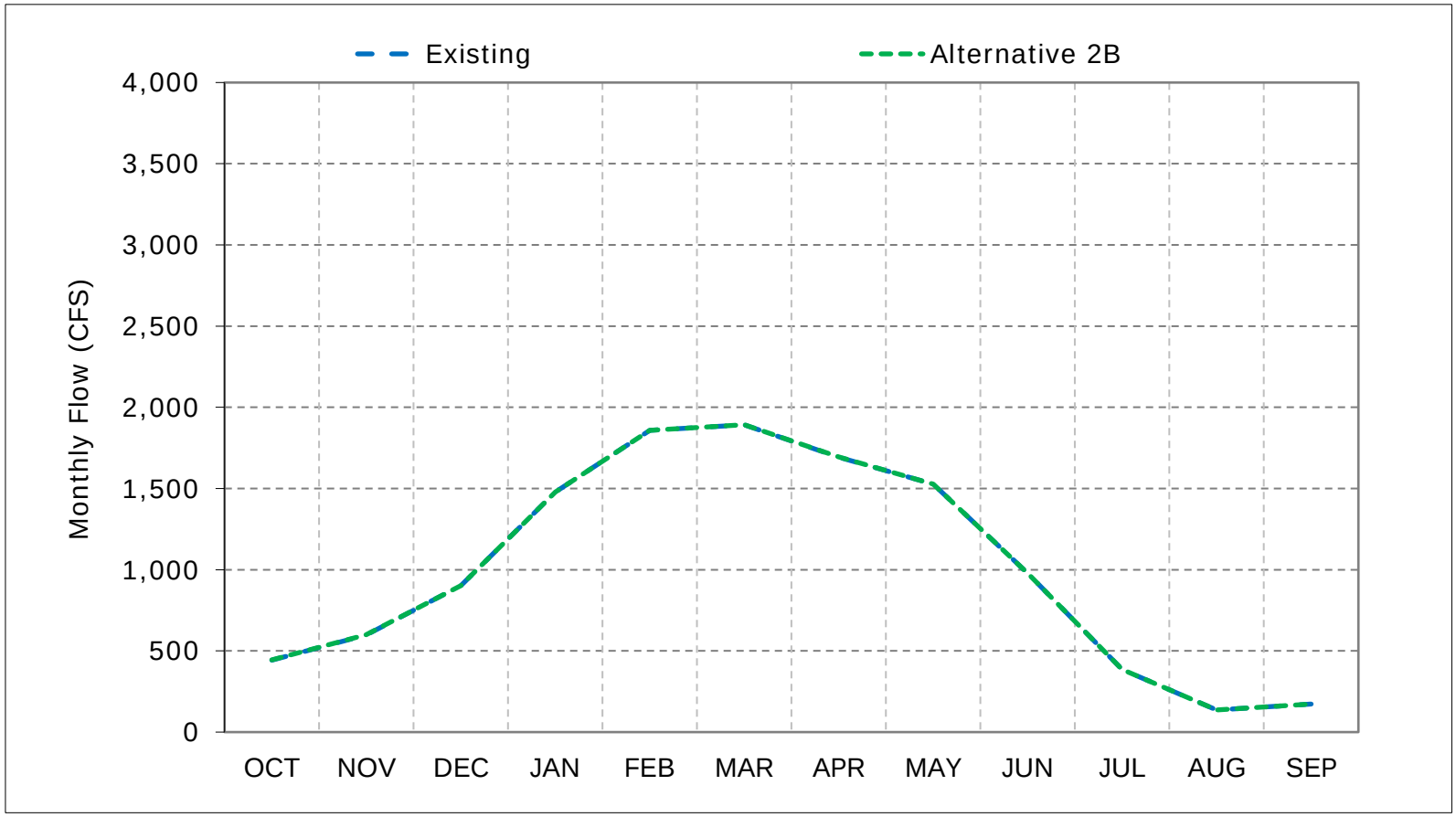
| | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 30% | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 1 | 0 | 0 |
| 40% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50% | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 60% | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 1 |
| 70% | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| 80% | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| 90% | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Above Normal (15%) | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Below Normal (17%) | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| Dry (22%) | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Critical (15%) | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

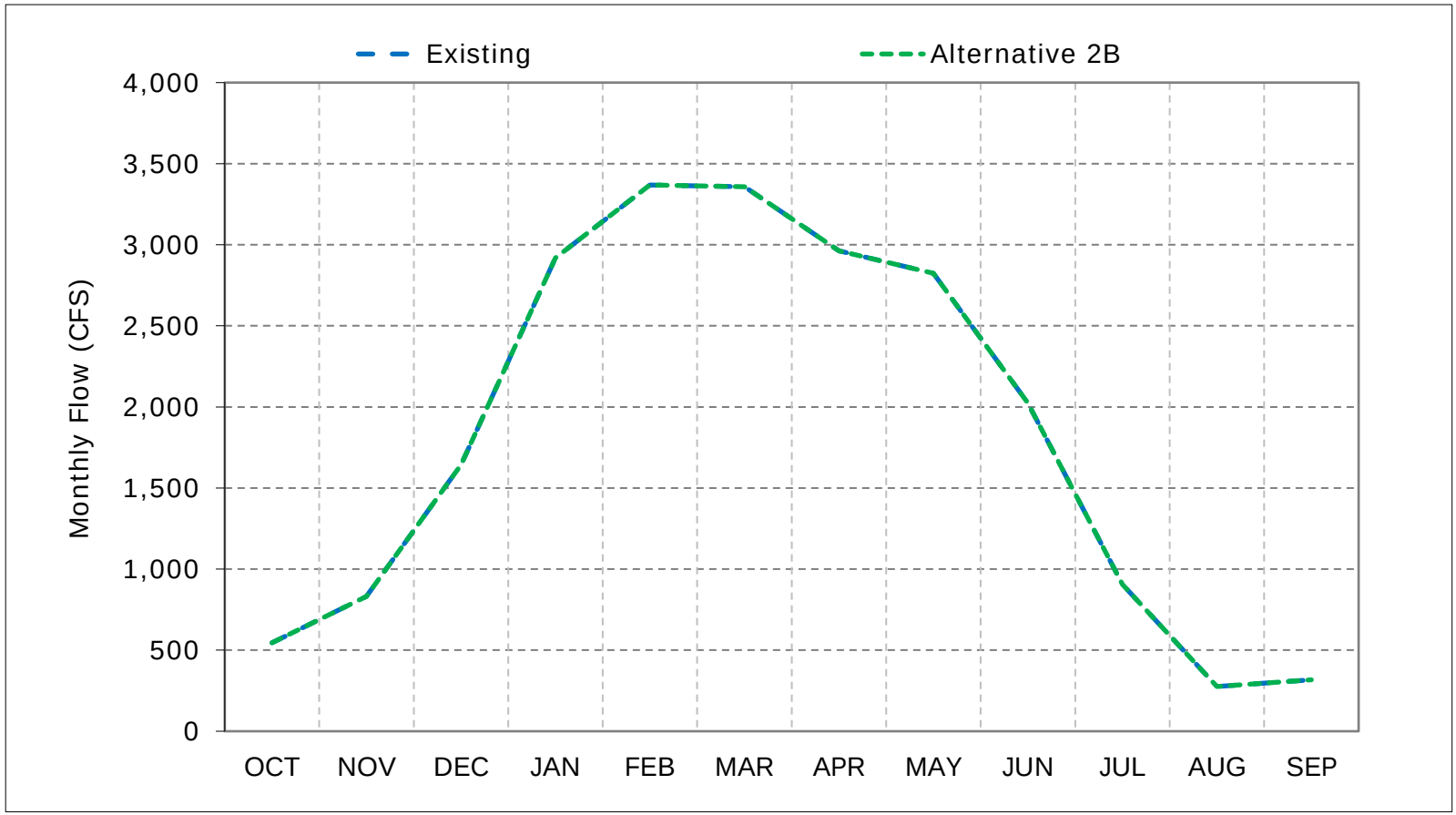
Figure 6-1. Mokelumne River below Consumnes, Long-Term Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

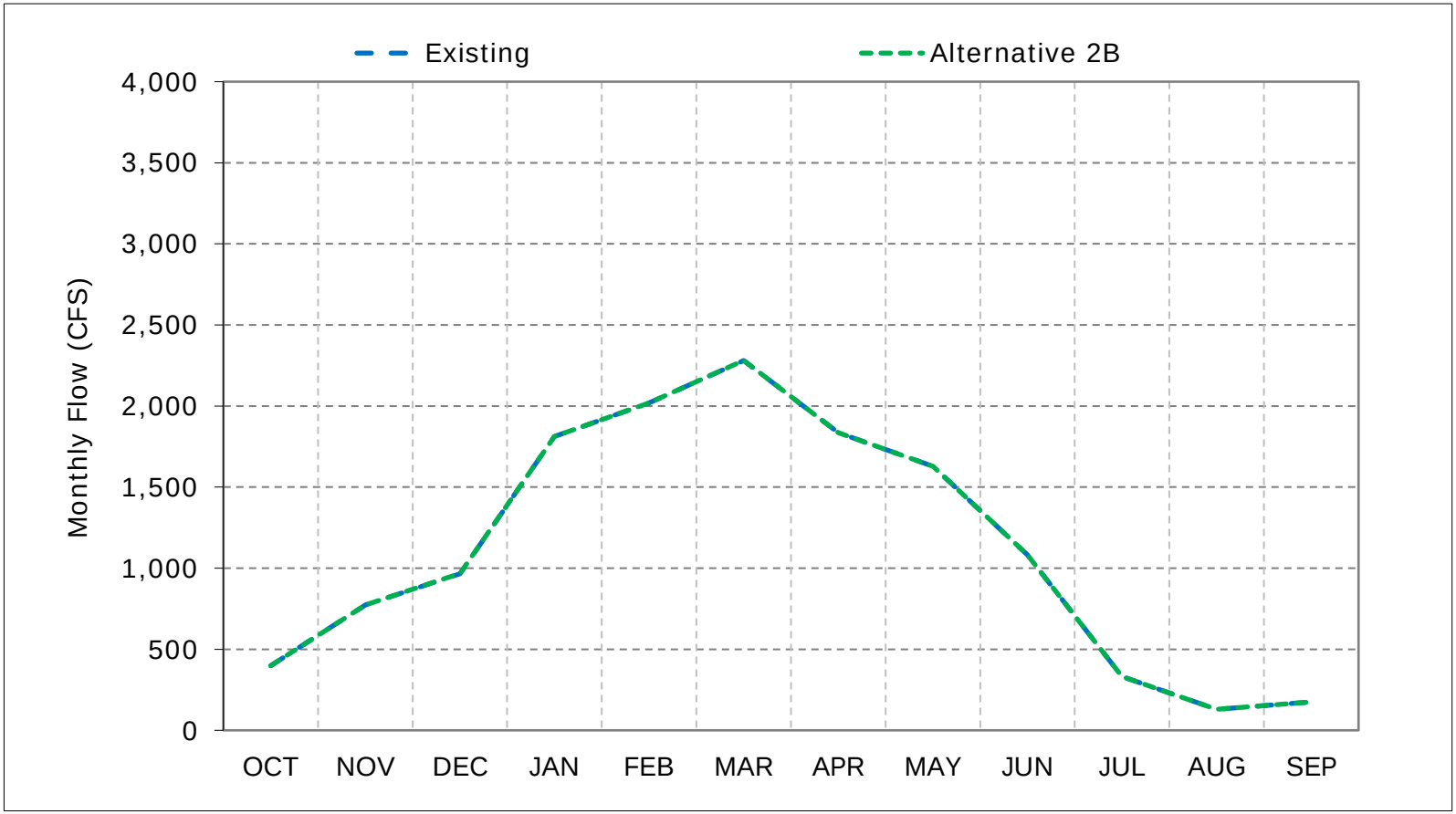
Figure 6-2. Mokelumne River below Consumnes, Wet Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

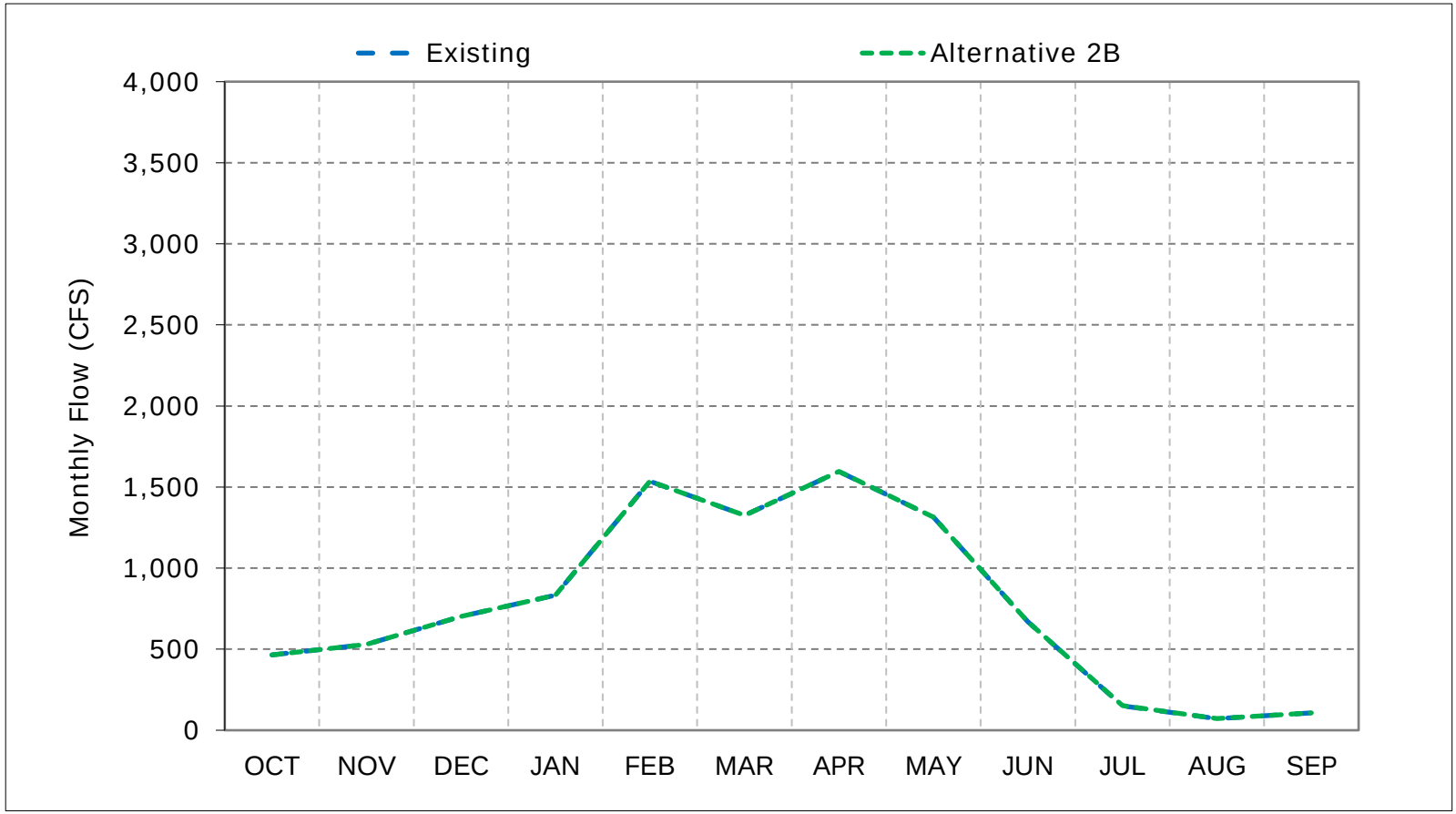
Figure 6-3. Mokelumne River below Consumnes, Above Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

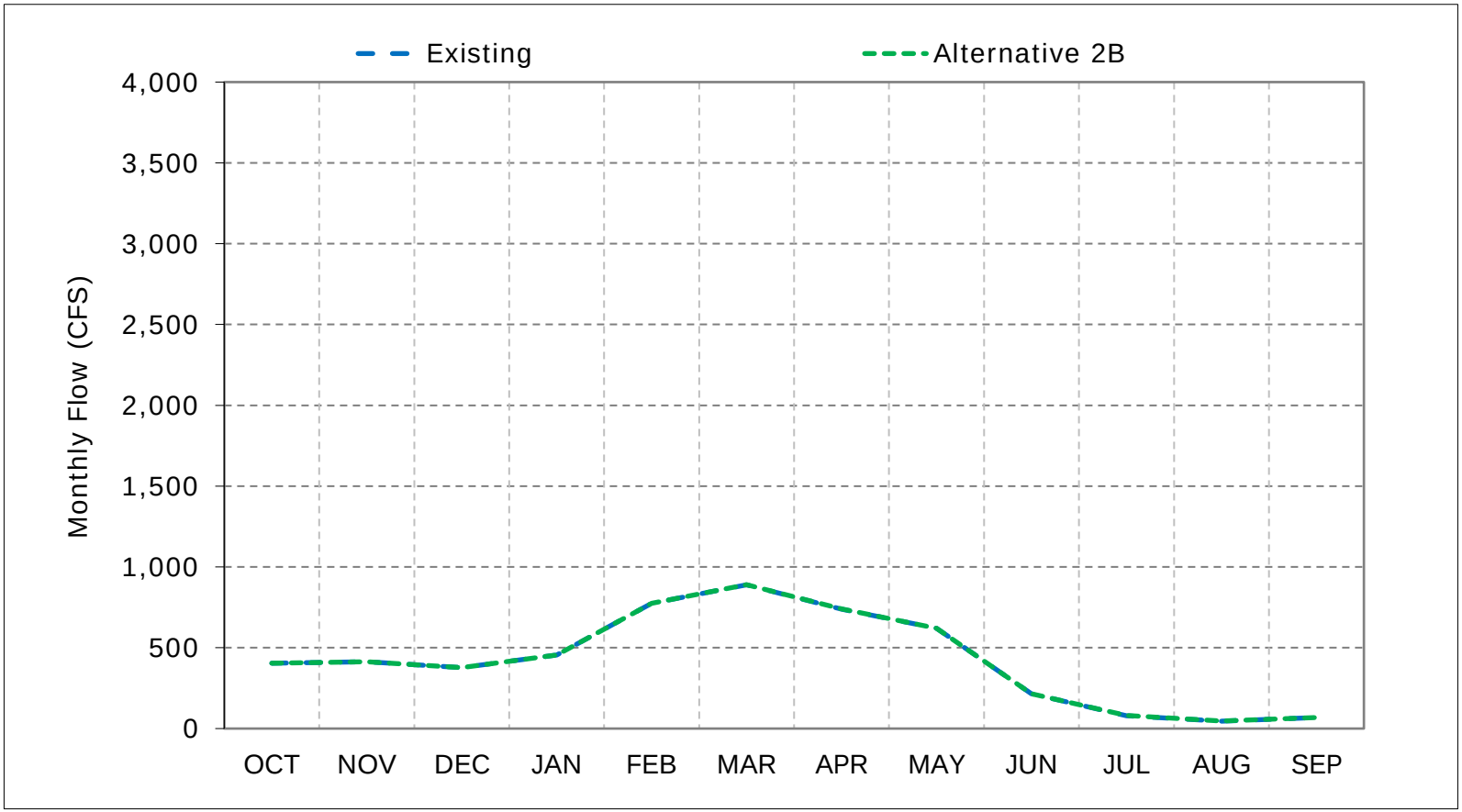
Figure 6-4. Mokelumne River below Consumnes, Below Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

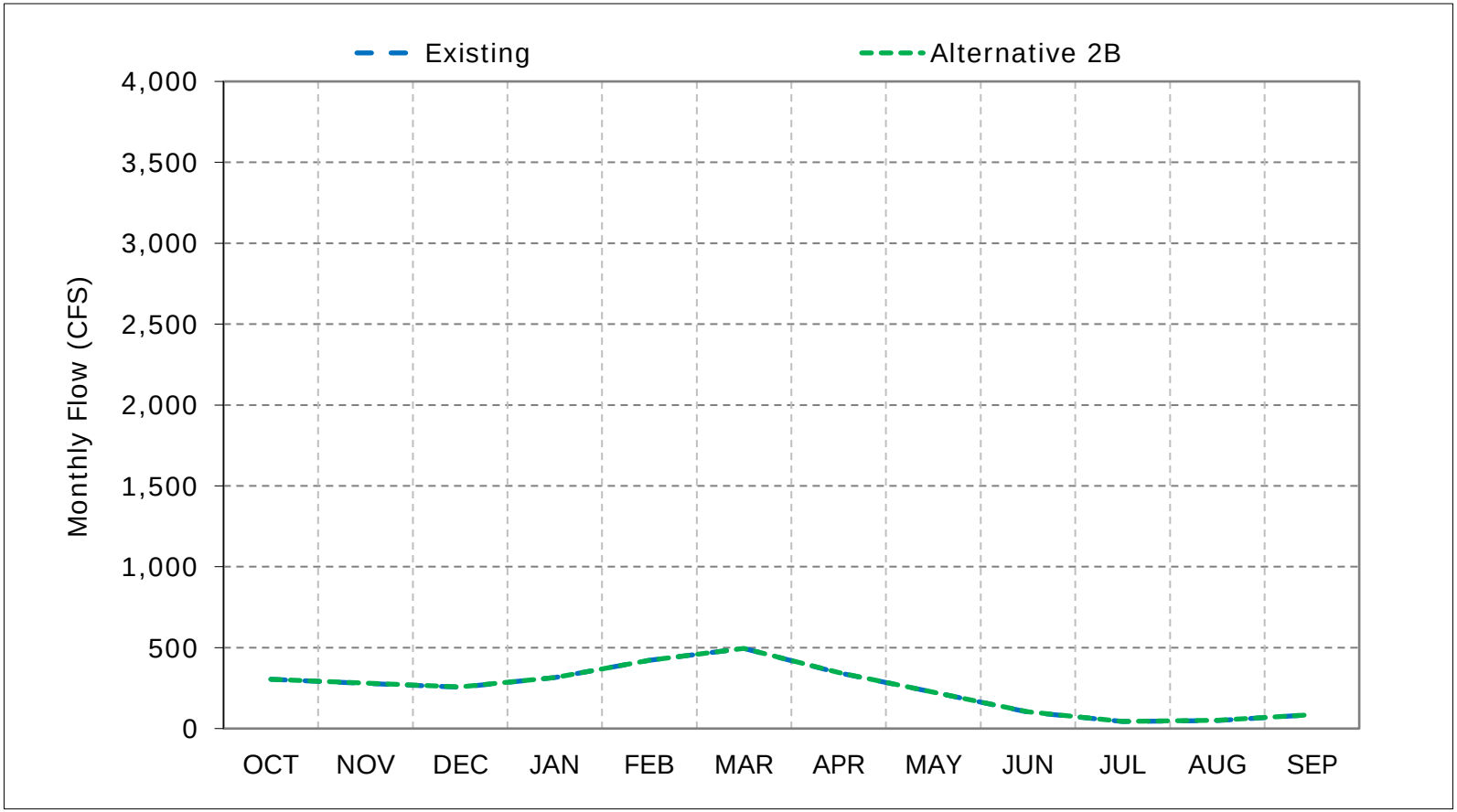
Figure 6-5. Mokelumne River below Consumnes, Dry Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 6-6. Mokelumne River below Consumnes, Critical Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 6-7. Mokelumne River below Consumnes, October

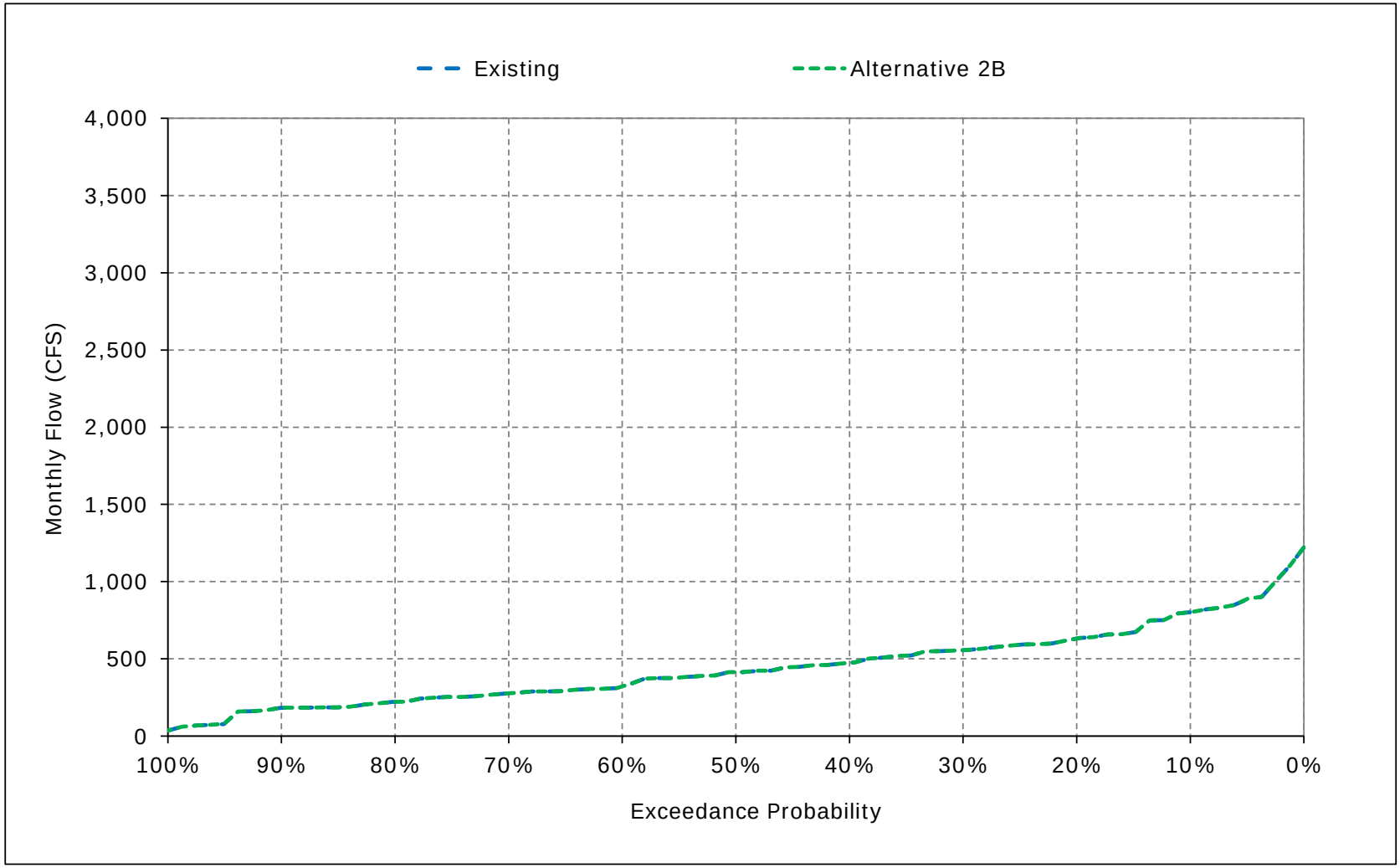


Figure 6-8. Mokelumne River below Consumnes, November

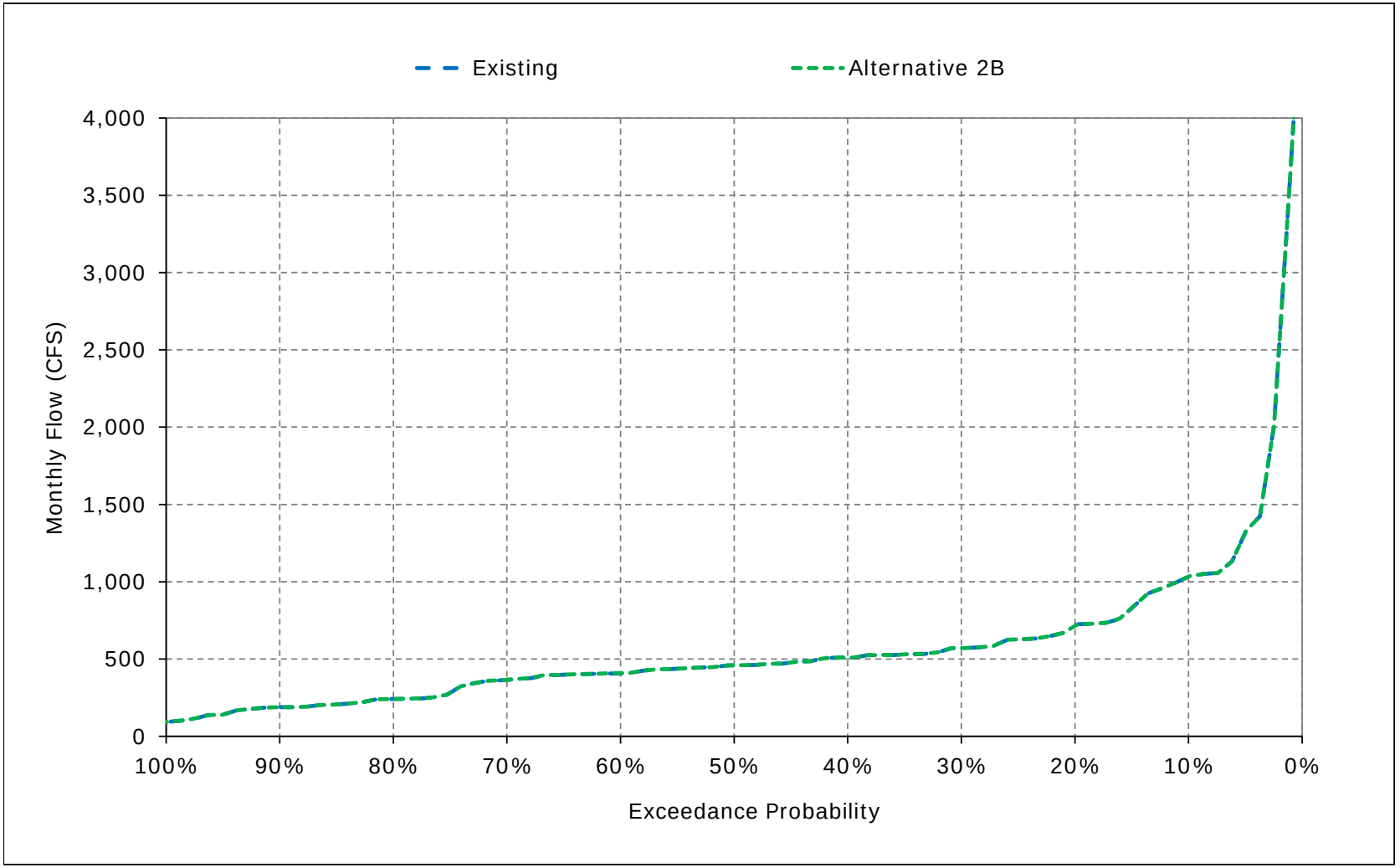


Figure 6-9. Mokelumne River below Consumnes, December

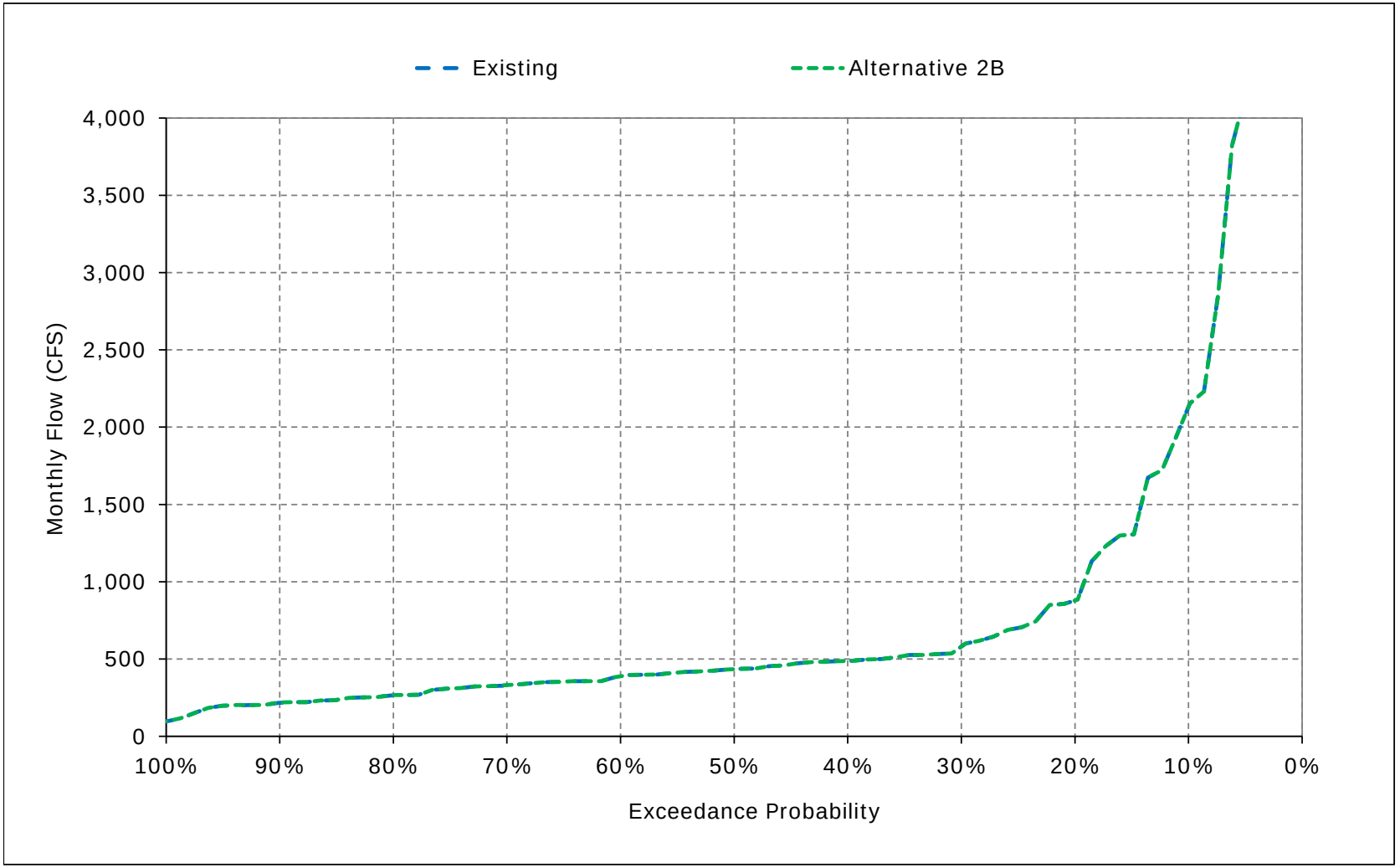


Figure 6-10. Mokelumne River below Consumnes, January

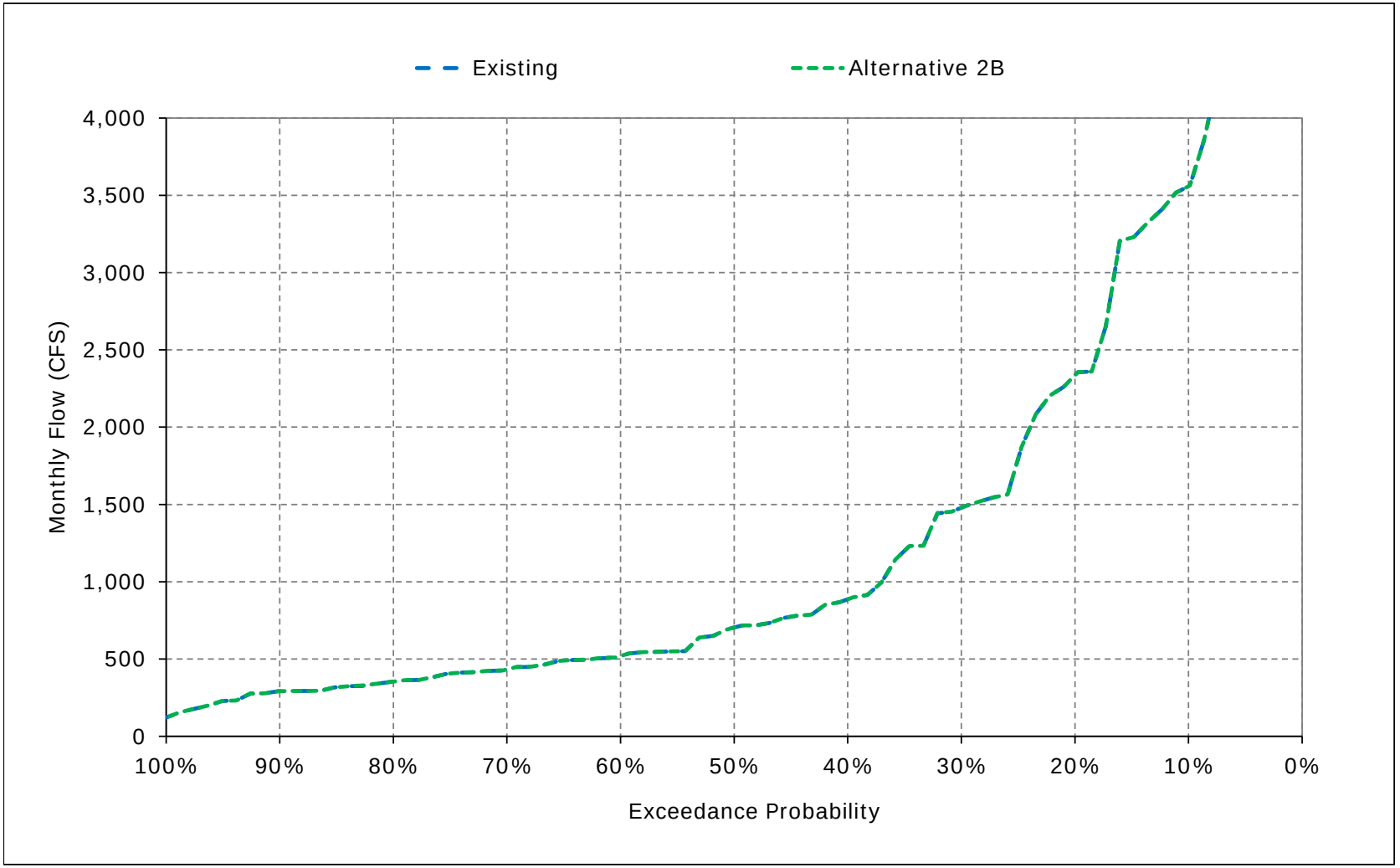


Figure 6-11. Mokelumne River below Consumnes, February

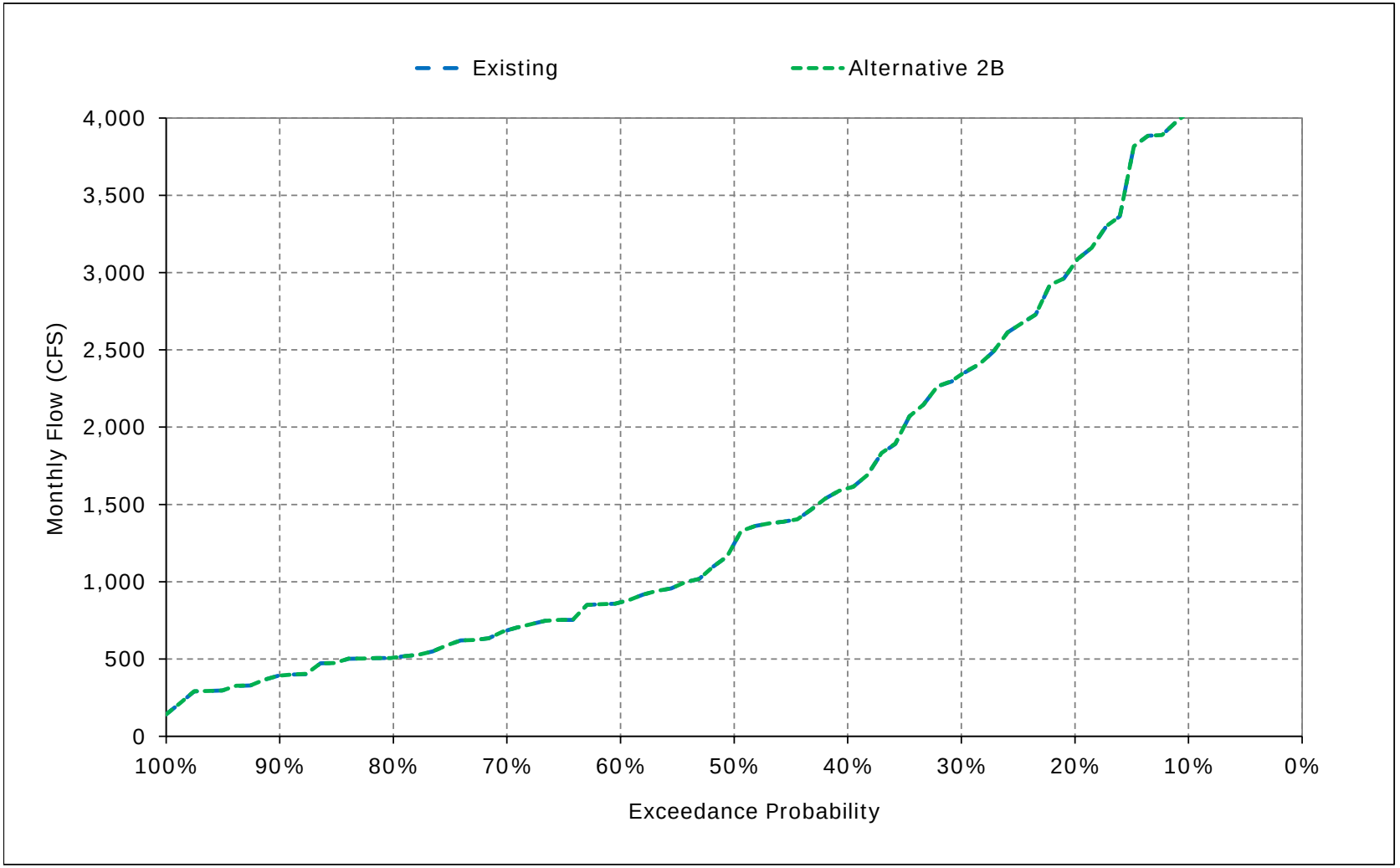


Figure 6-12. Mokelumne River below Consumnes, March

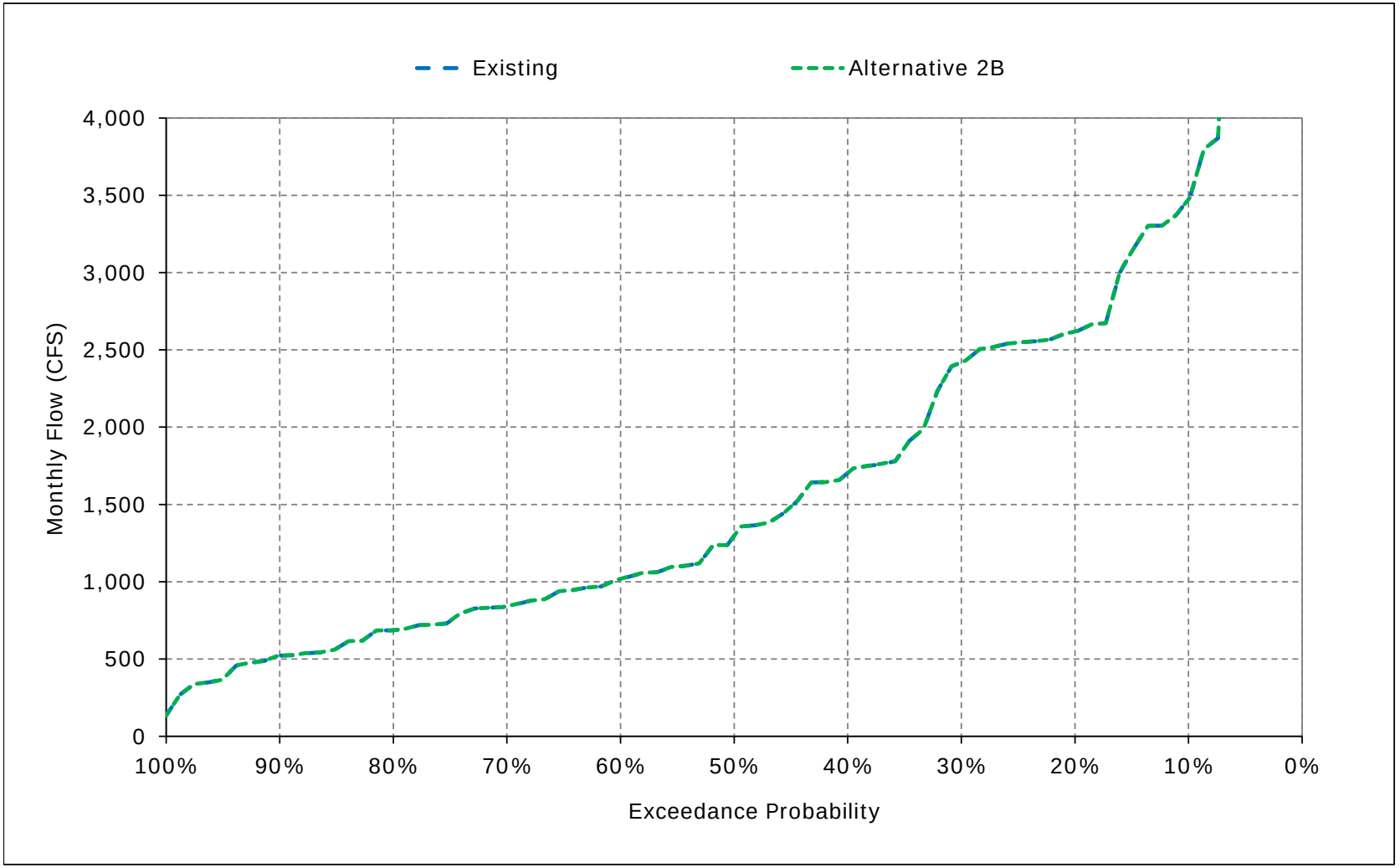


Figure 6-13. Mokelumne River below Consumnes, April

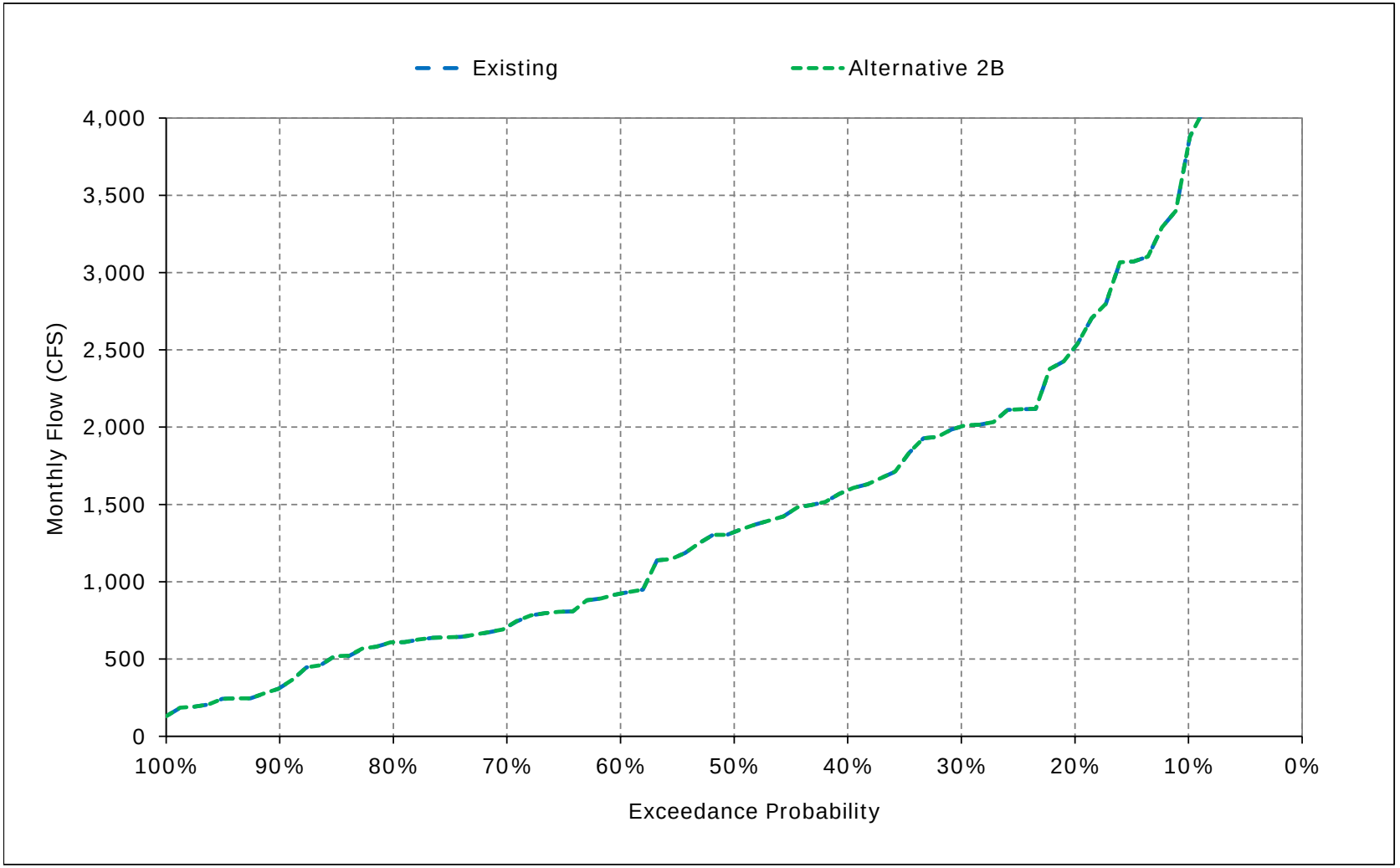


Figure 6-14. Mokelumne River below Consumnes, May

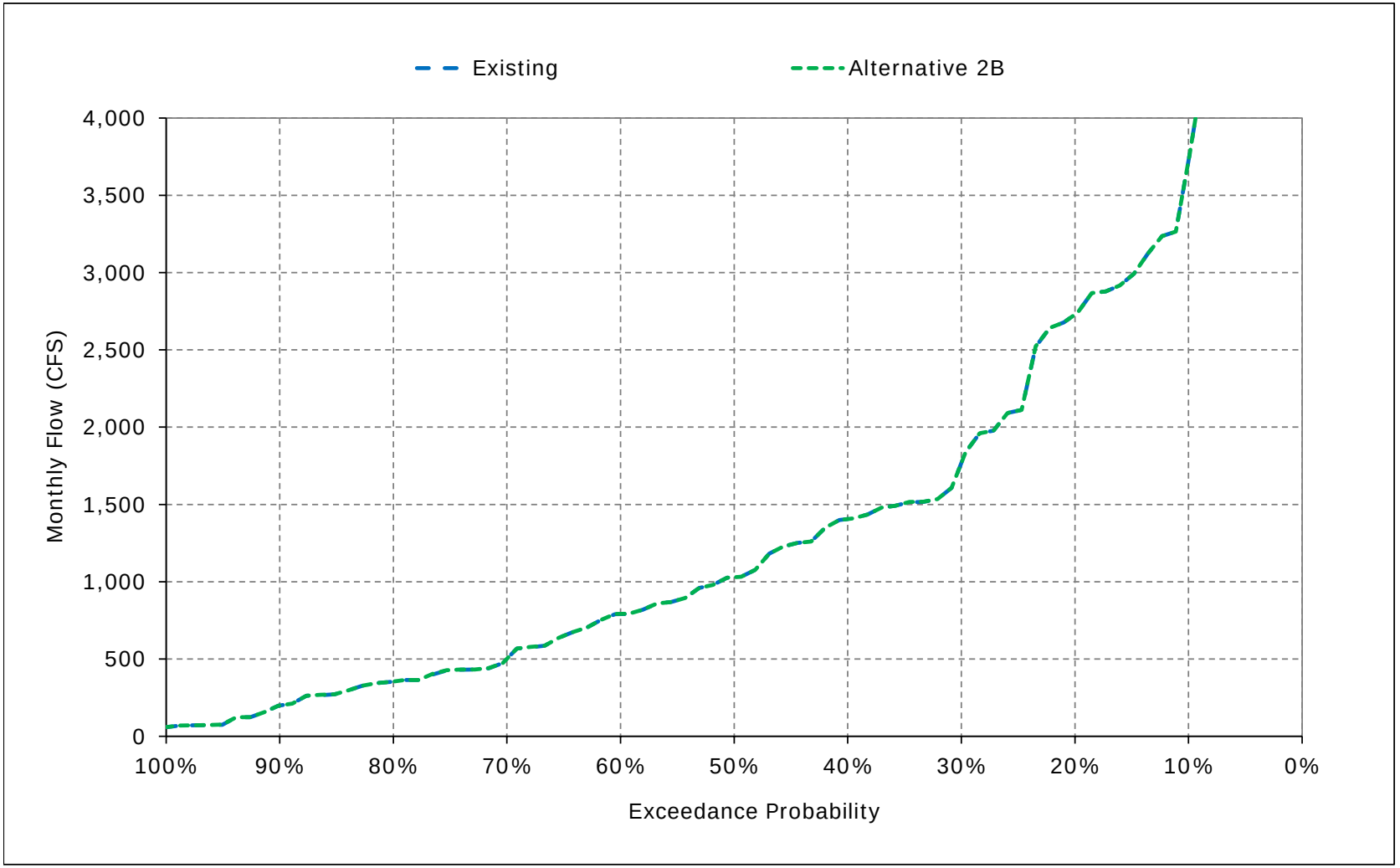


Figure 6-15. Mokelumne River below Consumnes, June

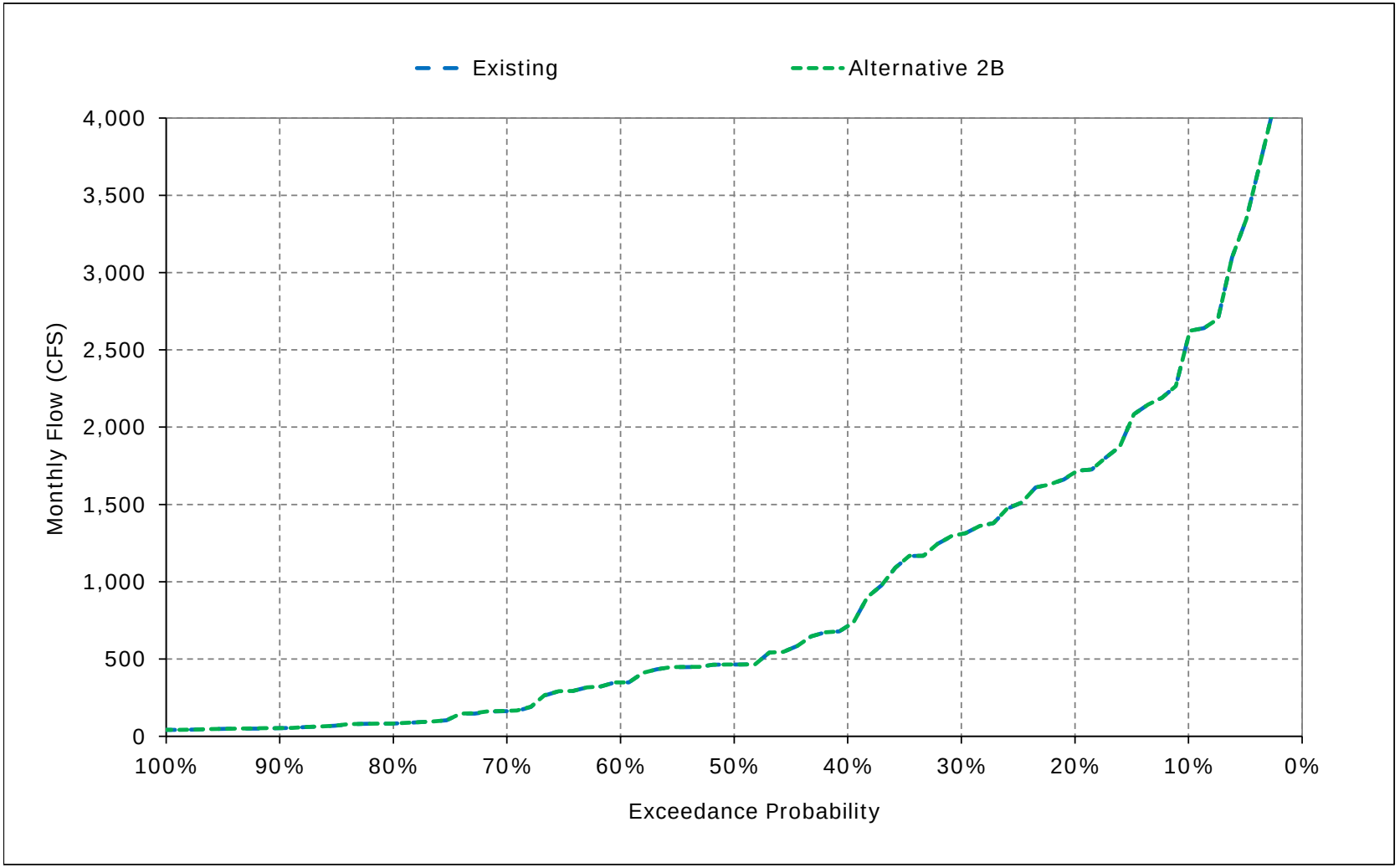


Figure 6-16. Mokelumne River below Consumnes, July

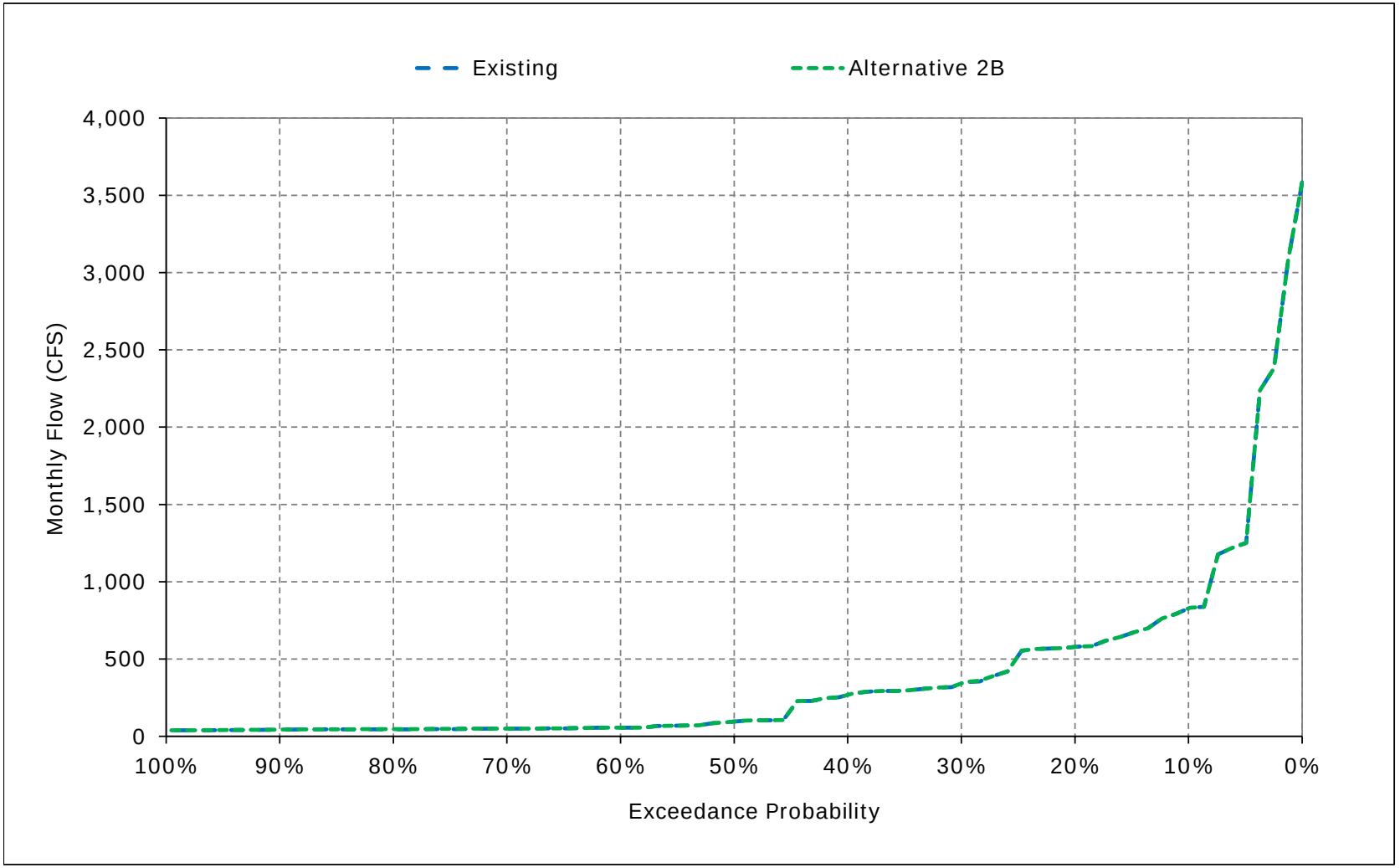


Figure 6-17. Mokelumne River below Consumnes, August

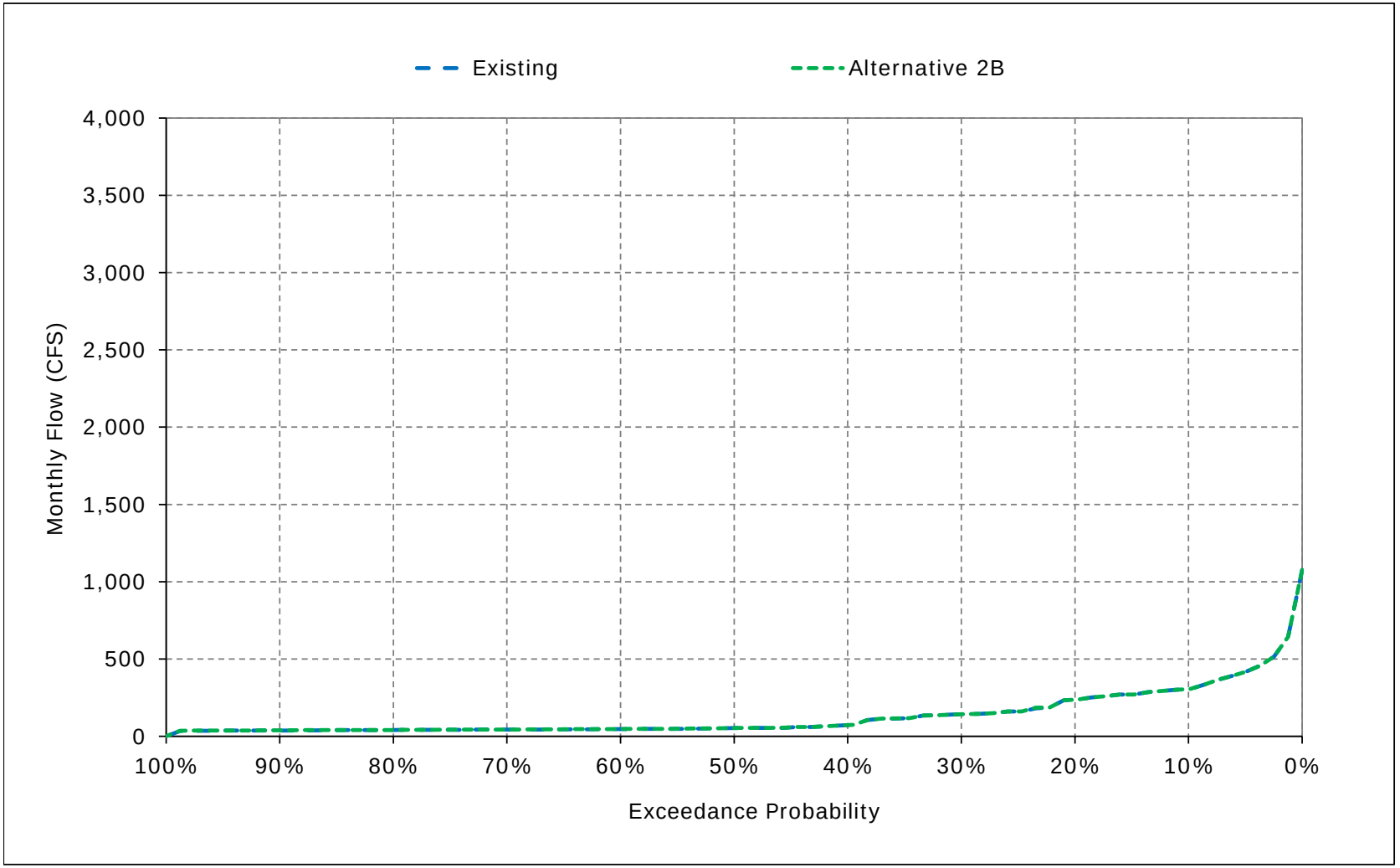
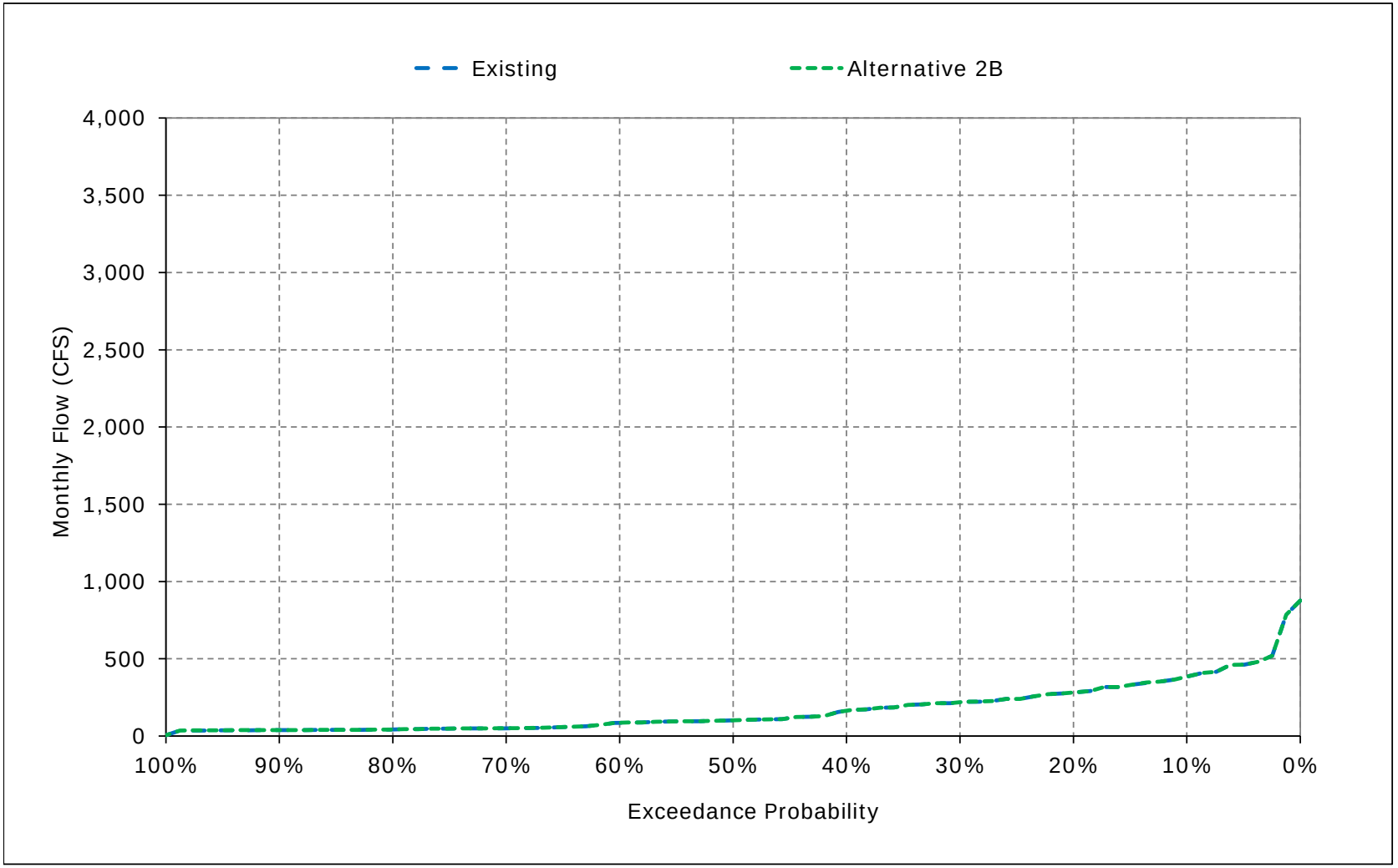


Figure 6-18. Mokelumne River below Consumnes, September



## Table 7-1. Old and Middle River Flow, Monthly Flow (combined flows)

### Existing

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -3,881 | -3,777 | -4,457 | -3,645 | -3,332 | -1,406 | 2,480 | 2,164 | -2,590 | -3,012 | -3,262 | -3,631 |
| 20% | -4,680 | -4,317 | -5,290 | -3,645 | -4,464 | -3,539 | 1,530 | 1,037 | -4,475 | -5,673 | -4,219 | -5,827 |
| 30% | -5,019 | -5,410 | -5,290 | -4,516 | -4,464 | -4,288 | 1,103 | 488 | -5,000 | -7,848 | -5,410 | -6,363 |
| 40% | -5,299 | -5,958 | -5,290 | -4,516 | -4,464 | -4,371 | 594 | -1,530 | -5,000 | -8,435 | -8,514 | -7,721 |
| 50% | -5,929 | -6,405 | -5,616 | -4,516 | -4,474 | -4,371 | -1,385 | -1,706 | -5,000 | -9,287 | -9,802 | -8,906 |
| 60% | -6,394 | -6,805 | -6,374 | -5,000 | -4,483 | -4,371 | -1,592 | -1,767 | -5,000 | -9,669 | -10,268 | -9,620 |
| 70% | -6,761 | -7,651 | -7,242 | -5,000 | -4,984 | -4,371 | -1,636 | -1,796 | -5,000 | -10,199 | -10,450 | -9,841 |
| 80% | -7,446 | -8,620 | -9,502 | -5,000 | -5,000 | -4,371 | -1,743 | -1,833 | -5,000 | -10,673 | -10,558 | -9,950 |
| 90% | -8,256 | -10,054 | -9,701 | -5,000 | -5,000 | -4,371 | -1,928 | -1,977 | -5,000 | -10,901 | -10,815 | -10,152 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -6,004 | -6,570 | -6,394 | -4,029 | -4,014 | -3,219 | -43 | -582 | -4,532 | -8,245 | -7,927 | -7,854 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | -6,495 | -7,433 | -5,515 | -2,766 | -2,728 | -1,815 | 1,945 | 812 | -4,667 | -8,739 | -10,214 | -9,567 |
| Above Normal (15%) | -5,955 | -6,478 | -7,343 | -4,274 | -4,248 | -3,761 | 104 | -383 | -4,967 | -9,553 | -10,592 | -9,992 |
| Below Normal (17%) | -6,003 | -6,910 | -7,000 | -4,578 | -4,649 | -4,294 | -415 | -695 | -4,973 | -10,256 | -9,703 | -8,760 |
| Dry (22%) | -5,844 | -6,372 | -7,004 | -4,889 | -4,709 | -4,151 | -1,586 | -1,773 | -4,727 | -8,401 | -4,339 | -6,036 |
| Critical (15%) | -5,232 | -4,692 | -5,727 | -4,588 | -4,787 | -3,067 | -1,748 | -1,881 | -2,998 | -3,286 | -3,621 | -3,678 |

### Alternative 2B

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -3,167 | -3,264 | -4,239 | -3,645 | -2,797 | -1,136 | 525 | -272 | -2,784 | -2,993 | -3,622 | -3,354 |
| 20% | -3,948 | -4,403 | -5,290 | -3,645 | -4,464 | -3,231 | -784 | -1,388 | -4,832 | -5,406 | -4,332 | -5,324 |
| 30% | -4,242 | -5,260 | -5,290 | -4,516 | -4,464 | -3,258 | -938 | -1,612 | -5,000 | -7,755 | -5,510 | -5,790 |
| 40% | -4,909 | -6,418 | -5,290 | -4,516 | -4,464 | -3,258 | -1,166 | -1,759 | -5,000 | -8,584 | -7,470 | -6,277 |
| 50% | -5,606 | -7,904 | -5,328 | -4,516 | -4,474 | -3,258 | -1,422 | -1,873 | -5,000 | -9,086 | -8,637 | -7,659 |
| 60% | -6,385 | -8,879 | -6,435 | -5,000 | -4,483 | -3,258 | -1,547 | -2,025 | -5,000 | -9,551 | -8,944 | -8,877 |
| 70% | -6,870 | -9,101 | -7,370 | -5,242 | -4,997 | -3,258 | -1,669 | -2,107 | -5,000 | -9,963 | -9,161 | -9,381 |
| 80% | -7,345 | -9,264 | -9,058 | -5,242 | -5,000 | -3,258 | -1,763 | -2,191 | -5,000 | -10,372 | -9,442 | -9,532 |
| 90% | -8,127 | -9,373 | -9,534 | -5,242 | -5,268 | -3,500 | -2,005 | -2,247 | -5,000 | -10,806 | -9,937 | -9,689 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -5,578 | -6,908 | -6,318 | -4,043 | -3,893 | -2,431 | -1,014 | -1,581 | -4,572 | -8,035 | -7,274 | -7,262 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | -6,244 | -7,894 | -5,537 | -2,688 | -2,278 | -877 | -380 | -1,060 | -4,642 | -8,498 | -8,668 | -8,541 |
| Above Normal (15%) | -5,662 | -6,518 | -6,830 | -4,335 | -3,957 | -2,754 | -1,281 | -2,029 | -4,961 | -9,522 | -9,152 | -9,495 |
| Below Normal (17%) | -5,743 | -7,352 | -6,901 | -4,717 | -4,793 | -3,277 | -1,295 | -1,871 | -4,996 | -9,784 | -9,607 | -8,123 |
| Dry (22%) | -5,208 | -6,556 | -7,264 | -5,094 | -4,867 | -3,254 | -1,475 | -1,909 | -4,912 | -8,000 | -4,549 | -5,707 |
| Critical (15%) | -4,412 | -5,175 | -5,401 | -4,320 | -4,822 | -3,251 | -1,104 | -1,435 | -3,027 | -3,559 | -3,743 | -3,582 |

### Alternative 2B minus Existing

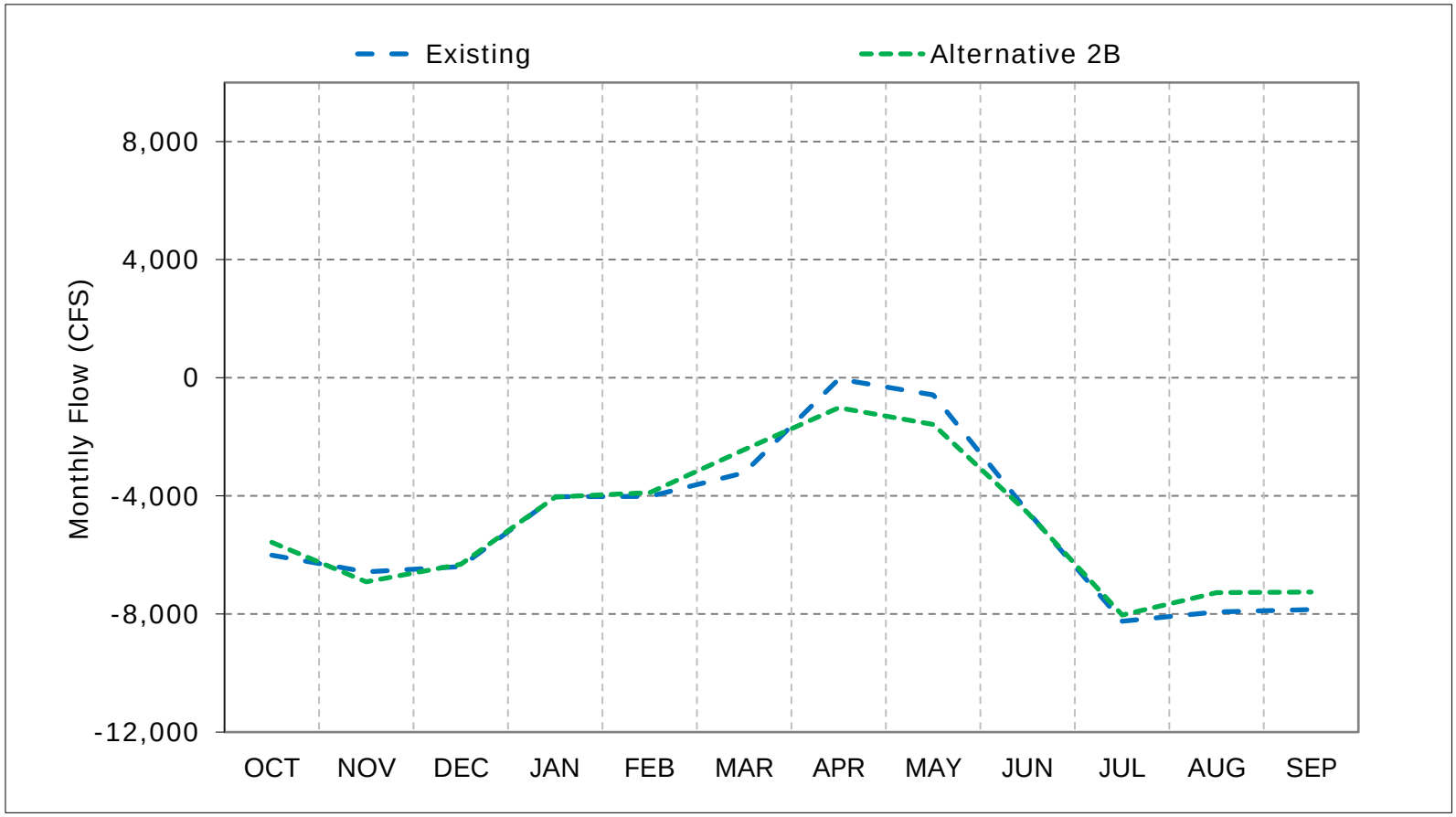
| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 714 | 513 | 218 | 0 | 535 | 269 | -1,955 | -2,436 | -195 | 19 | -360 | 278 |
| 20% | 732 | -86 | 0 | 0 | 0 | 308 | -2,314 | -2,425 | -357 | 266 | -113 | 503 |
| 30% | 776 | 150 | 0 | 0 | 0 | 1,030 | -2,041 | -2,100 | 0 | 93 | -100 | 573 |
| 40% | 391 | -461 | 0 | 0 | 0 | 1,113 | -1,760 | -228 | 0 | -149 | 1,044 | 1,444 |
| 50% | 322 | -1,498 | 289 | 0 | 0 | 1,113 | -37 | -168 | 0 | 201 | 1,165 | 1,247 |
| 60% | 10 | -2,074 | -61 | 0 | 0 | 1,113 | 45 | -259 | 0 | 118 | 1,324 | 743 |
| 70% | -109 | -1,450 | -128 | -242 | -13 | 1,113 | -33 | -312 | 0 | 237 | 1,289 | 461 |
| 80% | 101 | -645 | 444 | -242 | 0 | 1,113 | -20 | -358 | 0 | 301 | 1,116 | 418 |
| 90% | 129 | 681 | 167 | -242 | -268 | 871 | -78 | -270 | 0 | 95 | 878 | 463 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 426 | -339 | 75 | -14 | 121 | 788 | -972 | -1,000 | -40 | 210 | 653 | 593 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 251 | -461 | -22 | 77 | 450 | 937 | -2,325 | -1,872 | 25 | 241 | 1,546 | 1,025 |
| Above Normal (15%) | 293 | -40 | 513 | -60 | 291 | 1,006 | -1,386 | -1,646 | 5 | 31 | 1,440 | 498 |
| Below Normal (17%) | 260 | -442 | 99 | -138 | -143 | 1,017 | -880 | -1,176 | -23 | 473 | 95 | 637 |
| Dry (22%) | 636 | -184 | -260 | -206 | -157 | 898 | 112 | -136 | -185 | 401 | -210 | 329 |
| Critical (15%) | 820 | -483 | 326 | 268 | -35 | -185 | 644 | 446 | -30 | -273 | -122 | 96 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

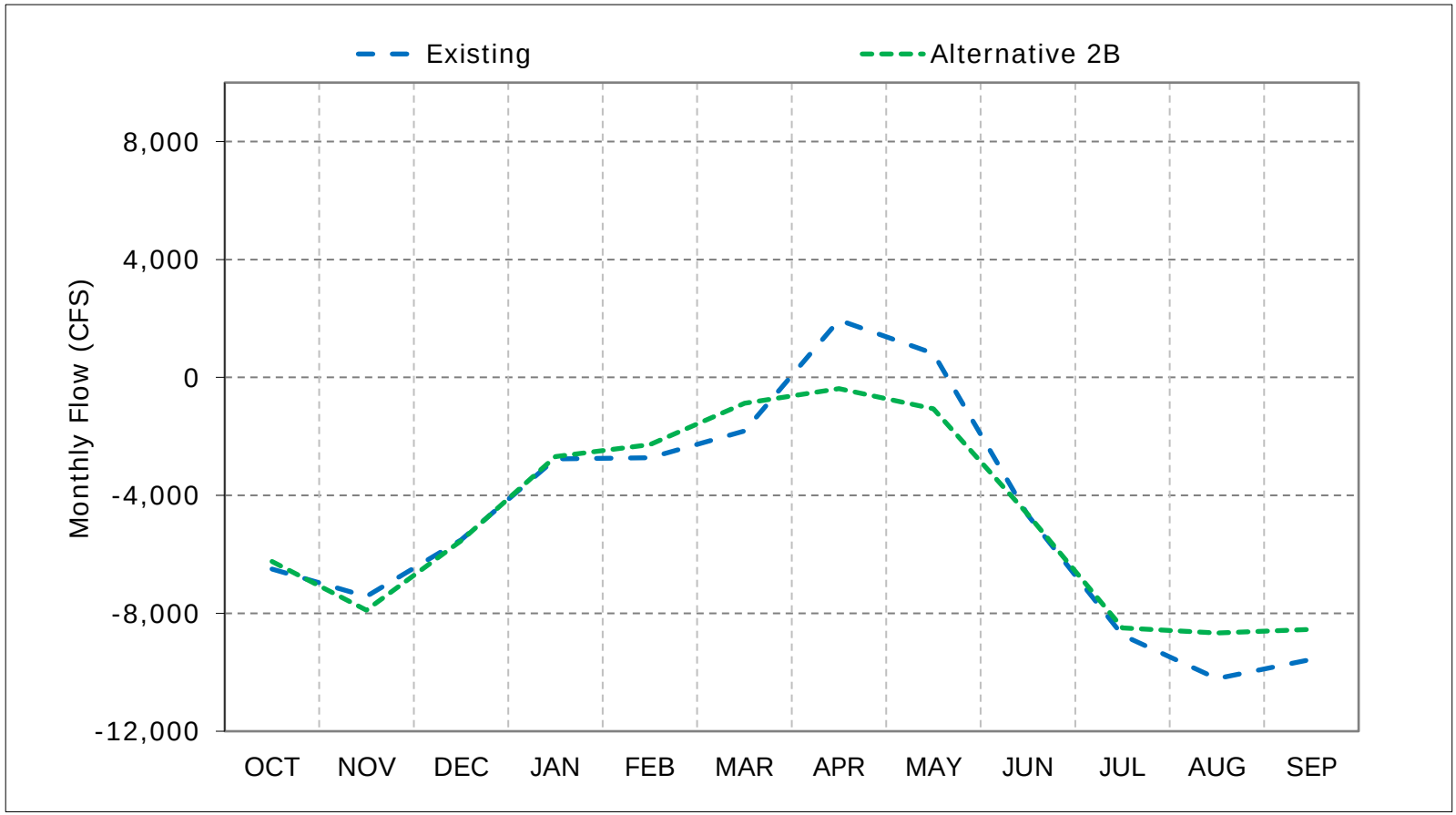
c These results are displayed with water year - year type sorting.

Figure 7-1. Old and Middle River Flow, Long-Term Average Flow



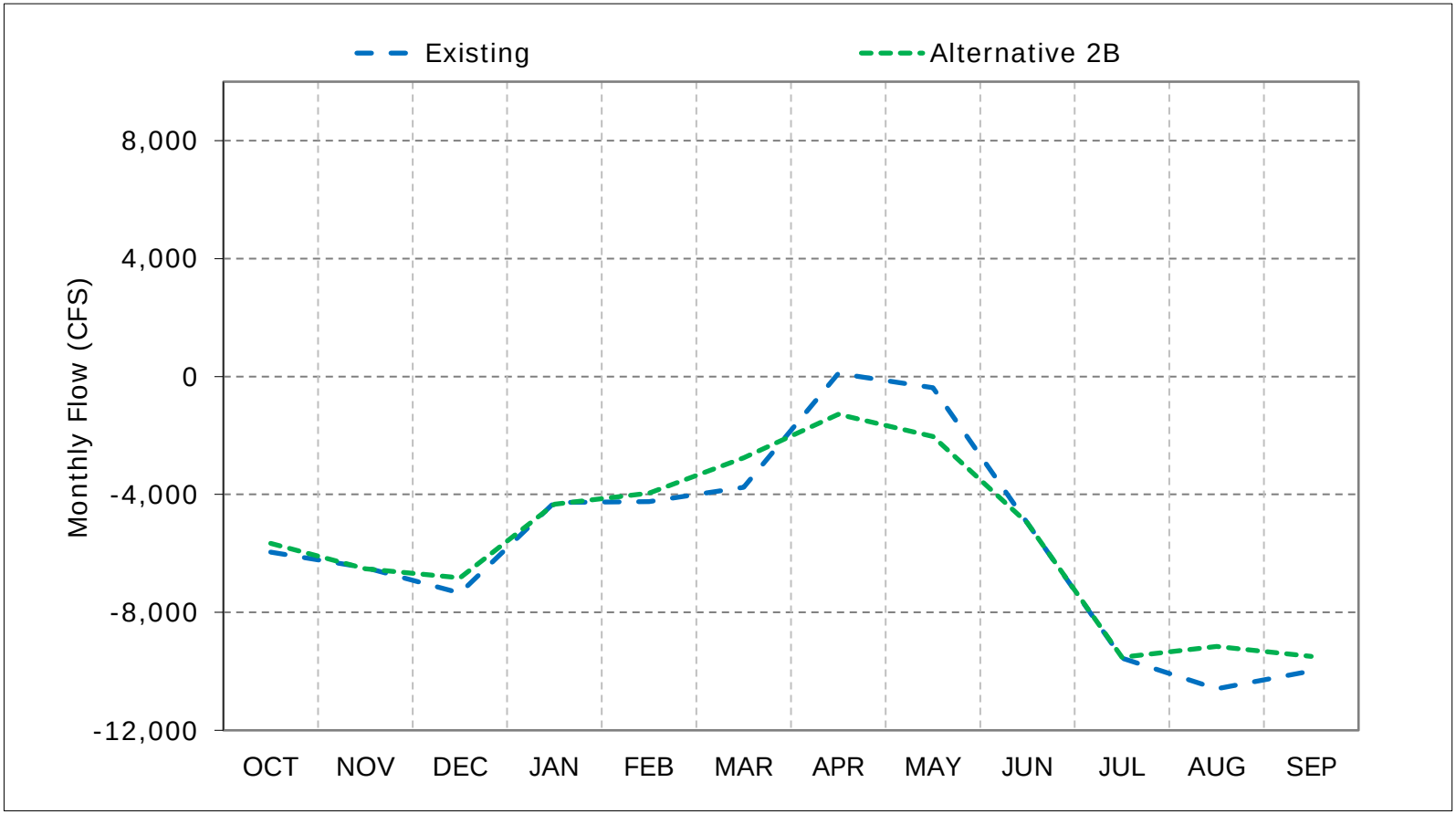

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-2. Old and Middle River Flow, Wet Year Average Flow



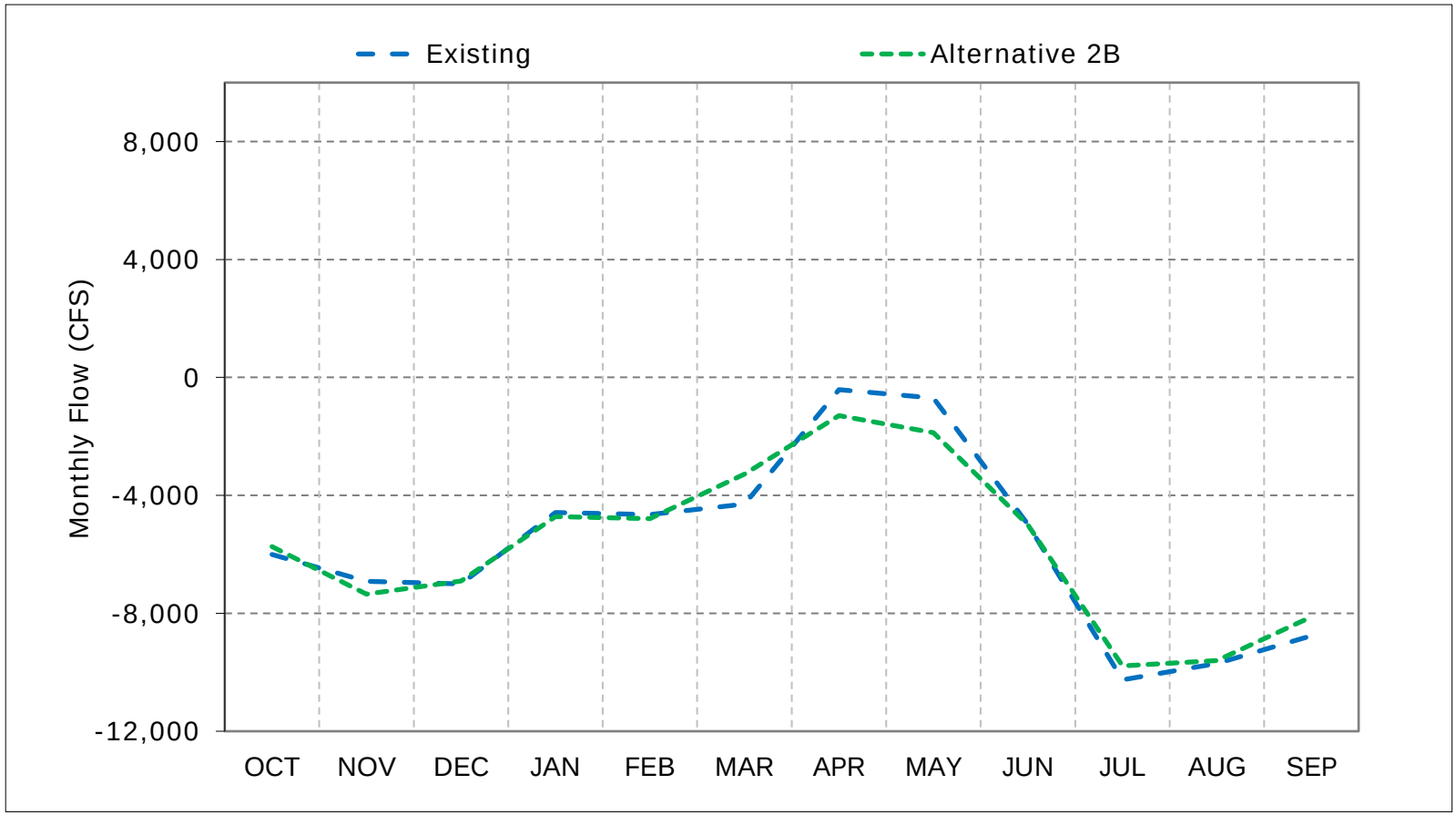

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-3. Old and Middle River Flow, Above Normal Year Average Flow



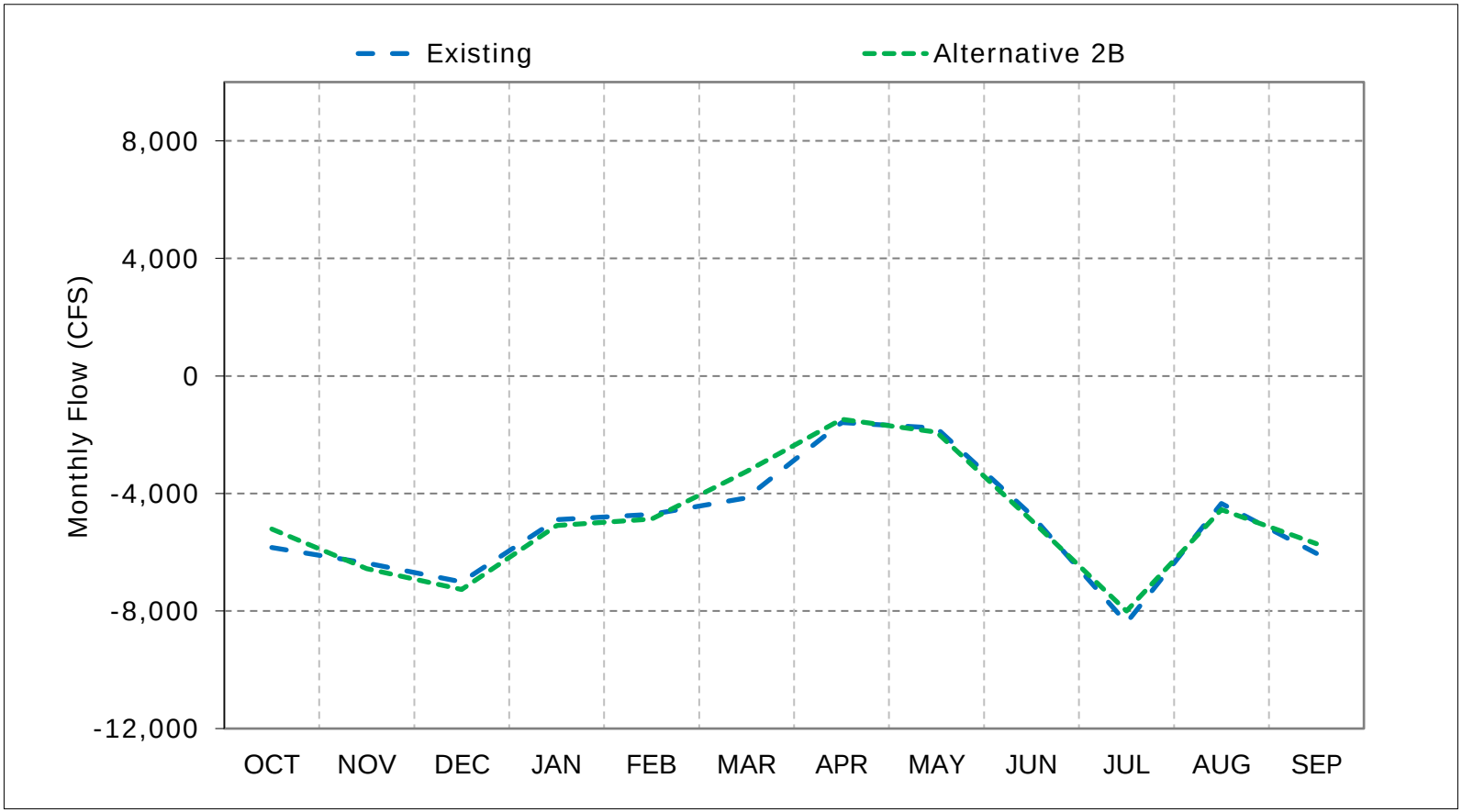

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-4. Old and Middle River Flow, Below Normal Year Average Flow



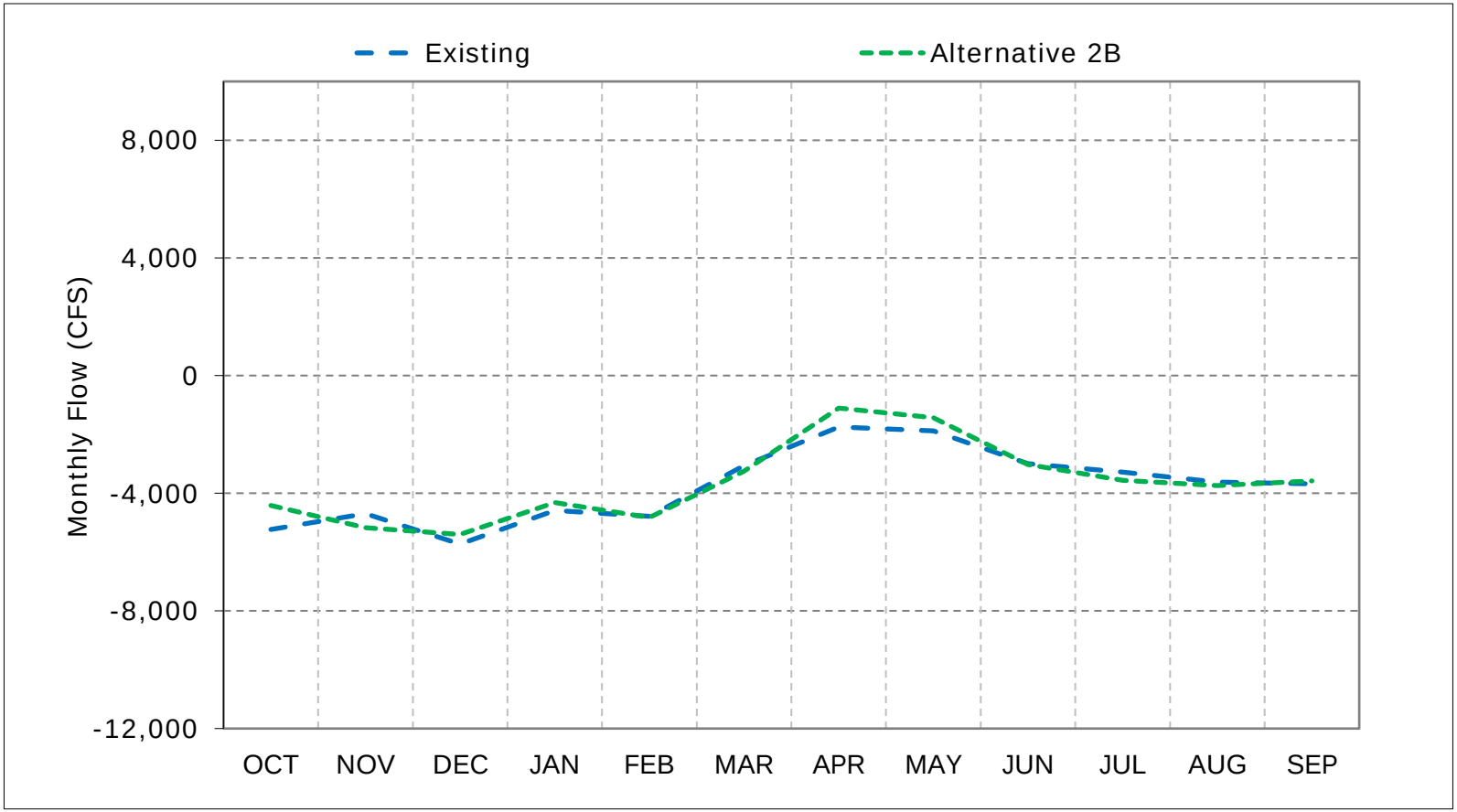

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-5. Old and Middle River Flow, Dry Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-6. Old and Middle River Flow, Critical Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-7. Old and Middle River Flow, October

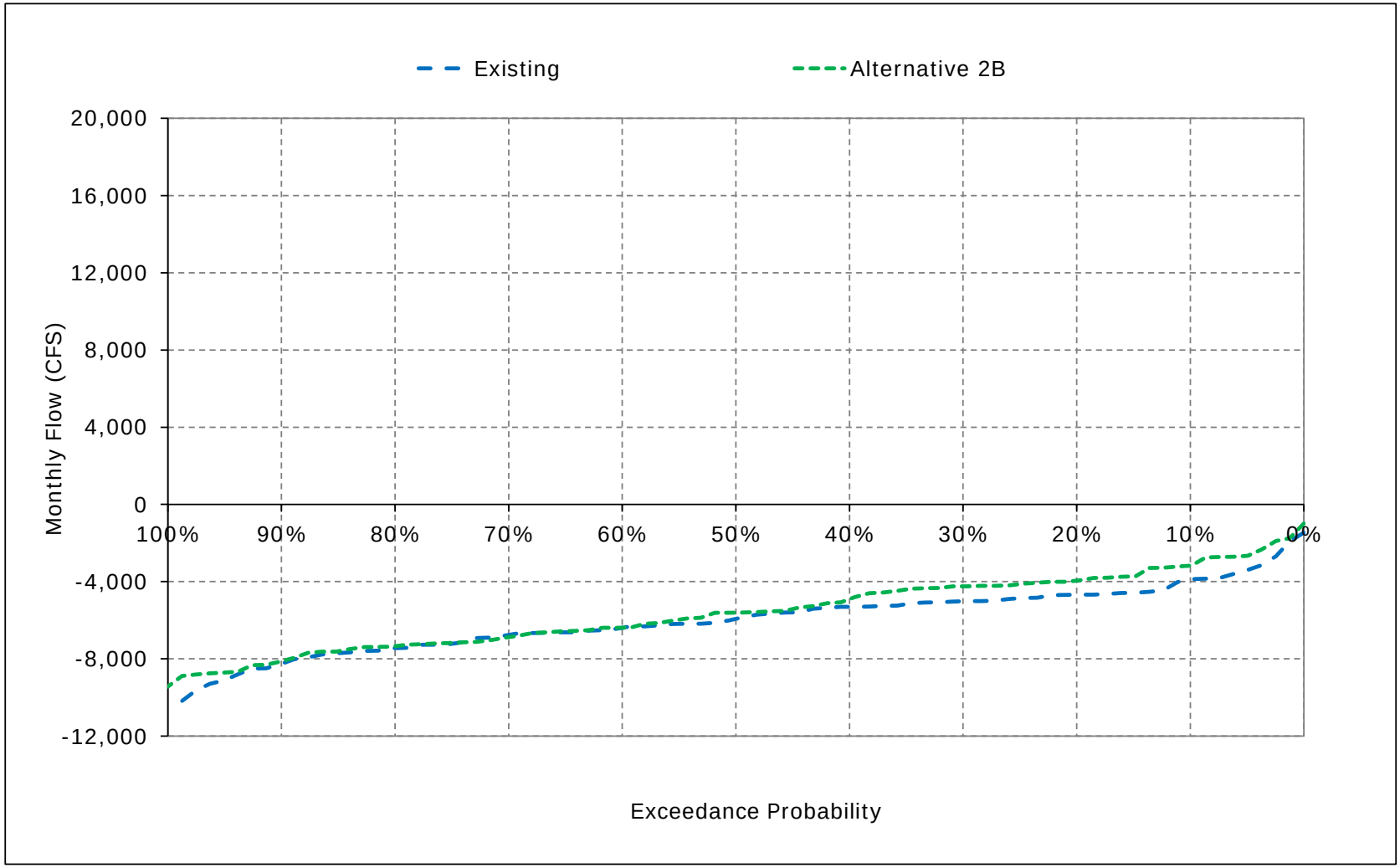


Figure 7-8. Old and Middle River Flow, November

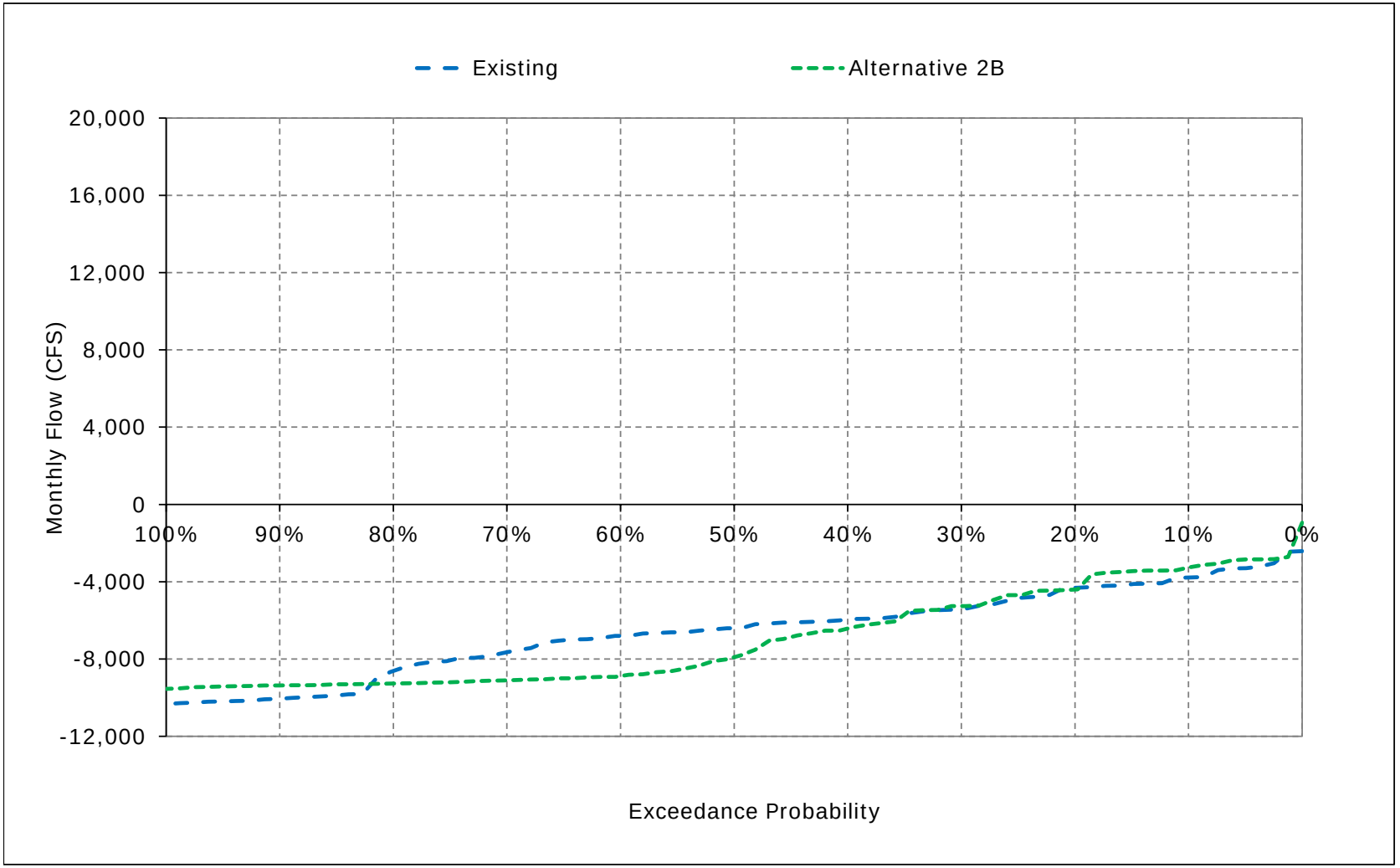


Figure 7-9. Old and Middle River Flow, December

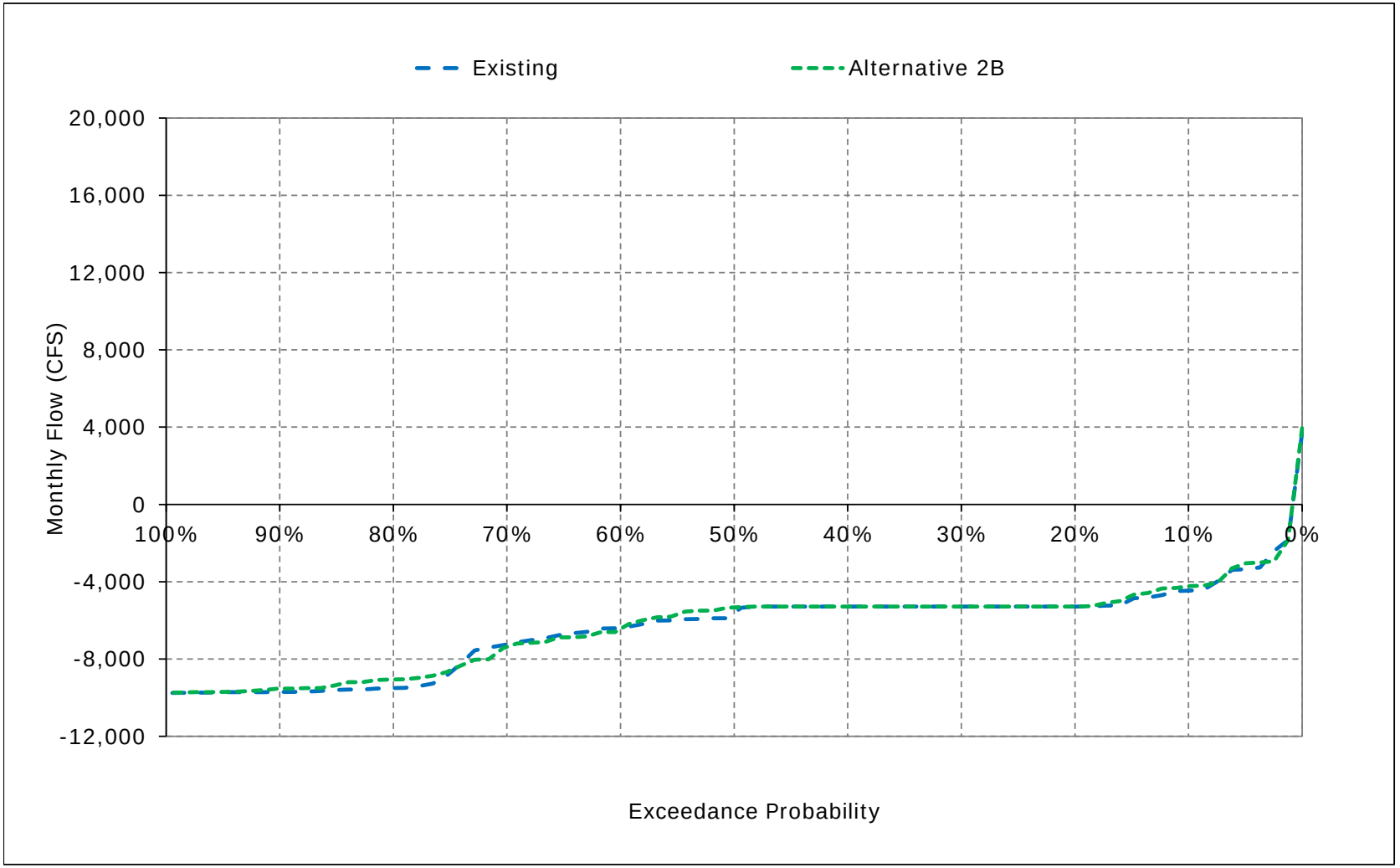


Figure 7-10. Old and Middle River Flow, January

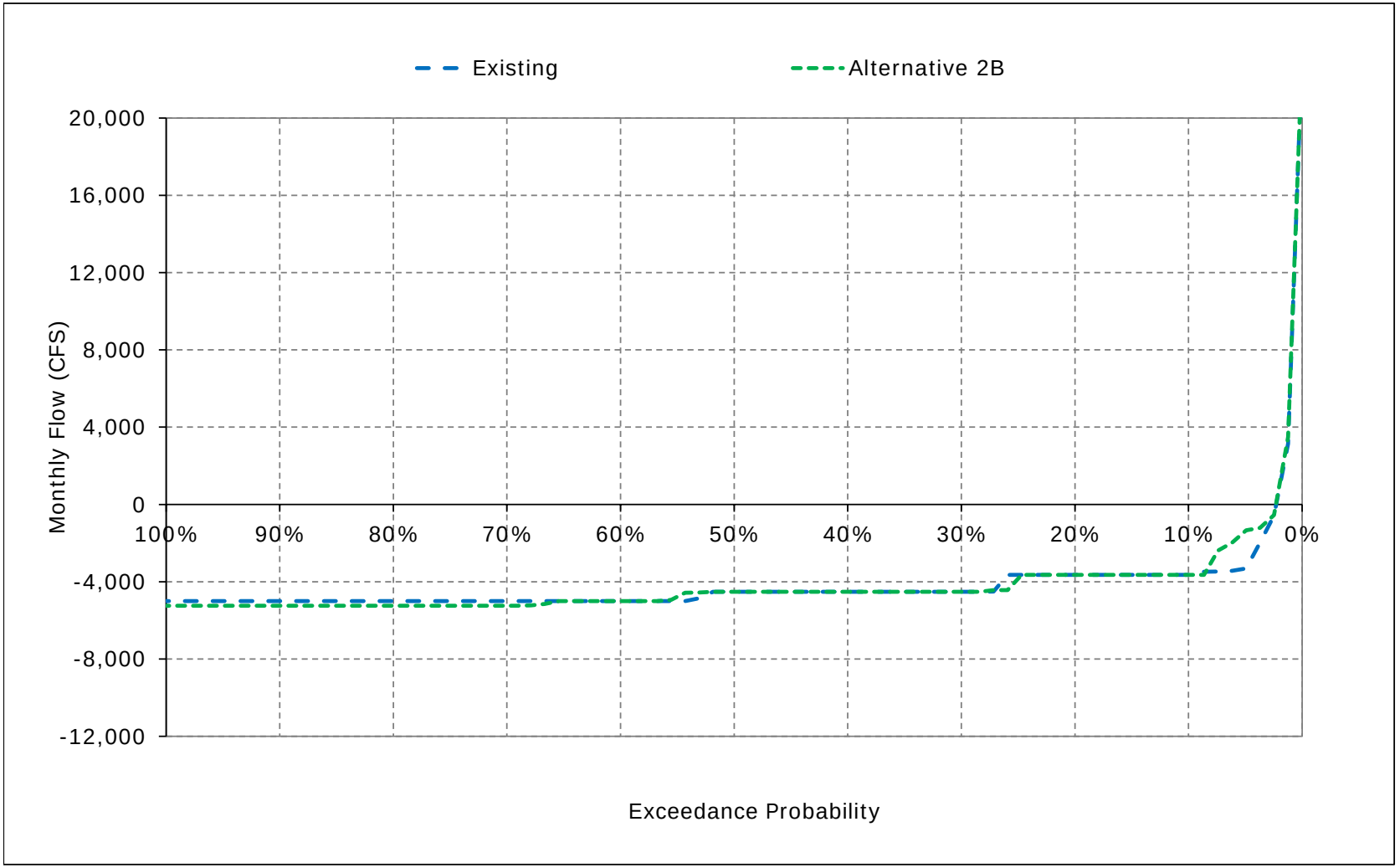


Figure 7-11. Old and Middle River Flow, February

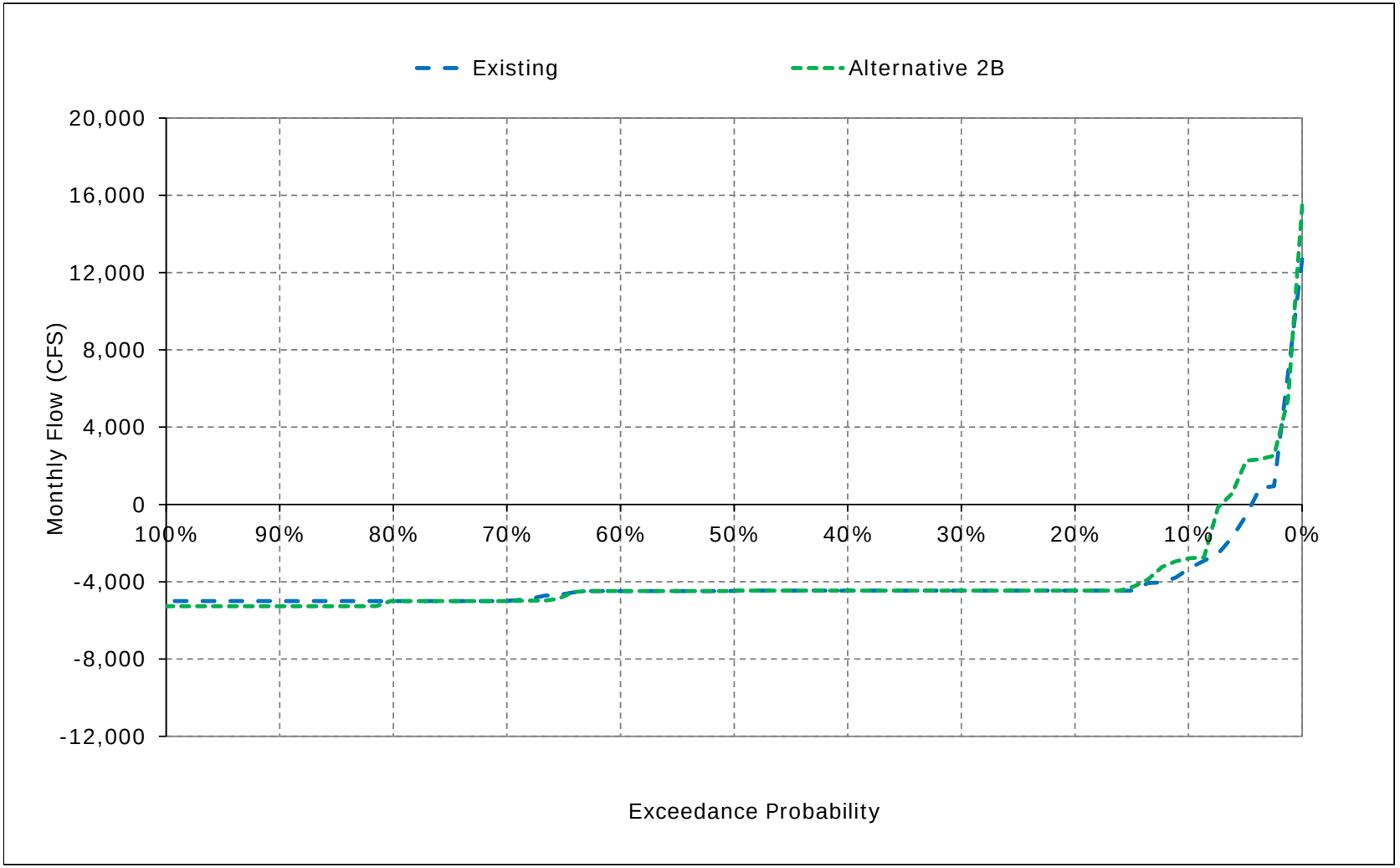


Figure 7-12. Old and Middle River Flow, March

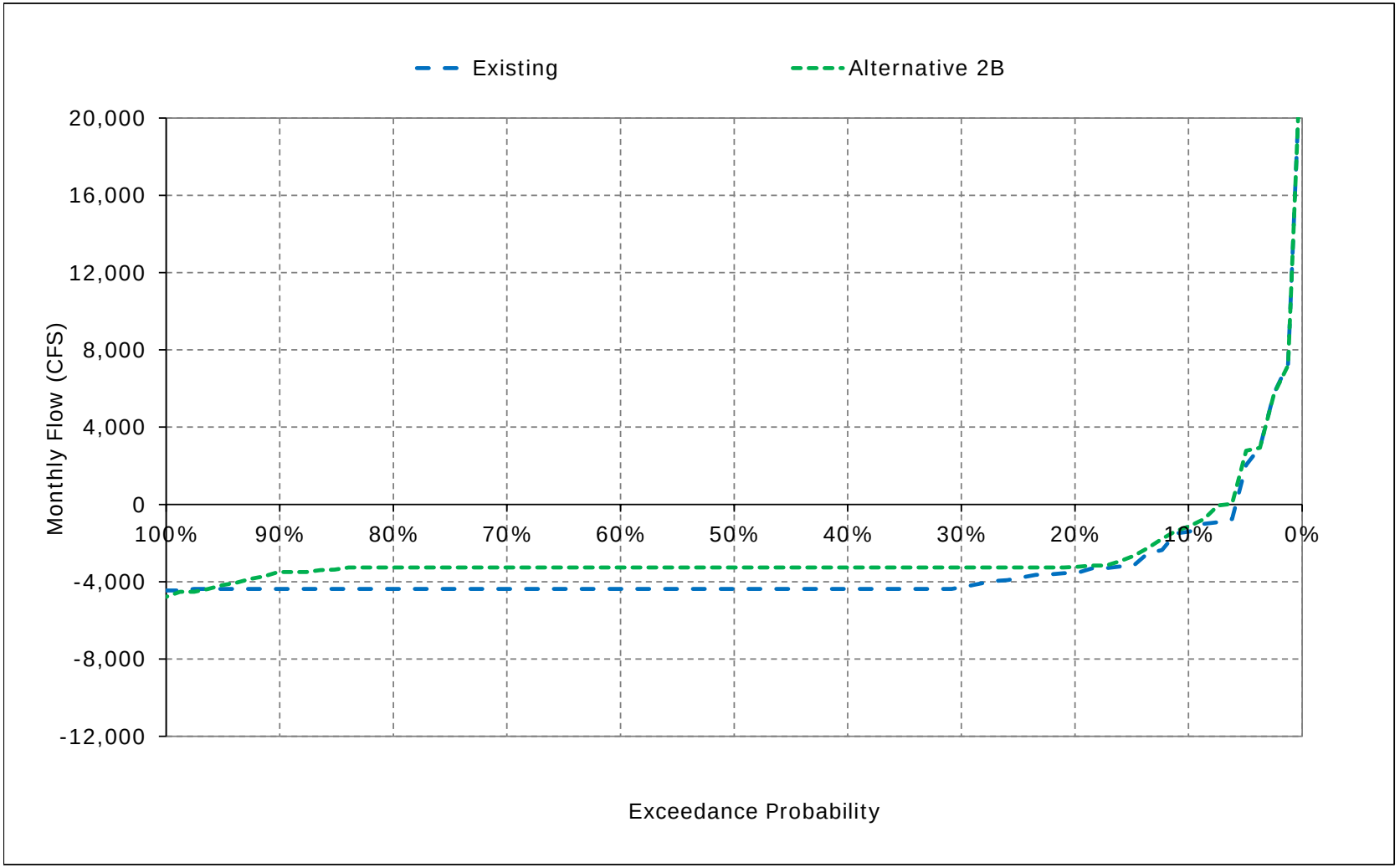


Figure 7-13. Old and Middle River Flow, April

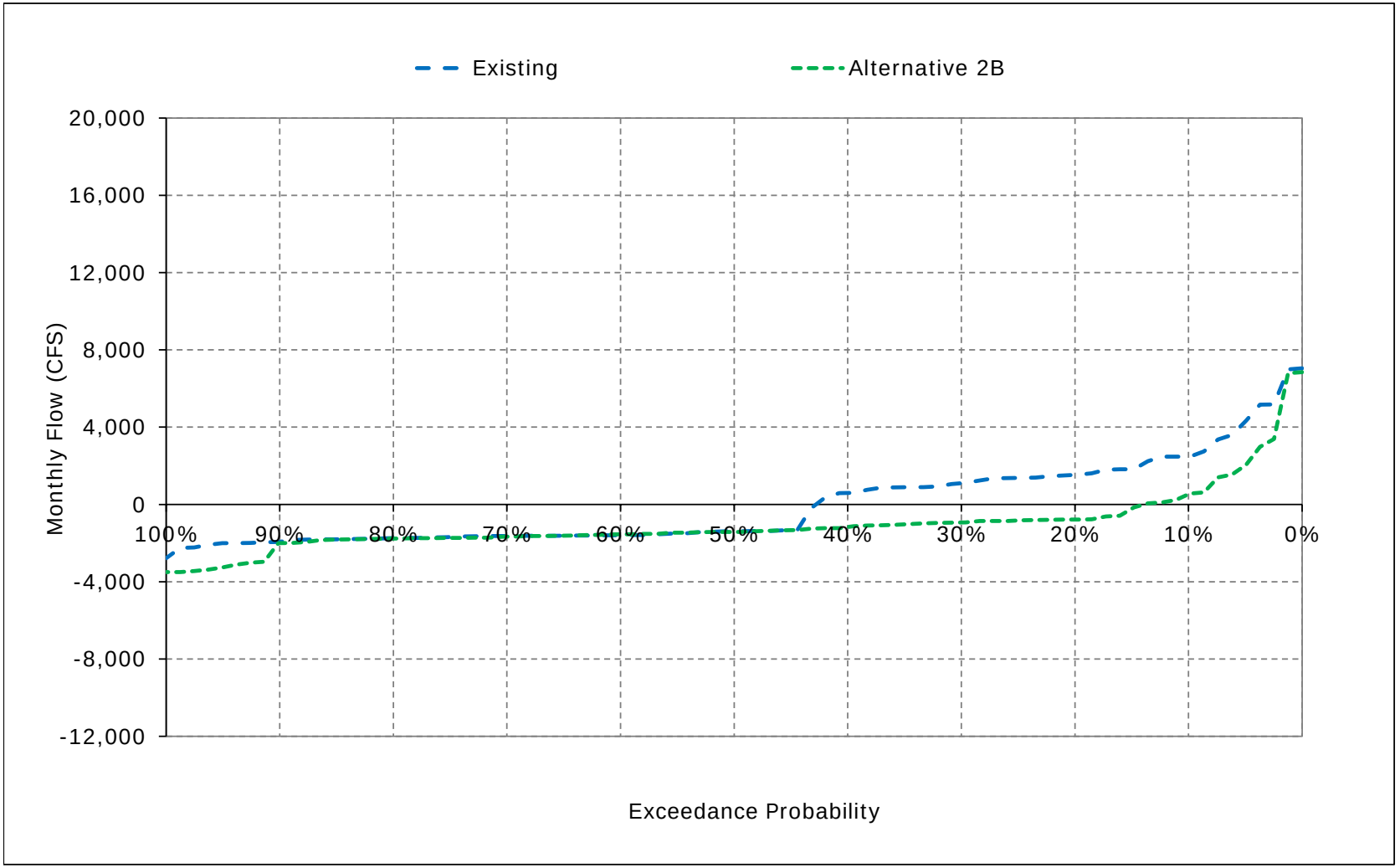


Figure 7-14. Old and Middle River Flow, May

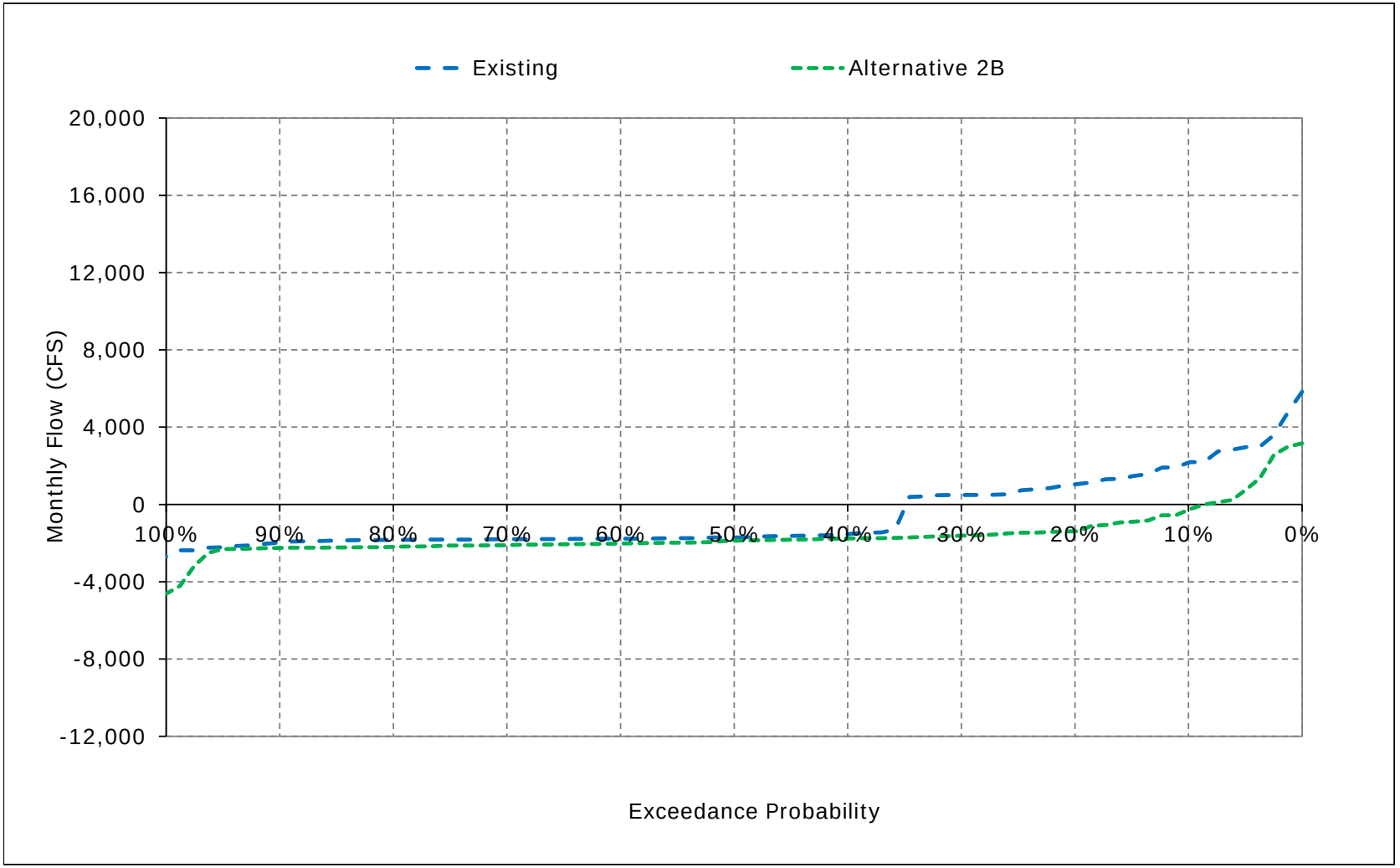


Figure 7-15. Old and Middle River Flow, June

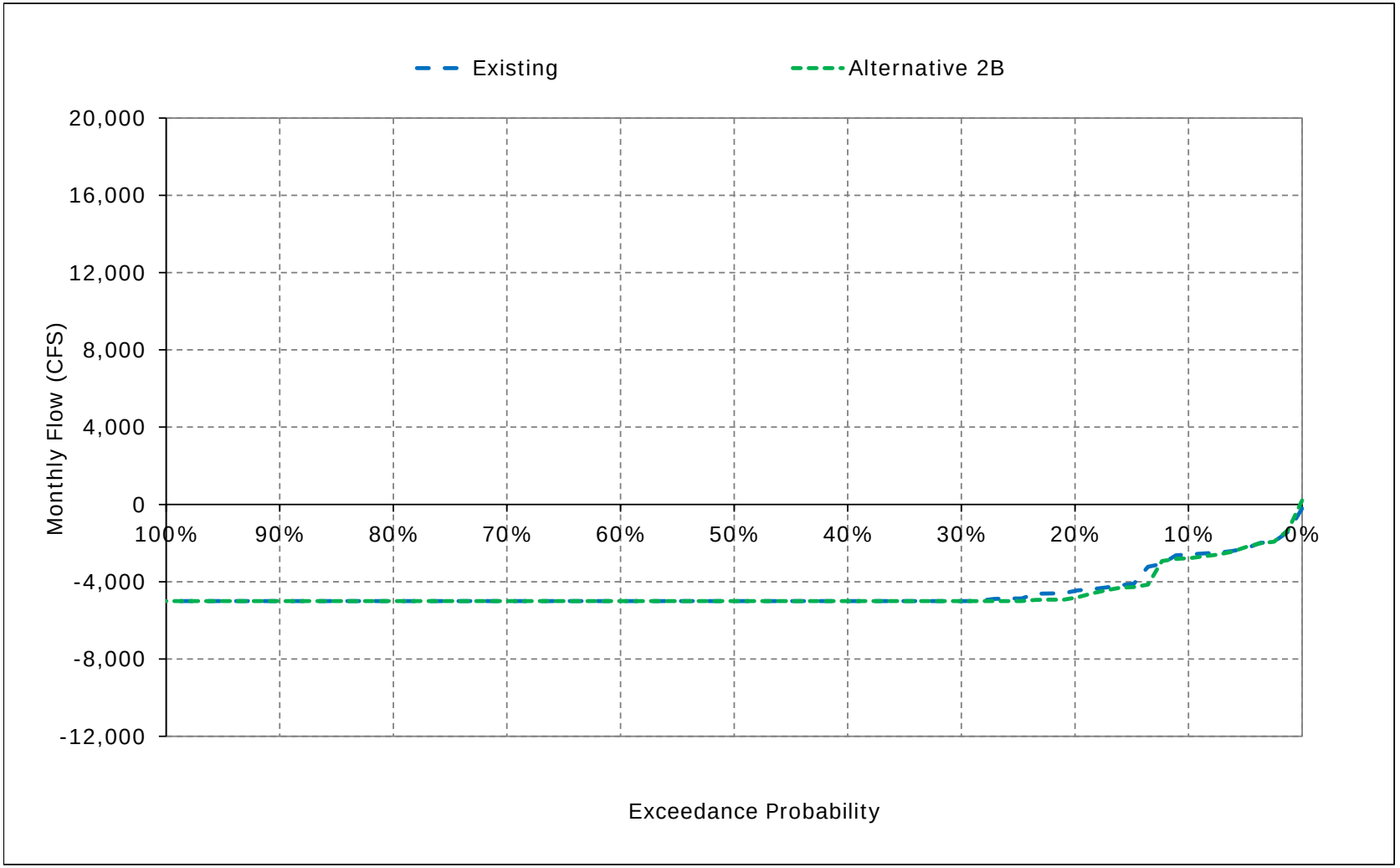


Figure 7-16. Old and Middle River Flow, July

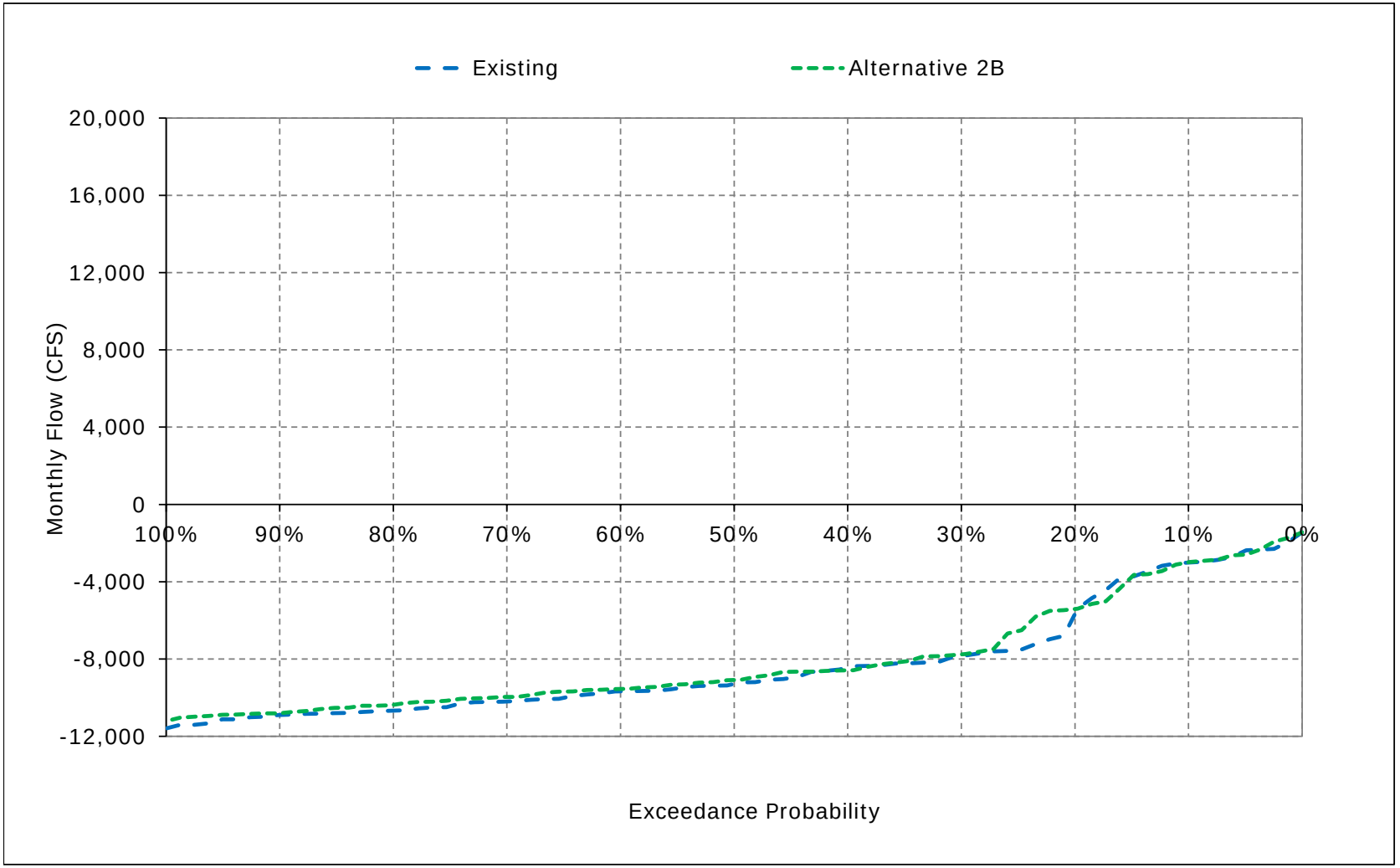


Figure 7-17. Old and Middle River Flow, August

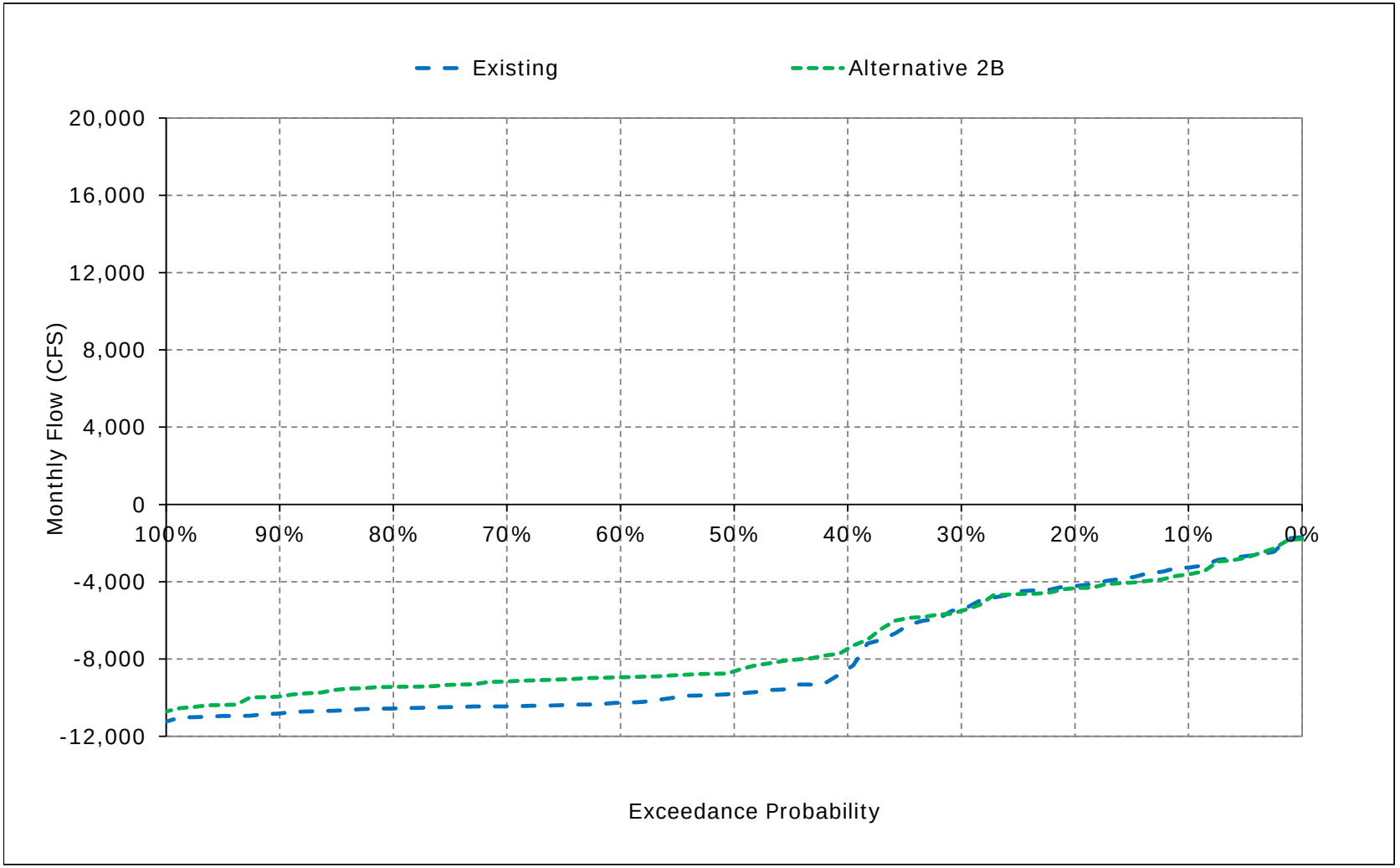
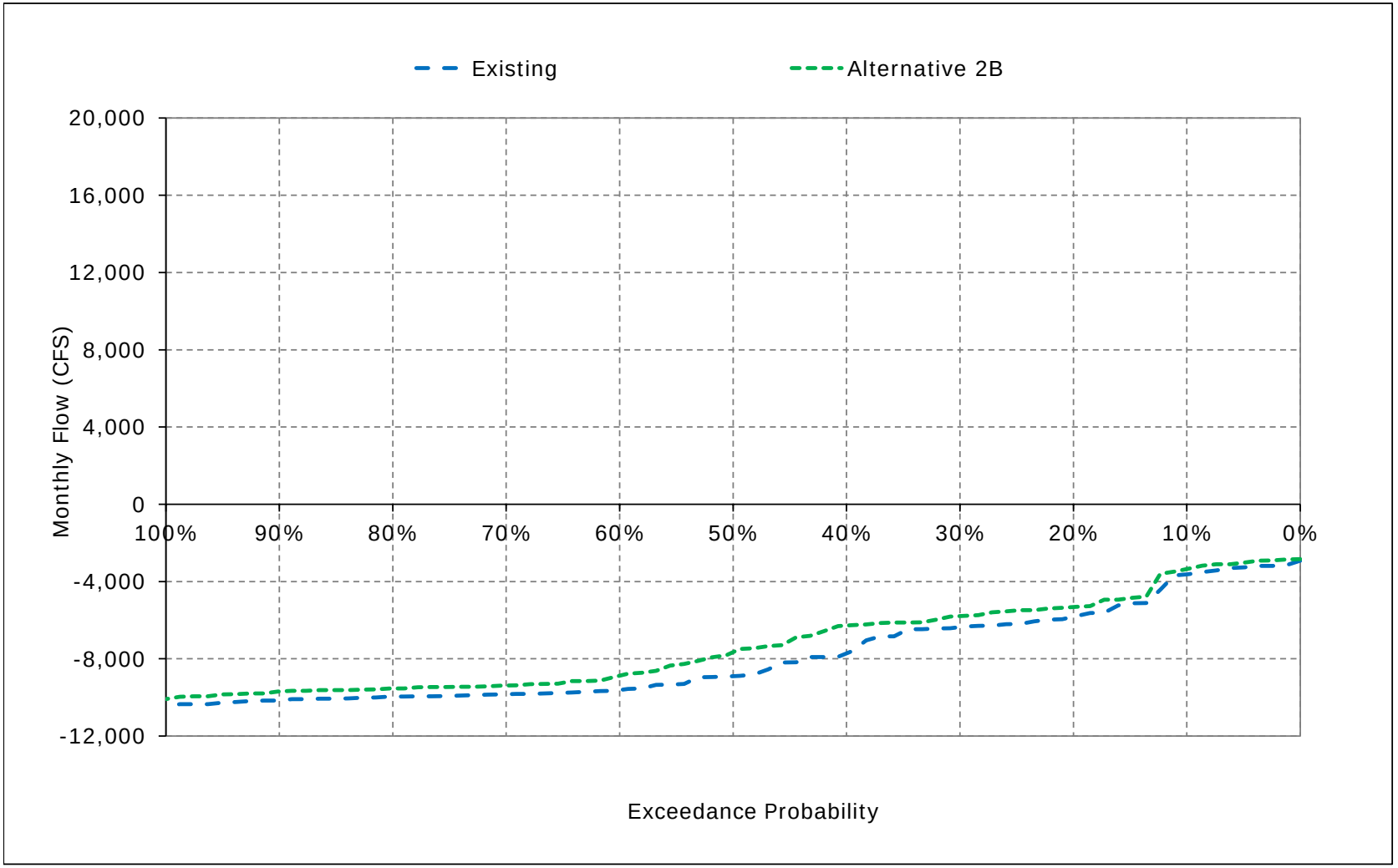


Figure 7-18. Old and Middle River Flow, September



# Table 8-1. Qwest, Monthly Flow

## Existing

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 1,101 | 1,598 | 7,499 | 14,692 | 18,541 | 18,228 | 20,508 | 16,658 | 7,874 | 362 | 245 | 35 |
| 20% | 459 | 97 | 2,675 | 10,229 | 12,454 | 11,863 | 14,500 | 9,590 | 3,602 | -285 | -650 | -1,012 |
| 30% | 76 | -77 | -321 | 5,864 | 10,150 | 6,927 | 10,843 | 7,568 | 2,039 | -1,323 | -1,260 | -1,568 |
| 40% | -10 | -641 | -1,310 | 3,159 | 7,473 | 5,169 | 8,593 | 6,449 | 1,054 | -2,443 | -2,321 | -1,948 |
| 50% | -224 | -923 | -1,710 | 1,398 | 4,039 | 3,332 | 6,602 | 5,451 | 476 | -2,799 | -4,233 | -2,266 |
| 60% | -371 | -1,513 | -2,422 | 261 | 1,931 | 2,051 | 4,740 | 3,606 | 51 | -3,227 | -4,588 | -2,638 |
| 70% | -578 | -1,990 | -3,349 | -189 | 730 | 1,470 | 3,805 | 2,374 | -556 | -3,787 | -4,725 | -3,631 |
| 80% | -1,237 | -2,586 | -4,822 | -985 | -18 | 684 | 2,559 | 1,691 | -930 | -4,236 | -5,078 | -4,095 |
| 90% | -1,696 | -3,624 | -5,504 | -1,333 | -908 | -178 | 1,618 | 921 | -1,123 | -4,772 | -5,296 | -4,560 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -375 | -767 | -53 | 5,395 | 7,422 | 7,194 | 8,963 | 6,858 | 2,054 | -1,788 | -3,008 | -2,285 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | -497 | -233 | 4,357 | 13,707 | 15,795 | 15,802 | 16,456 | 13,289 | 6,129 | 542 | -3,962 | -3,120 |
| Above Normal (15%) | -536 | -877 | -1,207 | 6,404 | 8,852 | 8,806 | 9,620 | 7,376 | 1,502 | -2,434 | -5,088 | -1,665 |
| Below Normal (17%) | -221 | -1,429 | -1,740 | 1,722 | 5,401 | 3,169 | 7,343 | 5,311 | 189 | -4,172 | -4,524 | -3,501 |
| Dry (22%) | -281 | -1,341 | -2,853 | -309 | 1,266 | 1,312 | 3,890 | 2,496 | -660 | -3,778 | -769 | -1,874 |
| Critical (15%) | -268 | -182 | -2,286 | -781 | -560 | 451 | 1,572 | 755 | 25 | -425 | -449 | -295 |

## Alternative 2B

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 478 | 72 | 7,504 | 14,763 | 19,500 | 18,842 | 14,730 | 12,443 | 7,870 | 473 | -14 | 220 |
| 20% | 66 | -157 | 2,558 | 10,208 | 12,448 | 13,417 | 10,703 | 6,737 | 3,759 | -451 | -700 | -347 |
| 30% | -36 | -1,184 | -153 | 5,983 | 9,702 | 7,854 | 8,755 | 5,271 | 1,735 | -1,376 | -1,048 | -716 |
| 40% | -142 | -1,950 | -1,168 | 3,456 | 7,459 | 6,445 | 6,326 | 4,270 | 1,001 | -1,923 | -2,008 | -1,092 |
| 50% | -617 | -2,406 | -1,716 | 1,845 | 4,066 | 4,472 | 4,777 | 3,282 | 443 | -2,644 | -2,740 | -1,456 |
| 60% | -1,096 | -3,355 | -2,325 | 205 | 1,831 | 2,887 | 3,599 | 2,120 | -105 | -3,072 | -3,109 | -1,742 |
| 70% | -1,907 | -3,608 | -3,200 | -488 | 562 | 1,896 | 2,845 | 1,217 | -418 | -3,772 | -3,413 | -1,936 |
| 80% | -2,221 | -3,966 | -4,695 | -1,230 | -385 | 1,368 | 1,875 | 539 | -805 | -4,056 | -3,892 | -2,264 |
| 90% | -3,096 | -4,456 | -5,248 | -1,392 | -1,031 | 176 | 1,445 | 253 | -1,094 | -4,526 | -4,429 | -3,288 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -1,014 | -1,974 | 69 | 5,413 | 7,621 | 8,039 | 7,174 | 4,964 | 2,051 | -1,637 | -2,292 | -1,239 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | -1,379 | -1,811 | 4,489 | 13,828 | 16,429 | 16,813 | 13,543 | 10,465 | 6,105 | 747 | -2,270 | 4 |
| Above Normal (15%) | -1,227 | -1,632 | -713 | 6,418 | 9,233 | 10,023 | 7,515 | 4,929 | 1,635 | -2,562 | -3,506 | -1,290 |
| Below Normal (17%) | -1,117 | -2,659 | -1,642 | 1,758 | 5,408 | 4,244 | 5,662 | 3,416 | 316 | -3,719 | -4,447 | -3,362 |
| Dry (22%) | -664 | -2,265 | -3,126 | -566 | 1,028 | 2,239 | 2,749 | 1,264 | -797 | -3,495 | -991 | -1,889 |
| Critical (15%) | -413 | -1,431 | -1,935 | -591 | -605 | 172 | 1,435 | 435 | -18 | -662 | -562 | -433 |

## Alternative 2B minus Existing

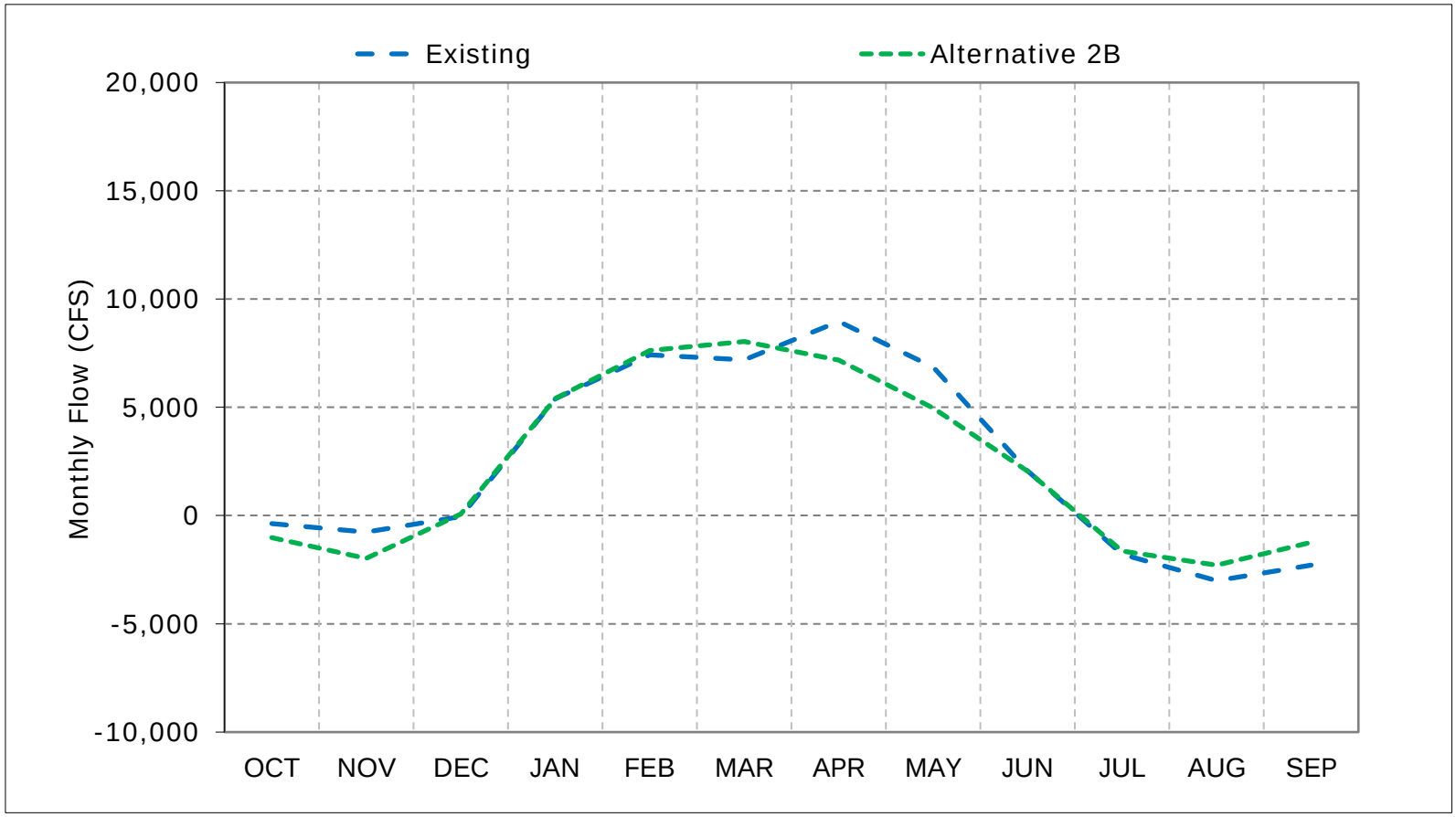
| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -623 | -1,525 | 5 | 71 | 959 | 614 | -5,779 | -4,216 | -3 | 110 | -260 | 186 |
| 20% | -393 | -254 | -117 | -21 | -5 | 1,553 | -3,797 | -2,853 | 157 | -166 | -51 | 665 |
| 30% | -112 | -1,107 | 168 | 119 | -449 | 928 | -2,088 | -2,297 | -305 | -54 | 212 | 852 |
| 40% | -132 | -1,308 | 142 | 297 | -15 | 1,276 | -2,267 | -2,179 | -54 | 520 | 313 | 856 |
| 50% | -393 | -1,483 | -6 | 446 | 27 | 1,140 | -1,824 | -2,169 | -33 | 155 | 1,494 | 810 |
| 60% | -725 | -1,842 | 97 | -56 | -100 | 836 | -1,140 | -1,485 | -156 | 155 | 1,480 | 896 |
| 70% | -1,329 | -1,618 | 149 | -300 | -168 | 426 | -960 | -1,157 | 137 | 15 | 1,312 | 1,695 |
| 80% | -984 | -1,381 | 128 | -244 | -366 | 684 | -685 | -1,152 | 125 | 180 | 1,186 | 1,831 |
| 90% | -1,400 | -832 | 256 | -59 | -123 | 353 | -173 | -668 | 29 | 246 | 868 | 1,272 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -639 | -1,206 | 122 | 18 | 199 | 844 | -1,789 | -1,894 | -3 | 151 | 716 | 1,046 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | -882 | -1,578 | 132 | 121 | 634 | 1,010 | -2,913 | -2,823 | -24 | 205 | 1,692 | 3,124 |
| Above Normal (15%) | -691 | -756 | 494 | 15 | 381 | 1,217 | -2,106 | -2,446 | 133 | -127 | 1,582 | 375 |
| Below Normal (17%) | -896 | -1,229 | 98 | 36 | 8 | 1,075 | -1,681 | -1,895 | 127 | 453 | 76 | 139 |
| Dry (22%) | -383 | -924 | -273 | -257 | -238 | 926 | -1,141 | -1,232 | -137 | 282 | -222 | -15 |
| Critical (15%) | -145 | -1,248 | 351 | 189 | -45 | -279 | -137 | -320 | -43 | -237 | -112 | -138 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

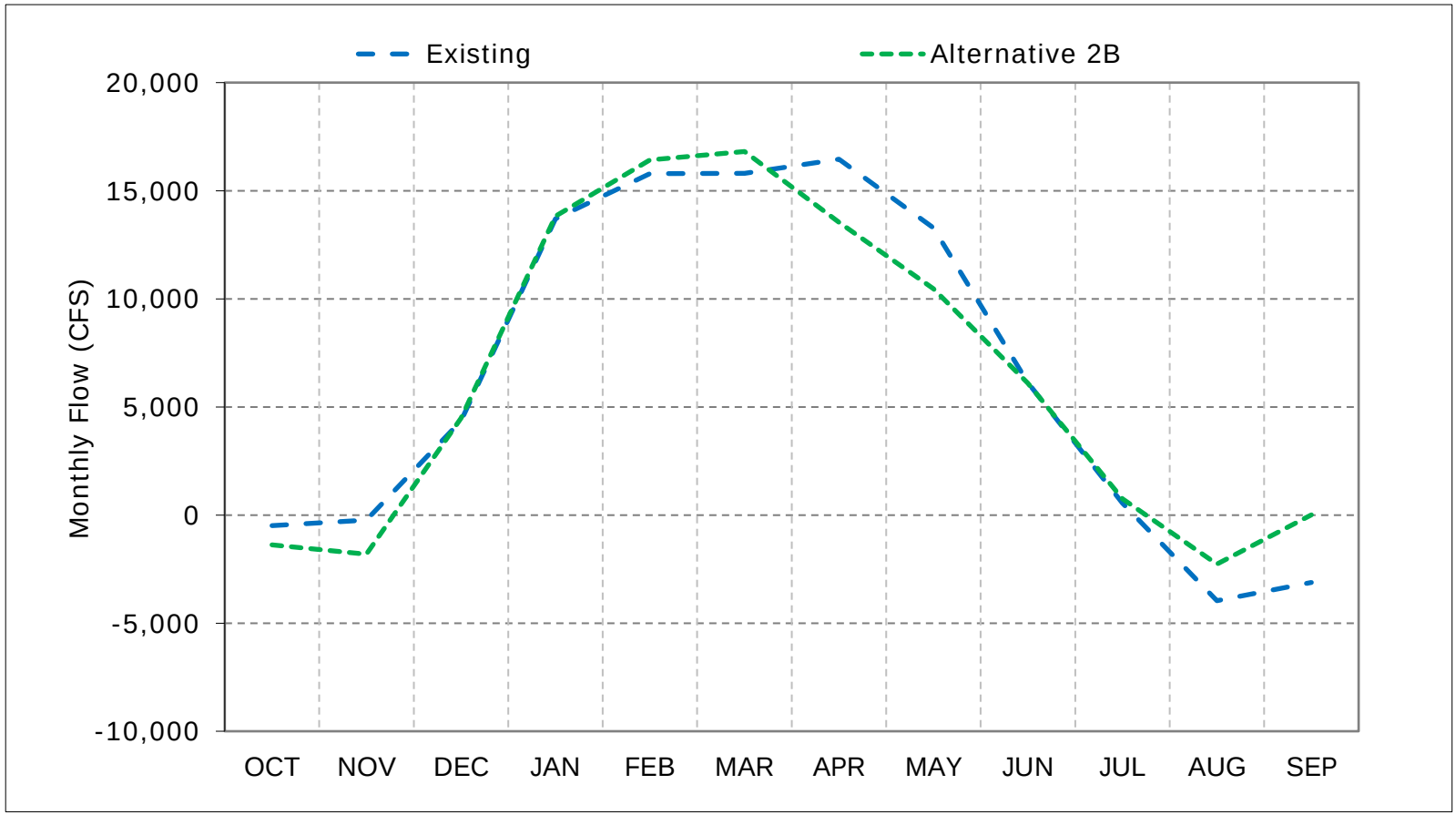
Figure 8-1. Qwest, Long-Term Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

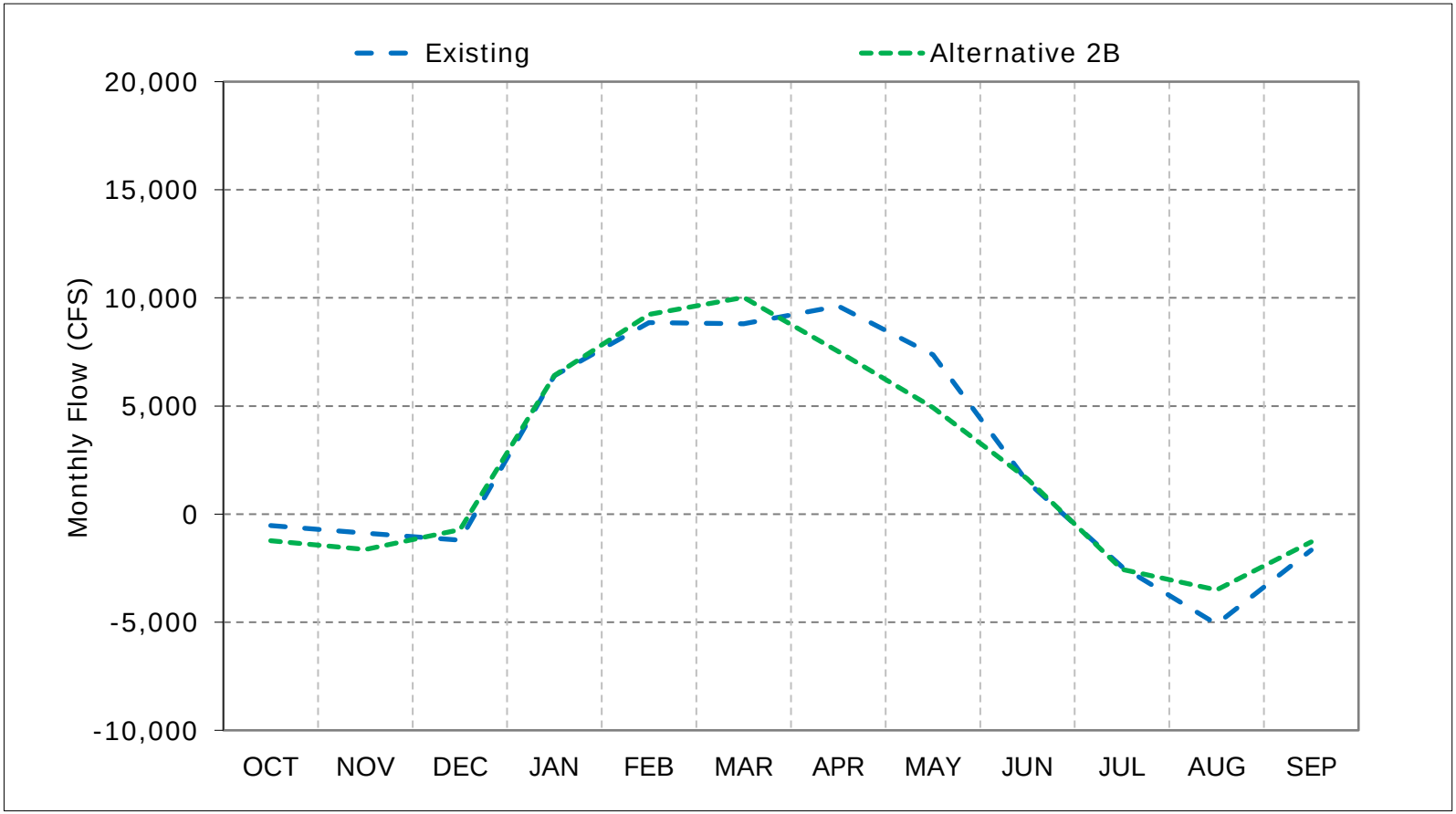
Figure 8-2. Qwest, Wet Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

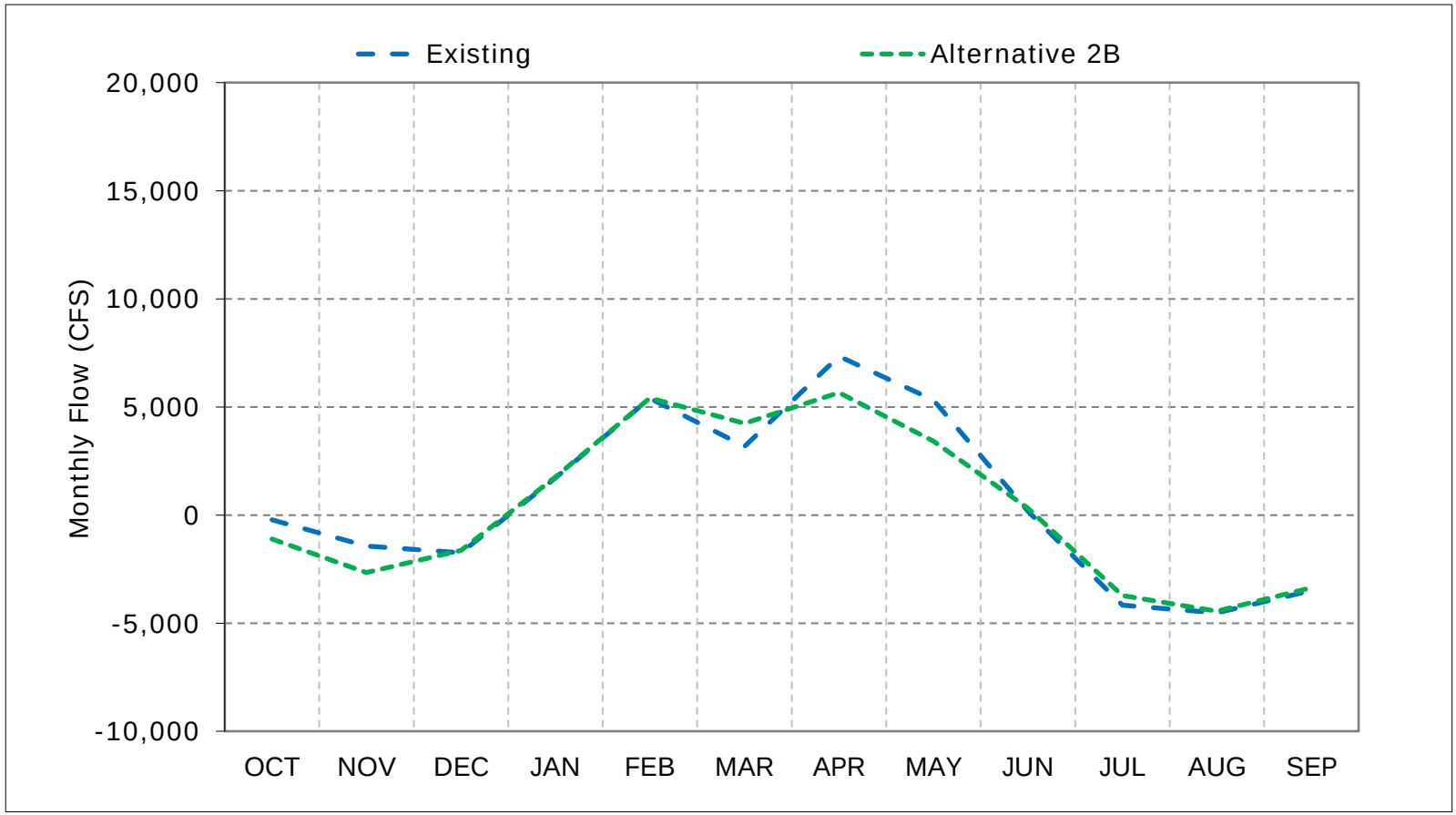
*These results are displayed with water year - year type sorting.

Figure 8-3. Qwest, Above Normal Year Average Flow



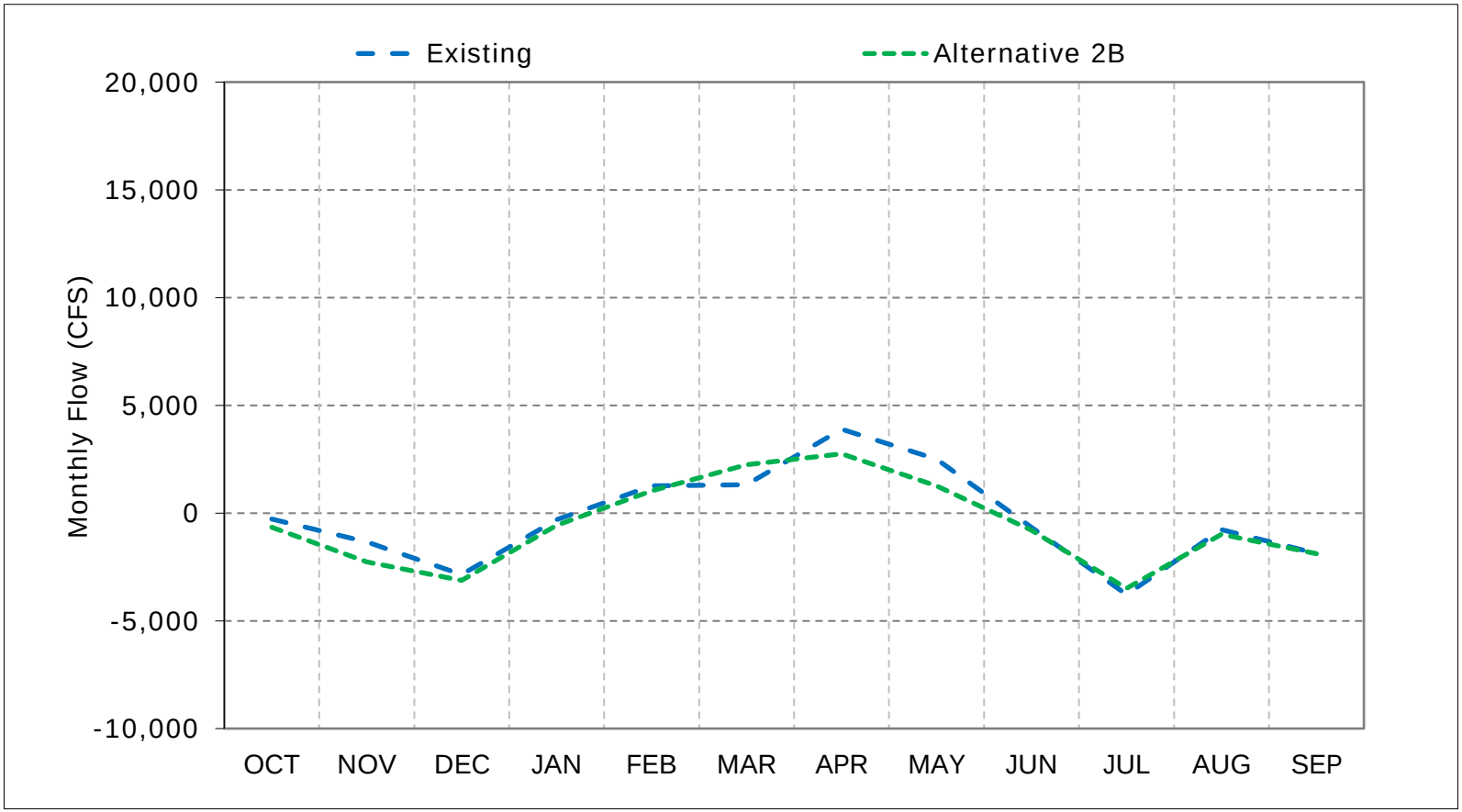

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-4. Qwest, Below Normal Year Average Flow



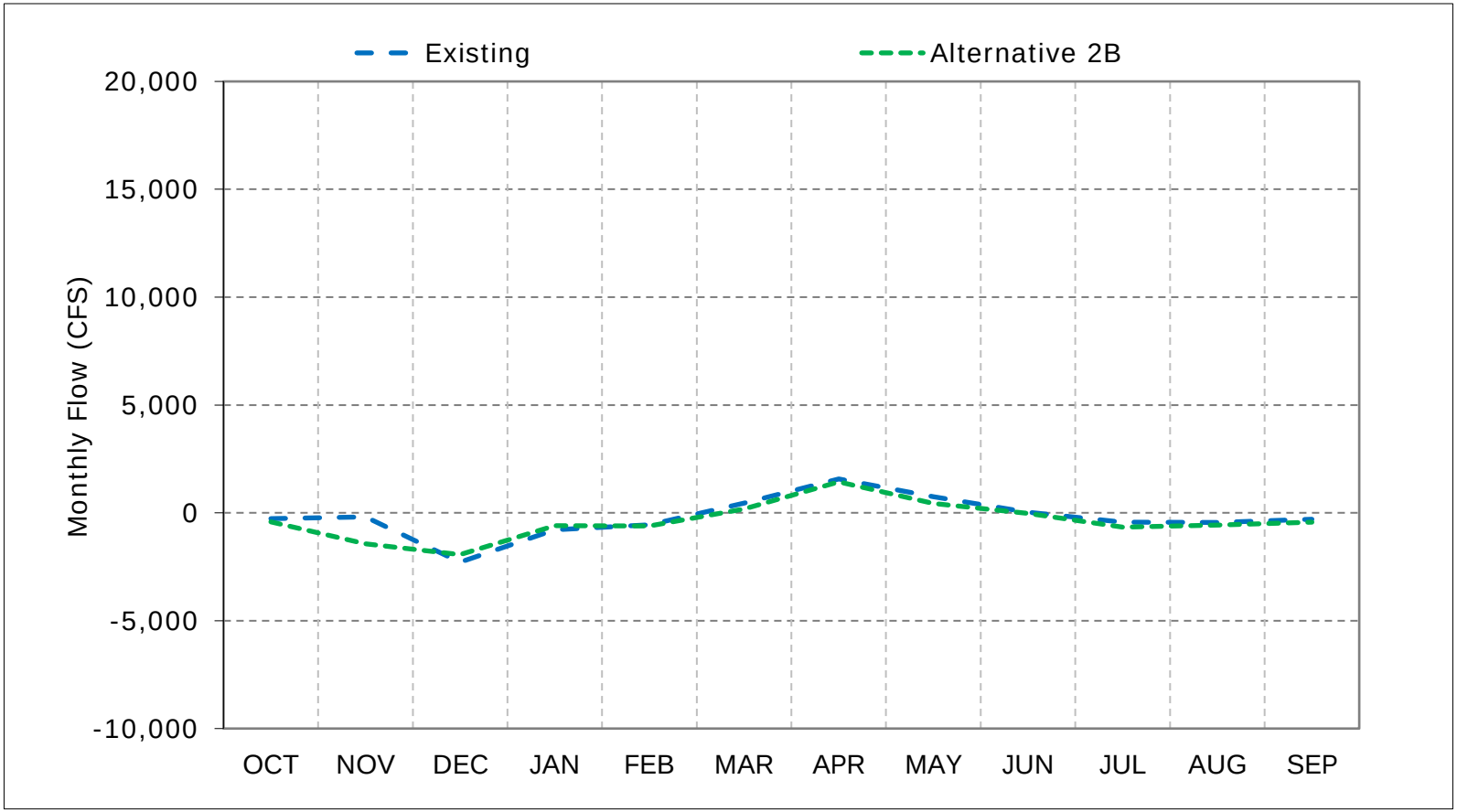

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-5. Qwest, Dry Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-6. Qwest, Critical Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-7. Qwest, October

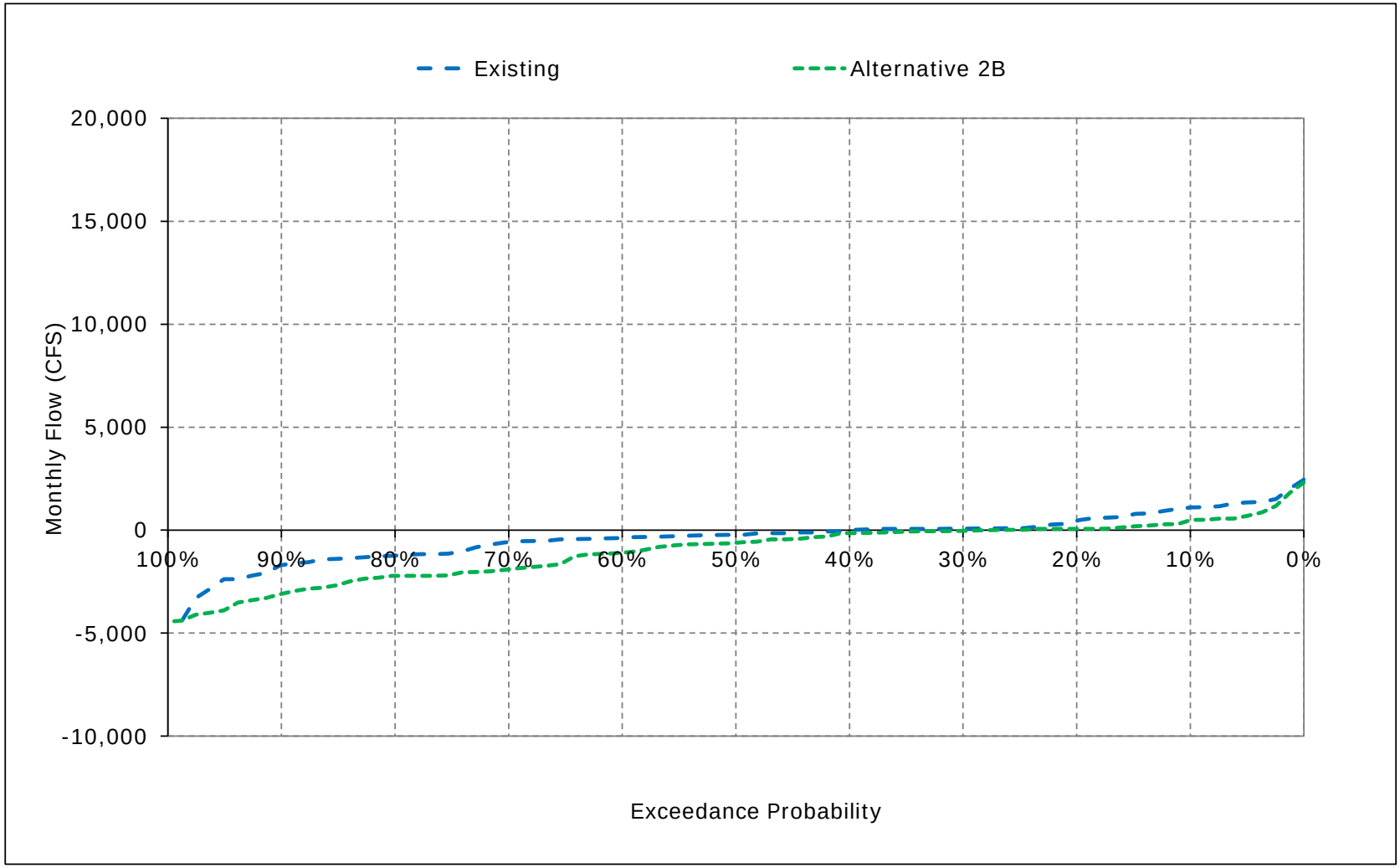


Figure 8-8. Qwest, November

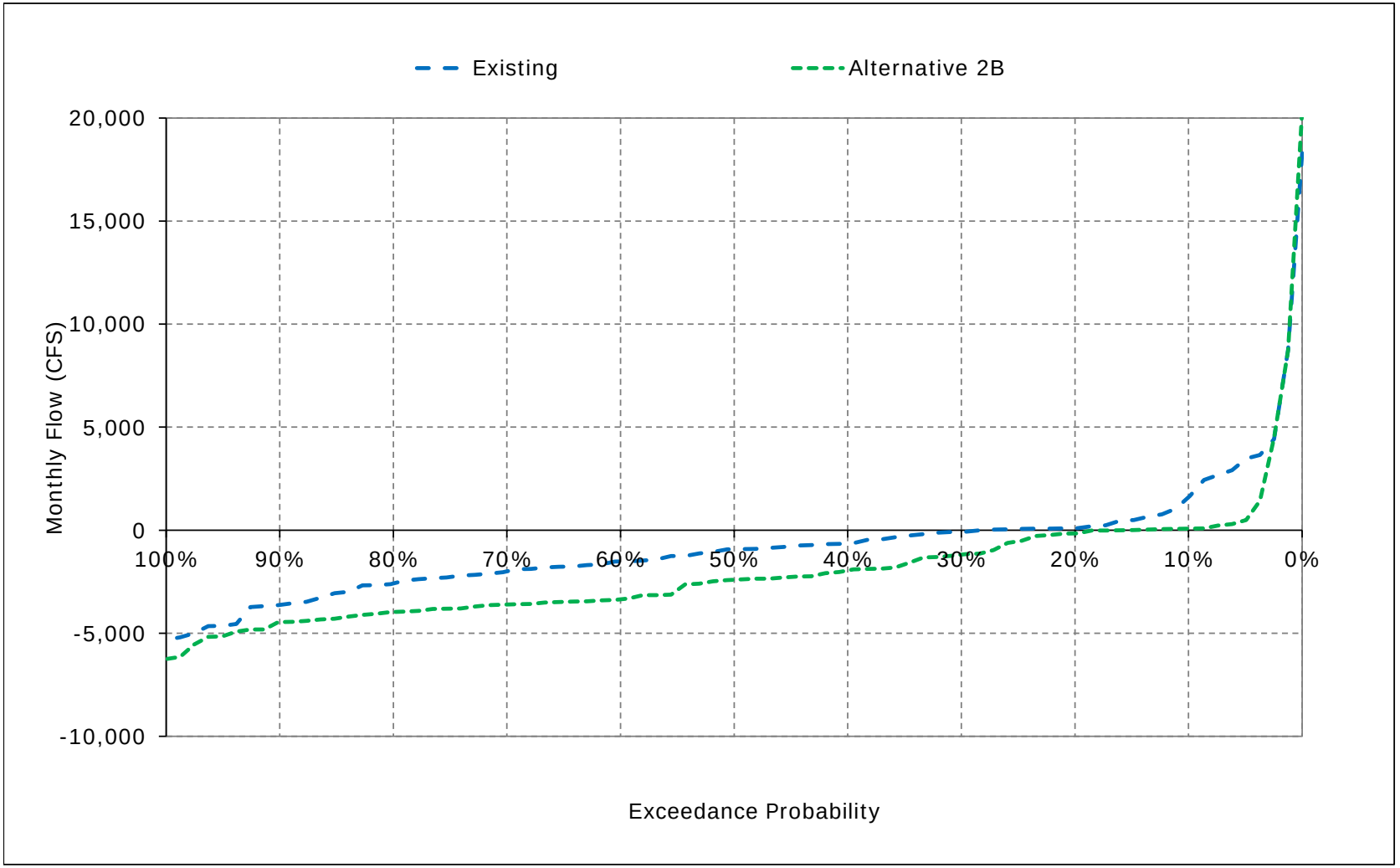


Figure 8-9. Qwest, December

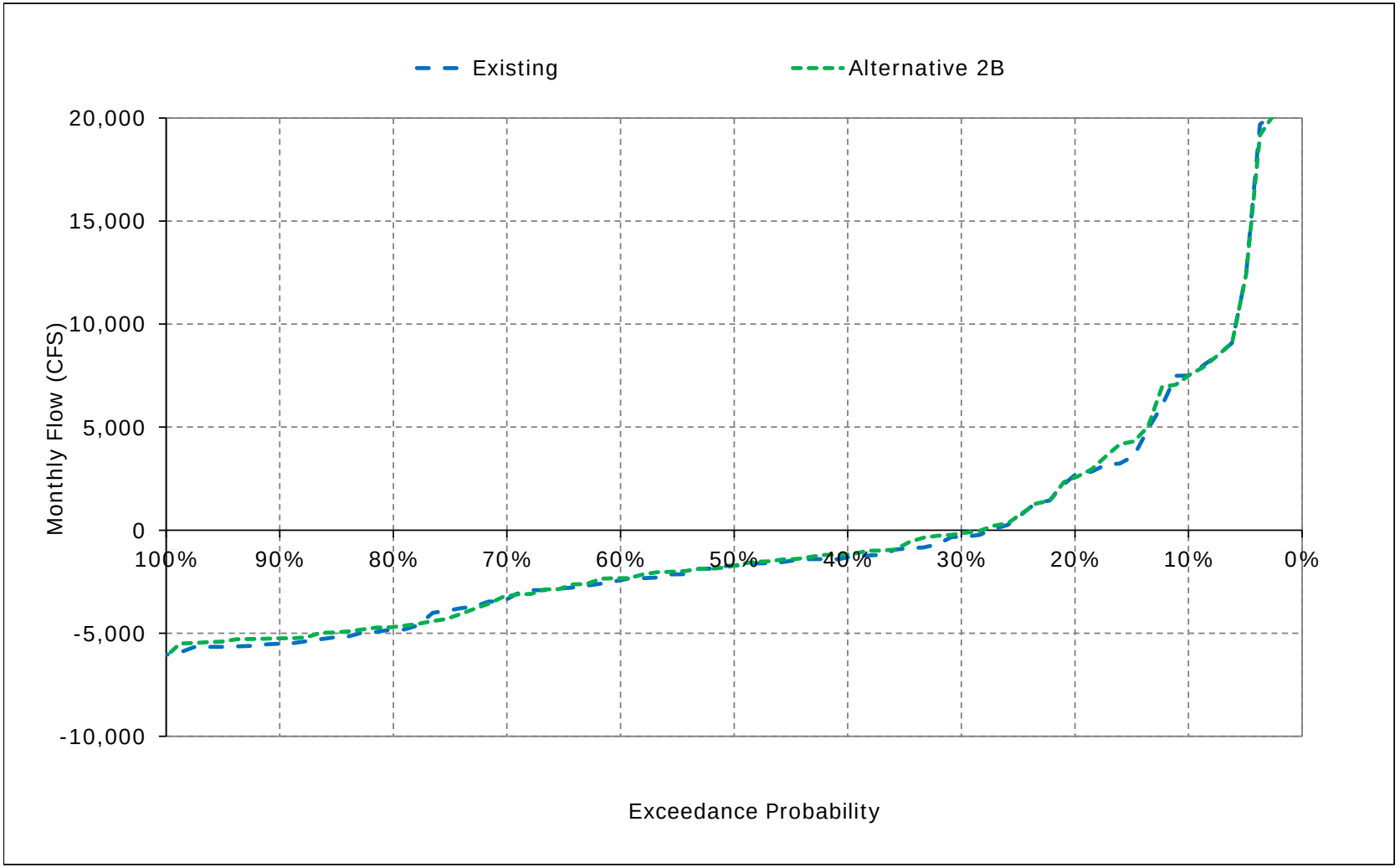


Figure 8-10. Qwest, January

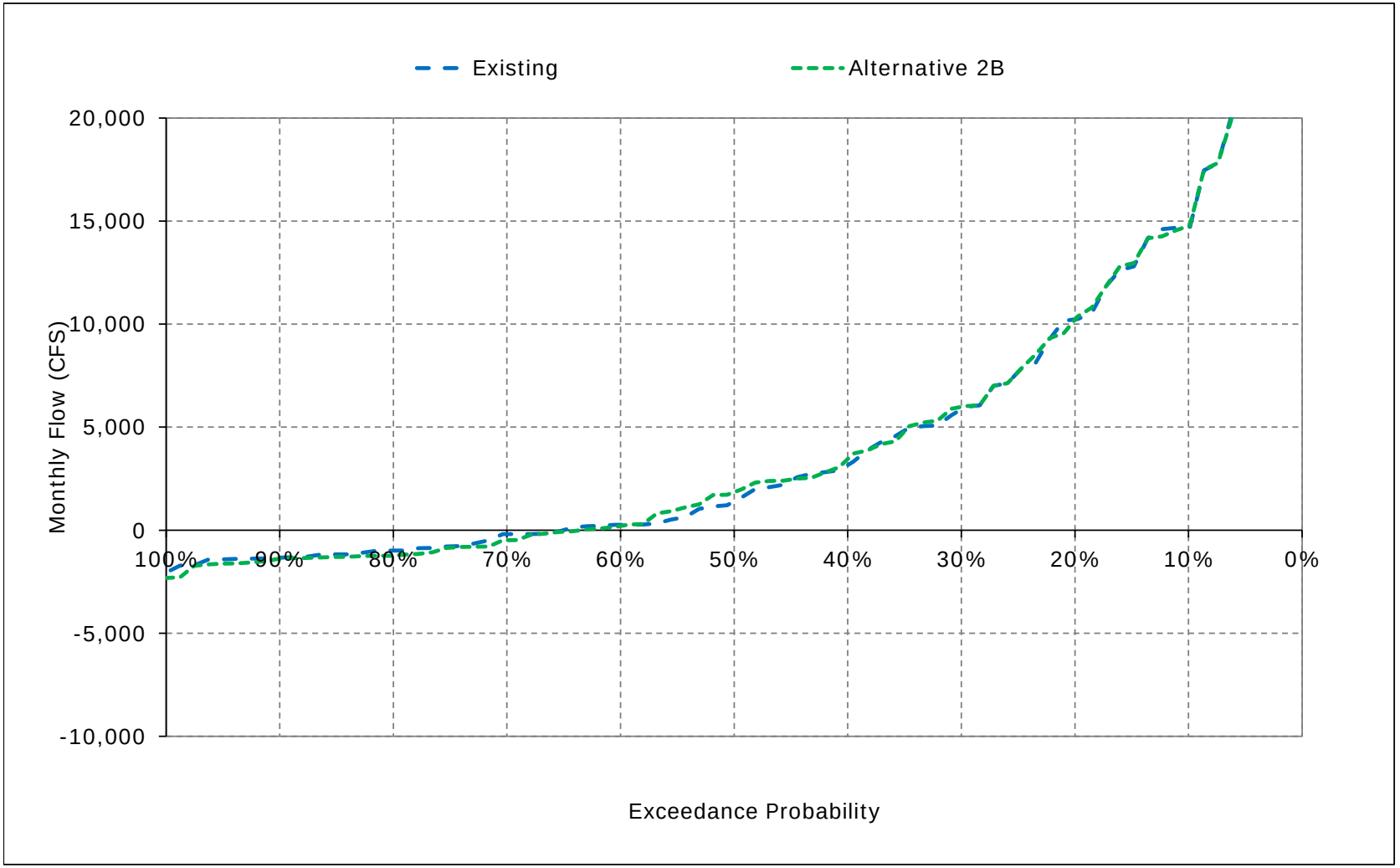


Figure 8-11. Qwest, February

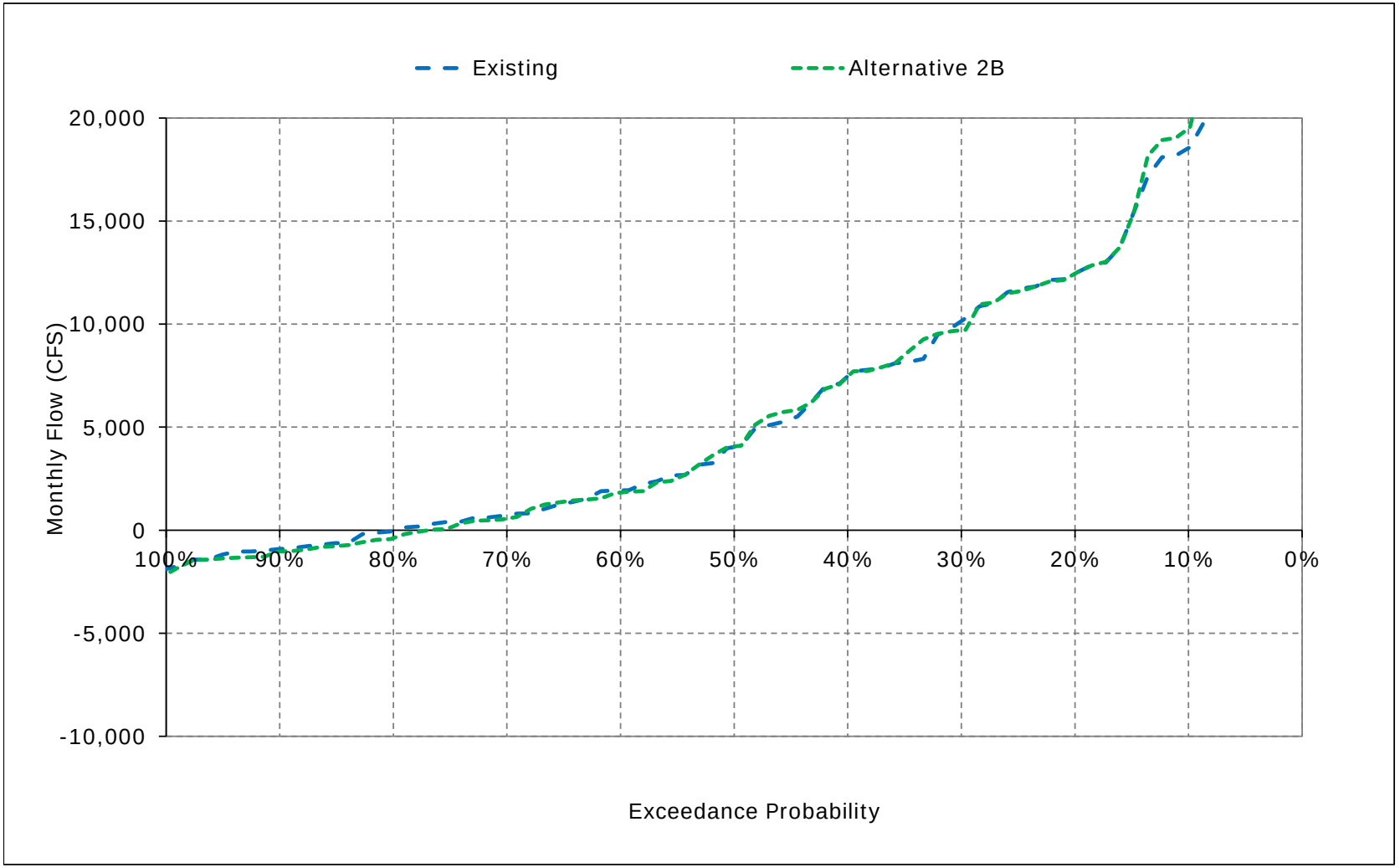


Figure 8-12. Qwest, March

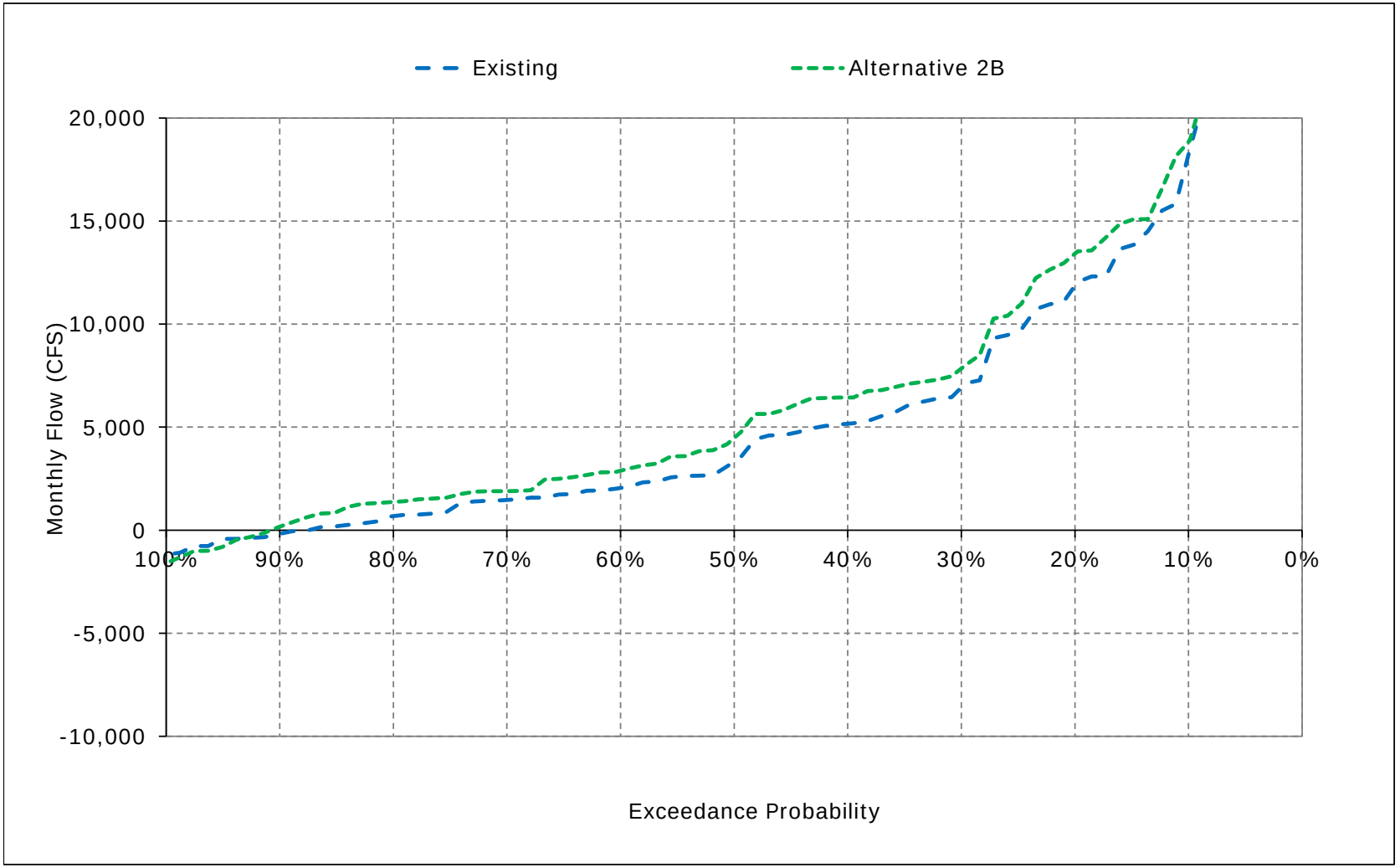


Figure 8-13. Qwest, April

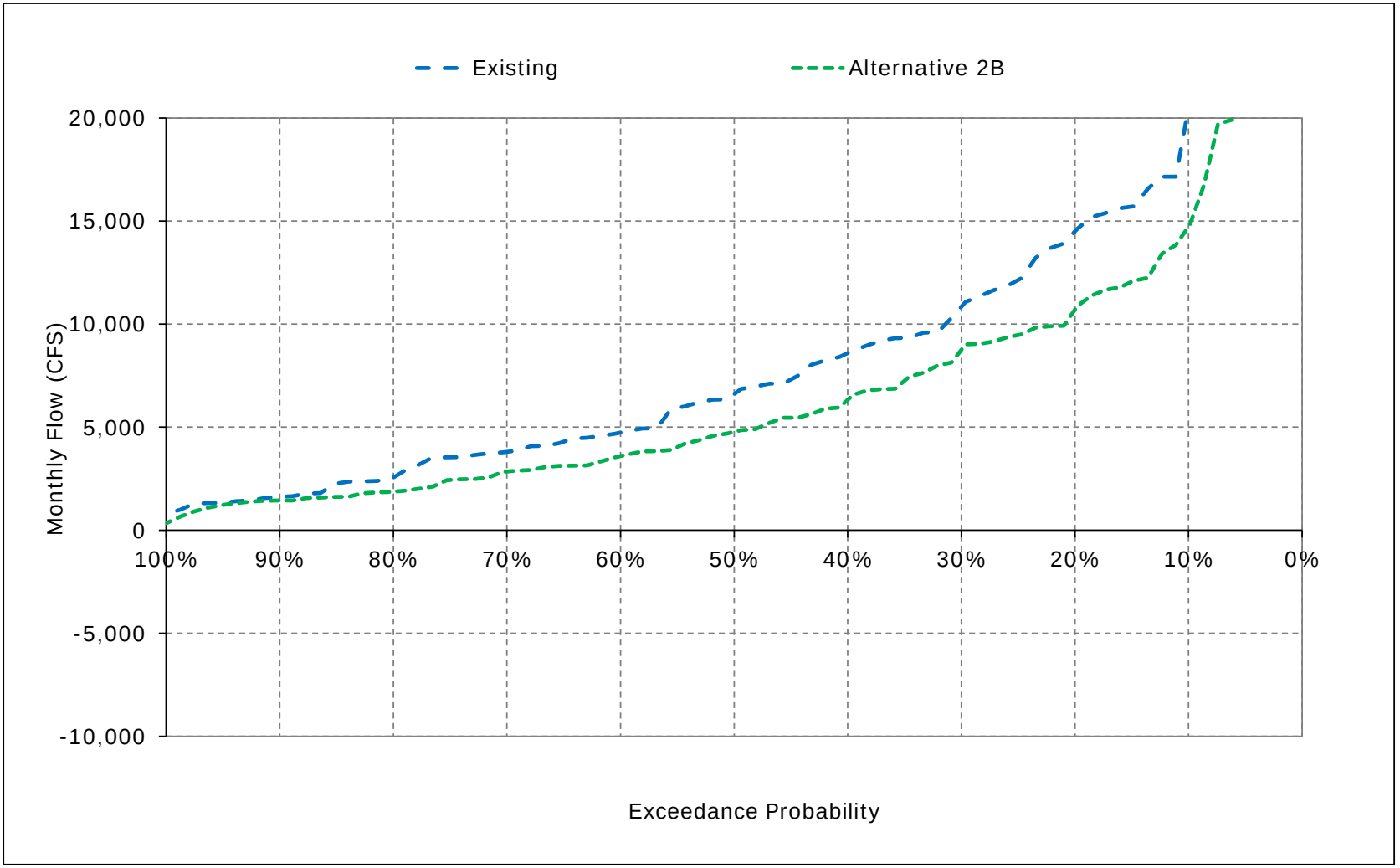


Figure 8-14. Qwest, May

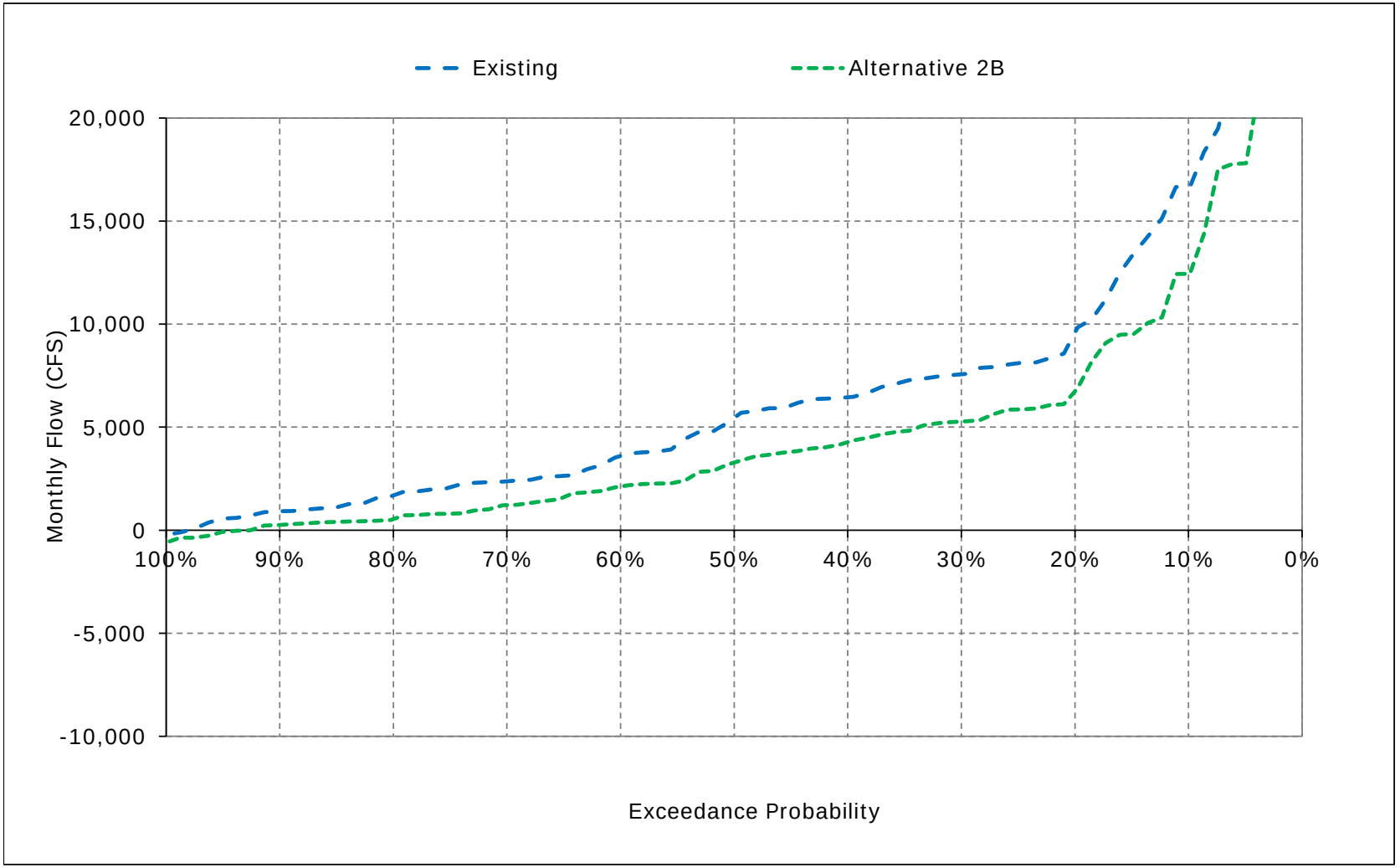


Figure 8-15. Qwest, June

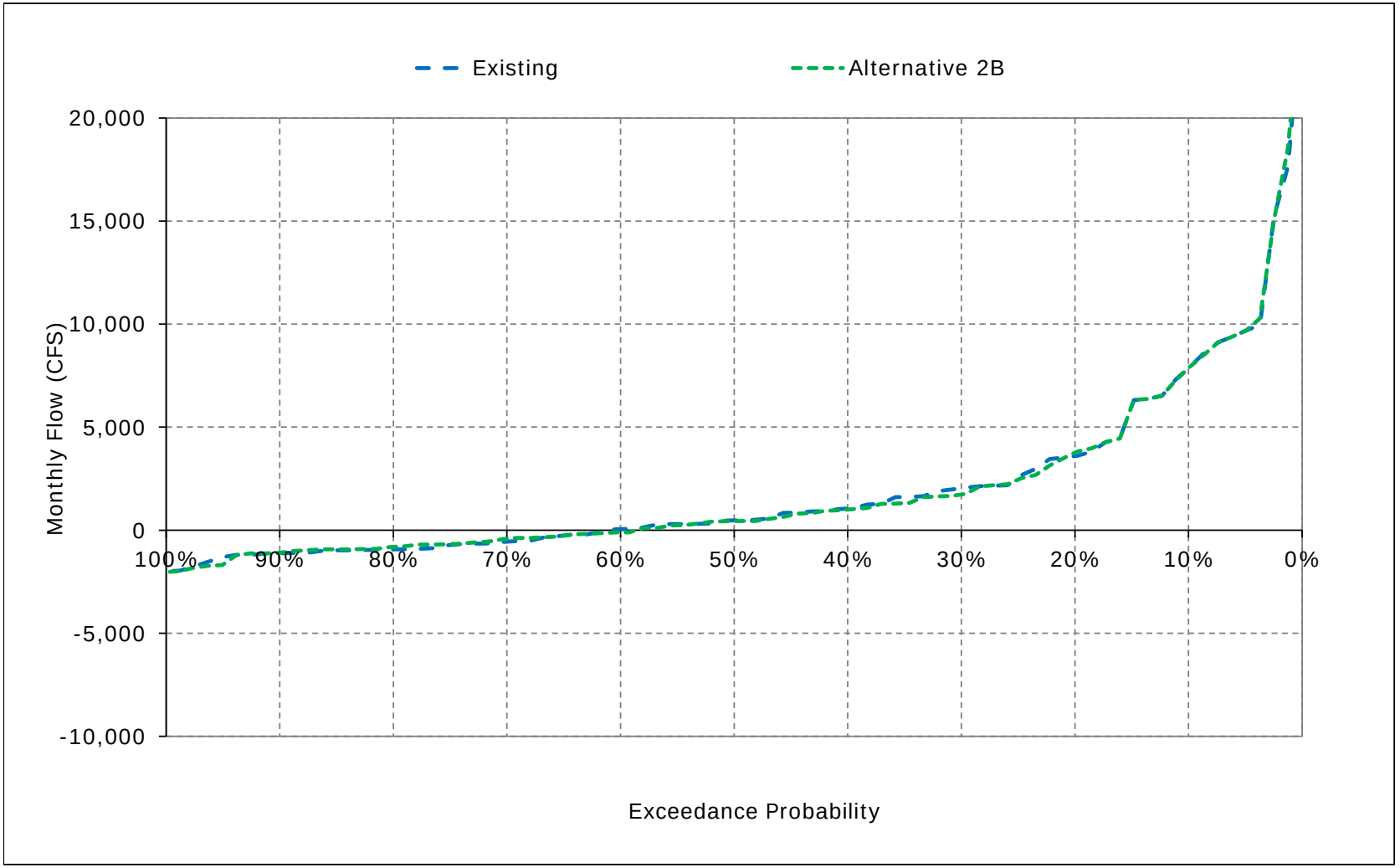


Figure 8-16. Qwest, July

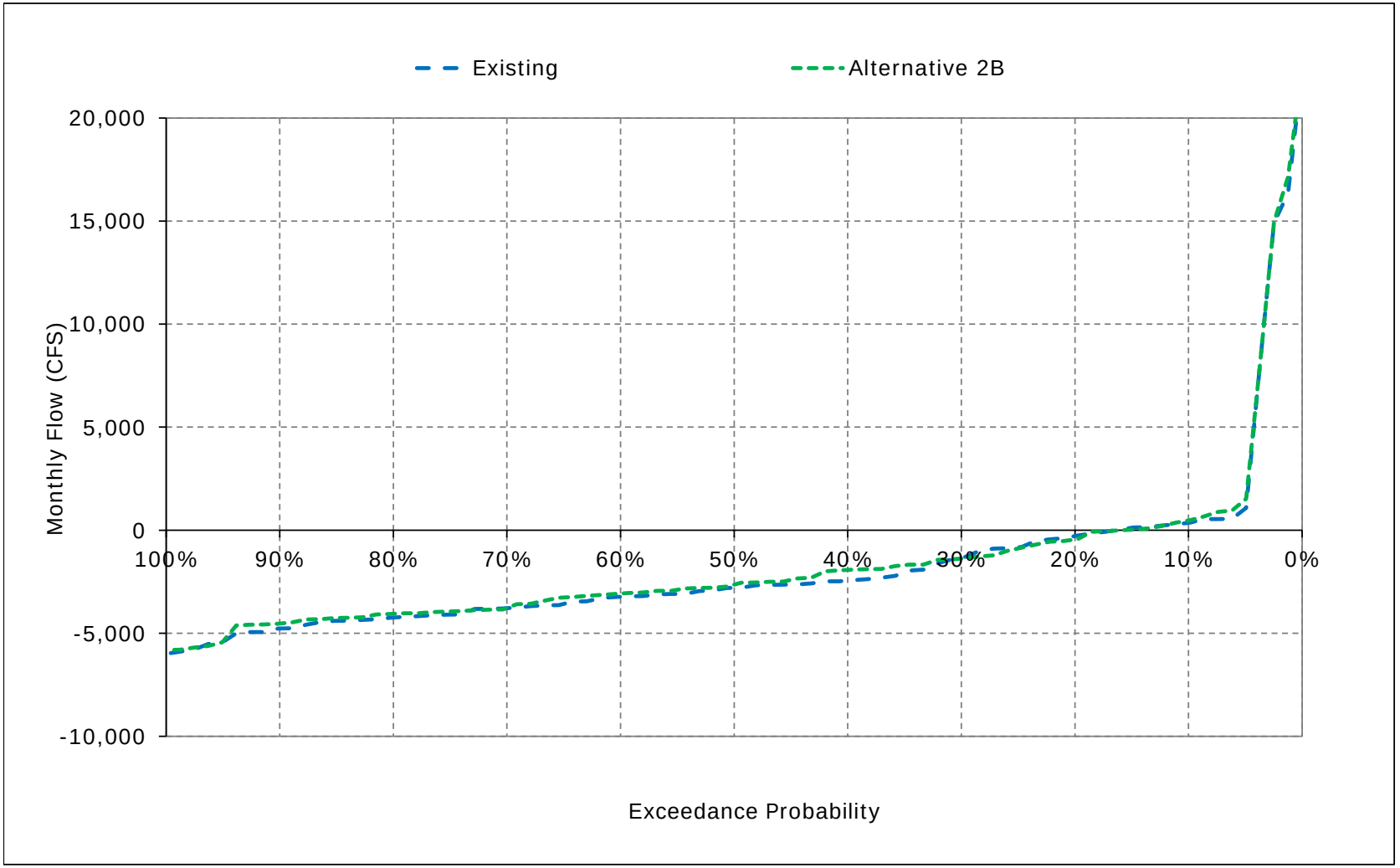


Figure 8-17. Qwest, August

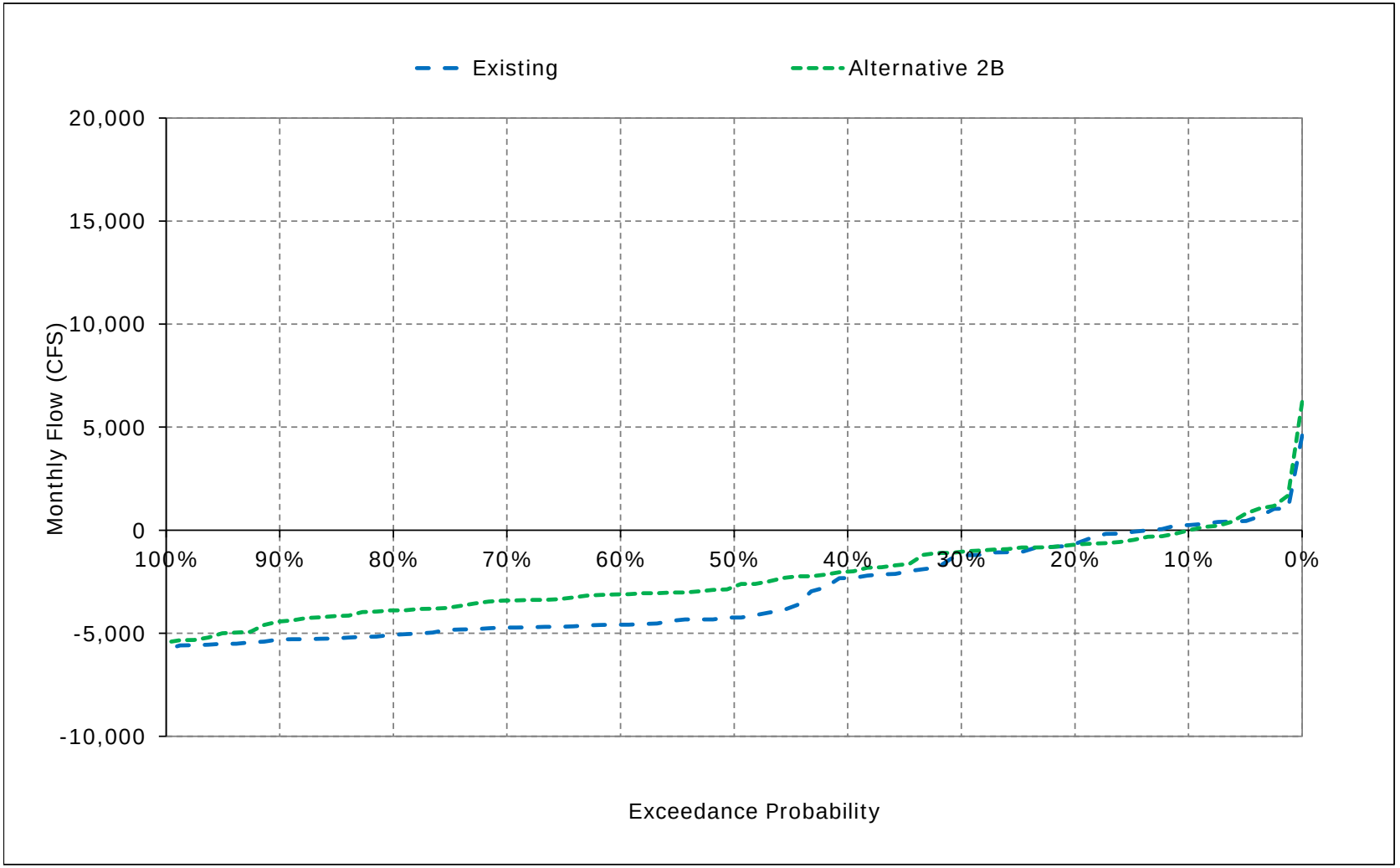
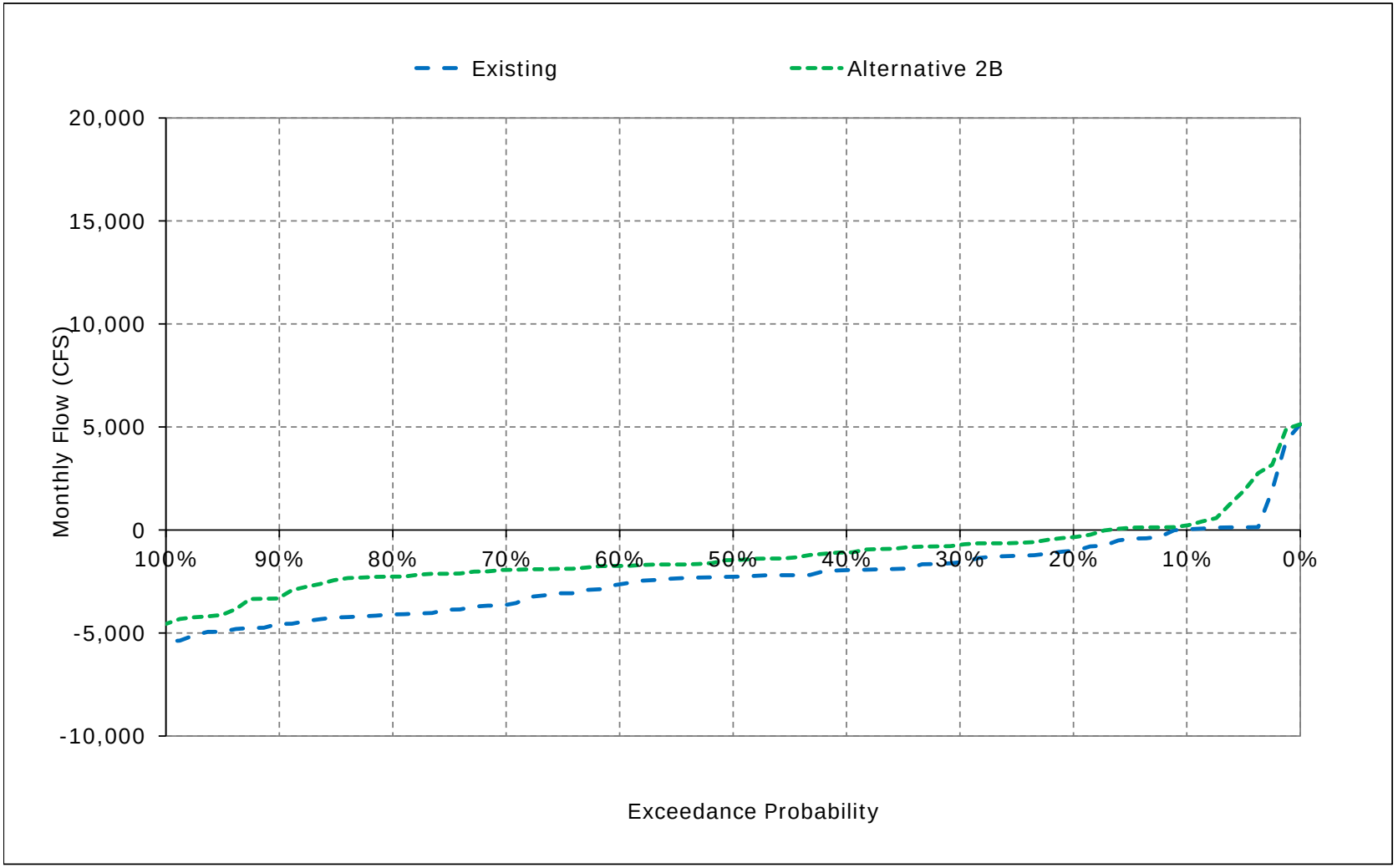


Figure 8-18. Qwest, September



## Table 9-1. Delta Outflow, Monthly Outflow

### Existing

| Statistic | Monthly Outflow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 8,281 | 16,003 | 64,924 | 99,529 | 128,573 | 86,962 | 73,320 | 51,194 | 29,470 | 11,514 | 4,216 | 20,133 |
| 20% | 7,813 | 15,281 | 32,439 | 66,067 | 79,799 | 65,200 | 53,523 | 31,419 | 14,524 | 9,504 | 4,000 | 19,500 |
| 30% | 7,453 | 13,889 | 15,815 | 47,484 | 60,558 | 43,763 | 31,053 | 21,380 | 10,193 | 8,268 | 4,000 | 15,953 |
| 40% | 6,031 | 11,000 | 12,583 | 28,238 | 51,342 | 35,194 | 28,456 | 18,465 | 7,993 | 8,000 | 4,000 | 11,563 |
| 50% | 4,712 | 10,156 | 9,684 | 19,147 | 35,758 | 25,841 | 22,248 | 15,195 | 7,243 | 8,000 | 4,000 | 4,203 |
| 60% | 4,000 | 5,463 | 5,579 | 16,356 | 24,017 | 20,399 | 16,601 | 11,910 | 7,100 | 6,500 | 4,000 | 3,055 |
| 70% | 4,000 | 4,500 | 4,932 | 11,933 | 16,765 | 16,301 | 13,467 | 9,446 | 7,037 | 5,000 | 3,998 | 3,000 |
| 80% | 4,000 | 4,500 | 4,506 | 9,402 | 14,140 | 12,437 | 11,550 | 8,237 | 6,119 | 5,000 | 3,838 | 3,000 |
| 90% | 4,000 | 4,500 | 4,500 | 8,081 | 10,146 | 9,076 | 9,541 | 6,979 | 5,034 | 4,000 | 3,500 | 3,000 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 5,997 | 11,472 | 21,026 | 41,339 | 52,691 | 42,631 | 31,618 | 21,916 | 12,394 | 8,075 | 4,216 | 9,630 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 7,724 | 17,334 | 42,783 | 83,568 | 97,663 | 79,915 | 56,933 | 39,709 | 22,444 | 11,645 | 5,047 | 19,510 |
| Above Normal (15%) | 5,432 | 12,125 | 17,901 | 45,449 | 59,682 | 52,471 | 33,562 | 24,582 | 11,383 | 9,804 | 4,000 | 11,758 |
| Below Normal (17%) | 5,429 | 8,622 | 12,186 | 20,966 | 36,006 | 22,558 | 23,217 | 15,806 | 7,964 | 7,360 | 4,000 | 3,625 |
| Dry (22%) | 5,213 | 8,210 | 8,791 | 13,693 | 22,405 | 18,720 | 15,097 | 9,920 | 6,717 | 5,036 | 3,801 | 3,006 |
| Critical (15%) | 4,657 | 6,332 | 5,673 | 10,968 | 13,155 | 11,295 | 9,410 | 5,821 | 5,316 | 4,004 | 3,506 | 3,040 |

### Alternative 2B

| Statistic | Monthly Outflow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 6,719 | 16,636 | 64,386 | 100,280 | 129,495 | 90,943 | 68,054 | 47,187 | 29,478 | 11,004 | 5,626 | 13,594 |
| 20% | 6,406 | 7,232 | 33,729 | 66,607 | 79,504 | 66,035 | 48,448 | 29,888 | 14,454 | 9,485 | 5,626 | 12,813 |
| 30% | 6,094 | 5,188 | 18,768 | 46,650 | 64,566 | 46,316 | 29,822 | 19,627 | 10,628 | 8,092 | 5,626 | 12,500 |
| 40% | 5,975 | 4,972 | 12,109 | 28,176 | 53,392 | 36,090 | 25,979 | 15,903 | 8,502 | 8,000 | 5,626 | 12,188 |
| 50% | 5,110 | 4,853 | 9,339 | 23,096 | 36,065 | 27,621 | 19,722 | 13,736 | 7,808 | 8,000 | 4,135 | 4,191 |
| 60% | 4,174 | 4,562 | 6,917 | 15,884 | 24,629 | 22,212 | 14,609 | 10,800 | 7,243 | 6,500 | 4,000 | 3,000 |
| 70% | 4,000 | 4,500 | 4,816 | 11,686 | 17,952 | 17,232 | 12,281 | 9,096 | 7,100 | 5,000 | 3,863 | 3,000 |
| 80% | 4,000 | 4,500 | 4,507 | 8,928 | 13,833 | 12,995 | 10,670 | 7,743 | 6,925 | 5,000 | 3,709 | 3,000 |
| 90% | 4,000 | 3,953 | 4,500 | 7,915 | 10,076 | 9,058 | 9,330 | 6,627 | 4,950 | 4,000 | 3,500 | 3,000 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 5,654 | 8,537 | 21,777 | 41,842 | 53,550 | 43,917 | 29,849 | 20,321 | 12,671 | 8,066 | 4,961 | 7,809 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 7,261 | 13,455 | 44,961 | 84,620 | 98,922 | 81,221 | 53,977 | 36,918 | 22,472 | 11,622 | 6,710 | 13,319 |
| Above Normal (15%) | 5,015 | 9,035 | 18,240 | 46,426 | 61,298 | 55,384 | 31,424 | 22,173 | 12,063 | 9,328 | 5,626 | 12,826 |
| Below Normal (17%) | 5,027 | 5,799 | 12,224 | 22,164 | 37,621 | 23,877 | 21,522 | 14,437 | 8,712 | 7,687 | 4,022 | 3,551 |
| Dry (22%) | 4,811 | 6,060 | 8,669 | 13,224 | 22,046 | 19,802 | 14,096 | 9,416 | 6,902 | 5,035 | 3,694 | 3,005 |
| Critical (15%) | 4,806 | 4,295 | 5,886 | 10,454 | 13,334 | 11,179 | 9,343 | 5,729 | 5,316 | 4,090 | 3,507 | 3,027 |

### Alternative 2B minus Existing

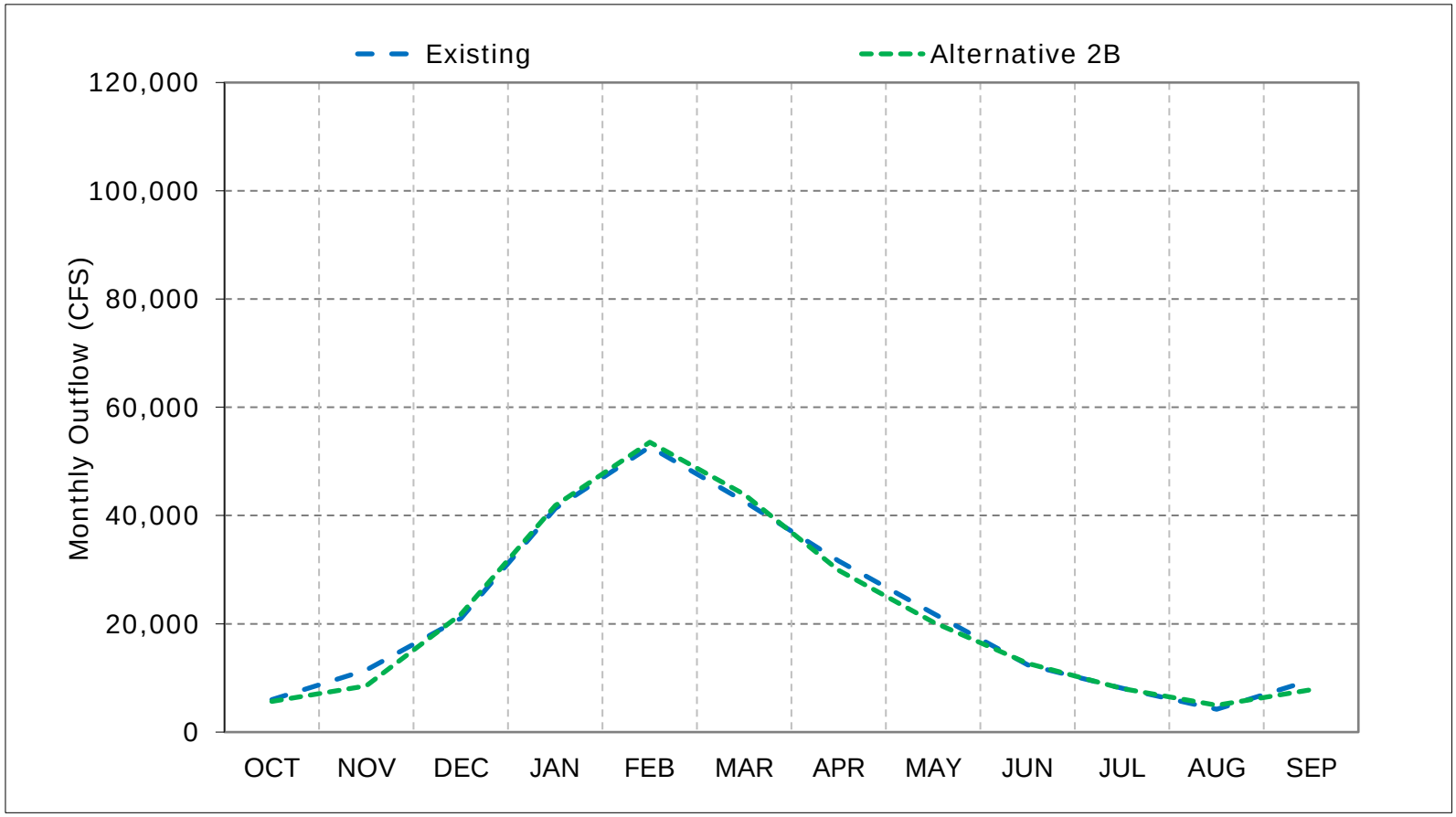
| Statistic | Monthly Outflow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -1,563 | 633 | -538 | 750 | 922 | 3,981 | -5,266 | -4,007 | 7 | -510 | 1,410 | -6,539 |
| 20% | -1,406 | -8,049 | 1,290 | 540 | -295 | 835 | -5,075 | -1,531 | -70 | -19 | 1,626 | -6,688 |
| 30% | -1,359 | -8,701 | 2,953 | -834 | 4,008 | 2,553 | -1,231 | -1,753 | 435 | -176 | 1,626 | -3,453 |
| 40% | -56 | -6,028 | -475 | -62 | 2,050 | 897 | -2,476 | -2,562 | 509 | 0 | 1,626 | 625 |
| 50% | 398 | -5,304 | -345 | 3,949 | 307 | 1,781 | -2,525 | -1,459 | 565 | 0 | 135 | -12 |
| 60% | 174 | -902 | 1,337 | -472 | 612 | 1,813 | -1,992 | -1,111 | 143 | 0 | 0 | -55 |
| 70% | 0 | 0 | -116 | -247 | 1,187 | 931 | -1,186 | -350 | 63 | 0 | -135 | 0 |
| 80% | 0 | 0 | 1 | -474 | -307 | 558 | -881 | -494 | 806 | 0 | -129 | 0 |
| 90% | 0 | -547 | 0 | -166 | -70 | -18 | -211 | -351 | -84 | 0 | 0 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -343 | -2,934 | 751 | 503 | 859 | 1,286 | -1,769 | -1,595 | 277 | -9 | 745 | -1,822 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | -463 | -3,879 | 2,178 | 1,052 | 1,259 | 1,305 | -2,956 | -2,791 | 28 | -23 | 1,662 | -6,191 |
| Above Normal (15%) | -417 | -3,090 | 339 | 977 | 1,616 | 2,913 | -2,138 | -2,408 | 680 | -476 | 1,626 | 1,068 |
| Below Normal (17%) | -402 | -2,823 | 38 | 1,198 | 1,615 | 1,319 | -1,696 | -1,369 | 749 | 327 | 22 | -74 |
| Dry (22%) | -402 | -2,150 | -122 | -469 | -358 | 1,082 | -1,001 | -504 | 185 | 0 | -108 | -2 |
| Critical (15%) | 149 | -2,037 | 213 | -514 | 179 | -116 | -67 | -92 | 0 | 85 | 1 | -13 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

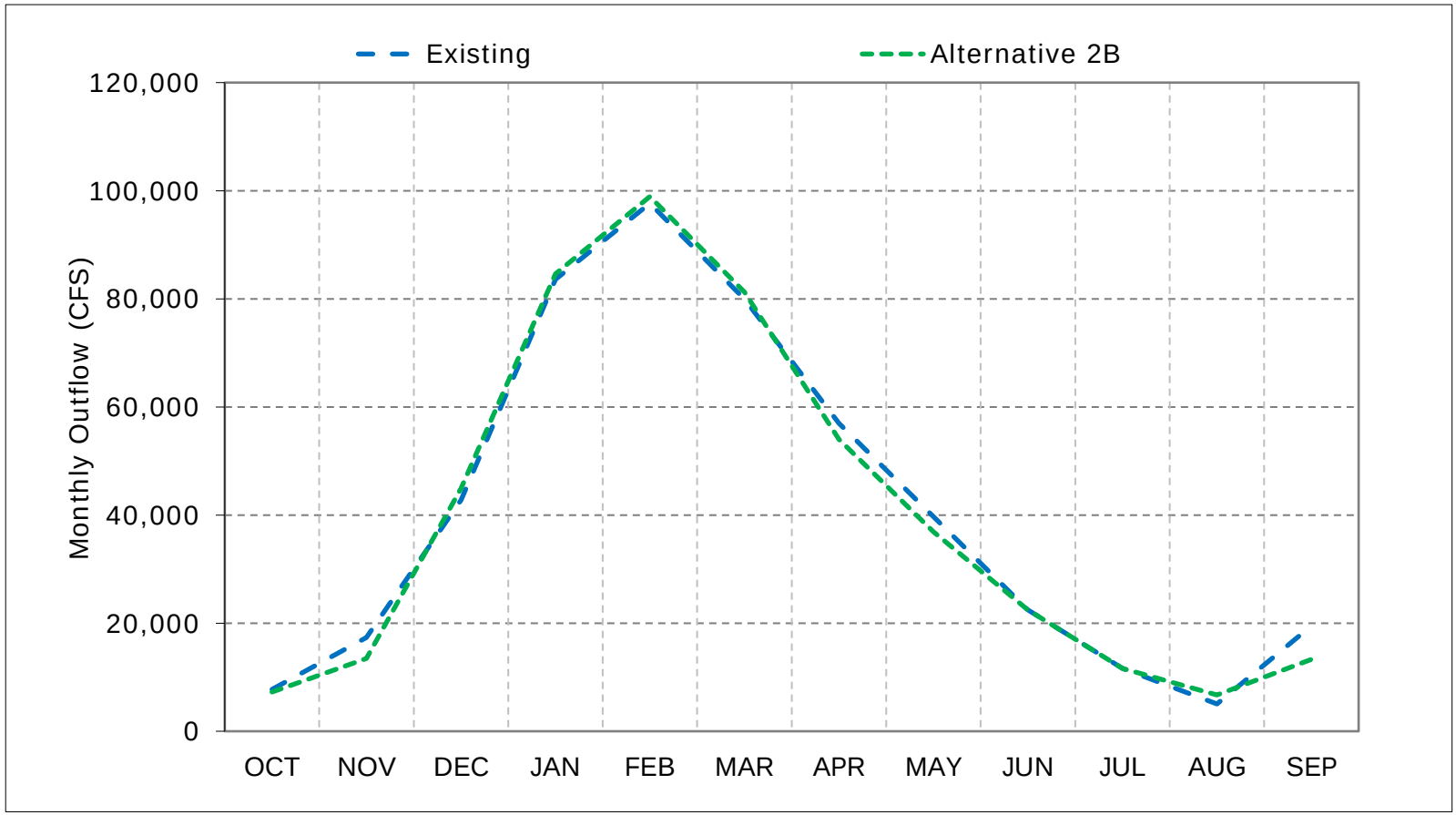
c These results are displayed with water year - year type sorting.

Figure 9-1. Delta Outflow, Long-Term Average Outflow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

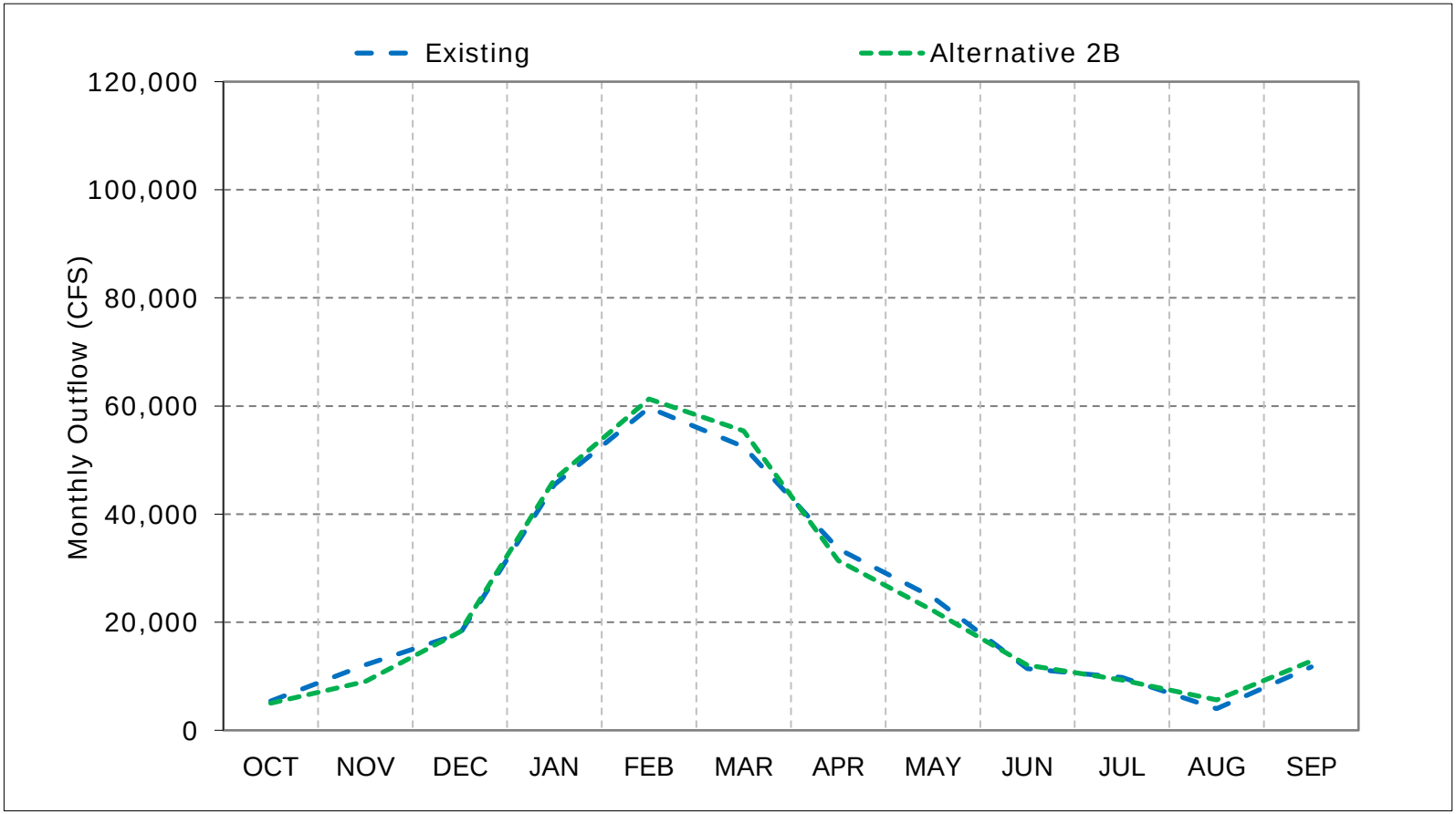
Figure 9-2. Delta Outflow, Wet Year Average Outflow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

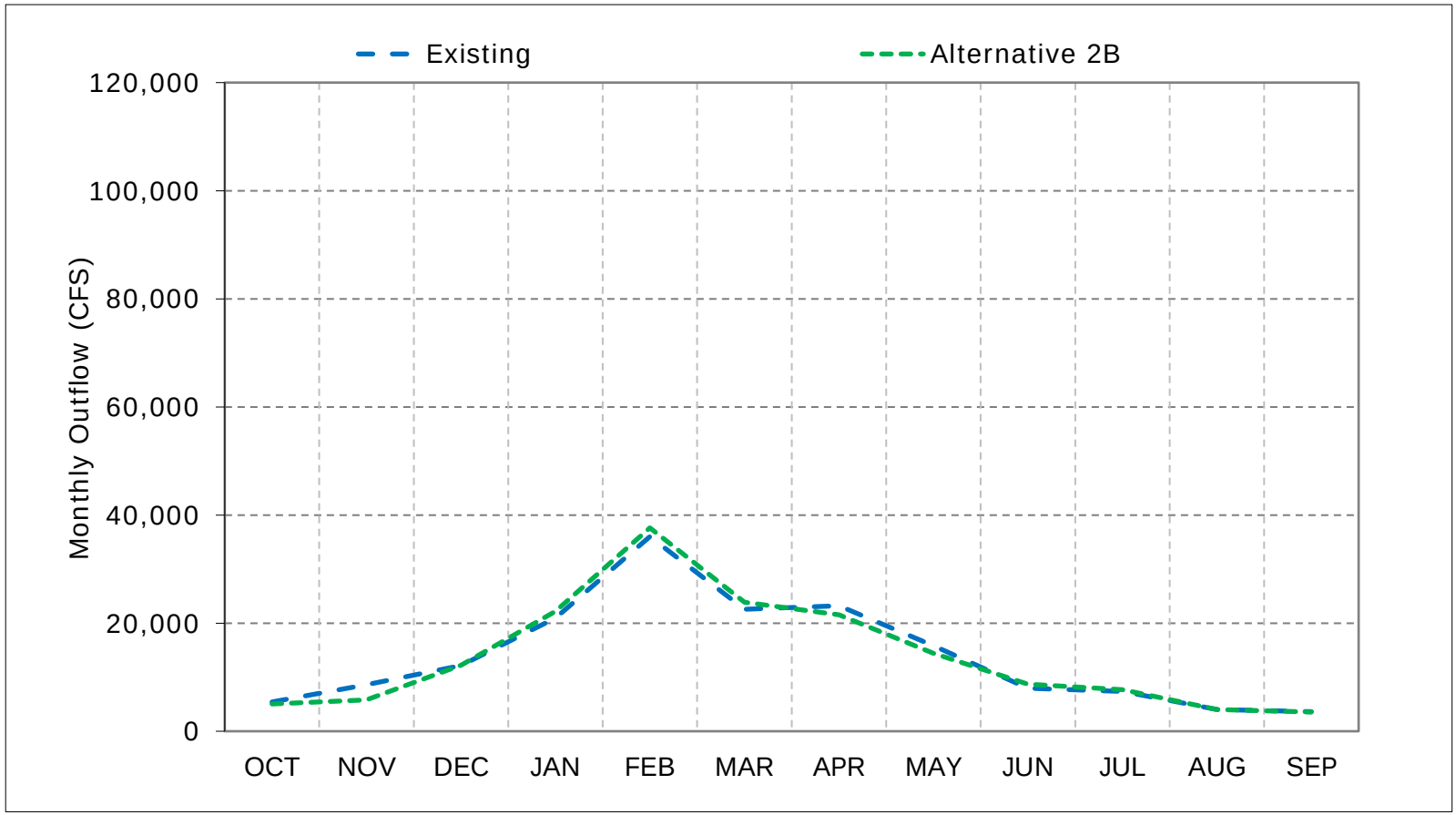
*These results are displayed with water year - year type sorting.

Figure 9-3. Delta Outflow, Above Normal Year Average Outflow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

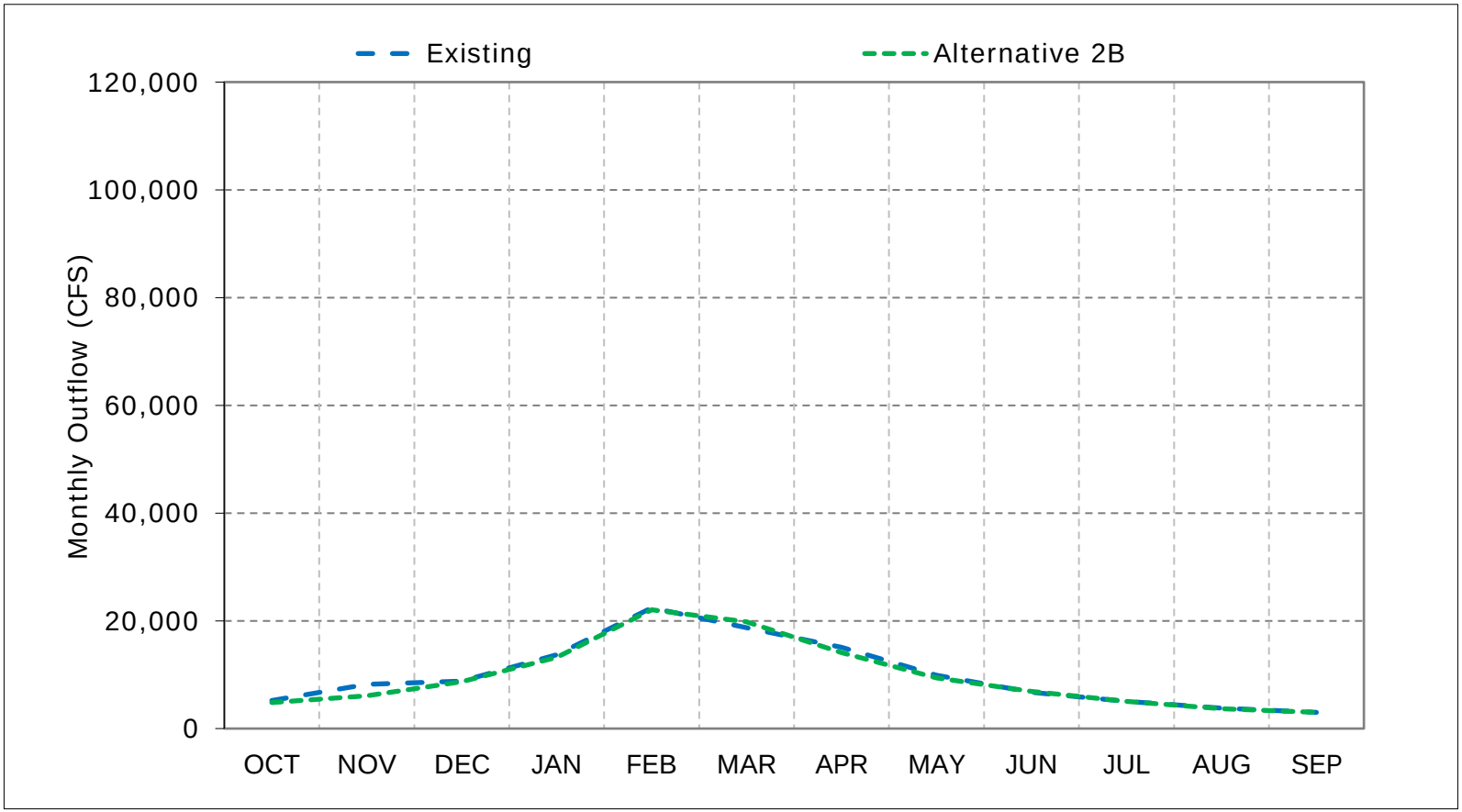
Figure 9-4. Delta Outflow, Below Normal Year Average Outflow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

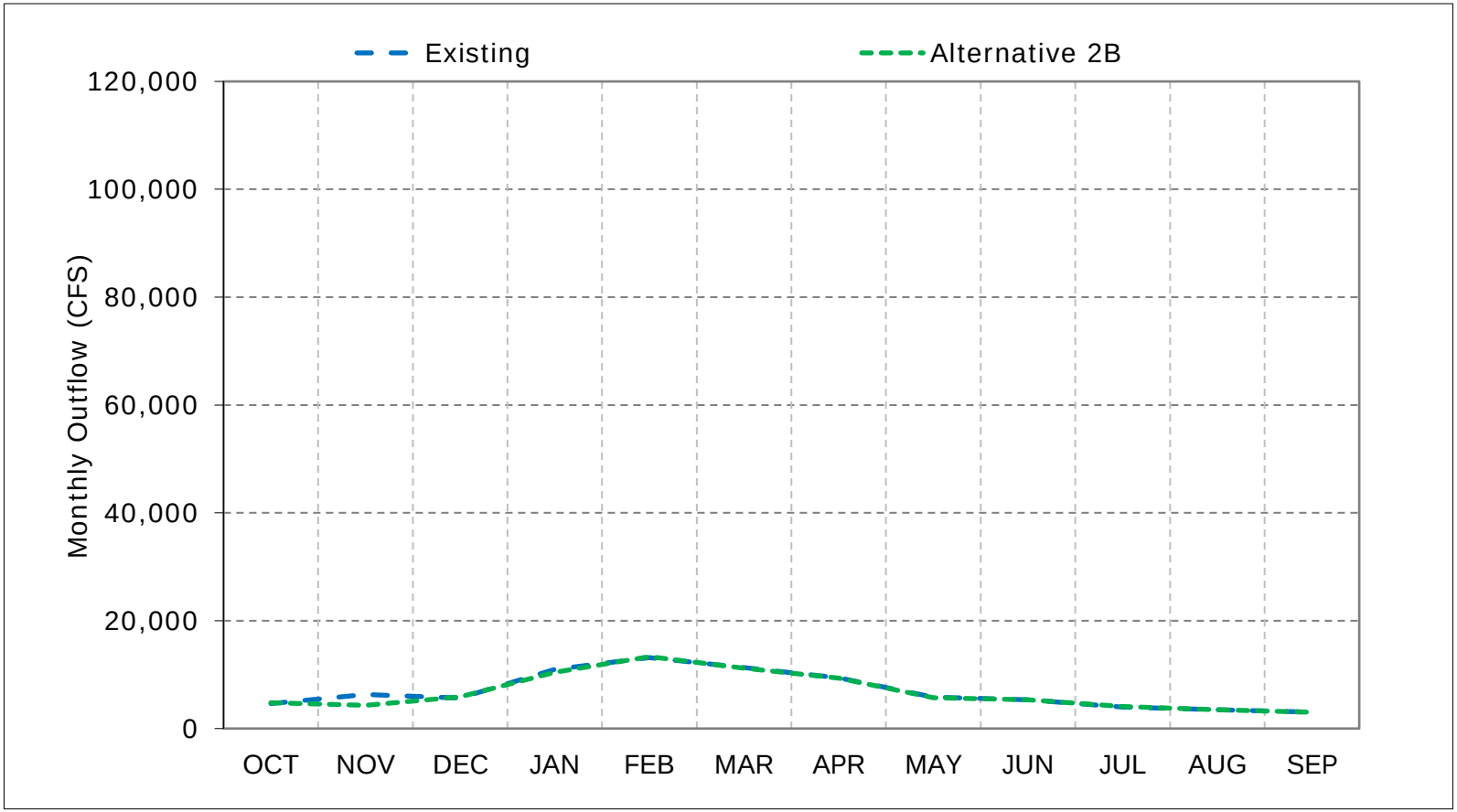
*These results are displayed with water year - year type sorting.

Figure 9-5. Delta Outflow, Dry Year Average Outflow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-6. Delta Outflow, Critical Year Average Outflow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-7. Delta Outflow, October

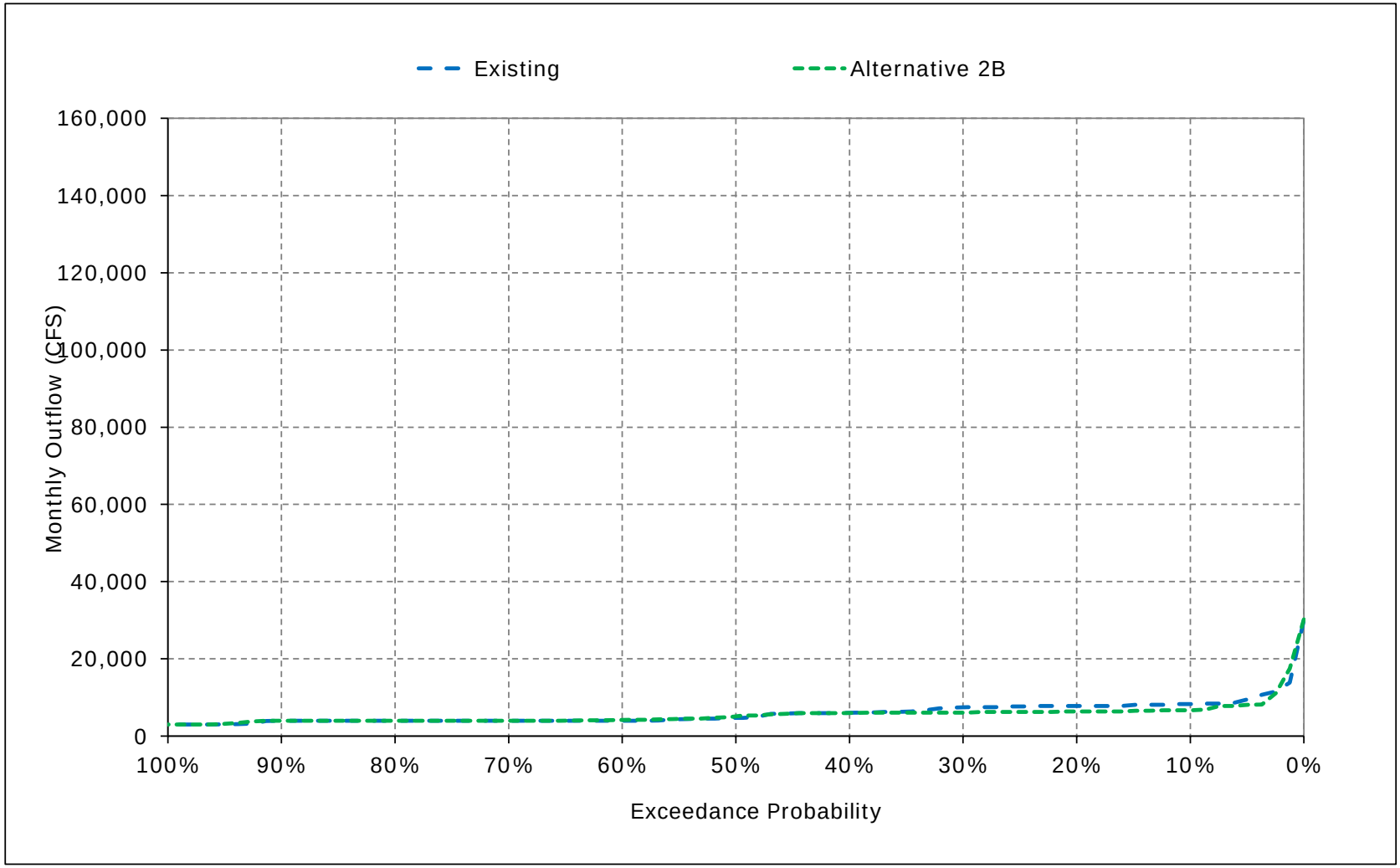


Figure 9-8. Delta Outflow, November

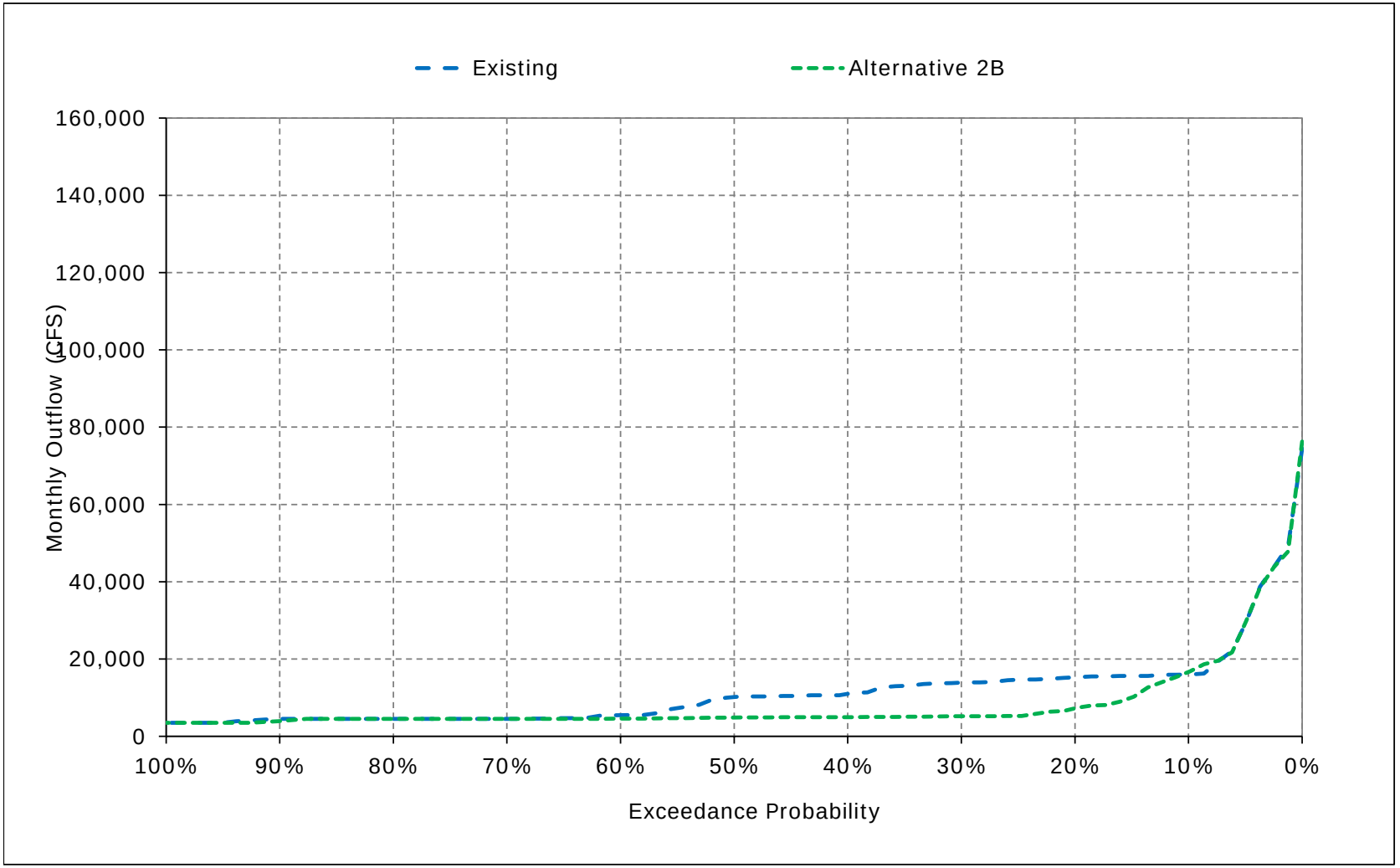


Figure 9-9. Delta Outflow, December

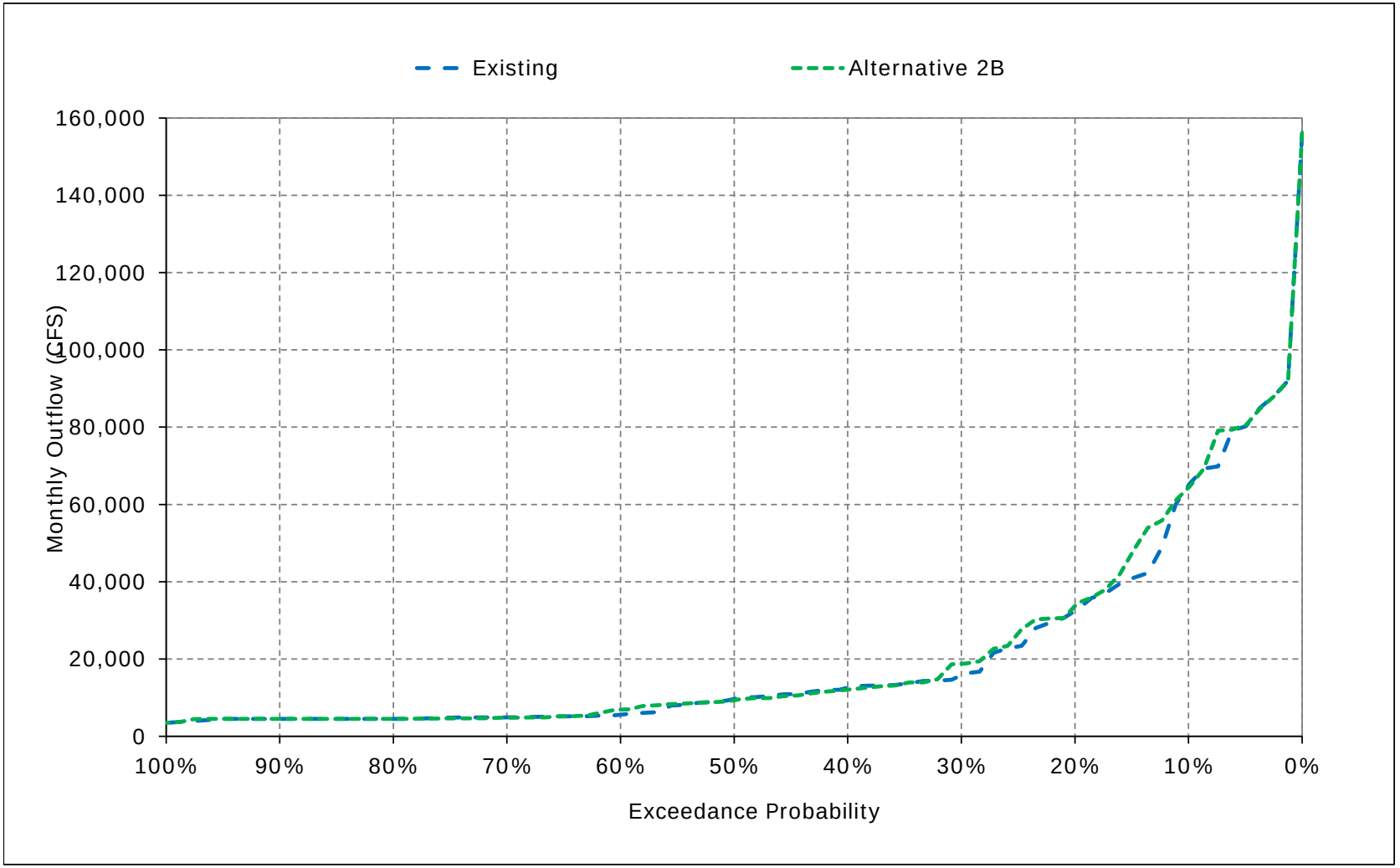


Figure 9-10. Delta Outflow, January

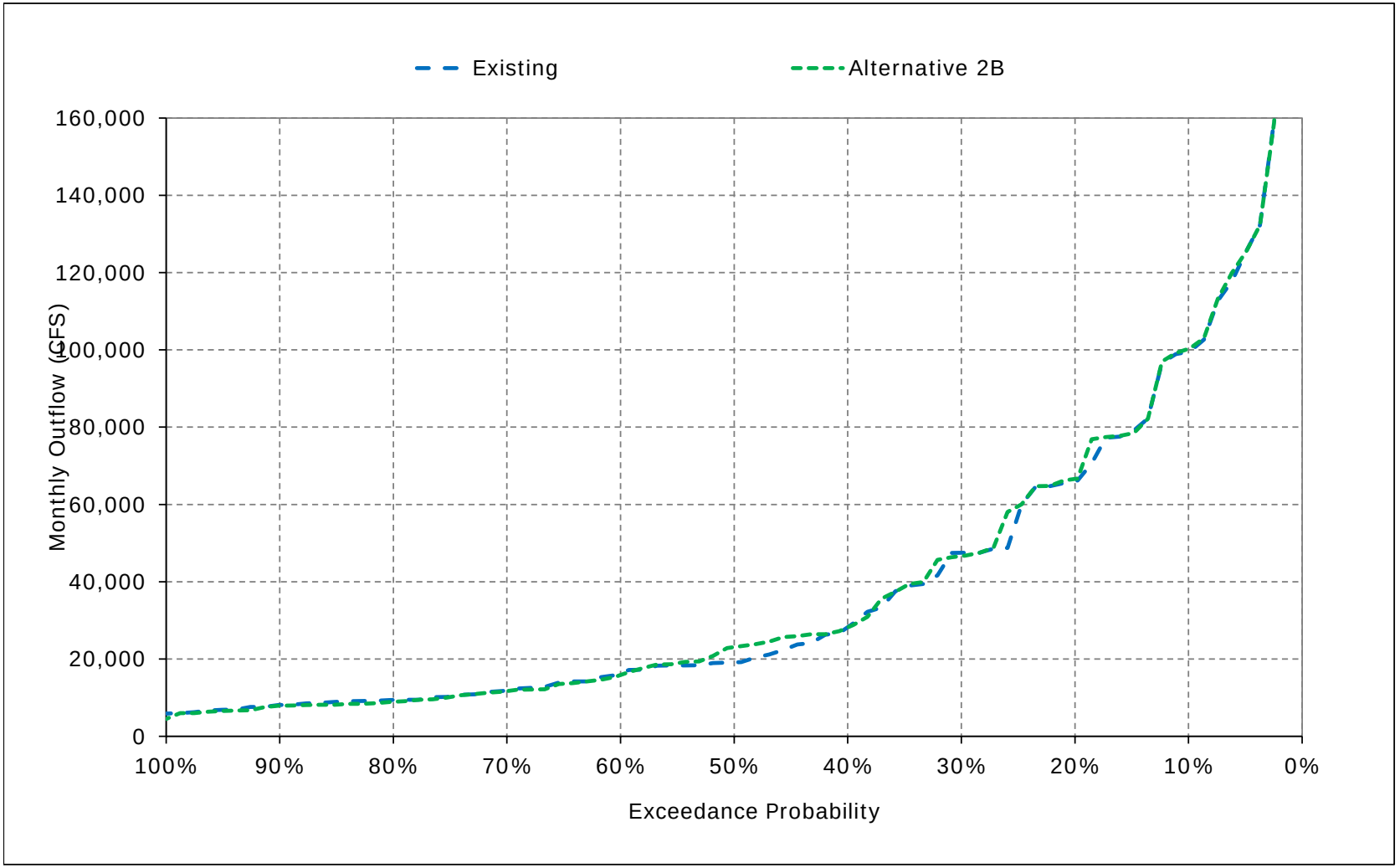


Figure 9-11. Delta Outflow, February

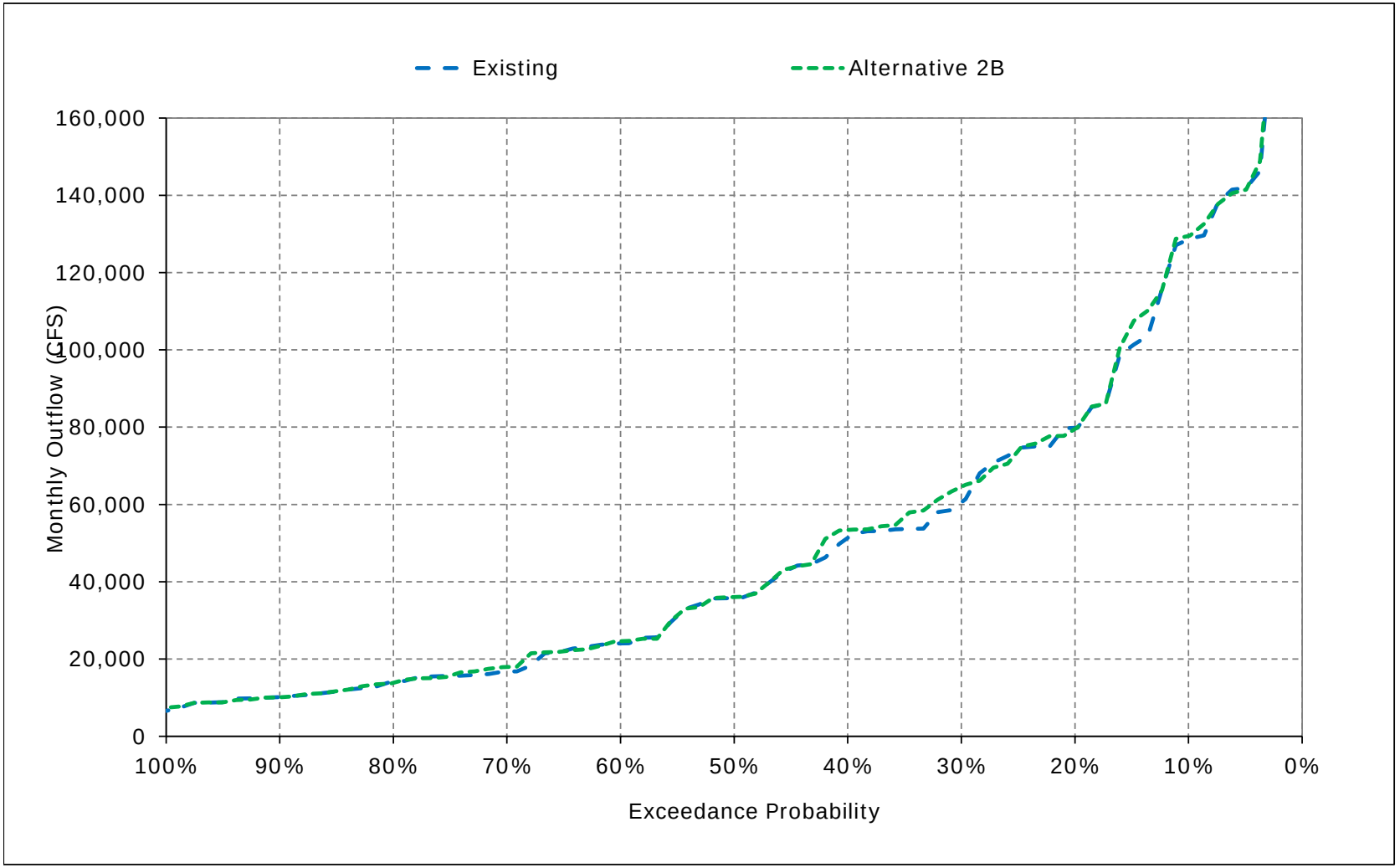


Figure 9-12. Delta Outflow, March

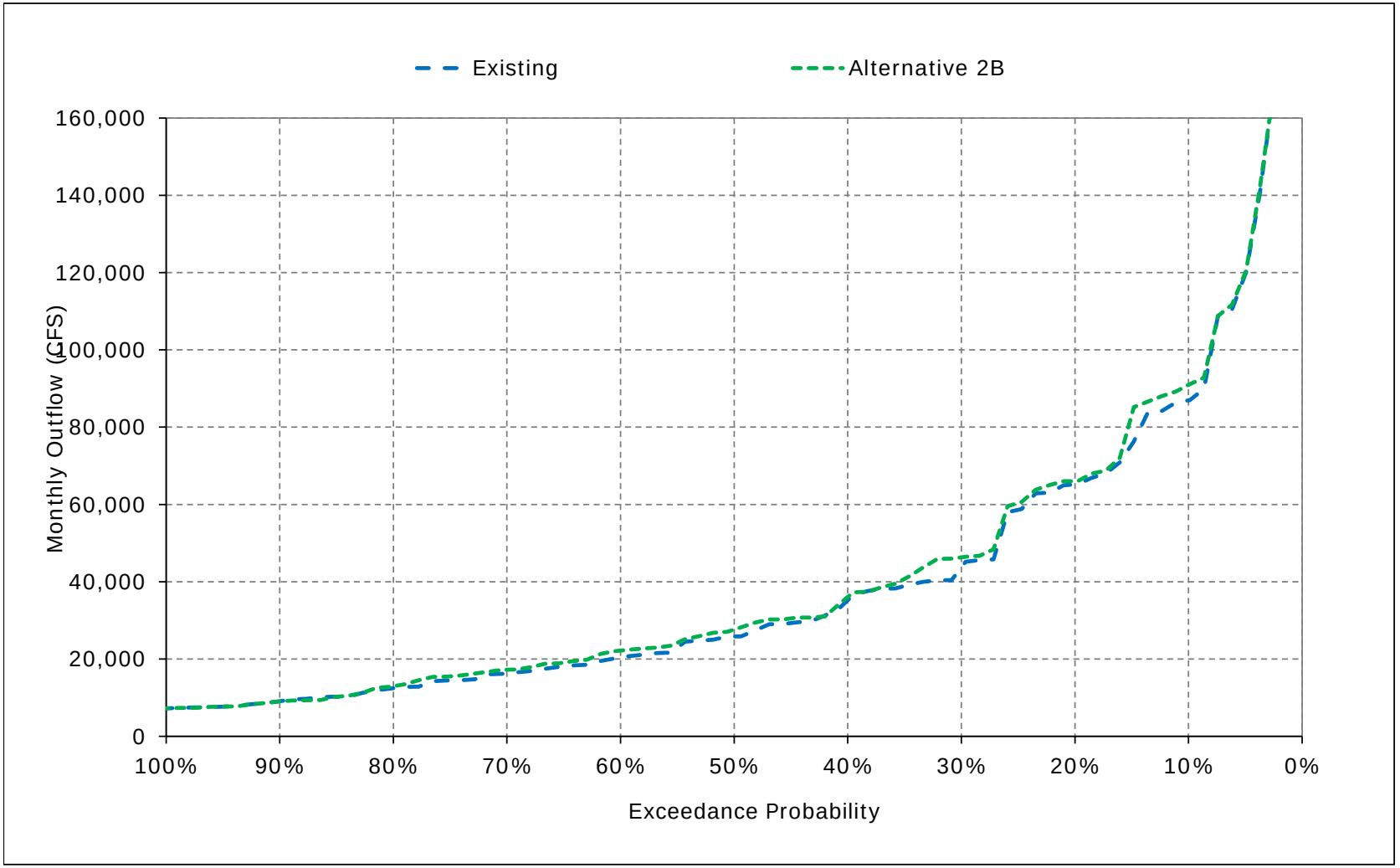


Figure 9-13. Delta Outflow, April

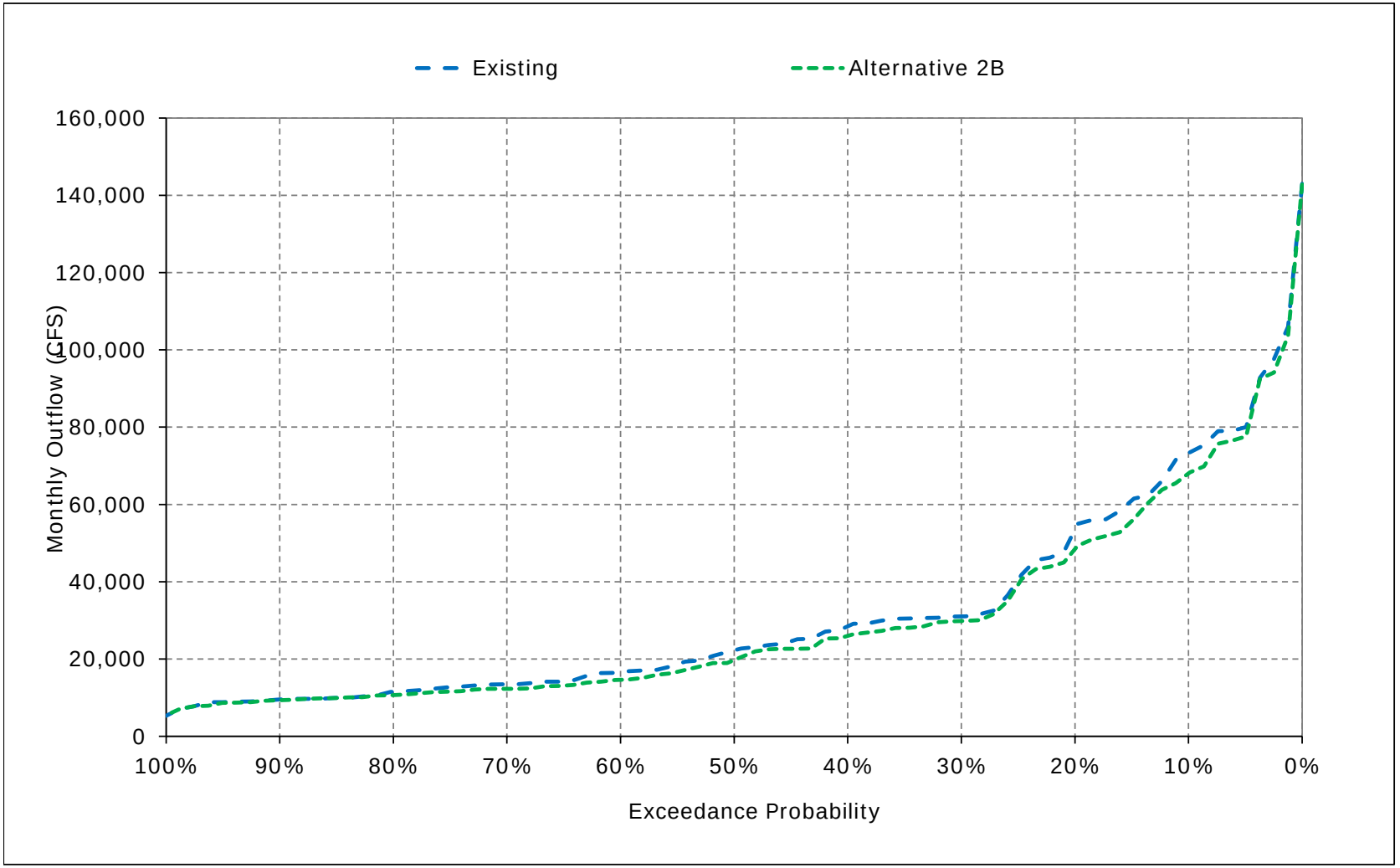


Figure 9-14. Delta Outflow, May

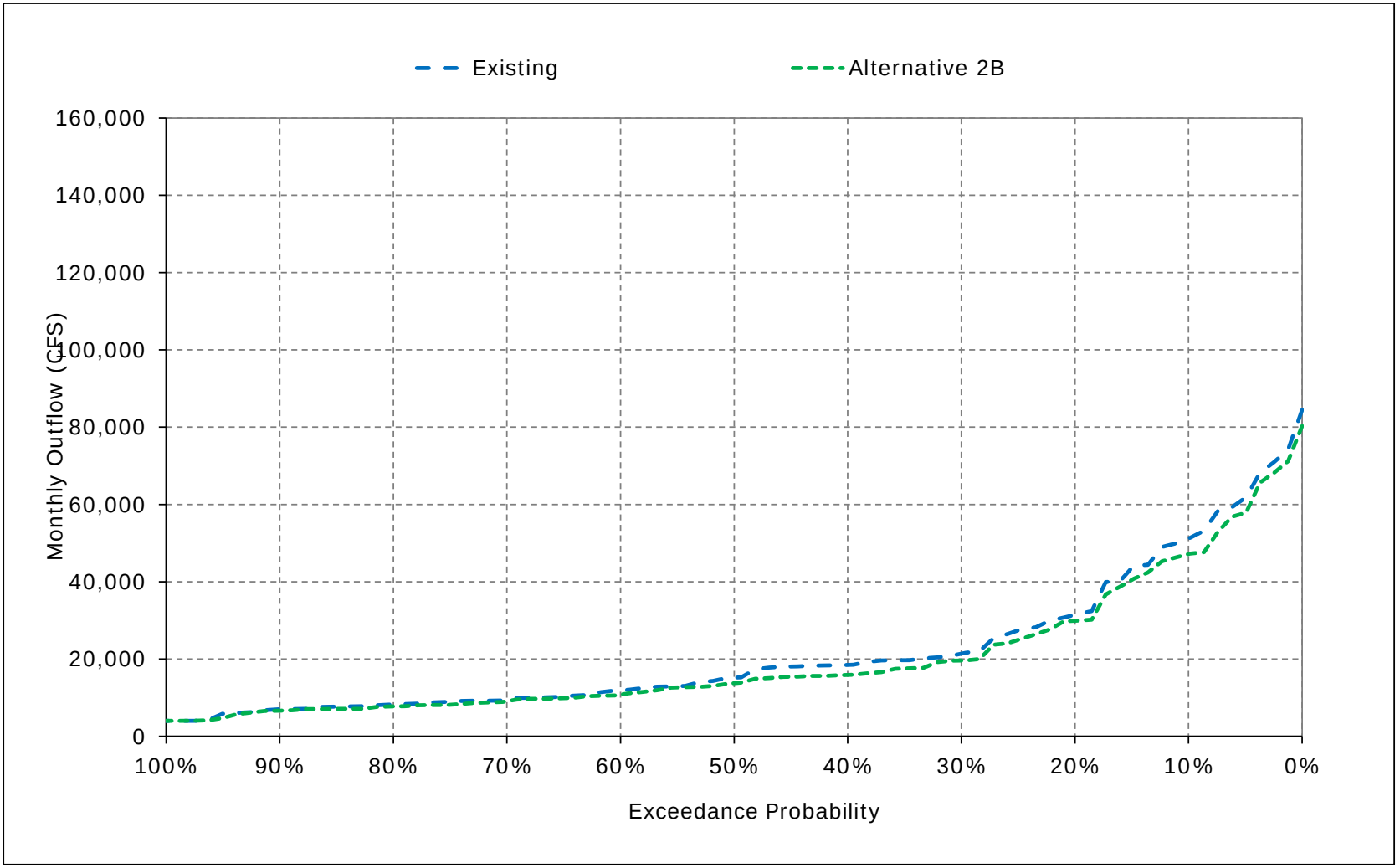


Figure 9-15. Delta Outflow, June

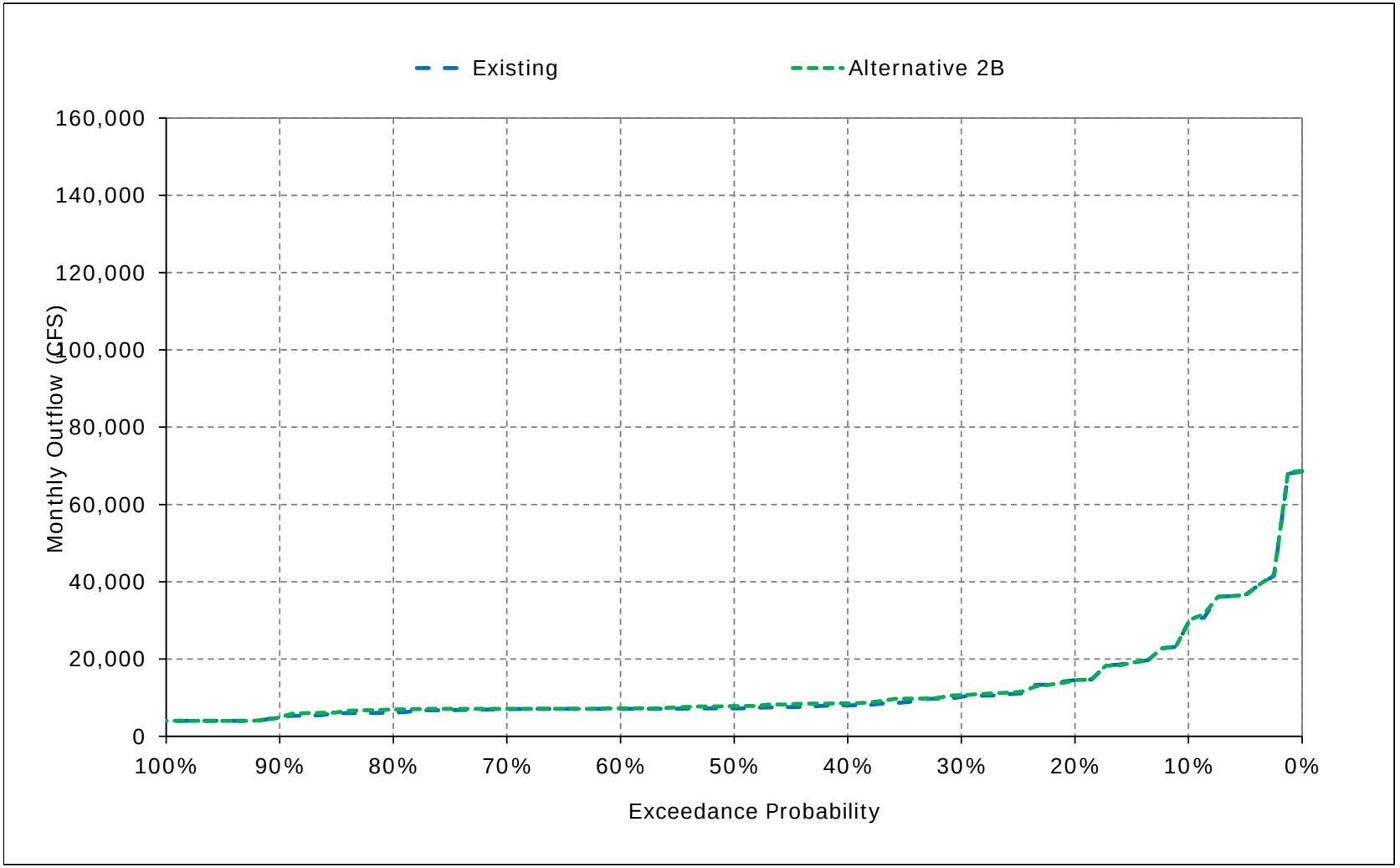


Figure 9-16. Delta Outflow, July

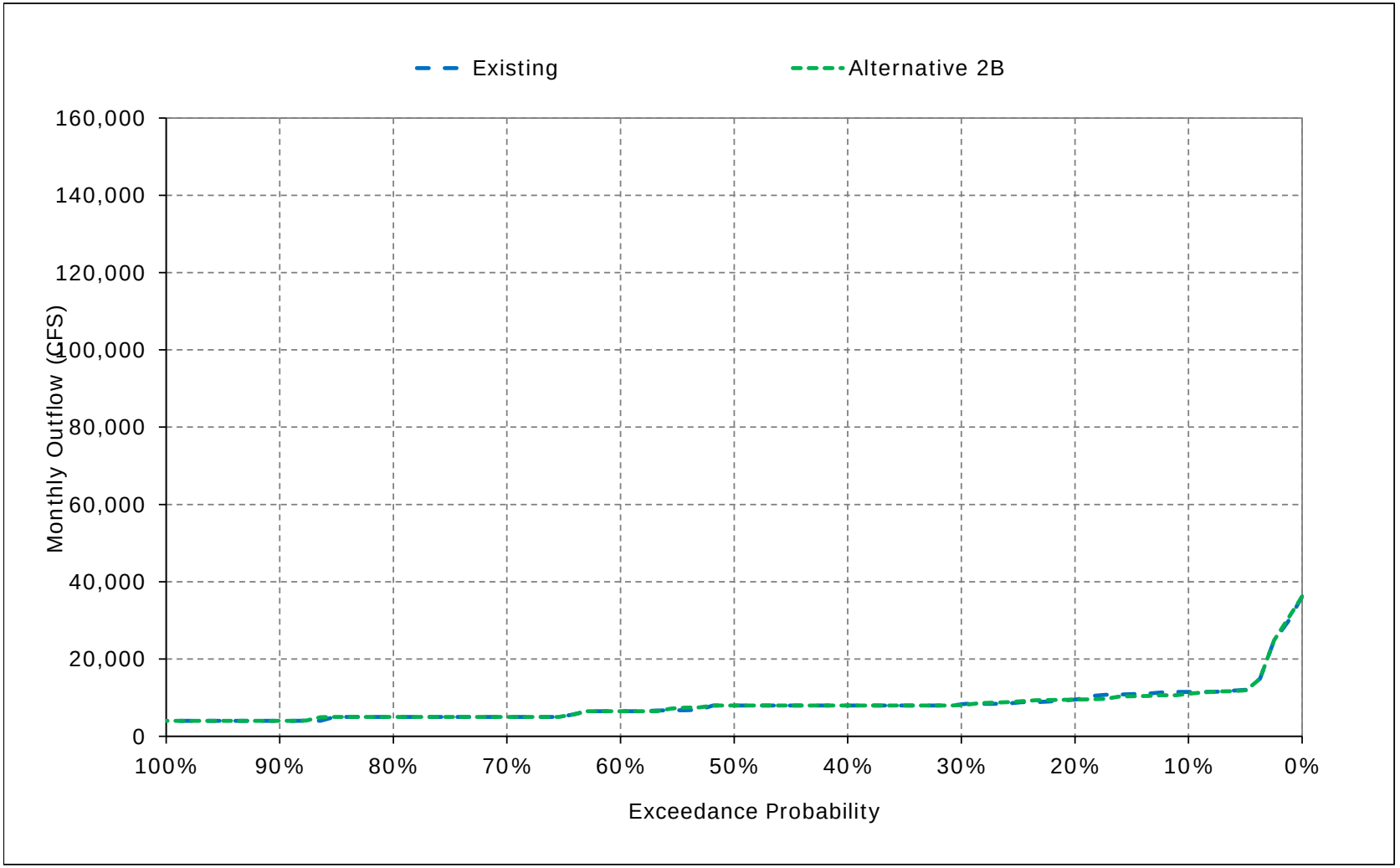


Figure 9-17. Delta Outflow, August

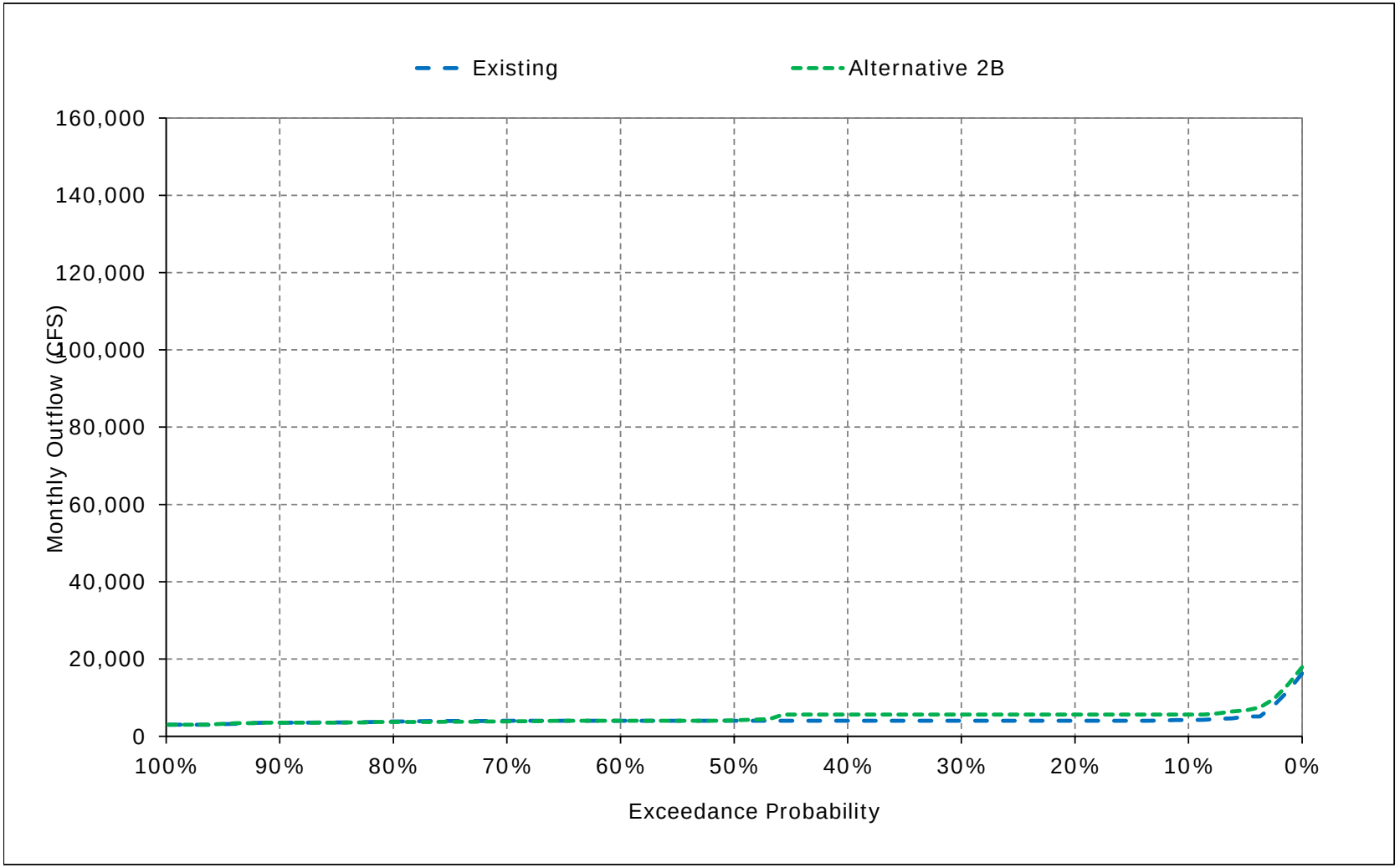
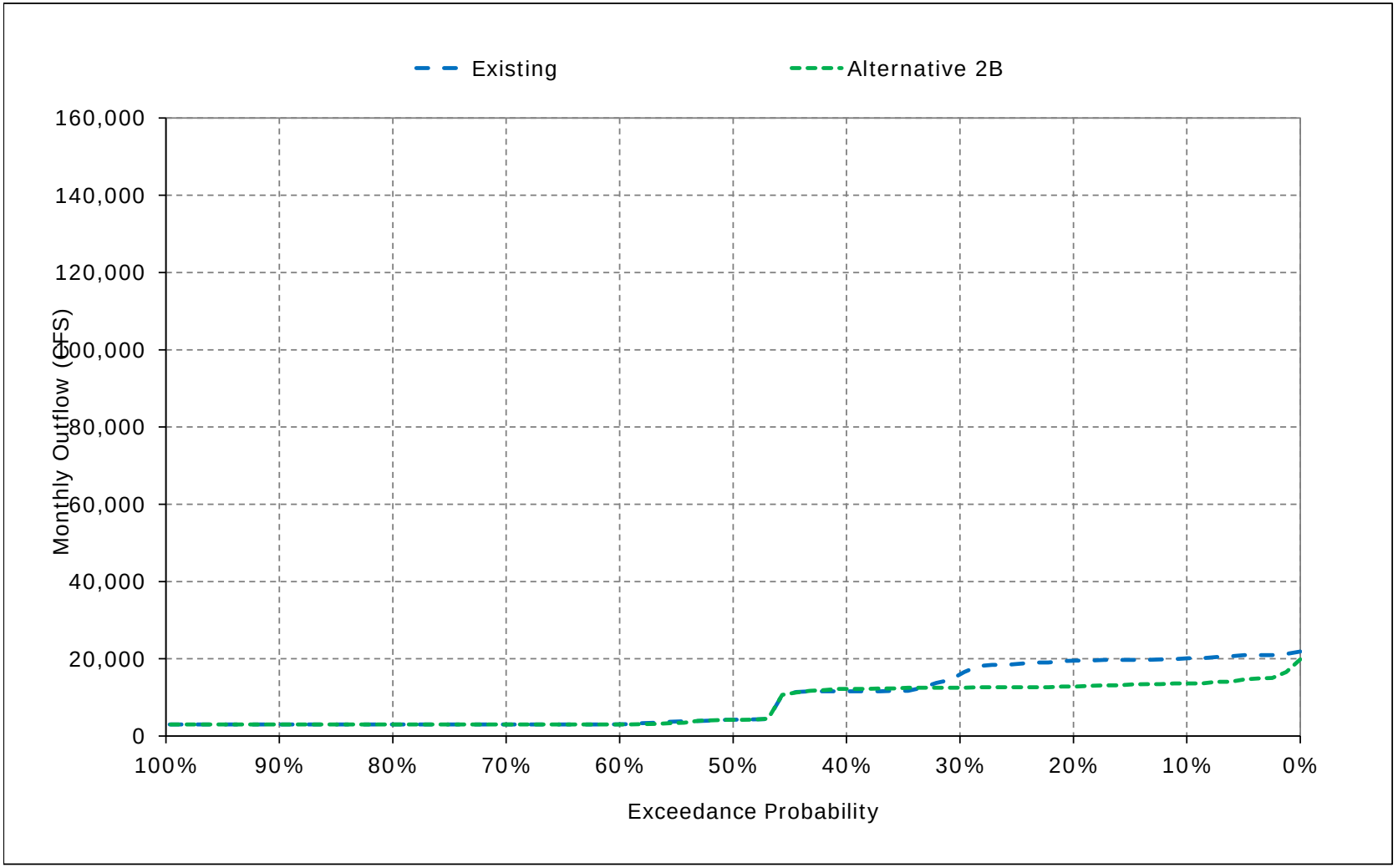


Figure 9-18. Delta Outflow, September



# Appendix C – Modeling

## Attachment 3-3 – Diversion Results (CalSim II)

***NOTE: Attachment 3-3 is a new attachment that has been added to the DEIR since initial publication, as part of the FEIR process. The additional attachment is not shown in underline for ease of reading.***

The following results of the CalSim II model are included for diversions at key project locations for the following alternatives:

- Existing Conditions
- Refined Alternative 2b

| Title | Model Parameter | Table Numbers | Figure Numbers |
|---|---|---|---|
| North Bay Aqueduct Exports | D403B | 1-1 | 1-1 to 1-18 |
| DCC Flow | C401B_DXC | 2-1 | 2-1 to 2-18 |
| Total Delta Exports | TOTAL_EXP | 3-1 | 3-1 to 3-18 |
| SWP Banks PP Exports | D419_SWP | 4-1 | 4-1 to 4-18 |
| CVP Banks PP Exports | D419_CVP | 5-1 | 5-1 to 5-18 |
| Banks PP Exports | D419 | 6-1 | 6-1 to 6-18 |
| Jones PP Exports | D418 | 7-1 | 7-1 to 7-18 |

Report formats

- Monthly tables comparing two scenarios (exceedance values, long-term average, and average by water year type)
- Monthly pattern charts (long-term average and average by water year type) including all scenarios
- Monthly exceedance charts (all months) including all scenarios

# Table 1-1. North Bay Aqueduct, Monthly Diversion

## Existing

| Statistic | Monthly Diversion (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 74 | 72 | 67 | 33 | 37 | 33 | 87 | 66 | 70 | 92 | 83 | 66 |
| 20% | 54 | 70 | 65 | 33 | 37 | 33 | 87 | 64 | 70 | 90 | 63 | 66 |
| 30% | 54 | 63 | 65 | 33 | 37 | 33 | 86 | 63 | 69 | 89 | 63 | 66 |
| 40% | 54 | 38 | 64 | 33 | 37 | 33 | 85 | 57 | 64 | 64 | 63 | 66 |
| 50% | 53 | 38 | 64 | 33 | 37 | 33 | 84 | 57 | 61 | 64 | 63 | 62 |
| 60% | 53 | 38 | 63 | 33 | 37 | 33 | 84 | 57 | 61 | 60 | 63 | 62 |
| 70% | 51 | 38 | 60 | 33 | 37 | 33 | 63 | 57 | 36 | 37 | 60 | 52 |
| 80% | 46 | 36 | 60 | 33 | 36 | 33 | 63 | 53 | 36 | 37 | 60 | 52 |
| 90% | 41 | 32 | 32 | 33 | 36 | 33 | 35 | 32 | 2 | 3 | 35 | 41 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 54 | 47 | 58 | 33 | 35 | 31 | 70 | 53 | 51 | 59 | 61 | 59 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 54 | 51 | 63 | 33 | 37 | 33 | 86 | 57 | 68 | 73 | 63 | 66 |
| Above Normal (15%) | 57 | 48 | 58 | 33 | 37 | 33 | 86 | 61 | 70 | 86 | 63 | 66 |
| Below Normal (17%) | 54 | 43 | 58 | 33 | 32 | 33 | 84 | 65 | 62 | 81 | 60 | 62 |
| Dry (22%) | 53 | 49 | 57 | 33 | 35 | 32 | 59 | 57 | 38 | 37 | 75 | 52 |
| Critical (15%) | 55 | 42 | 50 | 33 | 34 | 17 | 21 | 15 | 2 | 5 | 35 | 44 |

## Alternative 2B

| Statistic | Monthly Diversion (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 74 | 72 | 67 | 33 | 37 | 33 | 87 | 64 | 70 | 92 | 83 | 66 |
| 20% | 58 | 71 | 65 | 33 | 37 | 33 | 87 | 64 | 70 | 90 | 63 | 66 |
| 30% | 54 | 66 | 65 | 33 | 37 | 33 | 86 | 63 | 64 | 87 | 63 | 66 |
| 40% | 54 | 50 | 64 | 33 | 37 | 33 | 85 | 57 | 64 | 64 | 63 | 66 |
| 50% | 54 | 42 | 63 | 33 | 37 | 33 | 84 | 57 | 64 | 64 | 63 | 62 |
| 60% | 53 | 39 | 63 | 33 | 37 | 33 | 84 | 57 | 61 | 60 | 63 | 62 |
| 70% | 51 | 38 | 60 | 33 | 37 | 33 | 63 | 56 | 36 | 37 | 60 | 52 |
| 80% | 51 | 38 | 37 | 33 | 36 | 33 | 63 | 38 | 36 | 37 | 50 | 52 |
| 90% | 41 | 32 | 32 | 33 | 36 | 33 | 35 | 32 | 2 | 3 | 35 | 41 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 56 | 51 | 57 | 33 | 34 | 31 | 70 | 51 | 51 | 59 | 60 | 59 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 55 | 56 | 63 | 33 | 37 | 33 | 86 | 57 | 68 | 74 | 63 | 66 |
| Above Normal (15%) | 61 | 48 | 53 | 33 | 37 | 33 | 86 | 61 | 67 | 86 | 63 | 66 |
| Below Normal (17%) | 54 | 51 | 53 | 33 | 32 | 33 | 84 | 62 | 65 | 78 | 60 | 62 |
| Dry (22%) | 53 | 52 | 57 | 33 | 35 | 32 | 56 | 55 | 38 | 37 | 72 | 52 |
| Critical (15%) | 58 | 39 | 50 | 33 | 31 | 20 | 21 | 13 | 2 | 8 | 35 | 44 |

## Alternative 2B minus Existing

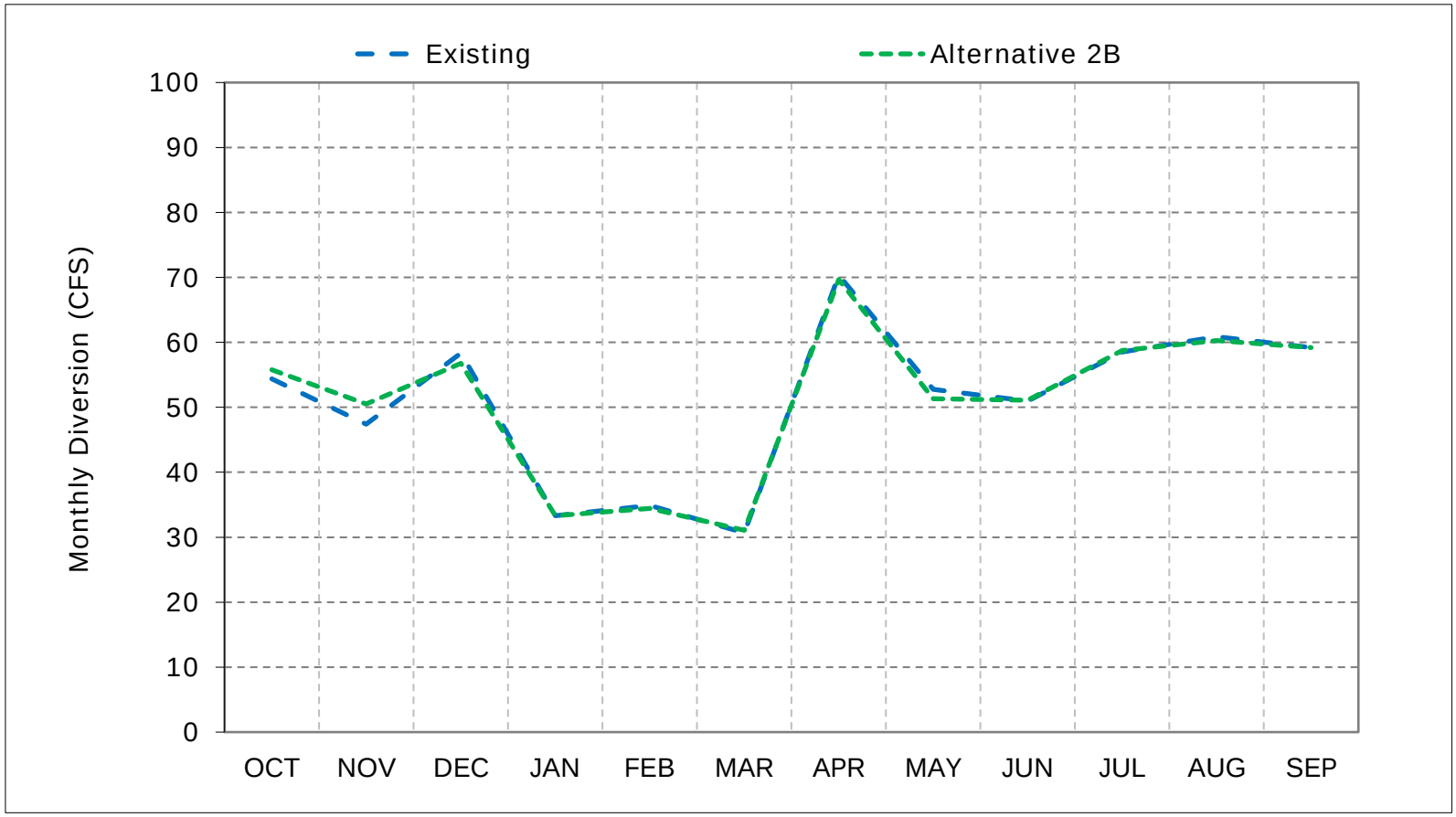
| Statistic | Monthly Diversion (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 | 0 | 0 | 0 |
| 20% | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30% | 0 | 3 | 0 | 0 | 0 | 0 | 0 | -1 | -5 | -3 | 0 | 0 |
| 40% | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50% | 1 | 4 | -2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| 60% | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80% | 5 | 1 | -23 | 0 | 0 | 0 | 0 | -15 | 0 | 0 | -9 | 0 |
| 90% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1 | 3 | -2 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | -1 | 0 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Above Normal (15%) | 4 | 0 | -5 | 0 | 0 | 0 | 0 | -1 | -3 | 0 | 0 | 0 |
| Below Normal (17%) | 0 | 8 | -5 | 0 | 0 | 0 | 0 | -3 | 4 | -2 | 0 | 0 |
| Dry (22%) | 0 | 3 | 0 | 0 | 0 | 0 | -3 | -2 | 0 | 0 | -3 | 0 |
| Critical (15%) | 3 | -2 | 0 | 0 | -3 | 3 | 0 | -3 | 0 | 3 | 0 | 0 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

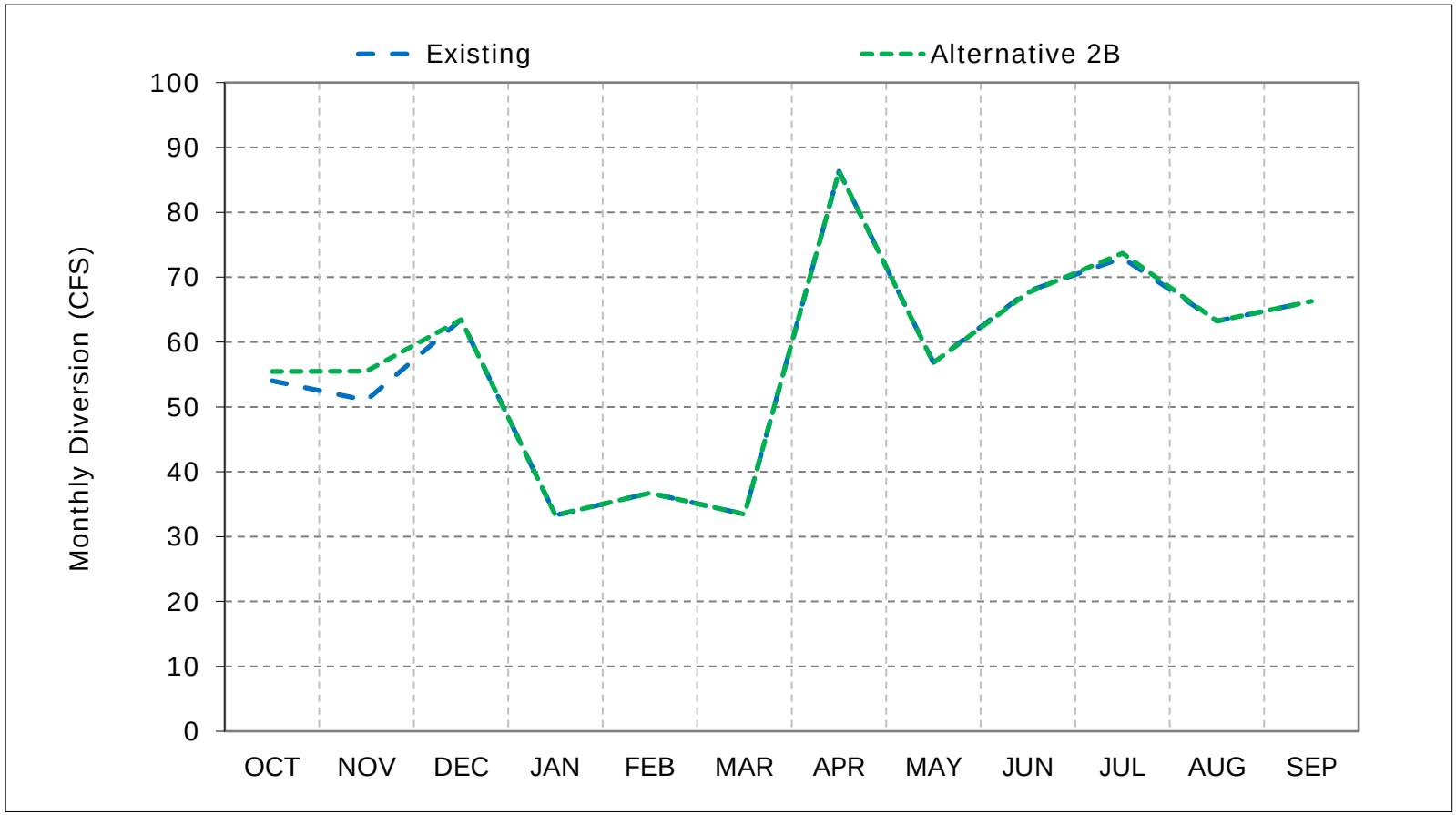
Figure 1-1. North Bay Aqueduct, Long-Term Average Diversion




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

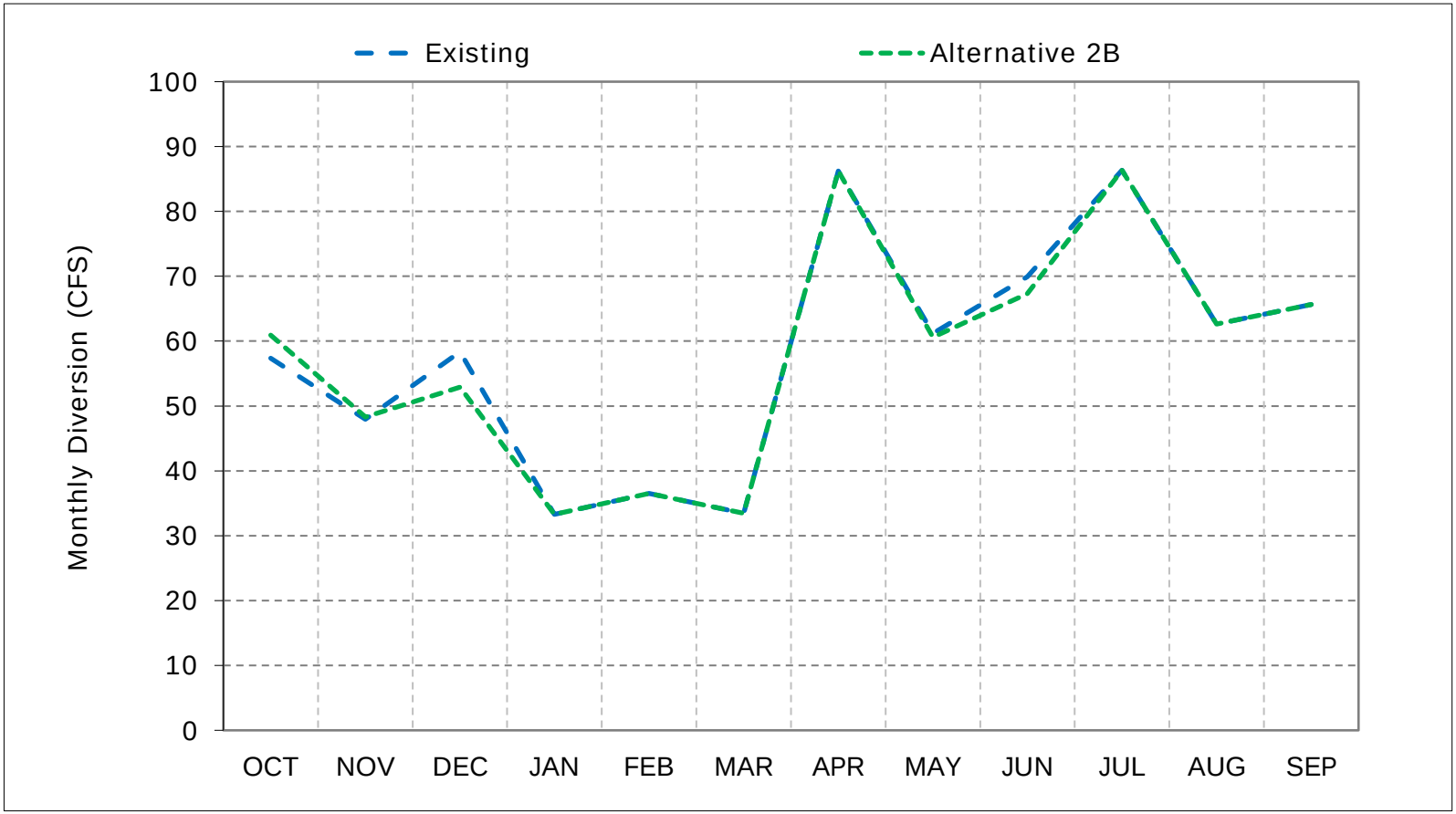
*These results are displayed with water year - year type sorting.

Figure 1-2. North Bay Aqueduct, Wet Year Average Diversion



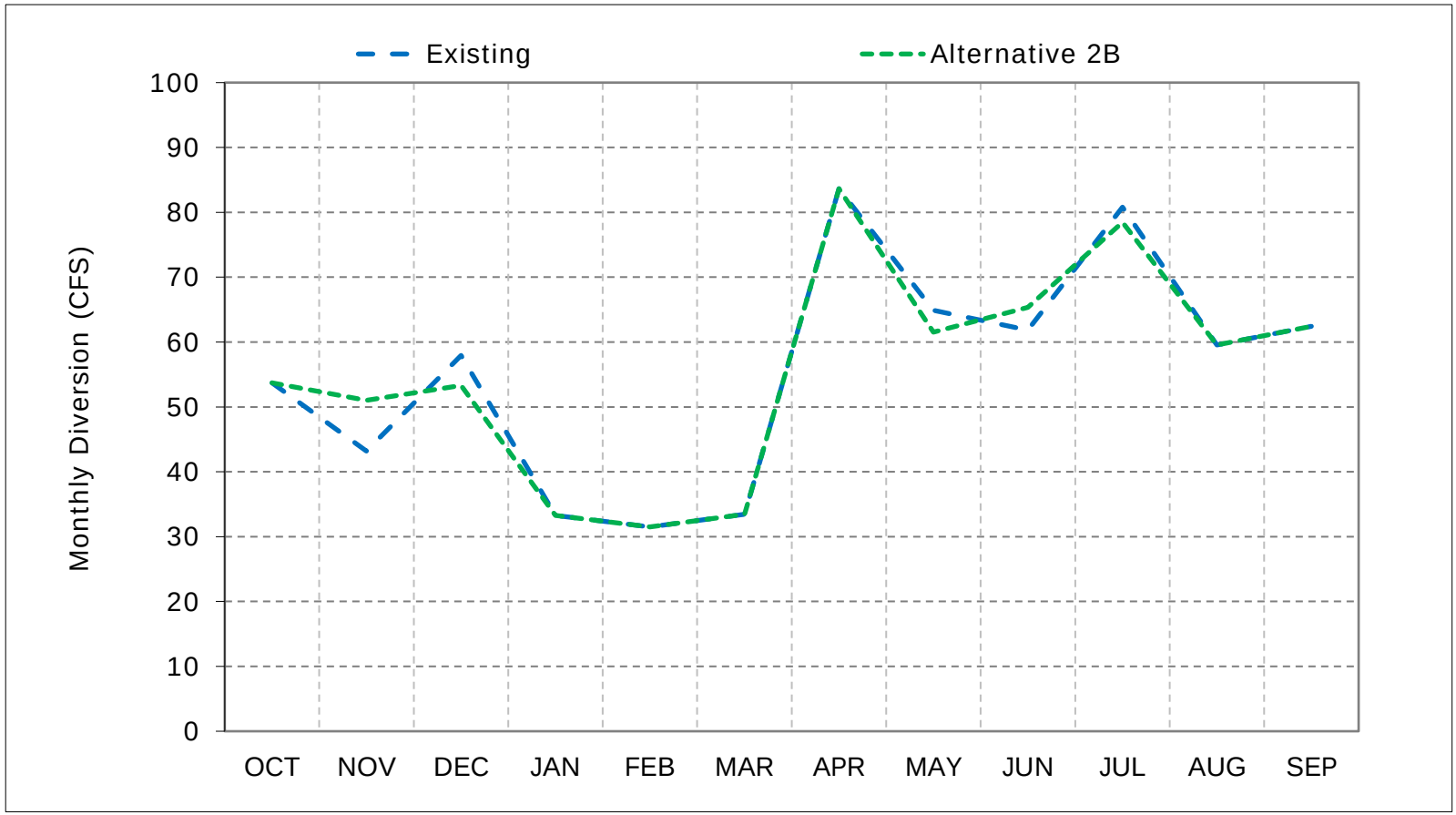

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-3. North Bay Aqueduct, Above Normal Year Average Diversion



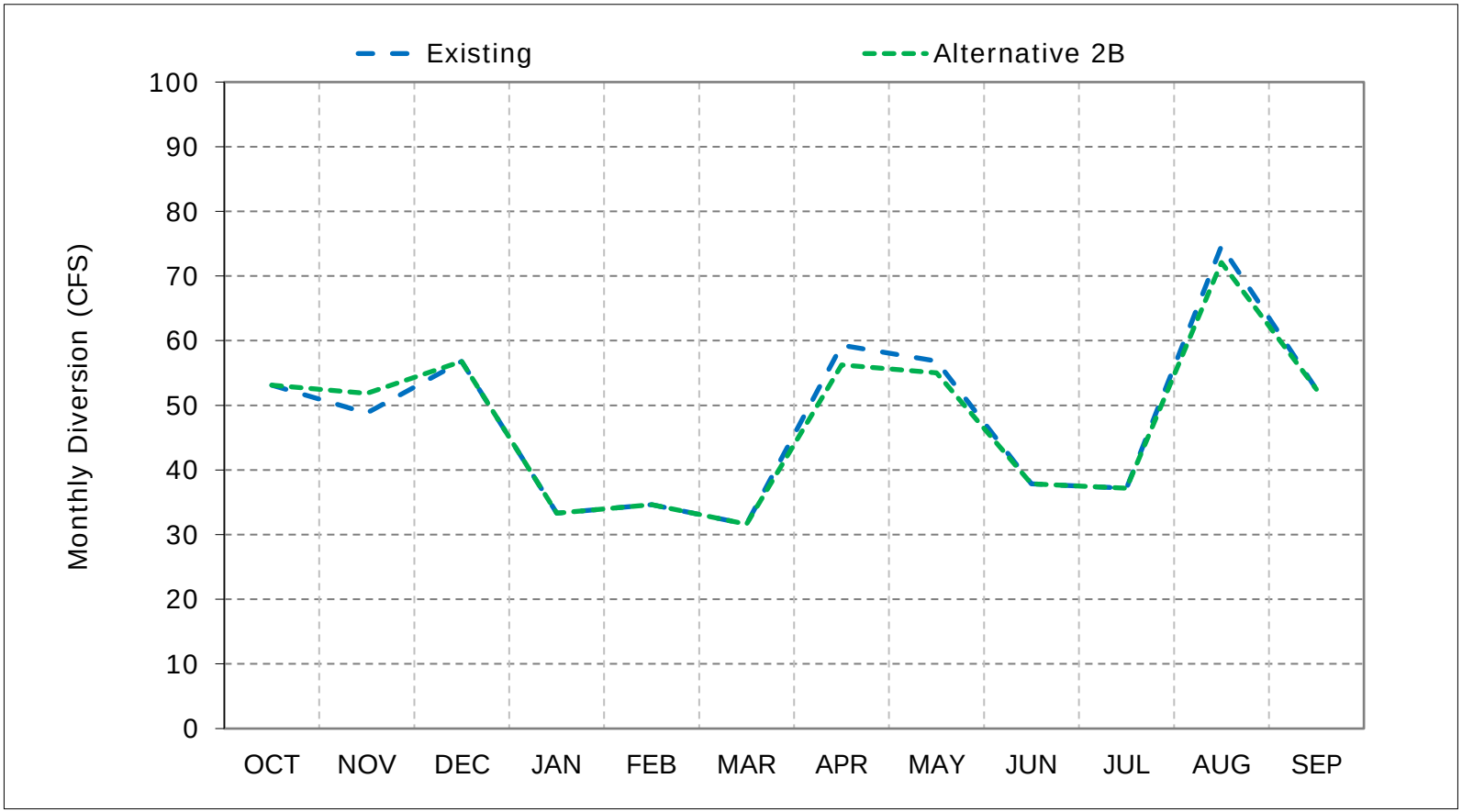

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-4. North Bay Aqueduct, Below Normal Year Average Diversion



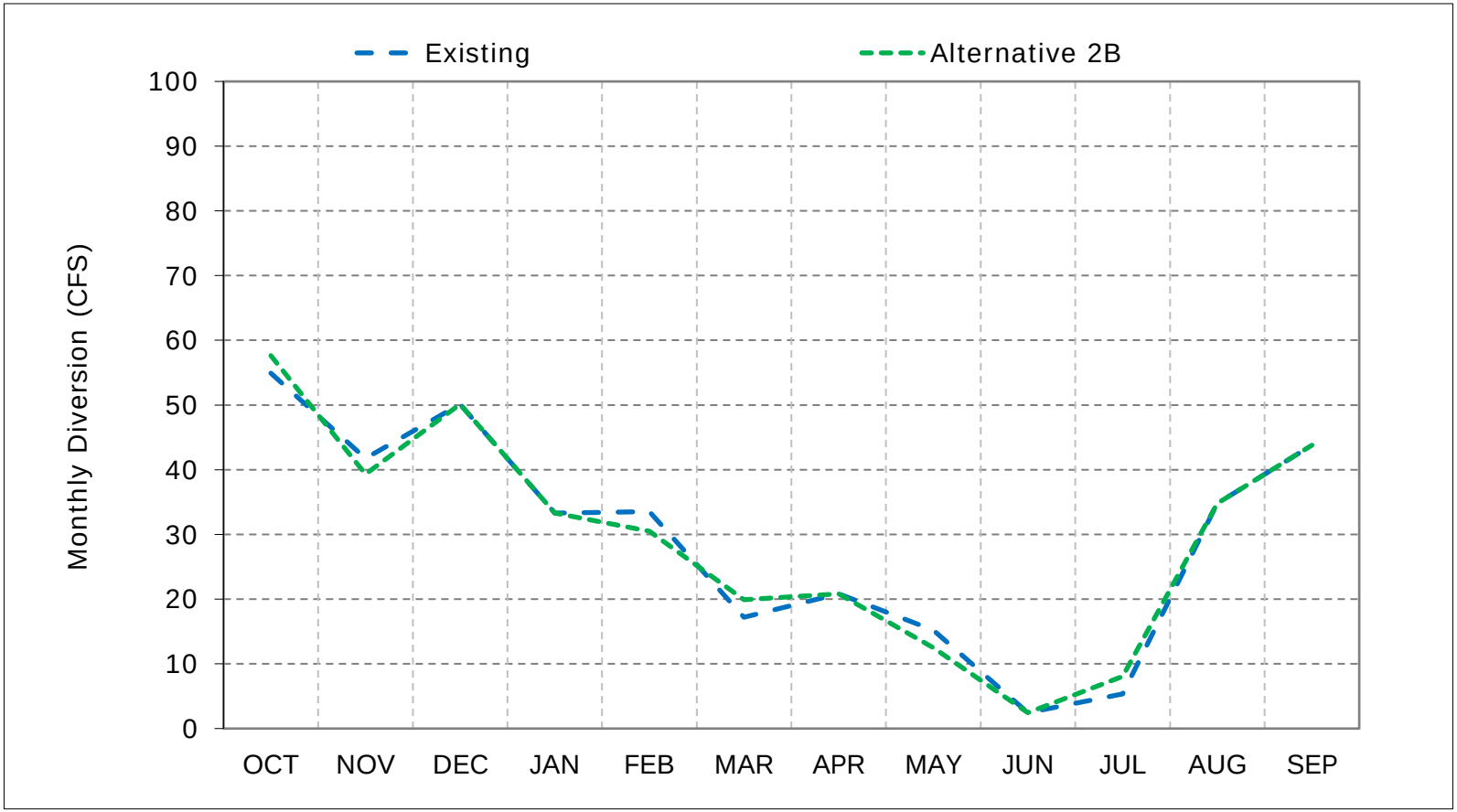

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-5. North Bay Aqueduct, Dry Year Average Diversion




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-6. North Bay Aqueduct, Critical Year Average Diversion




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-7. North Bay Aqueduct, October

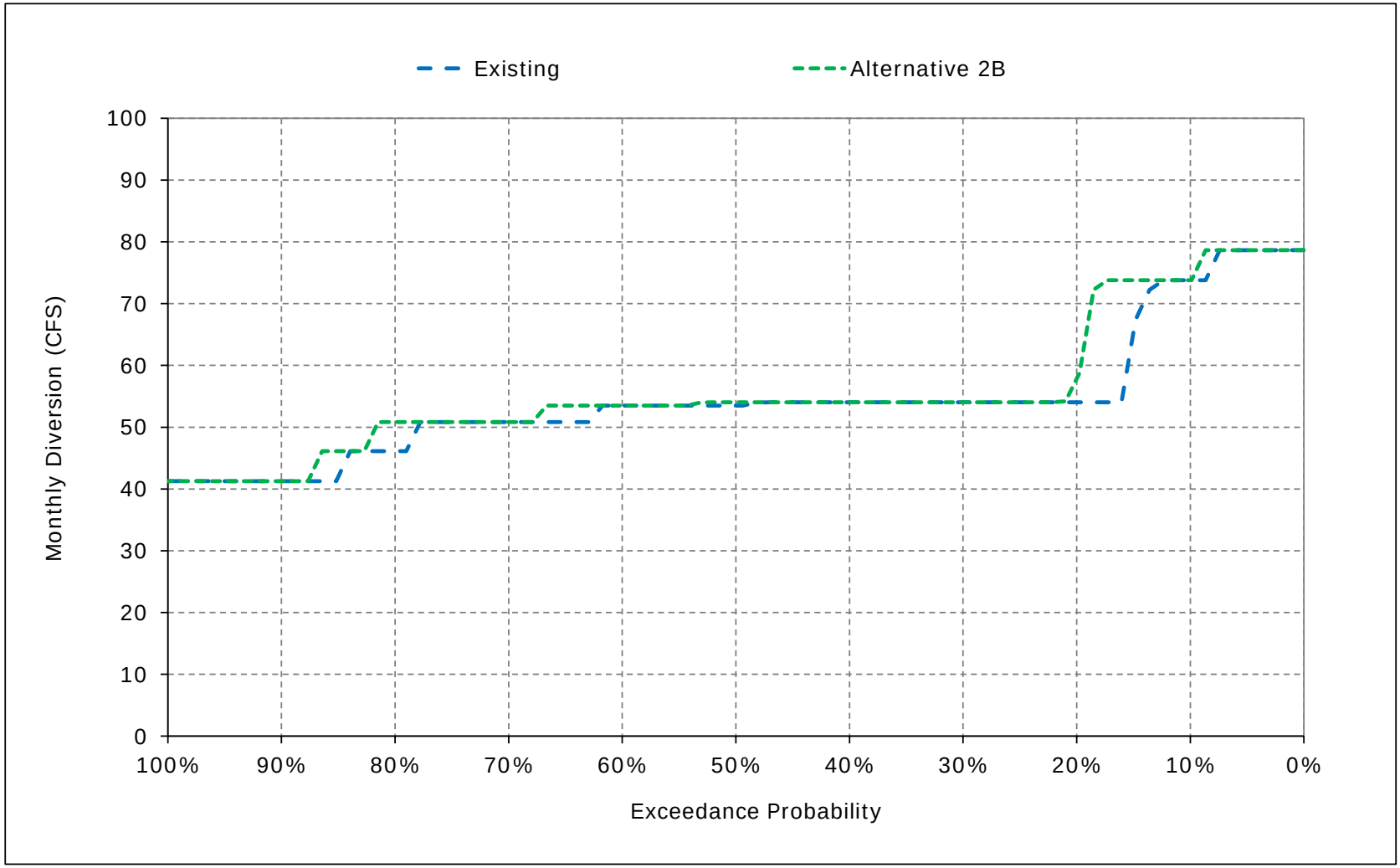


Figure 1-8. North Bay Aqueduct, November

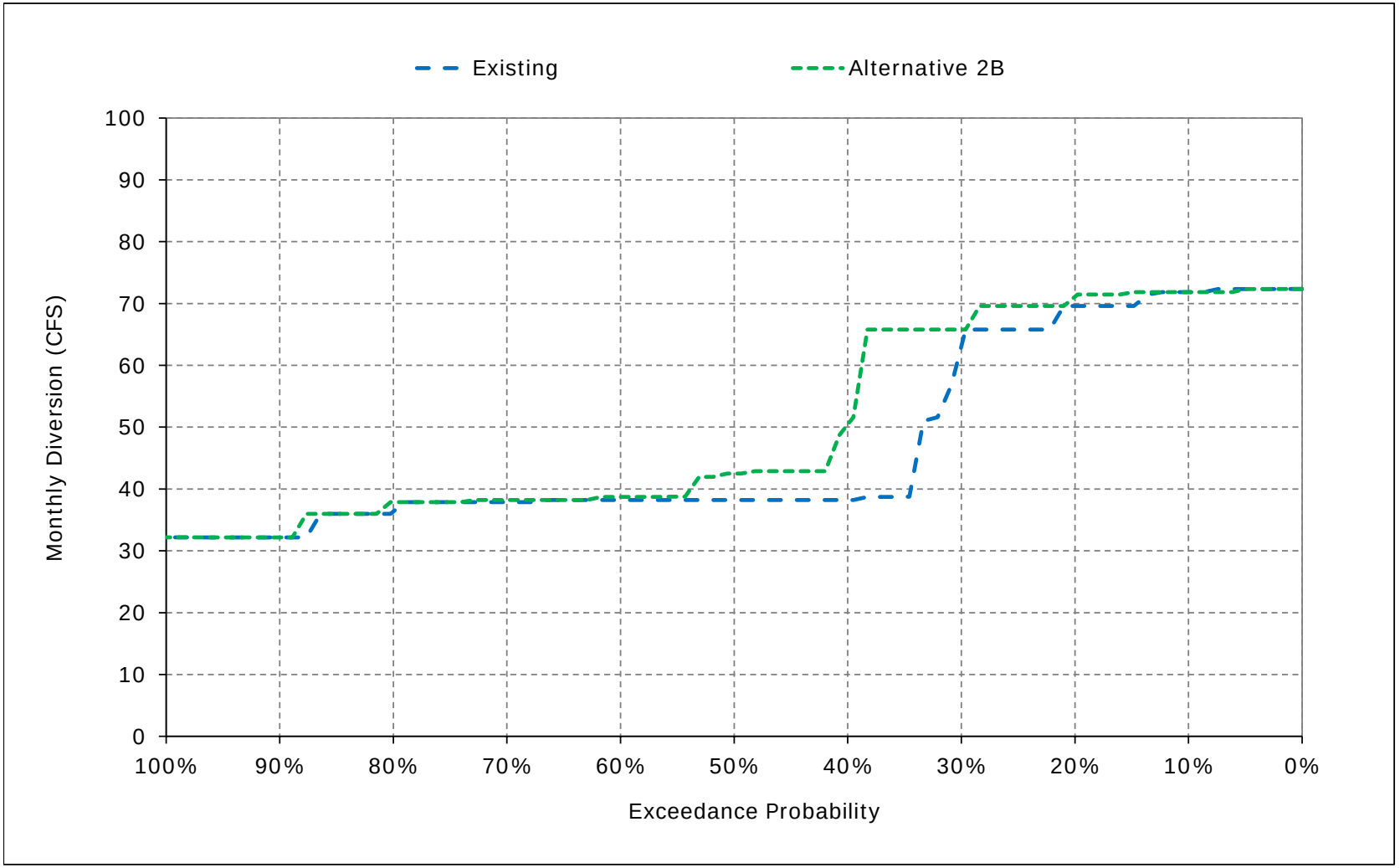


Figure 1-9. North Bay Aqueduct, December

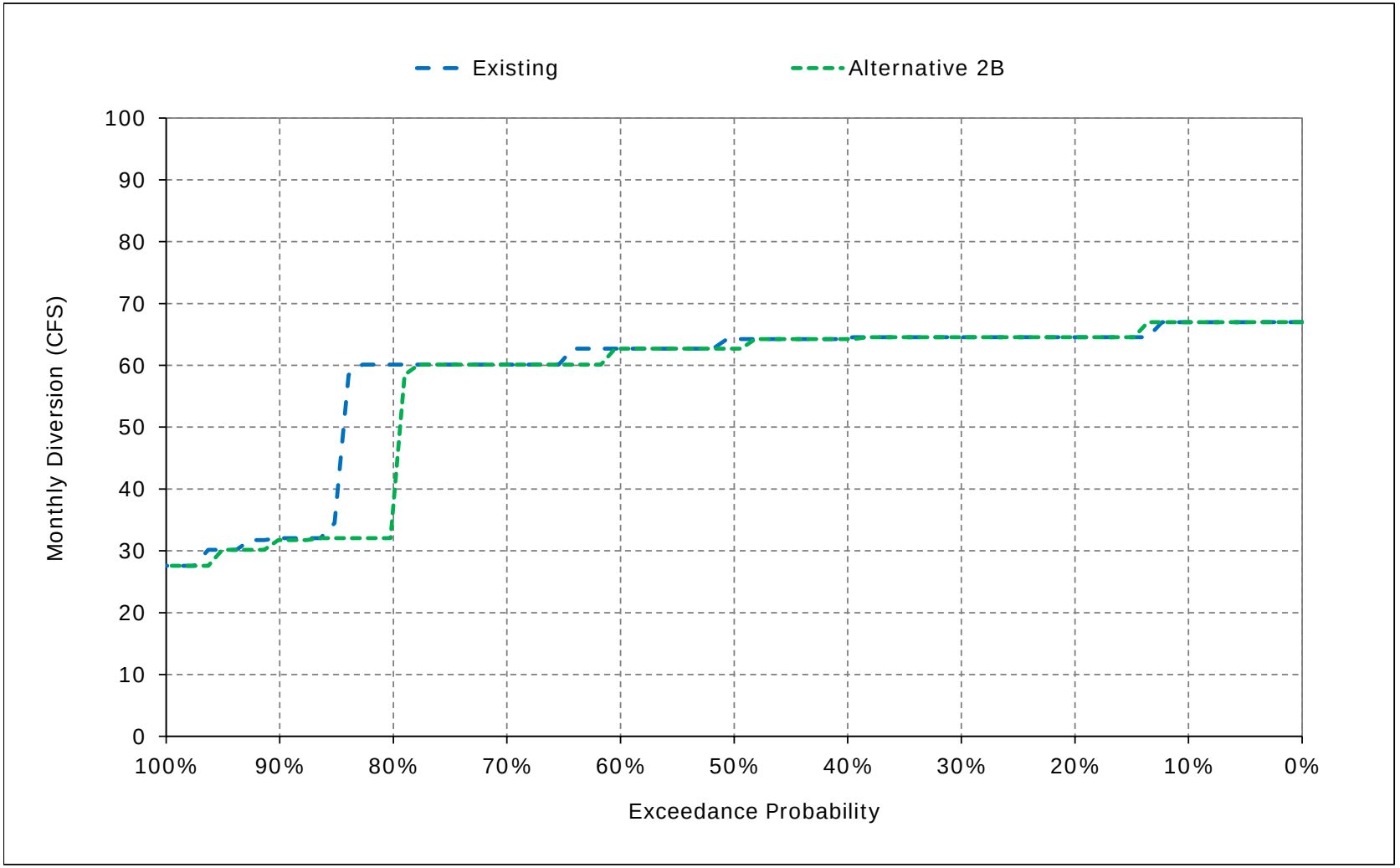


Figure 1-10. North Bay Aqueduct, January

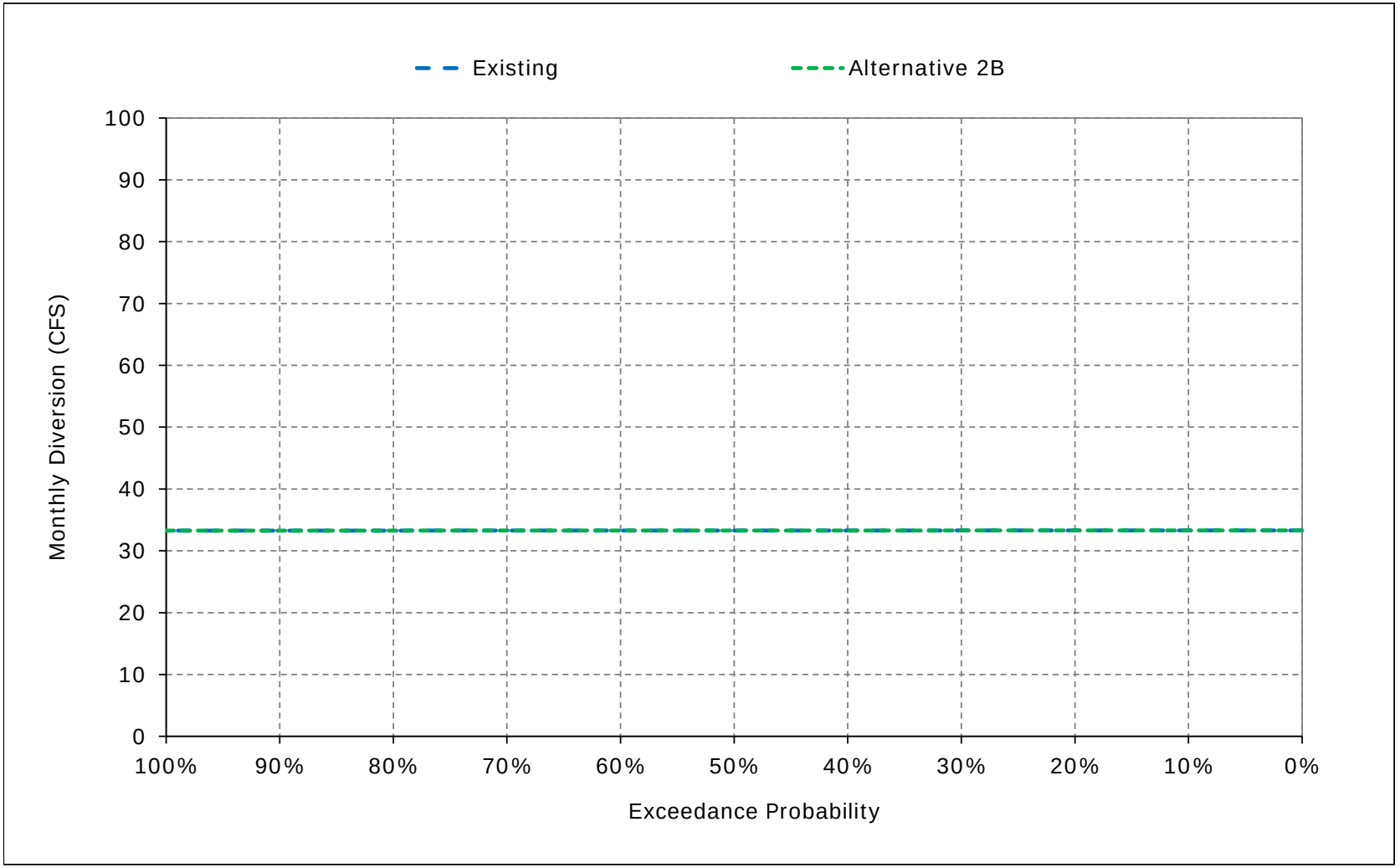


Figure 1-11. North Bay Aqueduct, February

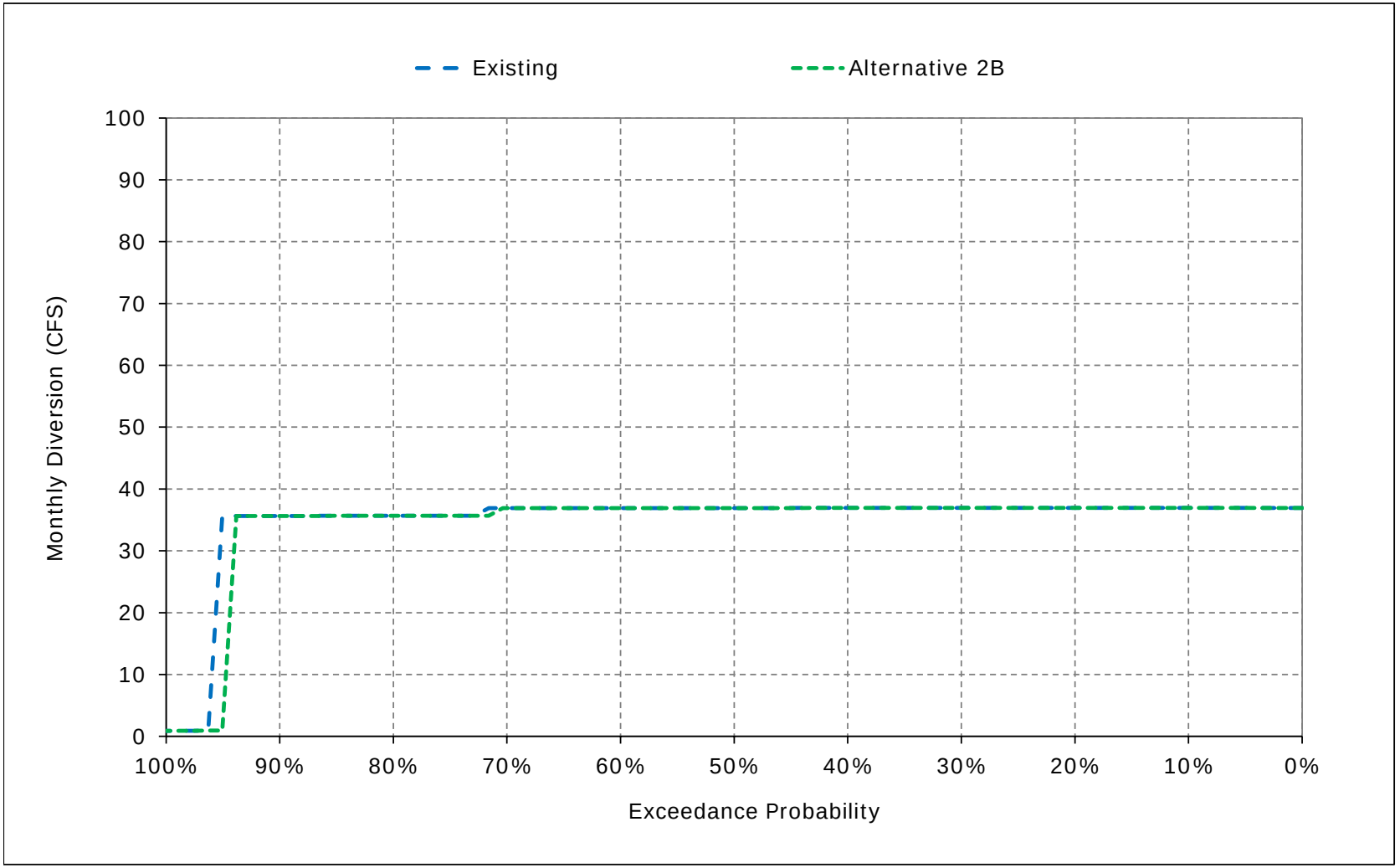


Figure 1-12. North Bay Aqueduct, March

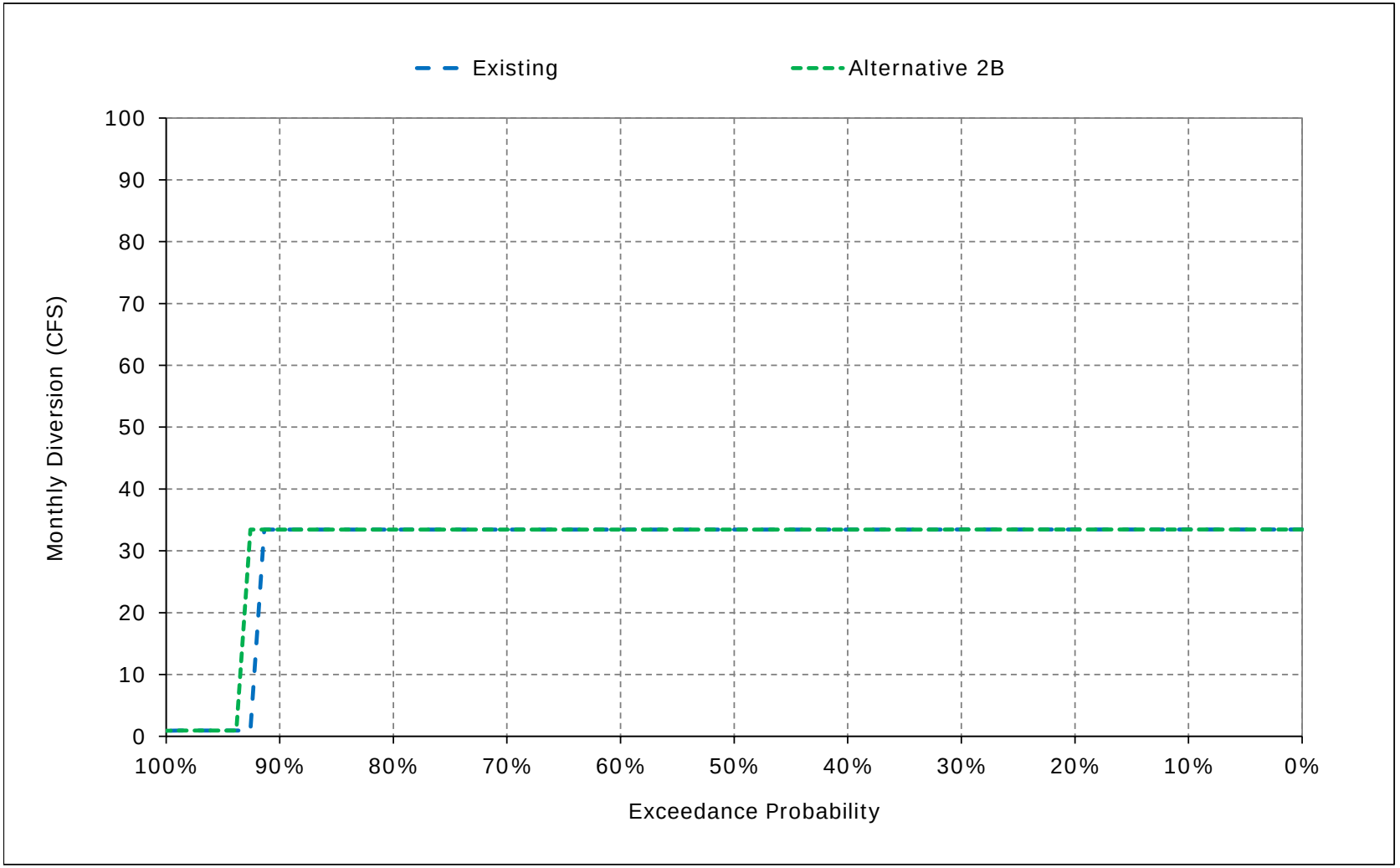


Figure 1-13. North Bay Aqueduct, April

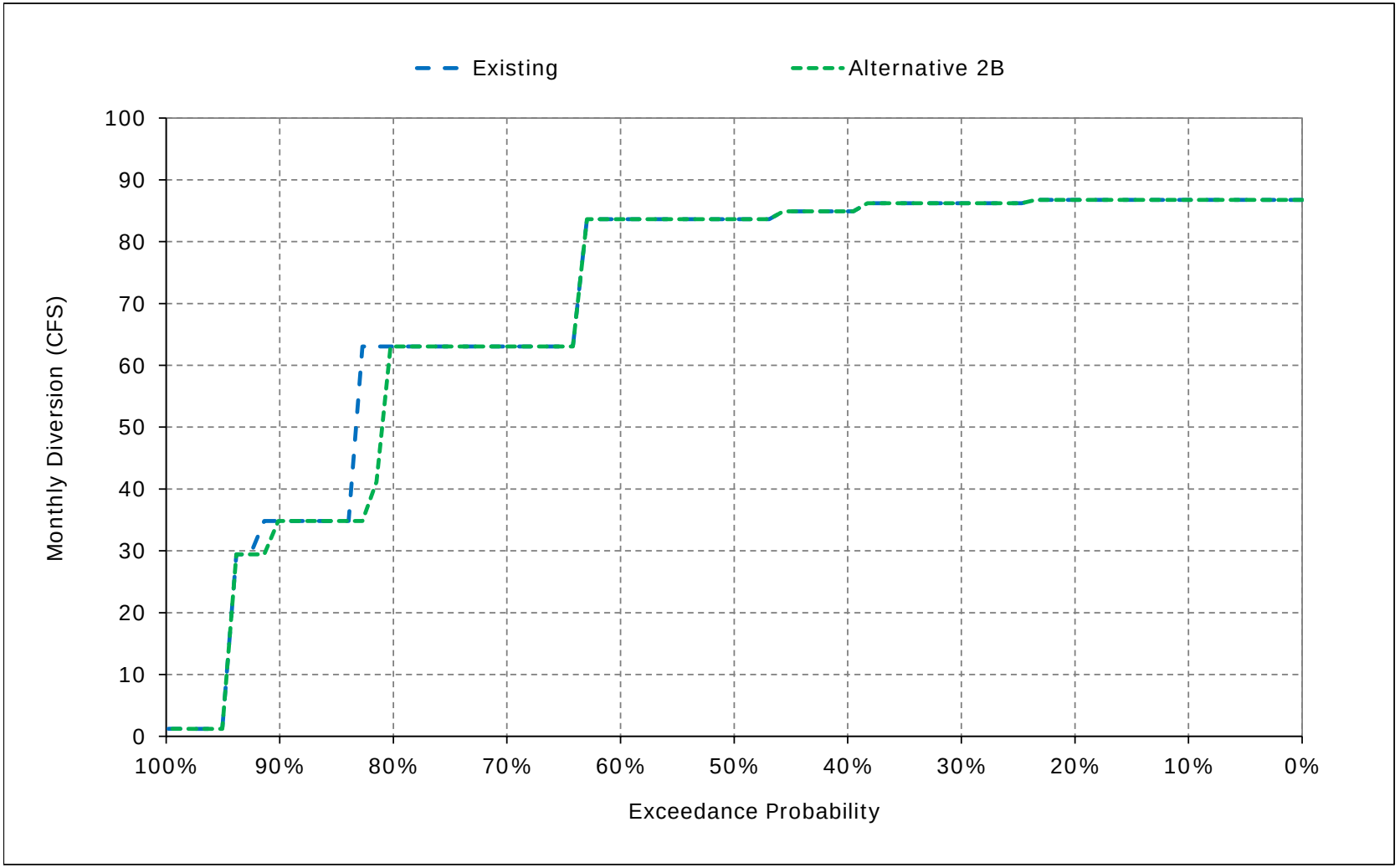


Figure 1-14. North Bay Aqueduct, May

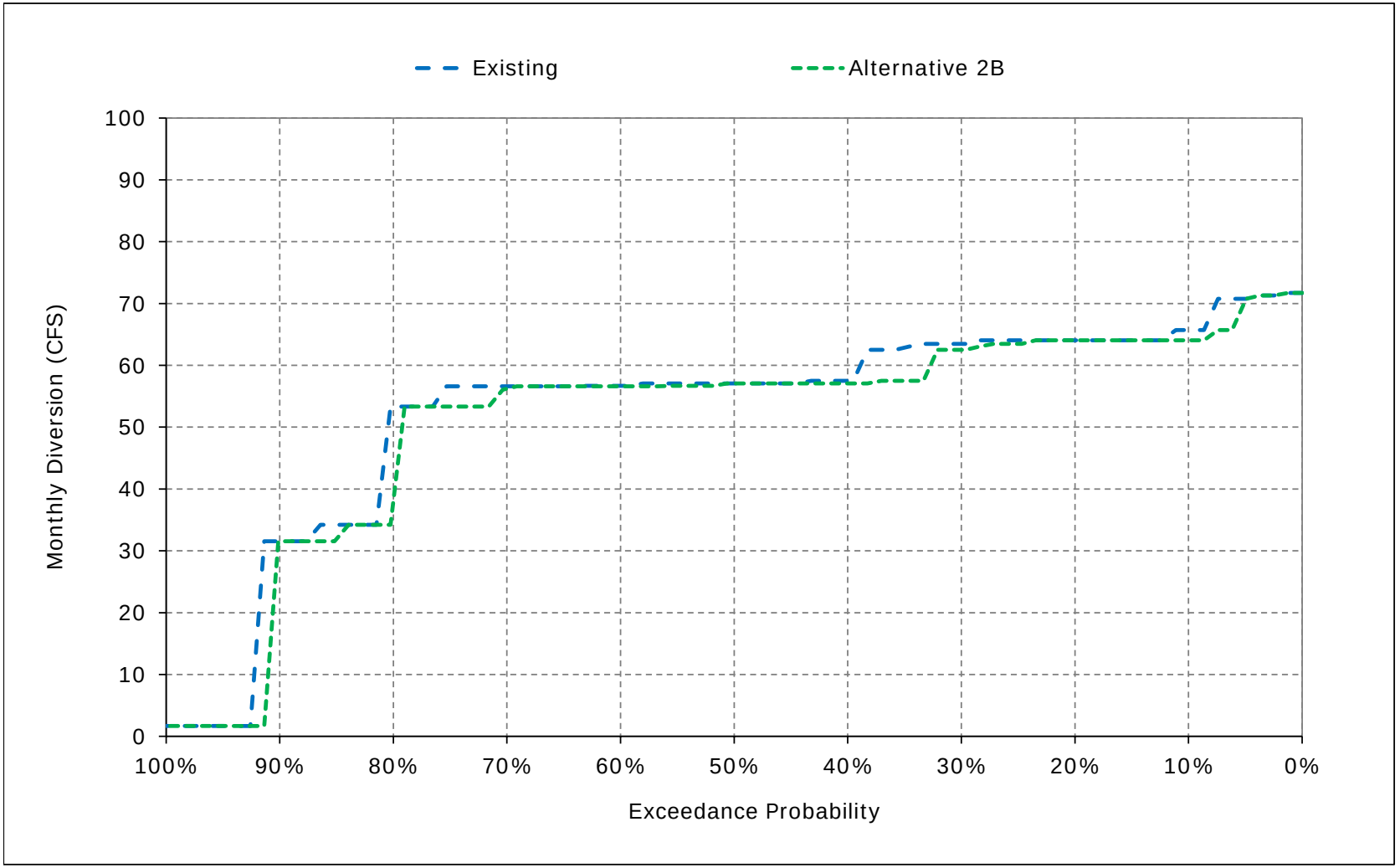


Figure 1-15. North Bay Aqueduct, June

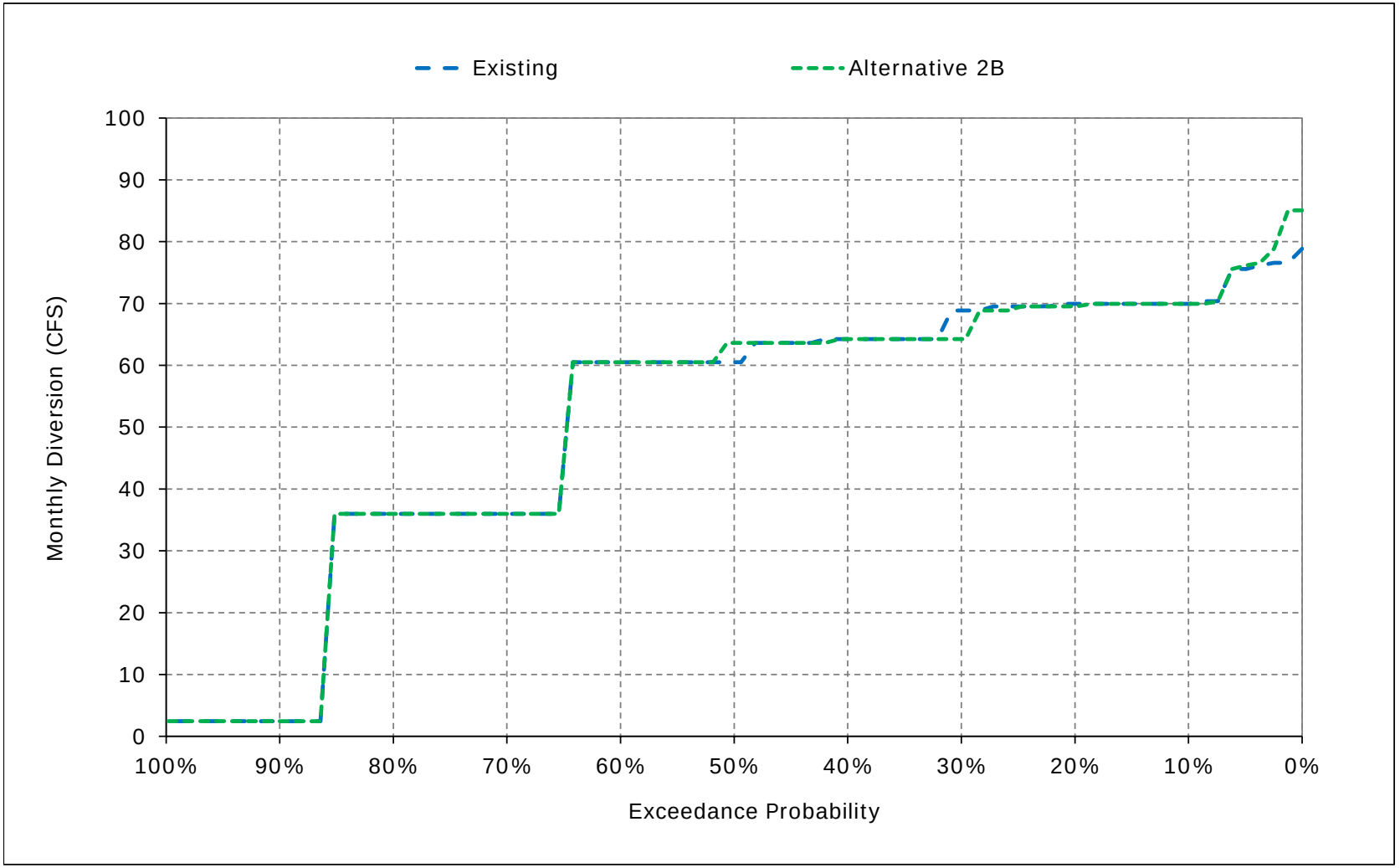


Figure 1-16. North Bay Aqueduct, July

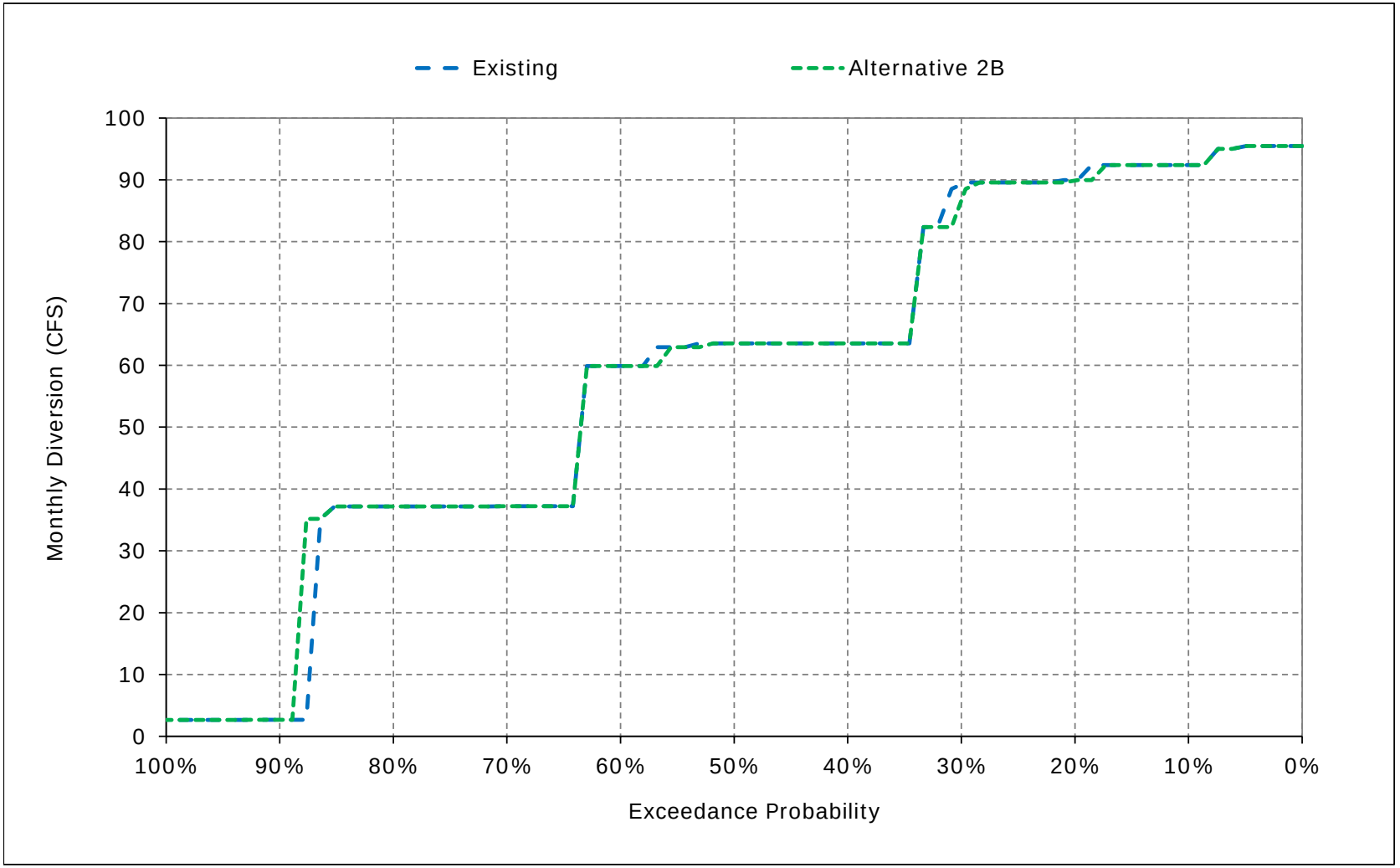


Figure 1-17. North Bay Aqueduct, August

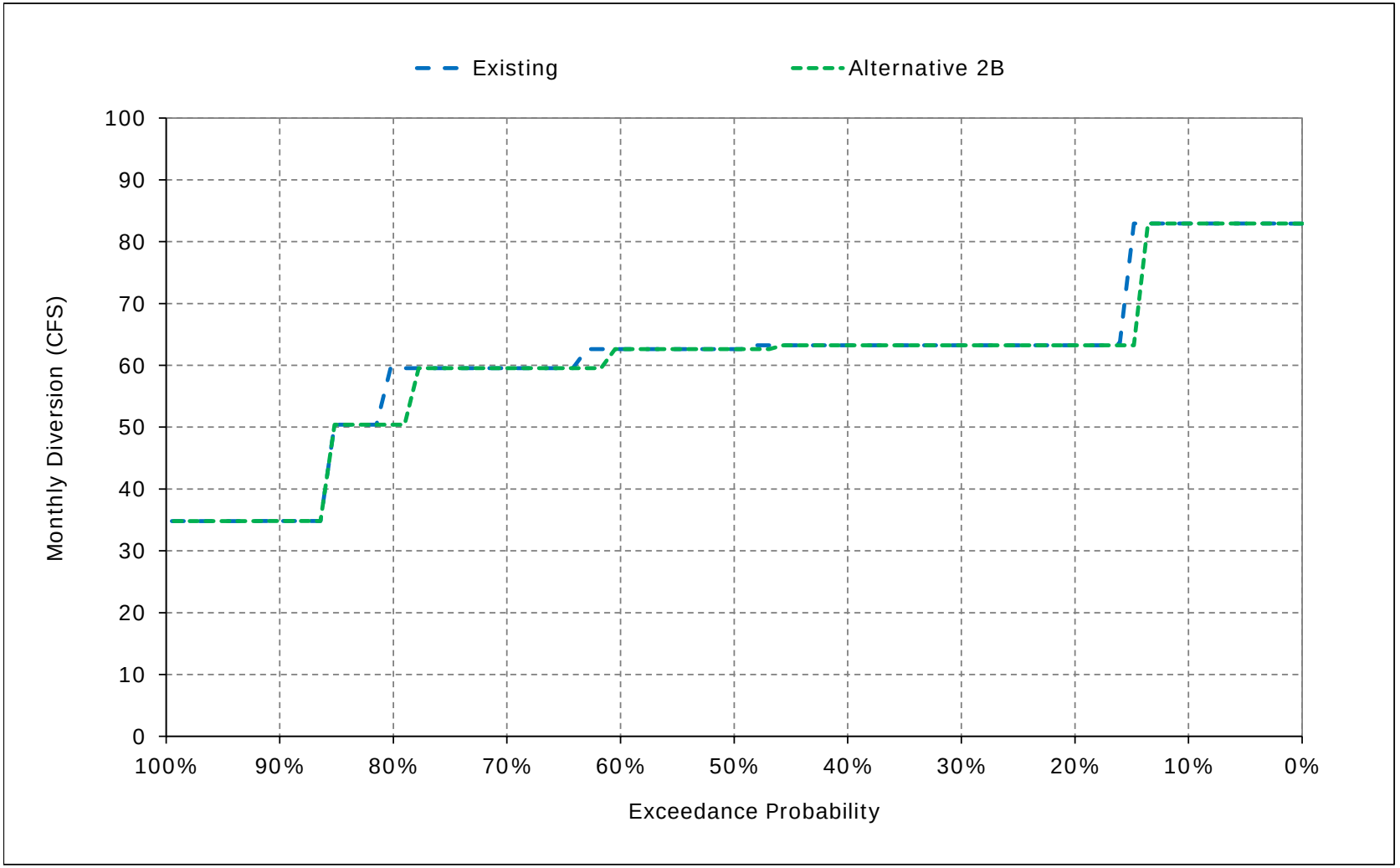


Figure 1-18. North Bay Aqueduct, September

# Table 2-1. DCC Flow, Monthly Flow

## Existing

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2,148 | 1,277 | 922 | 0 | 0 | 0 | 0 | 0 | 3,039 | 4,572 | 3,153 | 4,268 |
| 20% | 2,080 | 1,142 | 861 | 0 | 0 | 0 | 0 | 0 | 2,446 | 4,276 | 3,015 | 2,858 |
| 30% | 1,881 | 1,008 | 776 | 0 | 0 | 0 | 0 | 0 | 2,368 | 4,013 | 2,970 | 2,314 |
| 40% | 1,765 | 883 | 685 | 0 | 0 | 0 | 0 | 0 | 2,308 | 3,701 | 2,925 | 1,875 |
| 50% | 1,613 | 797 | 485 | 0 | 0 | 0 | 0 | 0 | 2,230 | 3,553 | 2,885 | 1,789 |
| 60% | 1,486 | 523 | 0 | 0 | 0 | 0 | 0 | 0 | 2,065 | 3,244 | 2,680 | 1,468 |
| 70% | 1,446 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 1,944 | 3,049 | 1,947 | 1,213 |
| 80% | 1,208 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,733 | 2,726 | 1,708 | 0 |
| 90% | 1,157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130 | 1,907 | 1,527 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1,596 | 645 | 436 | 0 | 0 | 0 | 0 | 0 | 2,061 | 3,402 | 2,526 | 1,828 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 1,419 | 450 | 107 | 0 | 0 | 0 | 0 | 0 | 2,060 | 3,754 | 3,021 | 690 |
| Above Normal (15%) | 1,669 | 516 | 417 | 0 | 0 | 0 | 0 | 0 | 1,820 | 4,072 | 3,046 | 4,186 |
| Below Normal (17%) | 1,827 | 783 | 679 | 0 | 0 | 0 | 0 | 0 | 2,331 | 3,879 | 2,887 | 2,407 |
| Dry (22%) | 1,705 | 716 | 567 | 0 | 0 | 0 | 0 | 0 | 2,240 | 3,103 | 1,796 | 1,775 |
| Critical (15%) | 1,470 | 930 | 684 | 0 | 0 | 0 | 0 | 0 | 1,723 | 1,865 | 1,607 | 1,340 |

## Alternative 2B

| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2,003 | 1,597 | 995 | 0 | 0 | 0 | 0 | 0 | 3,040 | 4,389 | 3,159 | 4,479 |
| 20% | 1,859 | 1,492 | 843 | 0 | 0 | 0 | 0 | 0 | 2,510 | 4,211 | 3,040 | 4,395 |
| 30% | 1,715 | 1,306 | 758 | 0 | 0 | 0 | 0 | 0 | 2,434 | 3,977 | 2,978 | 4,233 |
| 40% | 1,599 | 1,066 | 645 | 0 | 0 | 0 | 0 | 0 | 2,392 | 3,650 | 2,941 | 3,701 |
| 50% | 1,503 | 987 | 412 | 0 | 0 | 0 | 0 | 0 | 2,310 | 3,548 | 2,881 | 2,724 |
| 60% | 1,460 | 862 | 0 | 0 | 0 | 0 | 0 | 0 | 2,213 | 3,268 | 2,637 | 1,998 |
| 70% | 1,240 | 774 | 0 | 0 | 0 | 0 | 0 | 0 | 1,989 | 2,996 | 1,993 | 1,851 |
| 80% | 1,186 | 179 | 0 | 0 | 0 | 0 | 0 | 0 | 1,891 | 2,586 | 1,775 | 1,719 |
| 90% | 767 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 131 | 1,939 | 1,626 | 1,377 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1,437 | 924 | 422 | 0 | 0 | 0 | 0 | 0 | 2,127 | 3,358 | 2,534 | 2,950 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 1,287 | 792 | 82 | 0 | 0 | 0 | 0 | 0 | 2,072 | 3,690 | 3,013 | 4,154 |
| Above Normal (15%) | 1,531 | 837 | 379 | 0 | 0 | 0 | 0 | 0 | 1,948 | 3,975 | 3,059 | 4,380 |
| Below Normal (17%) | 1,559 | 1,055 | 677 | 0 | 0 | 0 | 0 | 0 | 2,476 | 3,843 | 2,872 | 2,348 |
| Dry (22%) | 1,615 | 980 | 562 | 0 | 0 | 0 | 0 | 0 | 2,316 | 3,024 | 1,827 | 1,778 |
| Critical (15%) | 1,260 | 1,061 | 694 | 0 | 0 | 0 | 0 | 0 | 1,733 | 1,955 | 1,639 | 1,373 |

## Alternative 2B minus Existing

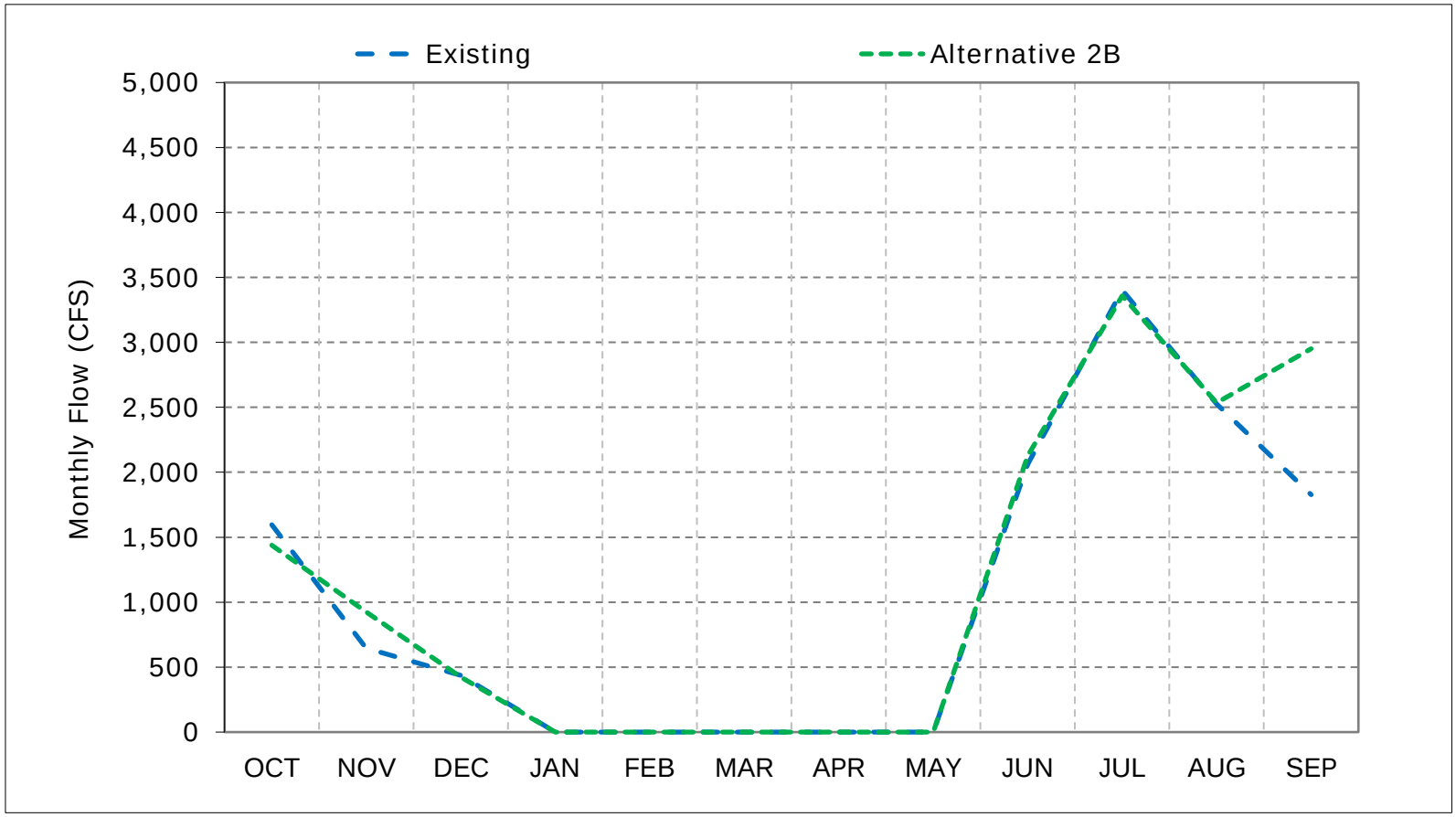
| Statistic | Monthly Flow (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -145 | 321 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | -184 | 6 | 211 |
| 20% | -220 | 351 | -17 | 0 | 0 | 0 | 0 | 0 | 64 | -65 | 25 | 1,538 |
| 30% | -166 | 298 | -17 | 0 | 0 | 0 | 0 | 0 | 65 | -36 | 8 | 1,918 |
| 40% | -166 | 184 | -39 | 0 | 0 | 0 | 0 | 0 | 84 | -51 | 16 | 1,825 |
| 50% | -110 | 190 | -74 | 0 | 0 | 0 | 0 | 0 | 80 | -5 | -5 | 934 |
| 60% | -25 | 339 | 0 | 0 | 0 | 0 | 0 | 0 | 148 | 23 | -43 | 531 |
| 70% | -206 | 744 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | -53 | 46 | 638 |
| 80% | -22 | 179 | 0 | 0 | 0 | 0 | 0 | 0 | 159 | -139 | 67 | 1,719 |
| 90% | -390 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 32 | 99 | 1,377 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -158 | 279 | -13 | 0 | 0 | 0 | 0 | 0 | 65 | -45 | 8 | 1,122 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | -132 | 341 | -25 | 0 | 0 | 0 | 0 | 0 | 12 | -64 | -8 | 3,464 |
| Above Normal (15%) | -138 | 321 | -38 | 0 | 0 | 0 | 0 | 0 | 127 | -97 | 12 | 194 |
| Below Normal (17%) | -268 | 272 | -2 | 0 | 0 | 0 | 0 | 0 | 146 | -36 | -15 | -60 |
| Dry (22%) | -90 | 264 | -5 | 0 | 0 | 0 | 0 | 0 | 75 | -79 | 31 | 3 |
| Critical (15%) | -210 | 131 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 91 | 32 | 33 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

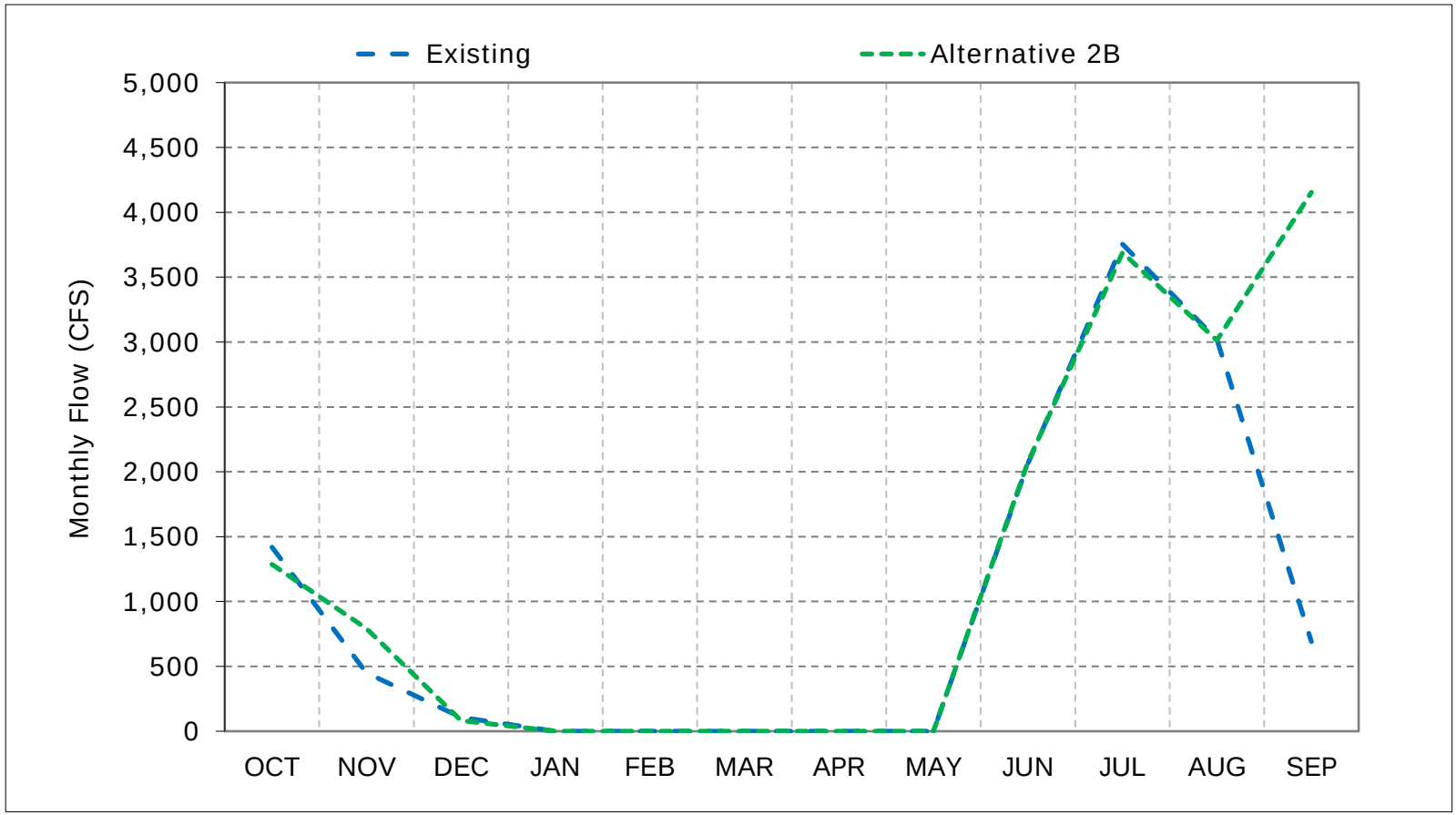
c These results are displayed with water year - year type sorting.

Figure 2-1. DCC Flow, Long-Term Average Flow



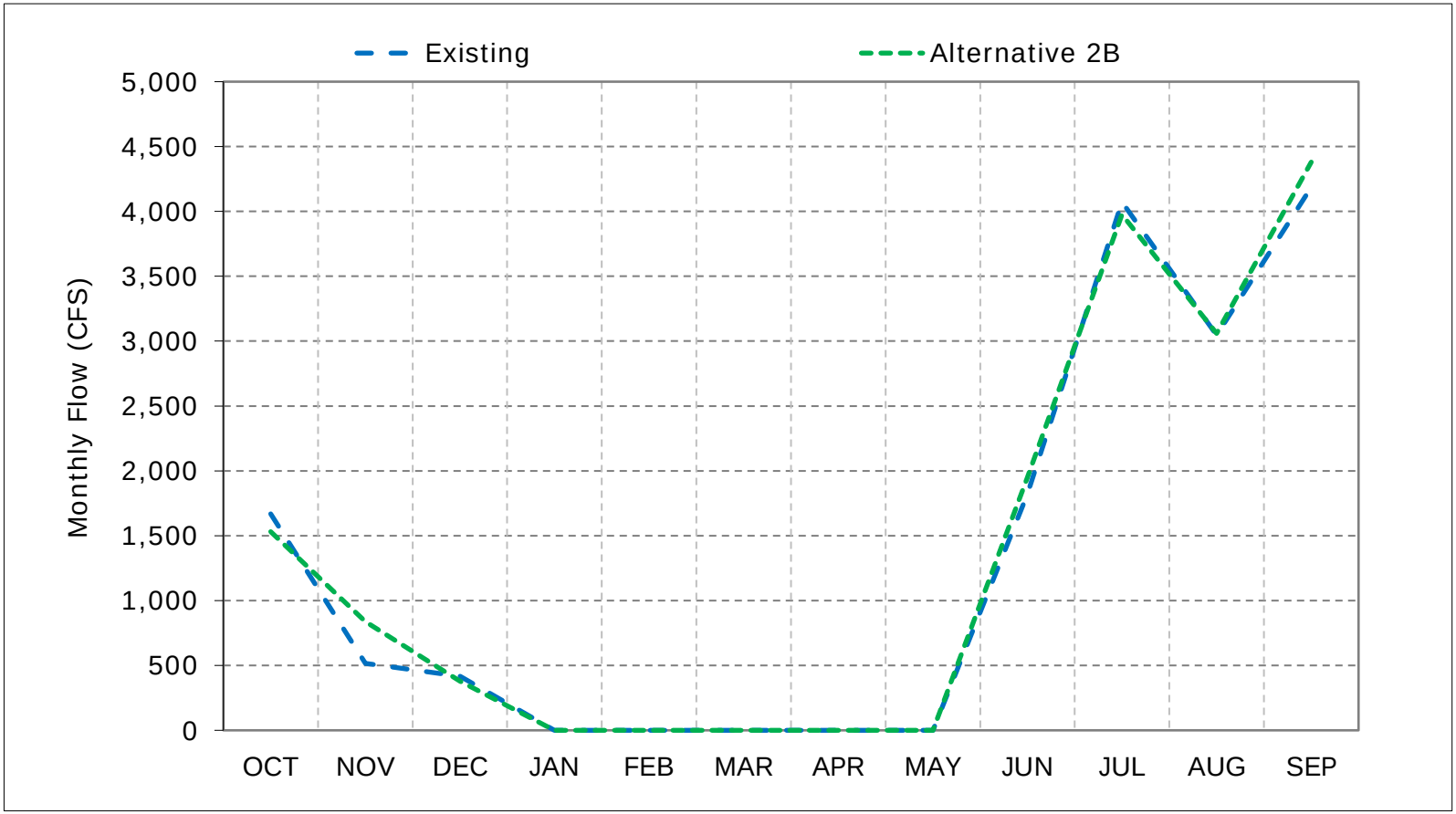

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-2. DCC Flow, Wet Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

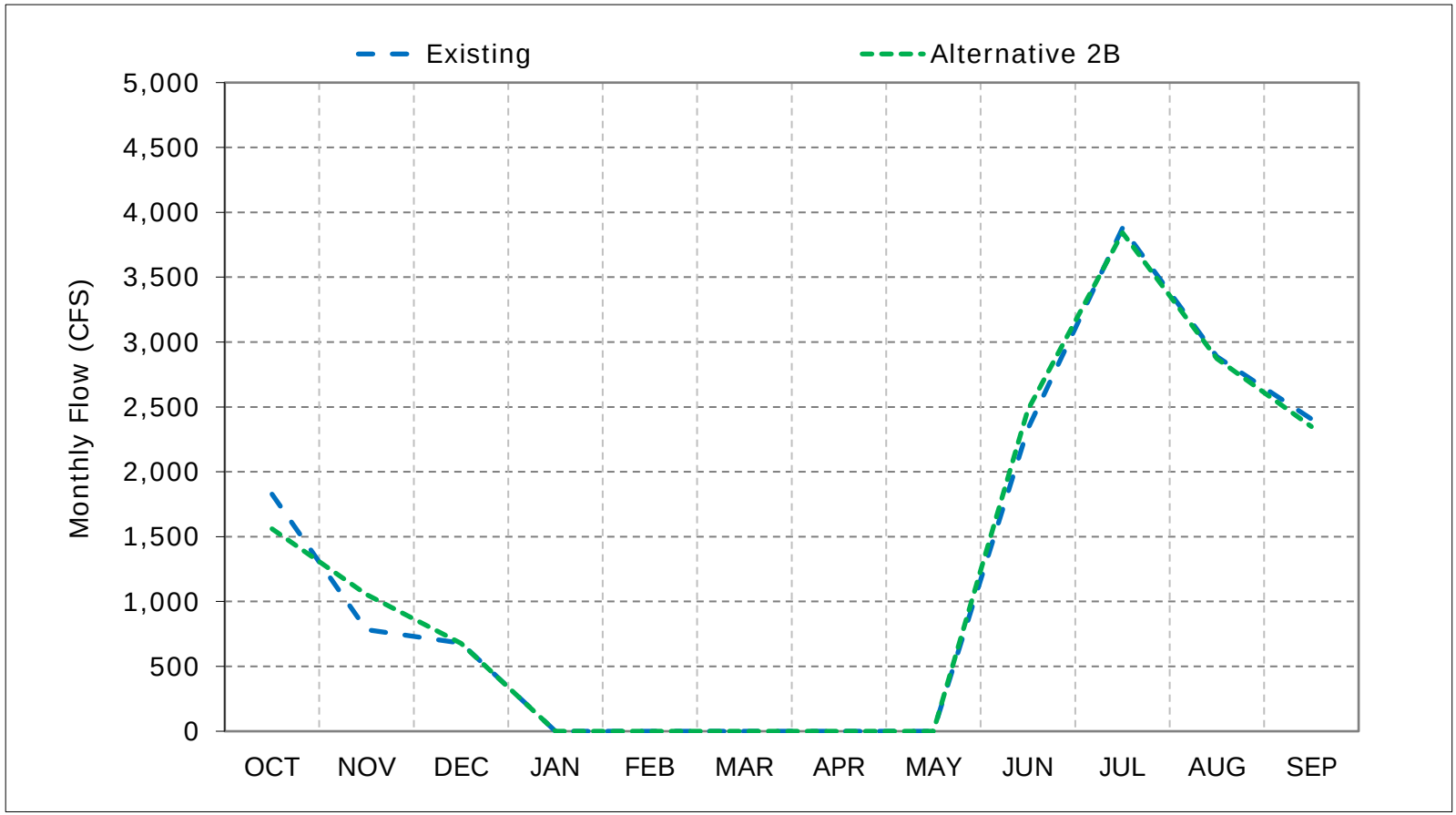
Figure 2-3. DCC Flow, Above Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

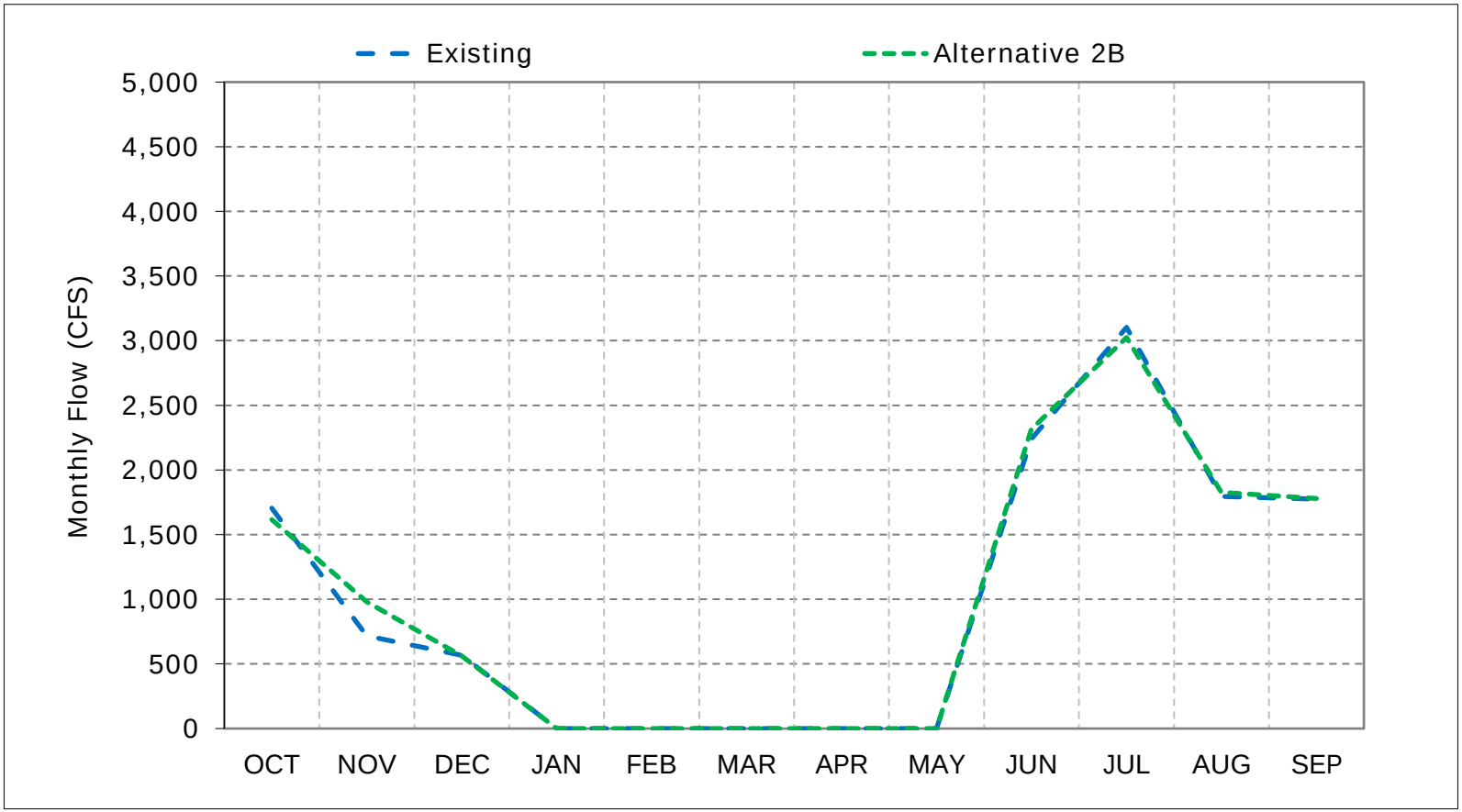
Figure 2-4. DCC Flow, Below Normal Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

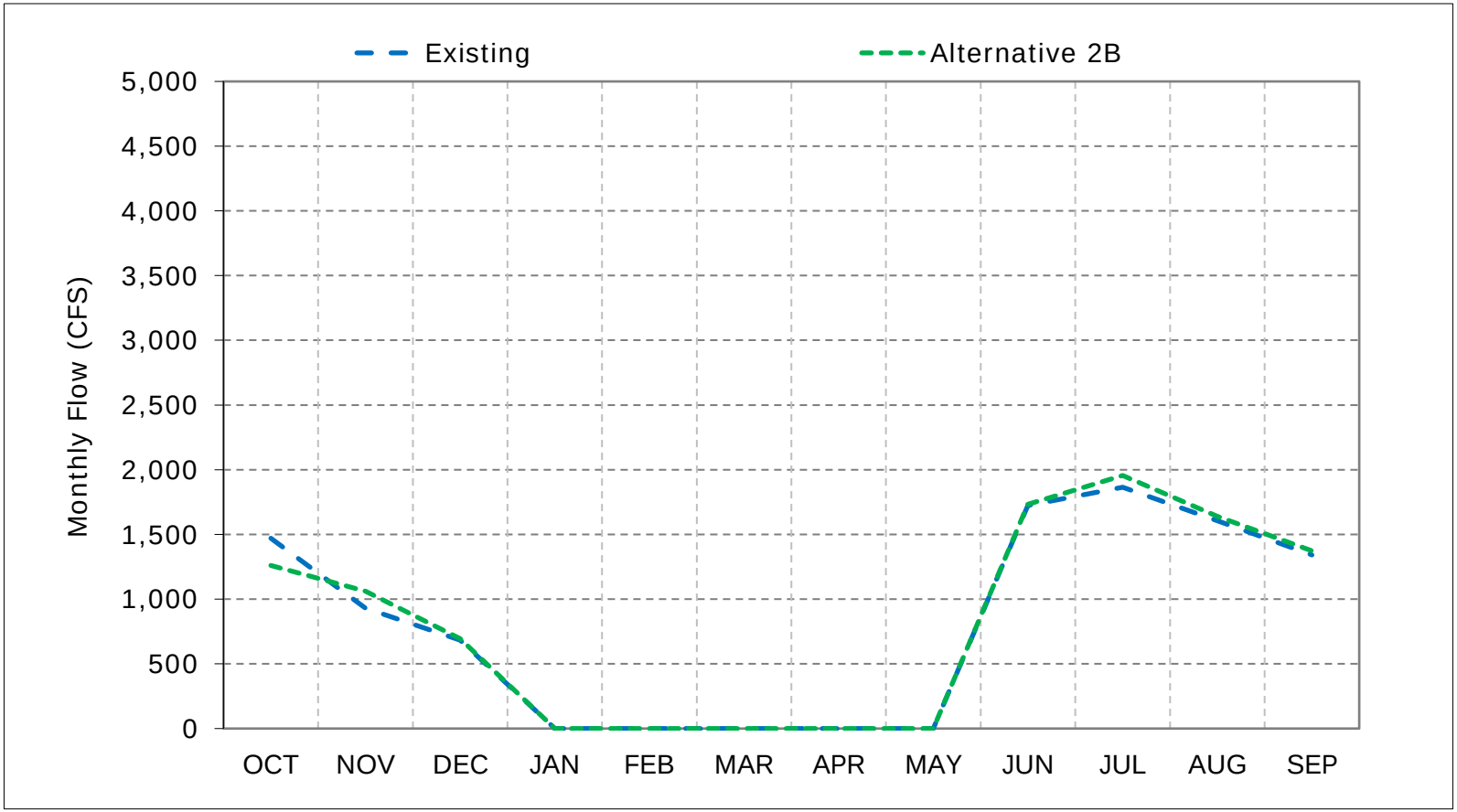
*These results are displayed with water year - year type sorting.

Figure 2-5. DCC Flow, Dry Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-6. DCC Flow, Critical Year Average Flow




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-7. DCC Flow, October

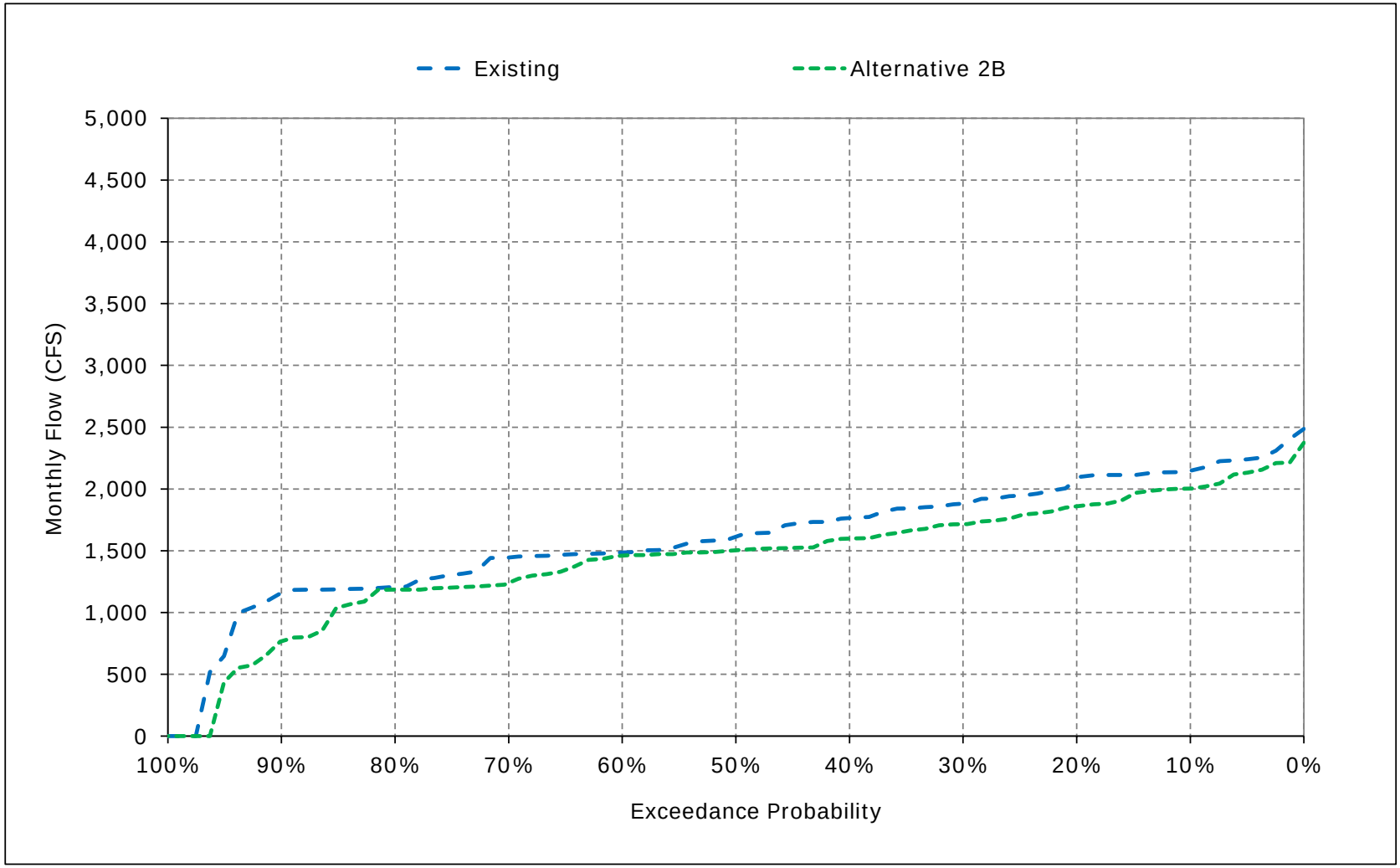


Figure 2-8. DCC Flow, November

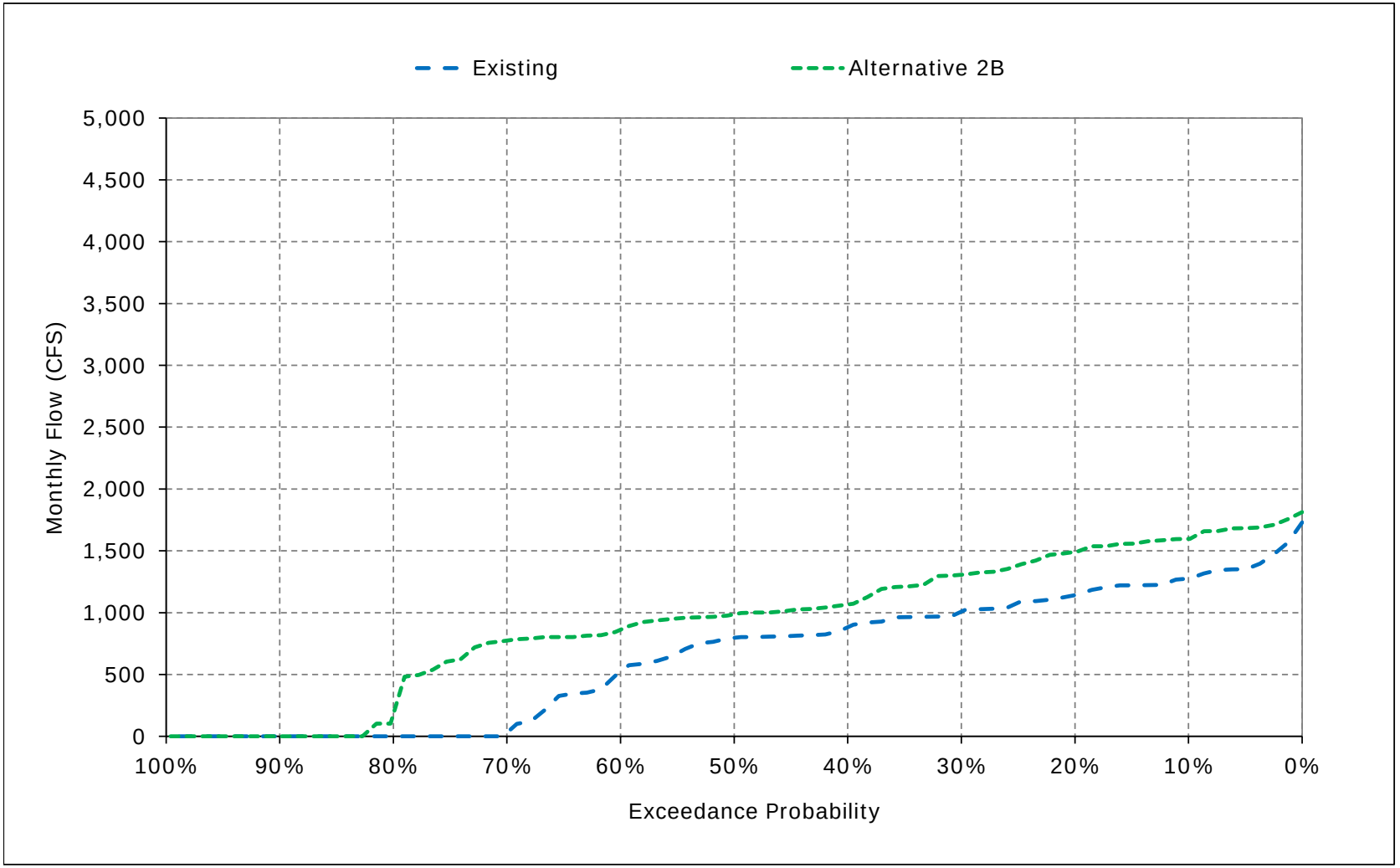


Figure 2-9. DCC Flow, December

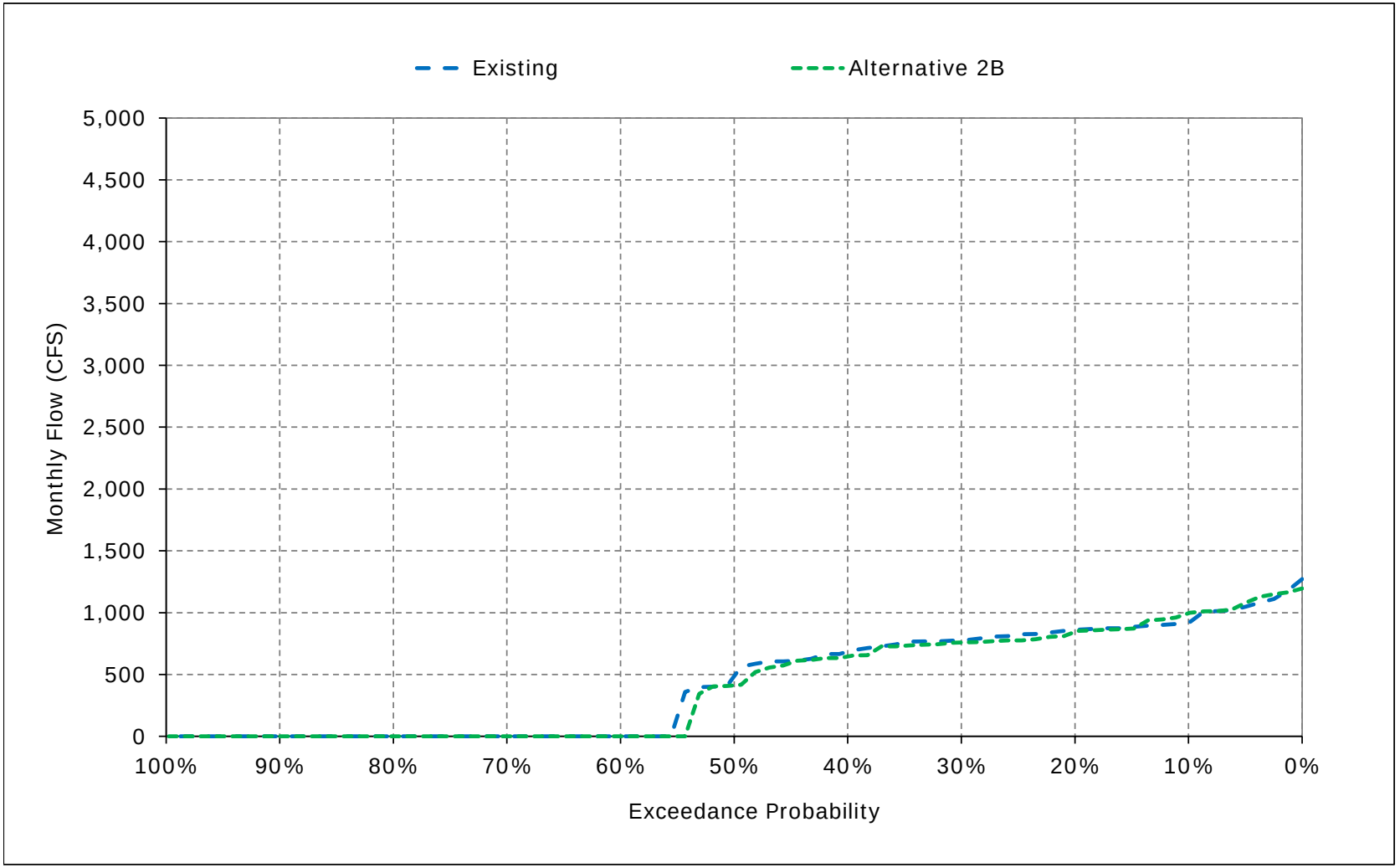


Figure 2-10. DCC Flow, January

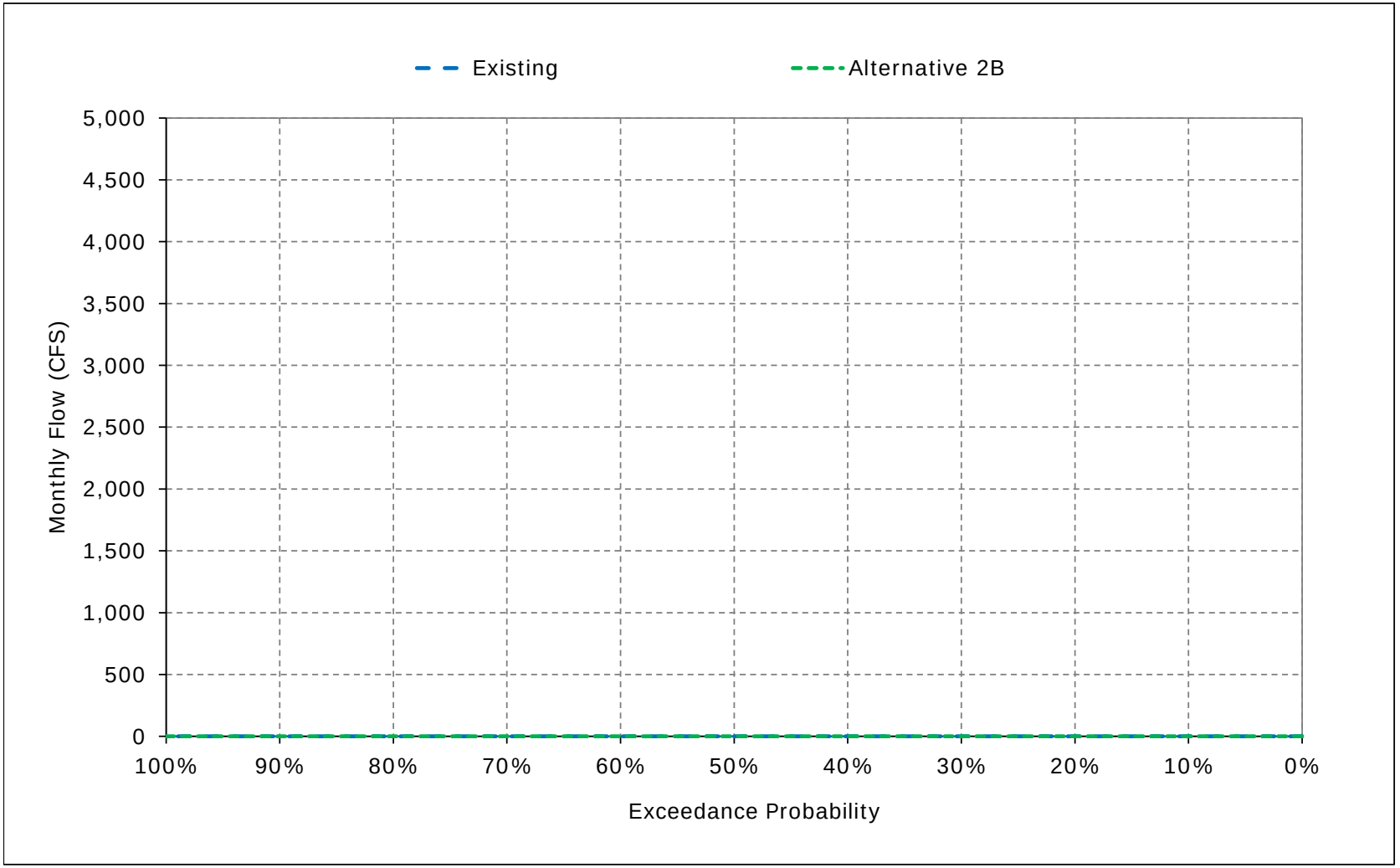


Figure 2-11. DCC Flow, February

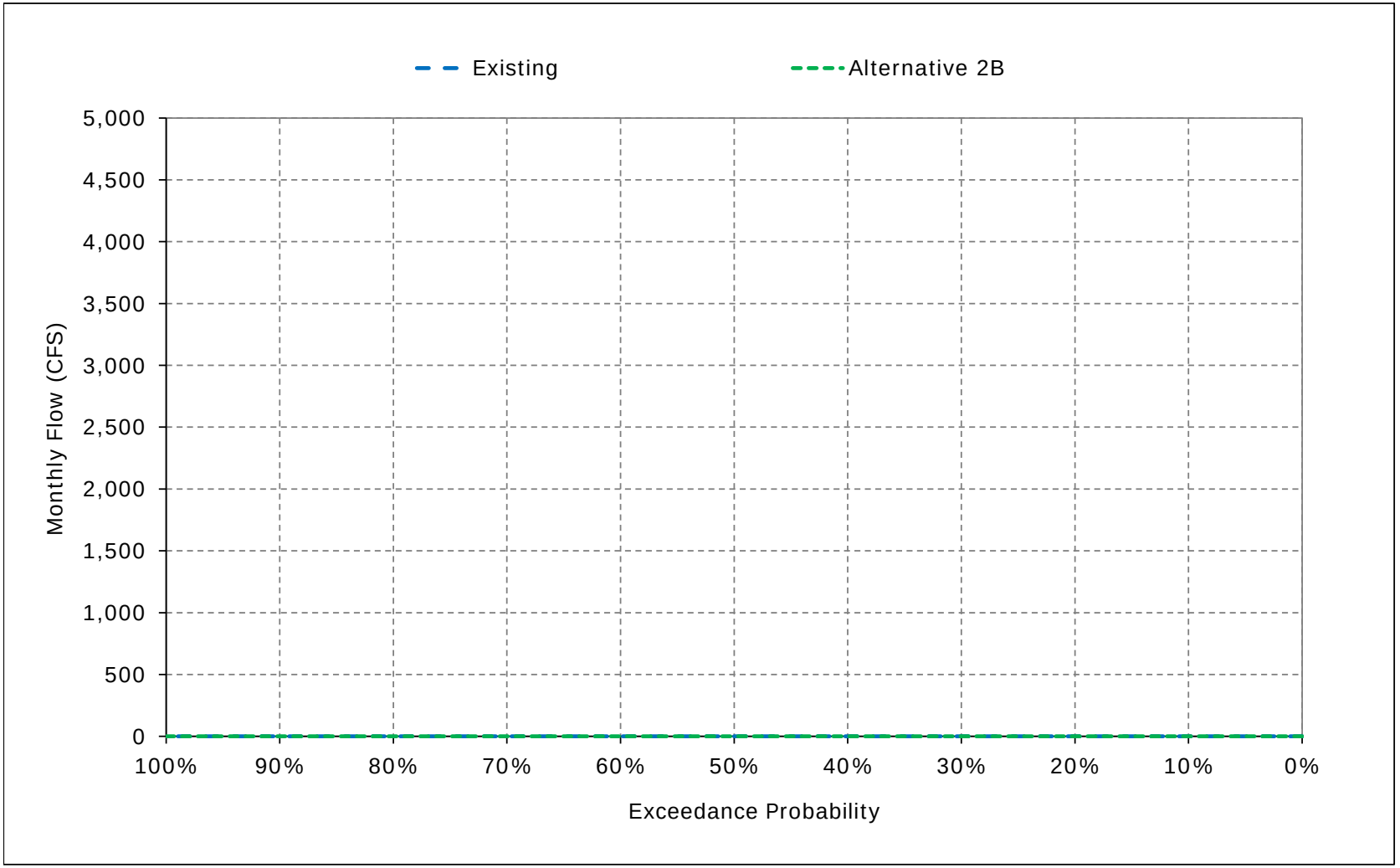


Figure 2-12. DCC Flow, March

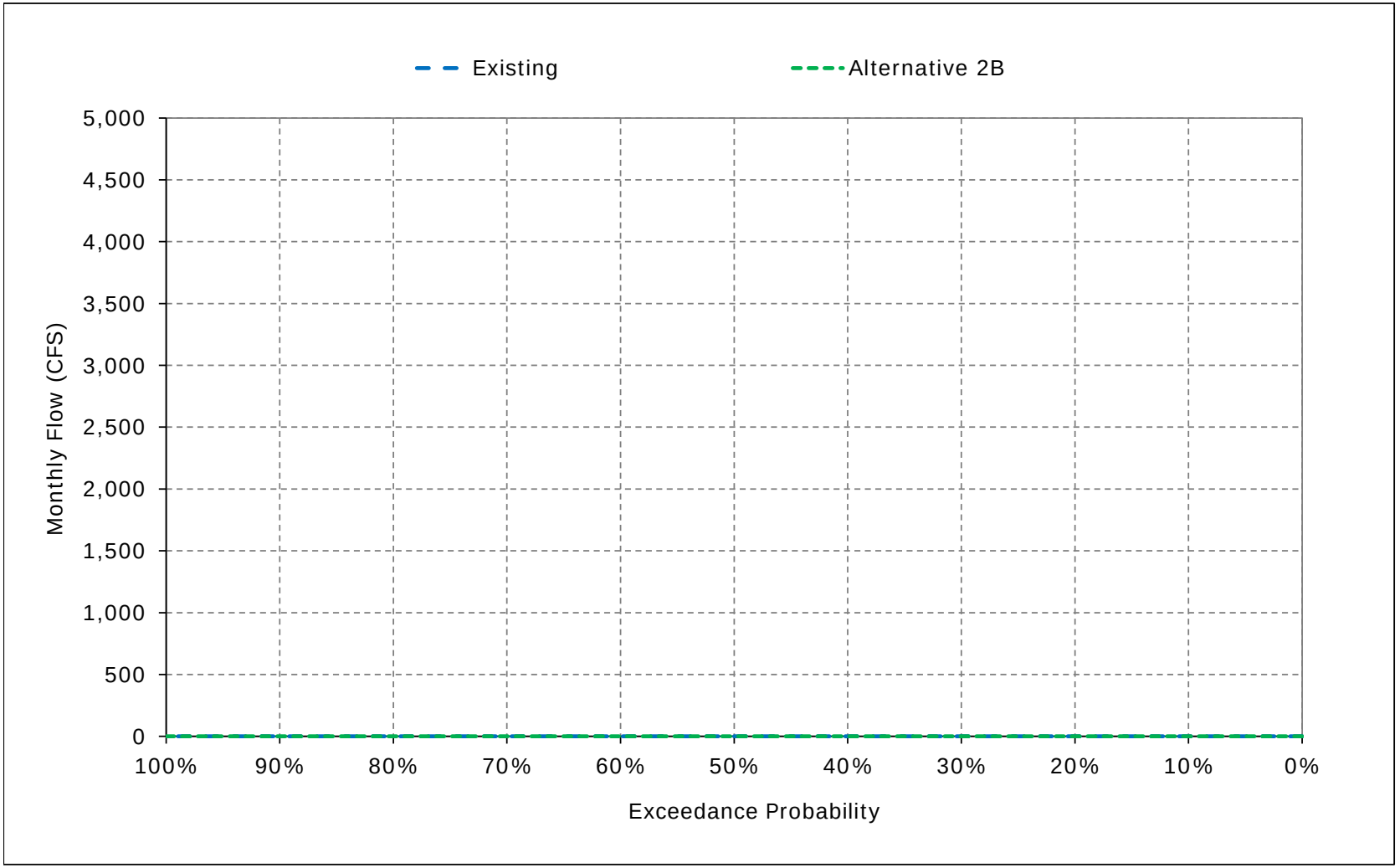


Figure 2-13. DCC Flow, April

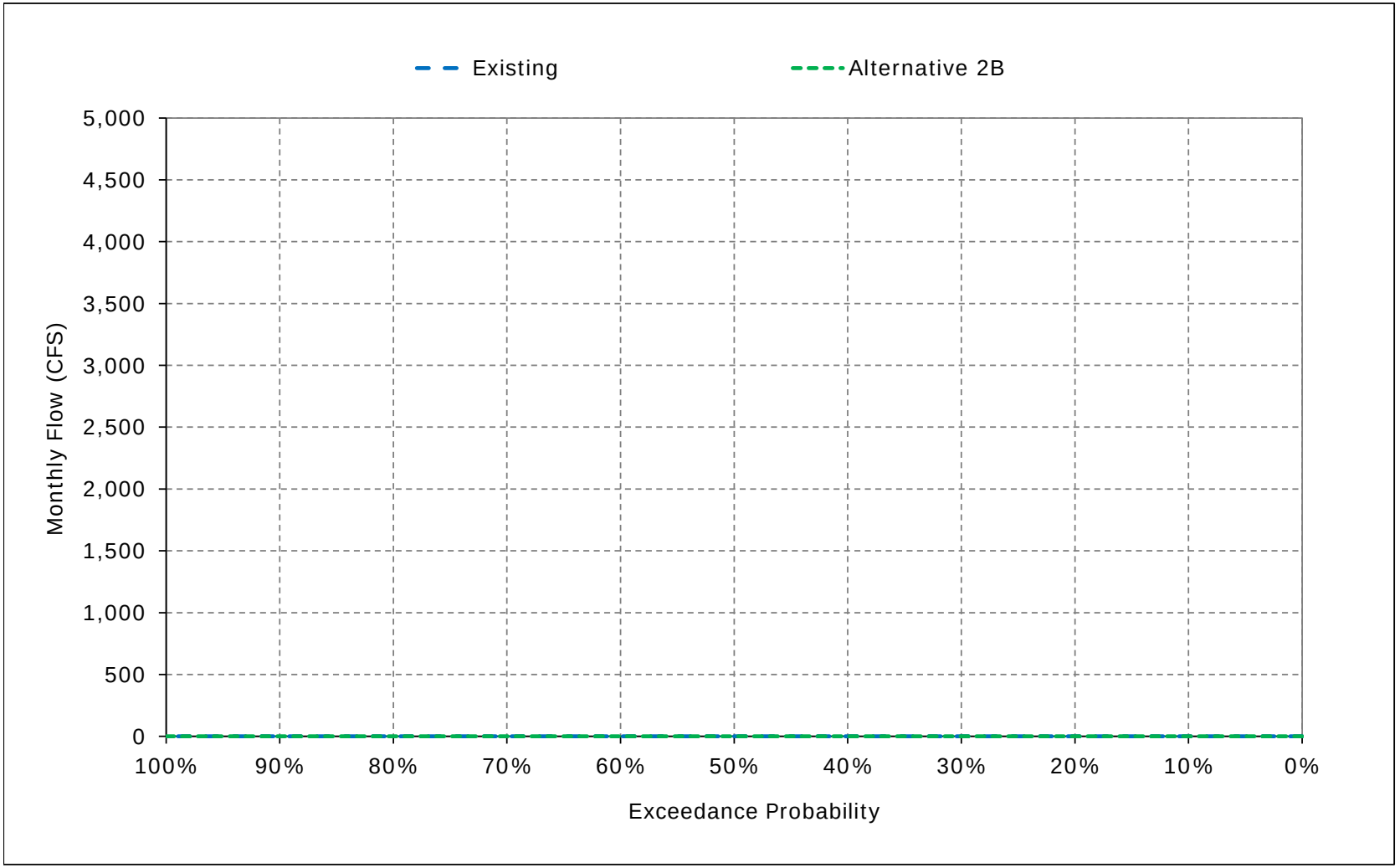


Figure 2-14. DCC Flow, May

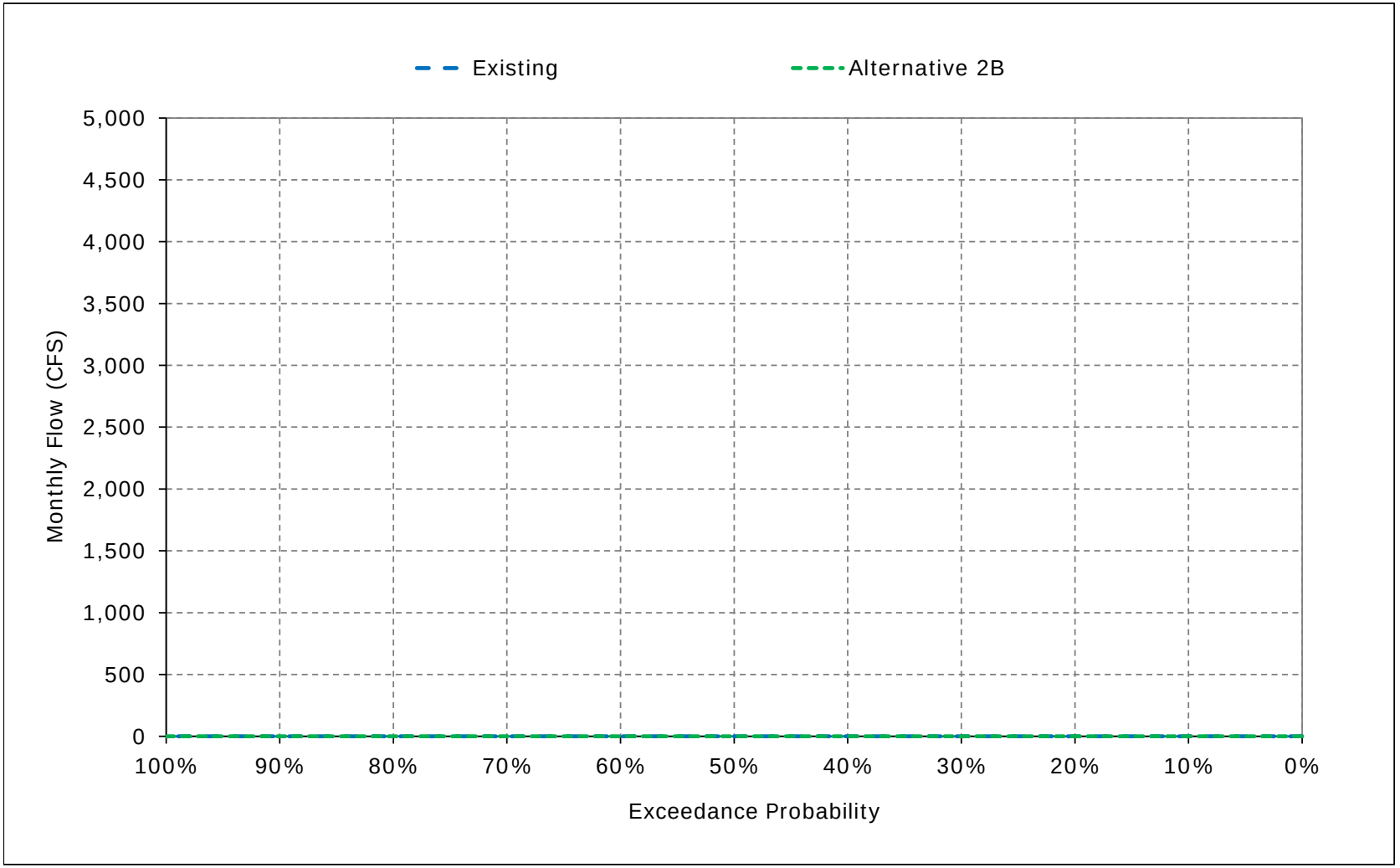


Figure 2-15. DCC Flow, June

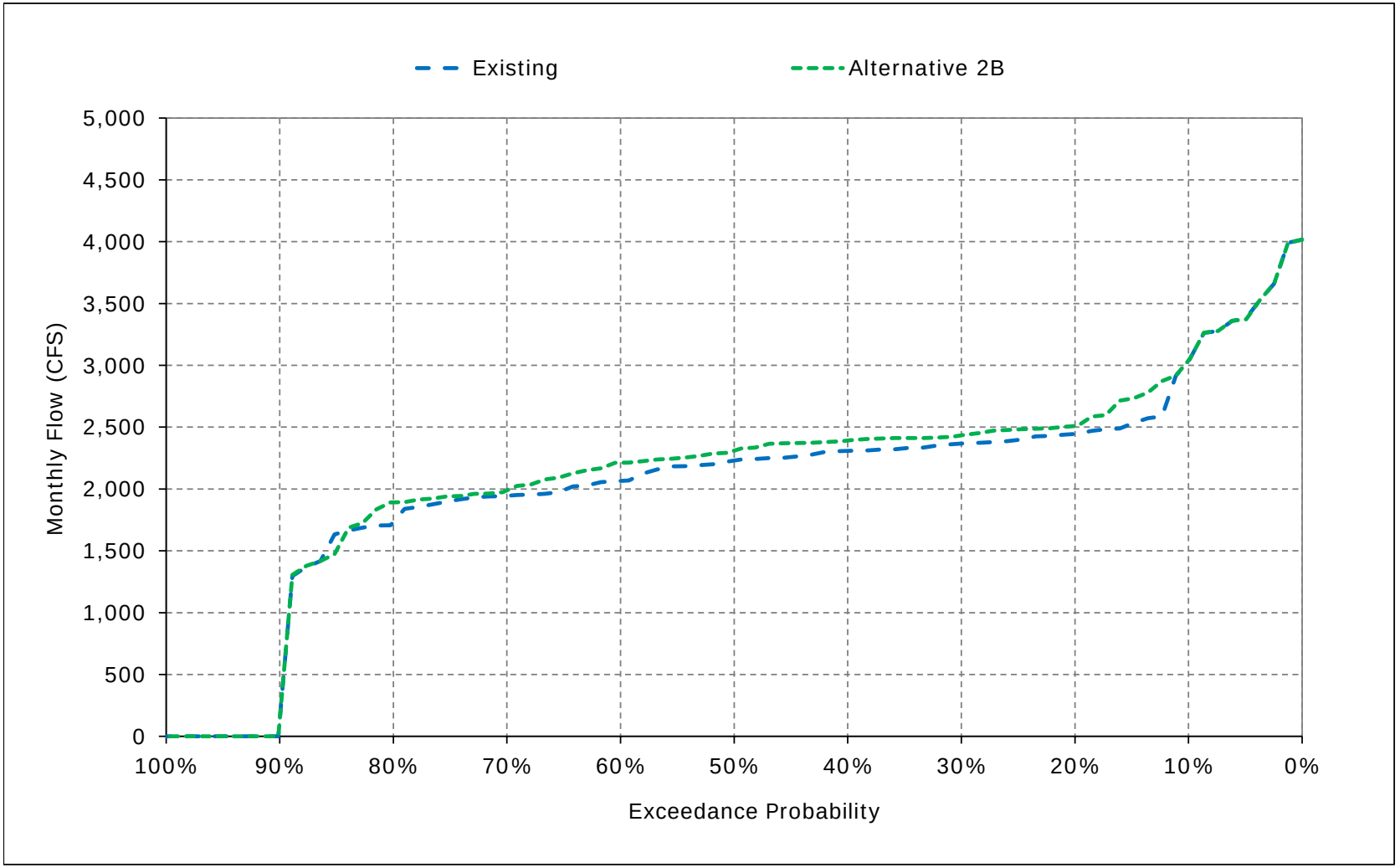


Figure 2-16. DCC Flow, July

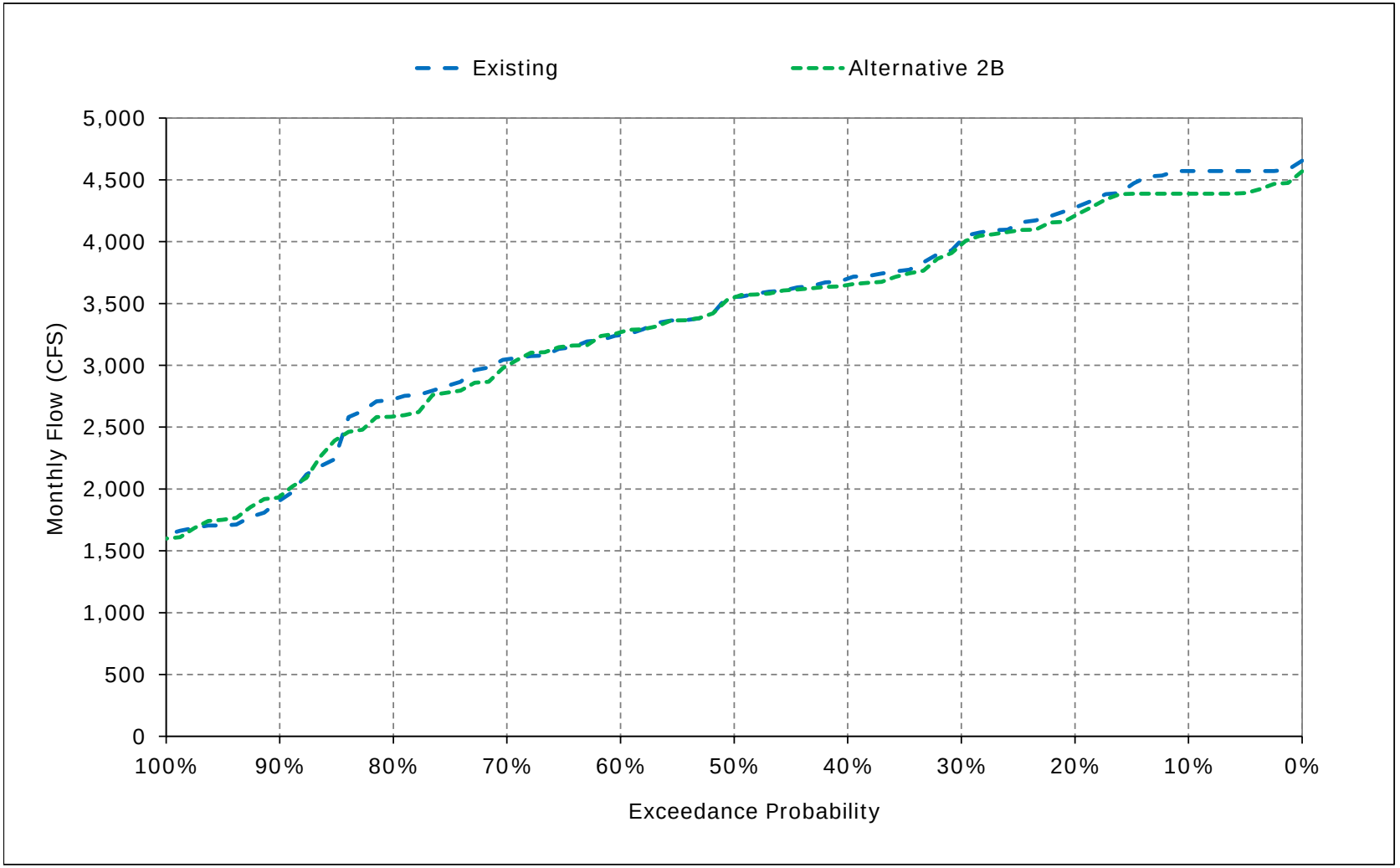


Figure 2-17. DCC Flow, August

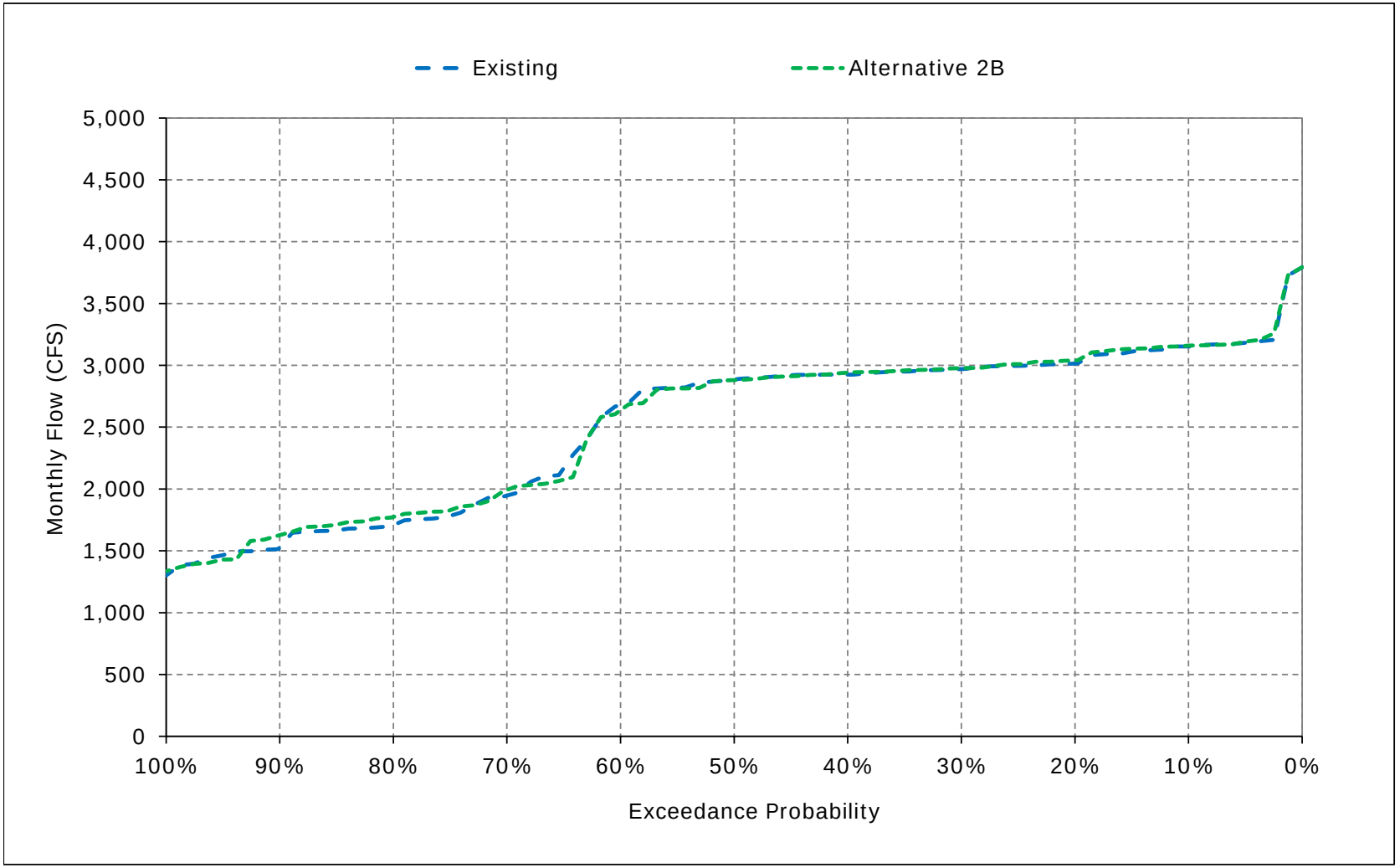
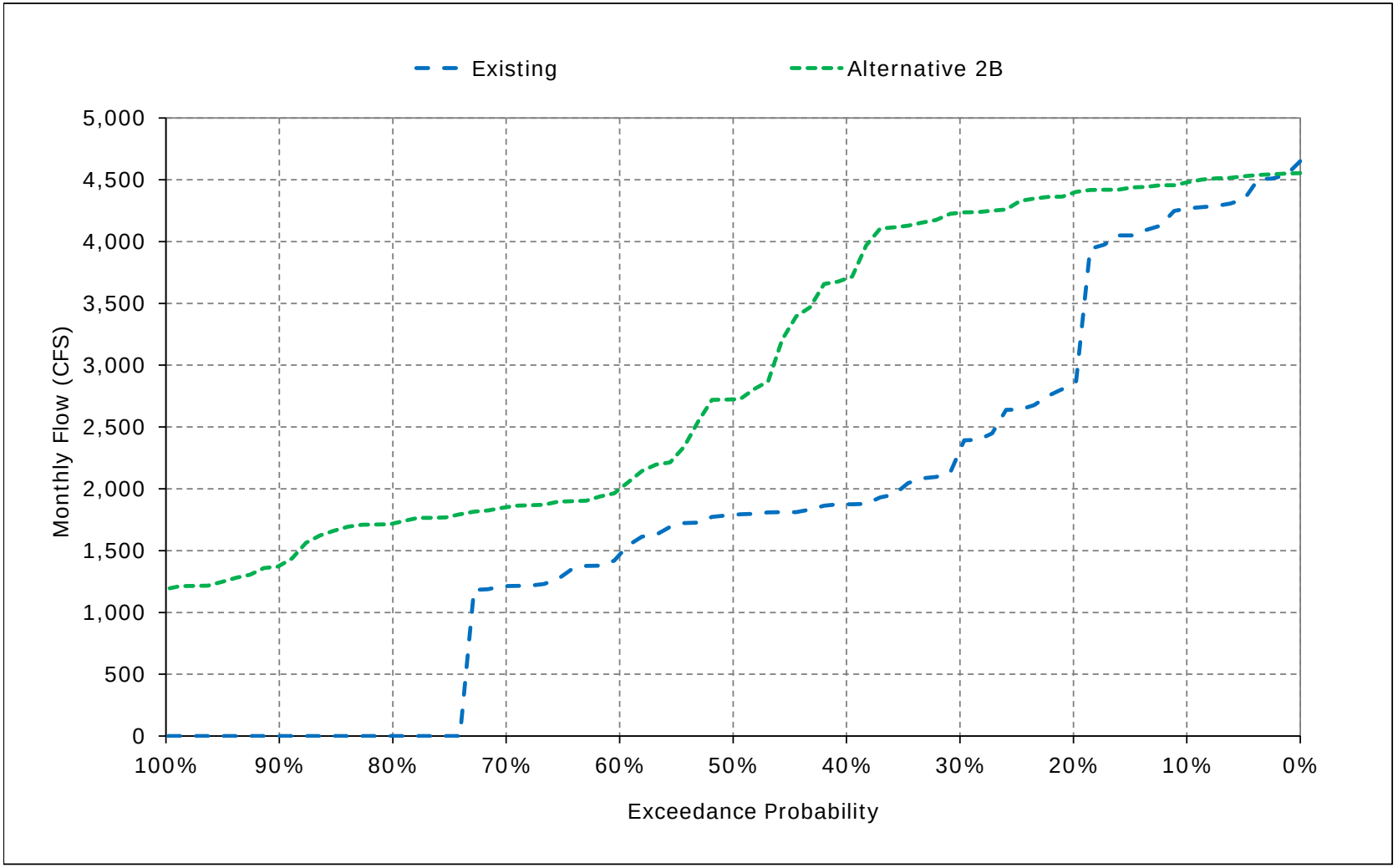


Figure 2-18. DCC Flow, September



## Table 3-1. Total Delta Exports, Monthly Delivery

### Existing

| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 9,505 | 11,280 | 11,672 | 10,061 | 12,003 | 10,316 | 3,006 | 2,765 | 8,910 | 11,483 | 11,629 | 11,280 |
| 20% | 8,355 | 10,656 | 11,620 | 8,032 | 9,639 | 9,196 | 2,231 | 1,956 | 6,968 | 11,338 | 11,569 | 11,280 |
| 30% | 7,633 | 8,681 | 10,027 | 7,159 | 8,359 | 8,719 | 1,970 | 1,698 | 5,734 | 11,280 | 11,363 | 11,206 |
| 40% | 7,193 | 7,557 | 8,942 | 6,890 | 7,752 | 7,282 | 1,790 | 1,514 | 5,587 | 11,140 | 11,280 | 11,115 |
| 50% | 6,672 | 7,183 | 8,016 | 6,749 | 7,108 | 6,587 | 1,625 | 1,500 | 5,319 | 10,475 | 10,858 | 10,419 |
| 60% | 5,945 | 6,628 | 7,390 | 6,549 | 6,703 | 6,104 | 1,500 | 1,500 | 5,053 | 9,917 | 10,057 | 8,592 |
| 70% | 5,628 | 6,008 | 7,197 | 6,453 | 6,576 | 5,823 | 1,500 | 1,500 | 4,907 | 8,976 | 5,344 | 7,062 |
| 80% | 5,093 | 4,950 | 6,685 | 6,180 | 6,419 | 5,545 | 1,500 | 1,500 | 4,670 | 7,186 | 4,136 | 6,579 |
| 90% | 4,332 | 4,216 | 5,939 | 5,204 | 6,063 | 4,720 | 1,500 | 1,500 | 2,900 | 2,468 | 3,201 | 3,927 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 6,738 | 7,386 | 8,593 | 7,274 | 8,058 | 7,232 | 2,053 | 2,013 | 5,677 | 9,053 | 8,537 | 8,885 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 7,370 | 8,515 | 8,705 | 8,773 | 9,741 | 9,395 | 2,791 | 2,861 | 7,690 | 11,211 | 11,501 | 11,092 |
| Above Normal (15%) | 6,560 | 7,164 | 9,463 | 7,134 | 8,319 | 7,873 | 1,765 | 1,639 | 6,253 | 10,328 | 11,350 | 11,102 |
| Below Normal (17%) | 6,739 | 7,696 | 8,931 | 6,680 | 8,176 | 7,197 | 1,651 | 1,580 | 5,366 | 10,518 | 10,293 | 9,805 |
| Dry (22%) | 6,572 | 7,130 | 8,672 | 6,573 | 6,552 | 5,843 | 1,813 | 1,621 | 4,684 | 8,247 | 4,413 | 6,754 |
| Critical (15%) | 5,790 | 5,184 | 6,966 | 5,907 | 6,271 | 4,027 | 1,570 | 1,644 | 2,592 | 2,603 | 3,439 | 4,011 |

### Alternative 2B

| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 10,549 | 11,280 | 11,665 | 10,061 | 11,267 | 10,030 | 6,995 | 7,639 | 8,907 | 11,374 | 10,756 | 11,280 |
| 20% | 9,225 | 11,280 | 11,156 | 8,069 | 9,251 | 7,874 | 5,811 | 4,838 | 6,919 | 11,280 | 10,016 | 11,280 |
| 30% | 8,689 | 11,280 | 10,094 | 7,263 | 8,551 | 7,312 | 4,310 | 4,082 | 5,595 | 10,999 | 9,950 | 11,280 |
| 40% | 8,282 | 10,998 | 8,973 | 7,110 | 7,886 | 5,979 | 3,875 | 3,880 | 5,378 | 10,718 | 9,875 | 11,170 |
| 50% | 7,446 | 10,055 | 7,969 | 6,904 | 7,264 | 5,640 | 3,370 | 3,518 | 5,199 | 10,134 | 9,654 | 9,574 |
| 60% | 6,443 | 8,043 | 7,324 | 6,756 | 6,756 | 5,348 | 3,103 | 3,359 | 5,054 | 9,666 | 9,224 | 7,401 |
| 70% | 5,639 | 6,624 | 6,954 | 6,535 | 6,544 | 4,921 | 2,611 | 2,944 | 4,860 | 8,662 | 5,526 | 6,942 |
| 80% | 5,136 | 5,722 | 6,646 | 6,108 | 6,294 | 4,610 | 2,251 | 2,283 | 4,694 | 6,101 | 4,371 | 6,385 |
| 90% | 4,044 | 4,281 | 5,702 | 5,549 | 6,067 | 4,333 | 1,746 | 1,980 | 2,884 | 3,096 | 3,373 | 4,085 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 7,243 | 8,673 | 8,501 | 7,286 | 7,988 | 6,319 | 3,856 | 3,916 | 5,656 | 8,835 | 7,835 | 8,714 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 8,163 | 10,132 | 8,704 | 8,681 | 9,484 | 8,370 | 5,695 | 5,568 | 7,602 | 10,994 | 9,854 | 10,618 |
| Above Normal (15%) | 7,120 | 8,015 | 8,899 | 7,200 | 8,067 | 6,751 | 4,102 | 4,257 | 6,162 | 10,297 | 9,794 | 11,056 |
| Below Normal (17%) | 7,438 | 9,054 | 8,822 | 6,834 | 8,285 | 5,994 | 3,614 | 3,725 | 5,298 | 10,008 | 10,192 | 9,554 |
| Dry (22%) | 6,828 | 8,179 | 8,952 | 6,797 | 6,688 | 4,786 | 2,737 | 2,794 | 4,824 | 7,803 | 4,631 | 6,762 |
| Critical (15%) | 5,766 | 6,463 | 6,609 | 5,613 | 6,267 | 4,120 | 1,585 | 1,901 | 2,600 | 2,873 | 3,557 | 4,197 |

### Alternative 2B minus Existing

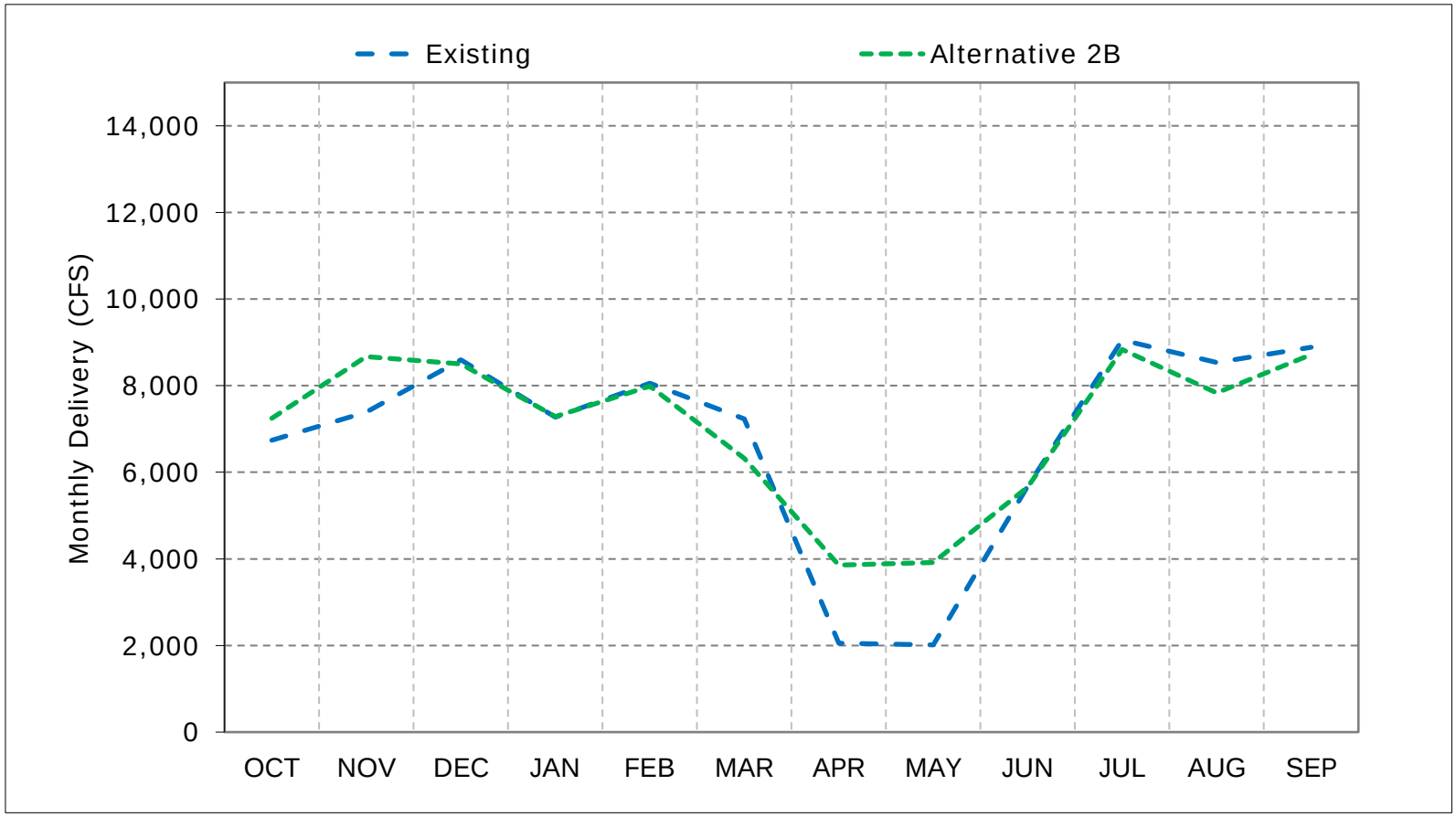
| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 1,043 | 0 | -7 | 0 | -736 | -286 | 3,989 | 4,874 | -3 | -108 | -874 | 0 |
| 20% | 870 | 624 | -464 | 37 | -388 | -1,321 | 3,580 | 2,882 | -50 | -58 | -1,553 | 0 |
| 30% | 1,057 | 2,599 | 67 | 104 | 192 | -1,407 | 2,341 | 2,384 | -139 | -281 | -1,413 | 74 |
| 40% | 1,089 | 3,442 | 31 | 221 | 134 | -1,303 | 2,084 | 2,366 | -209 | -422 | -1,405 | 55 |
| 50% | 774 | 2,872 | -47 | 155 | 156 | -947 | 1,745 | 2,018 | -120 | -341 | -1,205 | -846 |
| 60% | 498 | 1,416 | -66 | 207 | 53 | -756 | 1,603 | 1,859 | 1 | -250 | -834 | -1,191 |
| 70% | 10 | 616 | -243 | 83 | -32 | -901 | 1,111 | 1,444 | -47 | -314 | 182 | -119 |
| 80% | 43 | 772 | -39 | -72 | -125 | -935 | 751 | 783 | 24 | -1,085 | 235 | -193 |
| 90% | -288 | 65 | -237 | 345 | 4 | -387 | 246 | 480 | -16 | 628 | 172 | 159 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 505 | 1,286 | -92 | 13 | -70 | -913 | 1,803 | 1,903 | -21 | -219 | -702 | -171 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 793 | 1,617 | -1 | -92 | -257 | -1,025 | 2,904 | 2,706 | -88 | -217 | -1,646 | -475 |
| Above Normal (15%) | 559 | 851 | -563 | 65 | -251 | -1,122 | 2,337 | 2,618 | -91 | -31 | -1,556 | -46 |
| Below Normal (17%) | 699 | 1,358 | -108 | 154 | 109 | -1,203 | 1,963 | 2,146 | -68 | -510 | -102 | -251 |
| Dry (22%) | 256 | 1,049 | 280 | 224 | 136 | -1,058 | 924 | 1,173 | 140 | -444 | 217 | 8 |
| Critical (15%) | -23 | 1,279 | -357 | -294 | -3 | 93 | 14 | 256 | 8 | 270 | 118 | 186 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

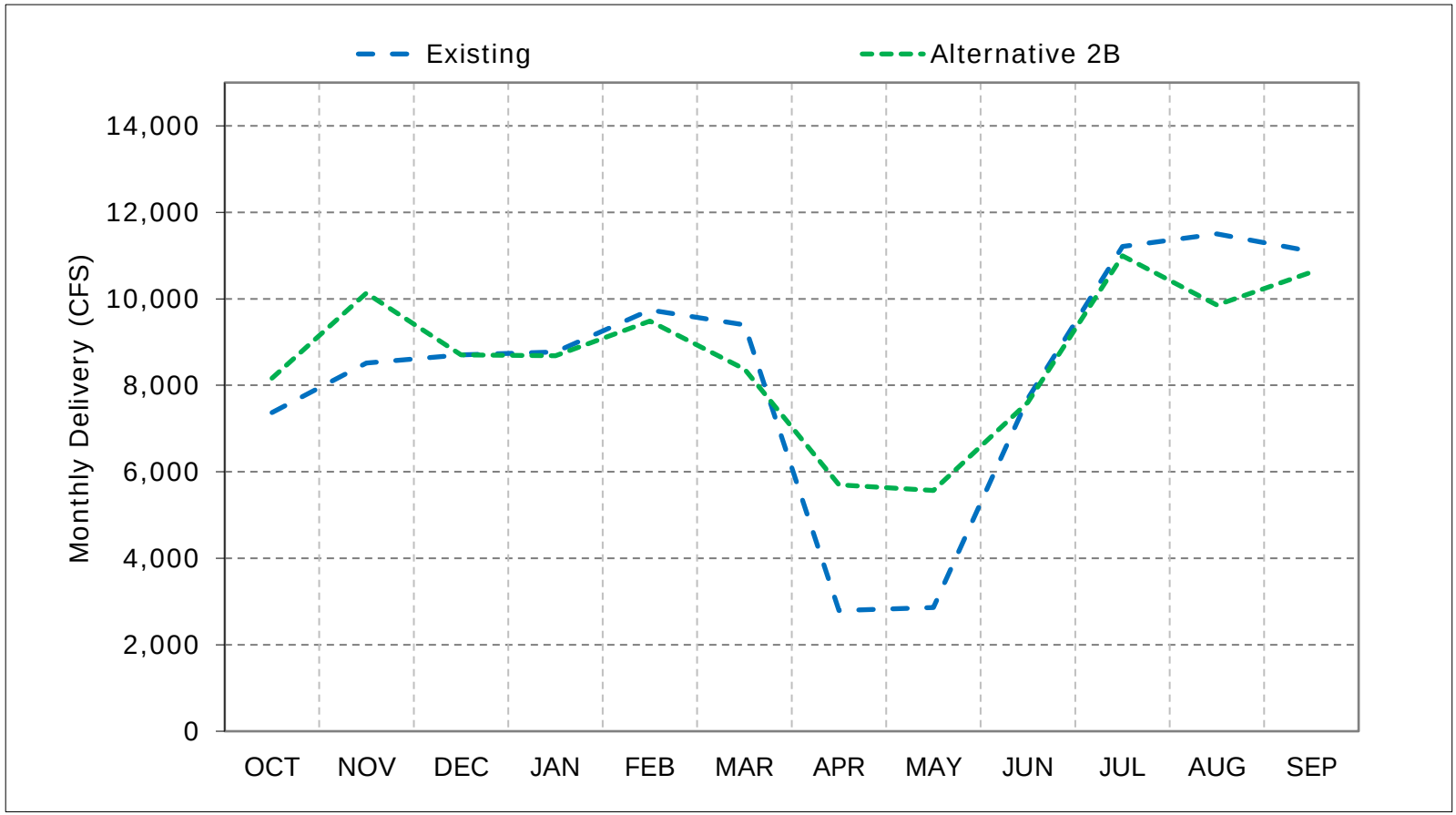
c These results are displayed with water year - year type sorting.

Figure 3-1. Total Delta Exports, Long-Term Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

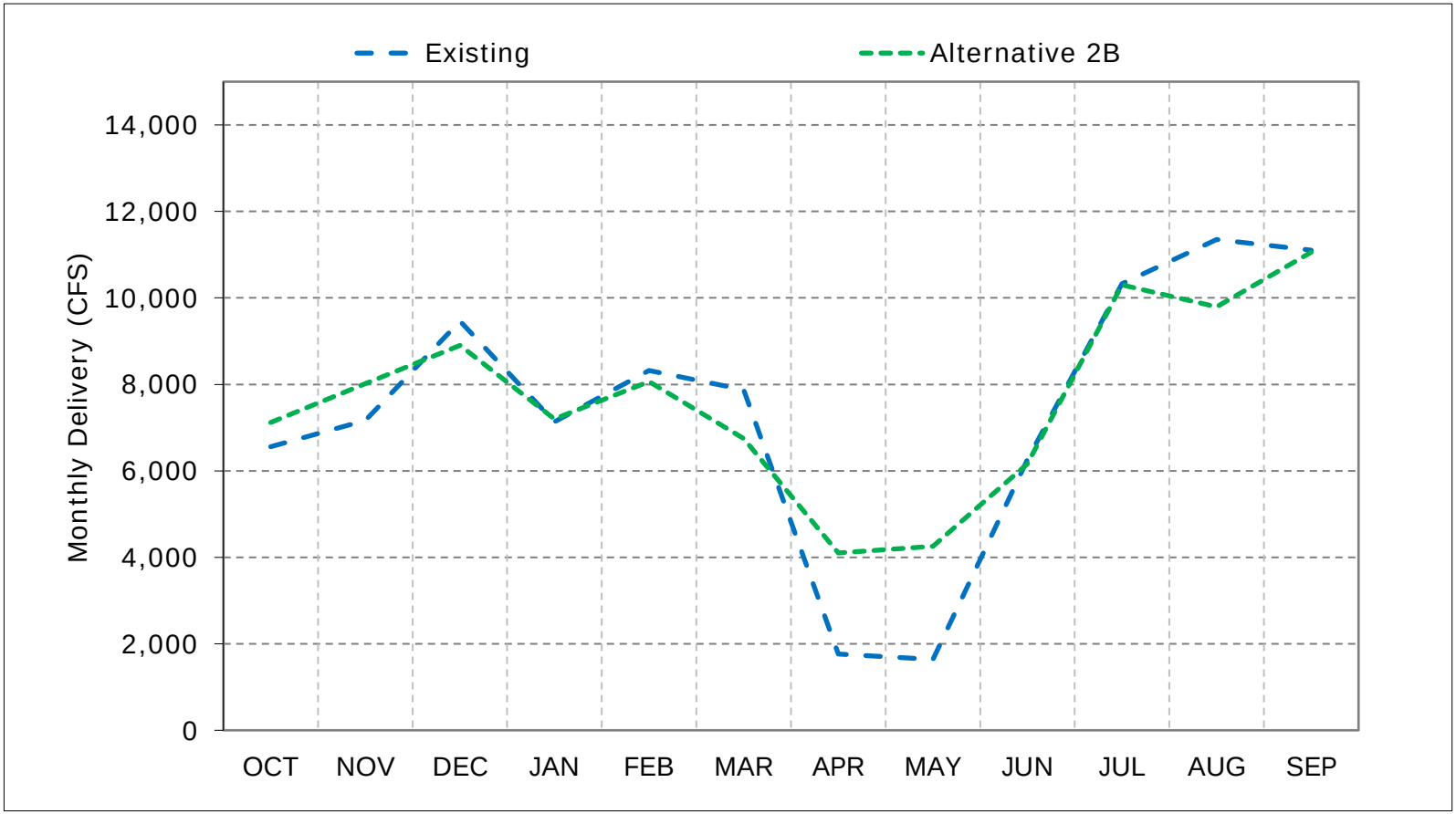
Figure 3-2. Total Delta Exports, Wet Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

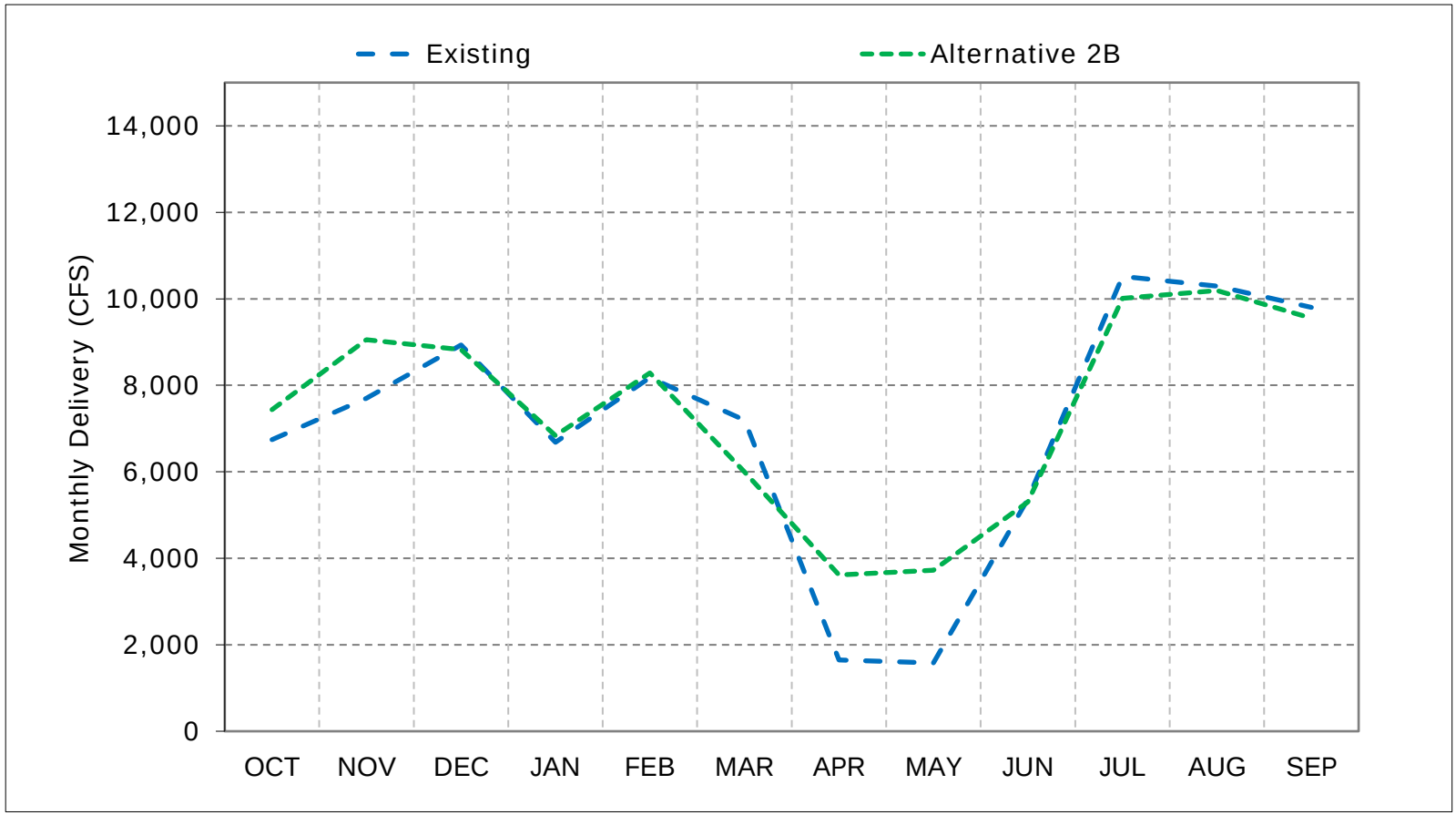
*These results are displayed with water year - year type sorting.

Figure 3-3. Total Delta Exports, Above Normal Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

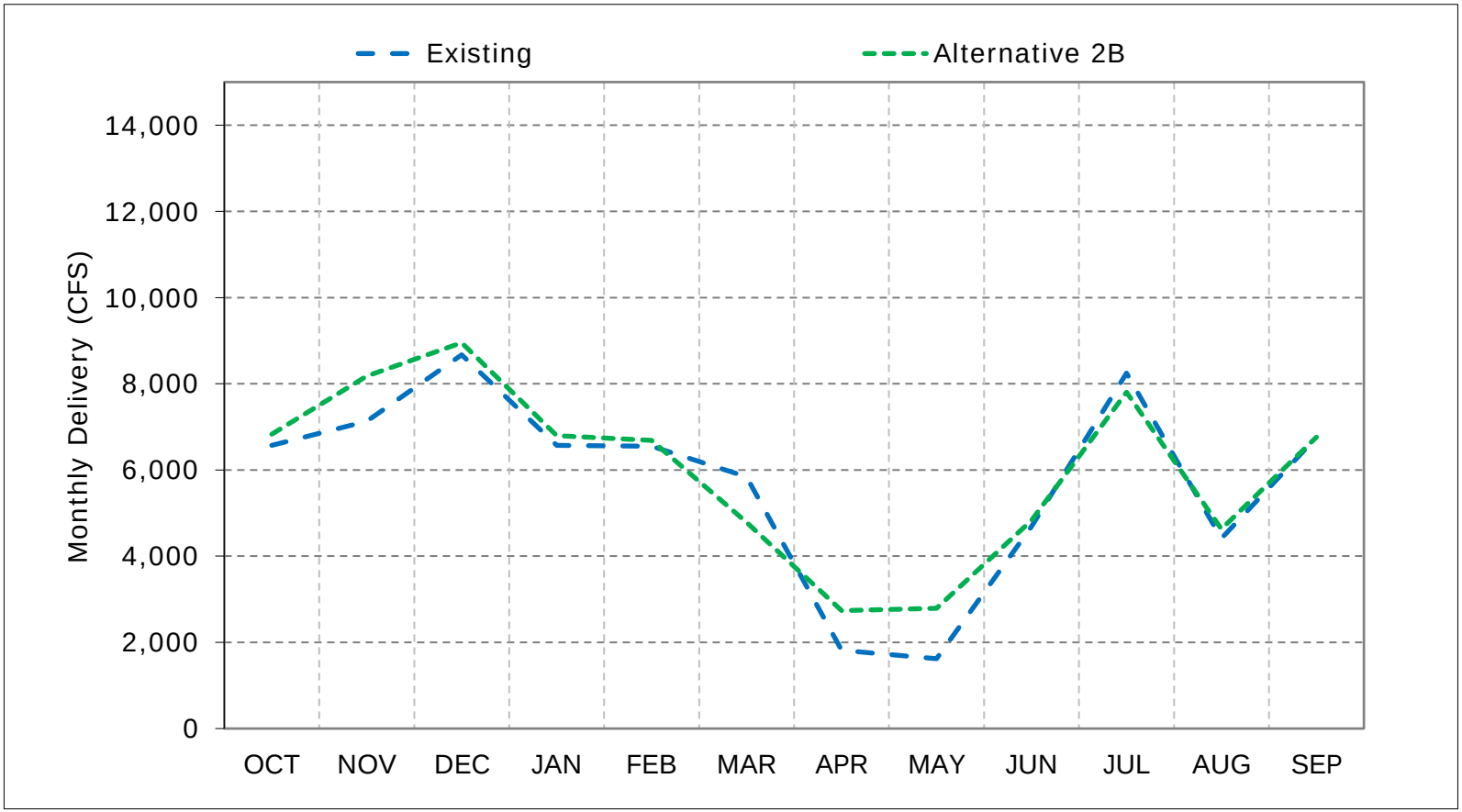
Figure 3-4. Total Delta Exports, Below Normal Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

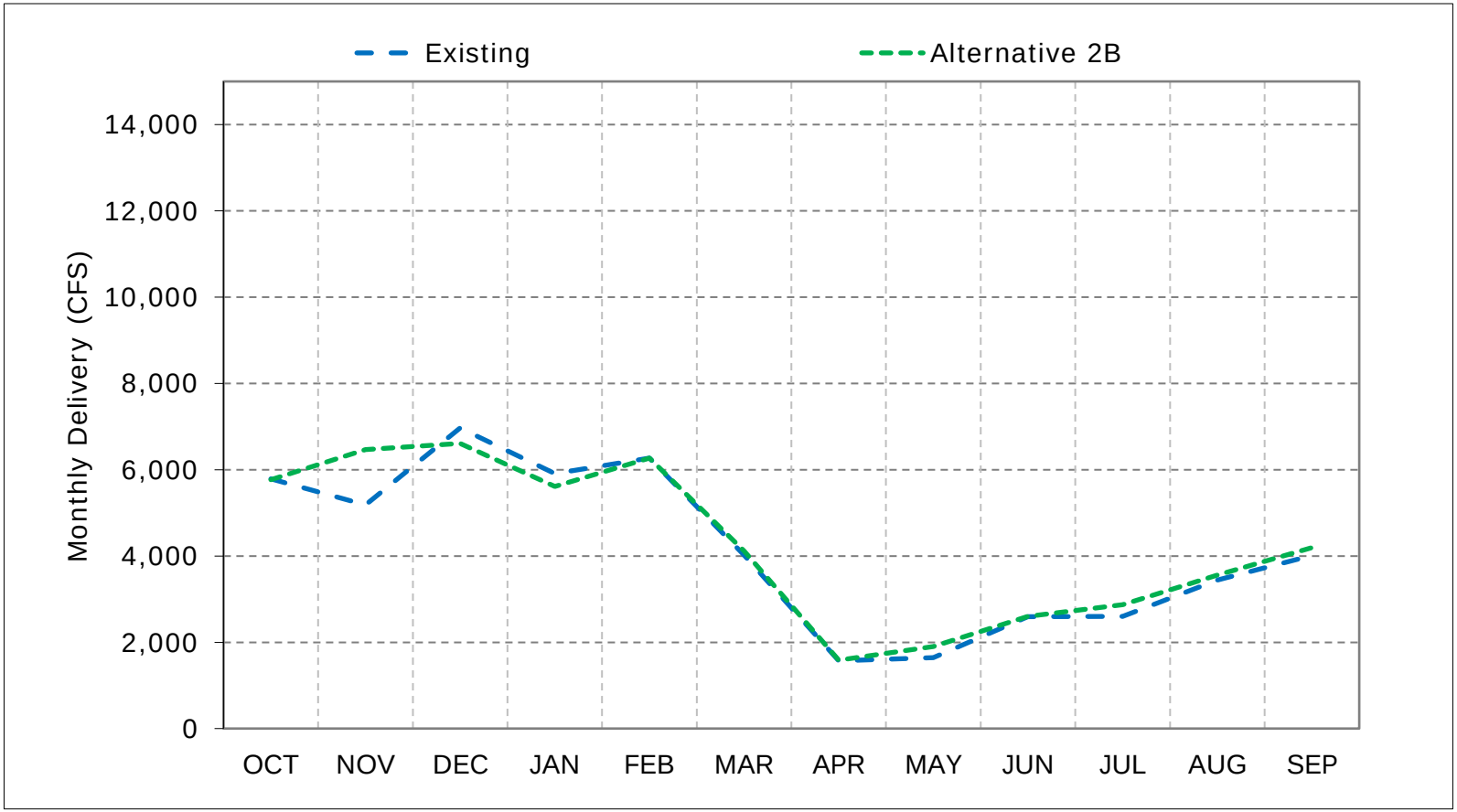
*These results are displayed with water year - year type sorting.

Figure 3-5. Total Delta Exports, Dry Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-6. Total Delta Exports, Critical Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 3-7. Total Delta Exports, October

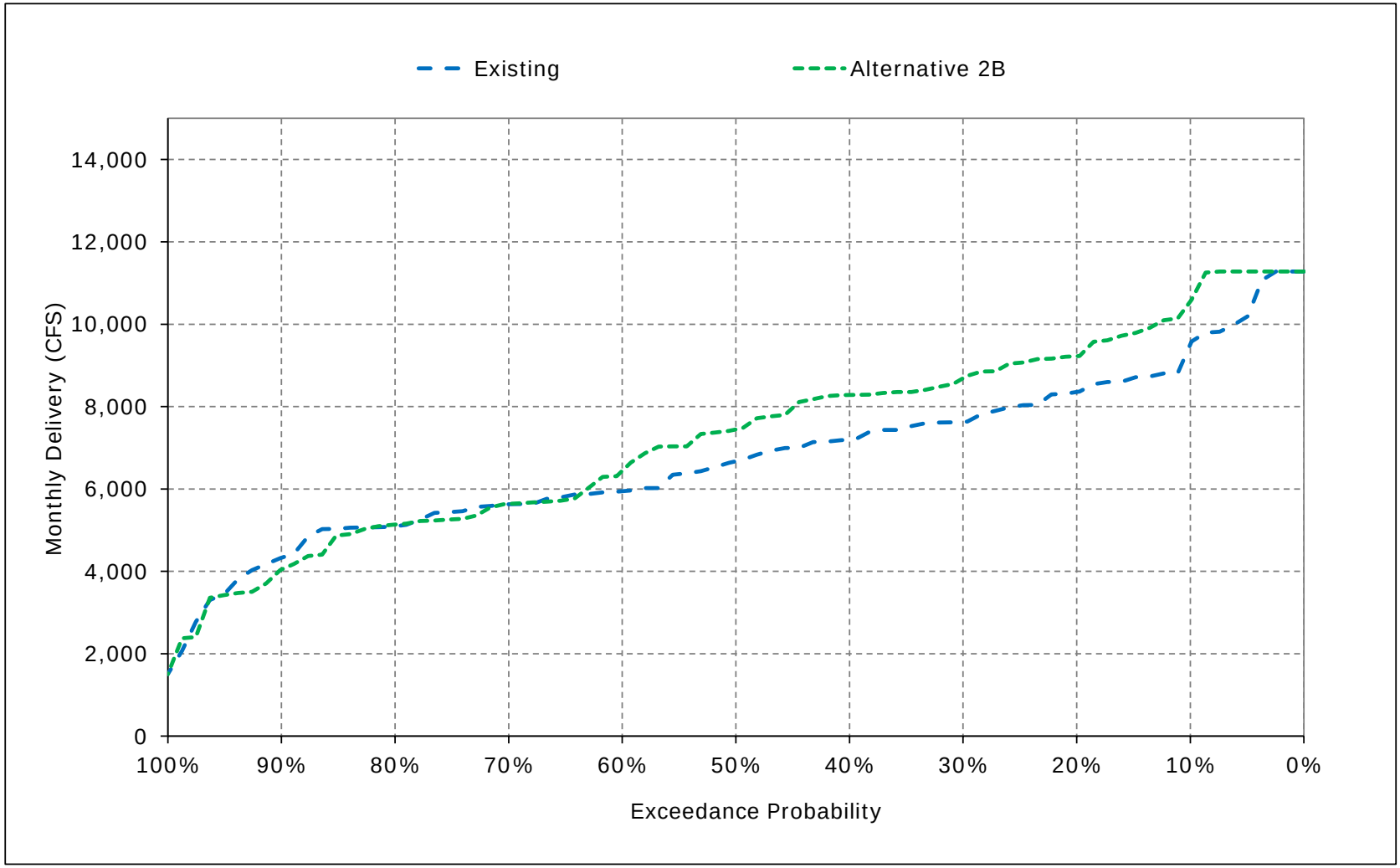


Figure 3-8. Total Delta Exports, November

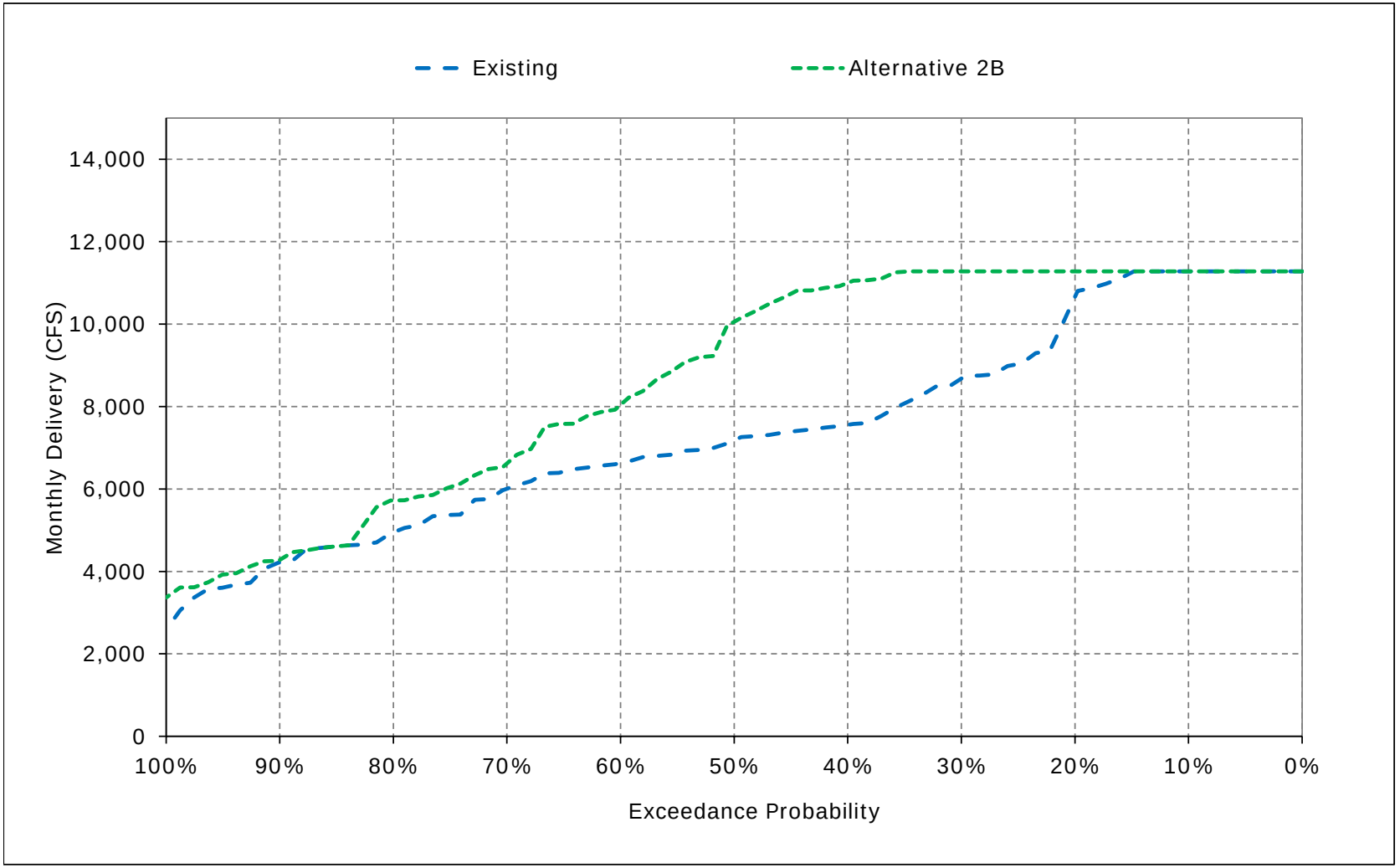


Figure 3-9. Total Delta Exports, December

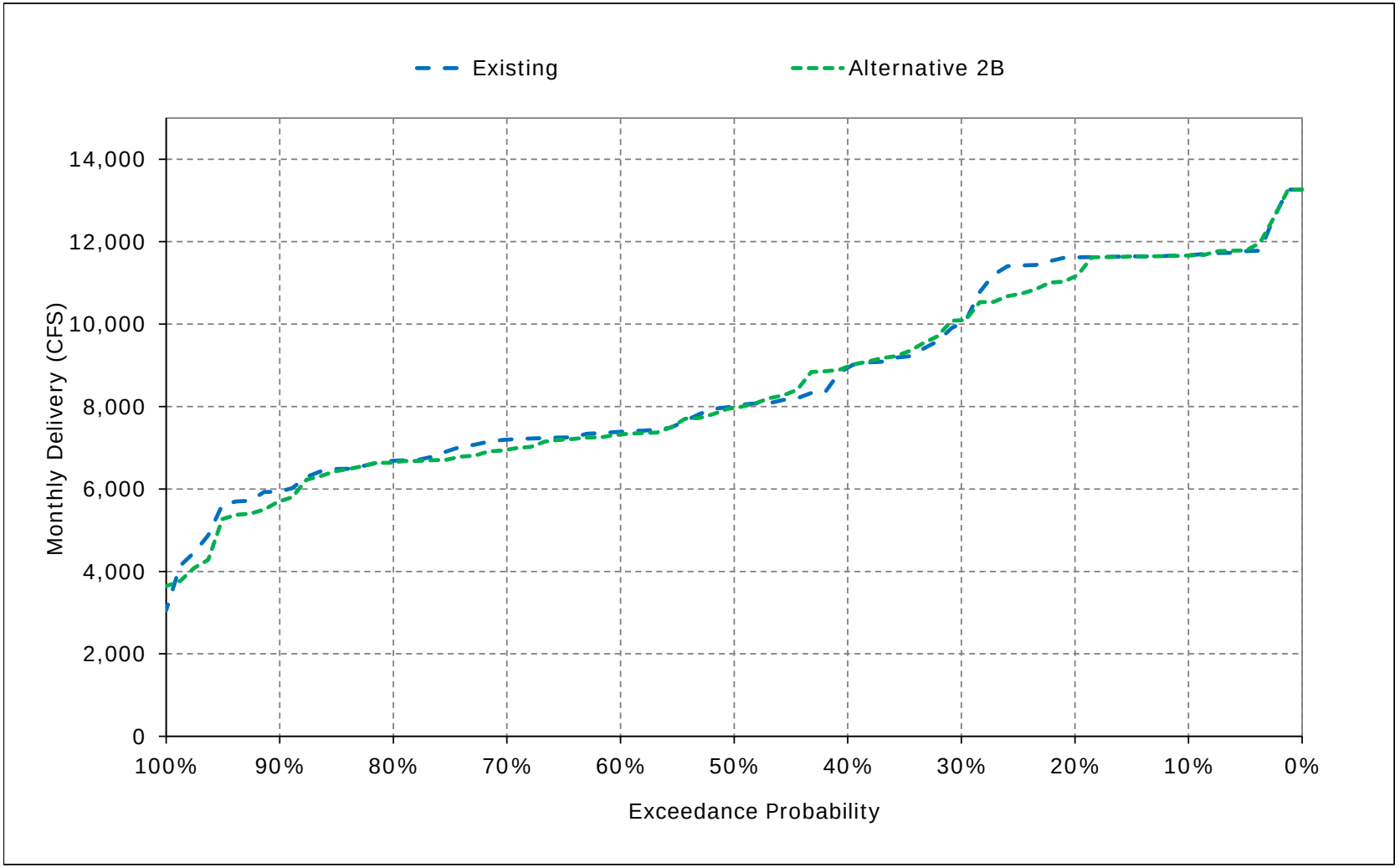


Figure 3-10. Total Delta Exports, January

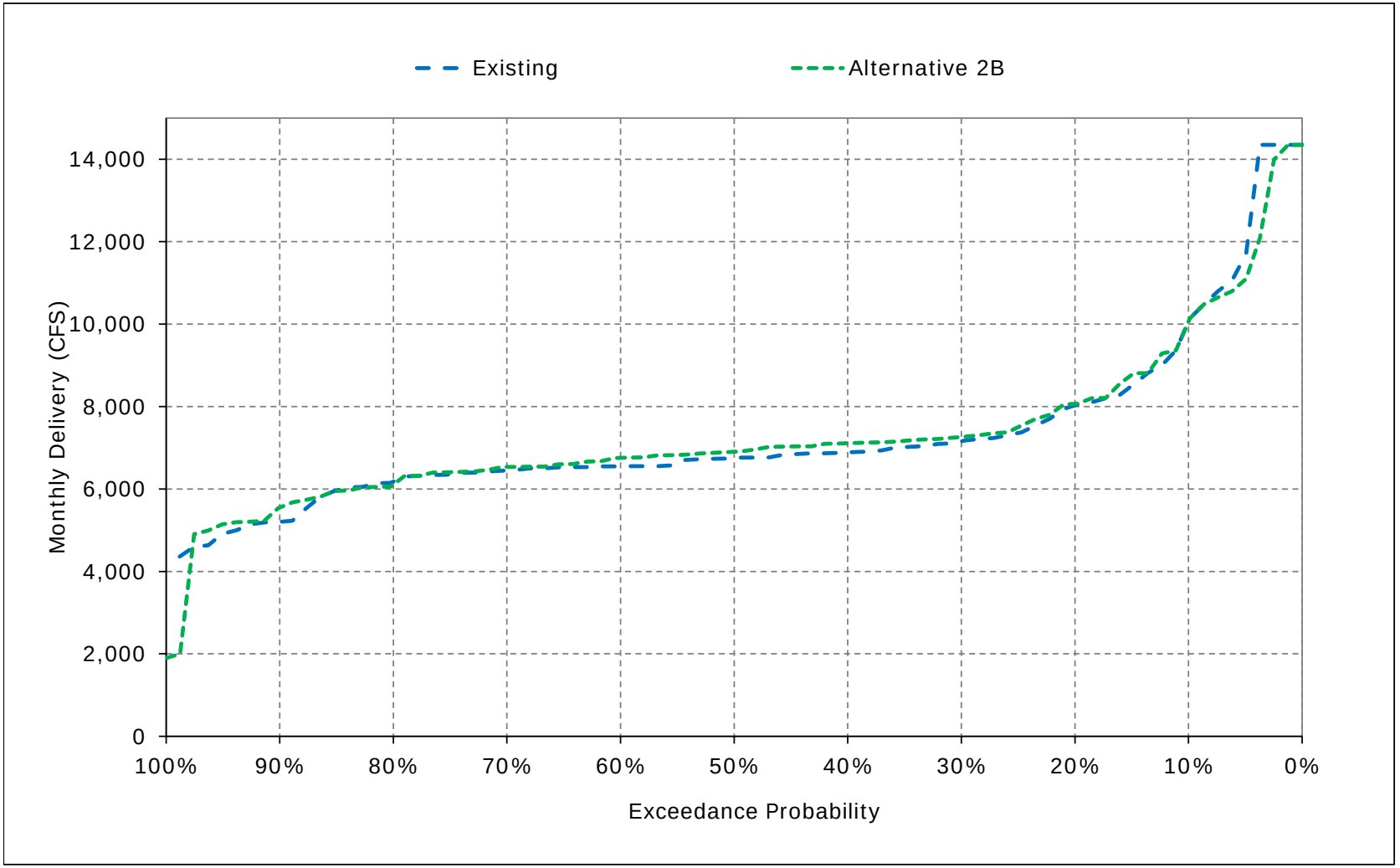


Figure 3-11. Total Delta Exports, February

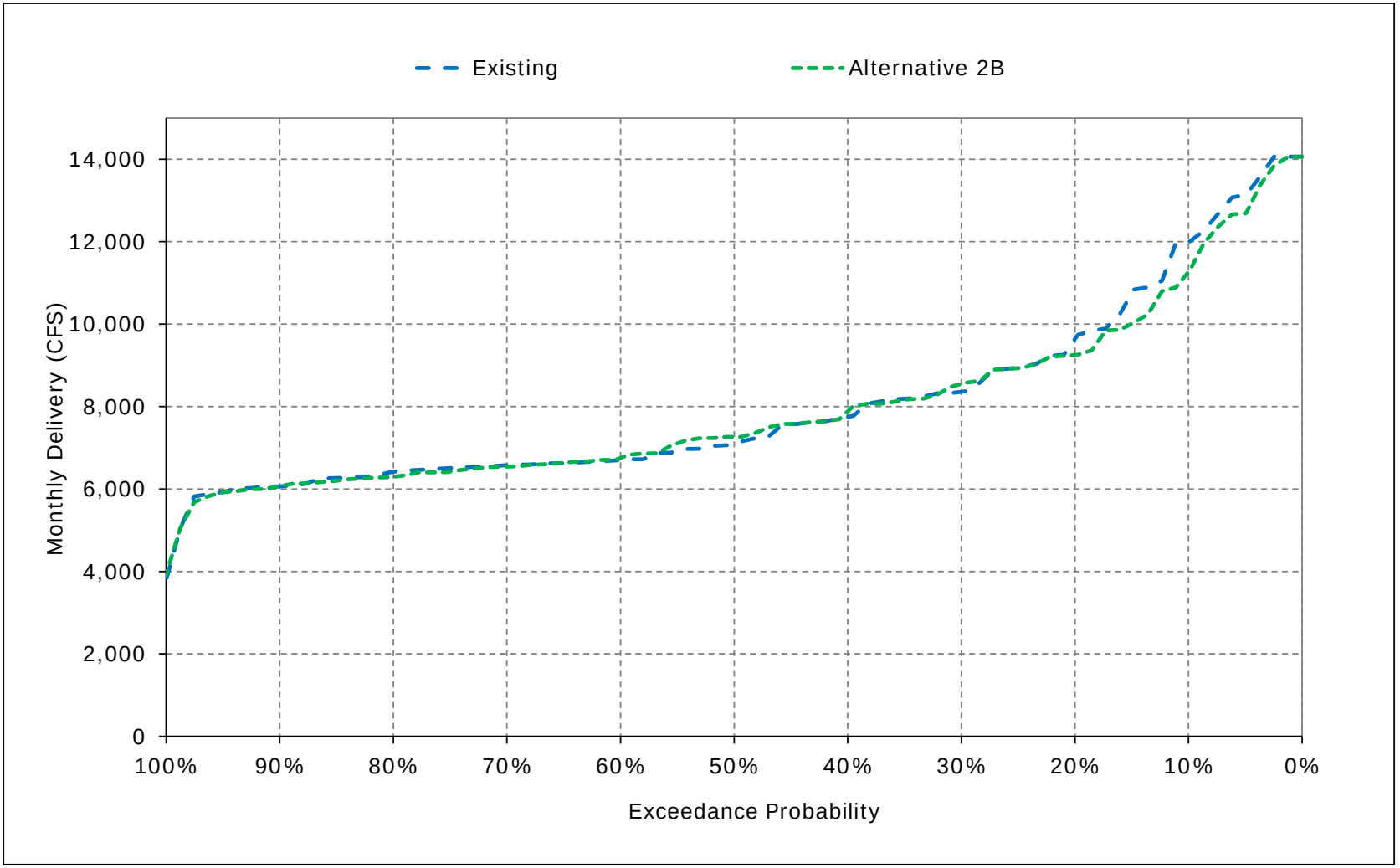


Figure 3-12. Total Delta Exports, March

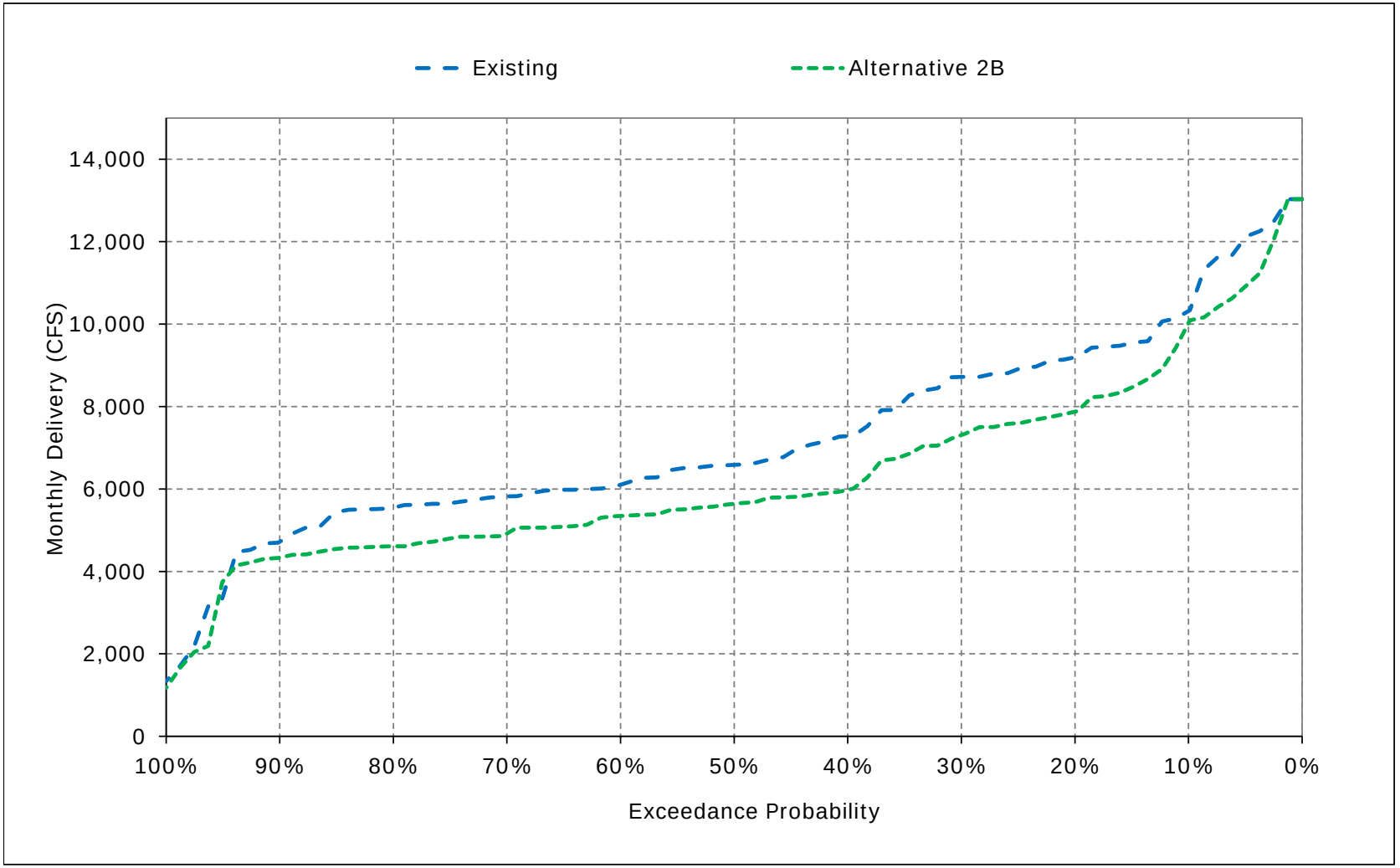


Figure 3-13. Total Delta Exports, April

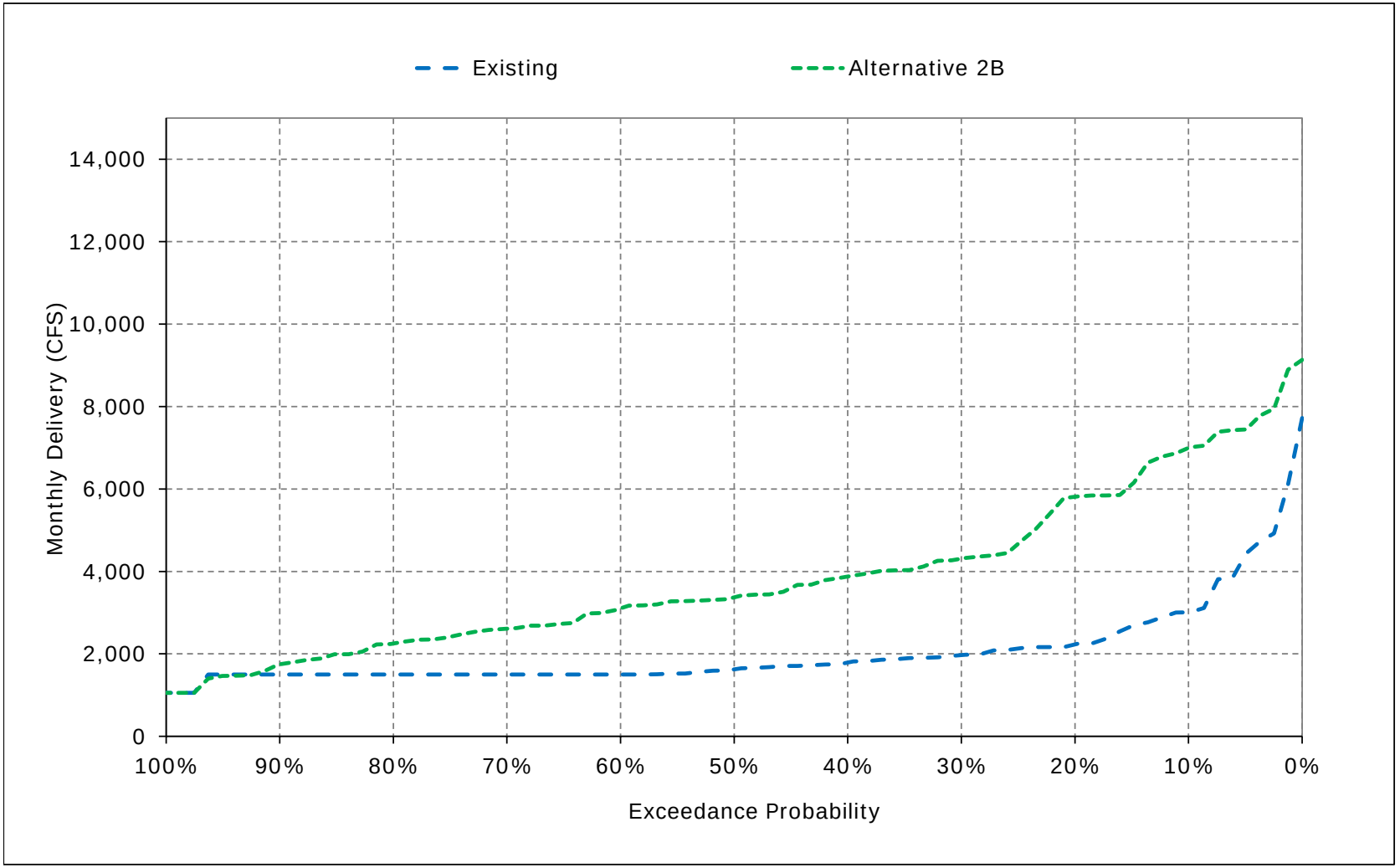


Figure 3-14. Total Delta Exports, May

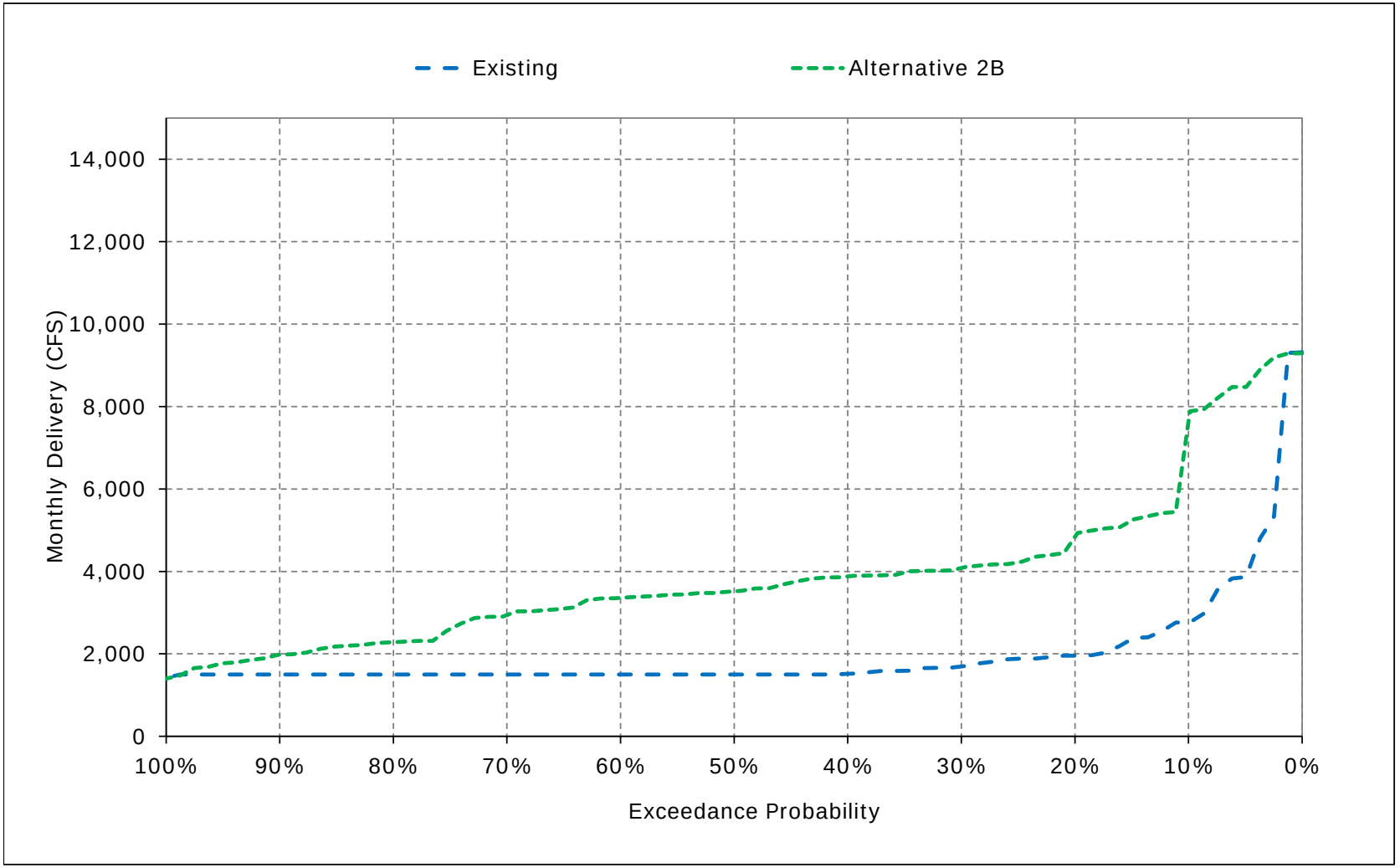


Figure 3-15. Total Delta Exports, June

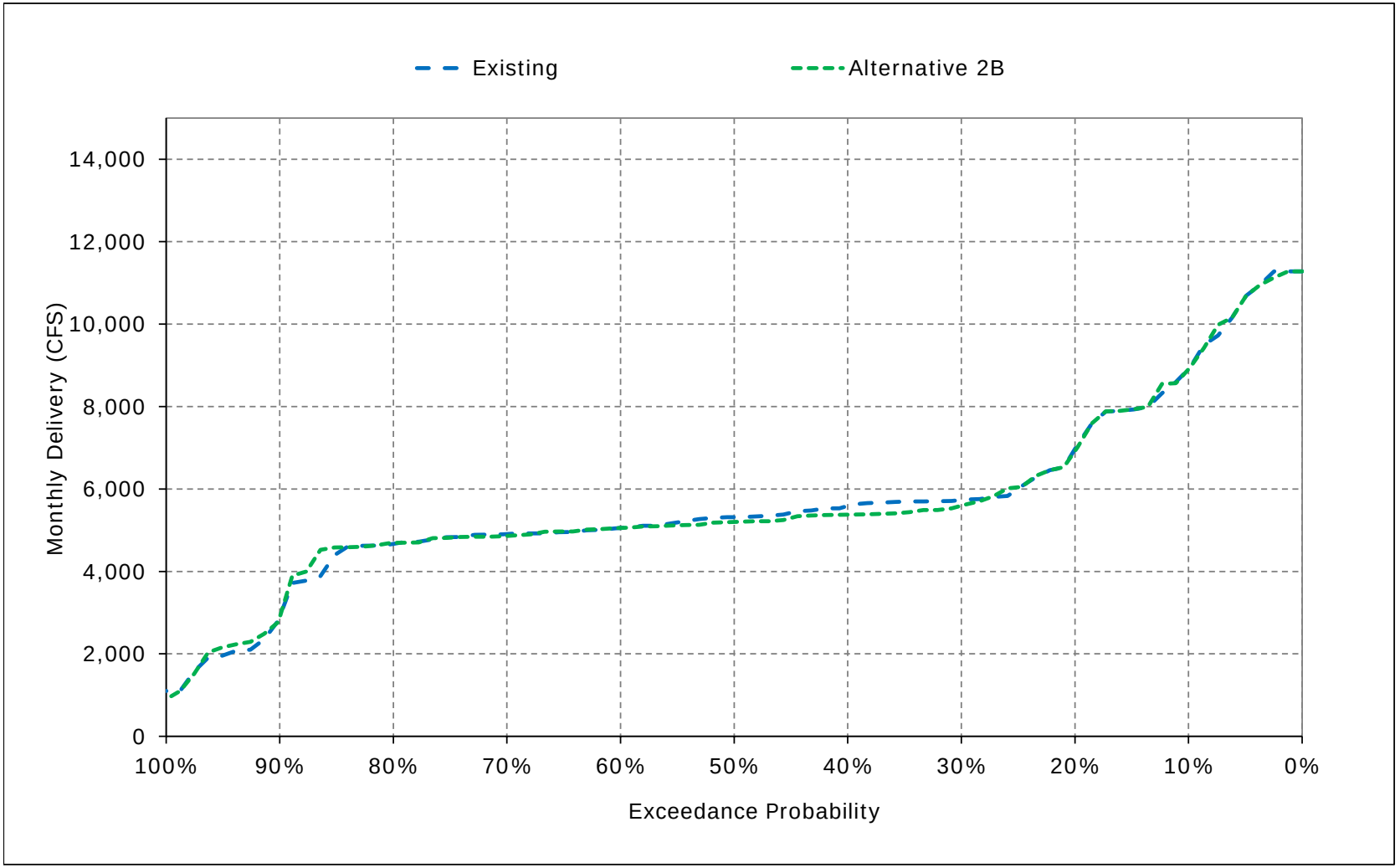


Figure 3-16. Total Delta Exports, July

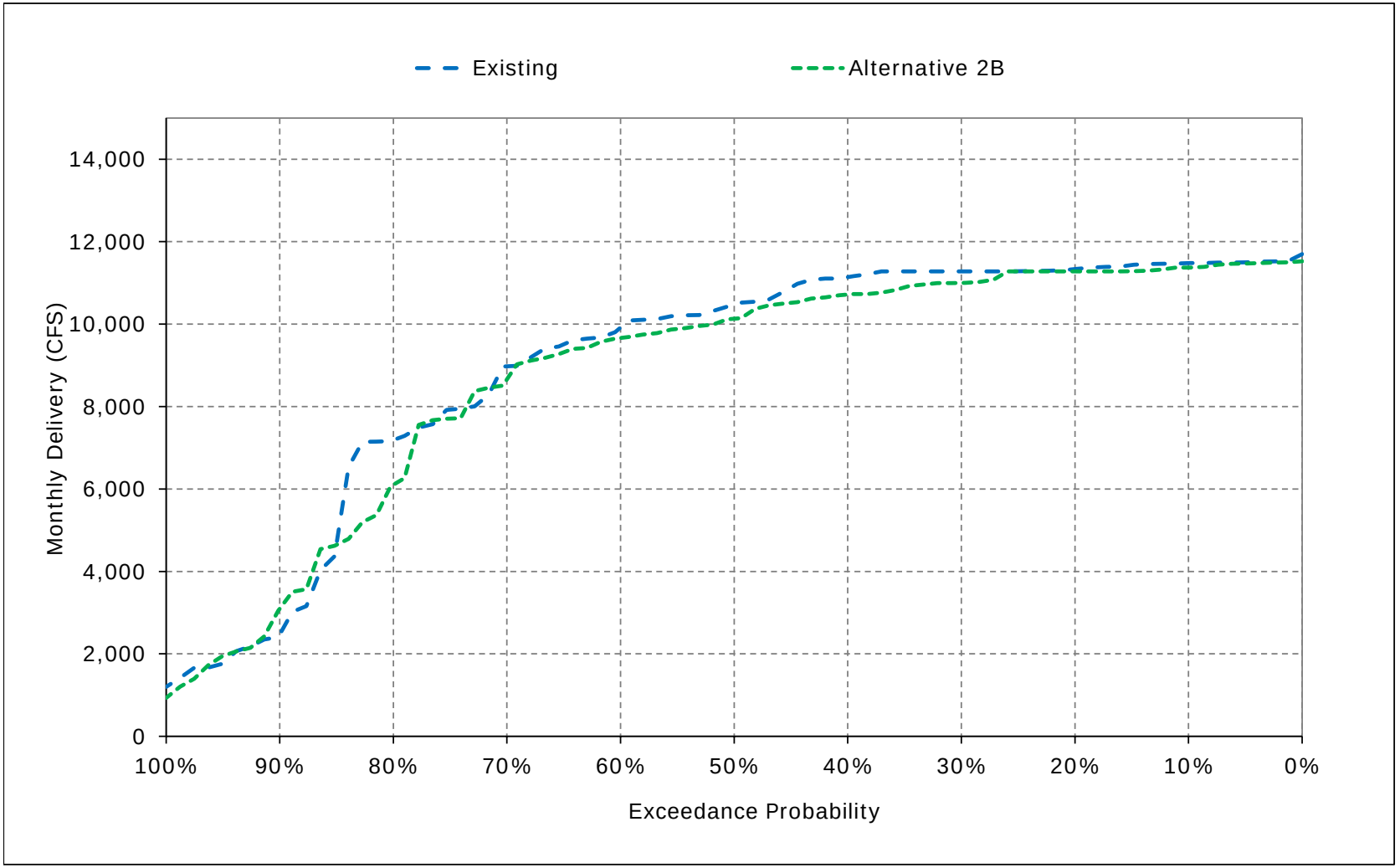


Figure 3-17. Total Delta Exports, August

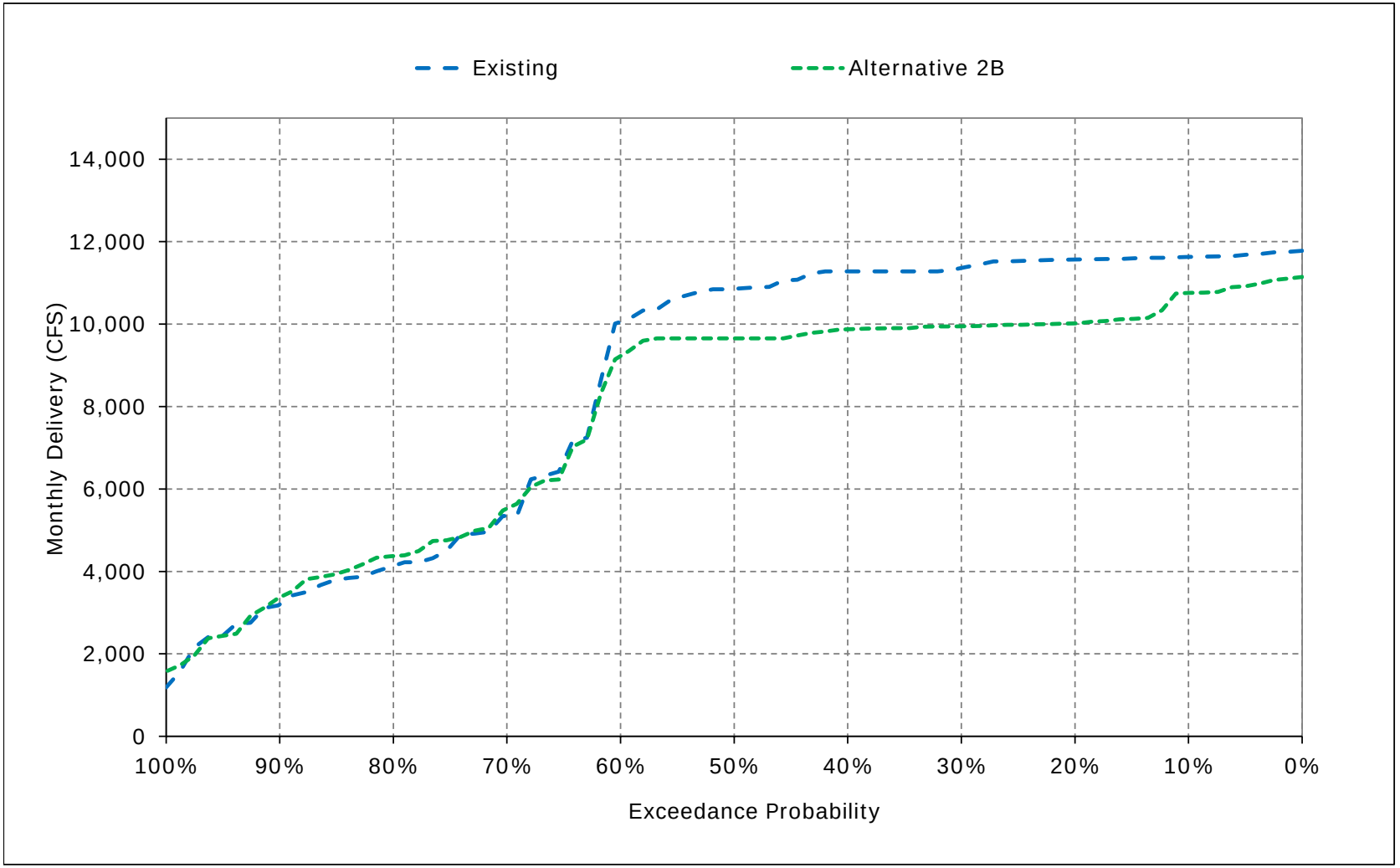
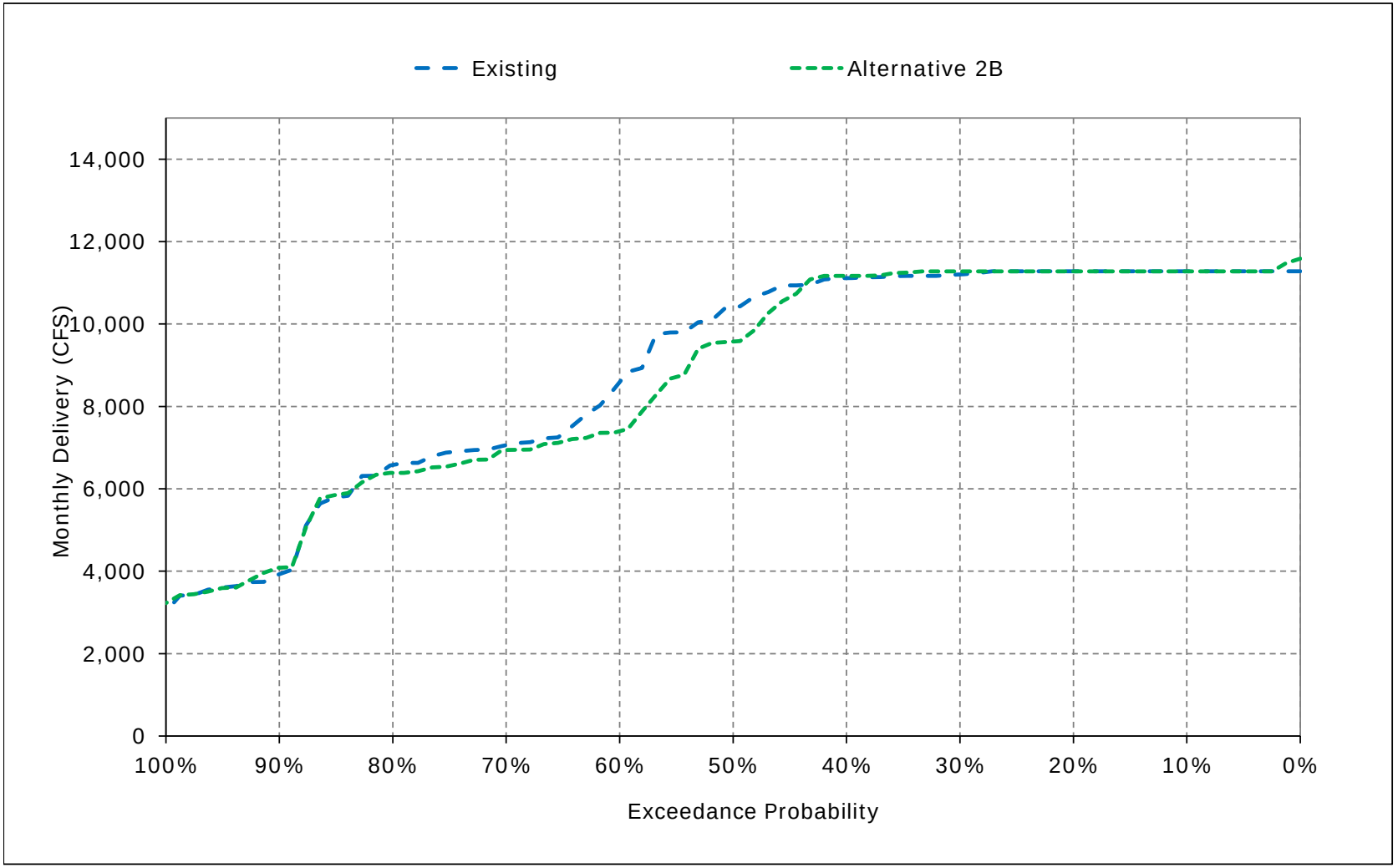


Figure 3-18. Total Delta Exports, September



# Table 4-1. SWP Banks PP Exports, Monthly Delivery

## Existing

| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 4,953 | 6,680 | 7,105 | 5,846 | 7,403 | 8,190 | 1,330 | 1,106 | 4,310 | 6,680 | 6,680 | 6,680 |
| 20% | 4,110 | 5,508 | 7,043 | 3,432 | 5,331 | 5,223 | 935 | 766 | 3,083 | 6,680 | 6,680 | 6,680 |
| 30% | 3,758 | 4,523 | 6,552 | 2,864 | 3,916 | 4,832 | 787 | 637 | 2,325 | 6,680 | 6,680 | 6,680 |
| 40% | 3,419 | 3,519 | 4,565 | 2,770 | 3,313 | 3,773 | 712 | 600 | 2,119 | 6,680 | 6,680 | 6,680 |
| 50% | 3,163 | 2,821 | 4,000 | 2,707 | 2,877 | 2,912 | 673 | 600 | 1,935 | 6,680 | 6,680 | 6,428 |
| 60% | 2,882 | 2,225 | 3,485 | 2,621 | 2,689 | 2,634 | 606 | 600 | 1,848 | 6,626 | 6,680 | 3,197 |
| 70% | 2,297 | 1,683 | 2,960 | 2,601 | 2,622 | 2,386 | 600 | 600 | 1,741 | 5,788 | 511 | 2,574 |
| 80% | 1,813 | 1,337 | 2,774 | 2,485 | 2,559 | 2,249 | 600 | 600 | 1,635 | 2,943 | 300 | 2,416 |
| 90% | 986 | 564 | 2,487 | 2,204 | 2,423 | 1,632 | 600 | 526 | 324 | 300 | 300 | 1,678 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3,088 | 3,243 | 4,576 | 3,302 | 3,900 | 3,793 | 873 | 811 | 2,335 | 5,164 | 4,373 | 4,622 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 3,680 | 4,067 | 4,520 | 4,574 | 5,340 | 5,783 | 1,264 | 1,270 | 3,555 | 6,602 | 6,680 | 6,617 |
| Above Normal (15%) | 3,044 | 2,865 | 5,335 | 3,151 | 4,114 | 3,956 | 706 | 656 | 2,482 | 6,411 | 6,680 | 6,680 |
| Below Normal (17%) | 3,114 | 3,394 | 4,908 | 2,768 | 3,839 | 3,682 | 672 | 632 | 2,049 | 6,676 | 6,404 | 4,657 |
| Dry (22%) | 2,775 | 3,074 | 4,599 | 2,692 | 2,683 | 2,383 | 695 | 628 | 1,687 | 4,089 | 515 | 2,581 |
| Critical (15%) | 2,289 | 1,911 | 3,514 | 2,234 | 2,464 | 1,566 | 692 | 454 | 852 | 650 | 483 | 1,264 |

## Alternative 2B

| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 5,708 | 6,680 | 7,080 | 5,849 | 6,863 | 6,044 | 3,176 | 3,405 | 4,307 | 6,680 | 6,664 | 6,680 |
| 20% | 4,625 | 6,680 | 7,027 | 3,949 | 5,437 | 4,078 | 2,113 | 754 | 2,964 | 6,680 | 5,054 | 6,680 |
| 30% | 4,387 | 6,212 | 5,361 | 3,196 | 4,187 | 3,429 | 766 | 601 | 2,168 | 6,680 | 5,054 | 6,680 |
| 40% | 3,958 | 5,380 | 4,421 | 2,904 | 3,446 | 2,863 | 683 | 600 | 1,956 | 6,680 | 5,054 | 6,680 |
| 50% | 3,616 | 4,907 | 3,937 | 2,844 | 3,031 | 2,443 | 603 | 600 | 1,888 | 6,670 | 5,054 | 3,708 |
| 60% | 3,101 | 4,194 | 3,610 | 2,748 | 2,840 | 2,200 | 600 | 600 | 1,803 | 6,094 | 4,681 | 2,913 |
| 70% | 2,491 | 3,633 | 3,021 | 2,625 | 2,618 | 1,986 | 600 | 600 | 1,760 | 5,281 | 372 | 2,528 |
| 80% | 2,008 | 2,945 | 2,819 | 2,530 | 2,507 | 1,798 | 600 | 600 | 1,694 | 1,386 | 300 | 2,274 |
| 90% | 1,183 | 2,104 | 2,619 | 2,217 | 2,398 | 1,622 | 600 | 493 | 300 | 300 | 300 | 1,547 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3,506 | 4,656 | 4,449 | 3,428 | 3,897 | 3,121 | 1,241 | 1,046 | 2,280 | 4,944 | 3,553 | 4,396 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 4,234 | 5,924 | 4,502 | 4,610 | 5,359 | 4,908 | 2,358 | 1,921 | 3,465 | 6,405 | 4,955 | 6,076 |
| Above Normal (15%) | 3,398 | 4,117 | 4,680 | 3,177 | 3,914 | 3,035 | 914 | 901 | 2,462 | 6,359 | 5,054 | 6,680 |
| Below Normal (17%) | 3,682 | 4,908 | 4,815 | 2,984 | 3,909 | 2,763 | 813 | 638 | 2,006 | 6,434 | 6,083 | 4,245 |
| Dry (22%) | 3,067 | 4,146 | 4,811 | 2,912 | 2,758 | 1,967 | 641 | 598 | 1,706 | 3,474 | 530 | 2,579 |
| Critical (15%) | 2,493 | 2,920 | 3,130 | 2,410 | 2,411 | 1,482 | 544 | 444 | 711 | 832 | 599 | 1,372 |

## Alternative 2B minus Existing

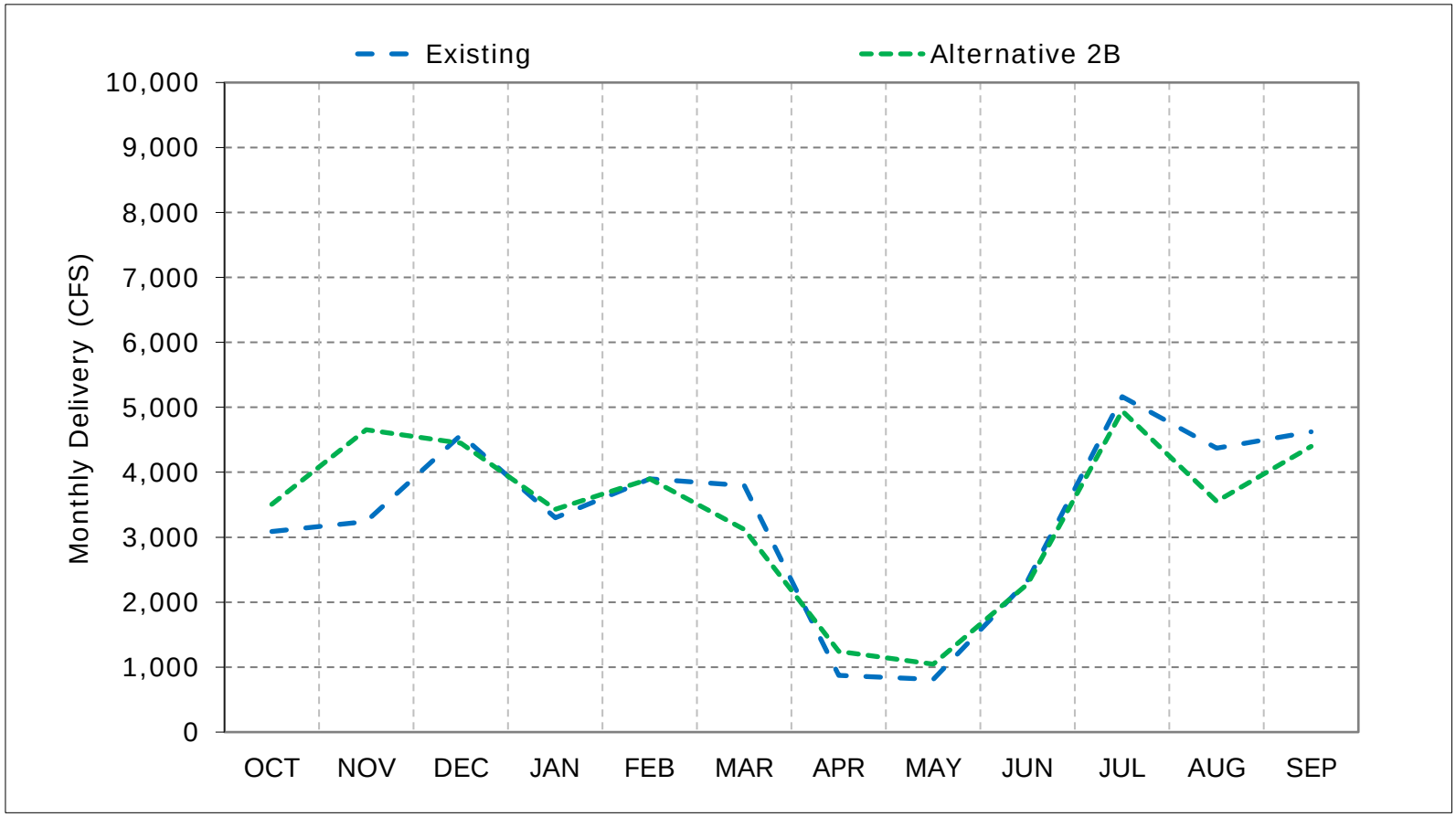
| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 755 | 0 | -24 | 3 | -540 | -2,146 | 1,846 | 2,299 | -3 | 0 | -16 | 0 |
| 20% | 515 | 1,172 | -16 | 516 | 106 | -1,145 | 1,177 | -12 | -119 | 0 | -1,626 | 0 |
| 30% | 629 | 1,689 | -1,190 | 332 | 271 | -1,403 | -21 | -36 | -157 | 0 | -1,626 | 0 |
| 40% | 539 | 1,861 | -144 | 134 | 133 | -910 | -29 | 0 | -163 | 0 | -1,626 | 0 |
| 50% | 453 | 2,087 | -63 | 137 | 154 | -469 | -70 | 0 | -47 | -10 | -1,626 | -2,719 |
| 60% | 219 | 1,969 | 125 | 126 | 151 | -435 | -6 | 0 | -45 | -532 | -1,999 | -285 |
| 70% | 194 | 1,950 | 61 | 24 | -5 | -400 | 0 | 0 | 19 | -507 | -139 | -45 |
| 80% | 195 | 1,608 | 45 | 45 | -53 | -452 | 0 | 0 | 59 | -1,557 | 0 | -142 |
| 90% | 197 | 1,540 | 132 | 13 | -25 | -10 | 0 | -33 | -24 | 0 | 0 | -131 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 418 | 1,414 | -127 | 126 | -3 | -673 | 368 | 235 | -55 | -220 | -820 | -227 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 555 | 1,858 | -18 | 36 | 18 | -875 | 1,094 | 651 | -90 | -197 | -1,725 | -541 |
| Above Normal (15%) | 354 | 1,252 | -654 | 26 | -200 | -921 | 207 | 245 | -20 | -52 | -1,626 | 0 |
| Below Normal (17%) | 567 | 1,514 | -94 | 216 | 70 | -919 | 141 | 7 | -43 | -242 | -321 | -412 |
| Dry (22%) | 292 | 1,072 | 211 | 220 | 75 | -416 | -54 | -31 | 19 | -615 | 15 | -2 |
| Critical (15%) | 203 | 1,009 | -384 | 176 | -52 | -84 | -148 | -11 | -141 | 182 | 116 | 108 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

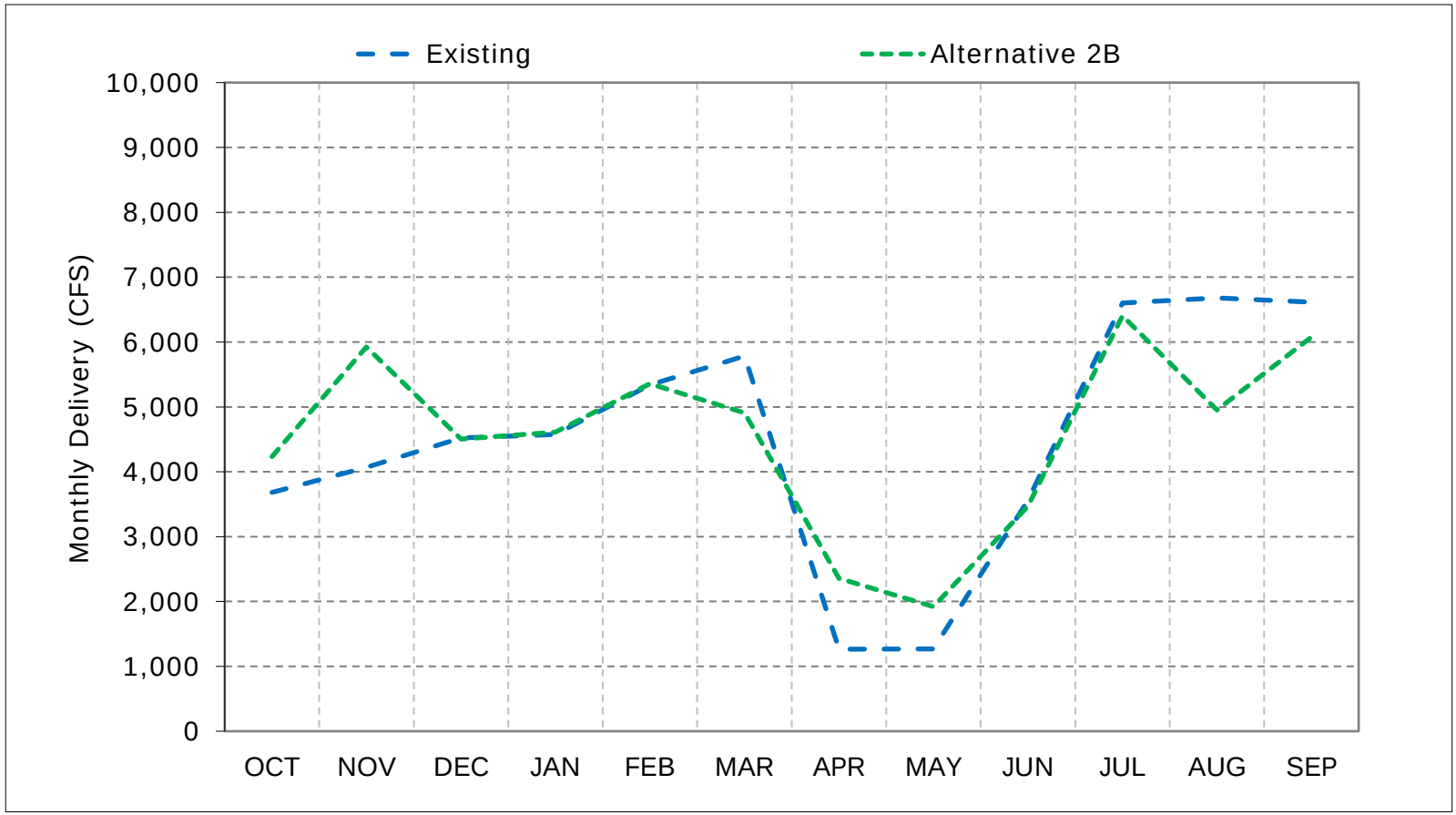
Figure 4-1. SWP Banks PP Exports, Long-Term Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

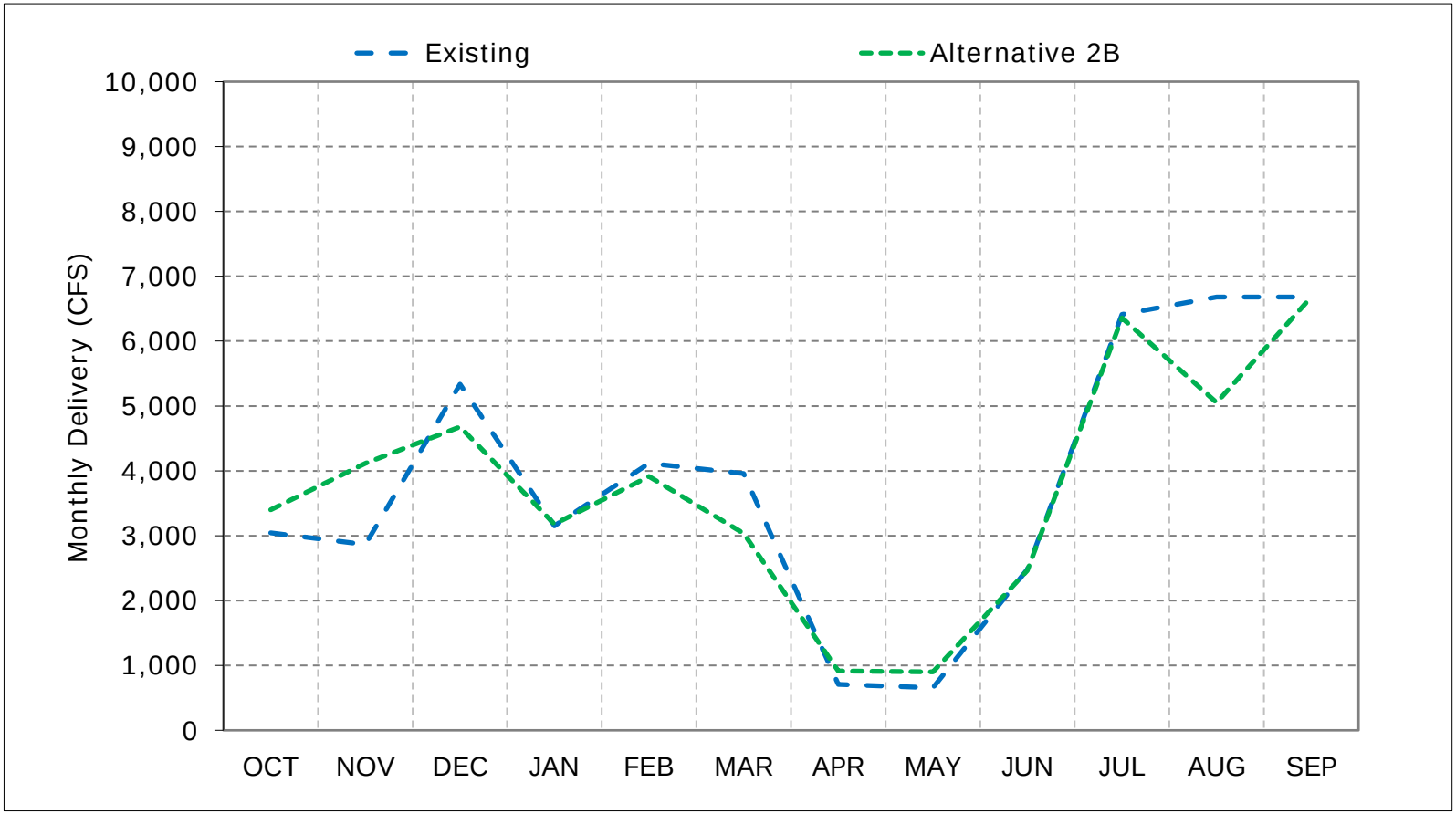
Figure 4-2. SWP Banks PP Exports, Wet Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

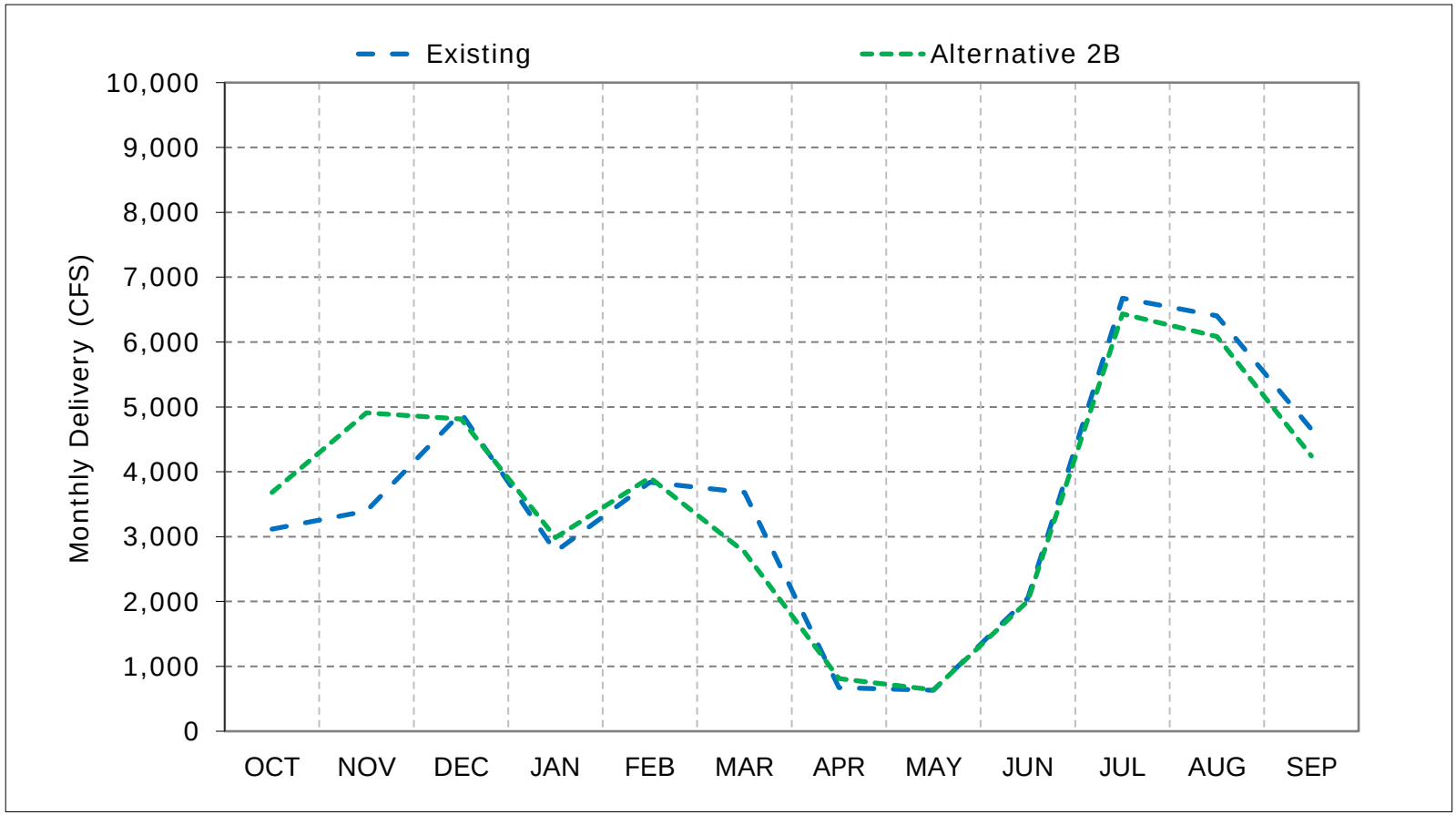
*These results are displayed with water year - year type sorting.

Figure 4-3. SWP Banks PP Exports, Above Normal Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

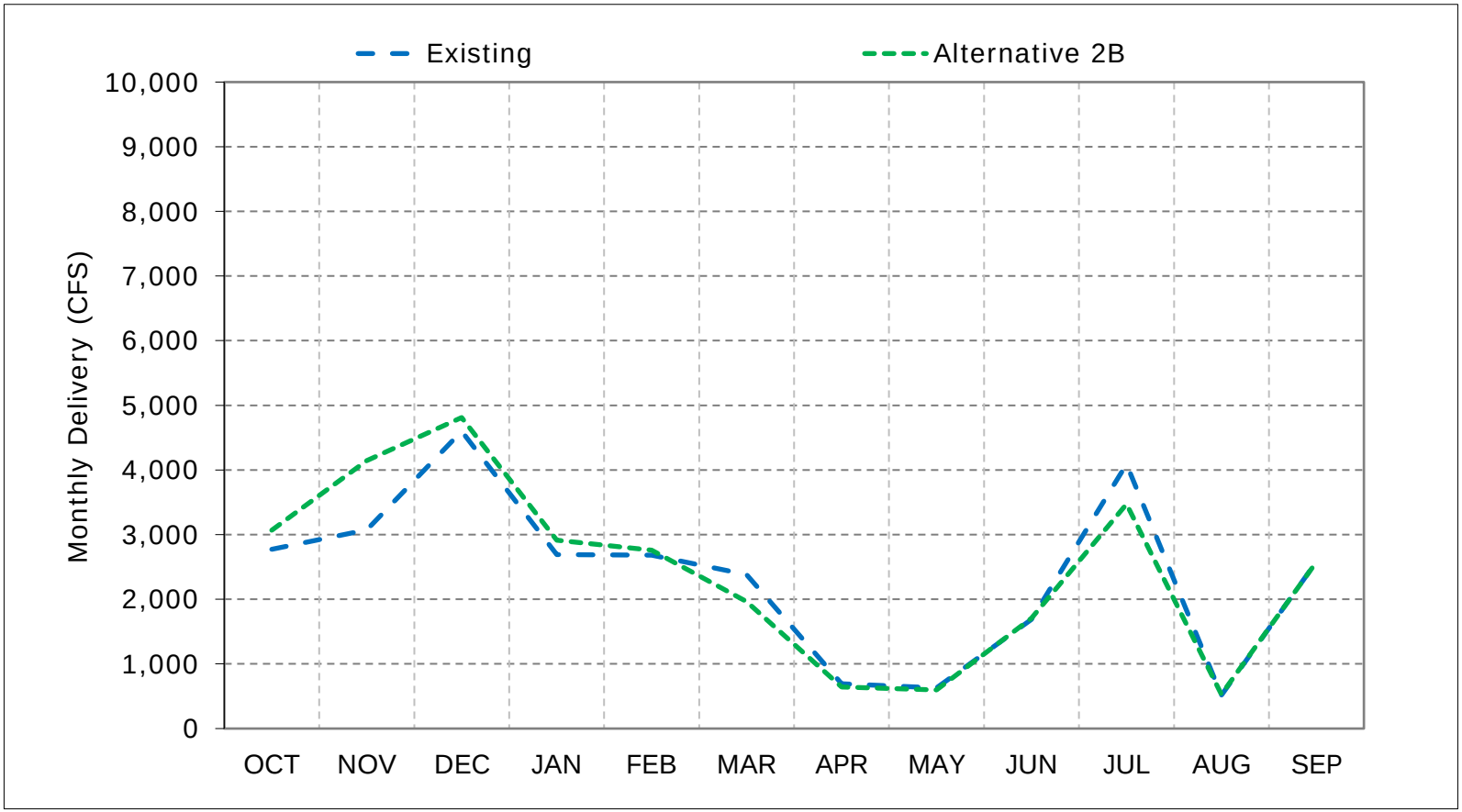
Figure 4-4. SWP Banks PP Exports, Below Normal Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

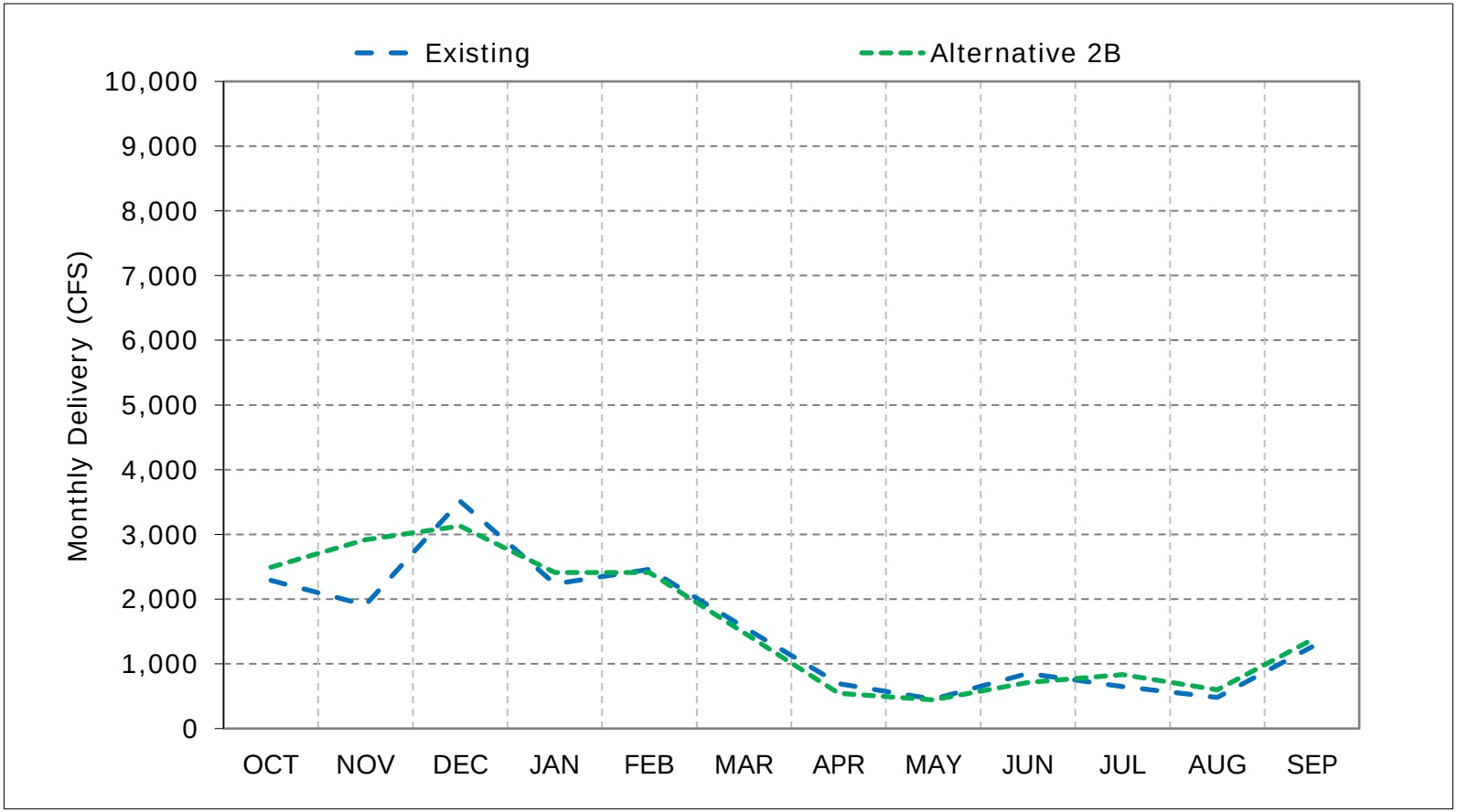
Figure 4-5. SWP Banks PP Exports, Dry Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 4-6. SWP Banks PP Exports, Critical Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-7. SWP Banks PP Exports, October

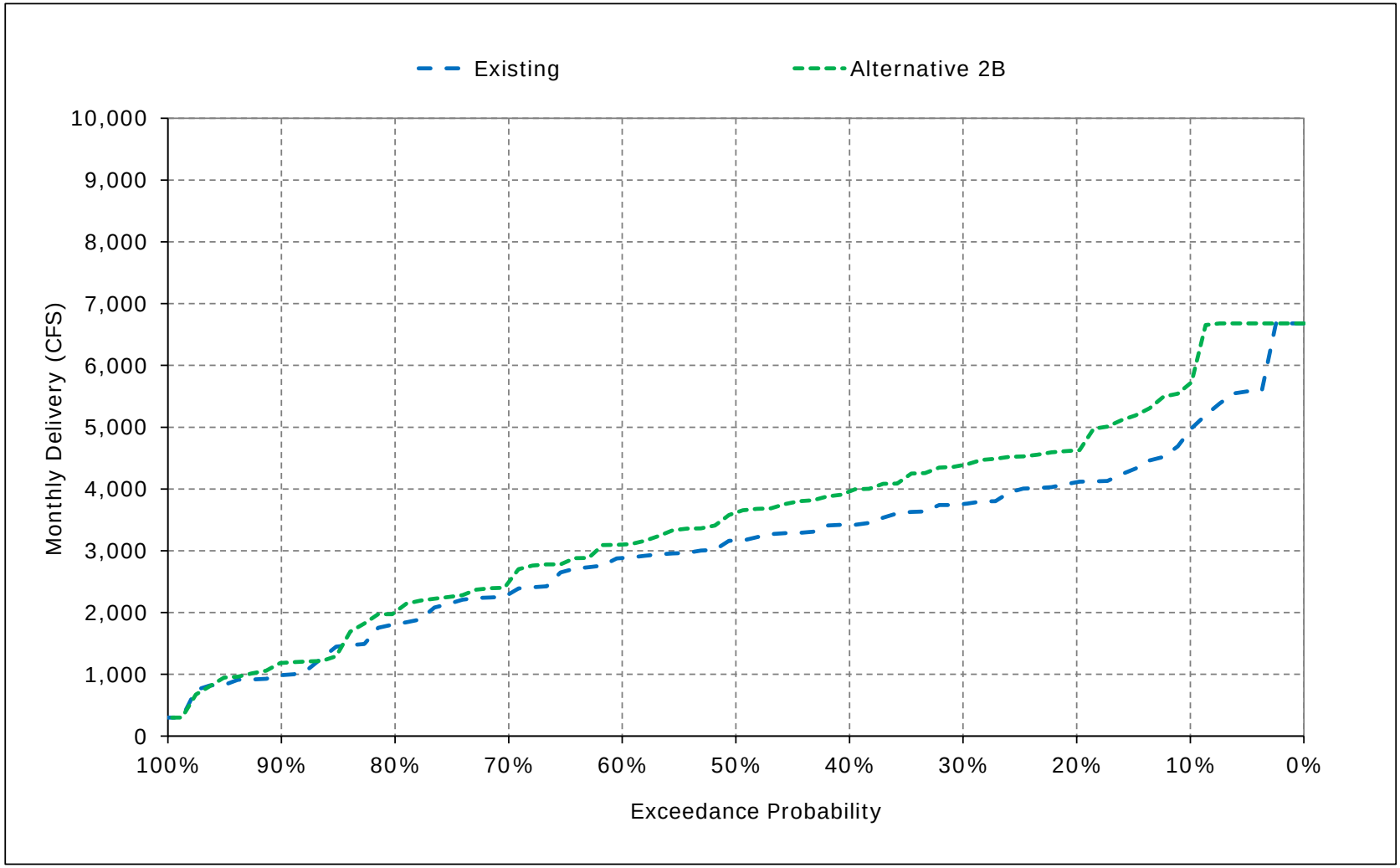


Figure 4-8. SWP Banks PP Exports, November

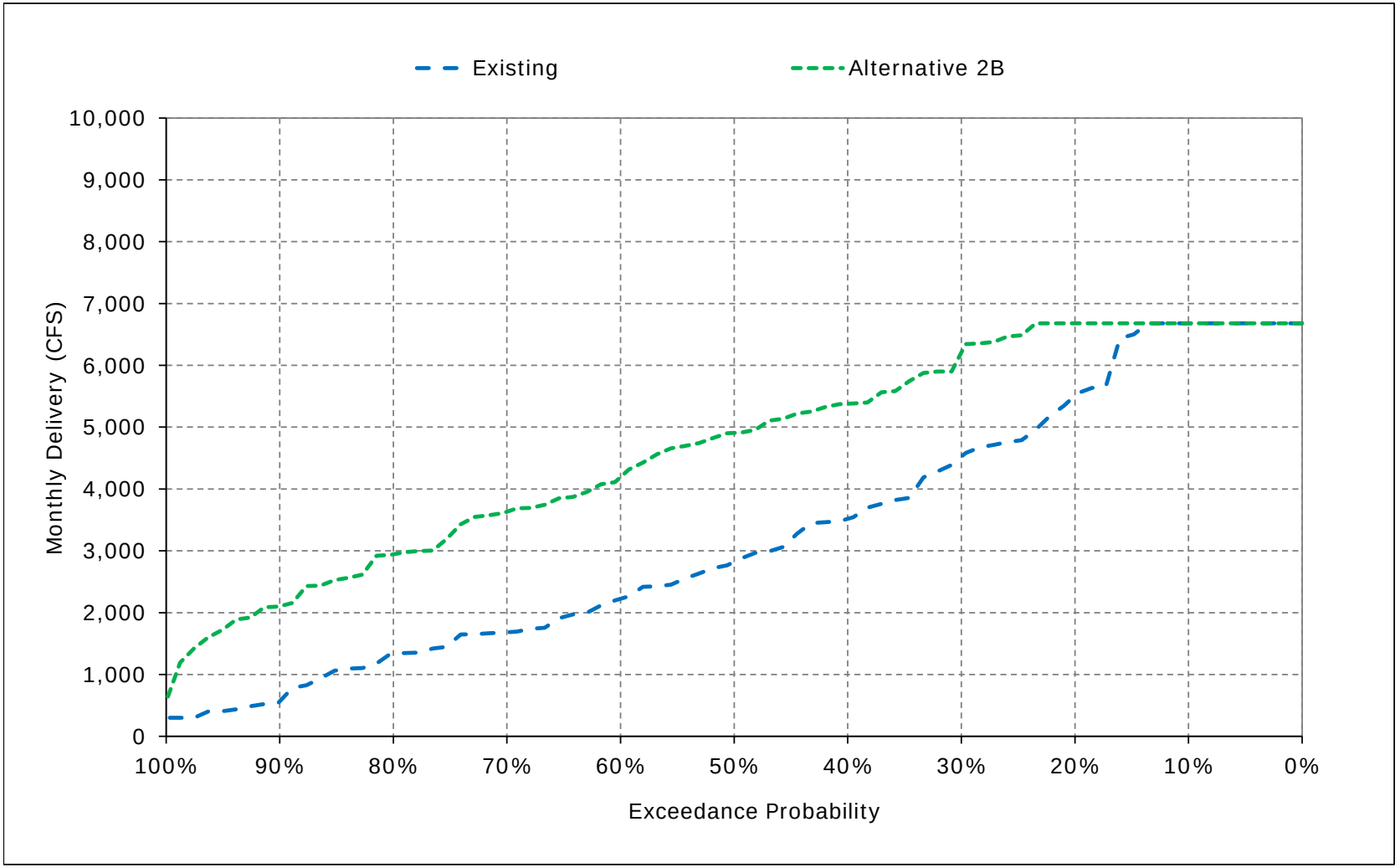


Figure 4-9. SWP Banks PP Exports, December

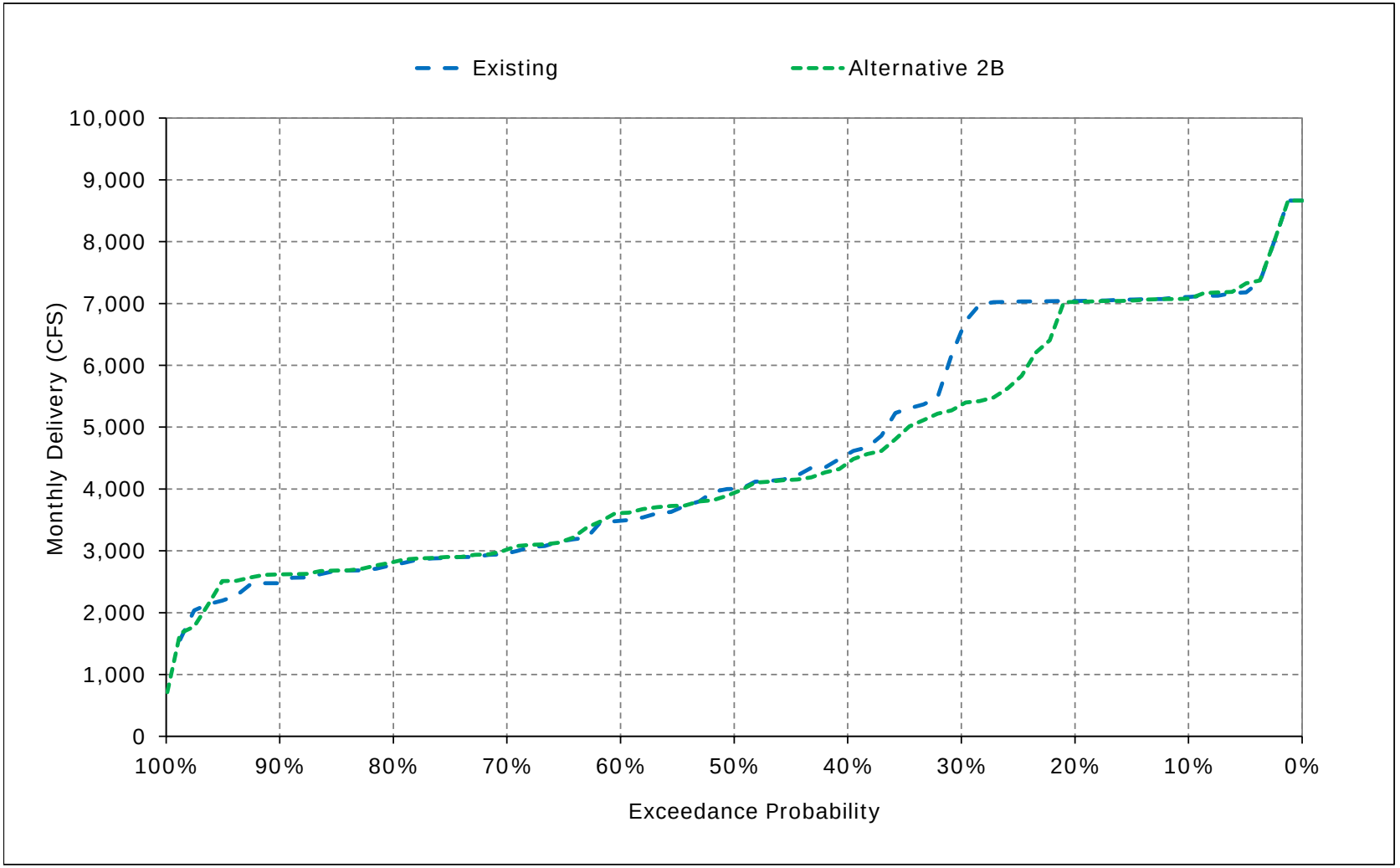


Figure 4-10. SWP Banks PP Exports, January

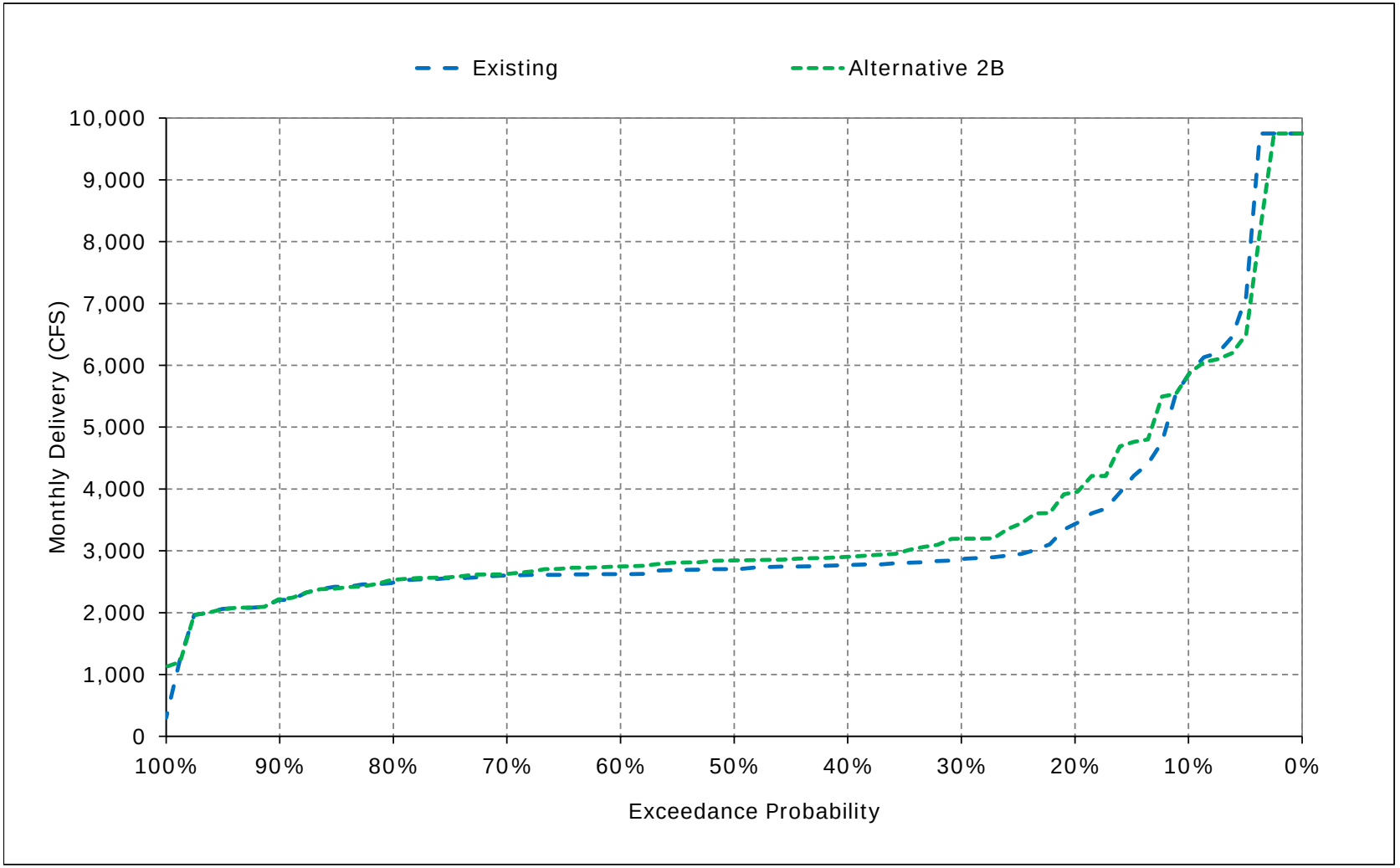


Figure 4-11. SWP Banks PP Exports, February

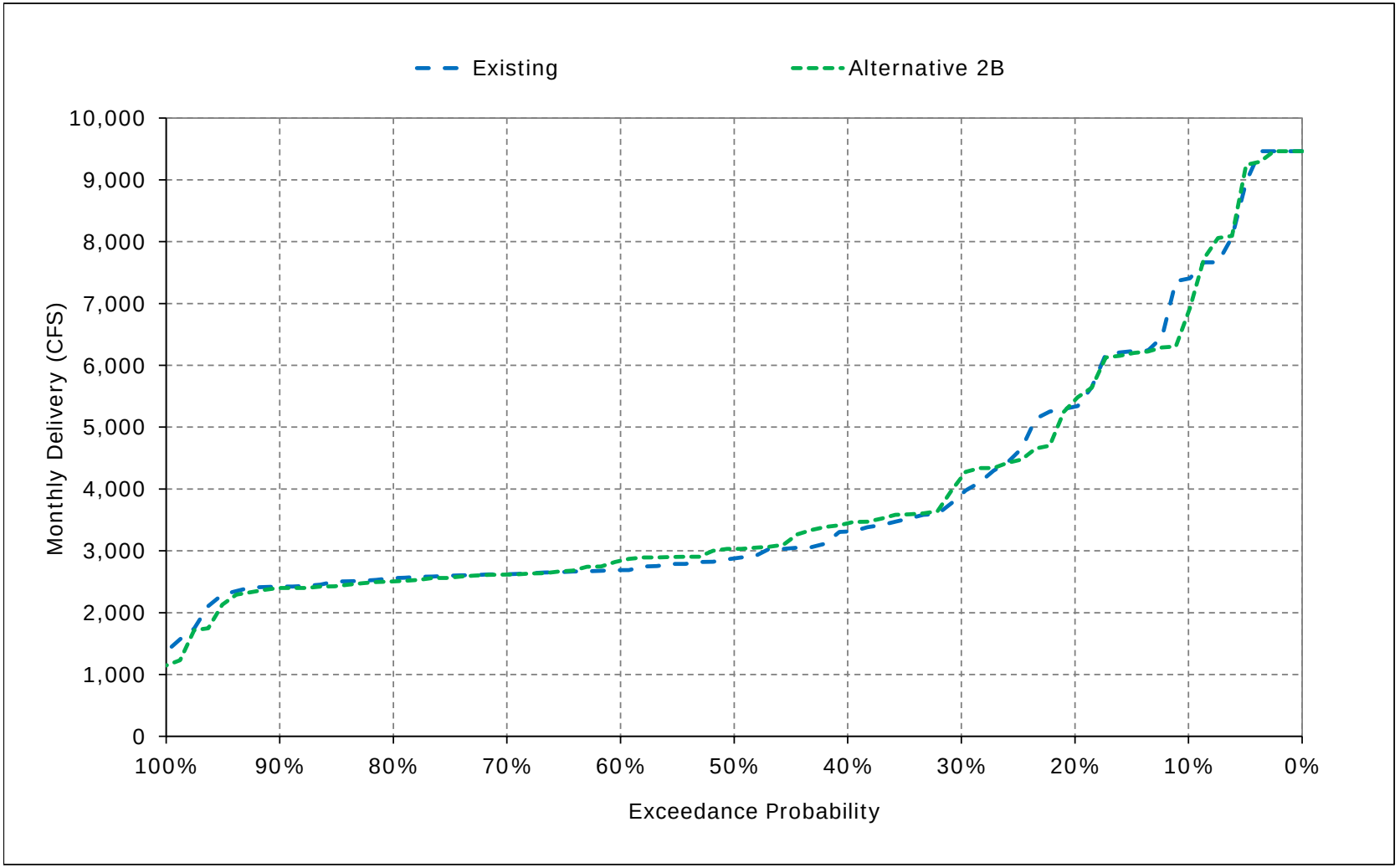


Figure 4-12. SWP Banks PP Exports, March

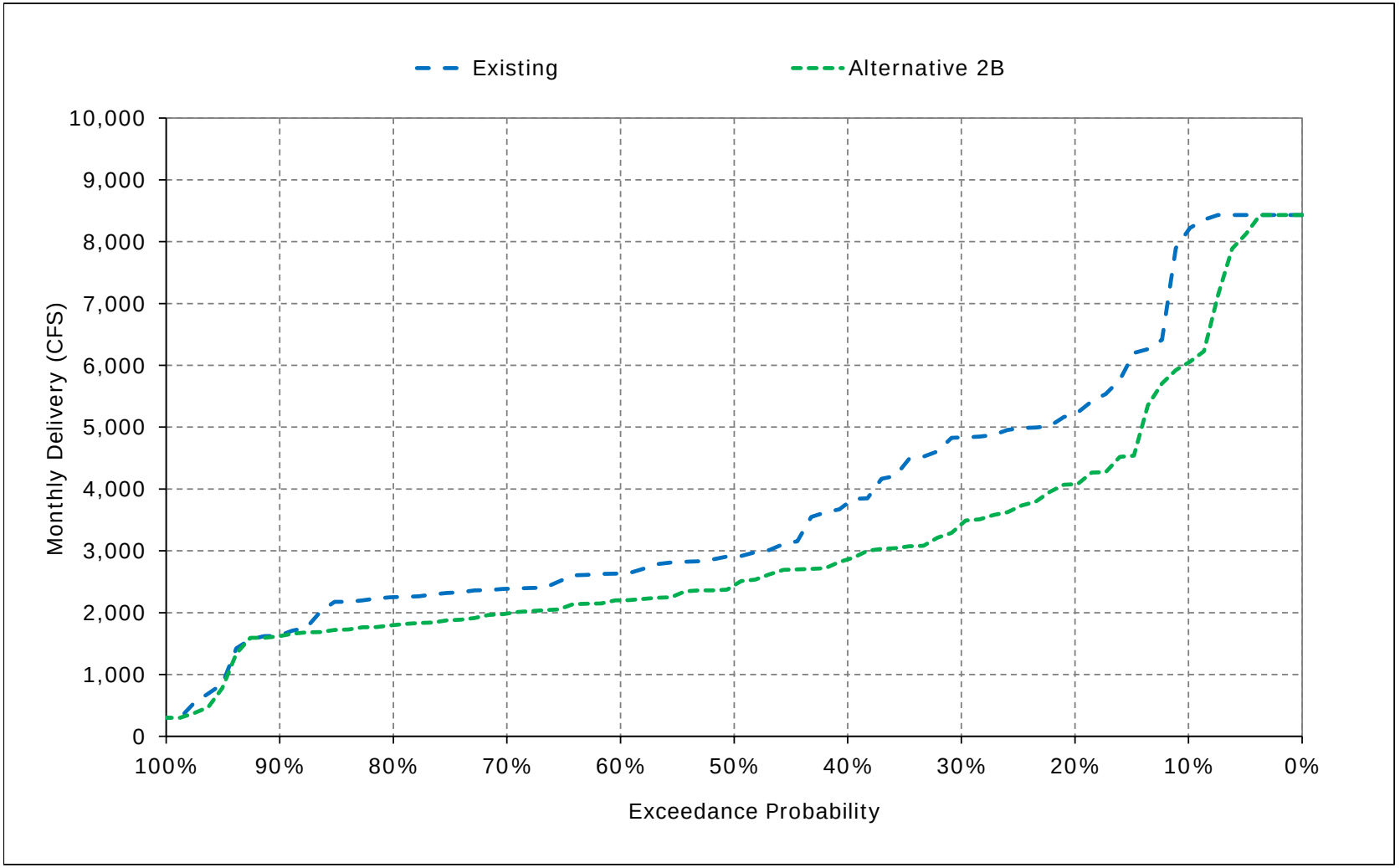


Figure 4-13. SWP Banks PP Exports, April

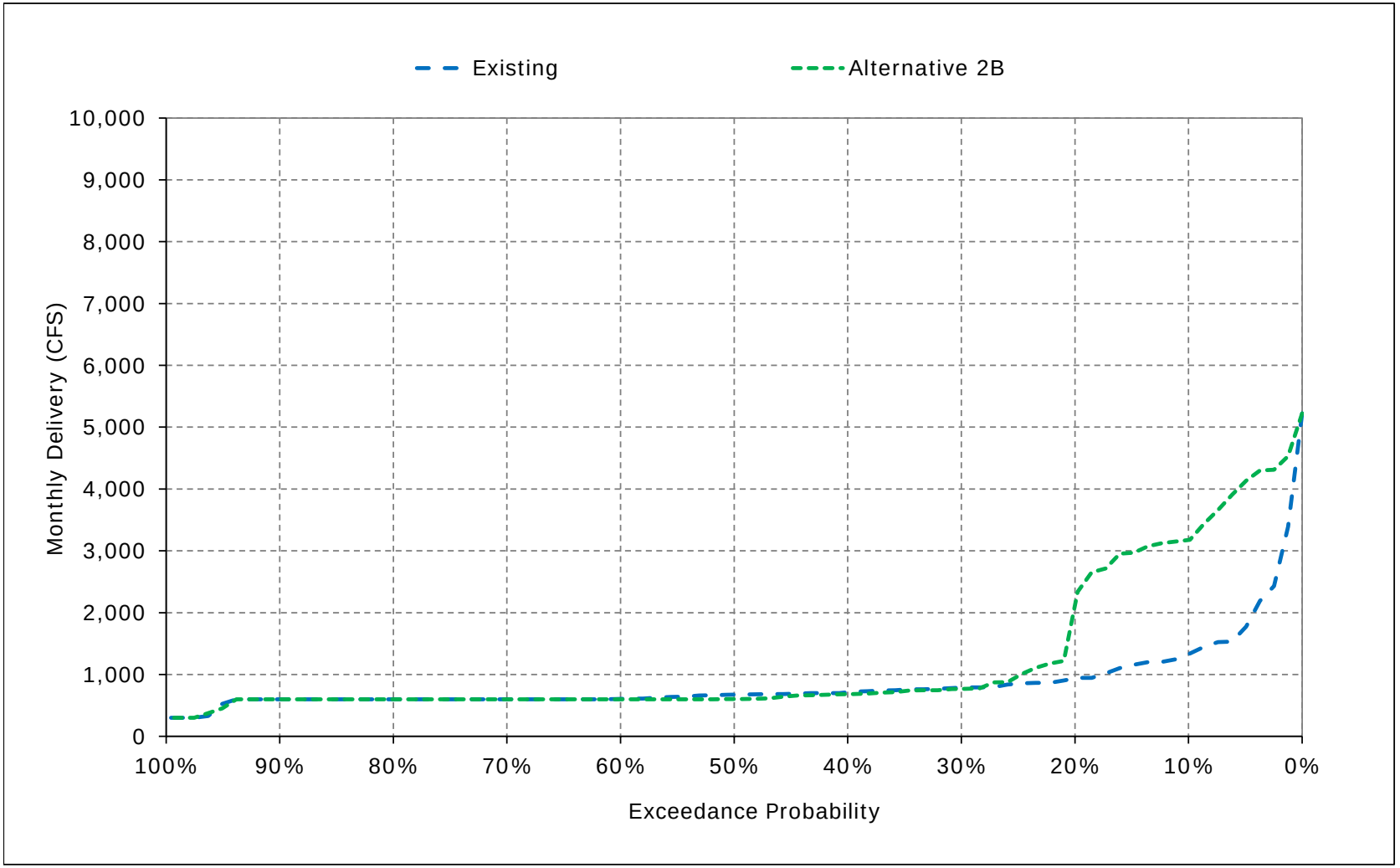


Figure 4-14. SWP Banks PP Exports, May

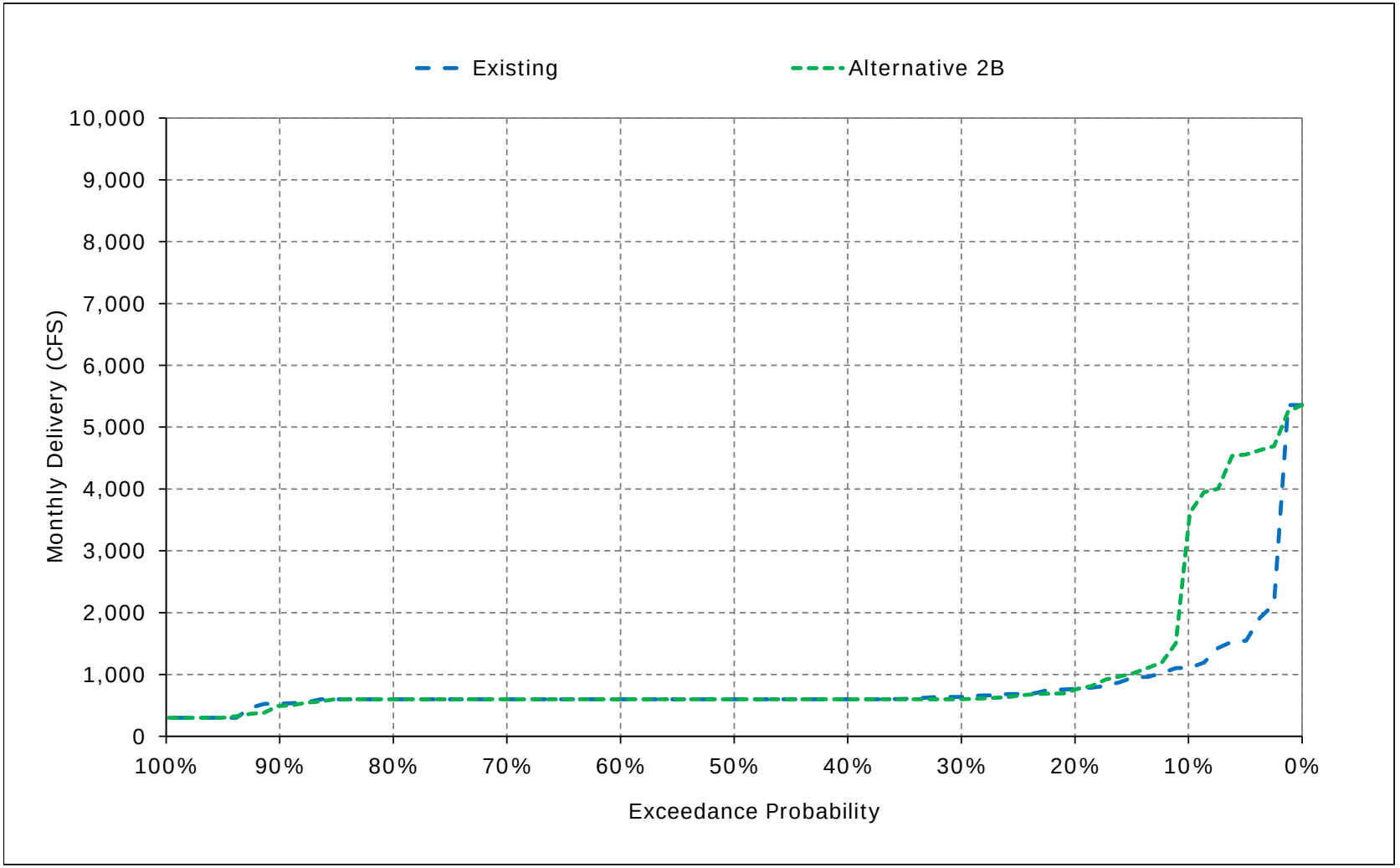


Figure 4-15. SWP Banks PP Exports, June

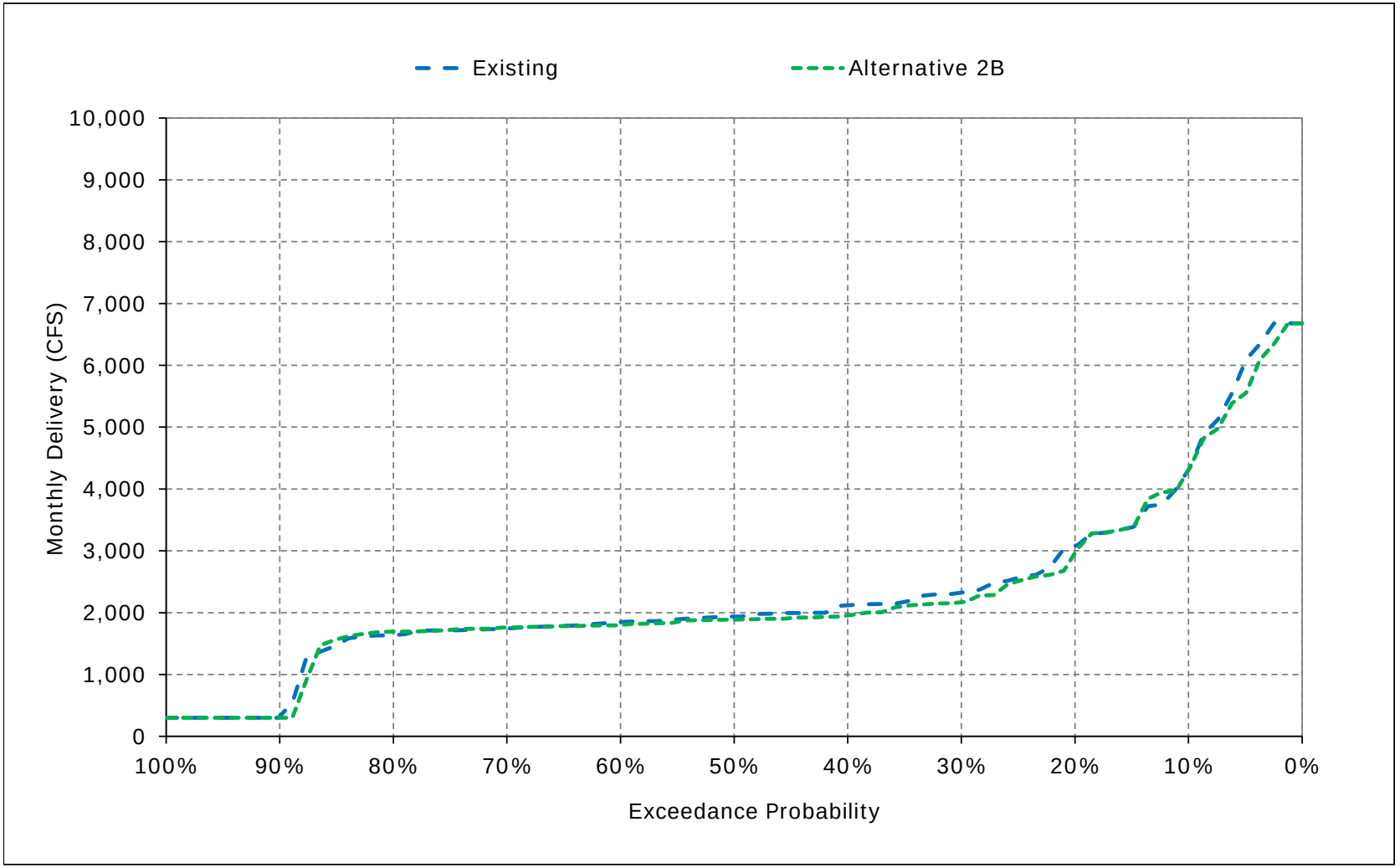


Figure 4-16. SWP Banks PP Exports, July

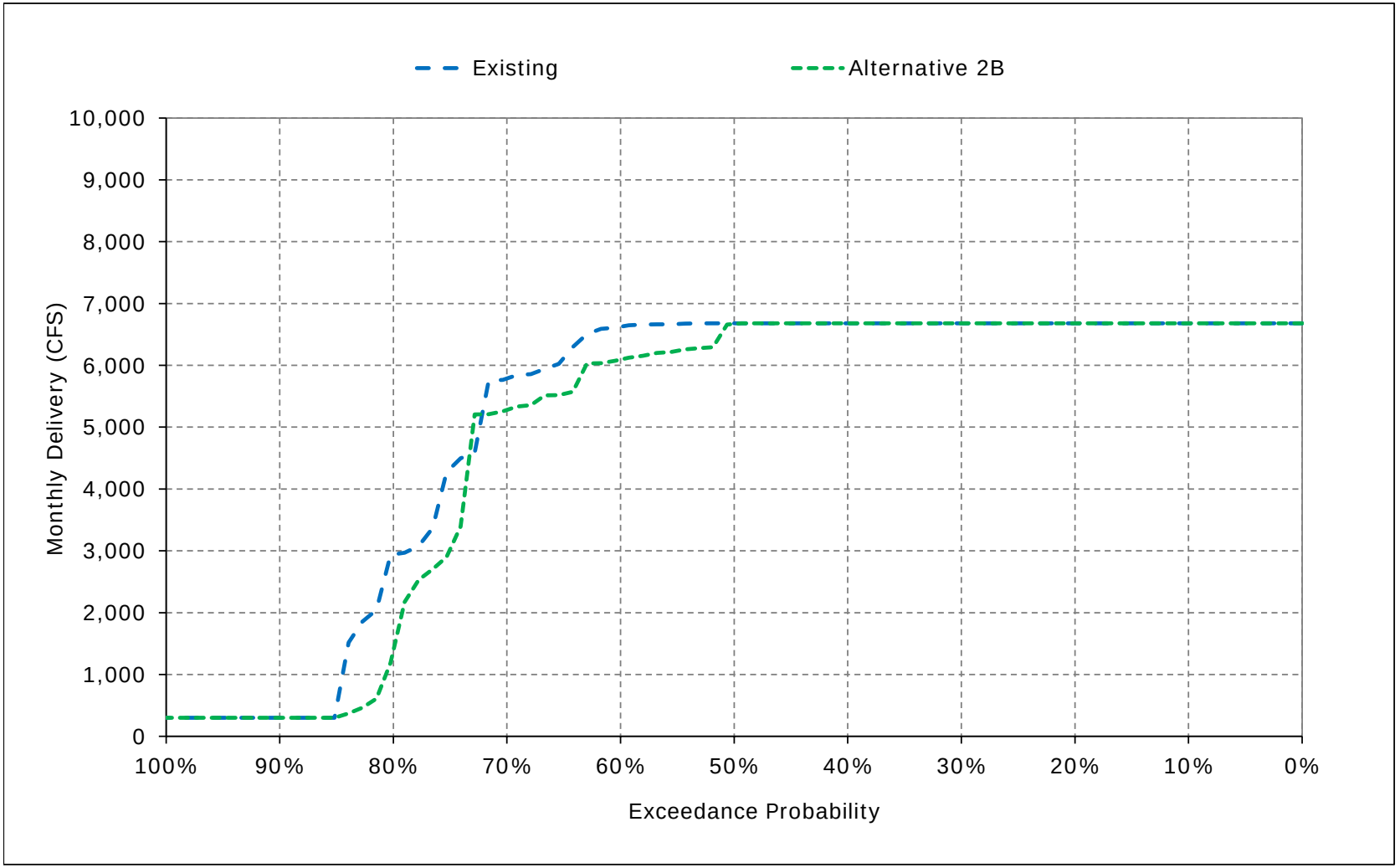


Figure 4-17. SWP Banks PP Exports, August

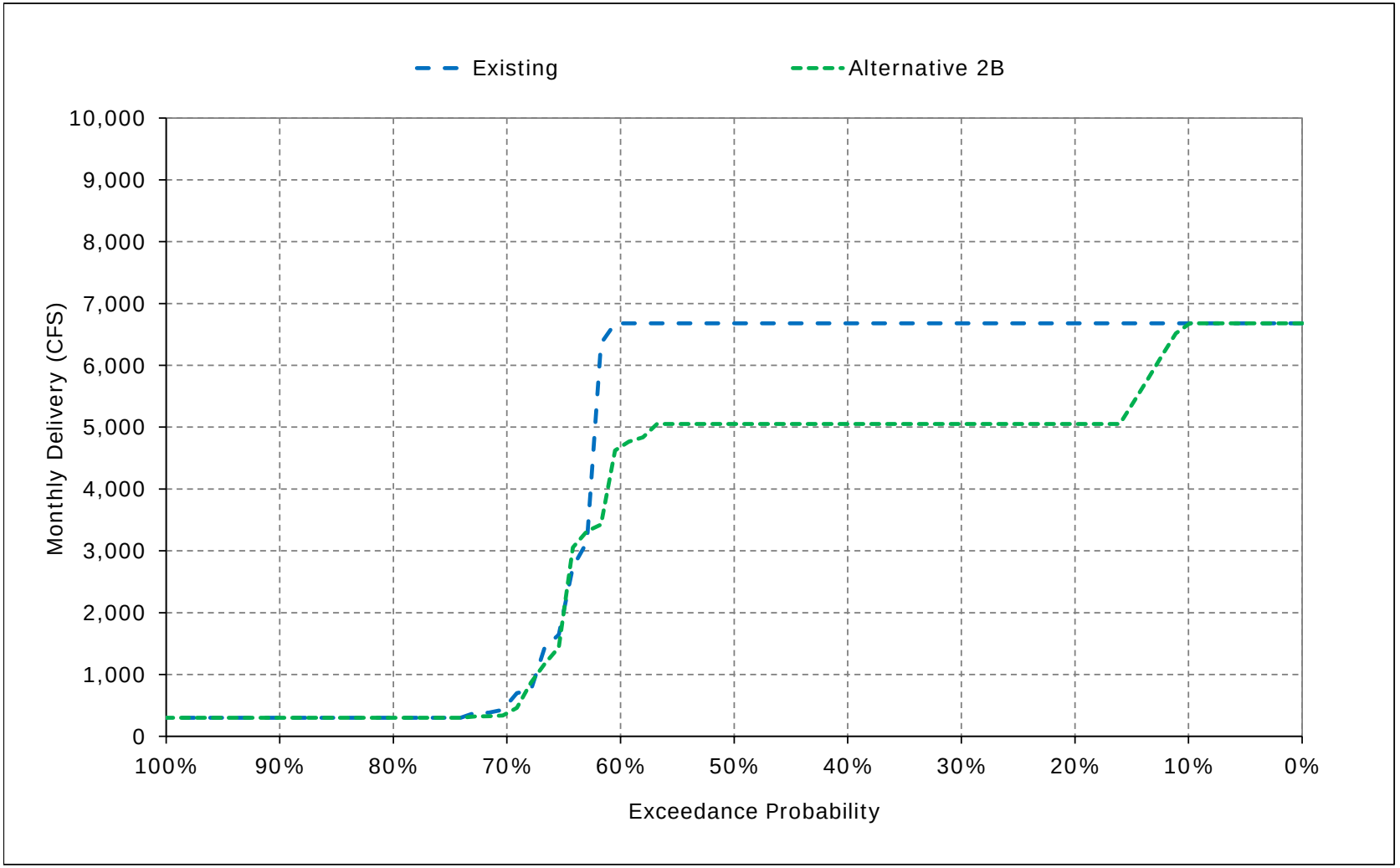
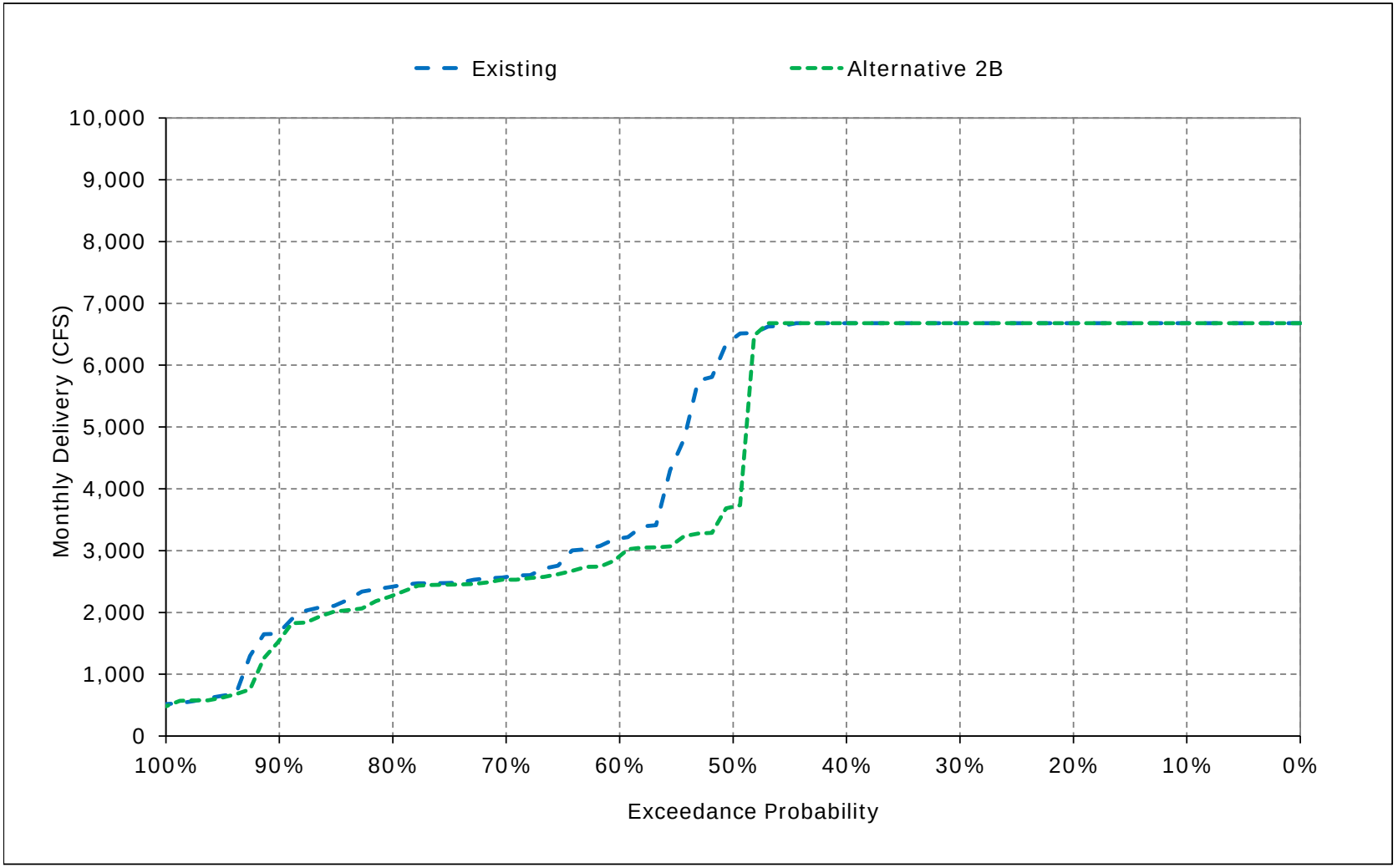


Figure 4-18. SWP Banks PP Exports, September



# Table 5-1. CVP Banks PP Exports, Monthly Delivery

## Existing

| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0 | 1,875 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 915 | 293 | 0 |
| 20% | 0 | 1,705 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 622 | 0 | 0 |
| 30% | 0 | 1,454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 0 | 0 |
| 40% | 0 | 163 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 69 | 660 | 19 | 0 | 41 | 10 | 0 | 0 | 0 | 224 | 95 | 103 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 8 | 715 | 21 | 0 | 73 | 0 | 0 | 0 | 0 | 33 | 0 | 0 |
| Above Normal (15%) | 74 | 740 | 0 | 0 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Below Normal (17%) | 84 | 759 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 1 | 107 | 602 |
| Dry (22%) | 113 | 647 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 632 | 347 | 0 |
| Critical (15%) | 111 | 361 | 85 | 0 | 0 | 0 | 0 | 0 | 0 | 513 | 1 | 0 |

## Alternative 2B

| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0 | 1,563 | 536 | 0 | 0 | 0 | 0 | 0 | 0 | 1,145 | 806 | 50 |
| 20% | 0 | 906 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 587 | 0 | 0 |
| 30% | 0 | 154 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 0 | 0 |
| 40% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 74 | 389 | 149 | 19 | 57 | 24 | 0 | 0 | 19 | 259 | 157 | 119 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 0 | 279 | 21 | 61 | 129 | 71 | 0 | 0 | 60 | 59 | 99 | 0 |
| Above Normal (15%) | 148 | 455 | 263 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Below Normal (17%) | 122 | 443 | 176 | 0 | 91 | 0 | 0 | 0 | 0 | 43 | 228 | 691 |
| Dry (22%) | 144 | 533 | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 733 | 340 | 3 |
| Critical (15%) | 0 | 282 | 356 | 0 | 0 | 13 | 0 | 0 | 0 | 494 | 84 | 0 |

## Alternative 2B minus Existing

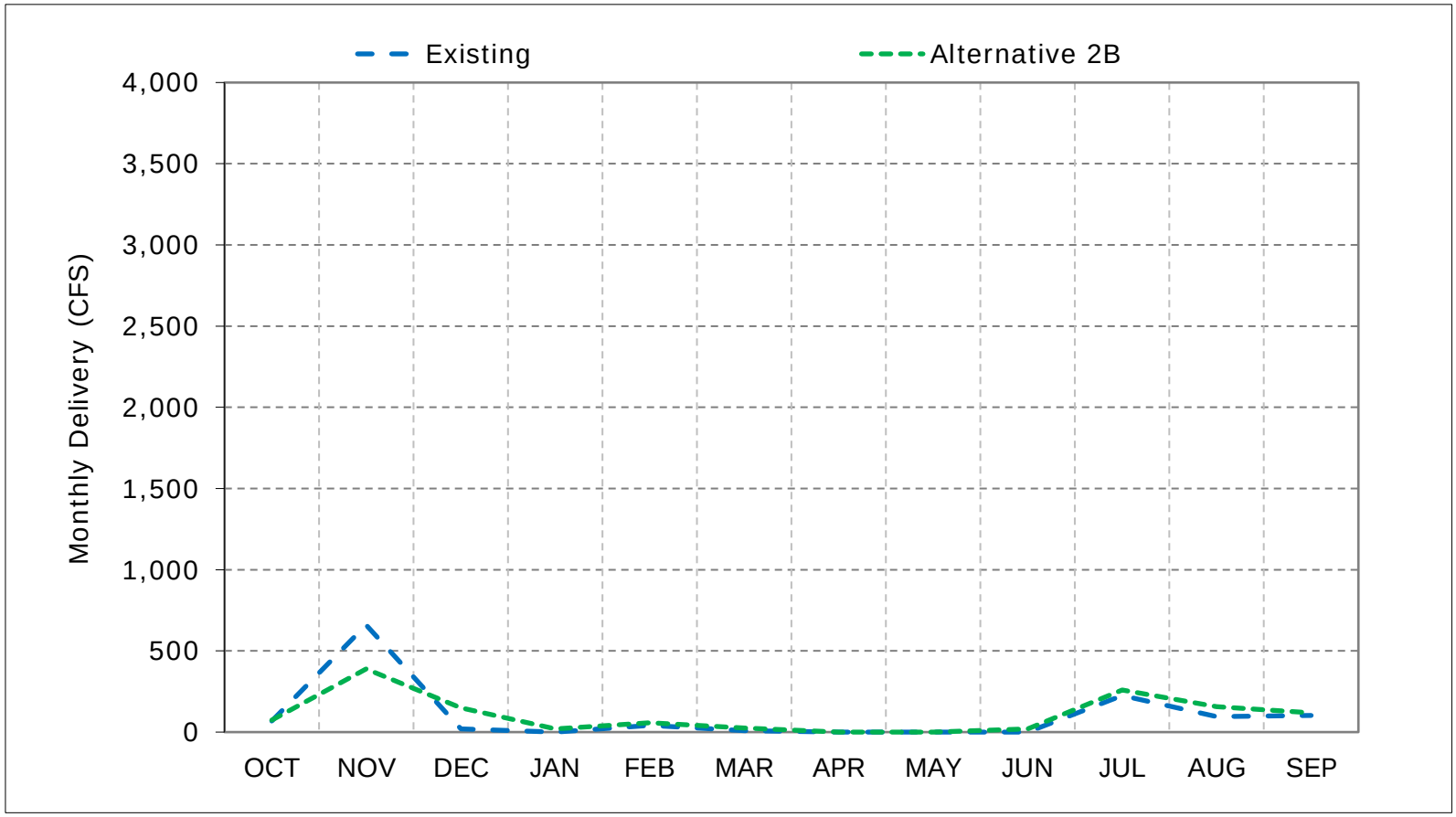
| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0 | -313 | 536 | 0 | 0 | 0 | 0 | 0 | 0 | 229 | 514 | 50 |
| 20% | 0 | -799 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -35 | 0 | 0 |
| 30% | 0 | -1,300 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 0 |
| 40% | 0 | -163 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 5 | -271 | 130 | 19 | 17 | 15 | 0 | 0 | 19 | 35 | 62 | 16 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | -8 | -436 | 0 | 61 | 57 | 71 | 0 | 0 | 60 | 26 | 99 | 0 |
| Above Normal (15%) | 74 | -285 | 263 | 0 | -68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Below Normal (17%) | 38 | -316 | 176 | 0 | 50 | 0 | 0 | 0 | 0 | 42 | 121 | 89 |
| Dry (22%) | 31 | -114 | 99 | 0 | 0 | -44 | 0 | 0 | 0 | 101 | -7 | 3 |
| Critical (15%) | -111 | -80 | 270 | 0 | 0 | 13 | 0 | 0 | 0 | -18 | 82 | 0 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

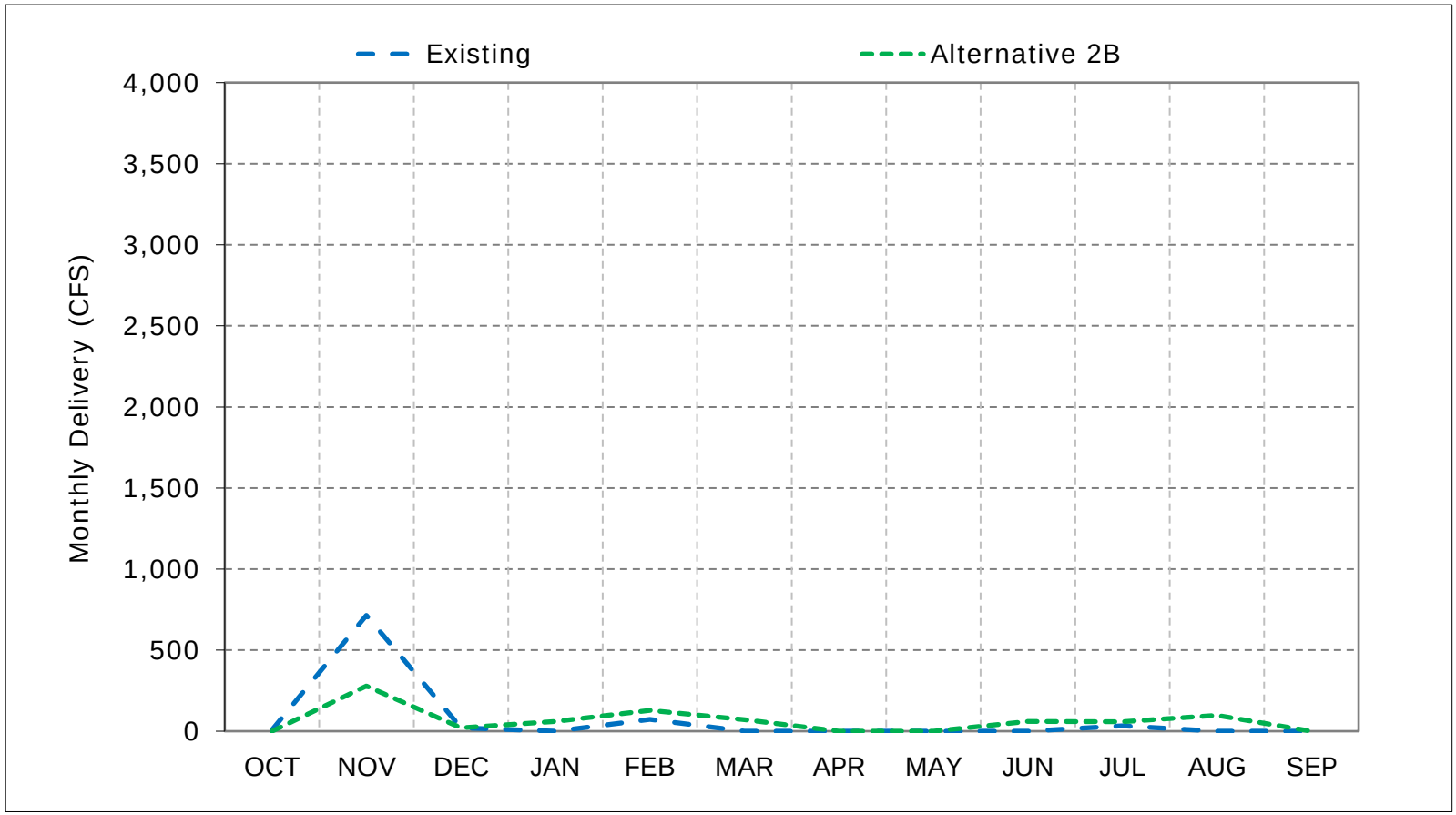
Figure 5-1. CVP Banks PP Exports, Long-Term Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

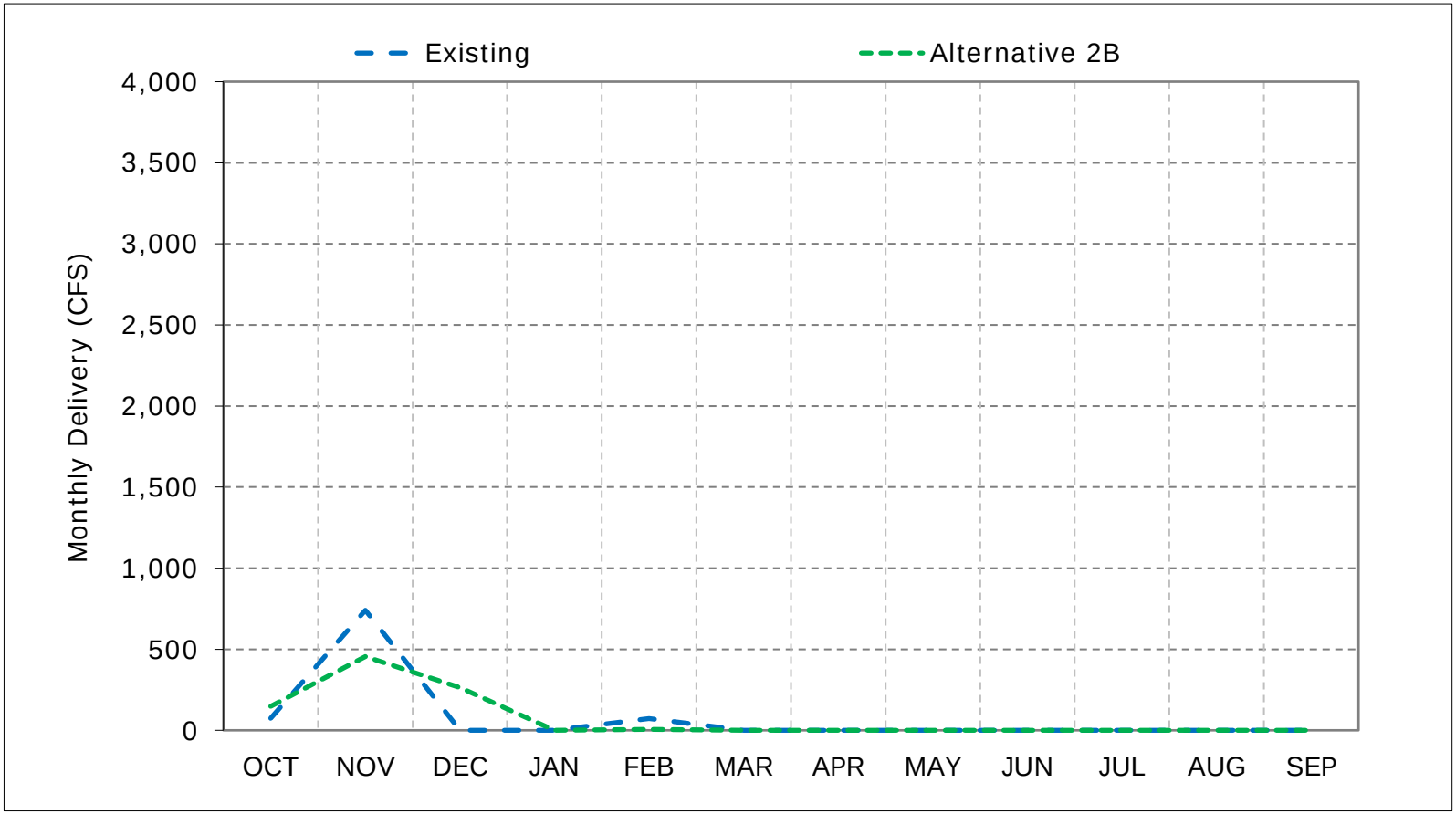
Figure 5-2. CVP Banks PP Exports, Wet Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

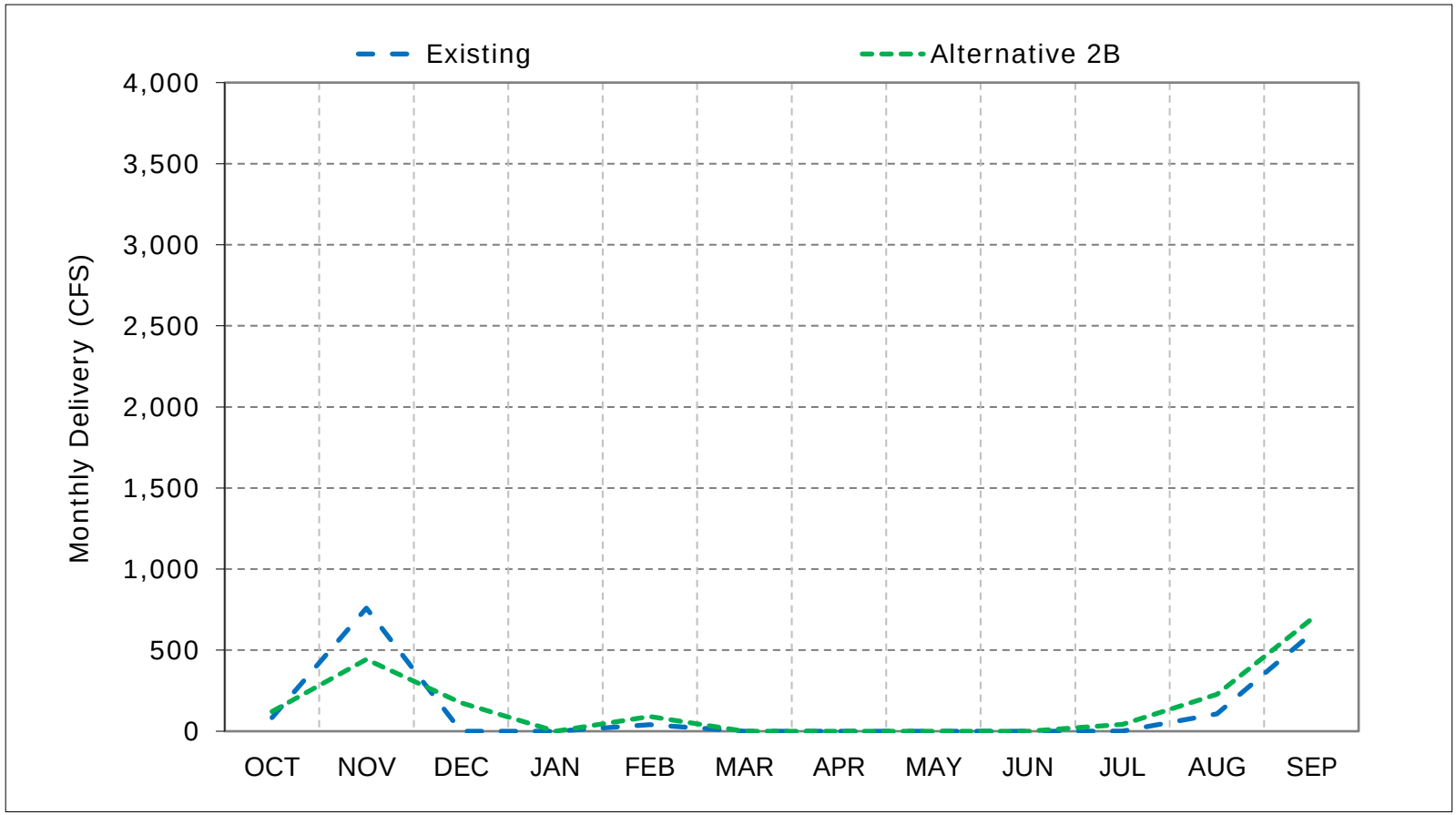
*These results are displayed with water year - year type sorting.

Figure 5-3. CVP Banks PP Exports, Above Normal Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

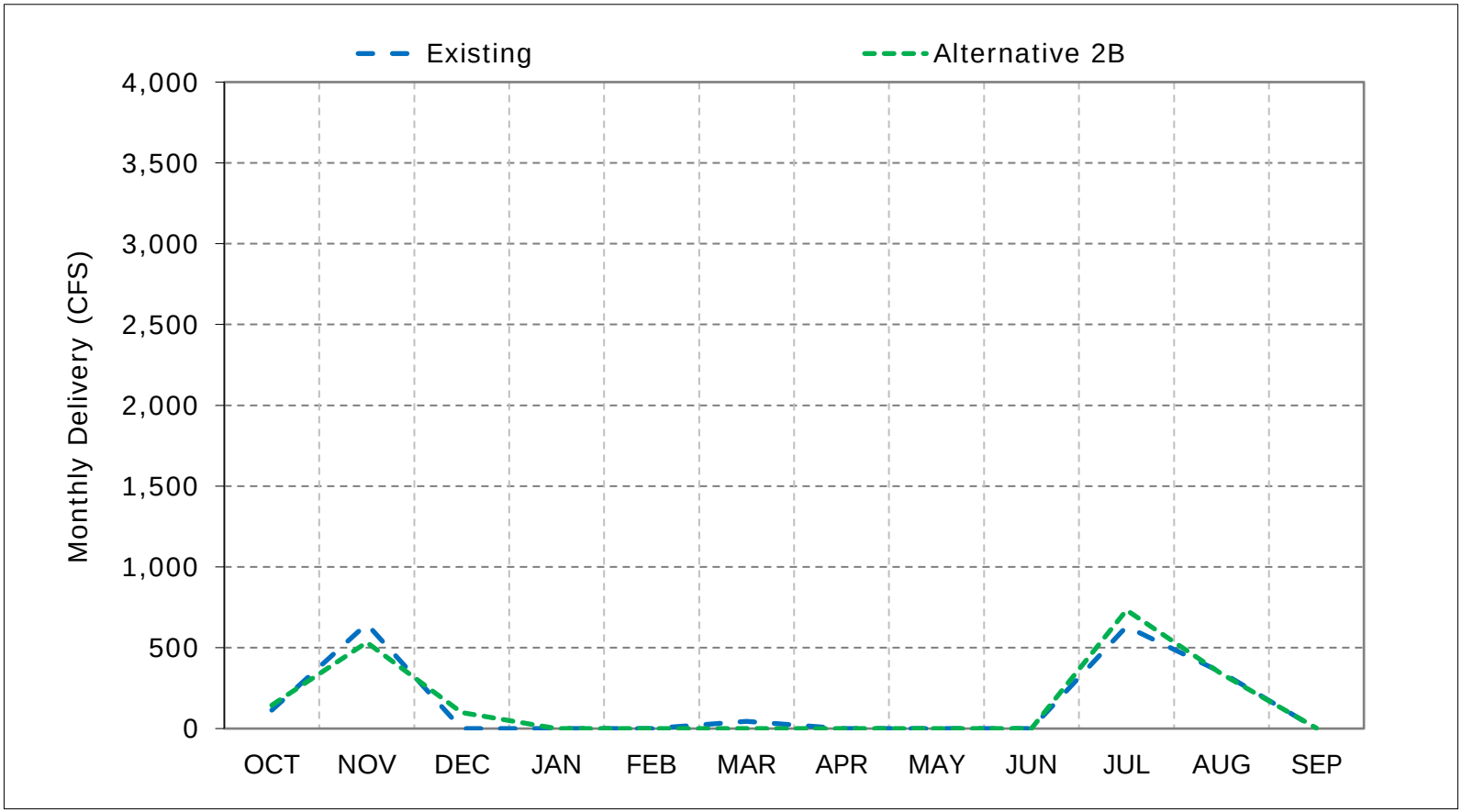
Figure 5-4. CVP Banks PP Exports, Below Normal Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

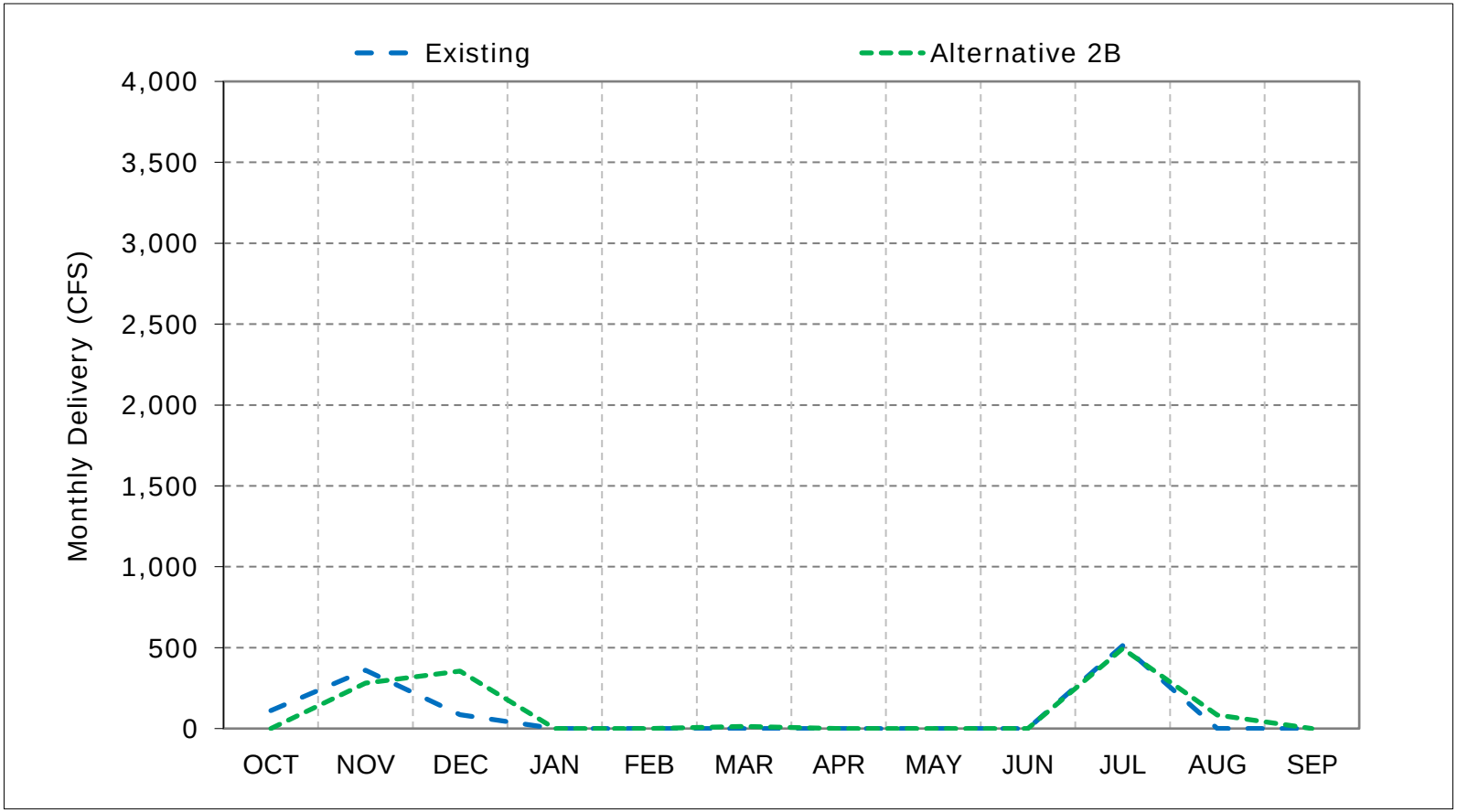
*These results are displayed with water year - year type sorting.

Figure 5-5. CVP Banks PP Exports, Dry Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-6. CVP Banks PP Exports, Critical Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-7. CVP Banks PP Exports, October

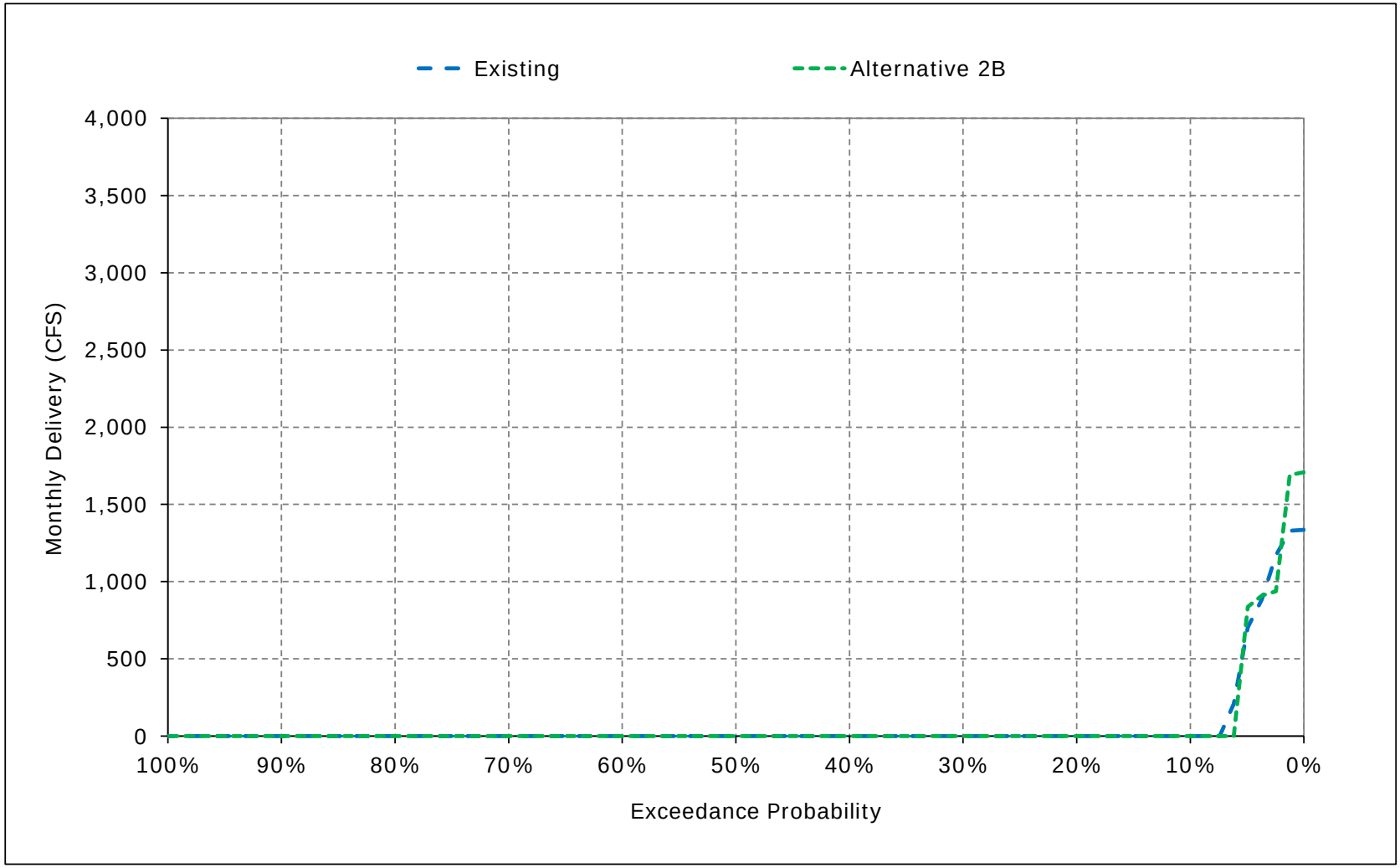


Figure 5-8. CVP Banks PP Exports, November

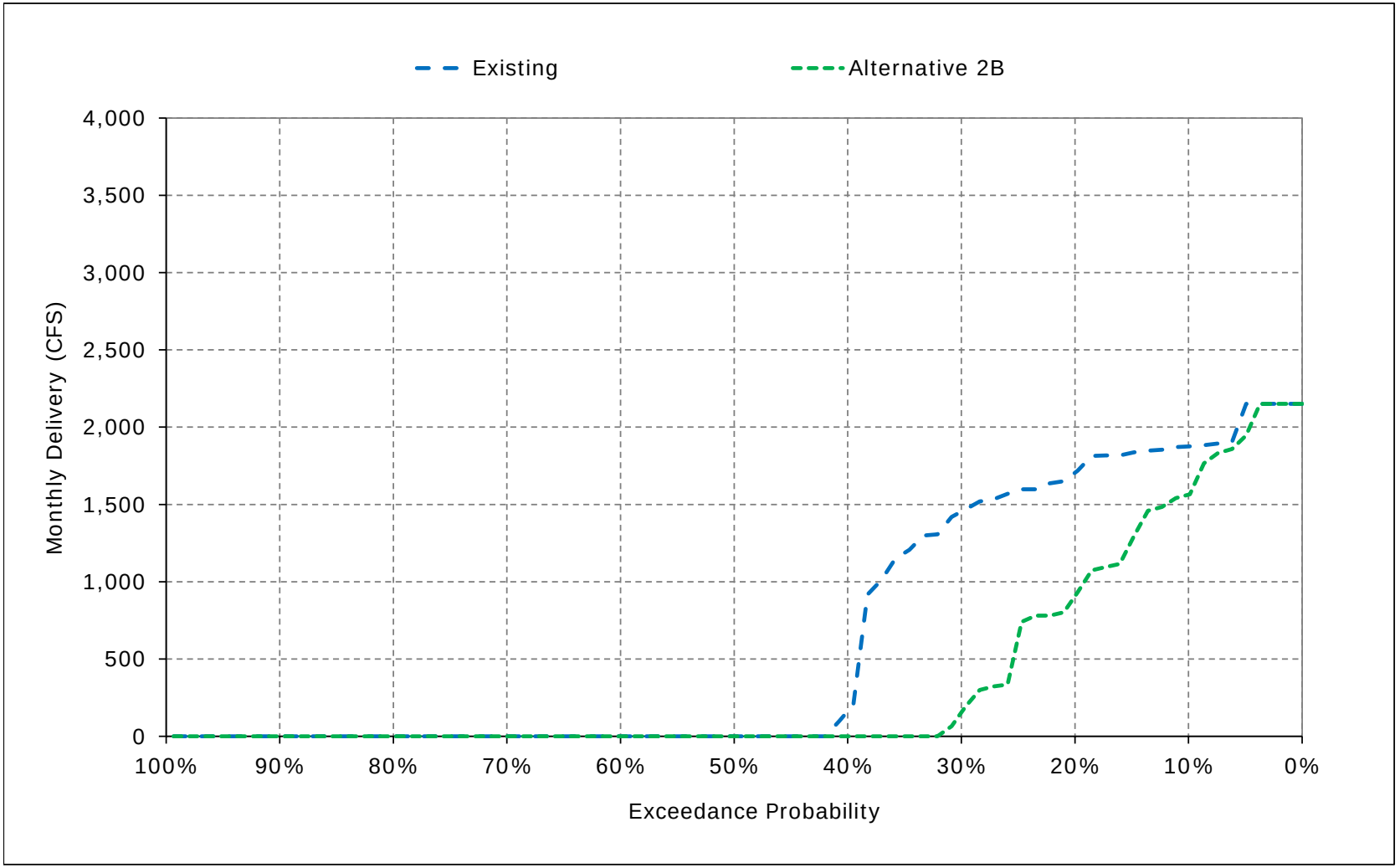


Figure 5-9. CVP Banks PP Exports, December

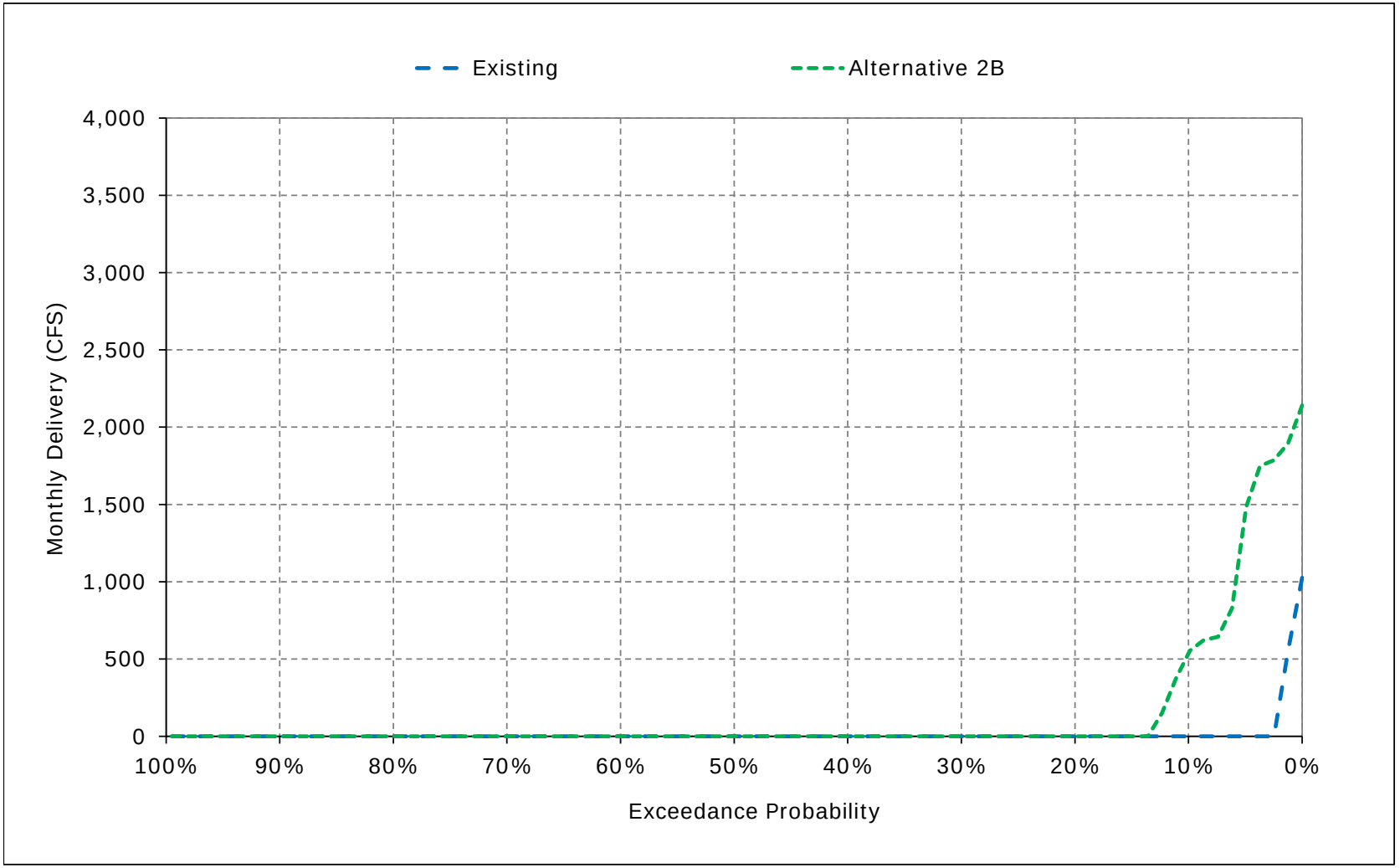


Figure 5-10. CVP Banks PP Exports, January

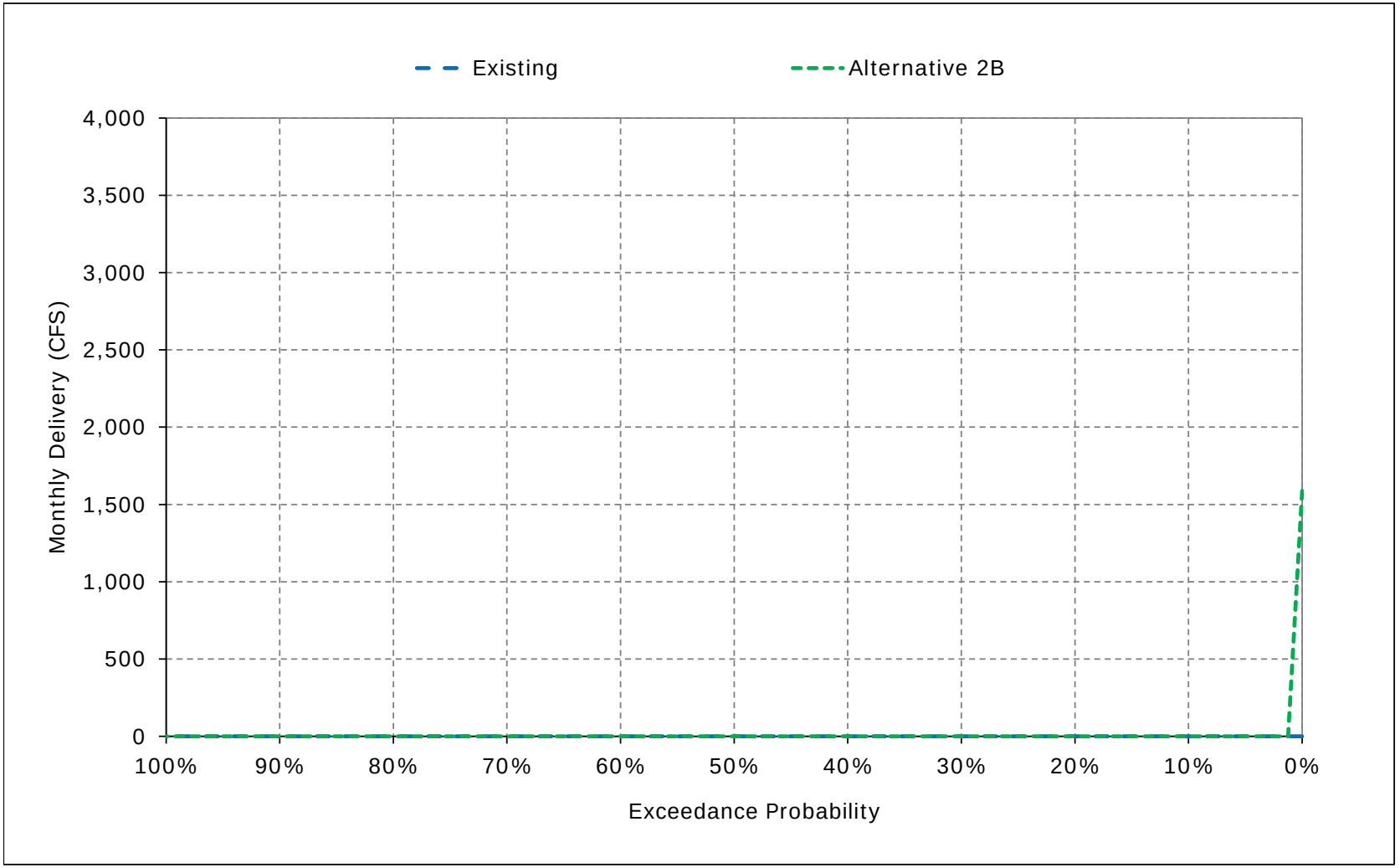


Figure 5-11. CVP Banks PP Exports, February

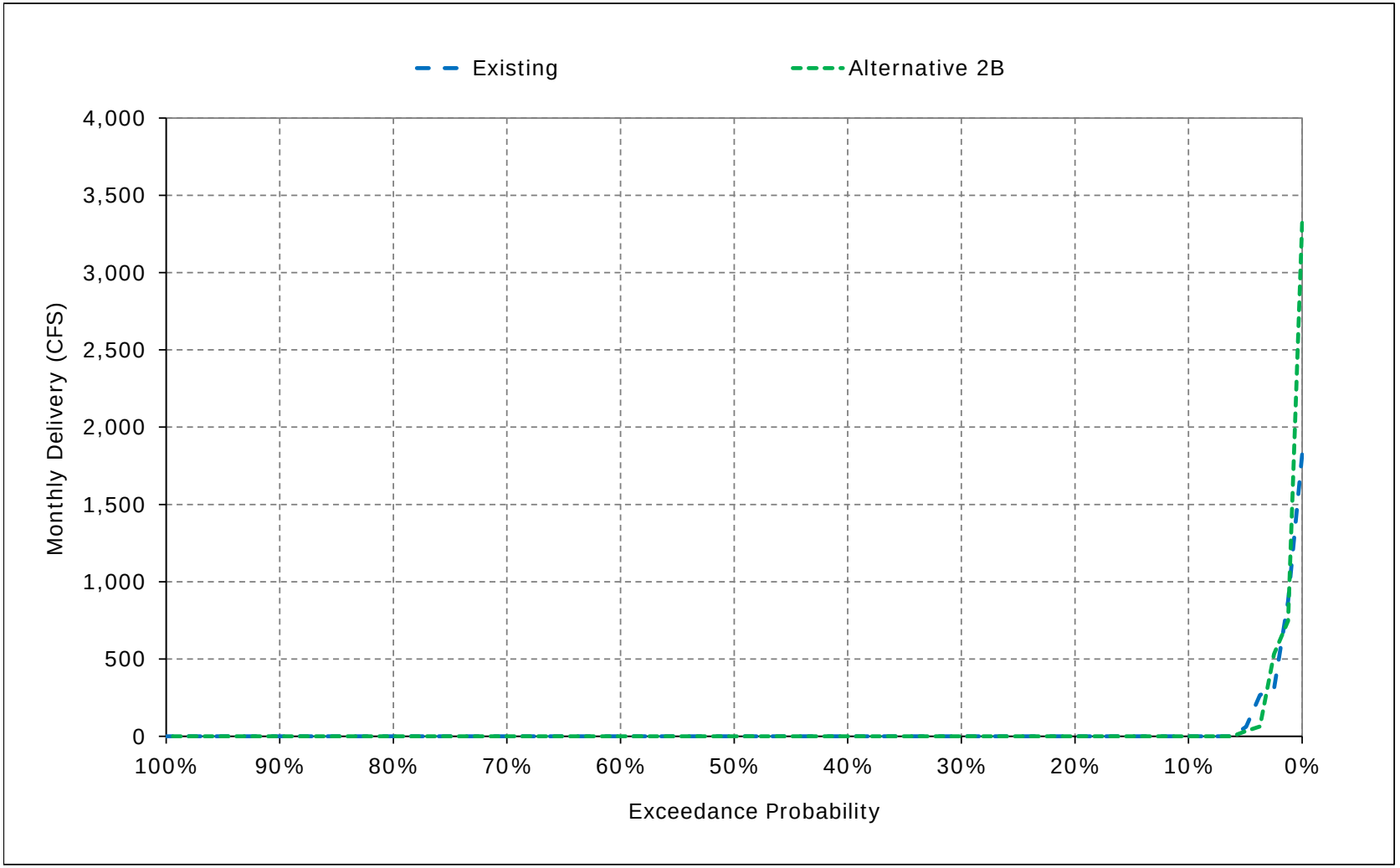


Figure 5-12. CVP Banks PP Exports, March

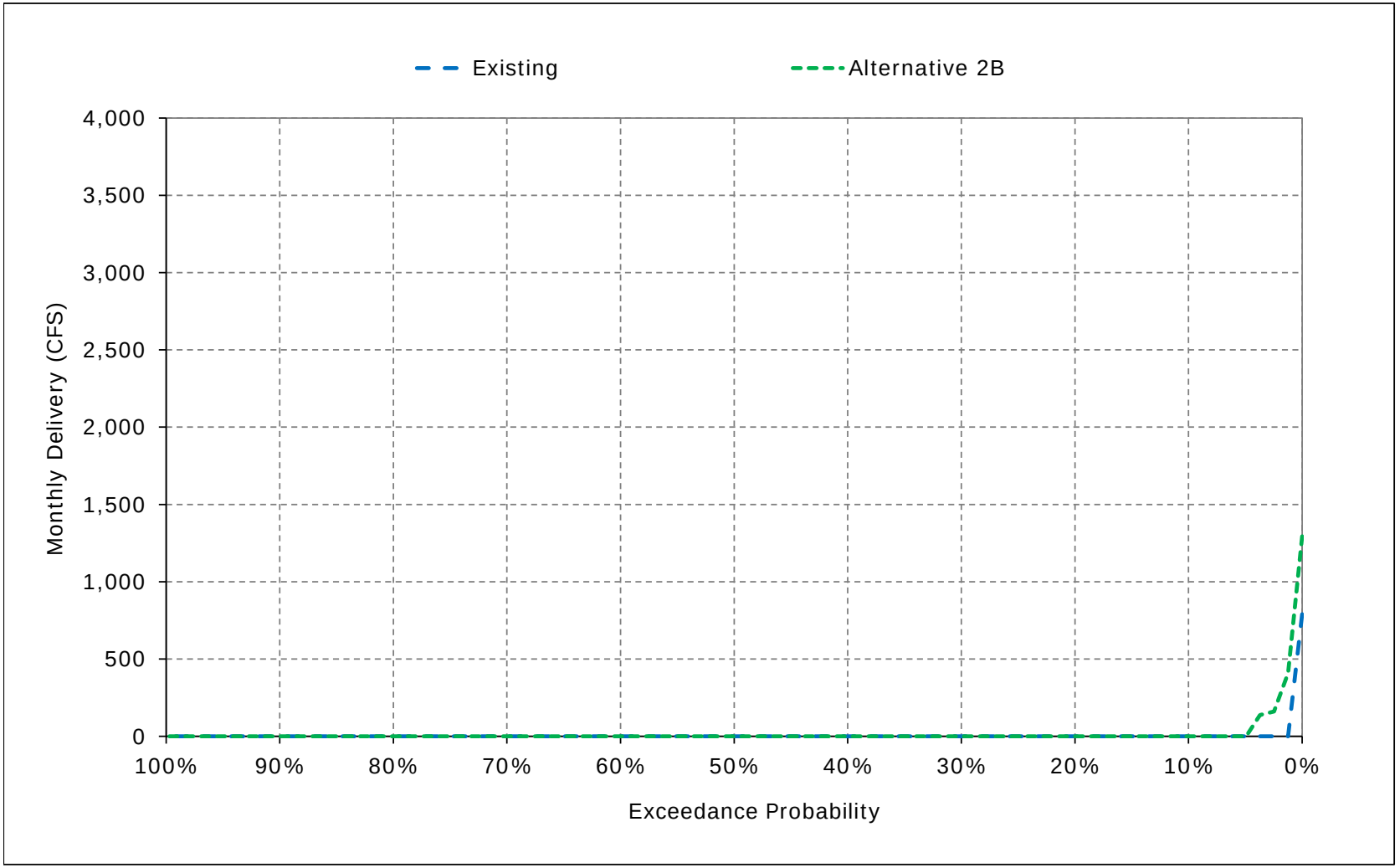


Figure 5-13. CVP Banks PP Exports, April

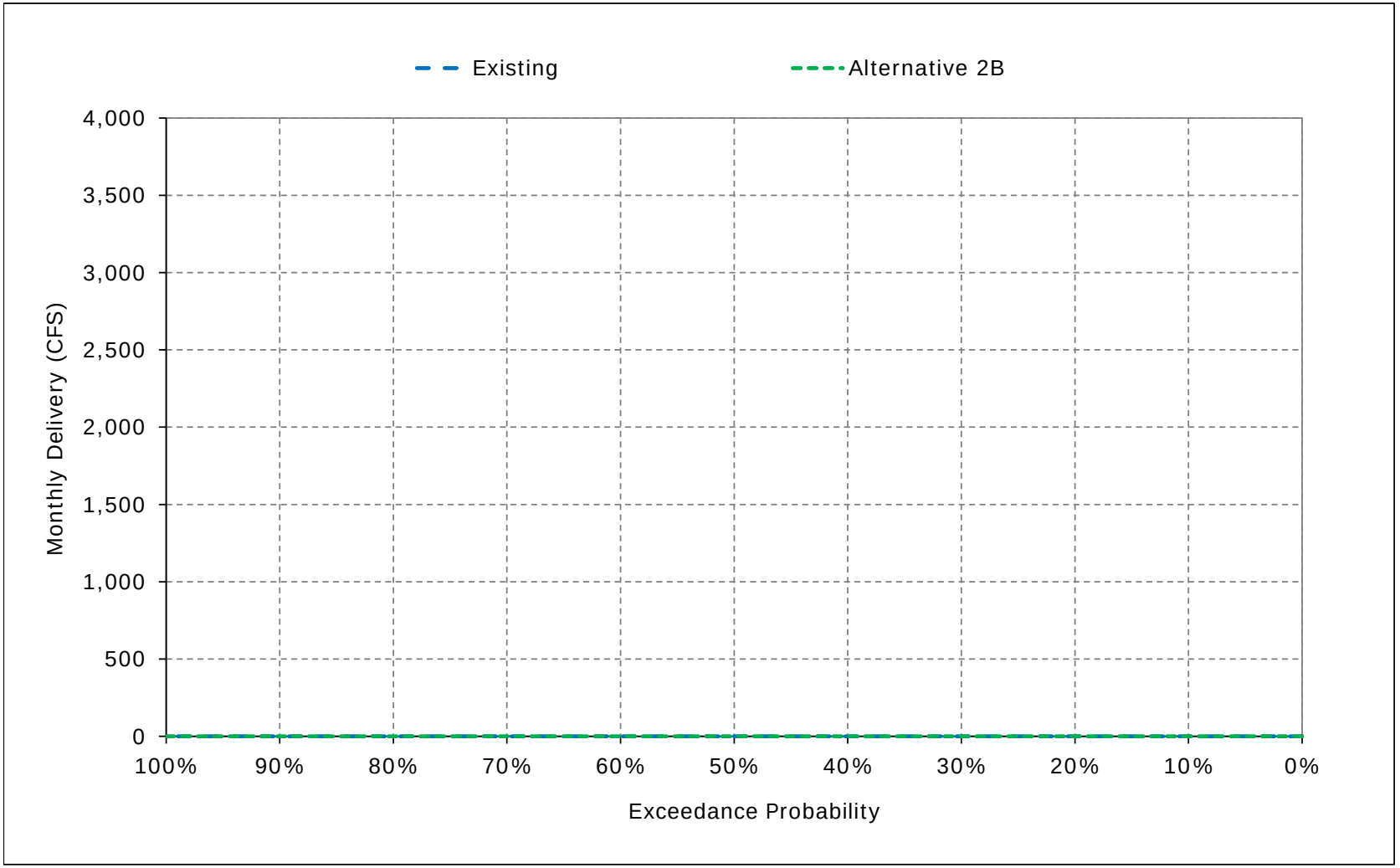


Figure 5-14. CVP Banks PP Exports, May

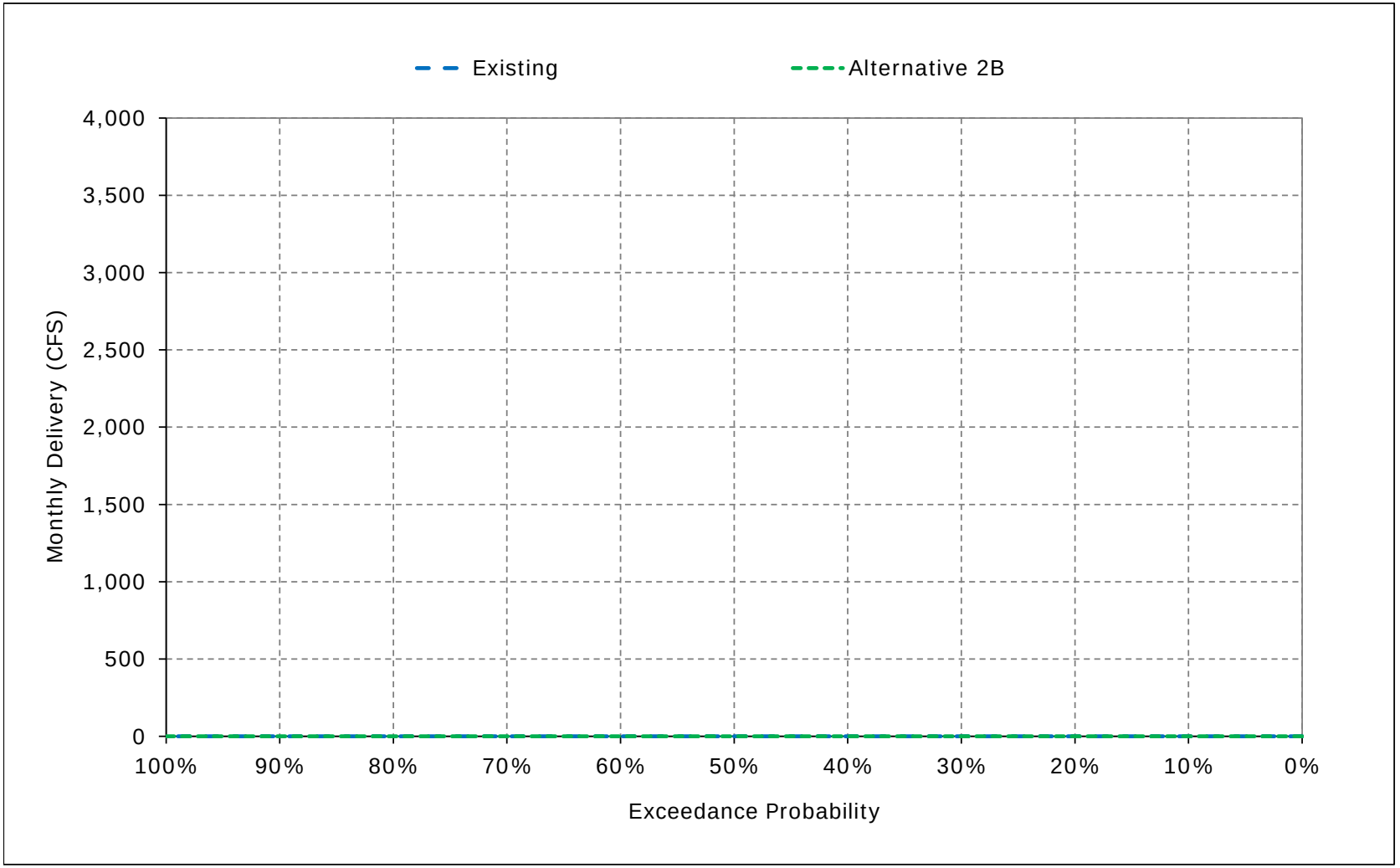


Figure 5-15. CVP Banks PP Exports, June

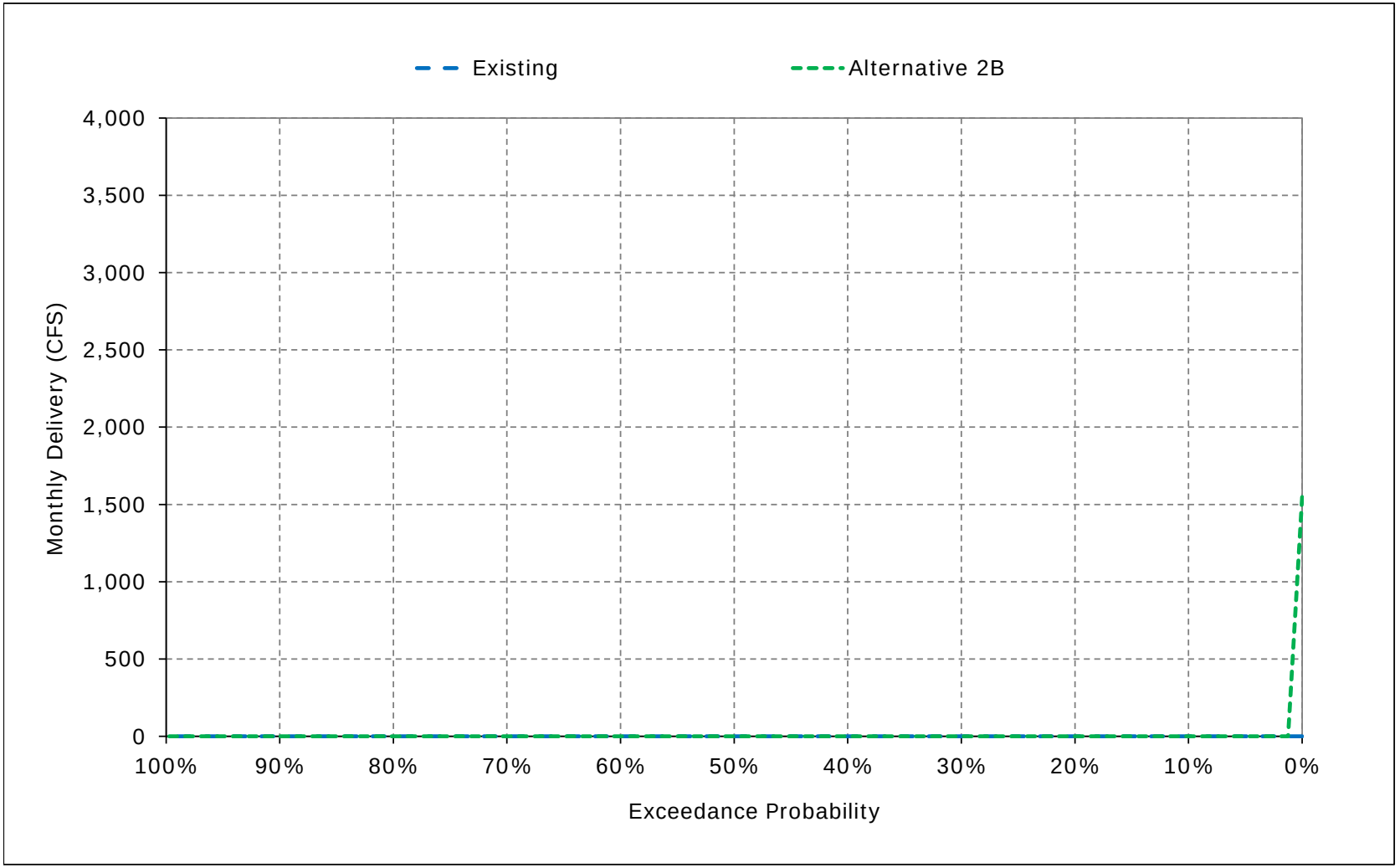


Figure 5-16. CVP Banks PP Exports, July

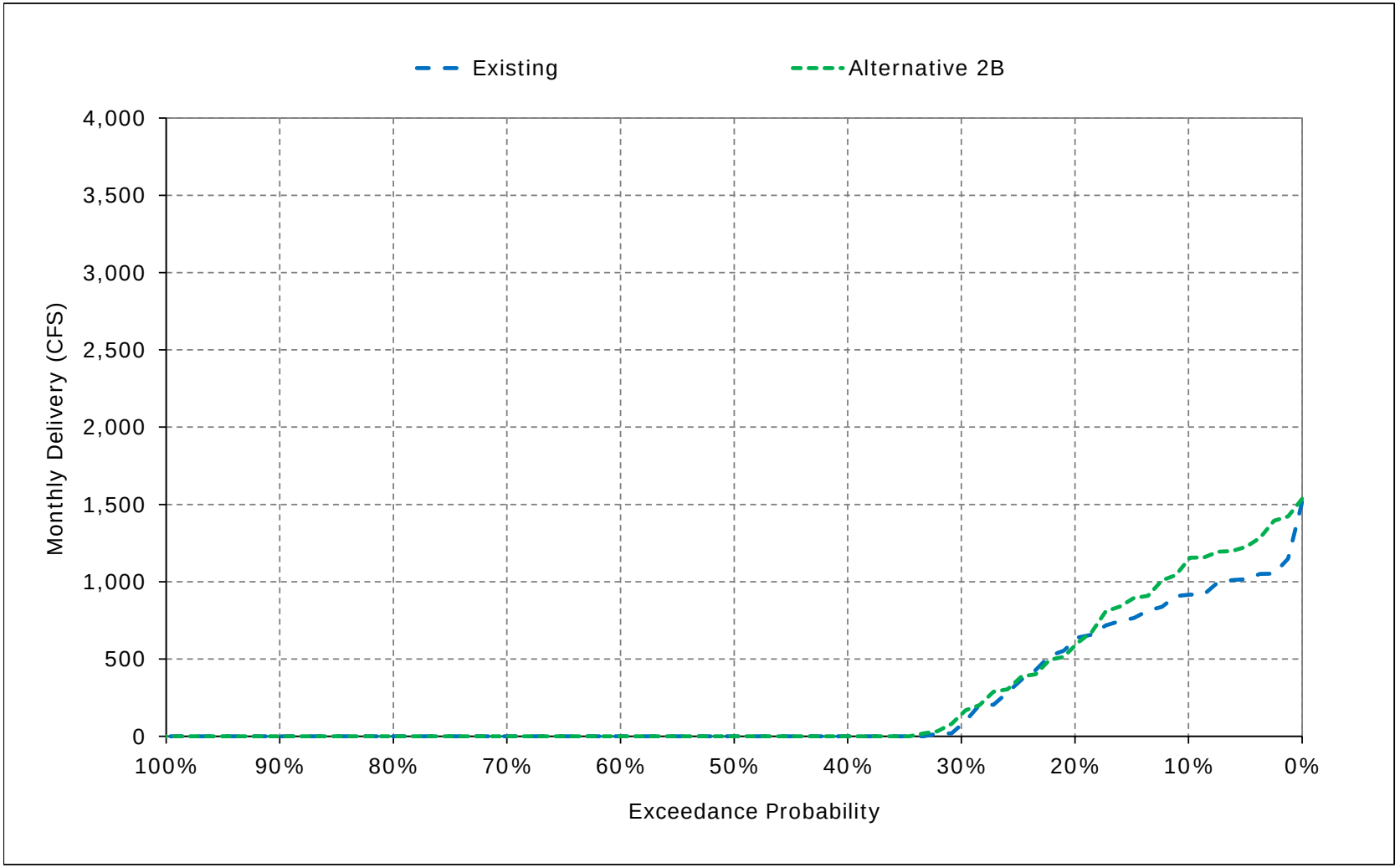


Figure 5-17. CVP Banks PP Exports, August

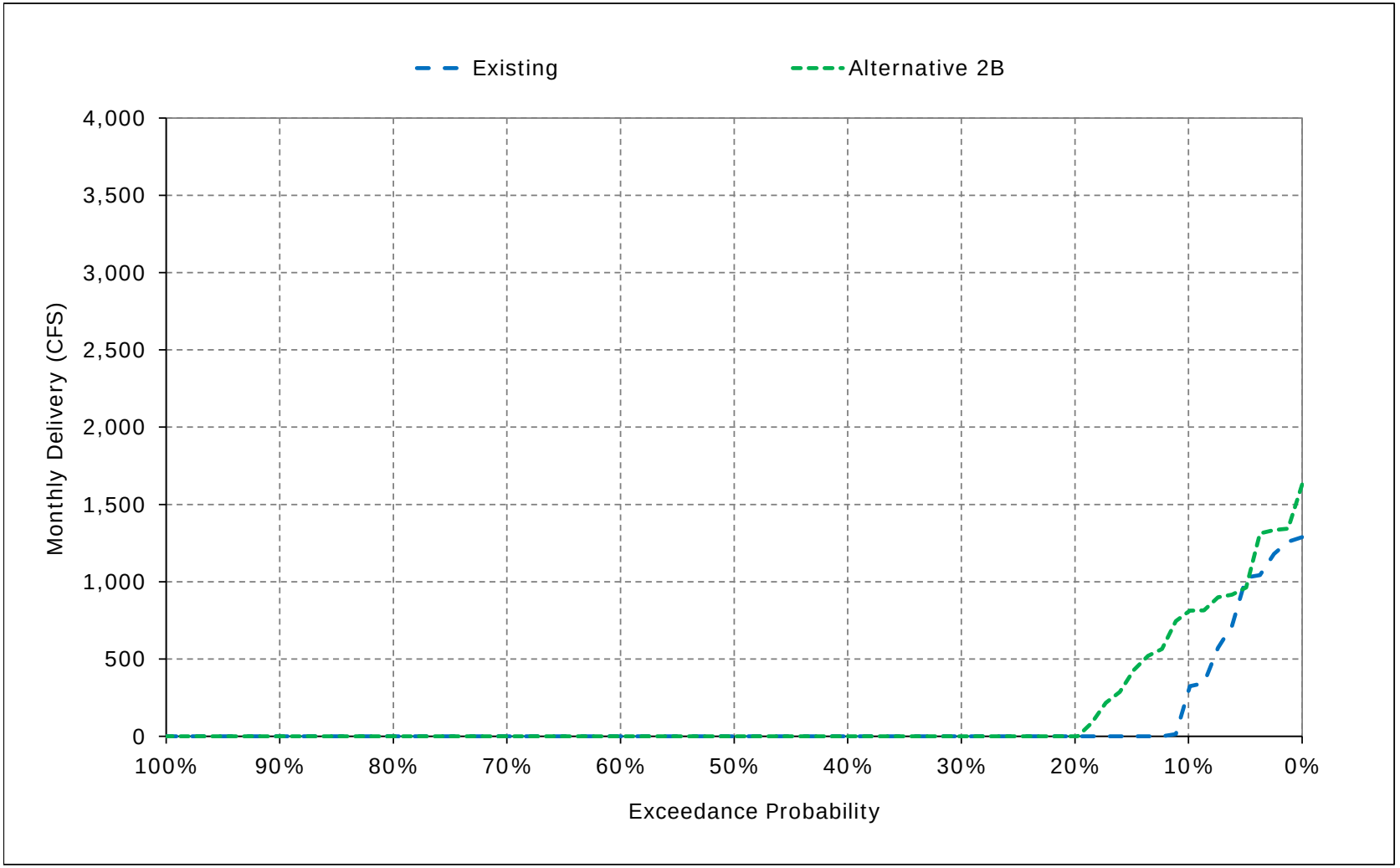
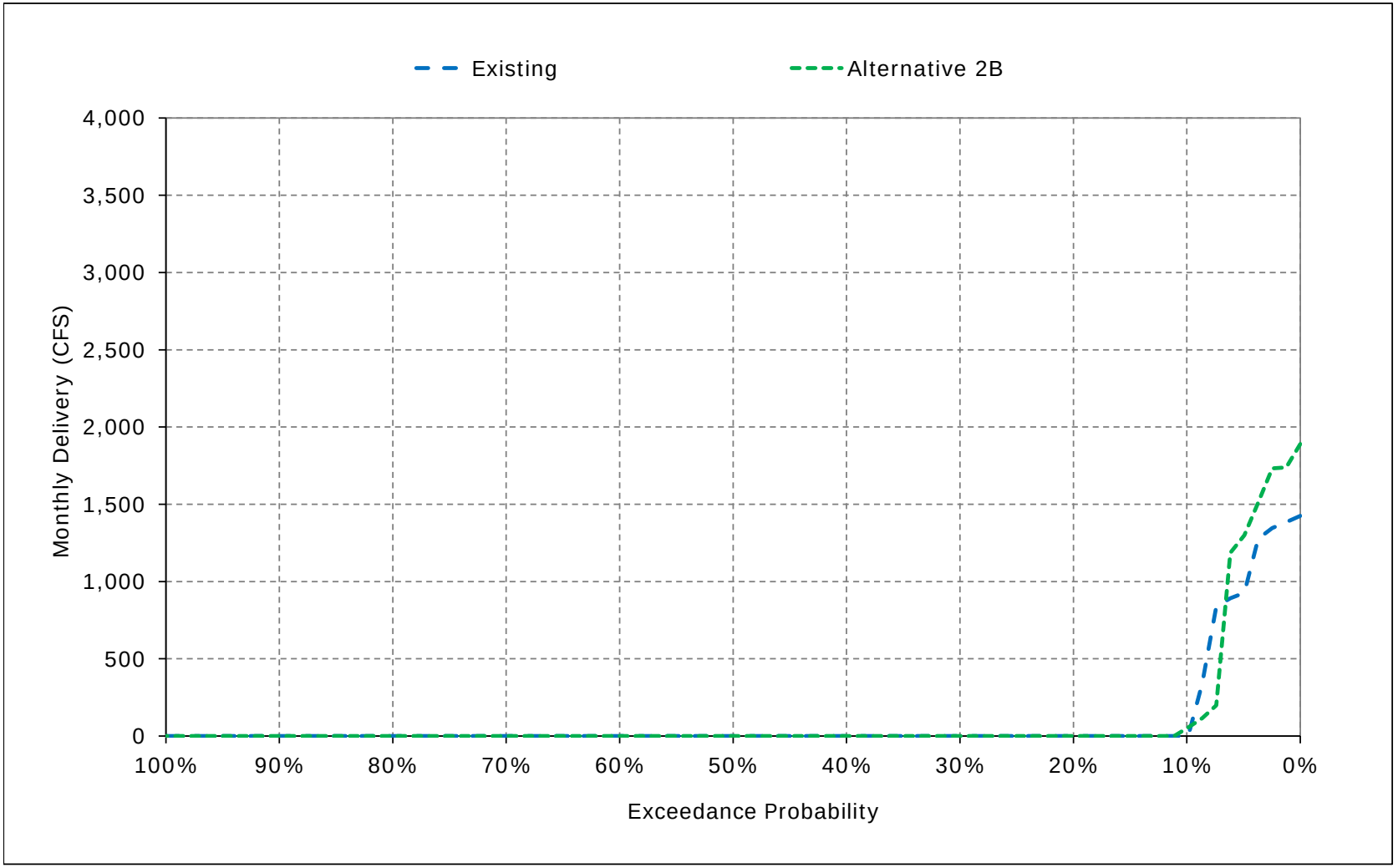


Figure 5-18. CVP Banks PP Exports, September



# Table 6-1. Banks PP Exports, Monthly Delivery

## Existing

| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 5,172 | 6,680 | 7,105 | 5,846 | 7,403 | 8,190 | 1,330 | 1,106 | 4,310 | 6,930 | 7,042 | 6,680 |
| 20% | 4,189 | 6,460 | 7,043 | 3,432 | 5,331 | 5,223 | 935 | 766 | 3,083 | 6,903 | 7,008 | 6,680 |
| 30% | 3,988 | 4,842 | 6,672 | 2,864 | 4,069 | 4,832 | 787 | 637 | 2,325 | 6,873 | 6,965 | 6,680 |
| 40% | 3,576 | 4,299 | 4,565 | 2,770 | 3,356 | 3,773 | 712 | 600 | 2,119 | 6,782 | 6,930 | 6,680 |
| 50% | 3,193 | 3,504 | 4,000 | 2,707 | 2,877 | 2,912 | 673 | 600 | 1,935 | 6,680 | 6,774 | 6,519 |
| 60% | 2,882 | 3,106 | 3,487 | 2,621 | 2,689 | 2,634 | 606 | 600 | 1,848 | 6,680 | 6,680 | 4,063 |
| 70% | 2,297 | 2,691 | 3,017 | 2,601 | 2,622 | 2,386 | 600 | 600 | 1,757 | 5,793 | 1,588 | 2,826 |
| 80% | 1,813 | 2,277 | 2,819 | 2,485 | 2,559 | 2,249 | 600 | 600 | 1,663 | 4,160 | 628 | 2,543 |
| 90% | 986 | 1,765 | 2,565 | 2,204 | 2,423 | 1,632 | 600 | 526 | 549 | 1,076 | 305 | 1,903 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3,165 | 3,956 | 4,602 | 3,302 | 3,943 | 3,803 | 873 | 811 | 2,349 | 5,543 | 4,684 | 4,802 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 3,688 | 4,850 | 4,542 | 4,574 | 5,413 | 5,783 | 1,264 | 1,270 | 3,555 | 6,722 | 6,901 | 6,617 |
| Above Normal (15%) | 3,152 | 3,621 | 5,362 | 3,151 | 4,187 | 3,956 | 706 | 656 | 2,482 | 6,513 | 6,990 | 6,680 |
| Below Normal (17%) | 3,198 | 4,171 | 4,908 | 2,768 | 3,891 | 3,682 | 672 | 632 | 2,049 | 6,892 | 6,775 | 5,404 |
| Dry (22%) | 2,902 | 3,799 | 4,607 | 2,692 | 2,683 | 2,427 | 695 | 628 | 1,721 | 4,996 | 1,105 | 2,748 |
| Critical (15%) | 2,400 | 2,341 | 3,610 | 2,234 | 2,464 | 1,566 | 692 | 454 | 894 | 1,268 | 503 | 1,372 |

## Alternative 2B

| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 6,607 | 6,680 | 7,080 | 5,849 | 6,903 | 6,210 | 3,176 | 3,405 | 4,307 | 6,924 | 6,902 | 6,680 |
| 20% | 5,083 | 6,680 | 7,033 | 3,949 | 5,606 | 4,078 | 2,113 | 754 | 2,964 | 6,882 | 5,472 | 6,680 |
| 30% | 4,505 | 6,680 | 6,036 | 3,201 | 4,321 | 3,429 | 766 | 601 | 2,168 | 6,826 | 5,380 | 6,680 |
| 40% | 4,051 | 6,680 | 5,044 | 2,904 | 3,502 | 2,863 | 683 | 600 | 1,956 | 6,683 | 5,334 | 6,680 |
| 50% | 3,681 | 6,044 | 4,188 | 2,844 | 3,031 | 2,443 | 603 | 600 | 1,888 | 6,680 | 5,138 | 5,314 |
| 60% | 3,101 | 4,956 | 3,610 | 2,748 | 2,840 | 2,200 | 600 | 600 | 1,803 | 6,290 | 5,054 | 3,352 |
| 70% | 2,491 | 3,689 | 3,021 | 2,625 | 2,618 | 1,986 | 600 | 600 | 1,764 | 5,341 | 1,619 | 2,727 |
| 80% | 2,008 | 2,987 | 2,819 | 2,530 | 2,507 | 1,798 | 600 | 600 | 1,696 | 3,101 | 562 | 2,365 |
| 90% | 1,183 | 2,104 | 2,619 | 2,217 | 2,398 | 1,622 | 600 | 493 | 463 | 1,189 | 365 | 1,590 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3,586 | 5,069 | 4,620 | 3,452 | 3,957 | 3,146 | 1,241 | 1,046 | 2,310 | 5,351 | 3,921 | 4,571 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 4,234 | 6,229 | 4,523 | 4,678 | 5,488 | 4,979 | 2,358 | 1,921 | 3,525 | 6,533 | 5,256 | 6,096 |
| Above Normal (15%) | 3,564 | 4,572 | 4,992 | 3,177 | 3,919 | 3,035 | 914 | 901 | 2,462 | 6,441 | 5,364 | 6,680 |
| Below Normal (17%) | 3,804 | 5,368 | 5,015 | 2,984 | 4,016 | 2,763 | 813 | 638 | 2,006 | 6,704 | 6,587 | 5,030 |
| Dry (22%) | 3,225 | 4,698 | 4,951 | 2,923 | 2,758 | 1,967 | 641 | 598 | 1,727 | 4,486 | 1,087 | 2,684 |
| Critical (15%) | 2,493 | 3,260 | 3,502 | 2,410 | 2,411 | 1,500 | 544 | 444 | 752 | 1,421 | 728 | 1,455 |

## Alternative 2B minus Existing

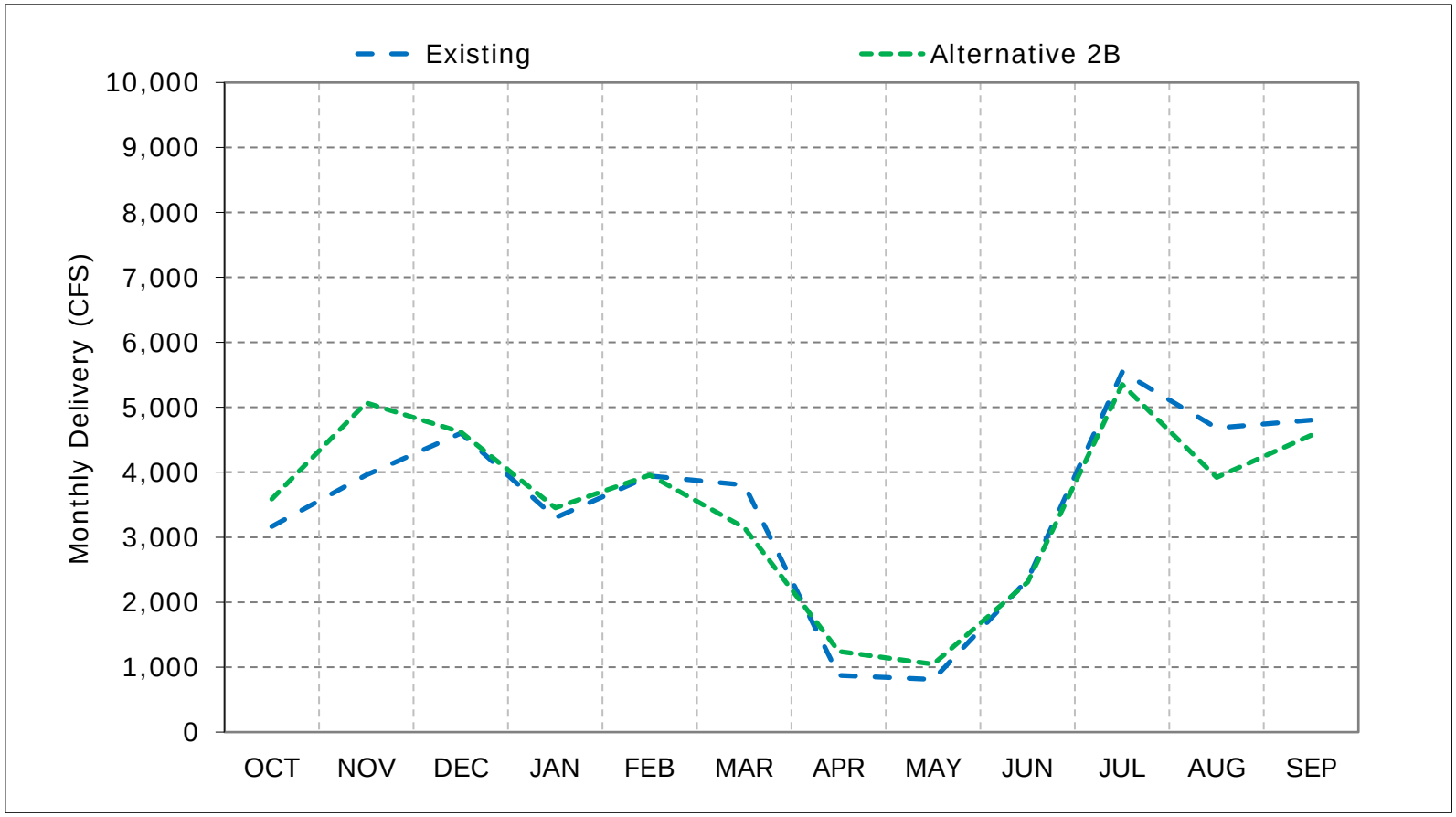
| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 1,435 | 0 | -24 | 3 | -499 | -1,980 | 1,846 | 2,299 | -3 | -5 | -140 | 0 |
| 20% | 893 | 220 | -10 | 516 | 275 | -1,145 | 1,177 | -12 | -119 | -22 | -1,536 | 0 |
| 30% | 517 | 1,838 | -636 | 337 | 252 | -1,403 | -21 | -36 | -157 | -48 | -1,585 | 0 |
| 40% | 475 | 2,381 | 479 | 134 | 146 | -910 | -29 | 0 | -163 | -99 | -1,596 | 0 |
| 50% | 489 | 2,540 | 188 | 137 | 154 | -469 | -70 | 0 | -47 | 0 | -1,636 | -1,205 |
| 60% | 219 | 1,851 | 123 | 126 | 151 | -435 | -6 | 0 | -45 | -390 | -1,626 | -711 |
| 70% | 194 | 998 | 5 | 24 | -5 | -400 | 0 | 0 | 6 | -452 | 31 | -99 |
| 80% | 195 | 710 | 0 | 45 | -53 | -452 | 0 | 0 | 32 | -1,059 | -67 | -179 |
| 90% | 197 | 339 | 54 | 13 | -25 | -10 | 0 | -33 | -86 | 113 | 60 | -313 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 421 | 1,112 | 18 | 150 | 15 | -658 | 368 | 235 | -39 | -192 | -763 | -231 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 547 | 1,379 | -18 | 104 | 75 | -804 | 1,094 | 651 | -30 | -189 | -1,645 | -522 |
| Above Normal (15%) | 412 | 950 | -370 | 26 | -268 | -921 | 207 | 245 | -20 | -72 | -1,626 | 0 |
| Below Normal (17%) | 606 | 1,196 | 107 | 216 | 124 | -919 | 141 | 7 | -43 | -189 | -188 | -374 |
| Dry (22%) | 323 | 899 | 344 | 231 | 75 | -460 | -54 | -31 | 6 | -510 | -18 | -64 |
| Critical (15%) | 92 | 918 | -107 | 176 | -52 | -67 | -148 | -11 | -141 | 152 | 225 | 83 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

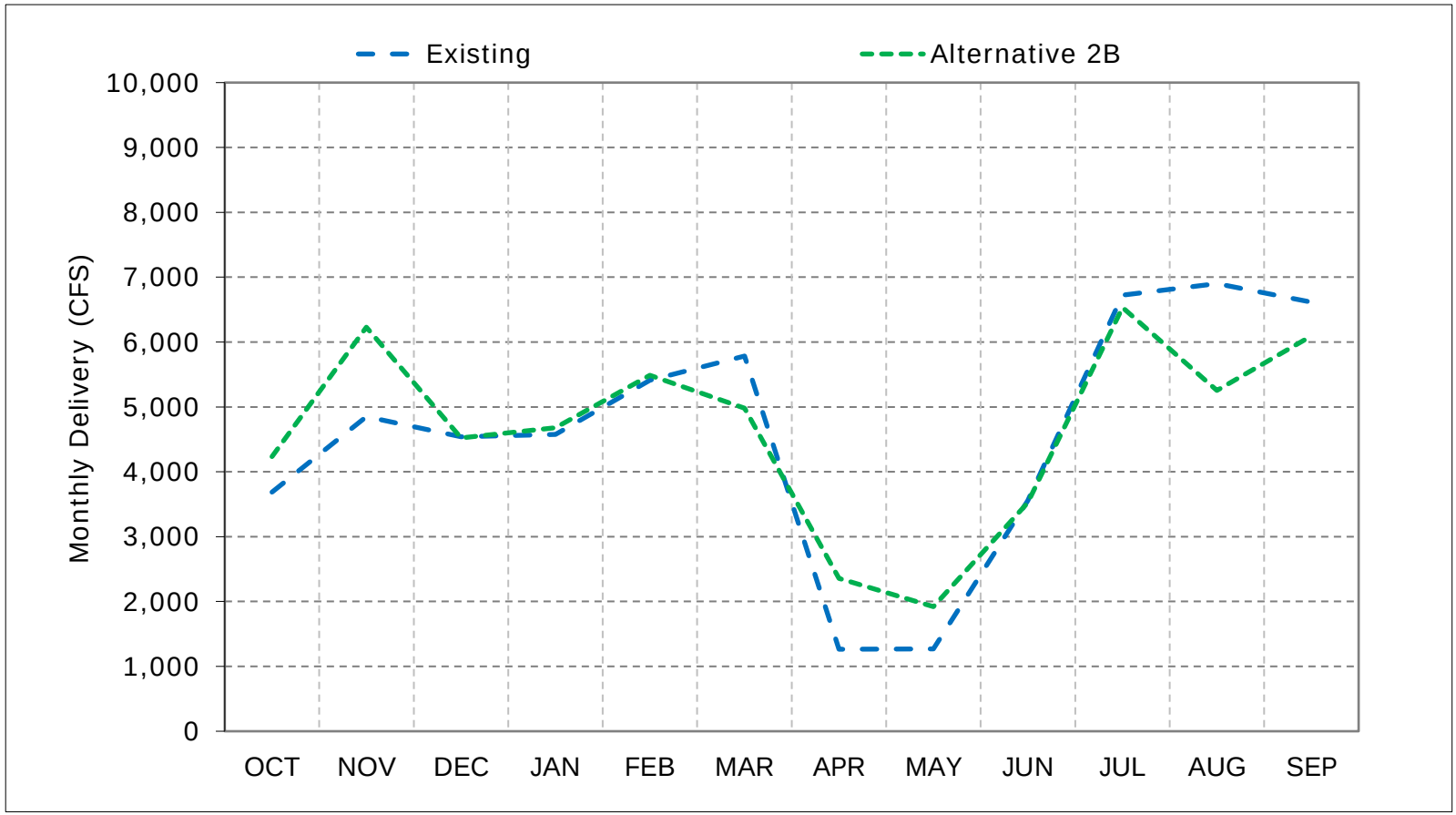
Figure 6-1. Banks PP Exports, Long-Term Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

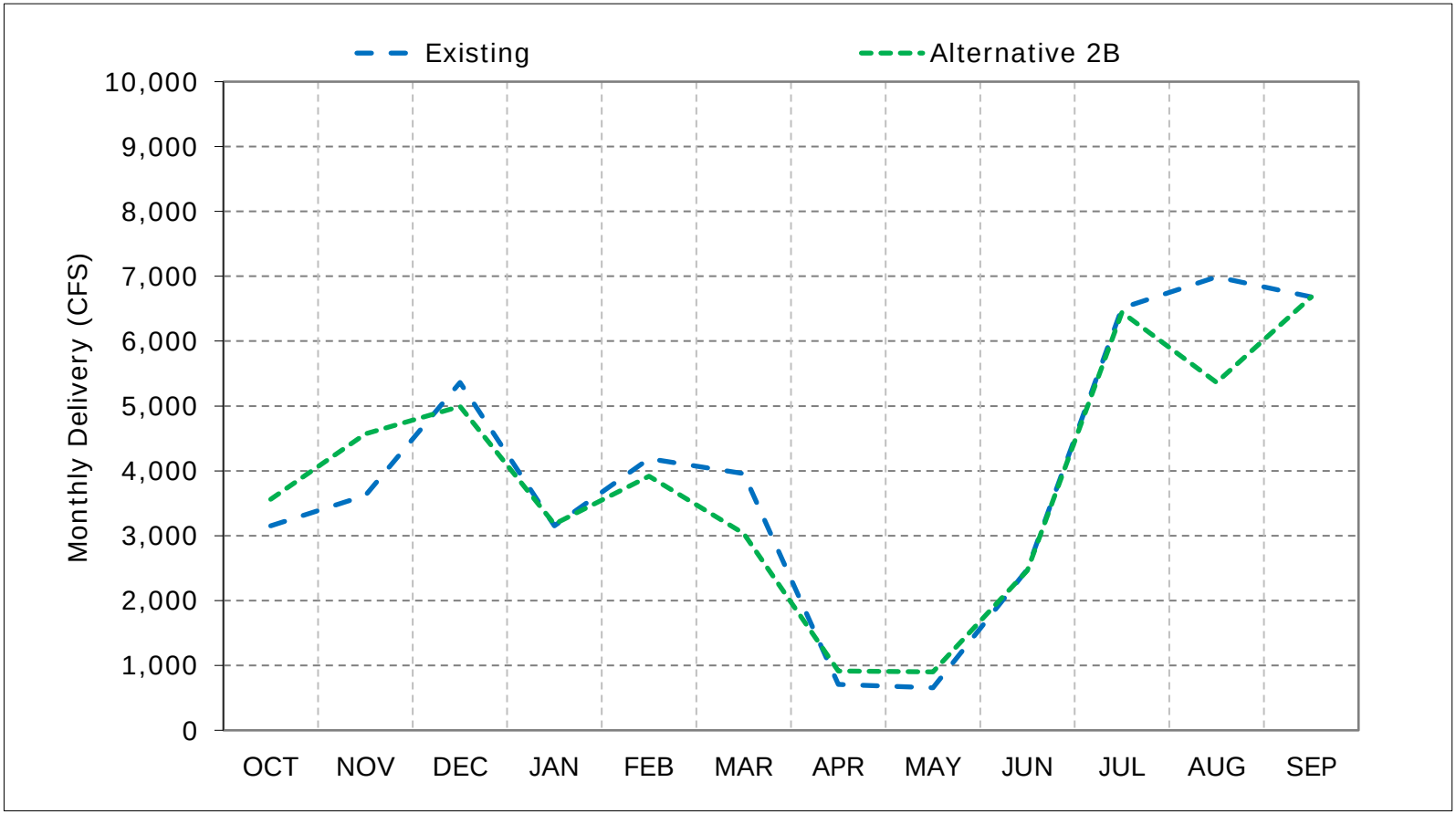
Figure 6-2. Banks PP Exports, Wet Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

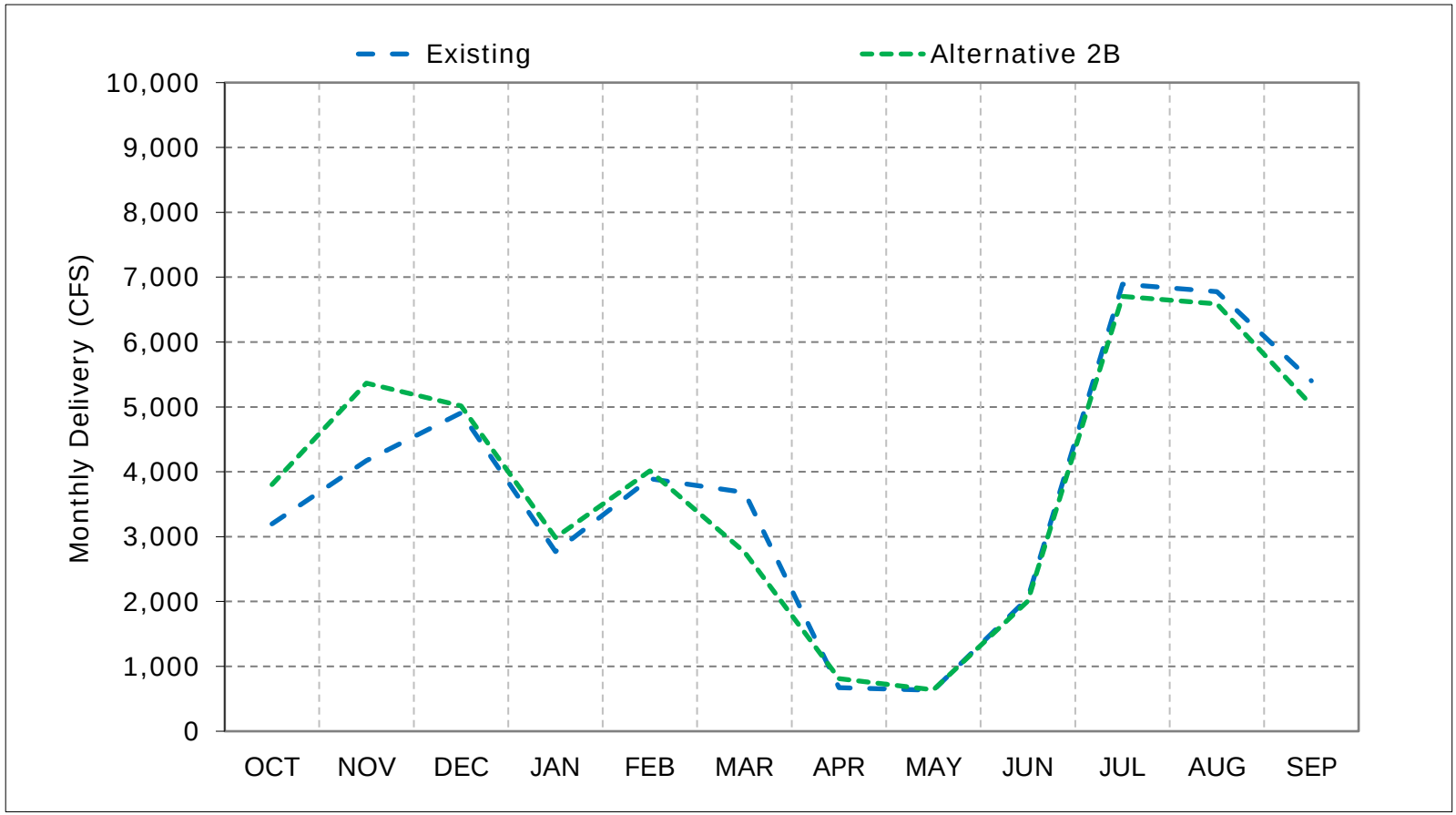
Figure 6-3. Banks PP Exports, Above Normal Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

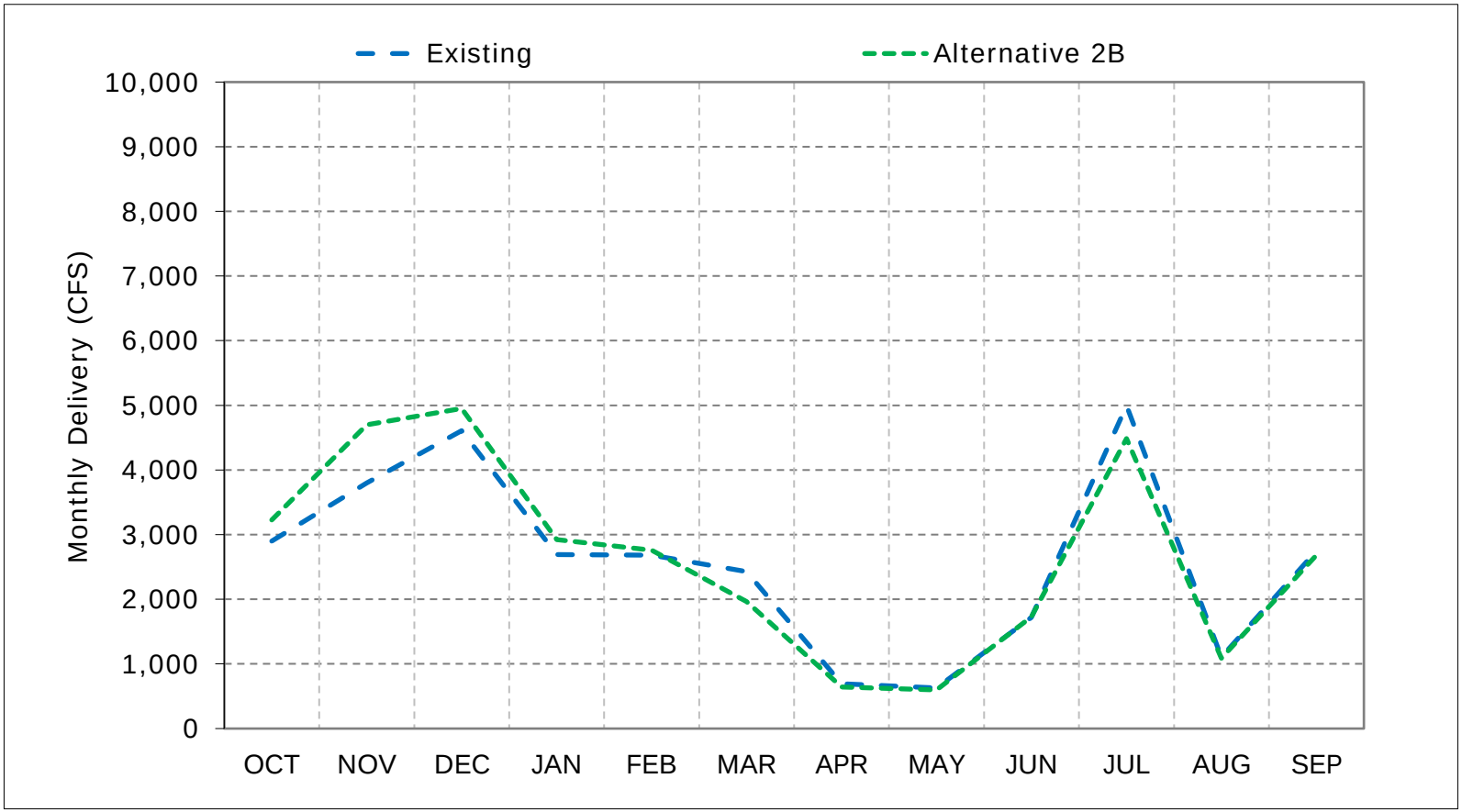
Figure 6-4. Banks PP Exports, Below Normal Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

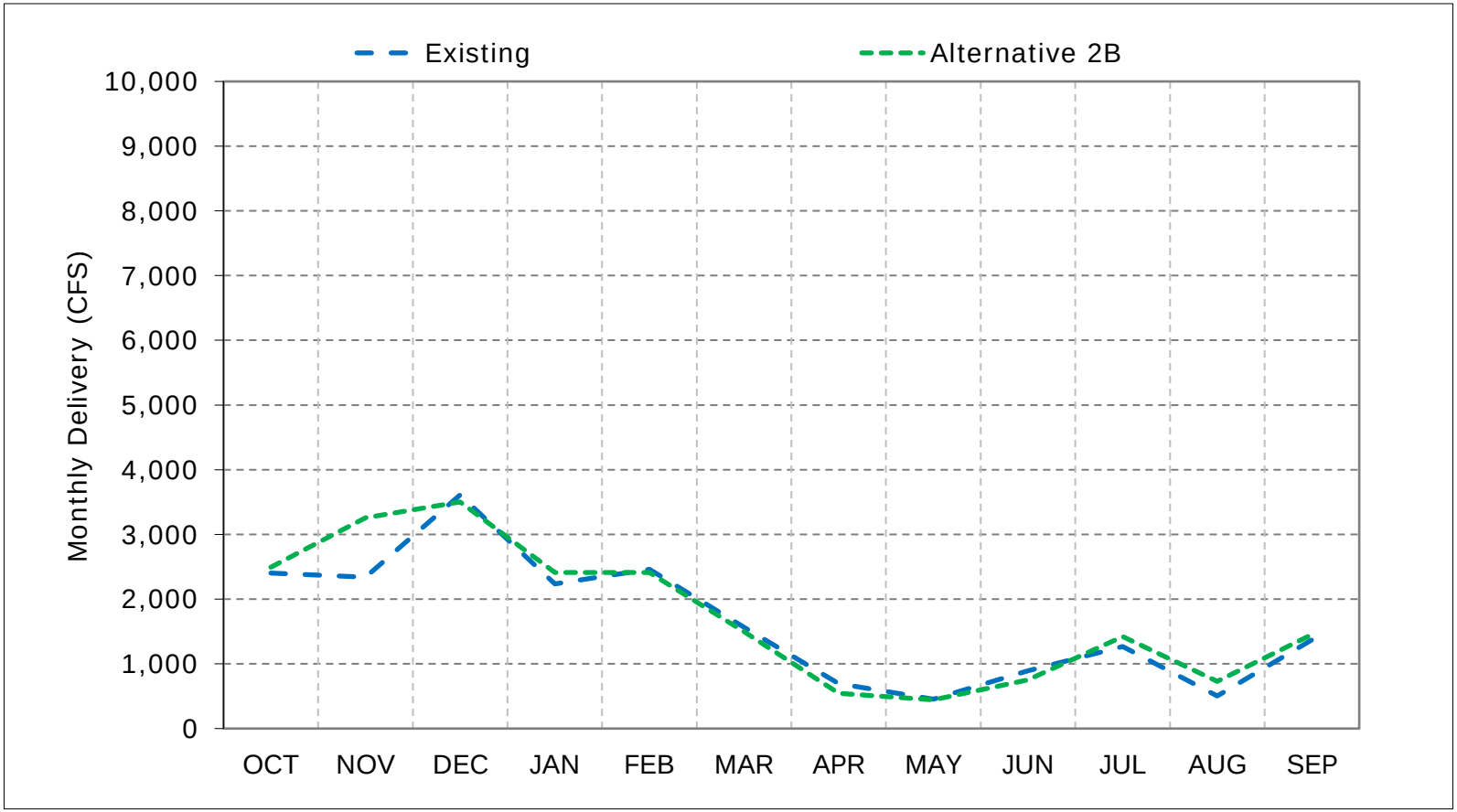
Figure 6-5. Banks PP Exports, Dry Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 6-6. Banks PP Exports, Critical Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 6-7. Banks PP Exports, October

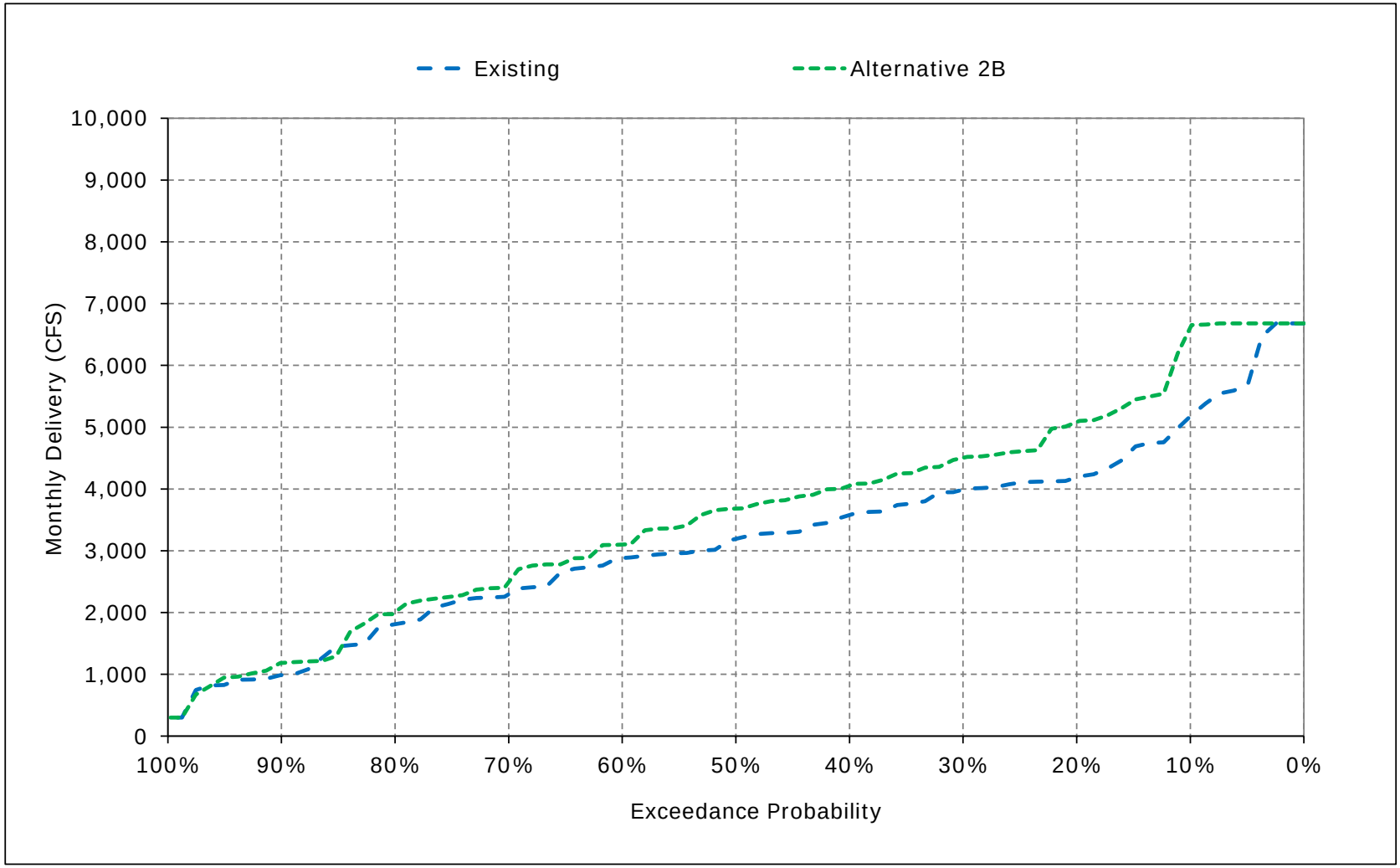


Figure 6-8. Banks PP Exports, November

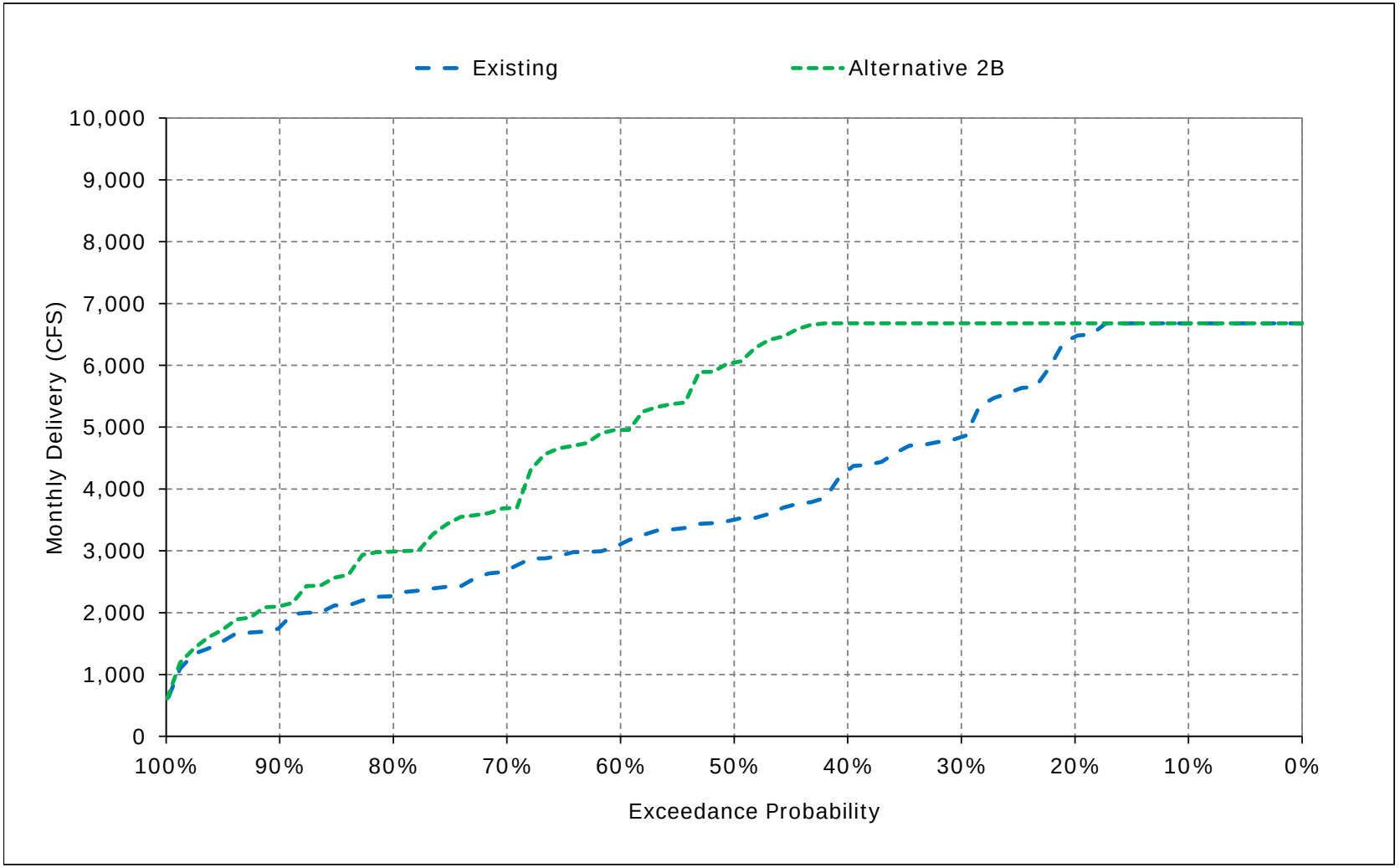


Figure 6-9. Banks PP Exports, December

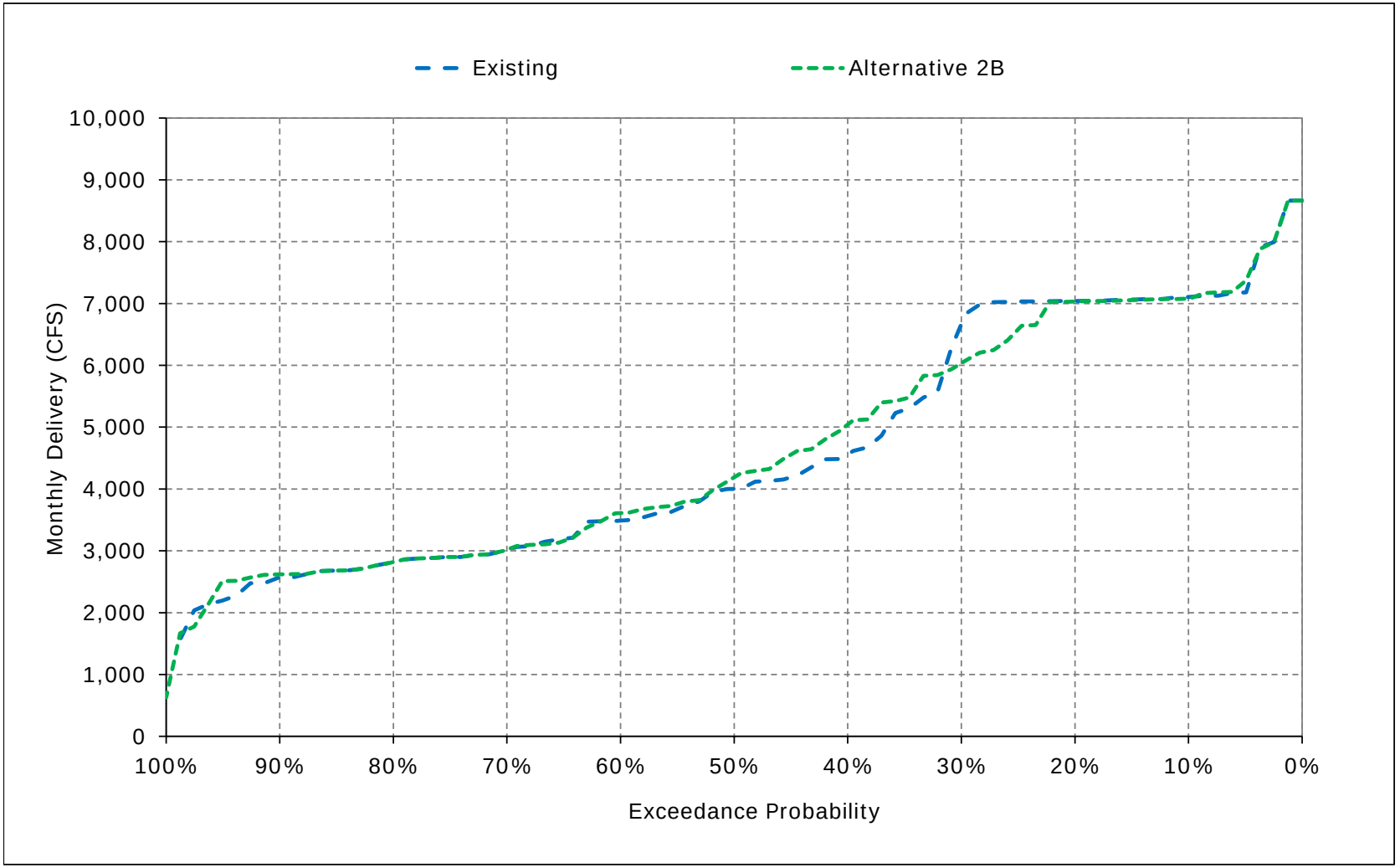


Figure 6-10. Banks PP Exports, January

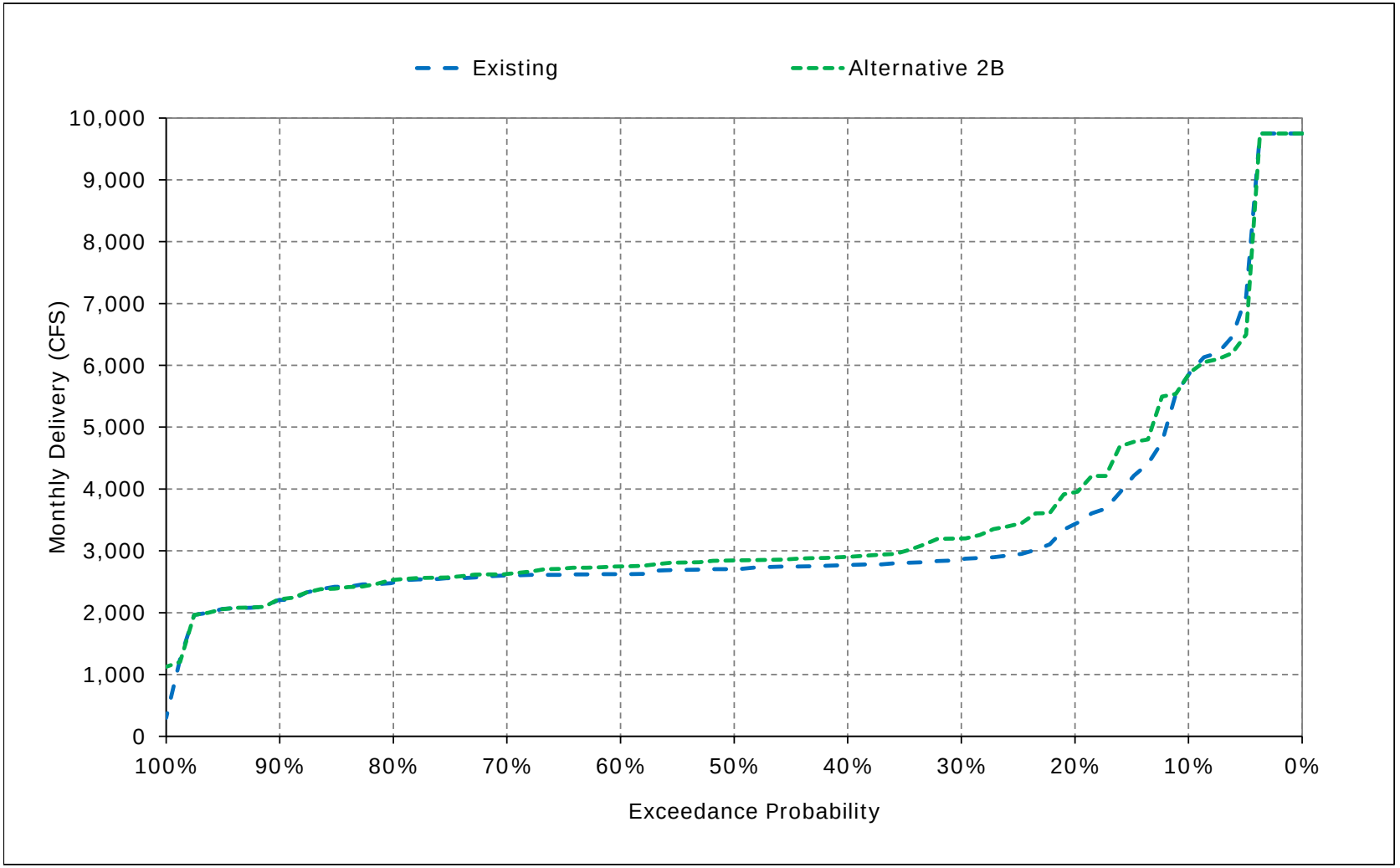


Figure 6-11. Banks PP Exports, February

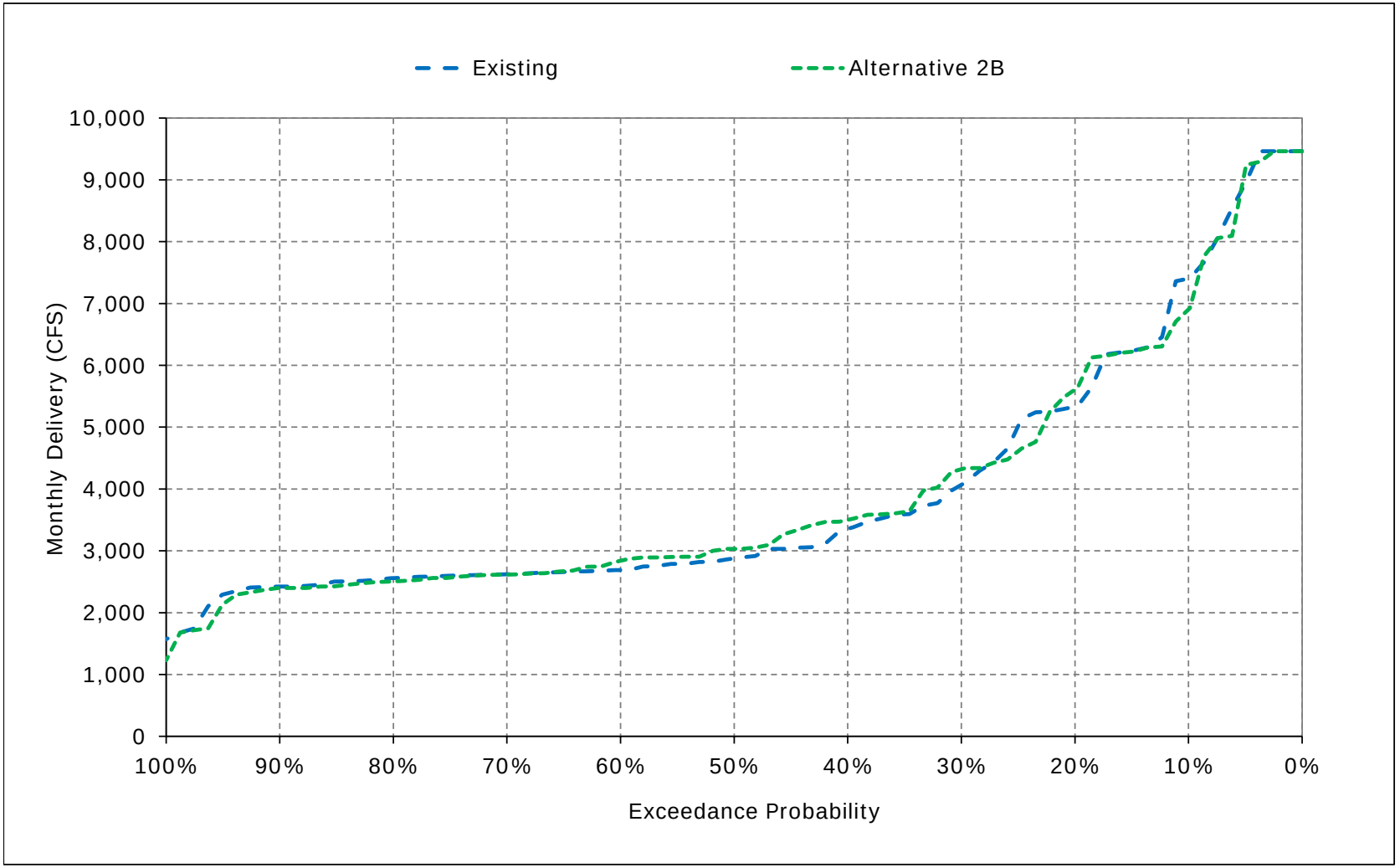


Figure 6-12. Banks PP Exports, March

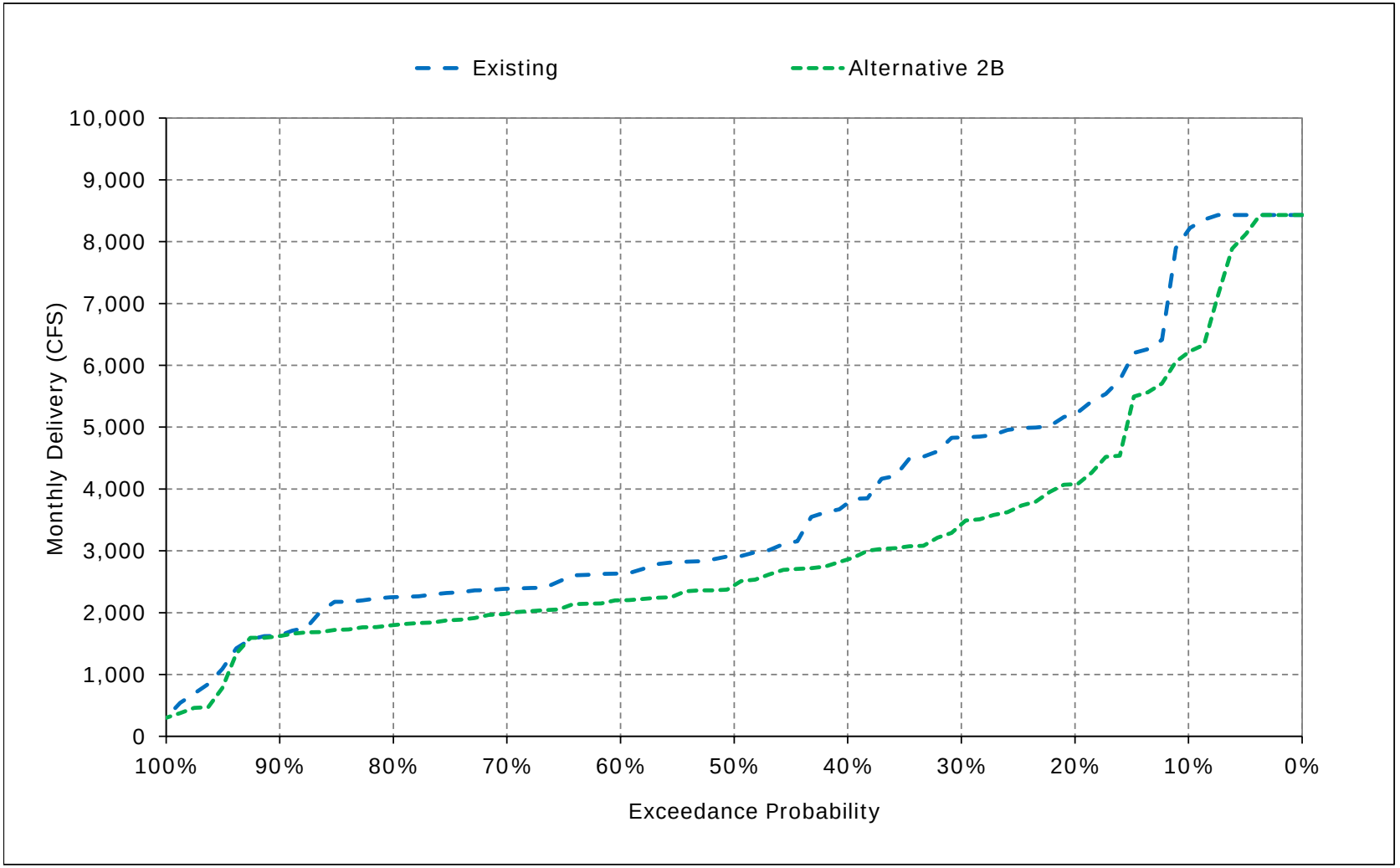


Figure 6-13. Banks PP Exports, April

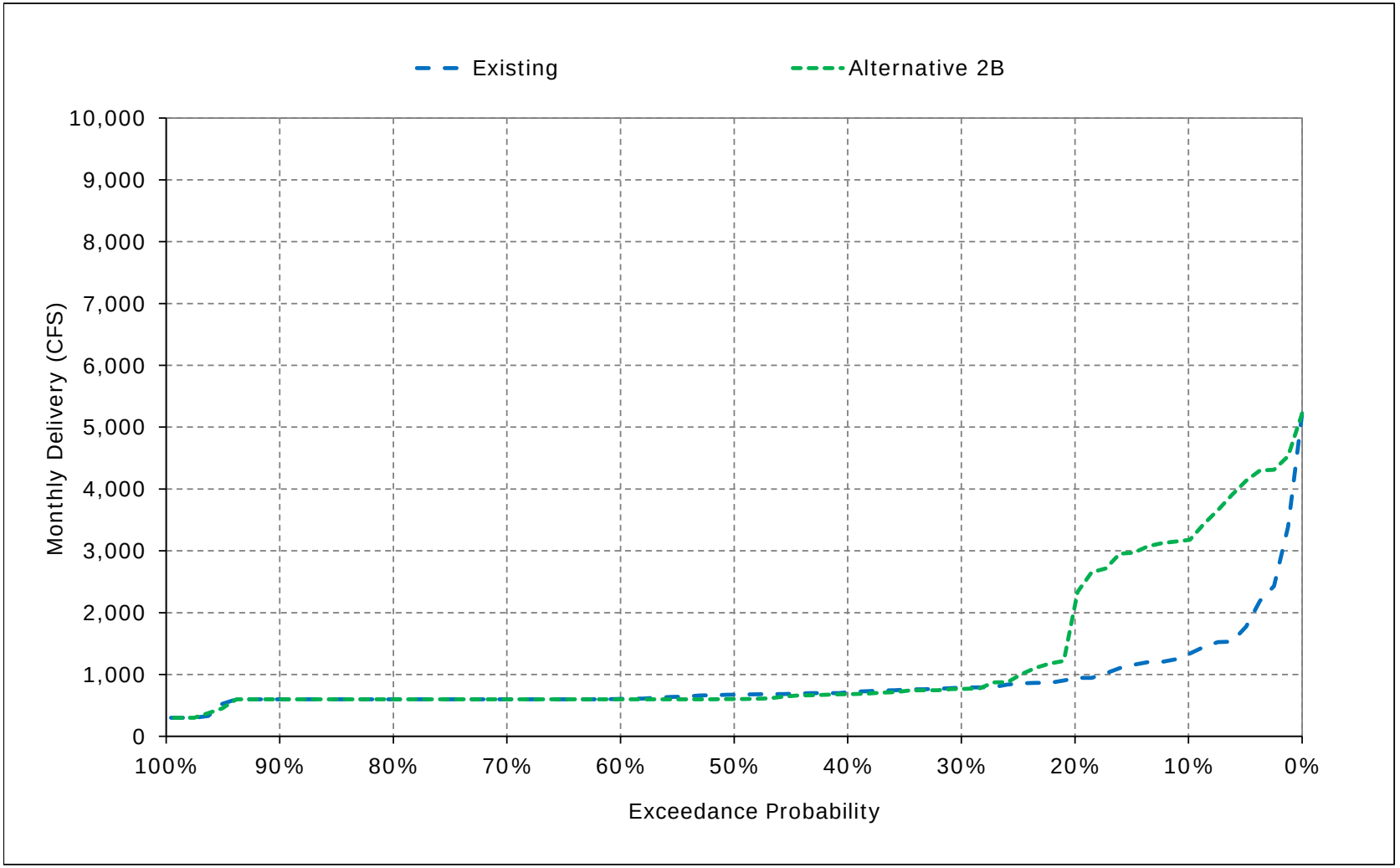


Figure 6-14. Banks PP Exports, May

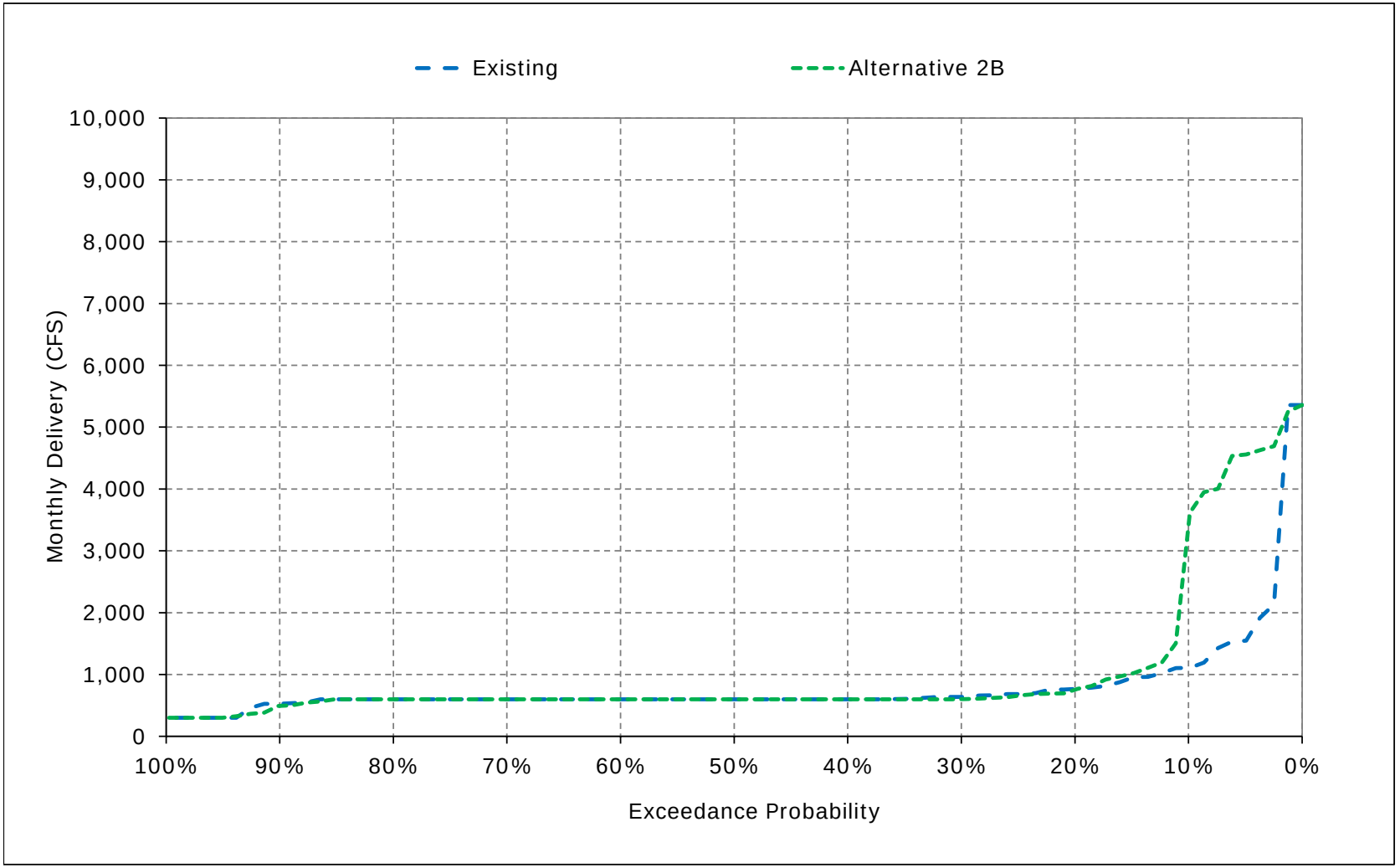


Figure 6-15. Banks PP Exports, June

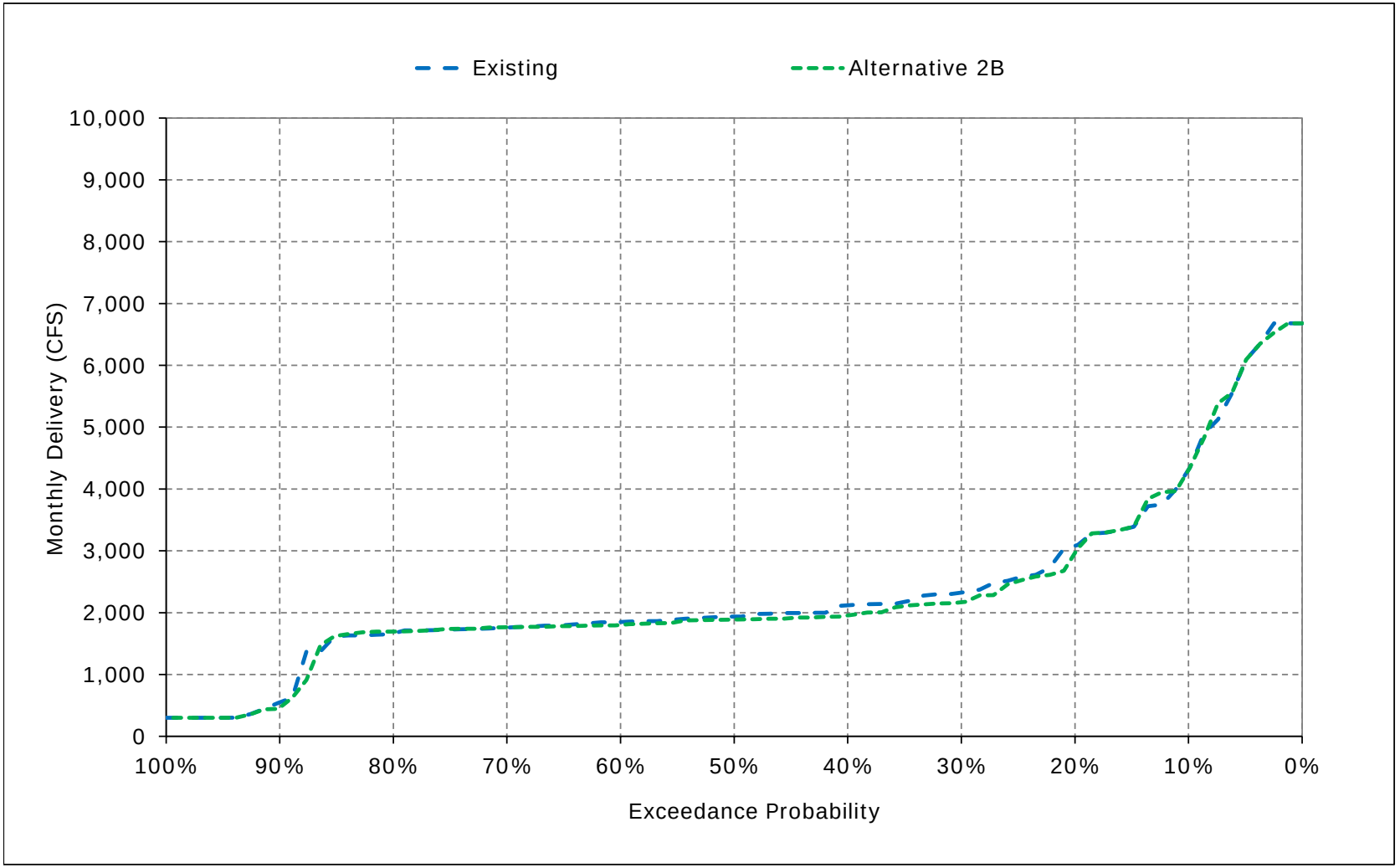


Figure 6-16. Banks PP Exports, July

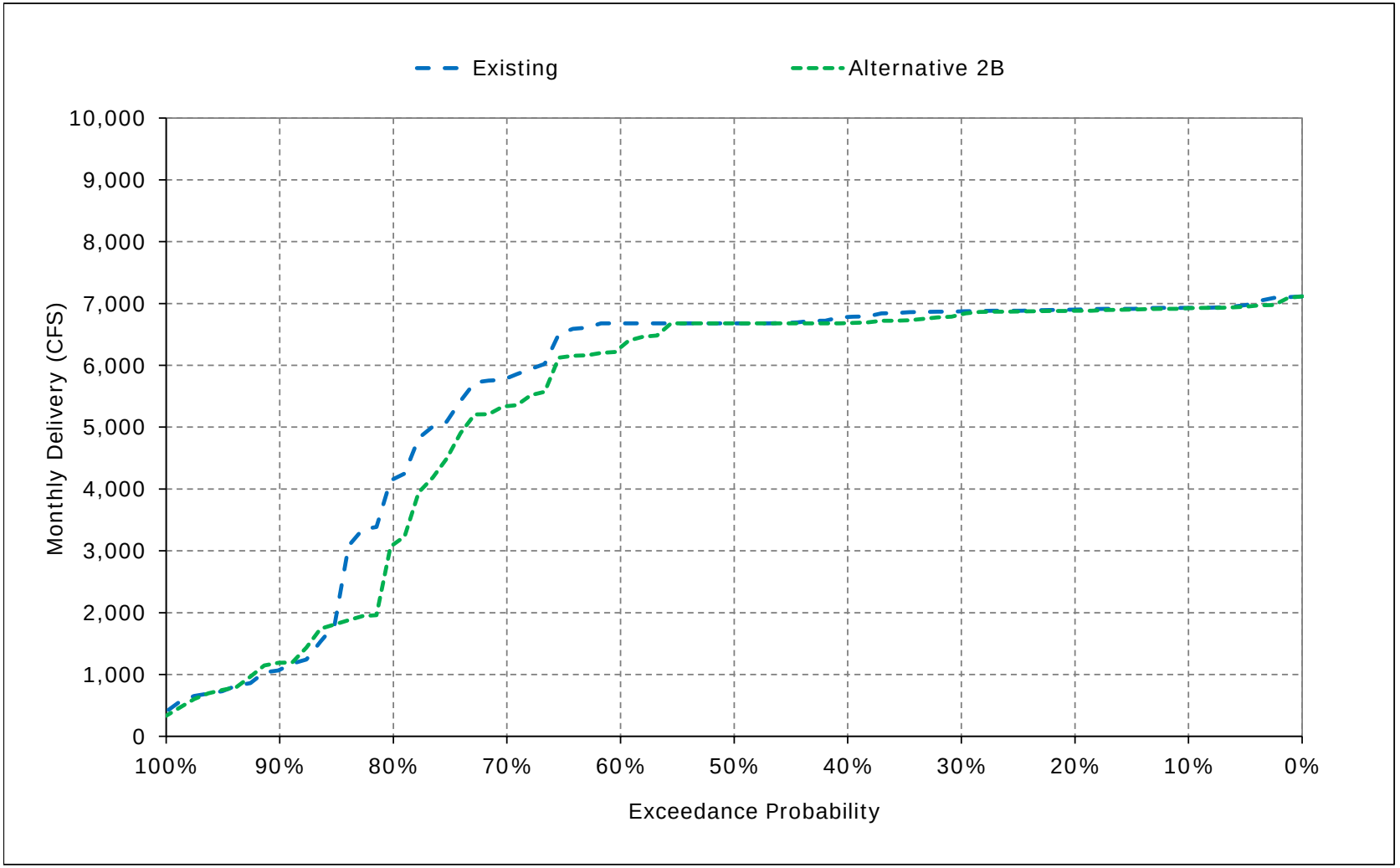


Figure 6-17. Banks PP Exports, August

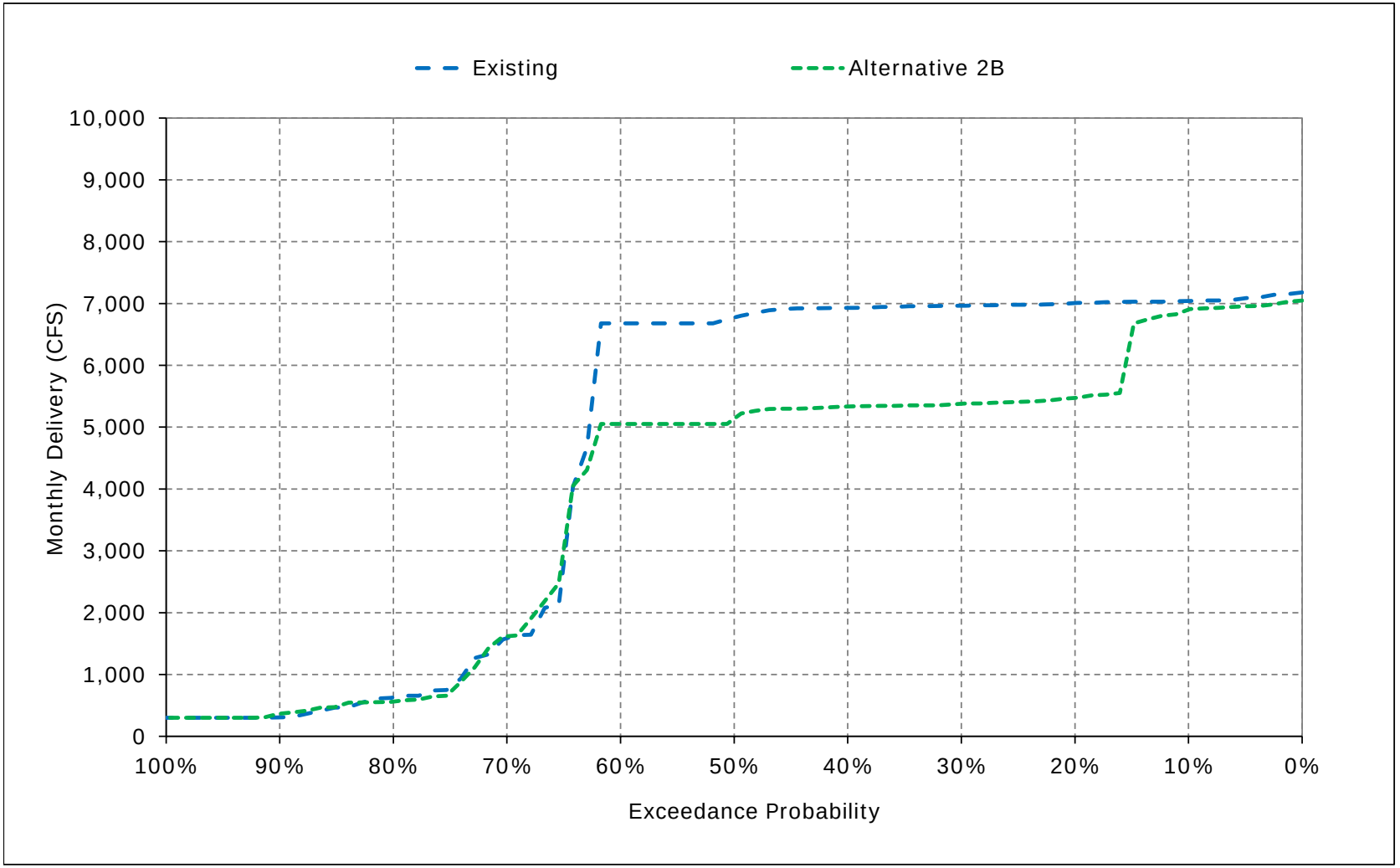
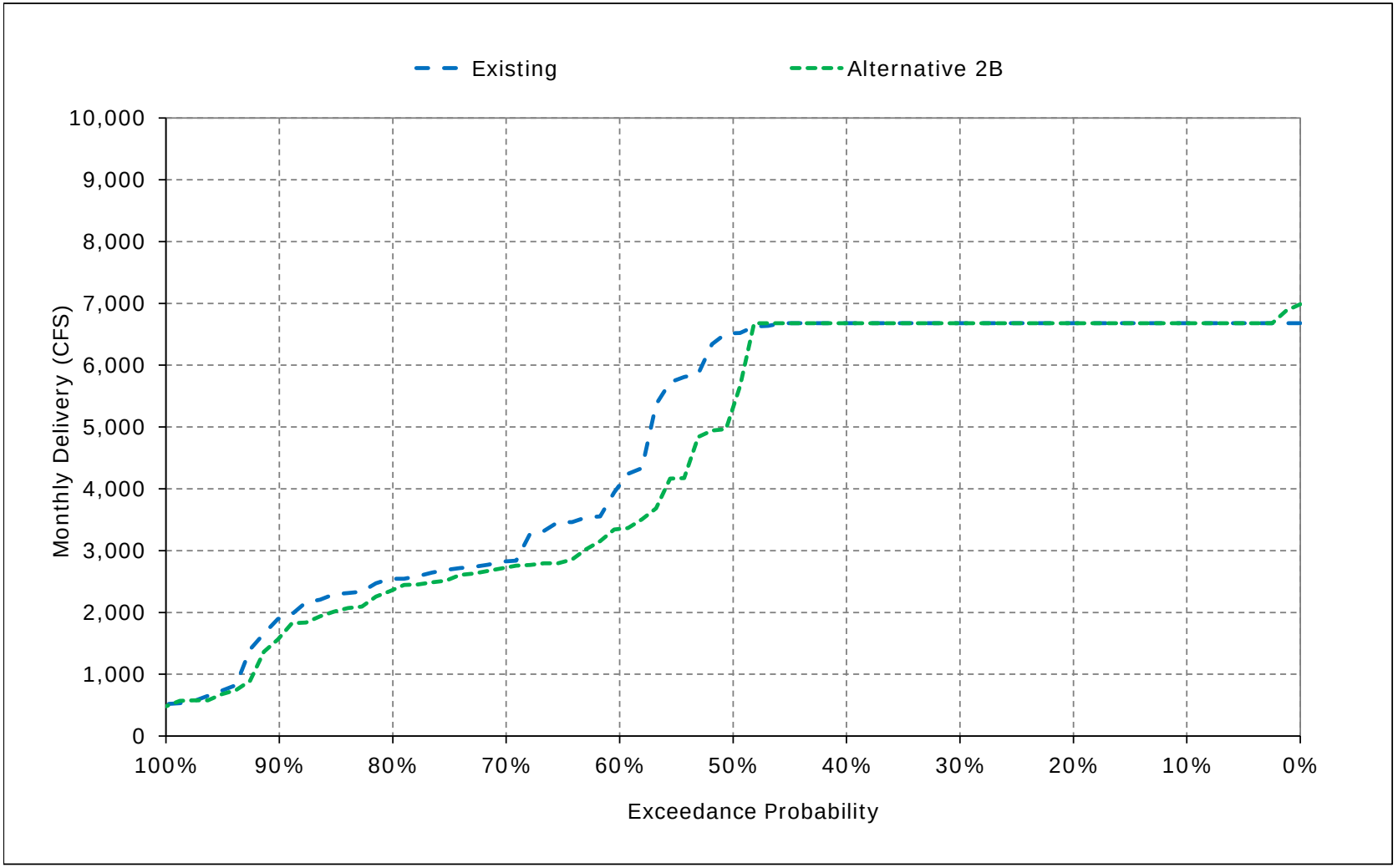


Figure 6-18. Banks PP Exports, September



# Table 7-1. Jones PP Exports, Monthly Delivery

## Existing

| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 4,600 | 4,600 | 4,600 | 4,600 | 4,600 | 4,600 | 1,804 | 1,659 | 4,600 | 4,600 | 4,600 | 4,600 |
| 20% | 4,393 | 4,600 | 4,600 | 4,600 | 4,600 | 4,371 | 1,341 | 1,346 | 4,433 | 4,600 | 4,600 | 4,600 |
| 30% | 4,114 | 4,579 | 4,600 | 4,287 | 4,600 | 4,031 | 1,165 | 1,172 | 3,703 | 4,600 | 4,600 | 4,600 |
| 40% | 3,631 | 4,201 | 4,411 | 4,134 | 4,386 | 3,809 | 1,043 | 975 | 3,491 | 4,397 | 4,600 | 4,524 |
| 50% | 3,499 | 3,913 | 4,327 | 4,049 | 4,184 | 3,534 | 948 | 900 | 3,408 | 3,972 | 4,241 | 4,443 |
| 60% | 3,337 | 3,333 | 4,174 | 3,929 | 3,986 | 3,377 | 900 | 900 | 3,237 | 3,465 | 3,919 | 4,293 |
| 70% | 3,189 | 2,639 | 3,987 | 3,864 | 3,896 | 3,115 | 900 | 900 | 3,179 | 3,235 | 3,650 | 3,979 |
| 80% | 3,064 | 2,063 | 3,614 | 3,685 | 3,762 | 2,552 | 900 | 900 | 2,728 | 2,110 | 3,198 | 3,544 |
| 90% | 2,878 | 1,760 | 2,571 | 3,122 | 3,607 | 1,913 | 820 | 900 | 1,820 | 1,385 | 2,175 | 3,088 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3,573 | 3,430 | 3,990 | 3,972 | 4,115 | 3,429 | 1,180 | 1,202 | 3,328 | 3,510 | 3,853 | 4,083 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 3,683 | 3,665 | 4,164 | 4,199 | 4,328 | 3,612 | 1,527 | 1,591 | 4,135 | 4,489 | 4,600 | 4,475 |
| Above Normal (15%) | 3,409 | 3,543 | 4,101 | 3,983 | 4,132 | 3,917 | 1,059 | 984 | 3,771 | 3,815 | 4,360 | 4,422 |
| Below Normal (17%) | 3,541 | 3,525 | 4,023 | 3,912 | 4,285 | 3,515 | 980 | 948 | 3,317 | 3,625 | 3,518 | 4,401 |
| Dry (22%) | 3,670 | 3,331 | 4,064 | 3,881 | 3,870 | 3,416 | 1,118 | 992 | 2,963 | 3,251 | 3,308 | 4,006 |
| Critical (15%) | 3,389 | 2,843 | 3,357 | 3,673 | 3,807 | 2,461 | 878 | 1,190 | 1,698 | 1,335 | 2,936 | 2,639 |

## Alternative 2B

| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 4,600 | 4,600 | 4,600 | 4,600 | 4,600 | 4,600 | 4,057 | 4,010 | 4,600 | 4,600 | 4,600 | 4,600 |
| 20% | 4,600 | 4,600 | 4,600 | 4,506 | 4,600 | 4,251 | 3,628 | 3,900 | 4,431 | 4,600 | 4,600 | 4,600 |
| 30% | 4,600 | 4,600 | 4,600 | 4,300 | 4,593 | 3,570 | 3,265 | 3,482 | 3,588 | 4,600 | 4,600 | 4,600 |
| 40% | 4,243 | 4,600 | 4,533 | 4,214 | 4,358 | 3,344 | 2,741 | 3,241 | 3,410 | 4,147 | 4,600 | 4,600 |
| 50% | 3,672 | 4,238 | 4,339 | 4,090 | 4,119 | 3,069 | 2,695 | 2,900 | 3,300 | 3,816 | 4,204 | 4,565 |
| 60% | 3,355 | 3,594 | 4,174 | 3,905 | 3,941 | 2,819 | 2,425 | 2,759 | 3,227 | 3,426 | 4,043 | 4,490 |
| 70% | 3,070 | 2,920 | 3,725 | 3,669 | 3,841 | 2,732 | 1,989 | 2,396 | 3,136 | 2,965 | 3,817 | 4,063 |
| 80% | 2,914 | 2,333 | 3,387 | 3,354 | 3,635 | 2,534 | 1,642 | 1,686 | 2,929 | 2,606 | 3,174 | 3,582 |
| 90% | 2,677 | 1,695 | 2,295 | 2,712 | 3,283 | 1,990 | 1,061 | 1,477 | 2,191 | 1,484 | 2,631 | 3,049 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3,657 | 3,604 | 3,880 | 3,834 | 4,030 | 3,173 | 2,615 | 2,870 | 3,347 | 3,483 | 3,914 | 4,143 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 3,929 | 3,903 | 4,181 | 4,002 | 3,996 | 3,391 | 3,336 | 3,647 | 4,077 | 4,461 | 4,598 | 4,522 |
| Above Normal (15%) | 3,556 | 3,443 | 3,907 | 4,022 | 4,148 | 3,715 | 3,188 | 3,357 | 3,700 | 3,856 | 4,431 | 4,376 |
| Below Normal (17%) | 3,634 | 3,686 | 3,808 | 3,850 | 4,270 | 3,232 | 2,802 | 3,087 | 3,293 | 3,304 | 3,605 | 4,524 |
| Dry (22%) | 3,602 | 3,481 | 4,001 | 3,874 | 3,930 | 2,819 | 2,095 | 2,196 | 3,097 | 3,317 | 3,544 | 4,078 |
| Critical (15%) | 3,274 | 3,204 | 3,107 | 3,203 | 3,856 | 2,620 | 1,041 | 1,457 | 1,848 | 1,453 | 2,829 | 2,742 |

## Alternative 2B minus Existing

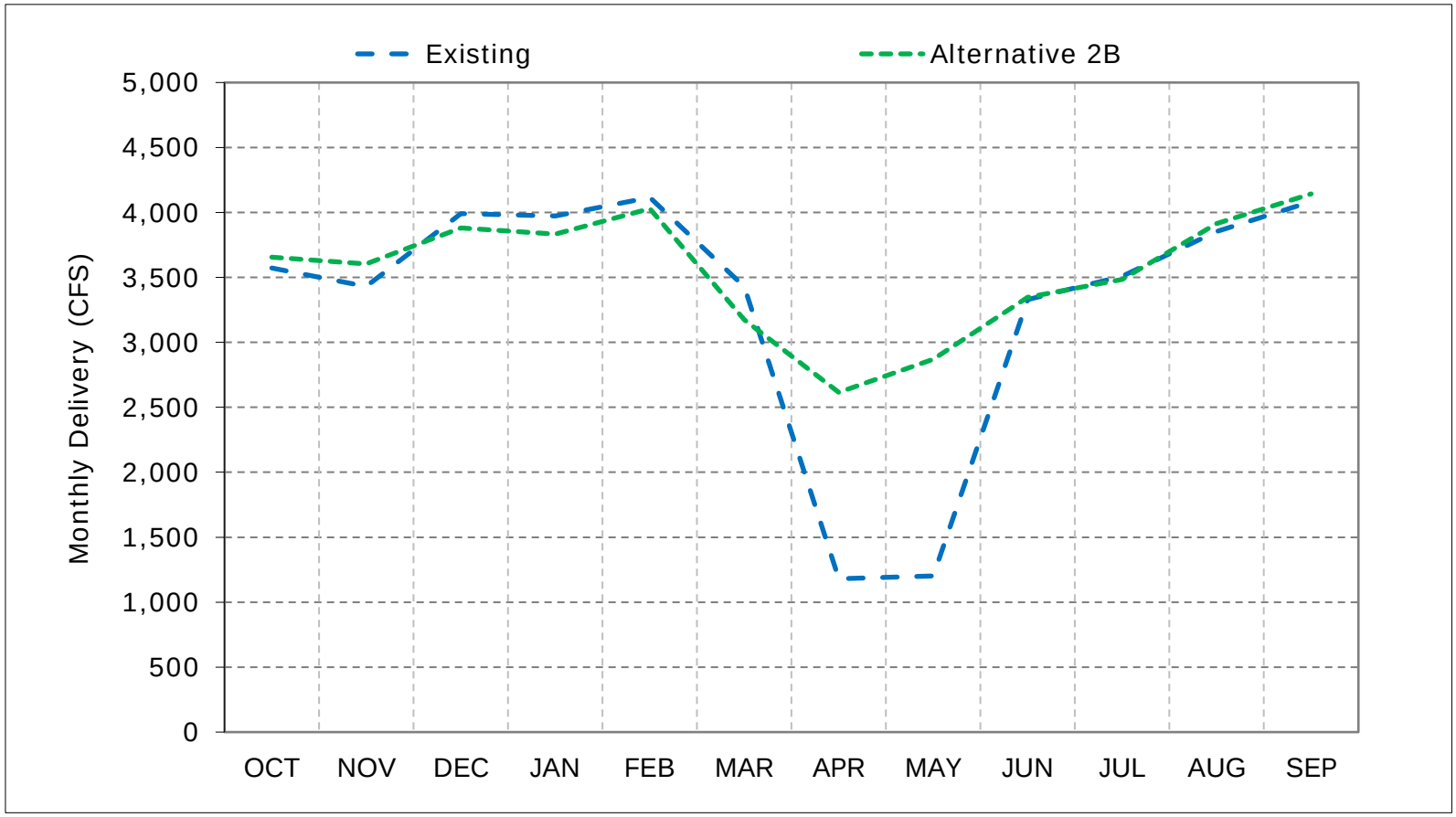
| Statistic | Monthly Delivery (CFS) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0 | 0 | 0 | 0 | 0 | 0 | 2,253 | 2,351 | 0 | 0 | 0 | 0 |
| 20% | 207 | 0 | 0 | -94 | 0 | -120 | 2,287 | 2,554 | -2 | 0 | 0 | 0 |
| 30% | 486 | 21 | 0 | 13 | -7 | -461 | 2,100 | 2,309 | -115 | 0 | 0 | 0 |
| 40% | 612 | 399 | 122 | 81 | -27 | -466 | 1,697 | 2,266 | -81 | -249 | 0 | 76 |
| 50% | 173 | 325 | 12 | 41 | -65 | -466 | 1,746 | 2,000 | -108 | -156 | -37 | 122 |
| 60% | 18 | 262 | 0 | -25 | -45 | -558 | 1,525 | 1,859 | -10 | -40 | 124 | 197 |
| 70% | -119 | 281 | -263 | -194 | -55 | -383 | 1,089 | 1,496 | -43 | -270 | 167 | 85 |
| 80% | -150 | 271 | -226 | -331 | -127 | -18 | 742 | 786 | 201 | 496 | -24 | 39 |
| 90% | -201 | -64 | -276 | -410 | -324 | 77 | 241 | 577 | 371 | 100 | 456 | -39 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 84 | 174 | -110 | -137 | -85 | -256 | 1,435 | 1,668 | 18 | -26 | 61 | 60 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 246 | 238 | 17 | -197 | -332 | -221 | 1,810 | 2,056 | -58 | -29 | -2 | 47 |
| Above Normal (15%) | 148 | -99 | -194 | 39 | 17 | -201 | 2,129 | 2,373 | -71 | 41 | 71 | -46 |
| Below Normal (17%) | 93 | 161 | -215 | -62 | -15 | -283 | 1,822 | 2,139 | -24 | -322 | 87 | 123 |
| Dry (22%) | -68 | 150 | -64 | -7 | 61 | -597 | 978 | 1,204 | 134 | 66 | 236 | 72 |
| Critical (15%) | -115 | 361 | -250 | -470 | 49 | 159 | 163 | 267 | 149 | 118 | -107 | 103 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

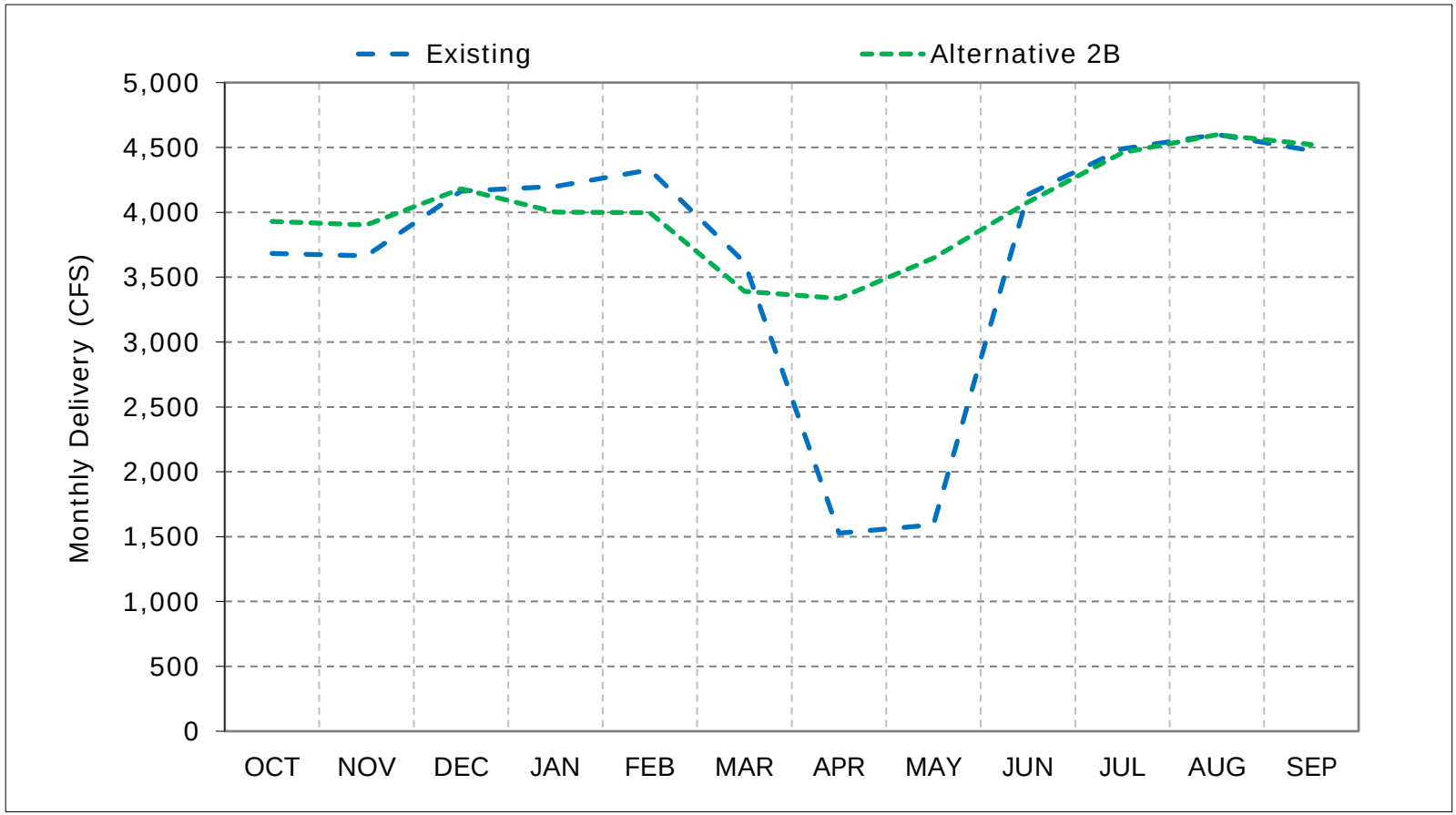
Figure 7-1. Jones PP Exports, Long-Term Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

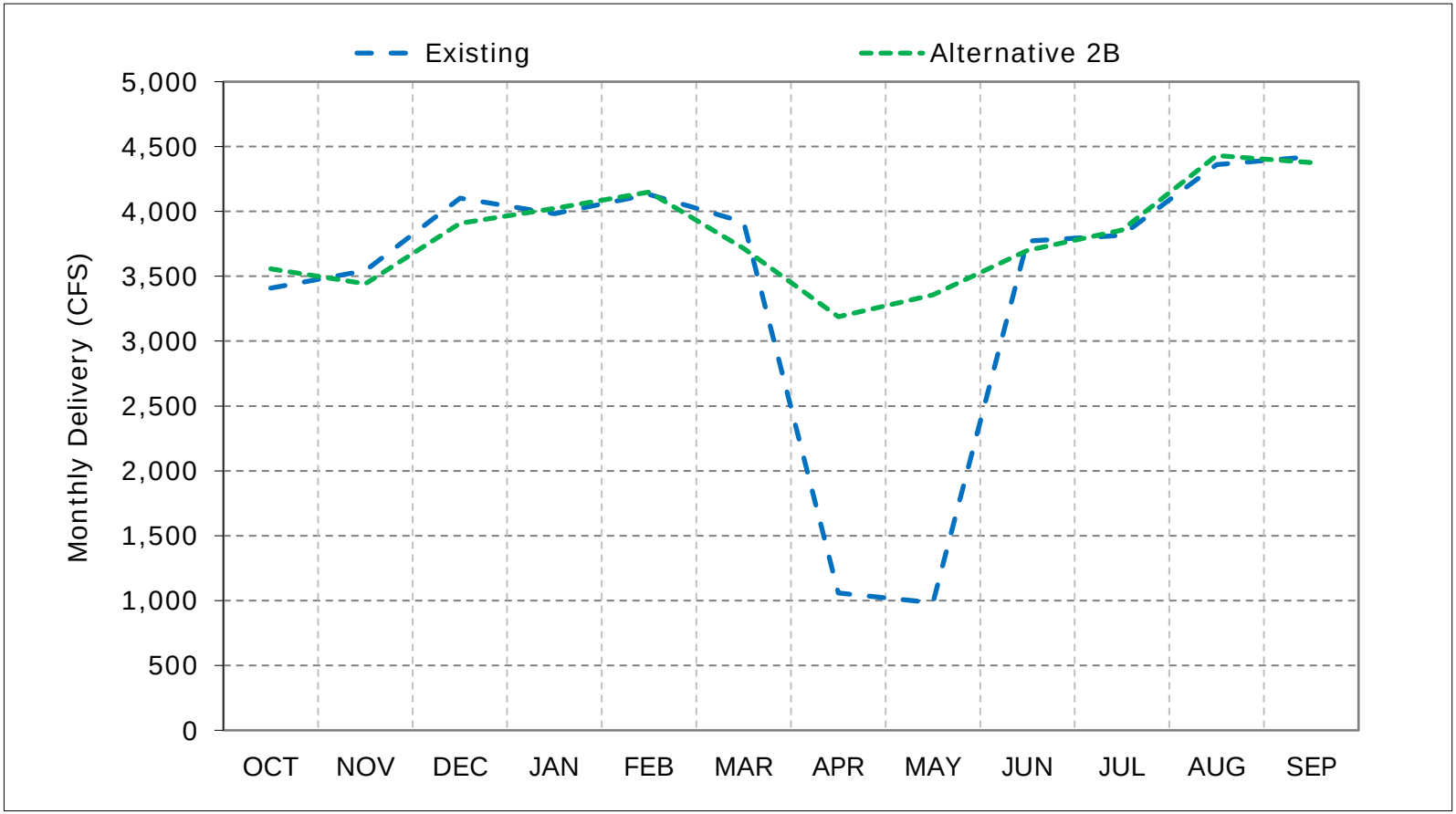
*These results are displayed with water year - year type sorting.

Figure 7-2. Jones PP Exports, Wet Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

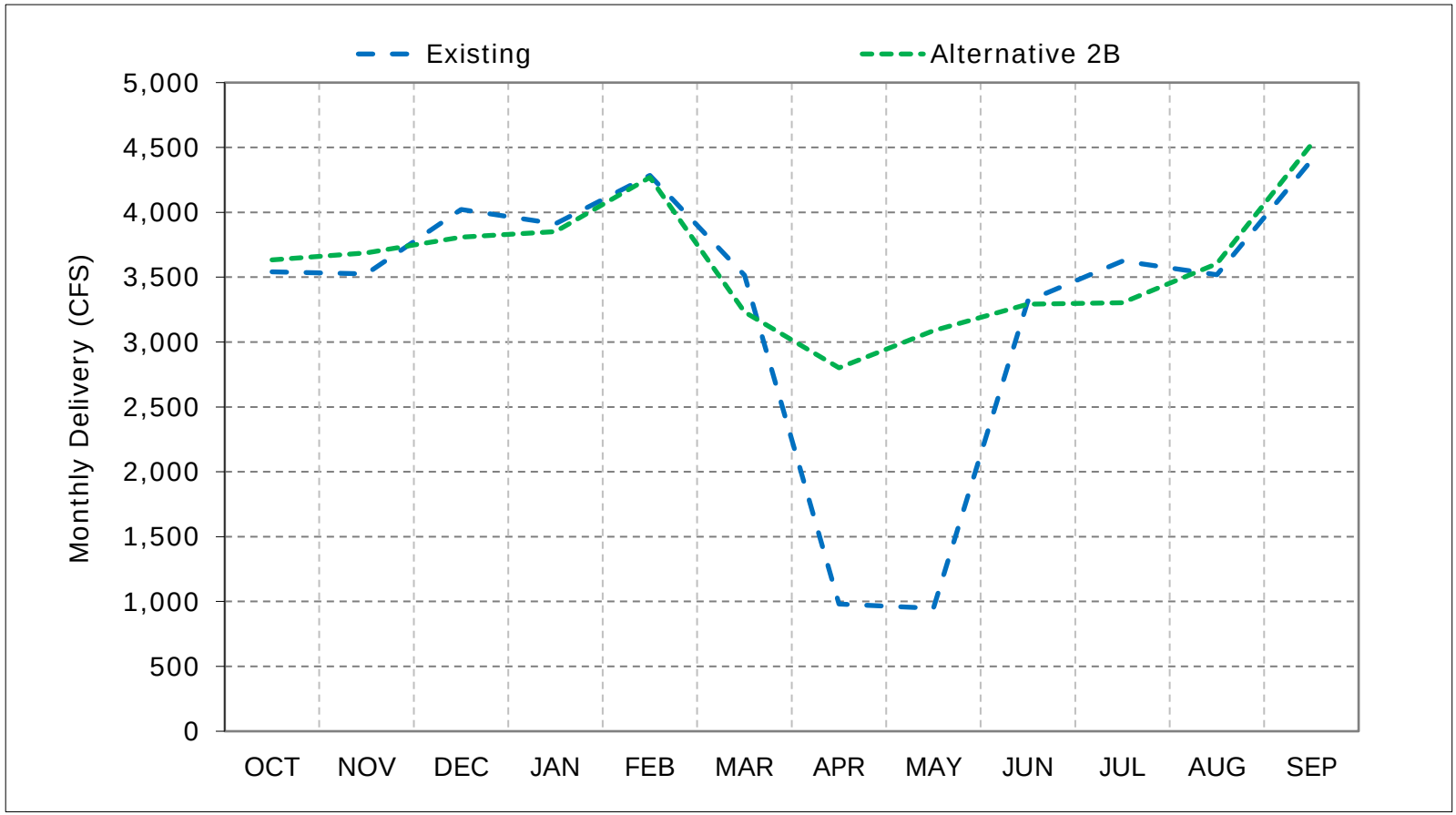
Figure 7-3. Jones PP Exports, Above Normal Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

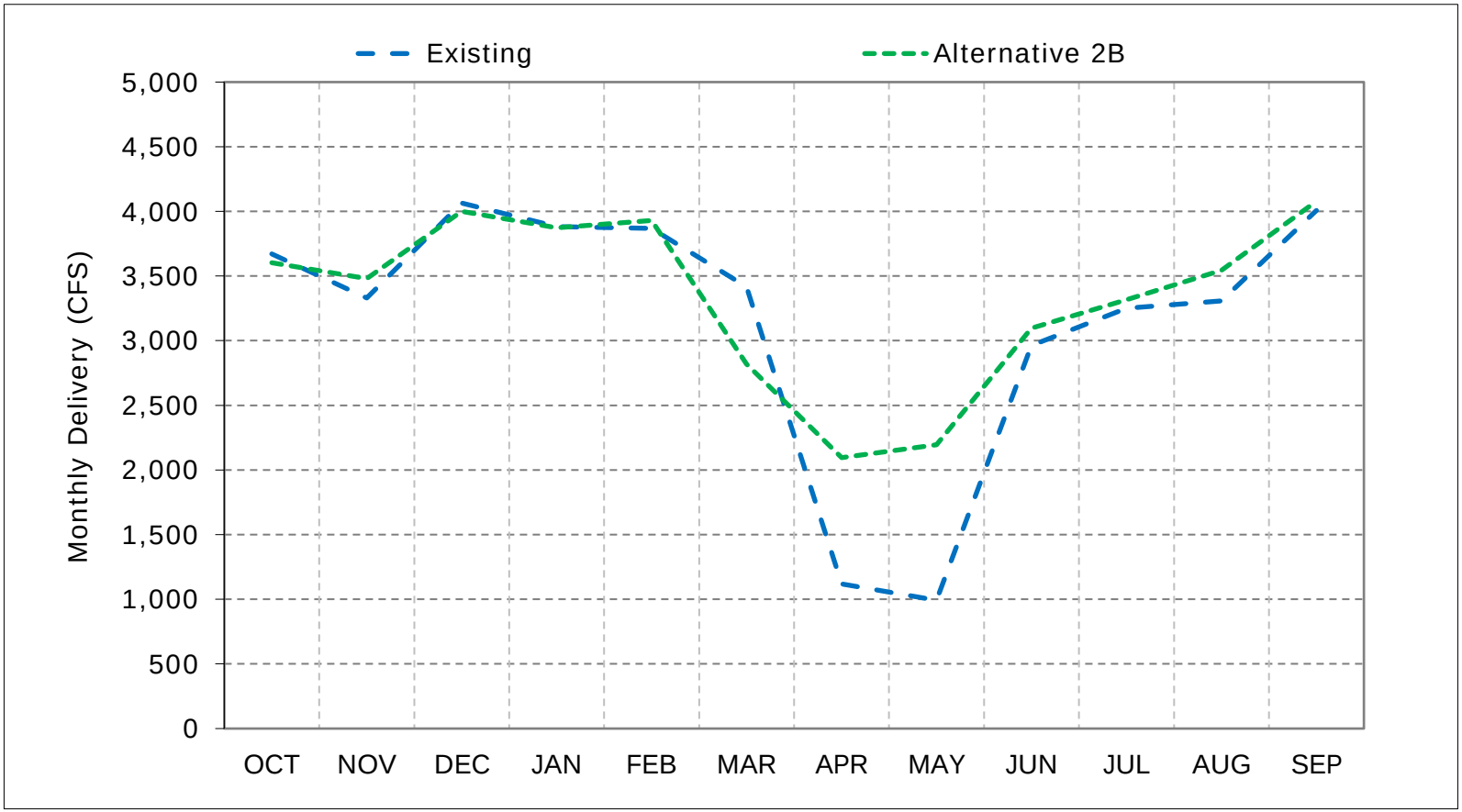
Figure 7-4. Jones PP Exports, Below Normal Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

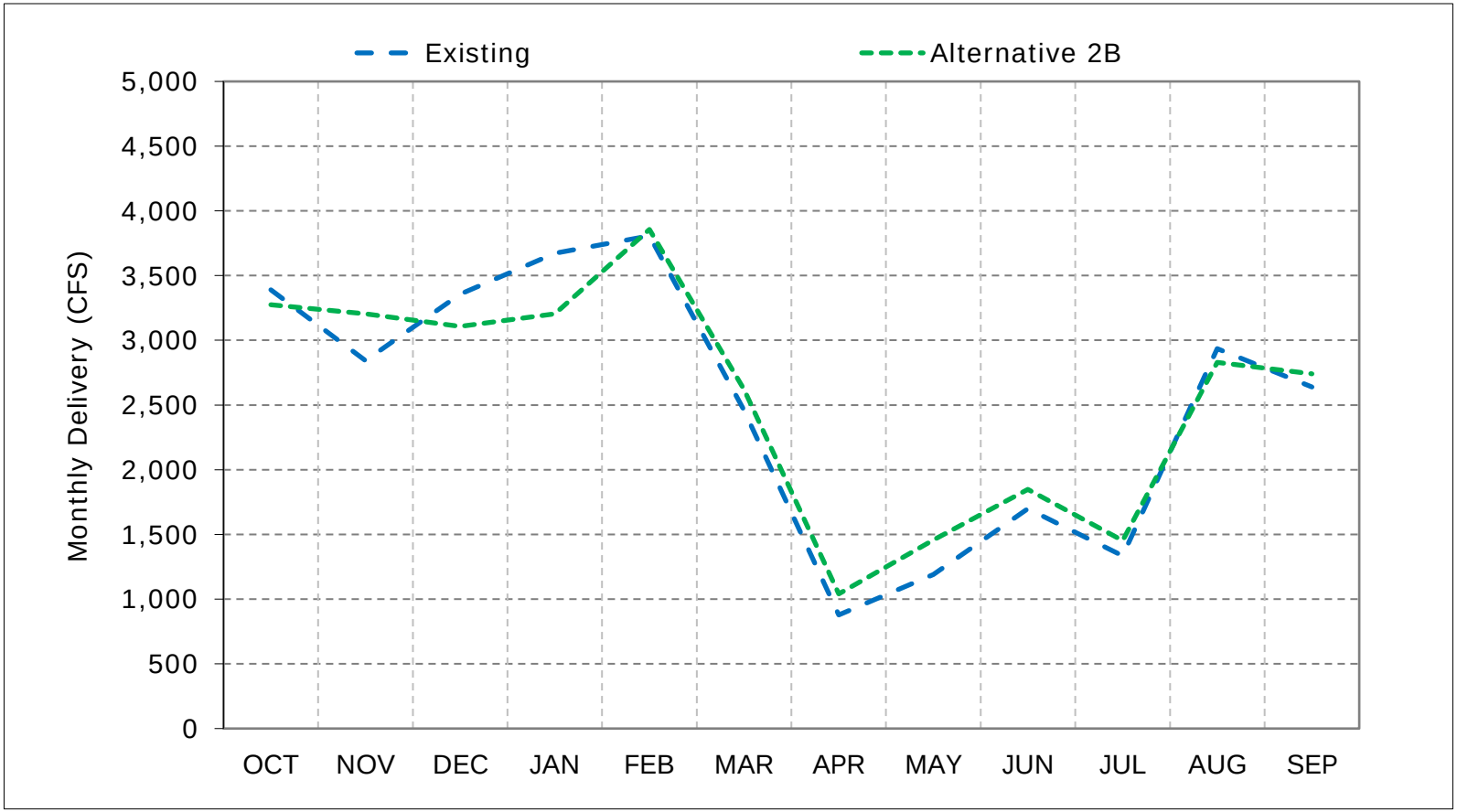
Figure 7-5. Jones PP Exports, Dry Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

Figure 7-6. Jones PP Exports, Critical Year Average Delivery




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-7. Jones PP Exports, October

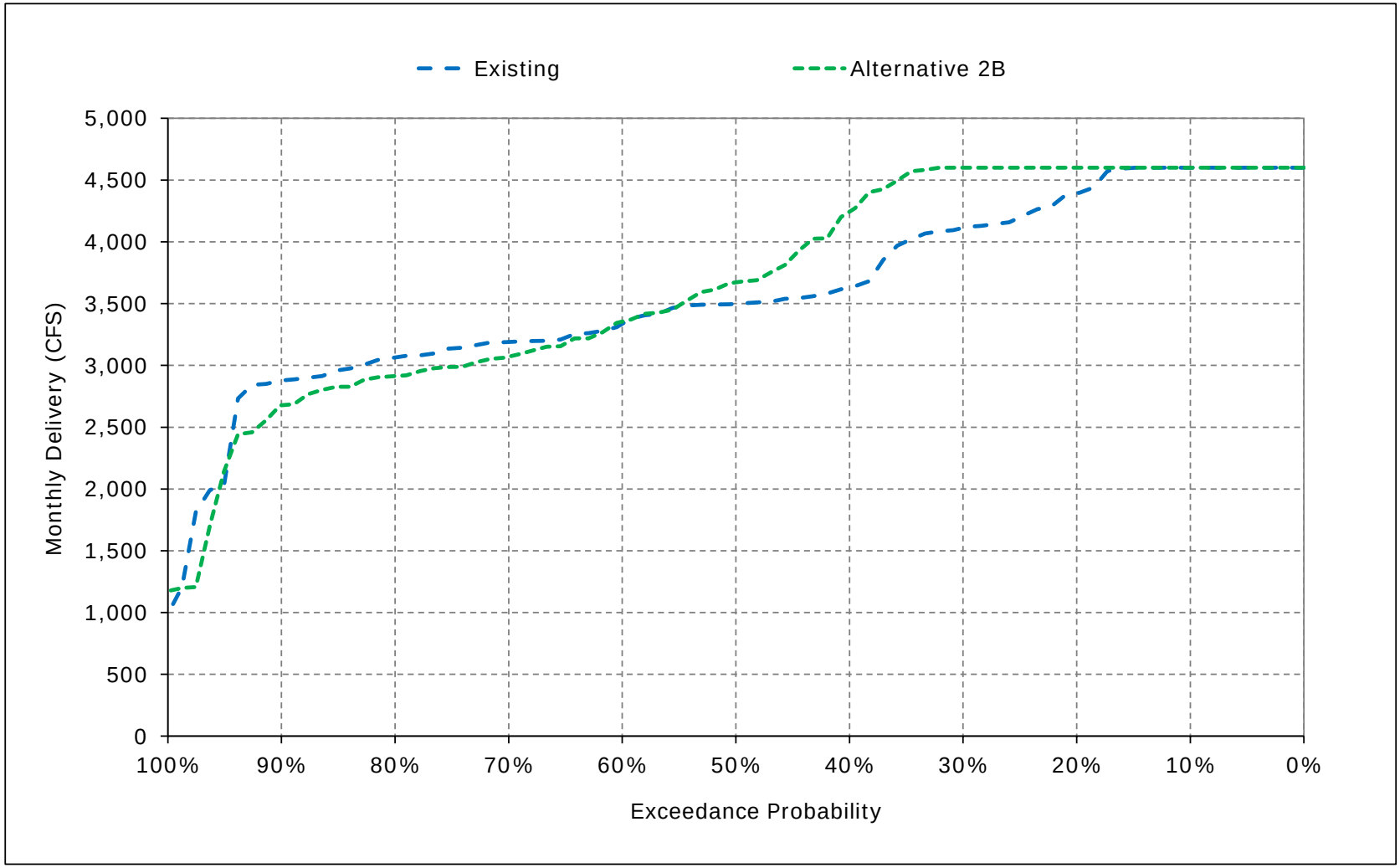


Figure 7-8. Jones PP Exports, November

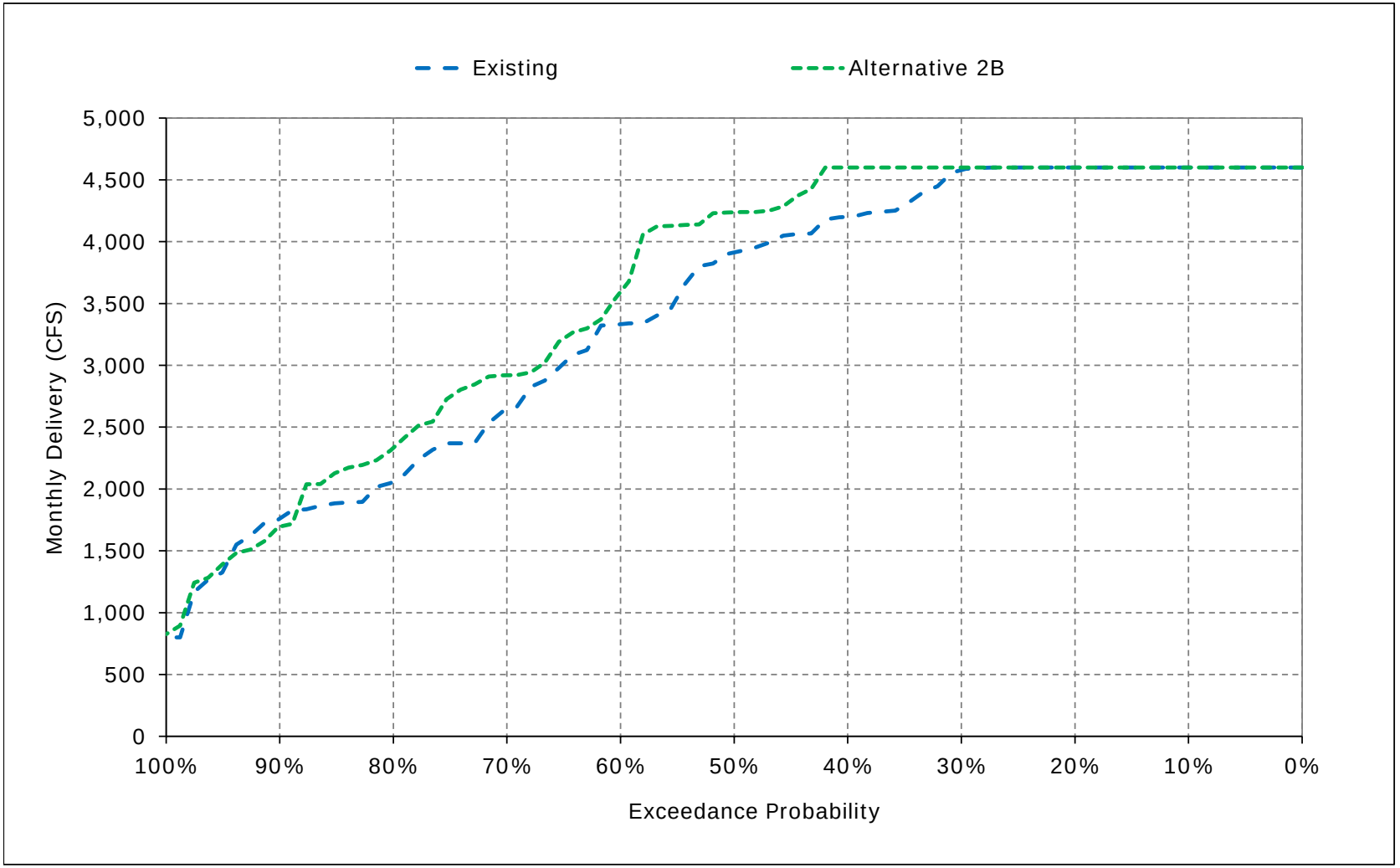


Figure 7-9. Jones PP Exports, December

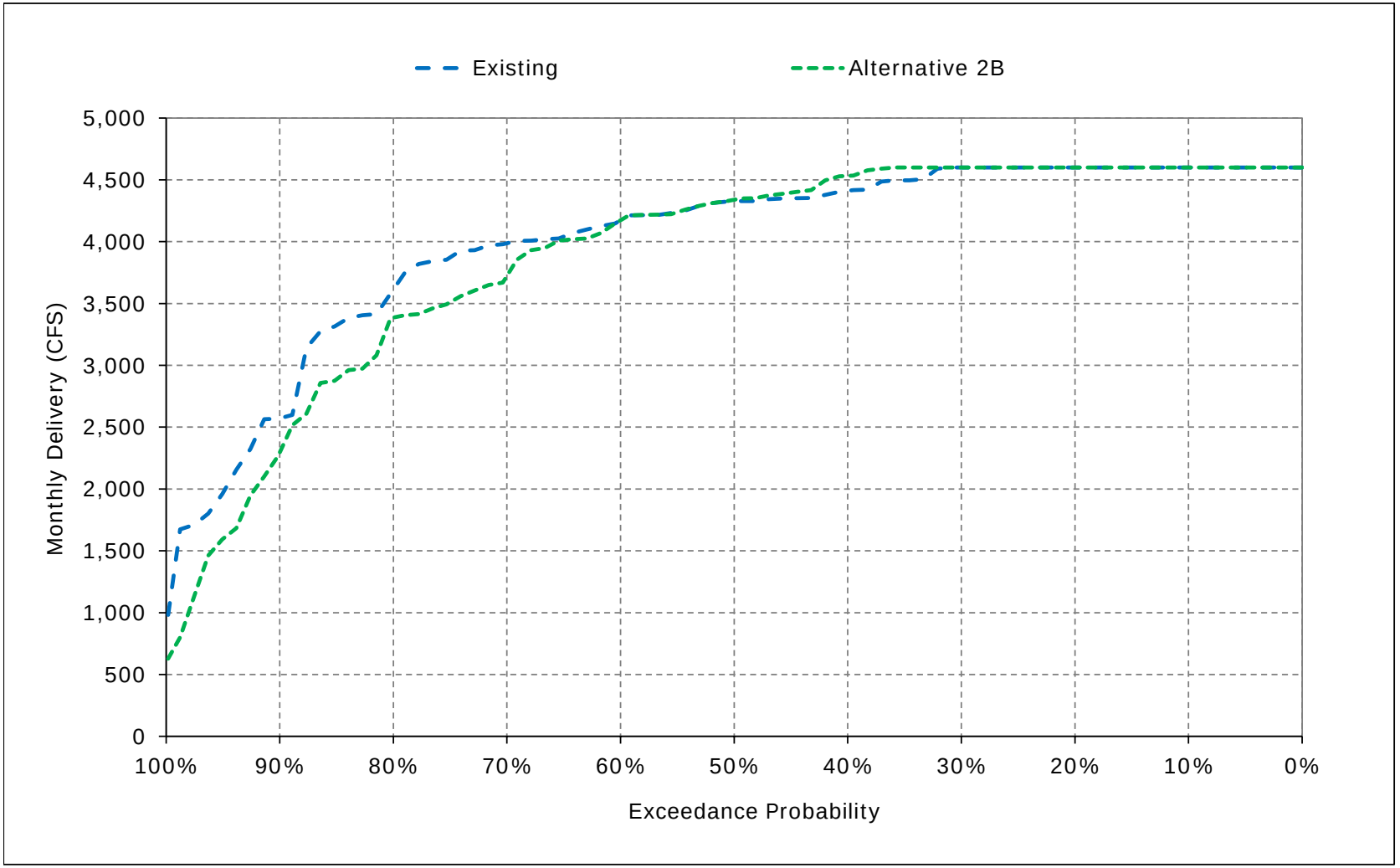


Figure 7-10. Jones PP Exports, January

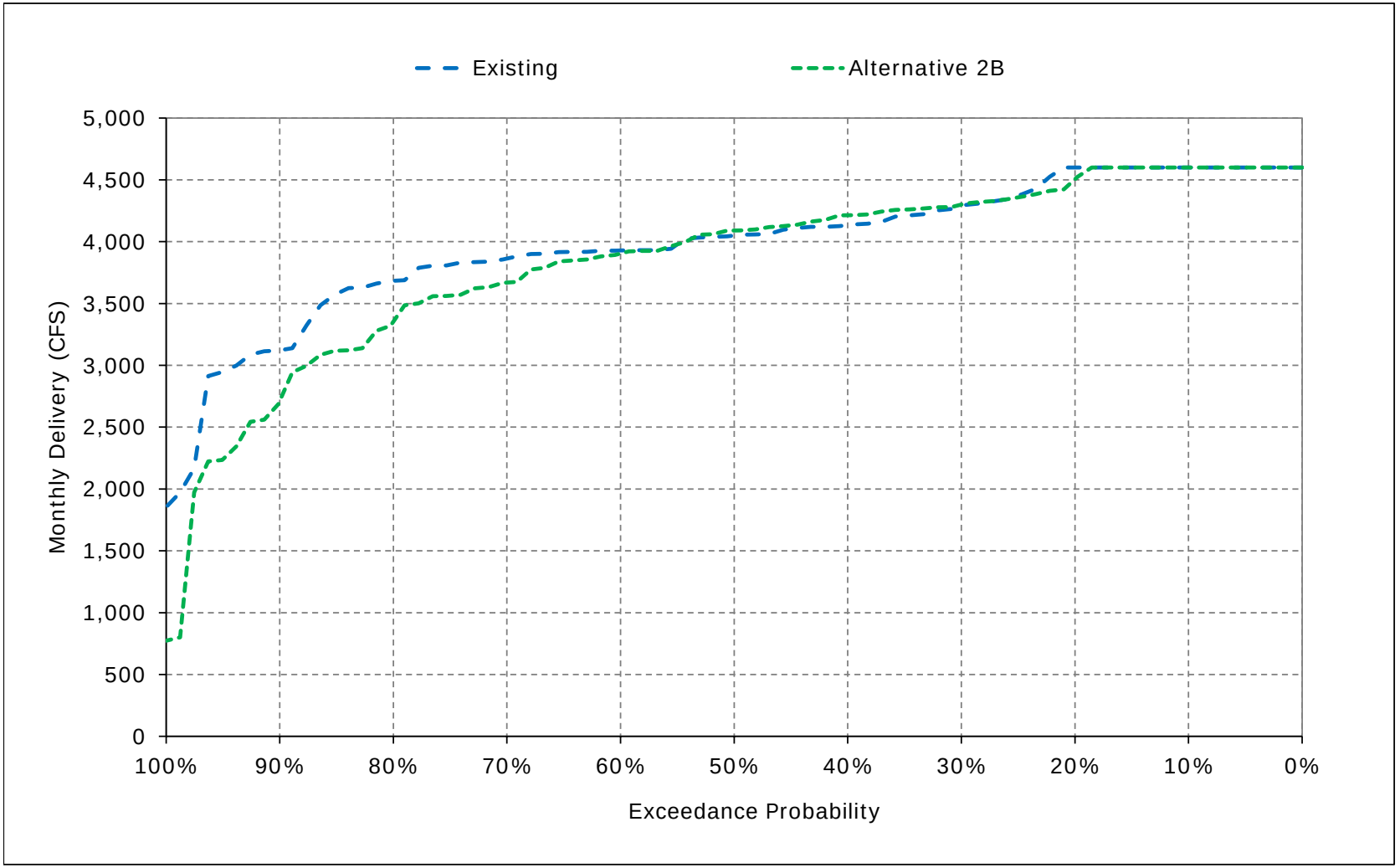


Figure 7-11. Jones PP Exports, February

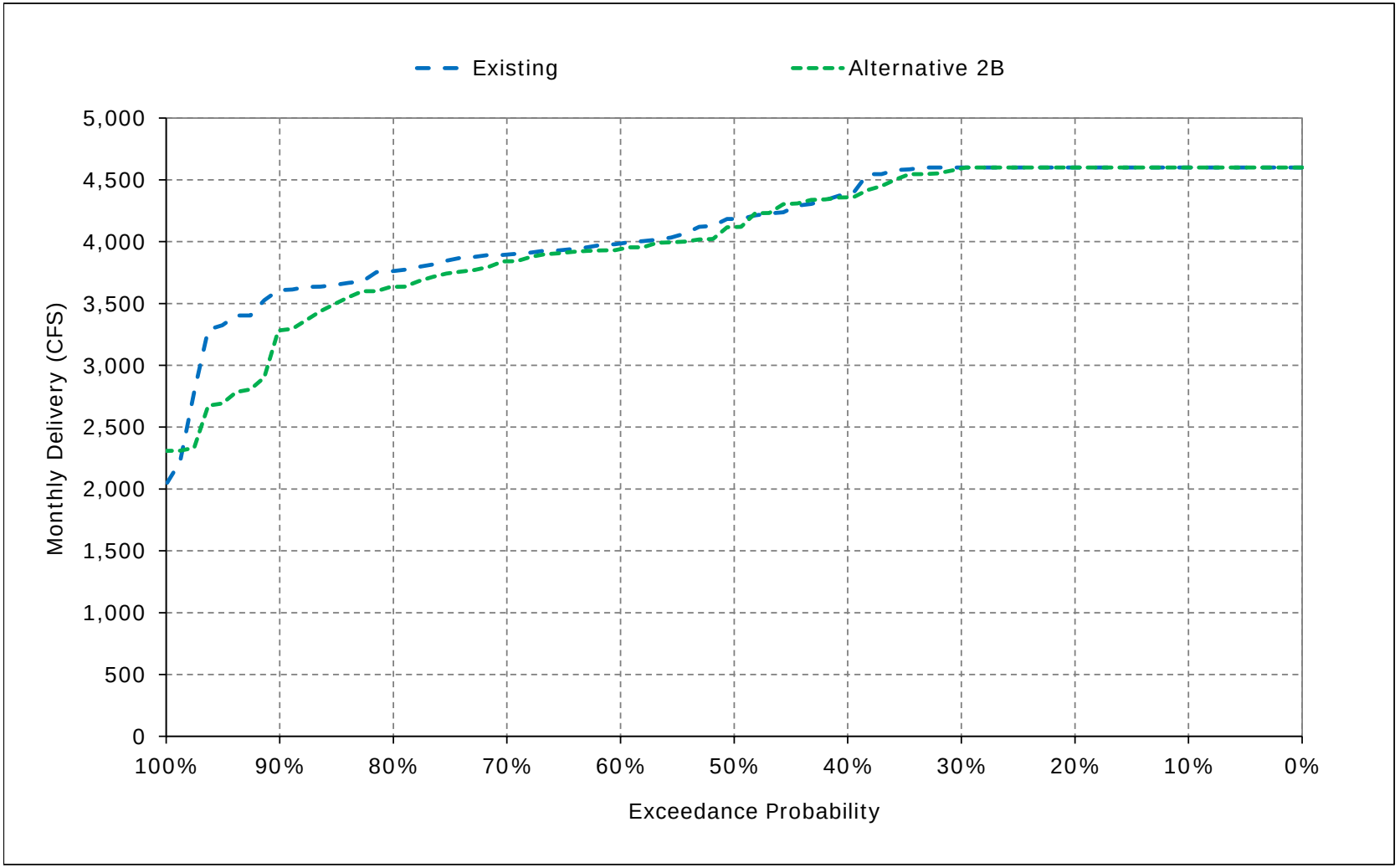


Figure 7-12. Jones PP Exports, March

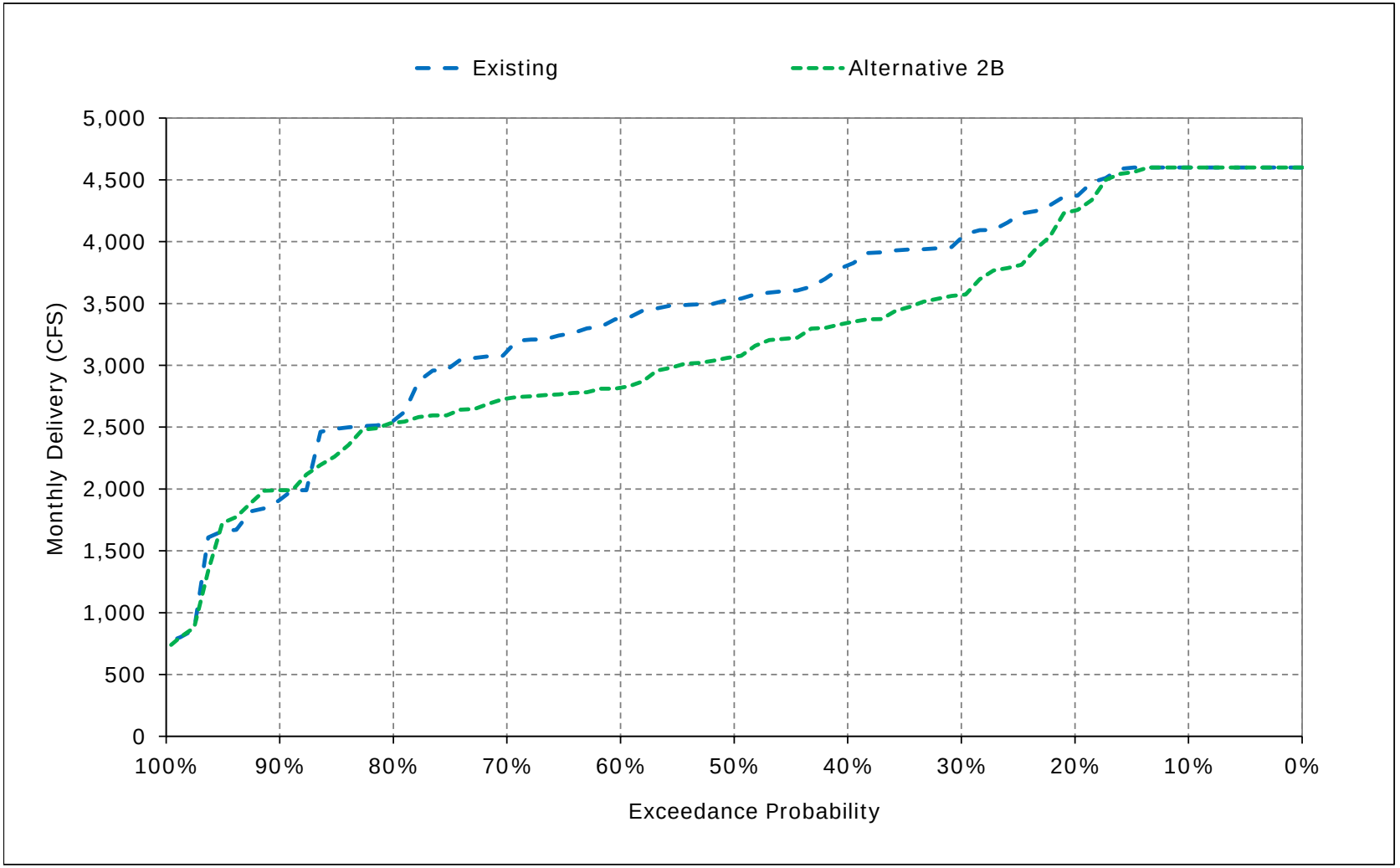


Figure 7-13. Jones PP Exports, April

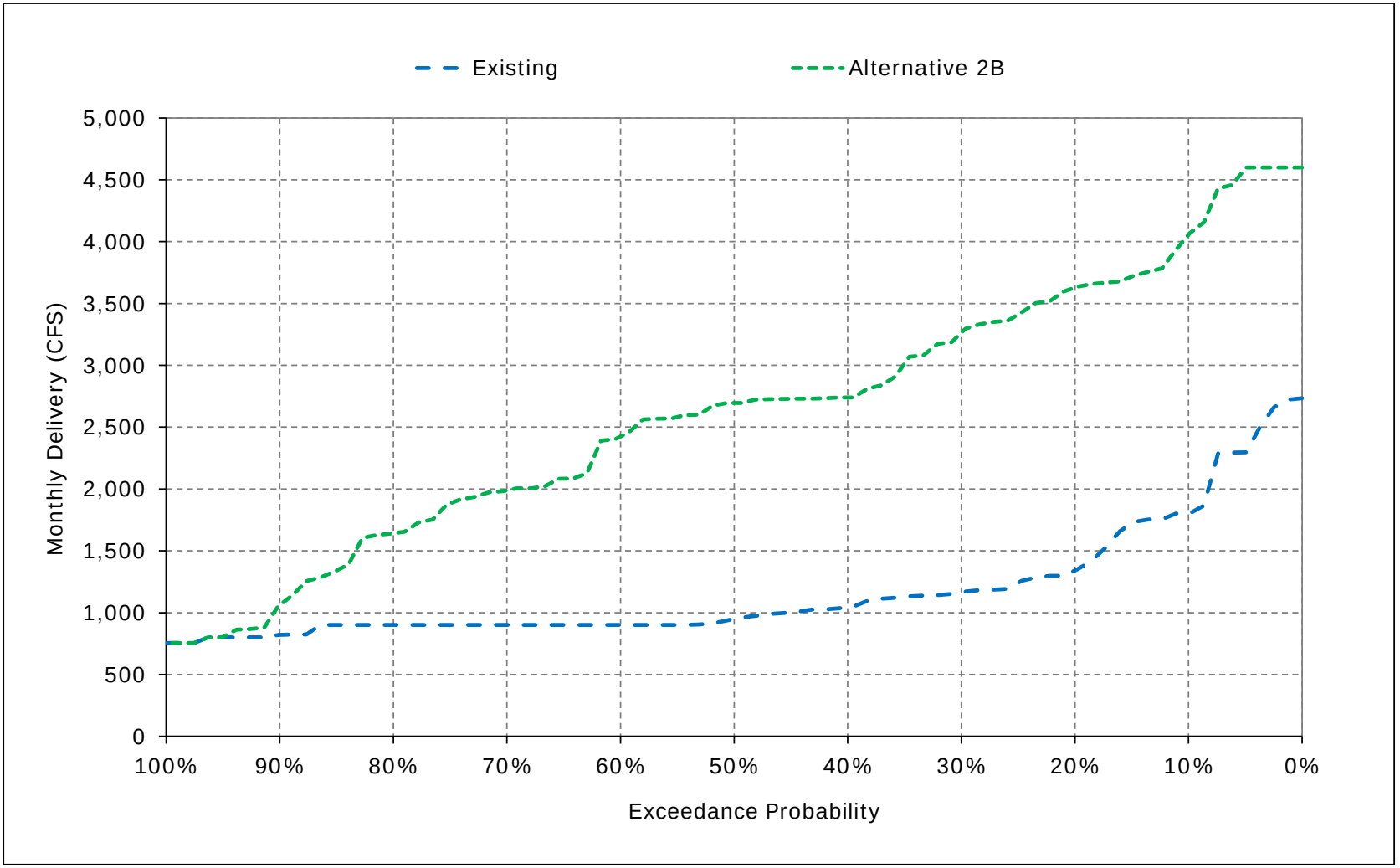


Figure 7-14. Jones PP Exports, May

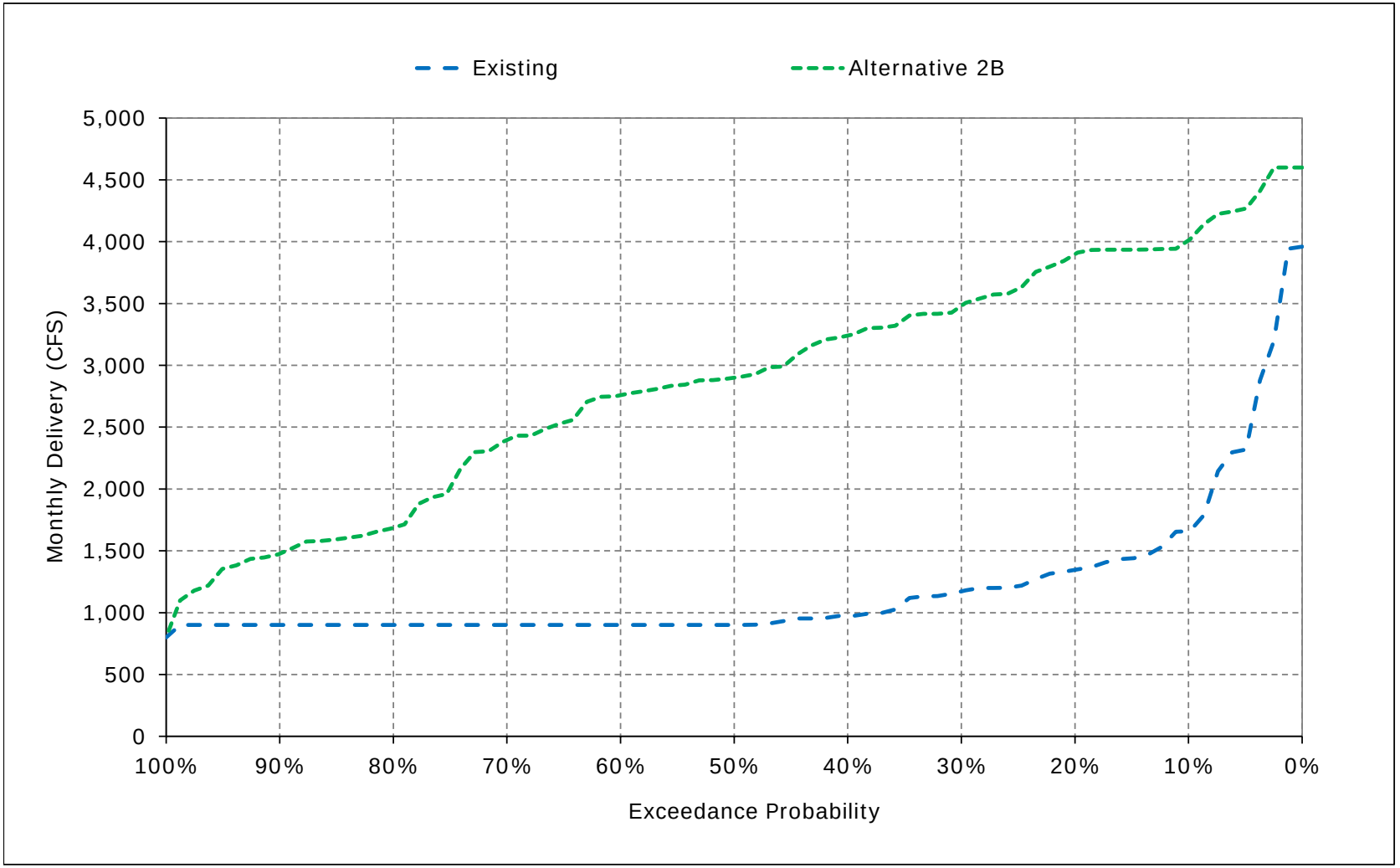


Figure 7-15. Jones PP Exports, June

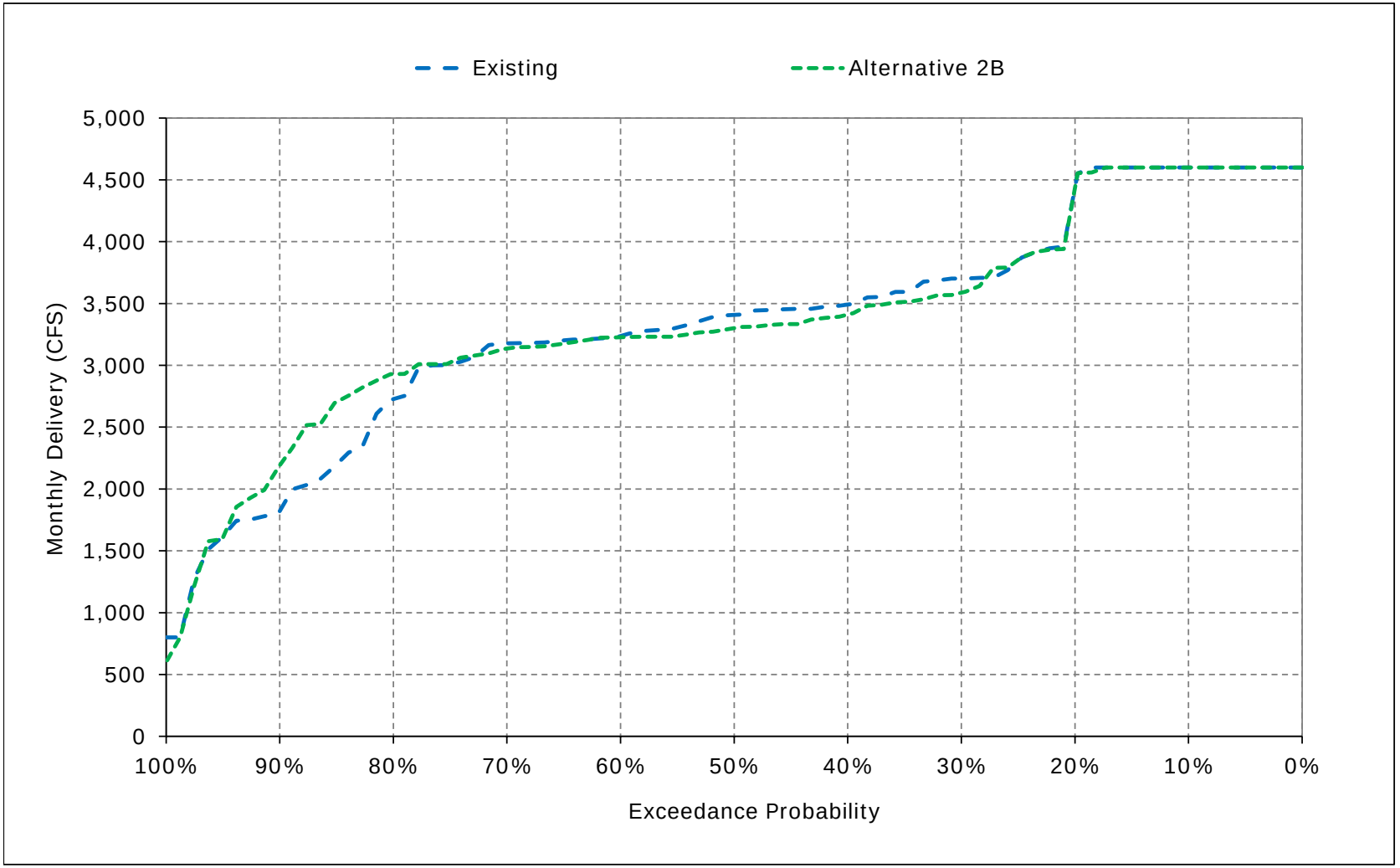


Figure 7-16. Jones PP Exports, July

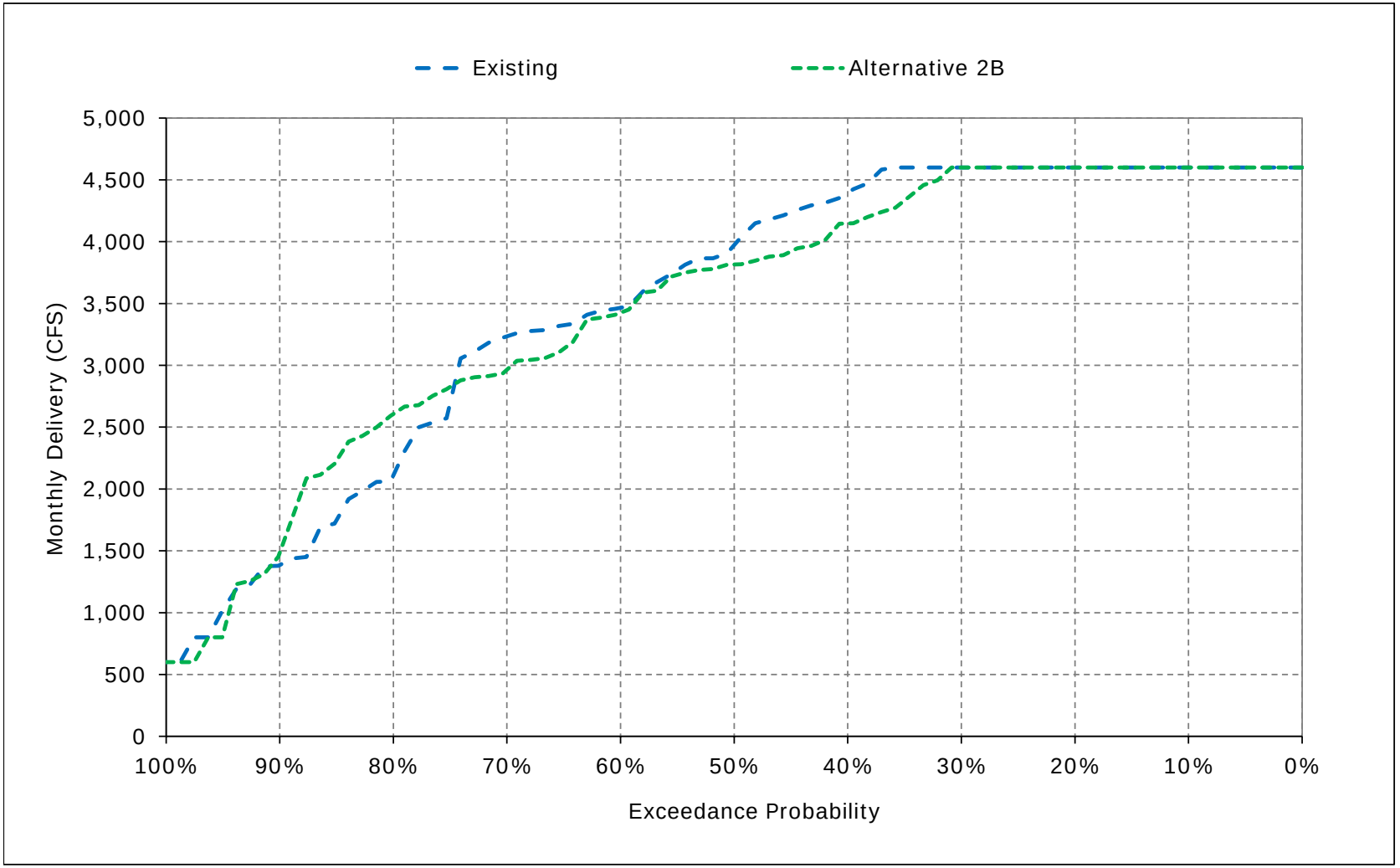


Figure 7-17. Jones PP Exports, August

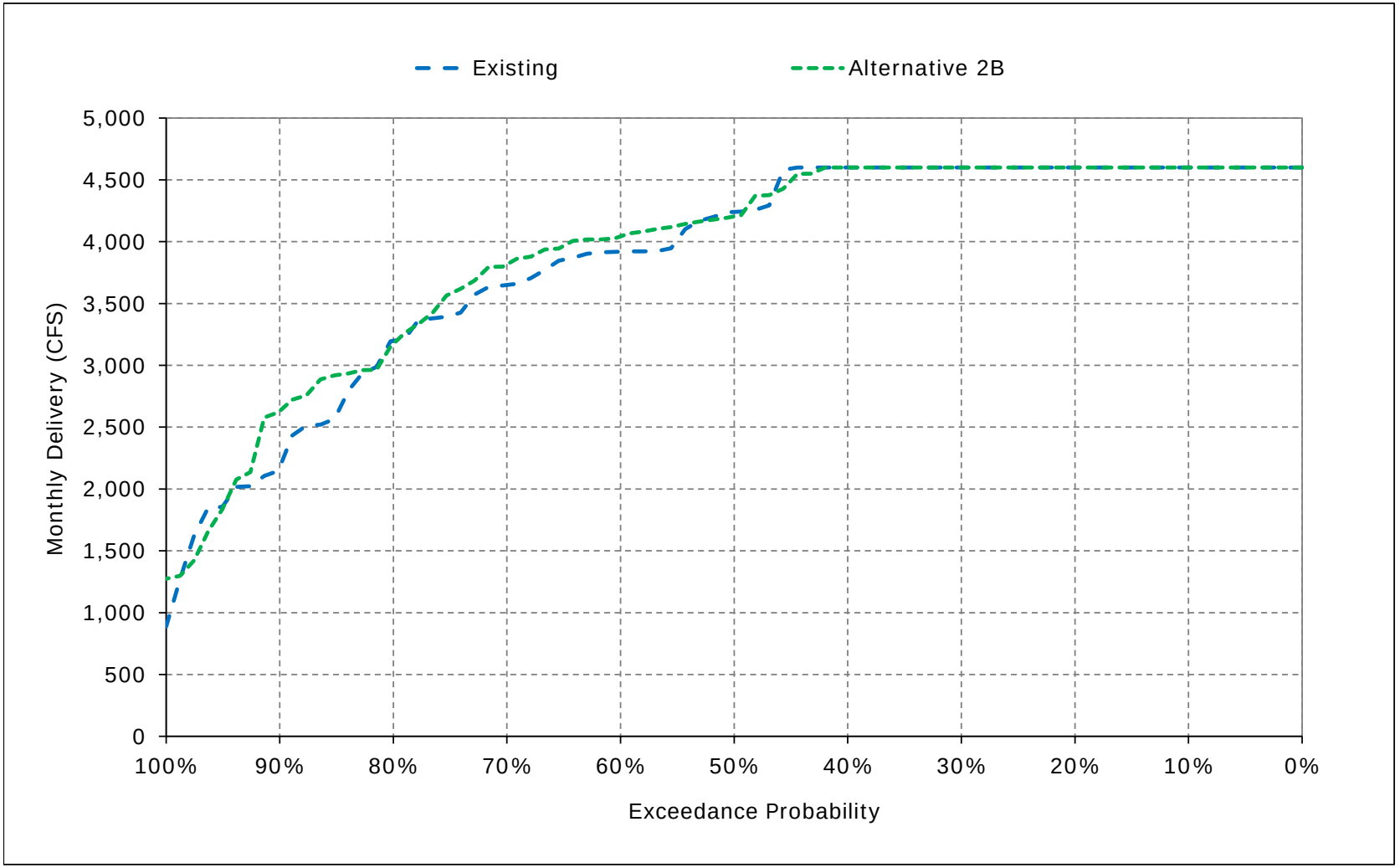
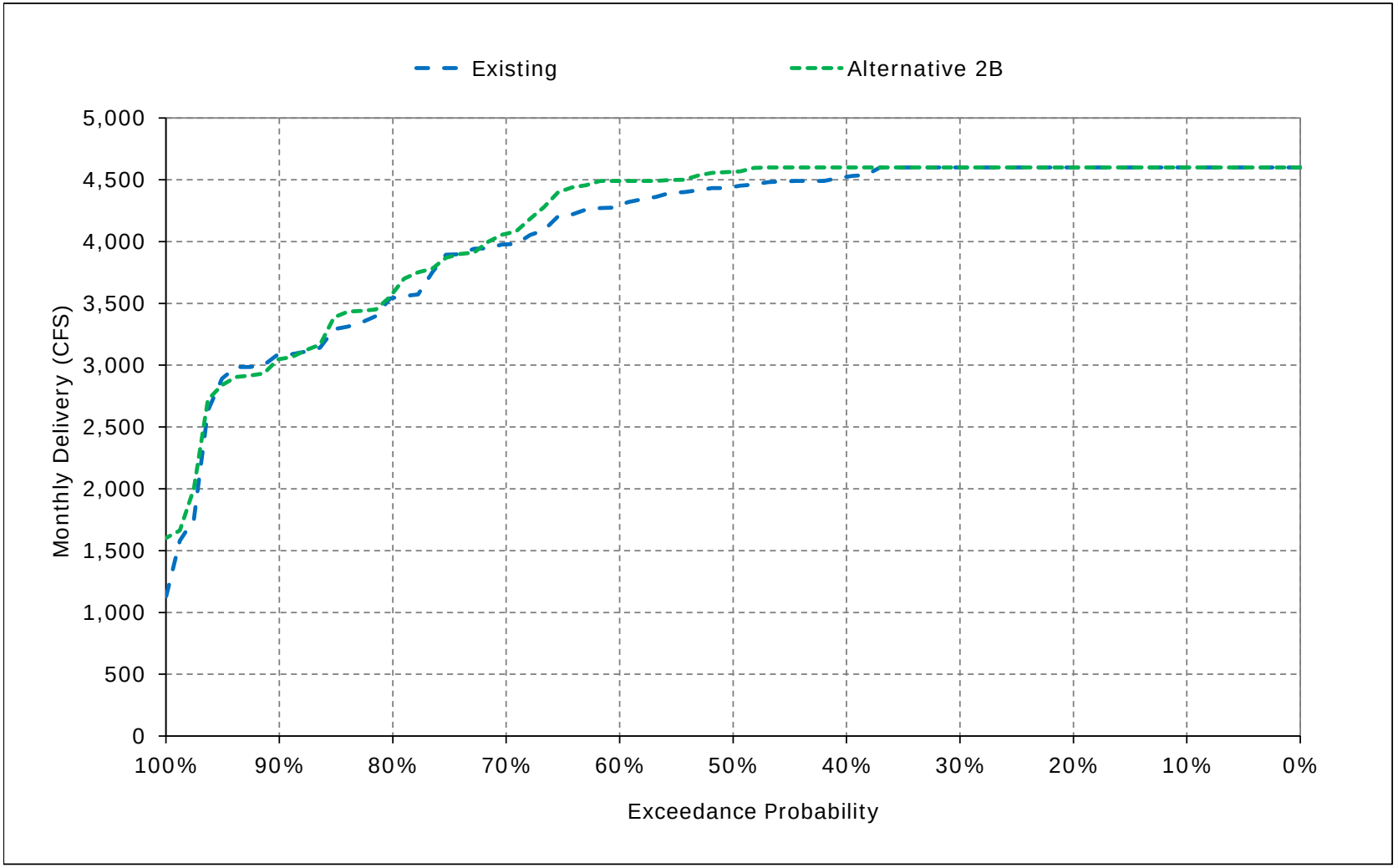


Figure 7-18. Jones PP Exports, September



# Appendix C – Modeling

## Attachment 3-4 – Water Supply Results (CalSim II)

***NOTE: Attachment 3-4 is a new attachment that has been added to the DEIR since initial publication, as part of the FEIR process. The additional attachment is not shown in underline for ease of reading.***

The following water supply results of the CalSim II model are included for the following alternatives:

- Existing Conditions
- Refined Alternative 2b

| Title | Model Parameter | Table Numbers | Figure Numbers |
|---|---|---|---|
| CalSim II Water Supply Summary Report | NA | 1-1 to 1-2 | 1-1 to 1-9 |
| Total Delta Exports | TOTAL_EXP | | 2-1 |

Report formats

- Tables comparing water supply of two scenarios (water supply by region and type, and water supply by type)
- Annual exceedance charts including all scenarios

Table 1-1. CALSIM II Water Summary Report, by Region and Type, Long-Term Average and Dry and Critical Year Averages

| | | | | Alternative 2B | Existing | Alternative 2B minus Existing |
|---|---|---|---|---|---|---|
| **Water Supply Reliability** | | | | | | |
| Sacramento River Hydrologic Region | | | | | | |
| CVP Settlement | Contract Delivery (annual average) | (TAF/year) | Long Term | 1,599 | 1,610 | -10 |
| | | | Dry and Critical | 1,575 | 1,585 | -10 |
| CVP Refuge Level 2 | Contract Delivery (annual average) | (TAF/year) | Long Term | 164 | 159 | 5 |
| | | | Dry and Critical | 147 | 140 | 7 |
| CVP M&I | Contract Delivery (annual average) | (TAF/year) | Long Term | 231 | 225 | 6 |
| | | | Dry and Critical | 210 | 199 | 11 |
| CVP Ag | Contract Delivery (annual average - does not include Settlement | (TAF/year) | Long Term | 299 | 275 | 25 |
| | | | Dry and Critical | 227 | 181 | 46 |
| SWP FRSA | Contract Delivery (annual average) | (TAF/year) | Long Term | 952 | 952 | 0 |
| | | | Dry and Critical | 908 | 908 | 0 |
| SWP M&I | Contract Delivery (annual average) | (TAF/year) | Long Term | 32 | 30 | 2 |
| | | | Dry and Critical | 25 | 20 | 5 |
| San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users) | | | | | | |
| CVP Exchange | Contract Delivery (annual average) | (TAF/year) | Long Term | 852 | 852 | 0 |
| | | | Dry and Critical | 814 | 814 | 0 |
| CVP Refuge Level 2 | Contract Delivery (annual average) | (TAF/year) | Long Term | 261 | 261 | 0 |
| | | | Dry and Critical | 248 | 249 | -1 |
| CVP M&I | Contract Delivery (annual average) | (TAF/year) | Long Term | 18 | 17 | 1 |
| | | | Dry and Critical | 15 | 15 | 0 |
| CVP Ag | Contract Delivery (annual average; does not include Exchange | (TAF/year) | Long Term | 410 | 352 | 58 |
| | | | Dry and Critical | 251 | 226 | 24 |
| SWP Ag | Contract Delivery (including Article 21) (annual average) | (TAF/year) | Long Term | 3 | 3 | 0 |
| | | | Dry and Critical | 2 | 2 | 0 |
| San Francisco Bay Hydrologic Region | | | | | | |
| CVP M&I | Contract Delivery (annual average) | (TAF/year) | Long Term | 264 | 259 | 5 |
| | | | Dry and Critical | 284 | 281 | 3 |
| CVP Ag | Contract Delivery (annual average) | (TAF/year) | Long Term | 51 | 44 | 7 |
| | | | Dry and Critical | 31 | 28 | 3 |
| SWP M&I | Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average) | (TAF/year) | Long Term | 206 | 202 | 3 |
| | | | Dry and Critical | 146 | 125 | 21 |
| Central Coast Hydrologic Region | | | | | | |
| SWP M&I | Contract Delivery (annual average) | (TAF/year) | Long Term | 40 | 40 | 0 |
| | | | Dry and Critical | 25 | 22 | 2 |
| Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users) | | | | | | |
| CVP Refuge Level 2 | Contract Delivery (annual average) | (TAF/year) | Long Term | 12 | 12 | 0 |
| | | | Dry and Critical | 11 | 11 | 0 |
| CVP Ag | Contract Delivery (annual average - includes Cross Valley Canal) | (TAF/year) | Long Term | 834 | 728 | 106 |
| | | | Dry and Critical | 526 | 474 | 51 |
| SWP M&I | Contract Delivery (annual average) | (TAF/year) | Long Term | 77 | 77 | -1 |
| | | | Dry and Critical | 48 | 42 | 6 |
| SWP Ag | Contract Delivery (including Article 21) (annual average) | (TAF/year) | Long Term | 574 | 585 | -11 |
| | | | Dry and Critical | 317 | 310 | 6 |
| South Lahontan Hydrologic Region | | | | | | |
| SWP M&I | Contract Delivery (including Article 21) (annual average) | (TAF/year) | Long Term | 259 | 260 | -1 |
| | | | Dry and Critical | 173 | 155 | 18 |
| South Coast Hydrologic Region | | | | | | |
| SWP M&I | Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average) | (TAF/year) | Long Term | 1,274 | 1,242 | 32 |
| | | | Dry and Critical | 912 | 763 | 148 |
| SWP Ag | Contract Delivery (including Article 21) (annual average) | (TAF/year) | Long Term | 7 | 7 | 0 |
| | | | Dry and Critical | 5 | 4 | 1 |
| Total For All Regions | | | | | | |
| Total Supplies | Contract Delivery (CVP, SWP and other) (annual average) | (TAF/year) | Long Term | 8,419 | 8,193 | 226 |
| | | | Dry and Critical | 6,899 | 6,556 | 342 |

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921

Table 1-2. CALSIM II Water Supply Summary Report, by Type, Long-Term Average and Dry and Critical Year Averages

| | | | | | Alternative 2B | Existing | Alternative 2B minus Existing |
|---|---|---|---|---|---|---|---|
| Water Supply Reliability | | | | | | | |
| North of Delta | | | | | | | |
| CVP Ag | Contract Delivery (annual average; does not include Exchange | (TAF/year) | Long Term | | 299 | 275 | 25 |
| | | | Dry and Critical | | 227 | 181 | 46 |
| CVP M&I | Contract Delivery (annual average) | (TAF/year) | Long Term | | 383 | 376 | 6 |
| | | | Dry and Critical | | 397 | 386 | 11 |
| SWP Ag | Contract Delivery (including Article 21) (annual average) | (TAF/year) | Long Term | | 0 | 0 | 0 |
| | | | Dry and Critical | | 0 | 0 | 0 |
| SWP M&I | Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average) | (TAF/year) | Long Term | | 103 | 101 | 2 |
| | | | Dry and Critical | | 73 | 68 | 5 |
| Total CVP North of Delta | | | | | | | |
| Total CVP Ag and M&I NOD | Contract Delivery (CVP) (annual average) | (TAF/year) | Long Term | | 682 | 651 | 31 |
| | | | Dry and Critical | | 624 | 567 | 57 |
| Total SWP North of Delta | | | | | | | |
| Total SWP Ag and M&I NOD | Contract Delivery (SWP) (annual average) | (TAF/year) | Long Term | | 103 | 101 | 2 |
| | | | Dry and Critical | | 73 | 68 | 5 |
| Total North of Delta | | | | | | | |
| Total North of Delta Ag and M&I Deliveries | Contract Delivery (CVP, SWP and other) (annual average) | (TAF/year) | Long Term | | 785 | 752 | 33 |
| | | | Dry and Critical | | 697 | 635 | 62 |
| South of Delta | | | | | | | |
| CVP Ag | Contract Delivery (annual average; does not include Exchange | (TAF/year) | Long Term | | 1,295 | 1,124 | 171 |
| | | | Dry and Critical | | 808 | 729 | 79 |
| CVP M&I | Contract Delivery (annual average) | (TAF/year) | Long Term | | 130 | 124 | 6 |
| | | | Dry and Critical | | 112 | 109 | 3 |
| SWP Ag | Contract Delivery (including Article 21) (annual average) | (TAF/year) | Long Term | | 585 | 596 | -11 |
| | | | Dry and Critical | | 323 | 316 | 7 |
| SWP M&I | Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average) | (TAF/year) | Long Term | | 1,784 | 1,750 | 33 |
| | | | Dry and Critical | | 1,256 | 1,060 | 196 |
| Total CVP South of Delta | | | | | | | |
| Total CVP Ag and M&I SOD | Contract Delivery (CVP) (annual average) | (TAF/year) | Long Term | | 1,425 | 1,248 | 177 |
| | | | Dry and Critical | | 920 | 838 | 82 |
| Total SWP South of Delta | | | | | | | |
| Total SWP Ag and M&I SOD | Contract Delivery (SWP) (annual average) | (TAF/year) | Long Term | | 2,369 | 2,346 | 22 |
| | | | Dry and Critical | | 1,579 | 1,377 | 203 |
| Total South of Delta | | | | | | | |
| Total South of Delta Ag and M&I Deliveries | Contract Delivery (CVP, SWP and other) (annual average) | (TAF/year) | Long Term | | 3,794 | 3,594 | 200 |
| | | | Dry and Critical | | 2,499 | 2,215 | 285 |

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921

Figure 1-1. CVP North of Delta Agricultural Water Service Contract Deliveries, Annual (Mar-Feb)

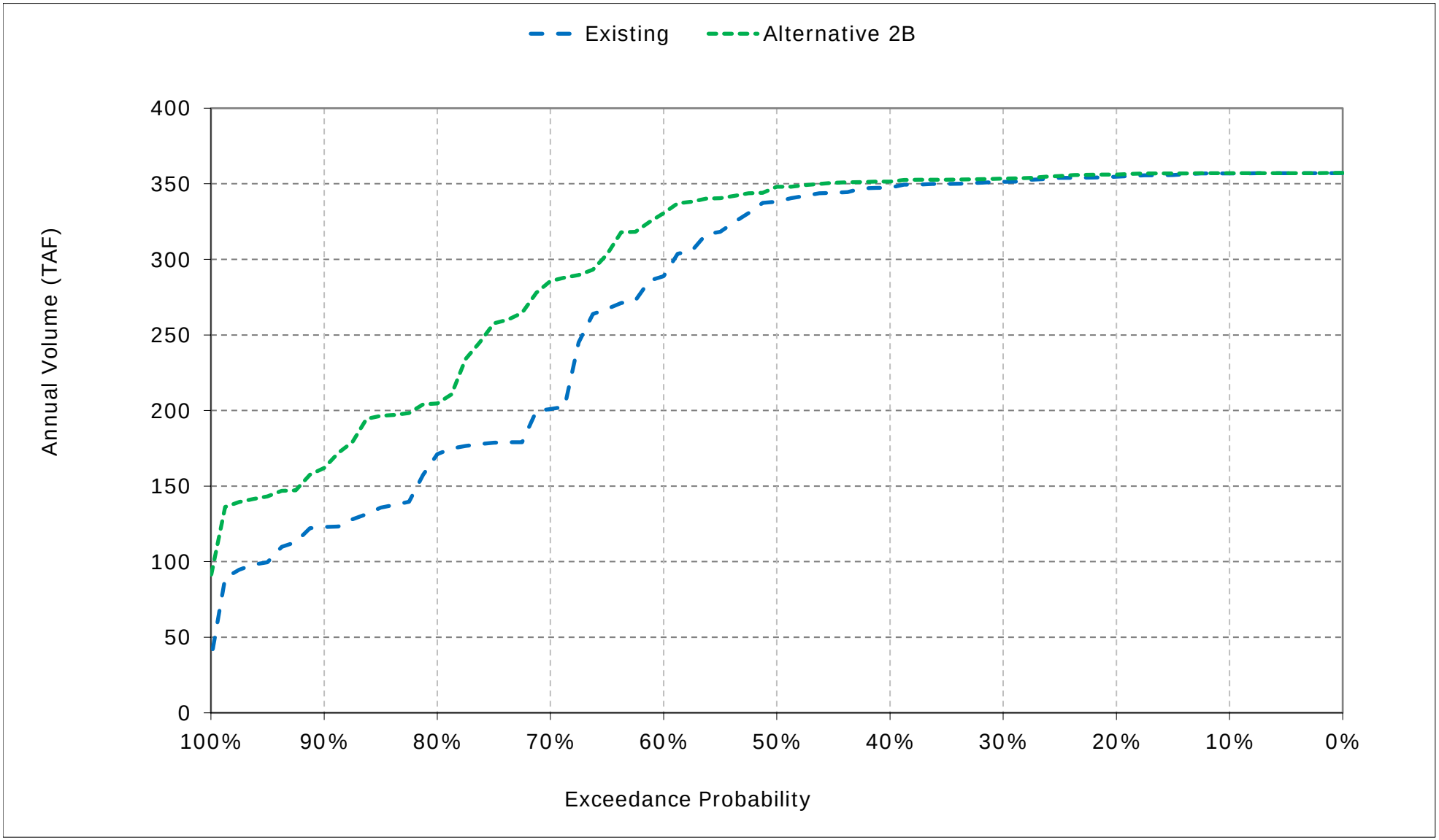


Figure 1-2. CVP South of Delta Agricultural Water Service Contract Deliveries, Annual (Mar-Feb)

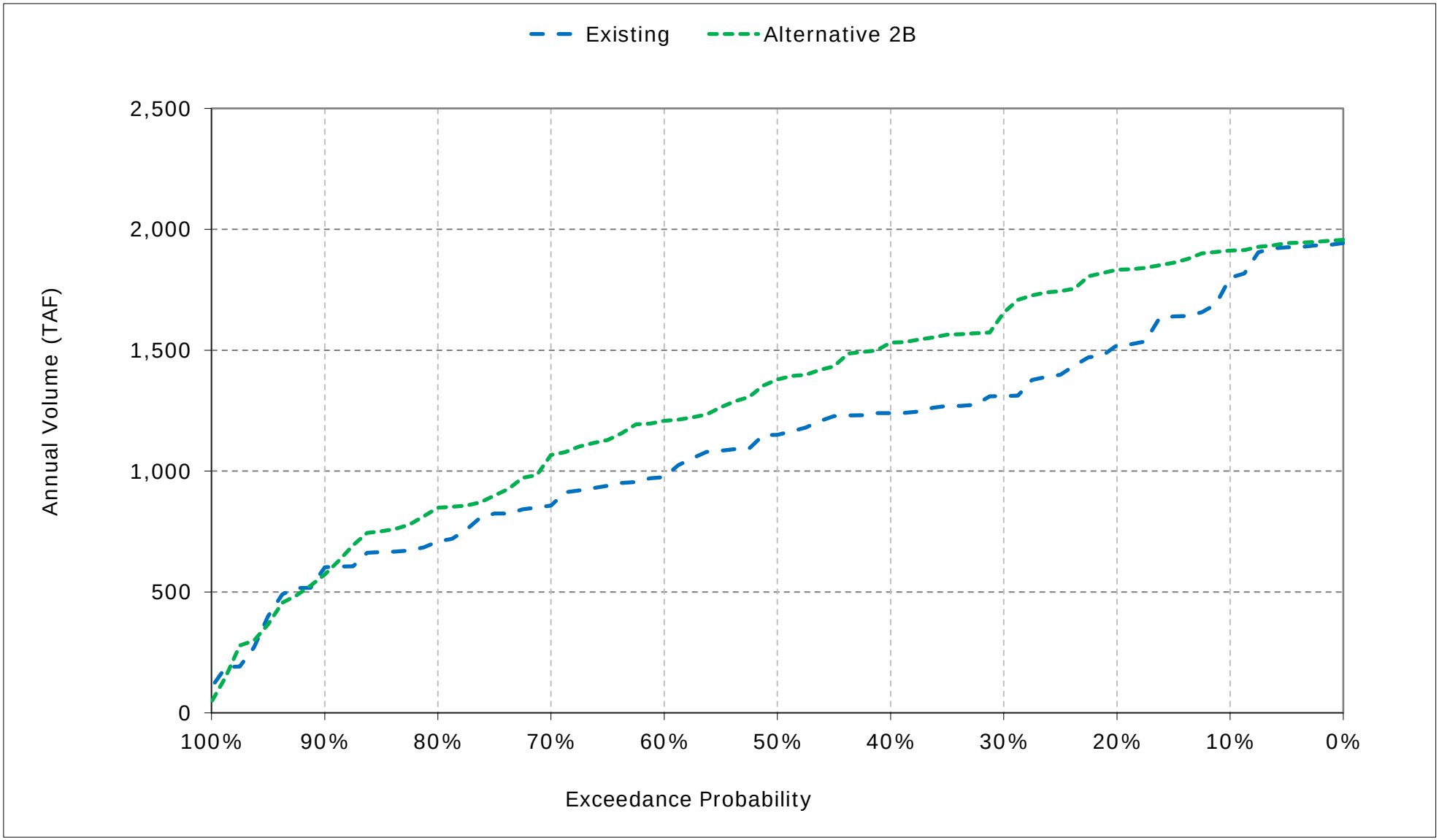


Figure 1-3. CVP North of Delta M&I Water Service Contract Deliveries, Annual (Mar-Feb)

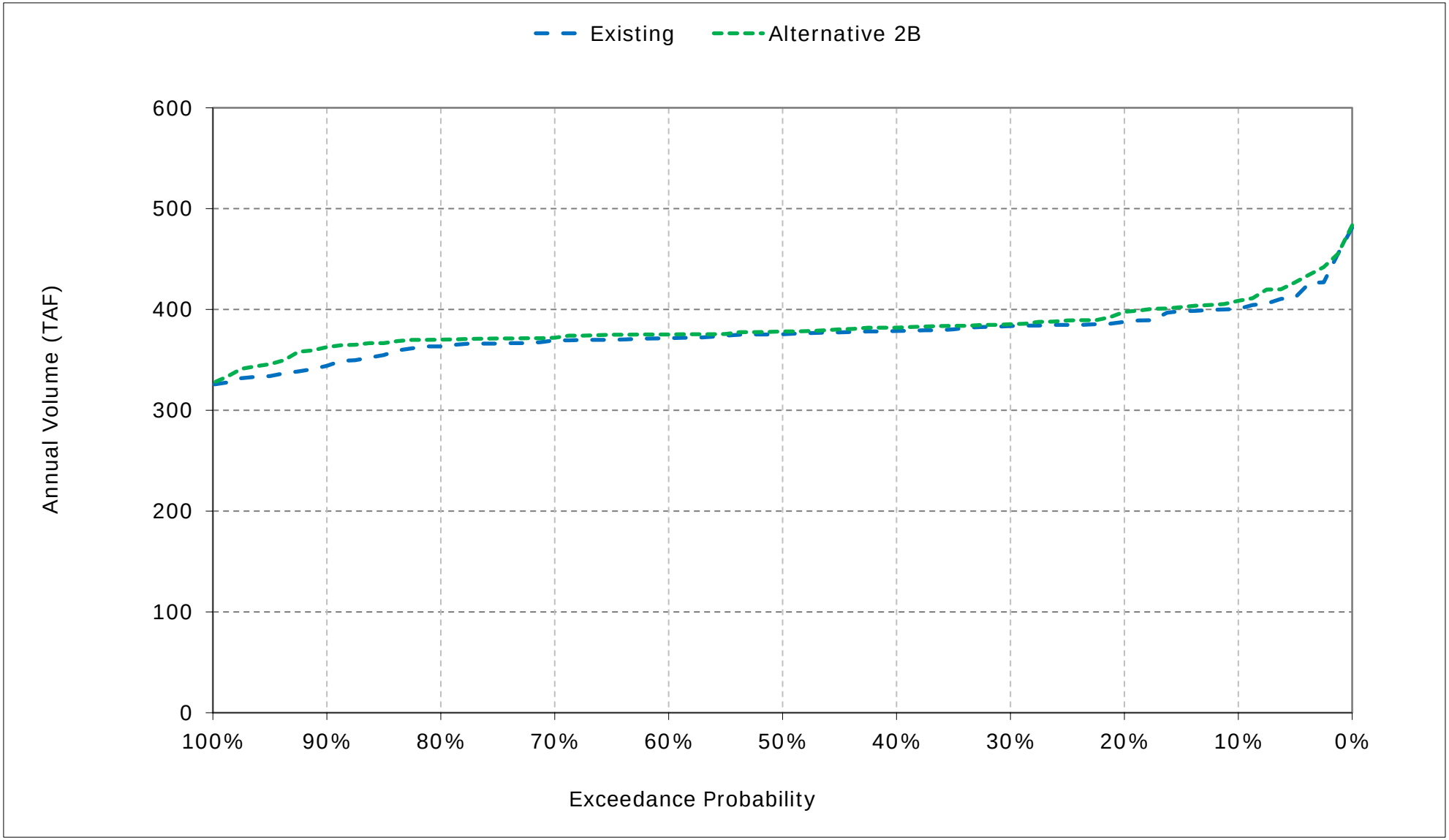


Figure 1-4. CVP South of Delta M&I Water Service Contract Deliveries, Annual (Mar-Feb)

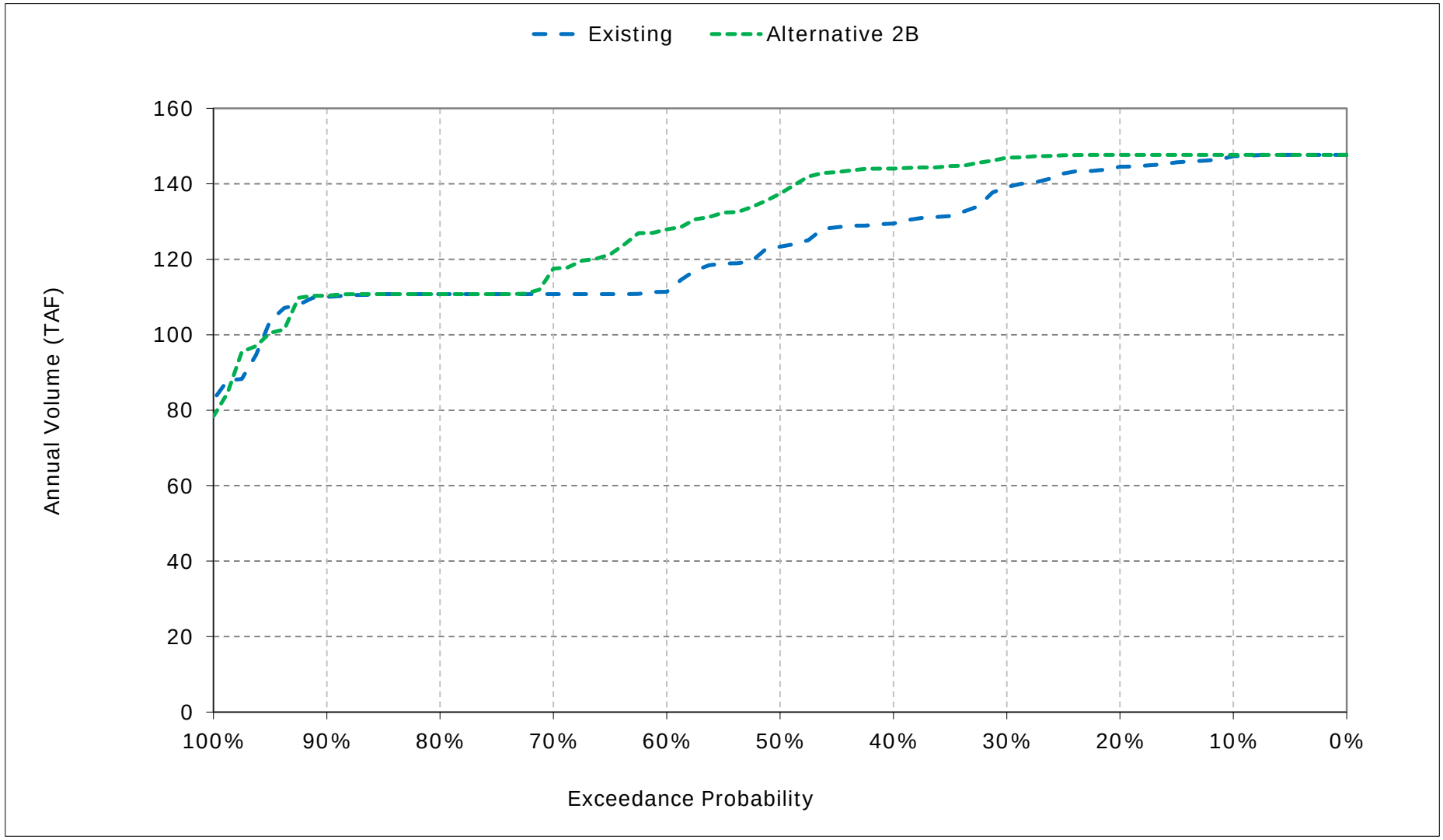


Figure 1-5. Total SWP Deliveries, Annual (Jan-Dec)

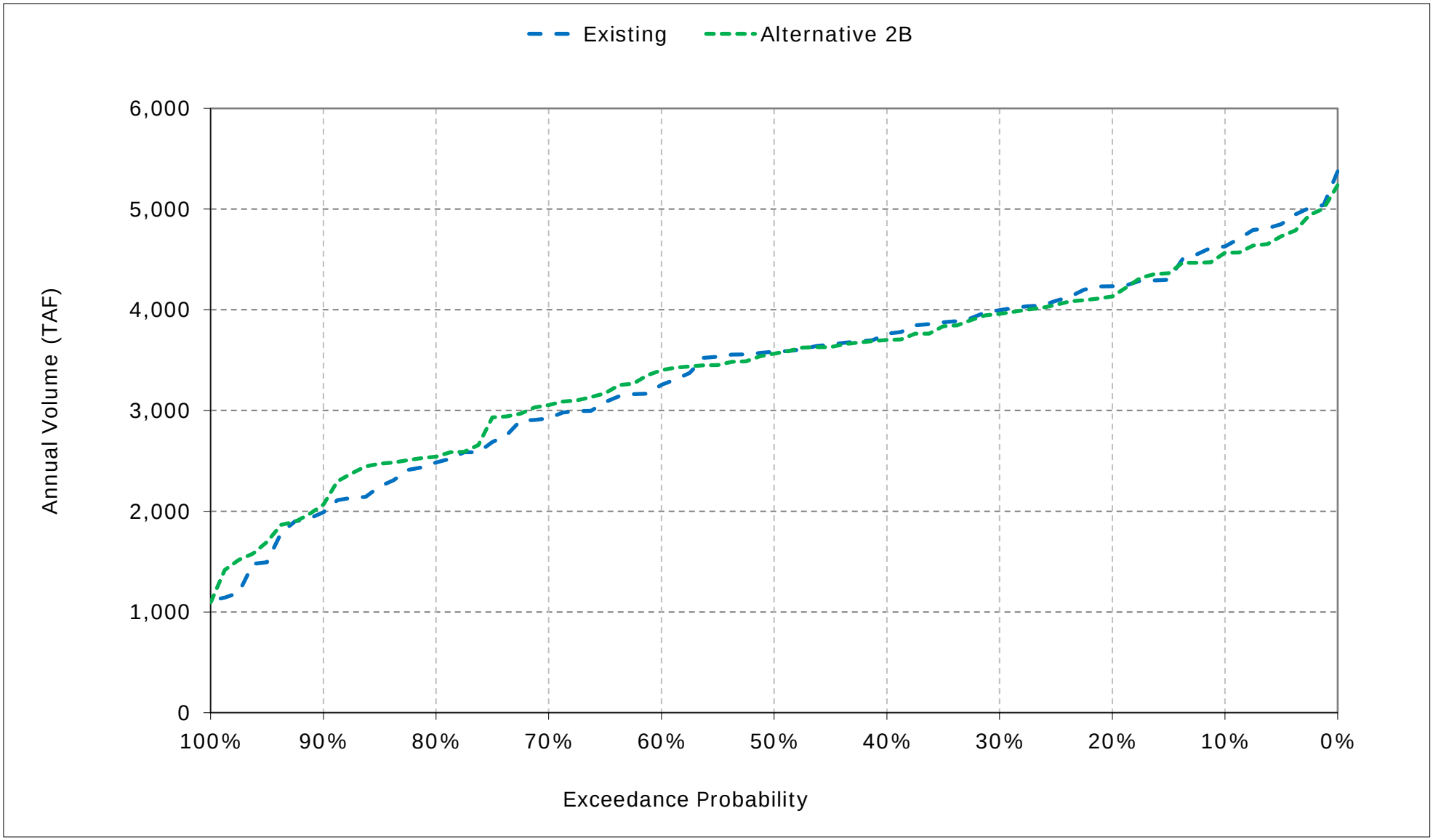


Figure 1-6. Total SWP South of Delta Deliveries including Article 21 and 56, Annual (Jan-Dec)

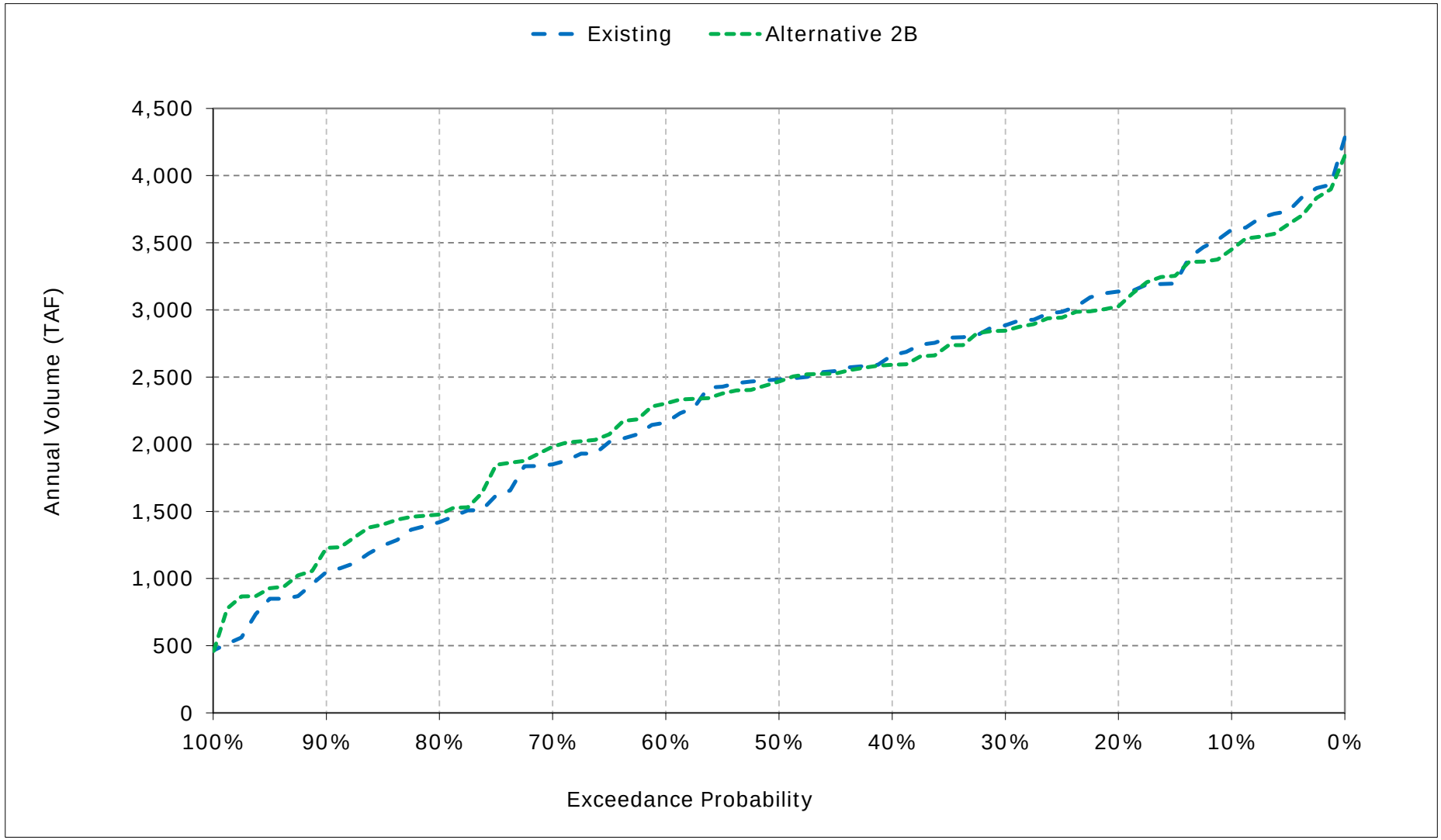


Figure 1-7. SWP Table A Deliveries with Article 56, Annual (Jan-Dec)

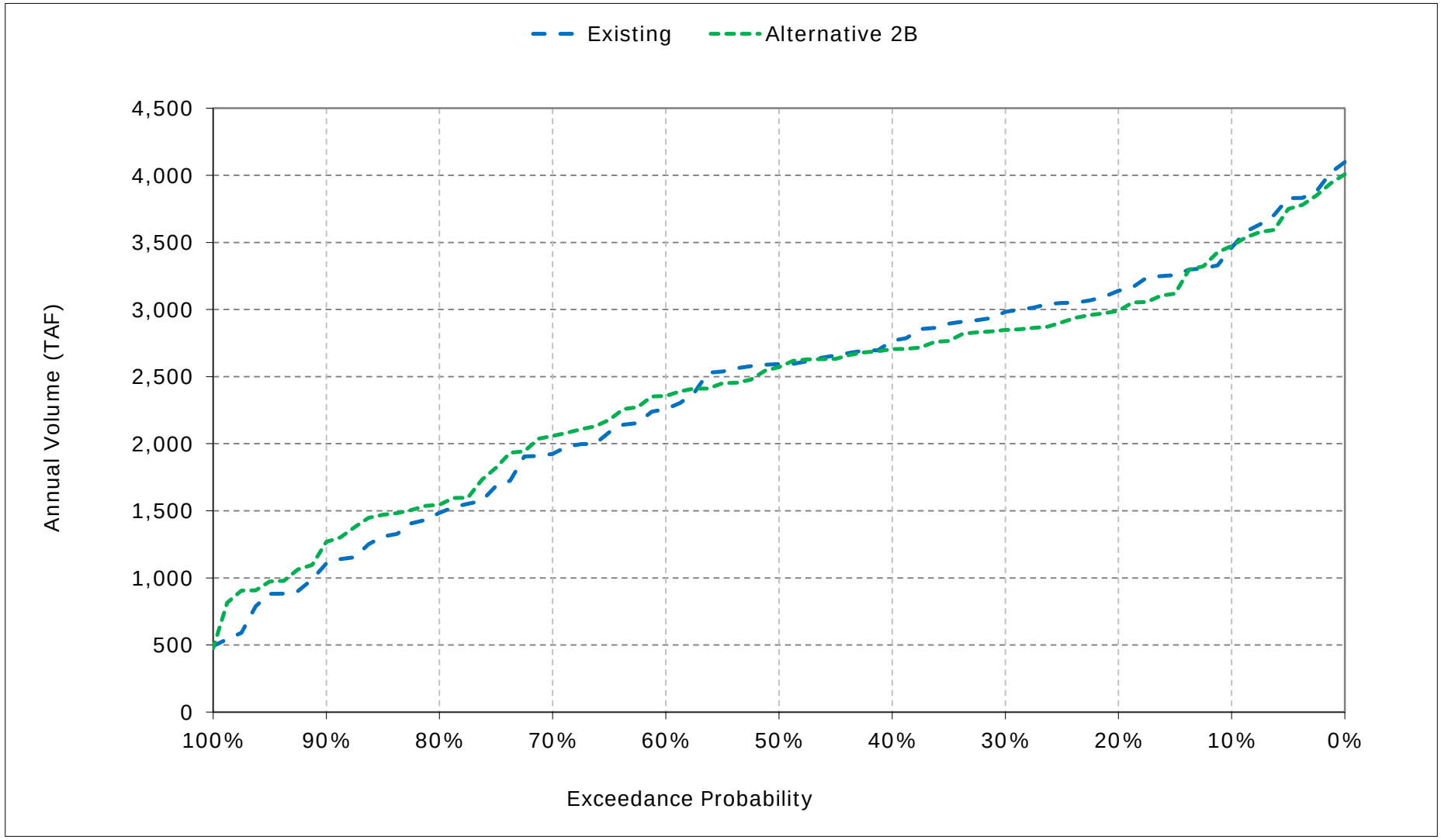


Figure 1-8. SWP South of Delta Table A Deliveries with Article 56, Annual (Jan-Dec)

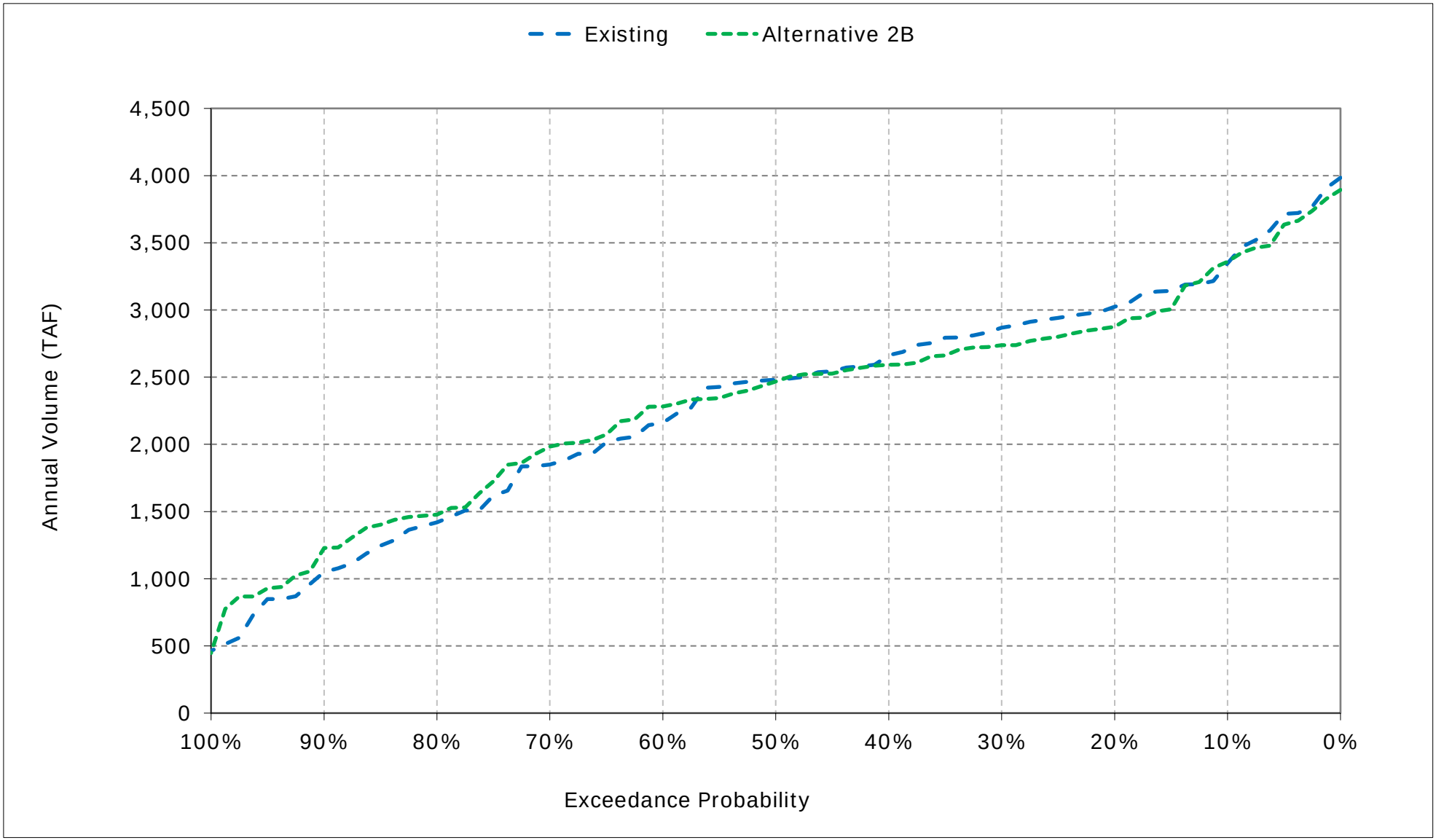


Figure 1-9. SWP Article 21 Deliveries, Annual (Jan-Dec)

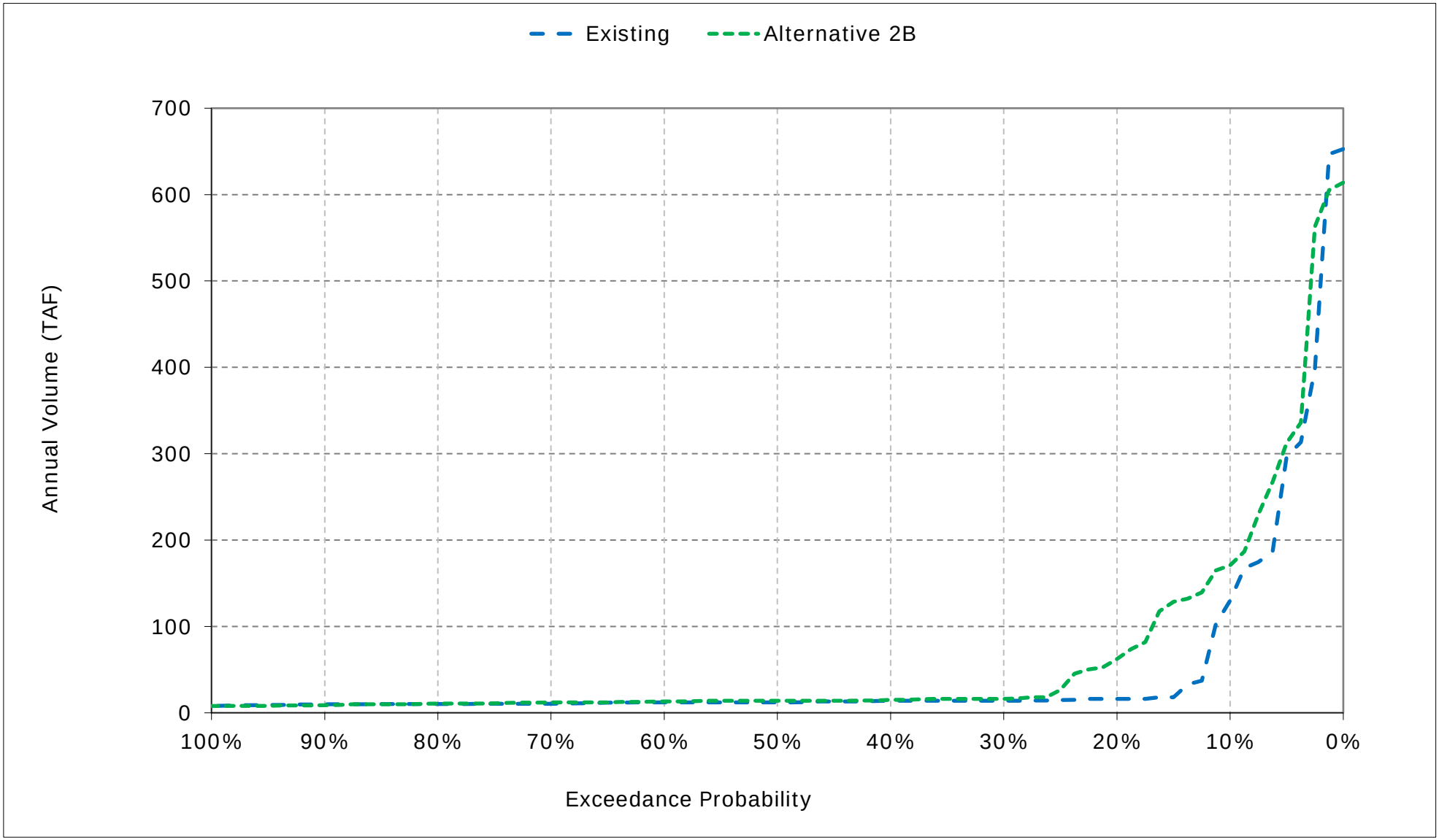
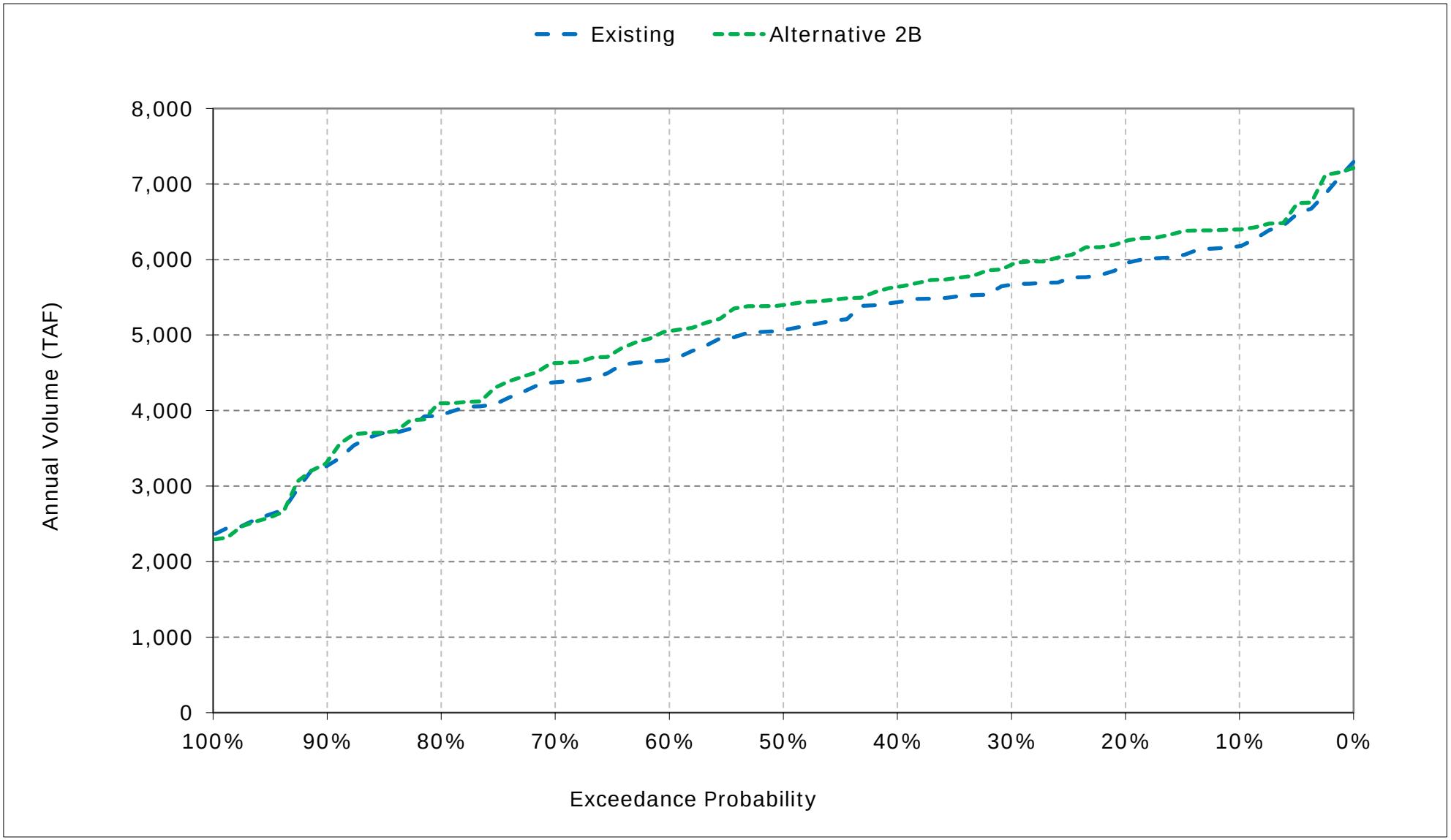


Figure 2-1. Total Delta Exports, Annual (Oct-Sep)



# Appendix C – Modeling

## Attachment 3-5 – X2 Position Results (CalSim II)

***NOTE: Attachment 3-5 is a new attachment that has been added to the DEIR since initial publication, as part of the FEIR process. The additional attachment is not shown in underline for ease of reading.***

The following results of the CalSim II model are included for Delta X2 conditions for the following alternatives:

- Existing Conditions
- Refined Alternative 2b

| Title | Model Parameter | Table Numbers | Figure Numbers |
|---|---|---|---|
| X2 | X2_PRV_MOD | 1-1 | 1-1 to 1-18 |

Report formats

- Monthly tables comparing two scenarios (exceedance values, long-term average, and average by water year type)
- Monthly pattern charts (long-term average and average by water year type) including all scenarios
- Monthly exceedance charts (all months) including all scenarios

# Table 1-1. X2 Position, Monthly Position

## Existing

| Statistic | Monthly Position (KM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 92.8 | 91.8 | 90.7 | 84.5 | 78.2 | 77.3 | 78.1 | 80.9 | 83.4 | 86.4 | 90.3 | 92.3 |
| 20% | 92.1 | 91.3 | 88.6 | 82.9 | 72.2 | 71.8 | 72.2 | 78.1 | 81.7 | 85.1 | 88.2 | 91.1 |
| 30% | 91.7 | 90.9 | 84.0 | 79.8 | 67.4 | 65.1 | 67.8 | 75.1 | 81.0 | 84.5 | 87.7 | 90.6 |
| 40% | 91.0 | 90.4 | 82.0 | 73.4 | 63.3 | 63.6 | 66.4 | 71.0 | 80.4 | 82.4 | 86.3 | 89.8 |
| 50% | 89.9 | 81.1 | 80.1 | 71.5 | 58.9 | 60.3 | 62.4 | 66.9 | 77.0 | 80.9 | 85.7 | 88.5 |
| 60% | 81.0 | 80.9 | 78.8 | 65.4 | 53.8 | 57.3 | 60.0 | 64.5 | 75.3 | 79.9 | 85.0 | 81.0 |
| 70% | 74.0 | 75.4 | 71.5 | 55.4 | 51.0 | 54.0 | 57.9 | 62.0 | 72.2 | 78.6 | 84.6 | 74.1 |
| 80% | 74.0 | 74.0 | 63.5 | 50.3 | 48.2 | 49.9 | 53.2 | 58.7 | 66.5 | 77.1 | 83.7 | 74.0 |
| 90% | 74.0 | 73.3 | 52.5 | 48.4 | 47.7 | 48.1 | 49.1 | 53.1 | 59.7 | 73.9 | 82.4 | 74.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 84.1 | 82.4 | 76.3 | 67.9 | 60.7 | 60.9 | 63.2 | 67.7 | 74.9 | 80.5 | 85.6 | 83.9 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 80.7 | 76.7 | 63.8 | 53.9 | 50.2 | 51.8 | 54.1 | 57.9 | 65.5 | 74.4 | 82.7 | 73.6 |
| Above Normal (15%) | 83.6 | 80.9 | 76.6 | 62.5 | 54.7 | 53.8 | 58.2 | 62.5 | 73.0 | 78.2 | 83.6 | 74.3 |
| Below Normal (17%) | 85.3 | 84.9 | 81.5 | 72.7 | 61.0 | 63.5 | 63.9 | 68.5 | 76.9 | 81.6 | 85.4 | 89.1 |
| Dry (22%) | 85.3 | 85.4 | 82.7 | 78.1 | 69.3 | 67.2 | 69.8 | 74.8 | 80.8 | 84.9 | 87.9 | 90.8 |
| Critical (15%) | 88.9 | 88.6 | 87.7 | 82.7 | 76.3 | 75.4 | 77.5 | 82.7 | 86.2 | 88.2 | 90.5 | 92.5 |

## Alternative 2B

| Statistic | Monthly Position (KM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 92.5 | 91.9 | 90.7 | 86.2 | 77.9 | 77.4 | 78.7 | 81.3 | 83.4 | 86.4 | 90.1 | 92.6 |
| 20% | 92.1 | 91.4 | 88.8 | 84.2 | 72.4 | 71.0 | 73.8 | 80.2 | 82.9 | 85.3 | 88.5 | 91.3 |
| 30% | 91.6 | 90.9 | 88.1 | 81.0 | 67.7 | 64.4 | 69.4 | 77.3 | 81.7 | 84.6 | 87.9 | 90.9 |
| 40% | 91.3 | 90.5 | 87.3 | 74.0 | 63.8 | 62.8 | 67.5 | 73.2 | 81.0 | 81.8 | 85.8 | 89.8 |
| 50% | 89.8 | 86.8 | 84.3 | 70.8 | 58.7 | 59.7 | 64.1 | 69.7 | 77.9 | 80.6 | 85.4 | 88.7 |
| 60% | 80.1 | 86.4 | 81.1 | 64.6 | 53.7 | 56.7 | 61.1 | 67.5 | 76.6 | 79.9 | 84.8 | 80.1 |
| 70% | 80.0 | 86.2 | 74.0 | 55.2 | 51.1 | 53.6 | 59.1 | 63.7 | 73.4 | 78.6 | 84.4 | 80.0 |
| 80% | 80.0 | 84.8 | 64.6 | 50.2 | 48.1 | 49.2 | 54.2 | 60.0 | 66.9 | 77.2 | 83.7 | 80.0 |
| 90% | 79.9 | 73.3 | 53.0 | 48.2 | 47.7 | 48.0 | 49.5 | 54.3 | 59.8 | 73.7 | 82.9 | 79.9 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 85.6 | 85.7 | 78.1 | 68.2 | 60.8 | 60.6 | 64.2 | 69.6 | 75.7 | 80.4 | 85.6 | 85.6 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 82.7 | 81.1 | 65.0 | 53.8 | 50.1 | 51.6 | 54.9 | 59.6 | 66.3 | 74.5 | 82.6 | 78.9 |
| Above Normal (15%) | 85.5 | 84.4 | 78.9 | 62.5 | 54.4 | 53.3 | 59.3 | 64.8 | 73.9 | 78.3 | 83.8 | 73.3 |
| Below Normal (17%) | 86.9 | 88.1 | 83.7 | 72.4 | 60.6 | 62.8 | 65.2 | 71.3 | 77.7 | 80.9 | 85.1 | 89.1 |
| Dry (22%) | 86.7 | 88.2 | 84.7 | 79.2 | 70.0 | 66.7 | 70.8 | 76.6 | 81.6 | 84.9 | 88.1 | 91.1 |
| Critical (15%) | 89.1 | 90.6 | 89.1 | 83.4 | 77.0 | 75.6 | 78.0 | 83.3 | 86.4 | 88.2 | 90.5 | 92.6 |

## Alternative 2B minus Existing

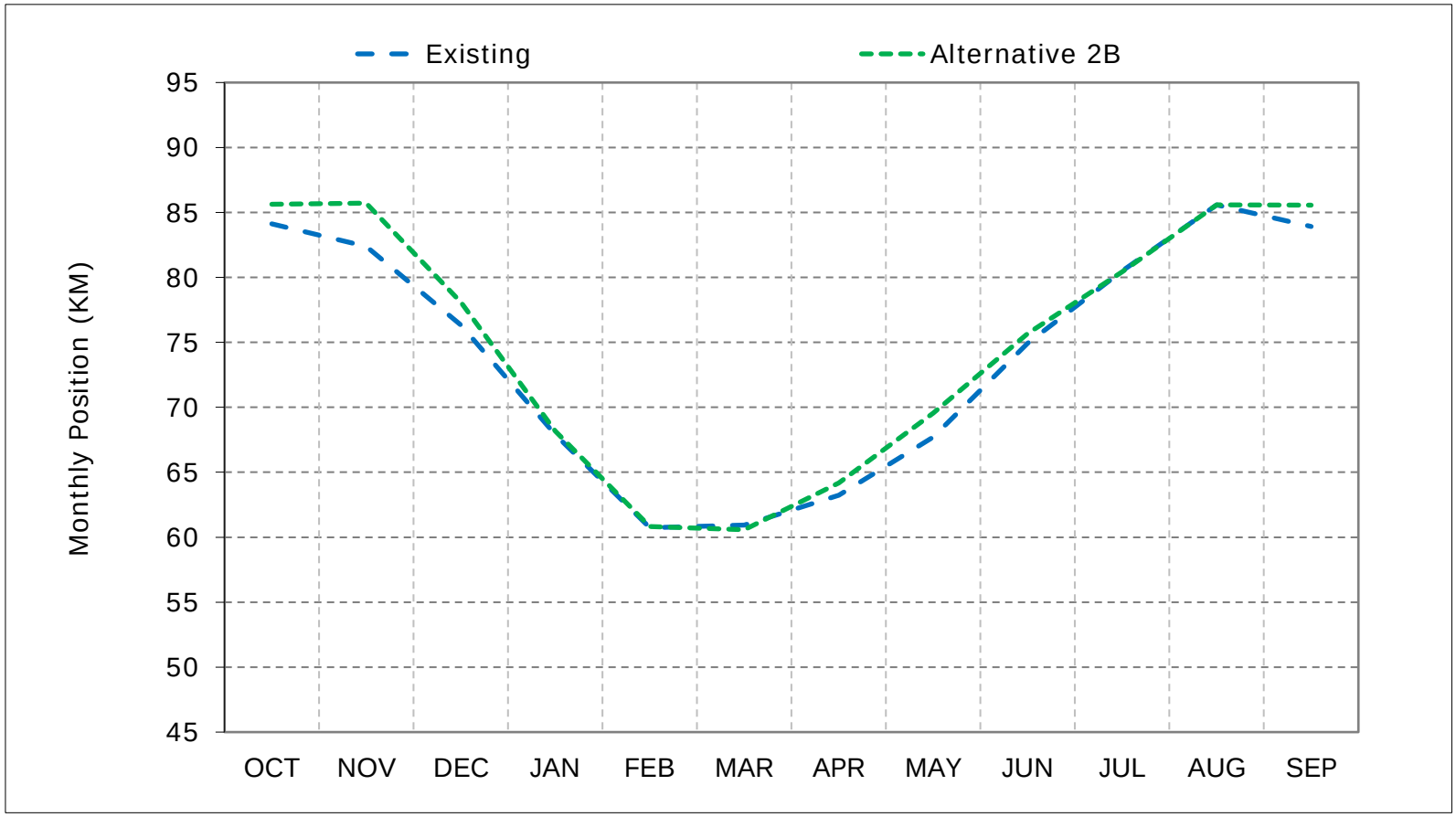
| Statistic | Monthly Position (KM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -0.3 | 0.1 | 0.0 | 1.7 | -0.3 | 0.1 | 0.6 | 0.4 | 0.0 | 0.0 | -0.2 | 0.3 |
| 20% | 0.0 | 0.1 | 0.1 | 1.2 | 0.2 | -0.7 | 1.6 | 2.0 | 1.2 | 0.1 | 0.3 | 0.2 |
| 30% | -0.1 | 0.0 | 4.2 | 1.2 | 0.2 | -0.7 | 1.6 | 2.2 | 0.7 | 0.1 | 0.2 | 0.2 |
| 40% | 0.2 | 0.1 | 5.3 | 0.5 | 0.5 | -0.8 | 1.2 | 2.3 | 0.5 | -0.5 | -0.4 | -0.1 |
| 50% | 0.0 | 5.7 | 4.2 | -0.7 | -0.2 | -0.6 | 1.6 | 2.8 | 0.9 | -0.3 | -0.2 | 0.2 |
| 60% | -0.9 | 5.5 | 2.3 | -0.8 | -0.1 | -0.6 | 1.1 | 2.9 | 1.3 | 0.0 | -0.2 | -0.9 |
| 70% | 6.0 | 10.8 | 2.5 | -0.1 | 0.1 | -0.4 | 1.2 | 1.8 | 1.3 | 0.1 | -0.2 | 5.9 |
| 80% | 6.0 | 10.7 | 1.1 | 0.0 | -0.1 | -0.6 | 1.0 | 1.2 | 0.4 | 0.1 | 0.1 | 5.9 |
| 90% | 6.0 | -0.1 | 0.6 | -0.2 | -0.1 | -0.1 | 0.4 | 1.2 | 0.1 | -0.2 | 0.5 | 6.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1.5 | 3.3 | 1.7 | 0.3 | 0.1 | -0.4 | 0.9 | 1.8 | 0.7 | -0.1 | 0.0 | 1.6 |
| Water Year Types[b,c] | | | | | | | | | | | | |
| Wet (32%) | 1.9 | 4.4 | 1.2 | -0.1 | -0.2 | -0.3 | 0.8 | 1.7 | 0.8 | 0.1 | -0.1 | 5.3 |
| Above Normal (15%) | 1.9 | 3.5 | 2.3 | 0.0 | -0.3 | -0.5 | 1.0 | 2.3 | 1.0 | 0.1 | 0.2 | -0.9 |
| Below Normal (17%) | 1.6 | 3.2 | 2.2 | -0.3 | -0.5 | -0.7 | 1.3 | 2.8 | 0.8 | -0.7 | -0.3 | 0.0 |
| Dry (22%) | 1.4 | 2.7 | 2.0 | 1.1 | 0.7 | -0.5 | 1.1 | 1.8 | 0.7 | 0.0 | 0.2 | 0.3 |
| Critical (15%) | 0.2 | 1.9 | 1.4 | 0.8 | 0.6 | 0.2 | 0.6 | 0.6 | 0.3 | 0.0 | 0.0 | 0.1 |

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with water year - year type sorting.

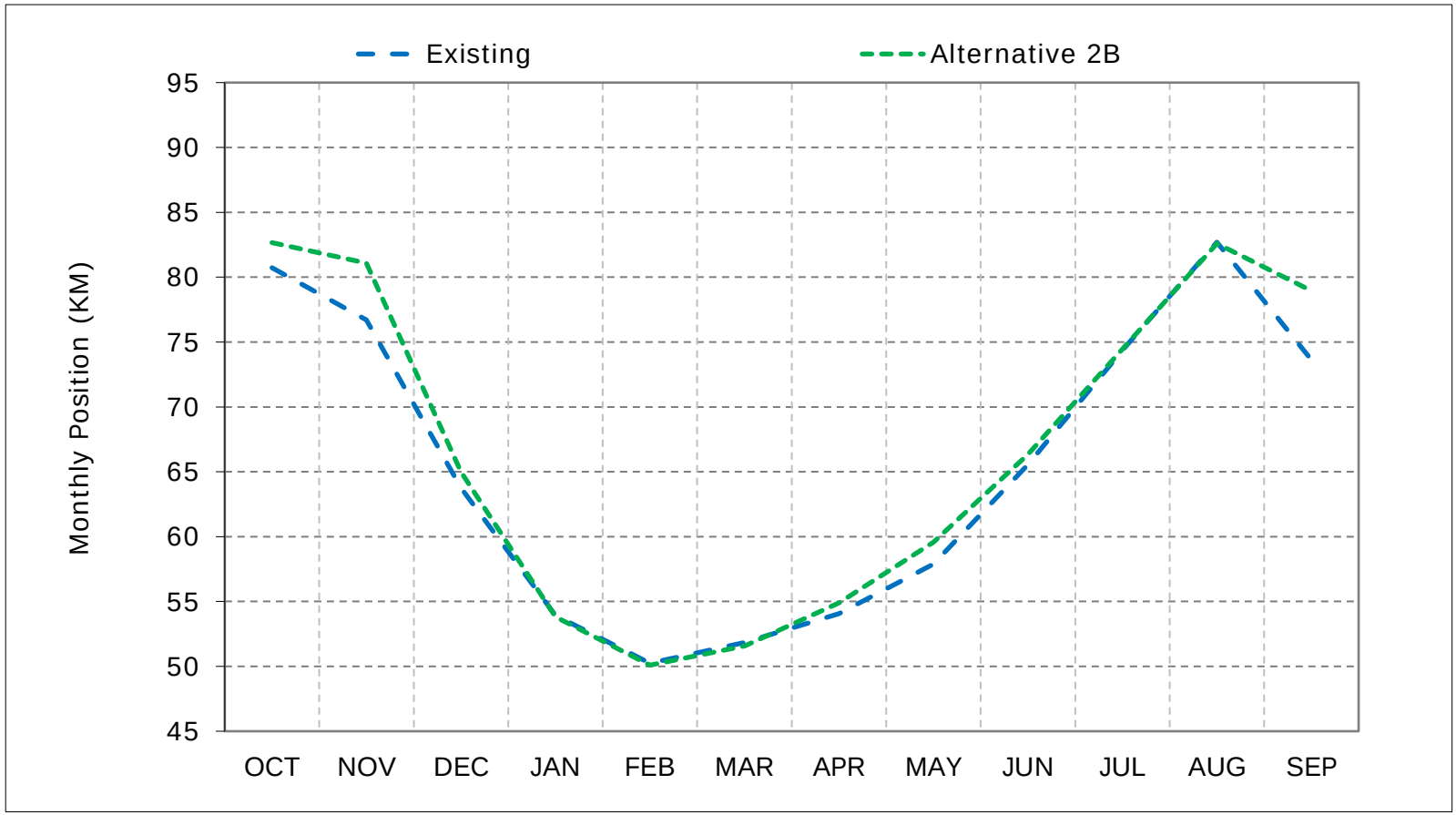
Figure 1-1. X2 Position, Long-Term Average Position




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with water year - year type sorting.

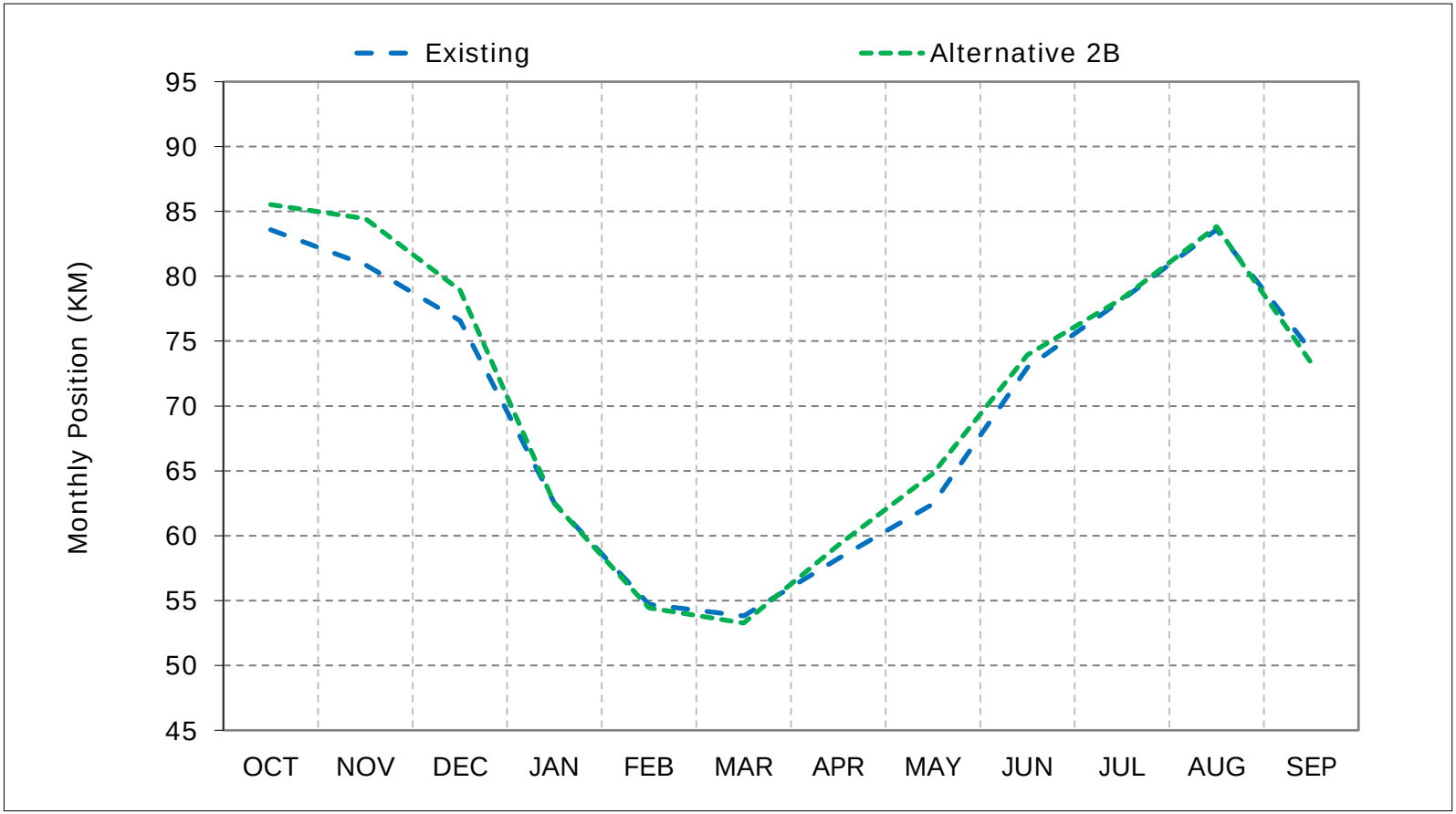
Figure 1-2. X2 Position, Wet Year Average Position




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

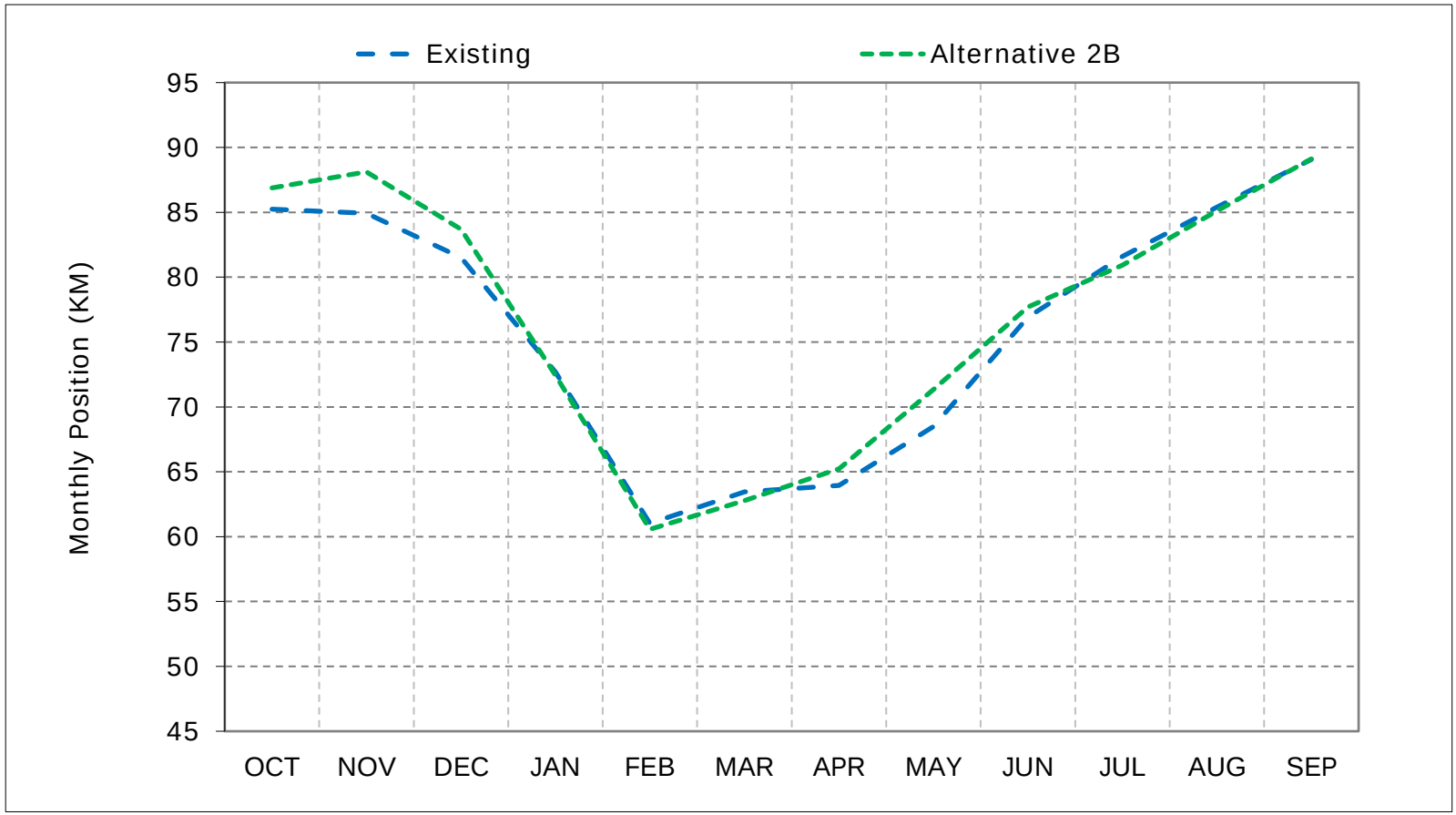
*These results are displayed with water year - year type sorting.

Figure 1-3. X2 Position, Above Normal Year Average Position



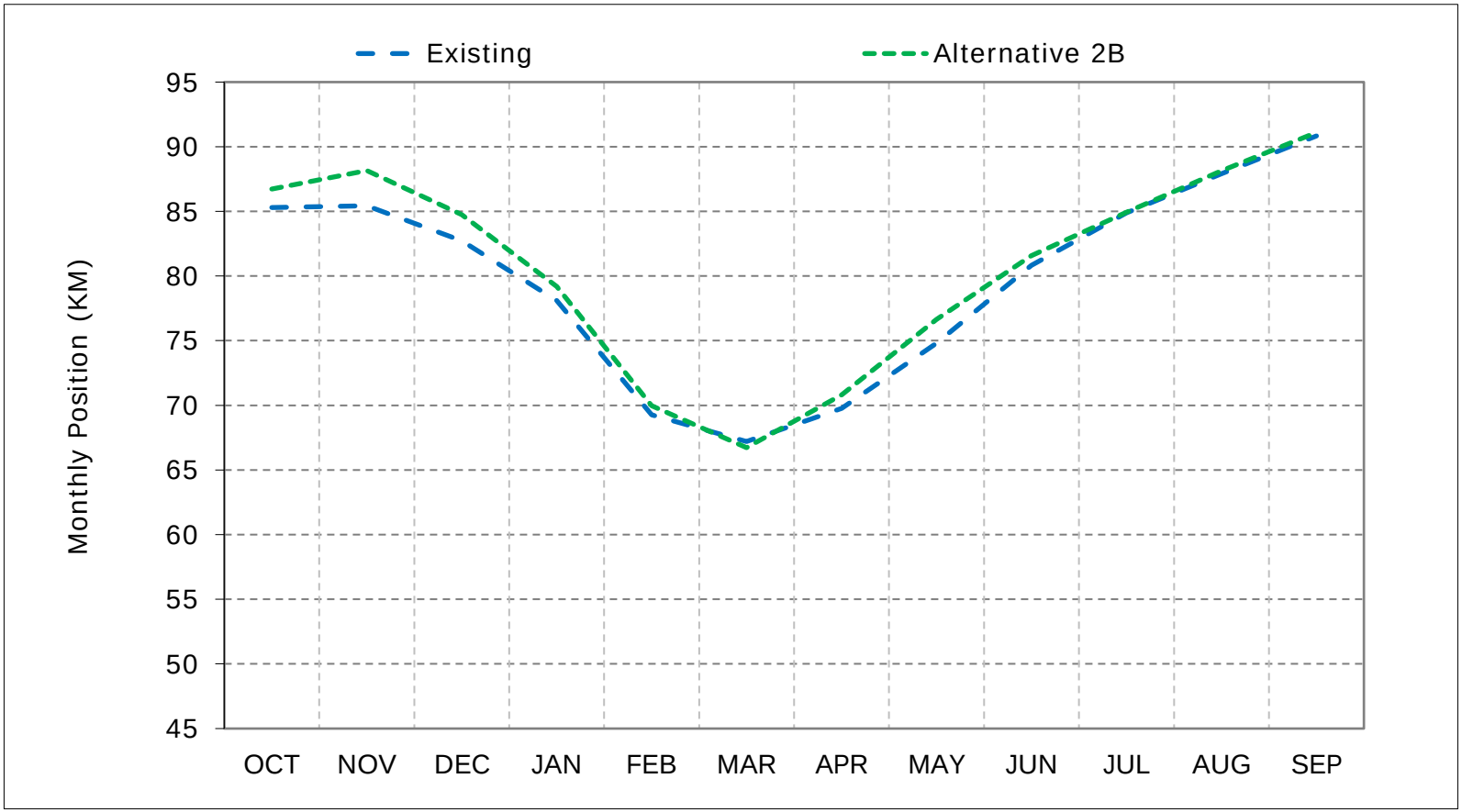

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-4. X2 Position, Below Normal Year Average Position



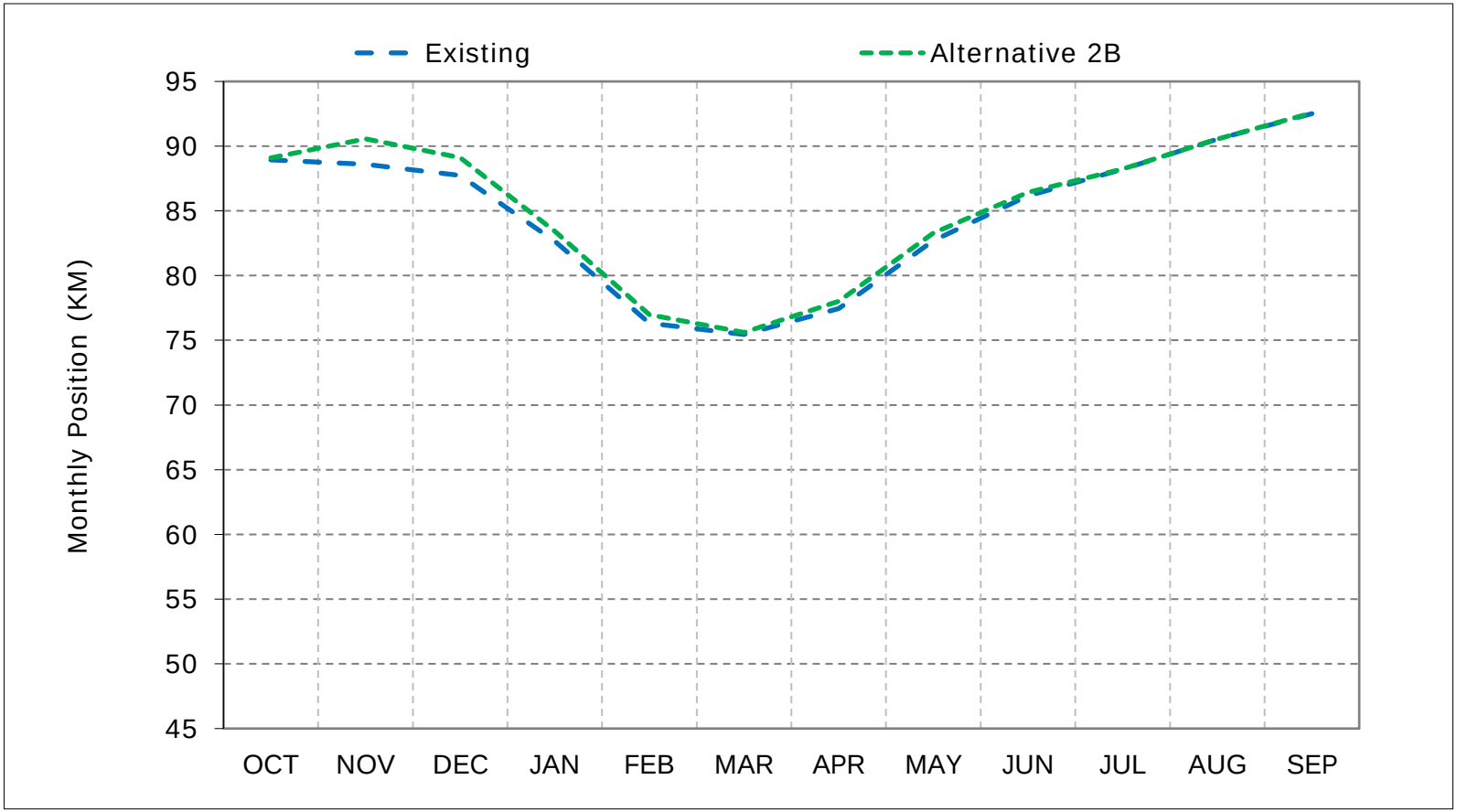

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-5. X2 Position, Dry Year Average Position




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-6. X2 Position, Critical Year Average Position




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-7. X2 Position, October

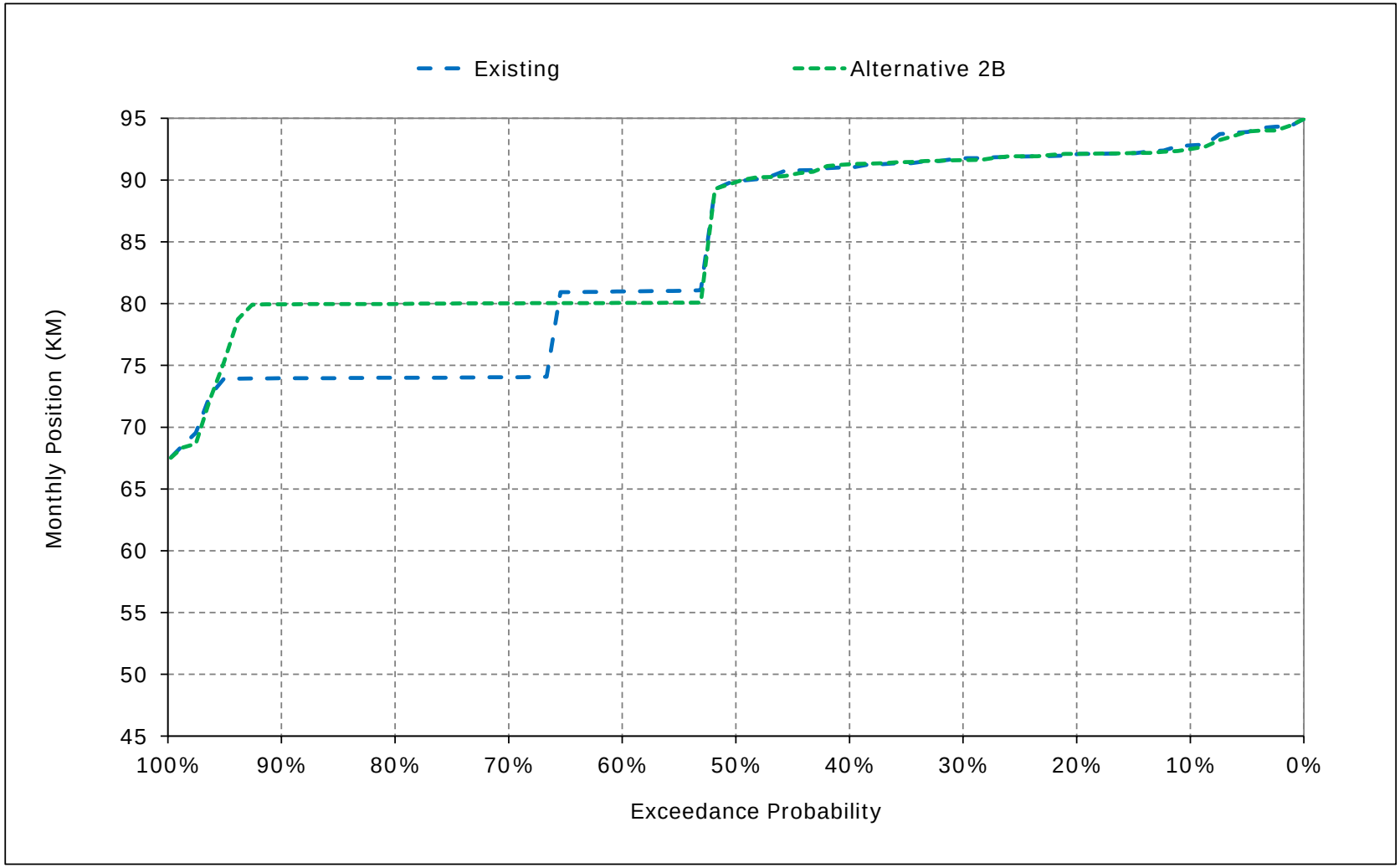


Figure 1-8. X2 Position, November

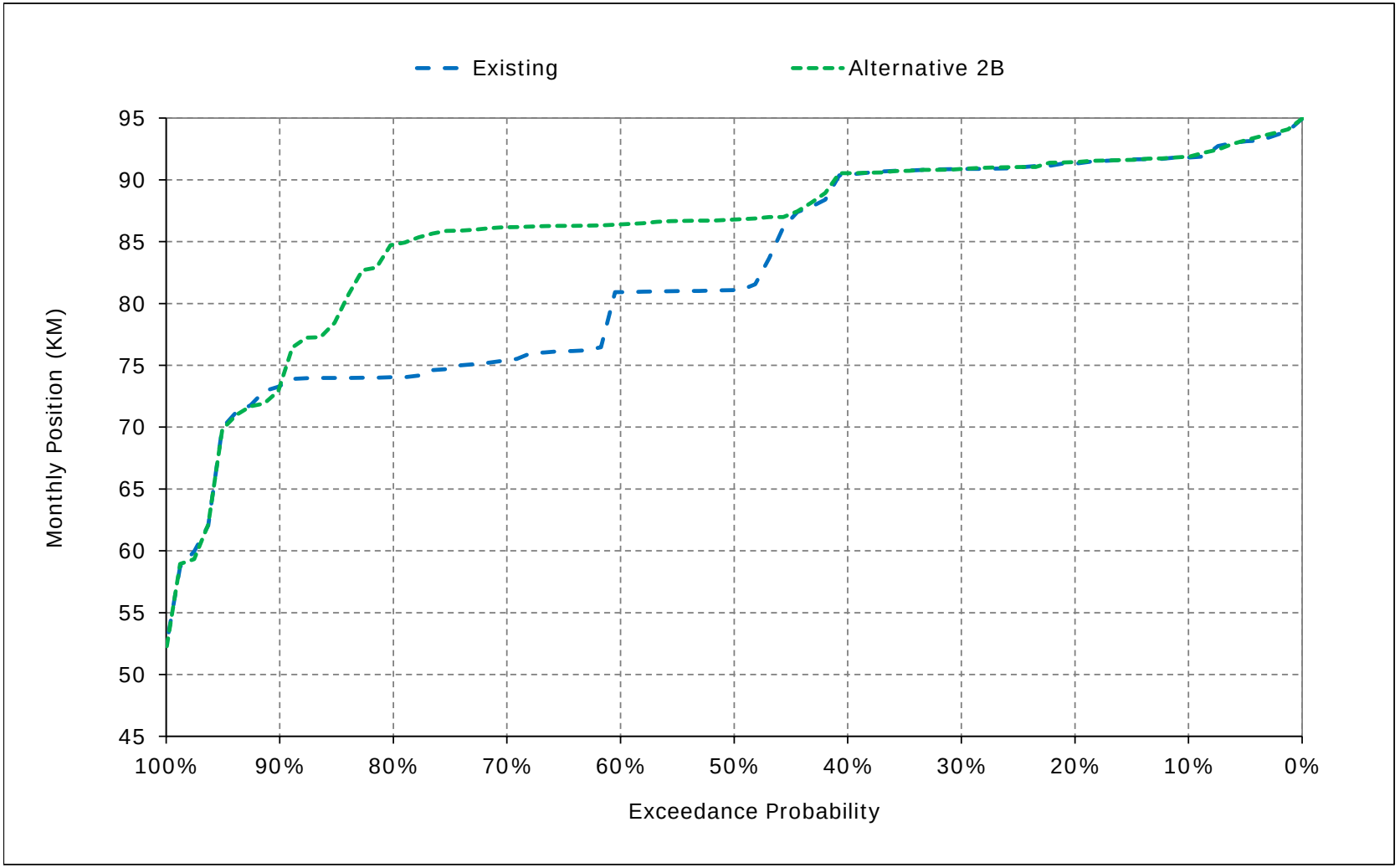


Figure 1-9. X2 Position, December

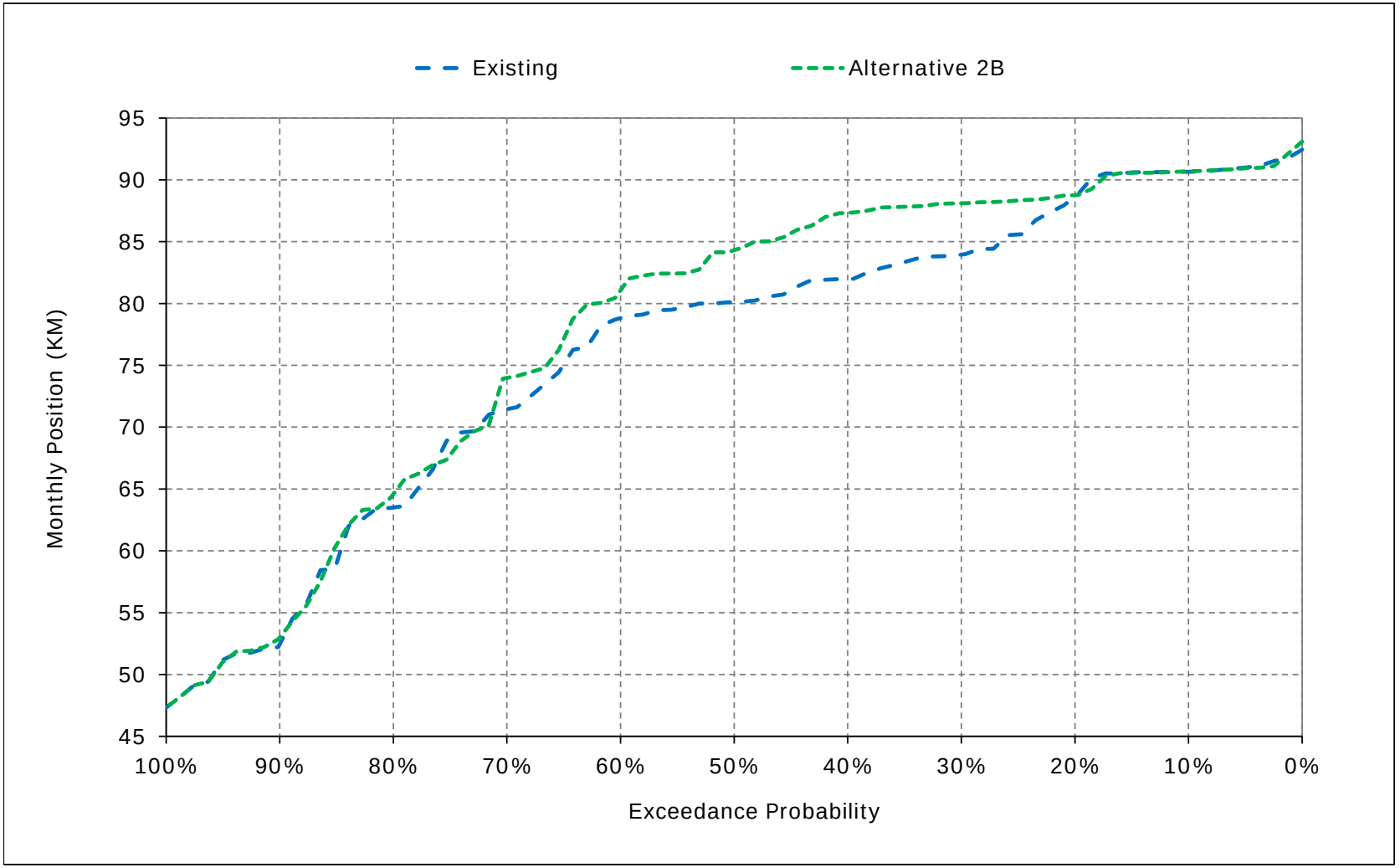


Figure 1-10. X2 Position, January

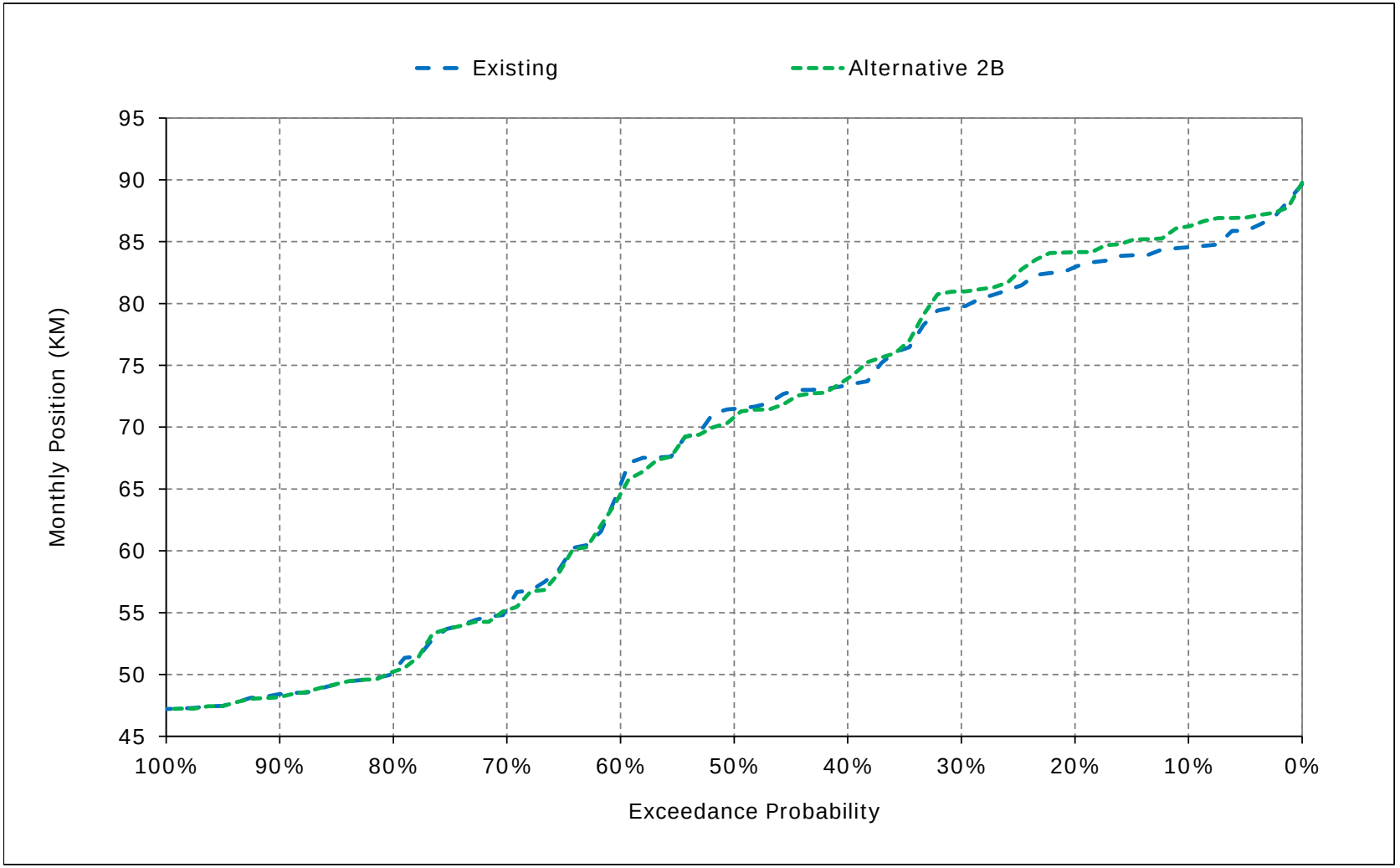


Figure 1-11. X2 Position, February

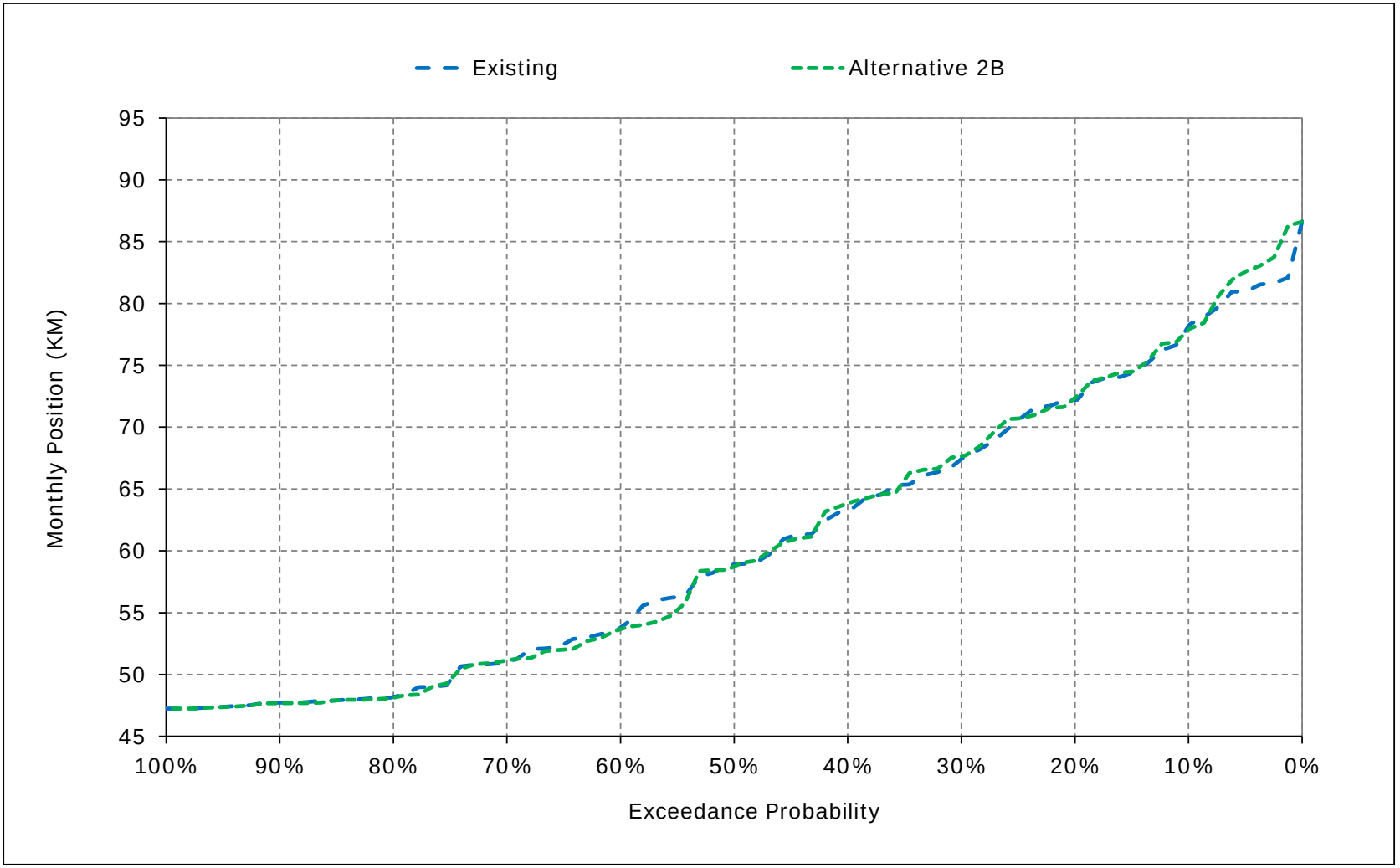


Figure 1-12. X2 Position, March

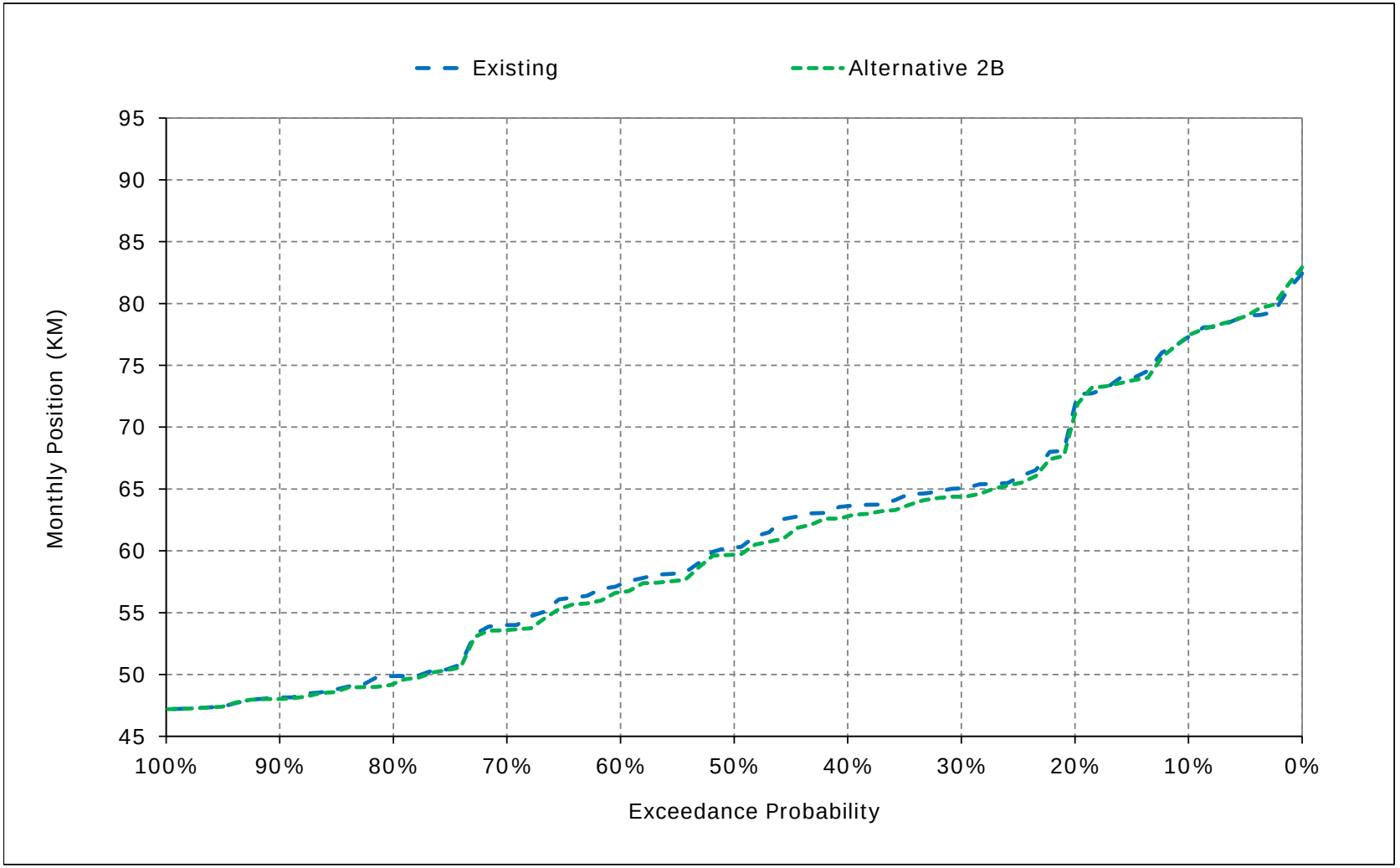


Figure 1-13. X2 Position, April

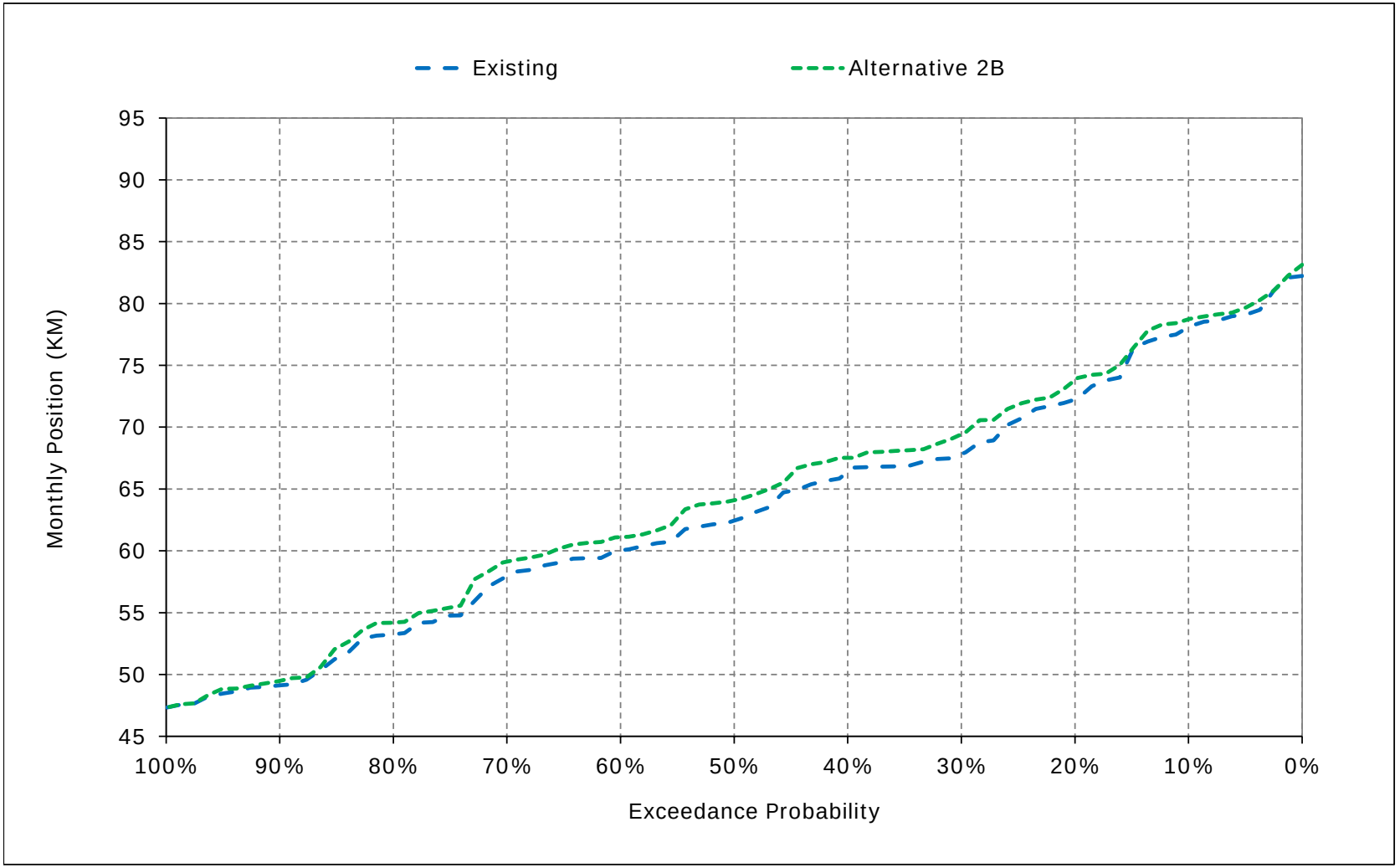


Figure 1-14. X2 Position, May

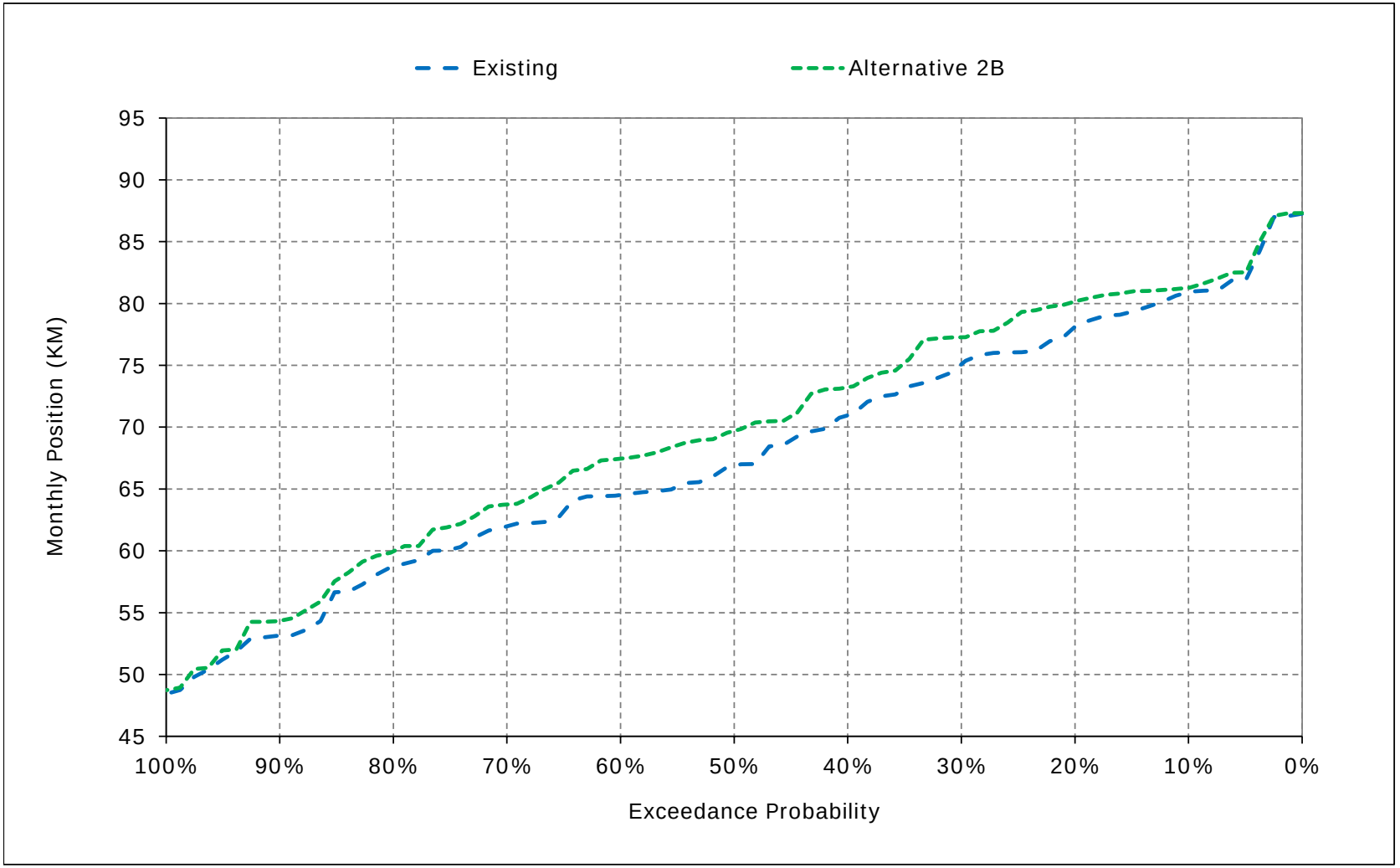


Figure 1-15. X2 Position, June

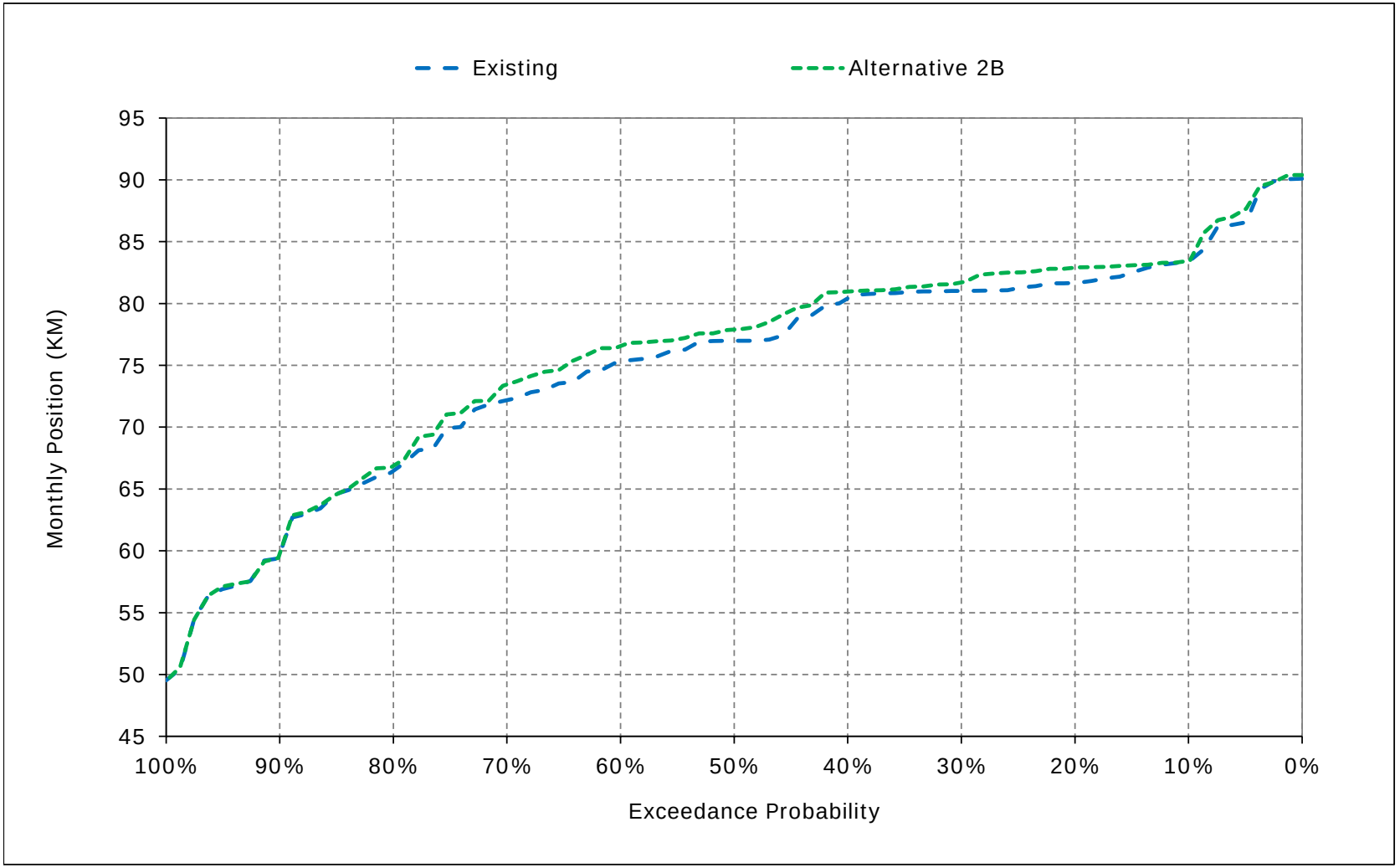


Figure 1-16. X2 Position, July

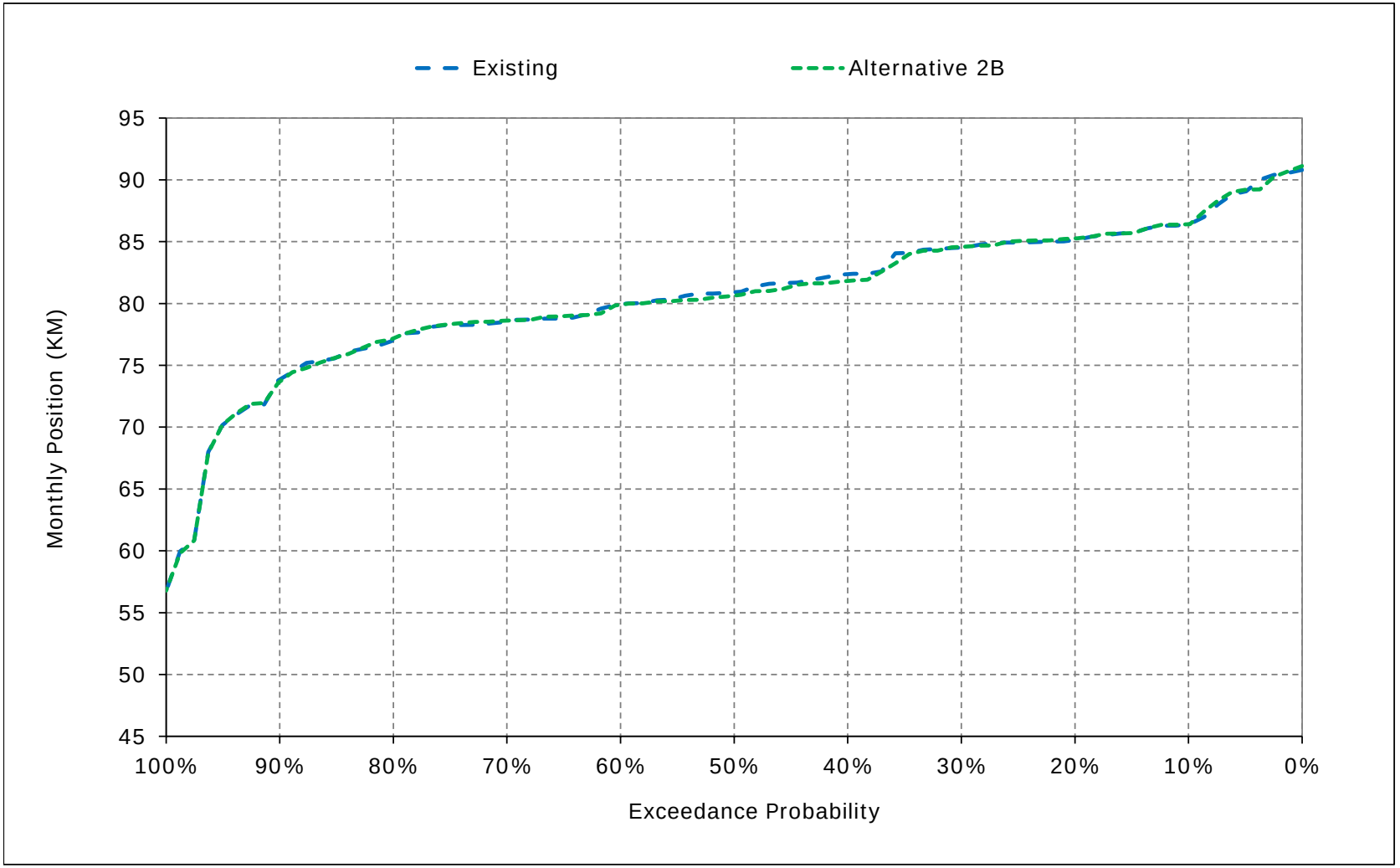


Figure 1-17. X2 Position, August

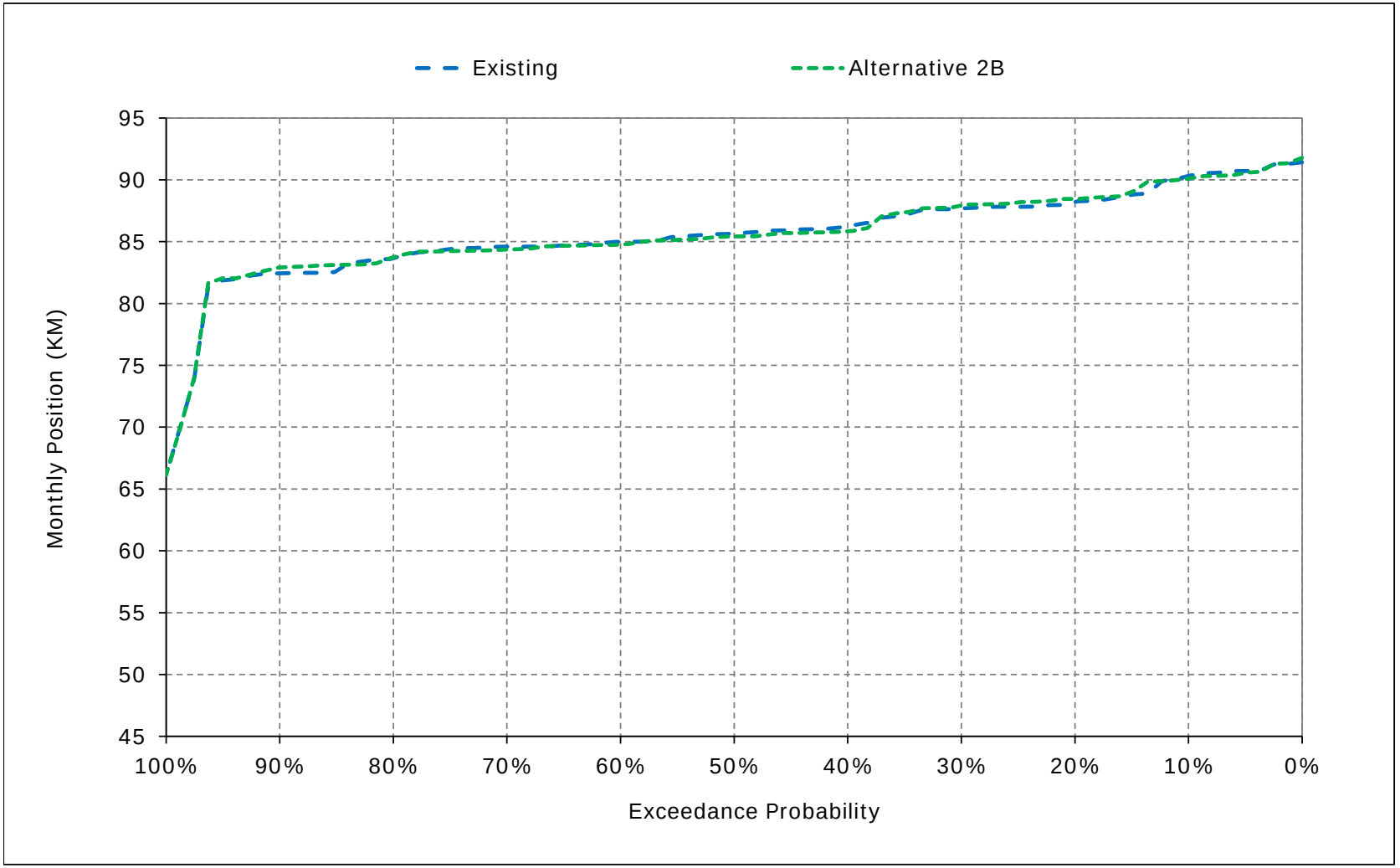
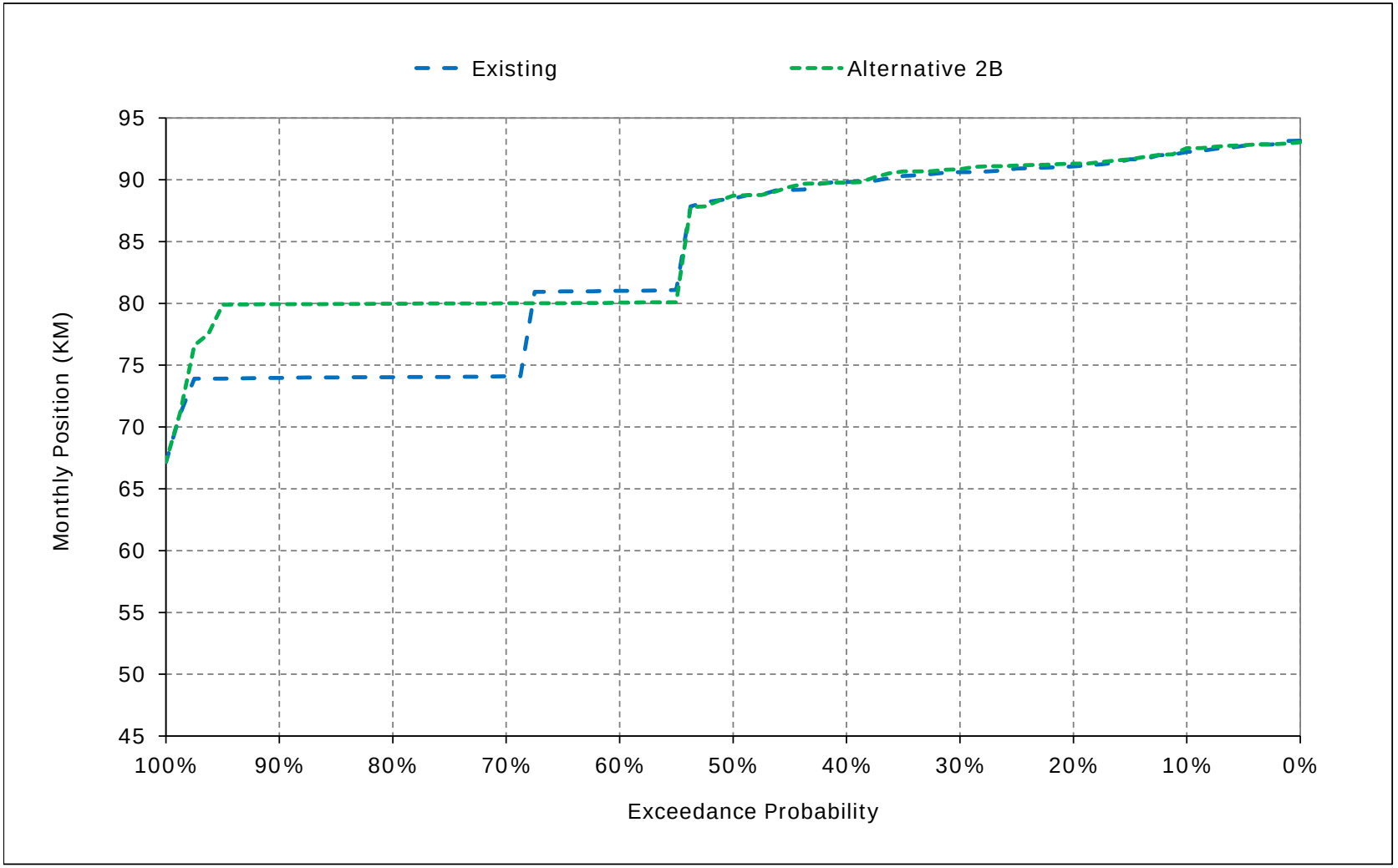


Figure 1-18. X2 Position, September



# Appendix C – Modeling

## Attachment 3-6 – Water Surface Elevation Results (DSM2-HYDRO)

***NOTE: Attachment 3-6 is a new attachment that has been added to the DEIR since initial publication, as part of the FEIR process. The additional attachment is not shown in underline for ease of reading.***

The following results of the DSM2-HYDRO model are included for Delta water surface elevation conditions for the following alternatives:

- Existing Conditions
- Refined Alternative 2b

| Title | Model Parameter | Table Numbers | Figure Numbers |
|---|---|---|---|
| Sacramento River at Freeport Water Surface Elevation | RSAC155 | 1-1 to 1-2 | NA |
| Sacramento River downstream of Steamboat Slough Water Surface Elevation | SAC_DS_STMBTSL | 2-1 to 2-2 | NA |
| Sacramento River at Rio Vista Water Surface Elevation | RSAC101 | 3-1 to 3-2 | NA |
| San Joaquin River at Jersey Point Water Surface Elevation | RSAN018 | 4-1 to 4-2 | NA |
| San Joaquin River at Prisoners Point Water Surface Elevation | RSAN037 | 5-1 to 5-2 | NA |
| Old River at Tracy Boulevard Water Surface Elevation | ROLD059 | 6-1 to 6-2 | NA |

Report formats

- Monthly tables comparing two scenarios (exceedance values, long-term average, and average by water year type)

Table 1-1-1. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation

Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3.8 | 5.6 | 5.9 | 7.5 | 15.0 | 12.0 | 10.8 | 5.7 | 4.7 | 5.3 | 4.6 | 6.5 |
| 20% | 3.6 | 4.8 | 5.0 | 6.9 | 12.0 | 8.9 | 6.7 | 4.3 | 4.5 | 5.0 | 4.5 | 4.3 |
| 30% | 3.6 | 4.0 | 4.6 | 6.0 | 9.0 | 7.5 | 6.1 | 4.3 | 4.4 | 4.9 | 4.3 | 4.0 |
| 40% | 3.5 | 3.7 | 4.3 | 5.5 | 6.0 | 6.5 | 6.0 | 4.2 | 4.4 | 4.7 | 4.1 | 3.8 |
| 50% | 3.5 | 3.7 | 3.9 | 5.1 | 5.0 | 4.8 | 5.6 | 4.0 | 4.2 | 4.6 | 4.0 | 3.8 |
| 60% | 3.4 | 3.6 | 3.8 | 4.9 | 4.7 | 4.0 | 4.2 | 3.8 | 4.1 | 4.5 | 3.9 | 3.7 |
| 70% | 3.3 | 3.4 | 3.8 | 4.3 | 4.5 | 3.8 | 3.7 | 3.8 | 3.9 | 4.2 | 3.9 | 3.6 |
| 80% | 3.3 | 3.3 | 3.7 | 4.0 | 4.4 | 3.4 | 3.6 | 3.6 | 3.8 | 4.0 | 3.8 | 3.5 |
| 90% | 3.2 | 3.3 | 3.7 | 3.9 | 4.2 | 3.3 | 3.4 | 3.4 | 3.8 | 3.9 | 3.7 | 3.5 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3.5 | 4.1 | 4.9 | 5.5 | 7.7 | 6.6 | 6.0 | 4.6 | 4.4 | 4.6 | 4.1 | 4.3 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 3.5 | 3.7 | 4.0 | 4.5 | 4.6 | 4.6 | 3.6 | 3.6 | 4.0 | 4.2 | 3.9 | 3.6 |
| Above Normal (16%) | 3.2 | 4.3 | 4.4 | 5.8 | 14.3 | 7.3 | 8.7 | 5.1 | 4.4 | 5.0 | 4.2 | 5.6 |
| Below Normal (13%) | 3.5 | 3.6 | 3.8 | 4.9 | 9.5 | 4.7 | 5.4 | 3.7 | 4.2 | 4.5 | 3.7 | 3.5 |
| Dry (24%) | 3.5 | 3.9 | 4.4 | 6.2 | 7.3 | 7.3 | 5.0 | 4.0 | 4.2 | 4.9 | 4.3 | 4.4 |
| Critical (15%) | 3.5 | 4.6 | 6.3 | 5.6 | 7.6 | 7.7 | 7.7 | 5.9 | 5.0 | 4.6 | 4.2 | 4.5 |

Alternative 2B

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3.8 | 4.8 | 6.0 | 7.4 | 14.9 | 12.6 | 10.8 | 5.7 | 4.8 | 5.4 | 4.6 | 5.8 |
| 20% | 3.7 | 4.0 | 5.1 | 6.9 | 11.5 | 8.8 | 6.5 | 4.3 | 4.7 | 5.1 | 4.5 | 4.3 |
| 30% | 3.6 | 3.8 | 4.6 | 5.9 | 9.1 | 7.5 | 6.2 | 4.2 | 4.6 | 5.0 | 4.3 | 3.9 |
| 40% | 3.5 | 3.7 | 4.3 | 5.6 | 6.3 | 6.5 | 6.0 | 4.2 | 4.4 | 4.8 | 4.0 | 3.8 |
| 50% | 3.5 | 3.6 | 4.0 | 5.1 | 5.1 | 4.6 | 5.5 | 4.1 | 4.2 | 4.5 | 3.9 | 3.7 |
| 60% | 3.5 | 3.5 | 3.9 | 4.8 | 4.8 | 4.0 | 4.1 | 3.8 | 4.0 | 4.3 | 3.9 | 3.7 |
| 70% | 3.3 | 3.4 | 3.8 | 4.2 | 4.6 | 3.8 | 3.7 | 3.8 | 4.0 | 4.1 | 3.8 | 3.6 |
| 80% | 3.3 | 3.3 | 3.7 | 4.0 | 4.4 | 3.6 | 3.7 | 3.6 | 4.0 | 4.0 | 3.8 | 3.5 |
| 90% | 3.2 | 3.3 | 3.7 | 3.9 | 4.3 | 3.4 | 3.4 | 3.4 | 3.9 | 3.9 | 3.7 | 3.5 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3.5 | 3.9 | 4.9 | 5.5 | 7.7 | 6.6 | 6.0 | 4.6 | 4.5 | 4.6 | 4.1 | 4.1 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 3.5 | 3.6 | 4.0 | 4.5 | 4.6 | 4.6 | 3.6 | 3.6 | 4.0 | 4.3 | 3.8 | 3.6 |
| Above Normal (16%) | 3.2 | 4.2 | 4.4 | 5.7 | 14.2 | 7.2 | 8.7 | 5.1 | 4.5 | 5.0 | 4.3 | 4.8 |
| Below Normal (13%) | 3.5 | 3.5 | 3.9 | 4.9 | 9.5 | 4.3 | 5.4 | 4.2 | 4.1 | 4.3 | 3.7 | 3.5 |
| Dry (24%) | 3.5 | 3.5 | 4.4 | 6.2 | 7.2 | 7.6 | 4.9 | 4.0 | 4.3 | 4.8 | 4.3 | 4.4 |
| Critical (15%) | 3.5 | 4.3 | 6.3 | 5.6 | 7.7 | 7.7 | 7.8 | 5.9 | 5.1 | 4.6 | 4.1 | 4.0 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.0 | -0.8 | 0.1 | -0.1 | -0.1 | 0.7 | 0.0 | -0.1 | 0.1 | 0.0 | 0.0 | -0.7 |
| 20% | 0.1 | -0.8 | 0.1 | 0.0 | -0.4 | -0.1 | -0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 |
| 30% | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 | 0.0 | -0.1 | -0.2 |
| 40% | 0.0 | 0.0 | -0.1 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | -0.1 | 0.0 |
| 50% | 0.0 | 0.0 | 0.1 | -0.1 | 0.1 | -0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | -0.1 |
| 60% | 0.0 | -0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | 0.0 | 0.0 |
| 70% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | -0.1 | 0.0 | 0.0 |
| 80% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.0 | -0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -0.2 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Above Normal (16%) | 0.0 | -0.1 | 0.0 | -0.1 | -0.2 | -0.1 | 0.0 | -0.1 | 0.1 | 0.0 | 0.0 | -0.9 |
| Below Normal (13%) | 0.0 | -0.1 | 0.1 | 0.0 | 0.0 | -0.4 | 0.0 | 0.4 | -0.1 | -0.2 | 0.0 | 0.0 |
| Dry (24%) | -0.1 | -0.4 | 0.0 | 0.0 | 0.0 | 0.3 | -0.1 | 0.0 | 0.1 | -0.1 | 0.0 | 0.1 |
| Critical (15%) | 0.0 | -0.3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | -0.1 | -0.4 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 1-2-1. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation

Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2.1 | 4.7 | 5.0 | 6.8 | 14.6 | 11.5 | 10.4 | 4.7 | 3.3 | 4.1 | 3.2 | 5.7 |
| 20% | 1.8 | 3.7 | 4.0 | 6.0 | 11.5 | 8.4 | 5.9 | 2.9 | 2.8 | 3.8 | 3.0 | 2.8 |
| 30% | 1.6 | 2.3 | 3.2 | 5.2 | 8.5 | 6.9 | 5.5 | 2.7 | 2.8 | 3.5 | 2.8 | 2.4 |
| 40% | 1.5 | 1.9 | 2.8 | 4.4 | 5.2 | 5.7 | 5.2 | 2.7 | 2.7 | 3.2 | 2.3 | 1.9 |
| 50% | 1.4 | 1.7 | 2.1 | 4.1 | 4.0 | 3.7 | 4.7 | 2.3 | 2.5 | 3.0 | 1.7 | 1.8 |
| 60% | 1.3 | 1.3 | 1.9 | 3.6 | 3.7 | 2.7 | 2.7 | 1.9 | 2.1 | 2.9 | 1.7 | 1.6 |
| 70% | 1.1 | 1.2 | 1.8 | 2.7 | 3.3 | 2.3 | 2.1 | 1.8 | 2.0 | 2.2 | 1.6 | 1.3 |
| 80% | 1.0 | 0.9 | 1.7 | 2.5 | 3.1 | 2.1 | 1.9 | 1.5 | 1.9 | 1.6 | 1.6 | 1.2 |
| 90% | 0.9 | 0.9 | 1.6 | 2.3 | 2.8 | 1.9 | 1.6 | 1.2 | 1.6 | 1.6 | 1.4 | 1.1 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1.5 | 2.3 | 3.3 | 4.3 | 6.8 | 5.6 | 4.9 | 3.0 | 2.7 | 2.9 | 2.2 | 2.5 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 1.4 | 1.5 | 2.1 | 3.0 | 3.4 | 3.2 | 1.9 | 1.4 | 2.0 | 2.0 | 1.5 | 1.3 |
| Above Normal (16%) | 1.1 | 2.8 | 3.1 | 4.6 | 13.9 | 6.5 | 8.2 | 3.9 | 2.7 | 3.7 | 2.5 | 4.4 |
| Below Normal (13%) | 1.5 | 1.7 | 1.7 | 3.6 | 9.0 | 3.6 | 4.5 | 1.9 | 2.5 | 3.0 | 1.4 | 1.4 |
| Dry (24%) | 1.4 | 1.9 | 2.9 | 5.3 | 6.3 | 6.3 | 3.7 | 2.3 | 2.5 | 3.3 | 2.4 | 2.7 |
| Critical (15%) | 1.7 | 3.2 | 4.9 | 4.5 | 6.7 | 6.9 | 6.9 | 4.6 | 3.5 | 3.1 | 2.5 | 2.9 |

Alternative 2B

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2.1 | 3.5 | 5.1 | 6.6 | 14.5 | 12.2 | 10.4 | 4.7 | 3.4 | 4.2 | 3.2 | 4.9 |
| 20% | 2.1 | 2.5 | 4.0 | 6.0 | 11.0 | 8.3 | 5.7 | 2.9 | 3.3 | 3.9 | 3.1 | 2.9 |
| 30% | 1.6 | 2.2 | 3.1 | 5.1 | 8.6 | 6.8 | 5.5 | 2.8 | 3.0 | 3.5 | 2.8 | 2.1 |
| 40% | 1.5 | 1.8 | 2.7 | 4.6 | 5.4 | 5.8 | 5.2 | 2.7 | 2.8 | 3.3 | 1.9 | 1.8 |
| 50% | 1.4 | 1.4 | 2.3 | 4.0 | 4.1 | 3.4 | 4.7 | 2.6 | 2.5 | 3.0 | 1.8 | 1.8 |
| 60% | 1.3 | 1.3 | 2.0 | 3.5 | 3.8 | 2.6 | 2.7 | 2.0 | 2.3 | 2.8 | 1.6 | 1.6 |
| 70% | 1.1 | 1.2 | 1.8 | 2.6 | 3.4 | 2.4 | 2.1 | 1.7 | 2.2 | 1.9 | 1.5 | 1.4 |
| 80% | 1.0 | 0.9 | 1.7 | 2.4 | 3.1 | 2.3 | 2.0 | 1.6 | 2.0 | 1.7 | 1.4 | 1.2 |
| 90% | 0.9 | 0.9 | 1.6 | 2.3 | 2.8 | 1.9 | 1.6 | 1.2 | 1.7 | 1.6 | 1.3 | 1.1 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1.5 | 2.0 | 3.3 | 4.3 | 6.8 | 5.6 | 4.9 | 3.0 | 2.8 | 2.9 | 2.1 | 2.3 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 1.4 | 1.5 | 2.2 | 3.0 | 3.4 | 3.3 | 1.9 | 1.4 | 2.1 | 2.1 | 1.5 | 1.3 |
| Above Normal (16%) | 1.1 | 2.7 | 3.2 | 4.5 | 13.7 | 6.4 | 8.2 | 3.9 | 2.9 | 3.7 | 2.5 | 3.4 |
| Below Normal (13%) | 1.5 | 1.4 | 1.9 | 3.5 | 9.0 | 3.0 | 4.5 | 2.7 | 2.4 | 2.8 | 1.4 | 1.5 |
| Dry (24%) | 1.3 | 1.4 | 2.8 | 5.3 | 6.3 | 6.6 | 3.7 | 2.3 | 2.7 | 3.1 | 2.4 | 2.7 |
| Critical (15%) | 1.7 | 2.7 | 4.9 | 4.5 | 6.9 | 6.9 | 7.0 | 4.6 | 3.6 | 3.1 | 2.4 | 2.4 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.0 | -1.2 | 0.1 | -0.2 | -0.1 | 0.7 | 0.0 | -0.1 | 0.1 | 0.0 | 0.0 | -0.8 |
| 20% | 0.3 | -1.2 | 0.0 | 0.0 | -0.4 | -0.1 | -0.2 | 0.0 | 0.5 | 0.1 | 0.1 | 0.1 |
| 30% | 0.0 | -0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 | 0.0 | -0.1 | -0.4 |
| 40% | 0.0 | -0.1 | -0.1 | 0.2 | 0.2 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | -0.5 | -0.1 |
| 50% | 0.0 | -0.3 | 0.2 | -0.1 | 0.2 | -0.3 | 0.0 | 0.3 | 0.0 | -0.1 | 0.1 | 0.0 |
| 60% | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | -0.1 | 0.0 | 0.2 | -0.2 | 0.0 | 0.0 |
| 70% | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | -0.3 | -0.1 | 0.0 |
| 80% | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | -0.2 | 0.0 |
| 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | -0.1 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.0 | -0.3 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -0.3 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | -0.1 | 0.0 |
| Above Normal (16%) | 0.0 | -0.1 | 0.1 | -0.1 | -0.2 | -0.1 | 0.0 | -0.1 | 0.2 | 0.0 | 0.1 | -1.0 |
| Below Normal (13%) | 0.0 | -0.3 | 0.2 | 0.0 | 0.0 | -0.6 | 0.0 | 0.8 | -0.1 | -0.3 | 0.0 | 0.0 |
| Dry (24%) | -0.1 | -0.5 | 0.0 | 0.0 | -0.1 | 0.3 | -0.1 | 0.0 | 0.2 | -0.3 | 0.0 | 0.1 |
| Critical (15%) | 0.0 | -0.5 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.2 | 0.0 | -0.1 | -0.6 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 2-1-1. Sacramento River d/s of Steamboat Slough, Monthly Averaged Daily Maximum Elevation

Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3.3 | 4.1 | 4.2 | 4.9 | 9.1 | 7.1 | 6.4 | 4.1 | 3.9 | 4.1 | 3.9 | 4.3 |
| 20% | 3.2 | 3.6 | 3.8 | 4.6 | 7.1 | 5.5 | 4.3 | 3.8 | 3.8 | 4.1 | 3.8 | 3.7 |
| 30% | 3.2 | 3.4 | 3.8 | 4.2 | 5.6 | 4.7 | 4.1 | 3.7 | 3.8 | 4.0 | 3.7 | 3.6 |
| 40% | 3.2 | 3.4 | 3.7 | 4.1 | 4.2 | 4.3 | 4.0 | 3.6 | 3.7 | 4.0 | 3.6 | 3.5 |
| 50% | 3.2 | 3.3 | 3.5 | 4.0 | 3.9 | 3.7 | 3.9 | 3.5 | 3.7 | 3.9 | 3.6 | 3.4 |
| 60% | 3.1 | 3.2 | 3.5 | 3.8 | 3.8 | 3.4 | 3.5 | 3.4 | 3.7 | 3.9 | 3.5 | 3.3 |
| 70% | 3.0 | 3.1 | 3.4 | 3.7 | 3.7 | 3.3 | 3.3 | 3.4 | 3.5 | 3.7 | 3.5 | 3.3 |
| 80% | 2.9 | 3.0 | 3.3 | 3.6 | 3.6 | 3.0 | 3.2 | 3.2 | 3.5 | 3.6 | 3.5 | 3.2 |
| 90% | 2.9 | 2.9 | 3.3 | 3.5 | 3.6 | 3.0 | 3.1 | 3.1 | 3.5 | 3.6 | 3.3 | 3.1 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3.1 | 3.4 | 3.9 | 4.1 | 5.2 | 4.5 | 4.2 | 3.7 | 3.8 | 3.9 | 3.6 | 3.5 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 3.1 | 3.2 | 3.5 | 3.8 | 3.7 | 3.6 | 3.2 | 3.2 | 3.6 | 3.7 | 3.5 | 3.3 |
| Above Normal (16%) | 2.9 | 3.4 | 3.5 | 4.1 | 8.6 | 4.7 | 5.3 | 3.9 | 3.7 | 4.0 | 3.6 | 4.1 |
| Below Normal (13%) | 3.1 | 3.2 | 3.5 | 4.0 | 5.8 | 3.7 | 4.0 | 3.3 | 3.7 | 3.8 | 3.3 | 3.1 |
| Dry (24%) | 3.1 | 3.3 | 3.7 | 4.3 | 5.1 | 4.9 | 3.7 | 3.6 | 3.7 | 4.0 | 3.7 | 3.6 |
| Critical (15%) | 3.2 | 3.6 | 4.5 | 4.1 | 5.2 | 5.1 | 5.0 | 4.3 | 4.0 | 3.9 | 3.6 | 3.6 |

Alternative 2B

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3.3 | 3.8 | 4.3 | 4.8 | 9.0 | 7.5 | 6.4 | 4.1 | 4.0 | 4.1 | 3.9 | 3.9 |
| 20% | 3.2 | 3.4 | 3.8 | 4.6 | 6.9 | 5.4 | 4.2 | 3.8 | 4.0 | 4.1 | 3.8 | 3.7 |
| 30% | 3.2 | 3.3 | 3.8 | 4.2 | 5.6 | 4.7 | 4.1 | 3.7 | 3.8 | 4.0 | 3.7 | 3.5 |
| 40% | 3.2 | 3.3 | 3.7 | 4.1 | 4.3 | 4.3 | 4.0 | 3.6 | 3.8 | 3.9 | 3.6 | 3.4 |
| 50% | 3.1 | 3.2 | 3.6 | 4.0 | 3.9 | 3.6 | 3.9 | 3.6 | 3.7 | 3.9 | 3.6 | 3.3 |
| 60% | 3.1 | 3.1 | 3.5 | 3.8 | 3.8 | 3.4 | 3.5 | 3.5 | 3.6 | 3.8 | 3.5 | 3.3 |
| 70% | 3.0 | 3.1 | 3.4 | 3.7 | 3.7 | 3.3 | 3.3 | 3.4 | 3.6 | 3.7 | 3.5 | 3.3 |
| 80% | 2.9 | 3.0 | 3.3 | 3.6 | 3.6 | 3.1 | 3.3 | 3.3 | 3.5 | 3.7 | 3.4 | 3.1 |
| 90% | 2.9 | 2.9 | 3.3 | 3.5 | 3.6 | 3.0 | 3.1 | 3.1 | 3.5 | 3.6 | 3.3 | 3.1 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3.1 | 3.3 | 3.9 | 4.1 | 5.2 | 4.6 | 4.2 | 3.7 | 3.8 | 3.9 | 3.6 | 3.4 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 3.2 | 3.2 | 3.5 | 3.8 | 3.7 | 3.6 | 3.2 | 3.2 | 3.6 | 3.8 | 3.5 | 3.3 |
| Above Normal (16%) | 2.9 | 3.4 | 3.5 | 4.1 | 8.5 | 4.6 | 5.3 | 3.8 | 3.8 | 4.0 | 3.7 | 3.6 |
| Below Normal (13%) | 3.1 | 3.1 | 3.5 | 4.0 | 5.8 | 3.6 | 4.0 | 3.5 | 3.6 | 3.7 | 3.3 | 3.1 |
| Dry (24%) | 3.1 | 3.1 | 3.7 | 4.3 | 5.0 | 5.1 | 3.7 | 3.6 | 3.8 | 3.9 | 3.7 | 3.6 |
| Critical (15%) | 3.2 | 3.5 | 4.6 | 4.1 | 5.2 | 5.1 | 5.0 | 4.3 | 4.0 | 3.9 | 3.6 | 3.4 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.0 | -0.3 | 0.0 | 0.0 | -0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.4 |
| 20% | 0.0 | -0.2 | 0.0 | 0.0 | -0.2 | 0.0 | -0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 30% | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40% | 0.0 | -0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | -0.1 |
| 50% | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60% | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 |
| 70% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 80% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Above Normal (16%) | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | -0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -0.4 |
| Below Normal (13%) | 0.0 | -0.1 | 0.1 | 0.0 | 0.0 | -0.1 | 0.0 | 0.2 | 0.0 | -0.1 | 0.0 | 0.0 |
| Dry (24%) | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 |
| Critical (15%) | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 2-2-1. Sacramento River d/s of Steamboat Slough, Monthly Averaged Daily Minimum Elevation

Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.6 | 2.0 | 2.2 | 3.2 | 8.4 | 6.2 | 5.4 | 2.0 | 1.1 | 1.4 | 1.0 | 2.4 |
| 20% | 0.5 | 1.4 | 1.6 | 2.8 | 6.2 | 4.3 | 2.7 | 1.1 | 0.9 | 1.2 | 1.0 | 0.9 |
| 30% | 0.4 | 0.7 | 1.2 | 2.3 | 4.3 | 3.3 | 2.4 | 1.1 | 0.8 | 1.2 | 0.9 | 0.8 |
| 40% | 0.3 | 0.5 | 1.0 | 1.9 | 2.3 | 2.7 | 2.3 | 1.0 | 0.8 | 1.0 | 0.7 | 0.6 |
| 50% | 0.3 | 0.4 | 0.6 | 1.7 | 1.7 | 1.6 | 2.1 | 0.8 | 0.7 | 0.9 | 0.5 | 0.5 |
| 60% | 0.3 | 0.3 | 0.5 | 1.5 | 1.5 | 0.9 | 1.0 | 0.6 | 0.5 | 0.9 | 0.5 | 0.5 |
| 70% | 0.1 | 0.1 | 0.5 | 1.0 | 1.4 | 0.8 | 0.7 | 0.5 | 0.5 | 0.6 | 0.4 | 0.3 |
| 80% | 0.1 | 0.0 | 0.4 | 0.9 | 1.2 | 0.6 | 0.5 | 0.3 | 0.5 | 0.4 | 0.4 | 0.3 |
| 90% | 0.0 | -0.1 | 0.3 | 0.8 | 1.1 | 0.5 | 0.4 | 0.2 | 0.3 | 0.4 | 0.3 | 0.2 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.3 | 0.7 | 1.3 | 1.9 | 3.5 | 2.7 | 2.2 | 1.2 | 0.8 | 0.9 | 0.6 | 0.9 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.3 | 0.3 | 0.6 | 1.2 | 1.3 | 1.3 | 0.6 | 0.3 | 0.5 | 0.5 | 0.4 | 0.3 |
| Above Normal (16%) | 0.1 | 1.0 | 1.1 | 2.0 | 7.8 | 3.1 | 4.1 | 1.7 | 0.9 | 1.2 | 0.7 | 1.9 |
| Below Normal (13%) | 0.4 | 0.4 | 0.5 | 1.5 | 4.6 | 1.6 | 2.0 | 0.6 | 0.7 | 0.9 | 0.3 | 0.3 |
| Dry (24%) | 0.3 | 0.5 | 1.0 | 2.3 | 3.2 | 3.1 | 1.5 | 0.8 | 0.7 | 1.0 | 0.8 | 0.9 |
| Critical (15%) | 0.4 | 1.2 | 2.3 | 2.0 | 3.4 | 3.5 | 3.4 | 2.1 | 1.3 | 1.0 | 0.8 | 1.1 |

Alternative 2B

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.6 | 1.4 | 2.3 | 3.1 | 8.3 | 6.6 | 5.4 | 2.0 | 1.1 | 1.4 | 1.0 | 1.8 |
| 20% | 0.6 | 0.7 | 1.6 | 2.8 | 5.9 | 4.2 | 2.6 | 1.1 | 1.0 | 1.3 | 1.0 | 1.0 |
| 30% | 0.4 | 0.6 | 1.2 | 2.3 | 4.4 | 3.3 | 2.5 | 1.1 | 0.9 | 1.2 | 0.9 | 0.7 |
| 40% | 0.4 | 0.5 | 0.9 | 2.0 | 2.5 | 2.7 | 2.2 | 1.0 | 0.8 | 1.0 | 0.6 | 0.5 |
| 50% | 0.3 | 0.3 | 0.7 | 1.6 | 1.7 | 1.5 | 2.0 | 1.0 | 0.7 | 1.0 | 0.5 | 0.5 |
| 60% | 0.3 | 0.3 | 0.6 | 1.5 | 1.5 | 0.9 | 1.0 | 0.6 | 0.6 | 0.8 | 0.4 | 0.5 |
| 70% | 0.1 | 0.1 | 0.5 | 1.0 | 1.4 | 0.8 | 0.7 | 0.5 | 0.6 | 0.5 | 0.4 | 0.3 |
| 80% | 0.1 | 0.0 | 0.4 | 0.9 | 1.2 | 0.8 | 0.6 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 |
| 90% | 0.0 | -0.1 | 0.3 | 0.8 | 1.1 | 0.5 | 0.4 | 0.3 | 0.4 | 0.4 | 0.3 | 0.2 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.3 | 0.6 | 1.3 | 1.8 | 3.5 | 2.7 | 2.2 | 1.2 | 0.9 | 0.9 | 0.6 | 0.7 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.3 | 0.3 | 0.7 | 1.2 | 1.3 | 1.3 | 0.6 | 0.3 | 0.5 | 0.6 | 0.4 | 0.3 |
| Above Normal (16%) | 0.1 | 0.9 | 1.1 | 1.9 | 7.7 | 3.1 | 4.0 | 1.6 | 0.9 | 1.2 | 0.8 | 1.1 |
| Below Normal (13%) | 0.4 | 0.3 | 0.6 | 1.5 | 4.6 | 1.3 | 2.0 | 1.0 | 0.6 | 0.8 | 0.3 | 0.3 |
| Dry (24%) | 0.2 | 0.2 | 1.0 | 2.4 | 3.1 | 3.3 | 1.5 | 0.8 | 0.8 | 0.9 | 0.8 | 0.9 |
| Critical (15%) | 0.4 | 0.9 | 2.3 | 2.0 | 3.5 | 3.5 | 3.5 | 2.1 | 1.4 | 1.0 | 0.7 | 0.8 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.0 | -0.6 | 0.1 | -0.1 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.6 |
| 20% | 0.1 | -0.7 | 0.0 | 0.0 | -0.3 | -0.1 | -0.1 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| 30% | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | -0.1 |
| 40% | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.1 |
| 50% | 0.0 | -0.1 | 0.1 | 0.0 | 0.1 | -0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60% | 0.0 | 0.0 | 0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | -0.1 | 0.0 | 0.0 |
| 70% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 |
| 80% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | -0.1 | 0.0 |
| 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.0 | -0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -0.2 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Above Normal (16%) | 0.0 | -0.1 | 0.0 | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -0.8 |
| Below Normal (13%) | 0.0 | -0.1 | 0.1 | 0.0 | 0.0 | -0.3 | 0.0 | 0.4 | -0.1 | -0.1 | 0.0 | 0.0 |
| Dry (24%) | 0.0 | -0.3 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | -0.1 | 0.0 | 0.0 |
| Critical (15%) | 0.0 | -0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -0.4 |

a Based on the 16-year simulation period

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 3-1-1. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation

Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3.3 | 3.4 | 3.5 | 3.6 | 4.0 | 3.5 | 3.4 | 3.5 | 3.6 | 3.7 | 3.6 | 3.5 |
| 20% | 3.2 | 3.3 | 3.4 | 3.5 | 3.7 | 3.4 | 3.3 | 3.4 | 3.6 | 3.7 | 3.6 | 3.4 |
| 30% | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.3 | 3.2 | 3.4 | 3.6 | 3.7 | 3.6 | 3.4 |
| 40% | 3.1 | 3.2 | 3.4 | 3.5 | 3.5 | 3.2 | 3.1 | 3.3 | 3.6 | 3.7 | 3.5 | 3.3 |
| 50% | 3.1 | 3.2 | 3.4 | 3.4 | 3.4 | 3.1 | 3.1 | 3.3 | 3.5 | 3.7 | 3.5 | 3.3 |
| 60% | 3.1 | 3.2 | 3.3 | 3.4 | 3.4 | 3.0 | 3.1 | 3.3 | 3.5 | 3.6 | 3.5 | 3.3 |
| 70% | 3.1 | 3.1 | 3.3 | 3.3 | 3.3 | 3.0 | 3.0 | 3.2 | 3.5 | 3.6 | 3.5 | 3.3 |
| 80% | 3.0 | 3.1 | 3.2 | 3.3 | 3.1 | 2.9 | 3.0 | 3.1 | 3.5 | 3.6 | 3.5 | 3.3 |
| 90% | 3.0 | 3.0 | 3.1 | 3.2 | 3.1 | 2.7 | 2.9 | 3.0 | 3.4 | 3.5 | 3.4 | 3.2 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3.1 | 3.2 | 3.4 | 3.4 | 3.5 | 3.1 | 3.1 | 3.3 | 3.5 | 3.6 | 3.5 | 3.3 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 3.2 | 3.2 | 3.3 | 3.4 | 3.2 | 3.0 | 3.0 | 3.2 | 3.5 | 3.7 | 3.5 | 3.4 |
| Above Normal (16%) | 3.0 | 3.1 | 3.1 | 3.2 | 3.8 | 3.1 | 3.2 | 3.3 | 3.5 | 3.6 | 3.5 | 3.4 |
| Below Normal (13%) | 3.2 | 3.2 | 3.5 | 3.5 | 3.7 | 3.2 | 3.3 | 3.1 | 3.5 | 3.5 | 3.5 | 3.1 |
| Dry (24%) | 3.1 | 3.2 | 3.4 | 3.4 | 3.5 | 3.2 | 3.1 | 3.4 | 3.5 | 3.7 | 3.6 | 3.4 |
| Critical (15%) | 3.1 | 3.2 | 3.4 | 3.4 | 3.4 | 3.2 | 3.2 | 3.4 | 3.5 | 3.6 | 3.4 | 3.3 |

Alternative 2B

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3.3 | 3.4 | 3.5 | 3.6 | 4.0 | 3.5 | 3.4 | 3.5 | 3.6 | 3.7 | 3.6 | 3.5 |
| 20% | 3.2 | 3.3 | 3.4 | 3.5 | 3.7 | 3.4 | 3.3 | 3.4 | 3.6 | 3.7 | 3.6 | 3.4 |
| 30% | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.3 | 3.2 | 3.4 | 3.6 | 3.7 | 3.6 | 3.4 |
| 40% | 3.1 | 3.2 | 3.4 | 3.5 | 3.5 | 3.2 | 3.1 | 3.3 | 3.6 | 3.7 | 3.5 | 3.3 |
| 50% | 3.1 | 3.2 | 3.4 | 3.4 | 3.4 | 3.1 | 3.1 | 3.3 | 3.5 | 3.7 | 3.5 | 3.3 |
| 60% | 3.1 | 3.1 | 3.3 | 3.4 | 3.4 | 3.0 | 3.1 | 3.2 | 3.5 | 3.6 | 3.5 | 3.3 |
| 70% | 3.1 | 3.1 | 3.3 | 3.3 | 3.3 | 3.0 | 3.0 | 3.2 | 3.5 | 3.6 | 3.5 | 3.3 |
| 80% | 3.0 | 3.1 | 3.3 | 3.3 | 3.1 | 2.9 | 3.0 | 3.2 | 3.5 | 3.6 | 3.4 | 3.3 |
| 90% | 3.0 | 3.0 | 3.1 | 3.2 | 3.1 | 2.7 | 3.0 | 3.0 | 3.4 | 3.5 | 3.4 | 3.2 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 3.1 | 3.2 | 3.4 | 3.4 | 3.5 | 3.1 | 3.1 | 3.3 | 3.5 | 3.6 | 3.5 | 3.3 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 3.2 | 3.2 | 3.3 | 3.4 | 3.2 | 3.0 | 3.0 | 3.2 | 3.5 | 3.7 | 3.5 | 3.4 |
| Above Normal (16%) | 3.0 | 3.1 | 3.1 | 3.2 | 3.8 | 3.1 | 3.2 | 3.3 | 3.5 | 3.6 | 3.5 | 3.3 |
| Below Normal (13%) | 3.2 | 3.2 | 3.5 | 3.5 | 3.7 | 3.2 | 3.3 | 3.2 | 3.5 | 3.5 | 3.4 | 3.1 |
| Dry (24%) | 3.1 | 3.1 | 3.4 | 3.4 | 3.5 | 3.2 | 3.1 | 3.4 | 3.5 | 3.7 | 3.6 | 3.4 |
| Critical (15%) | 3.1 | 3.2 | 3.4 | 3.4 | 3.4 | 3.2 | 3.2 | 3.4 | 3.5 | 3.6 | 3.4 | 3.2 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 20% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 30% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Above Normal (16%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 |
| Below Normal (13%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dry (24%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Critical (15%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 3-2-1. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation

Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -0.8 | -0.9 | -0.9 | -0.8 | 0.3 | -0.4 | -0.5 | -0.8 | -0.9 | -0.8 | -0.7 | -0.6 |
| 20% | -0.8 | -0.9 | -1.0 | -0.9 | -0.2 | -0.6 | -0.7 | -0.9 | -0.9 | -0.8 | -0.7 | -0.6 |
| 30% | -0.9 | -1.0 | -1.1 | -0.9 | -0.4 | -0.7 | -0.8 | -0.9 | -1.0 | -0.9 | -0.8 | -0.7 |
| 40% | -0.9 | -1.1 | -1.1 | -1.0 | -0.8 | -0.8 | -0.9 | -1.1 | -1.0 | -0.9 | -0.8 | -0.8 |
| 50% | -1.0 | -1.1 | -1.2 | -1.0 | -0.8 | -0.8 | -1.0 | -1.1 | -1.0 | -0.9 | -0.8 | -0.8 |
| 60% | -1.0 | -1.2 | -1.2 | -1.1 | -0.9 | -0.9 | -1.0 | -1.1 | -1.0 | -0.9 | -0.8 | -0.8 |
| 70% | -1.1 | -1.3 | -1.2 | -1.1 | -0.9 | -1.1 | -1.1 | -1.1 | -1.0 | -0.9 | -0.9 | -0.8 |
| 80% | -1.1 | -1.3 | -1.2 | -1.1 | -0.9 | -1.2 | -1.1 | -1.2 | -1.1 | -1.0 | -0.9 | -0.8 |
| 90% | -1.1 | -1.3 | -1.3 | -1.2 | -1.1 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.9 | -0.9 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -1.0 | -1.1 | -1.1 | -1.0 | -0.6 | -0.8 | -0.9 | -1.0 | -1.0 | -0.9 | -0.8 | -0.8 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | -1.0 | -1.2 | -1.2 | -1.1 | -1.0 | -1.1 | -1.1 | -1.2 | -1.1 | -0.9 | -0.9 | -0.8 |
| Above Normal (16%) | -1.1 | -1.1 | -1.3 | -1.1 | 0.2 | -0.8 | -0.7 | -1.0 | -0.9 | -0.9 | -0.8 | -0.7 |
| Below Normal (13%) | -0.8 | -1.1 | -1.0 | -0.9 | -0.3 | -0.7 | -0.7 | -1.2 | -1.0 | -1.0 | -0.9 | -1.0 |
| Dry (24%) | -1.0 | -1.2 | -1.1 | -1.1 | -0.7 | -0.8 | -1.0 | -1.0 | -1.0 | -0.9 | -0.8 | -0.7 |
| Critical (15%) | -0.9 | -1.0 | -0.9 | -1.0 | -0.5 | -0.5 | -0.7 | -0.9 | -0.9 | -0.8 | -0.8 | -0.7 |

Alternative 2B

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -0.8 | -0.9 | -0.9 | -0.8 | 0.3 | -0.3 | -0.6 | -0.8 | -0.9 | -0.8 | -0.7 | -0.6 |
| 20% | -0.8 | -1.0 | -1.0 | -0.9 | -0.2 | -0.6 | -0.7 | -0.9 | -0.9 | -0.8 | -0.7 | -0.7 |
| 30% | -0.9 | -1.0 | -1.1 | -0.9 | -0.4 | -0.7 | -0.8 | -0.9 | -1.0 | -0.9 | -0.8 | -0.7 |
| 40% | -0.9 | -1.1 | -1.1 | -1.0 | -0.8 | -0.8 | -0.9 | -1.1 | -1.0 | -0.9 | -0.8 | -0.8 |
| 50% | -1.0 | -1.1 | -1.2 | -1.1 | -0.9 | -0.8 | -1.0 | -1.1 | -1.0 | -0.9 | -0.8 | -0.8 |
| 60% | -1.0 | -1.2 | -1.2 | -1.1 | -0.9 | -0.9 | -1.0 | -1.1 | -1.0 | -0.9 | -0.8 | -0.8 |
| 70% | -1.1 | -1.3 | -1.2 | -1.1 | -0.9 | -1.1 | -1.1 | -1.1 | -1.0 | -0.9 | -0.8 | -0.8 |
| 80% | -1.1 | -1.3 | -1.2 | -1.1 | -0.9 | -1.2 | -1.1 | -1.2 | -1.0 | -1.0 | -0.9 | -0.8 |
| 90% | -1.1 | -1.3 | -1.3 | -1.2 | -1.1 | -1.2 | -1.2 | -1.2 | -1.1 | -1.0 | -0.9 | -0.9 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -1.0 | -1.1 | -1.1 | -1.0 | -0.6 | -0.8 | -0.9 | -1.0 | -1.0 | -0.9 | -0.8 | -0.8 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | -1.0 | -1.2 | -1.2 | -1.1 | -1.0 | -1.1 | -1.1 | -1.2 | -1.1 | -0.9 | -0.9 | -0.8 |
| Above Normal (16%) | -1.1 | -1.1 | -1.3 | -1.1 | 0.2 | -0.8 | -0.8 | -1.0 | -0.9 | -0.9 | -0.8 | -0.8 |
| Below Normal (13%) | -0.8 | -1.1 | -1.0 | -0.9 | -0.3 | -0.7 | -0.7 | -1.1 | -1.0 | -1.0 | -0.9 | -1.0 |
| Dry (24%) | -1.0 | -1.2 | -1.1 | -1.1 | -0.7 | -0.7 | -1.0 | -1.0 | -1.0 | -0.9 | -0.8 | -0.7 |
| Critical (15%) | -0.9 | -1.0 | -0.9 | -1.0 | -0.5 | -0.5 | -0.7 | -0.9 | -0.9 | -0.8 | -0.8 | -0.8 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 20% | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 |
| 30% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Above Normal (16%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Below Normal (13%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dry (24%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Critical (15%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 4-1-1. San Joaquin River at Jersey Point, Monthly Averaged Daily Maximum Elevation

Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3.0 | 3.0 | 3.1 | 3.2 | 3.5 | 3.0 | 2.9 | 3.2 | 3.3 | 3.4 | 3.3 | 3.2 |
| 20% | 2.9 | 2.9 | 3.1 | 3.1 | 3.2 | 3.0 | 2.8 | 3.1 | 3.3 | 3.4 | 3.3 | 3.1 |
| 30% | 2.9 | 2.9 | 3.0 | 3.1 | 3.2 | 2.9 | 2.8 | 3.1 | 3.3 | 3.4 | 3.2 | 3.0 |
| 40% | 2.8 | 2.9 | 3.0 | 3.0 | 3.1 | 2.8 | 2.8 | 3.0 | 3.2 | 3.3 | 3.2 | 3.0 |
| 50% | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 2.7 | 2.8 | 3.0 | 3.2 | 3.3 | 3.2 | 3.0 |
| 60% | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 2.7 | 2.7 | 2.8 | 3.1 | 3.3 | 3.2 | 3.0 |
| 70% | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 | 2.6 | 2.7 | 2.8 | 3.1 | 3.3 | 3.1 | 2.9 |
| 80% | 2.7 | 2.8 | 2.9 | 2.9 | 2.8 | 2.6 | 2.7 | 2.8 | 3.1 | 3.2 | 3.1 | 2.9 |
| 90% | 2.7 | 2.7 | 2.8 | 2.8 | 2.7 | 2.4 | 2.6 | 2.7 | 3.1 | 3.1 | 3.0 | 2.9 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 2.7 | 2.8 | 2.9 | 3.2 | 3.3 | 3.2 | 3.0 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 2.9 | 2.9 | 3.0 | 3.1 | 2.9 | 2.7 | 2.7 | 2.9 | 3.2 | 3.4 | 3.2 | 3.1 |
| Above Normal (16%) | 2.6 | 2.7 | 2.7 | 2.8 | 3.3 | 2.7 | 2.8 | 2.9 | 3.2 | 3.2 | 3.2 | 3.0 |
| Below Normal (13%) | 2.9 | 2.8 | 3.1 | 3.1 | 3.2 | 2.8 | 2.9 | 2.8 | 3.1 | 3.1 | 3.1 | 2.8 |
| Dry (24%) | 2.8 | 2.8 | 3.0 | 3.0 | 3.1 | 2.8 | 2.7 | 3.0 | 3.2 | 3.3 | 3.3 | 3.1 |
| Critical (15%) | 2.8 | 2.9 | 3.0 | 3.0 | 3.0 | 2.8 | 2.8 | 3.0 | 3.2 | 3.3 | 3.1 | 2.9 |

Alternative 2B

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3.0 | 3.0 | 3.1 | 3.2 | 3.5 | 3.1 | 2.9 | 3.2 | 3.3 | 3.4 | 3.3 | 3.2 |
| 20% | 2.9 | 2.9 | 3.1 | 3.1 | 3.2 | 3.0 | 2.8 | 3.1 | 3.3 | 3.4 | 3.3 | 3.1 |
| 30% | 2.9 | 2.9 | 3.0 | 3.1 | 3.1 | 2.9 | 2.8 | 3.1 | 3.3 | 3.4 | 3.2 | 3.0 |
| 40% | 2.8 | 2.9 | 3.0 | 3.0 | 3.1 | 2.8 | 2.8 | 3.0 | 3.2 | 3.3 | 3.2 | 3.0 |
| 50% | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 2.7 | 2.7 | 3.0 | 3.2 | 3.3 | 3.2 | 3.0 |
| 60% | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 2.7 | 2.7 | 2.8 | 3.2 | 3.3 | 3.2 | 3.0 |
| 70% | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 | 2.6 | 2.7 | 2.8 | 3.1 | 3.3 | 3.1 | 2.9 |
| 80% | 2.7 | 2.8 | 2.9 | 2.9 | 2.7 | 2.6 | 2.7 | 2.8 | 3.1 | 3.2 | 3.1 | 2.9 |
| 90% | 2.7 | 2.6 | 2.8 | 2.8 | 2.7 | 2.4 | 2.6 | 2.7 | 3.1 | 3.1 | 3.0 | 2.8 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 2.7 | 2.8 | 2.9 | 3.2 | 3.3 | 3.2 | 3.0 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 2.9 | 2.9 | 3.0 | 3.1 | 2.8 | 2.7 | 2.7 | 2.9 | 3.2 | 3.4 | 3.2 | 3.1 |
| Above Normal (16%) | 2.6 | 2.7 | 2.7 | 2.8 | 3.3 | 2.7 | 2.7 | 2.9 | 3.2 | 3.2 | 3.1 | 3.0 |
| Below Normal (13%) | 2.9 | 2.8 | 3.1 | 3.1 | 3.2 | 2.8 | 2.9 | 2.8 | 3.1 | 3.1 | 3.1 | 2.8 |
| Dry (24%) | 2.8 | 2.8 | 3.0 | 3.0 | 3.1 | 2.8 | 2.7 | 3.0 | 3.2 | 3.3 | 3.3 | 3.1 |
| Critical (15%) | 2.8 | 2.9 | 3.0 | 3.0 | 3.0 | 2.8 | 2.8 | 3.0 | 3.2 | 3.3 | 3.1 | 2.9 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 20% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 30% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Above Normal (16%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Below Normal (13%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dry (24%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Critical (15%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 4-2-1. San Joaquin River at Jersey Point, Monthly Averaged Daily Minimum Elevation

Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -0.5 | -0.6 | -0.6 | -0.5 | 0.2 | -0.2 | -0.3 | -0.5 | -0.5 | -0.4 | -0.3 | -0.3 |
| 20% | -0.5 | -0.6 | -0.7 | -0.6 | -0.1 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.4 | -0.3 |
| 30% | -0.5 | -0.7 | -0.7 | -0.6 | -0.2 | -0.4 | -0.5 | -0.5 | -0.6 | -0.5 | -0.4 | -0.4 |
| 40% | -0.6 | -0.7 | -0.7 | -0.7 | -0.5 | -0.5 | -0.5 | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 |
| 50% | -0.6 | -0.8 | -0.8 | -0.7 | -0.5 | -0.6 | -0.7 | -0.7 | -0.6 | -0.5 | -0.5 | -0.4 |
| 60% | -0.6 | -0.8 | -0.8 | -0.7 | -0.6 | -0.7 | -0.7 | -0.7 | -0.6 | -0.6 | -0.5 | -0.4 |
| 70% | -0.7 | -0.9 | -0.9 | -0.7 | -0.6 | -0.8 | -0.7 | -0.8 | -0.7 | -0.6 | -0.5 | -0.5 |
| 80% | -0.7 | -0.9 | -0.9 | -0.8 | -0.6 | -0.8 | -0.8 | -0.8 | -0.7 | -0.6 | -0.5 | -0.5 |
| 90% | -0.7 | -0.9 | -0.9 | -0.8 | -0.7 | -0.8 | -0.8 | -0.9 | -0.7 | -0.6 | -0.5 | -0.5 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -0.6 | -0.8 | -0.7 | -0.7 | -0.4 | -0.5 | -0.6 | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | -0.6 | -0.8 | -0.8 | -0.7 | -0.7 | -0.7 | -0.8 | -0.8 | -0.7 | -0.5 | -0.5 | -0.4 |
| Above Normal (16%) | -0.7 | -0.8 | -0.9 | -0.8 | 0.0 | -0.6 | -0.5 | -0.6 | -0.5 | -0.6 | -0.5 | -0.4 |
| Below Normal (13%) | -0.4 | -0.7 | -0.6 | -0.5 | -0.1 | -0.3 | -0.3 | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 |
| Dry (24%) | -0.7 | -0.8 | -0.8 | -0.7 | -0.4 | -0.5 | -0.7 | -0.6 | -0.6 | -0.6 | -0.4 | -0.4 |
| Critical (15%) | -0.5 | -0.7 | -0.6 | -0.6 | -0.3 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 |

Alternative 2B

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -0.5 | -0.6 | -0.6 | -0.5 | 0.2 | -0.2 | -0.3 | -0.5 | -0.5 | -0.4 | -0.3 | -0.3 |
| 20% | -0.5 | -0.6 | -0.6 | -0.6 | -0.1 | -0.3 | -0.4 | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 |
| 30% | -0.5 | -0.7 | -0.7 | -0.6 | -0.2 | -0.4 | -0.5 | -0.5 | -0.6 | -0.5 | -0.4 | -0.4 |
| 40% | -0.6 | -0.7 | -0.7 | -0.7 | -0.5 | -0.5 | -0.6 | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 |
| 50% | -0.6 | -0.8 | -0.8 | -0.7 | -0.5 | -0.6 | -0.7 | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 |
| 60% | -0.6 | -0.8 | -0.8 | -0.7 | -0.6 | -0.7 | -0.7 | -0.7 | -0.6 | -0.5 | -0.5 | -0.4 |
| 70% | -0.7 | -0.9 | -0.9 | -0.7 | -0.6 | -0.8 | -0.7 | -0.8 | -0.7 | -0.6 | -0.5 | -0.5 |
| 80% | -0.7 | -0.9 | -0.9 | -0.8 | -0.6 | -0.8 | -0.8 | -0.8 | -0.7 | -0.6 | -0.5 | -0.5 |
| 90% | -0.7 | -1.0 | -0.9 | -0.8 | -0.7 | -0.8 | -0.8 | -0.8 | -0.7 | -0.6 | -0.5 | -0.5 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -0.6 | -0.8 | -0.7 | -0.7 | -0.4 | -0.5 | -0.6 | -0.7 | -0.6 | -0.5 | -0.4 | -0.4 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | -0.6 | -0.8 | -0.8 | -0.7 | -0.7 | -0.7 | -0.8 | -0.8 | -0.7 | -0.5 | -0.5 | -0.4 |
| Above Normal (16%) | -0.7 | -0.8 | -0.9 | -0.8 | 0.0 | -0.5 | -0.5 | -0.6 | -0.5 | -0.6 | -0.5 | -0.4 |
| Below Normal (13%) | -0.4 | -0.7 | -0.6 | -0.5 | -0.1 | -0.3 | -0.4 | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 |
| Dry (24%) | -0.7 | -0.9 | -0.8 | -0.7 | -0.4 | -0.5 | -0.7 | -0.6 | -0.6 | -0.5 | -0.4 | -0.3 |
| Critical (15%) | -0.5 | -0.7 | -0.6 | -0.6 | -0.3 | -0.3 | -0.5 | -0.6 | -0.5 | -0.5 | -0.4 | -0.4 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 20% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 30% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Above Normal (16%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Below Normal (13%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dry (24%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Critical (15%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 5-1-1. San Joaquin River at Prisoners Point, Monthly Averaged Daily Maximum Elevation

Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3.1 | 3.1 | 3.2 | 3.3 | 3.7 | 3.2 | 3.1 | 3.3 | 3.4 | 3.5 | 3.4 | 3.3 |
| 20% | 3.1 | 3.0 | 3.2 | 3.2 | 3.4 | 3.1 | 3.0 | 3.2 | 3.4 | 3.5 | 3.4 | 3.2 |
| 30% | 3.0 | 3.0 | 3.1 | 3.2 | 3.3 | 3.0 | 3.0 | 3.2 | 3.4 | 3.5 | 3.4 | 3.2 |
| 40% | 2.9 | 3.0 | 3.1 | 3.1 | 3.2 | 2.9 | 2.9 | 3.2 | 3.4 | 3.5 | 3.3 | 3.1 |
| 50% | 2.9 | 2.9 | 3.1 | 3.1 | 3.2 | 2.8 | 2.9 | 3.1 | 3.3 | 3.4 | 3.3 | 3.1 |
| 60% | 2.9 | 2.9 | 3.1 | 3.1 | 3.1 | 2.8 | 2.8 | 3.0 | 3.3 | 3.4 | 3.3 | 3.1 |
| 70% | 2.9 | 2.9 | 3.0 | 3.0 | 3.0 | 2.7 | 2.8 | 2.9 | 3.2 | 3.4 | 3.3 | 3.1 |
| 80% | 2.8 | 2.9 | 3.0 | 3.0 | 2.9 | 2.7 | 2.8 | 2.9 | 3.2 | 3.3 | 3.2 | 3.0 |
| 90% | 2.8 | 2.8 | 2.9 | 2.9 | 2.8 | 2.5 | 2.7 | 2.8 | 3.2 | 3.2 | 3.1 | 3.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2.9 | 2.9 | 3.1 | 3.1 | 3.2 | 2.9 | 2.9 | 3.1 | 3.3 | 3.4 | 3.3 | 3.1 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 3.0 | 3.0 | 3.1 | 3.2 | 3.0 | 2.8 | 2.8 | 3.0 | 3.3 | 3.5 | 3.3 | 3.2 |
| Above Normal (16%) | 2.8 | 2.8 | 2.8 | 2.9 | 3.4 | 2.8 | 2.9 | 3.0 | 3.3 | 3.3 | 3.3 | 3.1 |
| Below Normal (13%) | 3.0 | 2.9 | 3.2 | 3.2 | 3.4 | 2.9 | 3.1 | 2.9 | 3.2 | 3.2 | 3.2 | 2.9 |
| Dry (24%) | 2.9 | 2.9 | 3.1 | 3.1 | 3.3 | 2.9 | 2.9 | 3.1 | 3.3 | 3.4 | 3.4 | 3.2 |
| Critical (15%) | 2.9 | 3.0 | 3.2 | 3.1 | 3.2 | 2.9 | 2.9 | 3.1 | 3.3 | 3.4 | 3.2 | 3.0 |

Alternative 2B

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3.1 | 3.1 | 3.2 | 3.3 | 3.7 | 3.2 | 3.1 | 3.3 | 3.4 | 3.5 | 3.4 | 3.3 |
| 20% | 3.1 | 3.0 | 3.2 | 3.2 | 3.4 | 3.1 | 3.0 | 3.2 | 3.4 | 3.5 | 3.4 | 3.2 |
| 30% | 3.0 | 3.0 | 3.1 | 3.2 | 3.3 | 3.0 | 2.9 | 3.2 | 3.4 | 3.5 | 3.4 | 3.2 |
| 40% | 2.9 | 3.0 | 3.1 | 3.2 | 3.2 | 2.9 | 2.9 | 3.2 | 3.3 | 3.5 | 3.3 | 3.1 |
| 50% | 2.9 | 3.0 | 3.1 | 3.1 | 3.2 | 2.8 | 2.9 | 3.1 | 3.3 | 3.4 | 3.3 | 3.1 |
| 60% | 2.9 | 2.9 | 3.1 | 3.1 | 3.1 | 2.8 | 2.8 | 2.9 | 3.3 | 3.4 | 3.3 | 3.1 |
| 70% | 2.9 | 2.9 | 3.0 | 3.0 | 3.0 | 2.8 | 2.8 | 2.9 | 3.2 | 3.4 | 3.3 | 3.1 |
| 80% | 2.8 | 2.9 | 3.0 | 3.0 | 2.8 | 2.7 | 2.8 | 2.9 | 3.2 | 3.3 | 3.2 | 3.0 |
| 90% | 2.8 | 2.8 | 2.9 | 2.9 | 2.8 | 2.5 | 2.7 | 2.8 | 3.2 | 3.2 | 3.1 | 3.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2.9 | 2.9 | 3.1 | 3.1 | 3.2 | 2.9 | 2.9 | 3.1 | 3.3 | 3.4 | 3.3 | 3.1 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 3.0 | 3.0 | 3.1 | 3.2 | 3.0 | 2.8 | 2.8 | 3.0 | 3.3 | 3.5 | 3.3 | 3.2 |
| Above Normal (16%) | 2.8 | 2.8 | 2.8 | 2.9 | 3.4 | 2.8 | 2.9 | 3.0 | 3.3 | 3.3 | 3.3 | 3.1 |
| Below Normal (13%) | 3.0 | 2.9 | 3.2 | 3.2 | 3.3 | 2.9 | 3.1 | 2.9 | 3.2 | 3.2 | 3.2 | 2.9 |
| Dry (24%) | 2.9 | 2.9 | 3.1 | 3.1 | 3.3 | 2.9 | 2.9 | 3.1 | 3.3 | 3.4 | 3.4 | 3.2 |
| Critical (15%) | 2.9 | 3.0 | 3.2 | 3.1 | 3.2 | 2.9 | 2.9 | 3.1 | 3.3 | 3.4 | 3.2 | 3.0 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 20% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 30% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Above Normal (16%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Below Normal (13%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dry (24%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Critical (15%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 5-2-1. San Joaquin River at Prisoners Point, Monthly Averaged Daily Minimum Elevation

Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -0.6 | -0.7 | -0.6 | -0.6 | 0.1 | -0.3 | -0.3 | -0.5 | -0.6 | -0.5 | -0.5 | -0.4 |
| 20% | -0.6 | -0.7 | -0.8 | -0.6 | -0.2 | -0.4 | -0.4 | -0.6 | -0.6 | -0.6 | -0.5 | -0.4 |
| 30% | -0.6 | -0.8 | -0.8 | -0.7 | -0.3 | -0.5 | -0.5 | -0.6 | -0.7 | -0.6 | -0.5 | -0.5 |
| 40% | -0.6 | -0.8 | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 | -0.7 | -0.7 | -0.6 | -0.5 | -0.5 |
| 50% | -0.7 | -0.9 | -0.9 | -0.8 | -0.6 | -0.6 | -0.7 | -0.8 | -0.7 | -0.6 | -0.5 | -0.5 |
| 60% | -0.7 | -0.9 | -0.9 | -0.8 | -0.7 | -0.7 | -0.7 | -0.8 | -0.7 | -0.6 | -0.5 | -0.5 |
| 70% | -0.7 | -0.9 | -0.9 | -0.8 | -0.7 | -0.9 | -0.8 | -0.8 | -0.7 | -0.6 | -0.6 | -0.6 |
| 80% | -0.8 | -1.0 | -0.9 | -0.9 | -0.7 | -0.9 | -0.8 | -0.8 | -0.7 | -0.7 | -0.6 | -0.6 |
| 90% | -0.8 | -1.0 | -1.0 | -0.9 | -0.8 | -0.9 | -0.9 | -0.9 | -0.8 | -0.7 | -0.6 | -0.6 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -0.7 | -0.9 | -0.8 | -0.7 | -0.4 | -0.6 | -0.6 | -0.7 | -0.7 | -0.6 | -0.5 | -0.5 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | -0.7 | -0.9 | -0.9 | -0.8 | -0.8 | -0.8 | -0.8 | -0.9 | -0.7 | -0.6 | -0.6 | -0.5 |
| Above Normal (16%) | -0.8 | -0.9 | -1.0 | -0.9 | 0.0 | -0.6 | -0.5 | -0.6 | -0.6 | -0.7 | -0.6 | -0.5 |
| Below Normal (13%) | -0.5 | -0.8 | -0.7 | -0.6 | -0.2 | -0.4 | -0.4 | -0.8 | -0.7 | -0.7 | -0.5 | -0.7 |
| Dry (24%) | -0.7 | -0.9 | -0.9 | -0.8 | -0.4 | -0.6 | -0.7 | -0.7 | -0.7 | -0.6 | -0.5 | -0.5 |
| Critical (15%) | -0.6 | -0.8 | -0.7 | -0.7 | -0.4 | -0.4 | -0.5 | -0.6 | -0.6 | -0.6 | -0.5 | -0.5 |

Alternative 2B

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -0.6 | -0.7 | -0.6 | -0.6 | 0.1 | -0.2 | -0.4 | -0.5 | -0.6 | -0.5 | -0.4 | -0.4 |
| 20% | -0.6 | -0.7 | -0.7 | -0.6 | -0.2 | -0.4 | -0.5 | -0.6 | -0.6 | -0.6 | -0.5 | -0.4 |
| 30% | -0.6 | -0.8 | -0.8 | -0.7 | -0.3 | -0.5 | -0.5 | -0.6 | -0.7 | -0.6 | -0.5 | -0.5 |
| 40% | -0.6 | -0.8 | -0.8 | -0.7 | -0.6 | -0.5 | -0.6 | -0.7 | -0.7 | -0.6 | -0.5 | -0.5 |
| 50% | -0.7 | -0.9 | -0.9 | -0.8 | -0.6 | -0.6 | -0.7 | -0.8 | -0.7 | -0.6 | -0.5 | -0.5 |
| 60% | -0.7 | -0.9 | -0.9 | -0.8 | -0.6 | -0.7 | -0.7 | -0.8 | -0.7 | -0.6 | -0.6 | -0.5 |
| 70% | -0.8 | -1.0 | -0.9 | -0.8 | -0.7 | -0.9 | -0.8 | -0.8 | -0.7 | -0.6 | -0.6 | -0.5 |
| 80% | -0.8 | -1.0 | -0.9 | -0.9 | -0.7 | -0.9 | -0.8 | -0.9 | -0.7 | -0.7 | -0.6 | -0.6 |
| 90% | -0.8 | -1.0 | -1.0 | -0.9 | -0.8 | -0.9 | -0.9 | -0.9 | -0.8 | -0.7 | -0.6 | -0.6 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -0.7 | -0.9 | -0.8 | -0.7 | -0.4 | -0.6 | -0.6 | -0.7 | -0.7 | -0.6 | -0.5 | -0.5 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | -0.7 | -0.9 | -0.9 | -0.8 | -0.8 | -0.8 | -0.8 | -0.9 | -0.8 | -0.6 | -0.6 | -0.5 |
| Above Normal (16%) | -0.8 | -0.9 | -1.0 | -0.9 | 0.0 | -0.6 | -0.5 | -0.7 | -0.6 | -0.7 | -0.6 | -0.5 |
| Below Normal (13%) | -0.5 | -0.8 | -0.7 | -0.6 | -0.2 | -0.4 | -0.4 | -0.9 | -0.7 | -0.7 | -0.6 | -0.7 |
| Dry (24%) | -0.7 | -0.9 | -0.8 | -0.8 | -0.4 | -0.6 | -0.7 | -0.7 | -0.7 | -0.6 | -0.5 | -0.5 |
| Critical (15%) | -0.6 | -0.8 | -0.7 | -0.7 | -0.4 | -0.4 | -0.5 | -0.6 | -0.6 | -0.5 | -0.5 | -0.5 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 20% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 30% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 50% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90% | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Above Normal (16%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Below Normal (13%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dry (24%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Critical (15%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 6-1-1. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation

Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2.4 | 2.4 | 2.8 | 2.8 | 3.6 | 3.1 | 3.3 | 3.2 | 2.8 | 2.8 | 2.7 | 2.7 |
| 20% | 2.4 | 2.3 | 2.8 | 2.8 | 3.3 | 2.8 | 3.2 | 3.1 | 2.8 | 2.7 | 2.7 | 2.6 |
| 30% | 2.4 | 2.3 | 2.6 | 2.7 | 2.9 | 2.7 | 3.1 | 2.8 | 2.7 | 2.6 | 2.6 | 2.6 |
| 40% | 2.3 | 2.3 | 2.5 | 2.7 | 2.7 | 2.5 | 3.0 | 2.8 | 2.7 | 2.6 | 2.6 | 2.4 |
| 50% | 2.3 | 2.2 | 2.4 | 2.6 | 2.7 | 2.5 | 2.8 | 2.7 | 2.7 | 2.5 | 2.5 | 2.4 |
| 60% | 2.2 | 2.2 | 2.4 | 2.5 | 2.6 | 2.4 | 2.6 | 2.6 | 2.7 | 2.4 | 2.5 | 2.3 |
| 70% | 2.2 | 2.1 | 2.3 | 2.5 | 2.5 | 2.3 | 2.5 | 2.4 | 2.6 | 2.3 | 2.5 | 2.3 |
| 80% | 2.2 | 2.1 | 2.3 | 2.5 | 2.5 | 2.3 | 2.5 | 2.4 | 2.5 | 2.3 | 2.5 | 2.3 |
| 90% | 2.2 | 2.0 | 2.2 | 2.4 | 2.2 | 2.2 | 2.4 | 2.3 | 2.4 | 2.1 | 2.3 | 2.2 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2.3 | 2.2 | 2.5 | 2.6 | 2.9 | 2.7 | 2.8 | 2.8 | 2.7 | 2.5 | 2.5 | 2.4 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 2.4 | 2.4 | 2.5 | 2.7 | 2.4 | 2.4 | 2.5 | 2.5 | 2.6 | 2.6 | 2.7 | 2.6 |
| Above Normal (16%) | 2.2 | 2.1 | 2.2 | 2.4 | 3.0 | 2.3 | 3.1 | 2.8 | 2.7 | 2.2 | 2.4 | 2.3 |
| Below Normal (13%) | 2.4 | 2.1 | 2.8 | 2.7 | 3.0 | 2.4 | 3.0 | 2.4 | 2.2 | 2.0 | 2.6 | 2.3 |
| Dry (24%) | 2.3 | 2.3 | 2.4 | 2.6 | 2.9 | 2.7 | 2.7 | 2.7 | 2.7 | 2.4 | 2.5 | 2.4 |
| Critical (15%) | 2.2 | 2.1 | 2.6 | 2.6 | 3.1 | 3.2 | 3.1 | 3.1 | 2.8 | 2.7 | 2.5 | 2.3 |

Alternative 2B

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2.7 | 2.6 | 2.8 | 2.8 | 3.5 | 3.2 | 3.0 | 3.1 | 2.8 | 2.9 | 2.8 | 2.8 |
| 20% | 2.6 | 2.6 | 2.8 | 2.8 | 3.3 | 2.7 | 2.9 | 2.9 | 2.7 | 2.7 | 2.7 | 2.7 |
| 30% | 2.6 | 2.5 | 2.6 | 2.7 | 2.9 | 2.7 | 2.8 | 2.9 | 2.7 | 2.6 | 2.7 | 2.7 |
| 40% | 2.5 | 2.5 | 2.5 | 2.7 | 2.7 | 2.7 | 2.8 | 2.8 | 2.6 | 2.6 | 2.6 | 2.5 |
| 50% | 2.5 | 2.5 | 2.5 | 2.6 | 2.7 | 2.5 | 2.7 | 2.7 | 2.6 | 2.5 | 2.6 | 2.5 |
| 60% | 2.5 | 2.4 | 2.4 | 2.5 | 2.6 | 2.5 | 2.7 | 2.5 | 2.6 | 2.4 | 2.5 | 2.5 |
| 70% | 2.5 | 2.4 | 2.3 | 2.5 | 2.5 | 2.4 | 2.7 | 2.5 | 2.5 | 2.3 | 2.5 | 2.4 |
| 80% | 2.4 | 2.3 | 2.3 | 2.4 | 2.4 | 2.2 | 2.6 | 2.5 | 2.4 | 2.2 | 2.5 | 2.4 |
| 90% | 2.4 | 2.2 | 2.2 | 2.4 | 2.2 | 2.0 | 2.6 | 2.5 | 2.4 | 2.1 | 2.3 | 2.3 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2.5 | 2.4 | 2.5 | 2.6 | 2.9 | 2.7 | 2.8 | 2.8 | 2.6 | 2.5 | 2.6 | 2.5 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 2.6 | 2.5 | 2.5 | 2.7 | 2.4 | 2.4 | 2.6 | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 |
| Above Normal (16%) | 2.4 | 2.3 | 2.2 | 2.4 | 3.0 | 2.4 | 2.7 | 2.7 | 2.6 | 2.2 | 2.4 | 2.4 |
| Below Normal (13%) | 2.6 | 2.4 | 2.7 | 2.7 | 2.9 | 2.7 | 2.8 | 2.5 | 2.2 | 2.1 | 2.6 | 2.4 |
| Dry (24%) | 2.6 | 2.5 | 2.5 | 2.6 | 2.9 | 2.7 | 2.7 | 2.8 | 2.6 | 2.5 | 2.6 | 2.5 |
| Critical (15%) | 2.5 | 2.4 | 2.6 | 2.6 | 3.1 | 3.1 | 3.0 | 3.1 | 2.8 | 2.7 | 2.5 | 2.5 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Maximum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | -0.3 | -0.1 | -0.1 | 0.1 | 0.0 | 0.1 |
| 20% | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.2 | 0.0 | 0.0 | 0.0 | 0.1 |
| 30% | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | -0.2 | 0.0 | -0.1 | 0.0 | 0.0 | 0.1 |
| 40% | 0.2 | 0.3 | 0.0 | 0.0 | 0.0 | 0.2 | -0.2 | 0.1 | -0.1 | 0.0 | 0.0 | 0.1 |
| 50% | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | -0.1 | 0.0 | 0.0 | 0.1 |
| 60% | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.0 | 0.1 |
| 70% | 0.3 | 0.3 | 0.0 | 0.0 | -0.1 | 0.1 | 0.1 | 0.1 | -0.1 | 0.0 | 0.0 | 0.1 |
| 80% | 0.2 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.2 |
| 90% | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | -0.1 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.1 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.0 | -0.1 | 0.0 | 0.1 |
| Above Normal (16%) | 0.2 | 0.3 | 0.0 | 0.0 | 0.0 | 0.1 | -0.4 | -0.1 | -0.1 | 0.0 | 0.0 | 0.1 |
| Below Normal (13%) | 0.2 | 0.3 | -0.1 | 0.0 | 0.0 | 0.3 | -0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 |
| Dry (24%) | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -0.1 | 0.1 | 0.0 | 0.1 |
| Critical (15%) | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | -0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 6-2-1. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation

Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 1.5 | 1.4 | -0.2 | -0.2 | 1.1 | 0.4 | 0.4 | 0.6 | 1.7 | 1.5 | 1.6 | 1.5 |
| 20% | 1.4 | 1.3 | -0.5 | -0.4 | 0.3 | 0.0 | 0.4 | 0.3 | 1.7 | 1.5 | 1.6 | 1.5 |
| 30% | 1.4 | 1.3 | -0.6 | -0.4 | -0.1 | -0.3 | 0.3 | 0.0 | 1.6 | 1.4 | 1.5 | 1.5 |
| 40% | 1.4 | 1.3 | -0.6 | -0.5 | -0.1 | -0.4 | 0.1 | -0.1 | 1.5 | 1.2 | 1.4 | 1.5 |
| 50% | 1.4 | 1.3 | -0.7 | -0.5 | -0.3 | -0.4 | -0.2 | -0.3 | 1.2 | 1.2 | 1.4 | 1.4 |
| 60% | 1.3 | 1.3 | -0.7 | -0.6 | -0.4 | -0.4 | -0.5 | -0.4 | 1.2 | 1.2 | 1.3 | 1.4 |
| 70% | 1.3 | 1.2 | -0.7 | -0.6 | -0.4 | -0.5 | -0.6 | -0.4 | 1.1 | 1.2 | 1.3 | 1.4 |
| 80% | 1.3 | 1.2 | -0.7 | -0.6 | -0.5 | -0.6 | -0.7 | -0.4 | 1.1 | 1.1 | 1.3 | 1.4 |
| 90% | 1.3 | 1.2 | -0.8 | -0.7 | -0.6 | -0.7 | -0.7 | -0.5 | 1.1 | 1.1 | 1.3 | 1.4 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1.4 | 1.3 | -0.5 | -0.5 | 0.1 | 0.0 | -0.1 | 0.0 | 1.4 | 1.4 | 1.4 | 1.4 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 1.4 | 1.3 | -0.6 | -0.6 | -0.6 | -0.6 | -0.7 | -0.4 | 1.2 | 1.2 | 1.3 | 1.4 |
| Above Normal (16%) | 1.3 | 1.2 | -0.7 | -0.7 | 0.1 | -0.5 | 0.2 | 0.0 | 1.6 | 1.2 | 1.4 | 1.4 |
| Below Normal (13%) | 1.5 | 1.3 | -0.3 | -0.4 | -0.1 | -0.4 | 0.1 | -0.4 | 1.0 | 1.0 | 1.3 | 1.4 |
| Dry (24%) | 1.4 | 1.3 | -0.7 | -0.6 | 0.0 | -0.2 | -0.3 | -0.1 | 1.4 | 1.3 | 1.4 | 1.4 |
| Critical (15%) | 1.4 | 1.3 | -0.4 | -0.3 | 0.6 | 0.8 | 0.5 | 0.6 | 1.5 | 1.7 | 1.5 | 1.5 |

Alternative 2B

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 1.7 | 1.5 | -0.3 | -0.2 | 1.1 | 0.5 | 0.3 | 0.5 | 1.6 | 1.5 | 1.6 | 1.7 |
| 20% | 1.7 | 1.5 | -0.5 | -0.4 | 0.3 | 0.1 | 0.2 | 0.2 | 1.5 | 1.5 | 1.6 | 1.6 |
| 30% | 1.6 | 1.5 | -0.6 | -0.4 | -0.1 | -0.3 | 0.1 | 0.1 | 1.5 | 1.4 | 1.5 | 1.6 |
| 40% | 1.6 | 1.4 | -0.6 | -0.5 | -0.1 | -0.3 | 0.0 | 0.0 | 1.4 | 1.2 | 1.4 | 1.5 |
| 50% | 1.6 | 1.4 | -0.7 | -0.5 | -0.3 | -0.4 | -0.1 | -0.2 | 1.2 | 1.2 | 1.4 | 1.5 |
| 60% | 1.5 | 1.4 | -0.7 | -0.6 | -0.4 | -0.5 | -0.3 | -0.3 | 1.2 | 1.2 | 1.4 | 1.5 |
| 70% | 1.5 | 1.4 | -0.7 | -0.6 | -0.5 | -0.5 | -0.5 | -0.3 | 1.2 | 1.2 | 1.3 | 1.4 |
| 80% | 1.4 | 1.3 | -0.8 | -0.6 | -0.5 | -0.6 | -0.6 | -0.3 | 1.1 | 1.1 | 1.3 | 1.4 |
| 90% | 1.4 | 1.3 | -0.8 | -0.7 | -0.6 | -0.7 | -0.6 | -0.4 | 1.0 | 1.1 | 1.3 | 1.4 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1.6 | 1.4 | -0.6 | -0.5 | 0.1 | 0.0 | -0.1 | 0.1 | 1.3 | 1.4 | 1.4 | 1.5 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 1.5 | 1.4 | -0.7 | -0.6 | -0.6 | -0.6 | -0.5 | -0.4 | 1.1 | 1.2 | 1.3 | 1.5 |
| Above Normal (16%) | 1.4 | 1.4 | -0.8 | -0.7 | 0.1 | -0.4 | 0.0 | 0.0 | 1.5 | 1.2 | 1.4 | 1.5 |
| Below Normal (13%) | 1.6 | 1.4 | -0.4 | -0.4 | -0.1 | -0.3 | 0.0 | -0.3 | 1.0 | 1.0 | 1.4 | 1.4 |
| Dry (24%) | 1.5 | 1.4 | -0.6 | -0.6 | 0.0 | -0.2 | -0.2 | -0.1 | 1.4 | 1.3 | 1.4 | 1.5 |
| Critical (15%) | 1.6 | 1.4 | -0.4 | -0.3 | 0.6 | 0.7 | 0.4 | 0.7 | 1.4 | 1.7 | 1.5 | 1.6 |

Alternative 2B minus Existing

| Statistic | Monthly Averaged Daily Minimum Elevation (FEET) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0.2 | 0.2 | -0.1 | 0.0 | 0.0 | 0.1 | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | 0.1 |
| 20% | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.1 | -0.2 | 0.0 | 0.0 | 0.1 |
| 30% | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | 0.0 | -0.2 | 0.0 | 0.0 | 0.1 |
| 40% | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | -0.2 | 0.1 | -0.1 | 0.0 | 0.0 | 0.1 |
| 50% | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 60% | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 70% | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 80% | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90% | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | -0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Above Normal (16%) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | -0.2 | 0.0 | -0.1 | 0.0 | 0.0 | 0.1 |
| Below Normal (13%) | 0.2 | 0.2 | -0.1 | 0.0 | 0.0 | 0.1 | -0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| Dry (24%) | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| Critical (15%) | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | -0.1 | 0.0 | 0.0 | 0.1 |

a Based on the 16-year simulation period
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999) at Early Long-Term
c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

# Appendix C – Modeling

## Attachment 3-7 – Salinity Results (DSM2-QUAL)

***NOTE: Attachment 3-7 is a new attachment that has been added to the DEIR since initial publication, as part of the FEIR process. The additional attachment is not shown in underline for ease of reading.***

The following results of the DSM2-QUAL model are included for Delta salinity conditions for the following alternatives:

- Existing Conditions
- Refined Alternative 2b

| Title | Model Parameter | Table Numbers | Figure Numbers |
|---|---|---|---|
| Sacramento River downstream of Steamboat Slough Salinity | SAC_DS_STMBTSL | 1-1 | 1-1 to 1-18 |
| Cache Slough at Ryer Island Salinity | CACHE_RYER | 2-1 | 2-1 to 2-18 |
| Sacramento River downstream of Georgiana Slough Salinity | RSAC123 | 3-1 | 3-1 to 3-18 |
| Sacramento River at Rio Vista Salinity | RSAC101 | 4-1 | 4-1 to 4-18 |
| Sacramento River at Emmaton Salinity | RSAC092 | 5-1 | 5-1 to 5-18 |
| Sacramento River at Collinsville Salinity | RSAC081 | 6-1 | 6-1 to 6-18 |
| Sacramento River at Mallard Slough Salinity | RSAC075 | 7-1 | 7-1 to 7-18 |
| Chipps Island North Channel Salinity | CHIPS_N_437 | 8-1 | 8-1 to 8-18 |
| Chipps Island South Channel Salinity | CHIPS_S_442 | 9-1 | 9-1 to 9-18 |
| Sacramento River at Port Chicago Salinity | RSAC064 | 10-1 | 10-1 to 10-18 |
| San Joaquin River at Antioch Salinity | RSAN007 | 11-1 | 11-1 to 11-18 |
| San Joaquin River at Jersey Point Salinity | RSAN018 | 12-1 | 12-1 to 12-18 |
| San Joaquin River at San Andreas Salinity | RSAN032 | 13-1 | 13-1 to 13-18 |
| San Joaquin River at Prisoners Point Salinity | RSAN037 | 14-1 | 14-1 to 14-18 |
| Old River at Rock Slough Salinity | ROLD024 | 15-1 | 15-1 to 15-18 |
| Banks Pumping Plant South Delta Exports Salinity | CLIFTON_COURT | 16-1 | 16-1 to 16-18 |
| Jones Pumping Plant South Delta Exports Salinity | CHDMC006 | 17-1 | 17-1 to 17-18 |
| Old River at Highway 4 | ROLD034 | 18-1 | 18-1 to 18-18 |
| Victoria Canal | CHVCT000 | 19-1 | 19-1 to 19-18 |
| Montezuma Slough at Hunter Cut | SLMZU003 | 20-1 | 20-1 to 20-18 |
| Montezuma Slough at Beldons Landing | SLMZU011 | 21-1 | 21-1 to 21-18 |
| Montezuma Slough at National Steel | SLMZU025 | 22-1 | 22-1 to 22-18 |
| Suisun Bay near Ryer | RYC | 24-1 | 24-1 to 24-18 |

| | | | |
|---|---|---|---|
| Goodyear Slough Outfall at Naval Fleet | GYS | 25-1 | 25-1 to 25-18 |
| Three Mile Slough | 3MILE_SL | 26-1 | 26-1 to 26-18 |

Report formats

- Monthly tables comparing two scenarios (exceedance values, long-term average, and average by water year type)
- Monthly pattern charts (long-term average and average by water year type) including all scenarios
- Monthly exceedance charts (all months) including all scenarios

## Table 1-1. Sacramento River downstream of Steamboat Slough Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 176 | 177 | 179 | 181 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 |
| **20%** | 176 | 176 | 178 | 180 | 178 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **30%** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **40%** | 176 | 176 | 177 | 178 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 176 |
| **50%** | 176 | 176 | 176 | 178 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 175 |
| **60%** | 176 | 176 | 176 | 178 | 176 | 176 | 176 | 176 | 176 | 175 | 176 | 175 |
| **70%** | 176 | 175 | 176 | 177 | 176 | 176 | 175 | 175 | 176 | 175 | 176 | 175 |
| **80%** | 175 | 175 | 175 | 177 | 176 | 176 | 175 | 175 | 176 | 175 | 175 | 175 |
| **90%** | 175 | 175 | 175 | 177 | 176 | 175 | 175 | 175 | 175 | 175 | 175 | 175 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 176 | 176 | 177 | 178 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 176 | 176 | 177 | 178 | 176 | 176 | 175 | 175 | 176 | 175 | 176 | 175 |
| **Above Normal (15%)** | 176 | 176 | 177 | 178 | 177 | 176 | 176 | 175 | 176 | 175 | 175 | 175 |
| **Below Normal (17%)** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 176 |
| **Dry (22%)** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **Critical (15%)** | 176 | 176 | 176 | 178 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |

### Alternative 2B

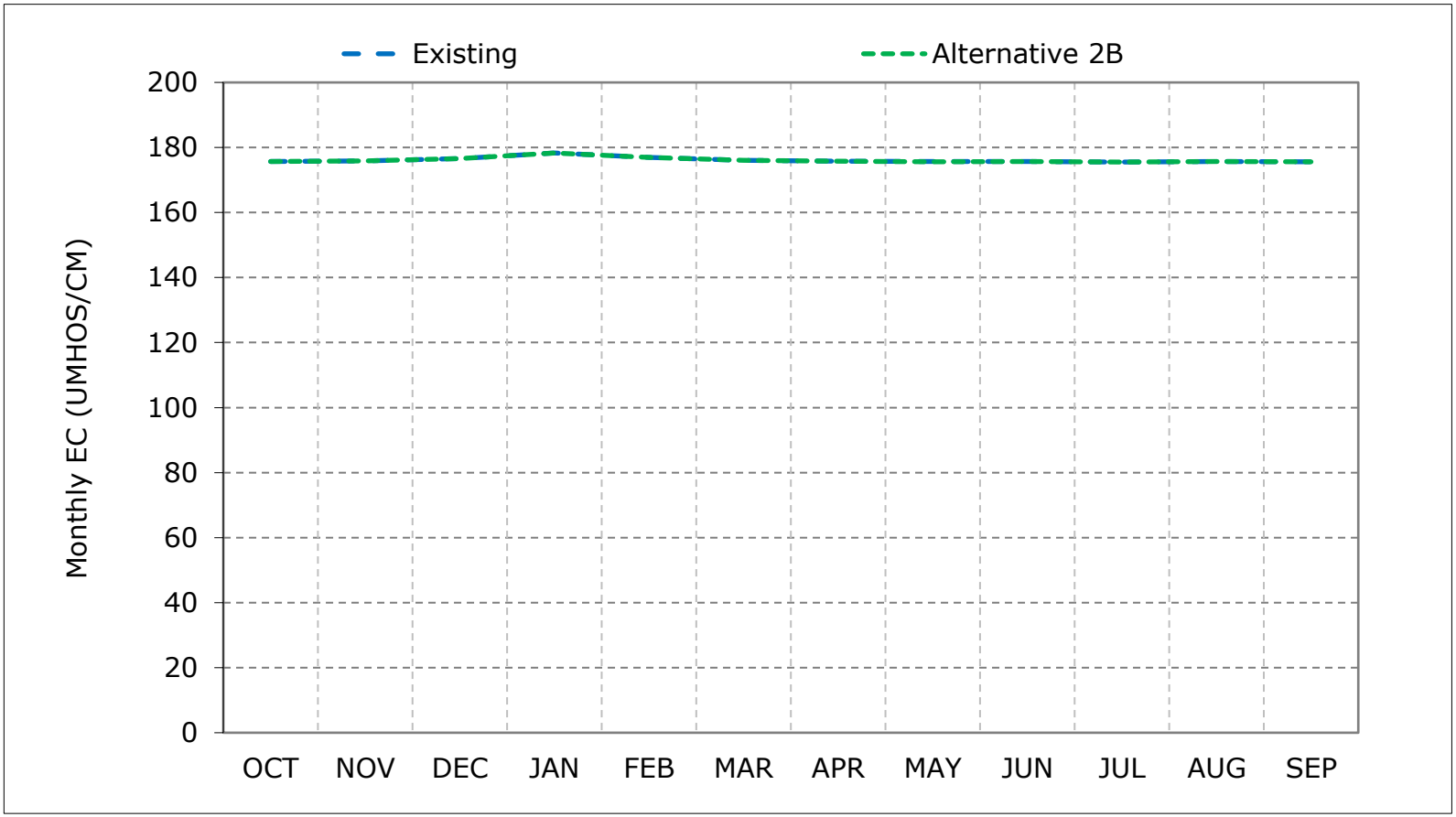
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 176 | 177 | 178 | 181 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 |
| **20%** | 176 | 176 | 177 | 180 | 178 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **30%** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **40%** | 176 | 176 | 176 | 178 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 176 |
| **50%** | 176 | 176 | 176 | 178 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 175 |
| **60%** | 176 | 176 | 176 | 178 | 176 | 176 | 176 | 176 | 176 | 175 | 176 | 175 |
| **70%** | 175 | 175 | 176 | 177 | 176 | 176 | 175 | 175 | 176 | 175 | 176 | 175 |
| **80%** | 175 | 175 | 176 | 177 | 176 | 176 | 175 | 175 | 176 | 175 | 176 | 175 |
| **90%** | 175 | 175 | 175 | 177 | 176 | 175 | 175 | 175 | 175 | 175 | 175 | 175 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 176 | 176 | 177 | 178 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 176 | 176 | 176 | 178 | 176 | 176 | 175 | 175 | 176 | 175 | 176 | 175 |
| **Above Normal (15%)** | 176 | 176 | 177 | 178 | 177 | 176 | 176 | 175 | 176 | 175 | 175 | 175 |
| **Below Normal (17%)** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 176 |
| **Dry (22%)** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **Critical (15%)** | 176 | 176 | 176 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | **0** | **0** | 0 | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 |
| **20%** | 0 | **0** | 0 | 0 | 0 | **0** | **0** | 0 | 0 | **0** | **0** | 0 |
| **30%** | 0 | **0** | **0** | **0** | 0 | **0** | 0 | 0 | 0 | 0 | 0 | **0** |
| **40%** | **0** | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **50%** | **0** | **0** | 0 | **0** | 0 | 0 | **0** | 0 | 0 | 0 | 0 | 0 |
| **60%** | 0 | **0** | 0 | **0** | 0 | **0** | **0** | 0 | 0 | **0** | 0 | **0** |
| **70%** | 0 | **0** | 0 | 0 | 0 | 0 | **0** | 0 | 0 | **0** | 0 | **0** |
| **80%** | 0 | **0** | **0** | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** |
| **90%** | 0 | **0** | **0** | **0** | **0** | 0 | **0** | 0 | **0** | **0** | **0** | **0** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 0 | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | 0 | **0** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 0 | **0** | 0 | 0 | 0 | 0 | **0** | 0 | 0 | **0** | **0** | **0** |
| **Above Normal (15%)** | 0 | **0** | **0** | 0 | 0 | 0 | **0** | 0 | 0 | **0** | 0 | 0 |
| **Below Normal (17%)** | 0 | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** | **0** |
| **Dry (22%)** | **0** | **0** | 0 | **0** | **0** | 0 | 0 | 0 | 0 | **0** | 0 | 0 |
| **Critical (15%)** | **0** | **0** | 0 | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

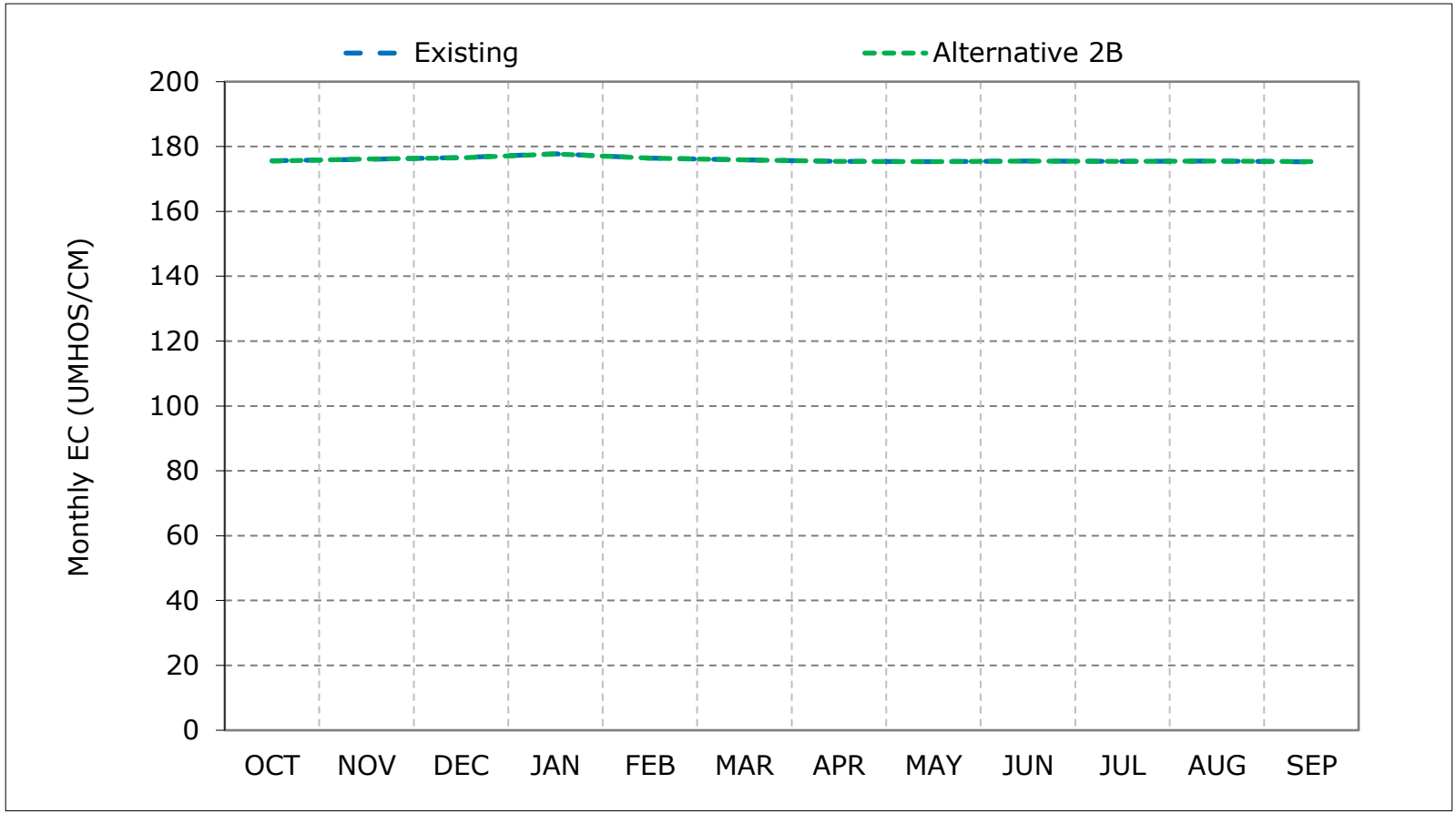
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 1-1. Sacramento River downstream of Steamboat Slough Salinity, Long-Ter**



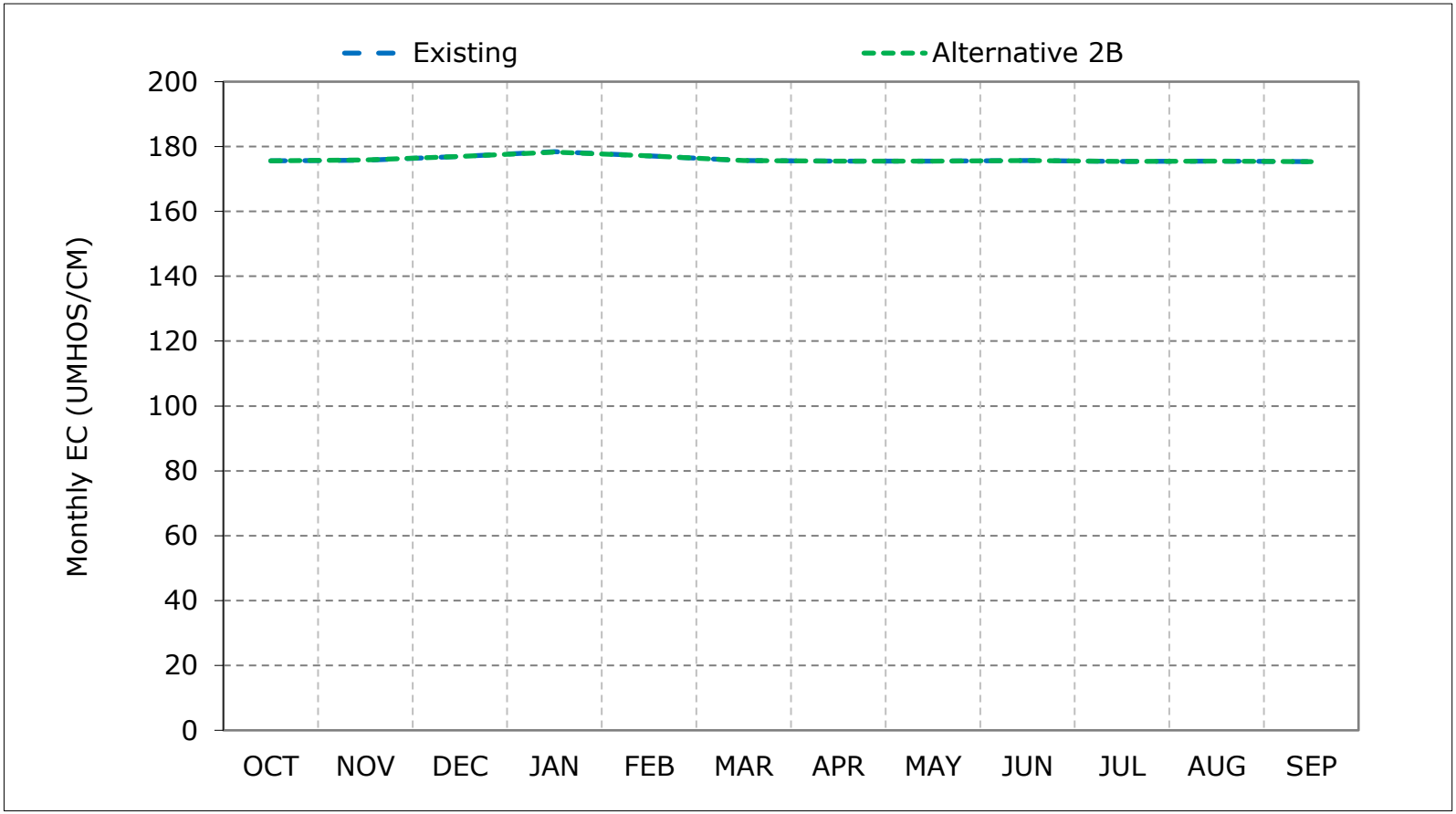

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 1-2. Sacramento River downstream of Steamboat Slough Salinity, Wet Yea**



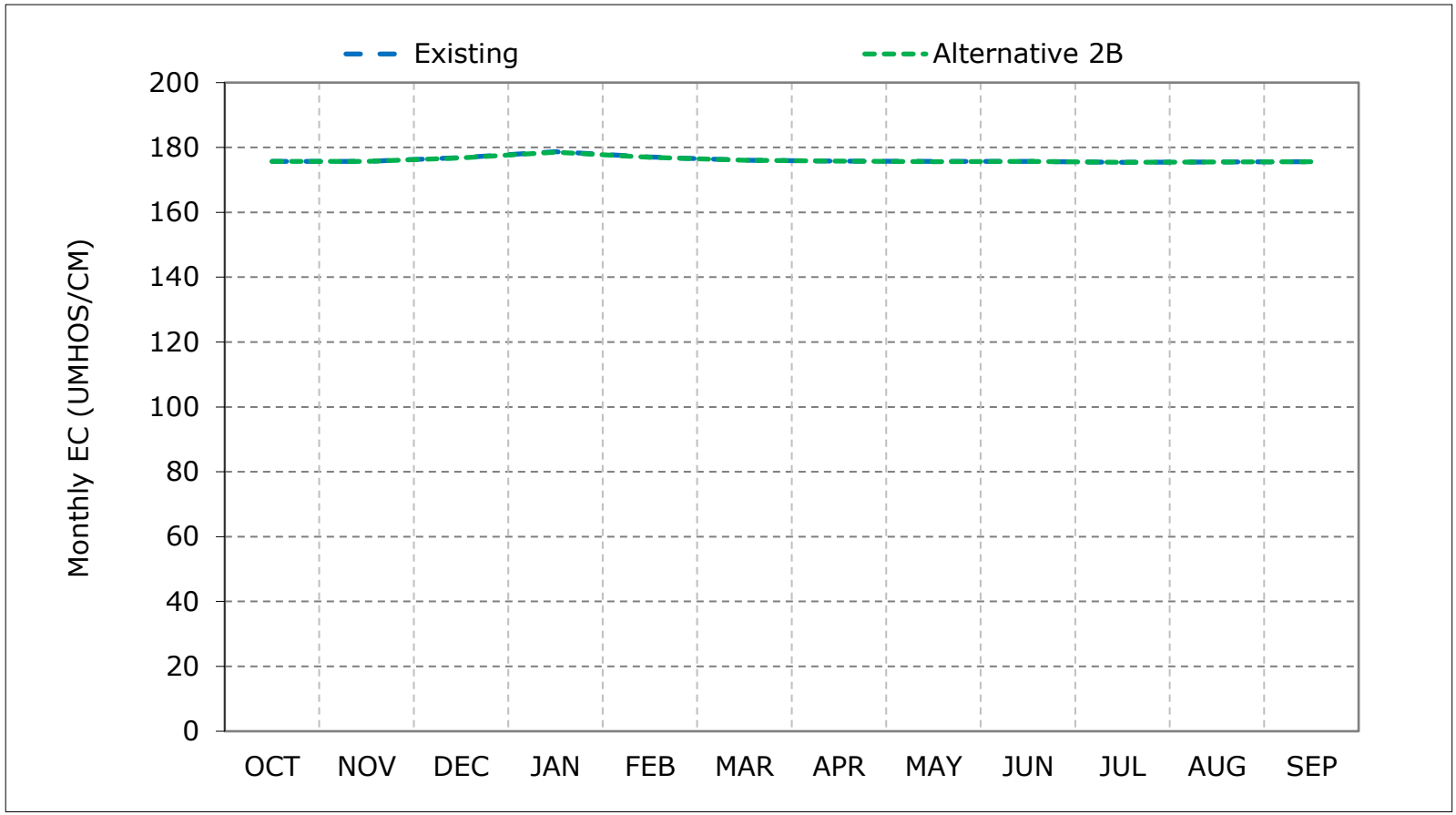

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 1-3. Sacramento River downstream of Steamboat Slough Salinity, Above N**



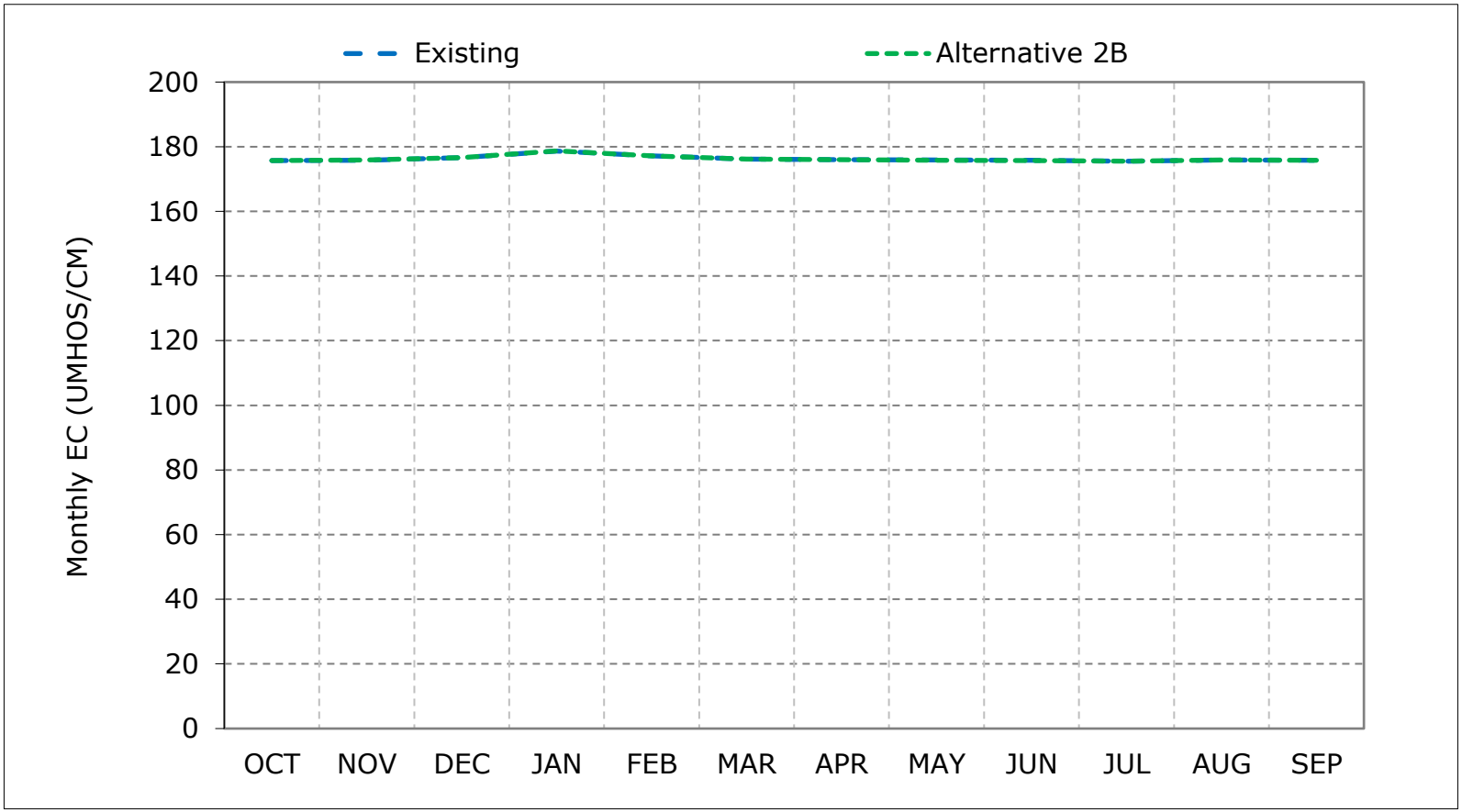

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 1-4. Sacramento River downstream of Steamboat Slough Salinity, Below N**



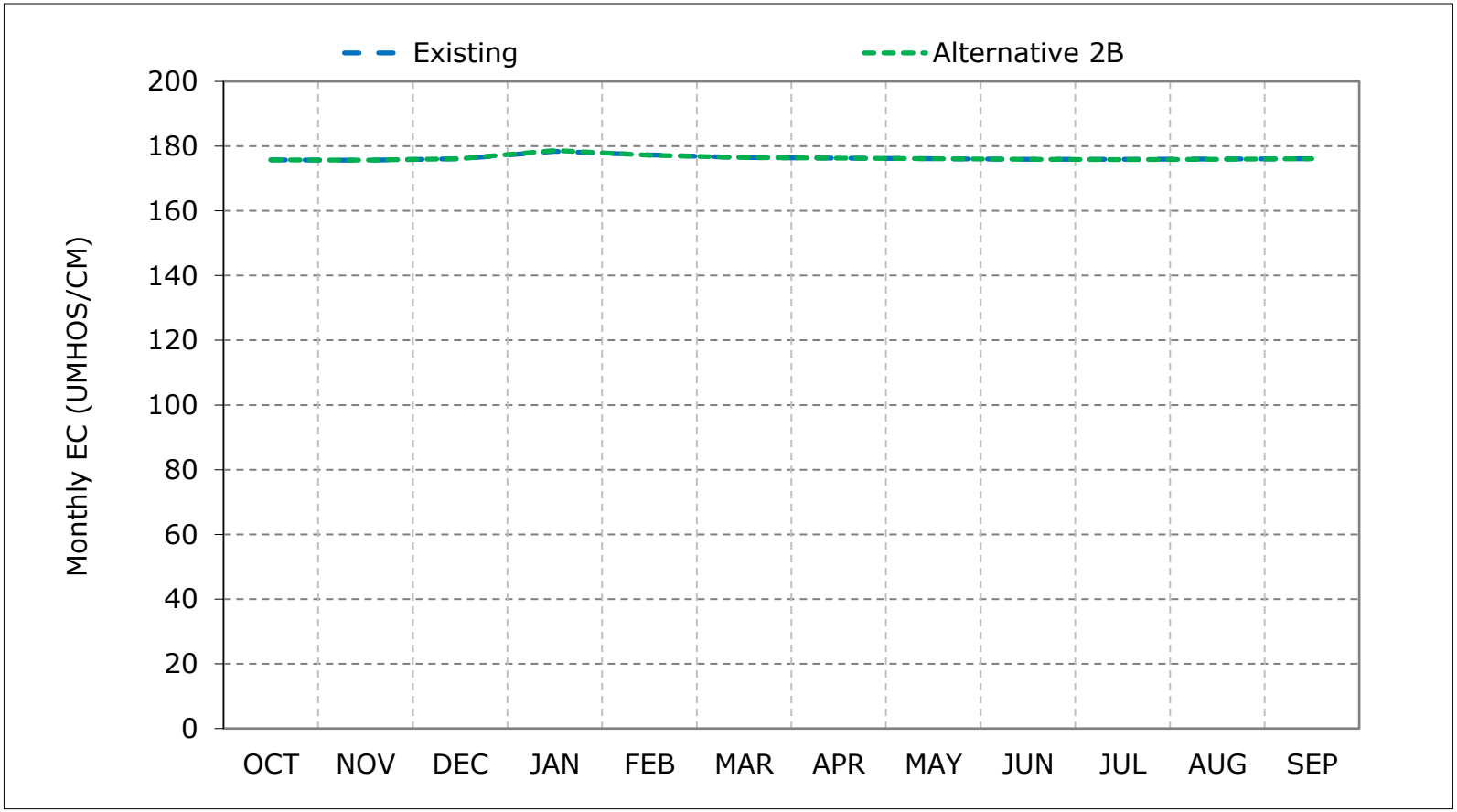

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 1-5. Sacramento River downstream of Steamboat Slough Salinity, Dry Year**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 1-6. Sacramento River downstream of Steamboat Slough Salinity, Critical Y**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 1-7. Sacramento River downstream of Steamboat Slough Salinity, January EC**

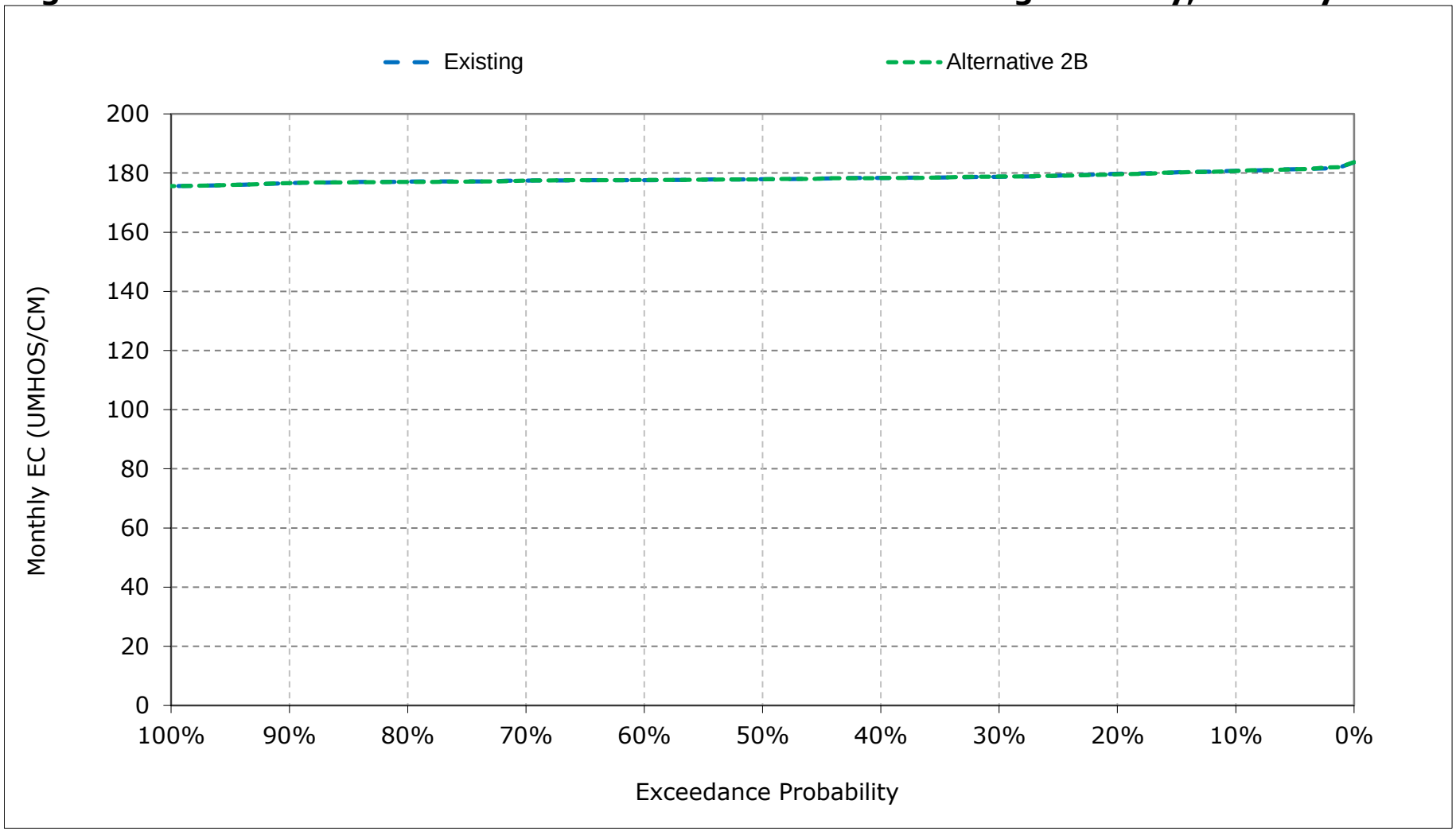


**Figure 1-8. Sacramento River downstream of Steamboat Slough Salinity, February EC**

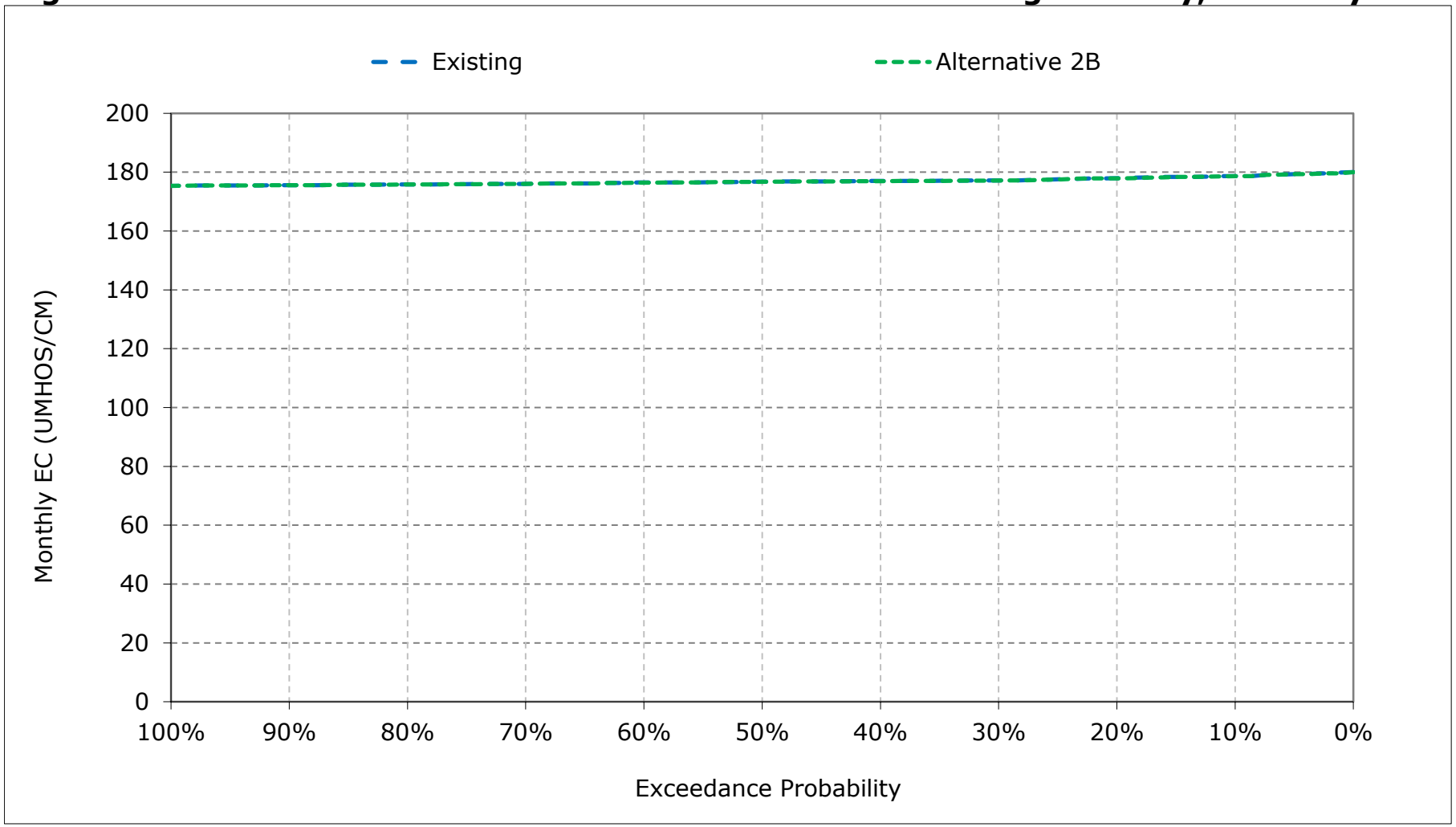


**Figure 1-9. Sacramento River downstream of Steamboat Slough Salinity, March EC**

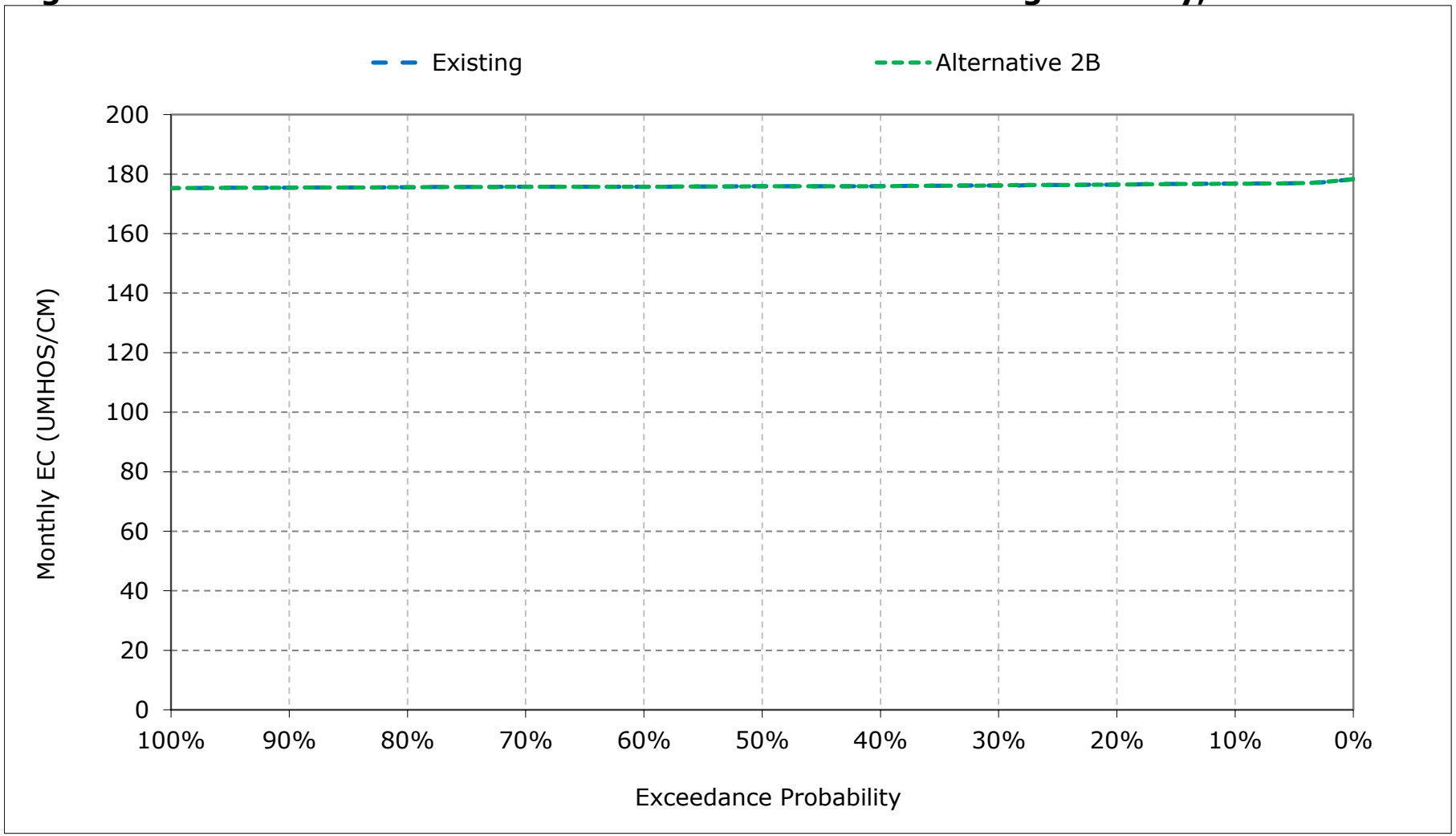


**Figure 1-10. Sacramento River downstream of Steamboat Slough Salinity, April EC**

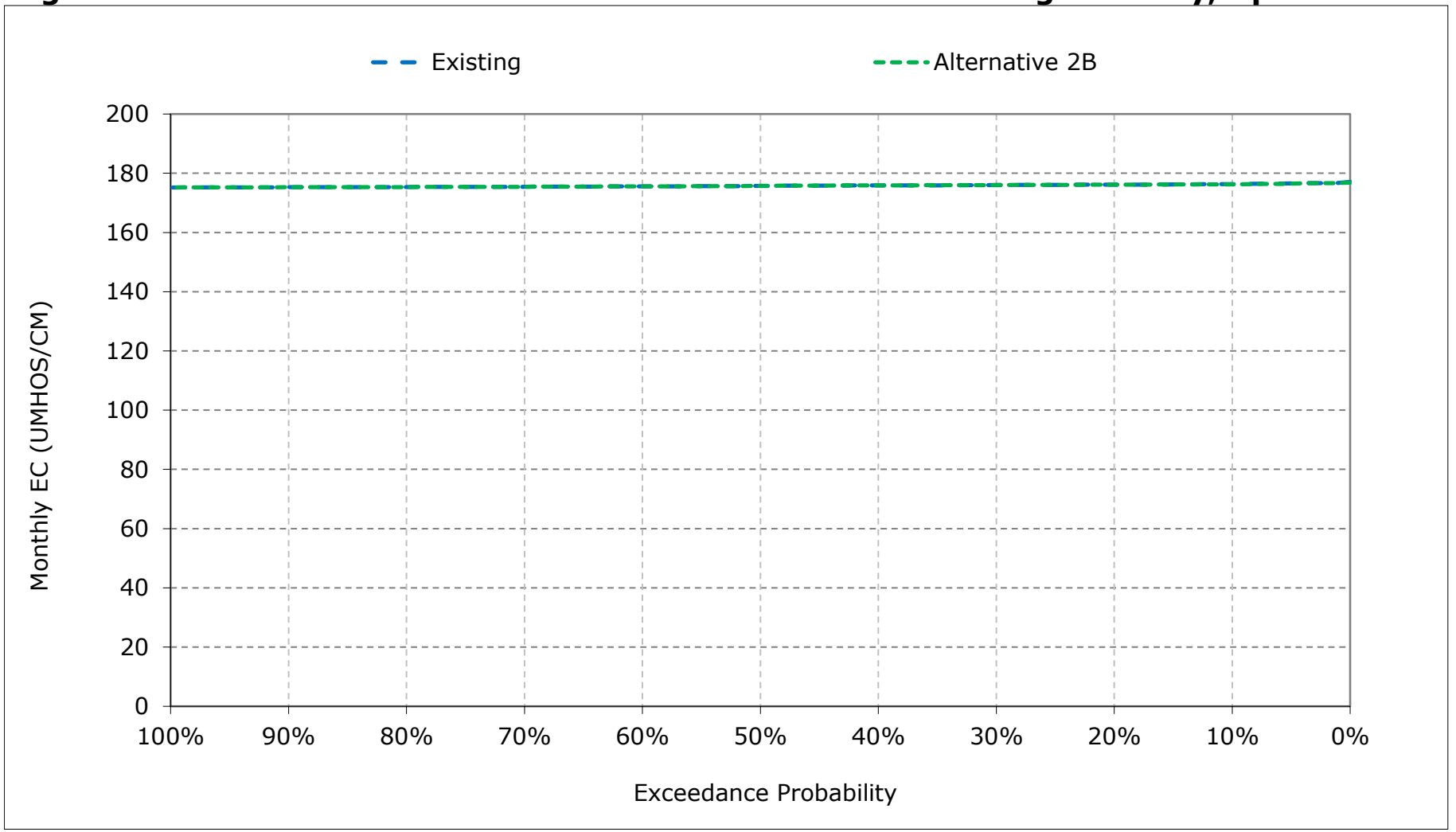


**Figure 1-11. Sacramento River downstream of Steamboat Slough Salinity, May EC**

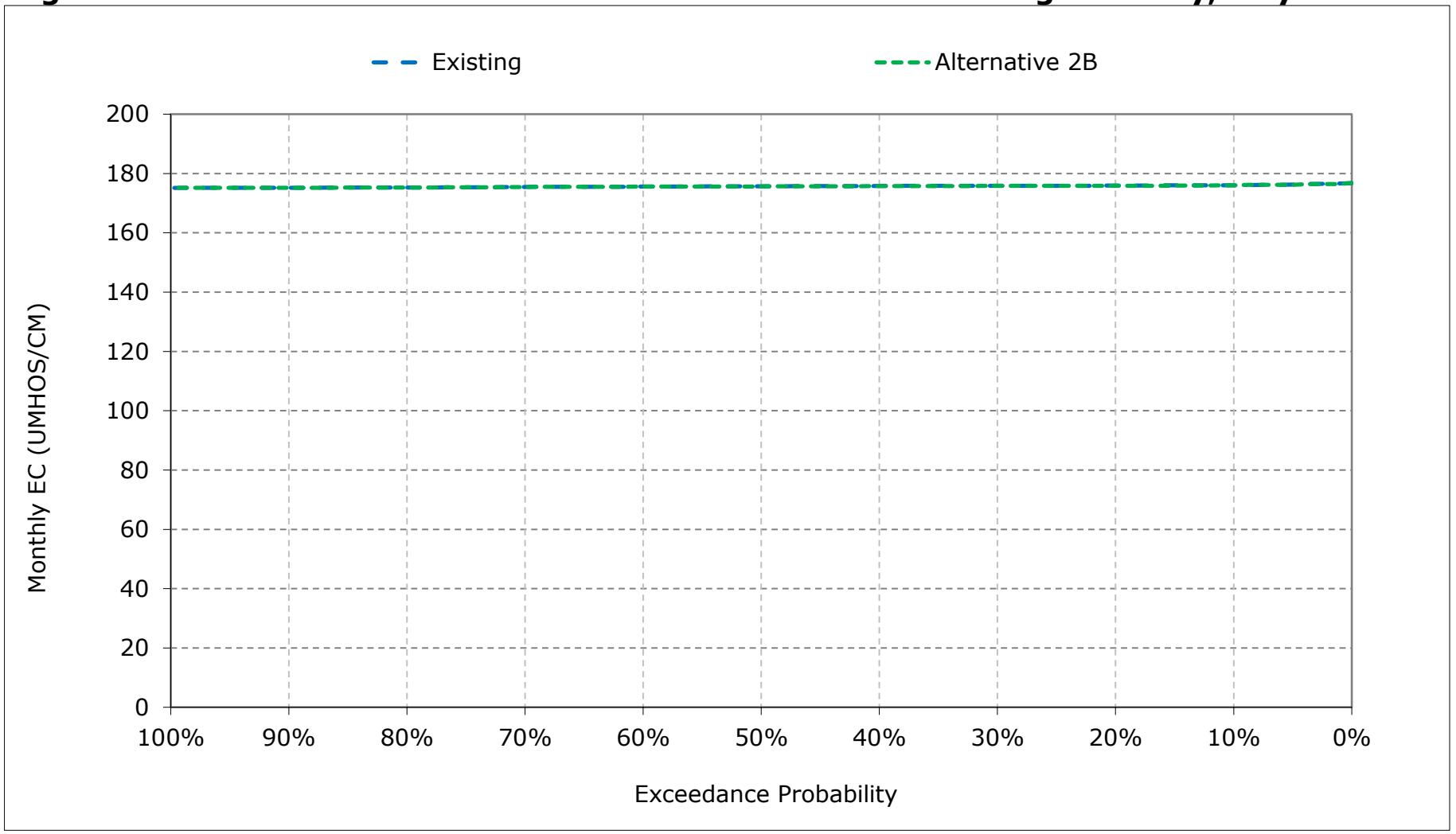


**Figure 1-12. Sacramento River downstream of Steamboat Slough Salinity, June EC**

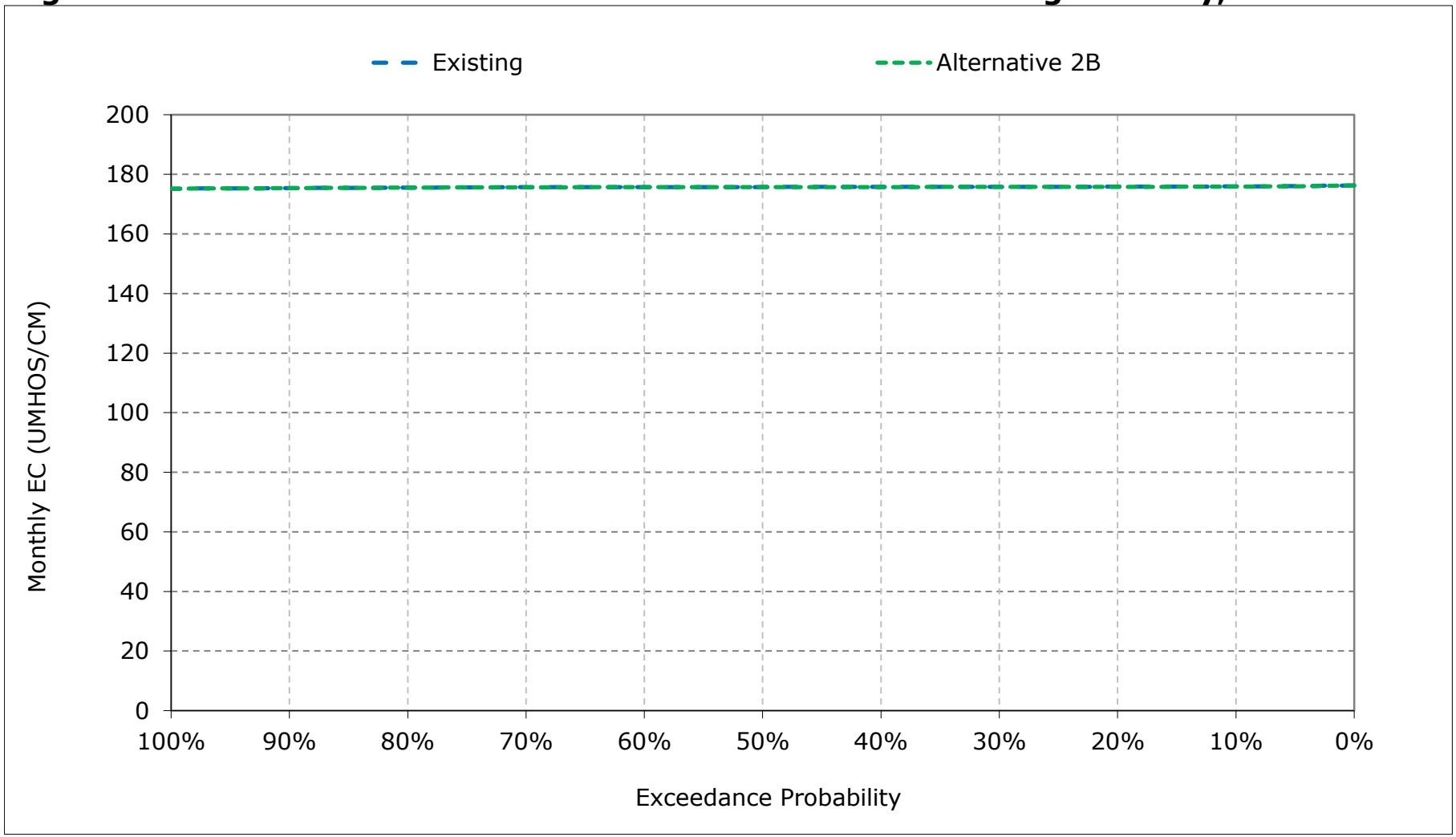


**Figure 1-13. Sacramento River downstream of Steamboat Slough Salinity, July EC**

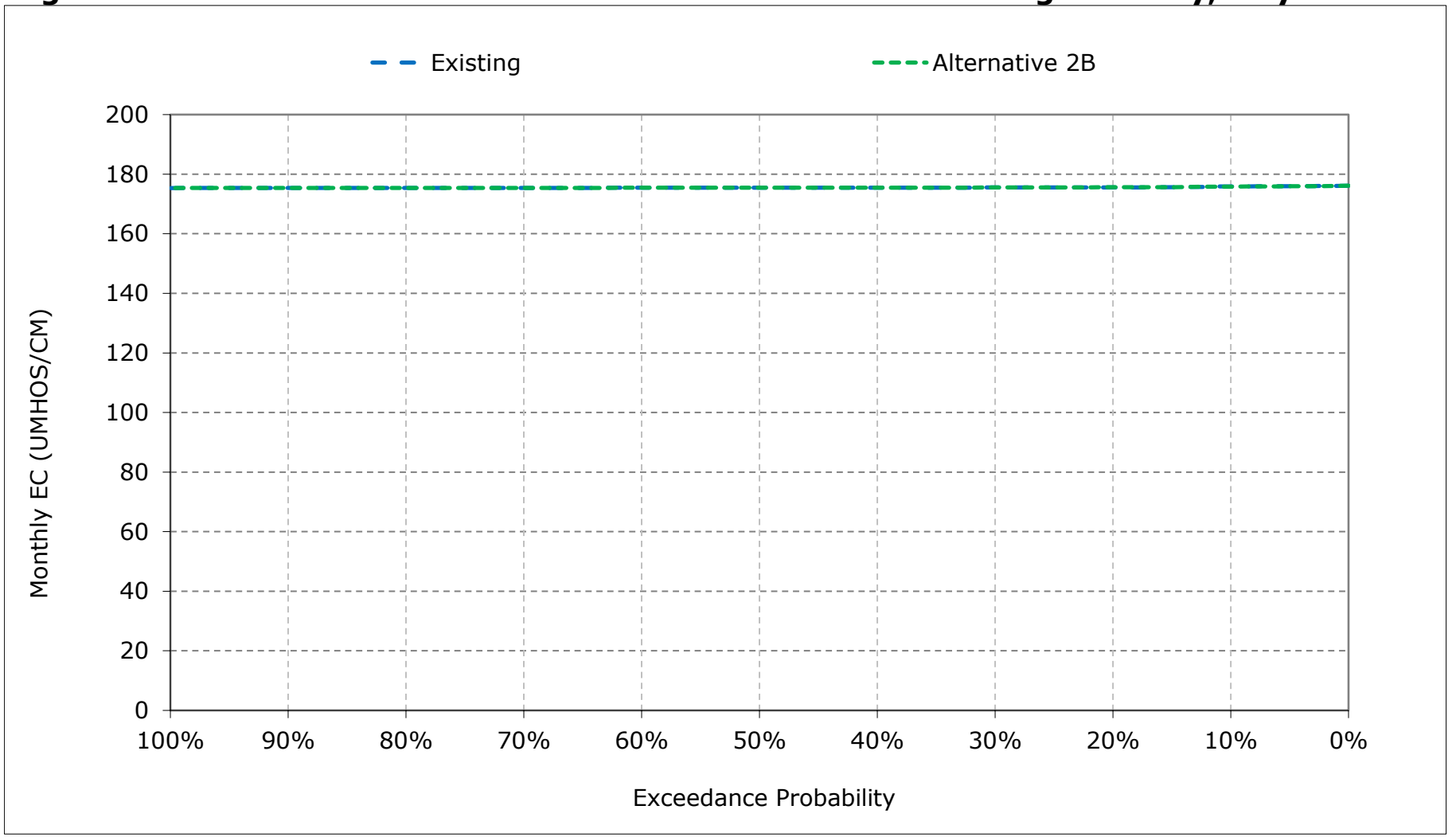


**Figure 1-14. Sacramento River downstream of Steamboat Slough Salinity, August EC**

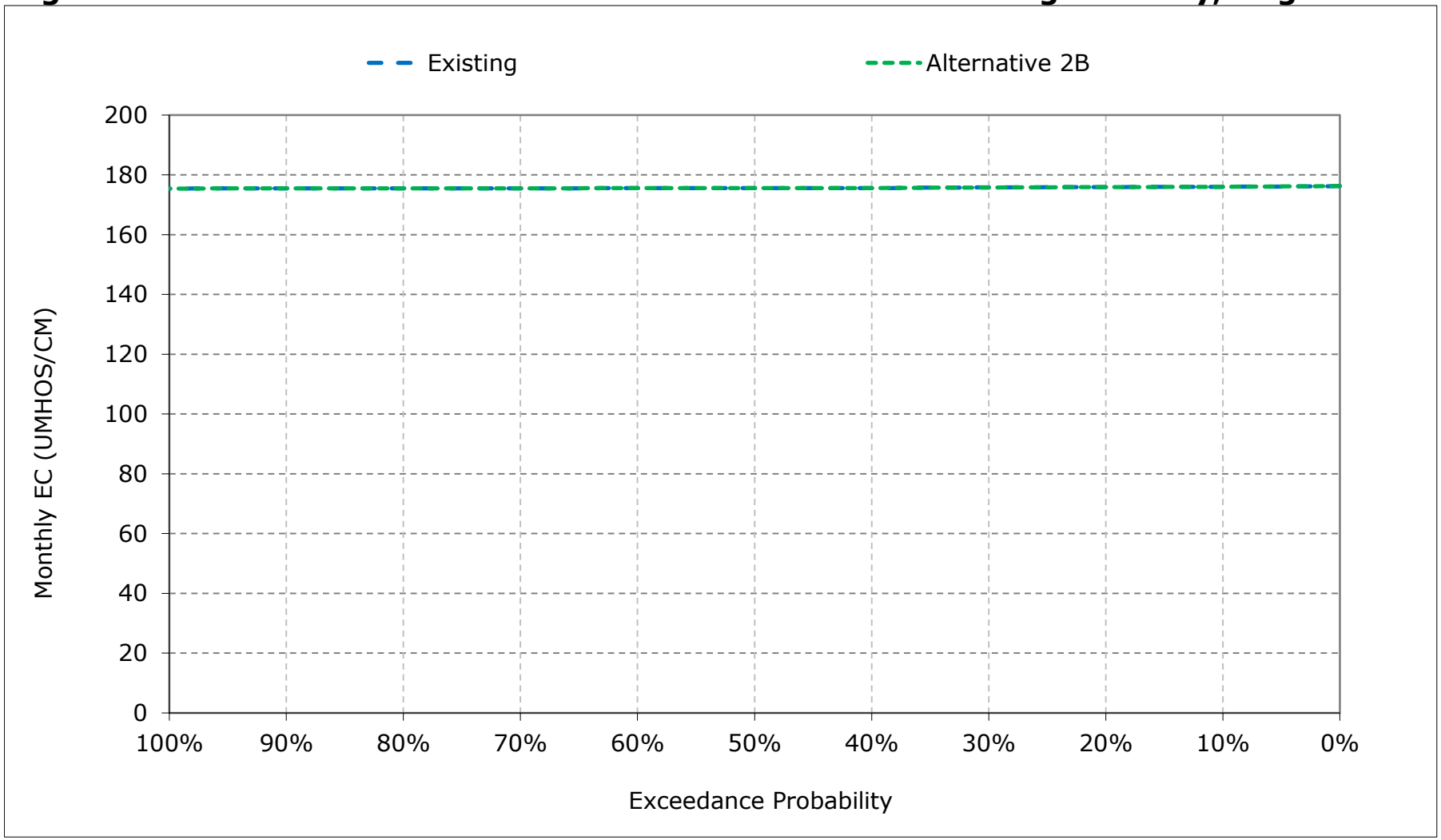


**Figure 1-15. Sacramento River downstream of Steamboat Slough Salinity, September EC**

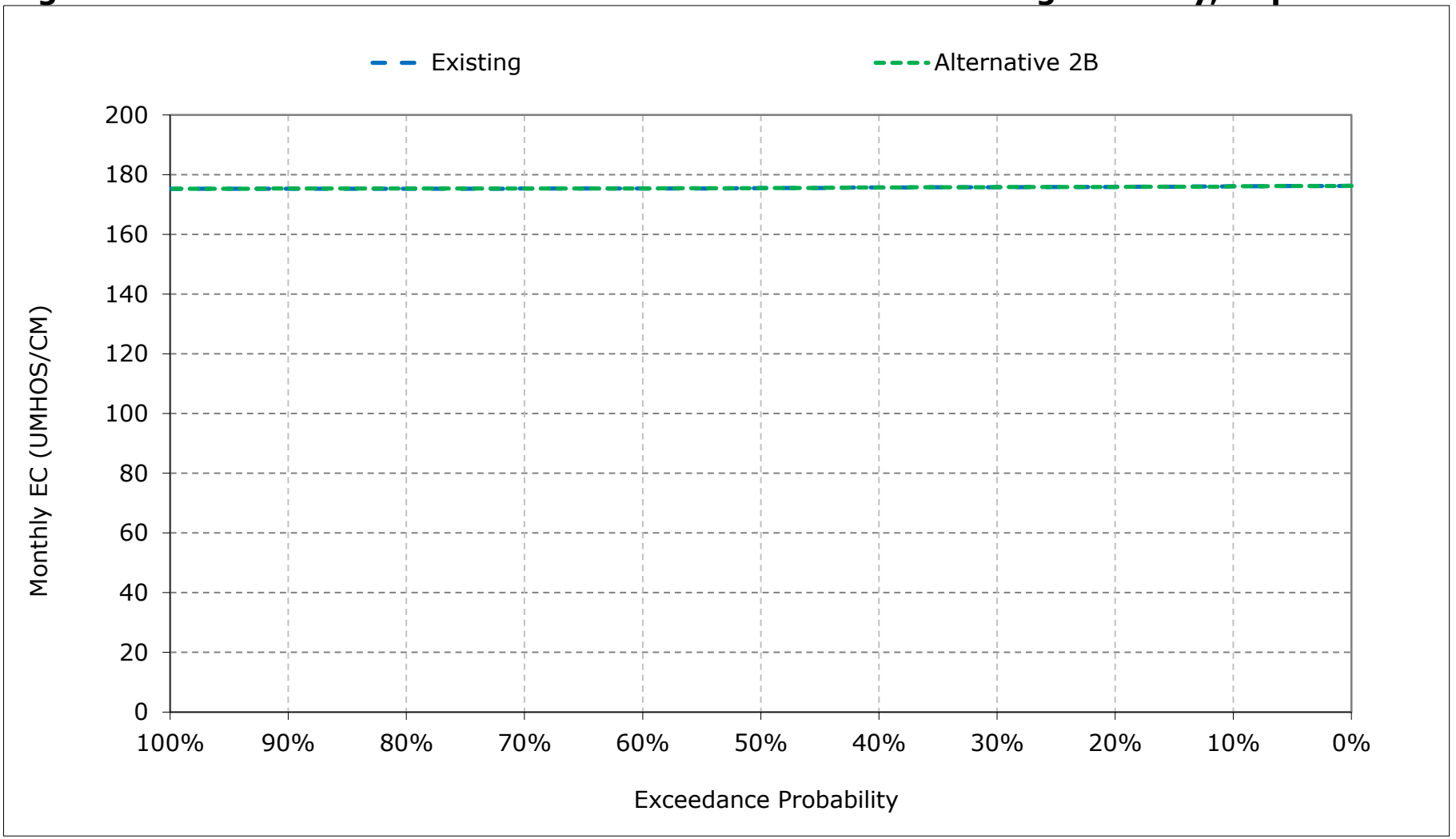


**Figure 1-16. Sacramento River downstream of Steamboat Slough Salinity, October EC**

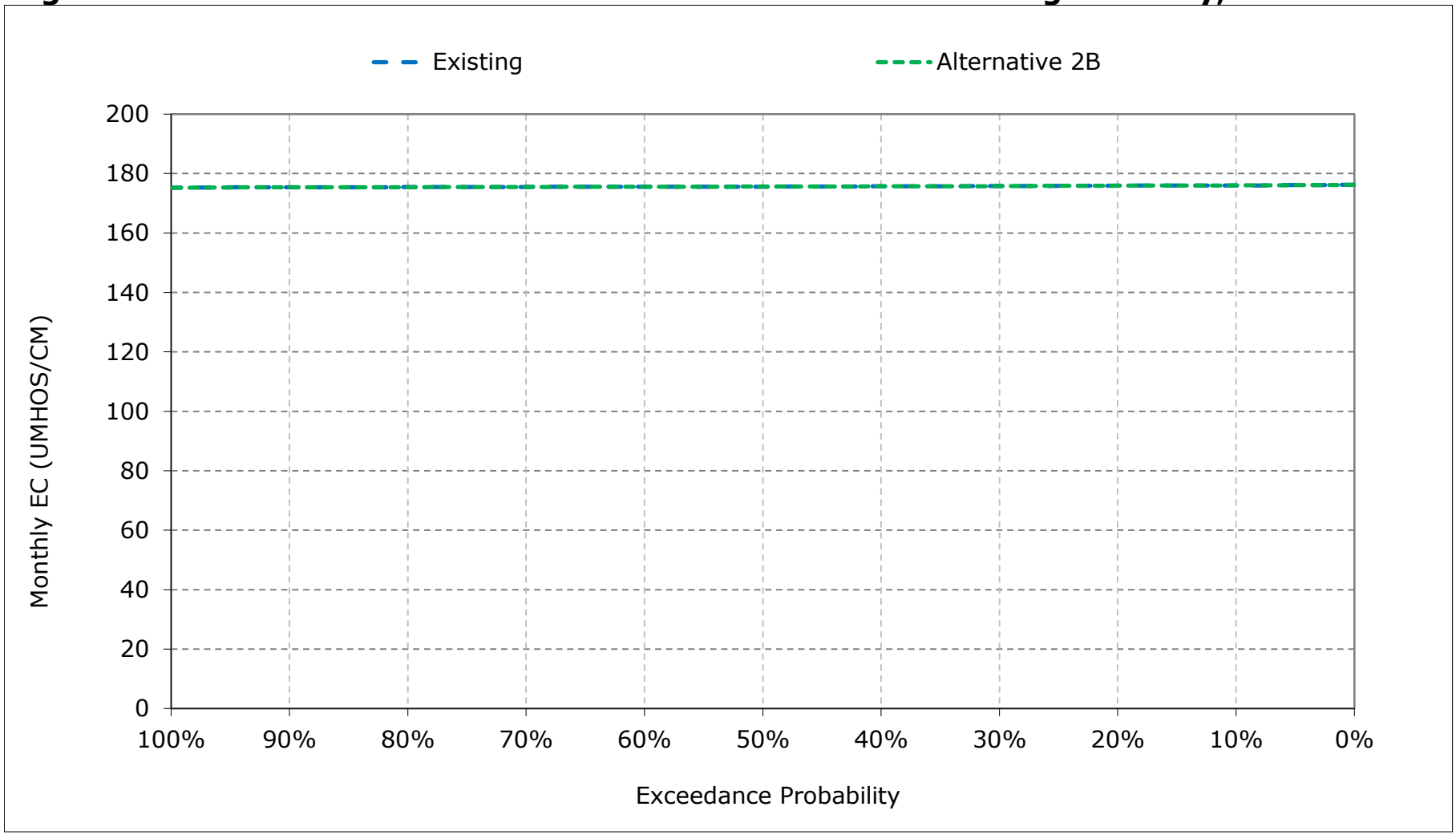


**Figure 1-17. Sacramento River downstream of Steamboat Slough Salinity, November EC**

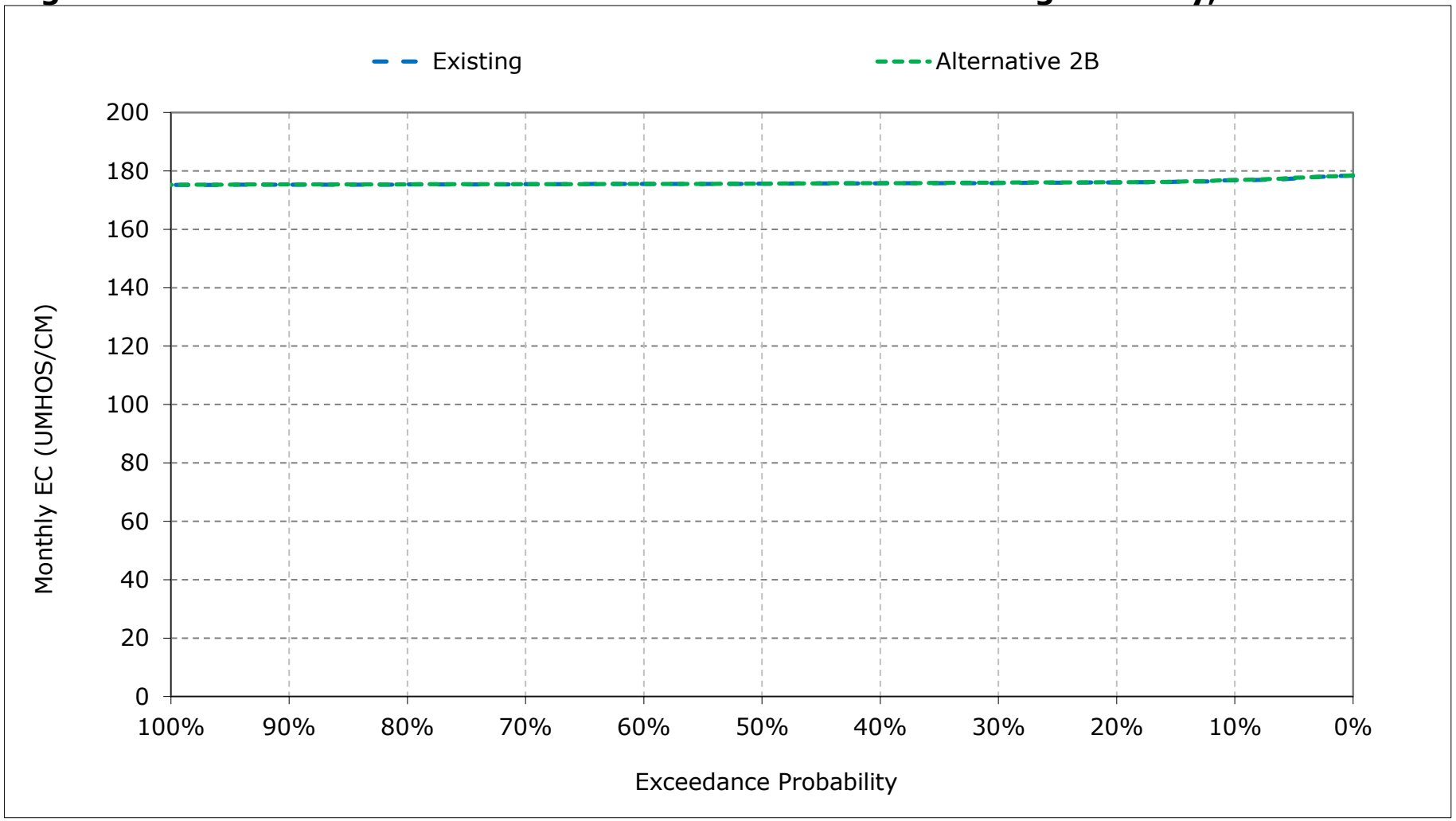
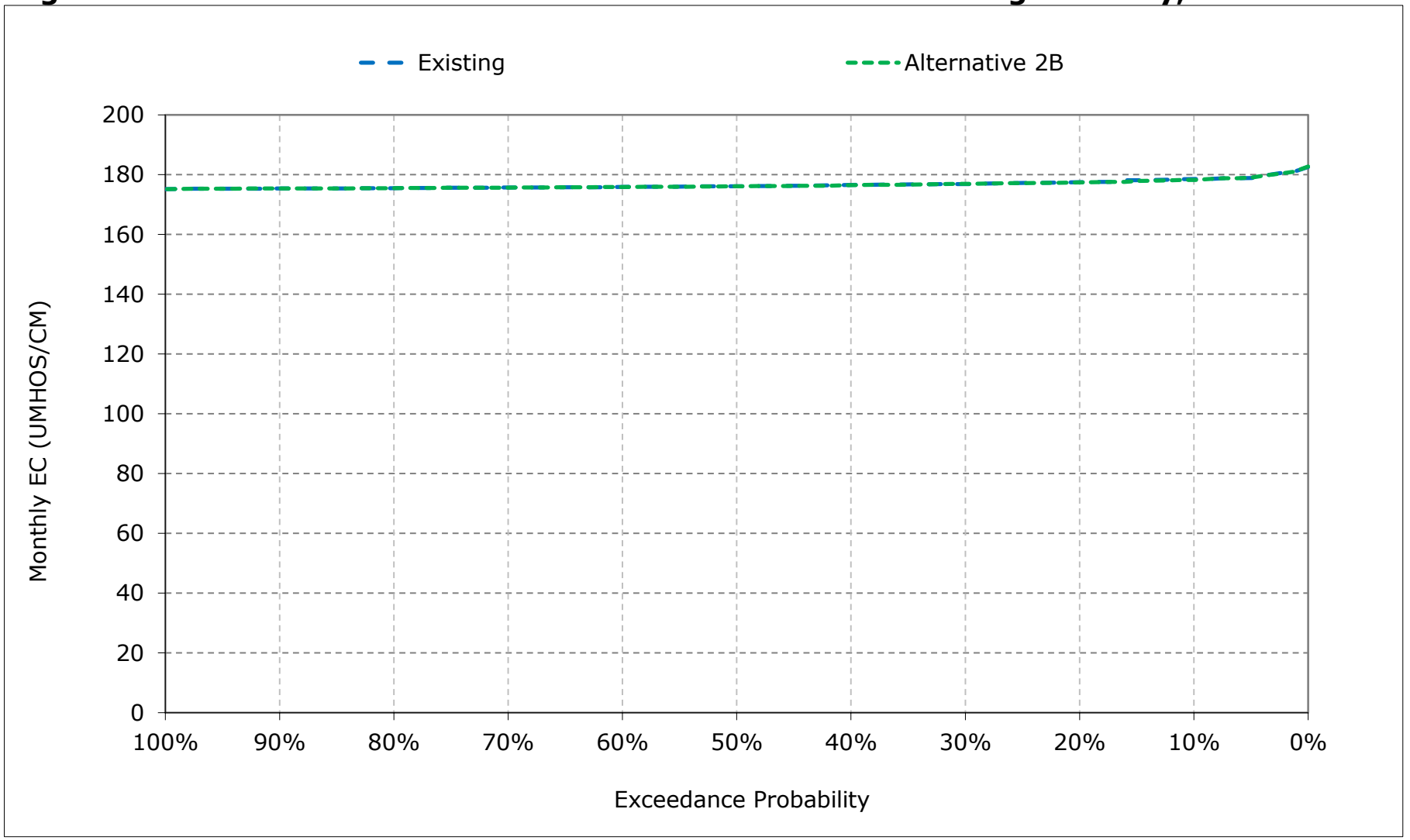


**Figure 1-18. Sacramento River downstream of Steamboat Slough Salinity, December EC**



## Table 2-1. Cache Slough at Ryer Island Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 189 | 190 | 191 | 203 | 201 | 194 | 187 | 184 | 184 | 185 | 186 | 187 |
| **20%** | 185 | 186 | 188 | 197 | 197 | 192 | 186 | 183 | 183 | 181 | 184 | 183 |
| **30%** | 184 | 184 | 186 | 193 | 192 | 190 | 185 | 183 | 182 | 181 | 183 | 182 |
| **40%** | 183 | 183 | 185 | 191 | 189 | 186 | 184 | 182 | 182 | 180 | 181 | 181 |
| **50%** | 181 | 181 | 184 | 190 | 188 | 185 | 183 | 182 | 182 | 180 | 180 | 180 |
| **60%** | 180 | 180 | 182 | 189 | 187 | 184 | 183 | 181 | 181 | 180 | 180 | 179 |
| **70%** | 180 | 180 | 181 | 187 | 185 | 183 | 182 | 180 | 181 | 180 | 180 | 179 |
| **80%** | 180 | 179 | 180 | 186 | 184 | 182 | 181 | 179 | 180 | 179 | 180 | 178 |
| **90%** | 179 | 179 | 180 | 184 | 182 | 181 | 180 | 178 | 179 | 179 | 179 | 178 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 183 | 183 | 185 | 192 | 190 | 187 | 184 | 181 | 182 | 181 | 182 | 181 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 181 | 181 | 183 | 190 | 184 | 183 | 182 | 180 | 180 | 180 | 180 | 178 |
| **Above Normal (15%)** | 183 | 183 | 185 | 194 | 192 | 185 | 182 | 180 | 181 | 180 | 180 | 179 |
| **Below Normal (17%)** | 183 | 182 | 186 | 193 | 193 | 189 | 184 | 182 | 181 | 180 | 180 | 180 |
| **Dry (22%)** | 184 | 185 | 185 | 193 | 193 | 188 | 185 | 183 | 182 | 181 | 184 | 183 |
| **Critical (15%)** | 185 | 187 | 186 | 191 | 193 | 190 | 186 | 184 | 185 | 186 | 186 | 188 |

### Alternative 2B

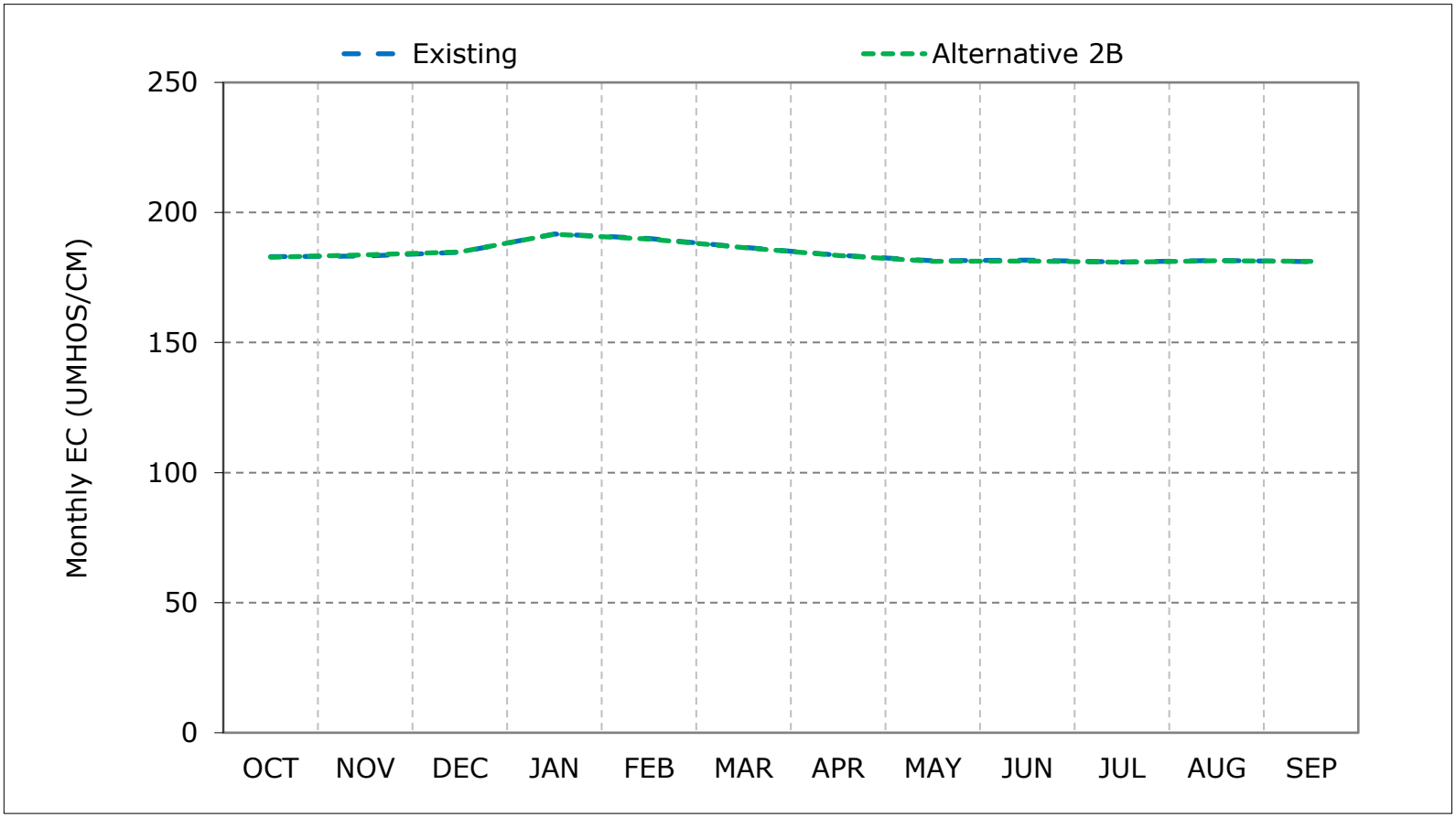
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 188 | 190 | 191 | 202 | 200 | 194 | 187 | 184 | 184 | 185 | 186 | 186 |
| **20%** | 185 | 186 | 188 | 197 | 197 | 192 | 186 | 183 | 182 | 181 | 184 | 183 |
| **30%** | 184 | 184 | 186 | 194 | 192 | 190 | 185 | 182 | 182 | 181 | 183 | 182 |
| **40%** | 183 | 183 | 185 | 192 | 188 | 186 | 184 | 182 | 181 | 180 | 181 | 181 |
| **50%** | 181 | 182 | 184 | 190 | 187 | 185 | 183 | 181 | 181 | 180 | 180 | 180 |
| **60%** | 180 | 181 | 182 | 189 | 187 | 184 | 182 | 181 | 181 | 180 | 180 | 179 |
| **70%** | 180 | 181 | 181 | 187 | 185 | 183 | 182 | 180 | 181 | 180 | 180 | 179 |
| **80%** | 180 | 180 | 181 | 186 | 184 | 182 | 181 | 179 | 180 | 179 | 179 | 179 |
| **90%** | 179 | 179 | 180 | 183 | 182 | 180 | 180 | 178 | 178 | 179 | 179 | 178 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 183 | 184 | 185 | 192 | 190 | 187 | 183 | 181 | 181 | 181 | 181 | 181 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 181 | 182 | 183 | 190 | 184 | 183 | 182 | 180 | 180 | 180 | 180 | 179 |
| **Above Normal (15%)** | 182 | 184 | 185 | 193 | 192 | 185 | 182 | 180 | 181 | 180 | 179 | 179 |
| **Below Normal (17%)** | 183 | 182 | 186 | 192 | 192 | 189 | 184 | 181 | 181 | 180 | 180 | 181 |
| **Dry (22%)** | 184 | 185 | 185 | 193 | 193 | 188 | 185 | 182 | 182 | 181 | 183 | 183 |
| **Critical (15%)** | 185 | 187 | 187 | 192 | 193 | 190 | 186 | 184 | 185 | 186 | 186 | 187 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -1 | **0** | **0** | -1 | 0 | **0** | **0** | -1 | **0** | 0 | **0** | 0 |
| **20%** | 0 | **0** | **0** | **0** | **0** | **0** | 0 | 0 | 0 | **0** | 0 | 0 |
| **30%** | **0** | **0** | **0** | **0** | **0** | **0** | 0 | 0 | 0 | **0** | 0 | 0 |
| **40%** | 0 | 0 | **0** | **0** | -1 | 0 | 0 | 0 | -1 | 0 | **0** | 0 |
| **50%** | **0** | **1** | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **60%** | 0 | **1** | **0** | 0 | **0** | **0** | 0 | 0 | 0 | 0 | 0 | **0** |
| **70%** | **0** | **1** | **0** | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| **80%** | **0** | **1** | **1** | 0 | 0 | **0** | **0** | 0 | **0** | 0 | 0 | **1** |
| **90%** | 0 | **1** | **0** | -1 | 0 | -1 | **0** | **0** | 0 | 0 | 0 | **1** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 0 | **0** | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 0 | **1** | 0 | 0 | 0 | **0** | 0 | 0 | 0 | **0** | 0 | **1** |
| **Above Normal (15%)** | 0 | **1** | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Below Normal (17%)** | 0 | **0** | **0** | -1 | -1 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Dry (22%)** | 0 | **0** | **0** | 0 | **0** | 0 | 0 | -1 | 0 | 0 | 0 | 0 |
| **Critical (15%)** | 0 | **1** | **1** | **1** | **0** | 0 | 0 | 0 | **0** | 0 | 0 | 0 |

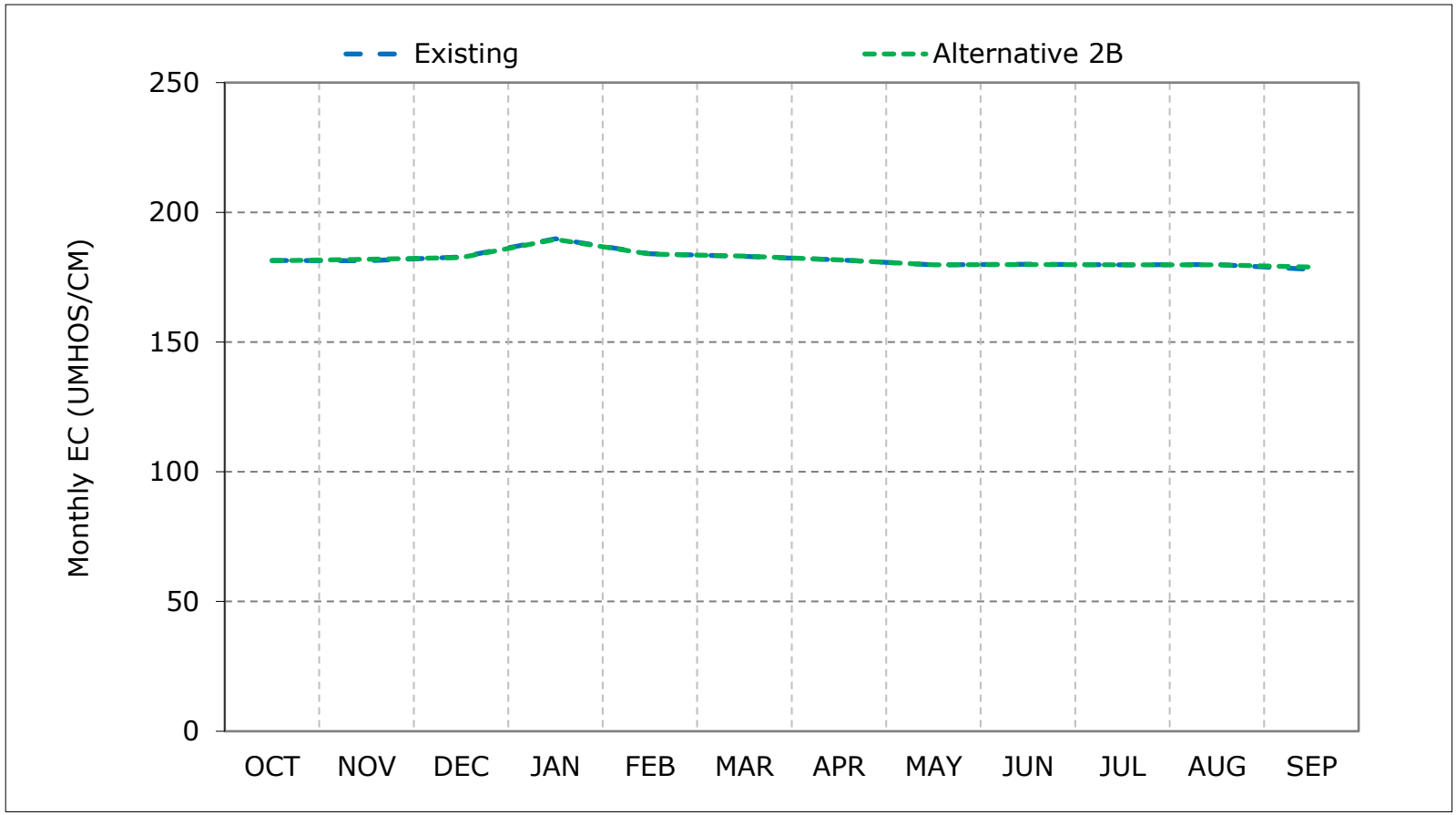
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 2-1. Cache Slough at Ryer Island Salinity, Long-Term Average EC**



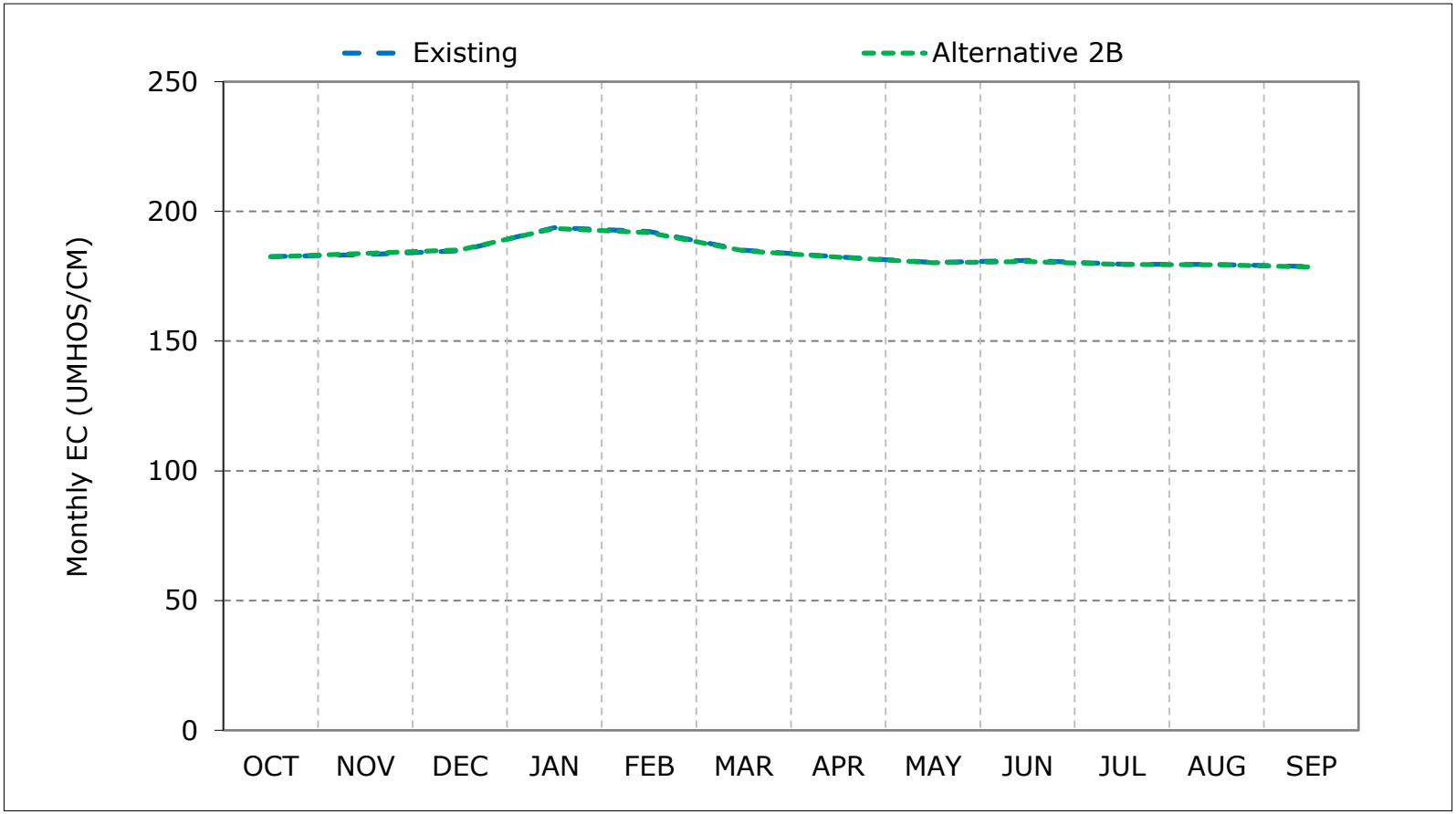

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 2-2. Cache Slough at Ryer Island Salinity, Wet Year Average EC**



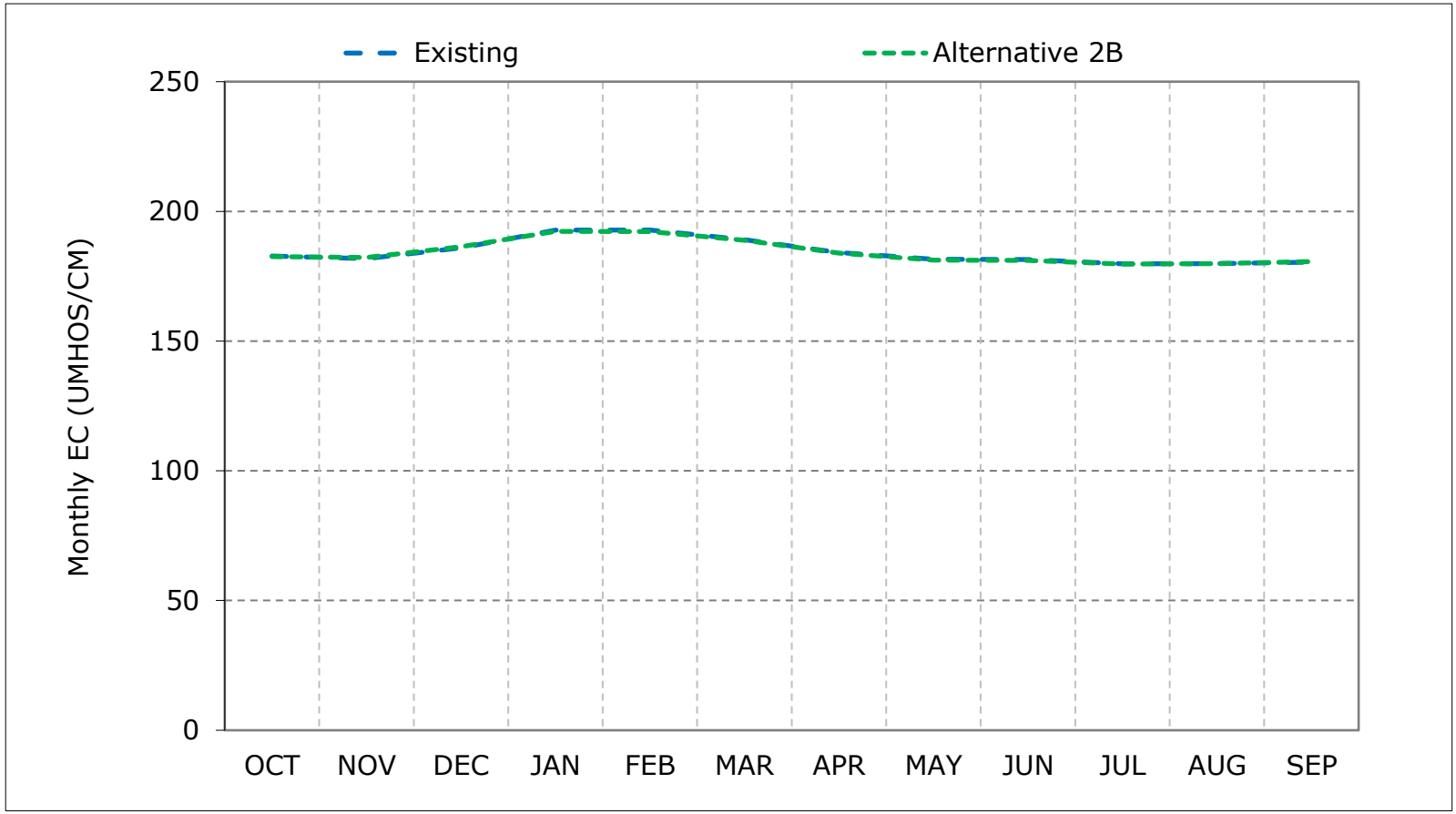

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 2-3. Cache Slough at Ryer Island Salinity, Above Normal Year Average EC**



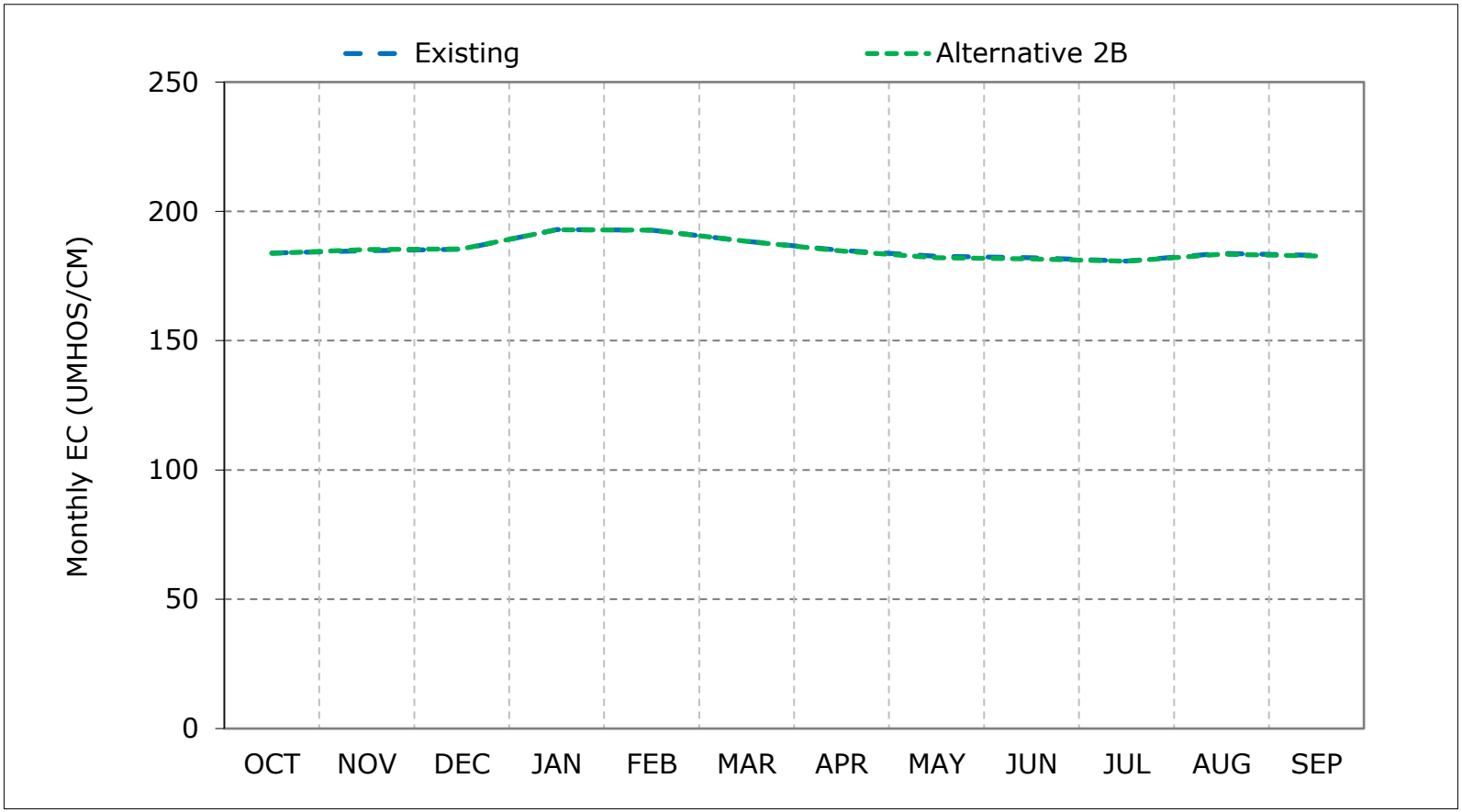

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 2-4. Cache Slough at Ryer Island Salinity, Below Normal Year Average EC**



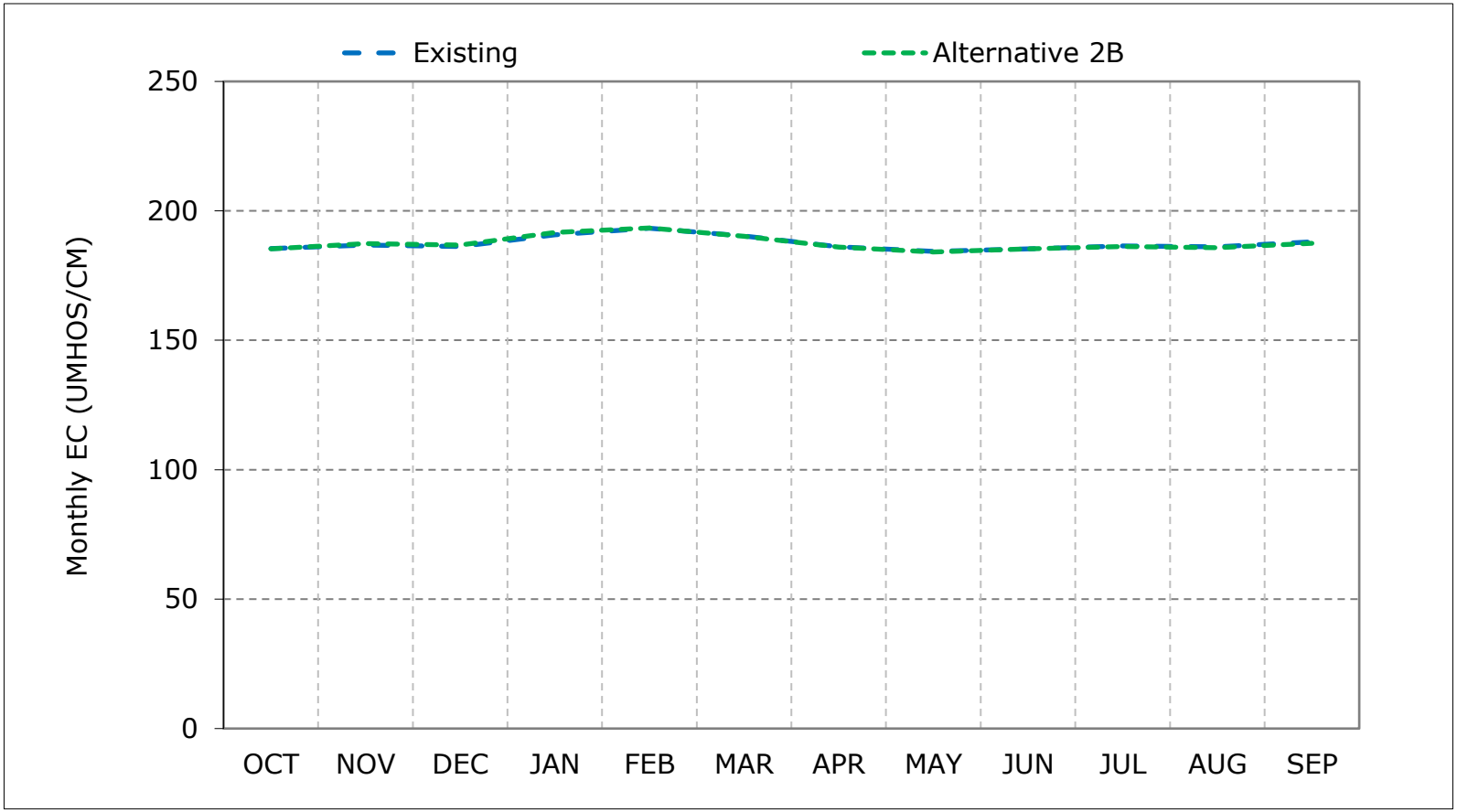

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 2-5. Cache Slough at Ryer Island Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 2-6. Cache Slough at Ryer Island Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 2-7. Cache Slough at Ryer Island Salinity, January EC**

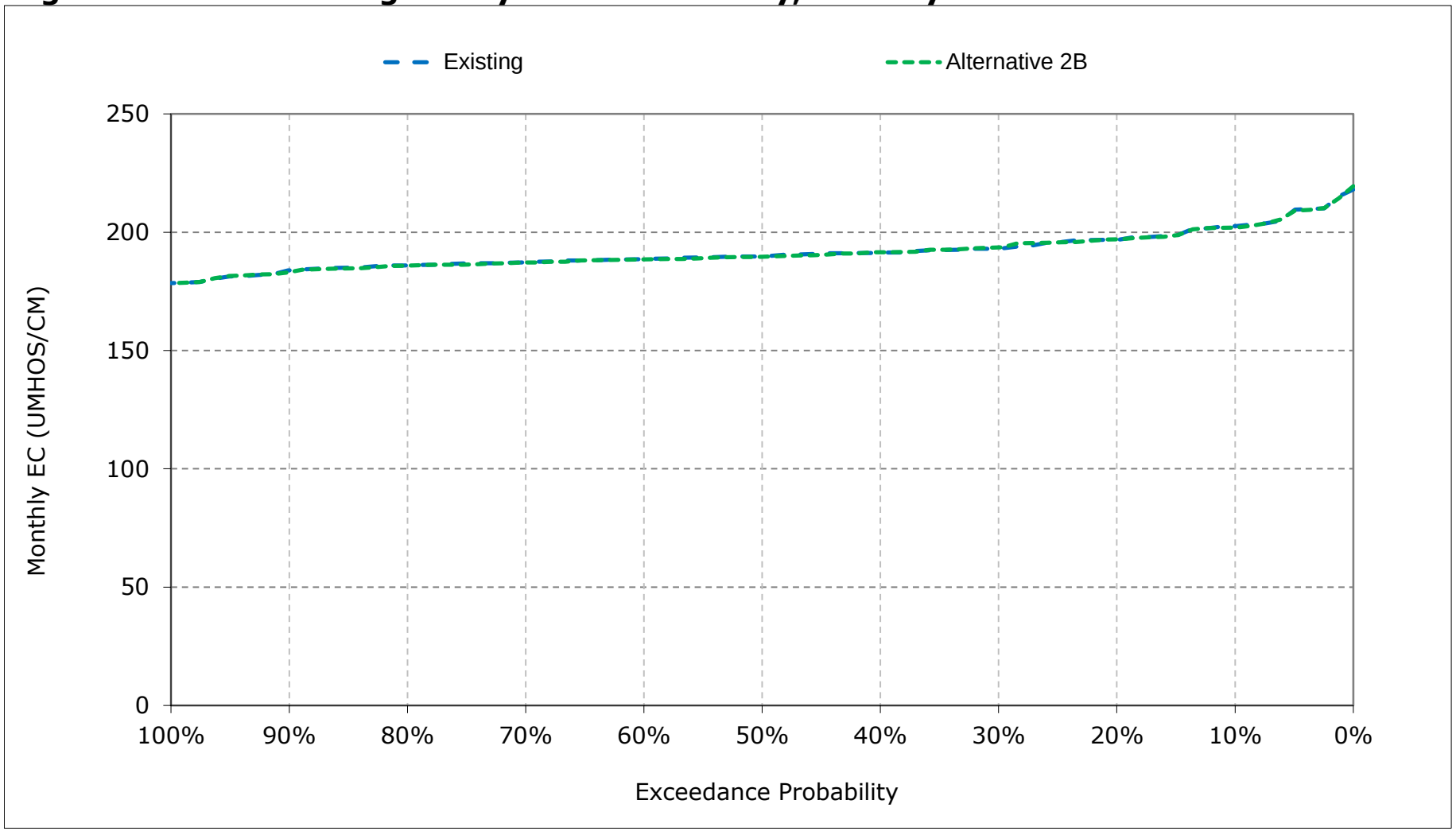


**Figure 2-8. Cache Slough at Ryer Island Salinity, February EC**

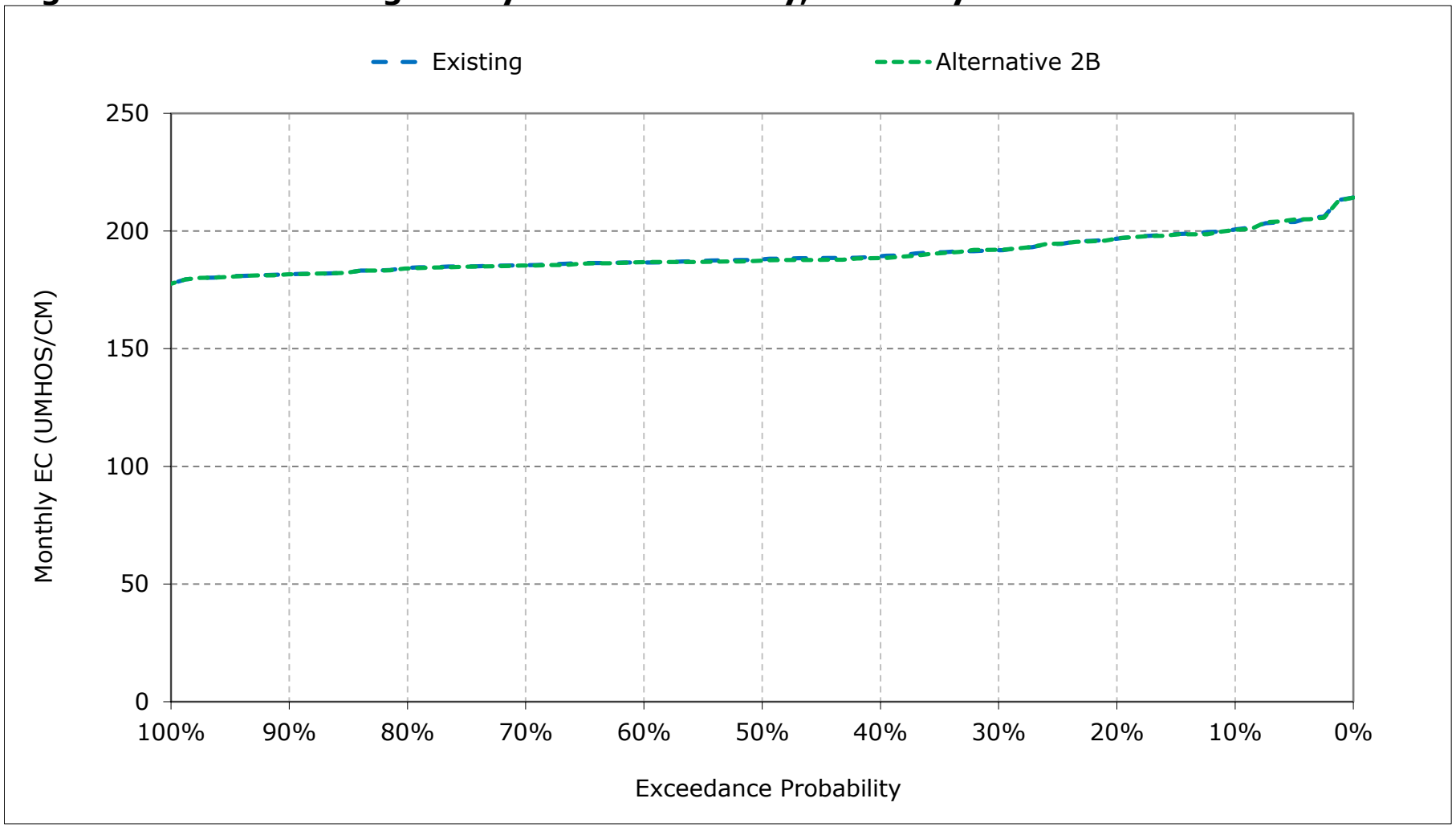


**Figure 2-9. Cache Slough at Ryer Island Salinity, March EC**

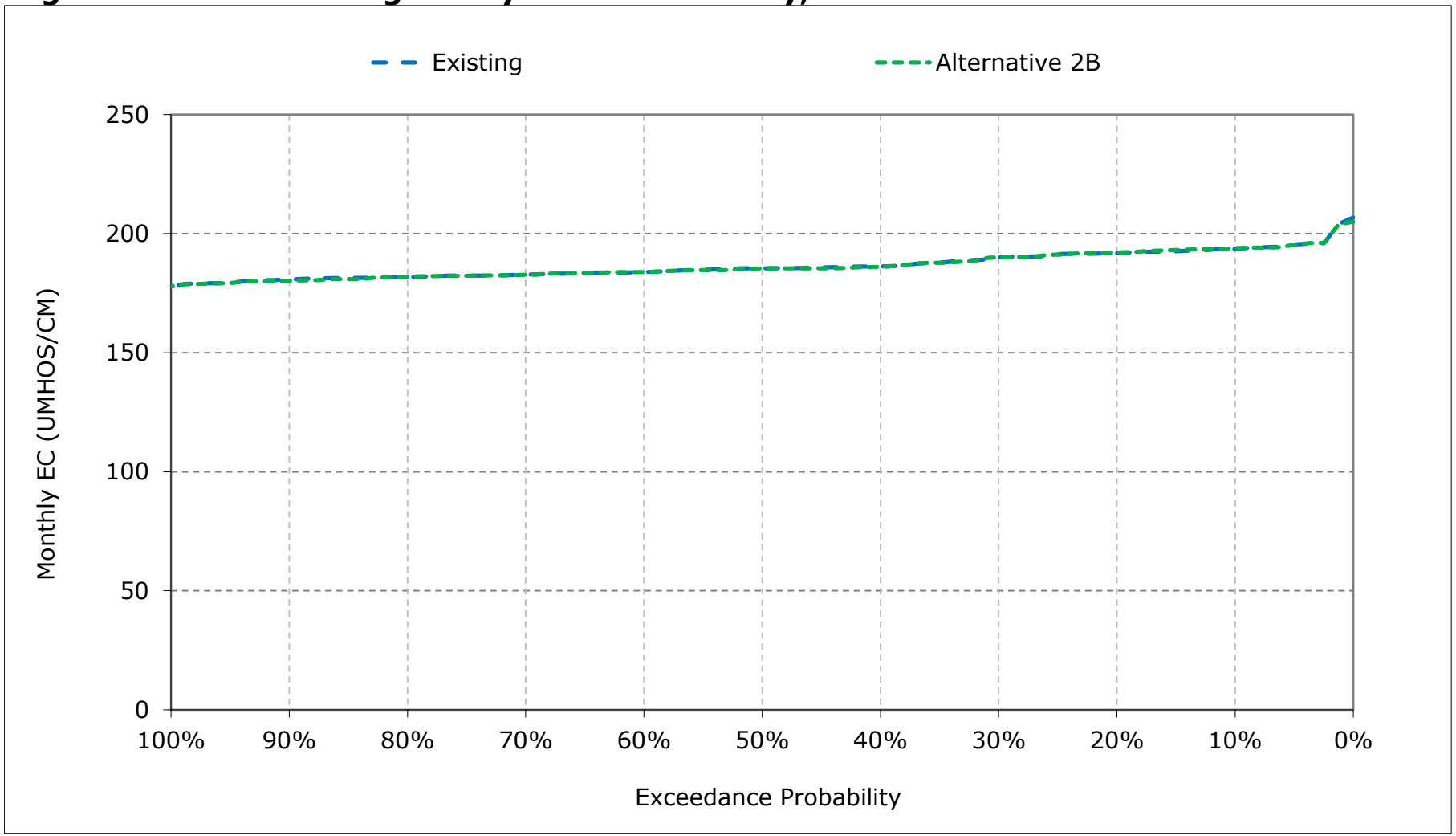


**Figure 2-10. Cache Slough at Ryer Island Salinity, April EC**

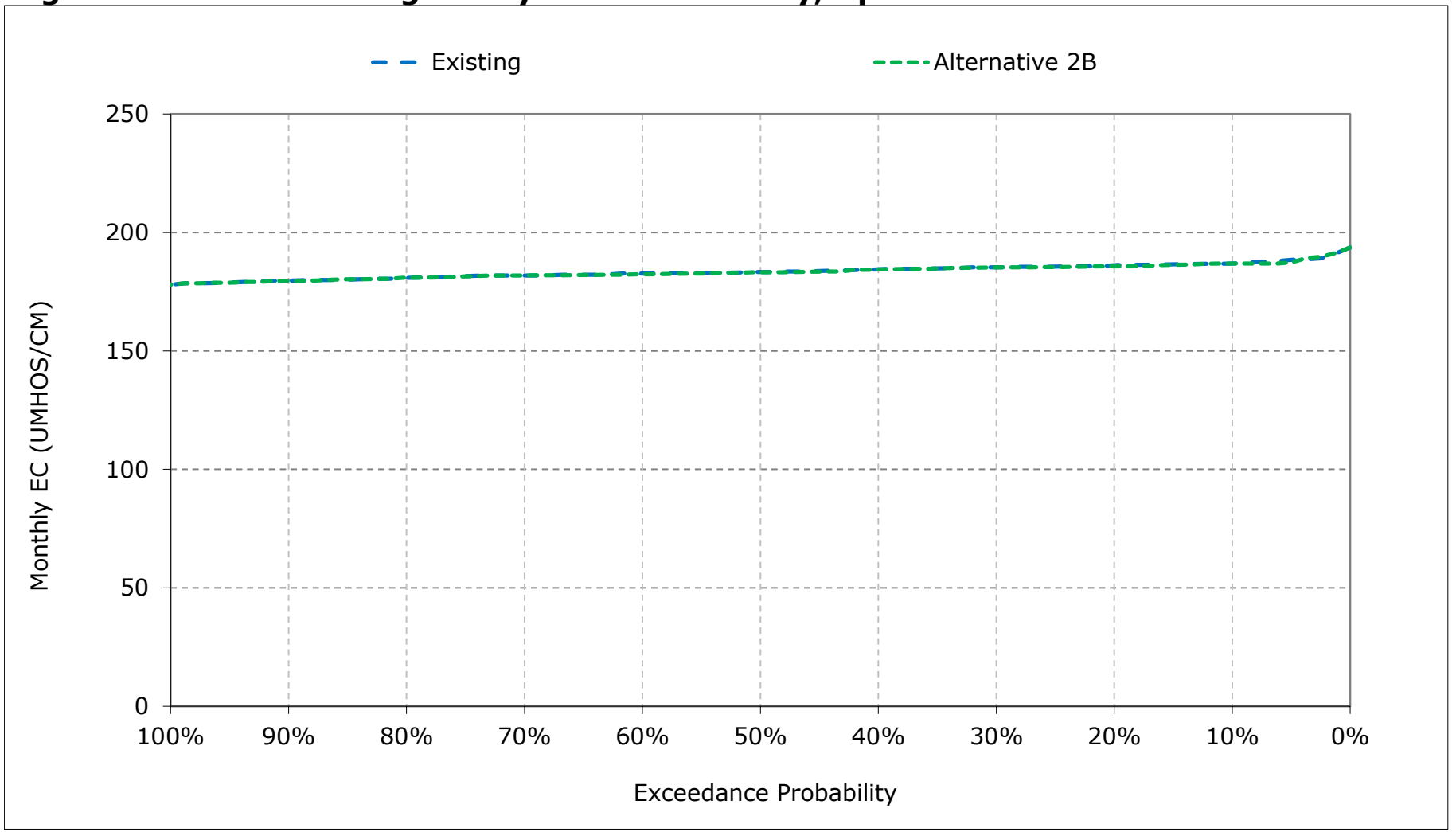


**Figure 2-11. Cache Slough at Ryer Island Salinity, May EC**

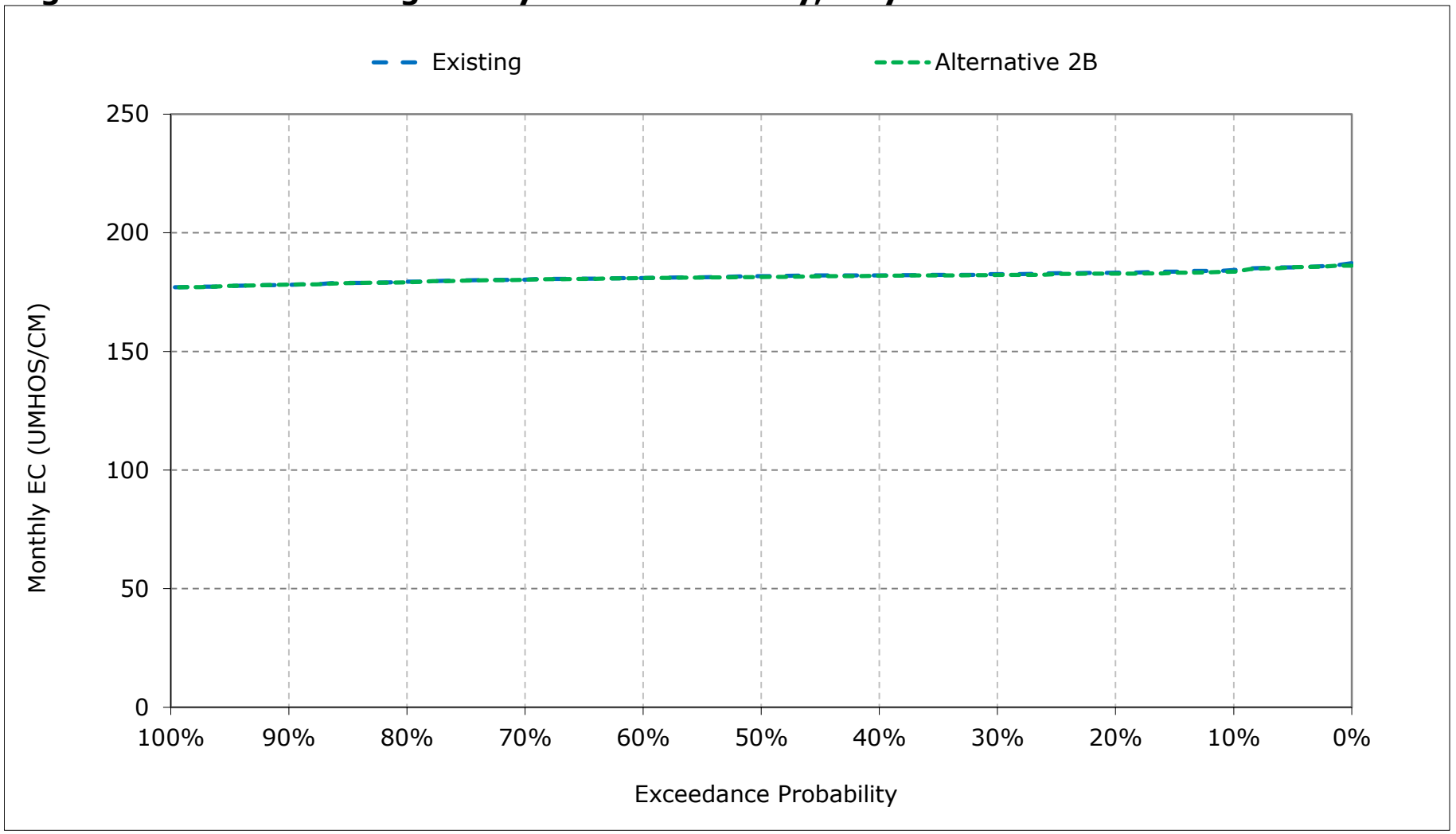


**Figure 2-12. Cache Slough at Ryer Island Salinity, June EC**

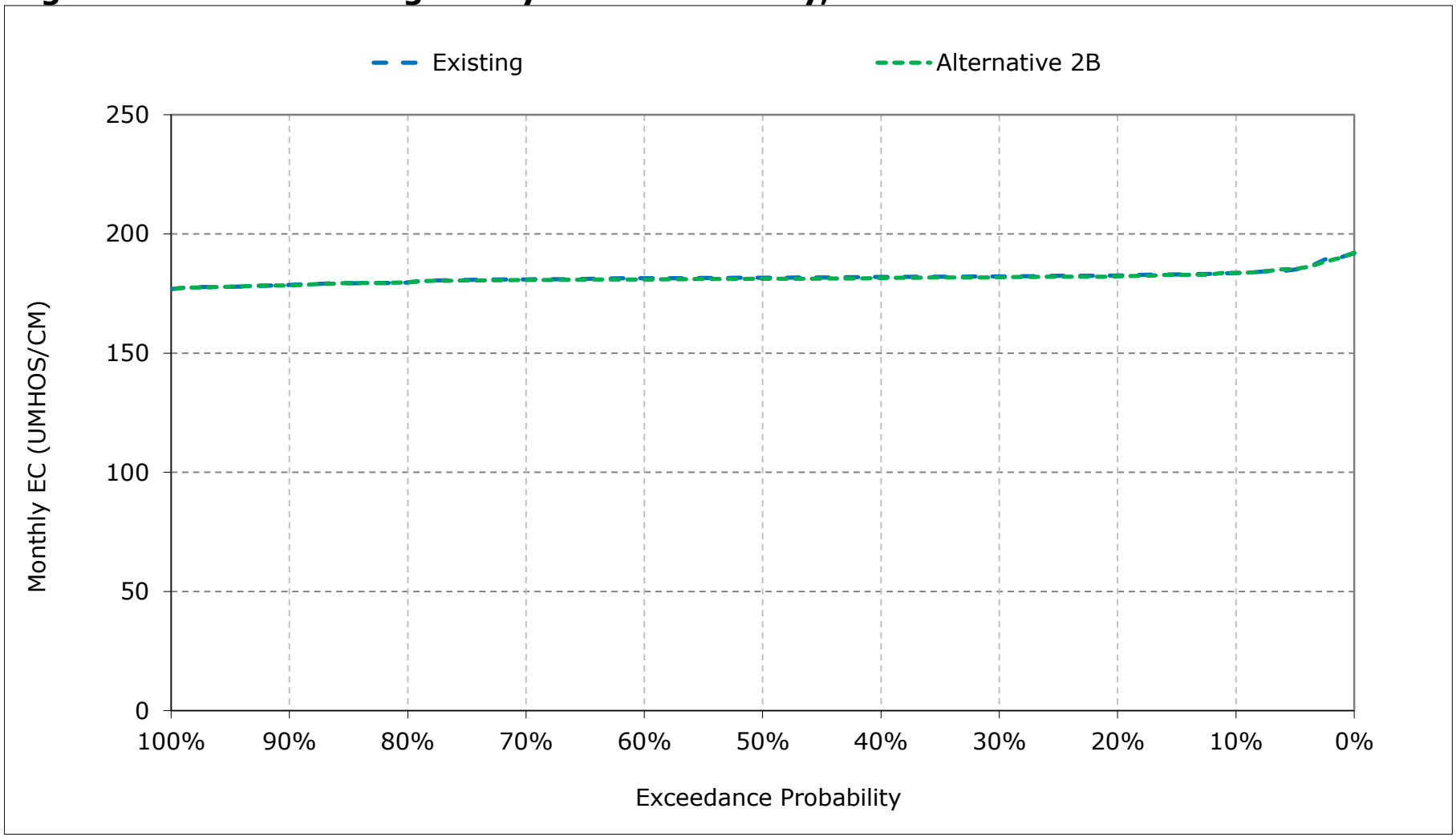


**Figure 2-13. Cache Slough at Ryer Island Salinity, July EC**

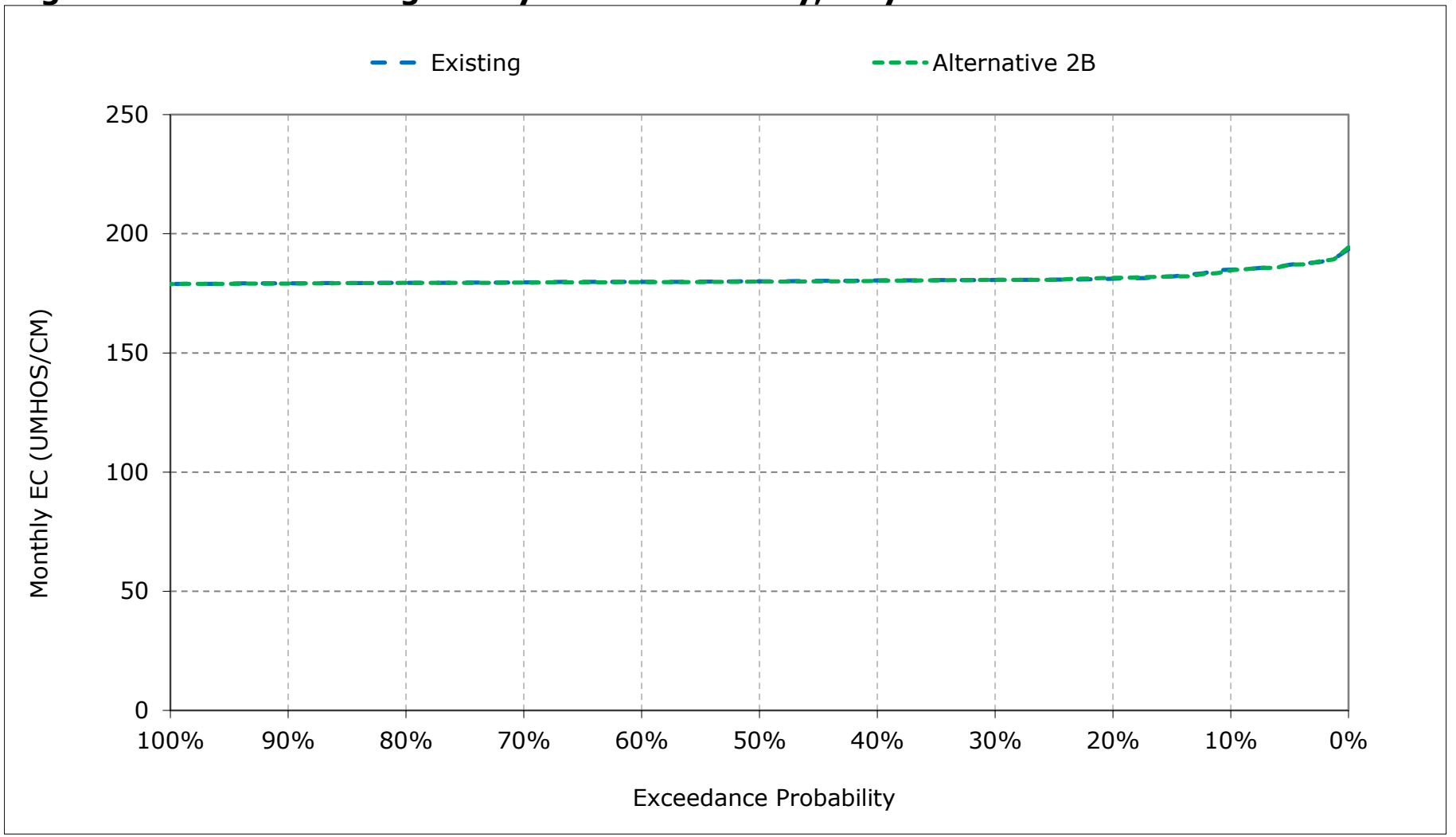


**Figure 2-14. Cache Slough at Ryer Island Salinity, August EC**

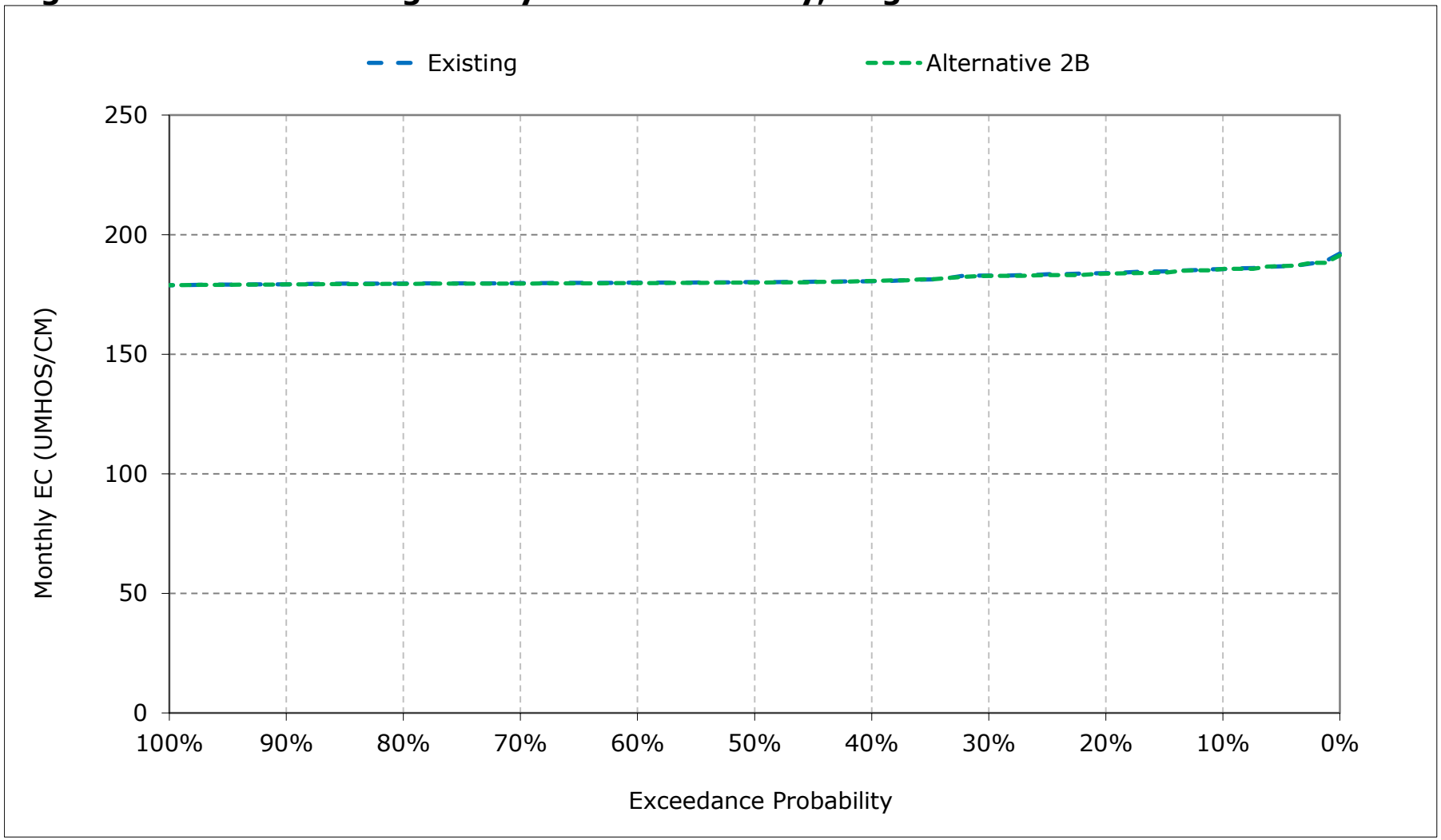


**Figure 2-15. Cache Slough at Ryer Island Salinity, September EC**

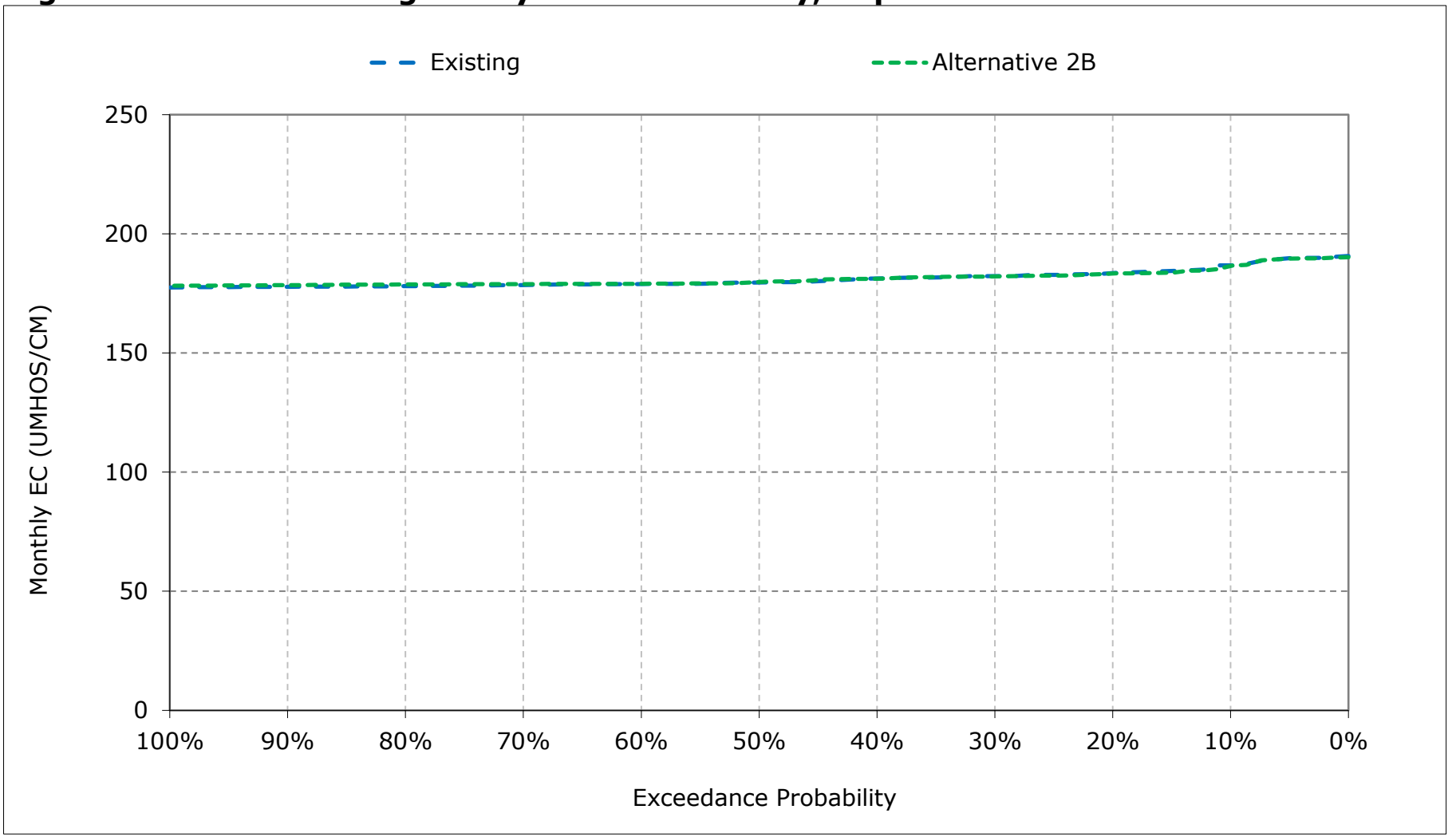


**Figure 2-16. Cache Slough at Ryer Island Salinity, October EC**

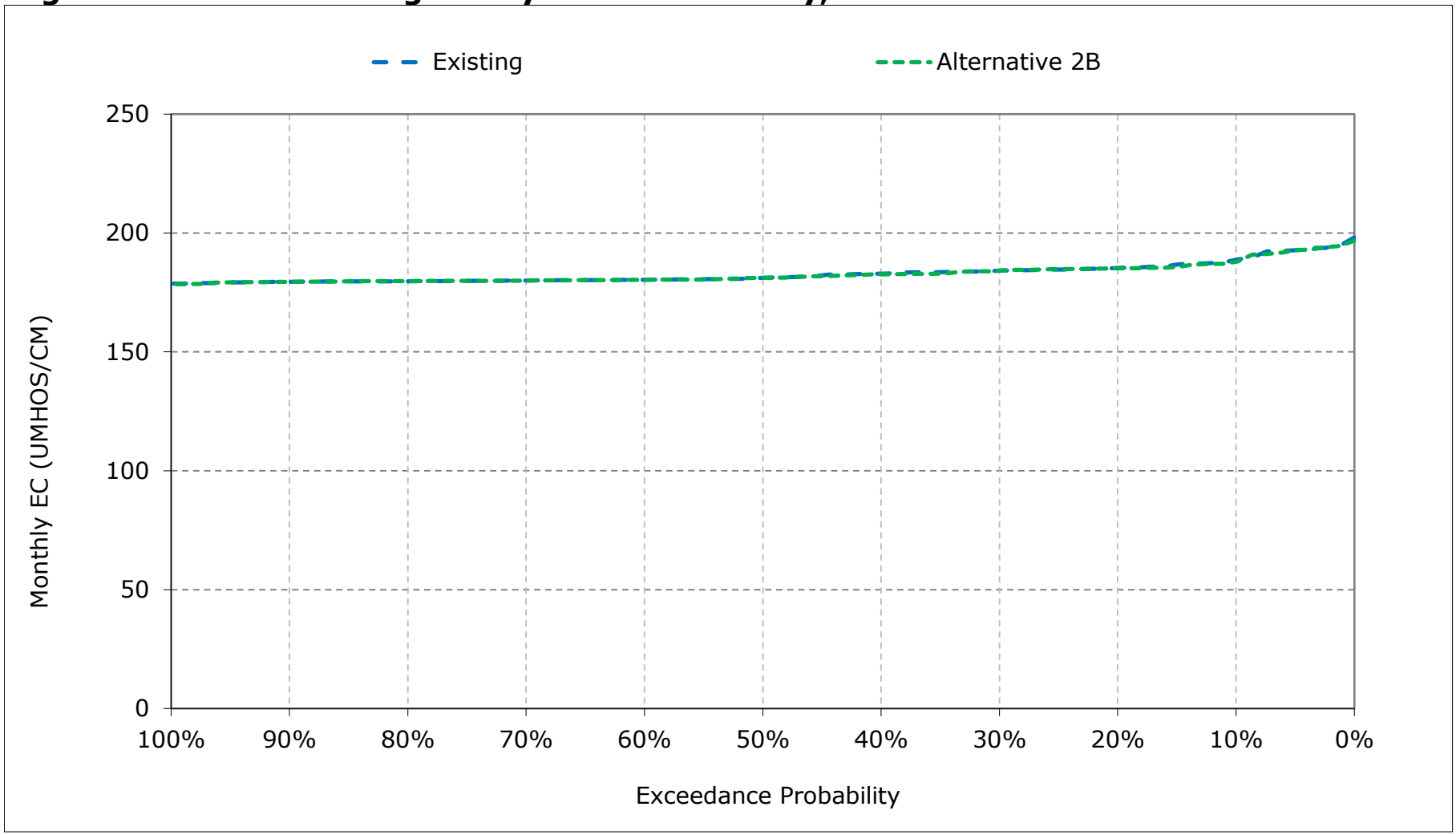


**Figure 2-17. Cache Slough at Ryer Island Salinity, November EC**

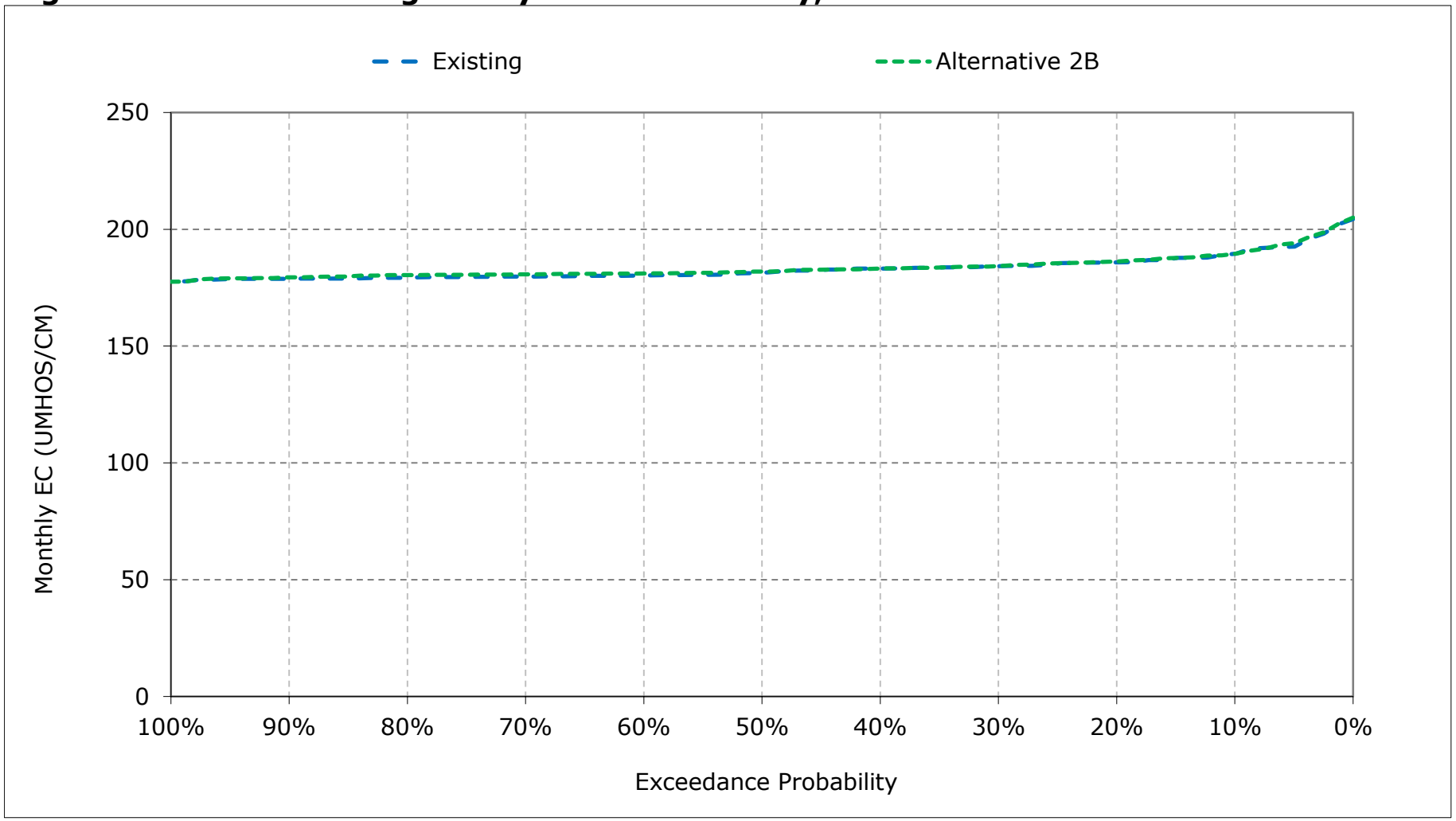
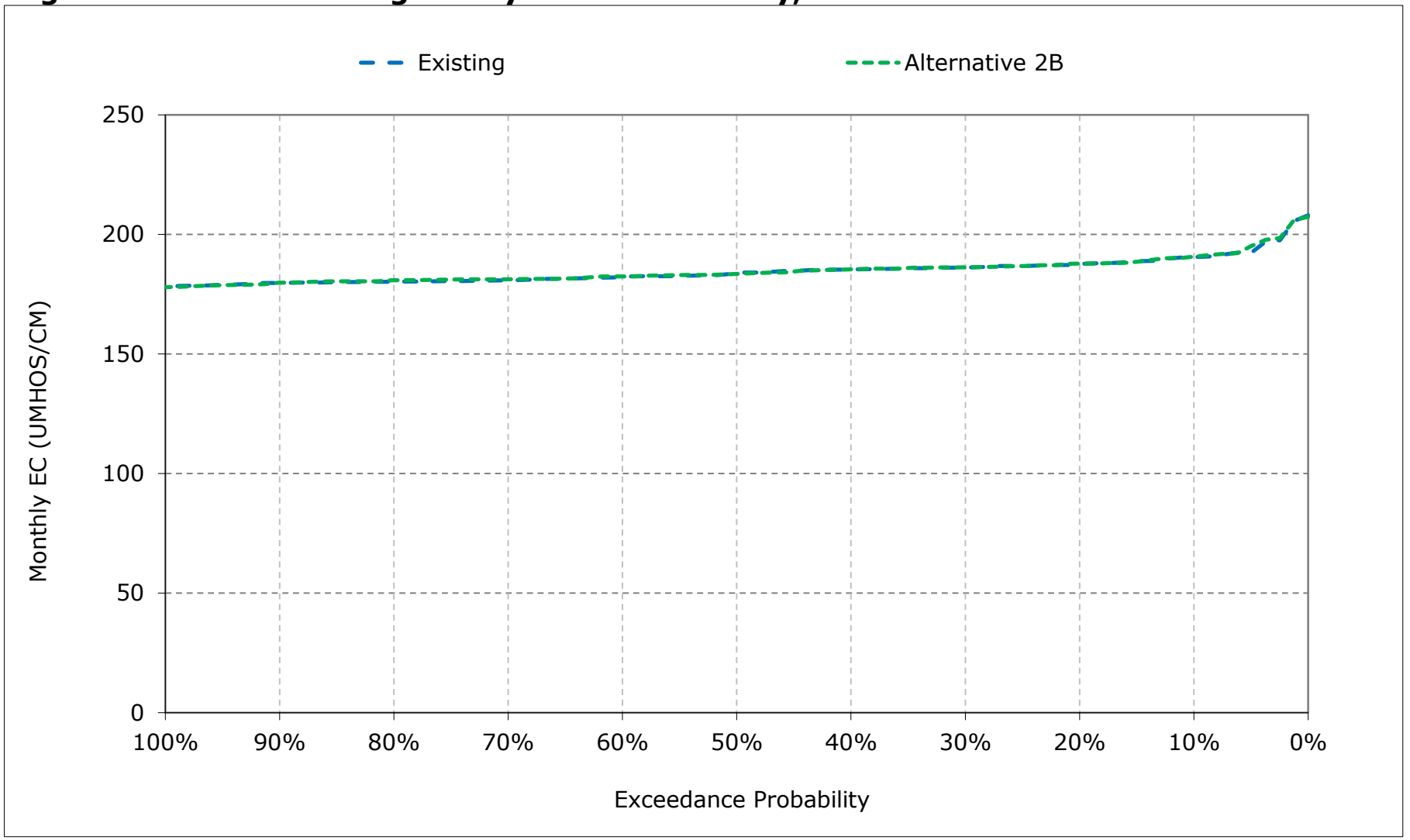


**Figure 2-18. Cache Slough at Ryer Island Salinity, December EC**



## Table 3-1. Sacramento River downstream of Georgiana Slough Salinity, Monthly EC

### Existing

| | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Statistic** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 176 | 177 | 179 | 181 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 |
| **20%** | 176 | 176 | 178 | 180 | 178 | 177 | 176 | 176 | 176 | 176 | 176 | 176 |
| **30%** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **40%** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **50%** | 176 | 176 | 176 | 178 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 176 |
| **60%** | 176 | 176 | 176 | 178 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 175 |
| **70%** | 176 | 175 | 176 | 178 | 176 | 176 | 176 | 175 | 176 | 175 | 176 | 175 |
| **80%** | 176 | 175 | 176 | 177 | 176 | 176 | 175 | 175 | 176 | 175 | 176 | 175 |
| **90%** | 175 | 175 | 175 | 177 | 176 | 175 | 175 | 175 | 175 | 175 | 176 | 175 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 176 | 176 | 177 | 178 | 177 | 176 | 176 | 175 | 176 | 175 | 176 | 175 |
| **Above Normal (15%)** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 175 |
| **Below Normal (17%)** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 176 |
| **Dry (22%)** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **Critical (15%)** | 176 | 176 | 176 | 179 | 177 | 177 | 176 | 176 | 176 | 176 | 176 | 176 |

### Alternative 2B

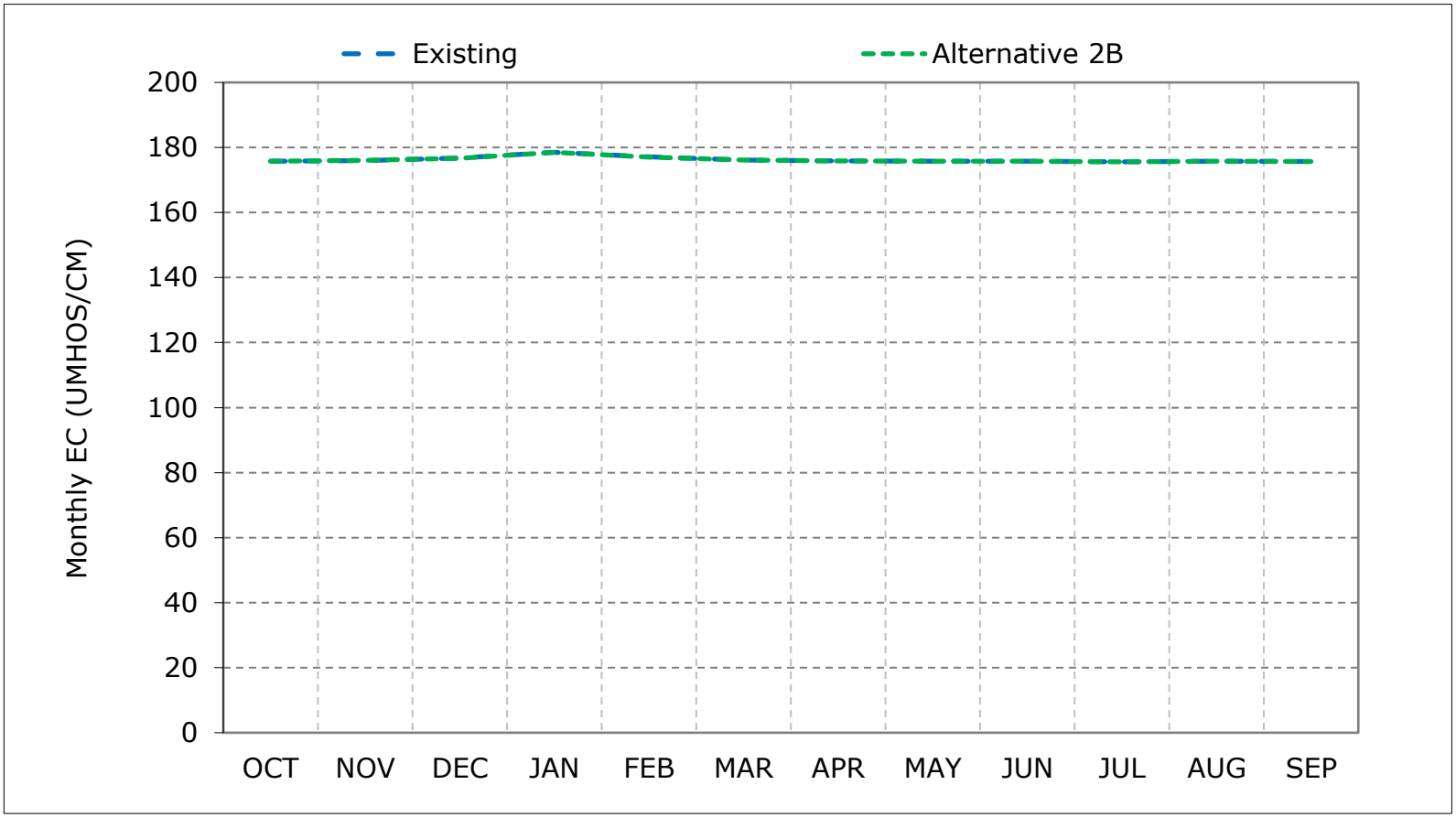
| | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Statistic** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 176 | 177 | 178 | 181 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 |
| **20%** | 176 | 176 | 178 | 180 | 178 | 177 | 176 | 176 | 176 | 176 | 176 | 176 |
| **30%** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **40%** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **50%** | 176 | 176 | 176 | 178 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 176 |
| **60%** | 176 | 176 | 176 | 178 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 175 |
| **70%** | 176 | 176 | 176 | 178 | 176 | 176 | 176 | 175 | 176 | 175 | 176 | 175 |
| **80%** | 175 | 175 | 176 | 177 | 176 | 176 | 175 | 175 | 176 | 175 | 176 | 175 |
| **90%** | 175 | 175 | 175 | 177 | 176 | 175 | 175 | 175 | 175 | 175 | 176 | 175 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 176 | 176 | 177 | 178 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 176 | 176 | 177 | 178 | 177 | 176 | 176 | 175 | 176 | 175 | 176 | 175 |
| **Above Normal (15%)** | 176 | 176 | 177 | 178 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 175 |
| **Below Normal (17%)** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 175 | 176 | 176 |
| **Dry (22%)** | 176 | 176 | 177 | 179 | 177 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| **Critical (15%)** | 176 | 176 | 176 | 179 | 177 | 177 | 176 | 176 | 176 | 176 | 176 | 176 |

### Alternative 2B minus Existing

| | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Statistic** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | **0** | **0** | 0 | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 |
| **20%** | **0** | **0** | 0 | 0 | 0 | **0** | **0** | 0 | 0 | **0** | **0** | 0 |
| **30%** | 0 | **0** | **0** | **0** | 0 | **0** | **0** | 0 | 0 | 0 | 0 | **0** |
| **40%** | **0** | **0** | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| **50%** | **0** | **0** | **0** | 0 | 0 | **0** | **0** | 0 | 0 | **0** | 0 | 0 |
| **60%** | 0 | **0** | 0 | **0** | 0 | **0** | 0 | 0 | 0 | **0** | 0 | **0** |
| **70%** | 0 | **0** | **0** | 0 | 0 | 0 | **0** | 0 | 0 | **0** | 0 | **0** |
| **80%** | 0 | **0** | **0** | 0 | 0 | 0 | **0** | 0 | 0 | **0** | **0** | **0** |
| **90%** | 0 | **0** | **0** | **0** | 0 | 0 | 0 | 0 | **0** | **0** | **0** | **0** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 0 | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | 0 | **0** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 0 | **0** | 0 | 0 | 0 | 0 | **0** | 0 | 0 | **0** | 0 | **0** |
| **Above Normal (15%)** | 0 | **0** | **0** | 0 | 0 | 0 | **0** | **0** | 0 | **0** | 0 | 0 |
| **Below Normal (17%)** | 0 | **0** | 0 | 0 | 0 | 0 | **0** | 0 | 0 | **0** | **0** | **0** |
| **Dry (22%)** | **0** | **0** | 0 | **0** | **0** | 0 | 0 | 0 | 0 | **0** | 0 | 0 |
| **Critical (15%)** | **0** | **0** | **0** | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

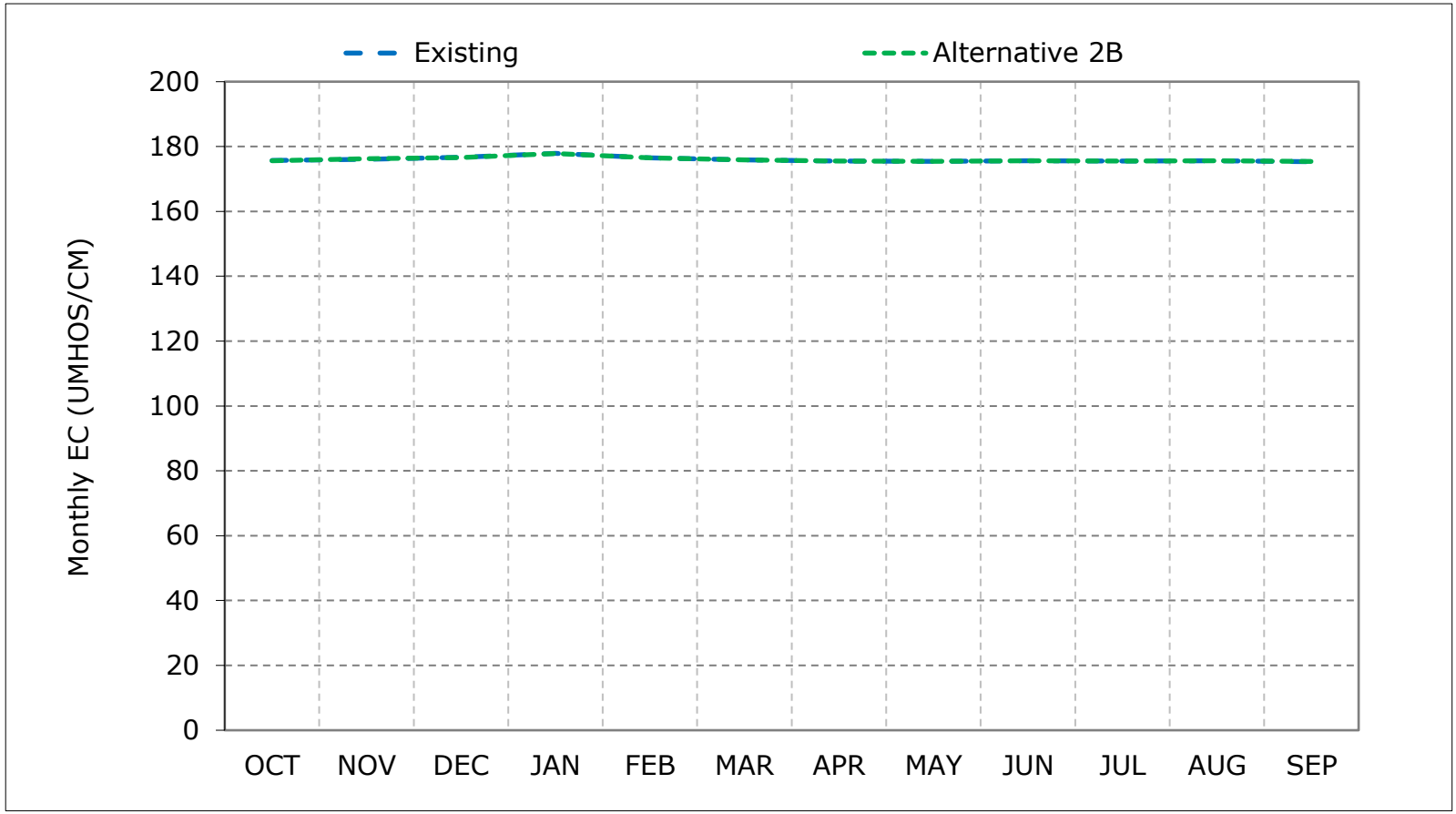
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 3-1. Sacramento River downstream of Georgiana Slough Salinity, Long-Term A**



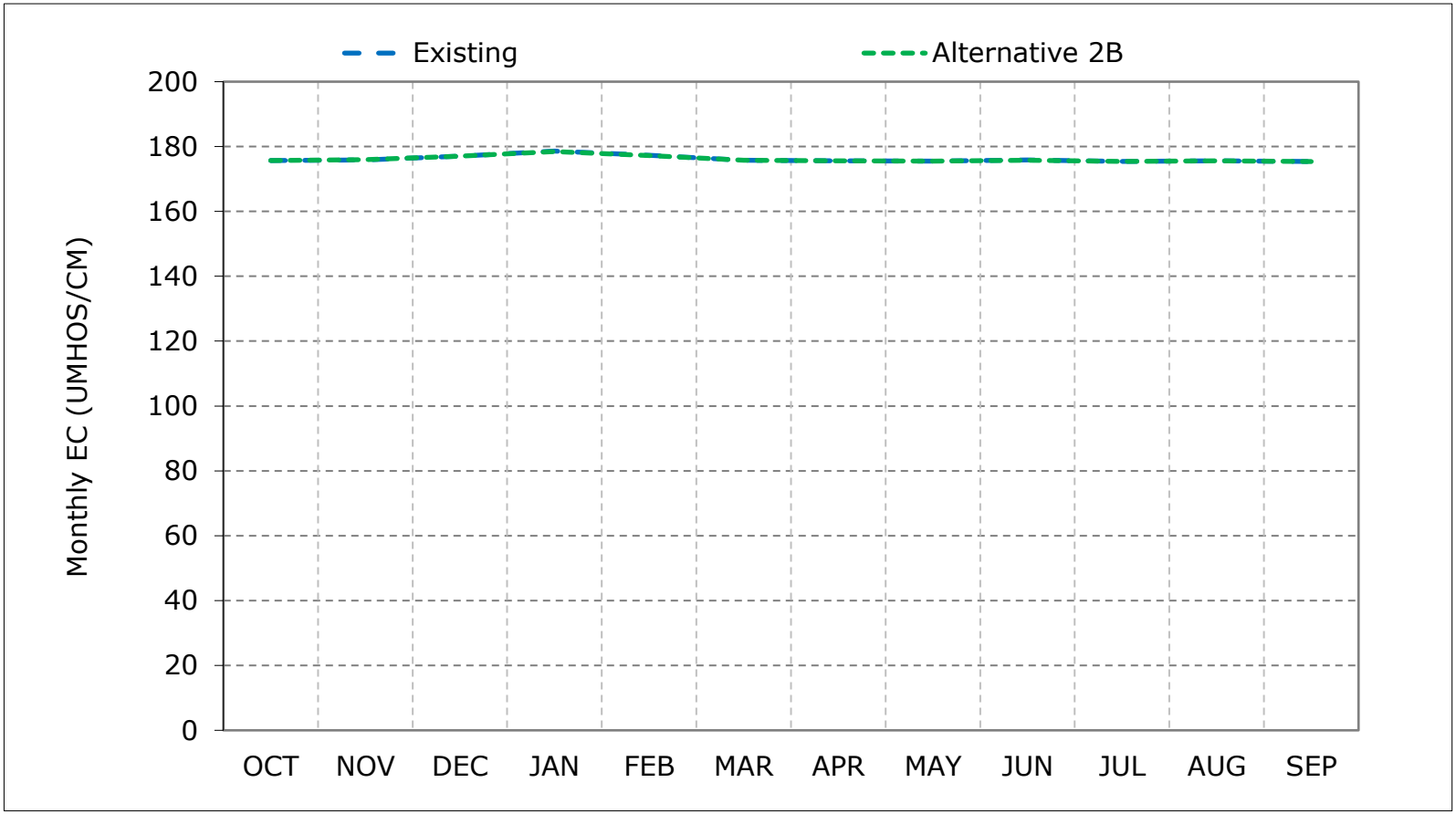

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 3-2. Sacramento River downstream of Georgiana Slough Salinity, Wet Year Avera**



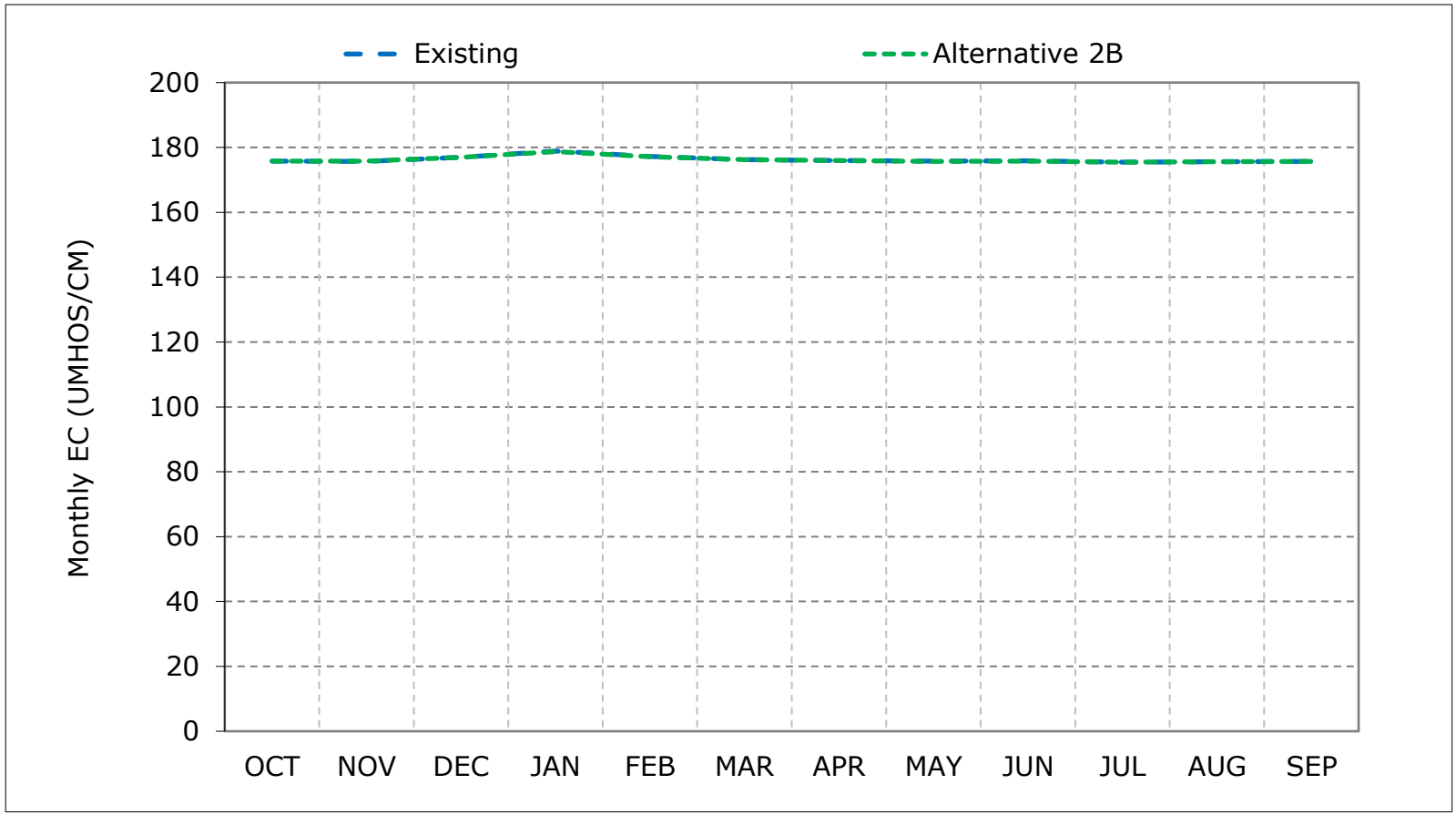

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 3-3. Sacramento River downstream of Georgiana Slough Salinity, Above Nor**



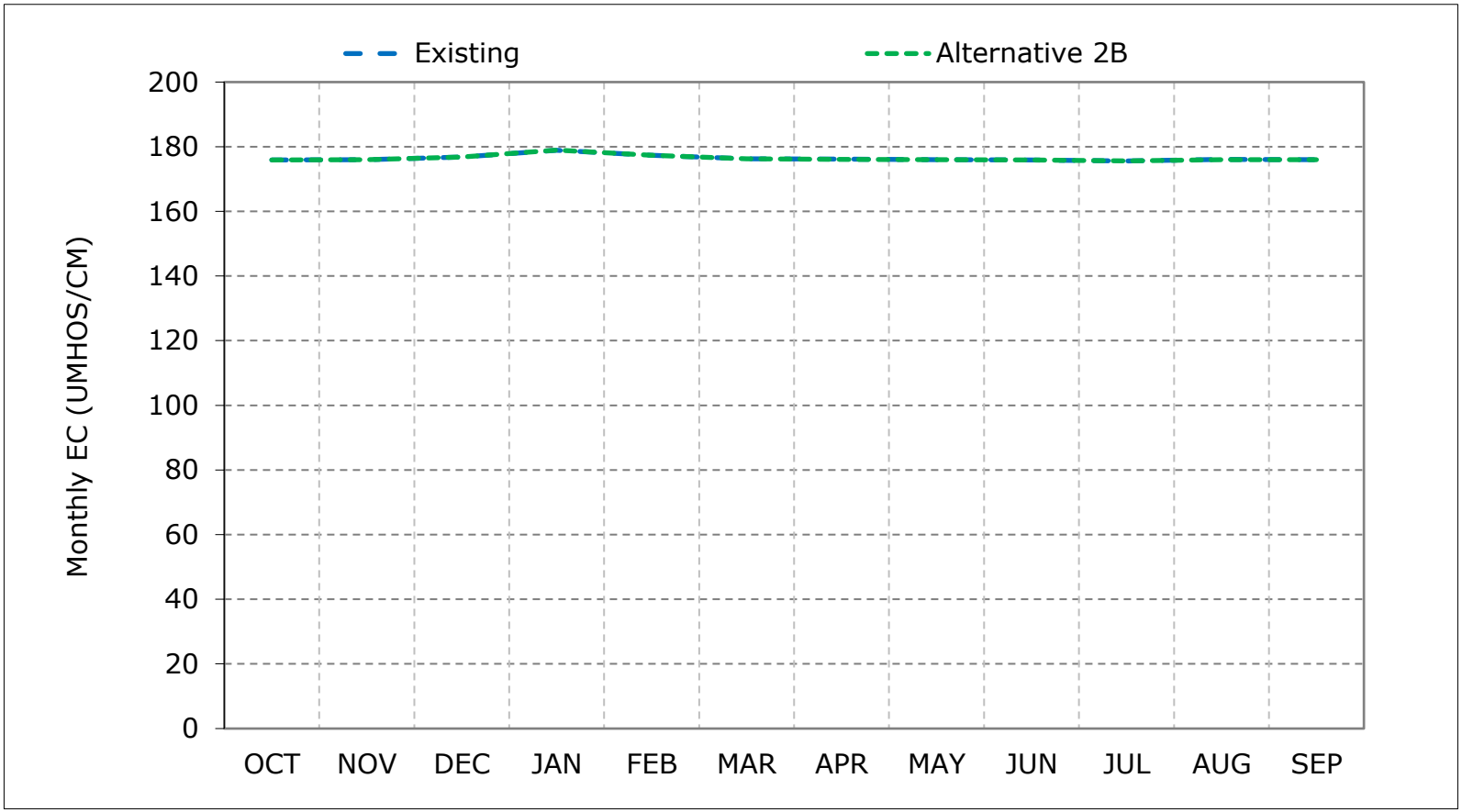

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 3-4. Sacramento River downstream of Georgiana Slough Salinity, Below Nor**



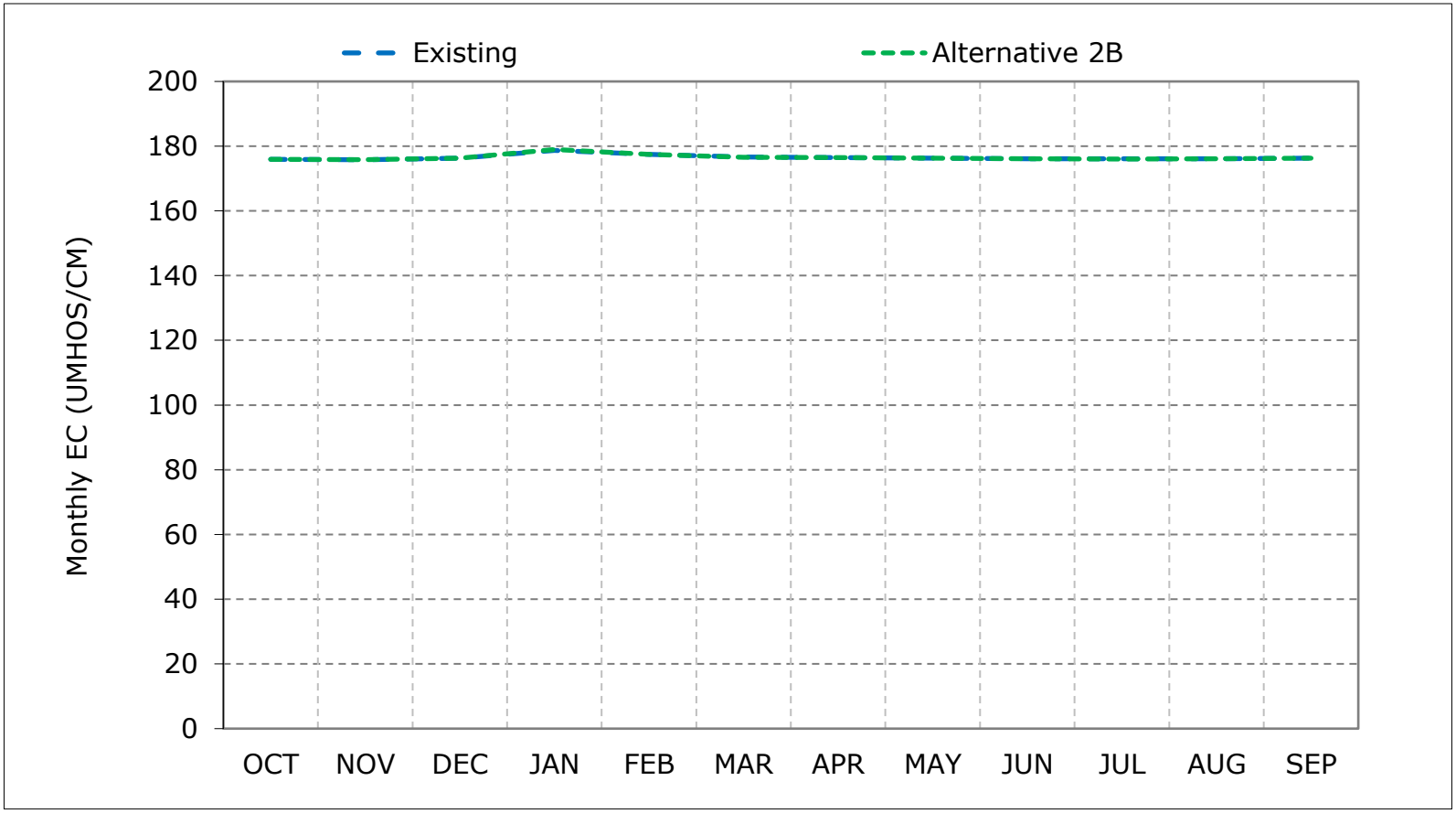

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 3-5. Sacramento River downstream of Georgiana Slough Salinity, Dry Year Avera**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 3-6. Sacramento River downstream of Georgiana Slough Salinity, Critical Year Av**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 3-7. Sacramento River downstream of Georgiana Slough Salinity, January EC**

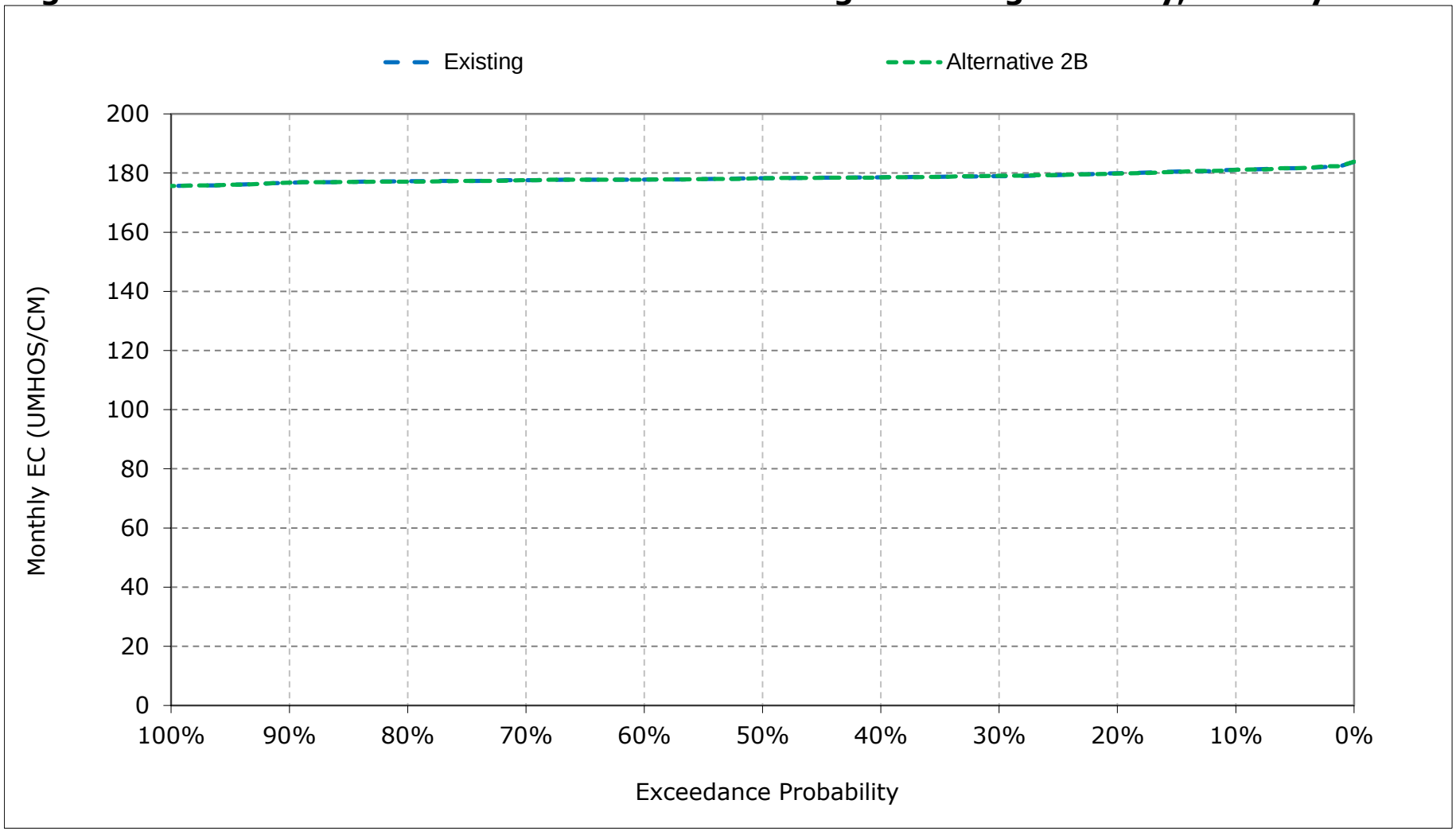


**Figure 3-8. Sacramento River downstream of Georgiana Slough Salinity, February EC**

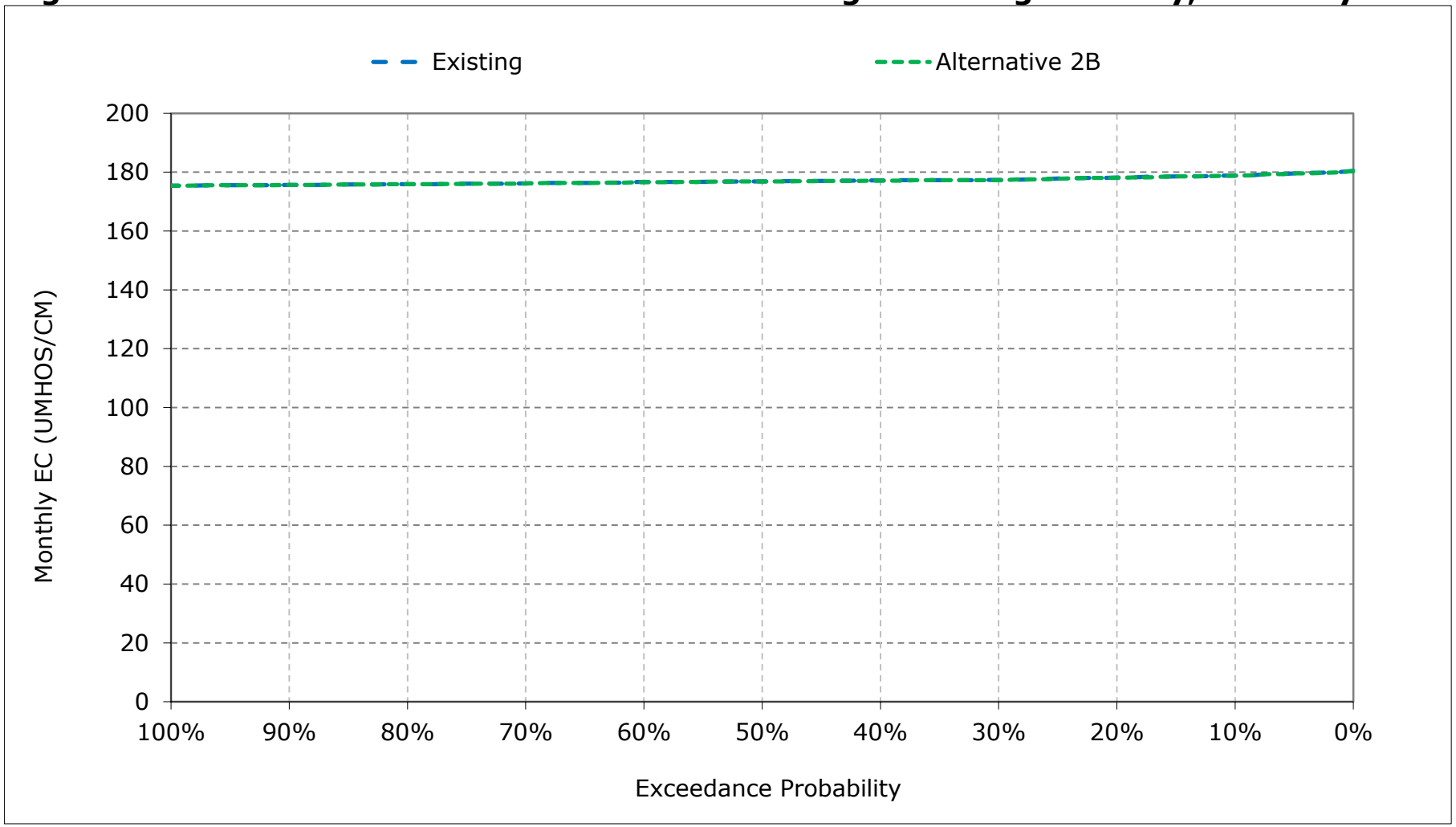


**Figure 3-9. Sacramento River downstream of Georgiana Slough Salinity, March EC**

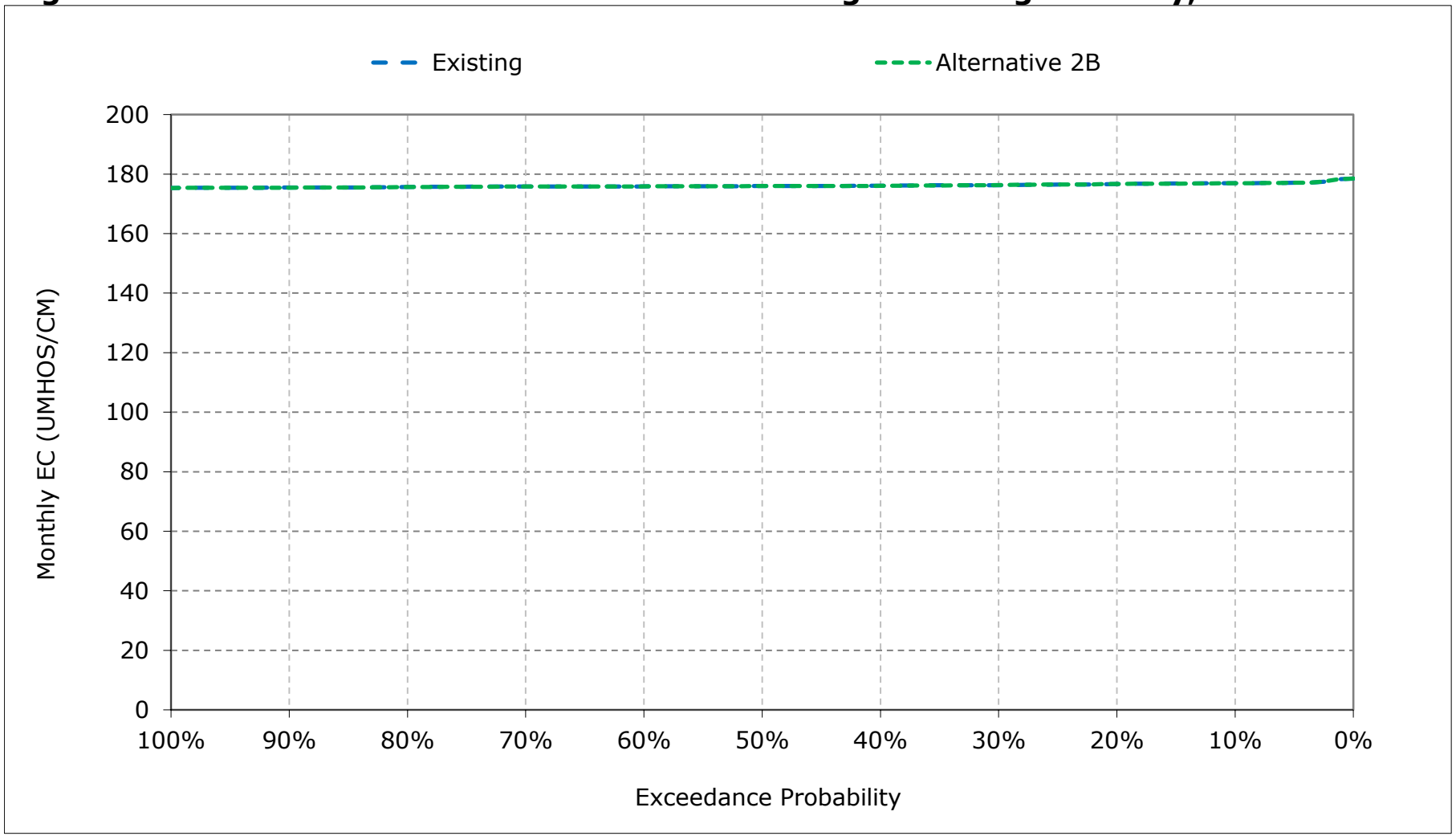


**Figure 3-10. Sacramento River downstream of Georgiana Slough Salinity, April EC**

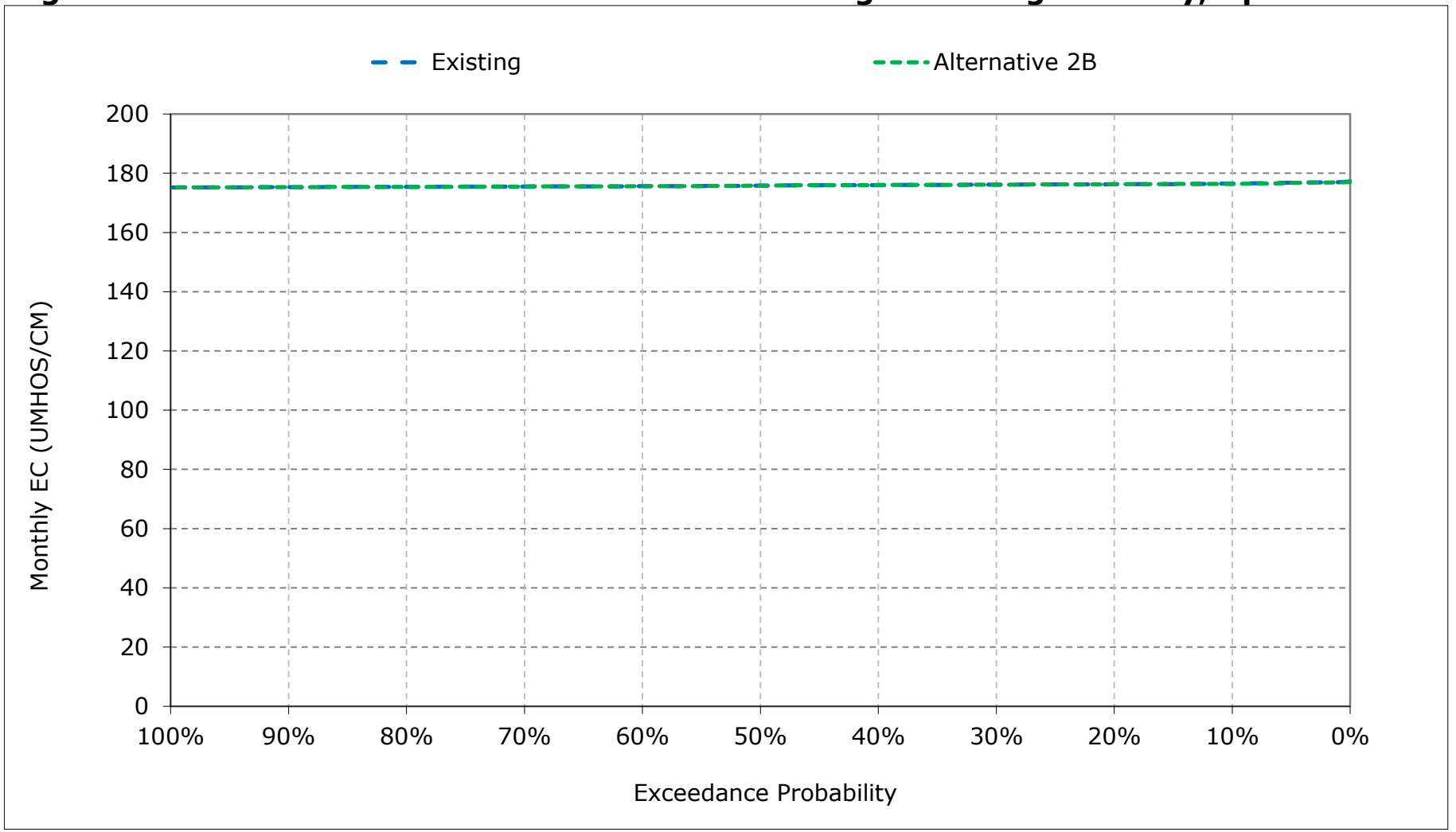


**Figure 3-11. Sacramento River downstream of Georgiana Slough Salinity, May EC**

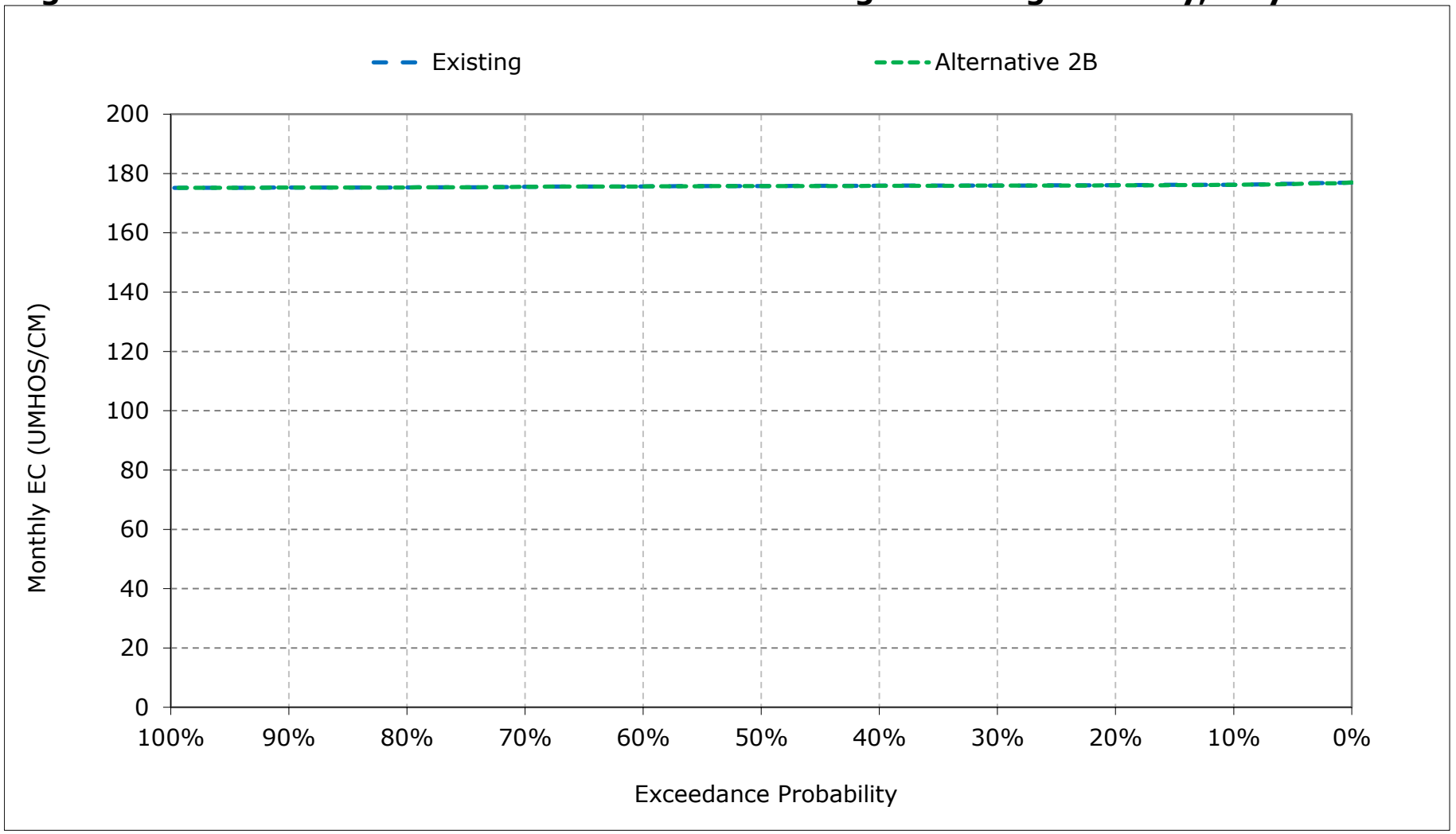


**Figure 3-12. Sacramento River downstream of Georgiana Slough Salinity, June EC**

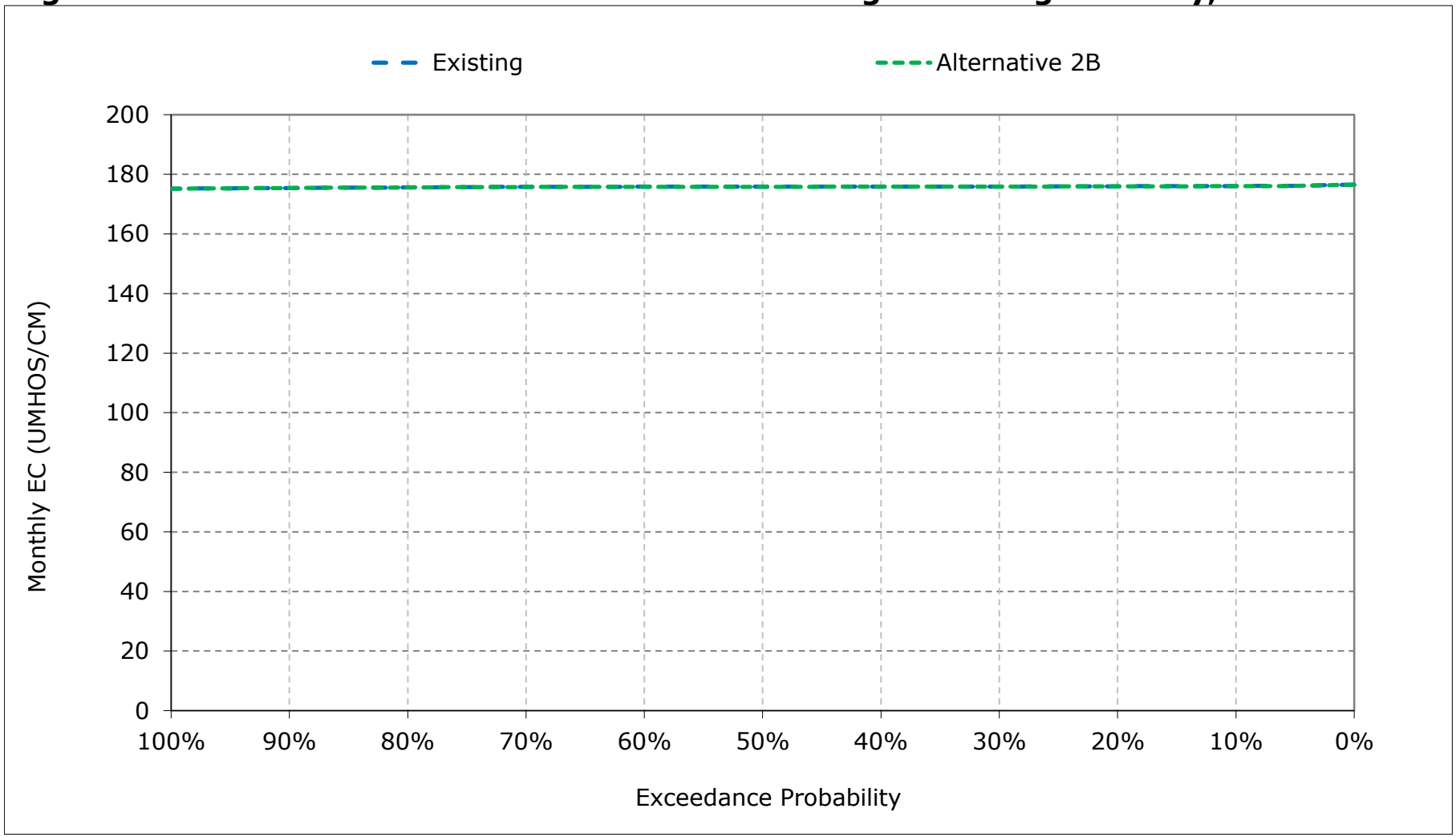


**Figure 3-13. Sacramento River downstream of Georgiana Slough Salinity, July EC**

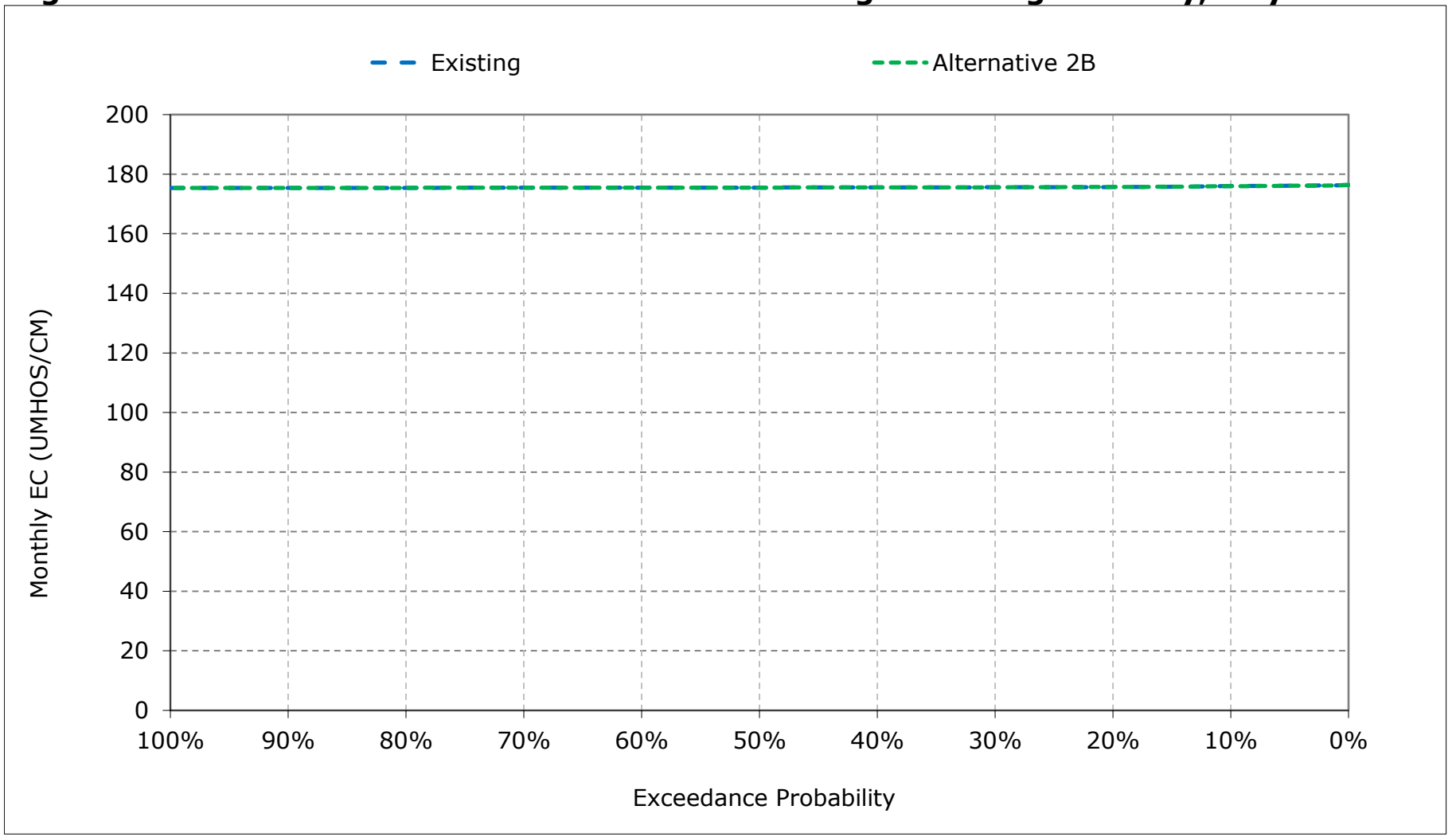


**Figure 3-14. Sacramento River downstream of Georgiana Slough Salinity, August EC**

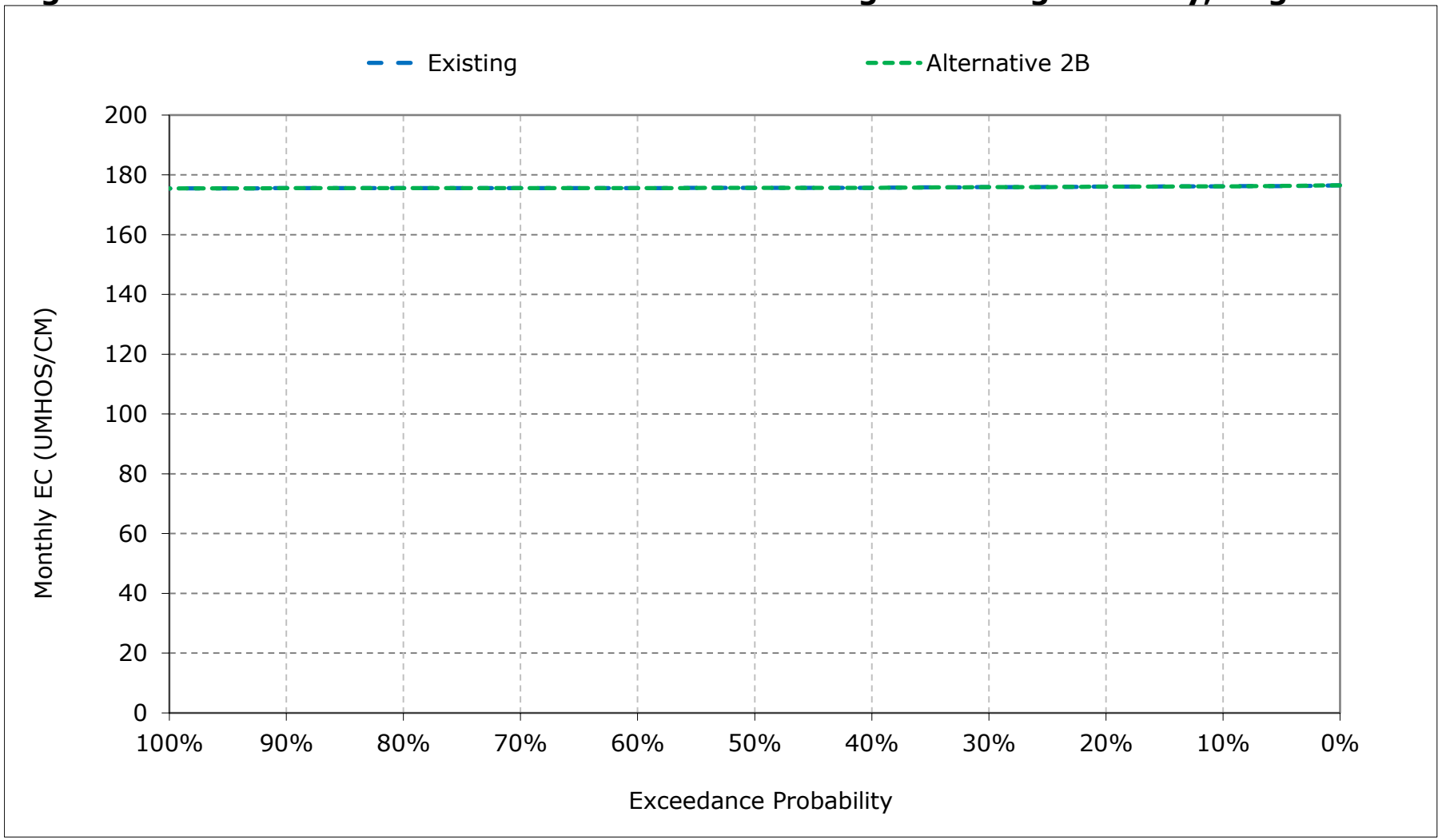


**Figure 3-15. Sacramento River downstream of Georgiana Slough Salinity, September EC**

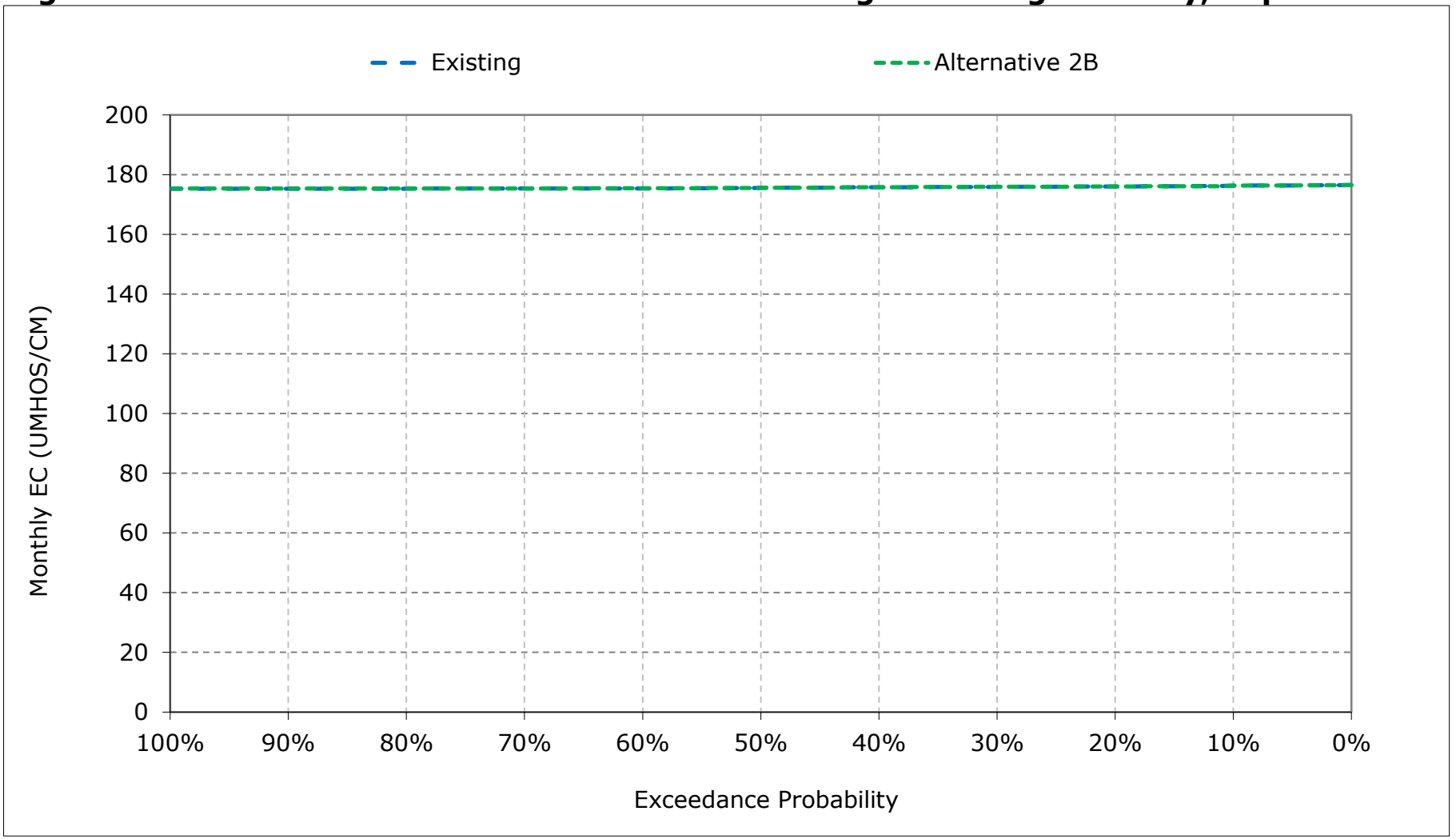


**Figure 3-16. Sacramento River downstream of Georgiana Slough Salinity, October EC**

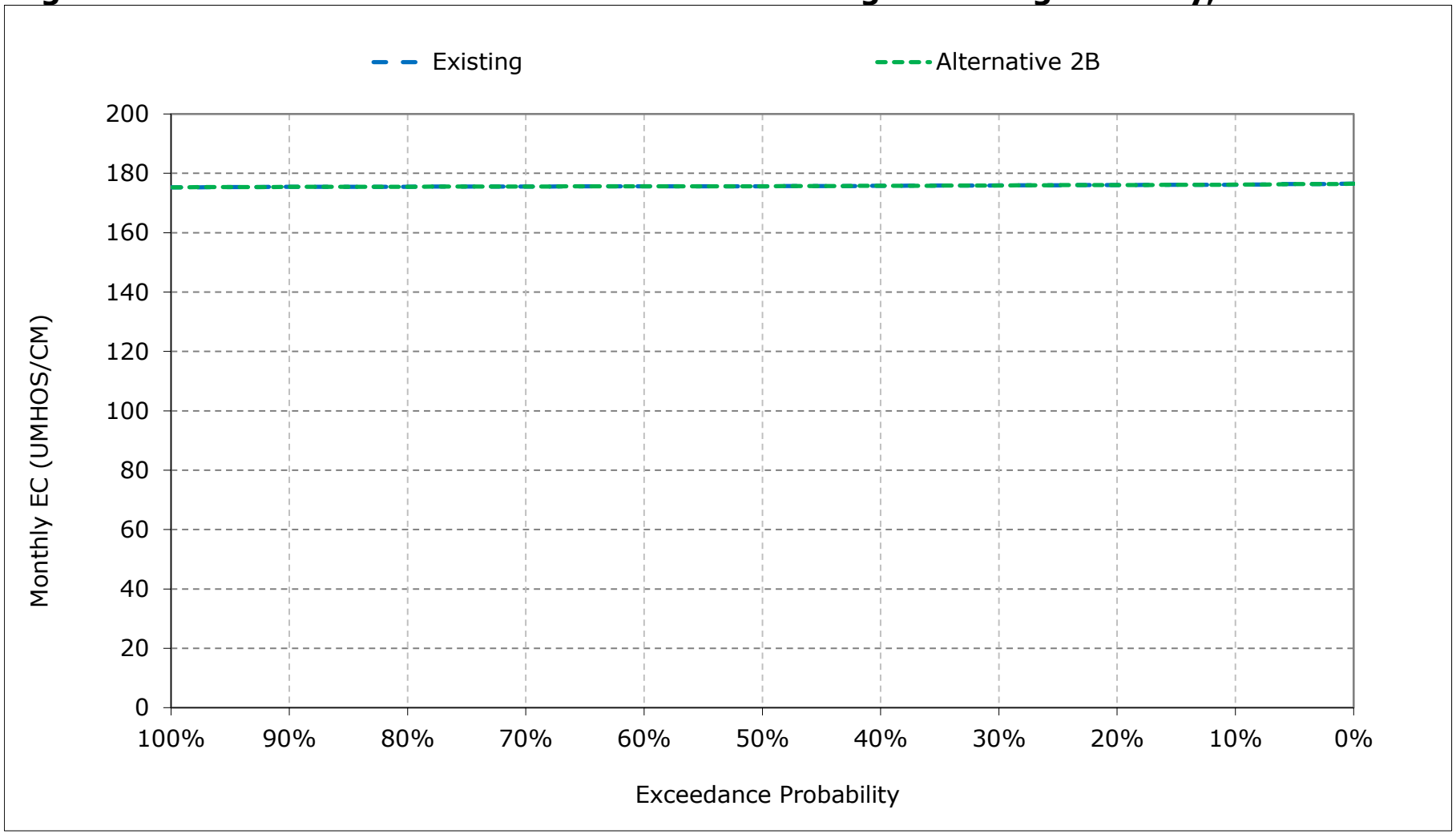


**Figure 3-17. Sacramento River downstream of Georgiana Slough Salinity, November EC**

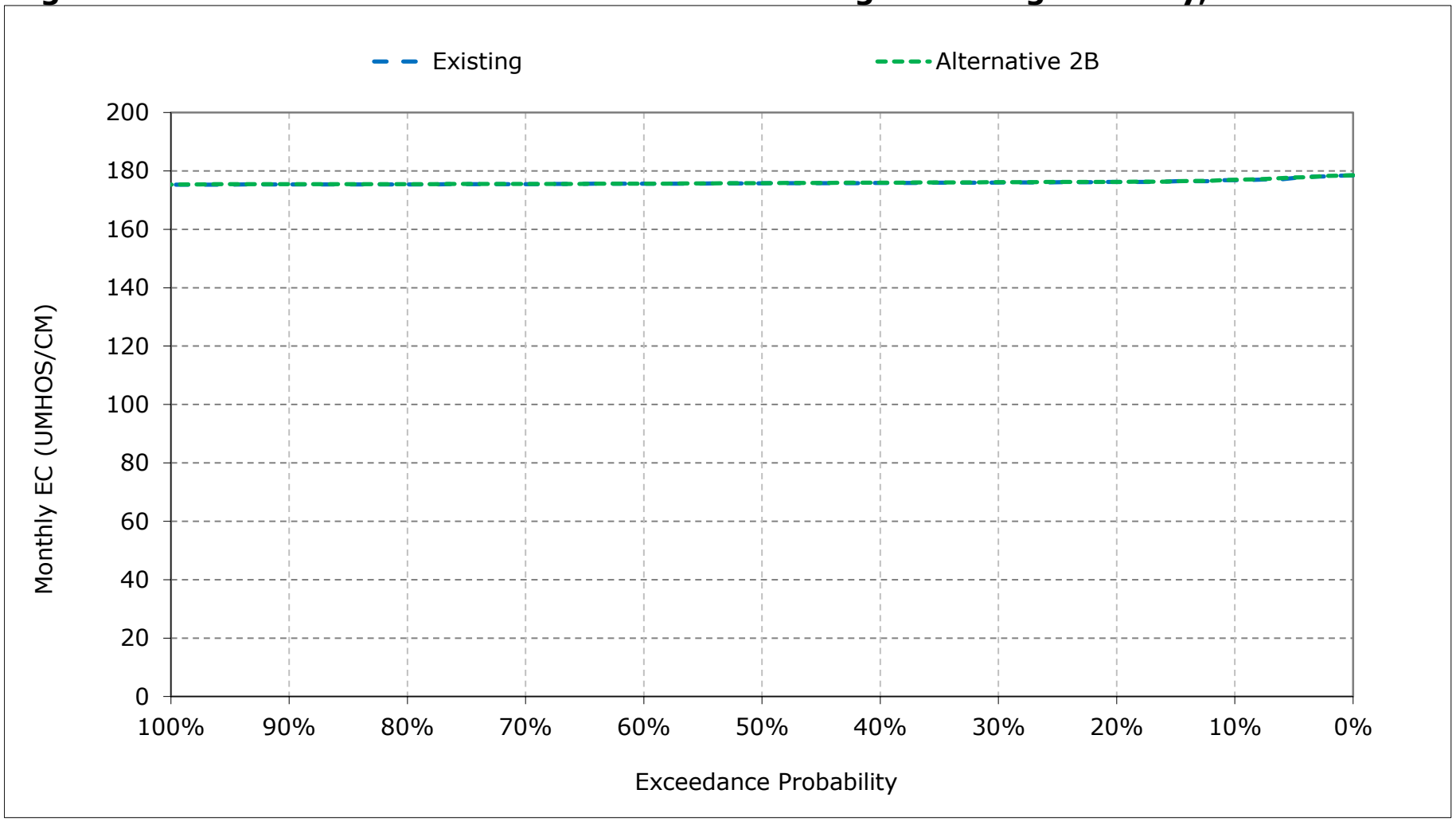
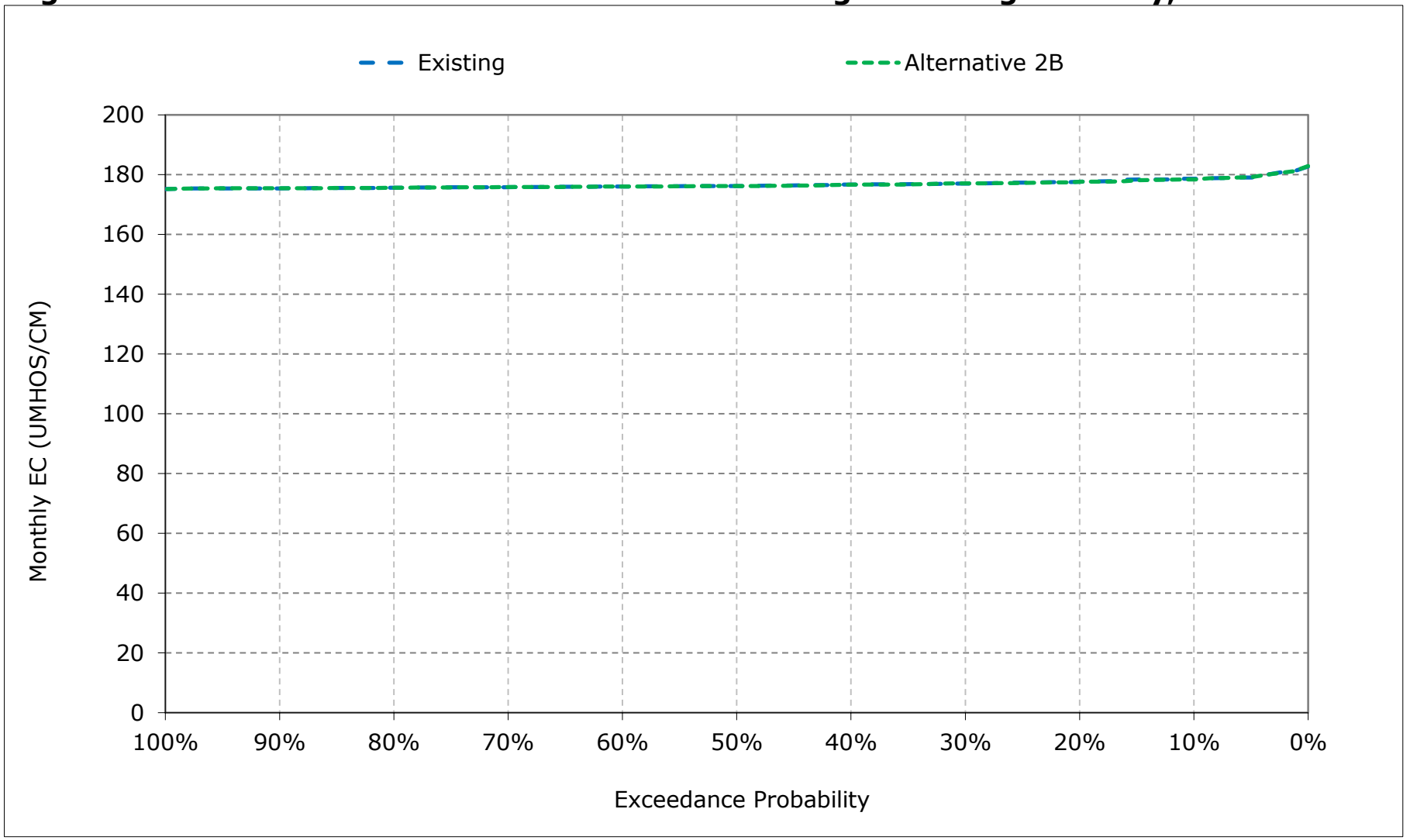


**Figure 3-18. Sacramento River downstream of Georgiana Slough Salinity, December EC**



## Table 4-1. Sacramento River at Rio Vista Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 491 | 422 | 367 | 244 | 201 | 195 | 191 | 198 | 215 | 278 | 369 | 457 |
| **20%** | 420 | 359 | 295 | 227 | 196 | 189 | 188 | 192 | 199 | 233 | 329 | 387 |
| **30%** | 401 | 337 | 234 | 213 | 193 | 187 | 186 | 188 | 195 | 221 | 314 | 371 |
| **40%** | 371 | 300 | 217 | 204 | 191 | 185 | 184 | 186 | 192 | 198 | 240 | 330 |
| **50%** | 322 | 201 | 204 | 198 | 186 | 183 | 183 | 184 | 190 | 194 | 233 | 282 |
| **60%** | 198 | 189 | 198 | 194 | 184 | 182 | 181 | 183 | 187 | 186 | 226 | 195 |
| **70%** | 188 | 182 | 187 | 190 | 183 | 180 | 180 | 181 | 184 | 185 | 221 | 183 |
| **80%** | 186 | 181 | 185 | 185 | 182 | 180 | 179 | 178 | 180 | 184 | 215 | 180 |
| **90%** | 185 | 180 | 180 | 181 | 180 | 179 | 178 | 177 | 178 | 182 | 212 | 180 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | 311 | 274 | 239 | 207 | 190 | 185 | 184 | 189 | 200 | 216 | 267 | 291 |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | 264 | 217 | 190 | 188 | 182 | 181 | 180 | 179 | 182 | 183 | 213 | 180 |
| **Above Normal (15%)** | 317 | 277 | 221 | 197 | 188 | 181 | 181 | 181 | 187 | 185 | 218 | 194 |
| **Below Normal (17%)** | 311 | 264 | 263 | 206 | 189 | 186 | 184 | 185 | 190 | 196 | 236 | 309 |
| **Dry (22%)** | 331 | 308 | 246 | 218 | 194 | 187 | 186 | 189 | 197 | 225 | 321 | 376 |
| **Critical (15%)** | 379 | 358 | 323 | 242 | 204 | 195 | 194 | 220 | 271 | 330 | 387 | 480 |

### Alternative 2B

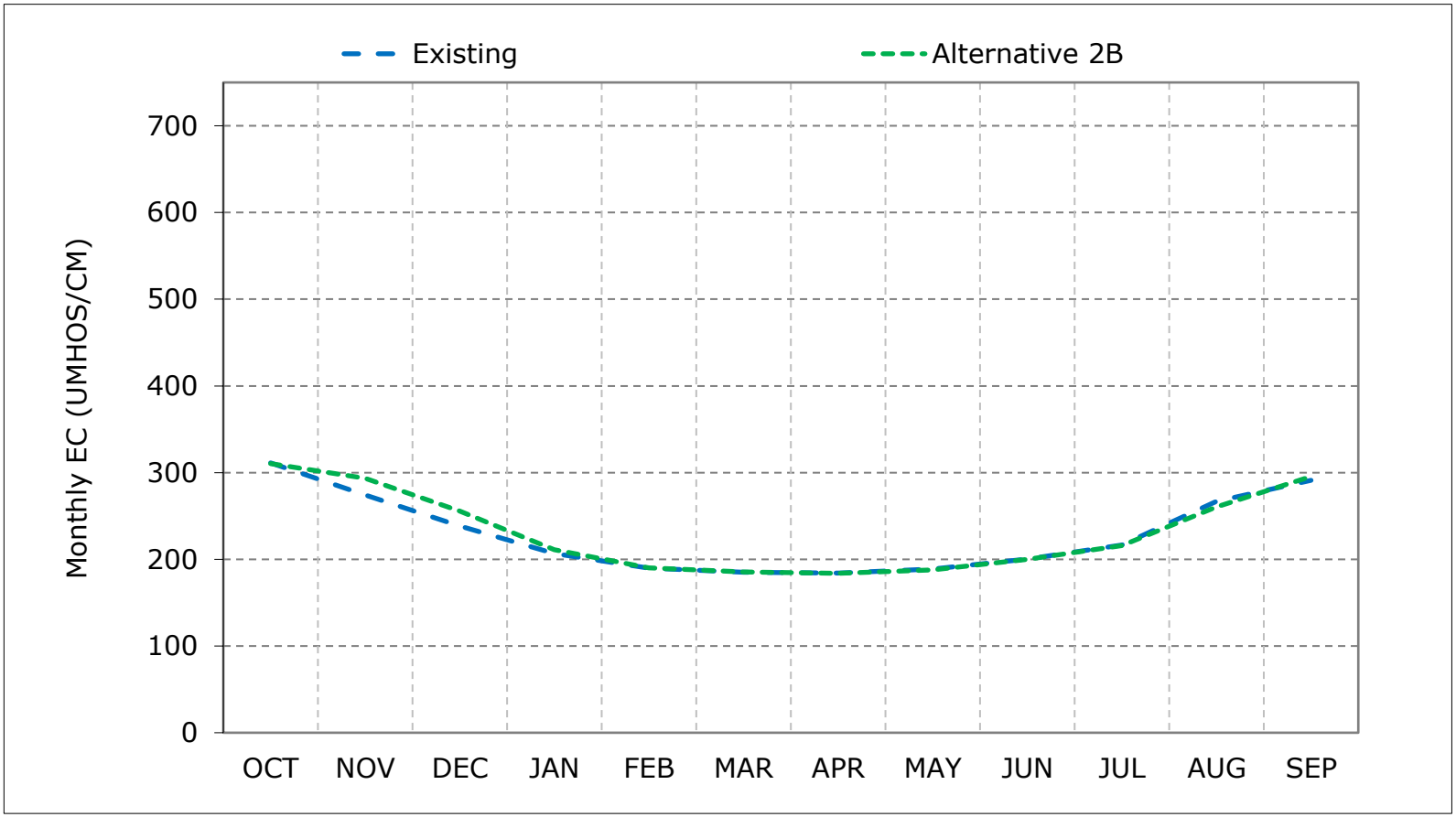
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 465 | 423 | 362 | 260 | 202 | 196 | 191 | 197 | 216 | 276 | 373 | 448 |
| **20%** | 424 | 368 | 302 | 237 | 196 | 190 | 188 | 190 | 201 | 232 | 327 | 394 |
| **30%** | 401 | 346 | 287 | 220 | 193 | 187 | 186 | 187 | 195 | 221 | 313 | 376 |
| **40%** | 365 | 301 | 262 | 203 | 190 | 185 | 184 | 184 | 191 | 197 | 249 | 356 |
| **50%** | 328 | 244 | 234 | 198 | 186 | 183 | 182 | 182 | 187 | 191 | 240 | 297 |
| **60%** | 195 | 236 | 217 | 193 | 184 | 182 | 181 | 181 | 185 | 186 | 207 | 187 |
| **70%** | 192 | 232 | 190 | 190 | 183 | 180 | 180 | 180 | 183 | 185 | 203 | 186 |
| **80%** | 191 | 219 | 185 | 185 | 182 | 180 | 179 | 178 | 180 | 184 | 200 | 185 |
| **90%** | 188 | 187 | 180 | 181 | 180 | 179 | 178 | 177 | 178 | 183 | 197 | 183 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | 310 | 293 | 255 | 211 | 190 | 185 | 184 | 188 | 200 | 216 | 260 | 295 |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | 263 | 239 | 195 | 188 | 182 | 181 | 180 | 179 | 181 | 184 | 198 | 185 |
| **Above Normal (15%)** | 314 | 295 | 244 | 200 | 187 | 181 | 181 | 180 | 184 | 185 | 203 | 186 |
| **Below Normal (17%)** | 313 | 282 | 286 | 207 | 189 | 185 | 183 | 183 | 188 | 194 | 243 | 331 |
| **Dry (22%)** | 328 | 327 | 268 | 227 | 195 | 187 | 186 | 188 | 197 | 226 | 321 | 382 |
| **Critical (15%)** | 379 | 373 | 343 | 253 | 206 | 196 | 194 | 220 | 274 | 327 | 382 | 475 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -27 | **1** | -5 | **16** | **1** | **1** | **0** | -1 | **1** | -2 | **4** | -8 |
| **20%** | **4** | **9** | **7** | **10** | 0 | **0** | 0 | -2 | **2** | 0 | -2 | **7** |
| **30%** | -1 | **8** | **52** | **7** | **0** | 0 | 0 | -1 | 0 | 0 | -1 | **5** |
| **40%** | -6 | **1** | **45** | 0 | 0 | **0** | -1 | -2 | -2 | -1 | **9** | **26** |
| **50%** | **6** | **44** | **31** | **0** | 0 | 0 | 0 | -2 | -4 | -3 | **7** | **15** |
| **60%** | -4 | **47** | **19** | -1 | 0 | 0 | 0 | -1 | -2 | **0** | -19 | -8 |
| **70%** | **4** | **50** | **3** | 0 | **0** | 0 | **0** | -1 | -1 | **0** | -18 | **3** |
| **80%** | **4** | **38** | **0** | -1 | 0 | 0 | 0 | 0 | 0 | **0** | -15 | **5** |
| **90%** | **3** | **7** | -1 | **0** | **0** | 0 | 0 | 0 | 0 | **0** | -16 | **3** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | -1 | **19** | **17** | **4** | **0** | **0** | 0 | -1 | 0 | -1 | -7 | **4** |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | -1 | **23** | **5** | **0** | 0 | 0 | 0 | 0 | 0 | **0** | -15 | **5** |
| **Above Normal (15%)** | -3 | **18** | **23** | **2** | -1 | 0 | 0 | -1 | -2 | **0** | -15 | -9 |
| **Below Normal (17%)** | **2** | **18** | **24** | **1** | -1 | 0 | 0 | -1 | -2 | -2 | **7** | **21** |
| **Dry (22%)** | -2 | **19** | **23** | **9** | **1** | **0** | -1 | -1 | 0 | **1** | **0** | **5** |
| **Critical (15%)** | 0 | **15** | **20** | **11** | **2** | **1** | **0** | 0 | **4** | -4 | -5 | -6 |

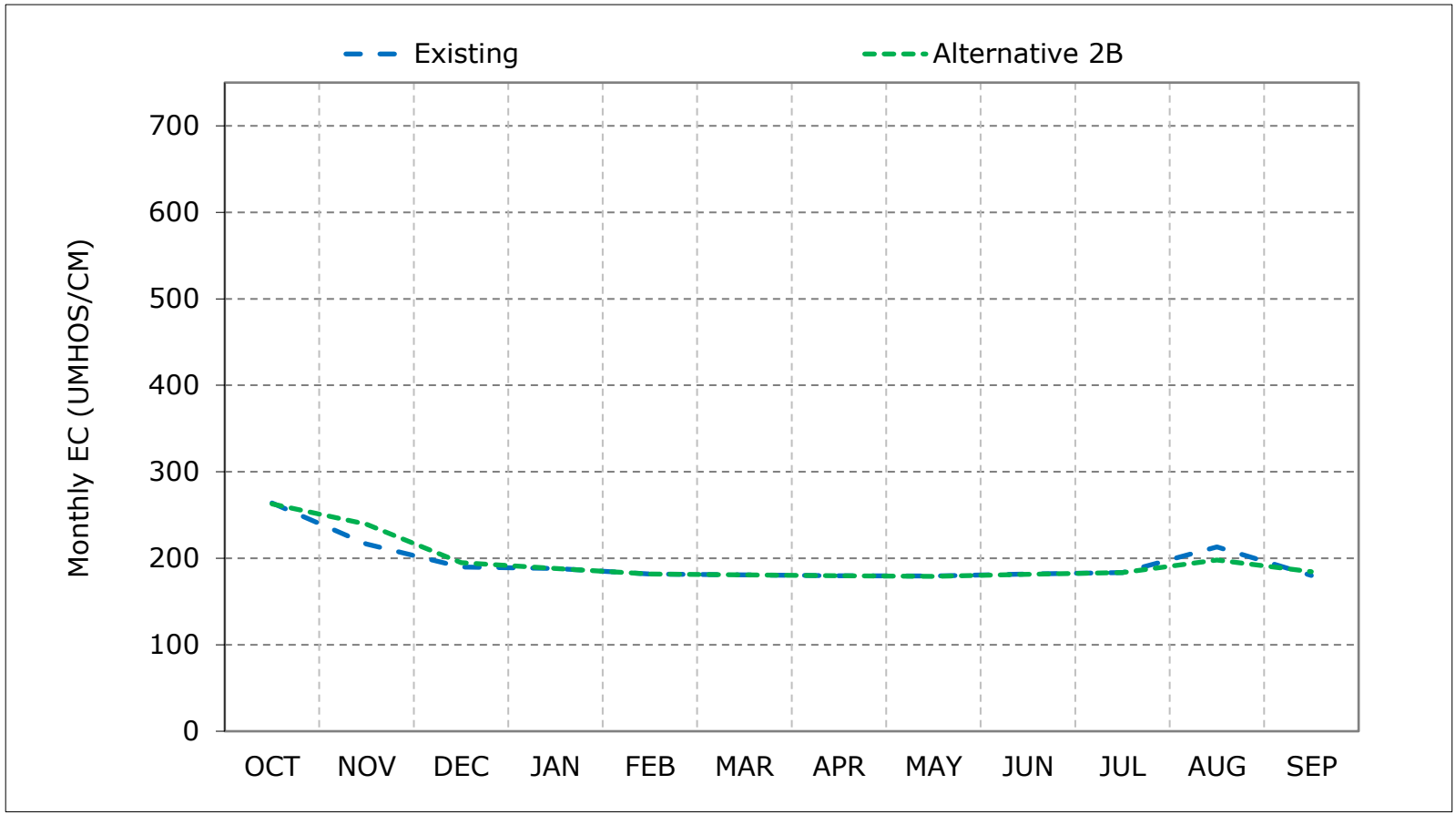
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 4-1. Sacramento River at Rio Vista Salinity, Long-Term Average EC**



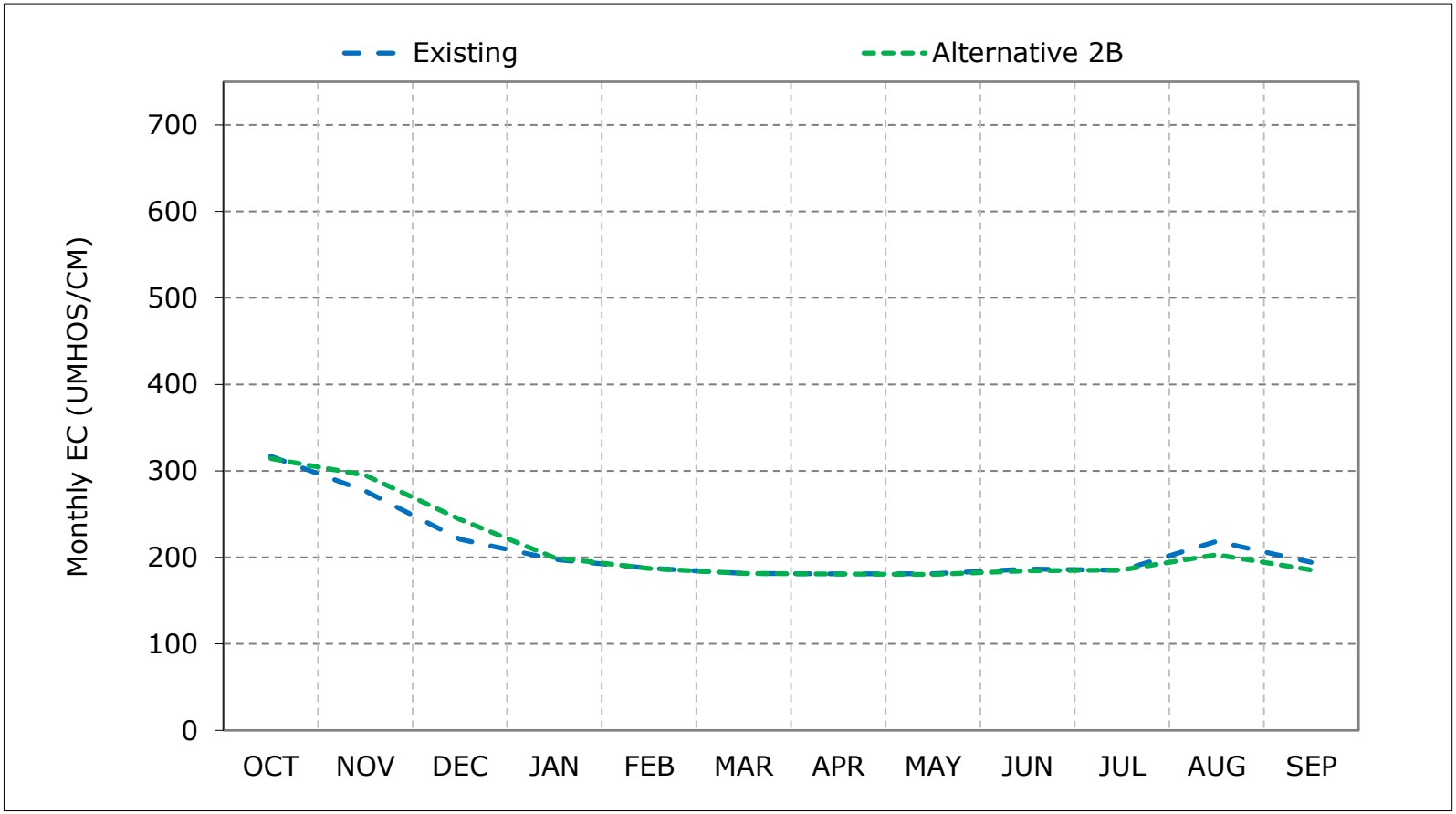

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 4-2. Sacramento River at Rio Vista Salinity, Wet Year Average EC**



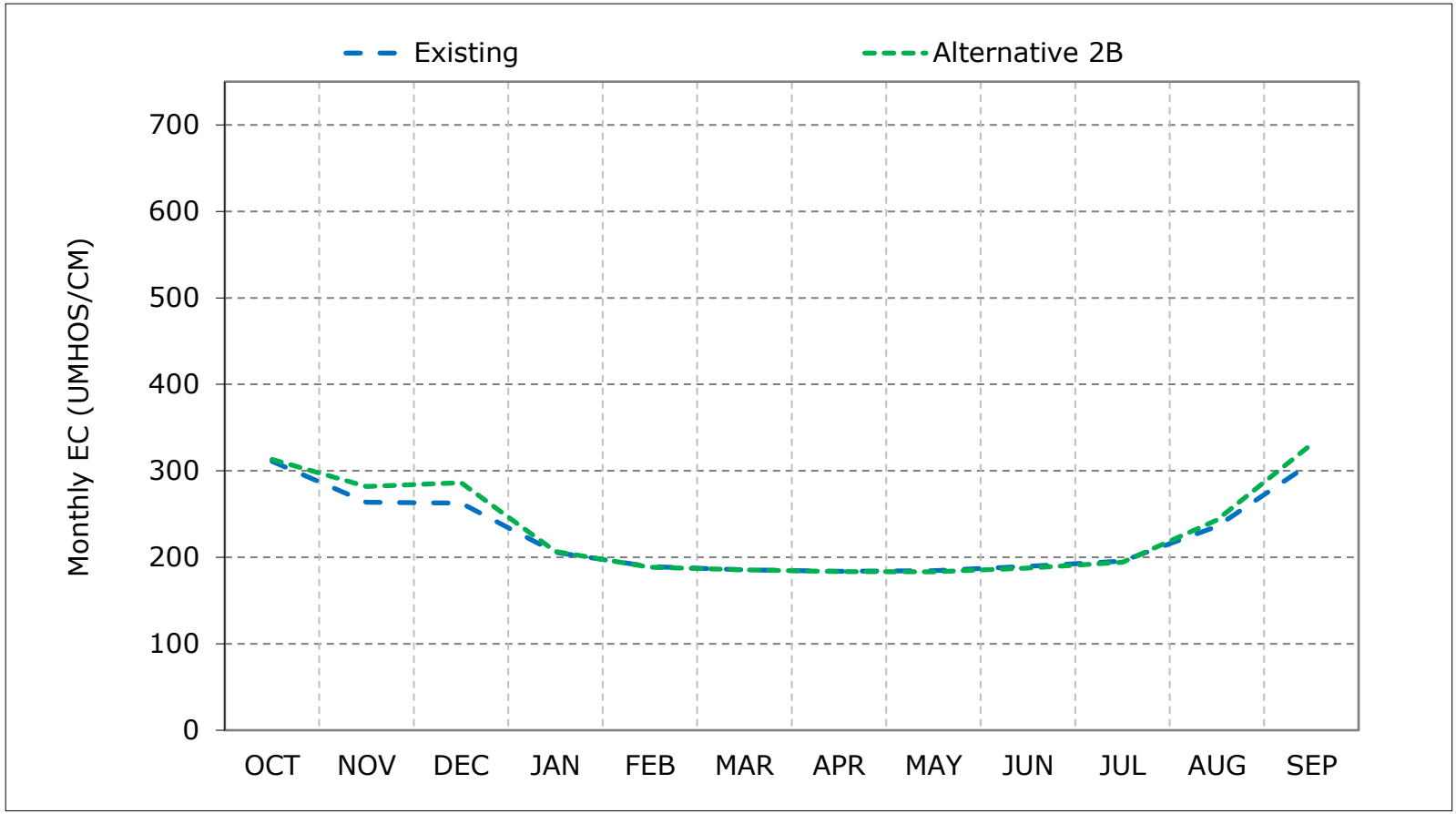

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 4-3. Sacramento River at Rio Vista Salinity, Above Normal Year Average EC**



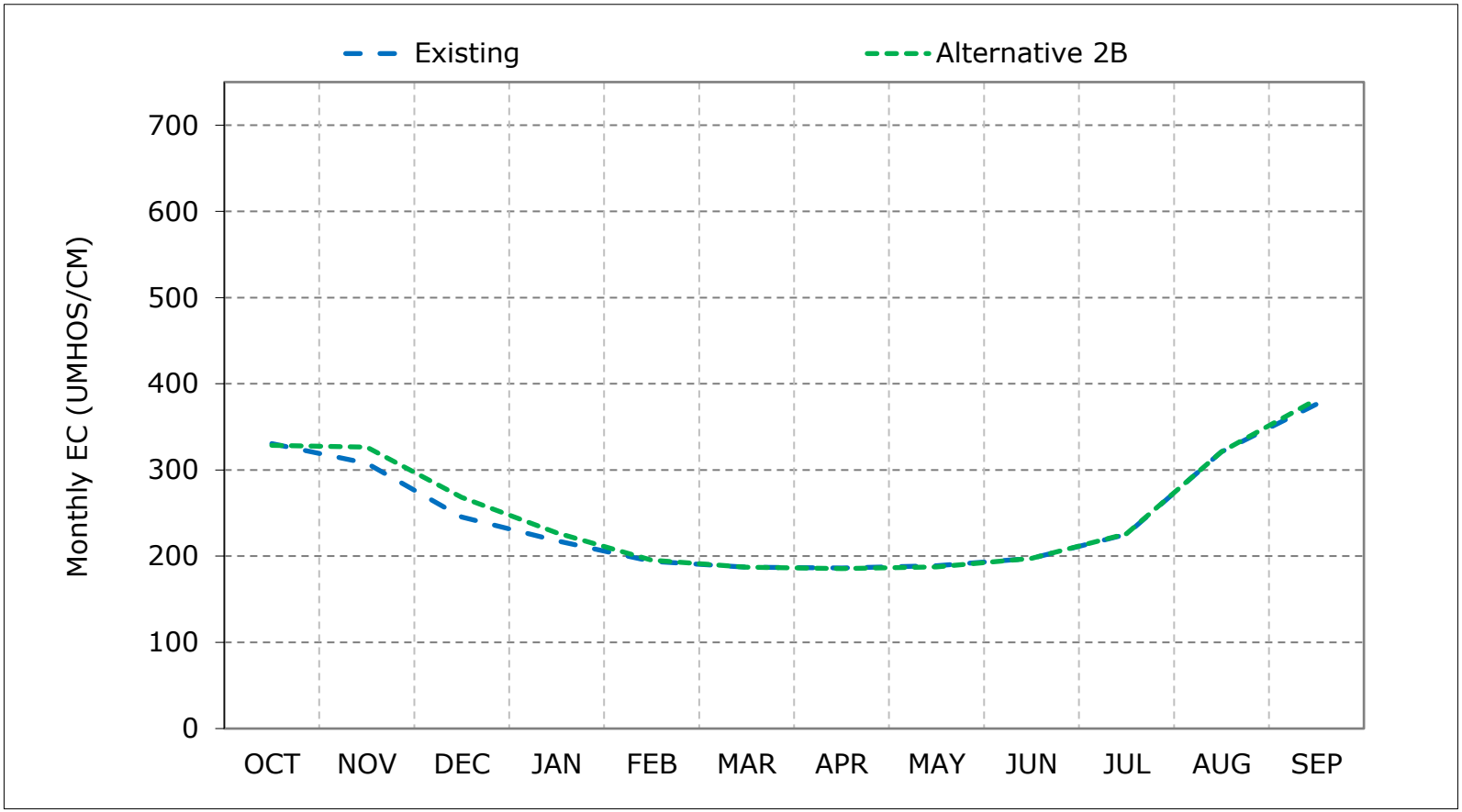

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 4-4. Sacramento River at Rio Vista Salinity, Below Normal Year Average EC**



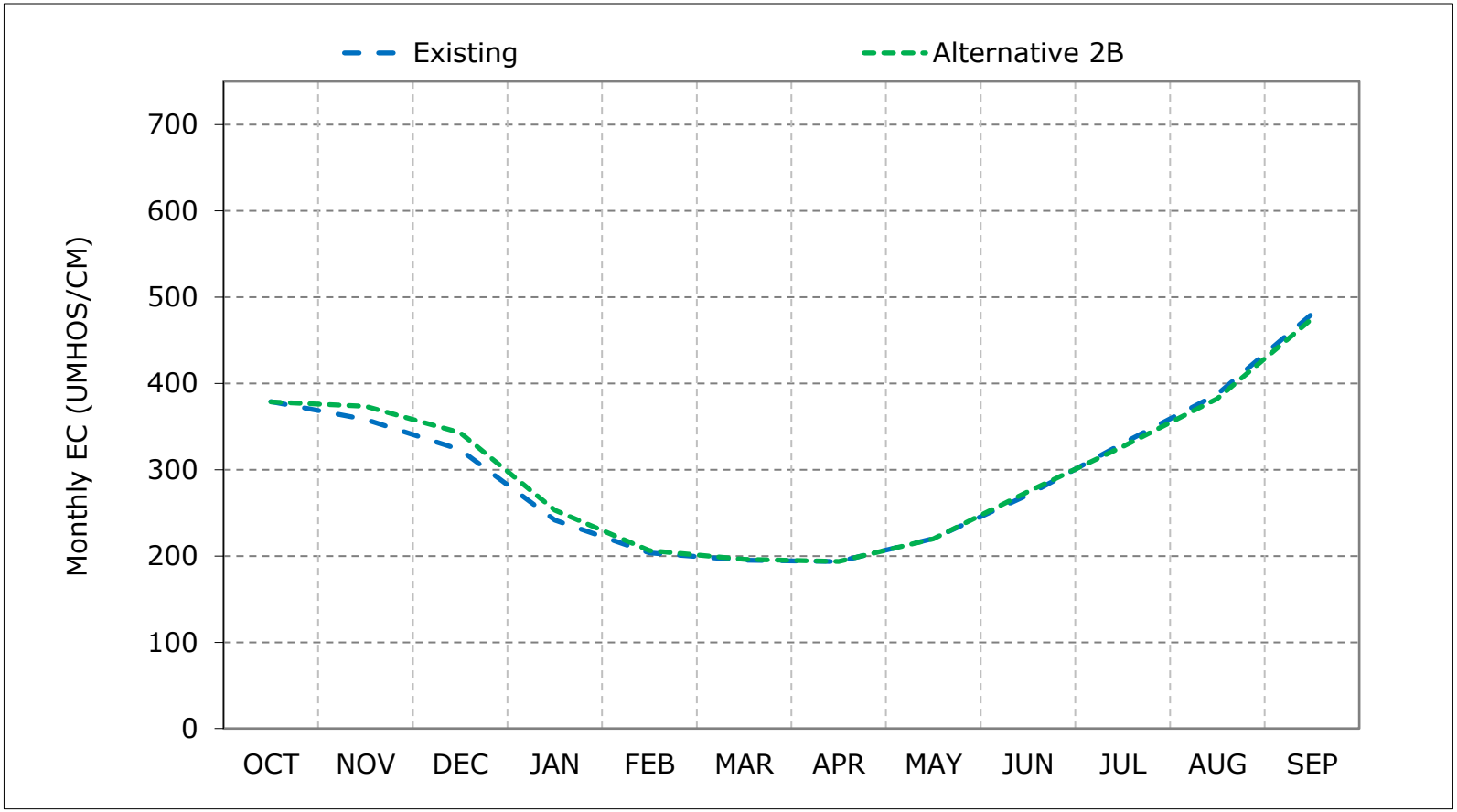

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 4-5. Sacramento River at Rio Vista Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 4-6. Sacramento River at Rio Vista Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 4-7. Sacramento River at Rio Vista Salinity, January EC**

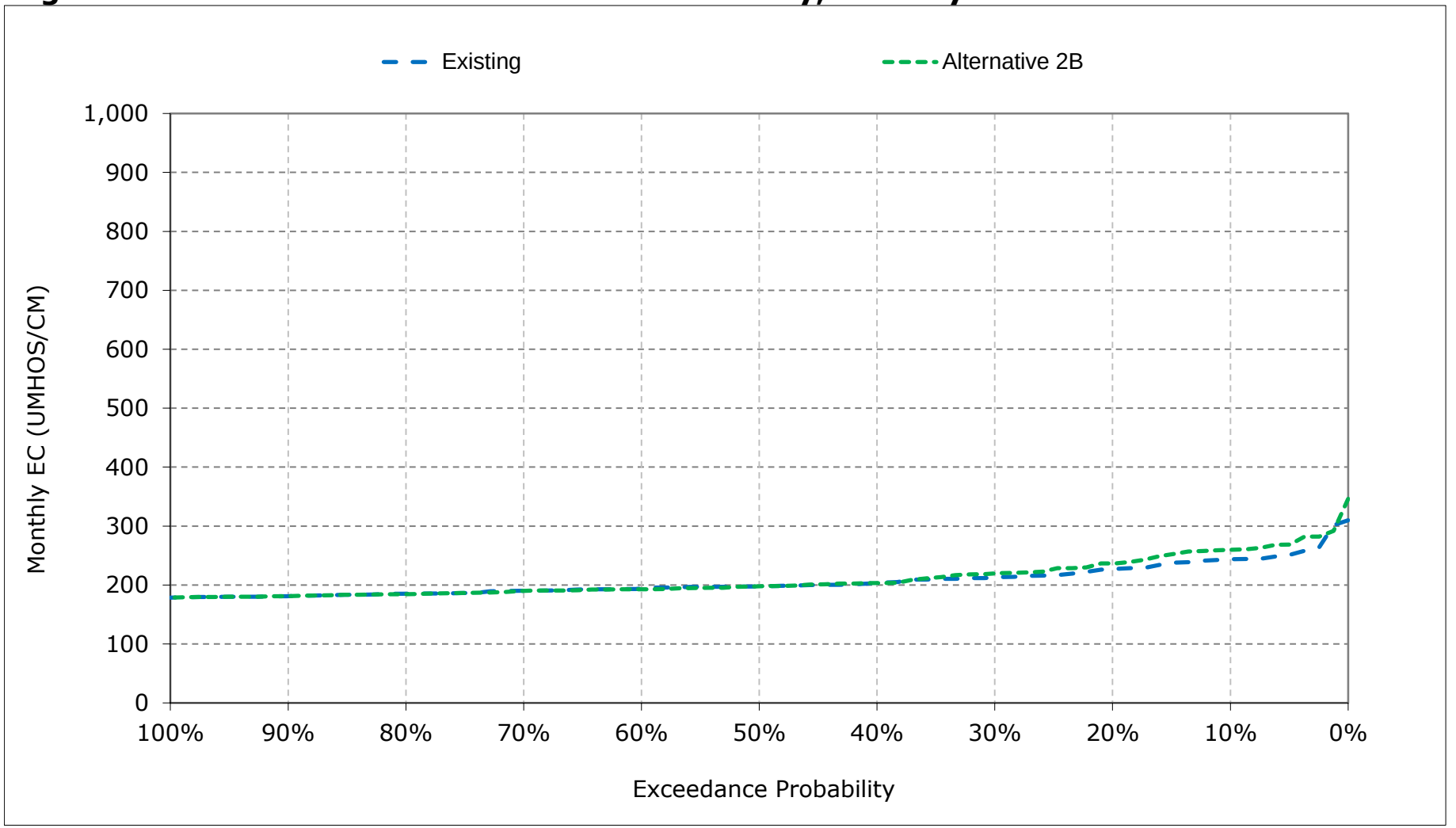


**Figure 4-8. Sacramento River at Rio Vista Salinity, February EC**

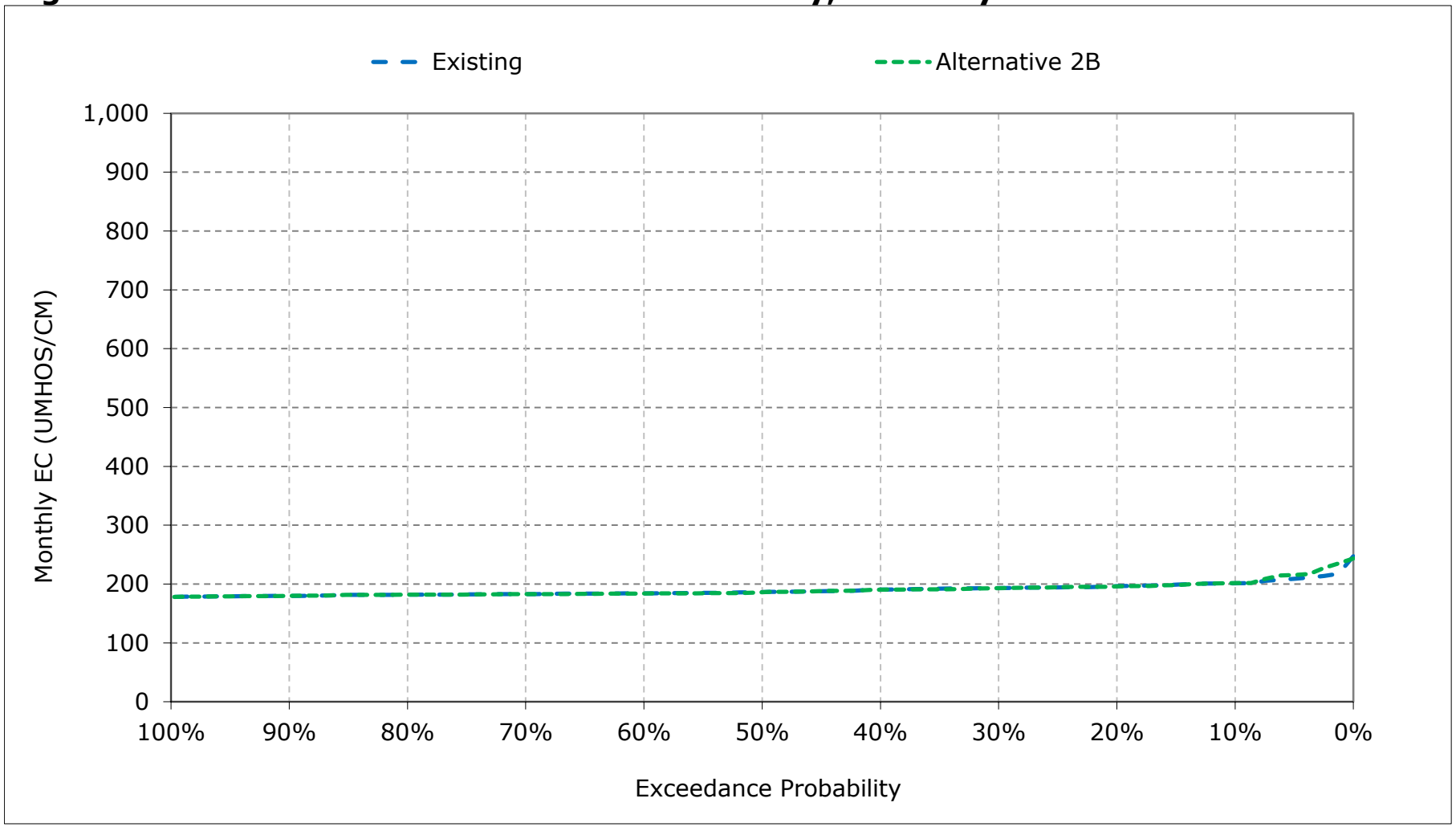


**Figure 4-9. Sacramento River at Rio Vista Salinity, March EC**

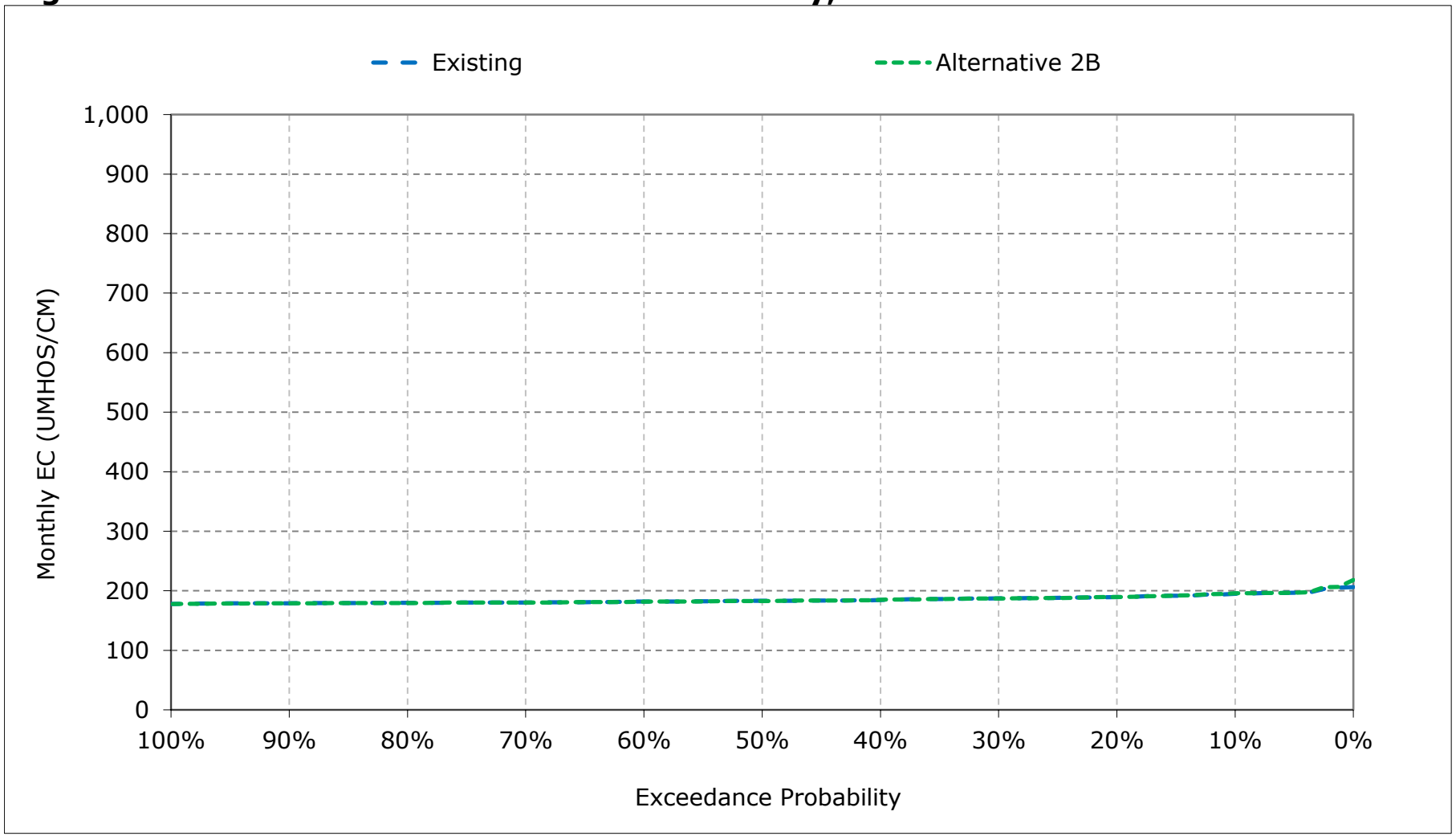


**Figure 4-10. Sacramento River at Rio Vista Salinity, April EC**

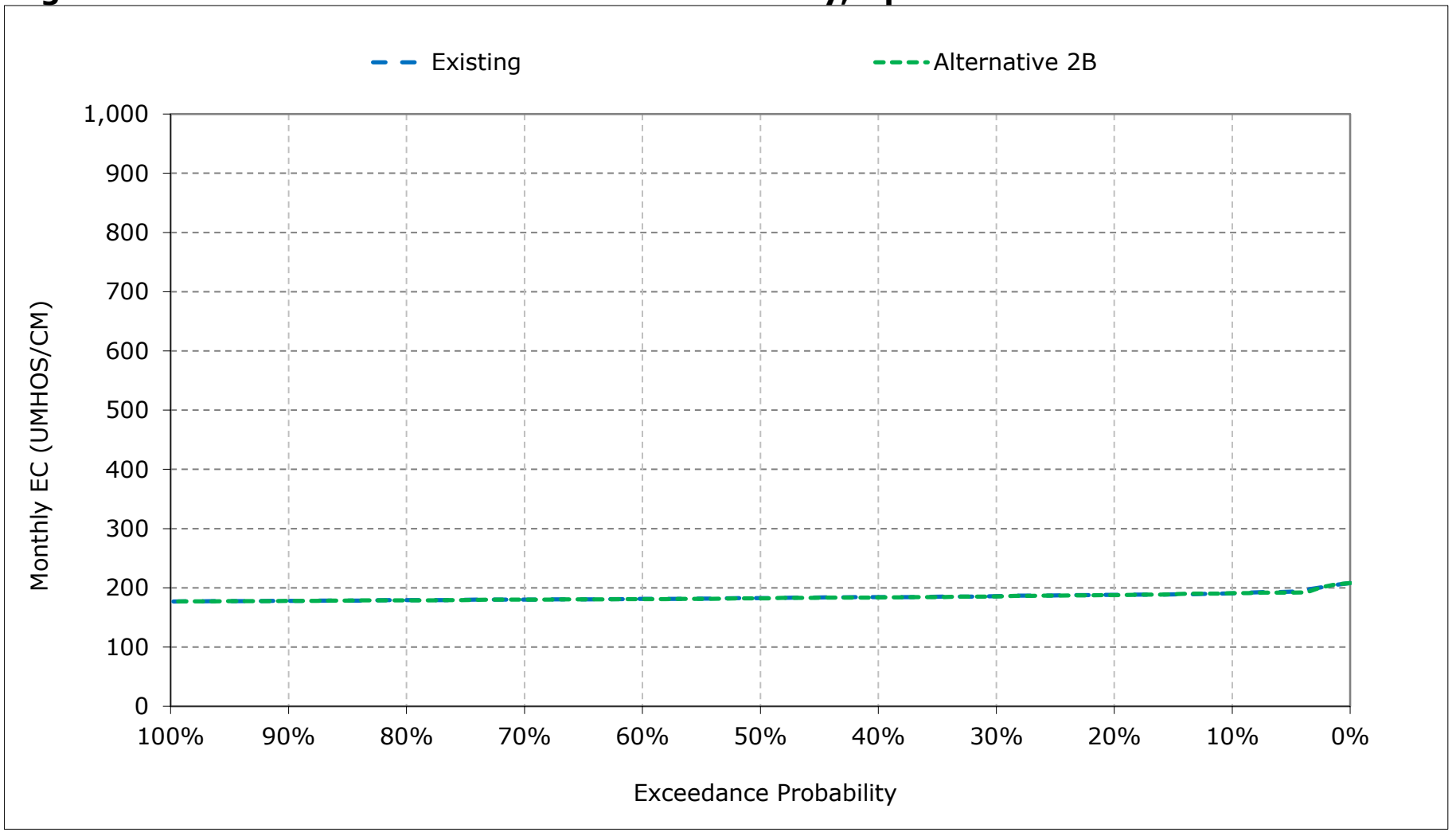


**Figure 4-11. Sacramento River at Rio Vista Salinity, May EC**

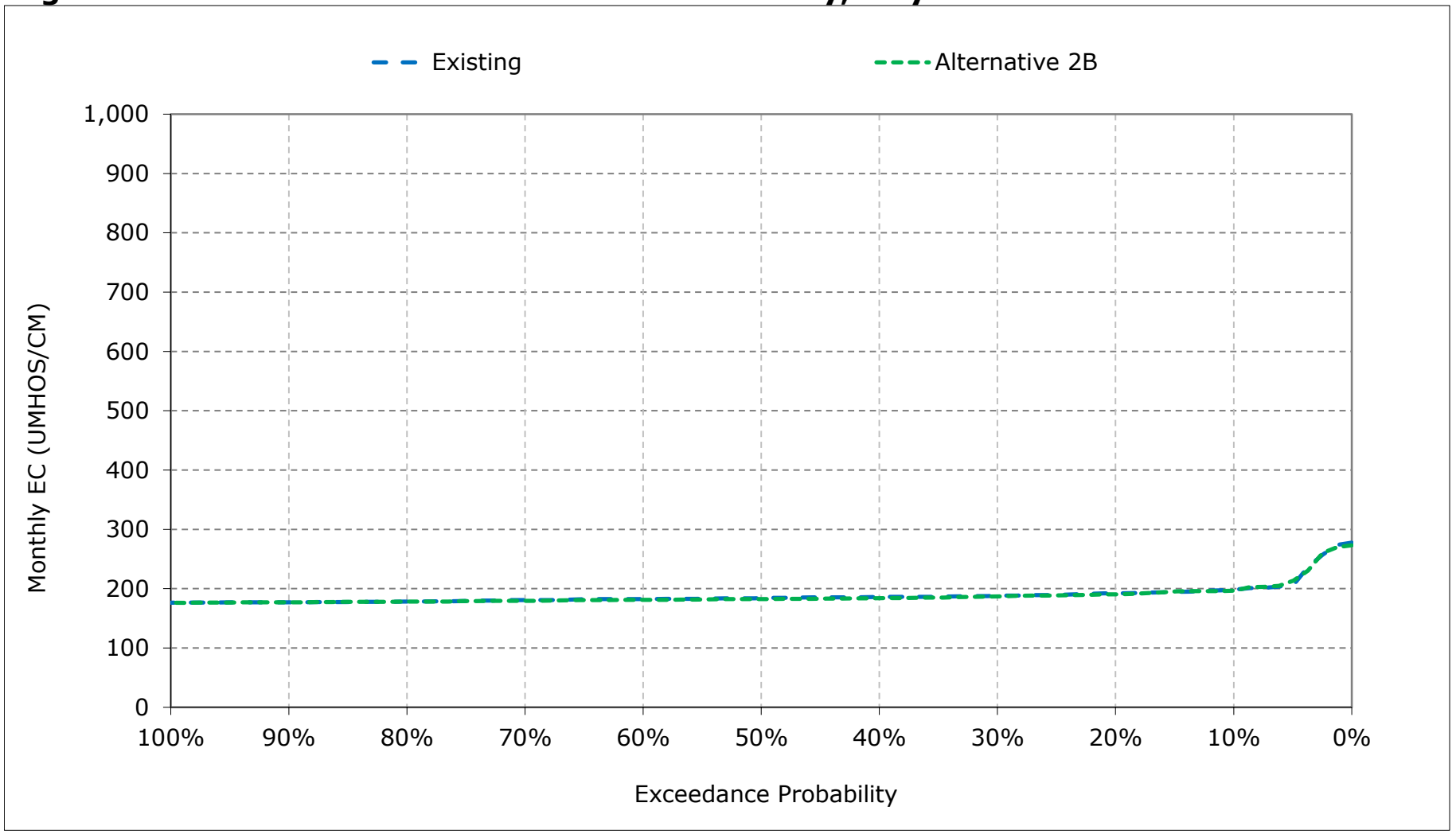


**Figure 4-12. Sacramento River at Rio Vista Salinity, June EC**

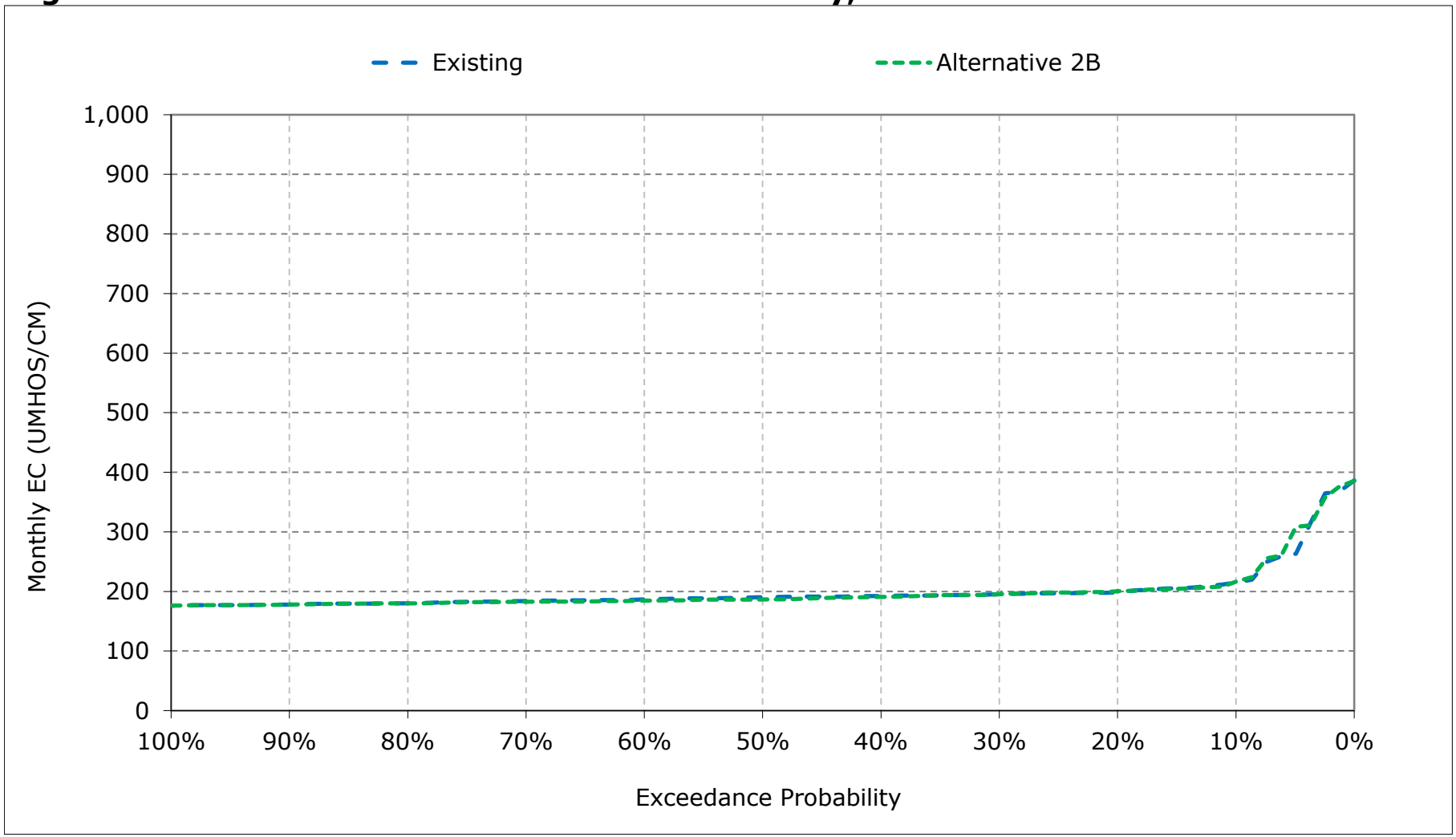


**Figure 4-13. Sacramento River at Rio Vista Salinity, July EC**

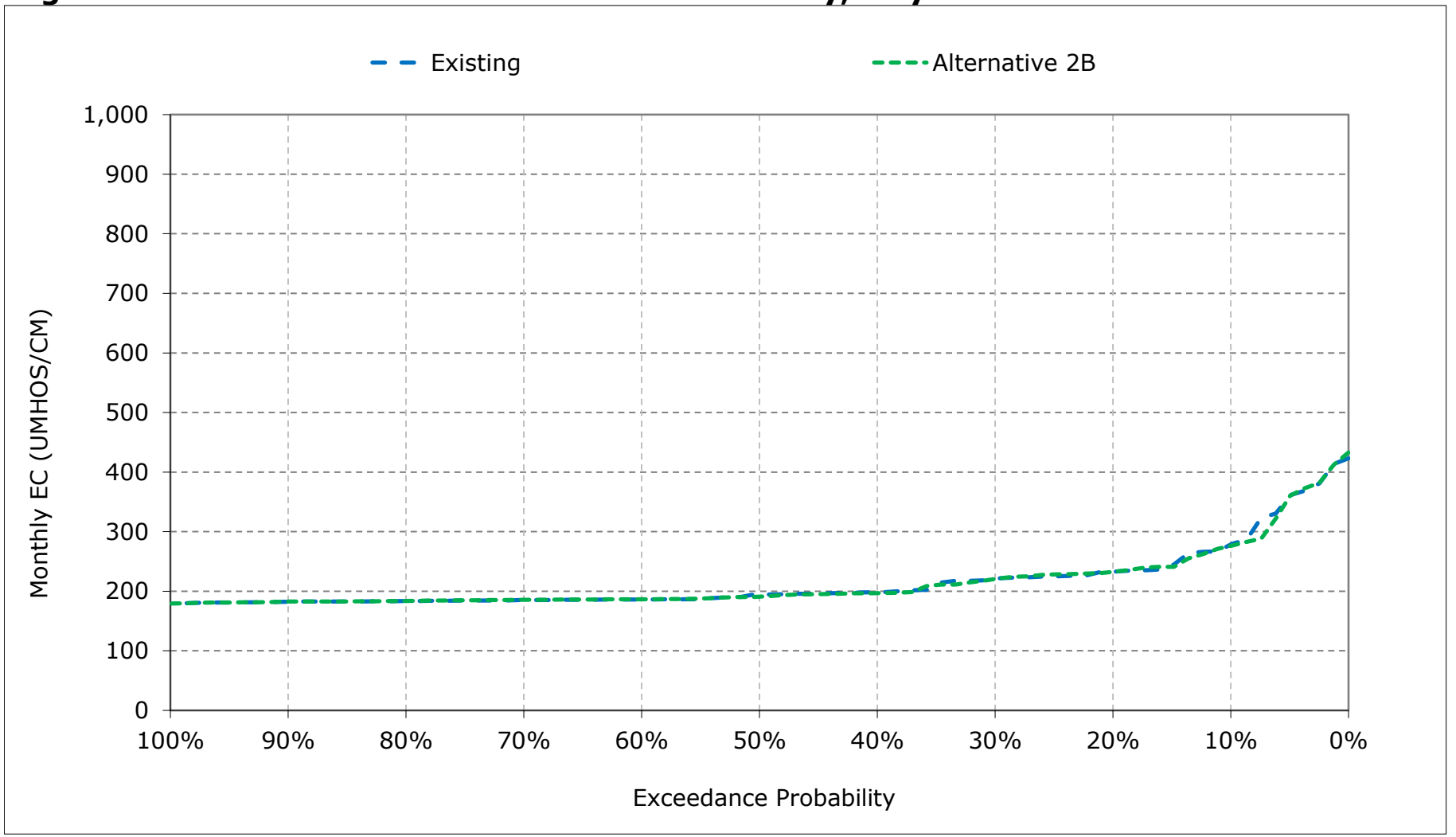


**Figure 4-14. Sacramento River at Rio Vista Salinity, August EC**

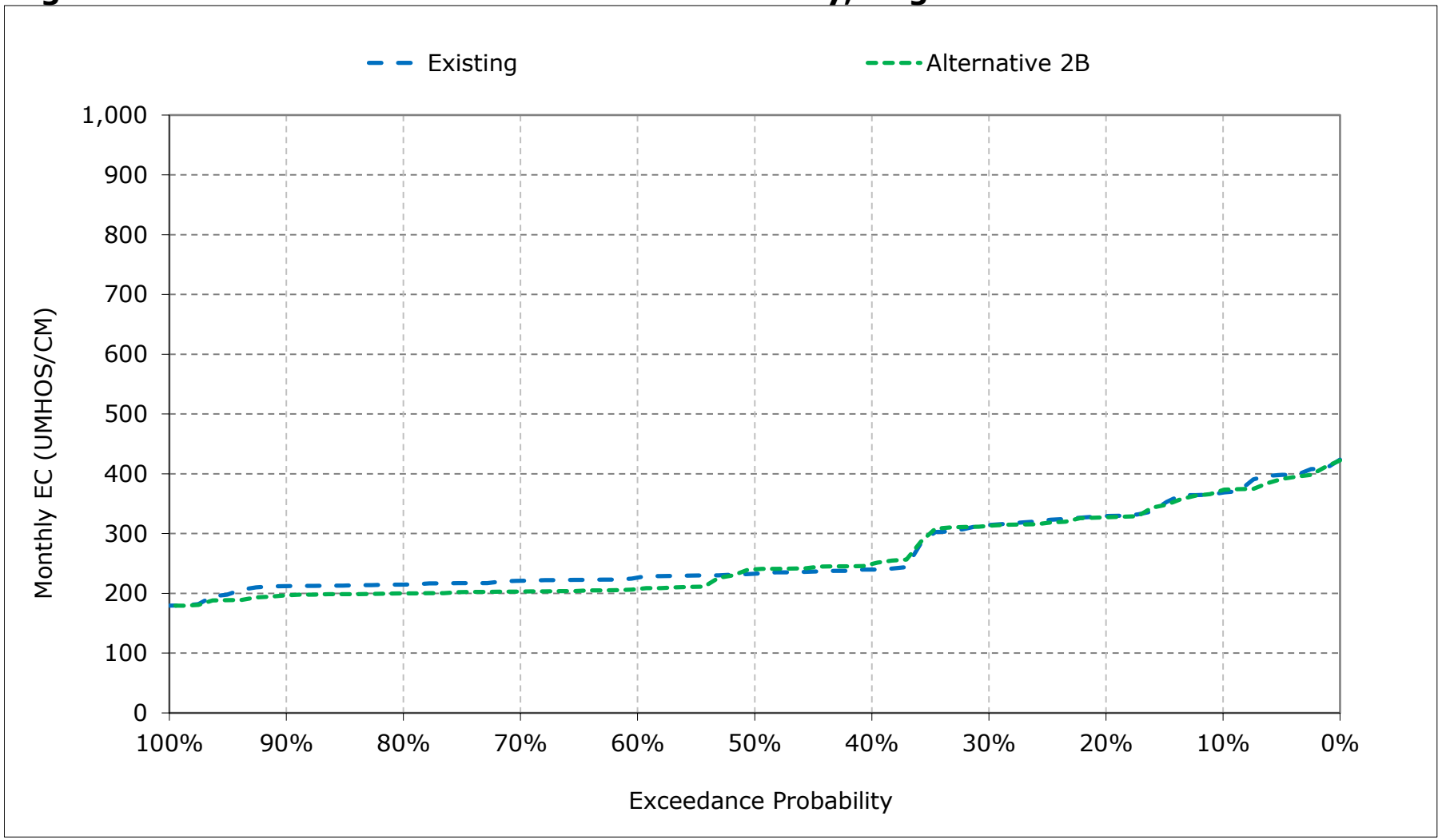


**Figure 4-15. Sacramento River at Rio Vista Salinity, September EC**

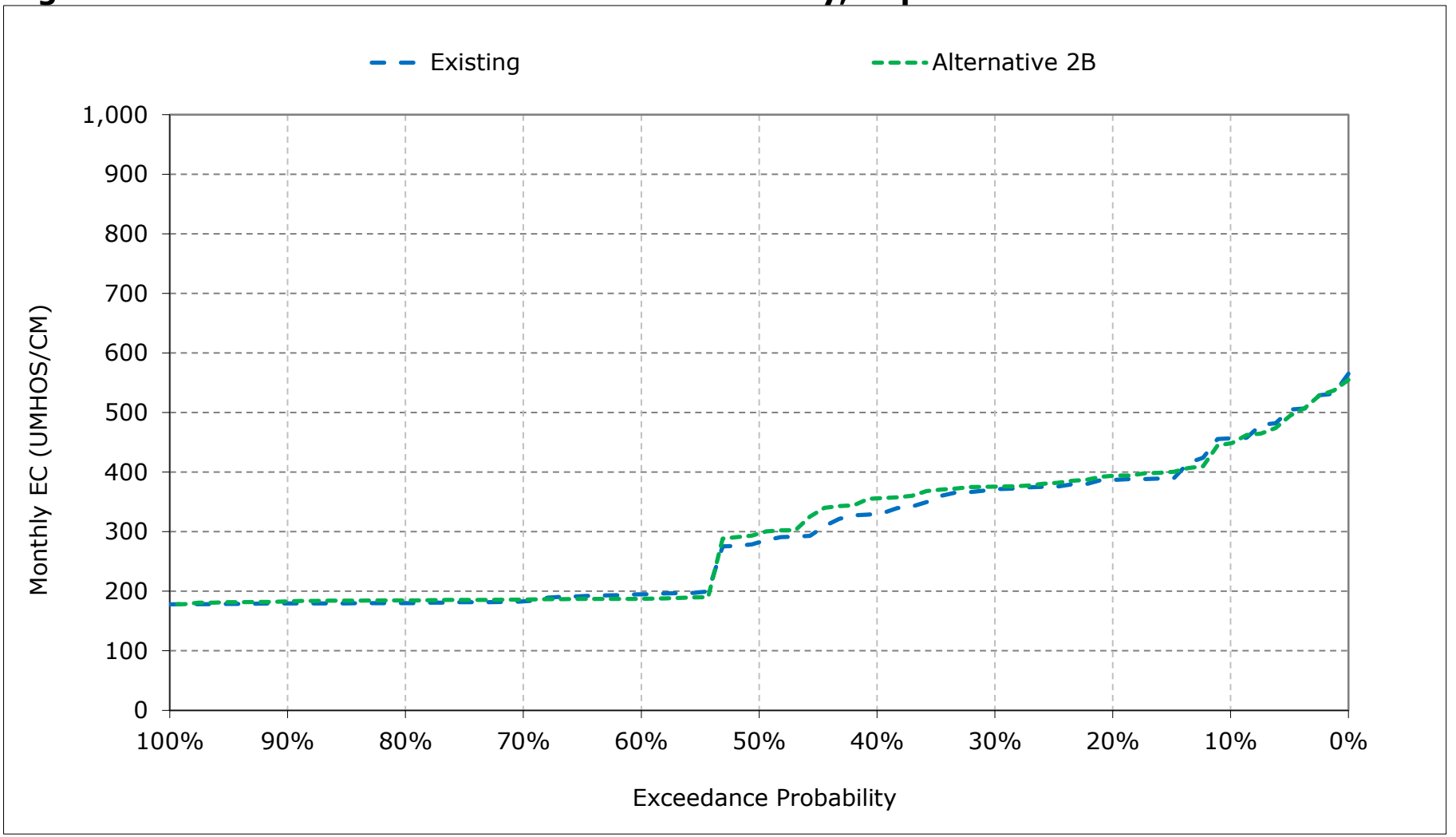


**Figure 4-16. Sacramento River at Rio Vista Salinity, October EC**

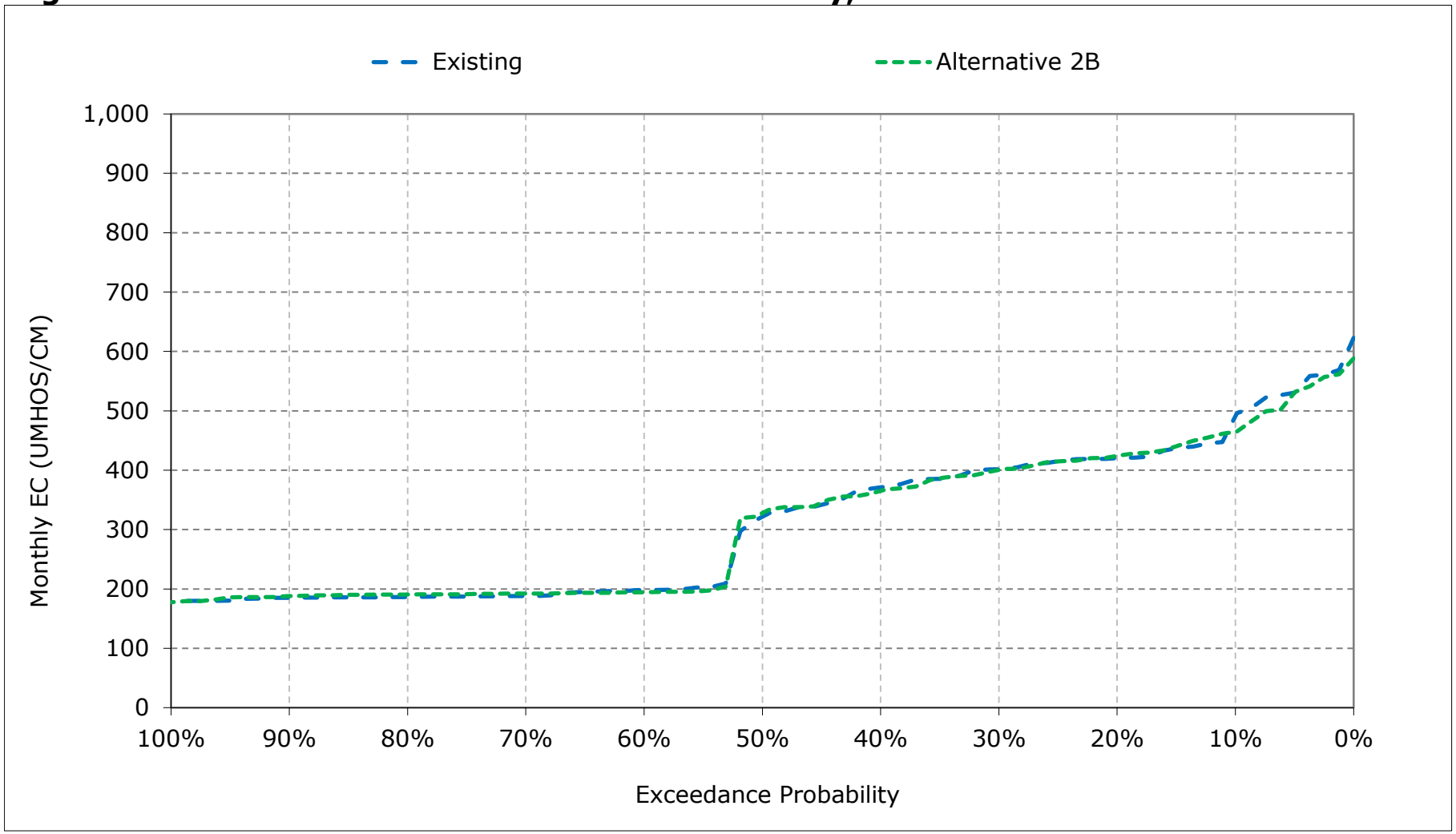


**Figure 4-17. Sacramento River at Rio Vista Salinity, November EC**

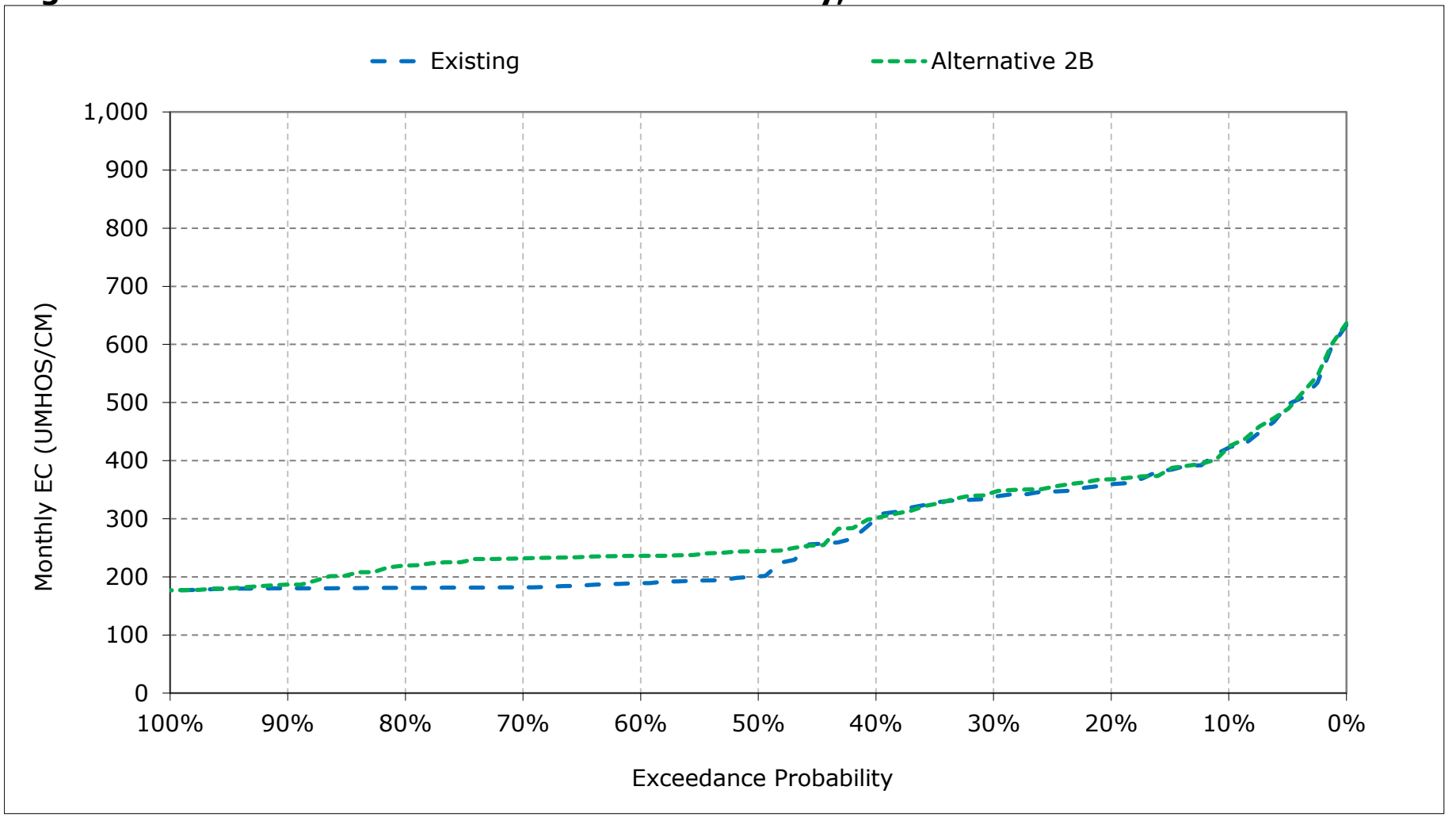
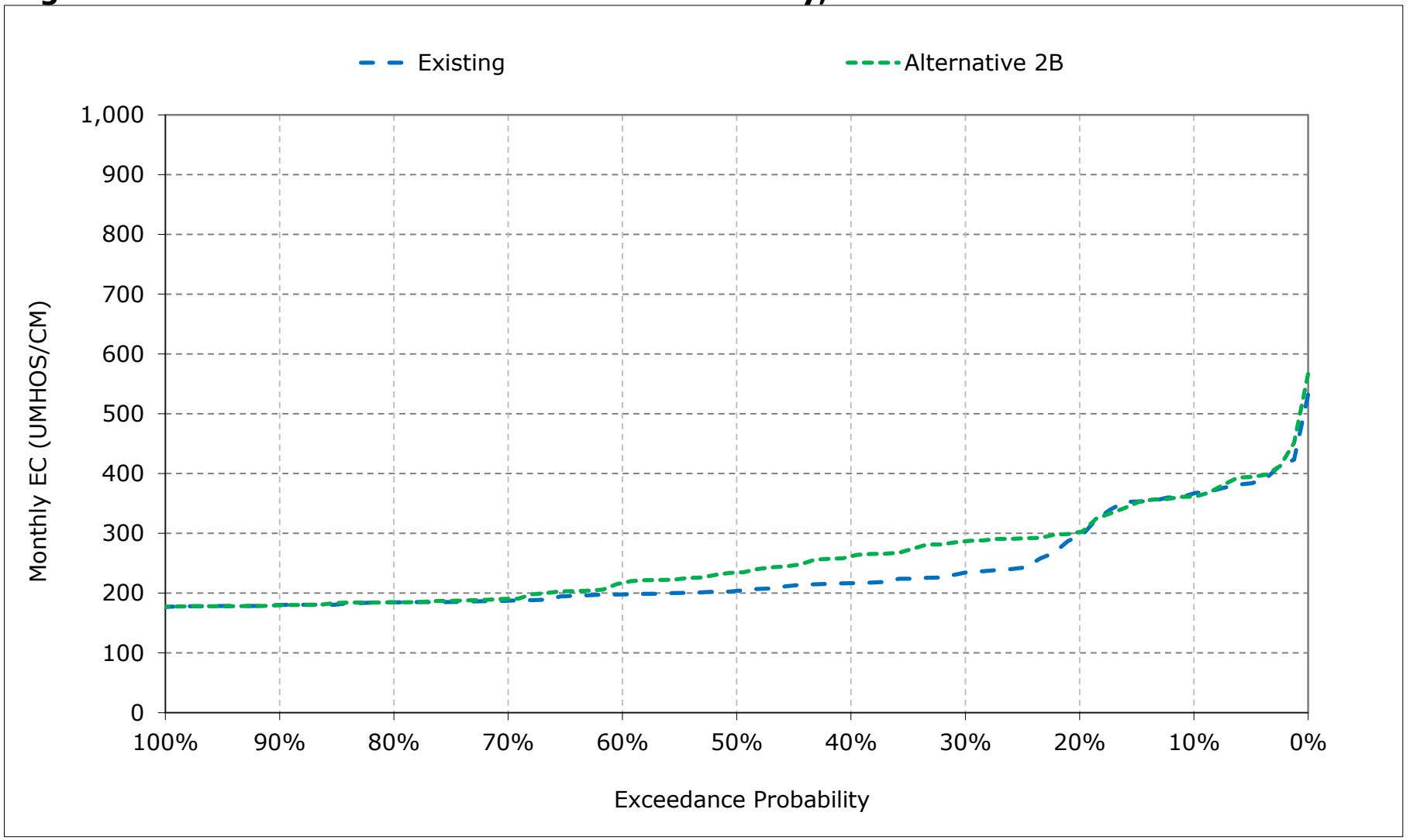


**Figure 4-18. Sacramento River at Rio Vista Salinity, December EC**



## Table 5-1. Sacramento River at Emmaton Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 3,495 | 2,968 | 2,416 | 934 | 343 | 312 | 348 | 559 | 832 | 1,536 | 2,564 | 3,311 |
| **20%** | 3,015 | 2,476 | 1,573 | 736 | 252 | 238 | 247 | 399 | 595 | 1,007 | 2,001 | 2,732 |
| **30%** | 2,933 | 2,366 | 878 | 518 | 226 | 197 | 207 | 304 | 555 | 814 | 1,887 | 2,644 |
| **40%** | 2,724 | 1,968 | 712 | 352 | 206 | 193 | 198 | 232 | 461 | 535 | 1,085 | 2,188 |
| **50%** | 2,082 | 539 | 533 | 288 | 195 | 189 | 193 | 206 | 391 | 442 | 957 | 1,544 |
| **60%** | 644 | 426 | 493 | 227 | 190 | 187 | 189 | 198 | 300 | 348 | 912 | 472 |
| **70%** | 385 | 275 | 252 | 196 | 185 | 183 | 186 | 192 | 253 | 317 | 840 | 321 |
| **80%** | 342 | 247 | 211 | 188 | 183 | 181 | 182 | 183 | 194 | 293 | 796 | 302 |
| **90%** | 314 | 238 | 182 | 182 | 182 | 181 | 181 | 180 | 182 | 266 | 731 | 278 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | 1,787 | 1,370 | 891 | 448 | 249 | 222 | 234 | 323 | 514 | 712 | 1,345 | 1,561 |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | 1,273 | 710 | 302 | 209 | 184 | 183 | 185 | 190 | 230 | 281 | 748 | 283 |
| **Above Normal (15%)** | 1,870 | 1,412 | 735 | 301 | 199 | 184 | 188 | 195 | 316 | 328 | 809 | 464 |
| **Below Normal (17%)** | 1,848 | 1,367 | 1,153 | 437 | 211 | 199 | 206 | 235 | 390 | 485 | 1,020 | 1,843 |
| **Dry (22%)** | 1,958 | 1,695 | 1,017 | 590 | 285 | 233 | 240 | 326 | 562 | 901 | 1,951 | 2,694 |
| **Critical (15%)** | 2,492 | 2,273 | 1,828 | 913 | 432 | 353 | 408 | 839 | 1,398 | 2,011 | 2,644 | 3,399 |

### Alternative 2B

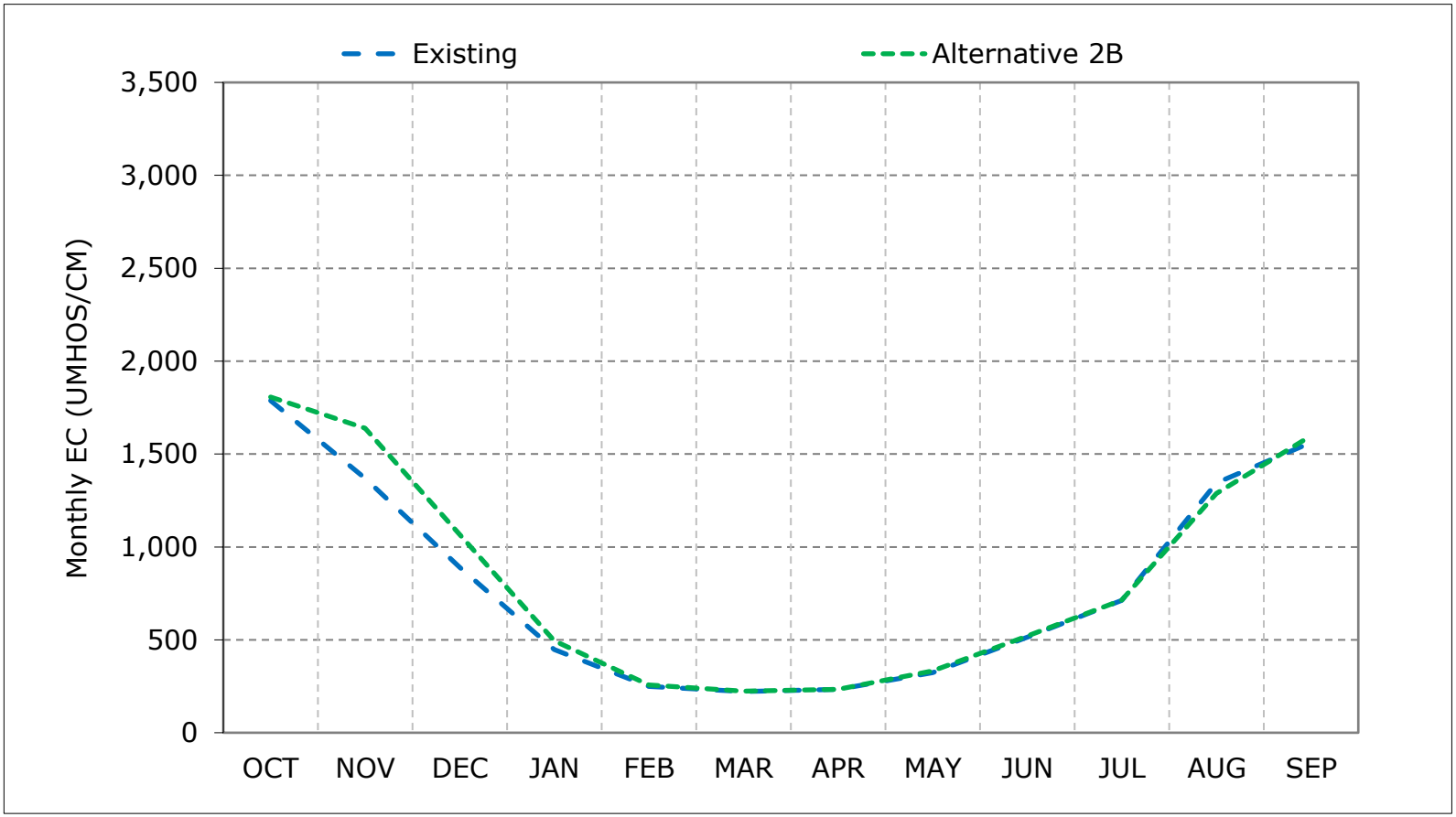
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 3,493 | 2,956 | 2,417 | 1,126 | 345 | 315 | 349 | 554 | 847 | 1,512 | 2,464 | 3,208 |
| **20%** | 3,070 | 2,544 | 1,597 | 848 | 262 | 230 | 254 | 428 | 635 | 1,062 | 2,031 | 2,797 |
| **30%** | 2,898 | 2,370 | 1,454 | 594 | 229 | 196 | 211 | 337 | 572 | 816 | 1,935 | 2,702 |
| **40%** | 2,661 | 1,979 | 1,223 | 377 | 205 | 193 | 198 | 235 | 451 | 533 | 1,226 | 2,420 |
| **50%** | 2,108 | 1,190 | 863 | 286 | 195 | 189 | 192 | 207 | 362 | 434 | 1,049 | 1,642 |
| **60%** | 621 | 1,094 | 618 | 221 | 189 | 187 | 187 | 195 | 291 | 358 | 719 | 371 |
| **70%** | 549 | 1,015 | 328 | 196 | 185 | 183 | 184 | 187 | 241 | 331 | 639 | 362 |
| **80%** | 479 | 831 | 244 | 189 | 183 | 181 | 182 | 181 | 193 | 305 | 620 | 337 |
| **90%** | 407 | 339 | 187 | 182 | 182 | 181 | 180 | 179 | 181 | 267 | 561 | 312 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | 1,807 | 1,638 | 1,066 | 495 | 258 | 224 | 234 | 332 | 520 | 714 | 1,287 | 1,598 |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | 1,300 | 1,043 | 373 | 209 | 184 | 183 | 184 | 192 | 238 | 287 | 573 | 328 |
| **Above Normal (15%)** | 1,881 | 1,647 | 980 | 333 | 196 | 185 | 187 | 195 | 296 | 332 | 650 | 347 |
| **Below Normal (17%)** | 1,893 | 1,624 | 1,395 | 457 | 210 | 199 | 208 | 246 | 378 | 491 | 1,155 | 2,050 |
| **Dry (22%)** | 1,976 | 1,966 | 1,245 | 685 | 304 | 234 | 240 | 350 | 580 | 922 | 1,972 | 2,736 |
| **Critical (15%)** | 2,477 | 2,445 | 2,004 | 1,033 | 468 | 364 | 410 | 847 | 1,433 | 1,968 | 2,599 | 3,367 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -1 | -11 | **1** | **192** | **2** | **3** | **2** | -5 | **15** | -24 | -100 | -104 |
| **20%** | **55** | **69** | **23** | **112** | **10** | -8 | **7** | **29** | **41** | **56** | **31** | **65** |
| **30%** | -35 | **3** | **576** | **77** | **3** | -1 | **4** | **33** | **17** | **2** | **49** | **58** |
| **40%** | -64 | **11** | **511** | **25** | -1 | **0** | **0** | **3** | -11 | -2 | **141** | **232** |
| **50%** | **26** | **651** | **329** | -2 | 0 | 0 | -1 | **1** | -28 | -8 | **92** | **98** |
| **60%** | -23 | **668** | **125** | -6 | -1 | **1** | -1 | -4 | -9 | **9** | -193 | -101 |
| **70%** | **164** | **740** | **76** | **0** | 0 | **0** | -1 | -5 | -12 | **14** | -202 | **41** |
| **80%** | **138** | **584** | **33** | **1** | 0 | **0** | -1 | -3 | -1 | **12** | -176 | **36** |
| **90%** | **93** | **101** | **5** | **0** | **0** | **0** | -1 | -1 | -1 | **2** | -169 | **34** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | **19** | **269** | **175** | **47** | **9** | **2** | **0** | **9** | **7** | **2** | -58 | **37** |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | **27** | **333** | **71** | **0** | 0 | **0** | 0 | **2** | **8** | **6** | -175 | **45** |
| **Above Normal (15%)** | **10** | **235** | **245** | **32** | -3 | **0** | -1 | -1 | -20 | **5** | -158 | -117 |
| **Below Normal (17%)** | **45** | **257** | **241** | **21** | -2 | 0 | **2** | **11** | -12 | **6** | **135** | **206** |
| **Dry (22%)** | **18** | **271** | **228** | **95** | **19** | **1** | **1** | **24** | **18** | **21** | **21** | **42** |
| **Critical (15%)** | -15 | **172** | **175** | **120** | **36** | **11** | **1** | **7** | **35** | -42 | -45 | -32 |

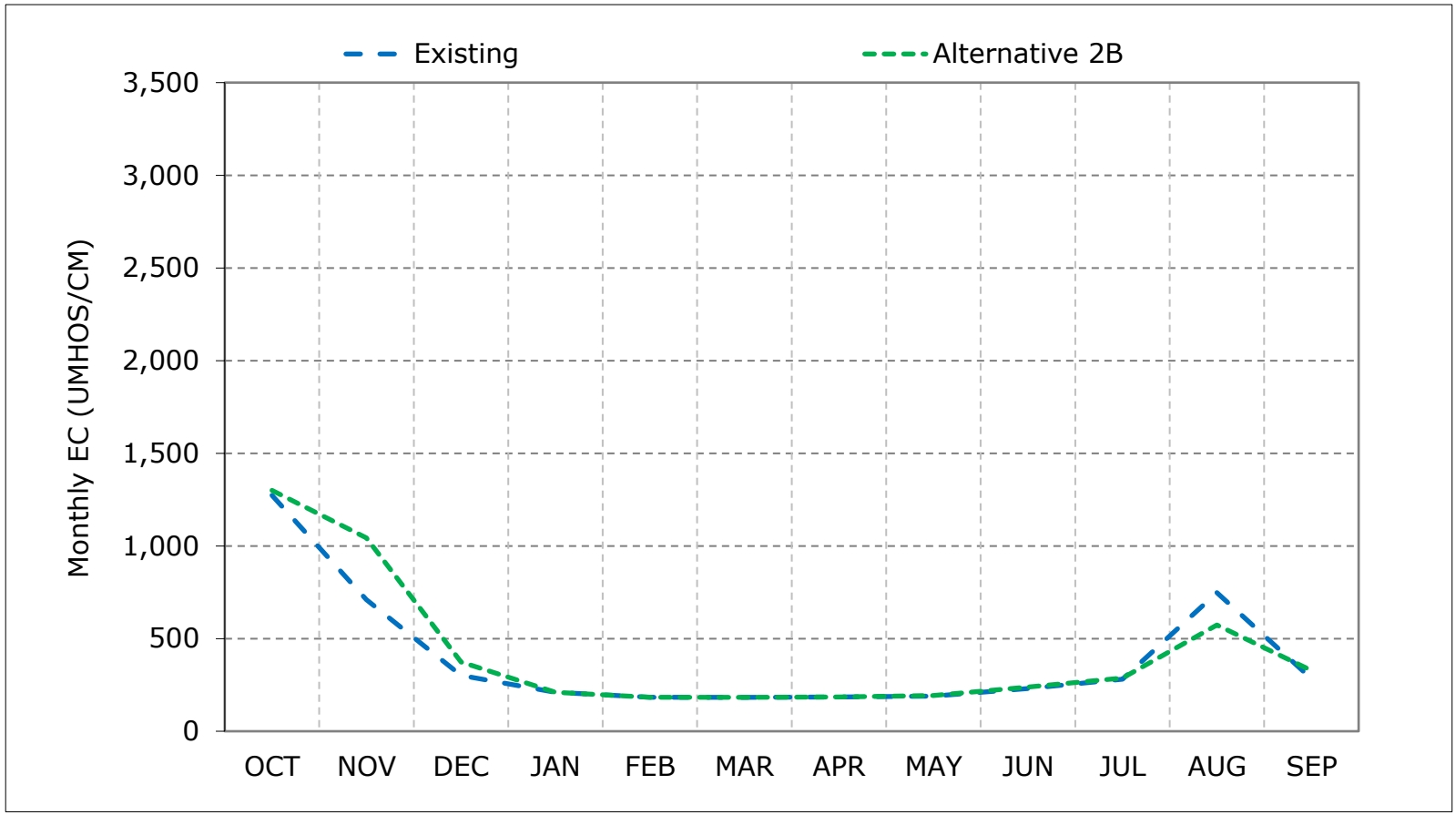
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 5-1. Sacramento River at Emmaton Salinity, Long-Term Average EC**



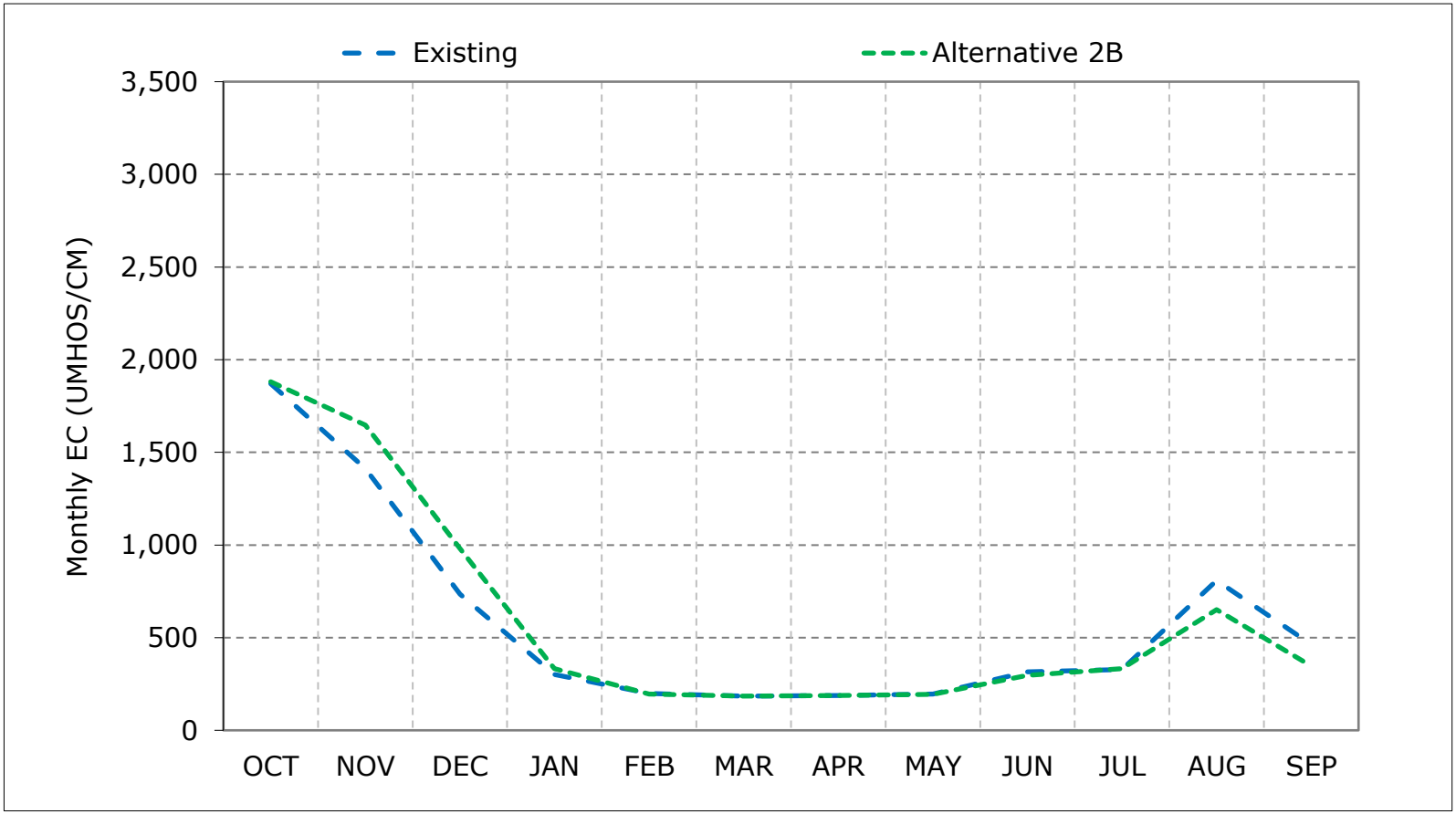

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 5-2. Sacramento River at Emmaton Salinity, Wet Year Average EC**



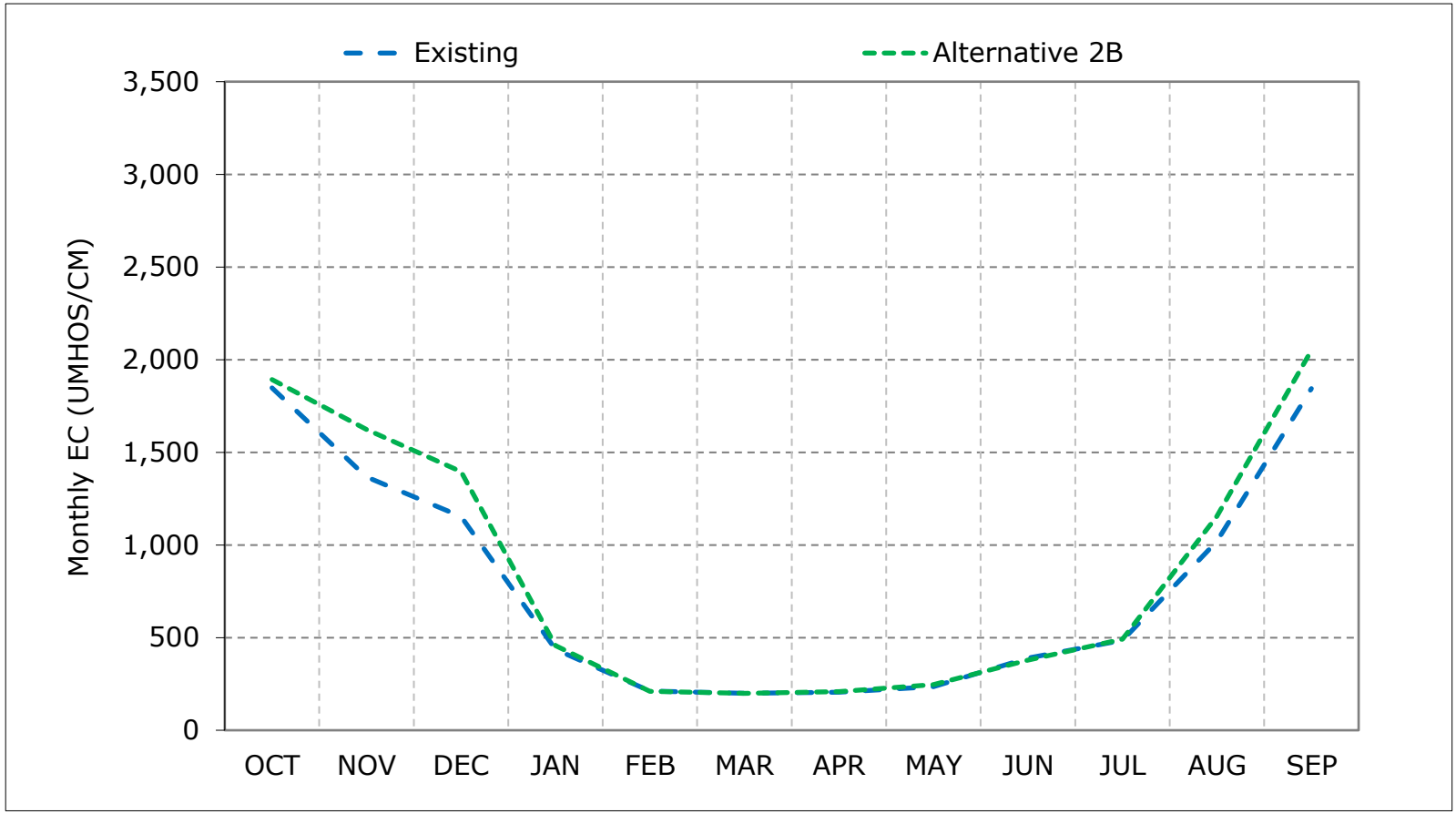

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 5-3. Sacramento River at Emmaton Salinity, Above Normal Year Average EC**



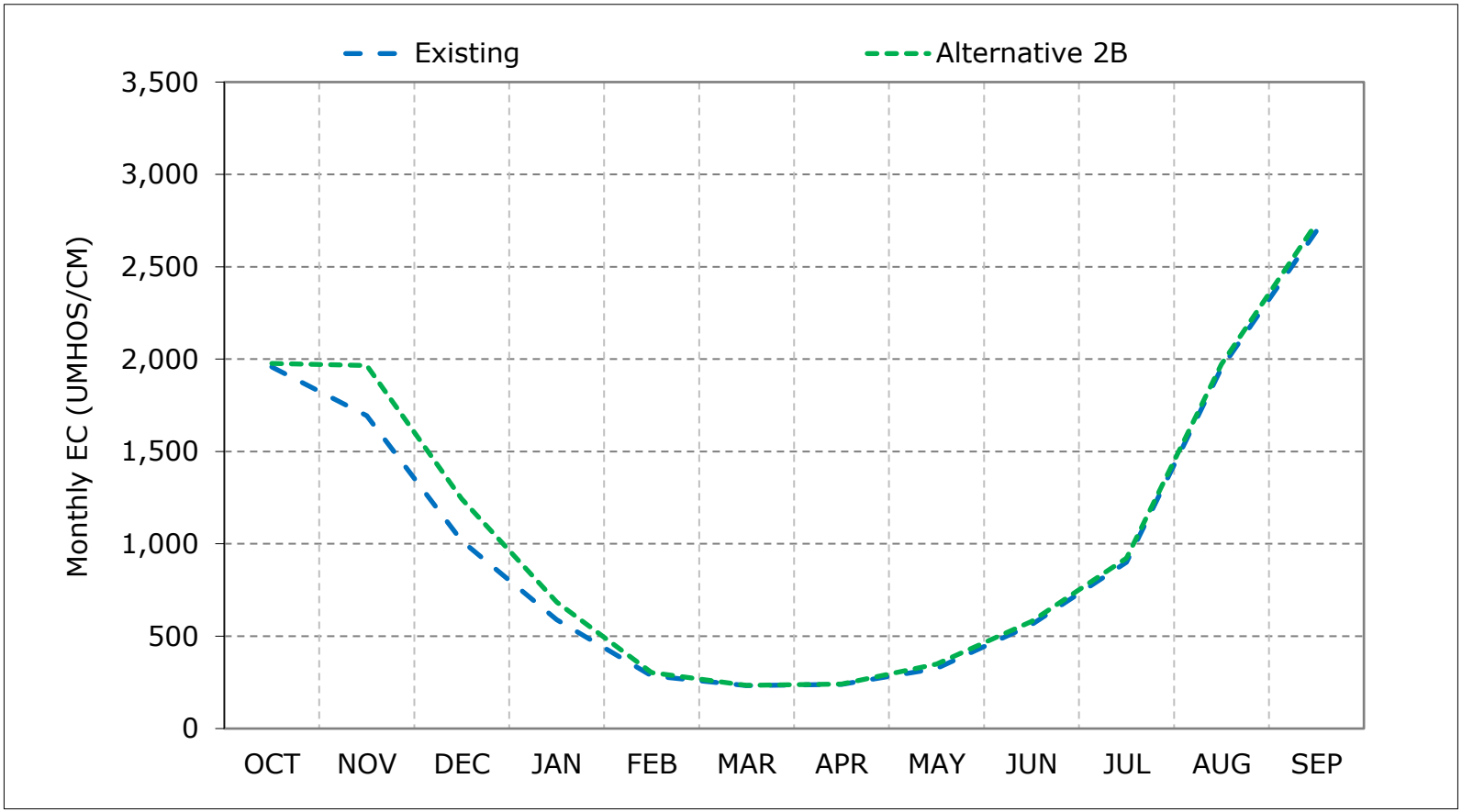

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 5-4. Sacramento River at Emmaton Salinity, Below Normal Year Average EC**



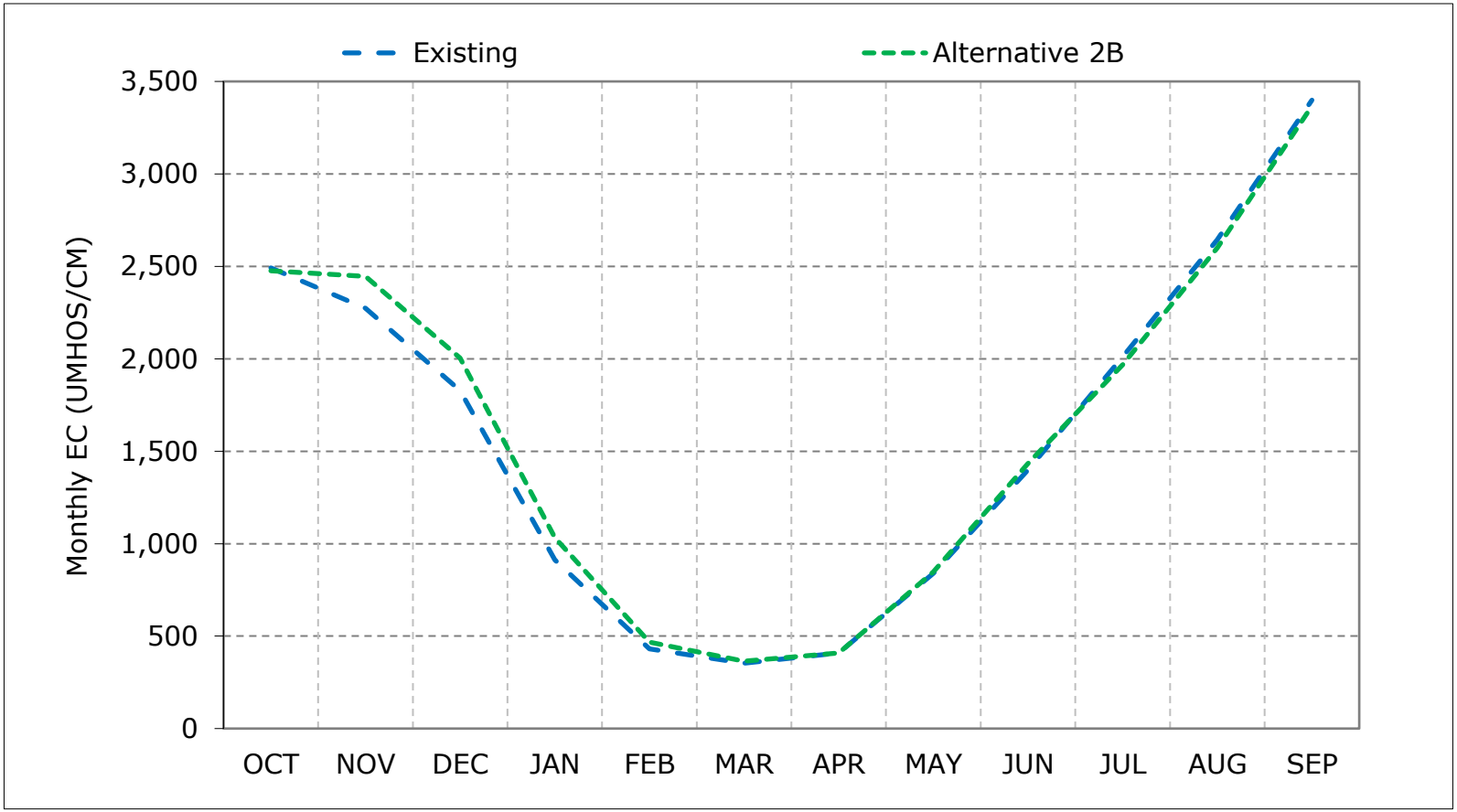

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 5-5. Sacramento River at Emmaton Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 5-6. Sacramento River at Emmaton Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 5-7. Sacramento River at Emmaton Salinity, January EC**

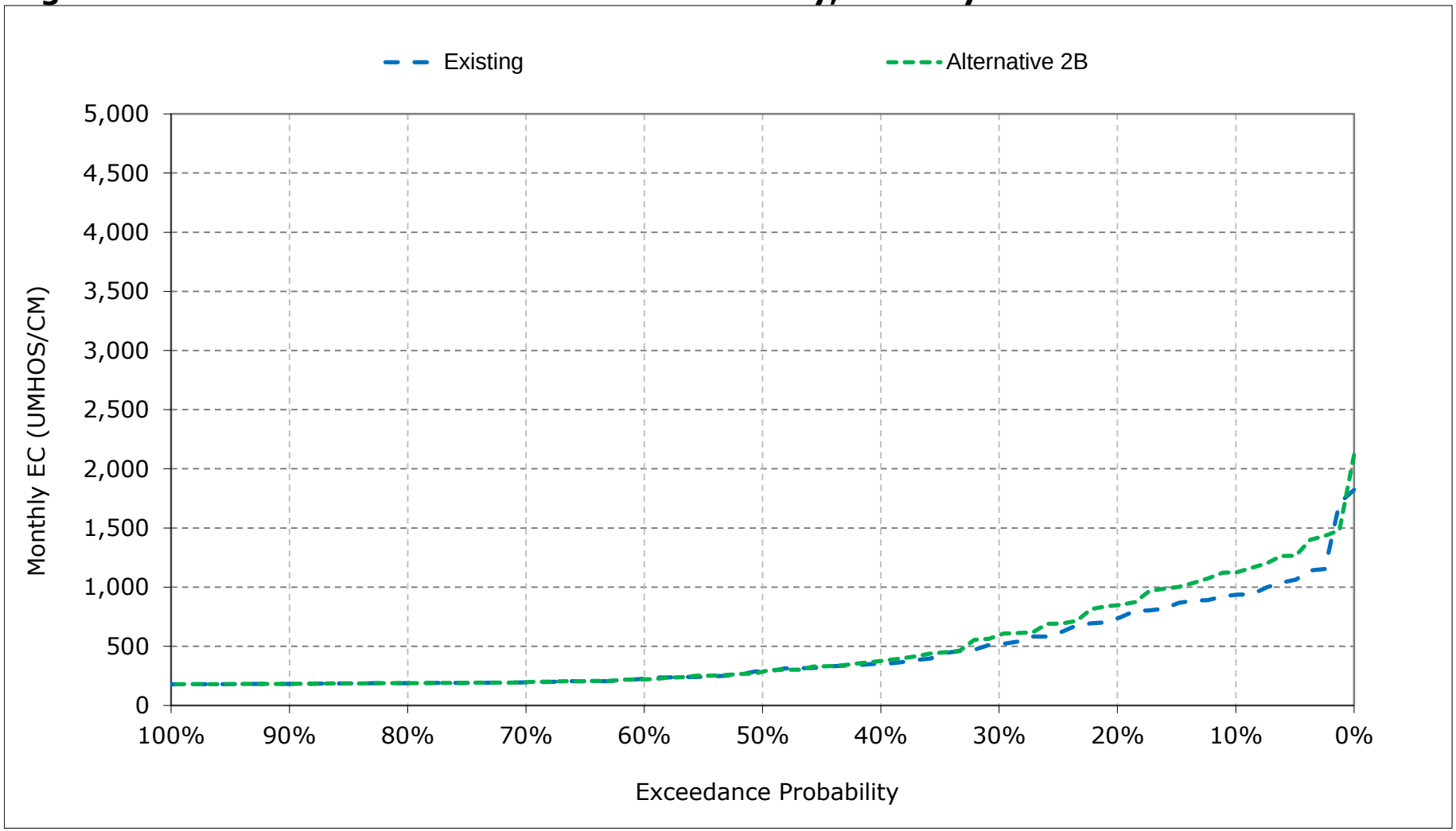


**Figure 5-8. Sacramento River at Emmaton Salinity, February EC**

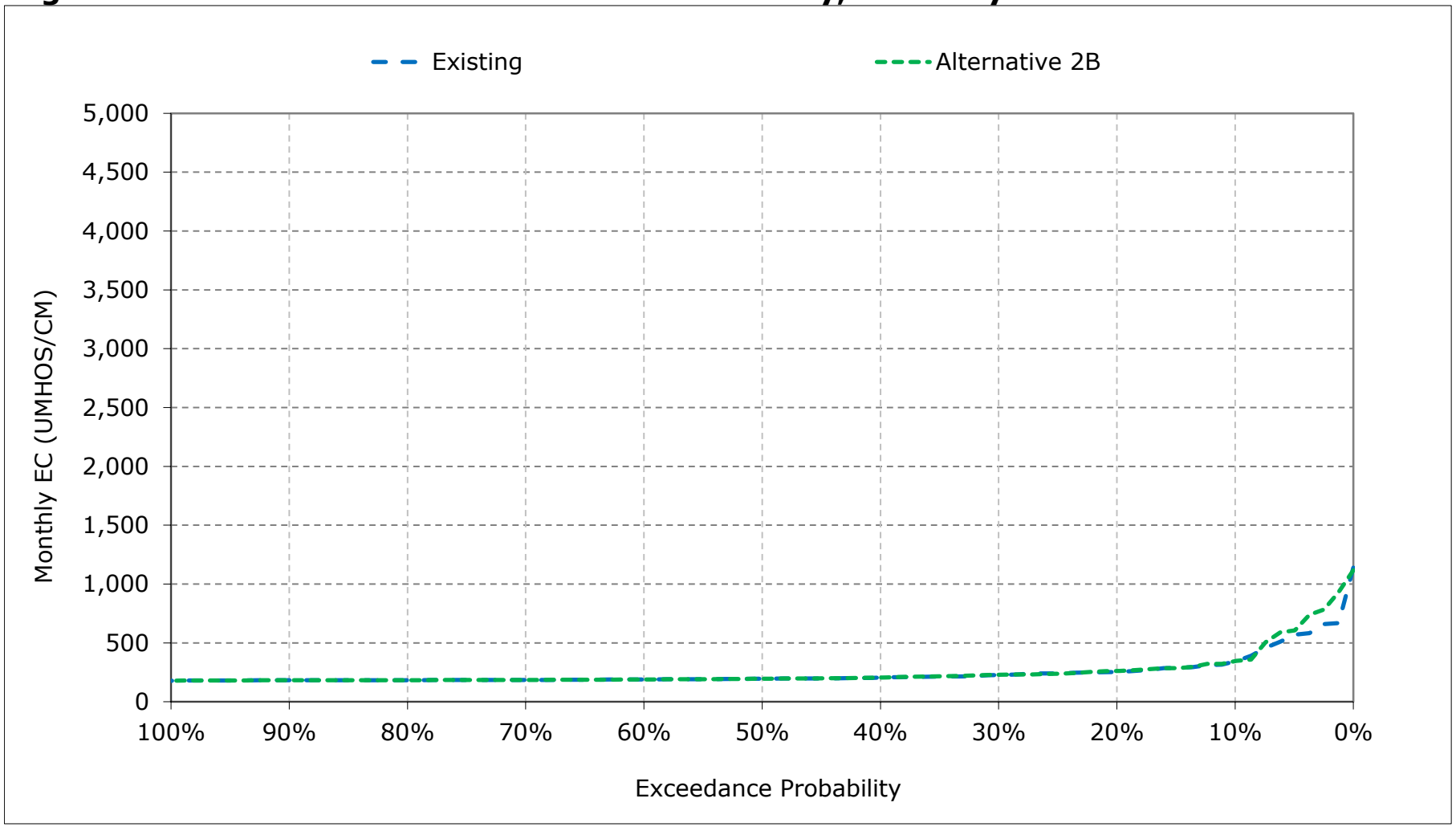


**Figure 5-9. Sacramento River at Emmaton Salinity, March EC**

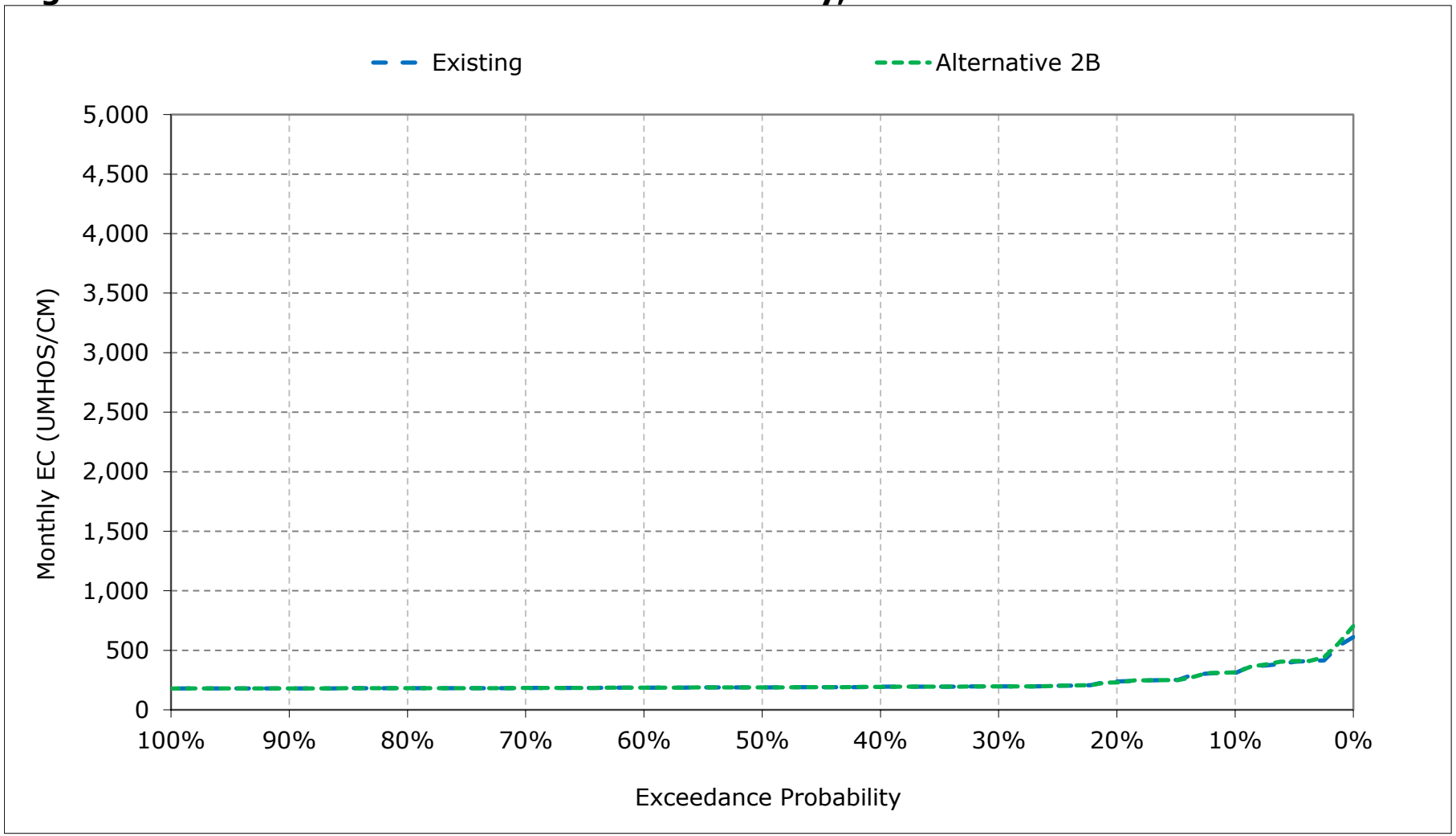


**Figure 5-10. Sacramento River at Emmaton Salinity, April EC**

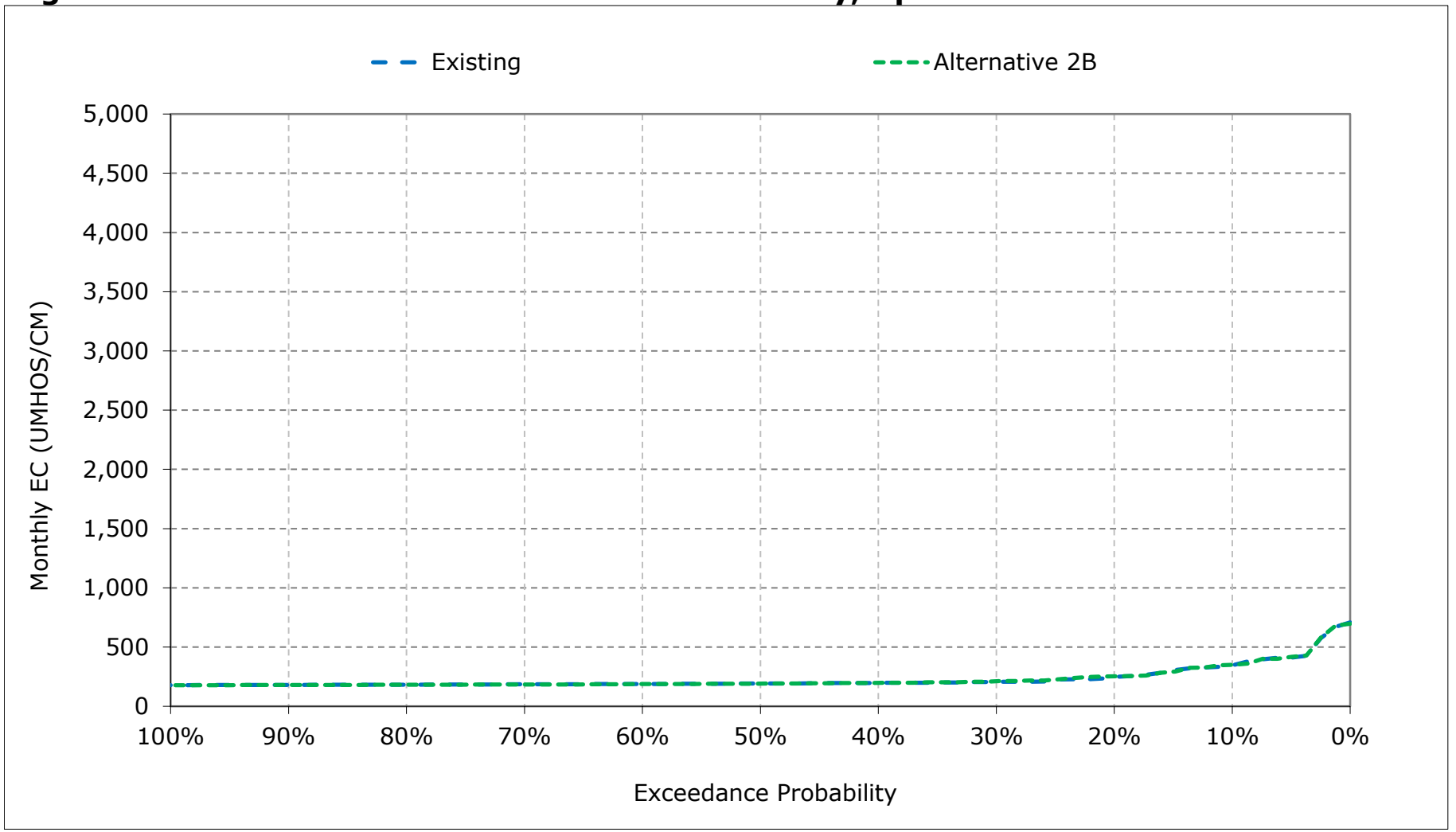


**Figure 5-11. Sacramento River at Emmaton Salinity, May EC**

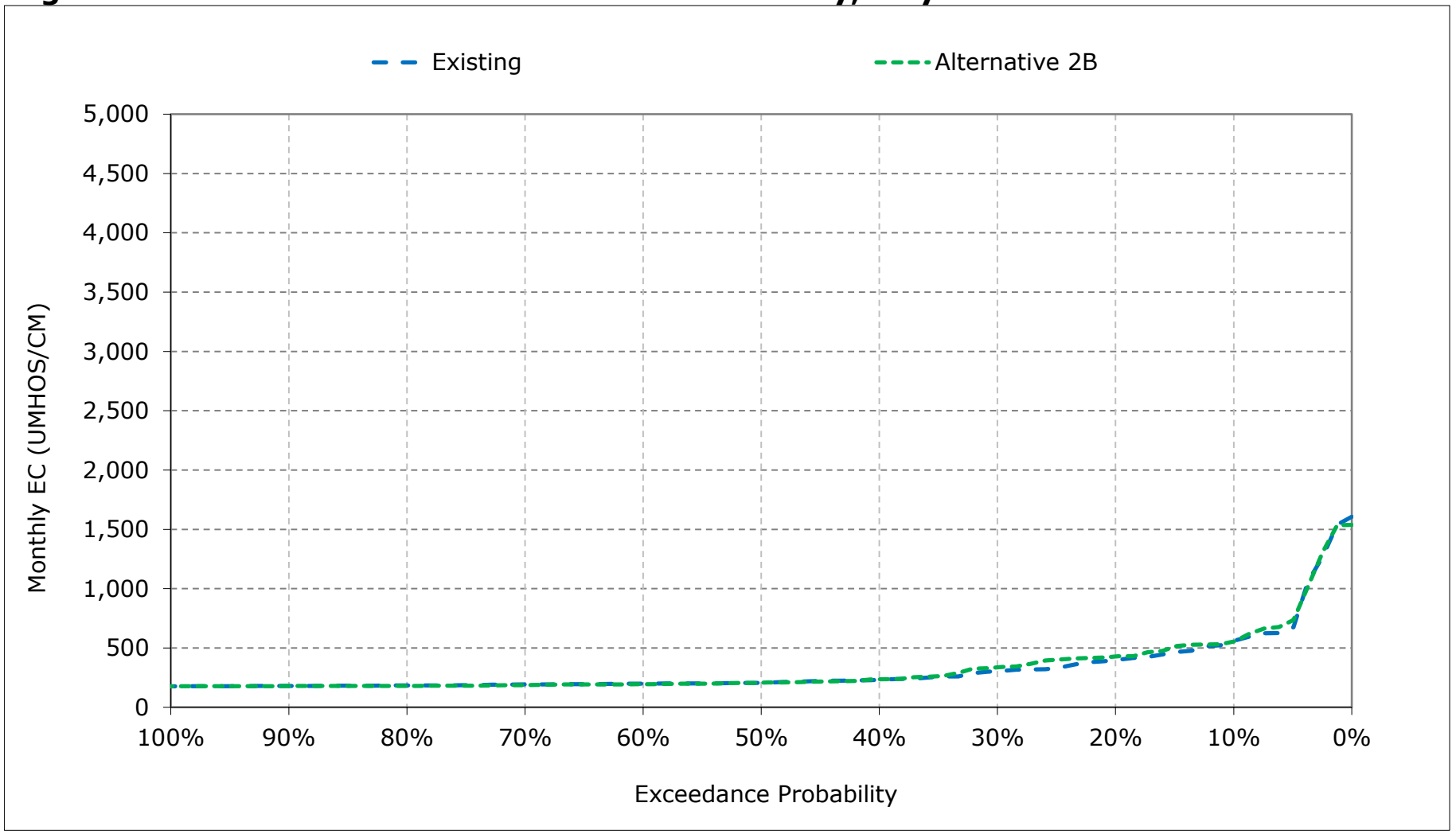


**Figure 5-12. Sacramento River at Emmaton Salinity, June EC**

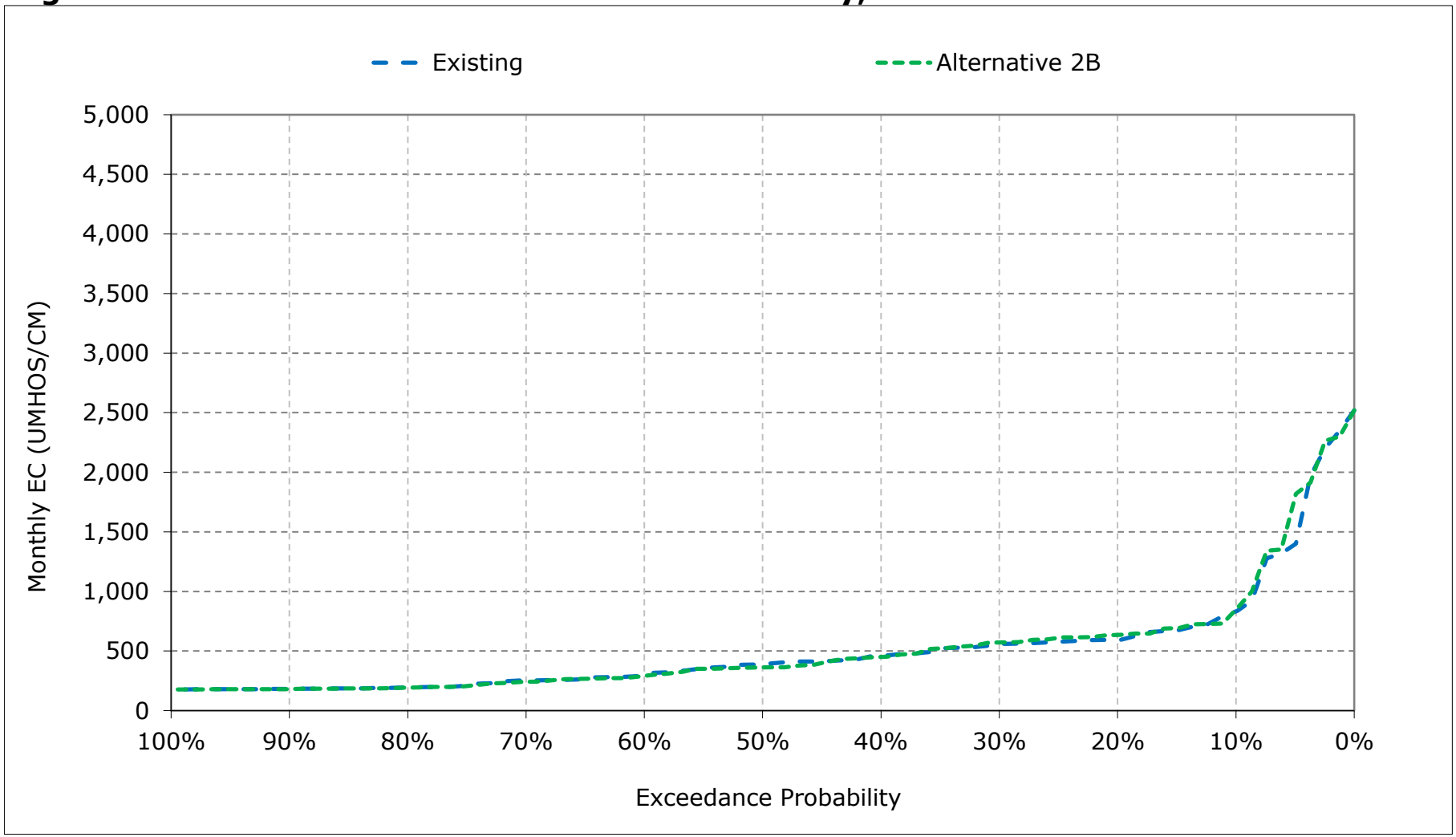


**Figure 5-13. Sacramento River at Emmaton Salinity, July EC**

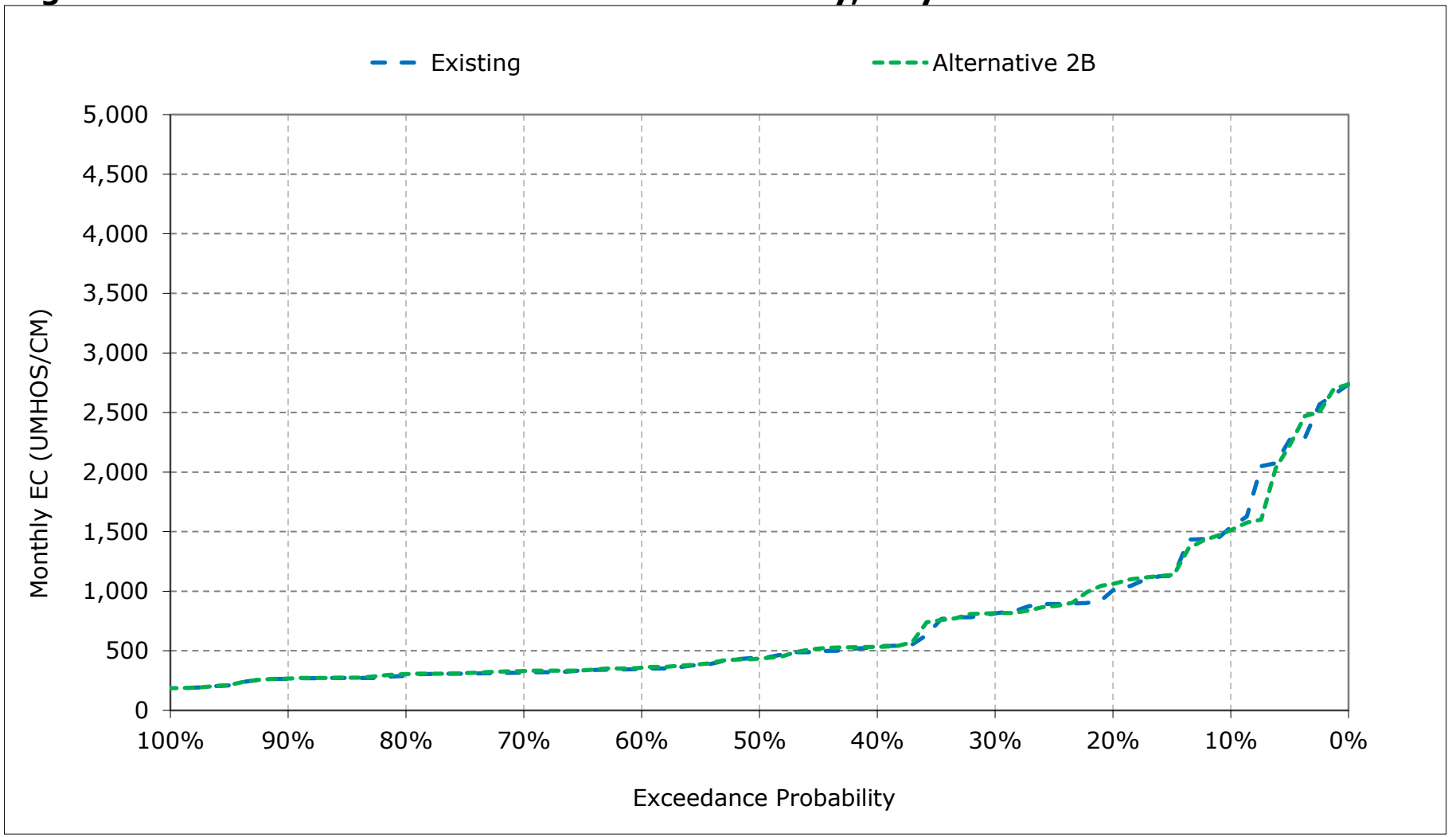


**Figure 5-14. Sacramento River at Emmaton Salinity, August EC**

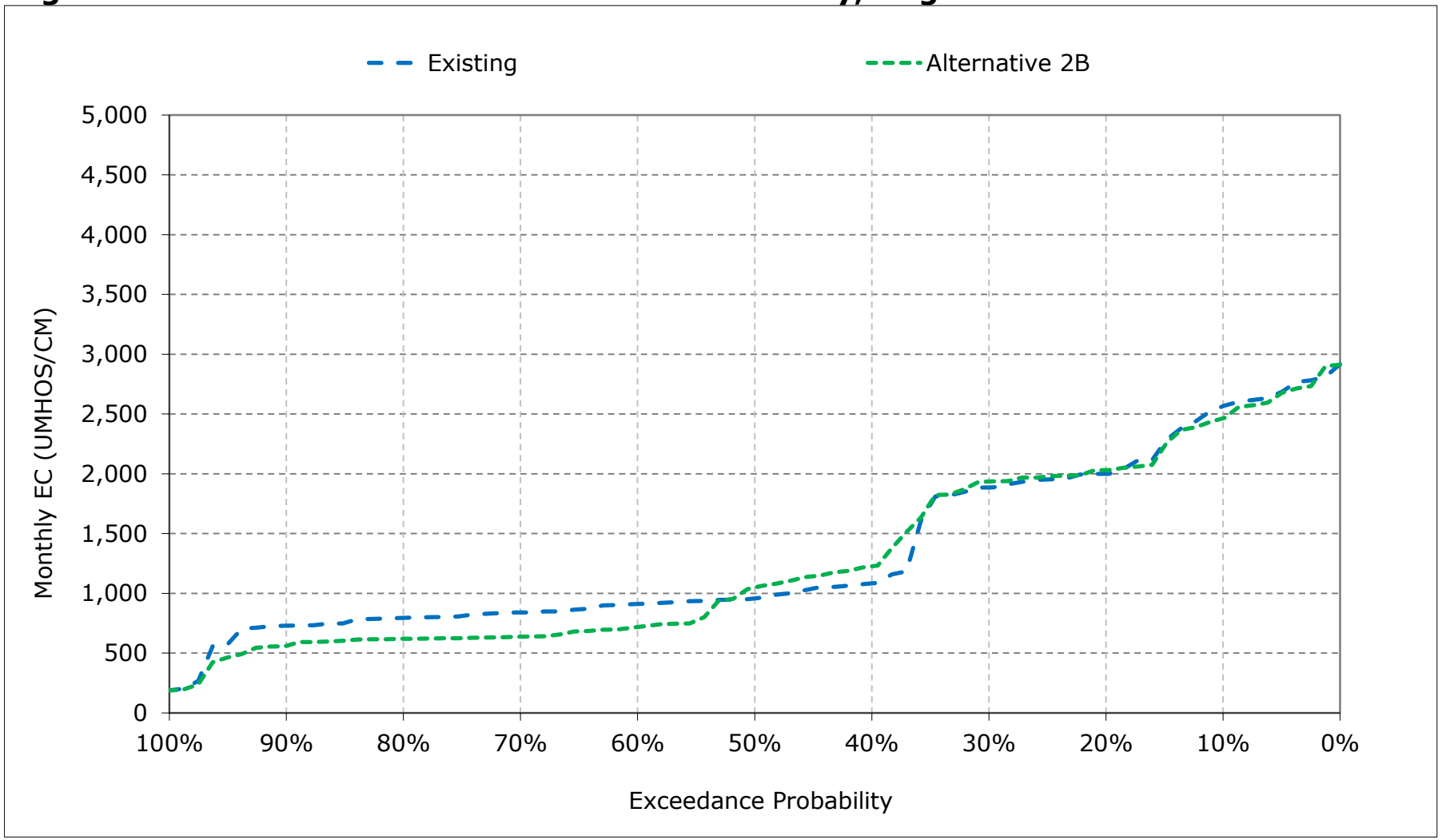


**Figure 5-15. Sacramento River at Emmaton Salinity, September EC**

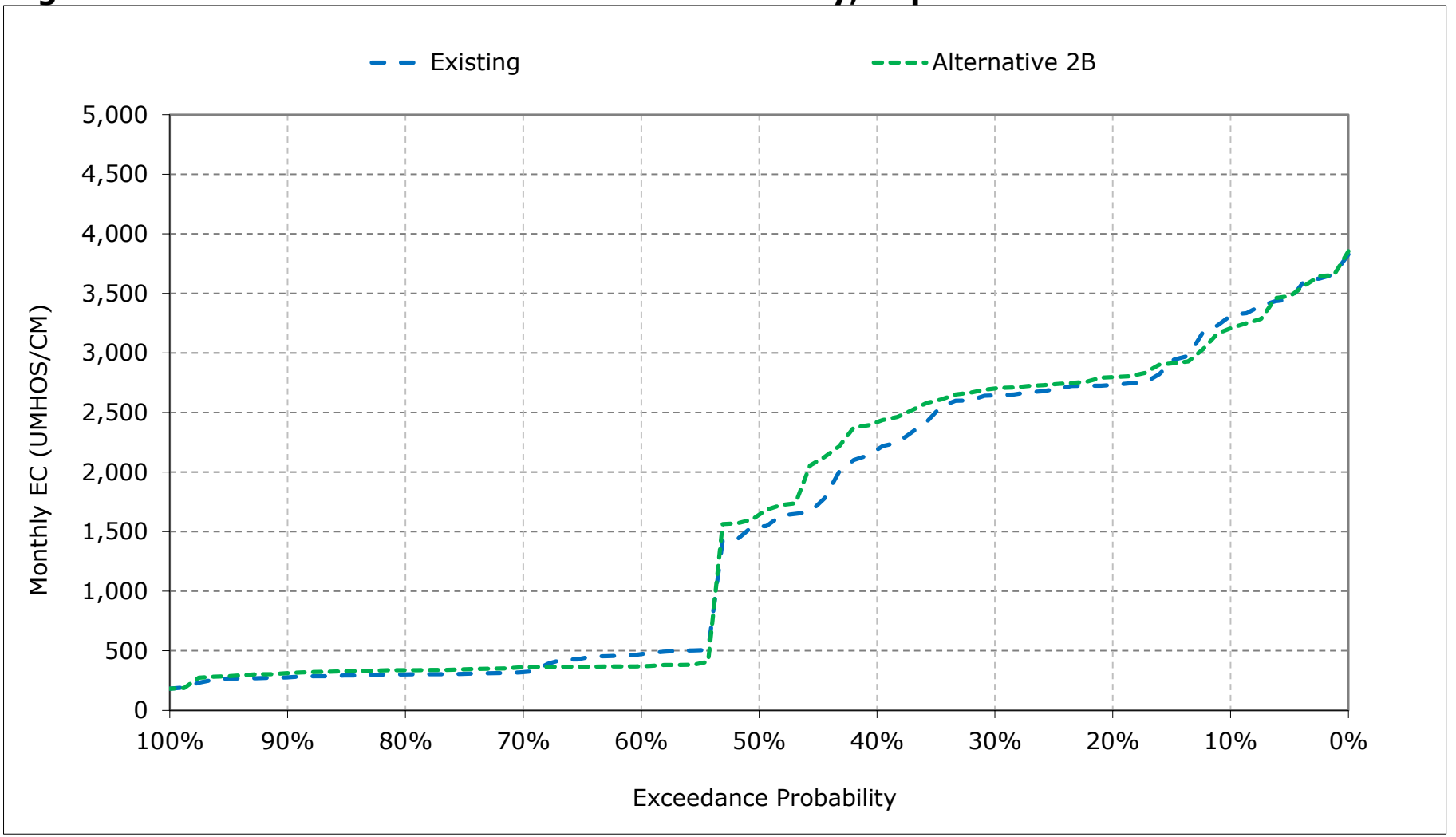


**Figure 5-16. Sacramento River at Emmaton Salinity, October EC**

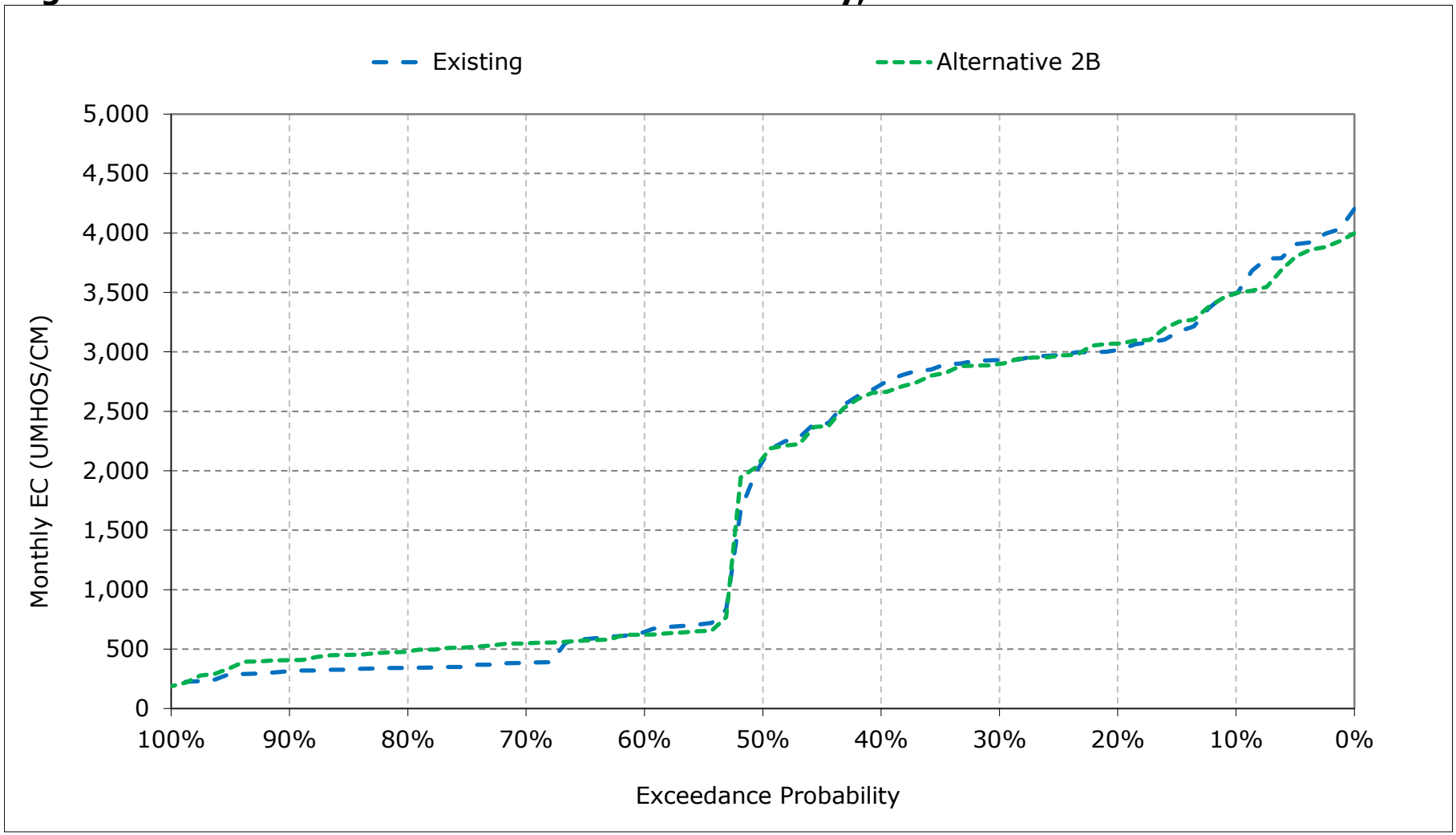


**Figure 5-17. Sacramento River at Emmaton Salinity, November EC**

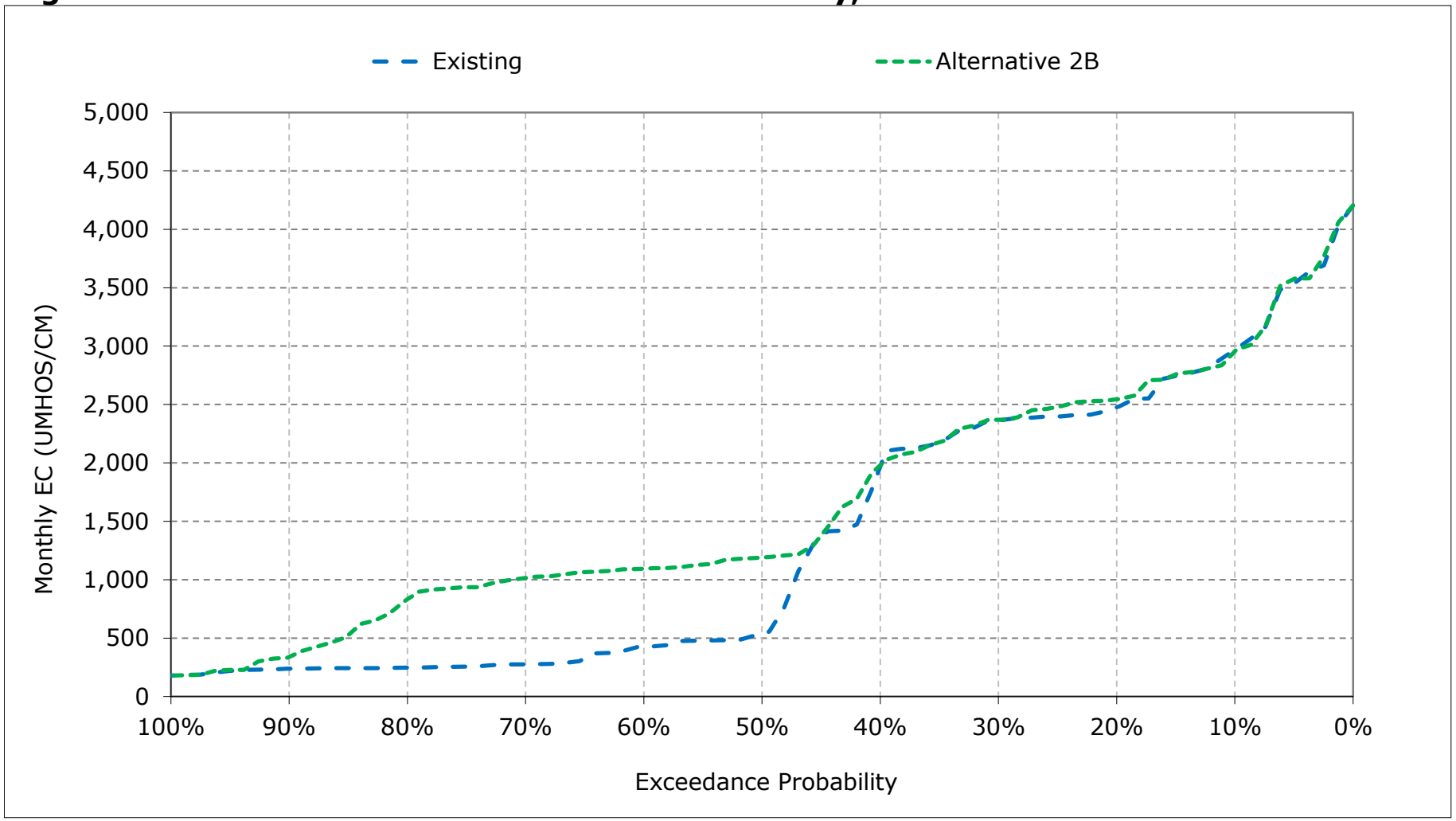
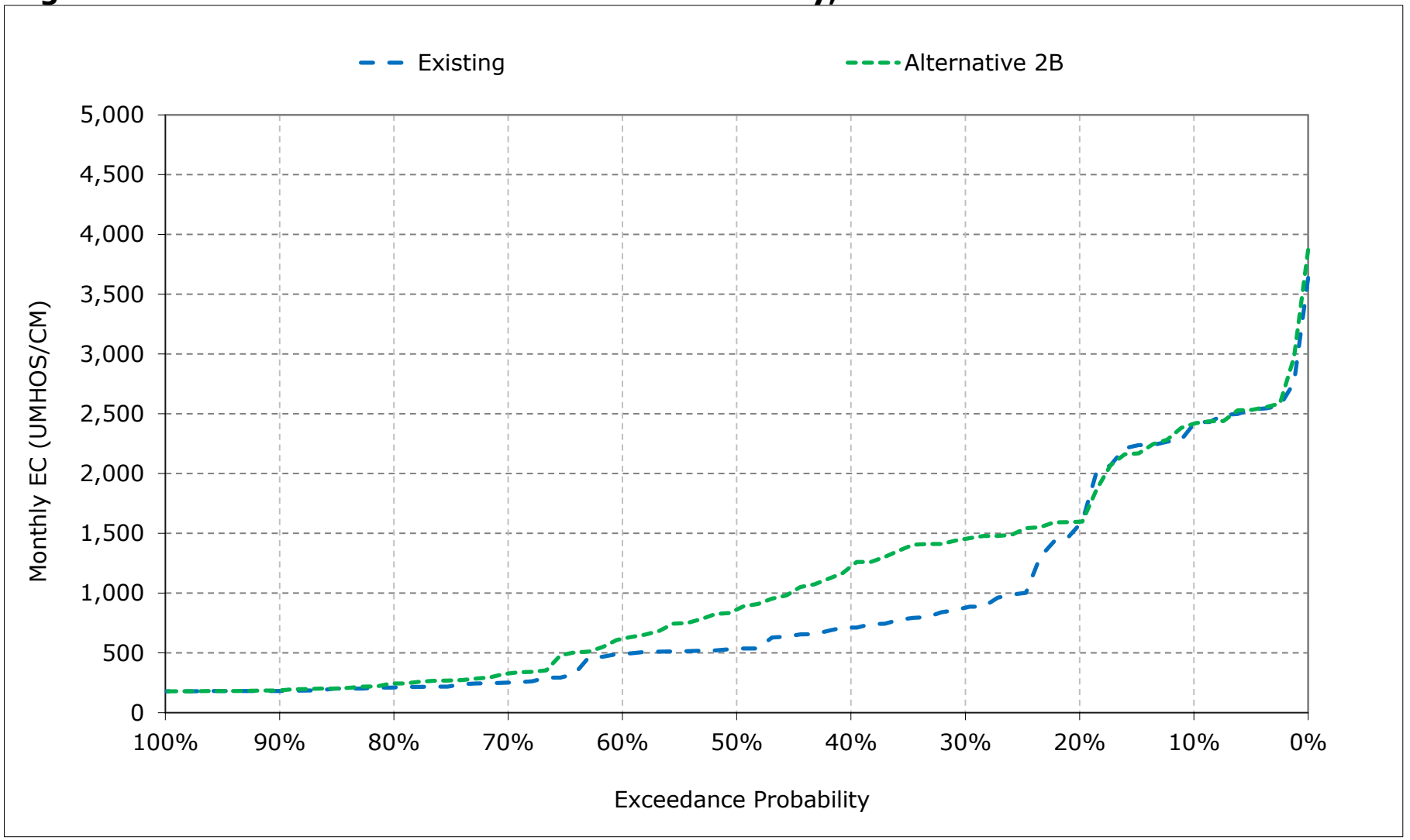


**Figure 5-18. Sacramento River at Emmaton Salinity, December EC**



## Table 6-1. Sacramento River at Collinsville Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 10,576 | 9,848 | 9,110 | 5,105 | 2,153 | 1,842 | 2,026 | 3,079 | 4,154 | 6,137 | 8,347 | 9,582 |
| **20%** | 9,842 | 9,273 | 7,373 | 4,259 | 1,341 | 965 | 1,027 | 2,112 | 3,307 | 5,010 | 7,170 | 8,936 |
| **30%** | 9,646 | 9,043 | 4,970 | 3,105 | 672 | 409 | 536 | 1,575 | 3,161 | 4,557 | 6,921 | 8,738 |
| **40%** | 9,323 | 8,431 | 4,102 | 1,656 | 393 | 313 | 407 | 851 | 2,547 | 3,240 | 5,285 | 7,855 |
| **50%** | 8,256 | 3,431 | 3,308 | 1,242 | 307 | 241 | 282 | 507 | 2,124 | 2,813 | 4,844 | 6,723 |
| **60%** | 3,721 | 2,939 | 3,073 | 649 | 215 | 209 | 221 | 349 | 1,490 | 2,140 | 4,720 | 2,769 |
| **70%** | 1,999 | 1,622 | 1,015 | 236 | 200 | 193 | 205 | 258 | 1,082 | 1,957 | 4,400 | 1,435 |
| **80%** | 1,856 | 1,375 | 518 | 205 | 192 | 189 | 195 | 200 | 468 | 1,696 | 4,159 | 1,261 |
| **90%** | 1,734 | 1,254 | 228 | 189 | 188 | 187 | 188 | 188 | 202 | 1,244 | 3,922 | 1,150 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 6,225 | 5,334 | 3,898 | 2,034 | 825 | 598 | 694 | 1,198 | 2,287 | 3,353 | 5,506 | 5,364 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 4,702 | 3,187 | 1,148 | 404 | 202 | 200 | 220 | 295 | 726 | 1,457 | 3,869 | 1,153 |
| **Above Normal (15%)** | 6,525 | 5,298 | 3,716 | 1,157 | 344 | 206 | 239 | 342 | 1,446 | 1,943 | 4,256 | 2,698 |
| **Below Normal (17%)** | 6,541 | 5,825 | 5,091 | 2,147 | 511 | 414 | 447 | 787 | 2,047 | 3,006 | 5,064 | 7,241 |
| **Dry (22%)** | 6,655 | 6,322 | 4,797 | 3,160 | 1,238 | 759 | 877 | 1,623 | 3,094 | 4,725 | 7,025 | 8,834 |
| **Critical (15%)** | 8,210 | 7,970 | 7,294 | 4,624 | 2,401 | 1,826 | 2,188 | 3,854 | 5,577 | 7,217 | 8,538 | 9,762 |

### Alternative 2B

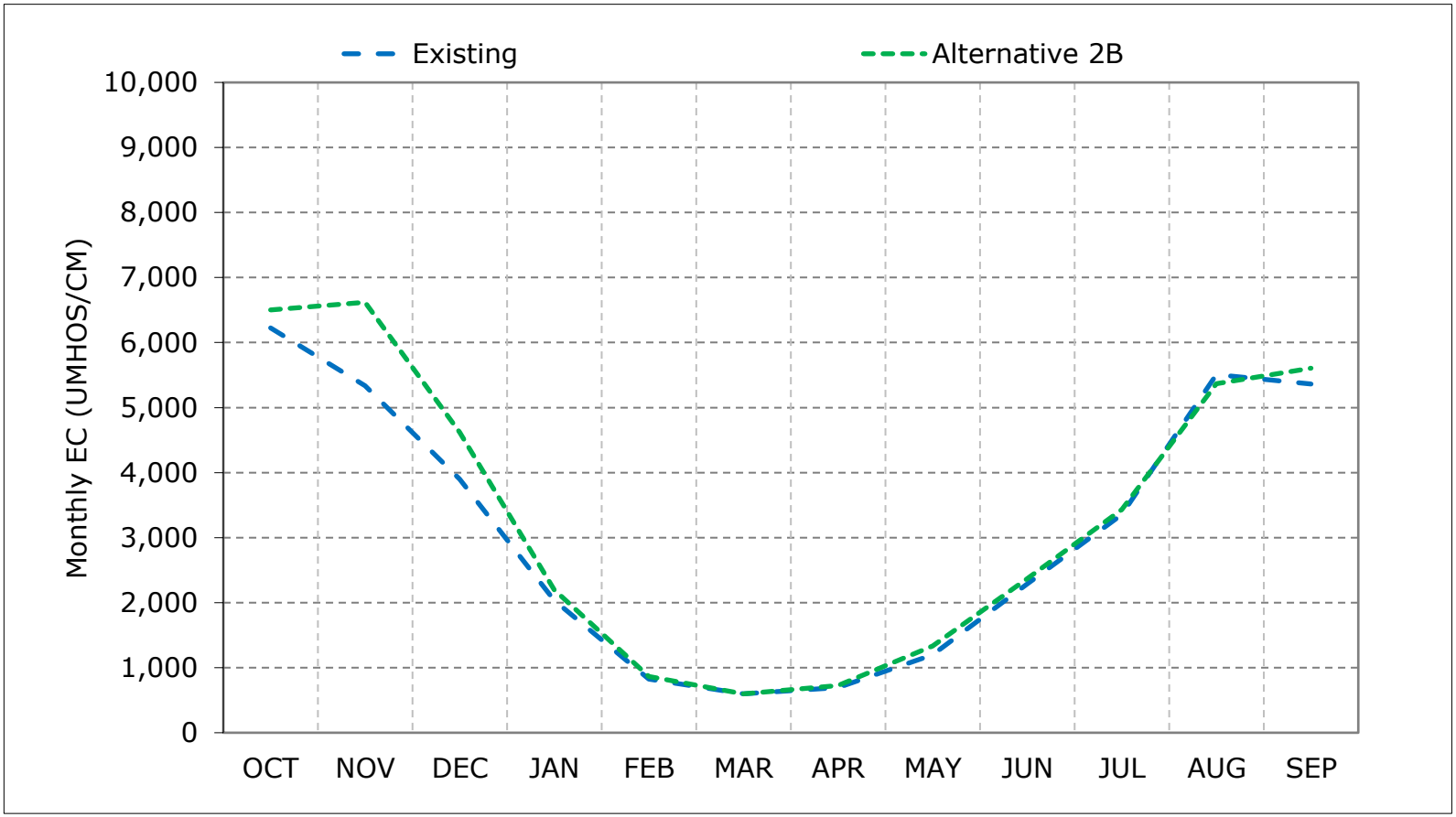
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 10,444 | 9,719 | 9,085 | 5,998 | 2,117 | 1,863 | 2,062 | 3,206 | 4,213 | 6,076 | 8,186 | 9,397 |
| **20%** | 9,825 | 9,341 | 7,400 | 4,751 | 1,370 | 893 | 1,082 | 2,490 | 3,564 | 5,085 | 7,214 | 9,002 |
| **30%** | 9,617 | 9,151 | 6,986 | 3,526 | 739 | 366 | 680 | 1,948 | 3,182 | 4,463 | 7,001 | 8,813 |
| **40%** | 9,266 | 8,502 | 6,280 | 1,807 | 379 | 289 | 473 | 1,068 | 2,714 | 3,580 | 6,182 | 8,318 |
| **50%** | 8,275 | 6,026 | 4,947 | 1,157 | 316 | 229 | 307 | 639 | 2,079 | 2,987 | 5,508 | 6,899 |
| **60%** | 3,485 | 5,722 | 3,714 | 599 | 215 | 206 | 224 | 453 | 1,623 | 2,251 | 4,028 | 2,264 |
| **70%** | 3,303 | 5,511 | 1,463 | 240 | 198 | 193 | 209 | 289 | 1,209 | 2,039 | 3,674 | 2,179 |
| **80%** | 3,081 | 4,751 | 814 | 202 | 193 | 189 | 191 | 197 | 485 | 1,791 | 3,570 | 2,029 |
| **90%** | 2,745 | 2,126 | 306 | 189 | 188 | 187 | 186 | 184 | 202 | 1,248 | 3,346 | 1,792 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 6,502 | 6,619 | 4,622 | 2,199 | 867 | 598 | 725 | 1,334 | 2,368 | 3,431 | 5,366 | 5,604 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 5,070 | 4,843 | 1,540 | 399 | 199 | 198 | 234 | 361 | 815 | 1,502 | 3,229 | 1,914 |
| **Above Normal (15%)** | 6,877 | 6,533 | 4,739 | 1,249 | 296 | 203 | 257 | 438 | 1,443 | 2,001 | 3,715 | 2,098 |
| **Below Normal (17%)** | 6,863 | 7,057 | 6,024 | 2,197 | 492 | 395 | 498 | 990 | 2,079 | 3,297 | 5,837 | 7,642 |
| **Dry (22%)** | 6,923 | 7,492 | 5,717 | 3,562 | 1,356 | 744 | 930 | 1,865 | 3,243 | 4,784 | 7,116 | 8,924 |
| **Critical (15%)** | 8,179 | 8,734 | 7,904 | 5,006 | 2,585 | 1,873 | 2,217 | 3,942 | 5,685 | 7,166 | 8,473 | 9,746 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -132 | -130 | -26 | **893** | -35 | **21** | **36** | **126** | **58** | -61 | -161 | -184 |
| **20%** | -17 | **68** | **27** | **493** | **29** | -71 | **55** | **378** | **256** | **75** | **44** | **66** |
| **30%** | -30 | **108** | **2,017** | **421** | **67** | -43 | **143** | **373** | **21** | -94 | **80** | **74** |
| **40%** | -57 | **71** | **2,178** | **151** | -14 | -23 | **66** | **217** | **166** | **340** | **897** | **463** |
| **50%** | **18** | **2,594** | **1,638** | -84 | **10** | -13 | **26** | **132** | -45 | **173** | **664** | **176** |
| **60%** | -236 | **2,783** | **642** | -50 | **0** | -3 | **3** | **104** | **133** | **111** | -692 | -505 |
| **70%** | **1,304** | **3,889** | **448** | **4** | -2 | **1** | **4** | **31** | **127** | **82** | -726 | **744** |
| **80%** | **1,225** | **3,375** | **296** | -2 | **0** | **0** | -4 | -2 | **17** | **94** | -589 | **768** |
| **90%** | **1,012** | **872** | **79** | **0** | **1** | **0** | -2 | -4 | -1 | **4** | -576 | **642** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **278** | **1,285** | **724** | **165** | **42** | -1 | **31** | **136** | **82** | **78** | -140 | **240** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **368** | **1,656** | **391** | -4 | -3 | -2 | **13** | **66** | **89** | **45** | -640 | **761** |
| **Above Normal (15%)** | **351** | **1,235** | **1,023** | **92** | -48 | -3 | **18** | **96** | -3 | **58** | -541 | -600 |
| **Below Normal (17%)** | **322** | **1,232** | **932** | **50** | -19 | -19 | **51** | **203** | **32** | **291** | **773** | **401** |
| **Dry (22%)** | **269** | **1,170** | **920** | **402** | **118** | -15 | **53** | **242** | **149** | **58** | **91** | **90** |
| **Critical (15%)** | -31 | **763** | **610** | **383** | **184** | **47** | **28** | **89** | **108** | -51 | -65 | -16 |

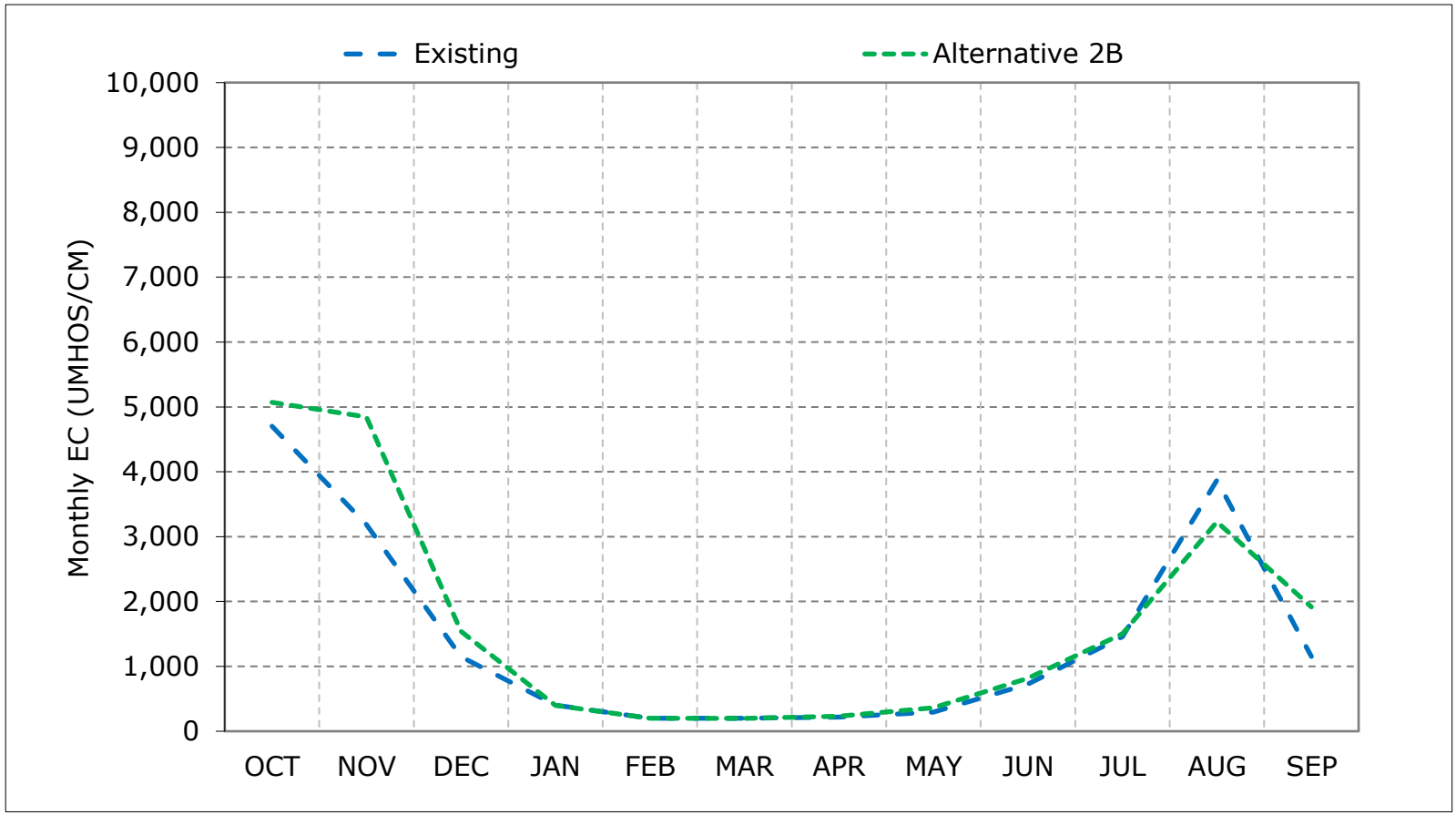
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 6-1. Sacramento River at Collinsville Salinity, Long-Term Average EC**



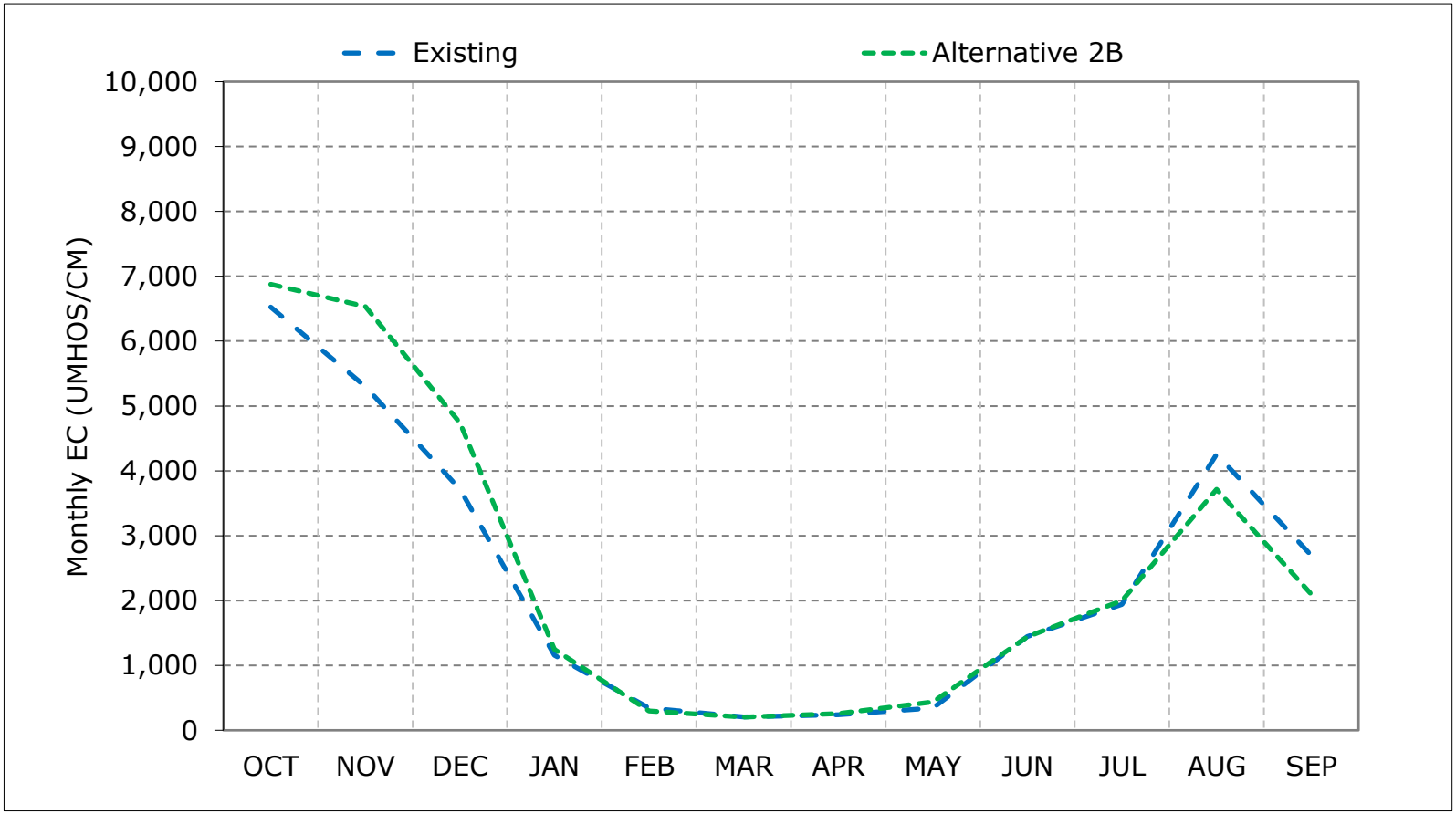

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 6-2. Sacramento River at Collinsville Salinity, Wet Year Average EC**



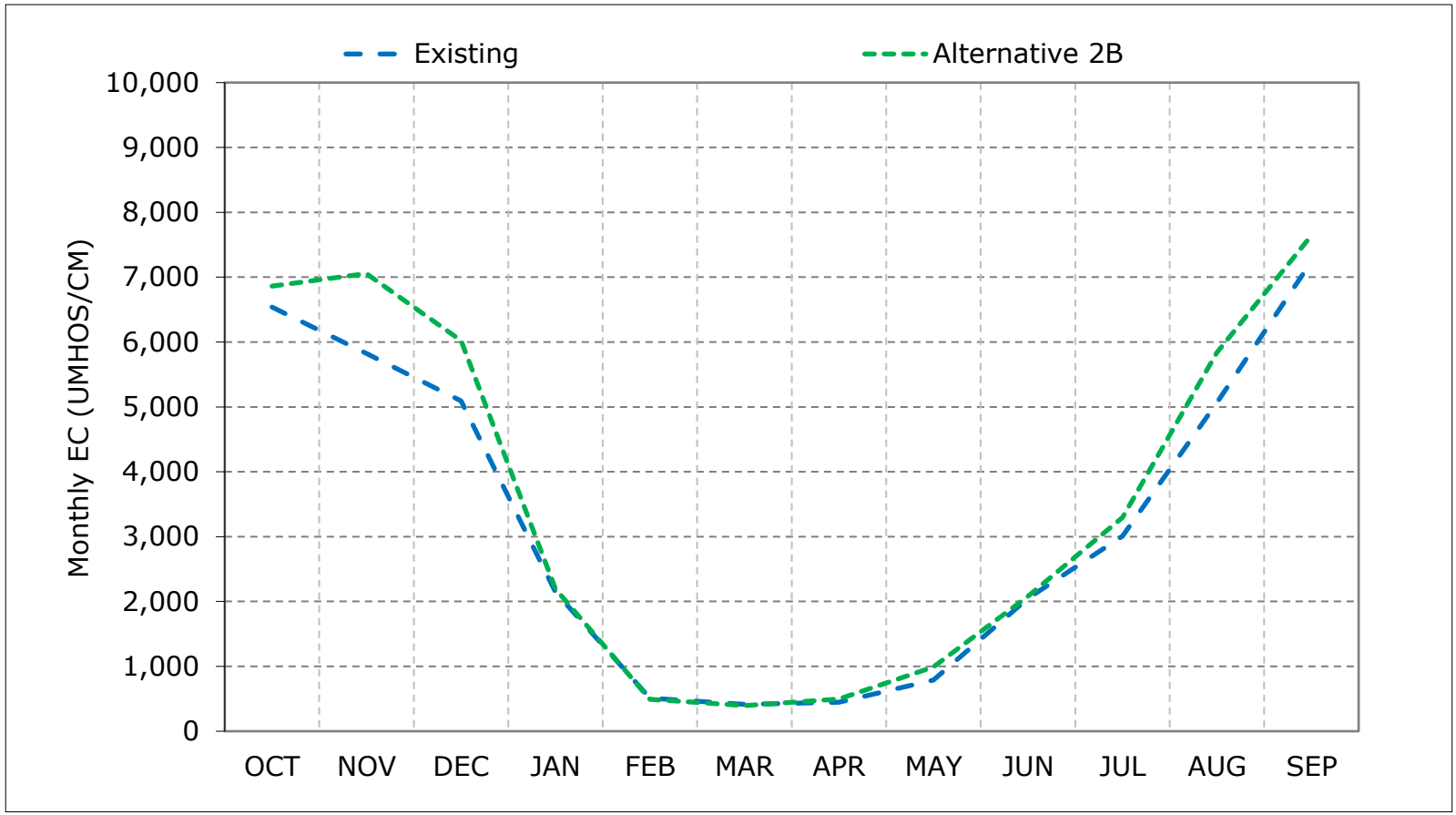

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 6-3. Sacramento River at Collinsville Salinity, Above Normal Year Average EC**



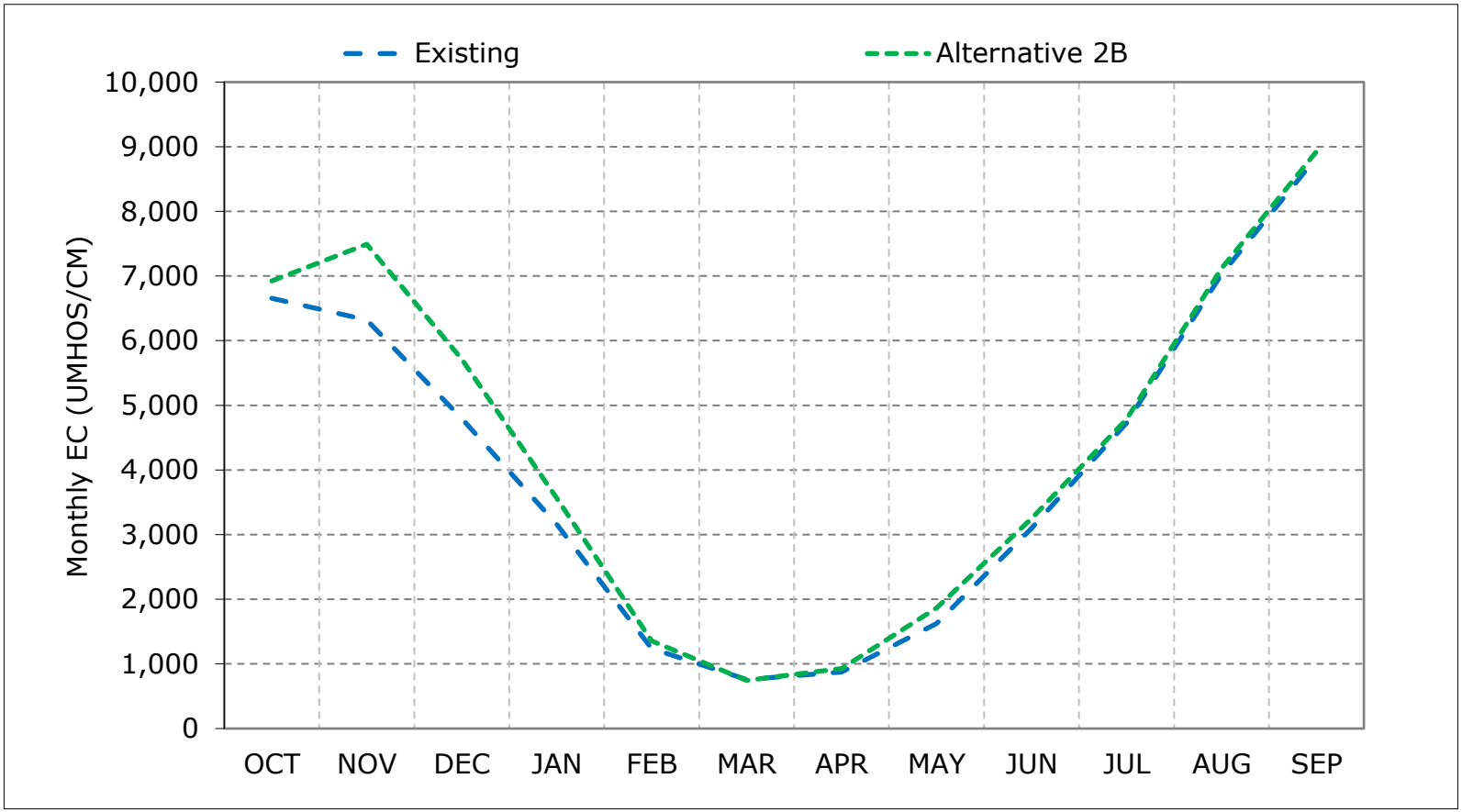

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 6-4. Sacramento River at Collinsville Salinity, Below Normal Year Average EC**



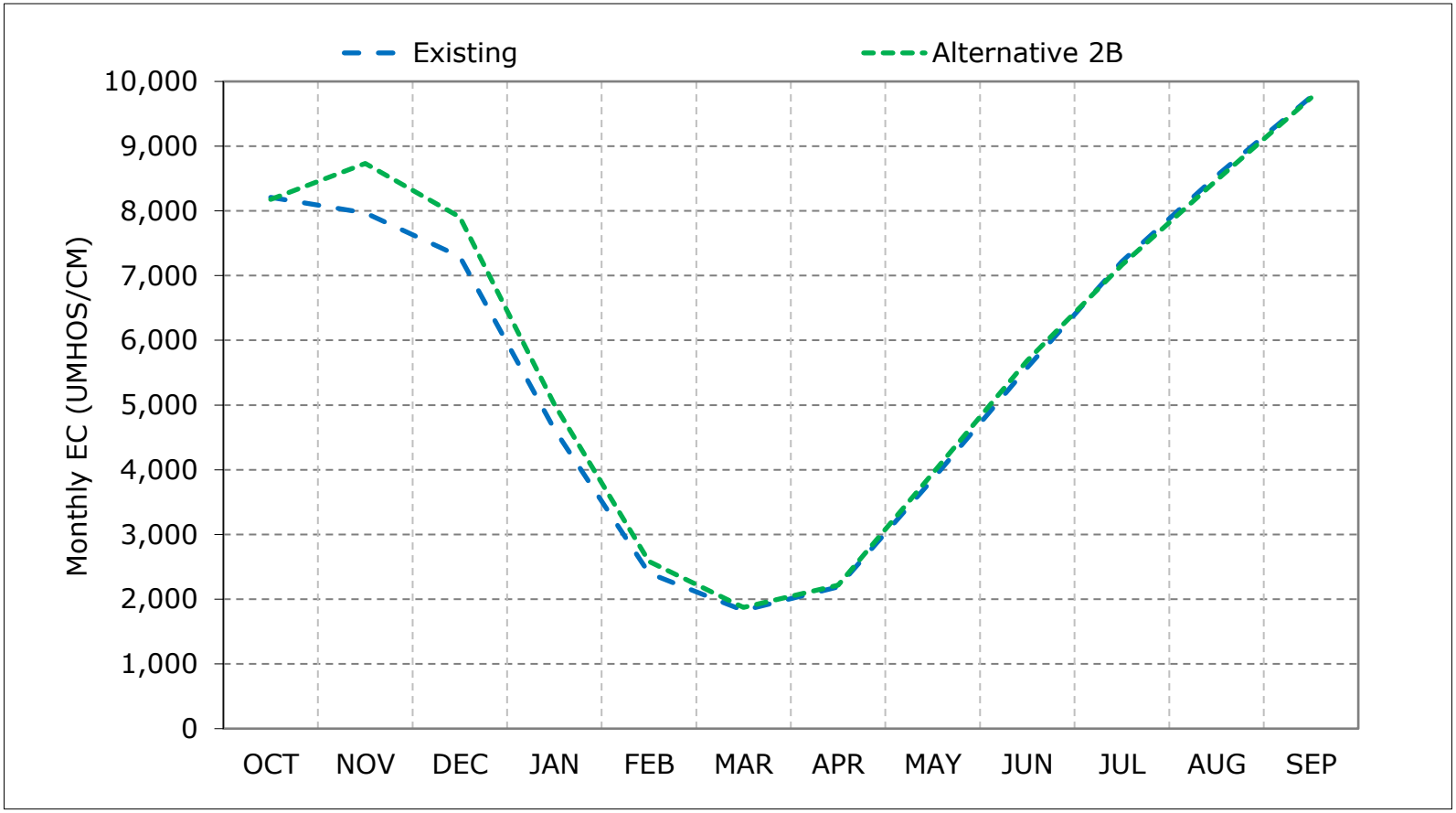

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 6-5. Sacramento River at Collinsville Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 6-6. Sacramento River at Collinsville Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 6-7. Sacramento River at Collinsville Salinity, January EC**

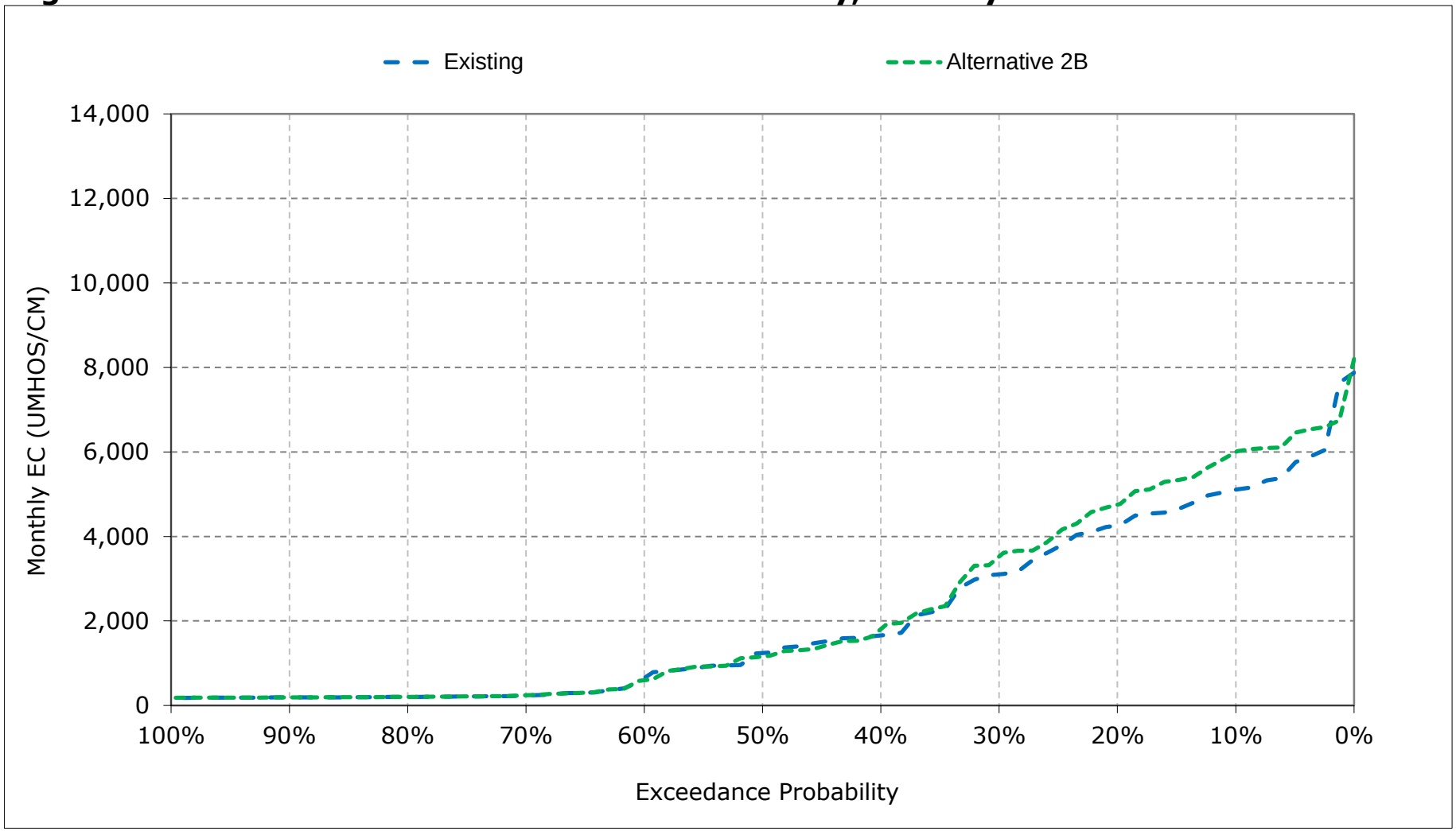


**Figure 6-8. Sacramento River at Collinsville Salinity, February EC**

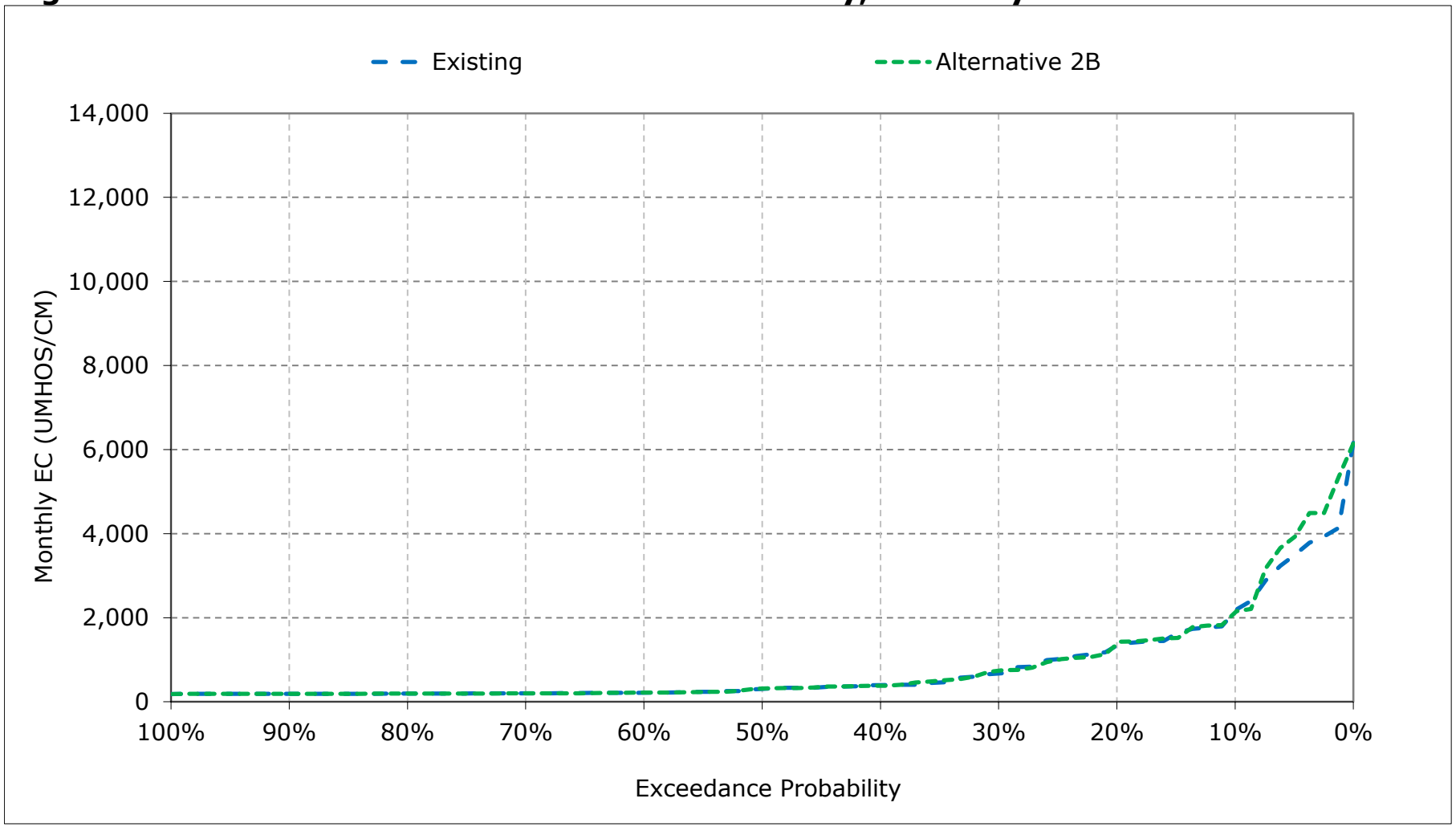


**Figure 6-9. Sacramento River at Collinsville Salinity, March EC**

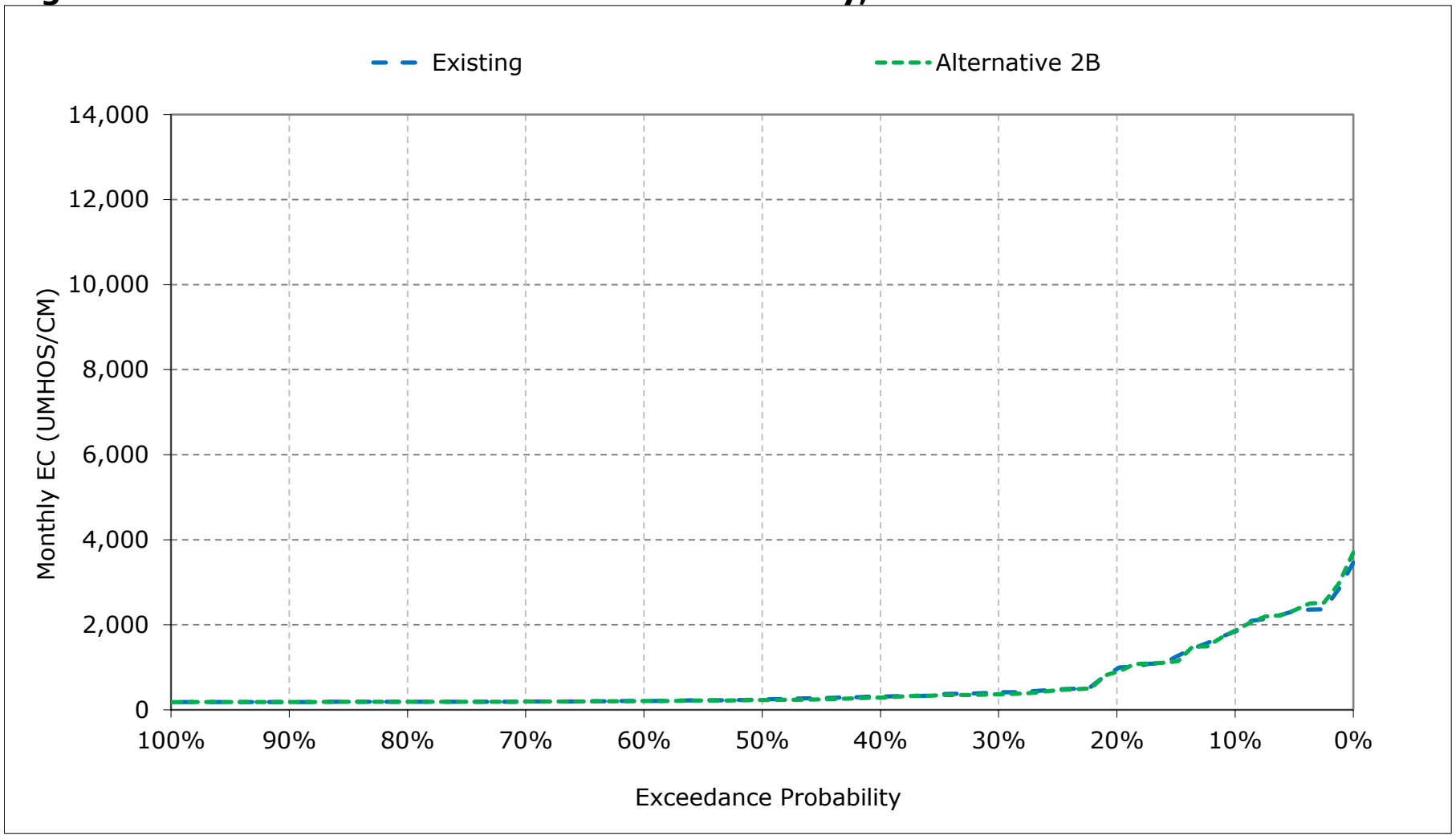


**Figure 6-10. Sacramento River at Collinsville Salinity, April EC**

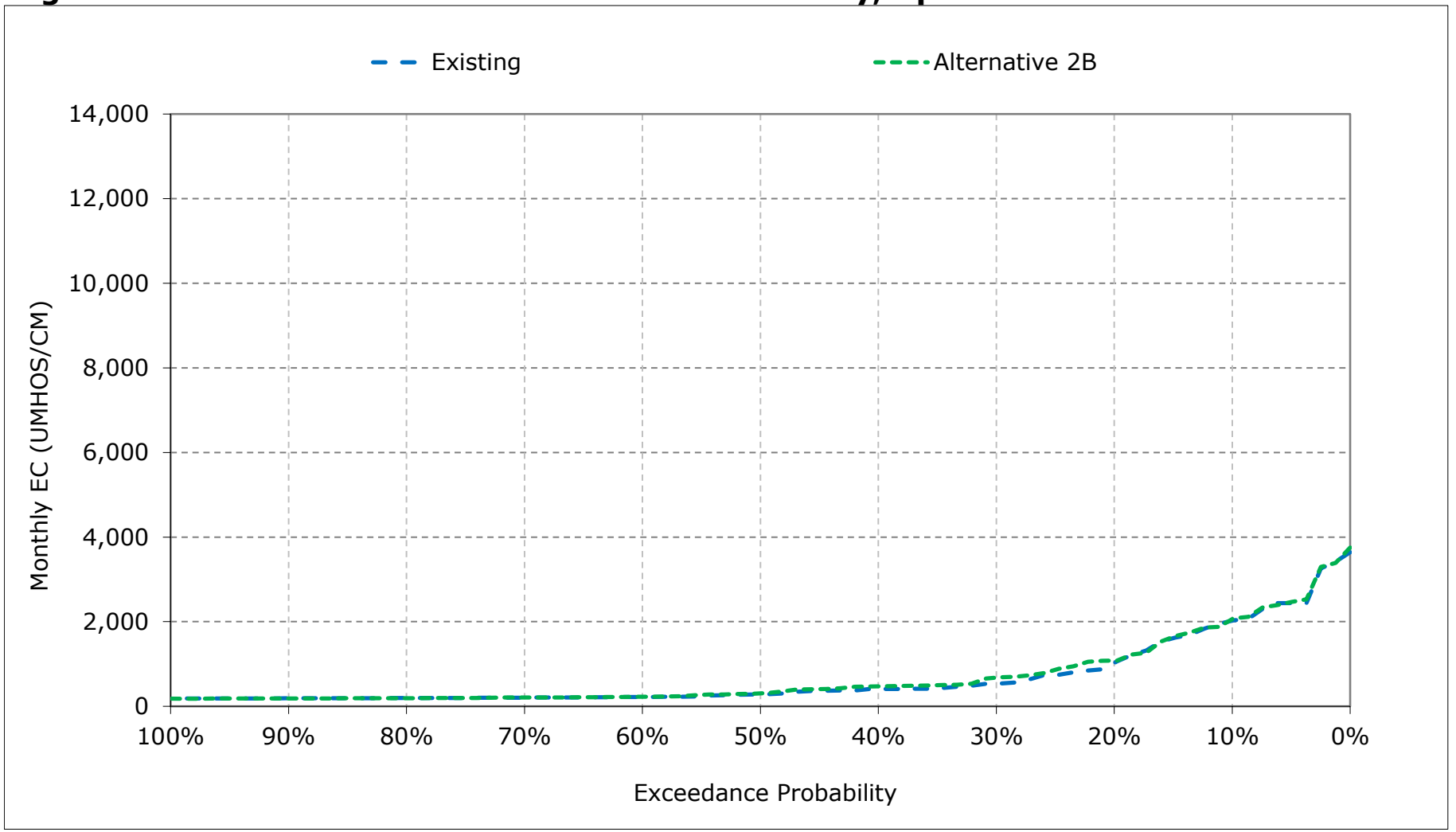


**Figure 6-11. Sacramento River at Collinsville Salinity, May EC**

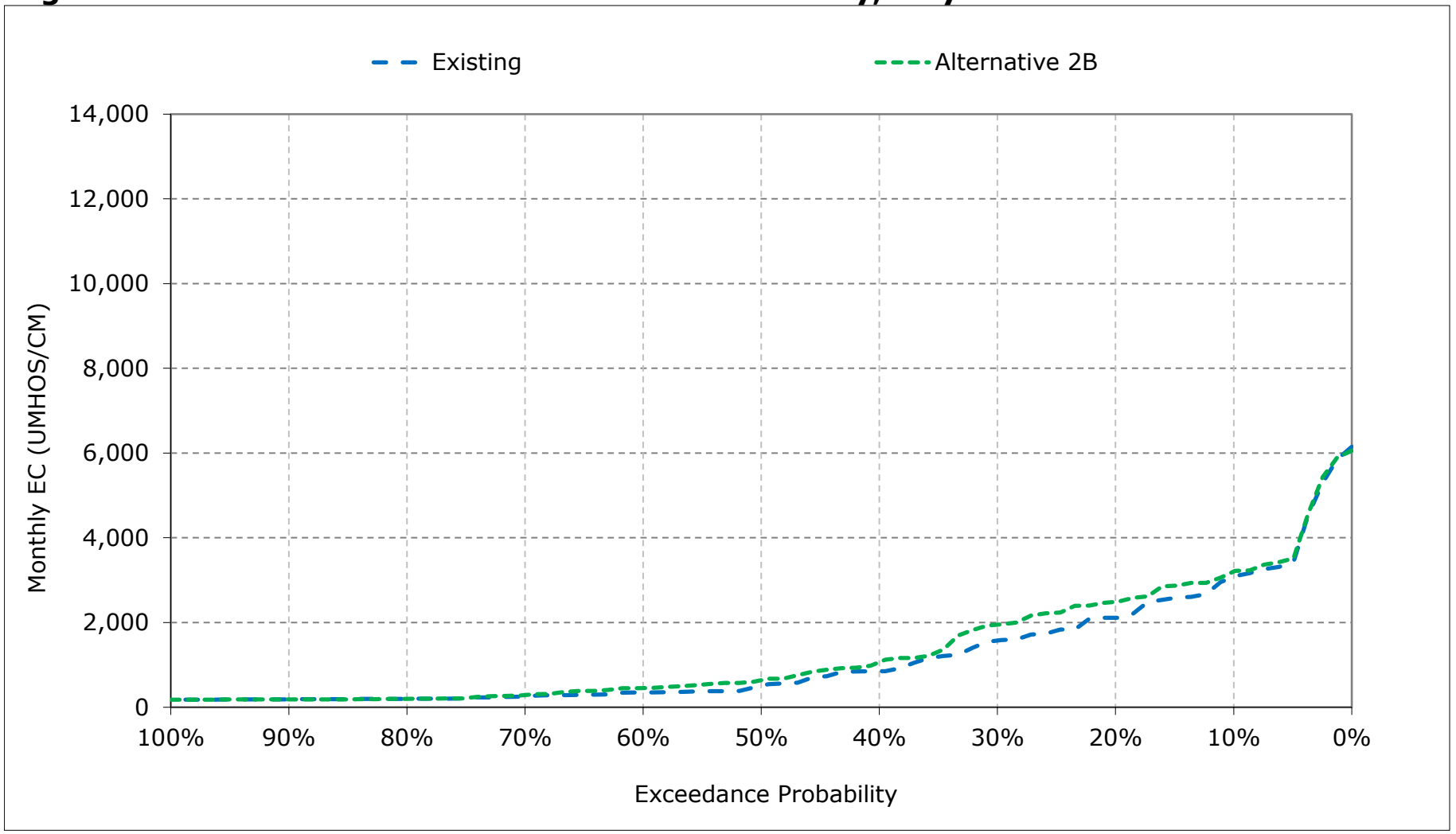


**Figure 6-12. Sacramento River at Collinsville Salinity, June EC**

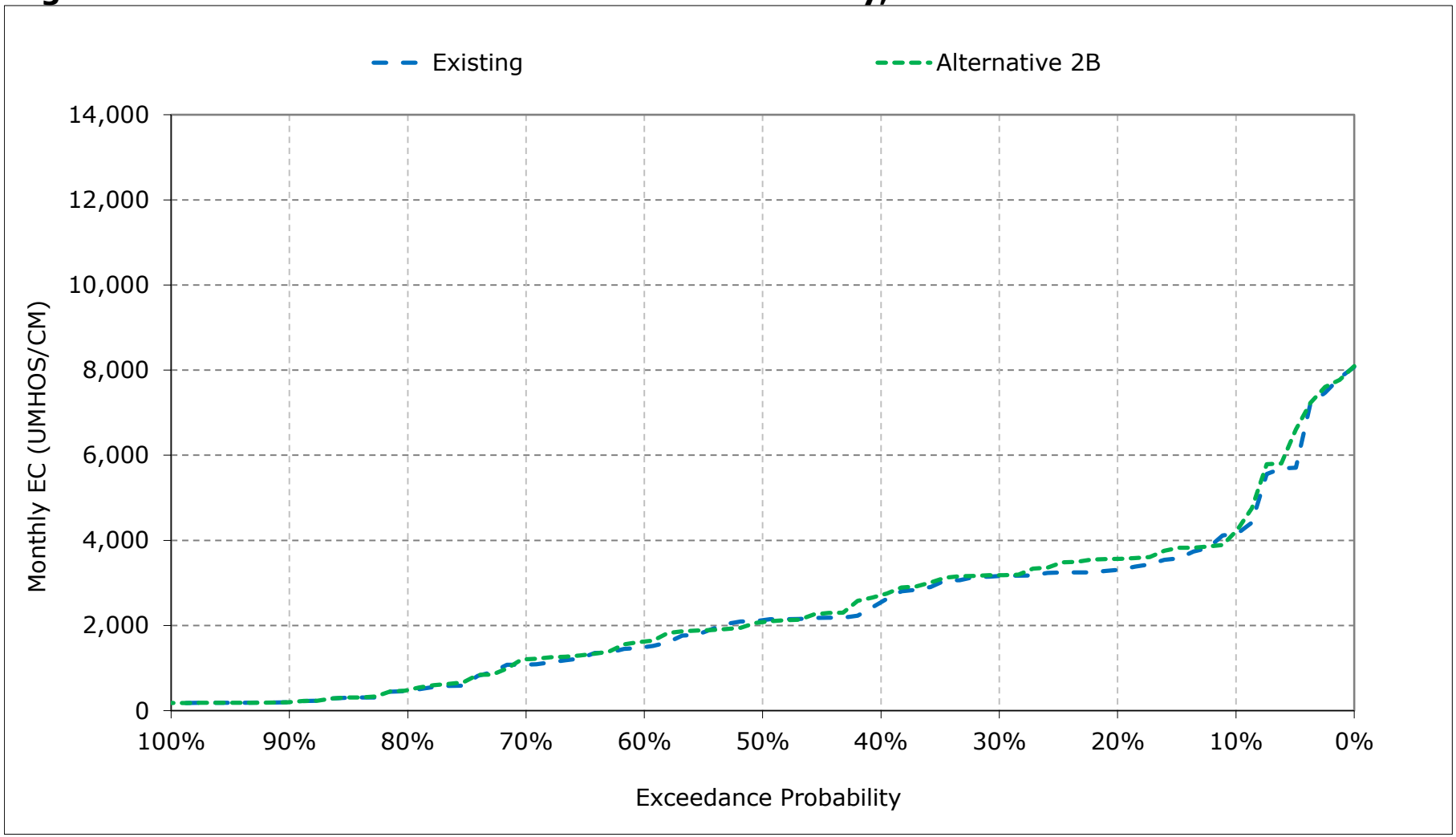


**Figure 6-13. Sacramento River at Collinsville Salinity, July EC**

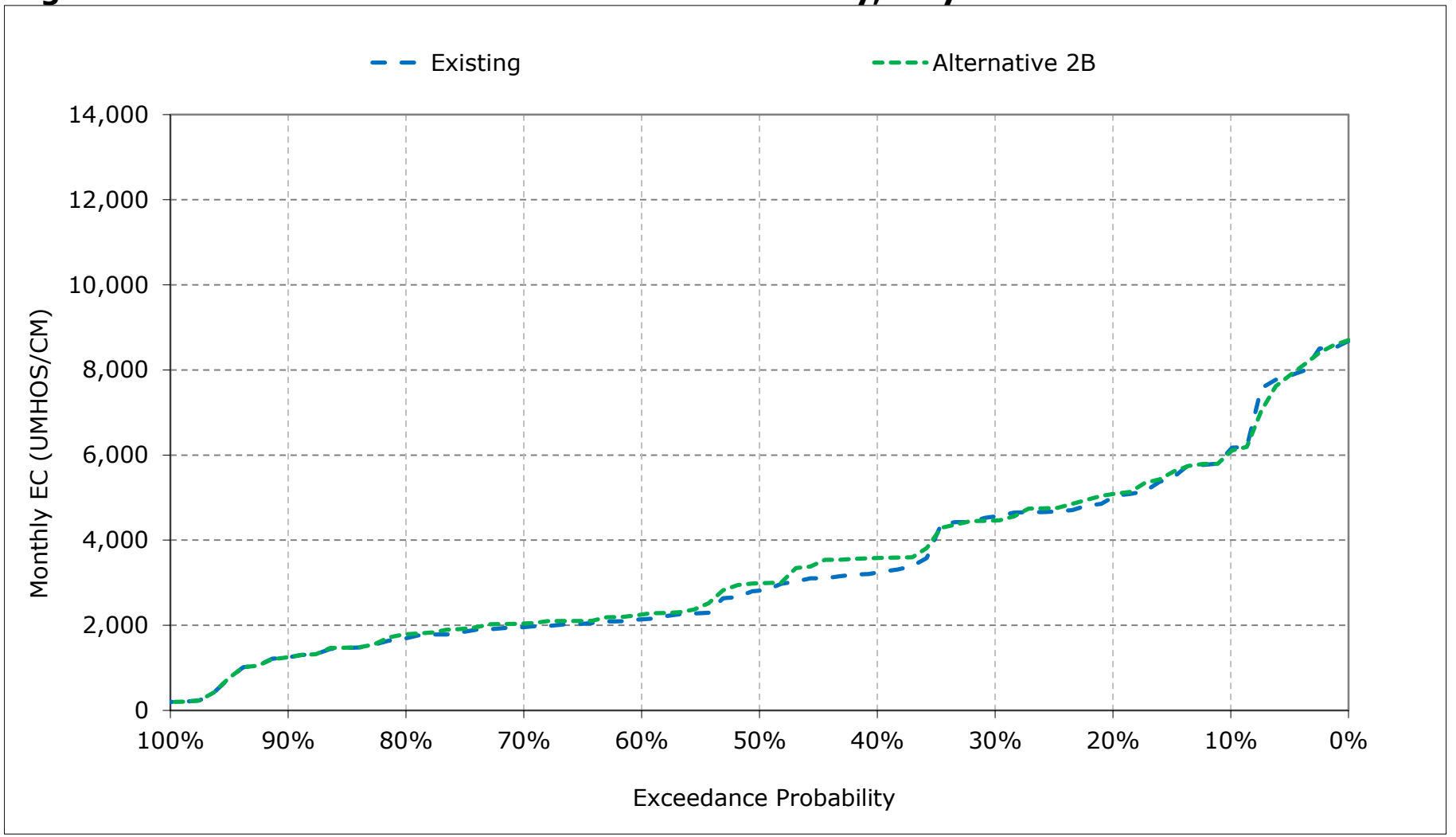


**Figure 6-14. Sacramento River at Collinsville Salinity, August EC**

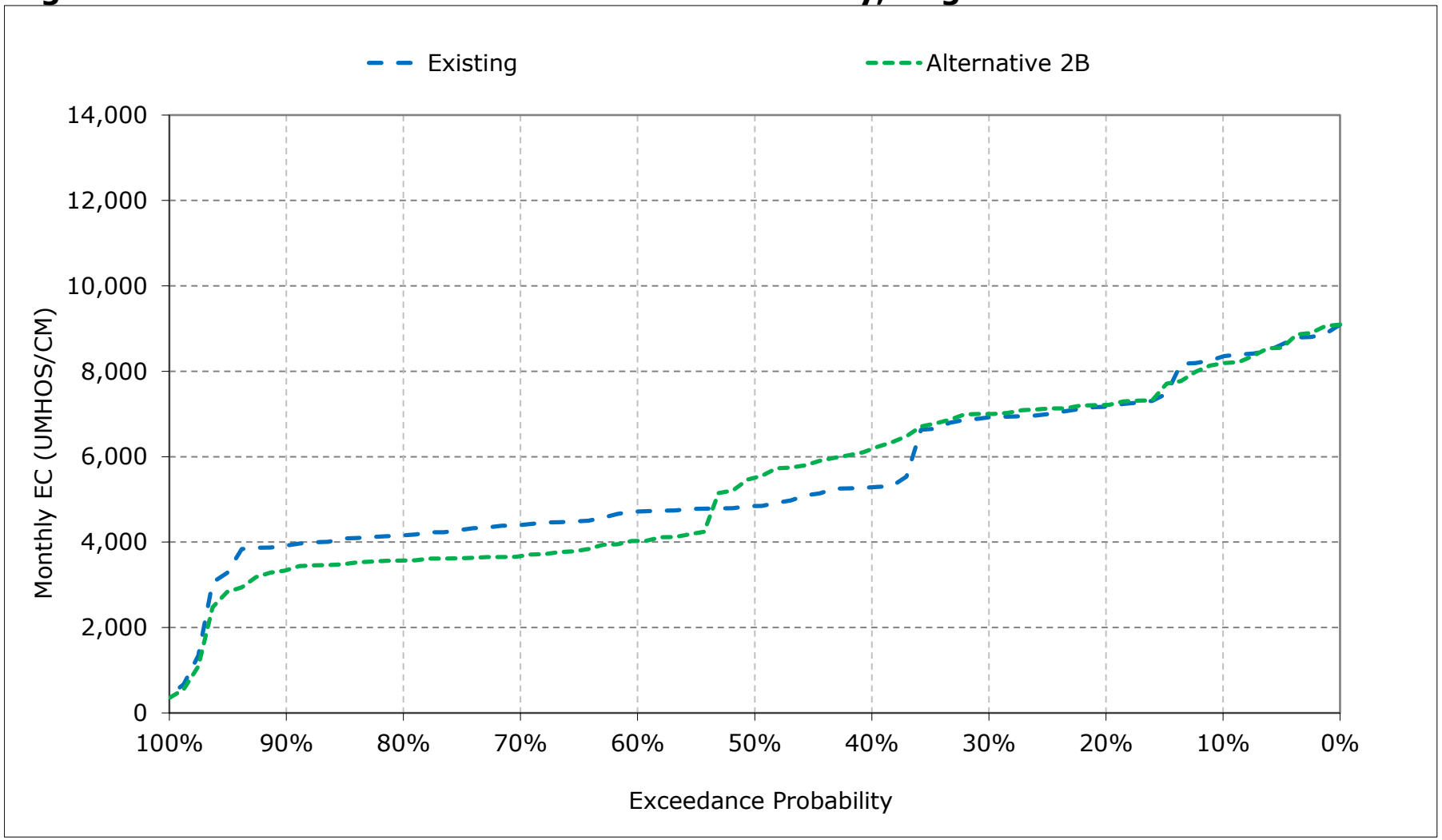


**Figure 6-15. Sacramento River at Collinsville Salinity, September EC**

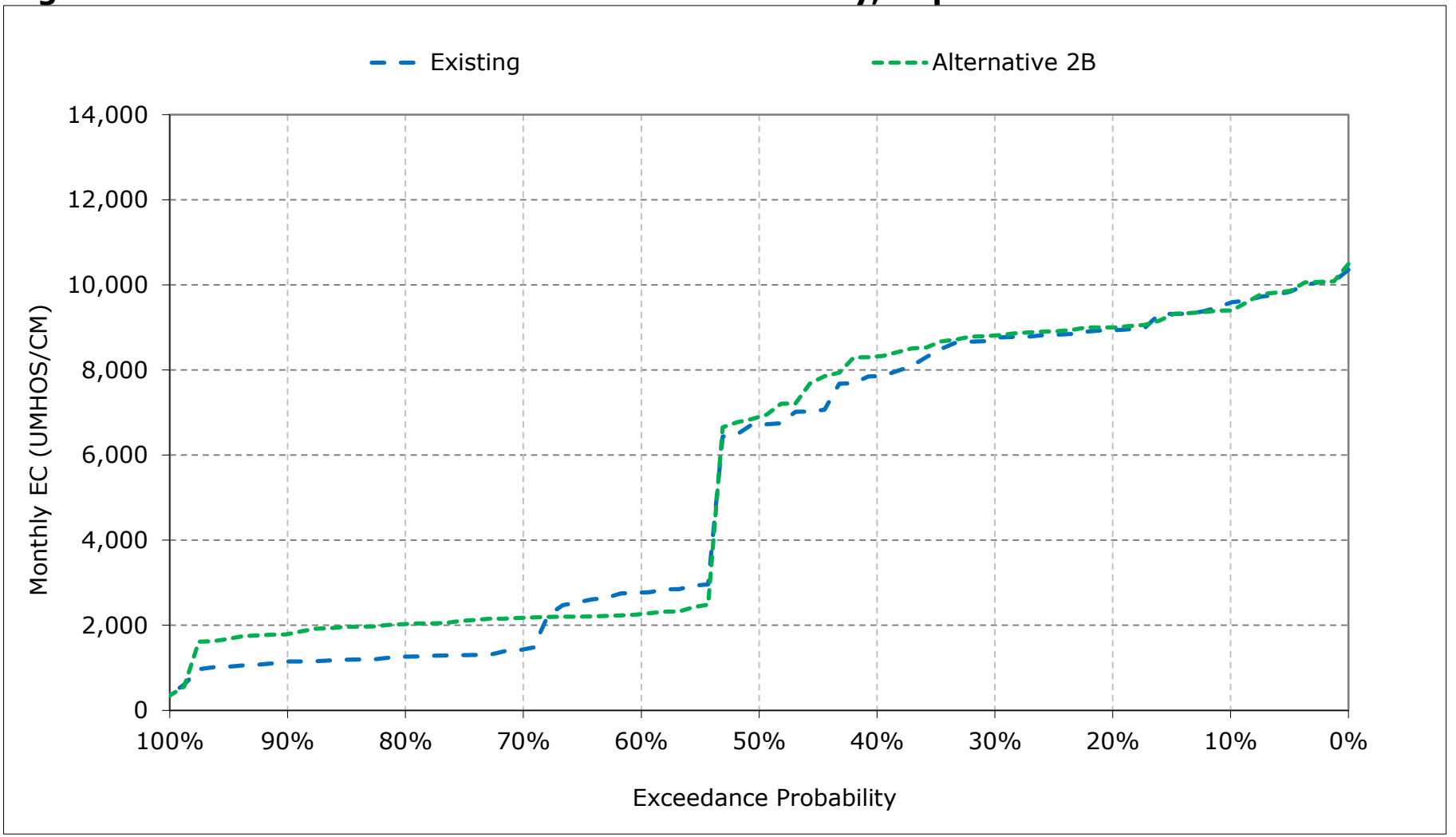


**Figure 6-16. Sacramento River at Collinsville Salinity, October EC**

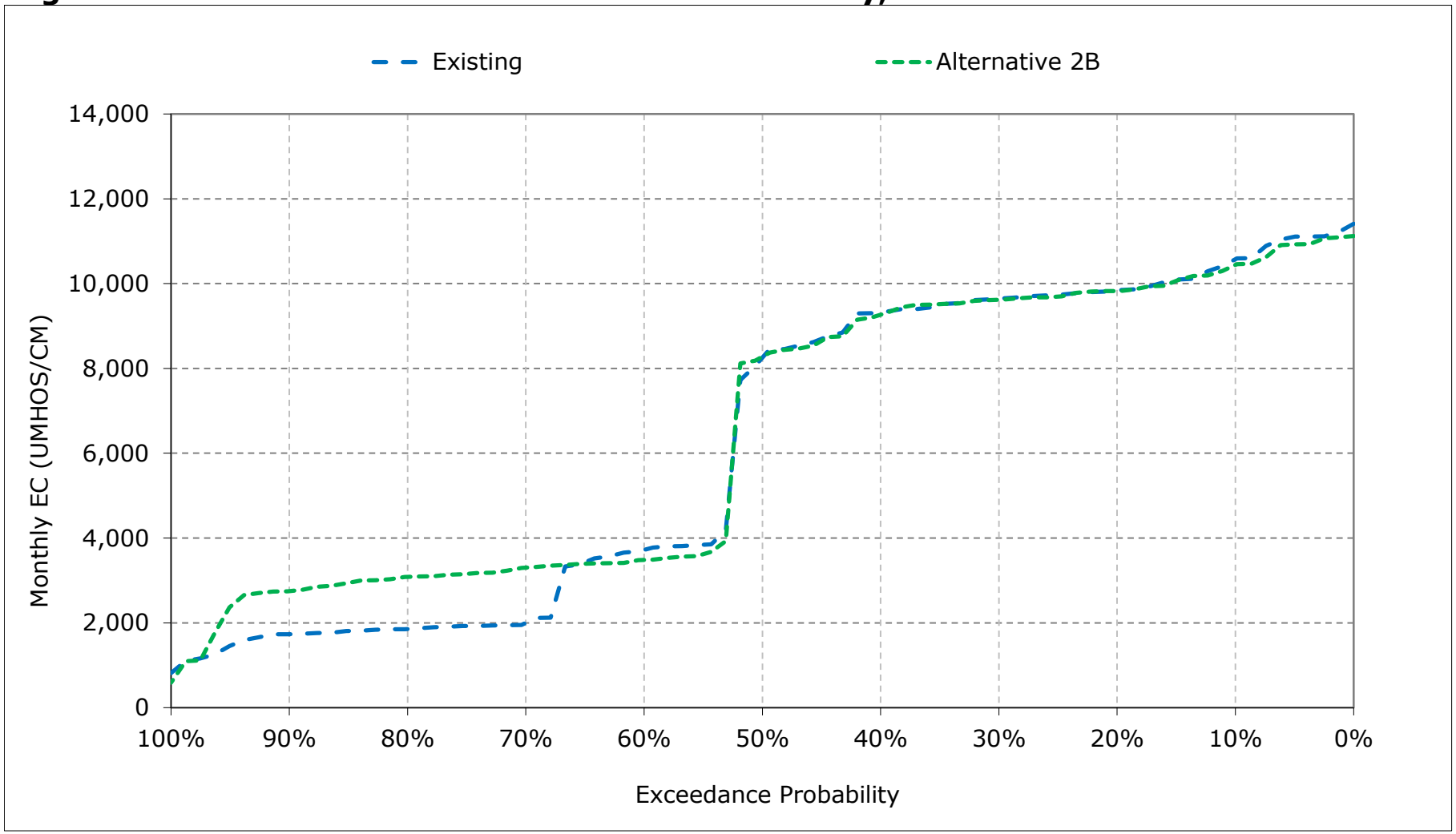


**Figure 6-17. Sacramento River at Collinsville Salinity, November EC**

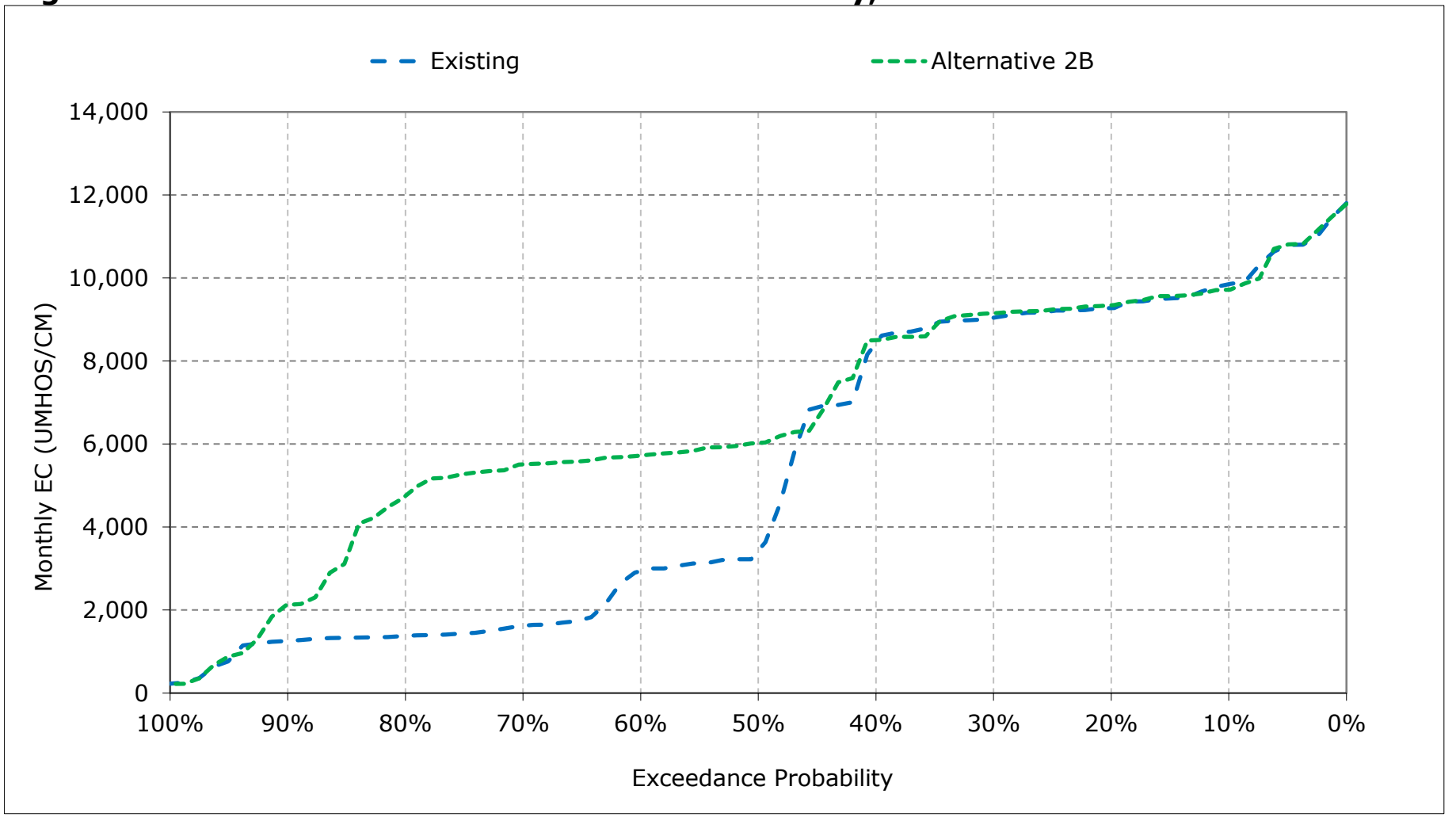
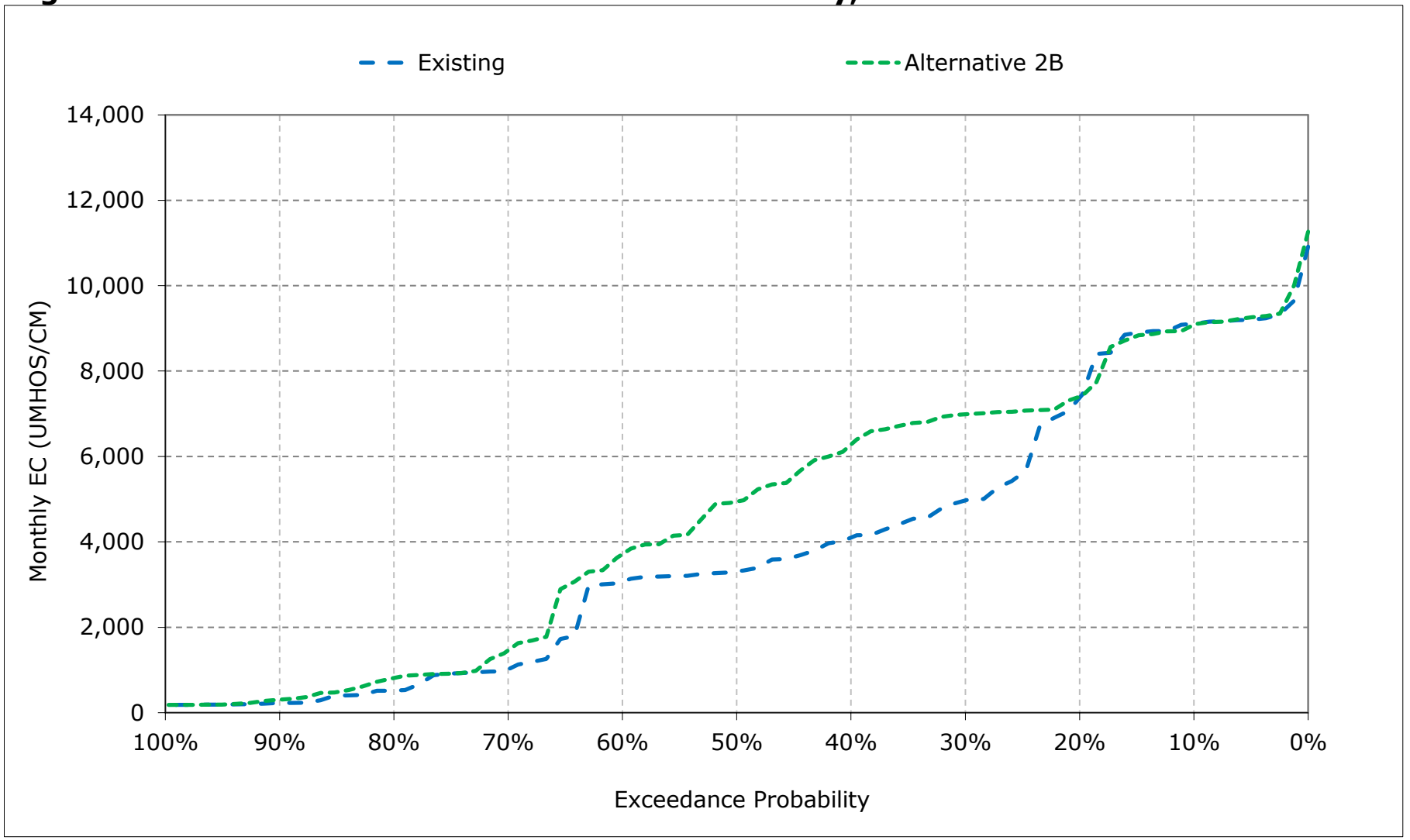


**Figure 6-18. Sacramento River at Collinsville Salinity, December EC**



## Table 7-1. Sacramento River at Mallard Slough Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 14,262 | 13,585 | 12,936 | 8,639 | 4,597 | 4,012 | 4,293 | 5,596 | 7,222 | 9,482 | 11,982 | 13,224 |
| **20%** | 13,605 | 13,227 | 11,331 | 7,673 | 2,924 | 2,247 | 2,342 | 4,309 | 6,033 | 8,280 | 10,695 | 12,609 |
| **30%** | 13,388 | 12,855 | 8,414 | 5,940 | 1,630 | 956 | 1,284 | 3,384 | 5,771 | 7,879 | 10,412 | 12,378 |
| **40%** | 13,120 | 12,345 | 7,099 | 3,495 | 809 | 700 | 1,005 | 2,083 | 4,919 | 6,131 | 8,722 | 11,515 |
| **50%** | 11,995 | 6,547 | 6,098 | 2,570 | 524 | 423 | 620 | 1,253 | 4,066 | 5,622 | 8,129 | 10,390 |
| **60%** | 6,582 | 5,724 | 5,568 | 1,463 | 286 | 274 | 361 | 814 | 3,217 | 4,474 | 7,926 | 5,456 |
| **70%** | 3,923 | 3,483 | 2,369 | 359 | 220 | 207 | 271 | 503 | 2,397 | 4,191 | 7,475 | 3,107 |
| **80%** | 3,688 | 3,152 | 1,073 | 220 | 202 | 199 | 207 | 270 | 1,164 | 3,700 | 7,186 | 2,793 |
| **90%** | 3,532 | 2,842 | 366 | 195 | 193 | 193 | 194 | 194 | 276 | 2,619 | 6,877 | 2,535 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 9,174 | 8,173 | 6,269 | 3,607 | 1,579 | 1,187 | 1,403 | 2,289 | 4,126 | 5,905 | 8,730 | 8,173 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 7,268 | 5,420 | 2,138 | 668 | 239 | 254 | 318 | 527 | 1,492 | 3,090 | 6,675 | 2,582 |
| **Above Normal (15%)** | 9,562 | 8,069 | 6,277 | 2,184 | 595 | 270 | 393 | 736 | 2,907 | 4,100 | 7,318 | 5,343 |
| **Below Normal (17%)** | 9,602 | 8,995 | 7,981 | 3,998 | 1,044 | 902 | 977 | 1,745 | 4,029 | 5,789 | 8,430 | 10,918 |
| **Dry (22%)** | 9,695 | 9,431 | 7,836 | 5,709 | 2,550 | 1,656 | 1,989 | 3,398 | 5,703 | 8,040 | 10,550 | 12,495 |
| **Critical (15%)** | 11,632 | 11,396 | 10,864 | 7,790 | 4,638 | 3,754 | 4,381 | 6,633 | 8,800 | 10,742 | 12,212 | 13,430 |

### Alternative 2B

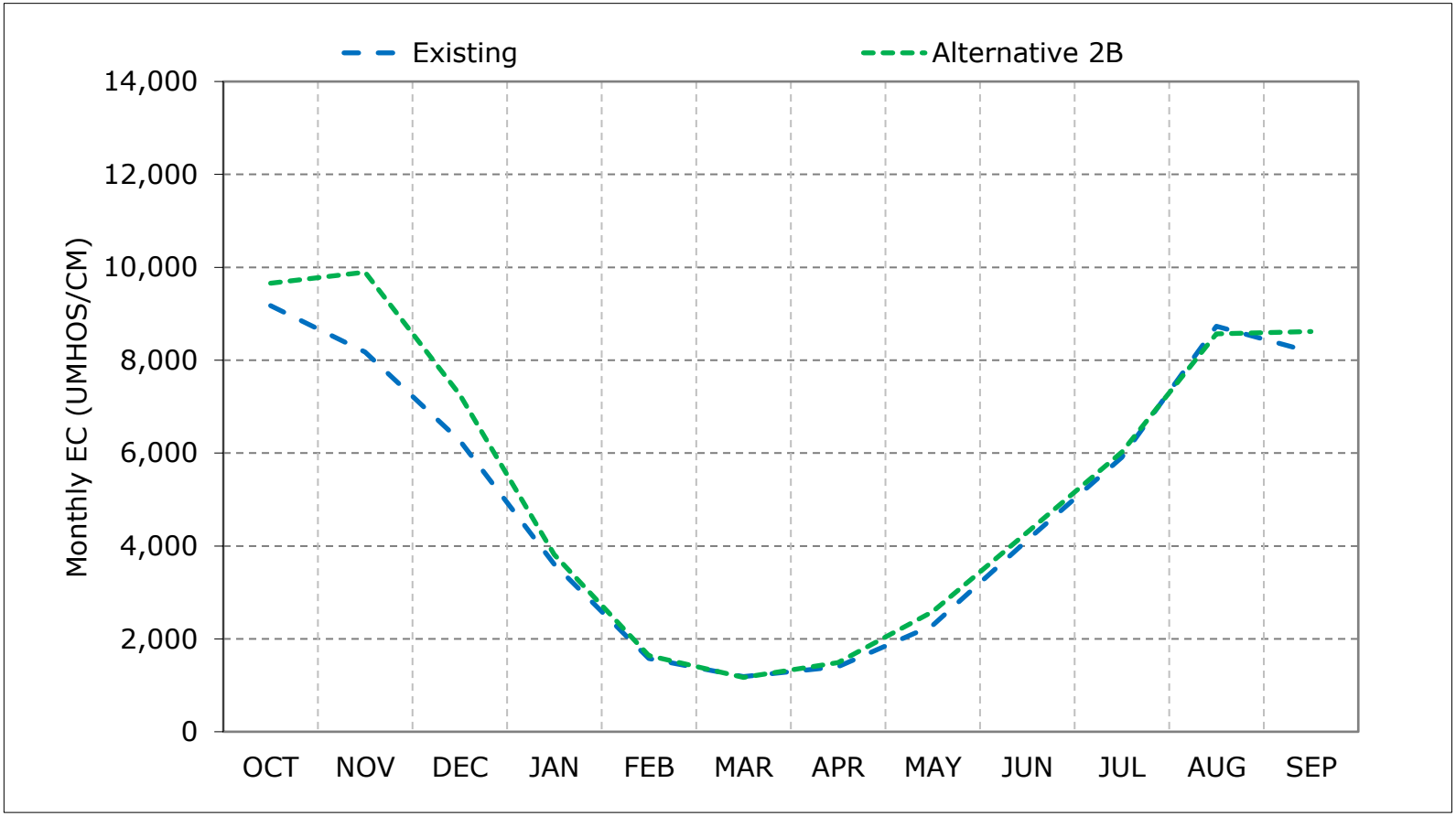
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 14,185 | 13,484 | 12,854 | 9,787 | 4,520 | 4,047 | 4,346 | 5,815 | 7,275 | 9,483 | 11,851 | 13,206 |
| **20%** | 13,554 | 13,214 | 11,317 | 8,292 | 2,900 | 2,123 | 2,591 | 4,997 | 6,482 | 8,388 | 10,765 | 12,689 |
| **30%** | 13,346 | 12,992 | 10,767 | 6,566 | 1,565 | 829 | 1,645 | 4,121 | 5,895 | 7,806 | 10,536 | 12,504 |
| **40%** | 13,059 | 12,380 | 9,984 | 3,767 | 884 | 657 | 1,197 | 2,551 | 5,306 | 6,578 | 9,629 | 11,918 |
| **50%** | 12,060 | 9,395 | 8,611 | 2,612 | 514 | 374 | 706 | 1,594 | 4,165 | 5,832 | 8,855 | 10,576 |
| **60%** | 6,167 | 9,085 | 6,948 | 1,404 | 247 | 246 | 405 | 1,174 | 3,579 | 4,618 | 7,138 | 4,767 |
| **70%** | 6,017 | 8,871 | 3,137 | 369 | 218 | 207 | 291 | 654 | 2,653 | 4,341 | 6,705 | 4,638 |
| **80%** | 5,690 | 7,899 | 1,593 | 217 | 202 | 197 | 206 | 304 | 1,224 | 3,776 | 6,525 | 4,389 |
| **90%** | 5,308 | 3,991 | 483 | 197 | 194 | 192 | 190 | 192 | 277 | 2,624 | 6,257 | 4,004 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 9,655 | 9,895 | 7,259 | 3,816 | 1,637 | 1,169 | 1,489 | 2,585 | 4,296 | 6,018 | 8,567 | 8,617 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 7,889 | 7,675 | 2,742 | 665 | 233 | 245 | 365 | 697 | 1,672 | 3,164 | 5,937 | 4,123 |
| **Above Normal (15%)** | 10,179 | 9,782 | 7,647 | 2,267 | 495 | 255 | 459 | 1,029 | 2,994 | 4,201 | 6,736 | 4,496 |
| **Below Normal (17%)** | 10,132 | 10,661 | 9,219 | 4,020 | 998 | 836 | 1,112 | 2,207 | 4,164 | 6,160 | 9,258 | 11,265 |
| **Dry (22%)** | 10,163 | 10,918 | 9,062 | 6,268 | 2,749 | 1,602 | 2,120 | 3,844 | 5,963 | 8,111 | 10,656 | 12,593 |
| **Critical (15%)** | 11,638 | 12,390 | 11,666 | 8,275 | 4,901 | 3,828 | 4,451 | 6,786 | 8,938 | 10,714 | 12,153 | 13,420 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -76 | -100 | -82 | **1,147** | -77 | **34** | **53** | **219** | **53** | **1** | -131 | -18 |
| **20%** | -51 | -13 | -15 | **619** | -24 | -125 | **249** | **687** | **449** | **109** | **69** | **80** |
| **30%** | -42 | **137** | **2,352** | **625** | -65 | -127 | **361** | **737** | **123** | -73 | **123** | **126** |
| **40%** | -61 | **35** | **2,886** | **272** | **74** | -43 | **192** | **467** | **388** | **447** | **906** | **403** |
| **50%** | **66** | **2,848** | **2,513** | **42** | -11 | -49 | **86** | **341** | **99** | **210** | **726** | **186** |
| **60%** | -415 | **3,361** | **1,379** | -59 | -39 | -27 | **44** | **360** | **362** | **144** | -788 | -689 |
| **70%** | **2,094** | **5,387** | **768** | **11** | -2 | **0** | **20** | **151** | **256** | **150** | -770 | **1,531** |
| **80%** | **2,002** | **4,747** | **521** | -3 | **0** | -2 | -1 | **34** | **60** | **76** | -661 | **1,595** |
| **90%** | **1,776** | **1,148** | **117** | **2** | **1** | 0 | -4 | -2 | **1** | **5** | -621 | **1,469** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **481** | **1,722** | **990** | **209** | **58** | -17 | **87** | **296** | **170** | **113** | -163 | **444** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **621** | **2,255** | **604** | -4 | -6 | -9 | **47** | **171** | **180** | **75** | -738 | **1,541** |
| **Above Normal (15%)** | **617** | **1,713** | **1,370** | **83** | -100 | -16 | **66** | **293** | **87** | **101** | -583 | -847 |
| **Below Normal (17%)** | **530** | **1,665** | **1,238** | **23** | -46 | -67 | **135** | **462** | **135** | **371** | **828** | **347** |
| **Dry (22%)** | **468** | **1,486** | **1,225** | **559** | **199** | -54 | **131** | **445** | **260** | **72** | **107** | **98** |
| **Critical (15%)** | **6** | **993** | **802** | **485** | **263** | **74** | **70** | **153** | **138** | -28 | -58 | -10 |

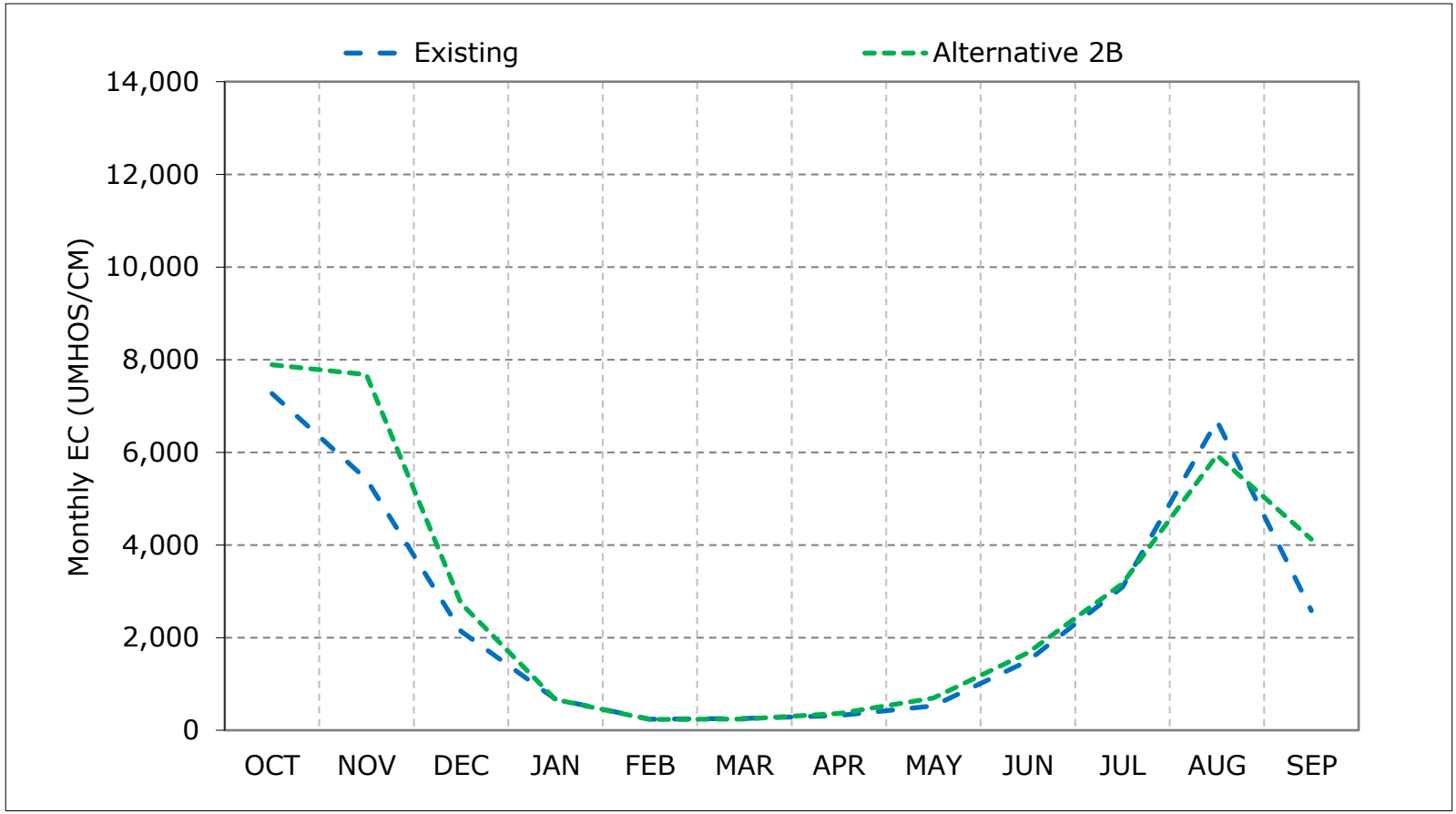
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 7-1. Sacramento River at Mallard Slough Salinity, Long-Term Average EC**



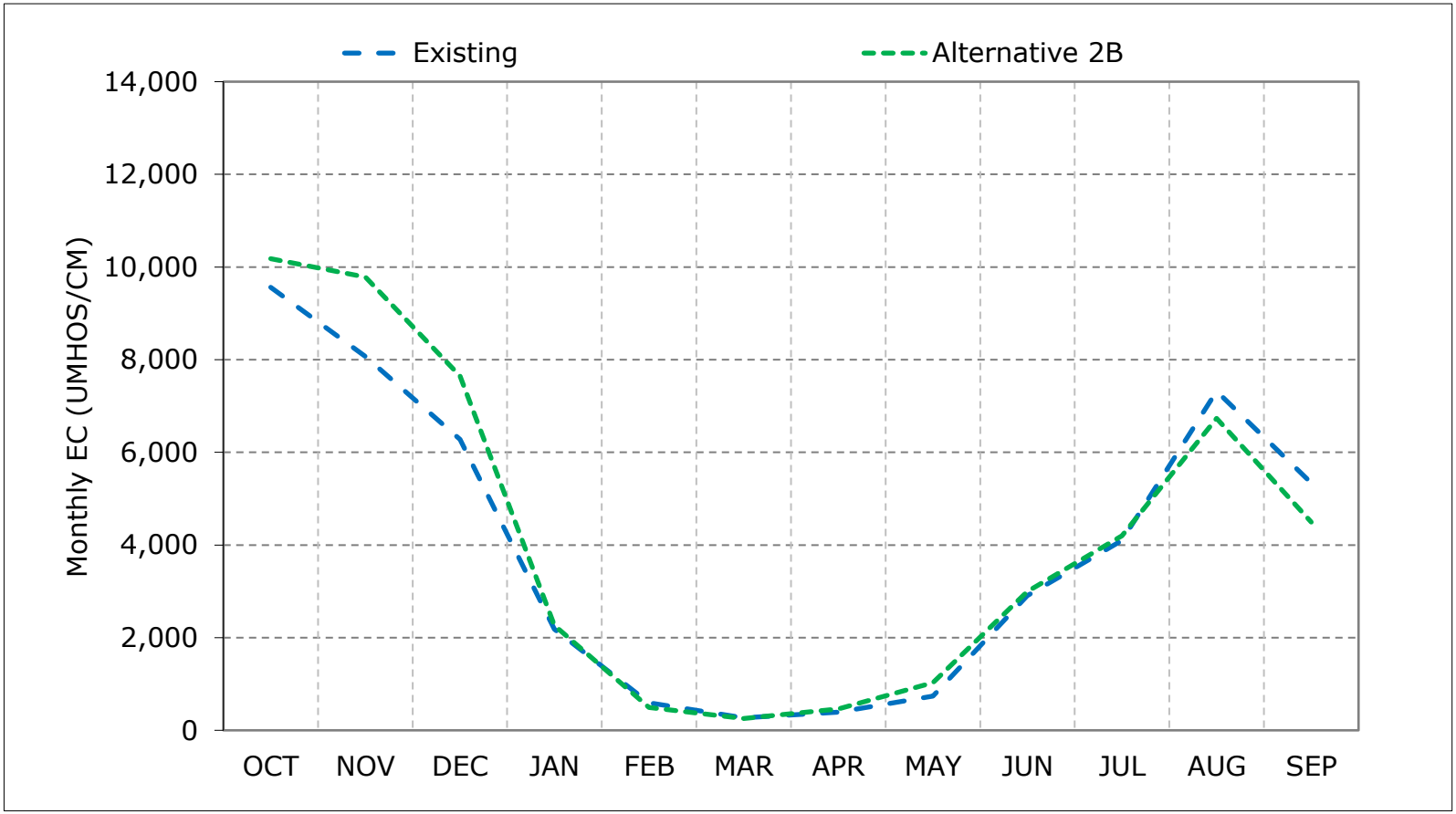

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 7-2. Sacramento River at Mallard Slough Salinity, Wet Year Average EC**



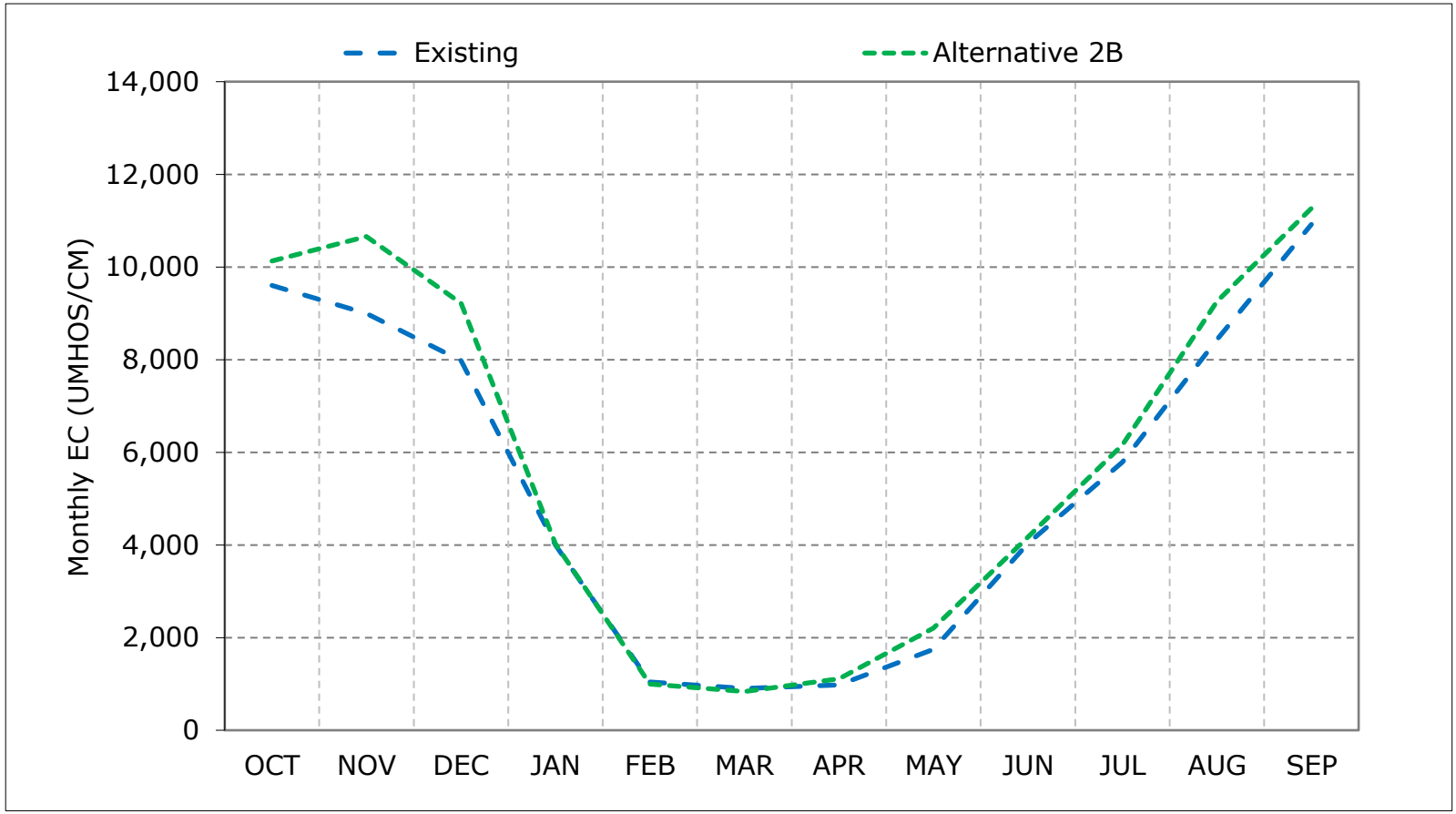

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 7-3. Sacramento River at Mallard Slough Salinity, Above Normal Year Average**



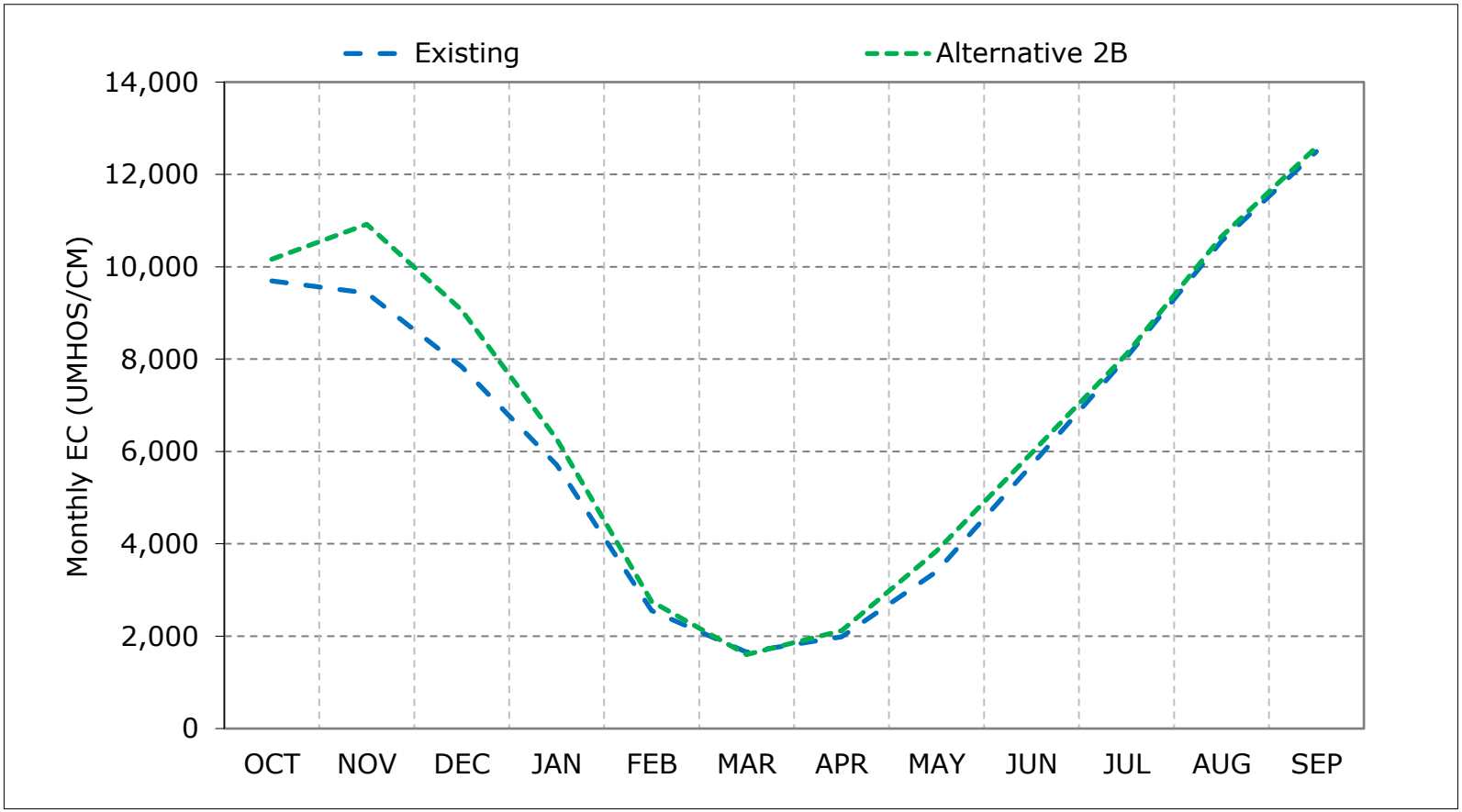

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 7-4. Sacramento River at Mallard Slough Salinity, Below Normal Year Average EC**



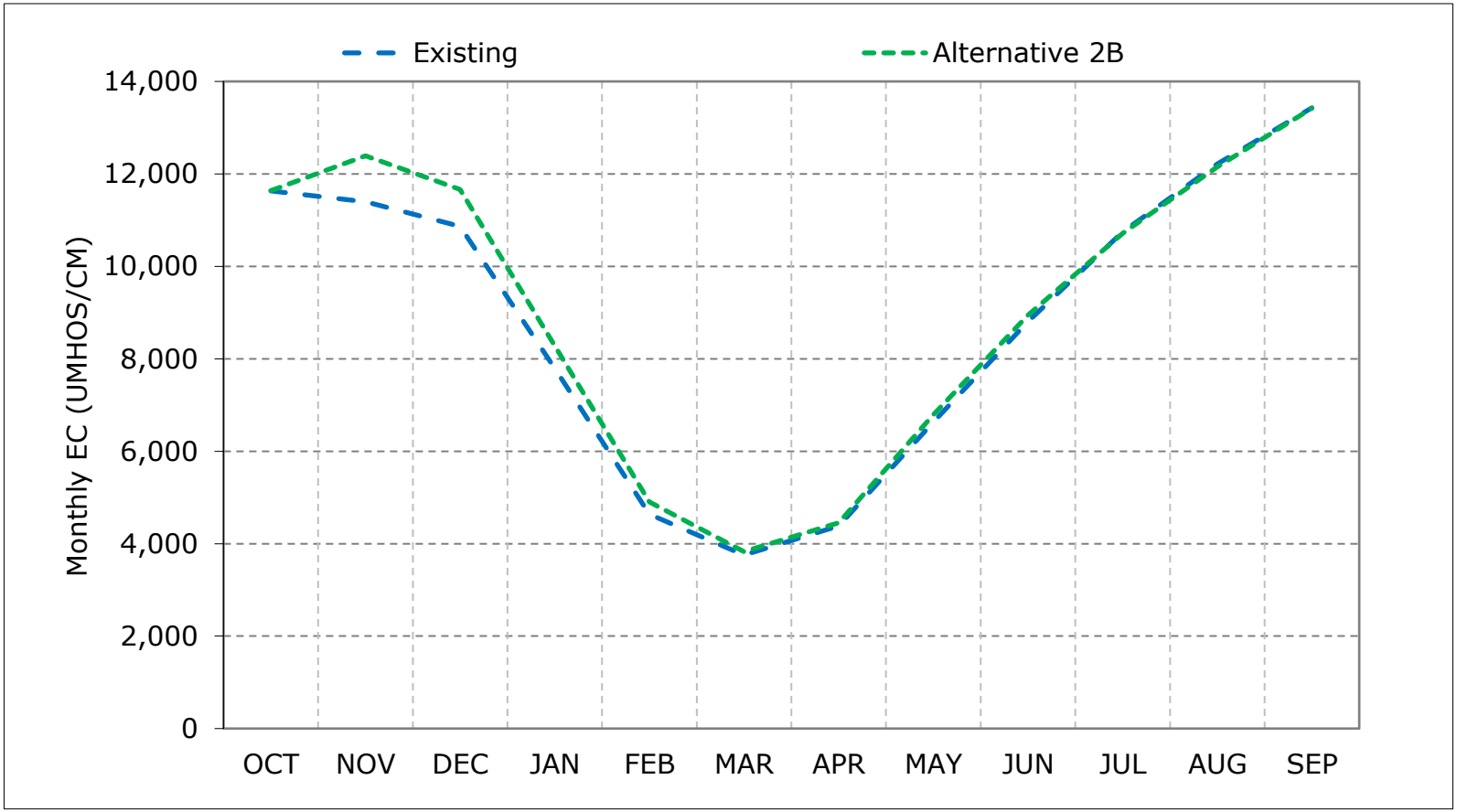

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 7-5. Sacramento River at Mallard Slough Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 7-6. Sacramento River at Mallard Slough Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 7-7. Sacramento River at Mallard Slough Salinity, January EC**

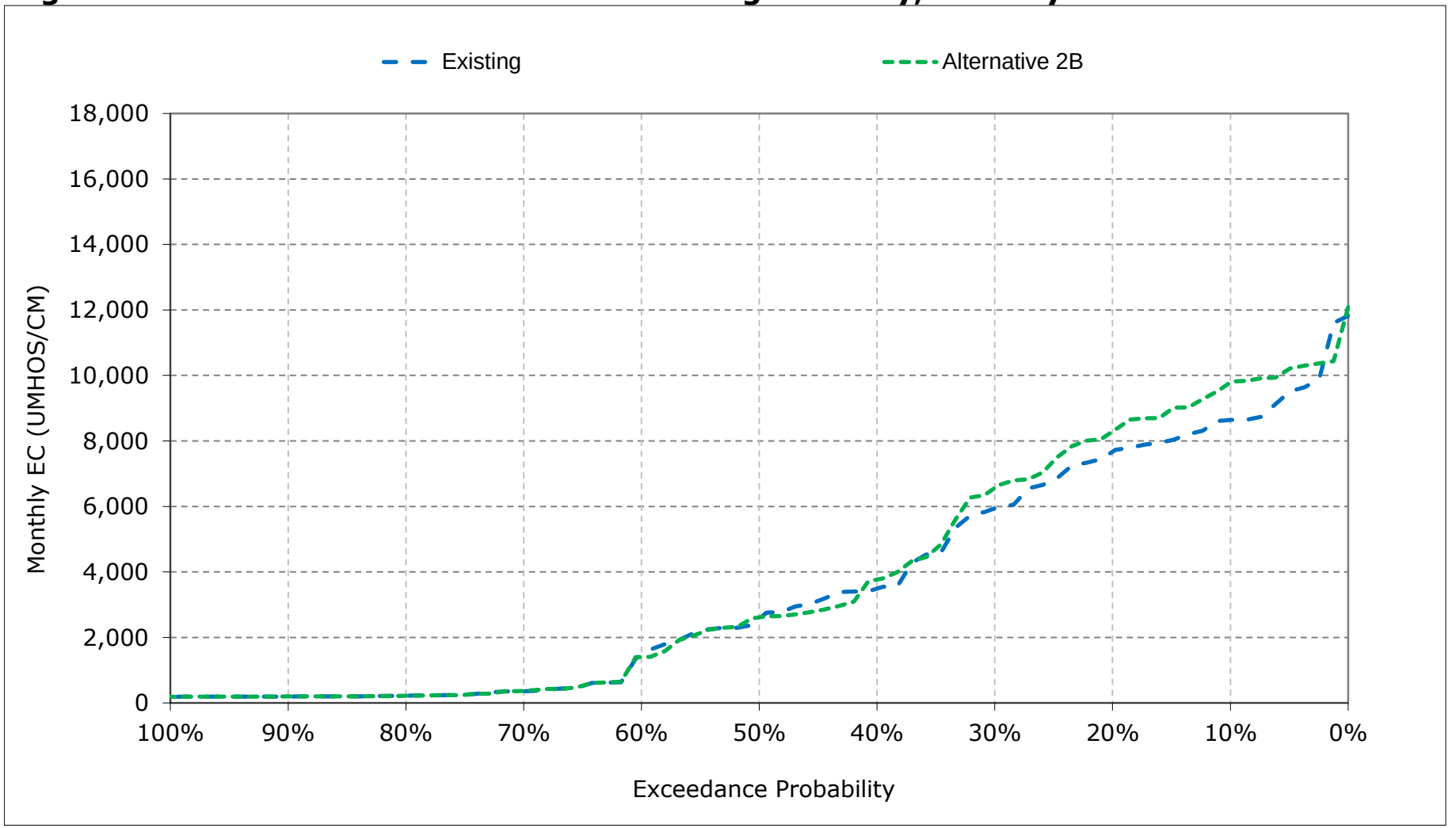


**Figure 7-8. Sacramento River at Mallard Slough Salinity, February EC**

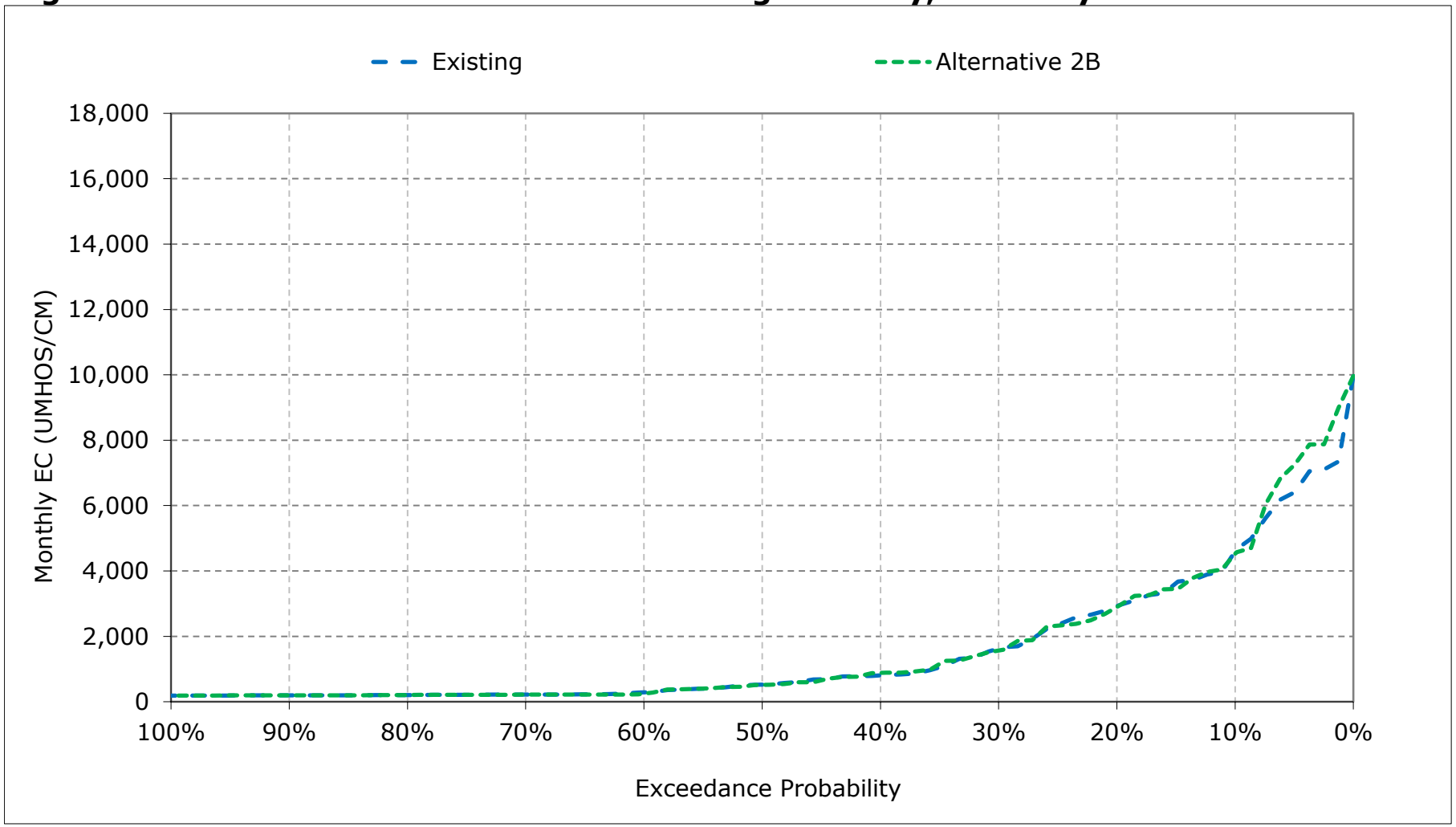


**Figure 7-9. Sacramento River at Mallard Slough Salinity, March EC**

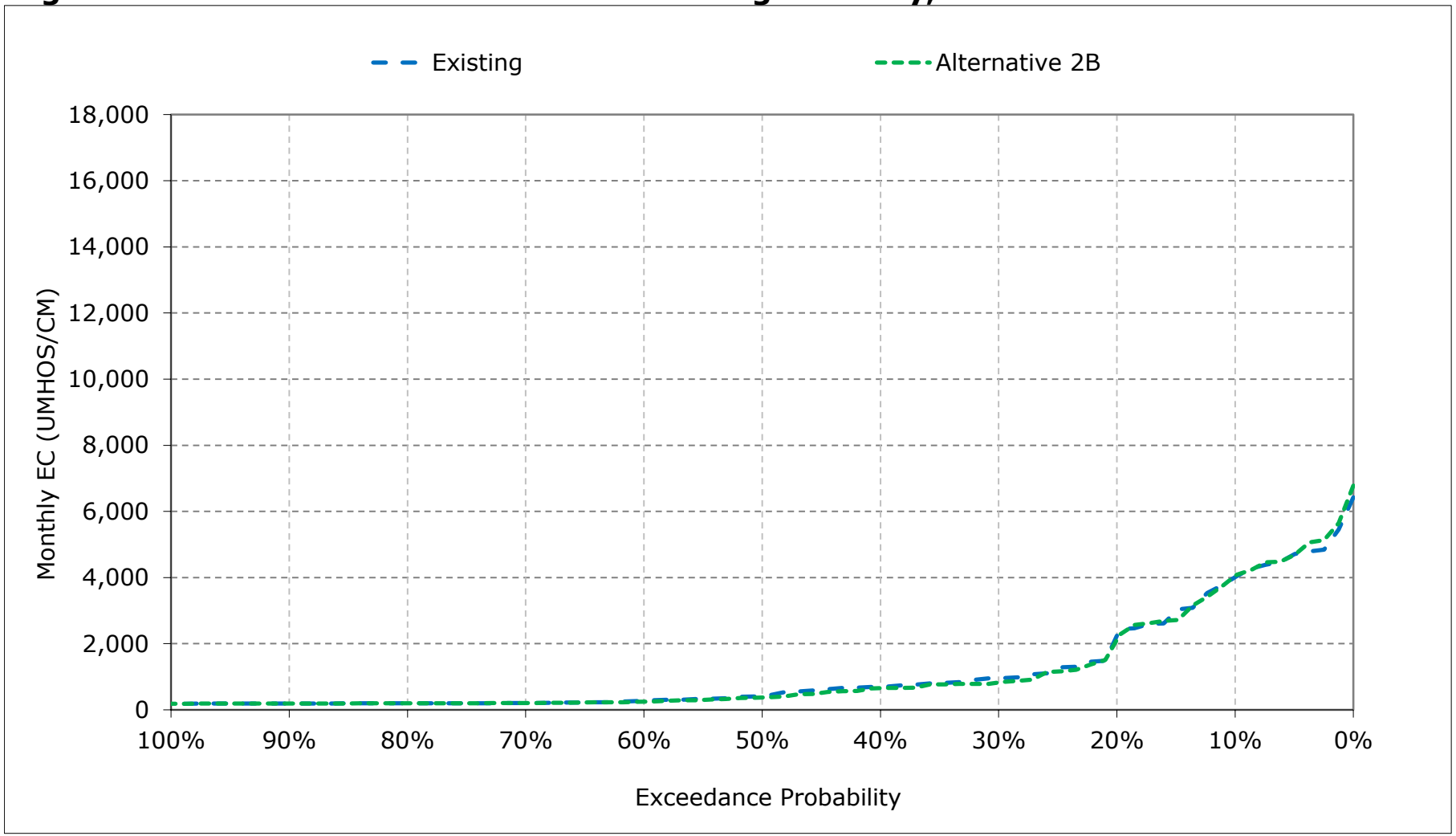


**Figure 7-10. Sacramento River at Mallard Slough Salinity, April EC**

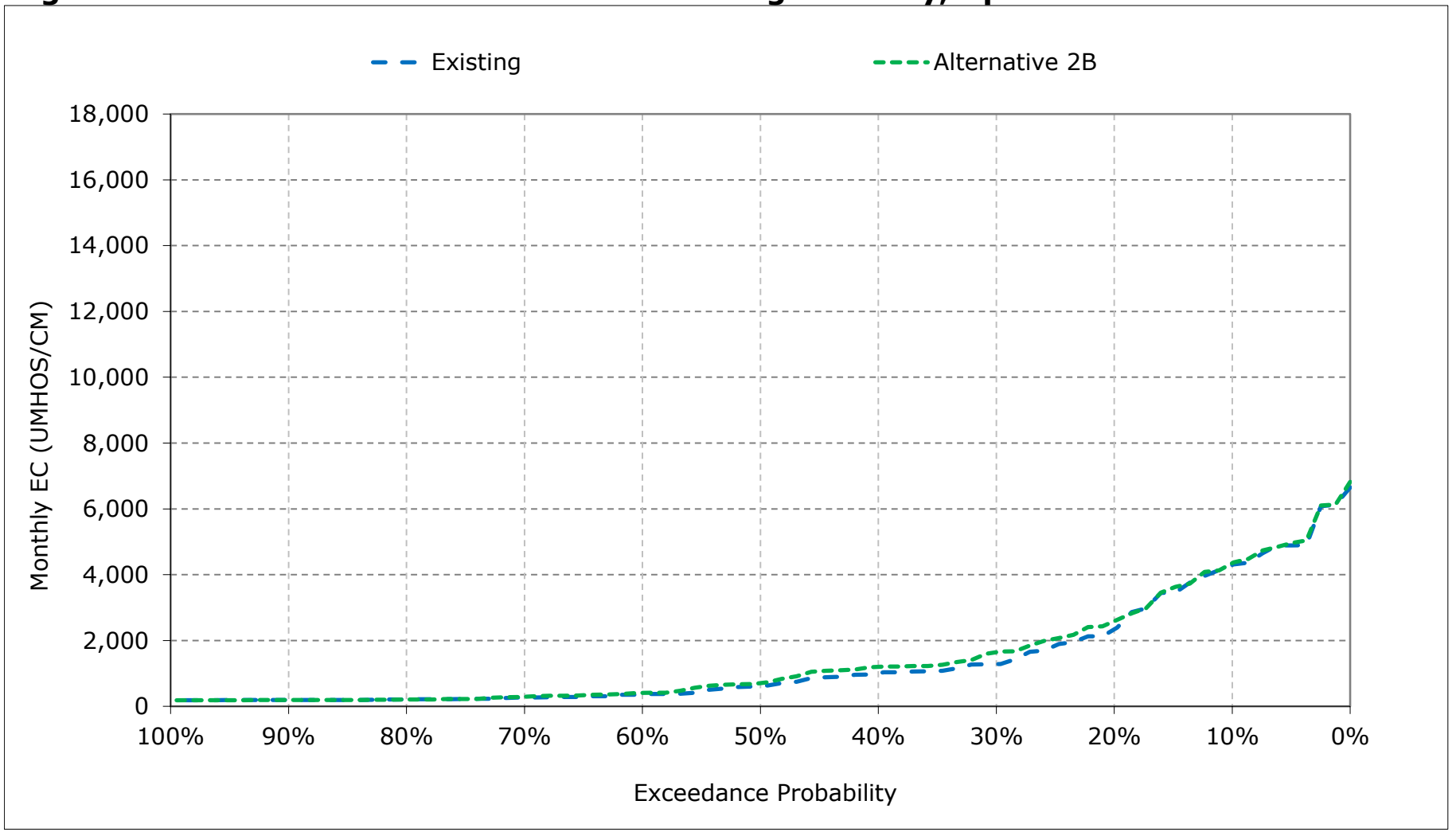


**Figure 7-11. Sacramento River at Mallard Slough Salinity, May EC**

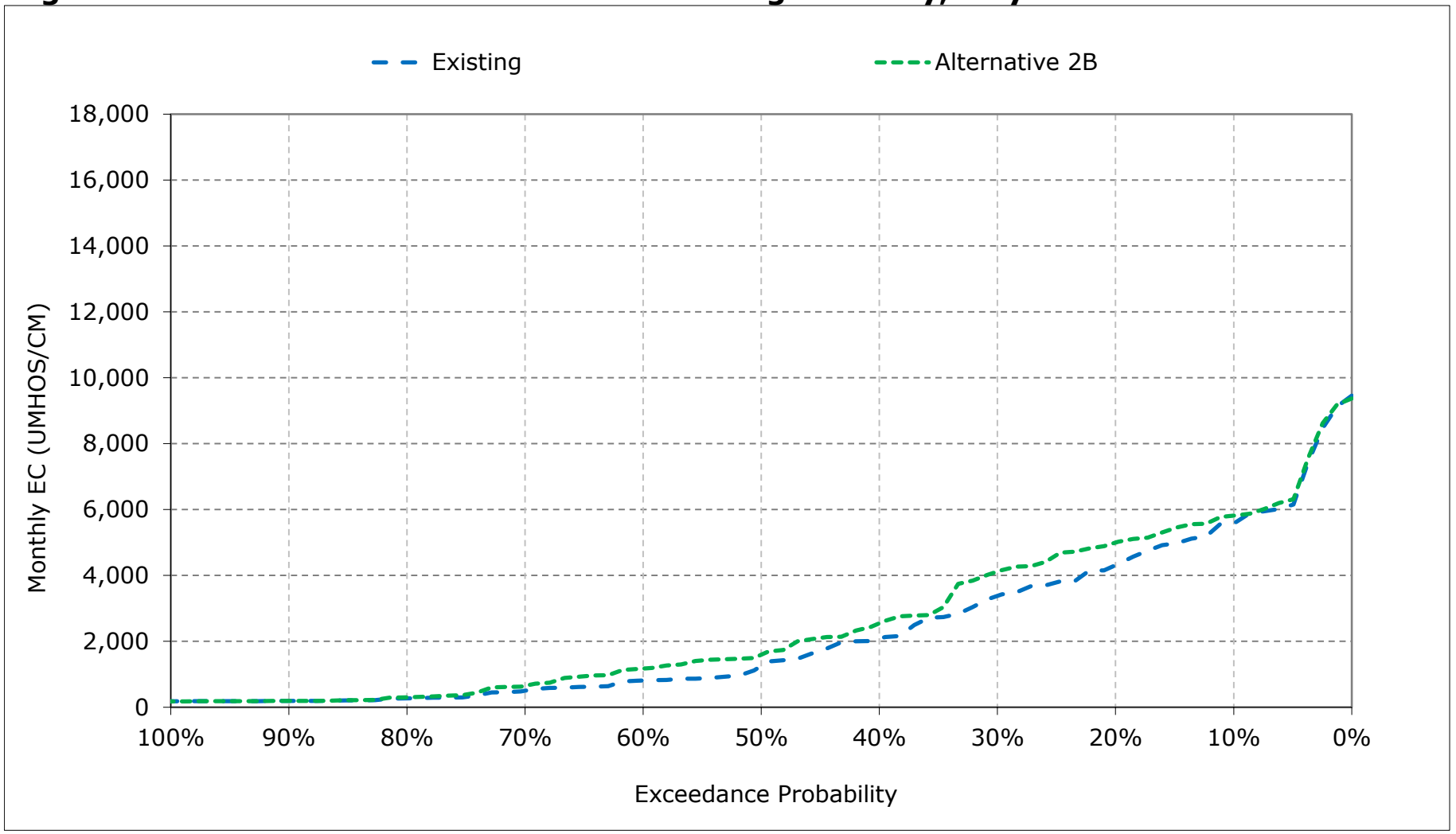


**Figure 7-12. Sacramento River at Mallard Slough Salinity, June EC**

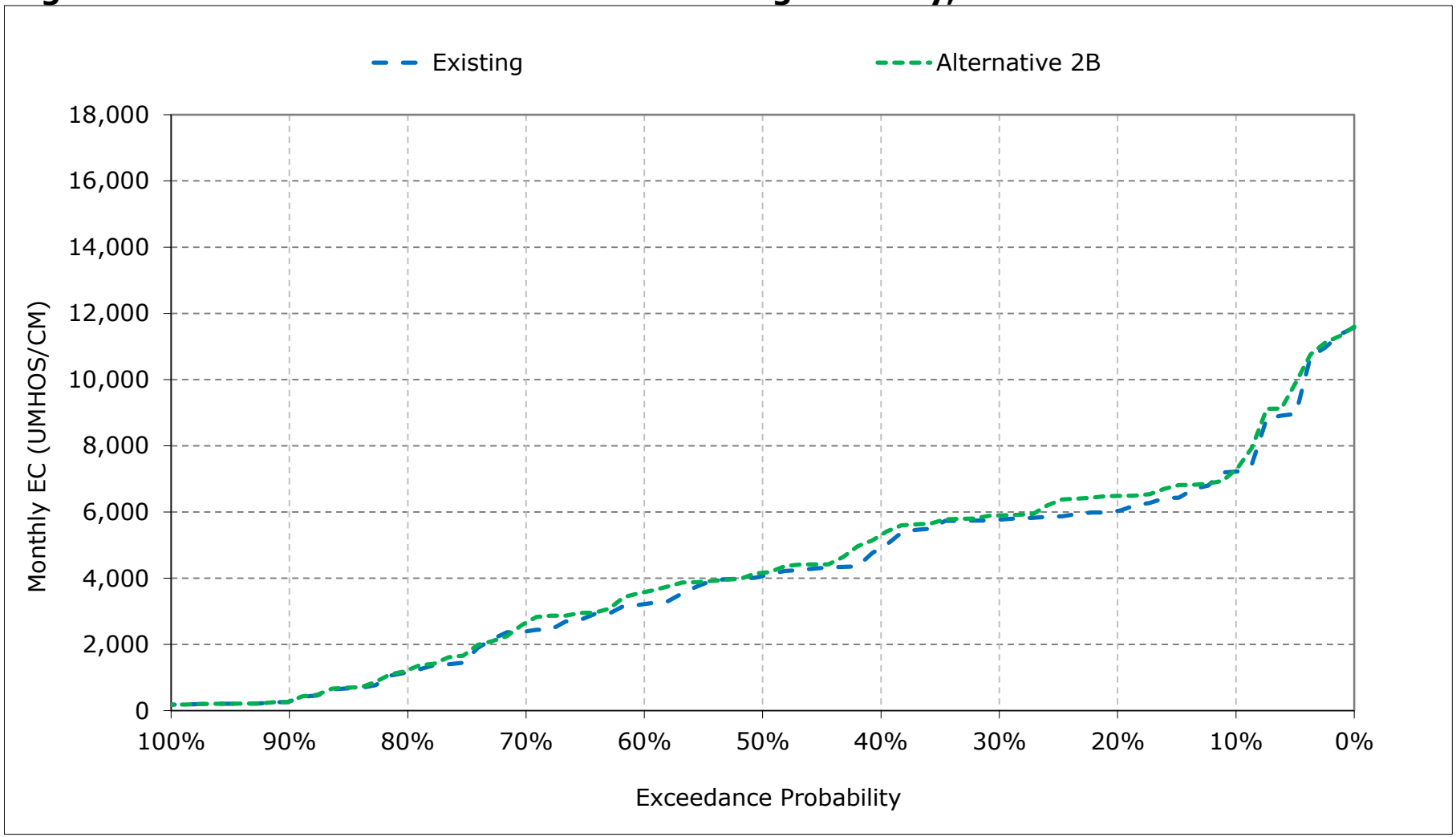


**Figure 7-13. Sacramento River at Mallard Slough Salinity, July EC**

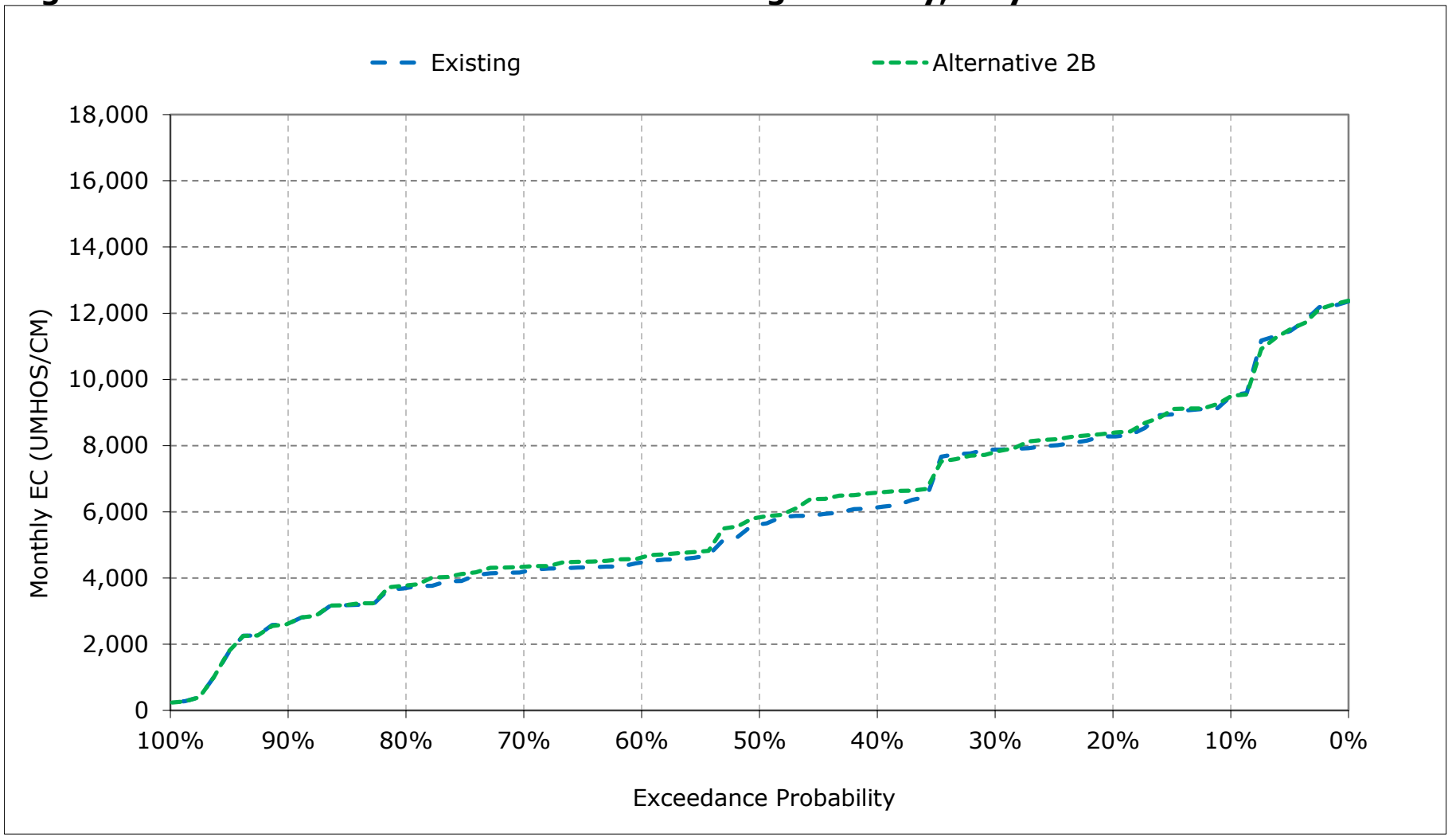


**Figure 7-14. Sacramento River at Mallard Slough Salinity, August EC**

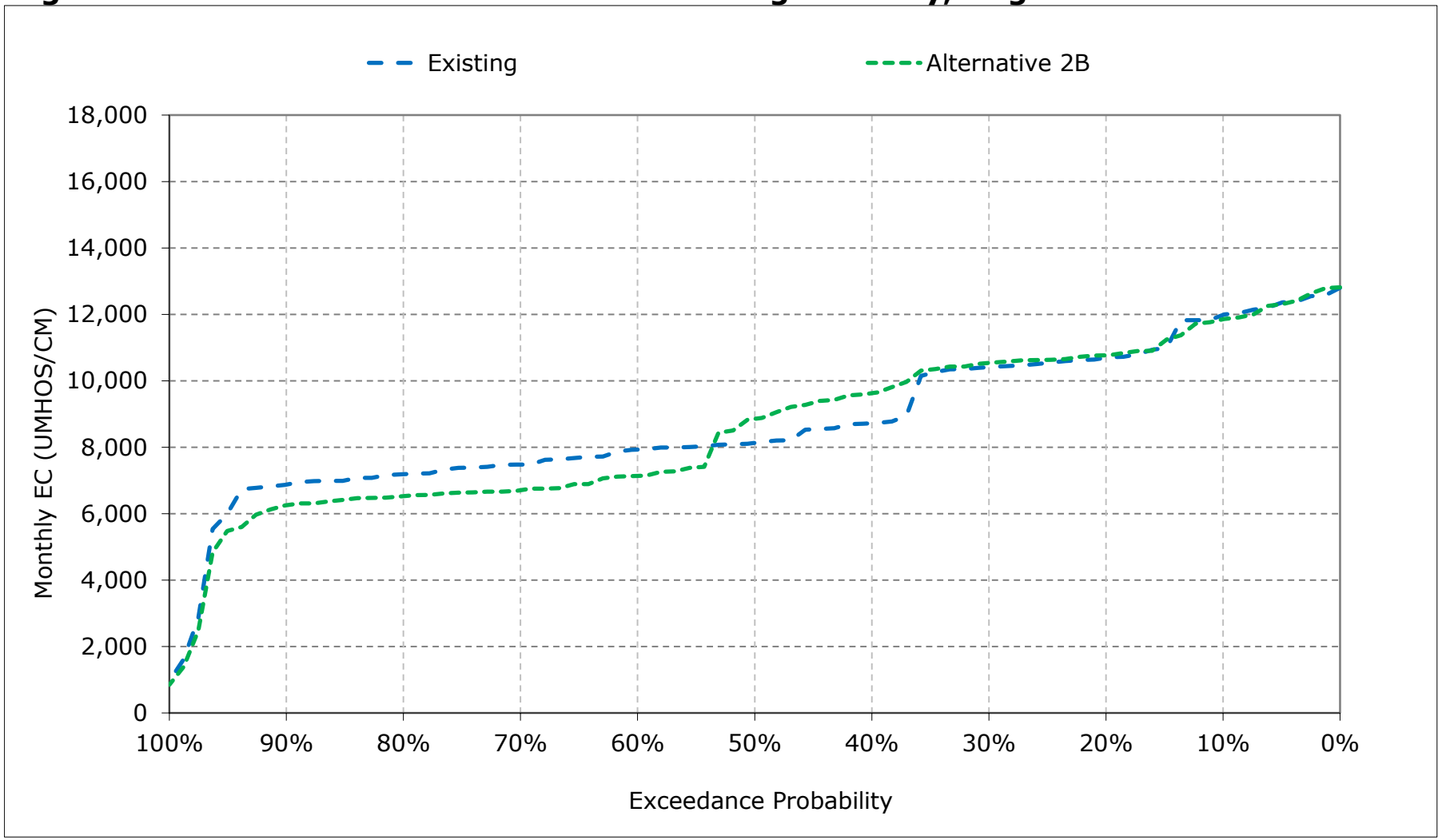


**Figure 7-15. Sacramento River at Mallard Slough Salinity, September EC**

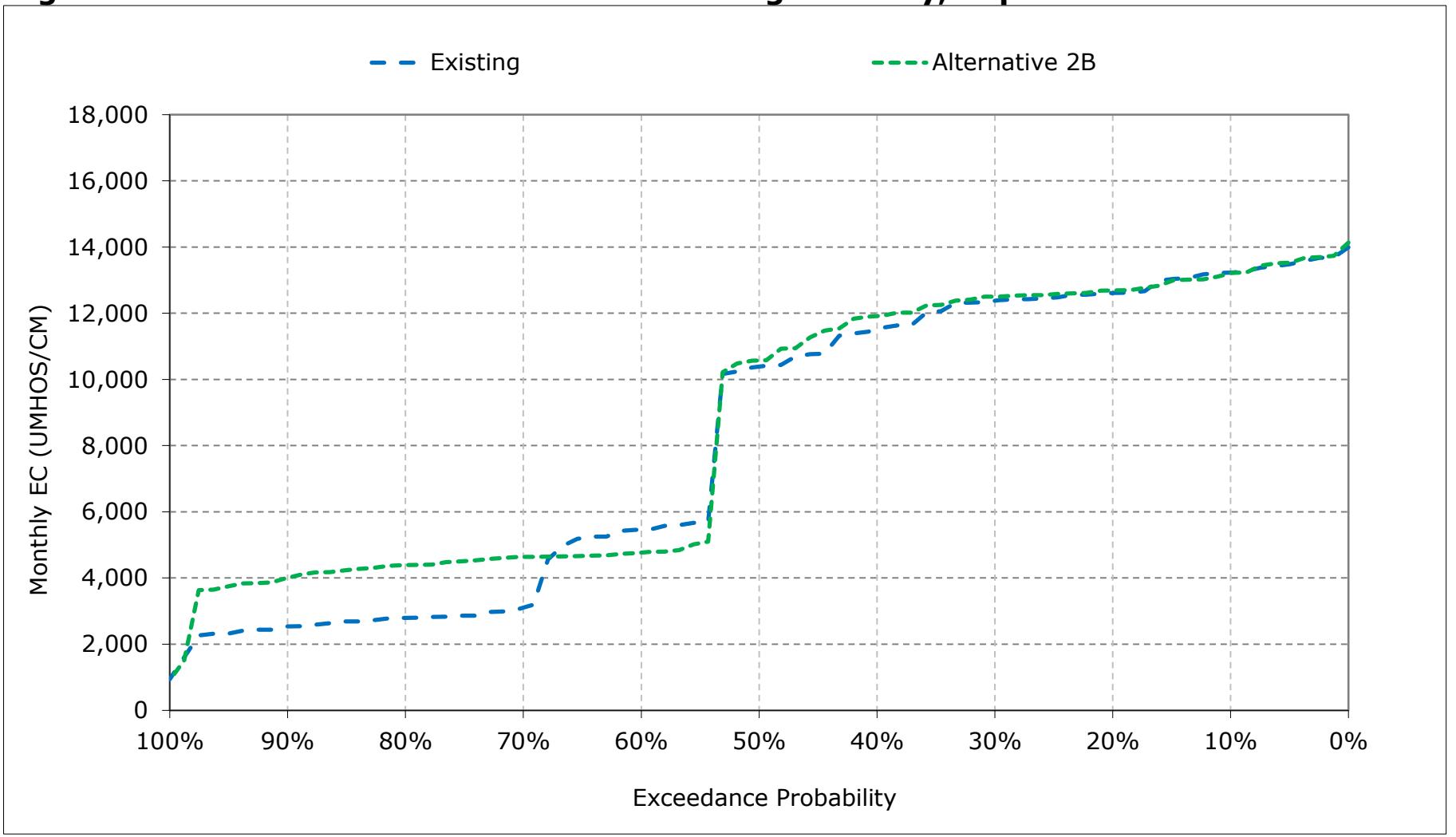


**Figure 7-16. Sacramento River at Mallard Slough Salinity, October EC**

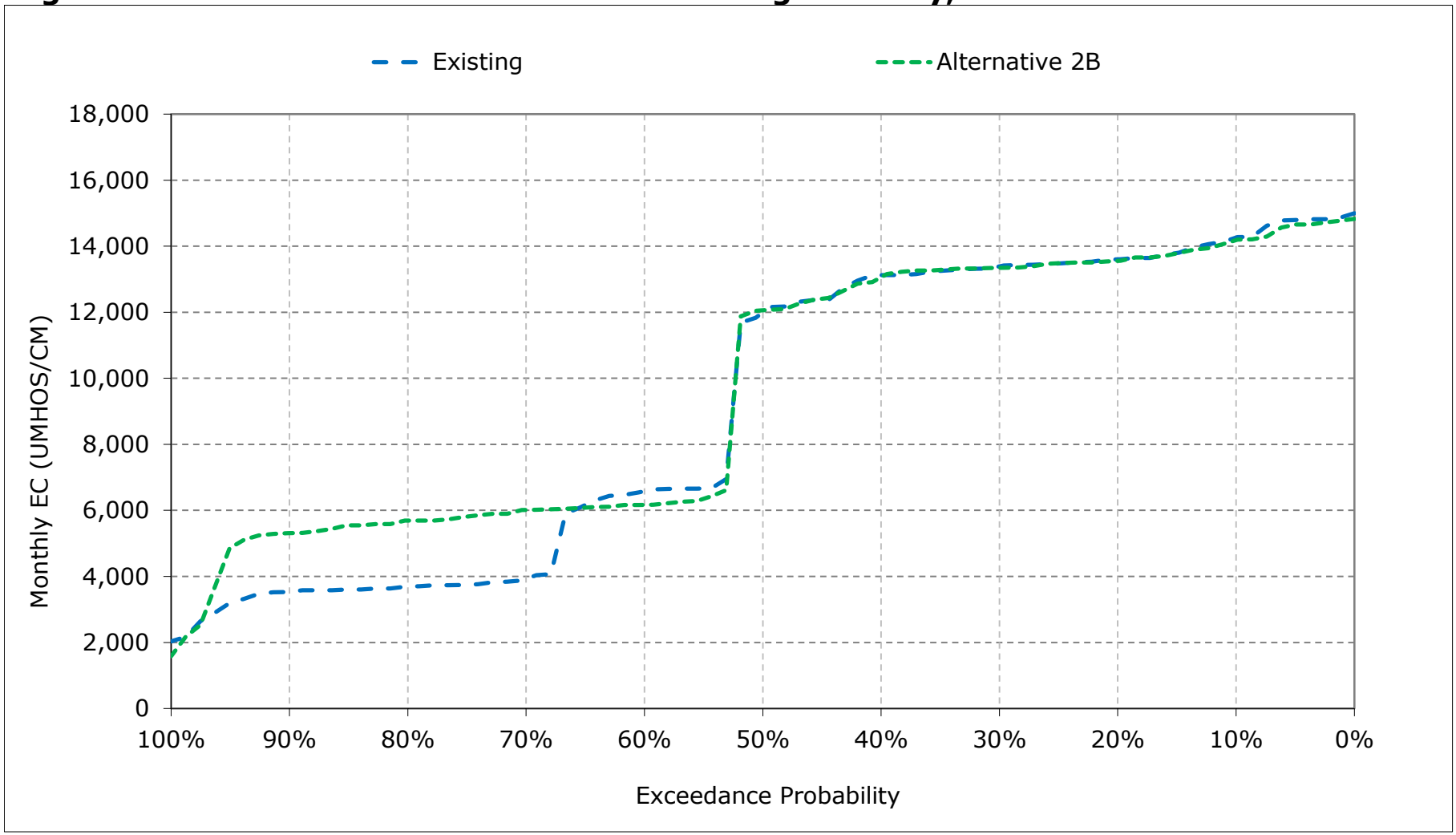


**Figure 7-17. Sacramento River at Mallard Slough Salinity, November EC**

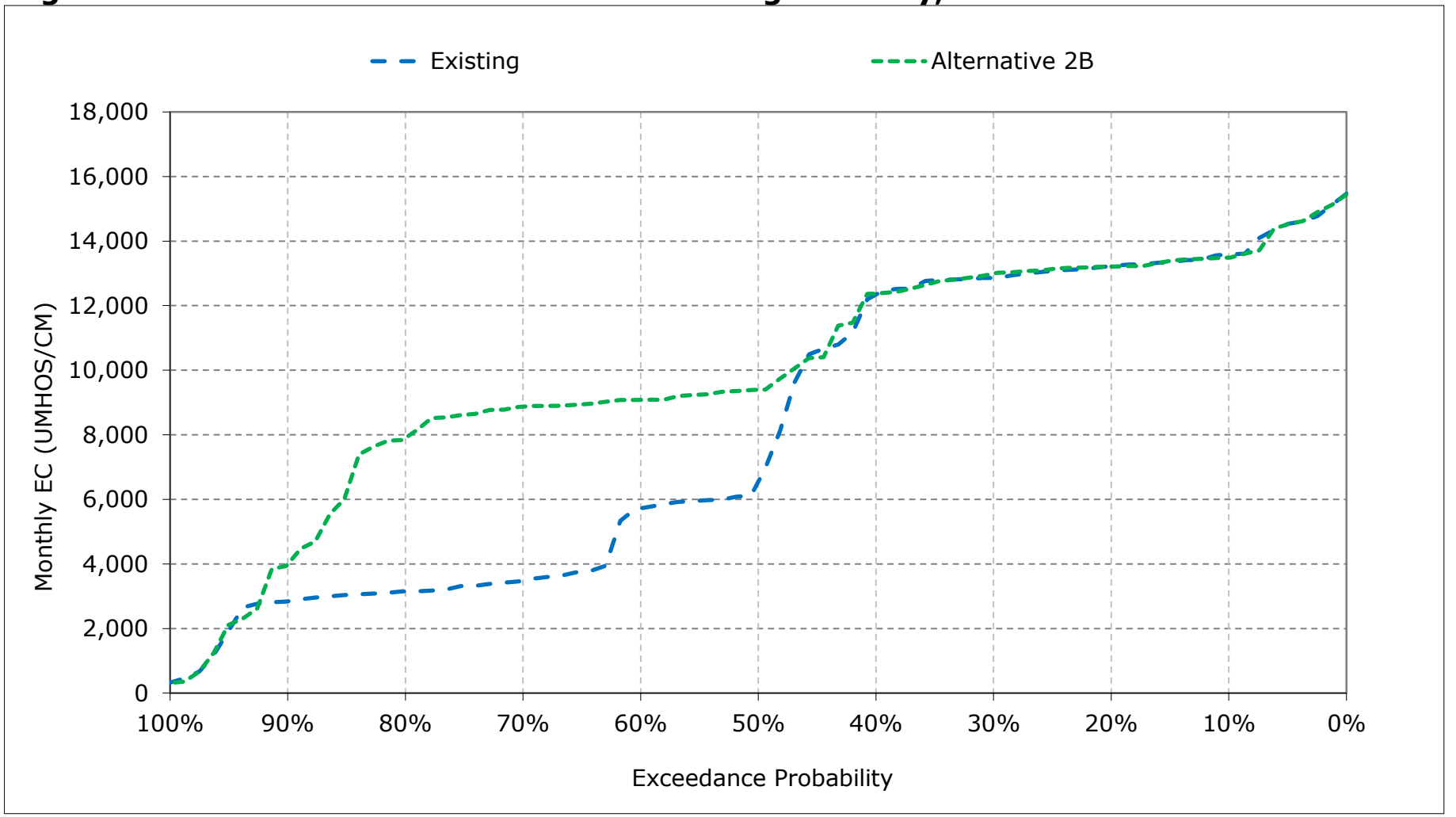
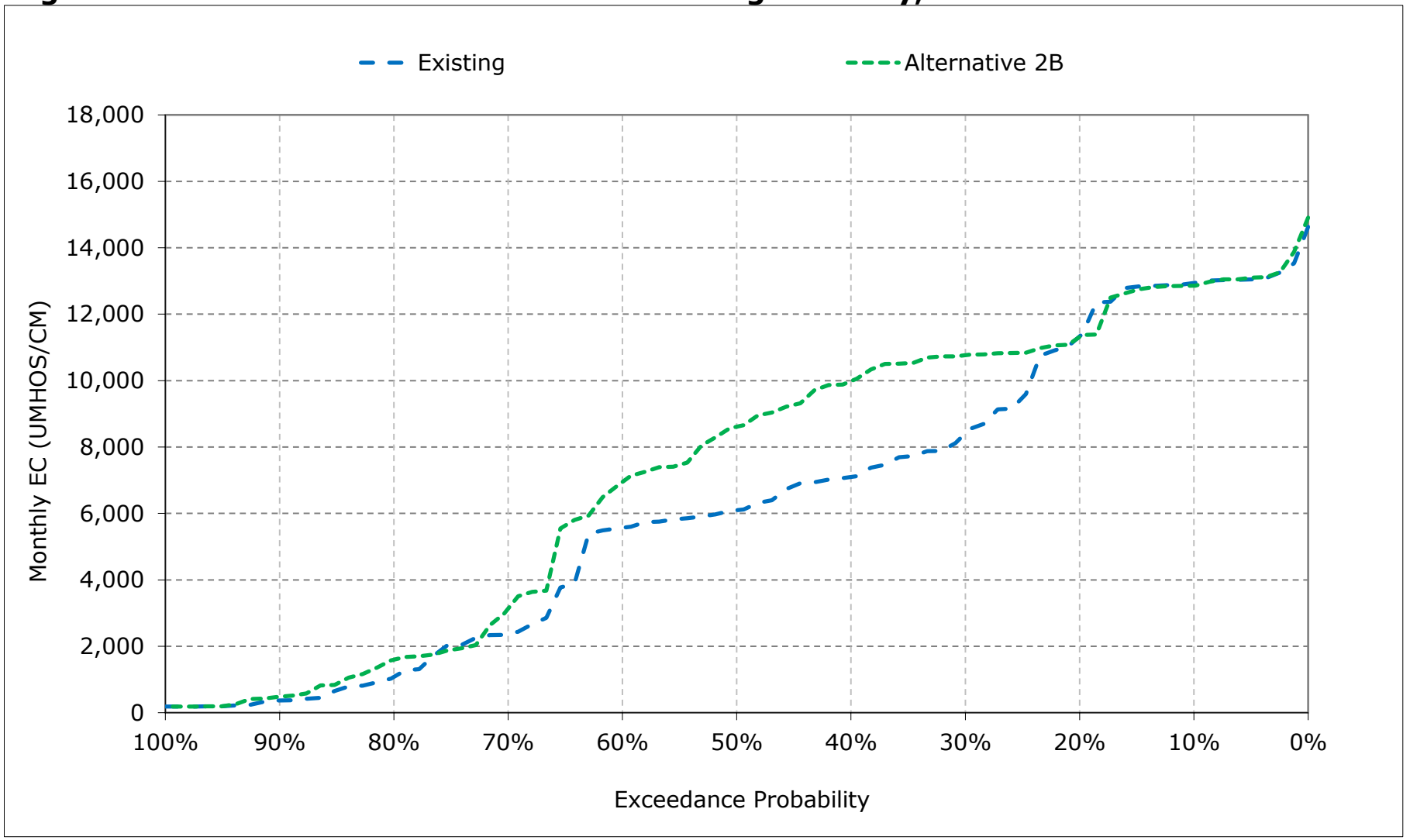


**Figure 7-18. Sacramento River at Mallard Slough Salinity, December EC**



## Table 8-1. Chipps Island North Channel Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 15,139 | 14,489 | 13,877 | 9,532 | 5,409 | 4,772 | 5,053 | 6,361 | 8,135 | 10,388 | 12,932 | 14,201 |
| **20%** | 14,525 | 14,158 | 12,320 | 8,644 | 3,435 | 2,748 | 2,823 | 5,030 | 6,871 | 9,219 | 11,638 | 13,565 |
| **30%** | 14,305 | 13,845 | 9,373 | 6,782 | 1,972 | 1,203 | 1,605 | 3,990 | 6,566 | 8,803 | 11,372 | 13,321 |
| **40%** | 14,060 | 13,301 | 8,053 | 4,143 | 1,005 | 902 | 1,261 | 2,549 | 5,667 | 6,999 | 9,694 | 12,485 |
| **50%** | 12,935 | 7,466 | 6,810 | 3,056 | 635 | 523 | 799 | 1,562 | 4,672 | 6,498 | 9,035 | 11,383 |
| **60%** | 7,398 | 6,550 | 6,264 | 1,784 | 321 | 316 | 446 | 1,033 | 3,816 | 5,231 | 8,836 | 6,341 |
| **70%** | 4,524 | 4,091 | 2,848 | 434 | 222 | 214 | 304 | 625 | 2,841 | 4,928 | 8,368 | 3,730 |
| **80%** | 4,248 | 3,742 | 1,294 | 227 | 203 | 200 | 215 | 317 | 1,451 | 4,385 | 8,047 | 3,386 |
| **90%** | 4,118 | 3,425 | 450 | 197 | 194 | 192 | 194 | 198 | 321 | 3,086 | 7,737 | 3,074 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 9,960 | 8,946 | 6,919 | 4,087 | 1,838 | 1,408 | 1,666 | 2,659 | 4,697 | 6,669 | 9,627 | 8,996 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 7,986 | 6,081 | 2,461 | 761 | 253 | 280 | 364 | 625 | 1,765 | 3,635 | 7,485 | 3,140 |
| **Above Normal (15%)** | 10,362 | 8,828 | 6,983 | 2,528 | 692 | 305 | 468 | 909 | 3,388 | 4,812 | 8,193 | 6,219 |
| **Below Normal (17%)** | 10,414 | 9,840 | 8,741 | 4,591 | 1,252 | 1,113 | 1,204 | 2,106 | 4,665 | 6,641 | 9,377 | 11,904 |
| **Dry (22%)** | 10,498 | 10,257 | 8,668 | 6,472 | 3,009 | 2,003 | 2,412 | 3,999 | 6,494 | 8,973 | 11,500 | 13,449 |
| **Critical (15%)** | 12,501 | 12,262 | 11,767 | 8,686 | 5,345 | 4,410 | 5,103 | 7,452 | 9,701 | 11,681 | 13,181 | 14,387 |

### Alternative 2B

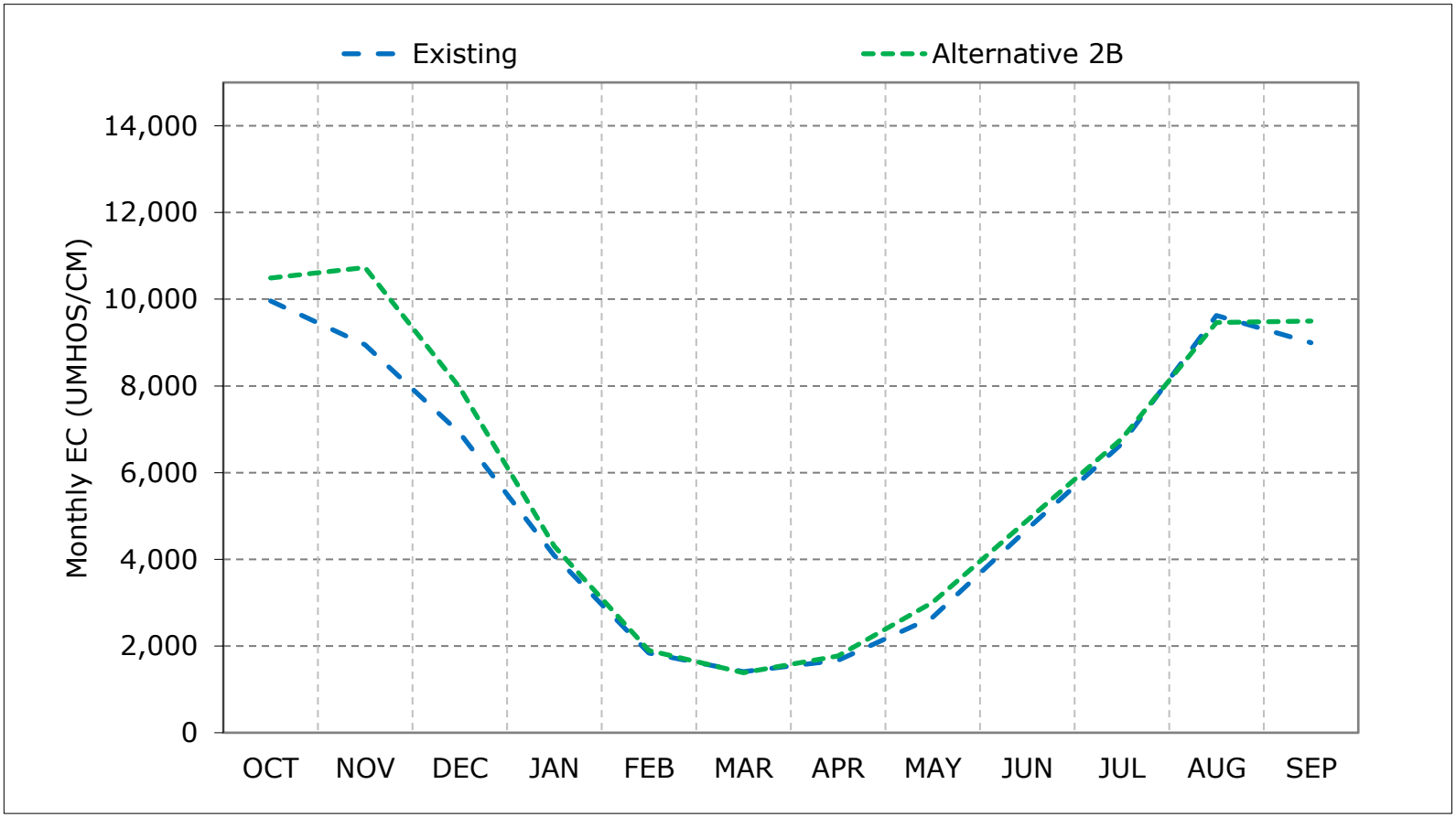
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 15,094 | 14,396 | 13,812 | 10,776 | 5,326 | 4,809 | 5,118 | 6,596 | 8,158 | 10,418 | 12,808 | 14,186 |
| **20%** | 14,478 | 14,129 | 12,226 | 9,307 | 3,407 | 2,601 | 3,170 | 5,804 | 7,354 | 9,314 | 11,724 | 13,644 |
| **30%** | 14,276 | 13,916 | 11,721 | 7,441 | 1,929 | 1,052 | 2,007 | 4,853 | 6,699 | 8,755 | 11,487 | 13,462 |
| **40%** | 14,003 | 13,310 | 10,963 | 4,446 | 1,106 | 826 | 1,483 | 3,083 | 6,115 | 7,436 | 10,509 | 12,861 |
| **50%** | 12,997 | 10,241 | 9,620 | 3,098 | 600 | 465 | 903 | 1,987 | 4,829 | 6,690 | 9,714 | 11,554 |
| **60%** | 6,951 | 9,945 | 7,888 | 1,737 | 269 | 277 | 511 | 1,489 | 4,250 | 5,380 | 8,071 | 5,617 |
| **70%** | 6,797 | 9,723 | 3,770 | 432 | 220 | 212 | 344 | 844 | 3,133 | 5,089 | 7,599 | 5,476 |
| **80%** | 6,468 | 8,772 | 1,859 | 219 | 204 | 200 | 216 | 375 | 1,527 | 4,431 | 7,418 | 5,210 |
| **90%** | 6,082 | 4,577 | 551 | 197 | 194 | 193 | 190 | 199 | 327 | 3,091 | 7,151 | 4,804 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 10,491 | 10,731 | 7,965 | 4,302 | 1,900 | 1,383 | 1,772 | 3,008 | 4,896 | 6,784 | 9,461 | 9,498 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 8,667 | 8,428 | 3,121 | 759 | 246 | 268 | 425 | 834 | 1,973 | 3,717 | 6,758 | 4,900 |
| **Above Normal (15%)** | 11,044 | 10,619 | 8,419 | 2,605 | 580 | 283 | 554 | 1,275 | 3,512 | 4,921 | 7,637 | 5,333 |
| **Below Normal (17%)** | 10,994 | 11,572 | 10,040 | 4,604 | 1,196 | 1,026 | 1,370 | 2,654 | 4,840 | 6,988 | 10,140 | 12,217 |
| **Dry (22%)** | 11,015 | 11,779 | 9,949 | 7,062 | 3,231 | 1,934 | 2,568 | 4,502 | 6,787 | 9,048 | 11,607 | 13,547 |
| **Critical (15%)** | 12,520 | 13,281 | 12,608 | 9,186 | 5,625 | 4,491 | 5,187 | 7,622 | 9,845 | 11,661 | 13,126 | 14,378 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -45 | -93 | -65 | **1,243** | -83 | **37** | **65** | **236** | **23** | **30** | -124 | -14 |
| **20%** | -47 | -29 | -94 | **663** | -28 | -147 | **347** | **774** | **484** | **95** | **86** | **79** |
| **30%** | -28 | **71** | **2,347** | **659** | -44 | -151 | **402** | **863** | **133** | -48 | **115** | **142** |
| **40%** | -57 | **9** | **2,911** | **303** | **101** | -76 | **222** | **535** | **448** | **436** | **815** | **376** |
| **50%** | **62** | **2,775** | **2,810** | **42** | -34 | -58 | **104** | **426** | **157** | **192** | **678** | **171** |
| **60%** | -447 | **3,395** | **1,624** | -46 | -52 | -40 | **65** | **456** | **434** | **149** | -765 | -724 |
| **70%** | **2,273** | **5,632** | **922** | -1 | -2 | -2 | **40** | **219** | **293** | **161** | -769 | **1,745** |
| **80%** | **2,220** | **5,030** | **565** | -8 | **2** | 0 | **1** | **58** | **76** | **45** | -628 | **1,824** |
| **90%** | **1,964** | **1,152** | **101** | **0** | **1** | **1** | -3 | **0** | **6** | **5** | -586 | **1,730** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **531** | **1,785** | **1,045** | **215** | **62** | -25 | **107** | **349** | **199** | **115** | -166 | **502** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **682** | **2,347** | **660** | -3 | -7 | -12 | **62** | **209** | **208** | **82** | -727 | **1,760** |
| **Above Normal (15%)** | **682** | **1,790** | **1,436** | **76** | -113 | -22 | **86** | **366** | **125** | **109** | -556 | -886 |
| **Below Normal (17%)** | **580** | **1,732** | **1,298** | **13** | -56 | -87 | **166** | **548** | **175** | **348** | **763** | **313** |
| **Dry (22%)** | **516** | **1,522** | **1,281** | **590** | **222** | -68 | **155** | **503** | **292** | **76** | **107** | **99** |
| **Critical (15%)** | **19** | **1,019** | **841** | **501** | **280** | **81** | **84** | **170** | **144** | -21 | -55 | -9 |

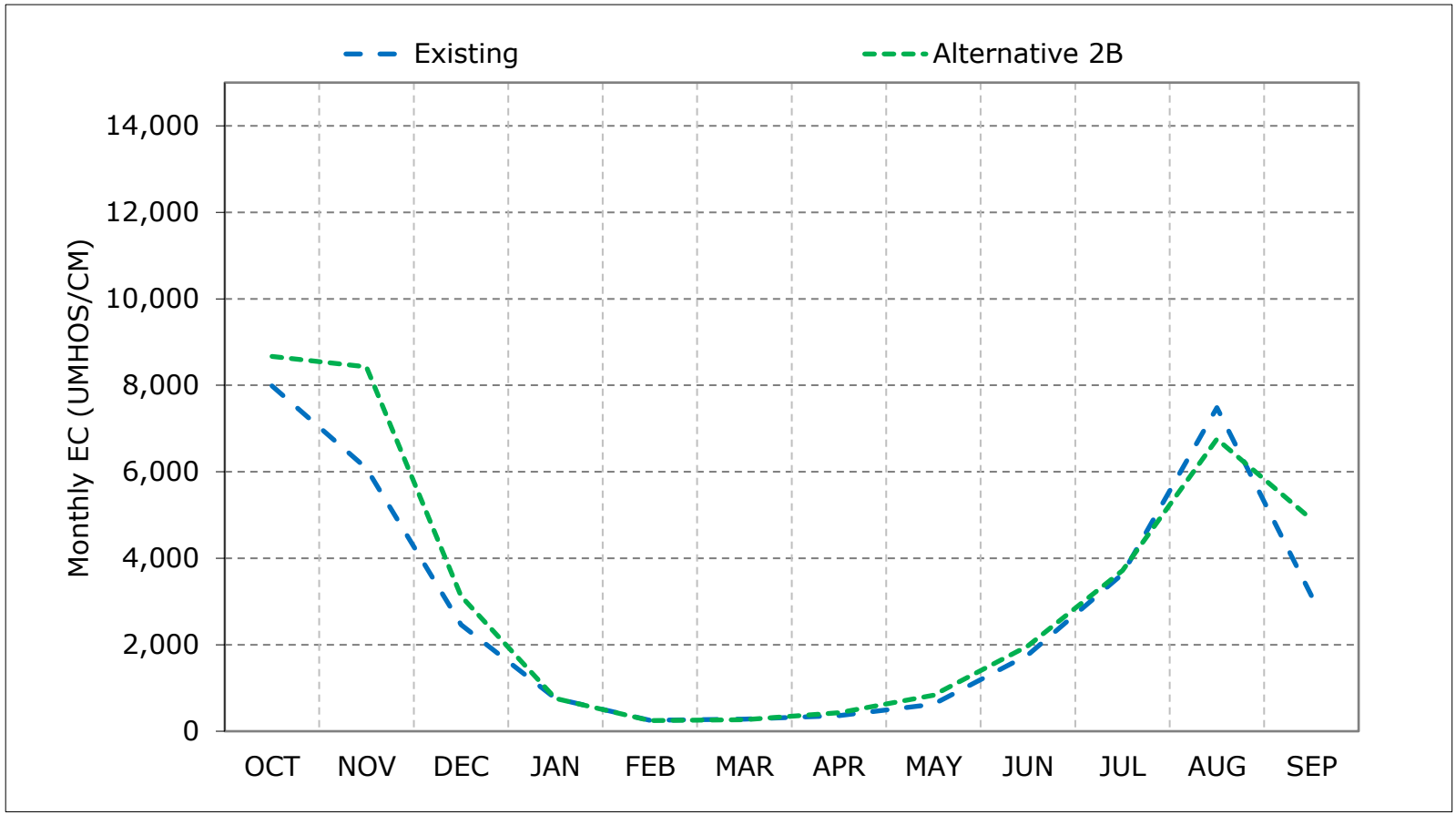
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 8-1. Chipps Island North Channel Salinity, Long-Term Average EC**



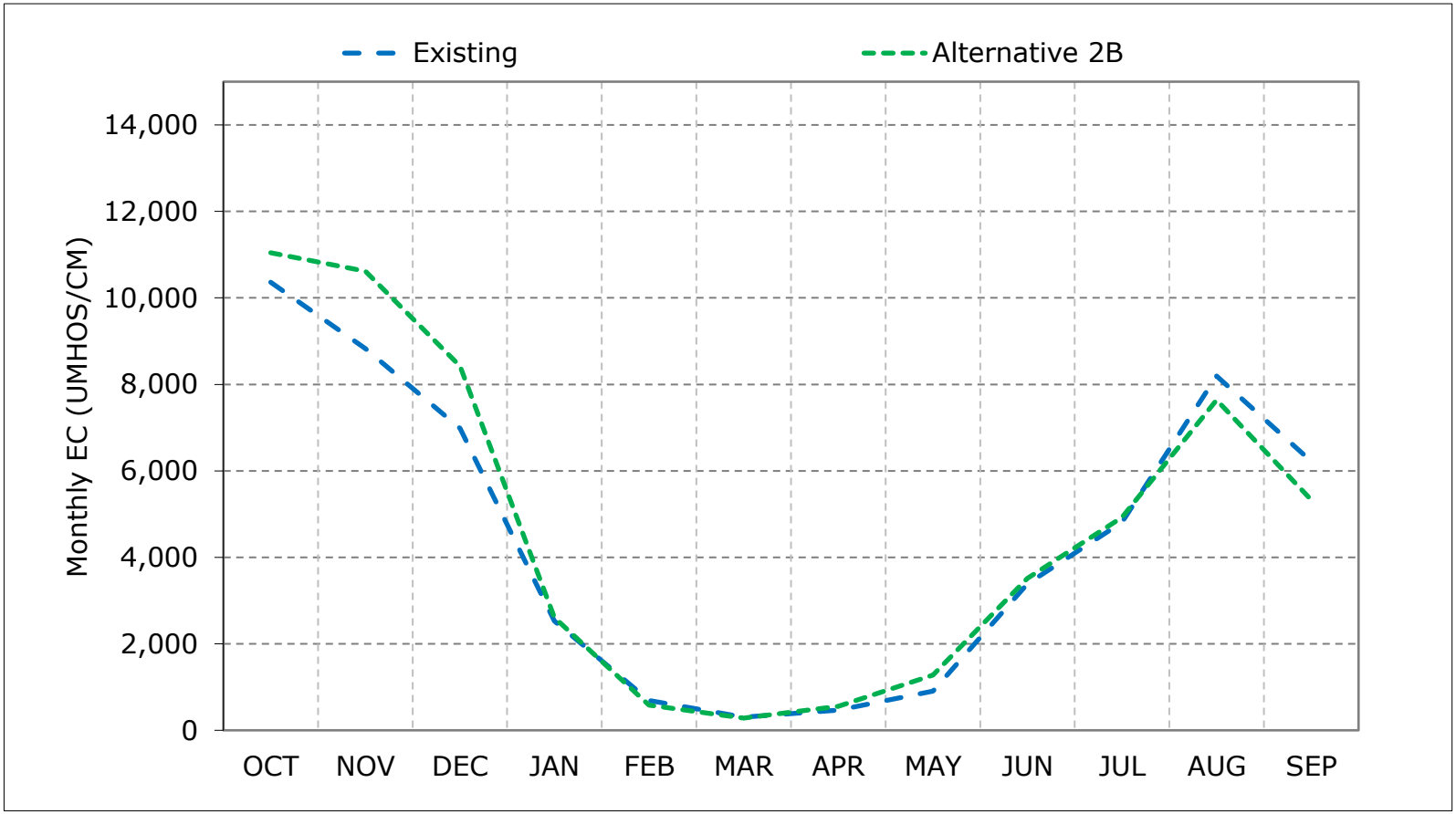

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 8-2. Chipps Island North Channel Salinity, Wet Year Average EC**



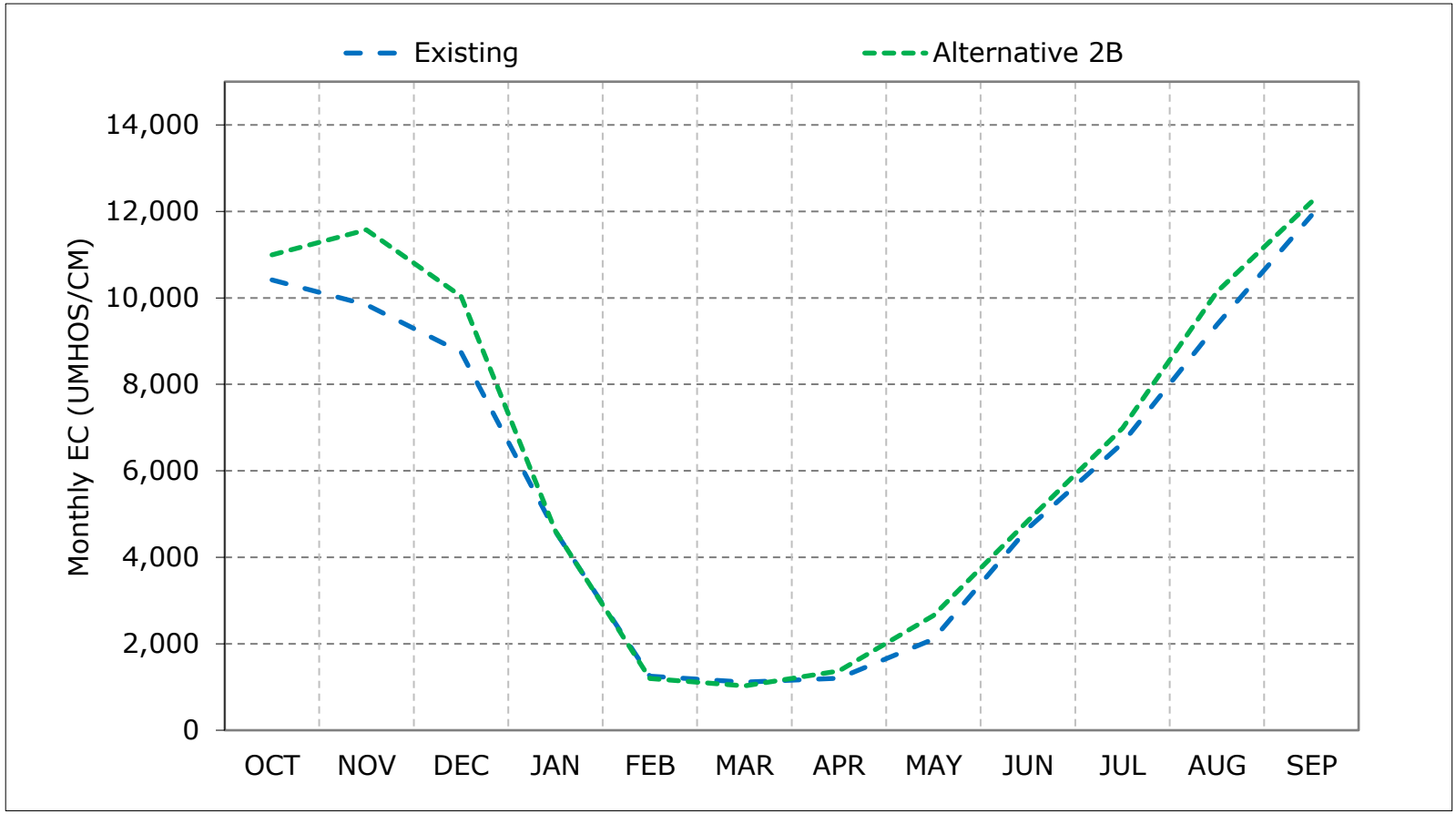

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 8-3. Chipps Island North Channel Salinity, Above Normal Year Average EC**



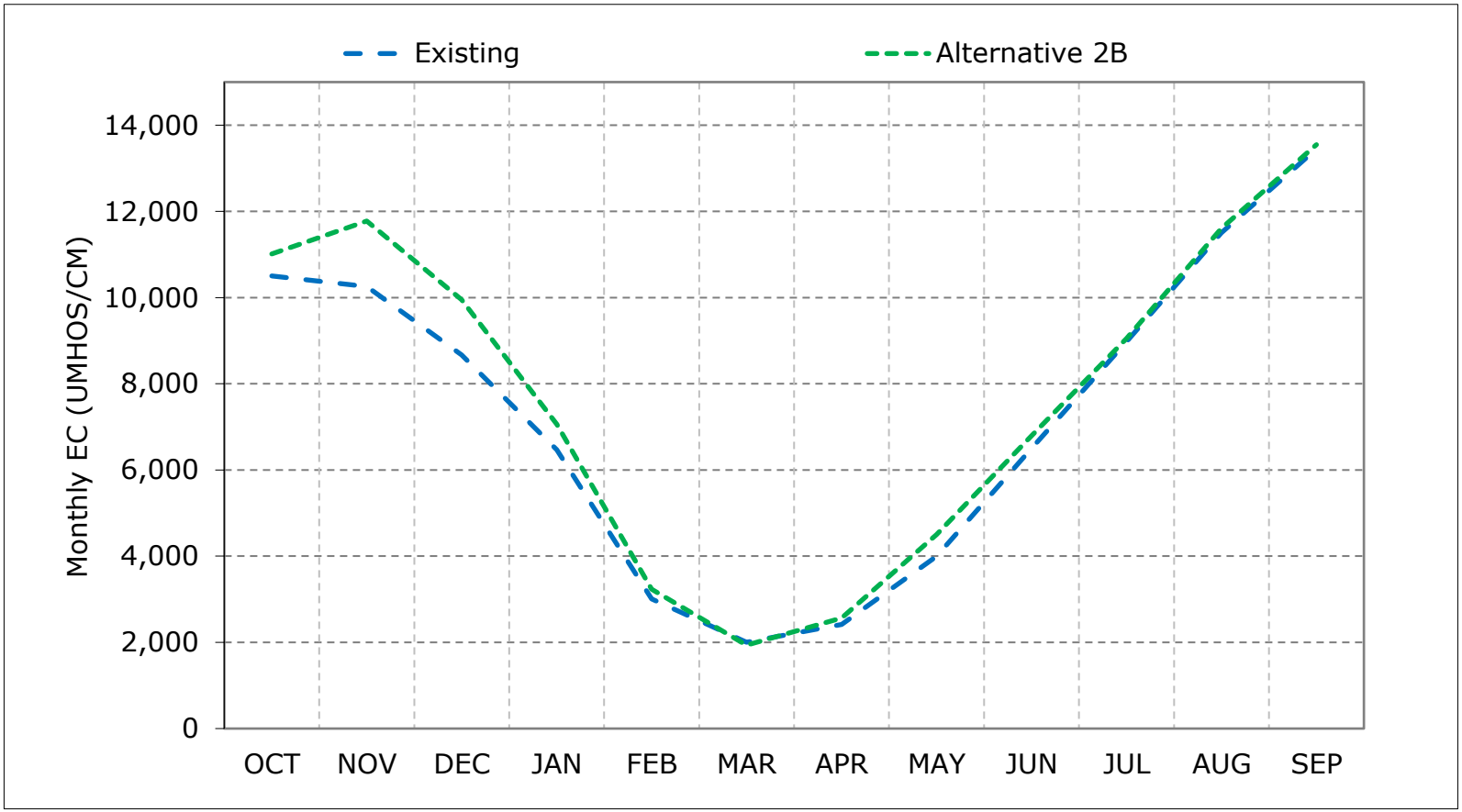

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 8-4. Chipps Island North Channel Salinity, Below Normal Year Average EC**



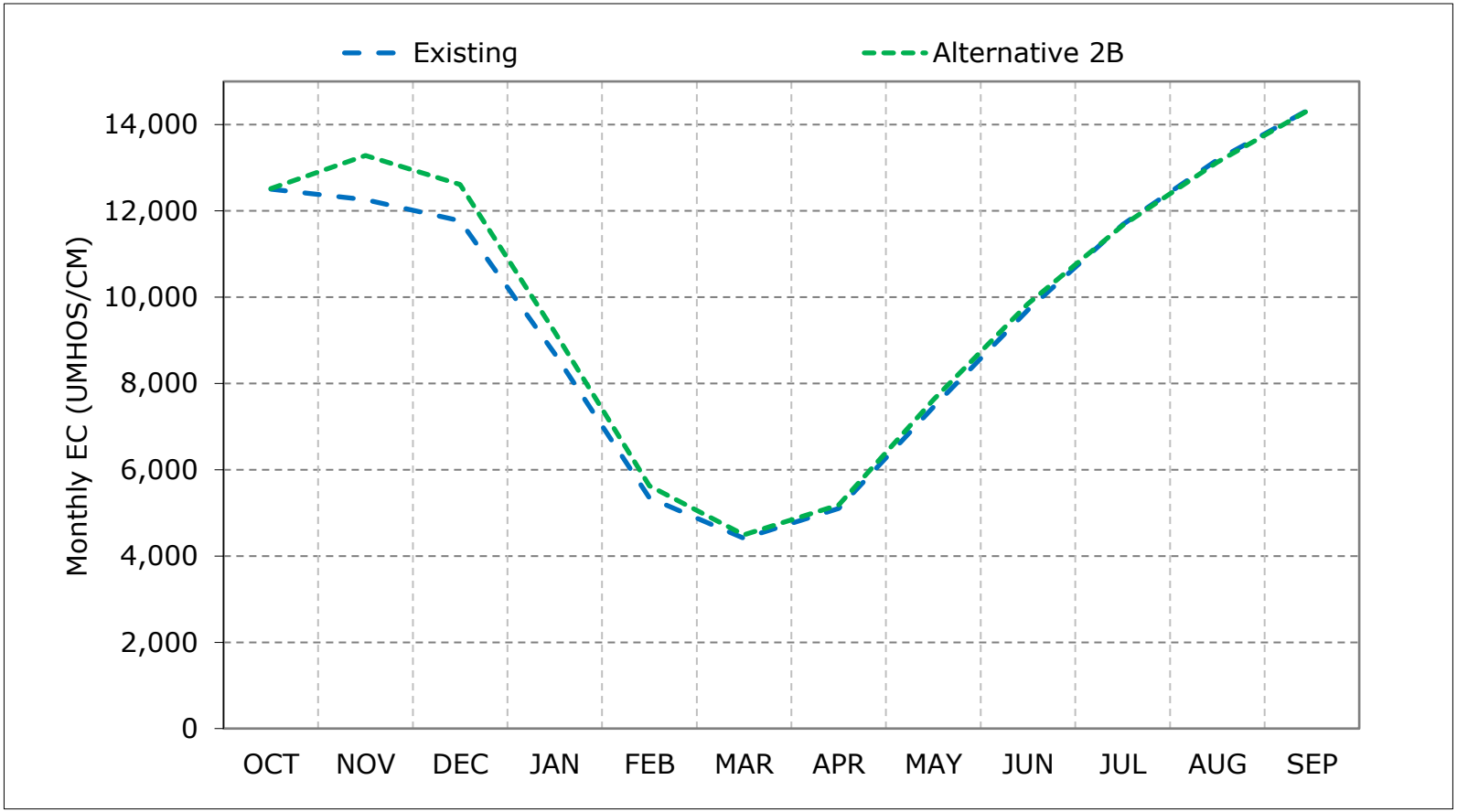

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 8-5. Chipps Island North Channel Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 8-6. Chipps Island North Channel Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 8-7. Chipps Island North Channel Salinity, January EC**

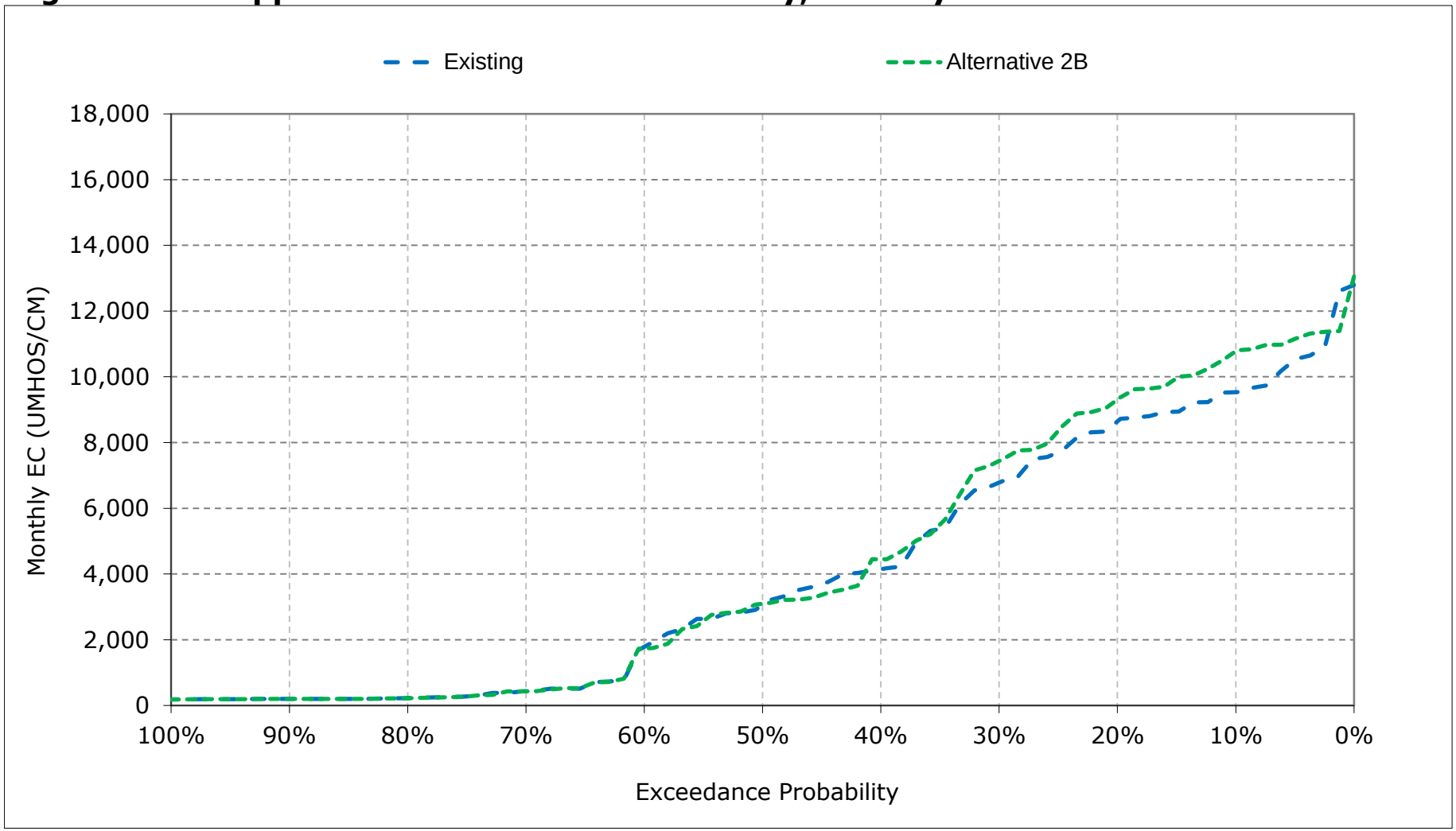


**Figure 8-8. Chipps Island North Channel Salinity, February EC**

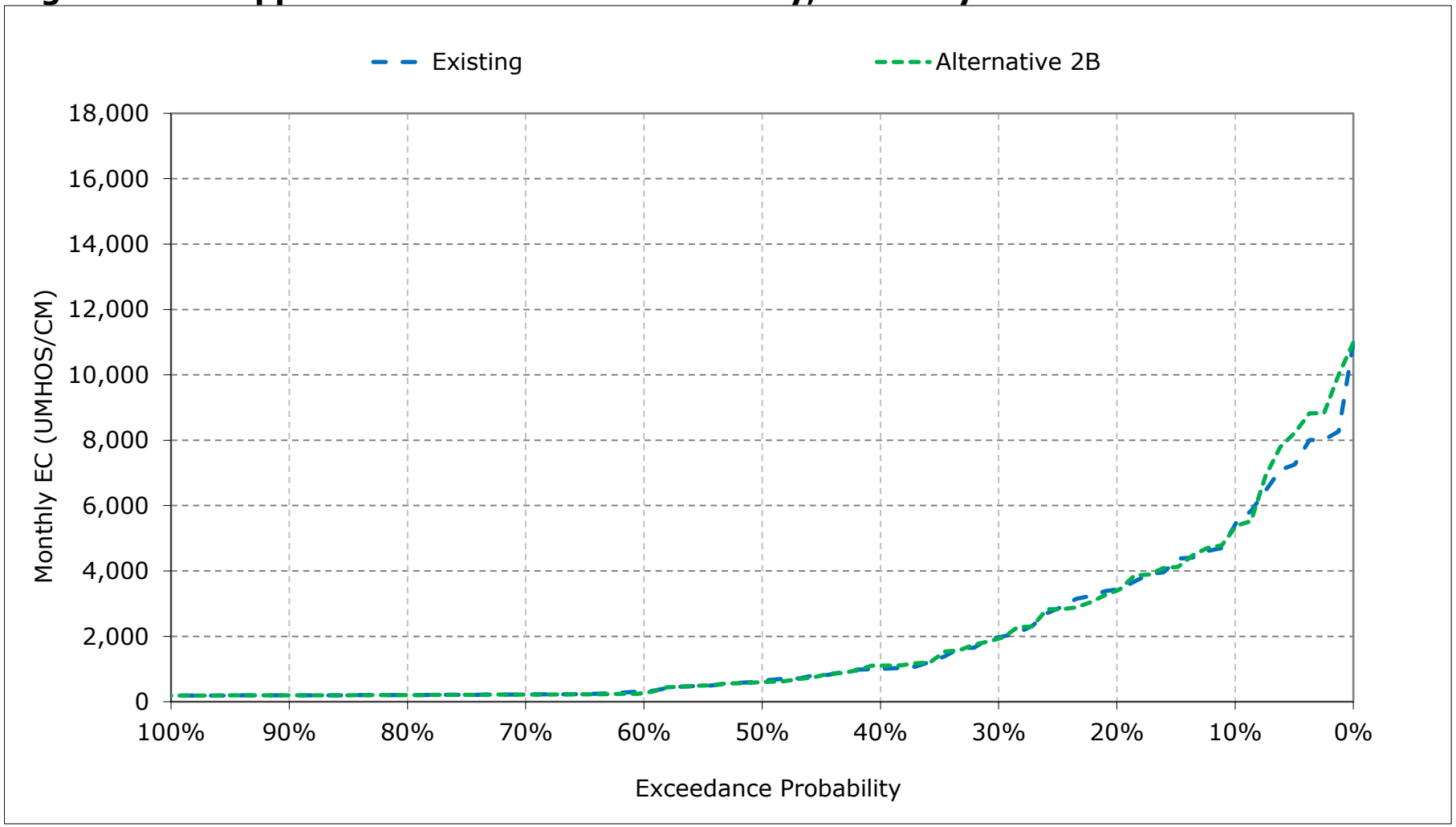


**Figure 8-9. Chipps Island North Channel Salinity, March EC**

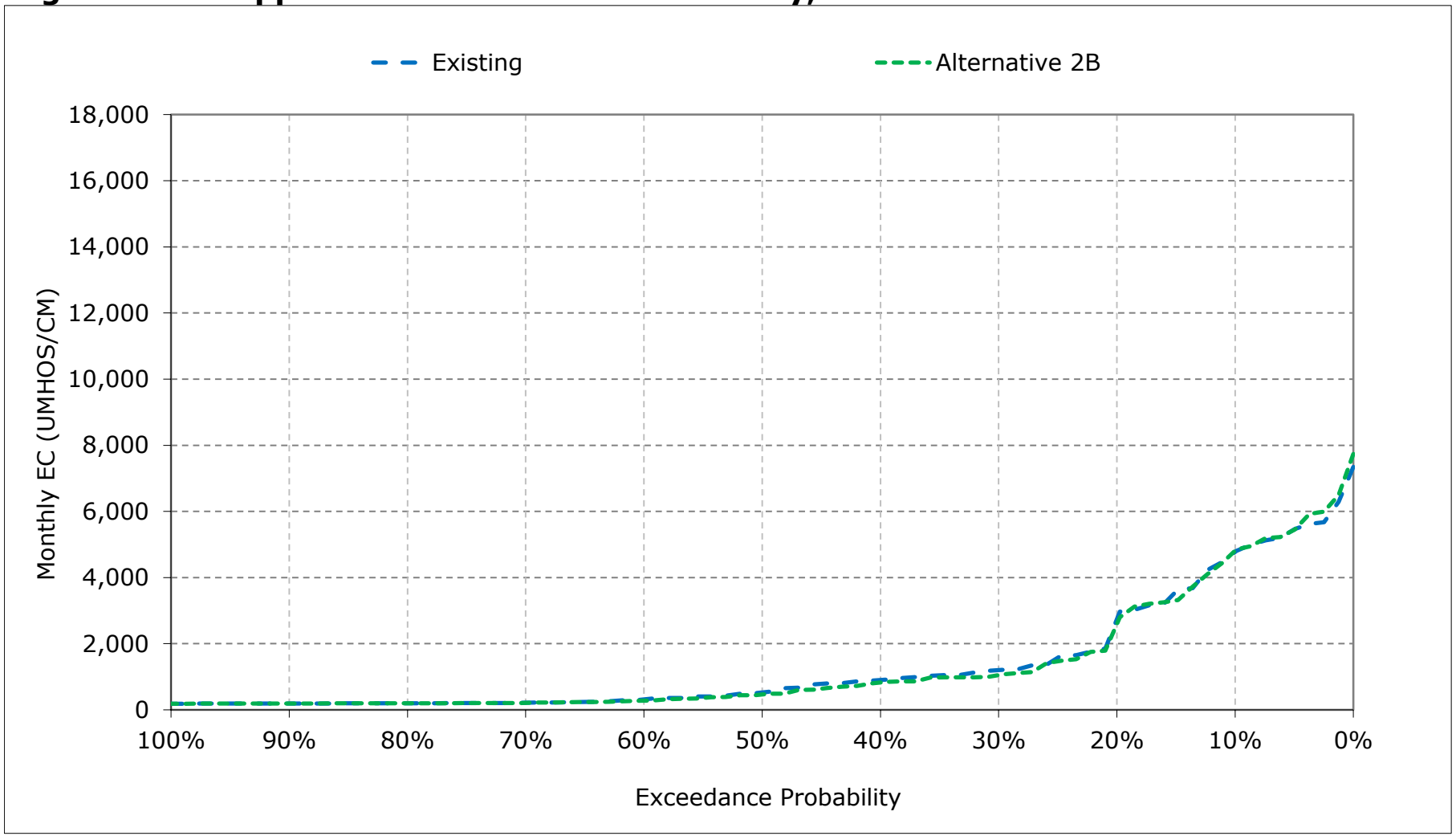


**Figure 8-10. Chipps Island North Channel Salinity, April EC**

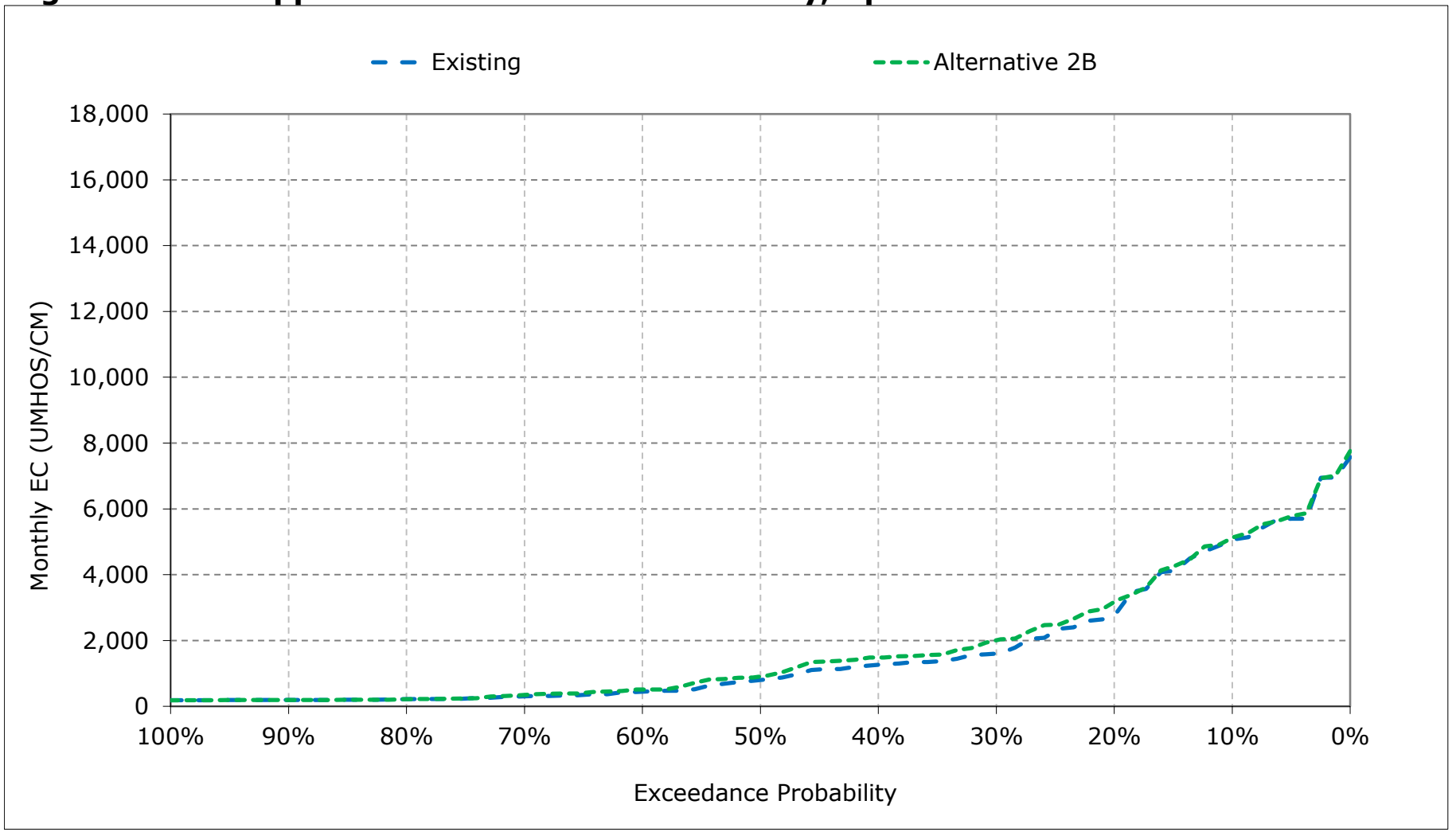


**Figure 8-11. Chipps Island North Channel Salinity, May EC**

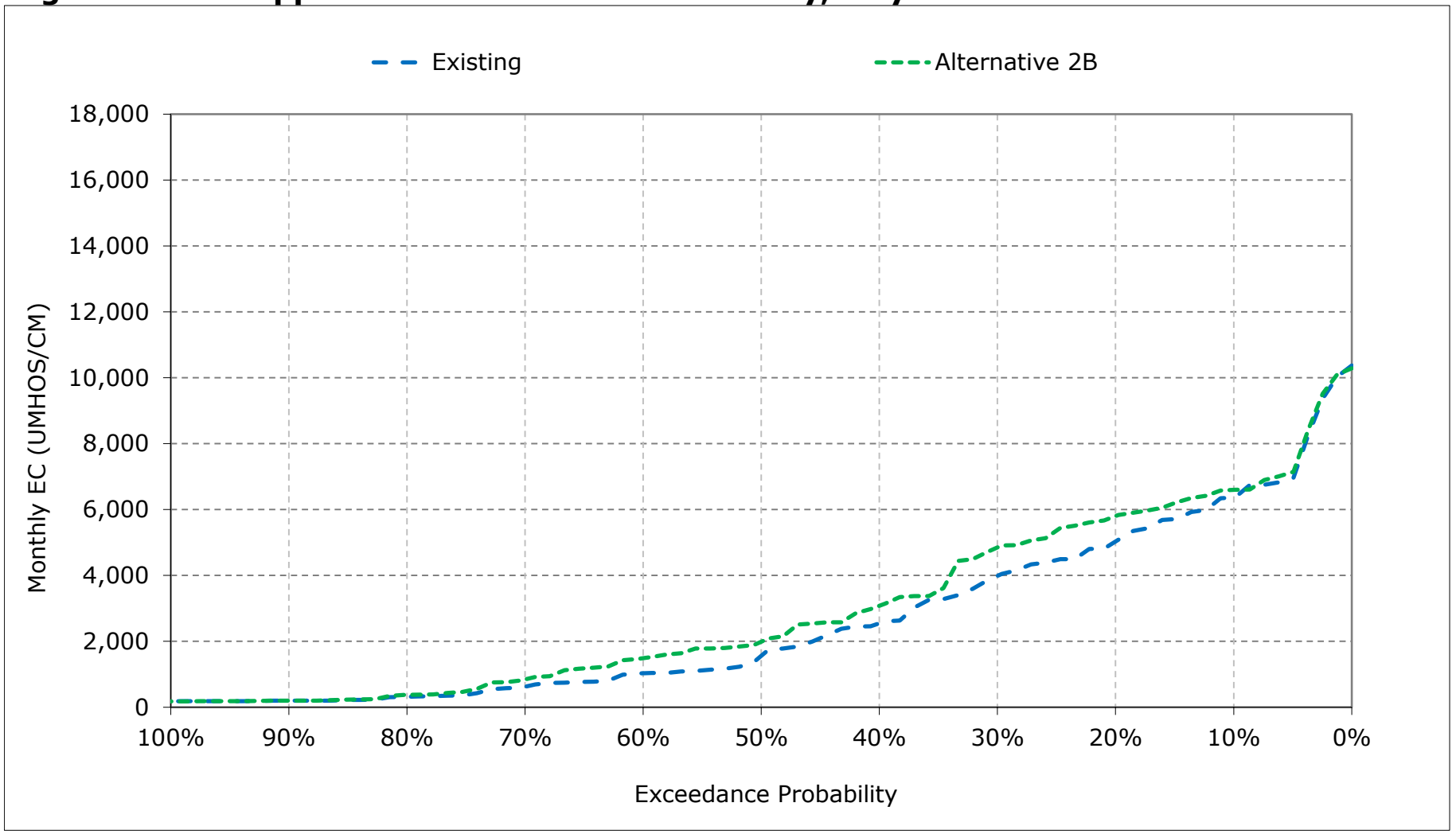


**Figure 8-12. Chipps Island North Channel Salinity, June EC**

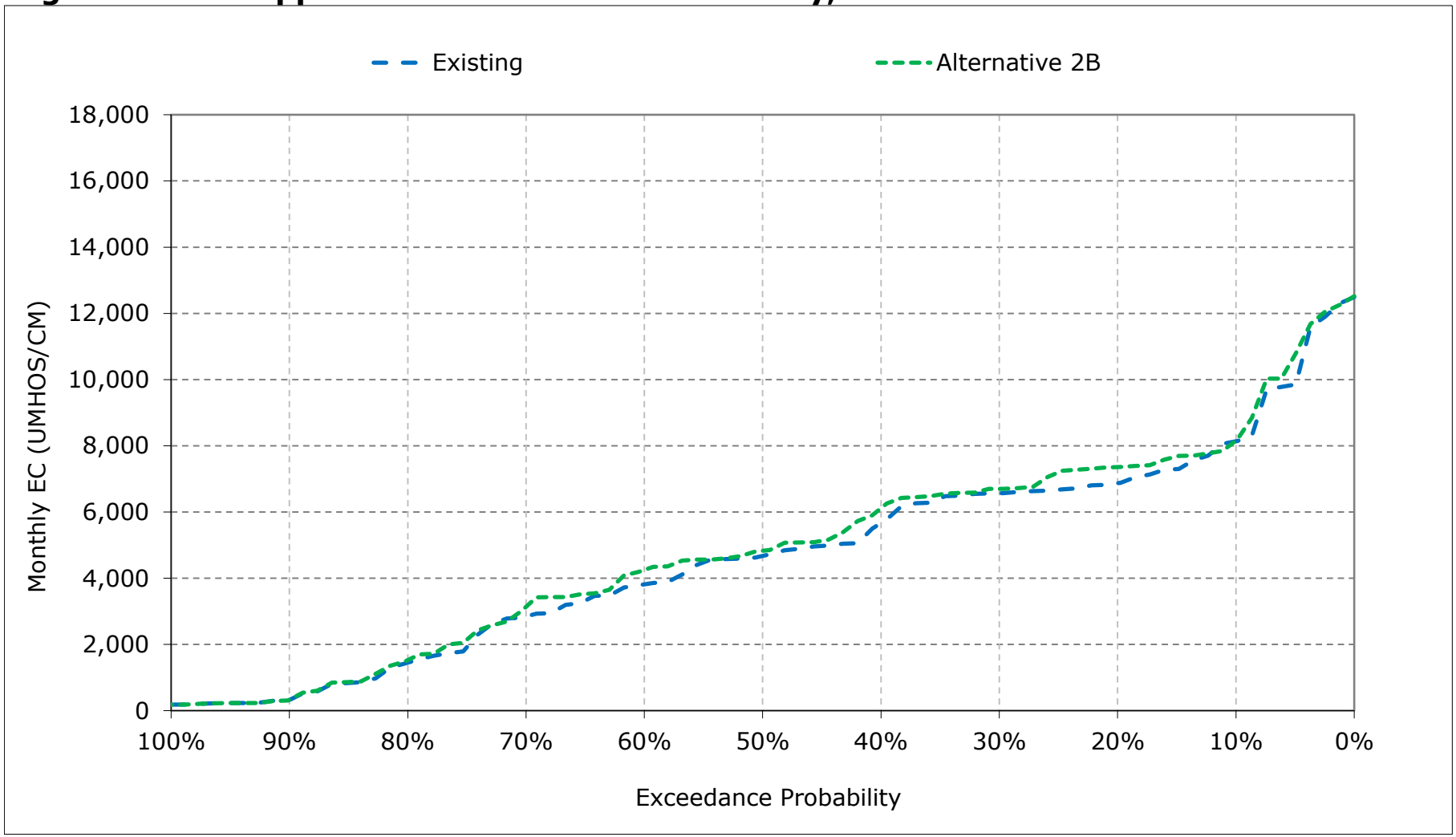


**Figure 8-13. Chipps Island North Channel Salinity, July EC**

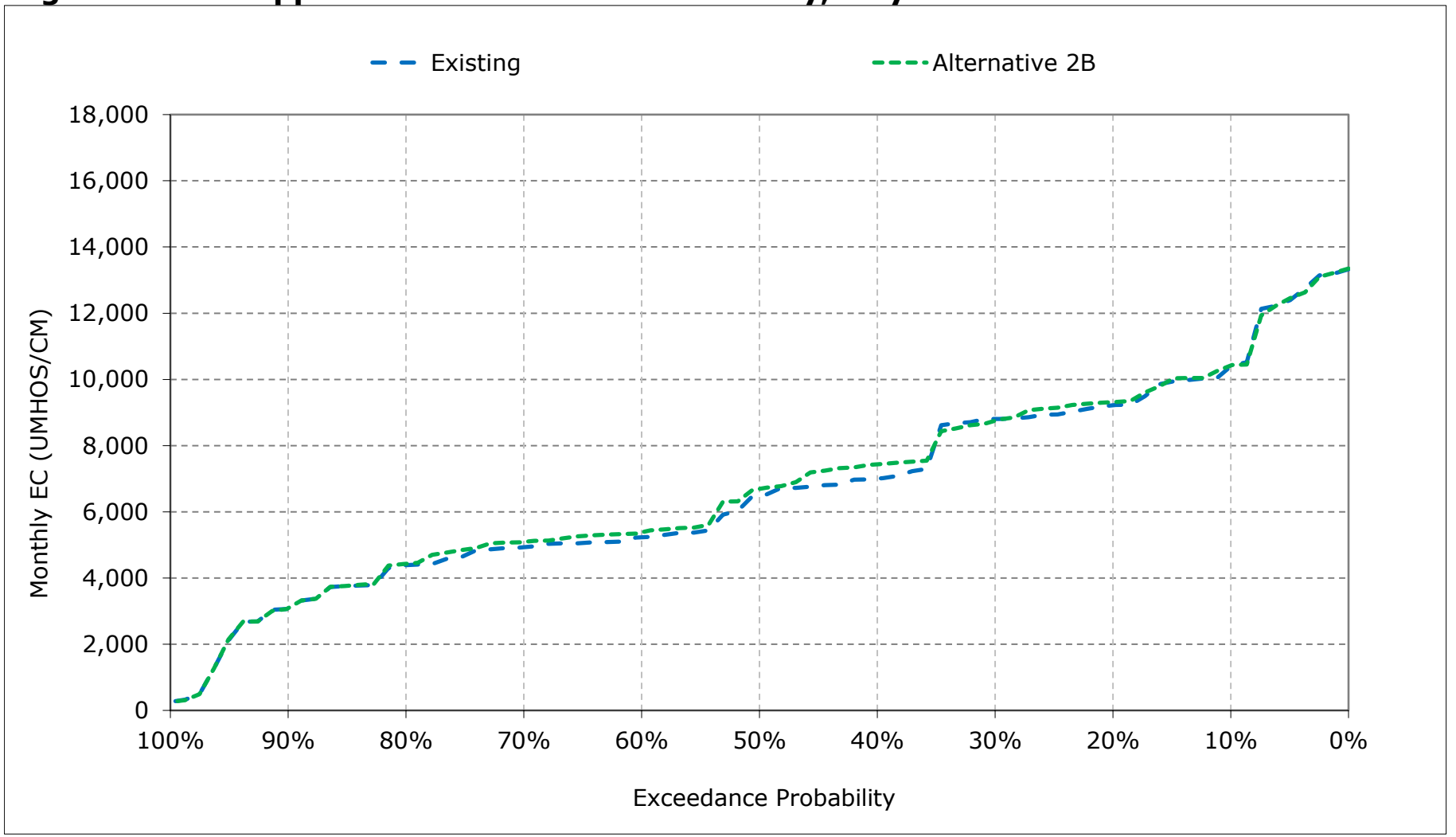


**Figure 8-14. Chipps Island North Channel Salinity, August EC**

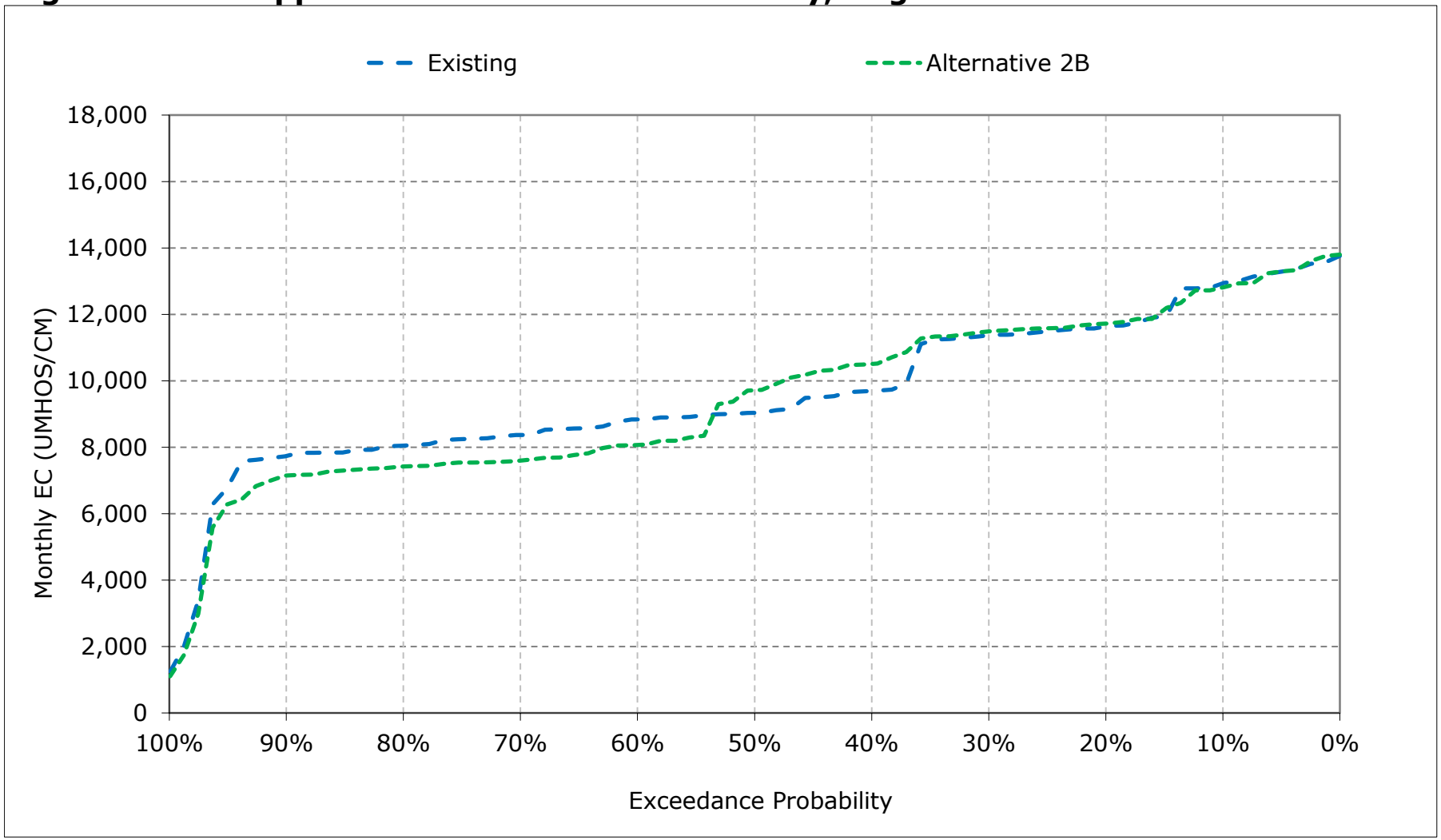


**Figure 8-15. Chipps Island North Channel Salinity, September EC**

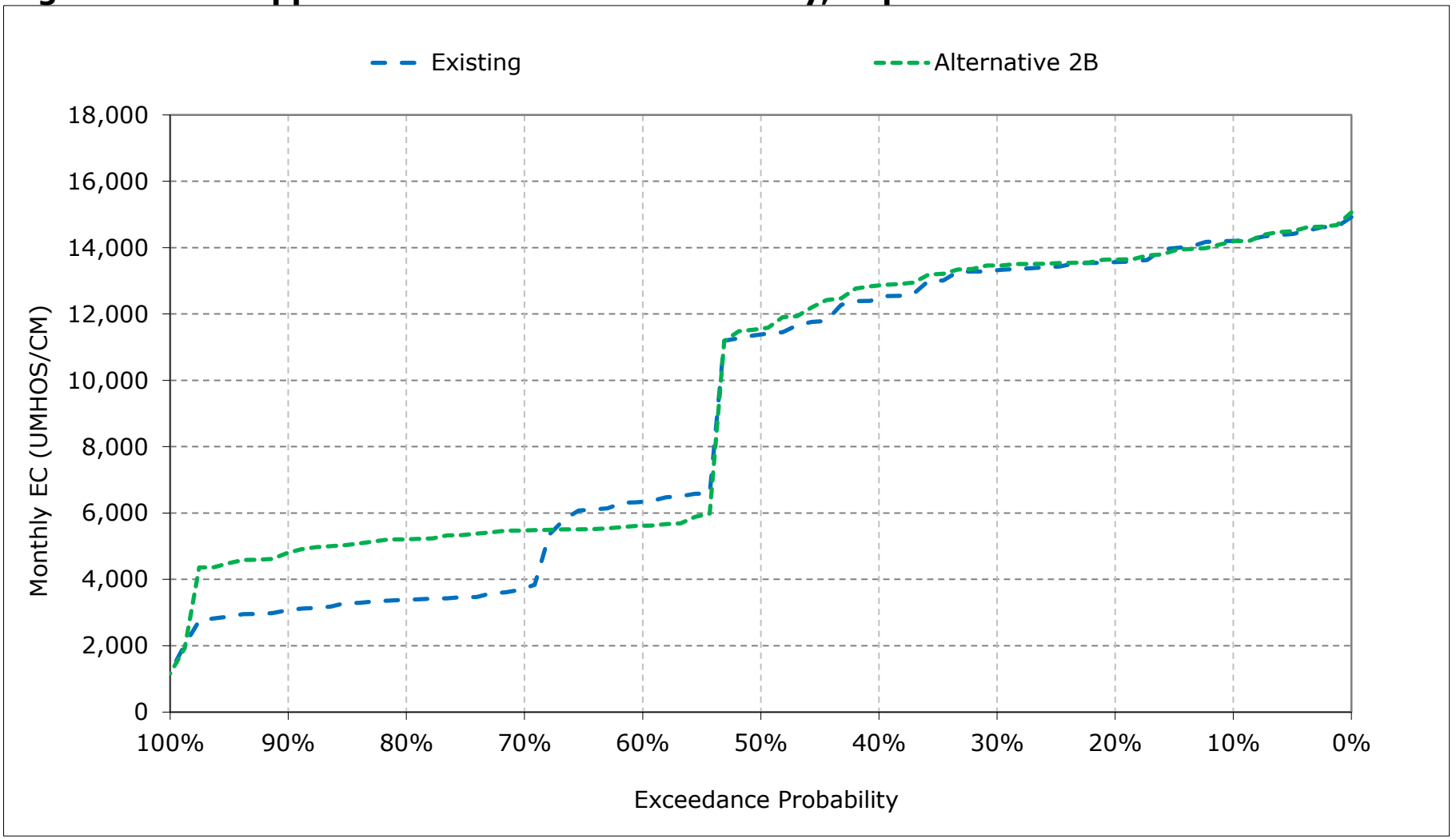


**Figure 8-16. Chipps Island North Channel Salinity, October EC**

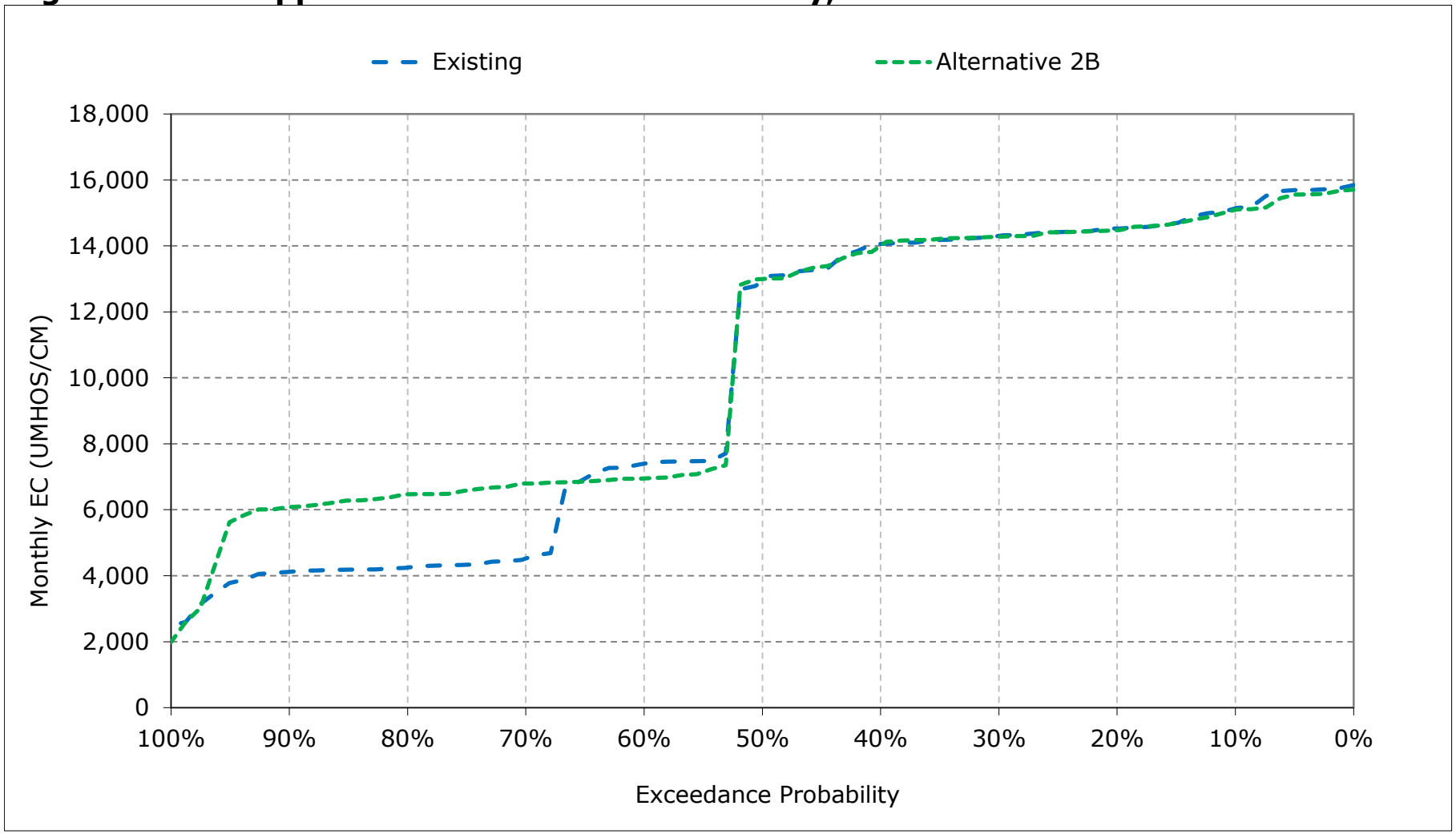


**Figure 8-17. Chipps Island North Channel Salinity, November EC**

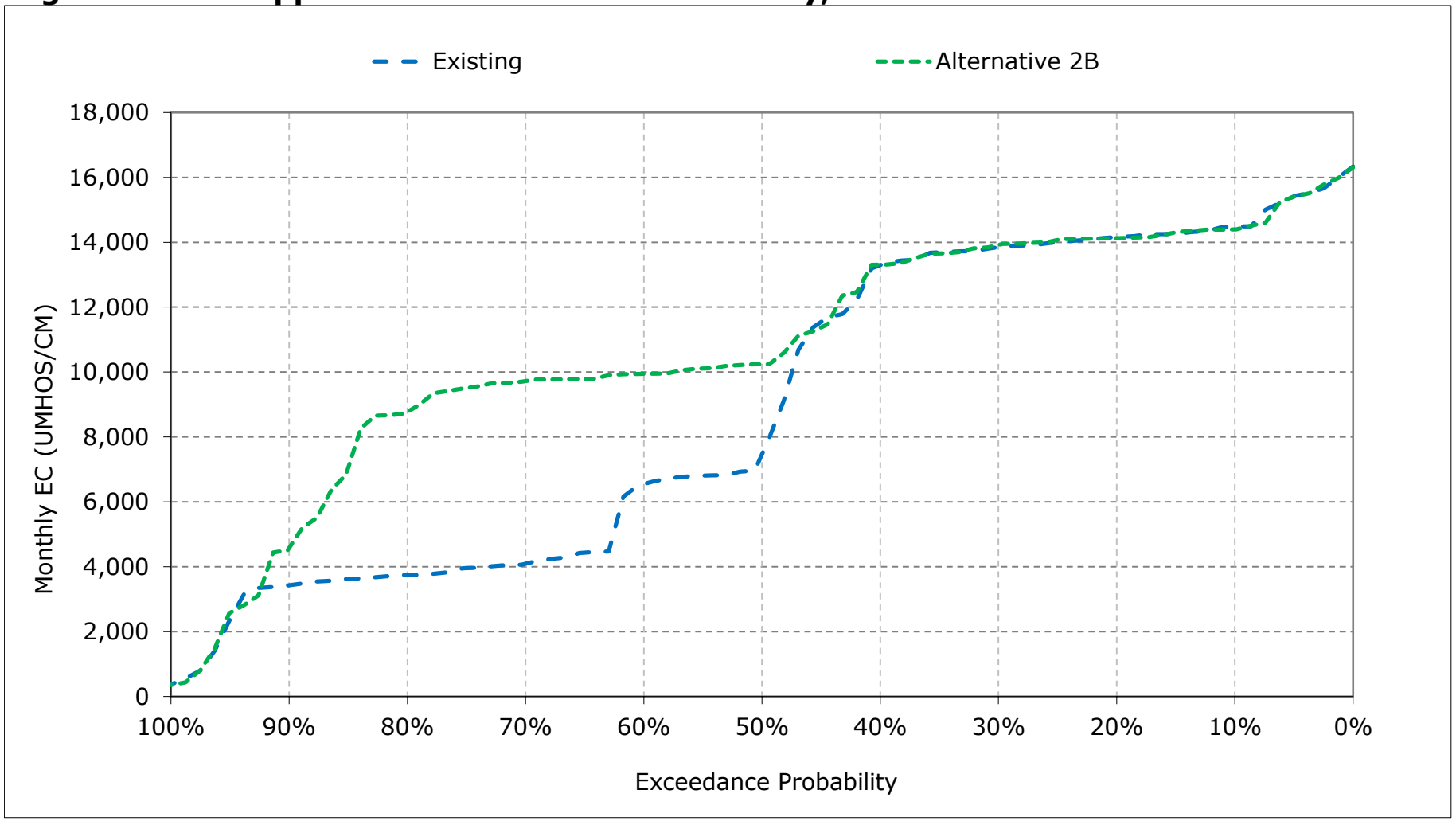
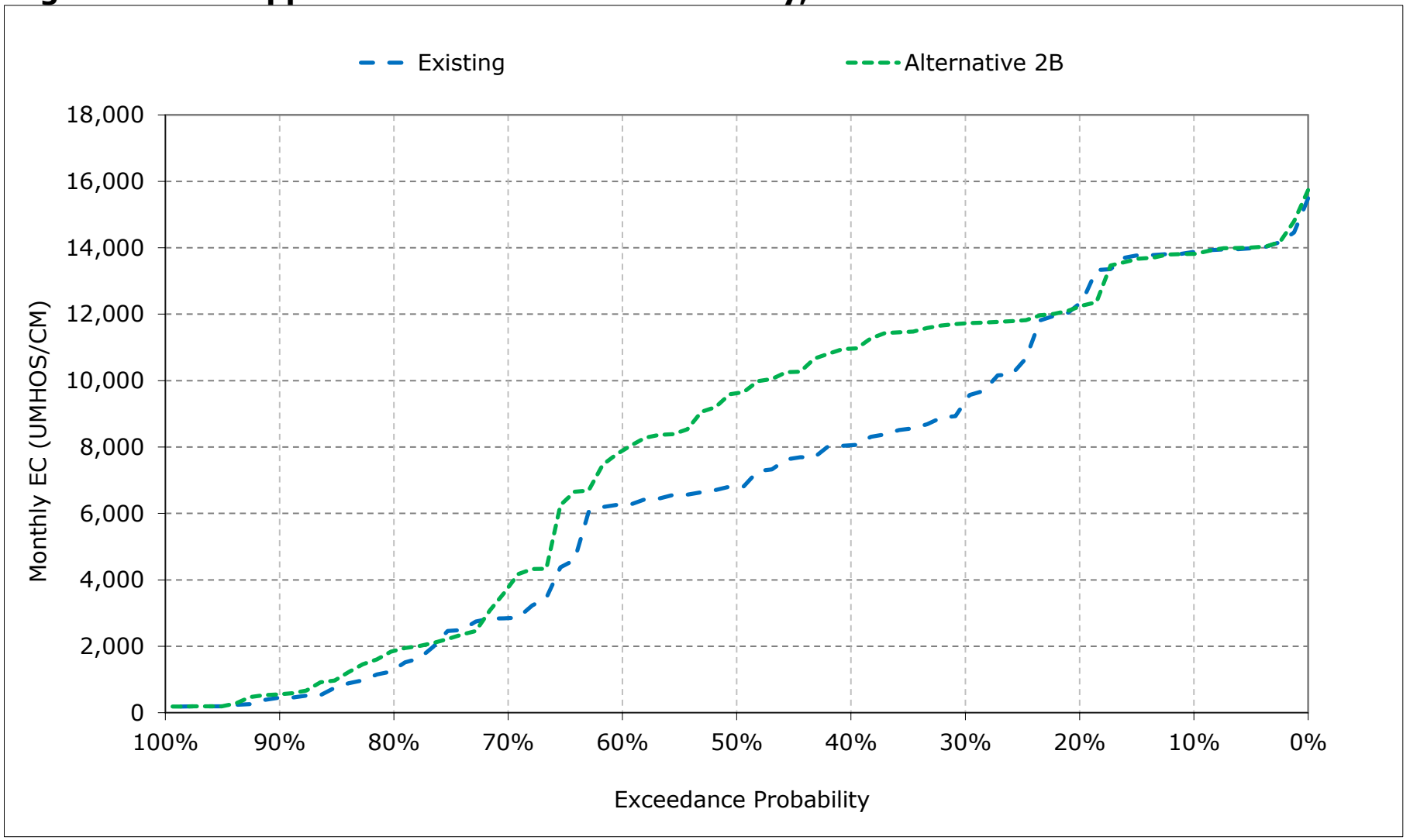


**Figure 8-18. Chipps Island North Channel Salinity, December EC**



## Table 9-1. Chipps Island South Channel Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 13,978 | 13,281 | 12,537 | 8,210 | 4,174 | 3,630 | 3,937 | 5,048 | 6,637 | 8,894 | 11,521 | 12,903 |
| **20%** | 13,320 | 12,805 | 10,920 | 7,295 | 2,547 | 2,037 | 1,966 | 3,919 | 5,526 | 7,692 | 10,241 | 12,247 |
| **30%** | 13,059 | 12,586 | 7,941 | 5,657 | 1,420 | 798 | 1,039 | 2,897 | 5,203 | 7,284 | 9,931 | 12,001 |
| **40%** | 12,865 | 11,999 | 6,732 | 3,264 | 795 | 605 | 808 | 1,734 | 4,277 | 5,564 | 8,261 | 11,115 |
| **50%** | 11,653 | 6,265 | 5,558 | 2,491 | 589 | 363 | 557 | 980 | 3,568 | 5,114 | 7,589 | 9,980 |
| **60%** | 6,184 | 5,367 | 5,069 | 1,335 | 295 | 244 | 307 | 646 | 2,720 | 4,060 | 7,427 | 5,219 |
| **70%** | 3,557 | 3,197 | 2,145 | 339 | 219 | 203 | 239 | 387 | 2,007 | 3,715 | 6,995 | 3,003 |
| **80%** | 3,334 | 2,863 | 1,040 | 216 | 201 | 196 | 205 | 238 | 897 | 3,268 | 6,690 | 2,663 |
| **90%** | 3,161 | 2,617 | 355 | 196 | 192 | 191 | 192 | 193 | 232 | 2,248 | 6,353 | 2,473 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 8,840 | 7,881 | 5,965 | 3,432 | 1,483 | 1,073 | 1,242 | 2,017 | 3,701 | 5,422 | 8,251 | 7,901 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 6,948 | 5,172 | 2,013 | 631 | 240 | 236 | 282 | 448 | 1,259 | 2,703 | 6,196 | 2,473 |
| **Above Normal (15%)** | 9,230 | 7,827 | 5,961 | 2,122 | 564 | 251 | 336 | 595 | 2,502 | 3,646 | 6,818 | 5,100 |
| **Below Normal (17%)** | 9,261 | 8,675 | 7,599 | 3,803 | 972 | 781 | 836 | 1,470 | 3,527 | 5,266 | 7,910 | 10,521 |
| **Dry (22%)** | 9,348 | 9,098 | 7,430 | 5,383 | 2,376 | 1,474 | 1,734 | 2,962 | 5,139 | 7,459 | 10,075 | 12,122 |
| **Critical (15%)** | 11,294 | 11,051 | 10,428 | 7,453 | 4,354 | 3,446 | 3,964 | 6,062 | 8,235 | 10,217 | 11,797 | 13,075 |

### Alternative 2B

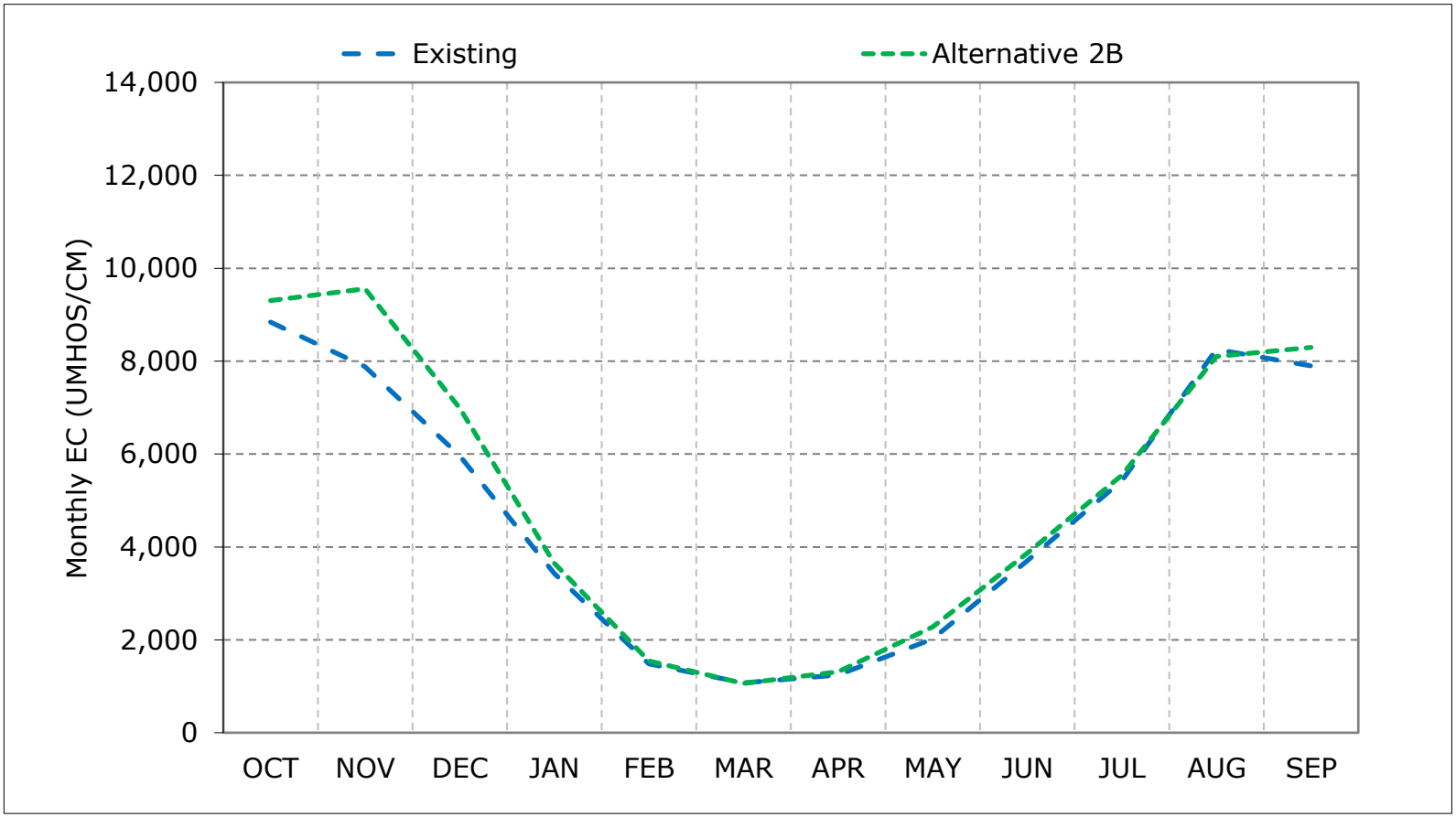
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 13,903 | 13,177 | 12,461 | 9,333 | 4,212 | 3,663 | 3,905 | 5,239 | 6,721 | 8,850 | 11,334 | 12,801 |
| **20%** | 13,286 | 12,832 | 10,862 | 8,008 | 2,516 | 1,909 | 2,209 | 4,473 | 5,936 | 7,826 | 10,283 | 12,295 |
| **30%** | 13,044 | 12,606 | 10,369 | 6,196 | 1,579 | 728 | 1,309 | 3,592 | 5,302 | 7,212 | 10,085 | 12,133 |
| **40%** | 12,784 | 12,004 | 9,553 | 3,561 | 779 | 536 | 949 | 2,091 | 4,750 | 6,031 | 9,232 | 11,576 |
| **50%** | 11,666 | 9,019 | 8,303 | 2,410 | 622 | 333 | 599 | 1,277 | 3,653 | 5,412 | 8,366 | 10,186 |
| **60%** | 5,768 | 8,687 | 6,612 | 1,245 | 258 | 233 | 333 | 945 | 3,077 | 4,161 | 6,692 | 4,490 |
| **70%** | 5,529 | 8,427 | 2,822 | 337 | 217 | 205 | 256 | 493 | 2,202 | 3,887 | 6,216 | 4,336 |
| **80%** | 5,256 | 7,487 | 1,597 | 215 | 201 | 195 | 201 | 254 | 940 | 3,341 | 6,020 | 4,132 |
| **90%** | 4,871 | 3,644 | 615 | 196 | 193 | 192 | 190 | 189 | 234 | 2,255 | 5,658 | 3,788 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 9,307 | 9,557 | 6,992 | 3,648 | 1,545 | 1,061 | 1,311 | 2,276 | 3,862 | 5,539 | 8,100 | 8,297 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 7,553 | 7,367 | 2,674 | 632 | 233 | 230 | 318 | 588 | 1,424 | 2,777 | 5,461 | 3,855 |
| **Above Normal (15%)** | 9,830 | 9,489 | 7,364 | 2,223 | 473 | 237 | 385 | 834 | 2,578 | 3,732 | 6,237 | 4,226 |
| **Below Normal (17%)** | 9,776 | 10,298 | 8,862 | 3,852 | 932 | 727 | 943 | 1,871 | 3,657 | 5,672 | 8,812 | 10,905 |
| **Dry (22%)** | 9,797 | 10,554 | 8,685 | 5,940 | 2,577 | 1,433 | 1,838 | 3,371 | 5,391 | 7,529 | 10,182 | 12,223 |
| **Critical (15%)** | 11,302 | 12,011 | 11,255 | 7,930 | 4,628 | 3,516 | 4,025 | 6,204 | 8,373 | 10,188 | 11,730 | 13,062 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -74 | -105 | -75 | **1,123** | **39** | **33** | -32 | **191** | **84** | -44 | -188 | -101 |
| **20%** | -34 | **27** | -58 | **713** | -31 | -128 | **243** | **554** | **410** | **133** | **42** | **49** |
| **30%** | -16 | **20** | **2,428** | **539** | **159** | -71 | **270** | **695** | **99** | -72 | **153** | **132** |
| **40%** | -81 | **5** | **2,821** | **297** | -15 | -69 | **141** | **357** | **473** | **467** | **971** | **461** |
| **50%** | **12** | **2,754** | **2,745** | -81 | **33** | -30 | **42** | **297** | **85** | **298** | **778** | **206** |
| **60%** | -416 | **3,321** | **1,543** | -90 | -37 | -12 | **26** | **299** | **357** | **101** | -735 | -730 |
| **70%** | **1,972** | **5,230** | **677** | -2 | -2 | **2** | **17** | **106** | **195** | **172** | -779 | **1,333** |
| **80%** | **1,921** | **4,624** | **556** | -1 | 0 | -1 | -4 | **16** | **44** | **72** | -670 | **1,468** |
| **90%** | **1,710** | **1,027** | **260** | 0 | **1** | **0** | -2 | -4 | **2** | **6** | -695 | **1,315** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **467** | **1,677** | **1,027** | **215** | **62** | -12 | **69** | **258** | **161** | **117** | -151 | **396** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **605** | **2,196** | **660** | **1** | -7 | -6 | **36** | **140** | **164** | **74** | -735 | **1,382** |
| **Above Normal (15%)** | **600** | **1,663** | **1,402** | **101** | -91 | -14 | **49** | **239** | **75** | **85** | -581 | -874 |
| **Below Normal (17%)** | **515** | **1,623** | **1,263** | **49** | -39 | -53 | **107** | **400** | **130** | **407** | **902** | **384** |
| **Dry (22%)** | **449** | **1,456** | **1,256** | **557** | **201** | -41 | **104** | **409** | **252** | **70** | **106** | **101** |
| **Critical (15%)** | **7** | **960** | **827** | **477** | **274** | **70** | **61** | **141** | **138** | -30 | -67 | -13 |

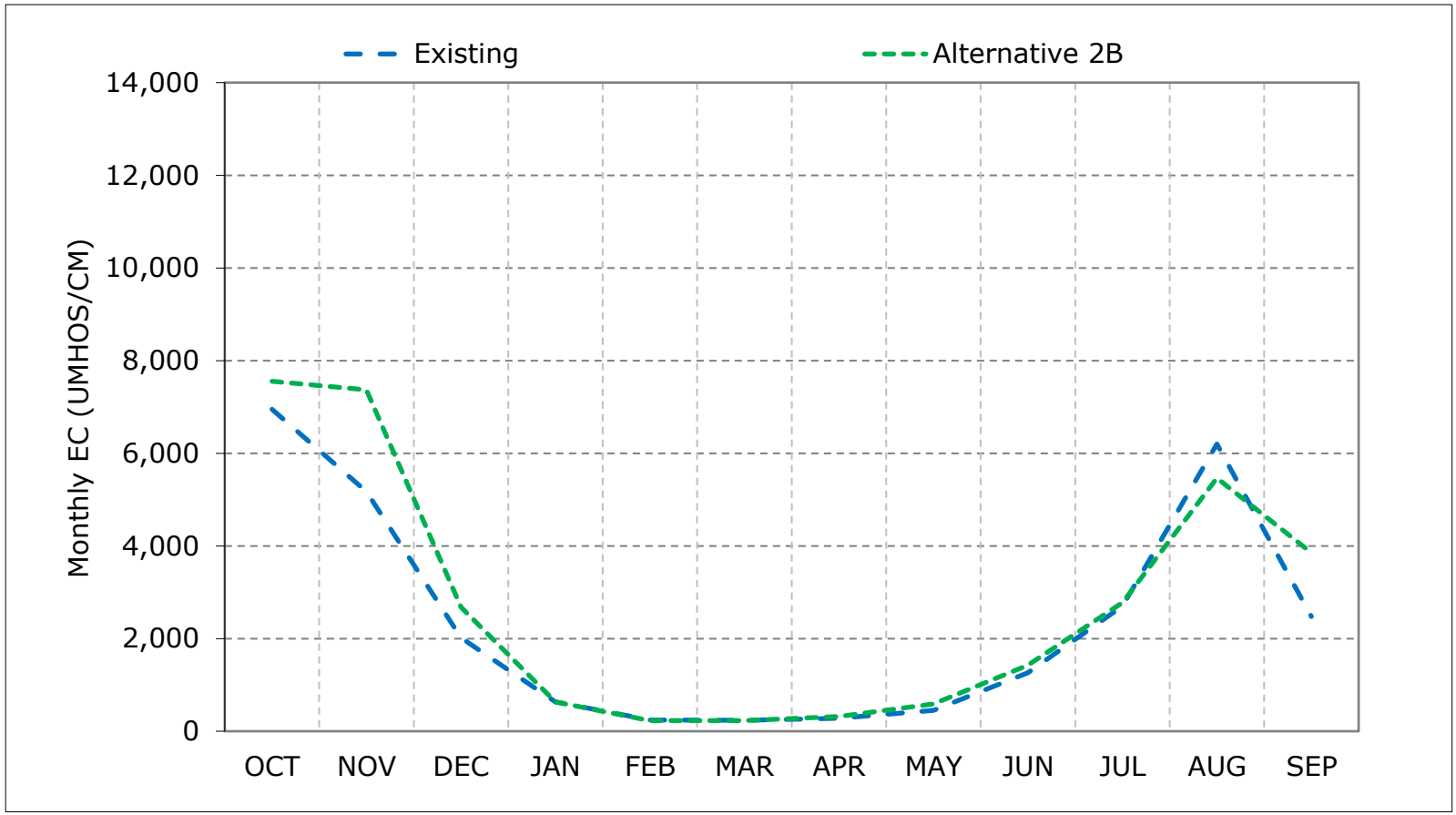
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 9-1. Chipps Island South Channel Salinity, Long-Term Average EC**



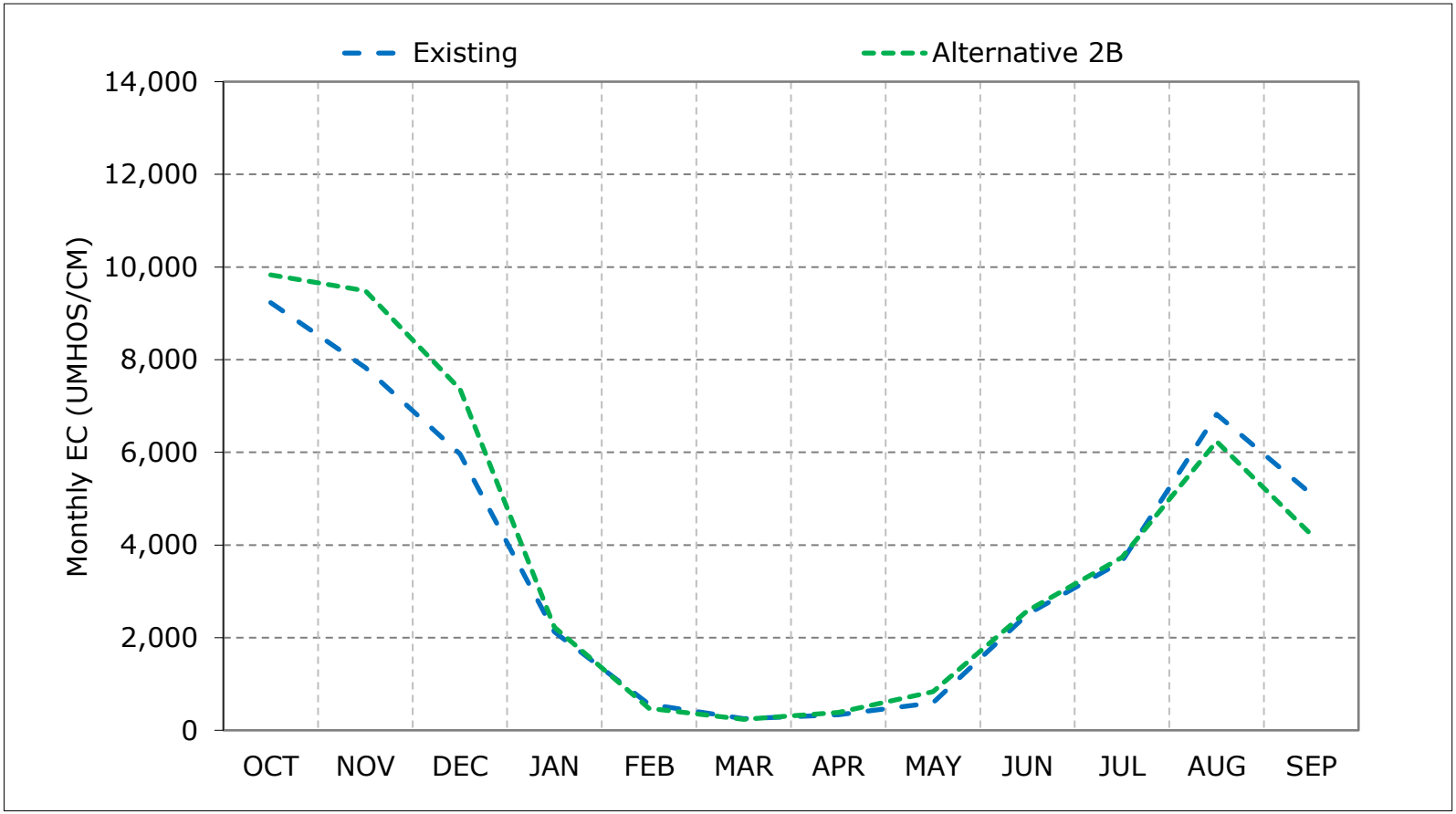

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 9-2. Chipps Island South Channel Salinity, Wet Year Average EC**



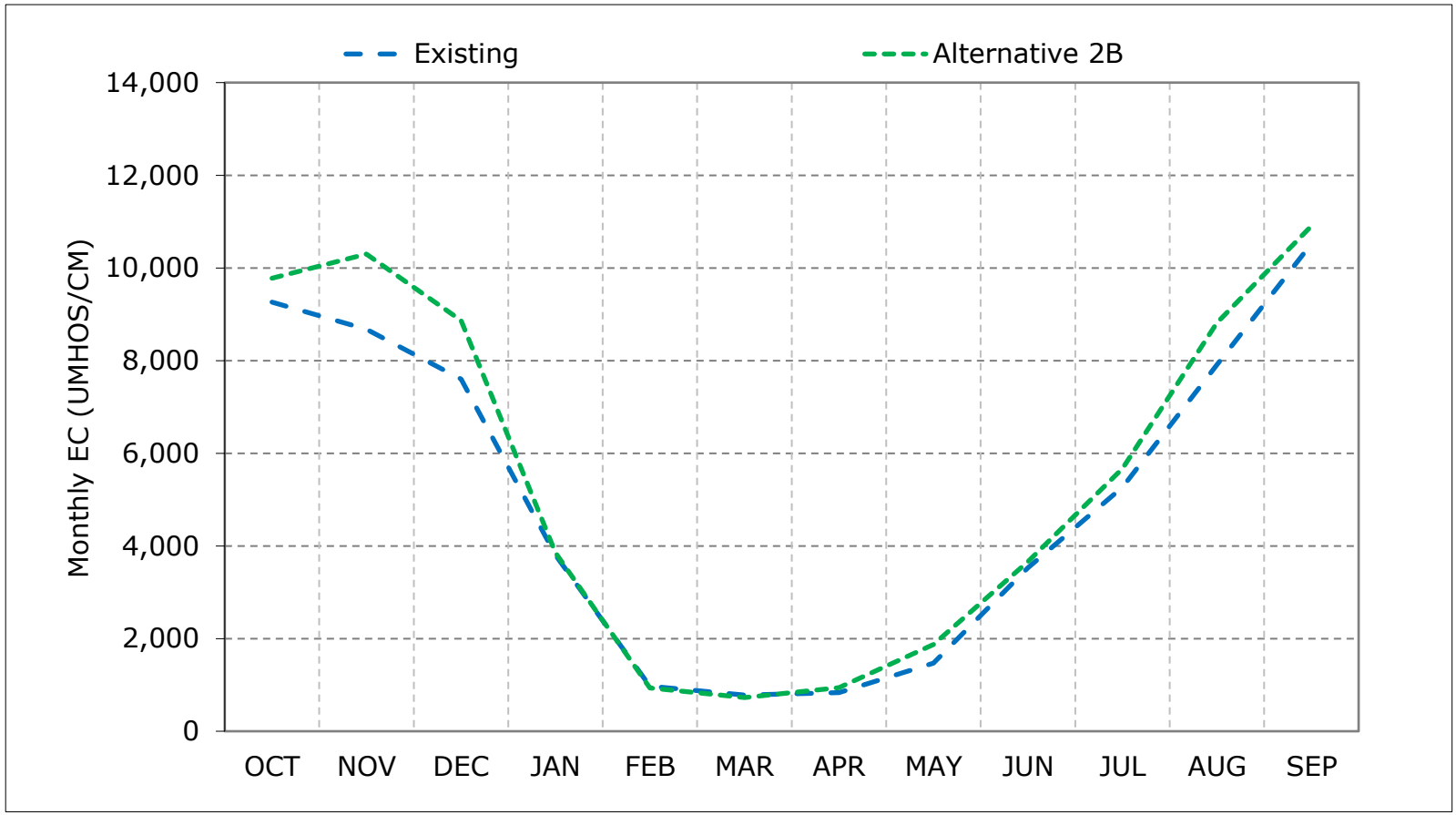

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 9-3. Chipps Island South Channel Salinity, Above Normal Year Average EC**



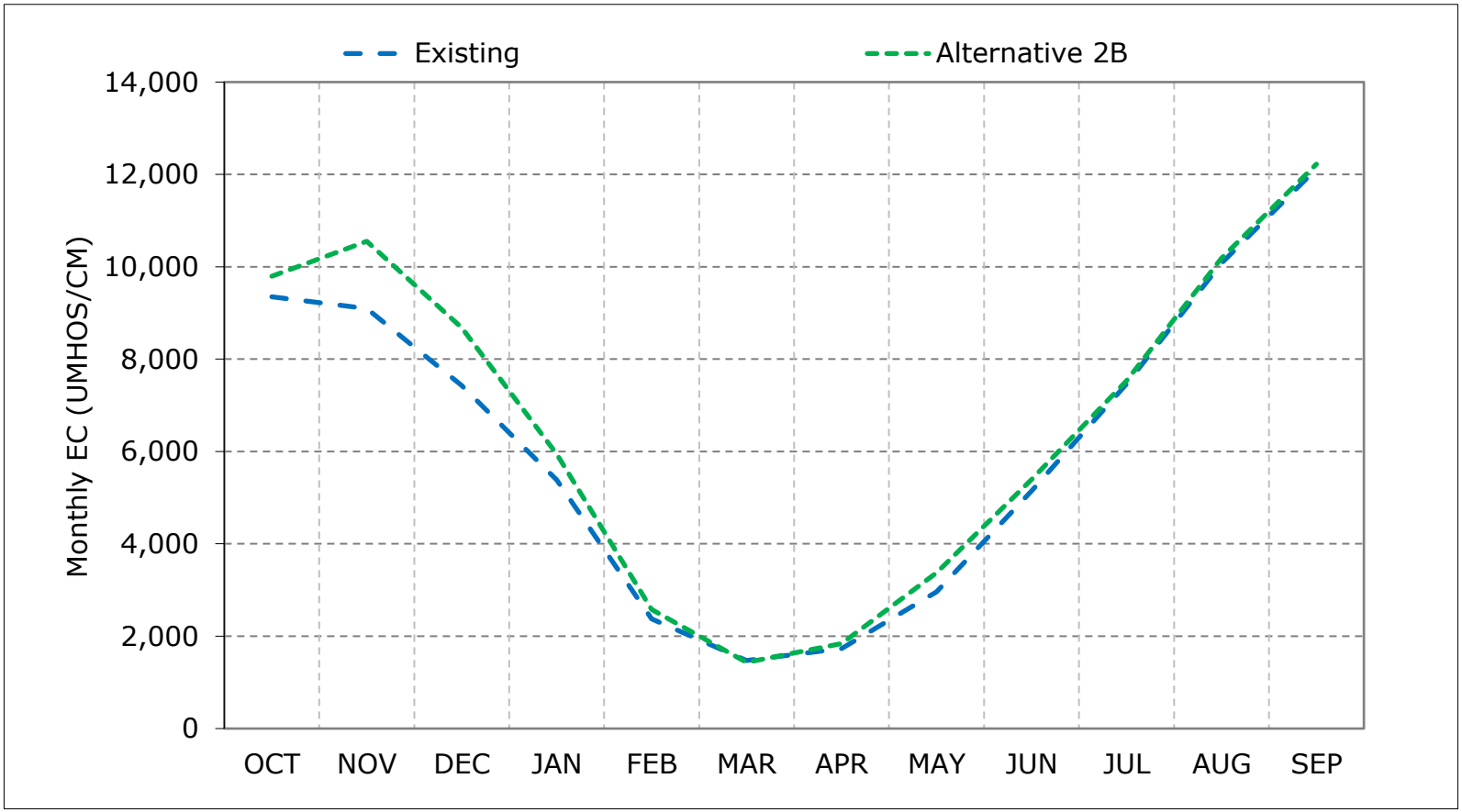

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 9-4. Chipps Island South Channel Salinity, Below Normal Year Average EC**



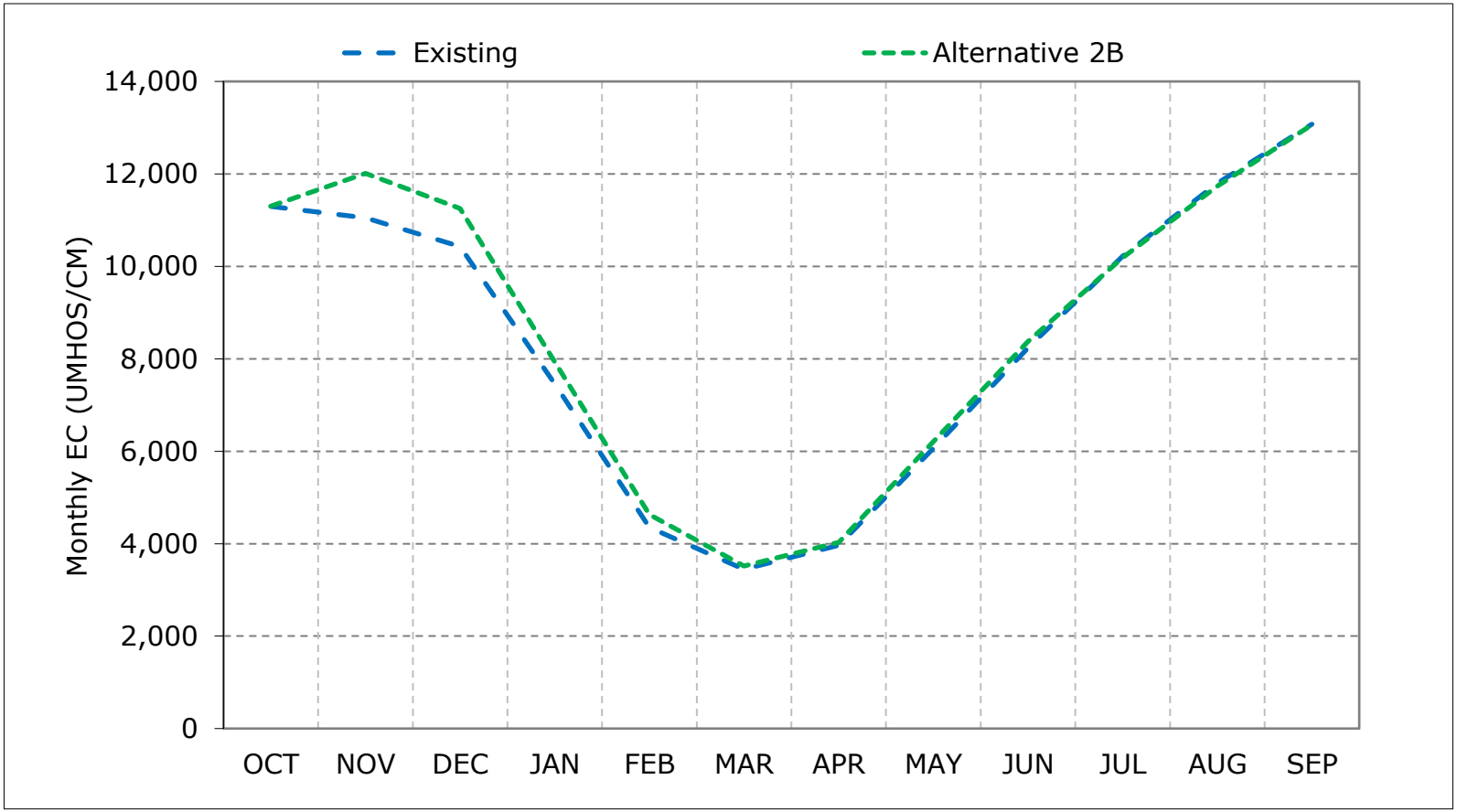

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 9-5. Chipps Island South Channel Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 9-6. Chipps Island South Channel Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 9-7. Chipps Island South Channel Salinity, January EC**

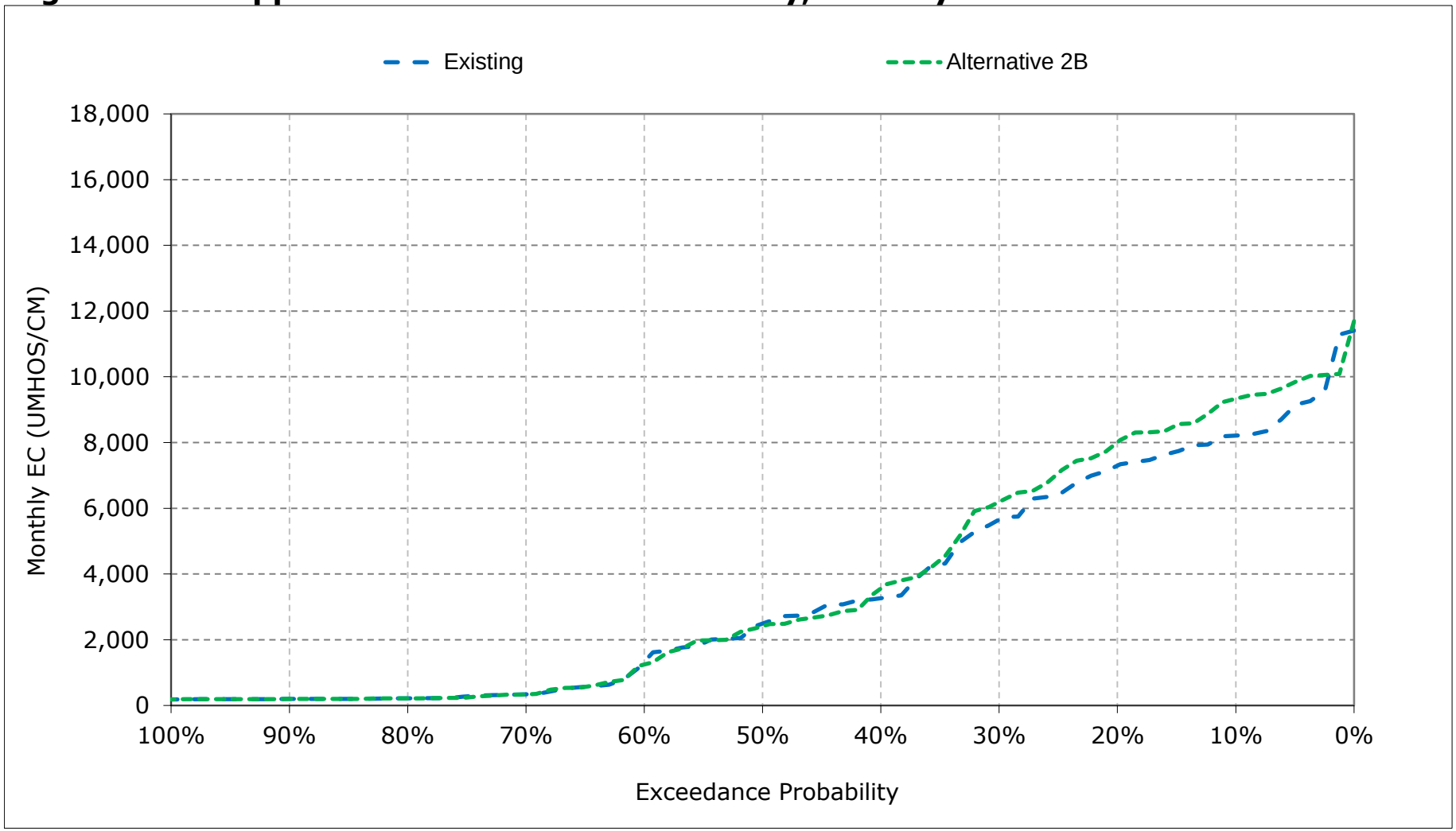


**Figure 9-8. Chipps Island South Channel Salinity, February EC**

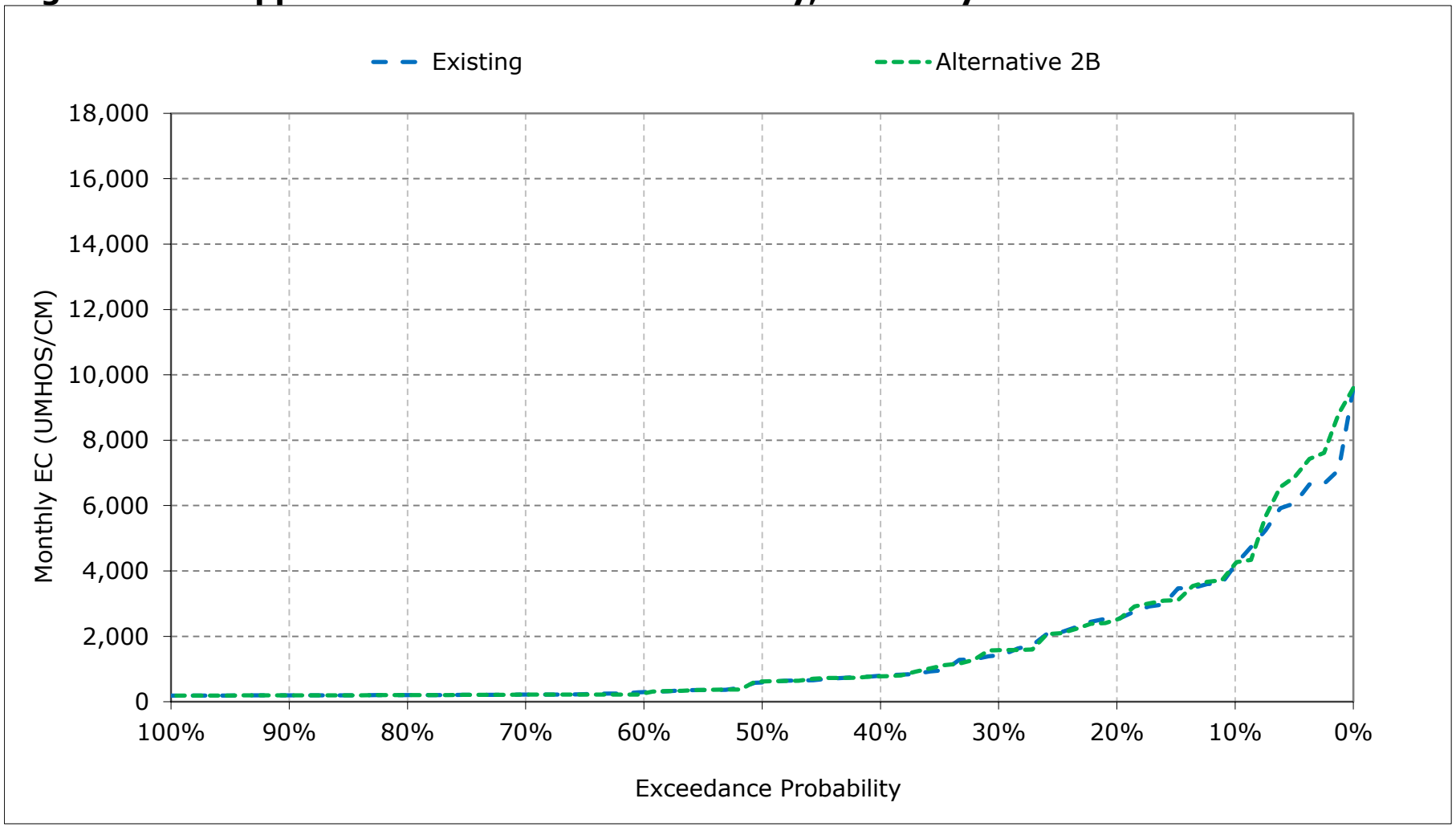


**Figure 9-9. Chipps Island South Channel Salinity, March EC**

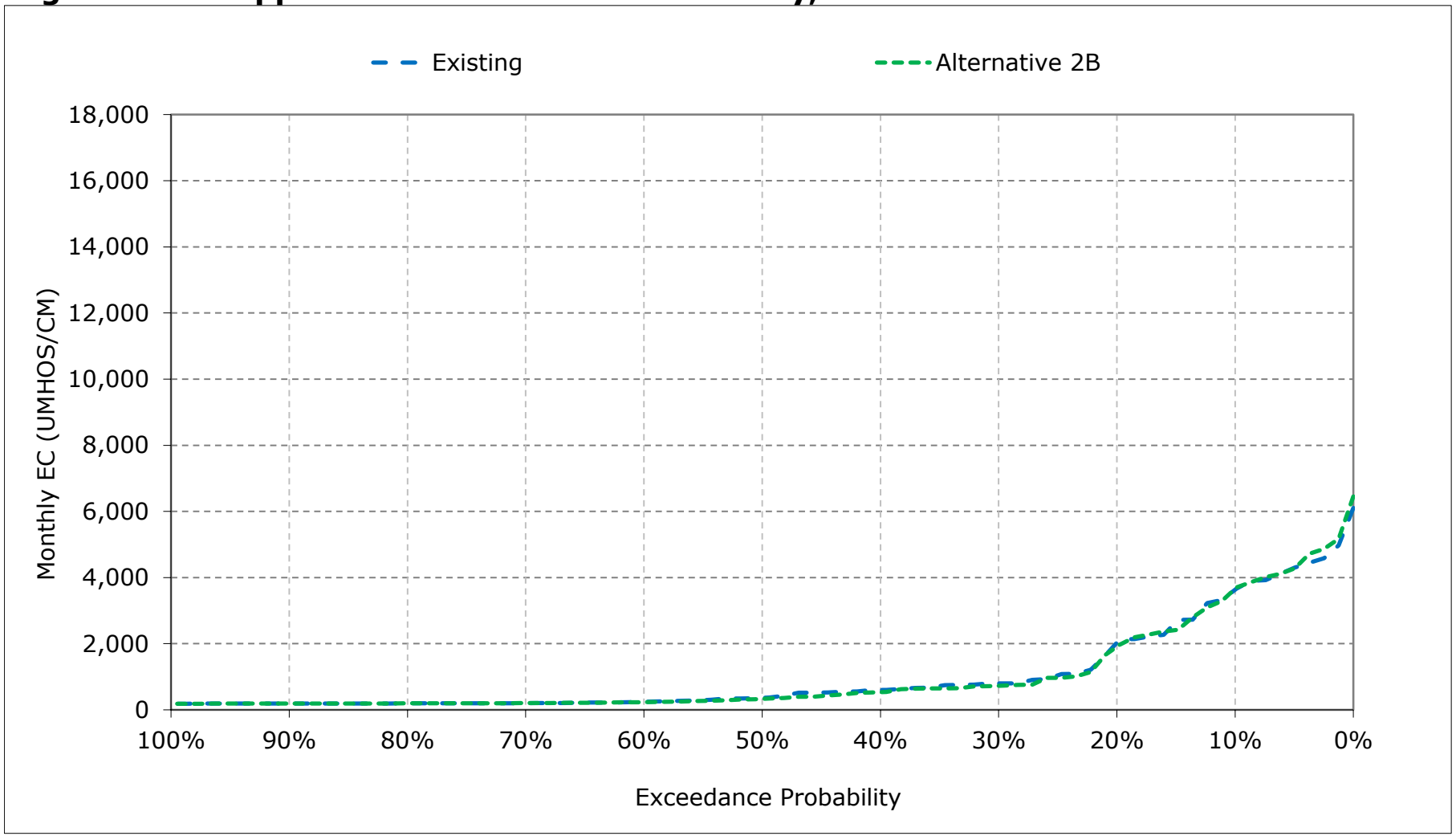


**Figure 9-10. Chipps Island South Channel Salinity, April EC**

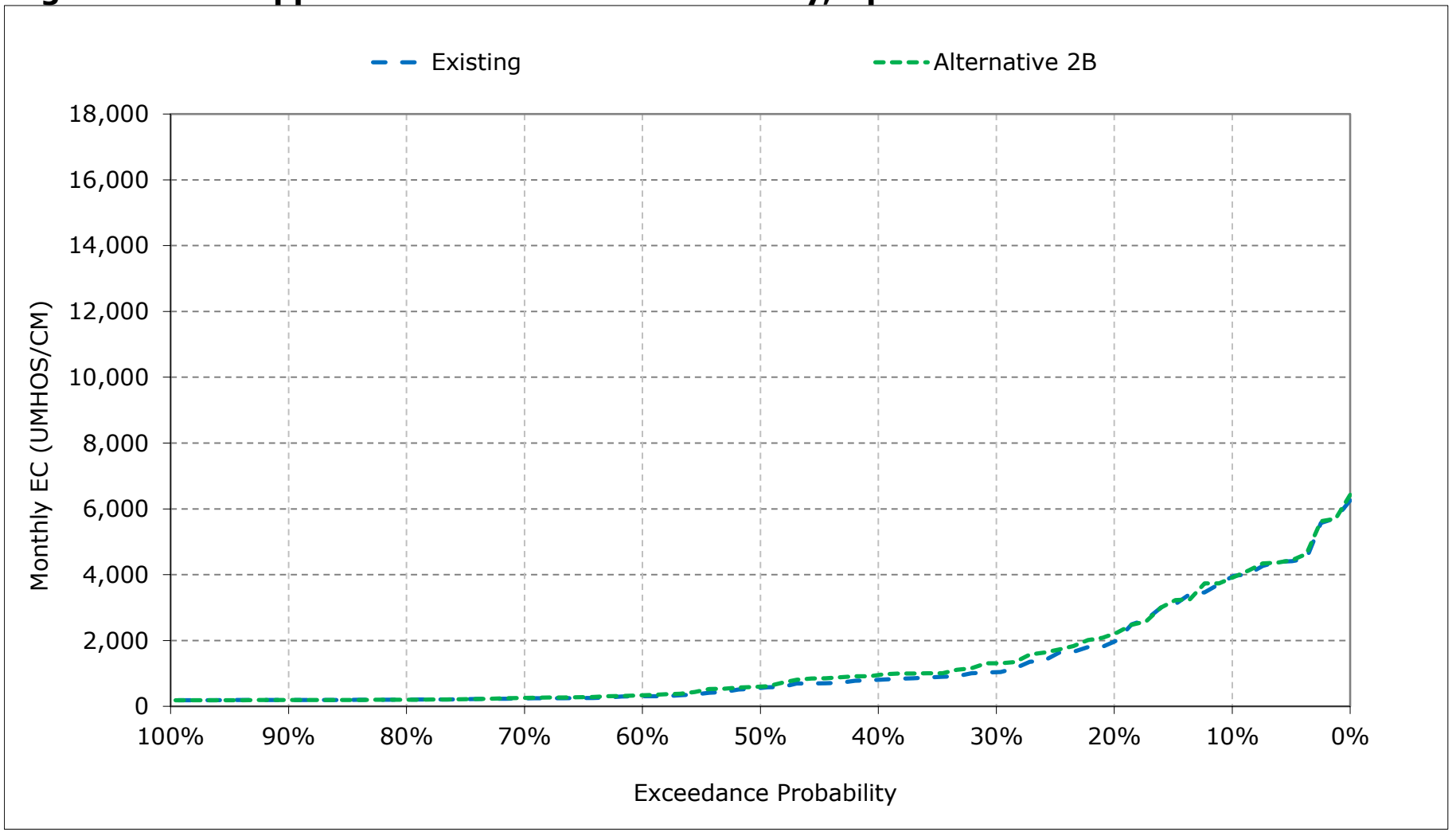


**Figure 9-11. Chipps Island South Channel Salinity, May EC**

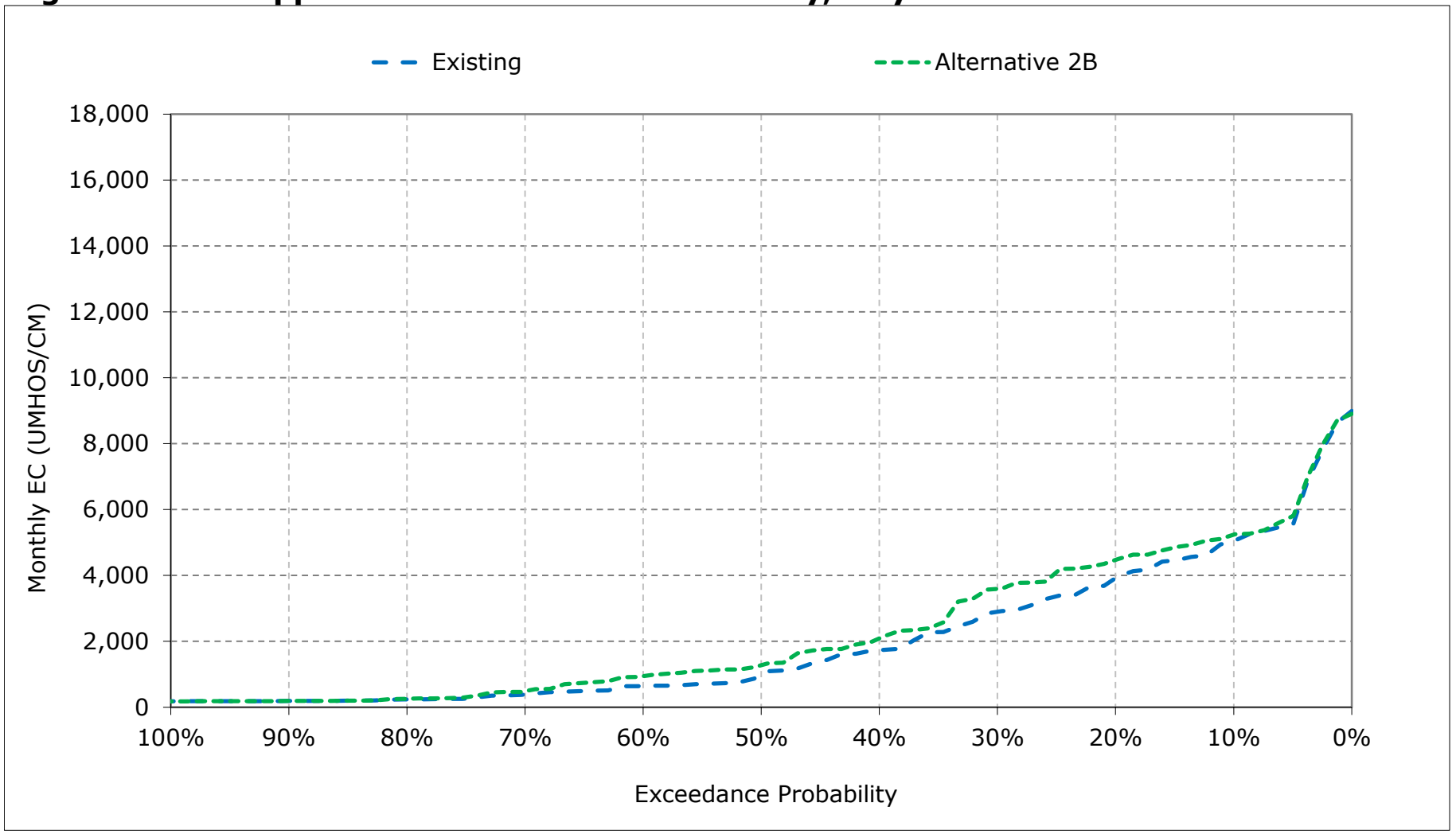


**Figure 9-12. Chipps Island South Channel Salinity, June EC**

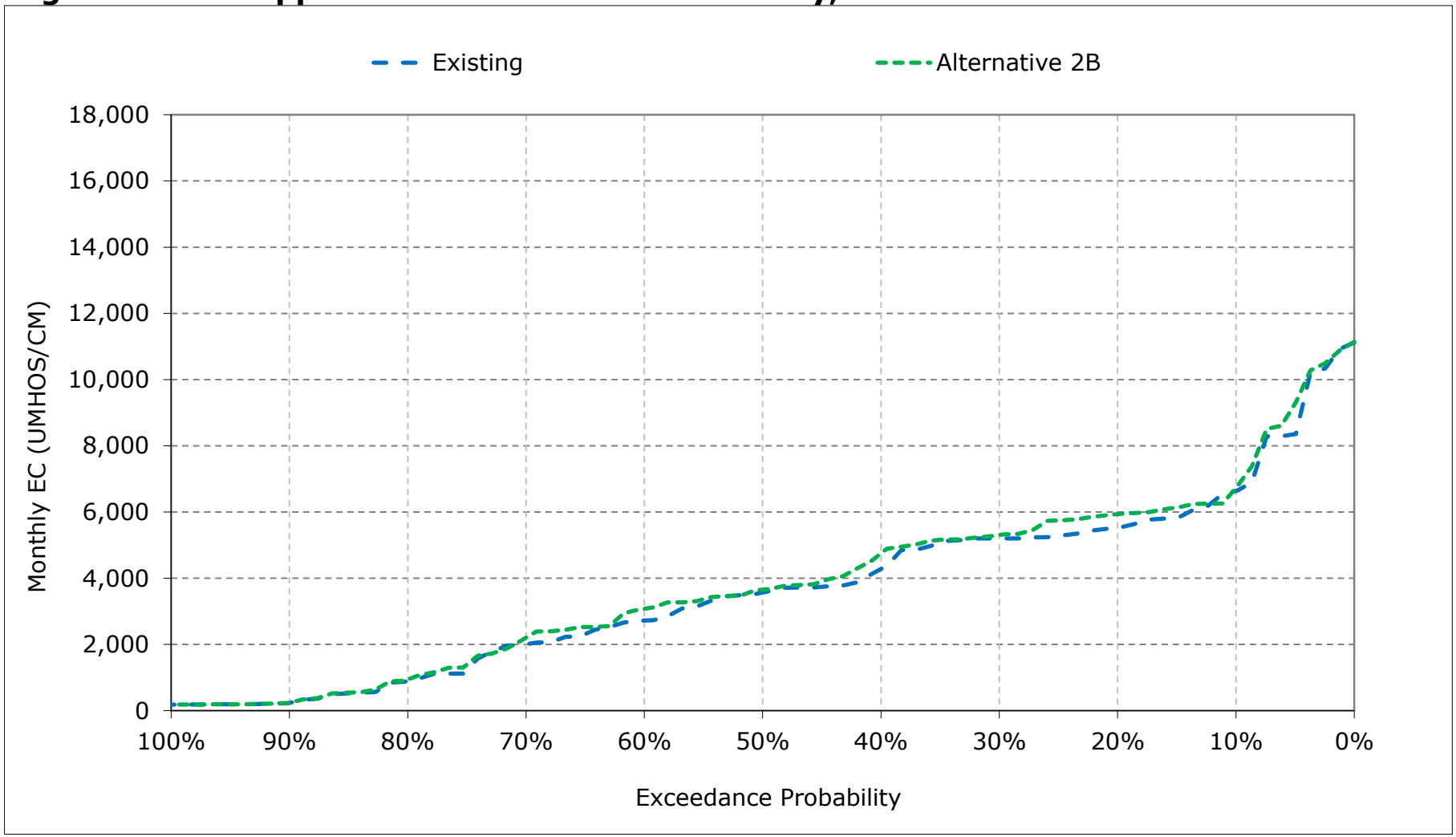


**Figure 9-13. Chipps Island South Channel Salinity, July EC**

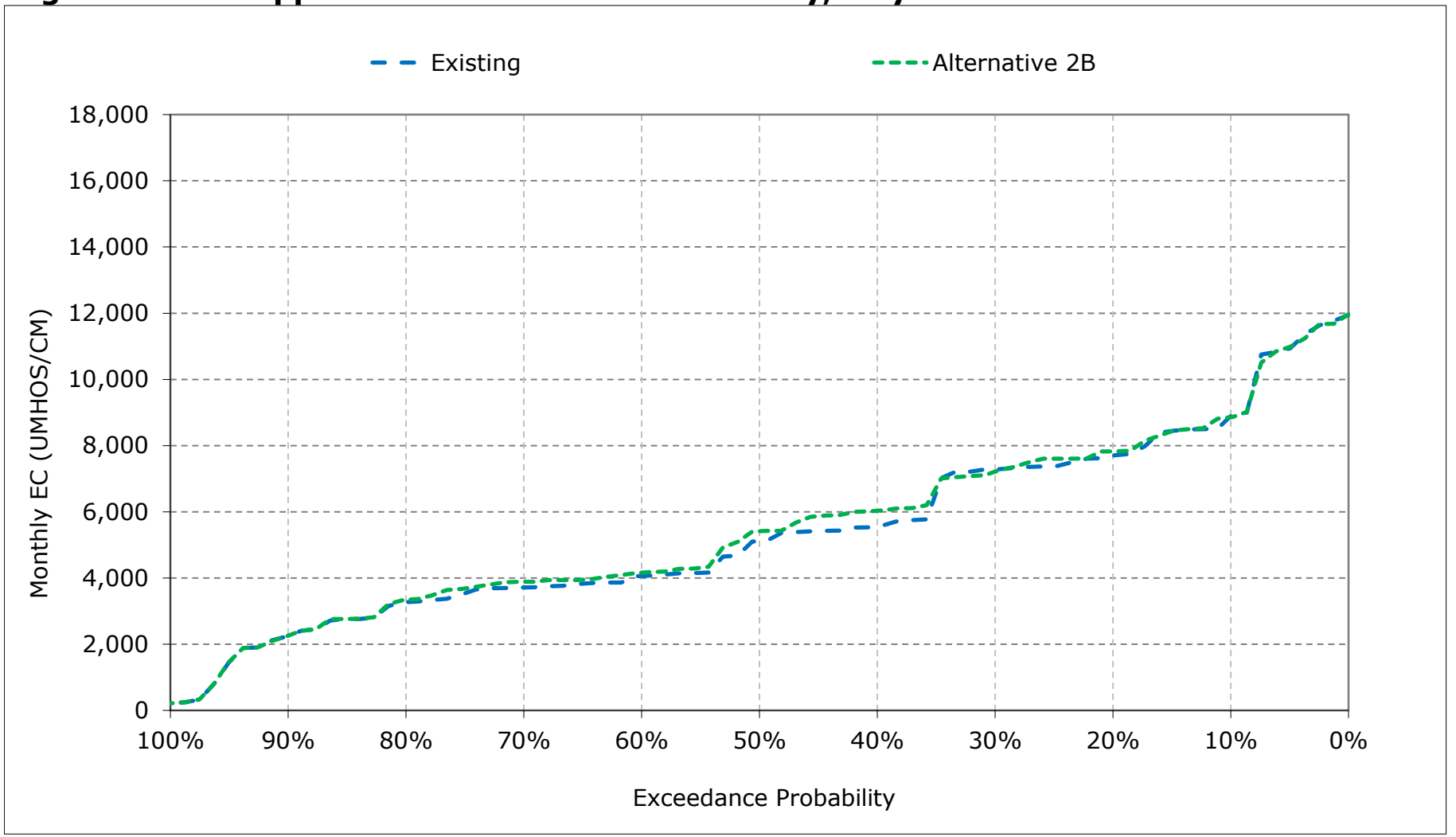


**Figure 9-14. Chipps Island South Channel Salinity, August EC**

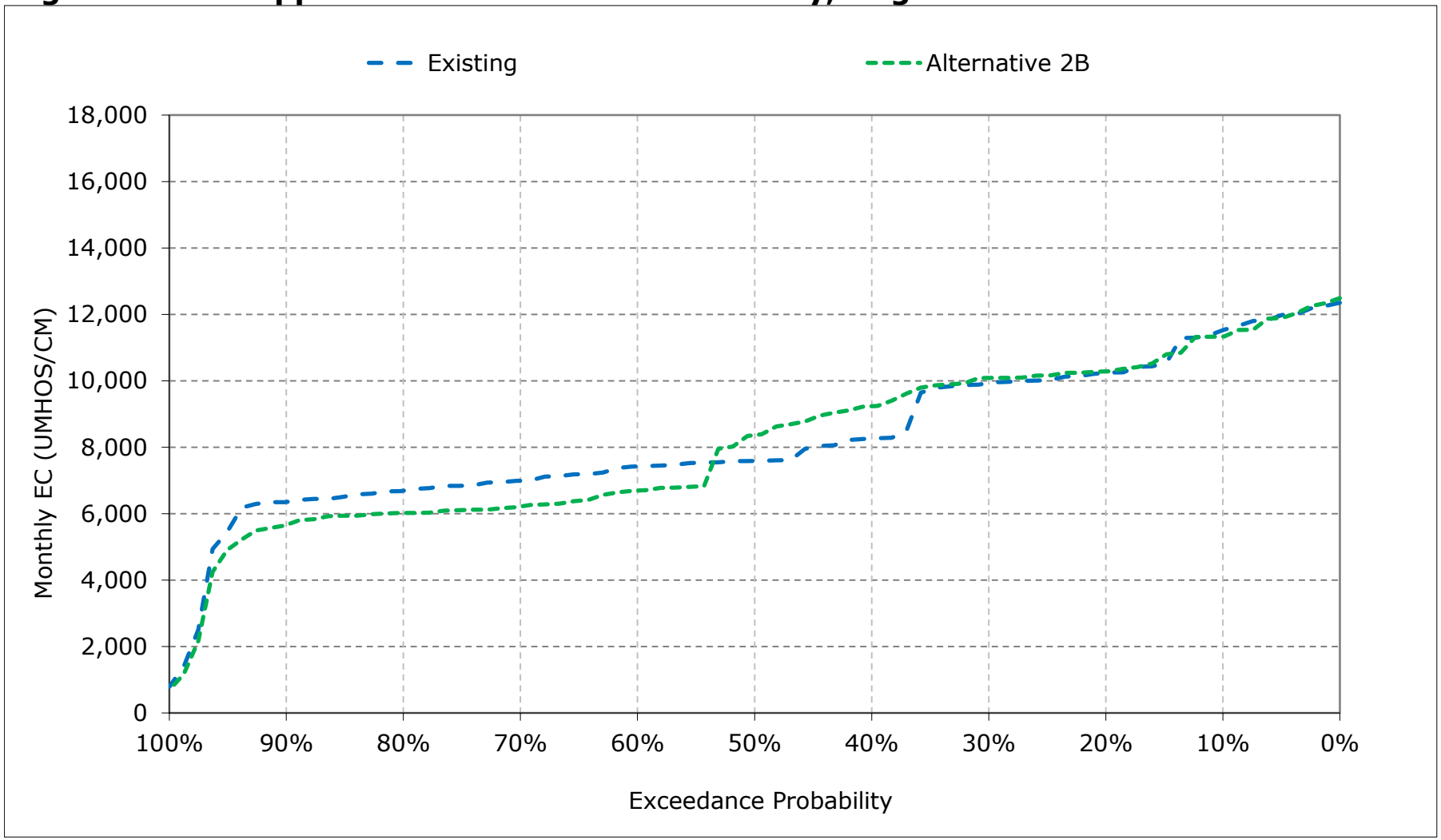


**Figure 9-15. Chipps Island South Channel Salinity, September EC**

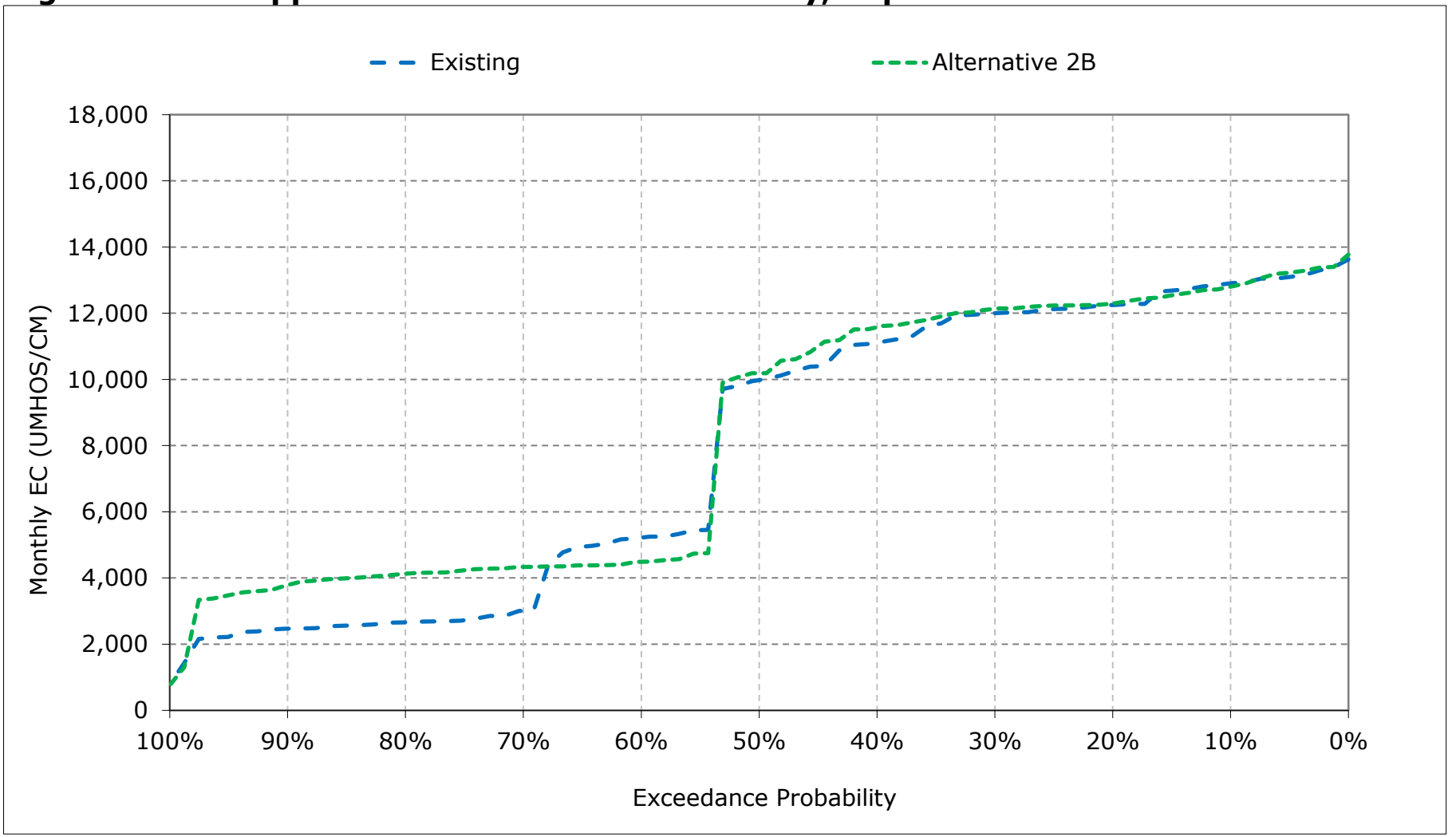


**Figure 9-16. Chipps Island South Channel Salinity, October EC**

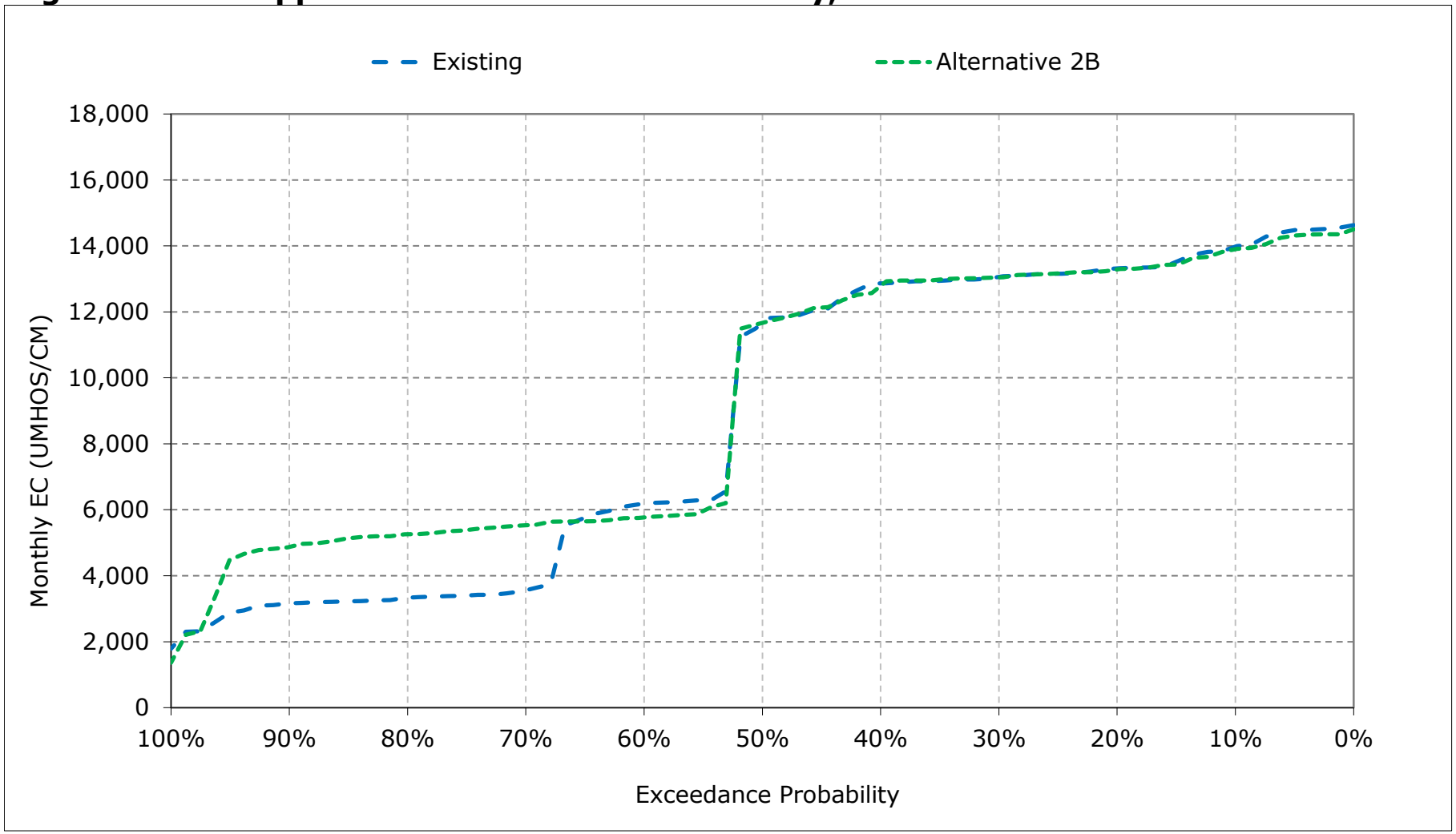


**Figure 9-17. Chipps Island South Channel Salinity, November EC**

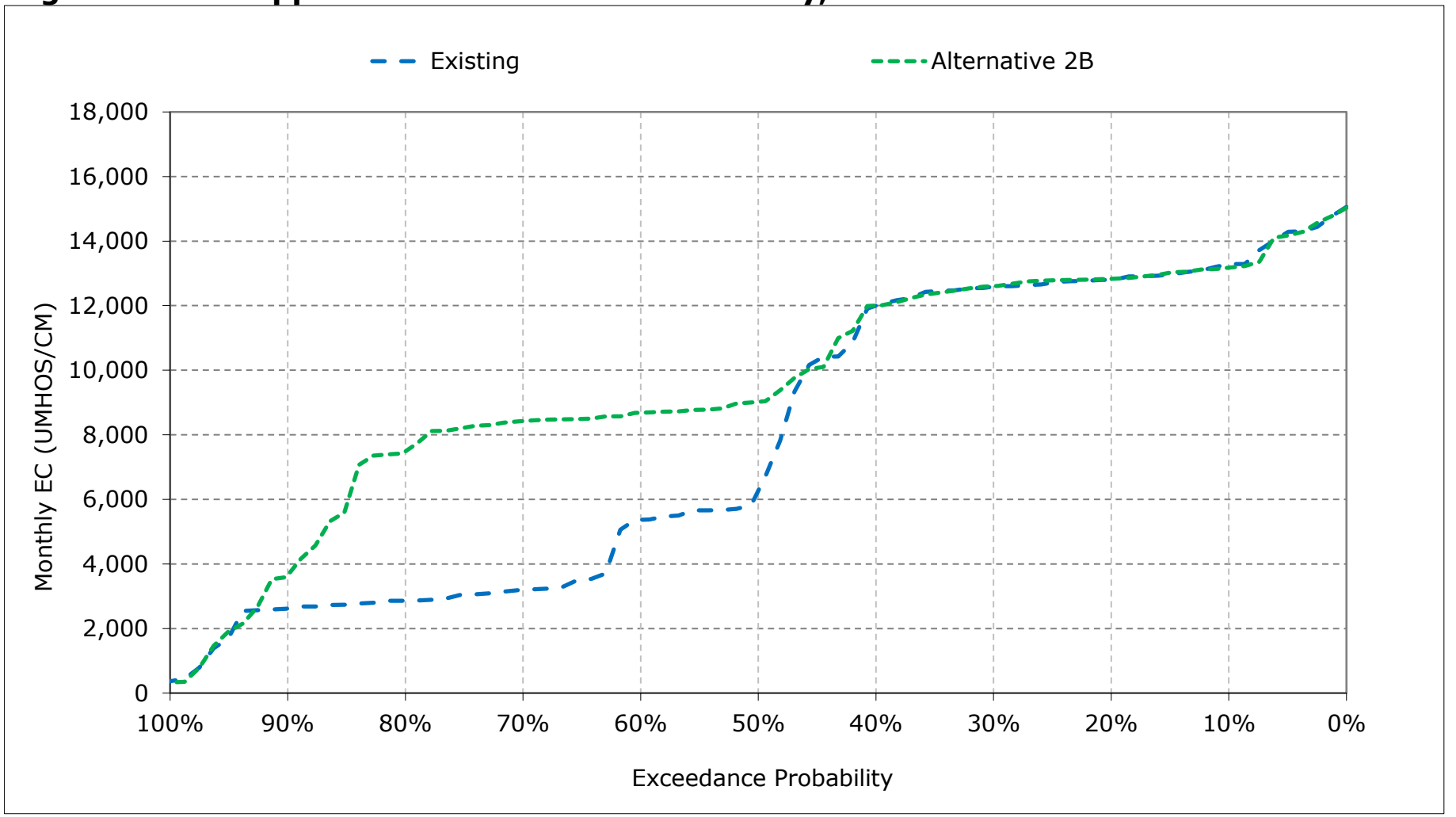
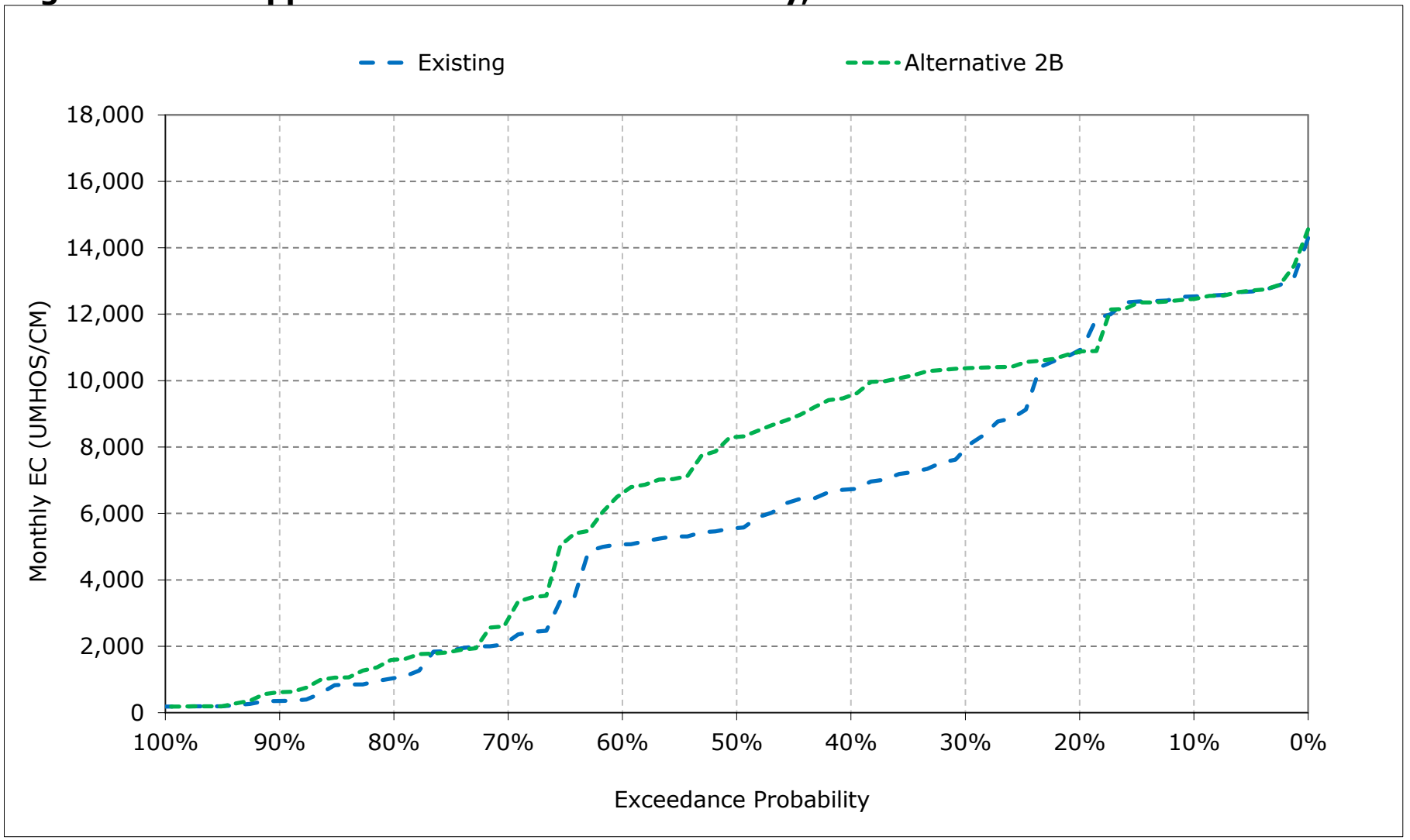


**Figure 9-18. Chipps Island South Channel Salinity, December EC**



## Table 10-1. Sacramento River at Port Chicago Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 18,857 | 18,301 | 17,944 | 14,027 | 10,103 | 9,246 | 9,508 | 11,032 | 12,944 | 14,993 | 17,328 | 18,408 |
| **20%** | 18,400 | 18,165 | 16,789 | 13,182 | 7,217 | 6,495 | 6,436 | 9,365 | 11,577 | 13,939 | 16,159 | 17,802 |
| **30%** | 18,221 | 17,817 | 14,104 | 11,188 | 4,890 | 3,578 | 4,510 | 8,038 | 11,116 | 13,675 | 15,975 | 17,592 |
| **40%** | 17,970 | 17,430 | 12,867 | 8,181 | 3,174 | 3,172 | 3,785 | 5,955 | 10,199 | 11,892 | 14,473 | 16,800 |
| **50%** | 17,153 | 12,186 | 11,009 | 6,774 | 1,756 | 1,883 | 2,627 | 4,393 | 8,819 | 11,353 | 13,884 | 16,050 |
| **60%** | 11,800 | 10,970 | 10,426 | 4,299 | 841 | 1,177 | 1,714 | 3,296 | 7,874 | 9,842 | 13,497 | 11,219 |
| **70%** | 8,403 | 8,017 | 6,384 | 1,127 | 341 | 539 | 1,041 | 2,304 | 6,353 | 9,483 | 13,064 | 7,842 |
| **80%** | 8,112 | 7,581 | 3,290 | 417 | 223 | 231 | 430 | 1,171 | 4,138 | 8,677 | 12,744 | 7,338 |
| **90%** | 7,934 | 7,173 | 1,022 | 227 | 205 | 201 | 219 | 337 | 1,237 | 6,634 | 12,410 | 6,785 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 13,892 | 12,807 | 10,348 | 6,775 | 3,582 | 3,140 | 3,701 | 5,288 | 8,305 | 11,058 | 14,210 | 13,231 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 11,865 | 9,727 | 4,560 | 1,509 | 462 | 663 | 946 | 1,654 | 4,040 | 7,375 | 11,990 | 6,980 |
| **Above Normal (15%)** | 14,288 | 12,609 | 10,702 | 4,607 | 1,512 | 812 | 1,482 | 2,737 | 6,817 | 9,286 | 12,891 | 11,049 |
| **Below Normal (17%)** | 14,379 | 13,928 | 12,606 | 8,063 | 2,946 | 3,101 | 3,357 | 5,013 | 8,800 | 11,464 | 14,189 | 16,435 |
| **Dry (22%)** | 14,459 | 14,253 | 12,965 | 10,586 | 6,057 | 4,745 | 5,613 | 7,981 | 11,081 | 13,821 | 16,074 | 17,695 |
| **Critical (15%)** | 16,472 | 16,198 | 15,972 | 13,130 | 9,441 | 8,475 | 9,421 | 11,992 | 14,294 | 16,194 | 17,566 | 18,520 |

### Alternative 2B

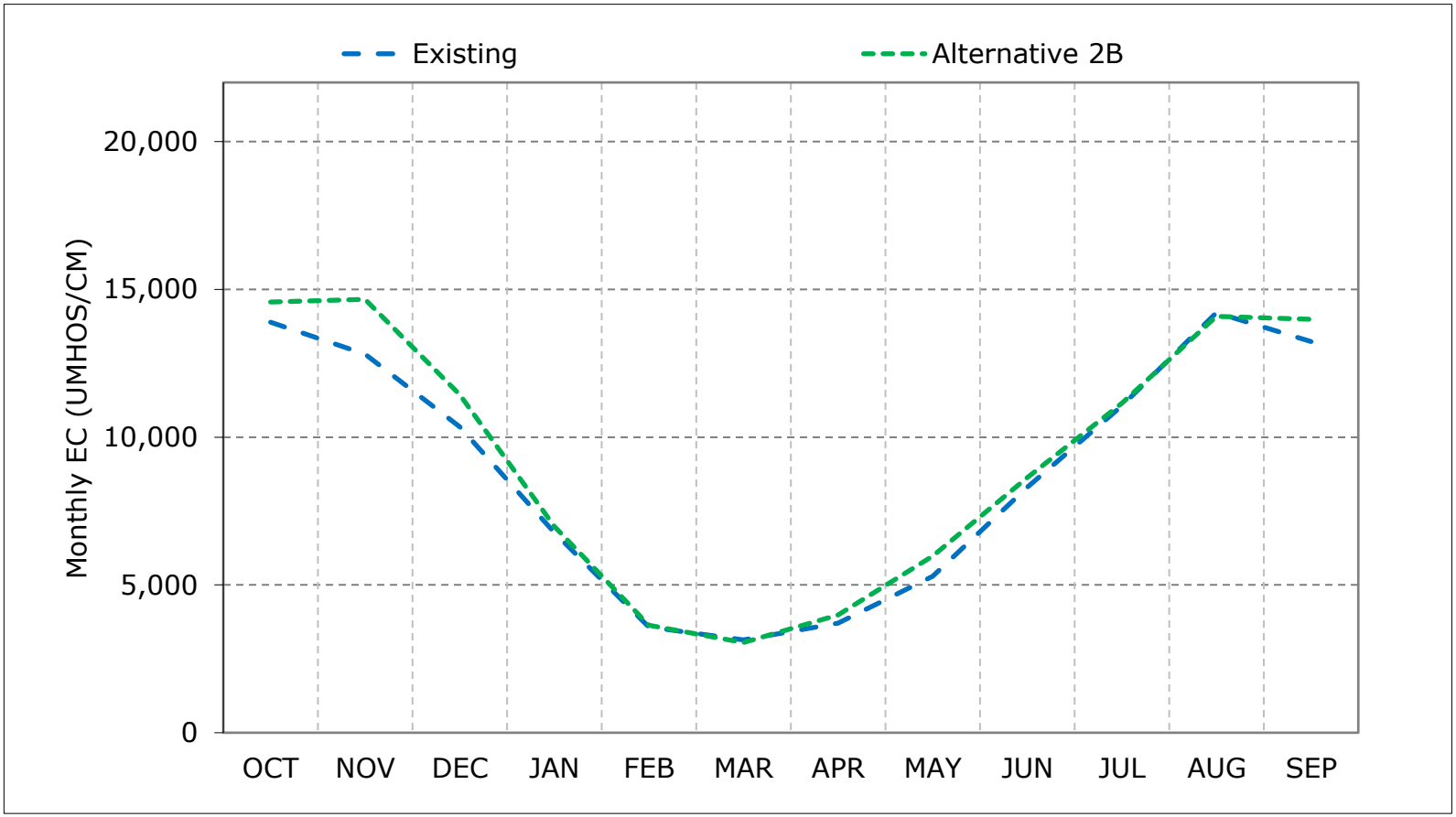
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 18,834 | 18,369 | 17,969 | 15,264 | 9,898 | 9,191 | 9,705 | 11,219 | 12,972 | 15,052 | 17,317 | 18,397 |
| **20%** | 18,417 | 18,131 | 16,545 | 14,044 | 7,092 | 6,375 | 7,219 | 10,450 | 12,094 | 14,133 | 16,279 | 17,851 |
| **30%** | 18,205 | 17,859 | 15,939 | 12,116 | 4,799 | 3,380 | 5,175 | 9,122 | 11,376 | 13,615 | 16,053 | 17,672 |
| **40%** | 17,919 | 17,345 | 15,419 | 8,599 | 3,231 | 2,840 | 4,336 | 7,036 | 10,840 | 12,088 | 14,870 | 17,004 |
| **50%** | 17,143 | 14,488 | 14,296 | 6,636 | 1,737 | 1,688 | 3,092 | 5,401 | 9,193 | 11,252 | 14,155 | 16,115 |
| **60%** | 11,334 | 14,208 | 12,679 | 4,122 | 640 | 980 | 1,895 | 4,462 | 8,456 | 10,061 | 13,077 | 10,560 |
| **70%** | 11,194 | 13,980 | 7,993 | 988 | 342 | 470 | 1,333 | 3,107 | 6,659 | 9,678 | 12,628 | 10,399 |
| **80%** | 10,808 | 13,312 | 3,955 | 407 | 223 | 232 | 492 | 1,492 | 4,300 | 8,731 | 12,324 | 10,130 |
| **90%** | 10,453 | 8,656 | 1,238 | 219 | 204 | 199 | 217 | 432 | 1,290 | 6,638 | 12,020 | 9,614 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 14,569 | 14,662 | 11,440 | 6,982 | 3,641 | 3,050 | 3,979 | 5,971 | 8,631 | 11,148 | 14,090 | 13,984 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 12,720 | 12,198 | 5,337 | 1,497 | 444 | 617 | 1,141 | 2,162 | 4,384 | 7,475 | 11,506 | 9,596 |
| **Above Normal (15%)** | 15,154 | 14,534 | 12,141 | 4,634 | 1,348 | 721 | 1,771 | 3,632 | 7,126 | 9,418 | 12,613 | 10,248 |
| **Below Normal (17%)** | 15,105 | 15,741 | 13,948 | 8,004 | 2,818 | 2,863 | 3,785 | 6,088 | 9,155 | 11,578 | 14,530 | 16,569 |
| **Dry (22%)** | 15,121 | 15,755 | 14,247 | 11,236 | 6,365 | 4,578 | 5,952 | 8,763 | 11,483 | 13,905 | 16,173 | 17,782 |
| **Critical (15%)** | 16,536 | 17,232 | 16,826 | 13,640 | 9,734 | 8,580 | 9,600 | 12,236 | 14,447 | 16,198 | 17,529 | 18,515 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -23 | **67** | **25** | **1,237** | -205 | -55 | **197** | **188** | **28** | **59** | -10 | -12 |
| **20%** | **17** | -34 | -244 | **861** | -125 | -120 | **783** | **1,085** | **517** | **194** | **120** | **49** |
| **30%** | -16 | **42** | **1,835** | **928** | -91 | -198 | **665** | **1,084** | **261** | -60 | **78** | **80** |
| **40%** | -52 | -85 | **2,552** | **418** | **57** | -333 | **551** | **1,082** | **641** | **196** | **397** | **204** |
| **50%** | -9 | **2,302** | **3,287** | -138 | -19 | -195 | **466** | **1,007** | **375** | -101 | **271** | **65** |
| **60%** | -466 | **3,238** | **2,253** | -177 | -201 | -196 | **181** | **1,166** | **582** | **219** | -420 | -660 |
| **70%** | **2,791** | **5,963** | **1,609** | -139 | **2** | -69 | **292** | **803** | **307** | **195** | -436 | **2,557** |
| **80%** | **2,696** | **5,730** | **665** | -10 | **0** | **2** | **62** | **321** | **162** | **53** | -420 | **2,792** |
| **90%** | **2,518** | **1,483** | **217** | -9 | -1 | -2 | -2 | **94** | **53** | **4** | -390 | **2,829** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **677** | **1,856** | **1,092** | **207** | **59** | -90 | **278** | **683** | **326** | **89** | -119 | **753** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **855** | **2,471** | **776** | -12 | -17 | -46 | **196** | **508** | **345** | **100** | -484 | **2,616** |
| **Above Normal (15%)** | **867** | **1,925** | **1,439** | **28** | -164 | -91 | **289** | **895** | **310** | **131** | -277 | -801 |
| **Below Normal (17%)** | **726** | **1,813** | **1,342** | -59 | -128 | -238 | **428** | **1,075** | **355** | **114** | **341** | **134** |
| **Dry (22%)** | **662** | **1,502** | **1,283** | **650** | **308** | -167 | **339** | **782** | **402** | **84** | **99** | **87** |
| **Critical (15%)** | **65** | **1,033** | **854** | **510** | **293** | **105** | **179** | **243** | **152** | **4** | -37 | -5 |

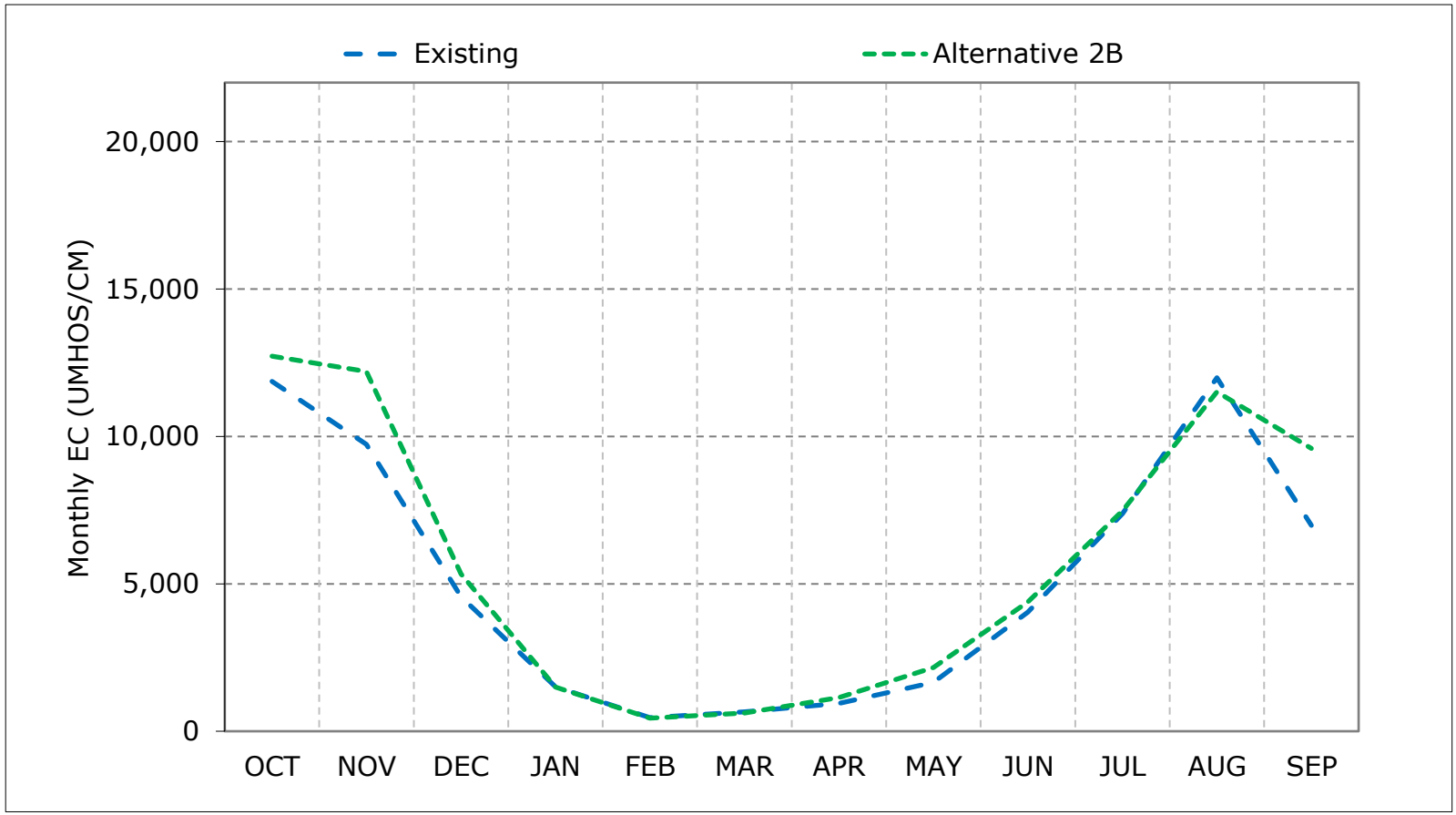
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 10-1. Sacramento River at Port Chicago Salinity, Long-Term Average EC**



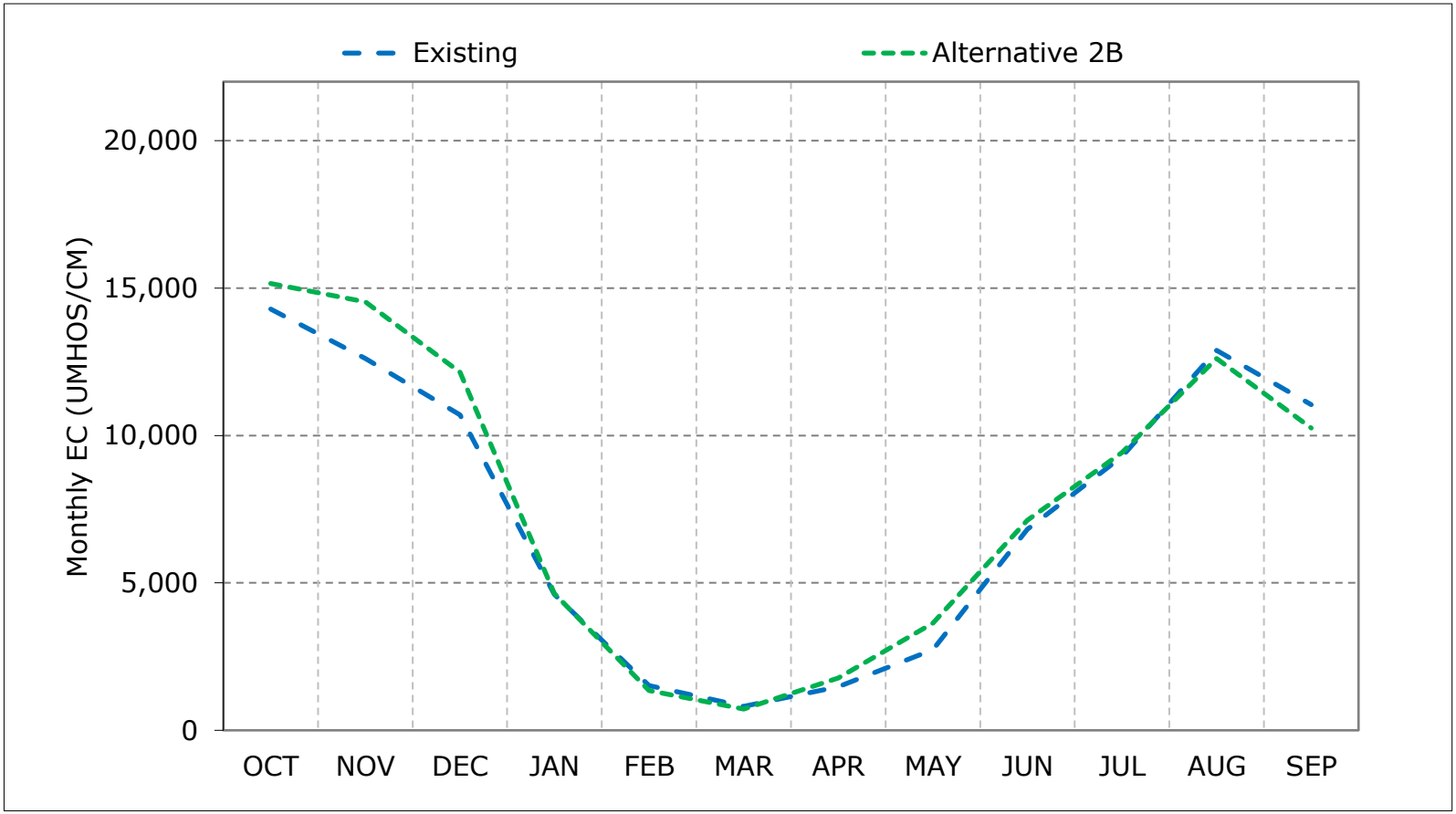

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 10-2. Sacramento River at Port Chicago Salinity, Wet Year Average EC**



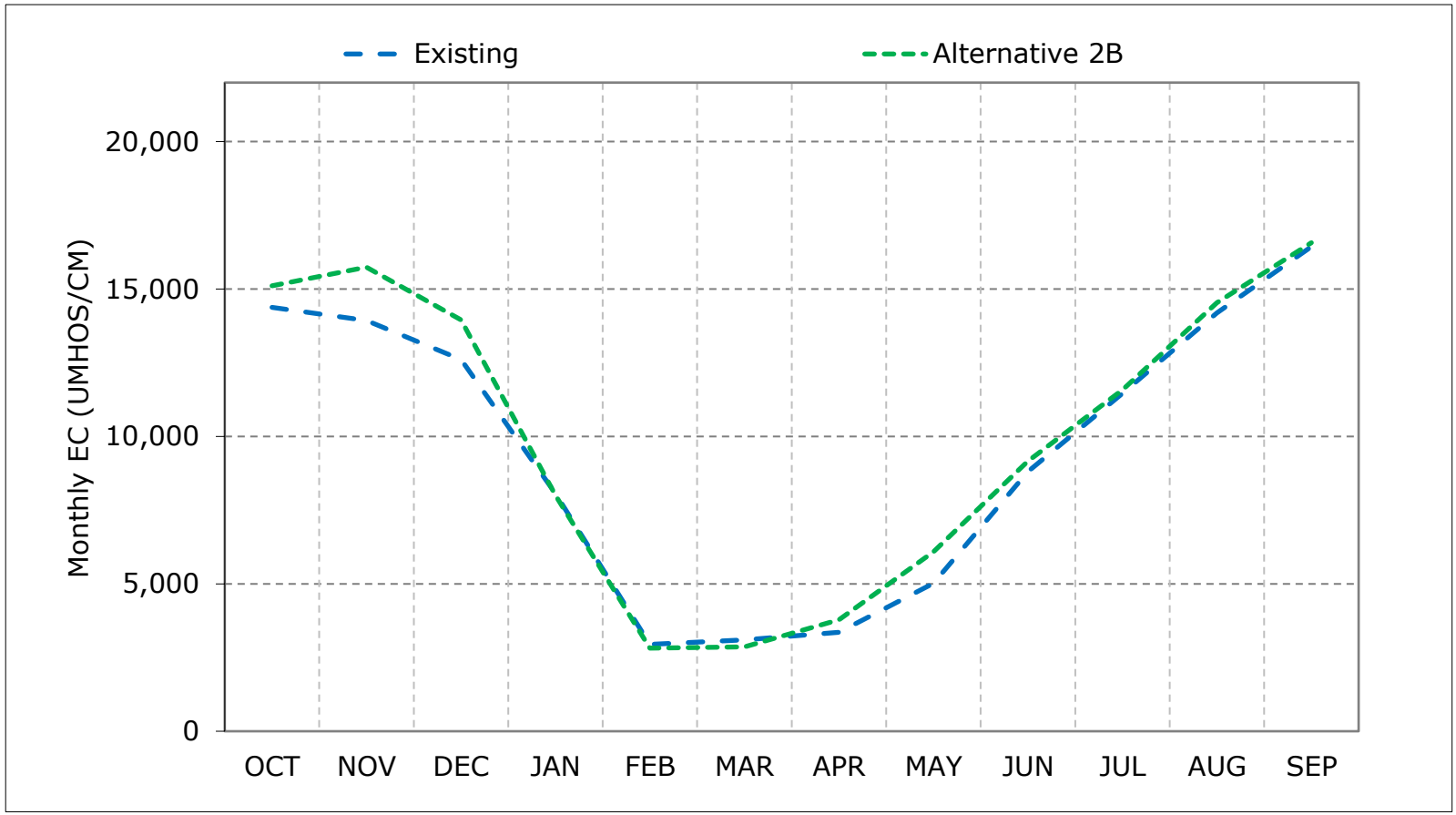

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 10-3. Sacramento River at Port Chicago Salinity, Above Normal Year Average**



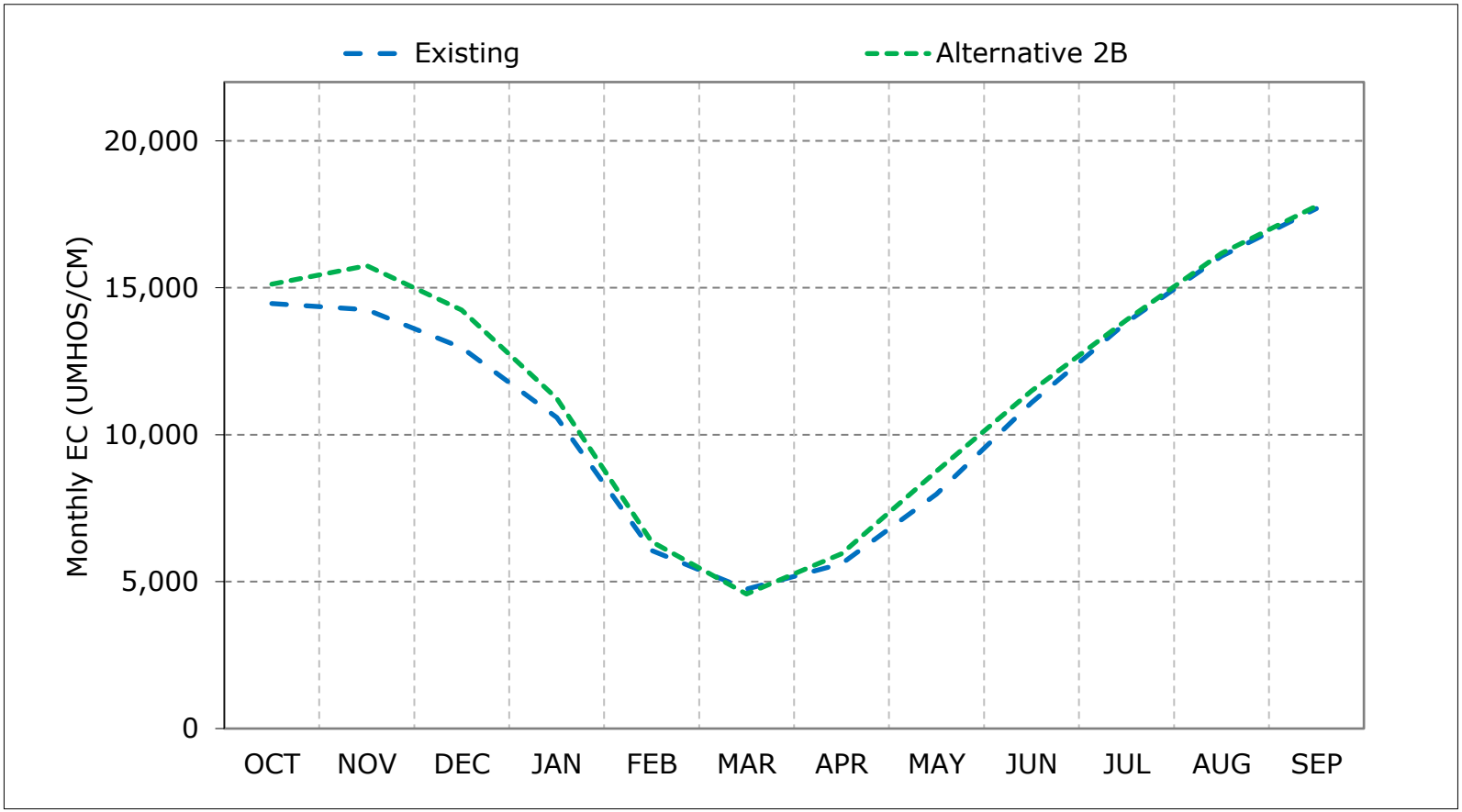

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 10-4. Sacramento River at Port Chicago Salinity, Below Normal Year Average**



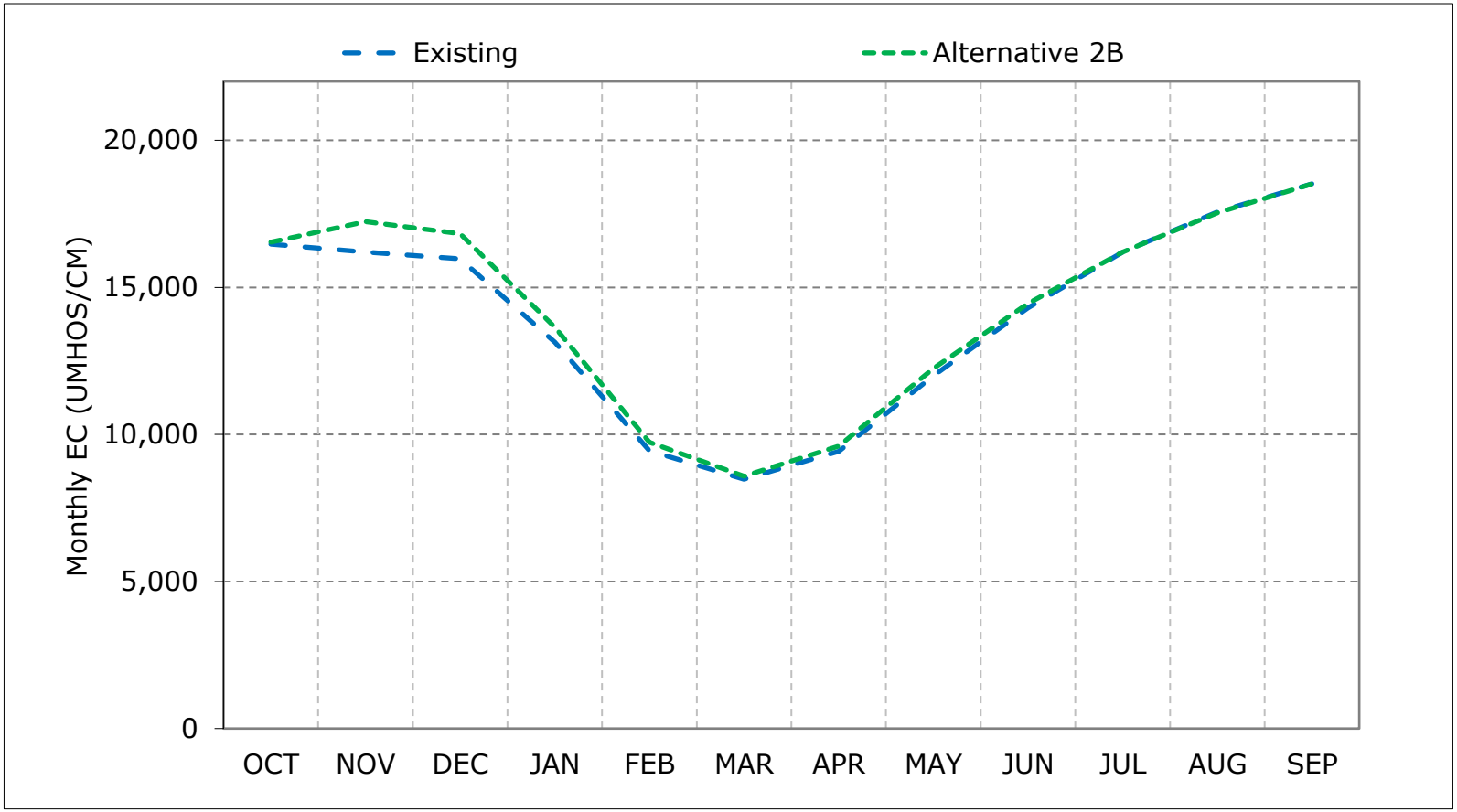

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 10-5. Sacramento River at Port Chicago Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 10-6. Sacramento River at Port Chicago Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 10-7. Sacramento River at Port Chicago Salinity, January EC**

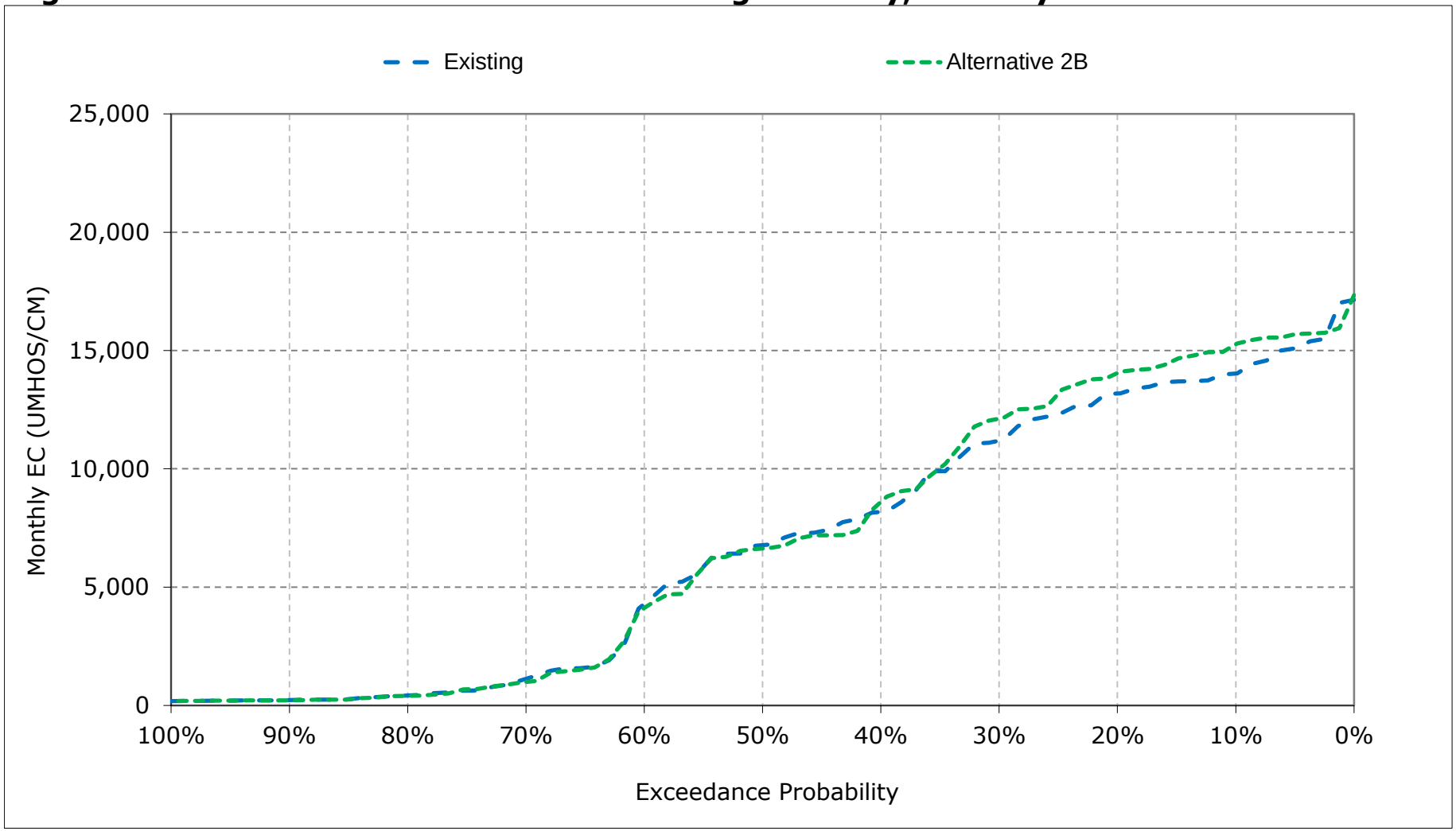


**Figure 10-8. Sacramento River at Port Chicago Salinity, February EC**

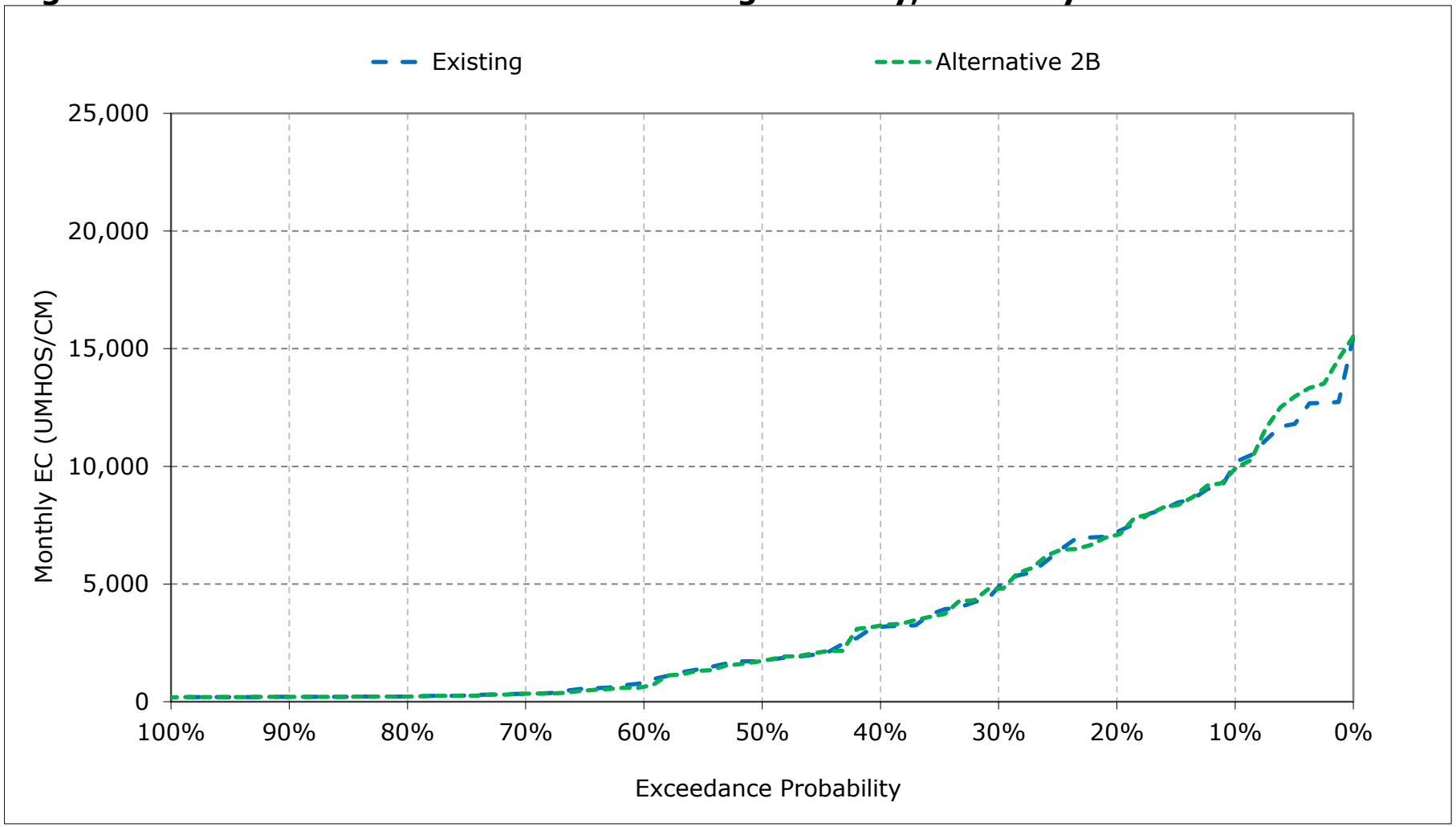


**Figure 10-9. Sacramento River at Port Chicago Salinity, March EC**

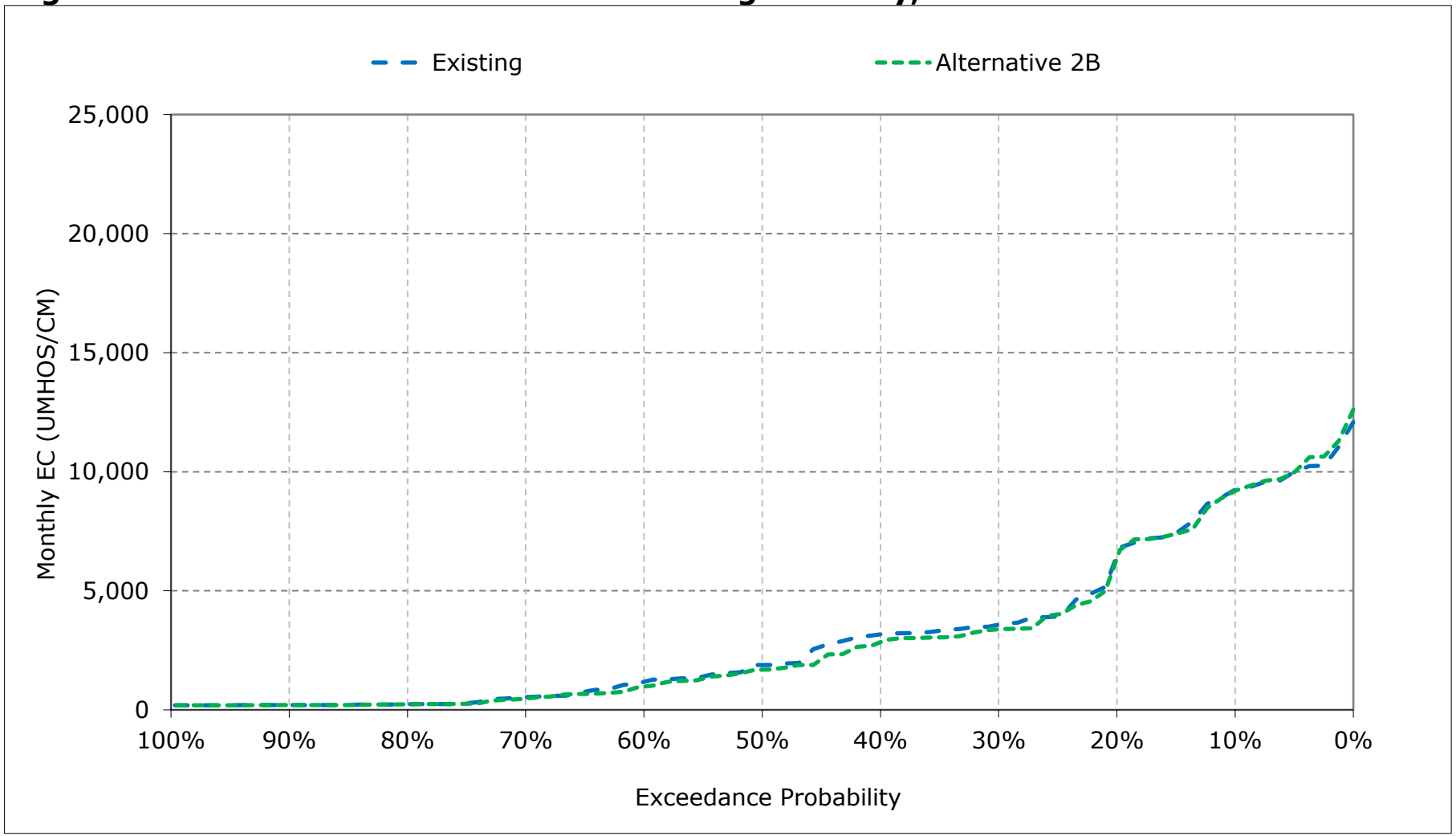


**Figure 10-10. Sacramento River at Port Chicago Salinity, April EC**

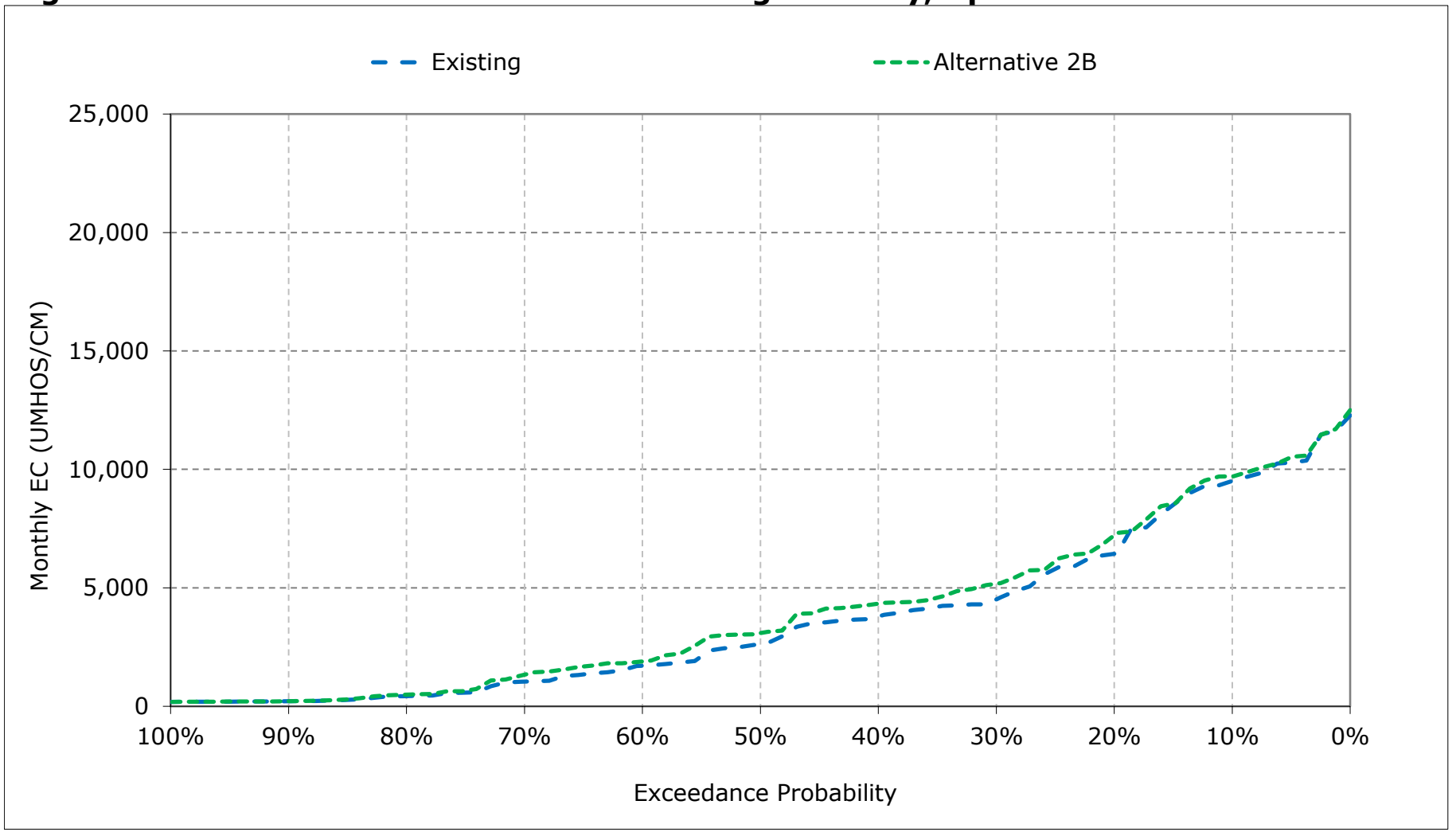


**Figure 10-11. Sacramento River at Port Chicago Salinity, May EC**

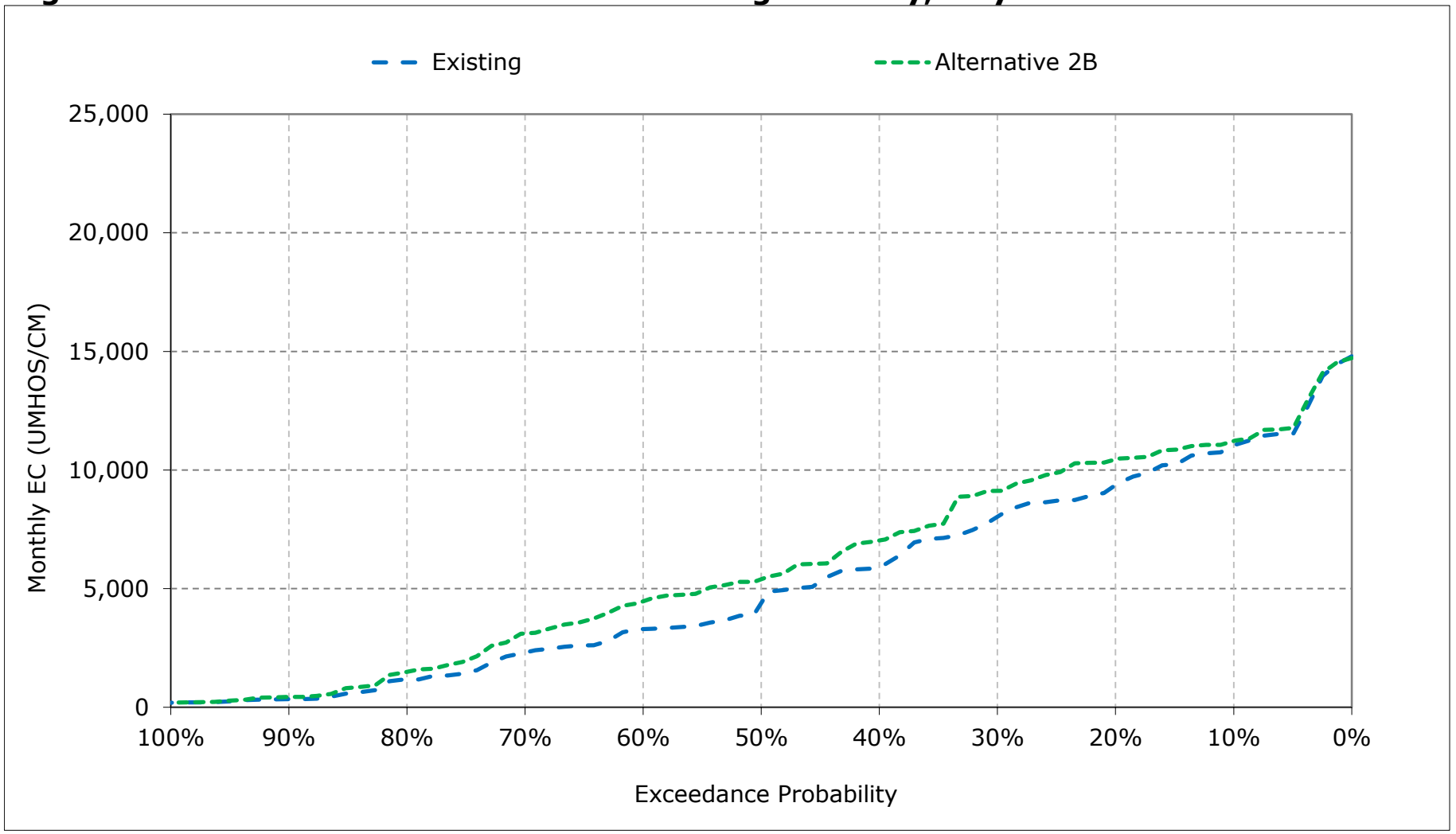


**Figure 10-12. Sacramento River at Port Chicago Salinity, June EC**

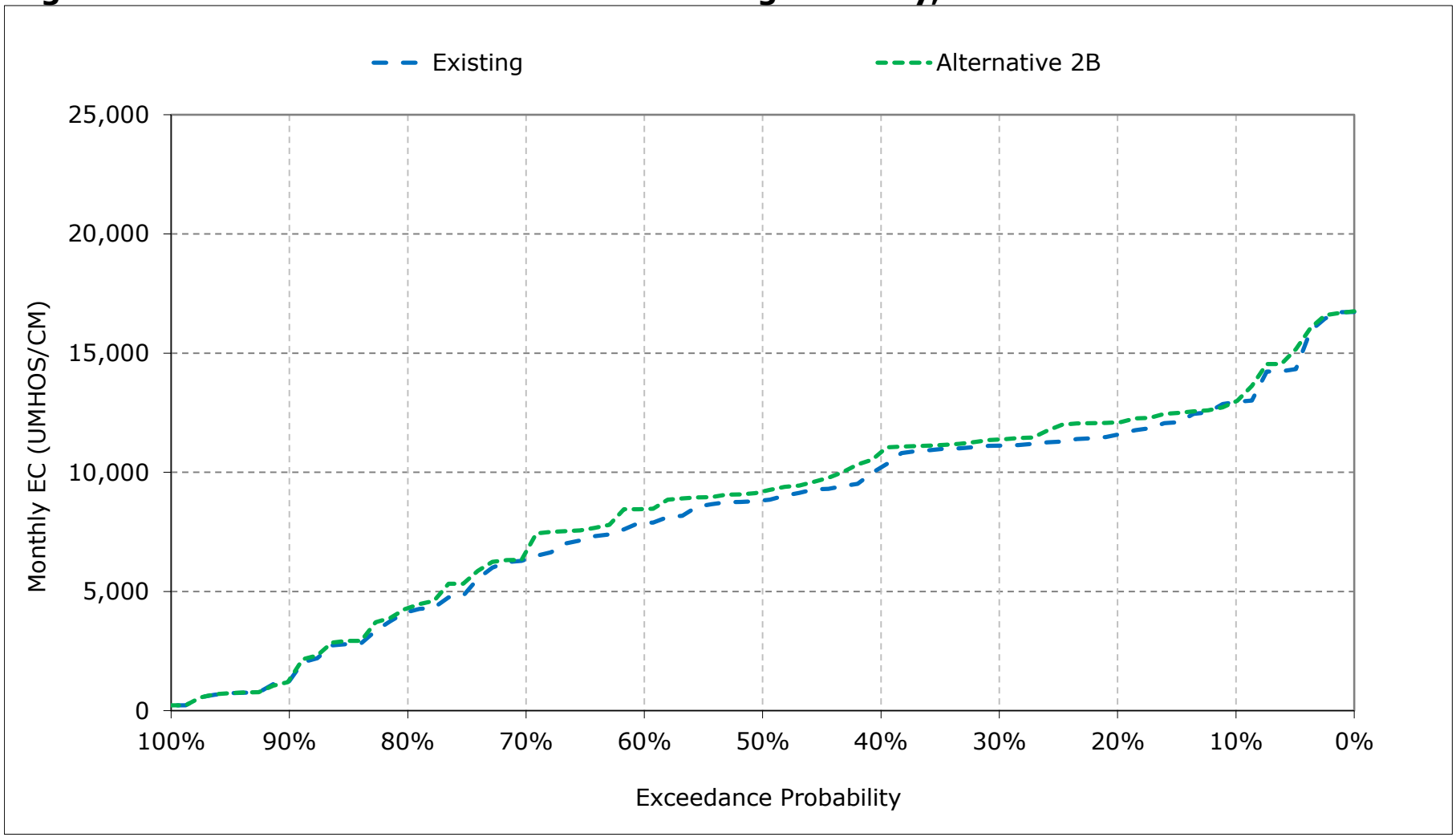


**Figure 10-13. Sacramento River at Port Chicago Salinity, July EC**

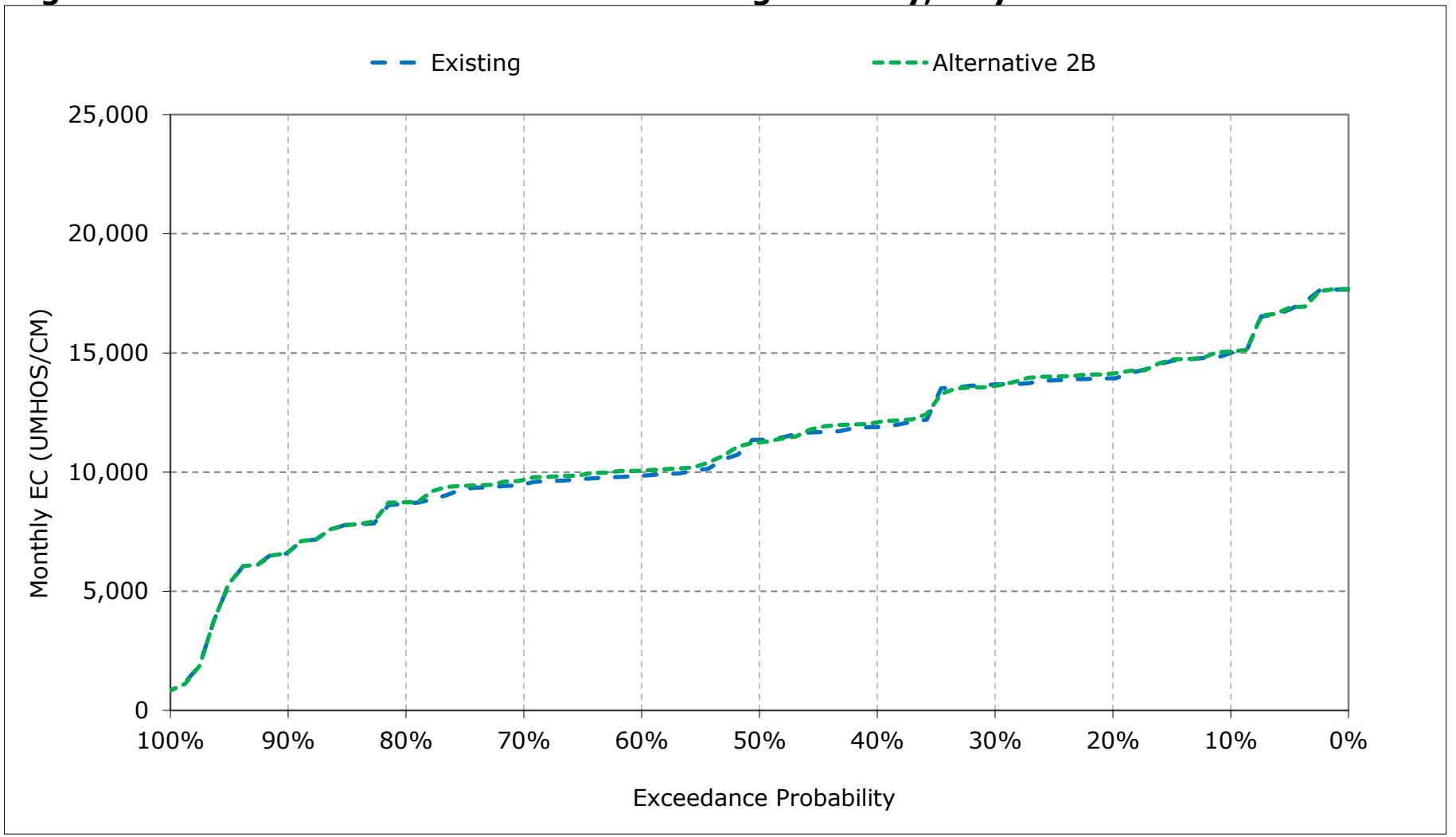


**Figure 10-14. Sacramento River at Port Chicago Salinity, August EC**

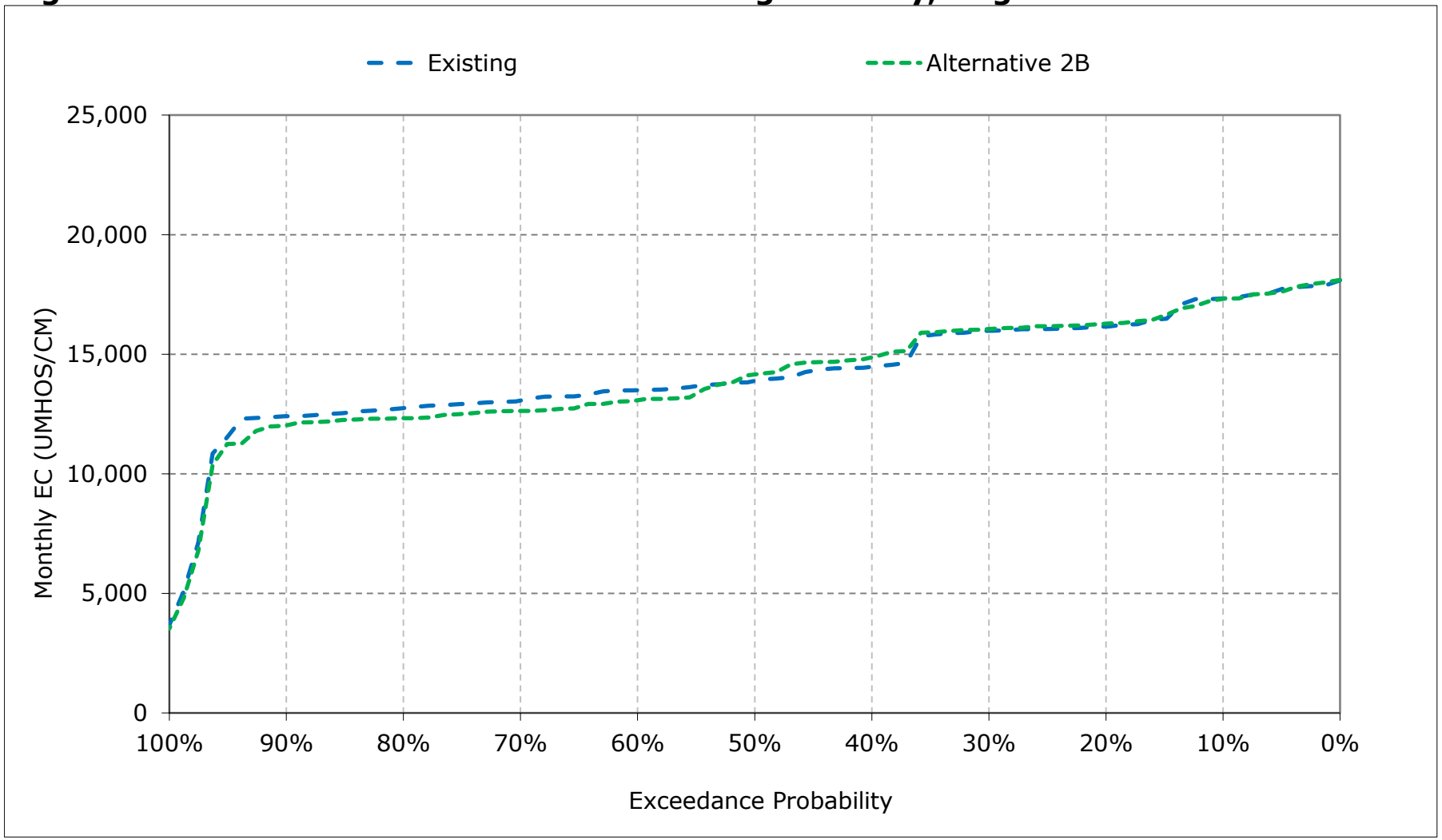


**Figure 10-15. Sacramento River at Port Chicago Salinity, September EC**

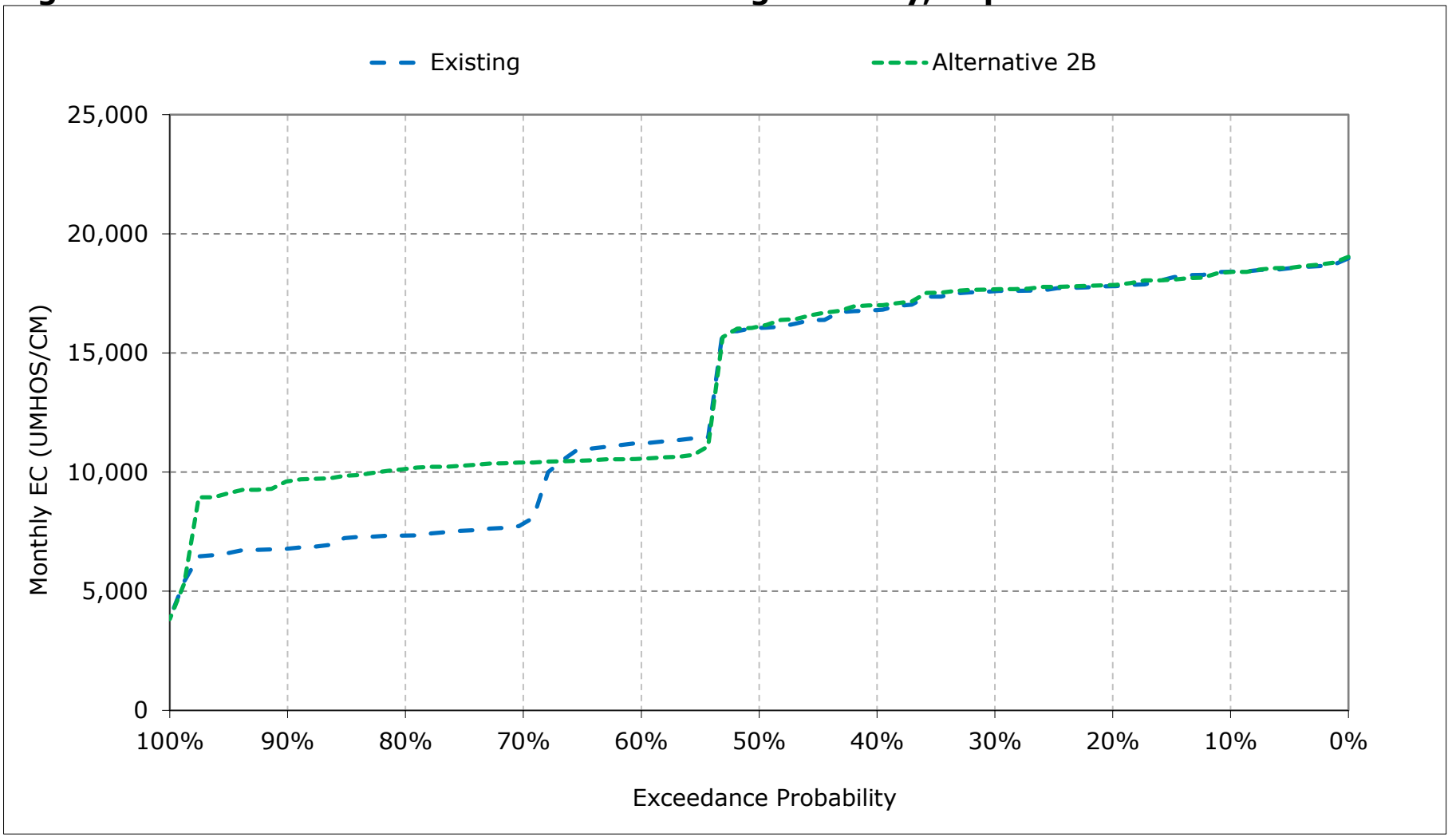


**Figure 10-16. Sacramento River at Port Chicago Salinity, October EC**

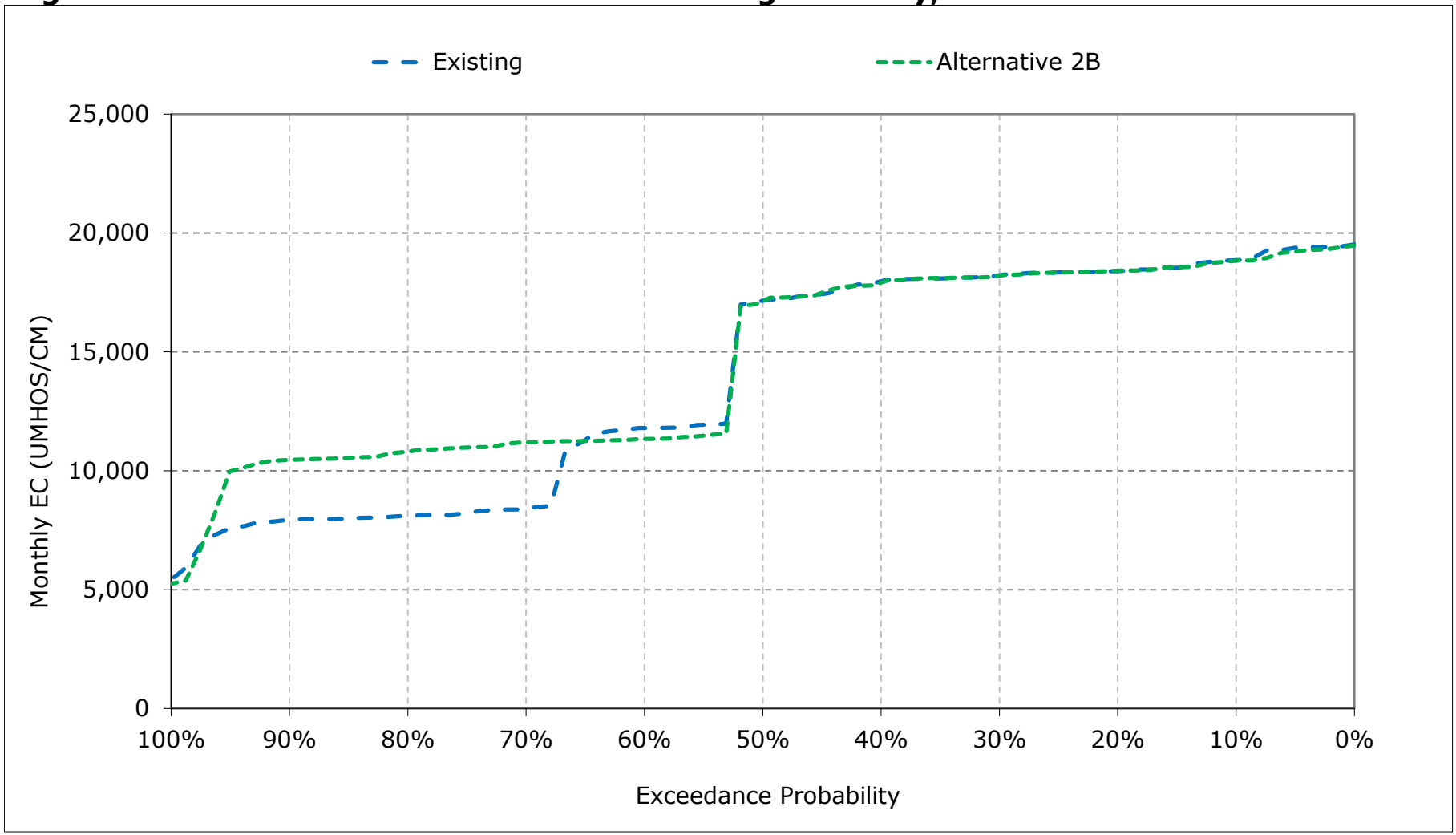


**Figure 10-17. Sacramento River at Port Chicago Salinity, November EC**

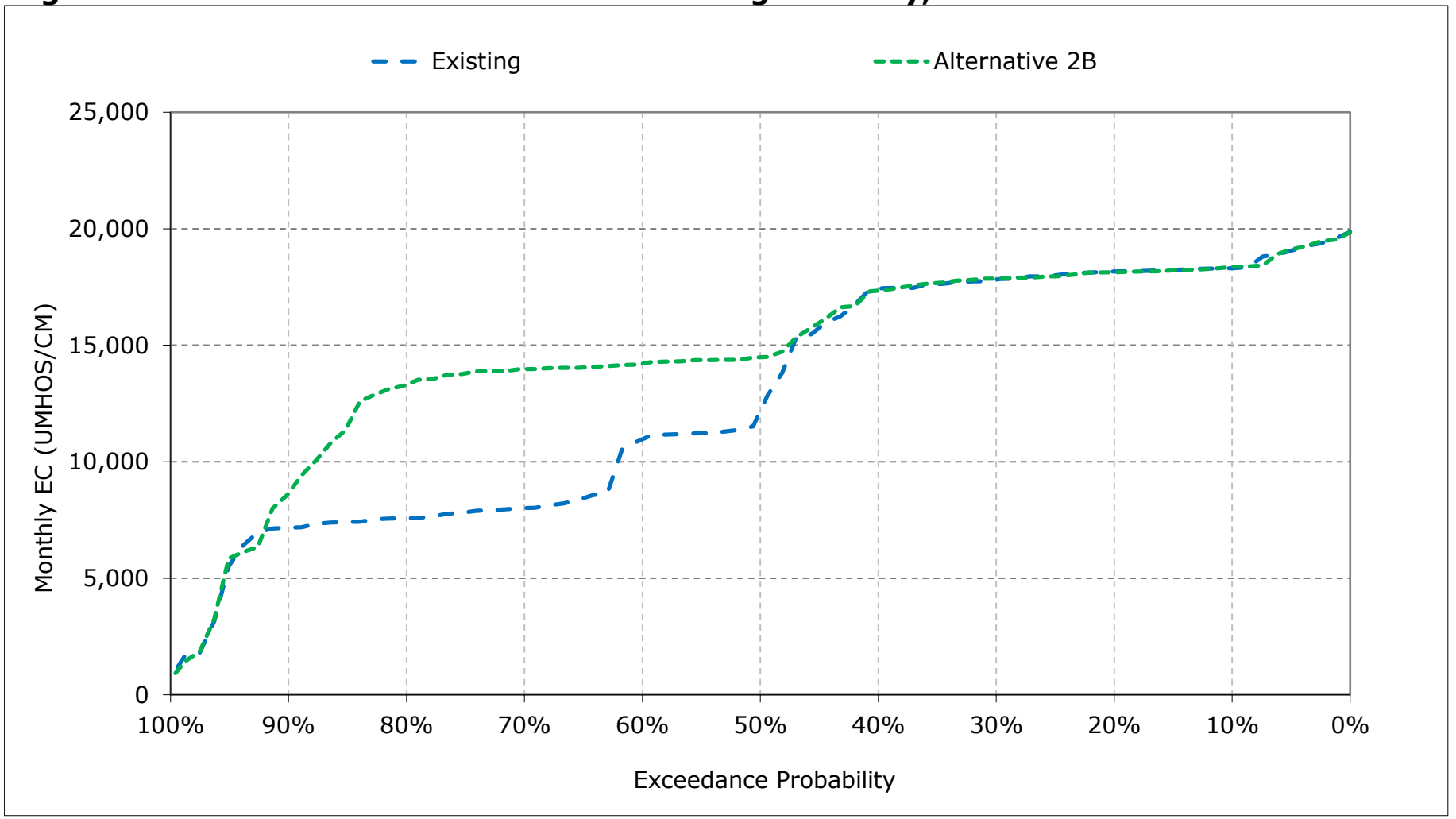
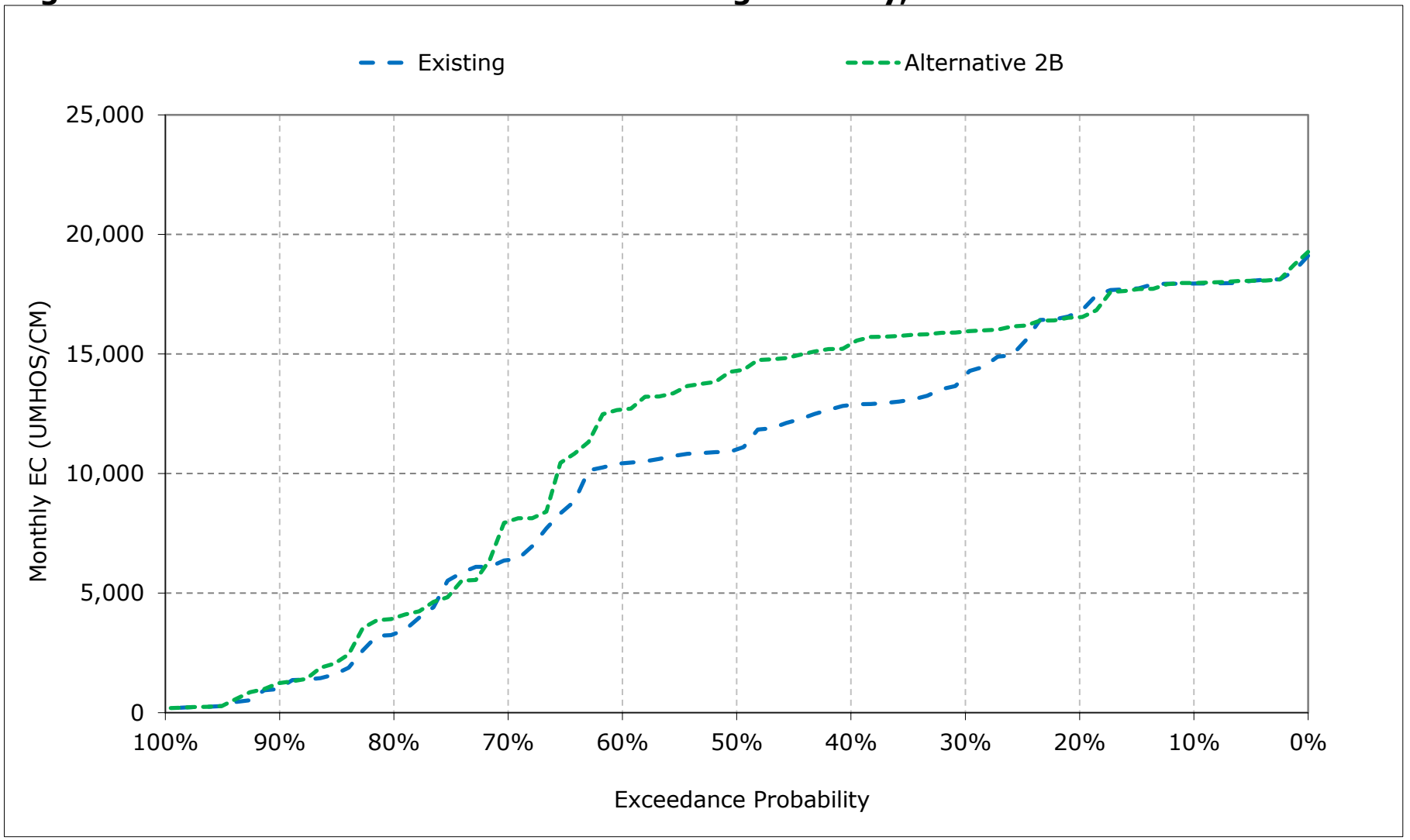


**Figure 10-18. Sacramento River at Port Chicago Salinity, December EC**



## Table 11-1. San Joaquin River at Antioch Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 7,250 | 6,676 | 6,398 | 3,358 | 1,223 | 1,035 | 961 | 1,609 | 2,307 | 3,749 | 5,519 | 6,896 |
| **20%** | 6,792 | 6,518 | 5,164 | 2,829 | 758 | 498 | 505 | 1,020 | 1,833 | 3,160 | 4,834 | 6,480 |
| **30%** | 6,690 | 6,190 | 3,327 | 2,078 | 520 | 294 | 297 | 720 | 1,708 | 2,987 | 4,528 | 6,264 |
| **40%** | 6,284 | 5,969 | 2,785 | 1,274 | 370 | 260 | 262 | 422 | 1,303 | 2,013 | 3,709 | 5,800 |
| **50%** | 5,773 | 2,464 | 2,170 | 1,002 | 283 | 239 | 244 | 291 | 1,087 | 1,813 | 3,305 | 4,925 |
| **60%** | 2,050 | 1,730 | 1,872 | 491 | 255 | 229 | 227 | 252 | 689 | 1,232 | 3,199 | 2,032 |
| **70%** | 1,128 | 914 | 751 | 260 | 243 | 222 | 219 | 232 | 525 | 1,151 | 2,996 | 1,321 |
| **80%** | 952 | 798 | 486 | 235 | 225 | 216 | 213 | 216 | 270 | 955 | 2,779 | 1,199 |
| **90%** | 846 | 731 | 228 | 220 | 213 | 199 | 208 | 204 | 205 | 659 | 2,565 | 1,144 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 4,134 | 3,633 | 2,705 | 1,426 | 595 | 407 | 417 | 667 | 1,286 | 2,113 | 3,696 | 3,952 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 3,066 | 2,178 | 843 | 354 | 240 | 220 | 220 | 236 | 408 | 827 | 2,568 | 1,081 |
| **Above Normal (15%)** | 4,383 | 3,637 | 2,584 | 908 | 319 | 223 | 224 | 251 | 755 | 1,128 | 2,849 | 2,005 |
| **Below Normal (17%)** | 4,353 | 3,978 | 3,531 | 1,536 | 399 | 296 | 293 | 422 | 1,065 | 1,884 | 3,469 | 5,337 |
| **Dry (22%)** | 4,420 | 4,312 | 3,284 | 2,079 | 808 | 464 | 454 | 785 | 1,686 | 3,078 | 4,668 | 6,380 |
| **Critical (15%)** | 5,515 | 5,357 | 5,024 | 3,155 | 1,547 | 1,040 | 1,123 | 2,128 | 3,379 | 4,706 | 5,797 | 6,863 |

### Alternative 2B

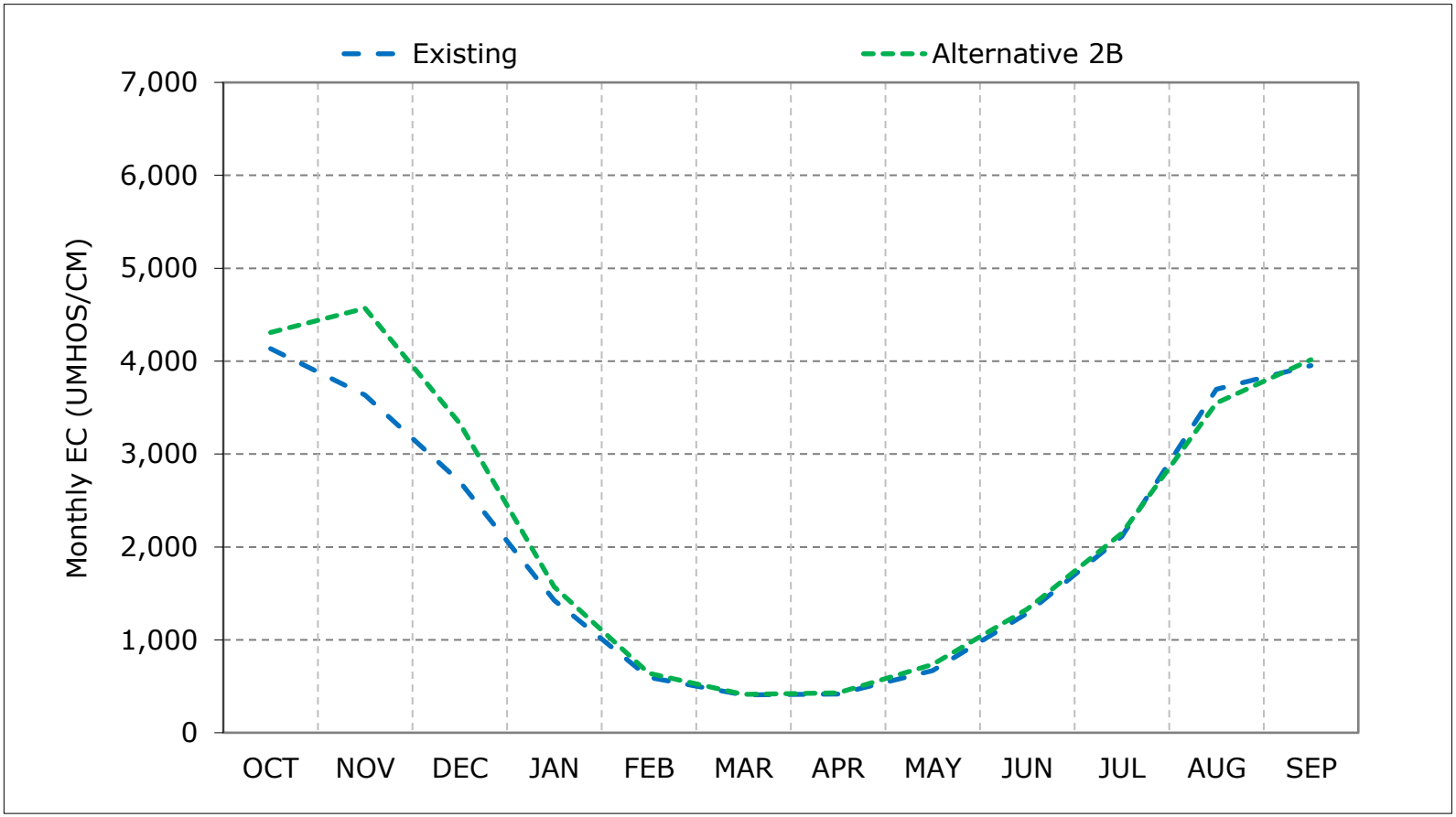
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 7,130 | 6,661 | 6,277 | 4,057 | 1,253 | 1,050 | 1,014 | 1,662 | 2,370 | 3,838 | 5,429 | 6,899 |
| **20%** | 6,810 | 6,514 | 5,225 | 3,251 | 820 | 524 | 533 | 1,231 | 1,949 | 3,245 | 4,867 | 6,518 |
| **30%** | 6,614 | 6,269 | 5,039 | 2,307 | 541 | 284 | 338 | 920 | 1,741 | 2,967 | 4,677 | 6,322 |
| **40%** | 6,374 | 5,969 | 4,503 | 1,461 | 385 | 256 | 281 | 492 | 1,391 | 2,166 | 4,282 | 6,063 |
| **50%** | 5,720 | 4,095 | 3,569 | 998 | 293 | 241 | 247 | 328 | 1,026 | 1,842 | 3,753 | 5,192 |
| **60%** | 1,926 | 3,847 | 2,625 | 510 | 262 | 228 | 222 | 270 | 772 | 1,304 | 2,603 | 1,539 |
| **70%** | 1,819 | 3,719 | 1,270 | 268 | 242 | 219 | 212 | 225 | 557 | 1,206 | 2,338 | 1,469 |
| **80%** | 1,737 | 3,127 | 765 | 242 | 226 | 215 | 208 | 201 | 269 | 985 | 2,222 | 1,402 |
| **90%** | 1,599 | 1,393 | 348 | 220 | 214 | 201 | 203 | 193 | 200 | 659 | 2,016 | 1,244 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 4,309 | 4,569 | 3,332 | 1,569 | 639 | 413 | 428 | 736 | 1,331 | 2,146 | 3,548 | 4,016 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 3,320 | 3,374 | 1,253 | 366 | 239 | 221 | 218 | 254 | 447 | 851 | 1,990 | 1,252 |
| **Above Normal (15%)** | 4,602 | 4,517 | 3,408 | 1,035 | 309 | 225 | 224 | 271 | 729 | 1,151 | 2,350 | 1,459 |
| **Below Normal (17%)** | 4,583 | 4,876 | 4,299 | 1,638 | 399 | 290 | 310 | 516 | 1,070 | 1,998 | 4,004 | 5,735 |
| **Dry (22%)** | 4,555 | 5,174 | 4,079 | 2,409 | 914 | 464 | 481 | 933 | 1,786 | 3,098 | 4,765 | 6,470 |
| **Critical (15%)** | 5,468 | 5,941 | 5,514 | 3,367 | 1,703 | 1,082 | 1,146 | 2,204 | 3,472 | 4,693 | 5,766 | 6,879 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -120 | -16 | -122 | **699** | **31** | **15** | **52** | **53** | **63** | **89** | -91 | **3** |
| **20%** | **18** | -4 | **61** | **422** | **62** | **26** | **28** | **210** | **116** | **85** | **33** | **38** |
| **30%** | -76 | **79** | **1,712** | **229** | **22** | -10 | **41** | **200** | **34** | -19 | **150** | **59** |
| **40%** | **90** | 0 | **1,718** | **188** | **15** | -3 | **19** | **70** | **88** | **153** | **574** | **263** |
| **50%** | -52 | **1,630** | **1,399** | -3 | **10** | **3** | **3** | **37** | -61 | **29** | **448** | **267** |
| **60%** | -124 | **2,117** | **753** | **19** | **7** | -1 | -5 | **19** | **83** | **71** | -596 | -493 |
| **70%** | **691** | **2,806** | **519** | **7** | -1 | -3 | -6 | -7 | **32** | **55** | -657 | **148** |
| **80%** | **785** | **2,329** | **279** | **7** | **1** | -1 | -5 | -15 | -1 | **30** | -556 | **203** |
| **90%** | **753** | **662** | **120** | **1** | **0** | **2** | -5 | -10 | -5 | 0 | -549 | **100** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **175** | **936** | **628** | **143** | **44** | **6** | **12** | **68** | **45** | **33** | -148 | **65** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **254** | **1,196** | **410** | **12** | -2 | **1** | -2 | **19** | **39** | **24** | -578 | **171** |
| **Above Normal (15%)** | **219** | **880** | **824** | **127** | -9 | **2** | **0** | **19** | -26 | **23** | -499 | -546 |
| **Below Normal (17%)** | **230** | **898** | **768** | **102** | 0 | -6 | **17** | **94** | **5** | **114** | **535** | **398** |
| **Dry (22%)** | **135** | **862** | **794** | **330** | **106** | **0** | **27** | **148** | **101** | **21** | **97** | **90** |
| **Critical (15%)** | -47 | **584** | **490** | **212** | **157** | **42** | **23** | **76** | **93** | -13 | -31 | **16** |

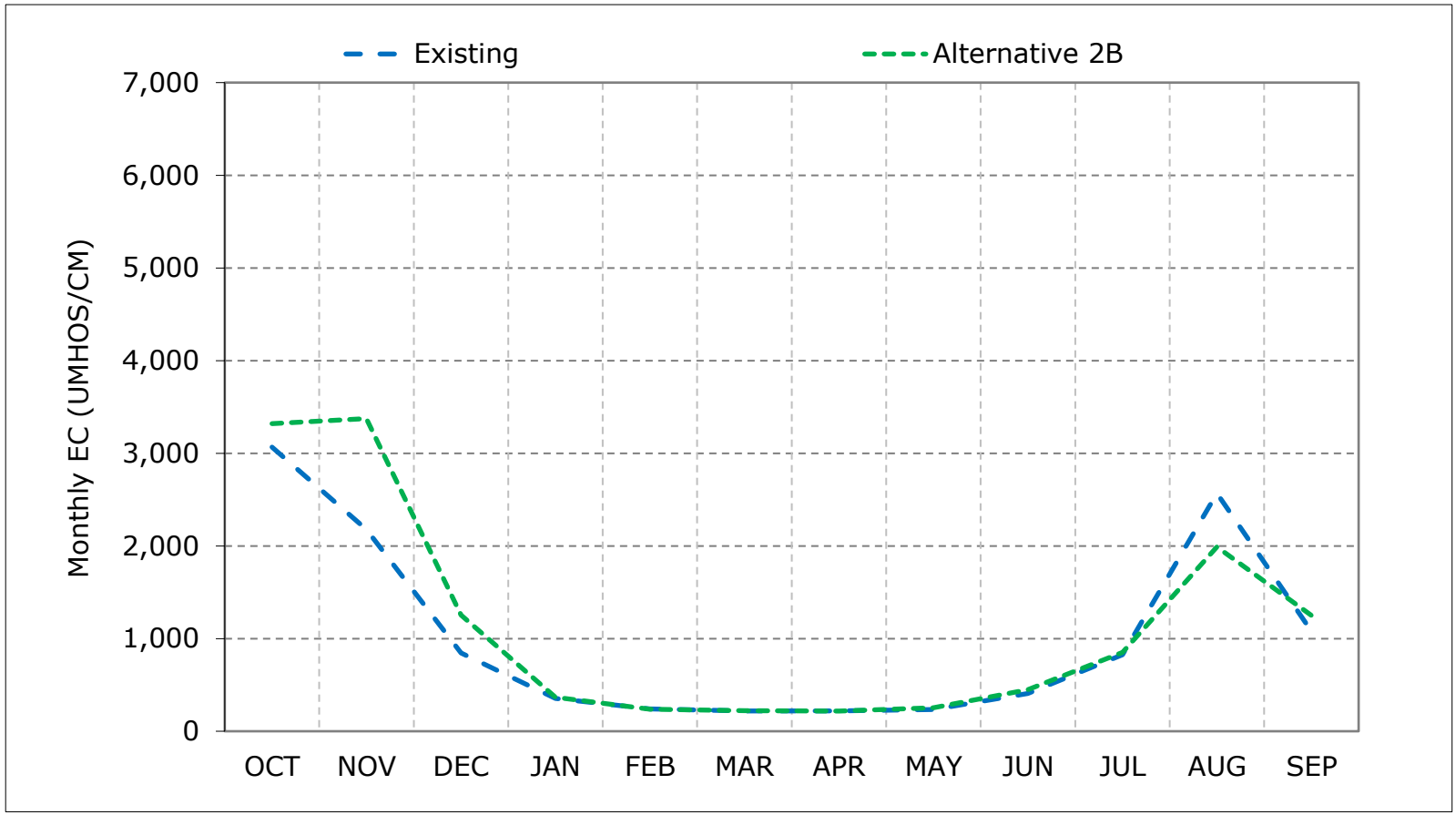
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 11-1. San Joaquin River at Antioch Salinity, Long-Term Average EC**



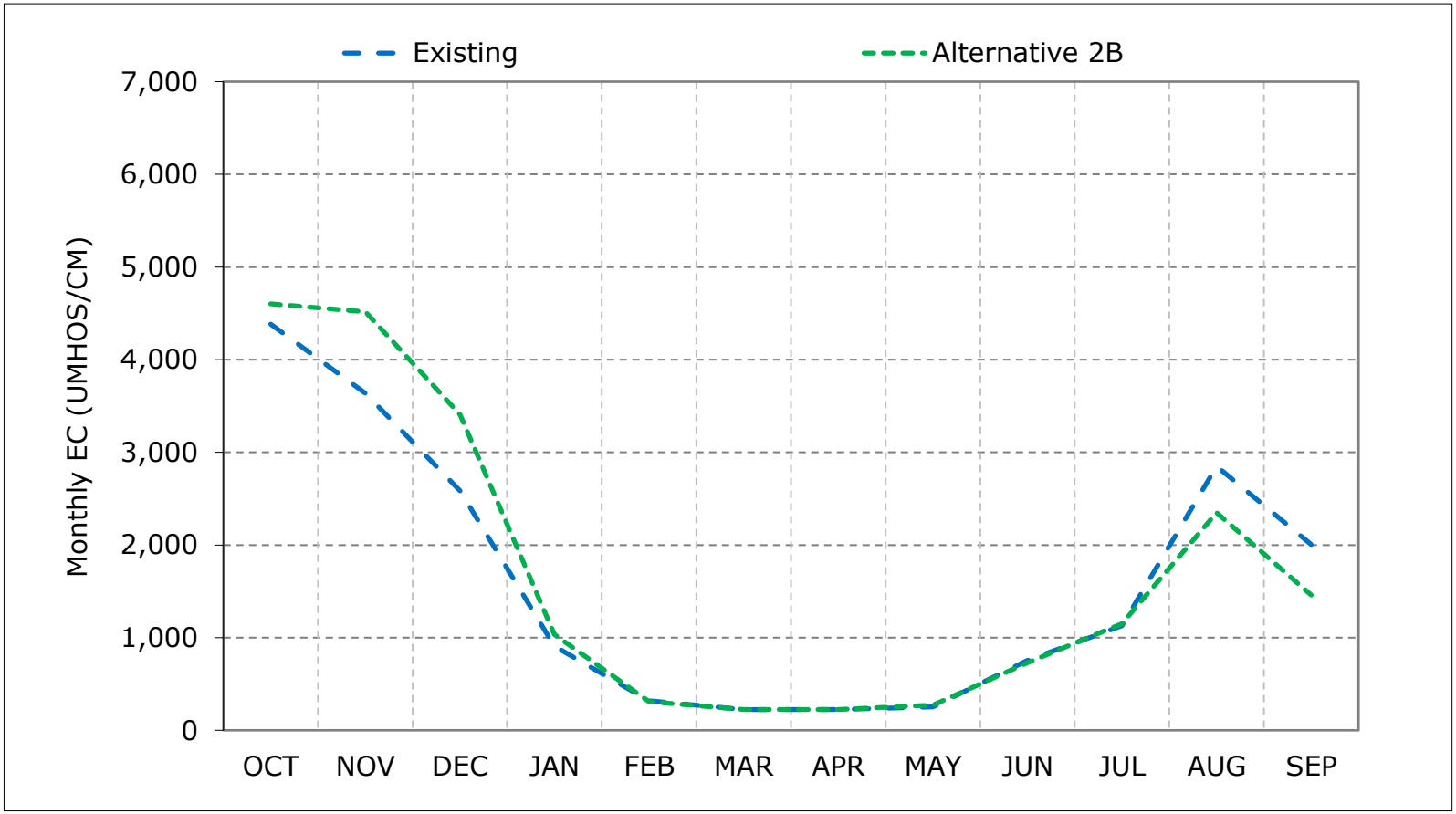

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 11-2. San Joaquin River at Antioch Salinity, Wet Year Average EC**



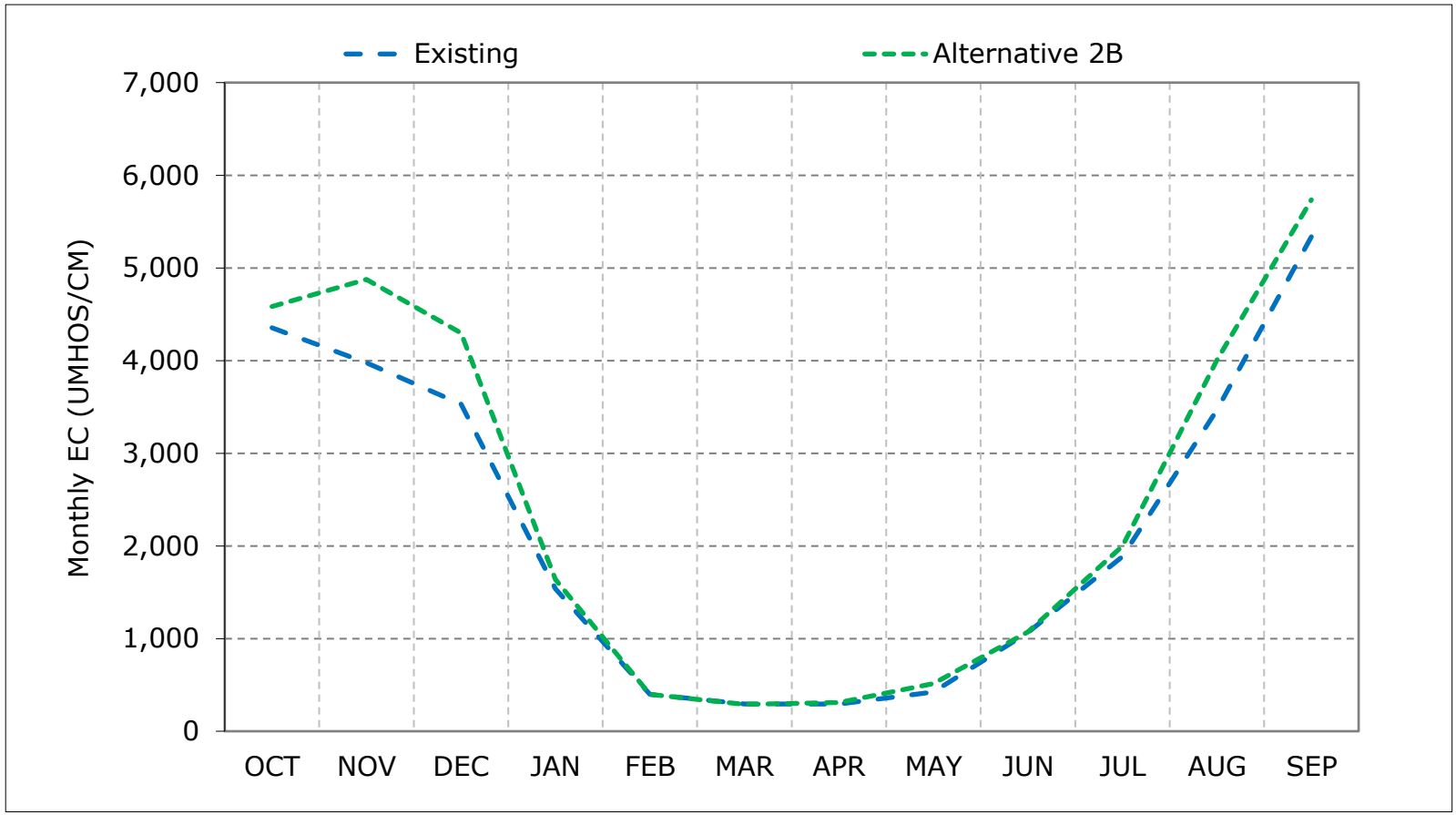

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 11-3. San Joaquin River at Antioch Salinity, Above Normal Year Average EC**



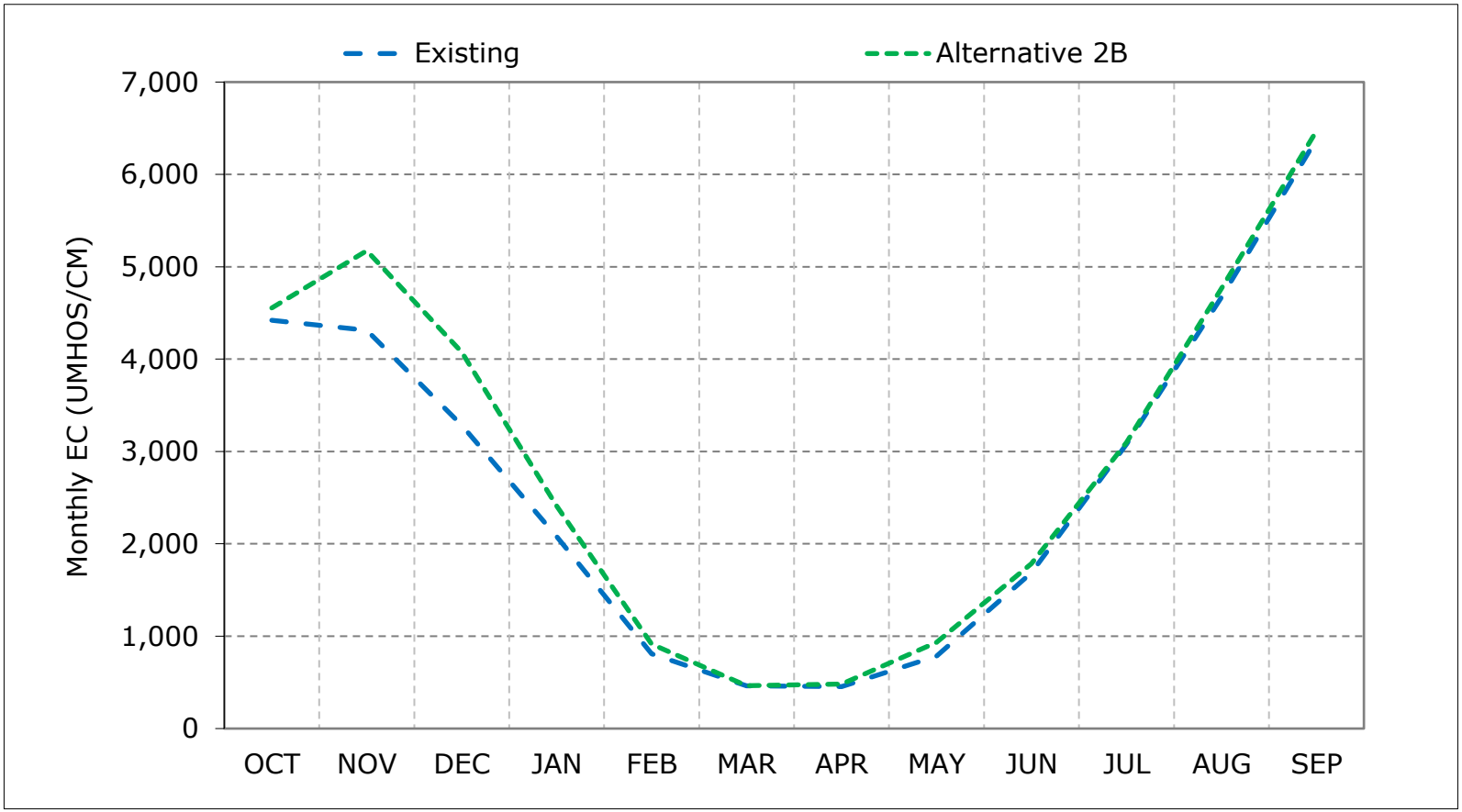

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 11-4. San Joaquin River at Antioch Salinity, Below Normal Year Average EC**



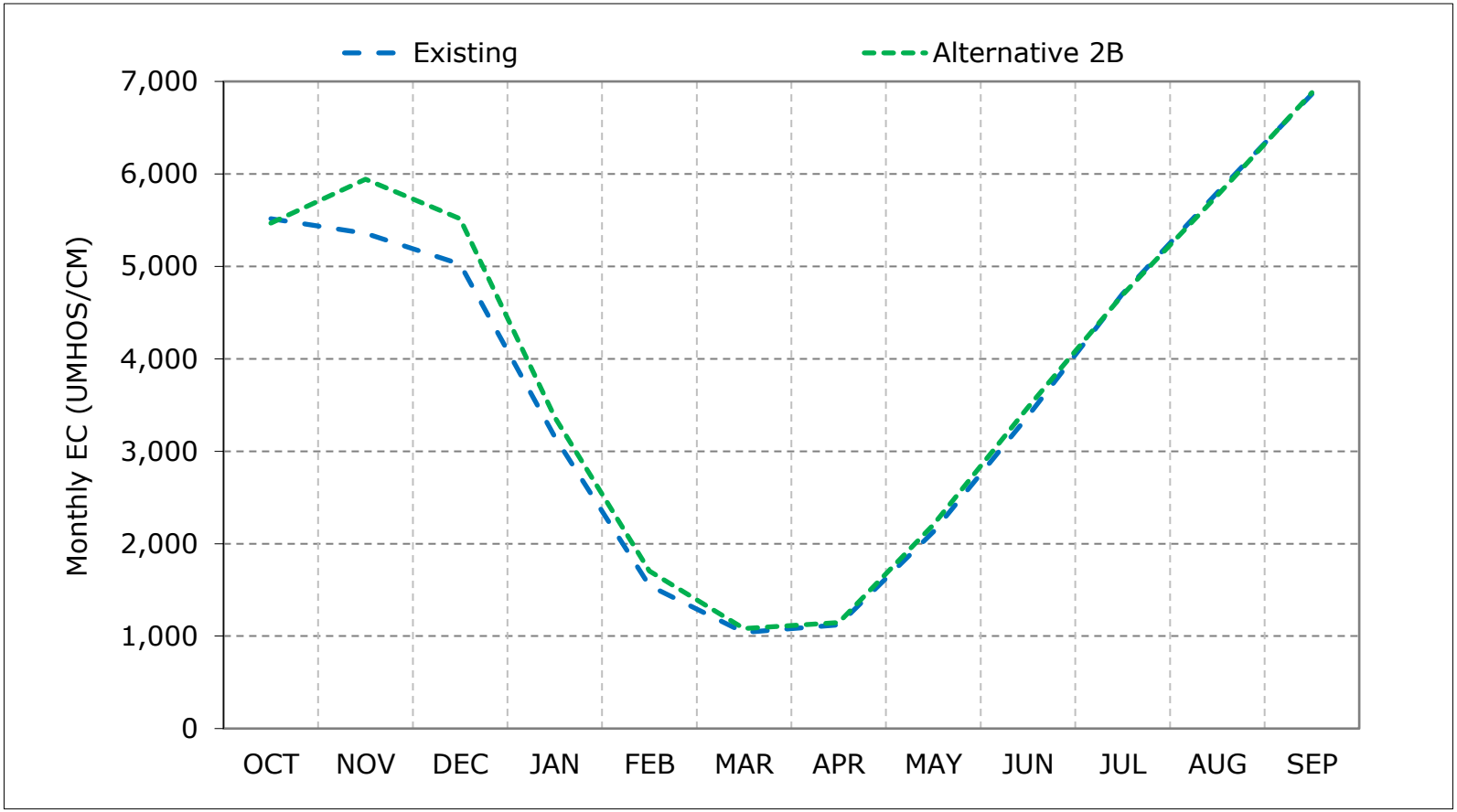

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 11-5. San Joaquin River at Antioch Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 11-6. San Joaquin River at Antioch Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 11-7. San Joaquin River at Antioch Salinity, January EC**

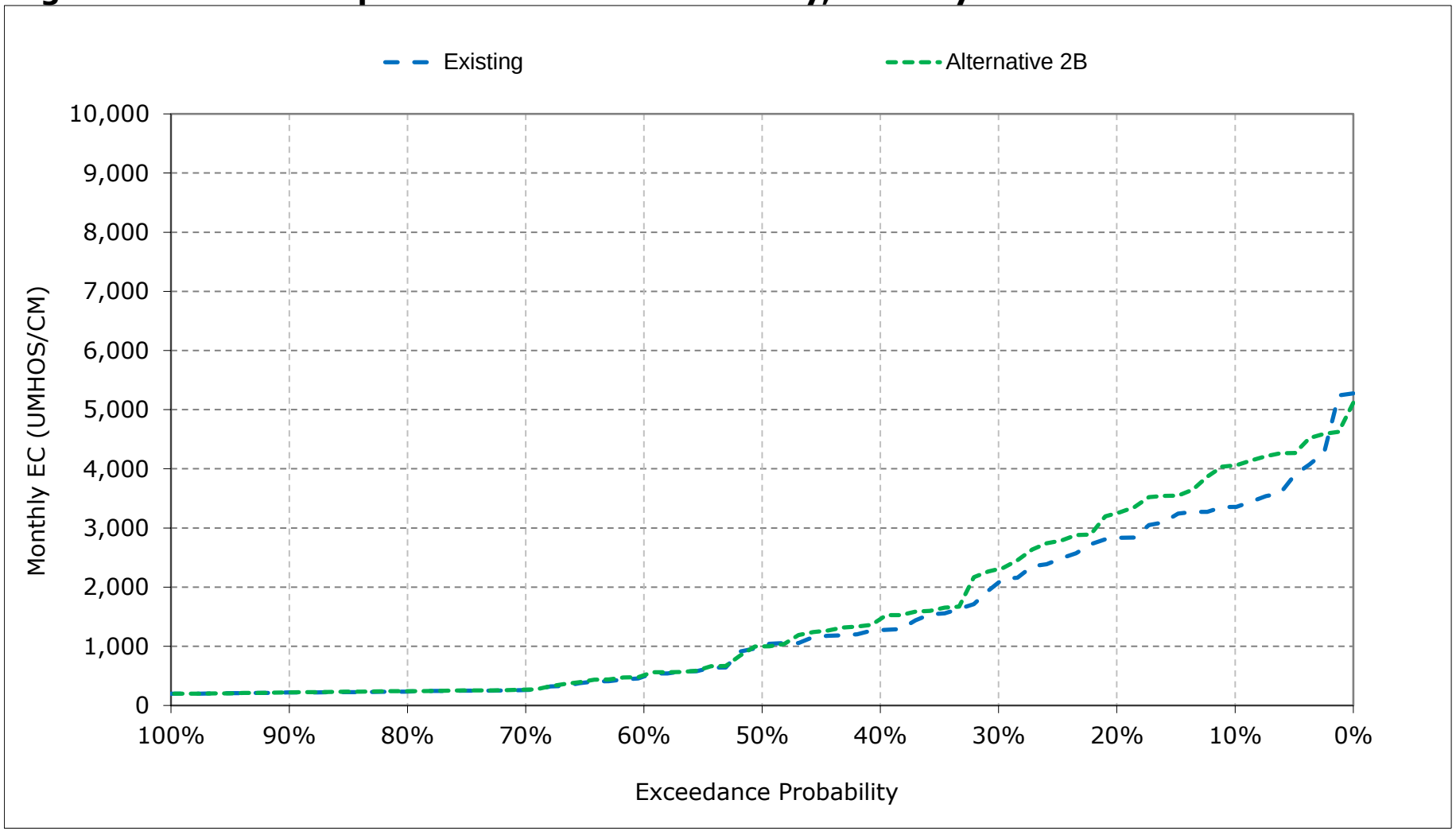


**Figure 11-8. San Joaquin River at Antioch Salinity, February EC**

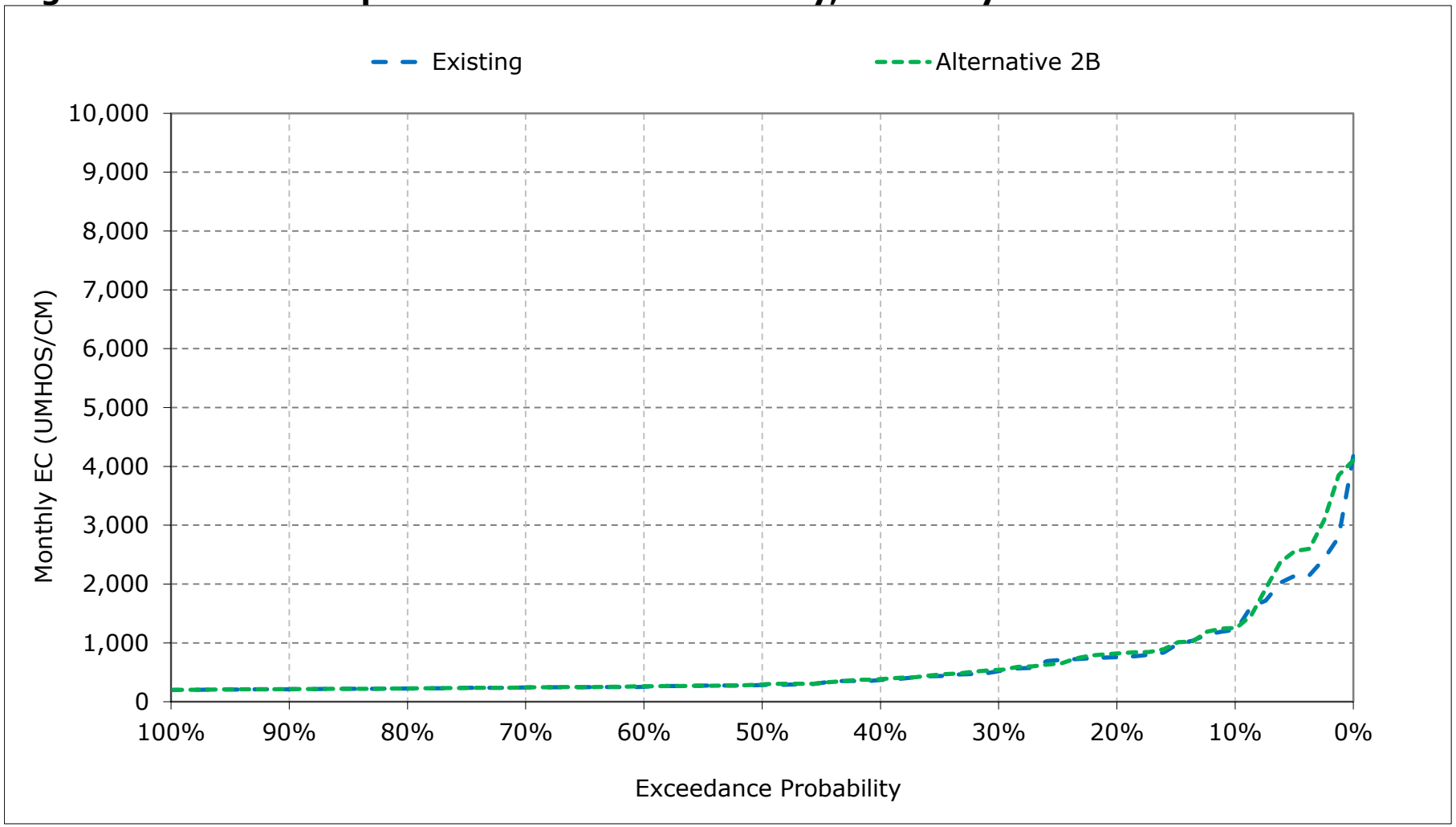


**Figure 11-9. San Joaquin River at Antioch Salinity, March EC**

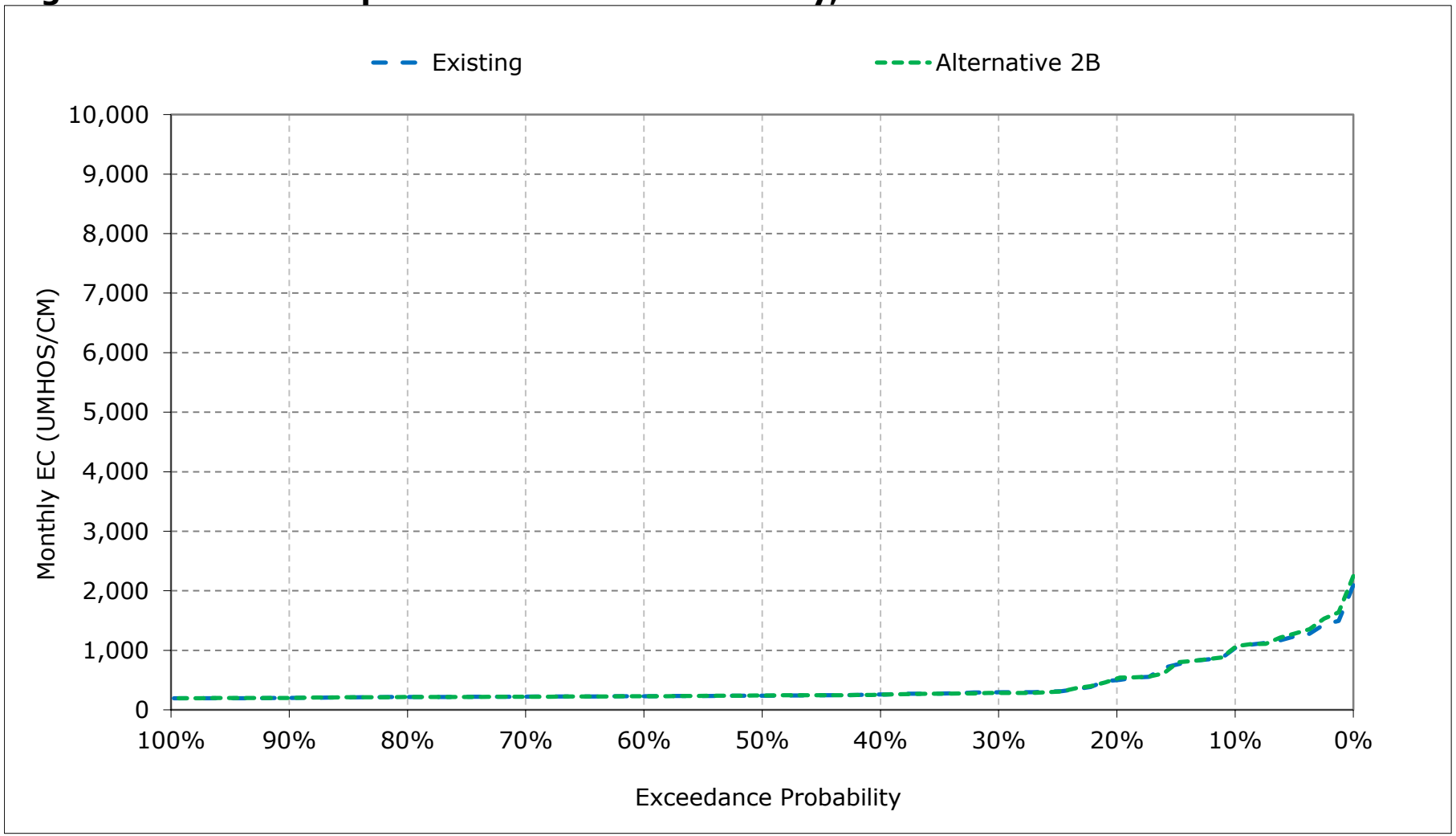


**Figure 11-10. San Joaquin River at Antioch Salinity, April EC**

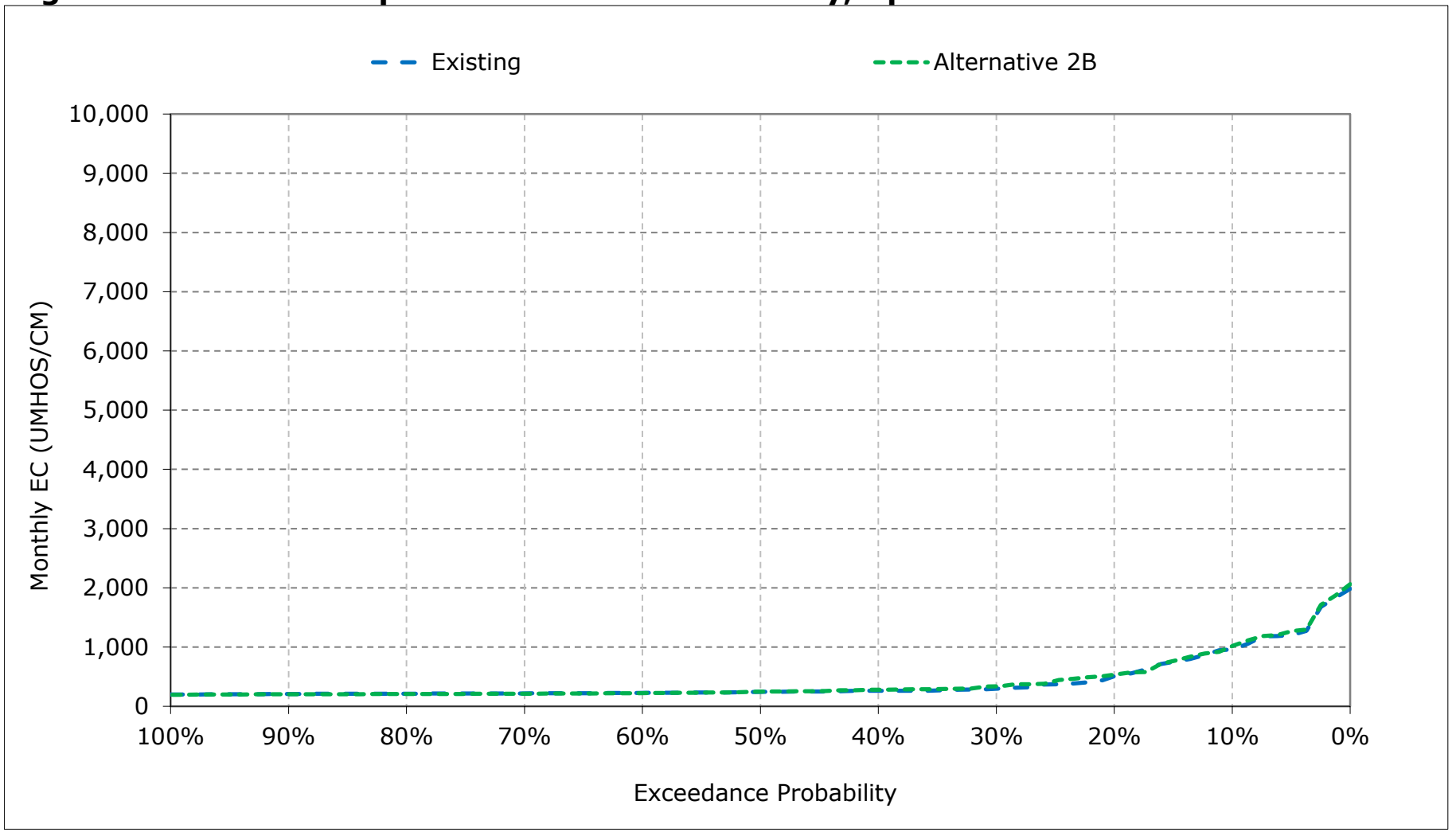


**Figure 11-11. San Joaquin River at Antioch Salinity, May EC**

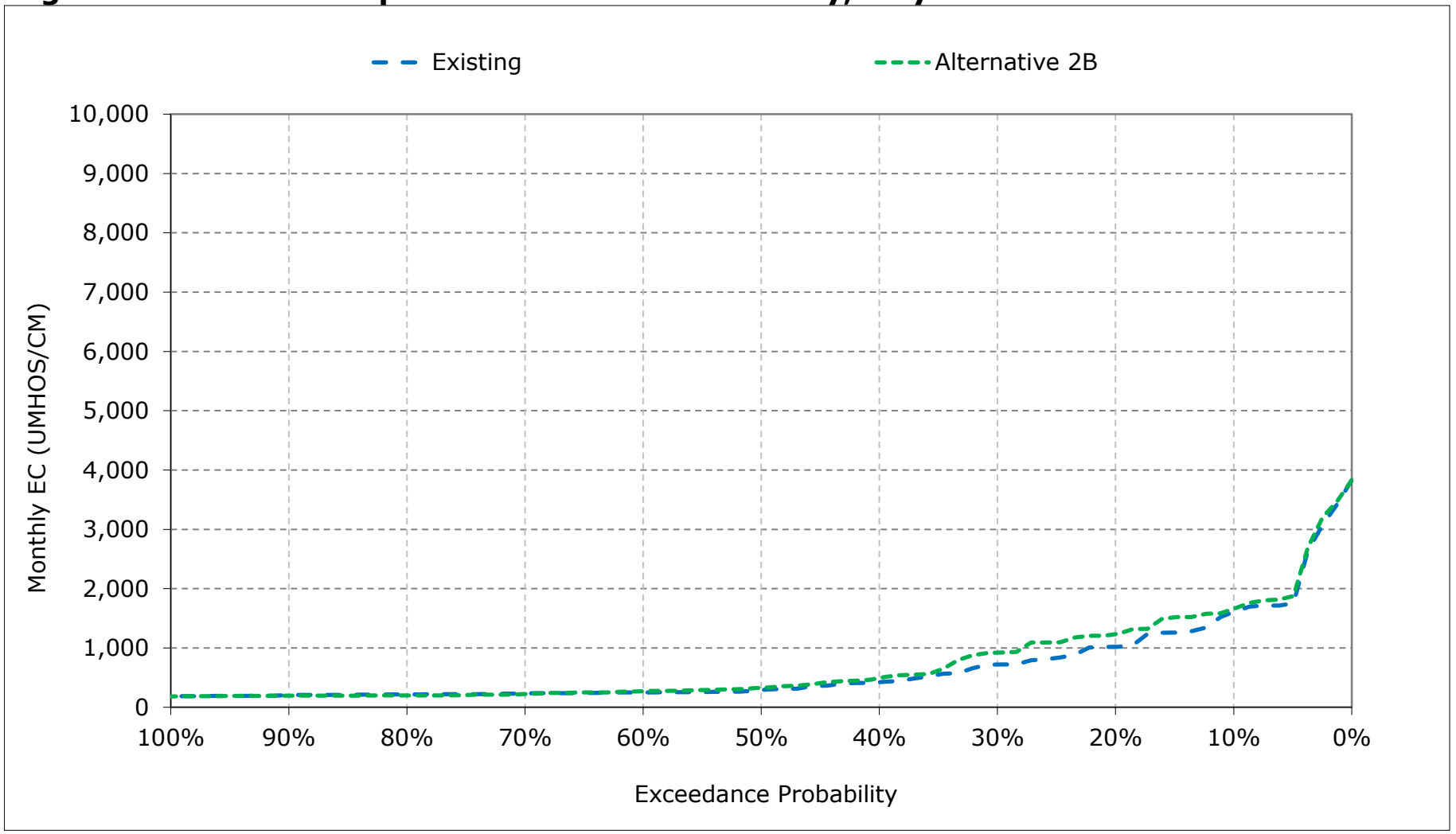


**Figure 11-12. San Joaquin River at Antioch Salinity, June EC**

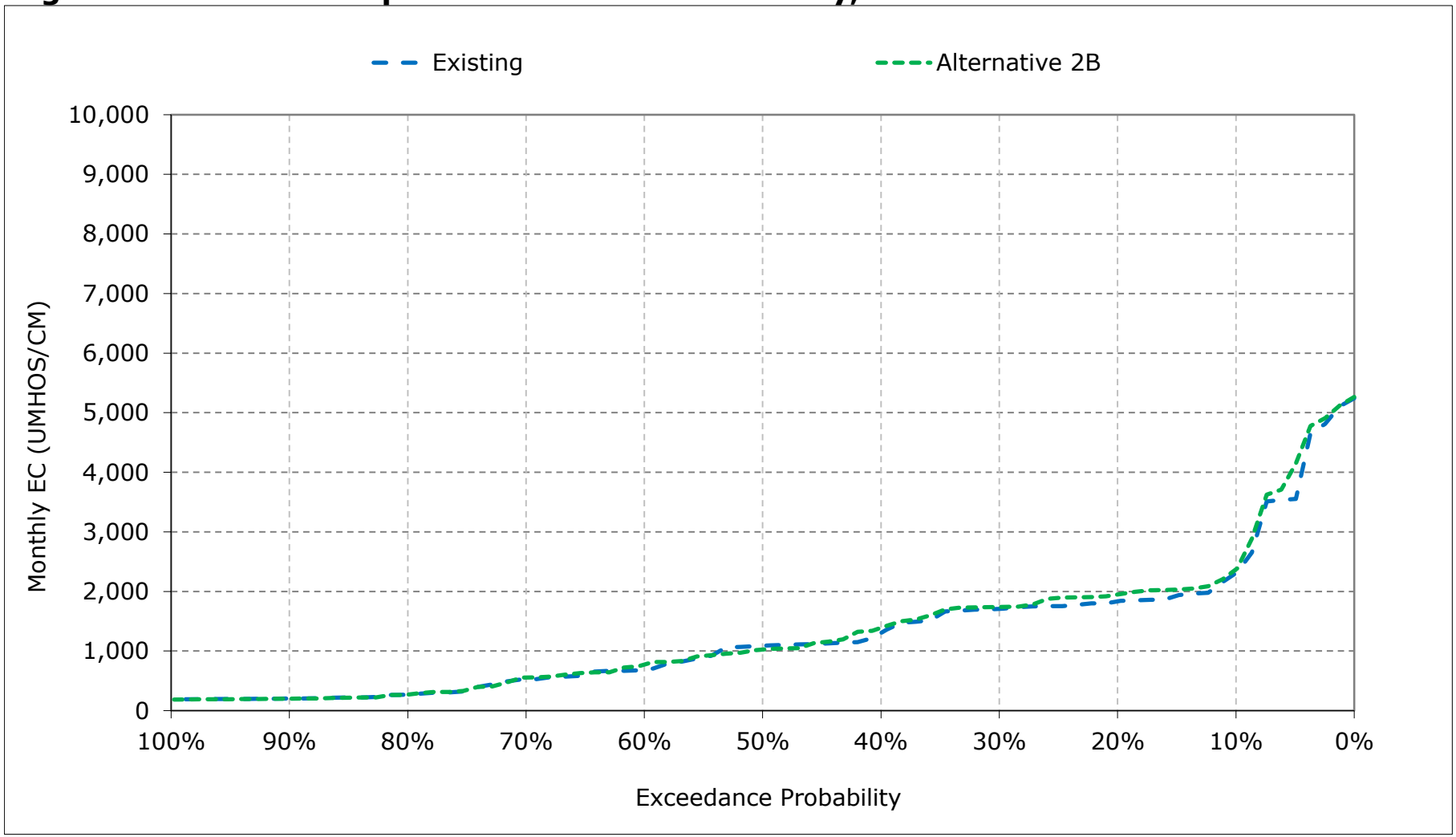


**Figure 11-13. San Joaquin River at Antioch Salinity, July EC**

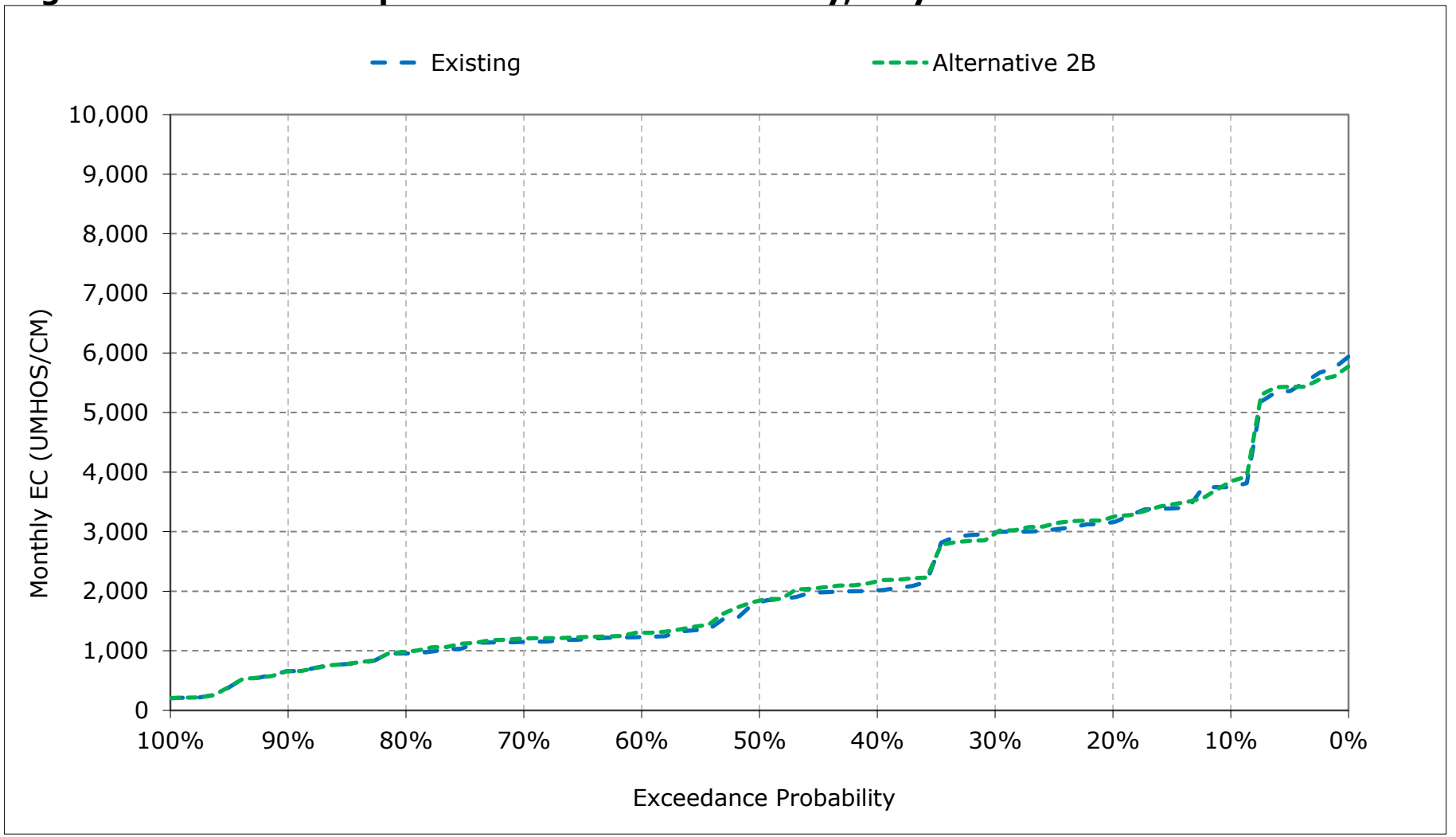


**Figure 11-14. San Joaquin River at Antioch Salinity, August EC**

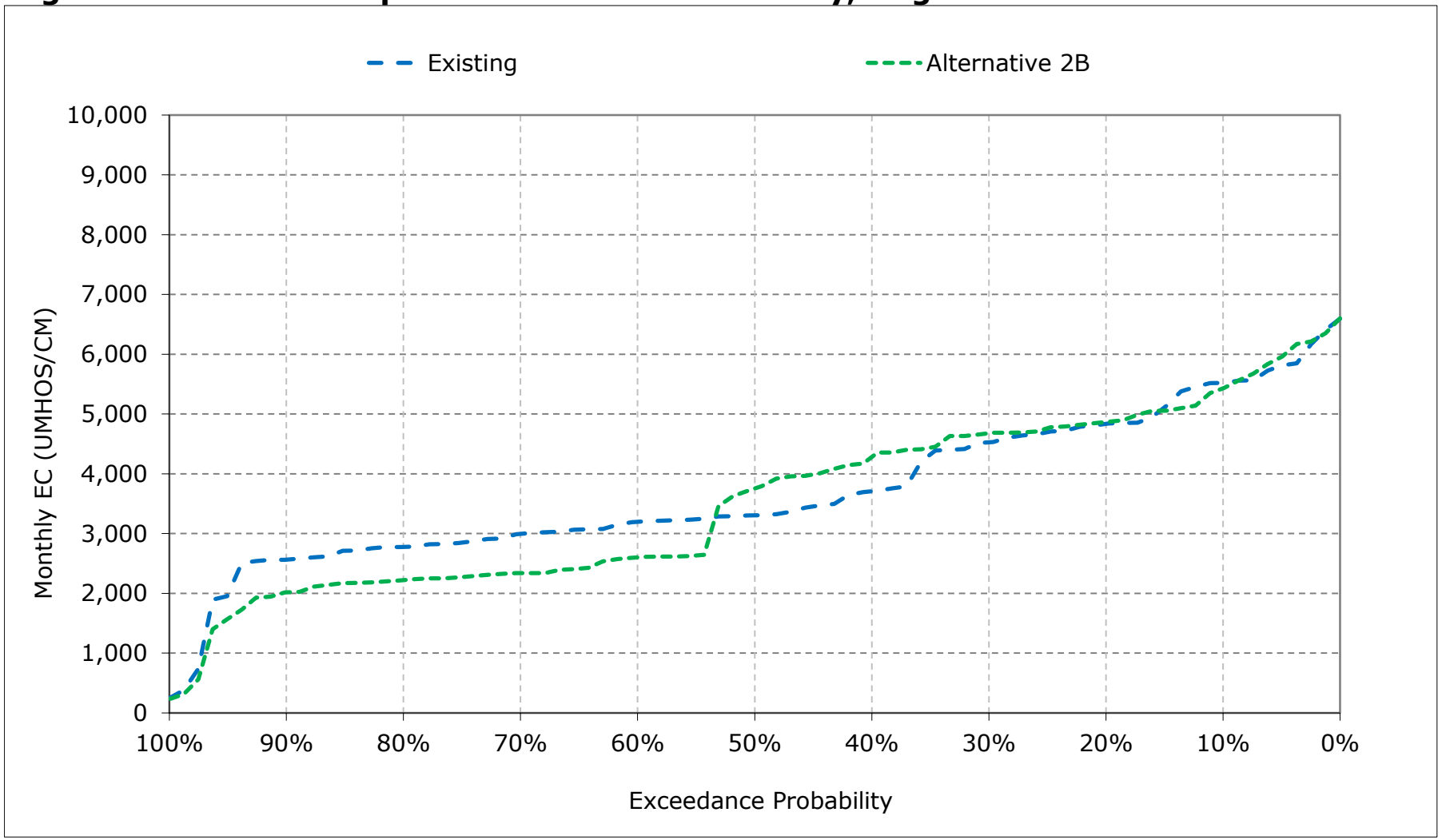


**Figure 11-15. San Joaquin River at Antioch Salinity, September EC**

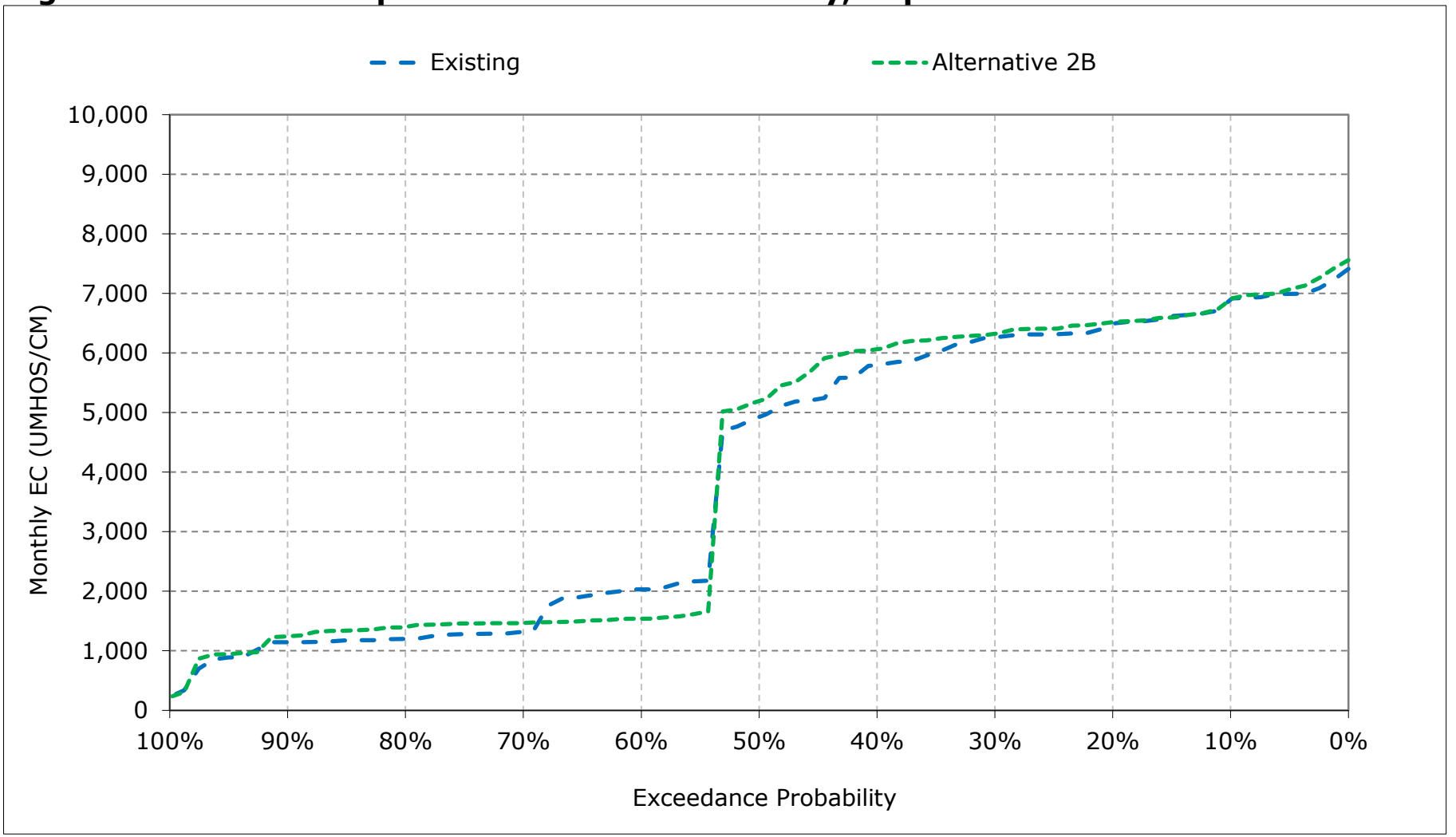


**Figure 11-16. San Joaquin River at Antioch Salinity, October EC**

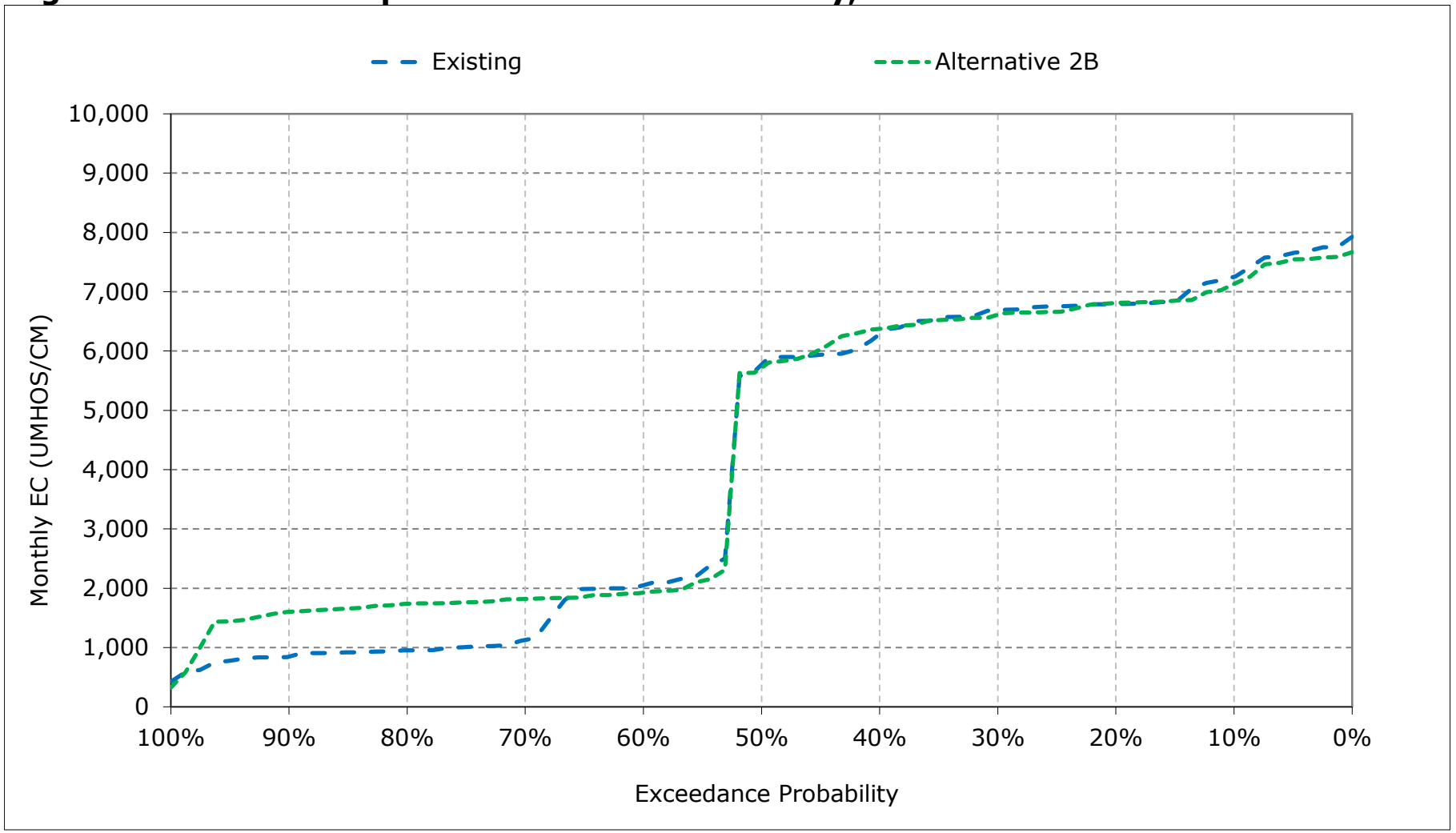


**Figure 11-17. San Joaquin River at Antioch Salinity, November EC**

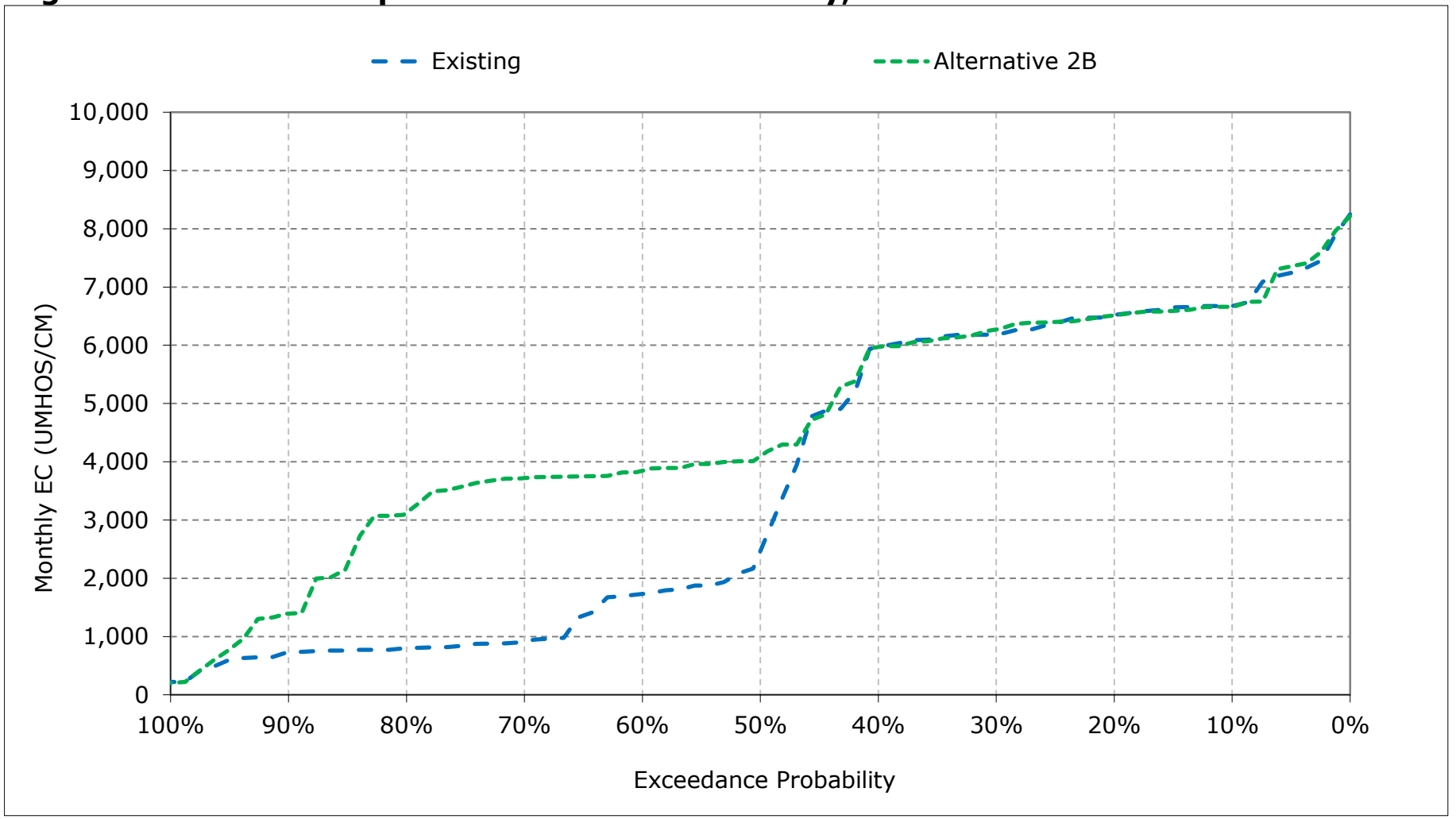
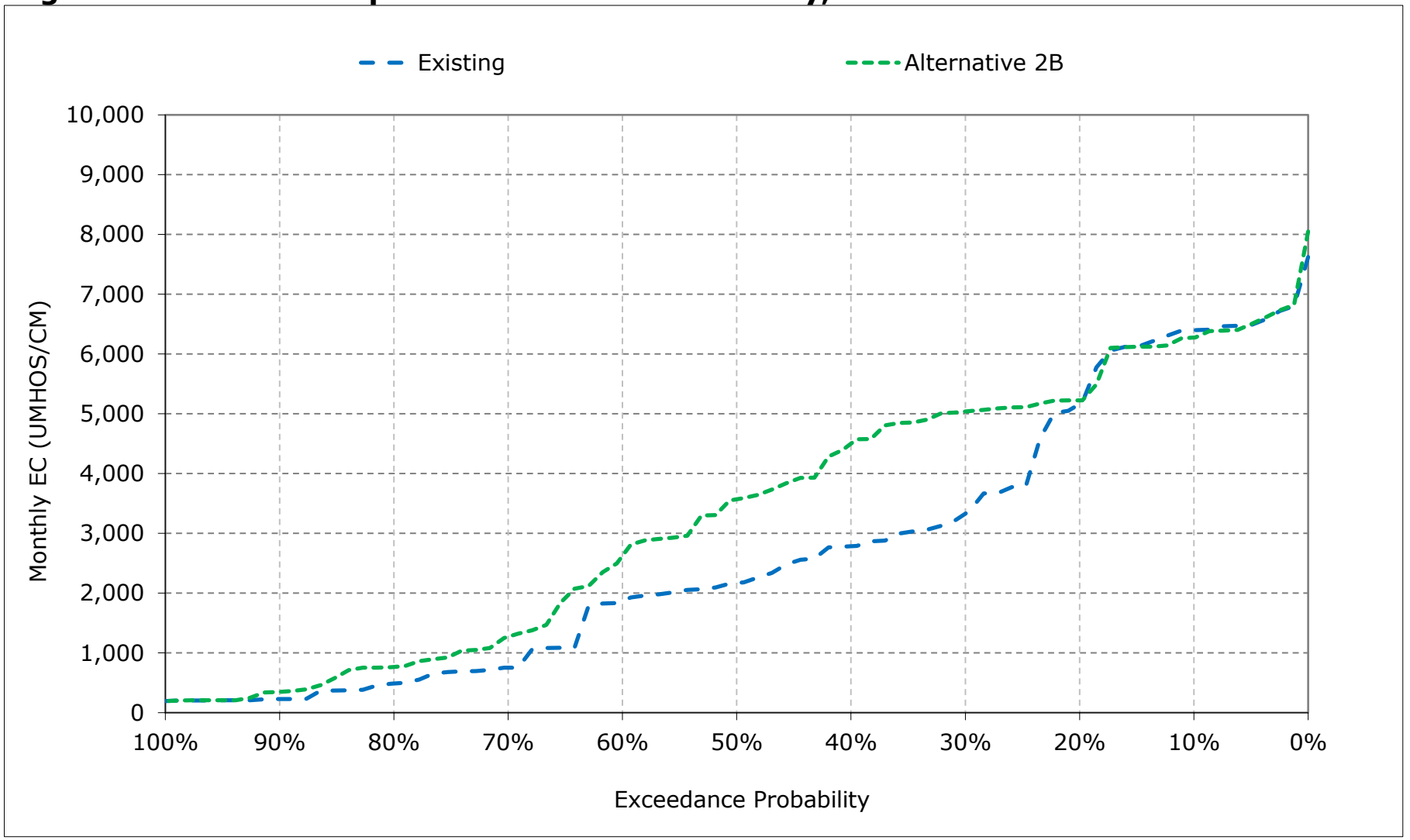


**Figure 11-18. San Joaquin River at Antioch Salinity, December EC**



## Table 12-1. San Joaquin River at Jersey Point Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 2,437 | 2,408 | 2,326 | 1,362 | 568 | 339 | 307 | 395 | 562 | 1,431 | 1,744 | 2,423 |
| **20%** | 2,258 | 2,253 | 2,053 | 1,126 | 397 | 274 | 249 | 303 | 470 | 1,136 | 1,546 | 2,323 |
| **30%** | 2,157 | 2,128 | 1,532 | 889 | 309 | 244 | 236 | 266 | 446 | 888 | 1,473 | 2,249 |
| **40%** | 2,064 | 1,889 | 1,271 | 674 | 290 | 236 | 230 | 247 | 365 | 808 | 1,374 | 2,127 |
| **50%** | 1,775 | 1,285 | 831 | 515 | 270 | 228 | 224 | 240 | 311 | 595 | 1,300 | 1,910 |
| **60%** | 562 | 637 | 743 | 352 | 252 | 222 | 221 | 233 | 256 | 491 | 1,208 | 1,028 |
| **70%** | 369 | 399 | 507 | 264 | 237 | 214 | 219 | 227 | 231 | 442 | 1,148 | 967 |
| **80%** | 312 | 322 | 308 | 234 | 219 | 209 | 214 | 222 | 209 | 337 | 1,065 | 909 |
| **90%** | 287 | 267 | 215 | 218 | 213 | 200 | 209 | 207 | 203 | 246 | 1,000 | 876 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 1,354 | 1,310 | 1,133 | 668 | 342 | 255 | 243 | 283 | 401 | 754 | 1,304 | 1,613 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 1,021 | 898 | 480 | 277 | 234 | 219 | 218 | 215 | 223 | 335 | 990 | 819 |
| **Above Normal (15%)** | 1,495 | 1,286 | 1,114 | 516 | 267 | 222 | 224 | 229 | 276 | 429 | 1,124 | 942 |
| **Below Normal (17%)** | 1,417 | 1,465 | 1,437 | 744 | 289 | 233 | 232 | 247 | 328 | 746 | 1,402 | 2,286 |
| **Dry (22%)** | 1,430 | 1,529 | 1,355 | 865 | 391 | 256 | 239 | 277 | 449 | 1,141 | 1,475 | 2,261 |
| **Critical (15%)** | 1,747 | 1,716 | 1,876 | 1,282 | 637 | 387 | 332 | 534 | 923 | 1,413 | 1,795 | 2,248 |

### Alternative 2B

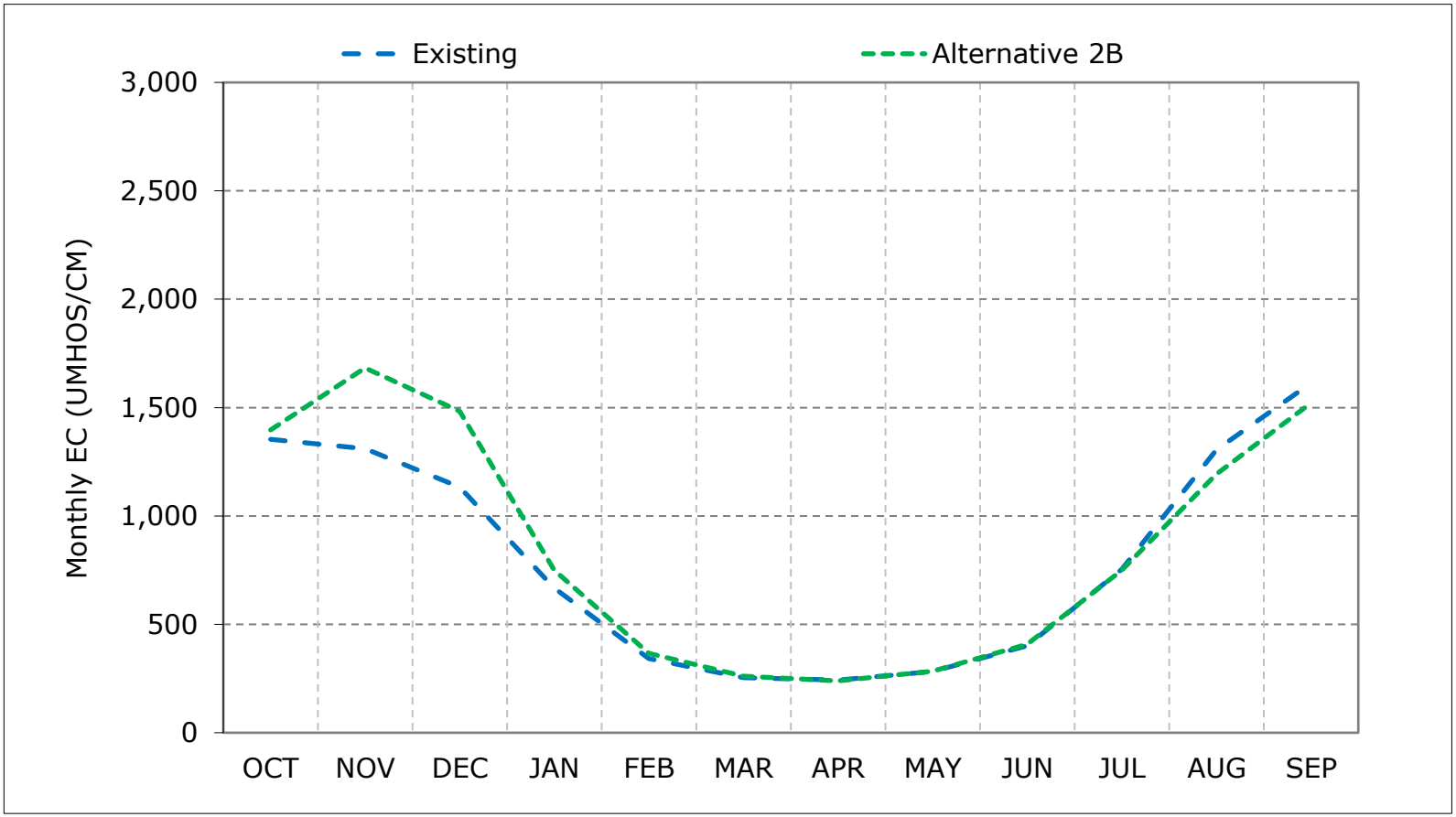
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 2,383 | 2,391 | 2,472 | 1,599 | 624 | 350 | 306 | 420 | 598 | 1,441 | 1,784 | 2,594 |
| **20%** | 2,294 | 2,254 | 2,314 | 1,328 | 414 | 275 | 246 | 336 | 507 | 1,096 | 1,663 | 2,472 |
| **30%** | 2,154 | 2,108 | 2,188 | 1,085 | 329 | 246 | 229 | 273 | 450 | 905 | 1,535 | 2,347 |
| **40%** | 2,029 | 1,891 | 1,922 | 832 | 297 | 239 | 224 | 232 | 363 | 769 | 1,451 | 2,159 |
| **50%** | 1,769 | 1,747 | 1,612 | 513 | 274 | 232 | 218 | 223 | 293 | 566 | 1,298 | 1,970 |
| **60%** | 607 | 1,501 | 1,406 | 380 | 254 | 225 | 214 | 214 | 251 | 491 | 925 | 669 |
| **70%** | 540 | 1,449 | 746 | 269 | 236 | 217 | 210 | 205 | 227 | 451 | 792 | 609 |
| **80%** | 471 | 1,288 | 513 | 241 | 219 | 209 | 208 | 202 | 201 | 340 | 735 | 577 |
| **90%** | 403 | 720 | 275 | 225 | 213 | 203 | 204 | 194 | 197 | 246 | 614 | 479 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 1,397 | 1,683 | 1,483 | 750 | 366 | 261 | 239 | 284 | 408 | 750 | 1,193 | 1,521 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 1,094 | 1,375 | 730 | 295 | 235 | 221 | 211 | 204 | 223 | 337 | 660 | 505 |
| **Above Normal (15%)** | 1,557 | 1,635 | 1,541 | 610 | 274 | 226 | 216 | 211 | 258 | 430 | 809 | 625 |
| **Below Normal (17%)** | 1,491 | 1,820 | 1,843 | 830 | 293 | 233 | 225 | 244 | 319 | 717 | 1,567 | 2,497 |
| **Dry (22%)** | 1,438 | 1,858 | 1,827 | 1,052 | 445 | 262 | 238 | 294 | 473 | 1,123 | 1,518 | 2,317 |
| **Critical (15%)** | 1,721 | 1,976 | 2,124 | 1,329 | 711 | 411 | 342 | 561 | 964 | 1,445 | 1,808 | 2,282 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -54 | -17 | **146** | **237** | **56** | **11** | -1 | **25** | **36** | **10** | **40** | **171** |
| **20%** | **36** | **2** | **261** | **202** | **17** | **1** | -4 | **33** | **38** | -40 | **116** | **149** |
| **30%** | -3 | -20 | **656** | **196** | **19** | **1** | -7 | **7** | **4** | **17** | **62** | **98** |
| **40%** | -35 | **2** | **650** | **158** | **7** | **3** | -7 | -15 | -2 | -39 | **77** | **32** |
| **50%** | -6 | **462** | **781** | -2 | **4** | **3** | -7 | -18 | -19 | -29 | -1 | **60** |
| **60%** | **44** | **864** | **663** | **29** | **2** | **4** | -7 | -18 | -5 | **0** | -282 | -359 |
| **70%** | **171** | **1,050** | **238** | **5** | -1 | **2** | -8 | -21 | -4 | **9** | -356 | -358 |
| **80%** | **159** | **966** | **205** | **7** | **0** | **0** | -6 | -19 | -8 | **3** | -330 | -332 |
| **90%** | **116** | **453** | **60** | **7** | **1** | **2** | -5 | -13 | -5 | 0 | -386 | -397 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **43** | **373** | **351** | **82** | **25** | **6** | -3 | **1** | **7** | -3 | -111 | -93 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **73** | **477** | **249** | **18** | **1** | **2** | -8 | -11 | -1 | **2** | -331 | -314 |
| **Above Normal (15%)** | **62** | **349** | **426** | **94** | **7** | **4** | -8 | -18 | -18 | **2** | -315 | -317 |
| **Below Normal (17%)** | **74** | **355** | **406** | **86** | **5** | **0** | -7 | -3 | -9 | -29 | **165** | **211** |
| **Dry (22%)** | **8** | **329** | **472** | **188** | **54** | **6** | -1 | **17** | **24** | -18 | **43** | **56** |
| **Critical (15%)** | -26 | **260** | **248** | **47** | **74** | **24** | **10** | **28** | **40** | **32** | **13** | **34** |

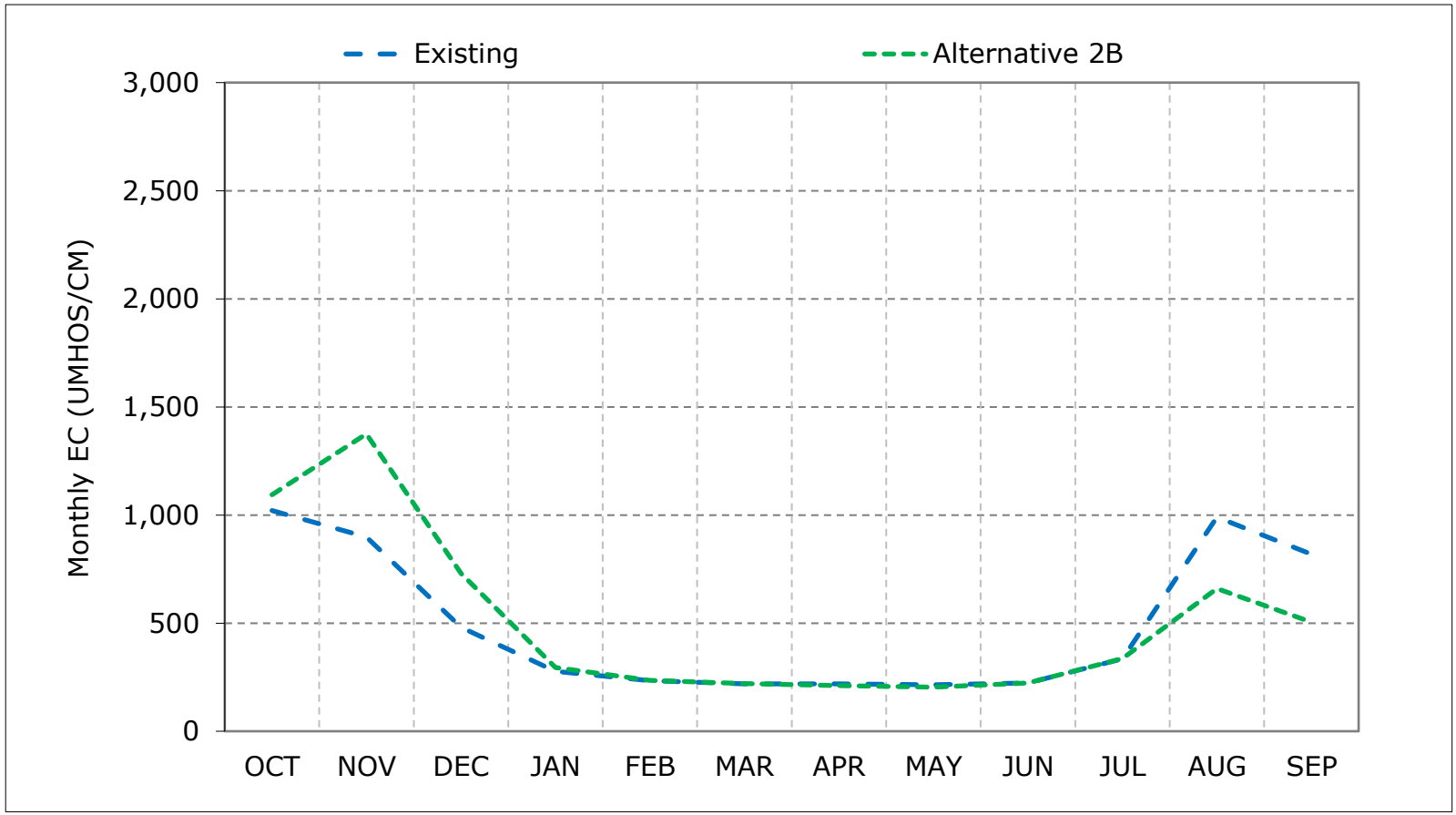
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 12-1. San Joaquin River at Jersey Point Salinity, Long-Term Average EC**



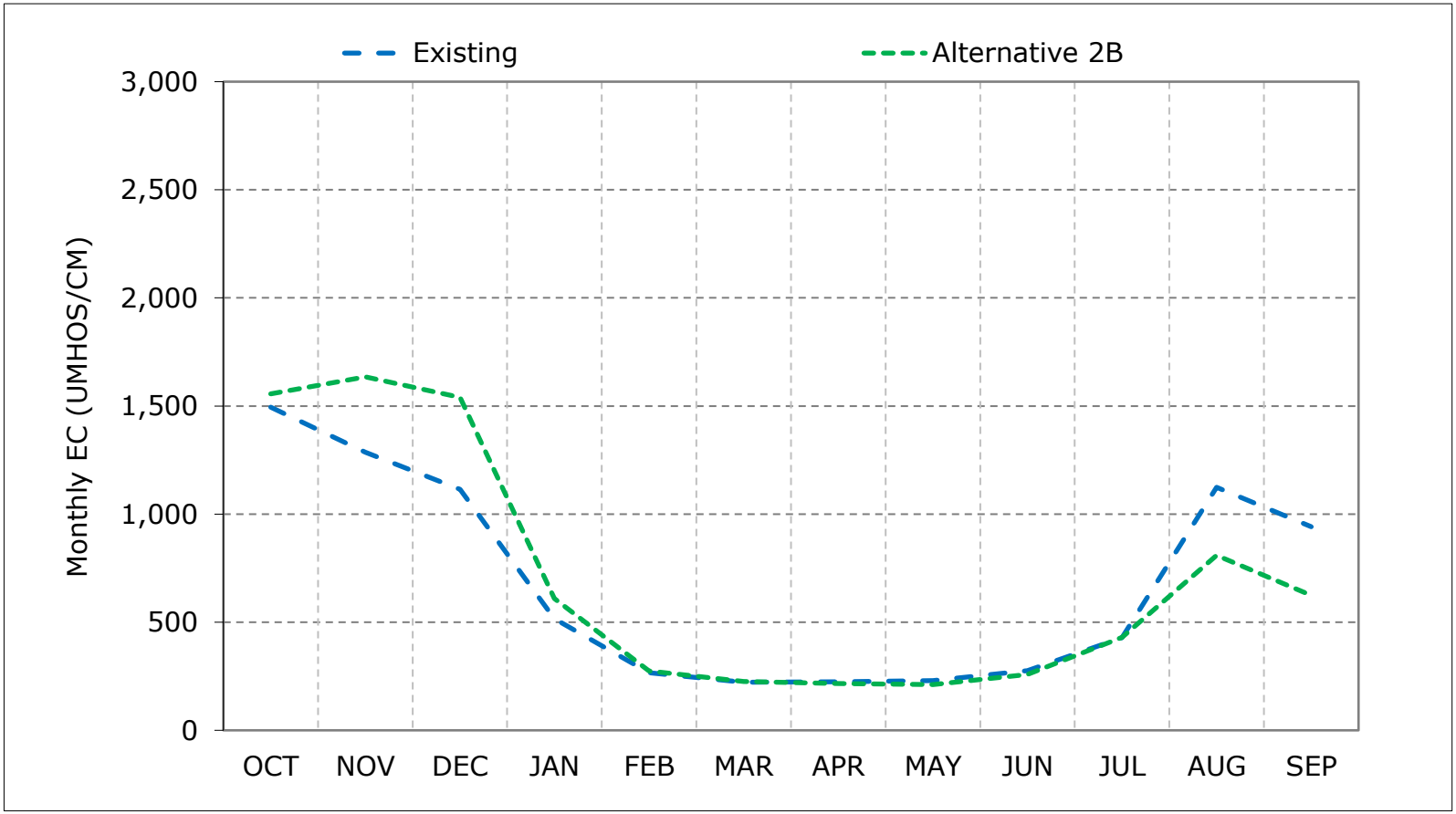

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 12-2. San Joaquin River at Jersey Point Salinity, Wet Year Average EC**



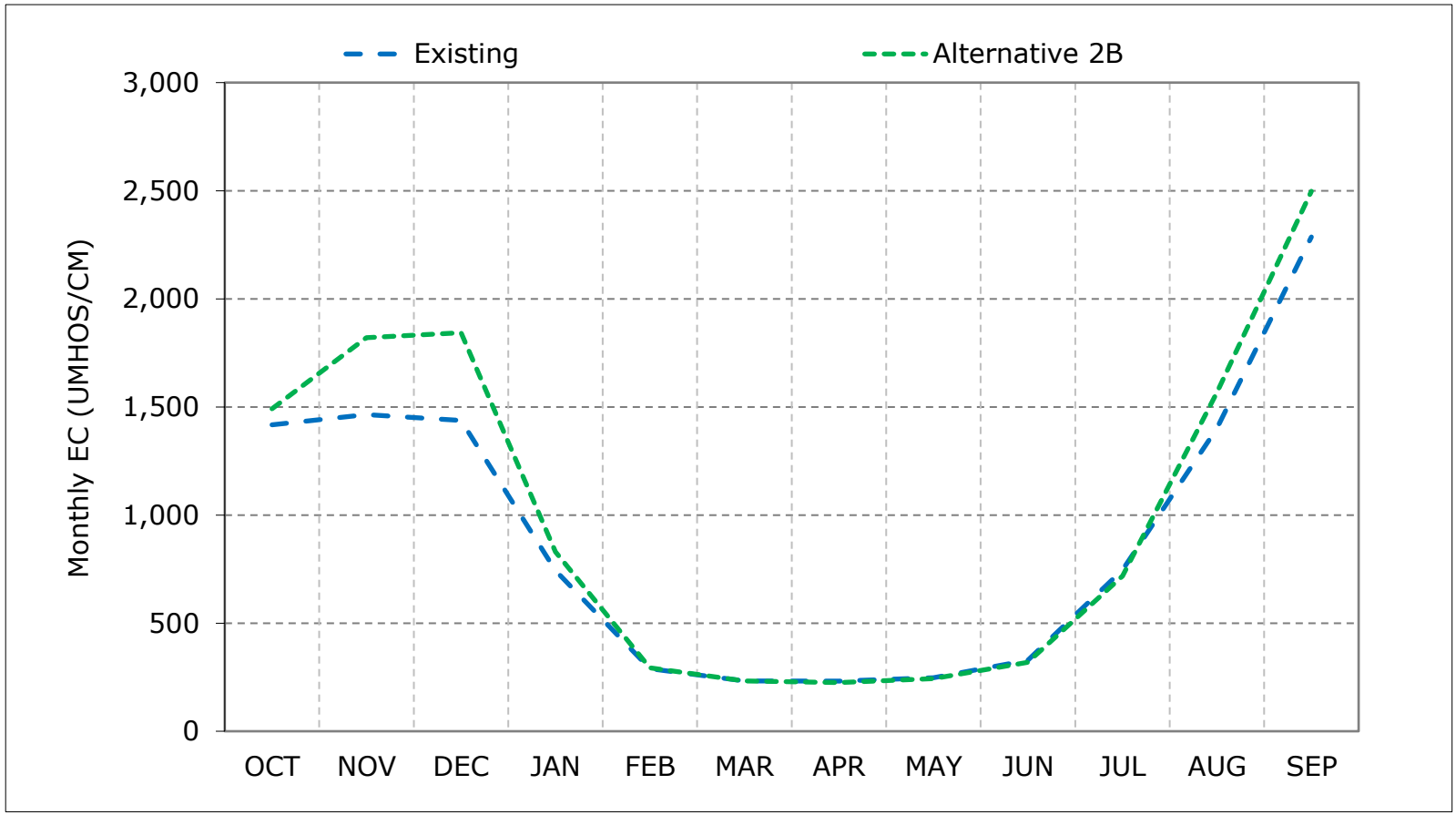

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 12-3. San Joaquin River at Jersey Point Salinity, Above Normal Year Average**



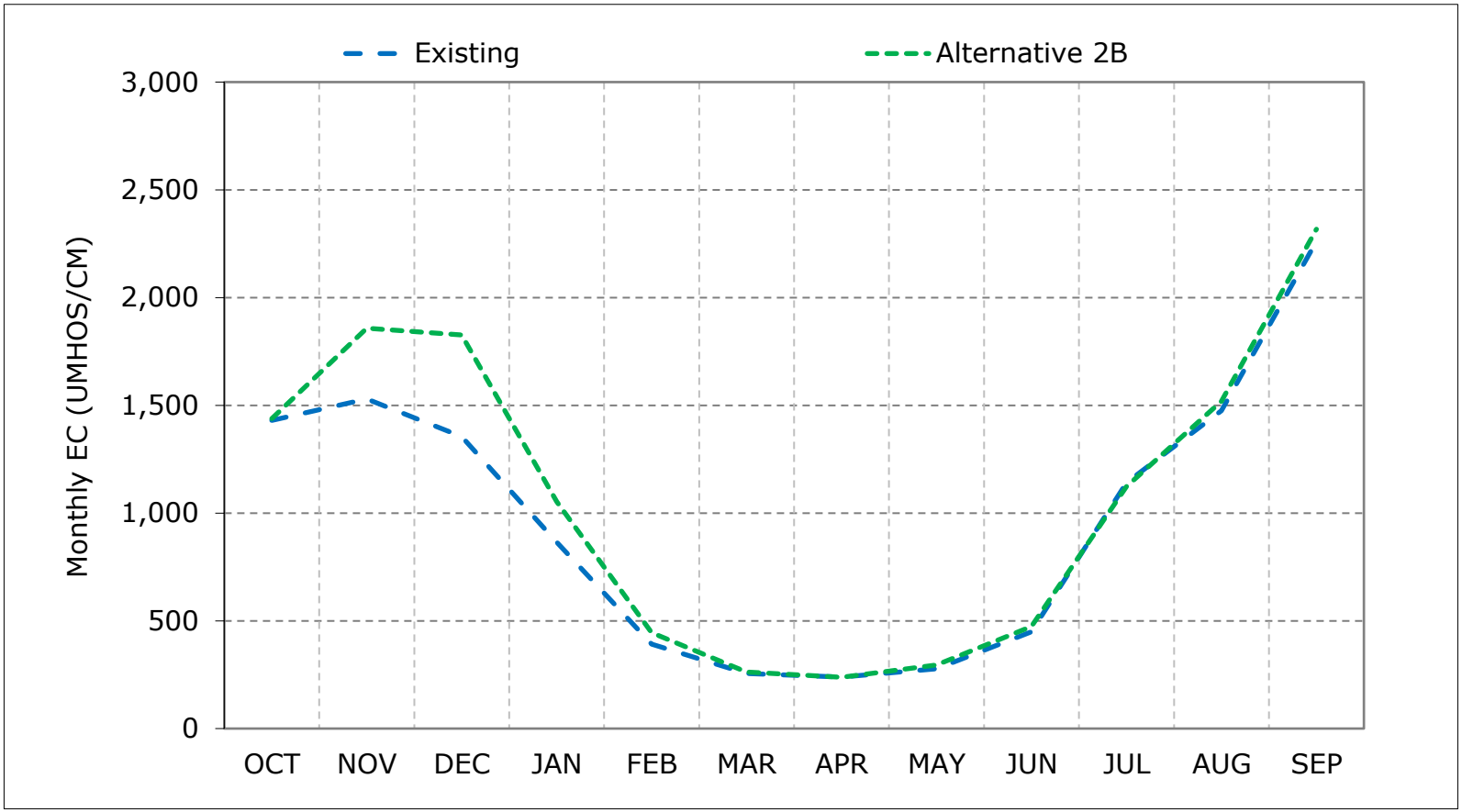

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 12-4. San Joaquin River at Jersey Point Salinity, Below Normal Year Average**



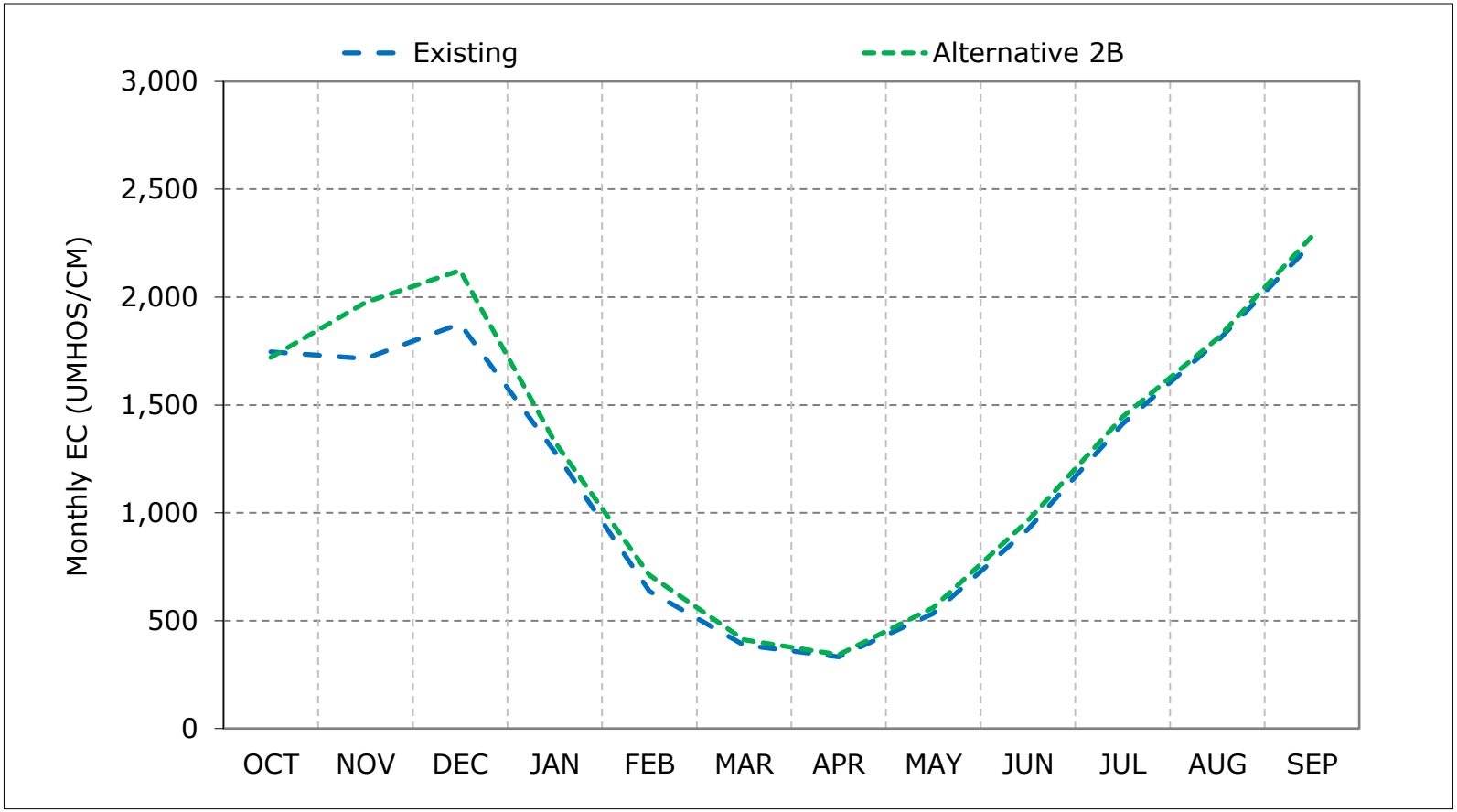

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 12-5. San Joaquin River at Jersey Point Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 12-6. San Joaquin River at Jersey Point Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 12-7. San Joaquin River at Jersey Point Salinity, January EC**

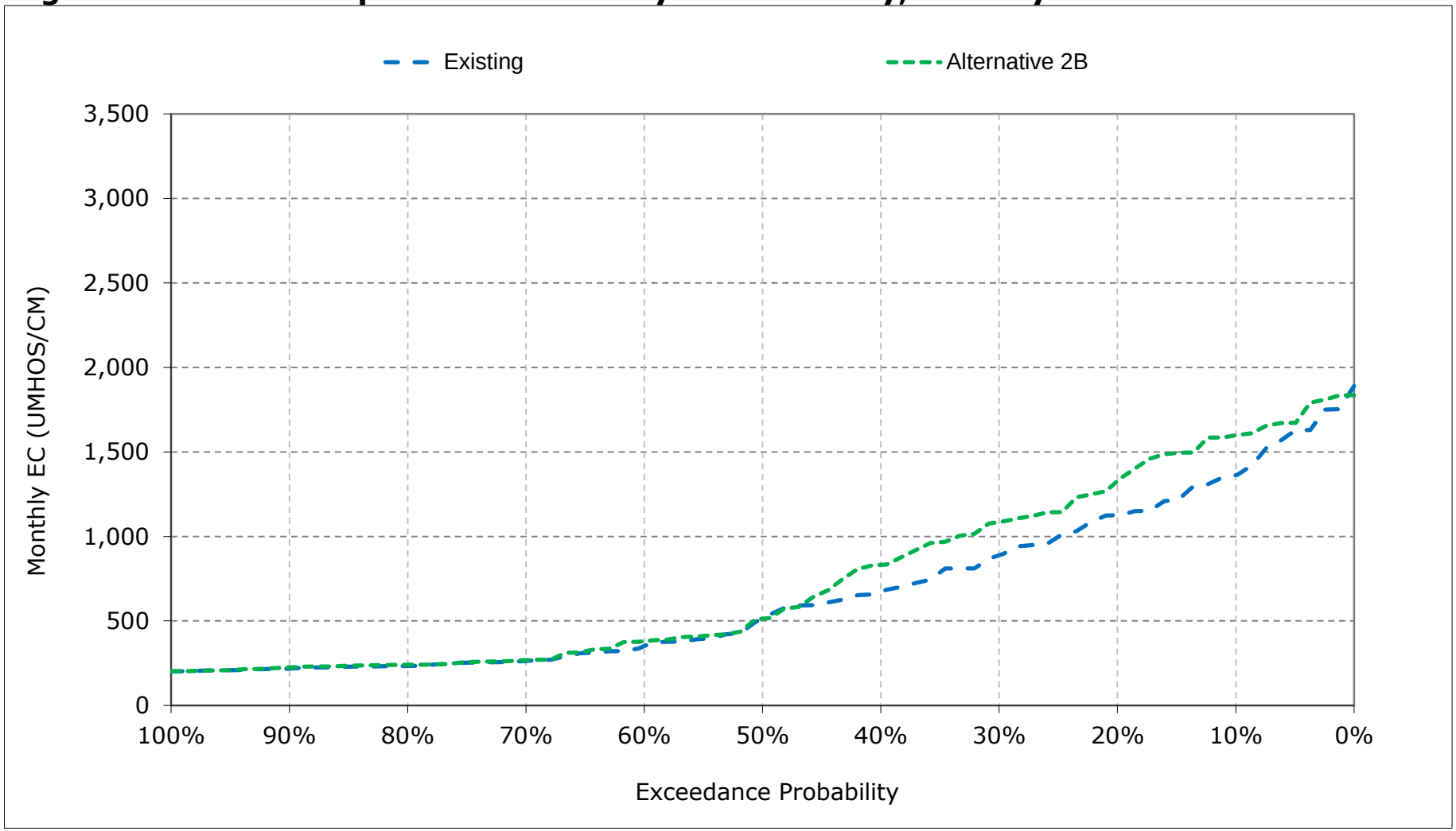


**Figure 12-8. San Joaquin River at Jersey Point Salinity, February EC**

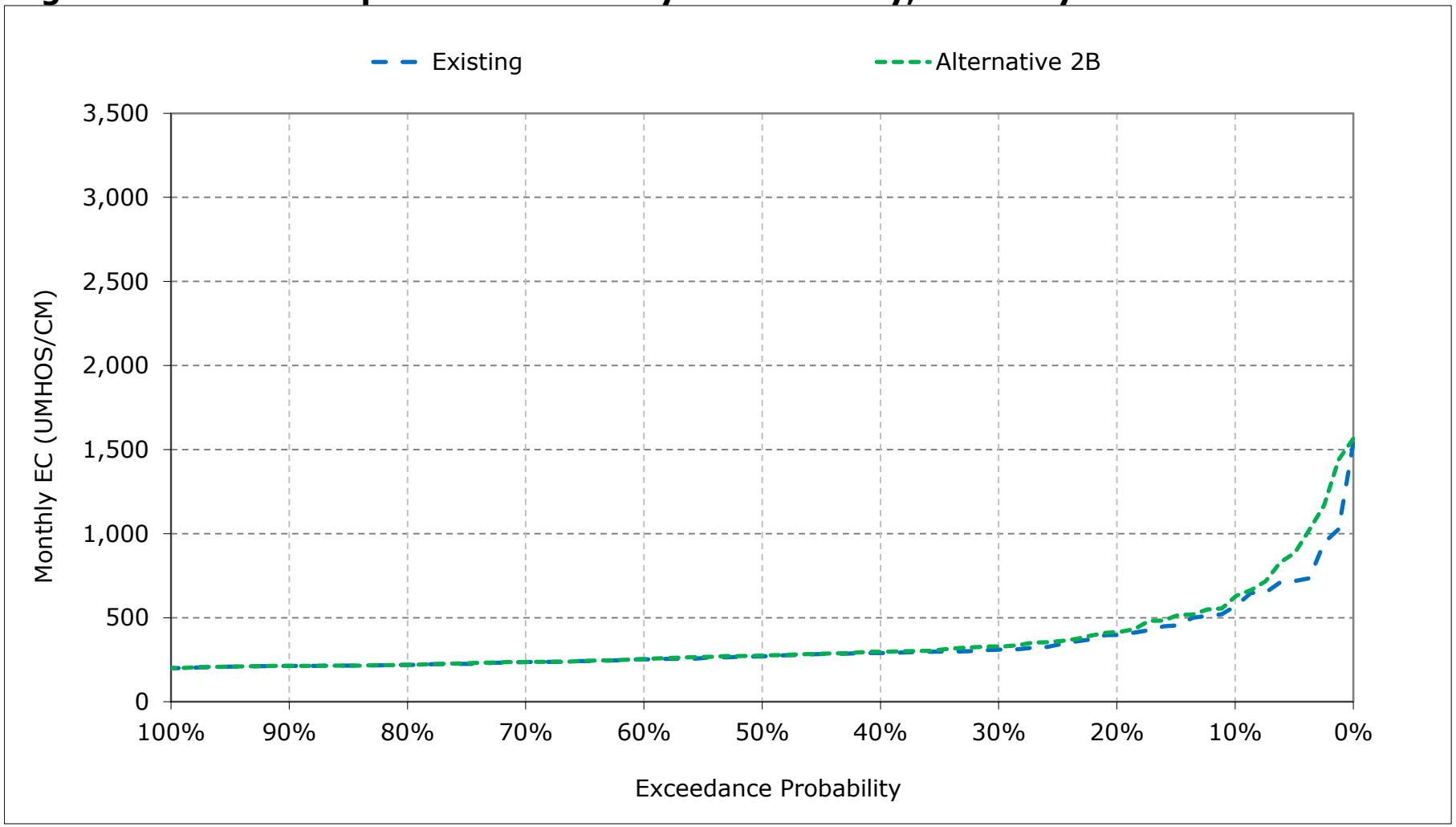


**Figure 12-9. San Joaquin River at Jersey Point Salinity, March EC**

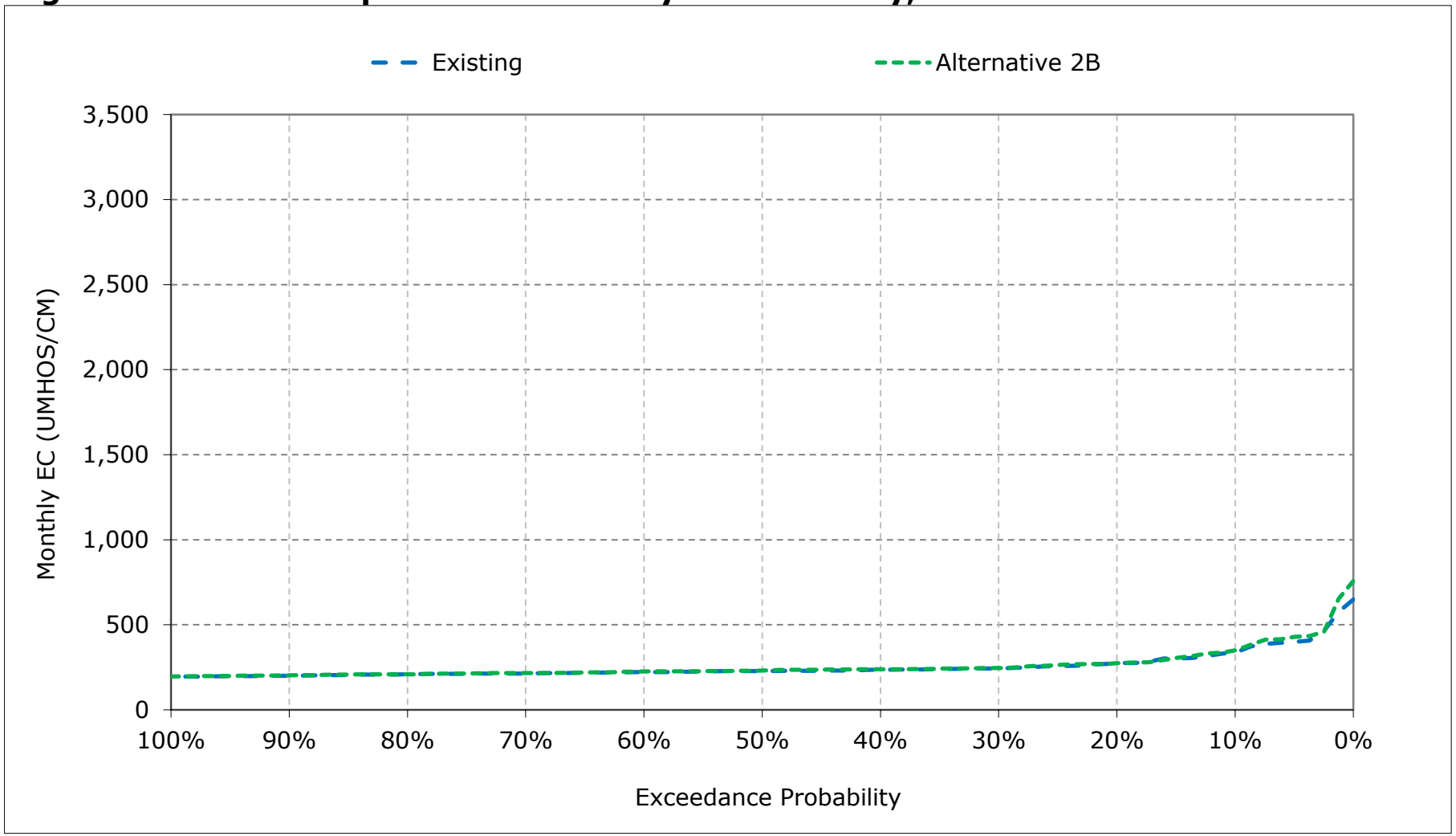


**Figure 12-10. San Joaquin River at Jersey Point Salinity, April EC**

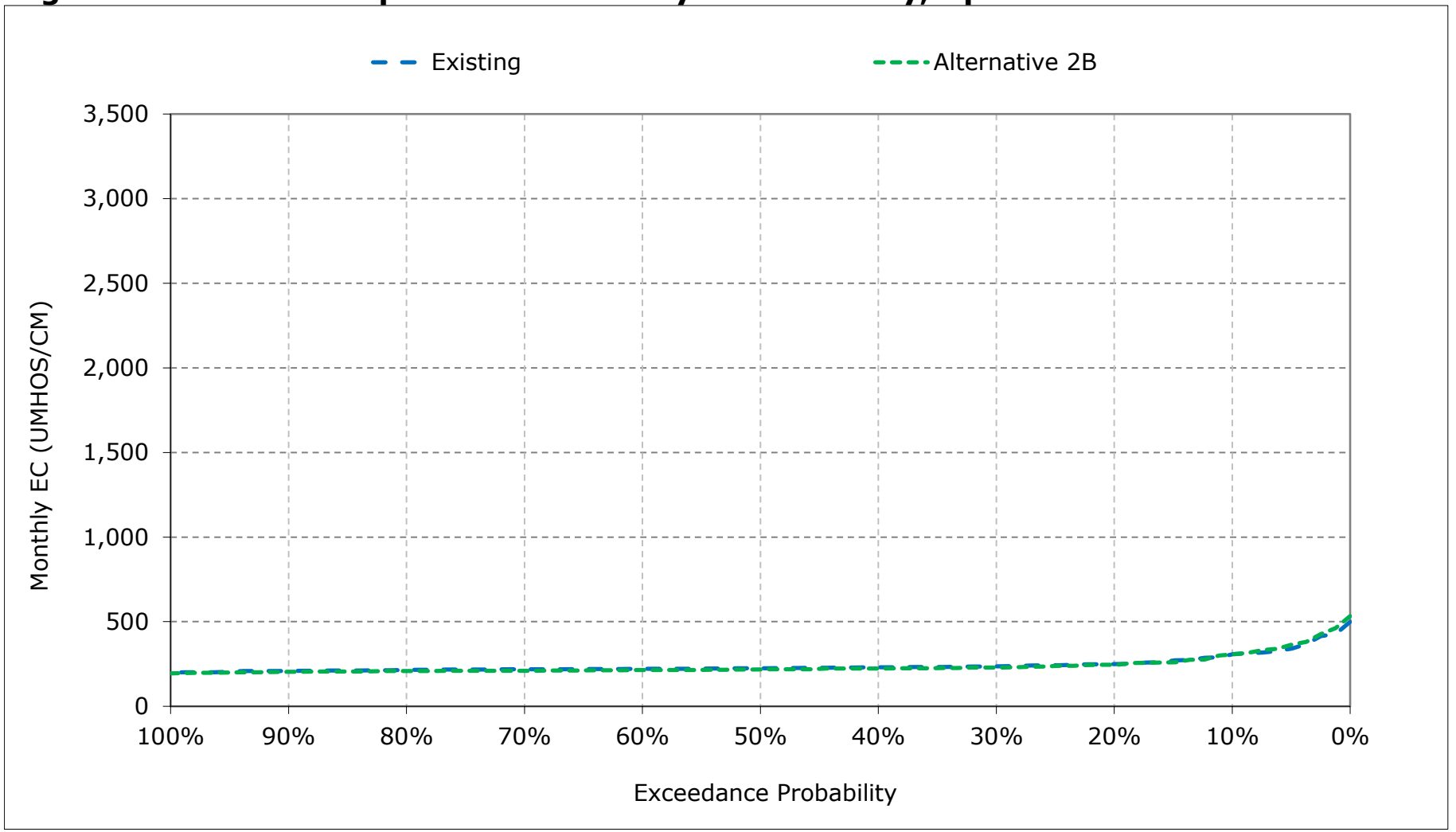


**Figure 12-11. San Joaquin River at Jersey Point Salinity, May EC**

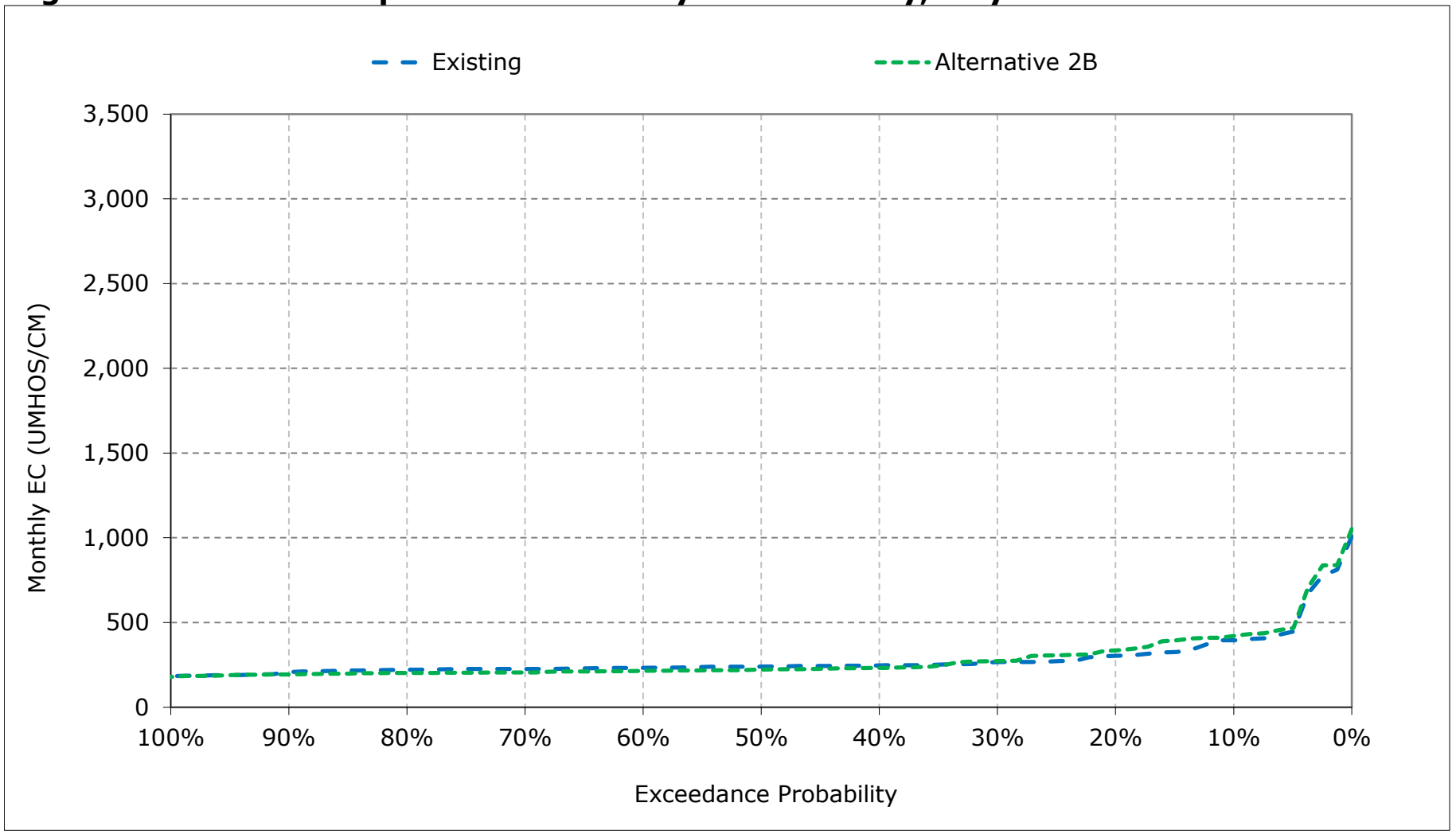


**Figure 12-12. San Joaquin River at Jersey Point Salinity, June EC**

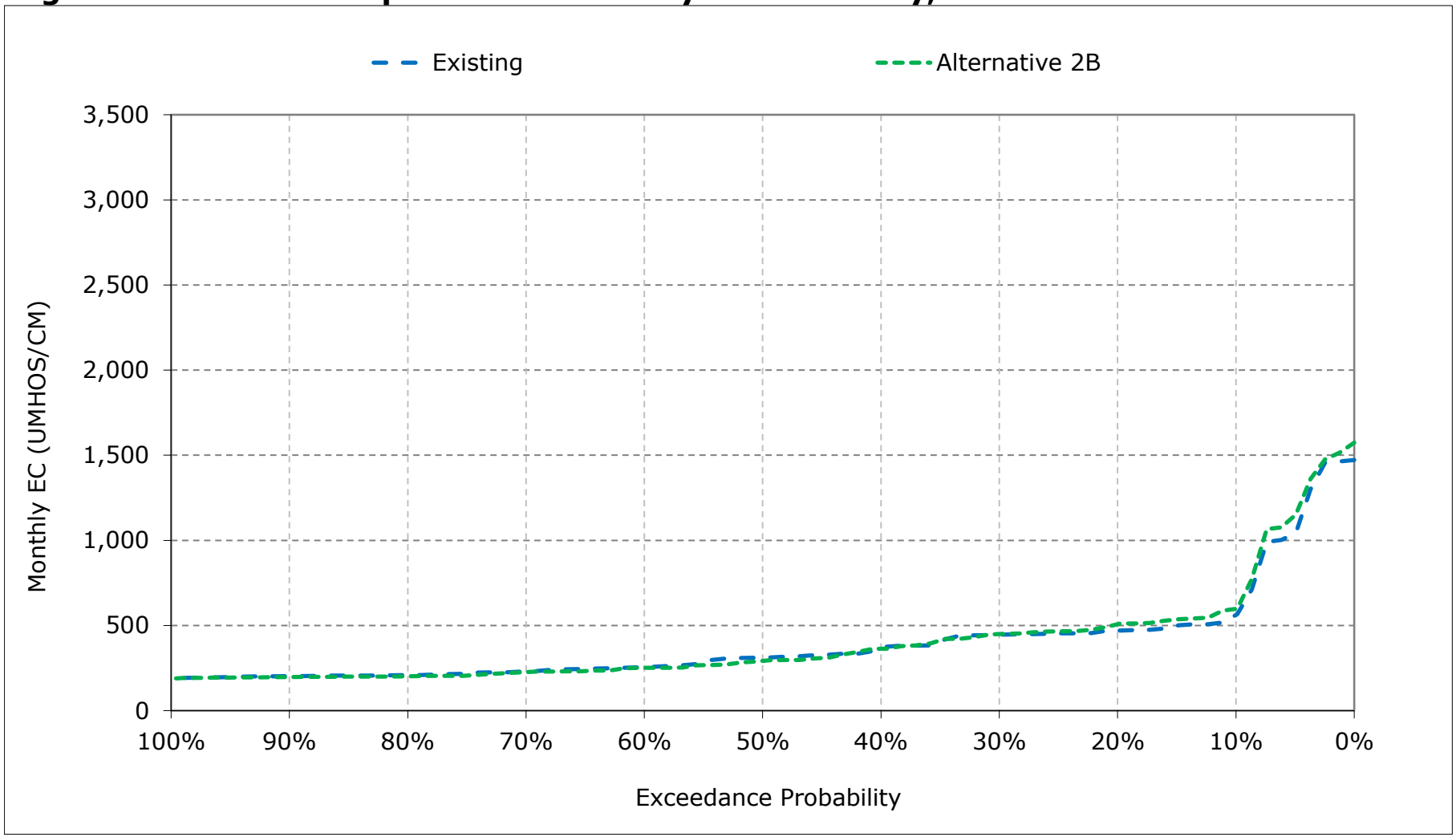


**Figure 12-13. San Joaquin River at Jersey Point Salinity, July EC**

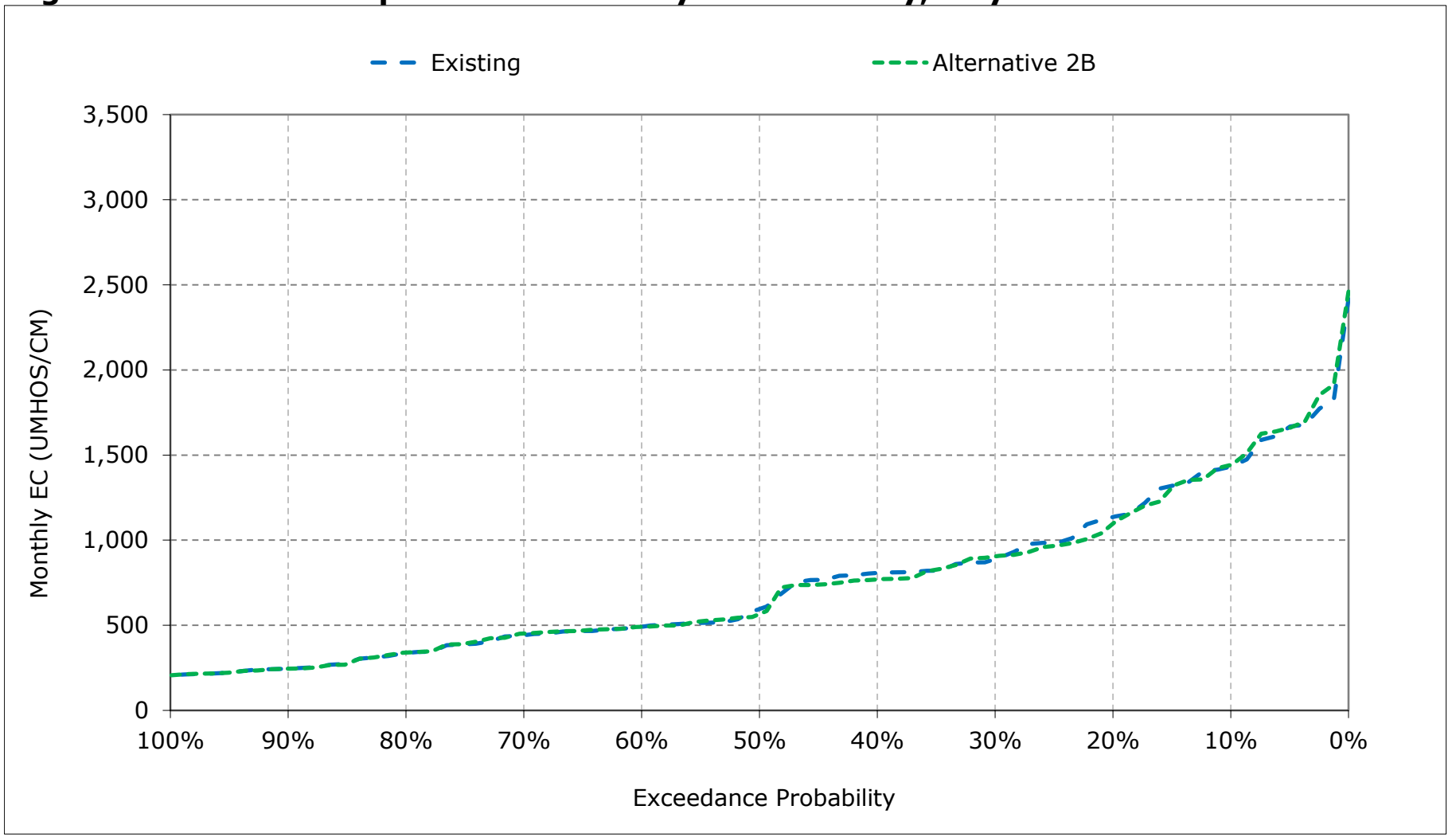


**Figure 12-14. San Joaquin River at Jersey Point Salinity, August EC**

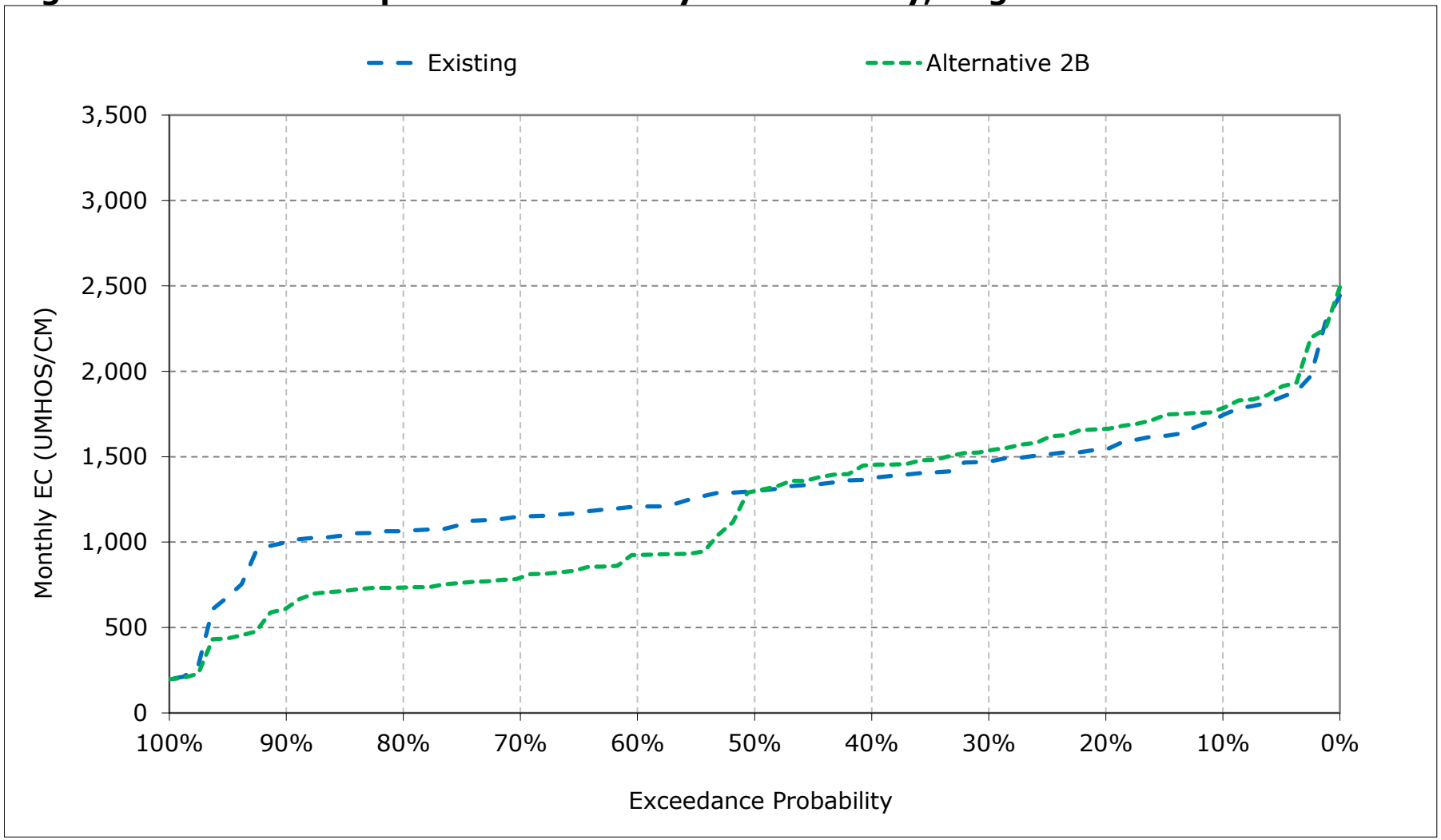


**Figure 12-15. San Joaquin River at Jersey Point Salinity, September EC**

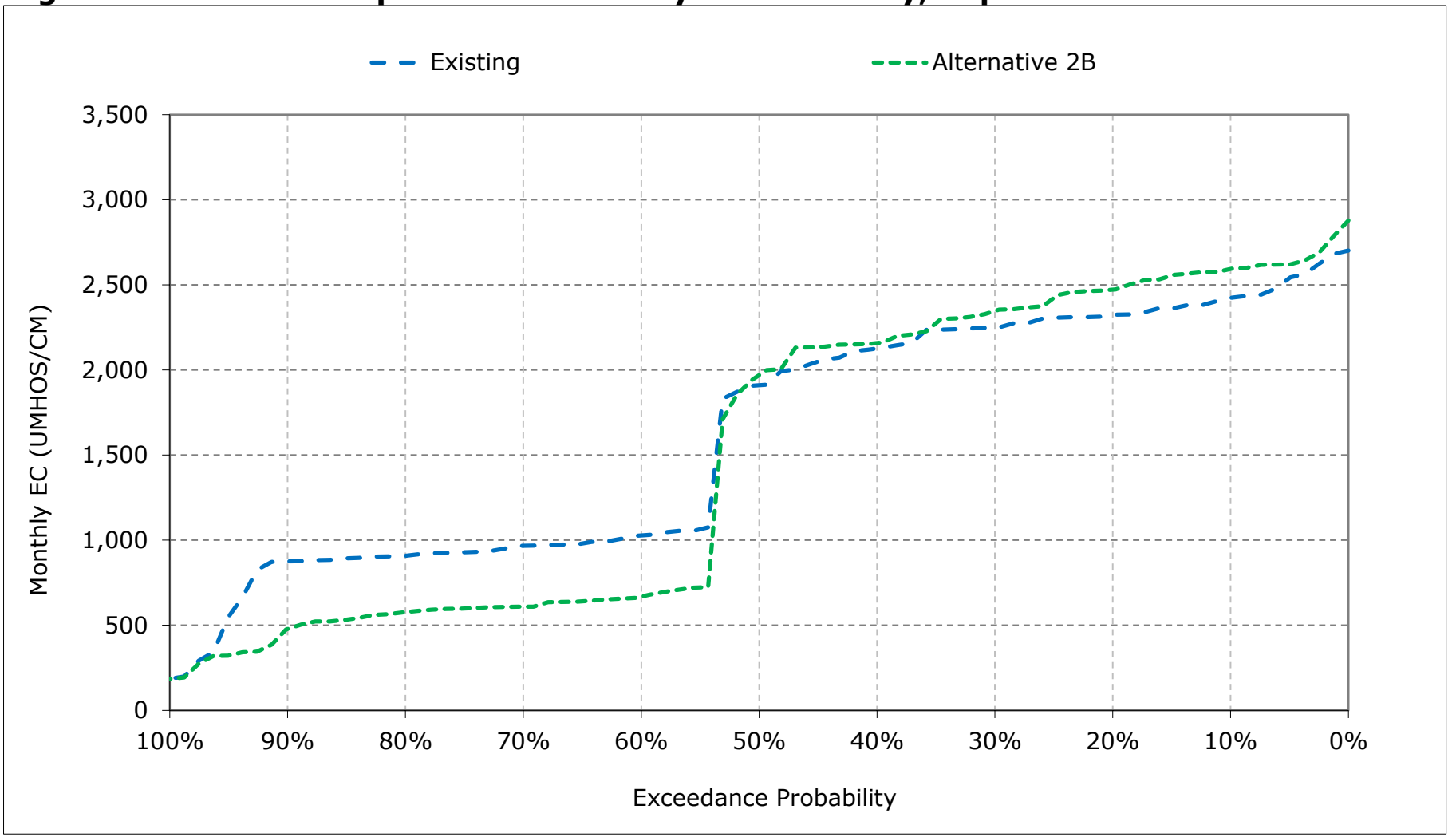


**Figure 12-16. San Joaquin River at Jersey Point Salinity, October EC**

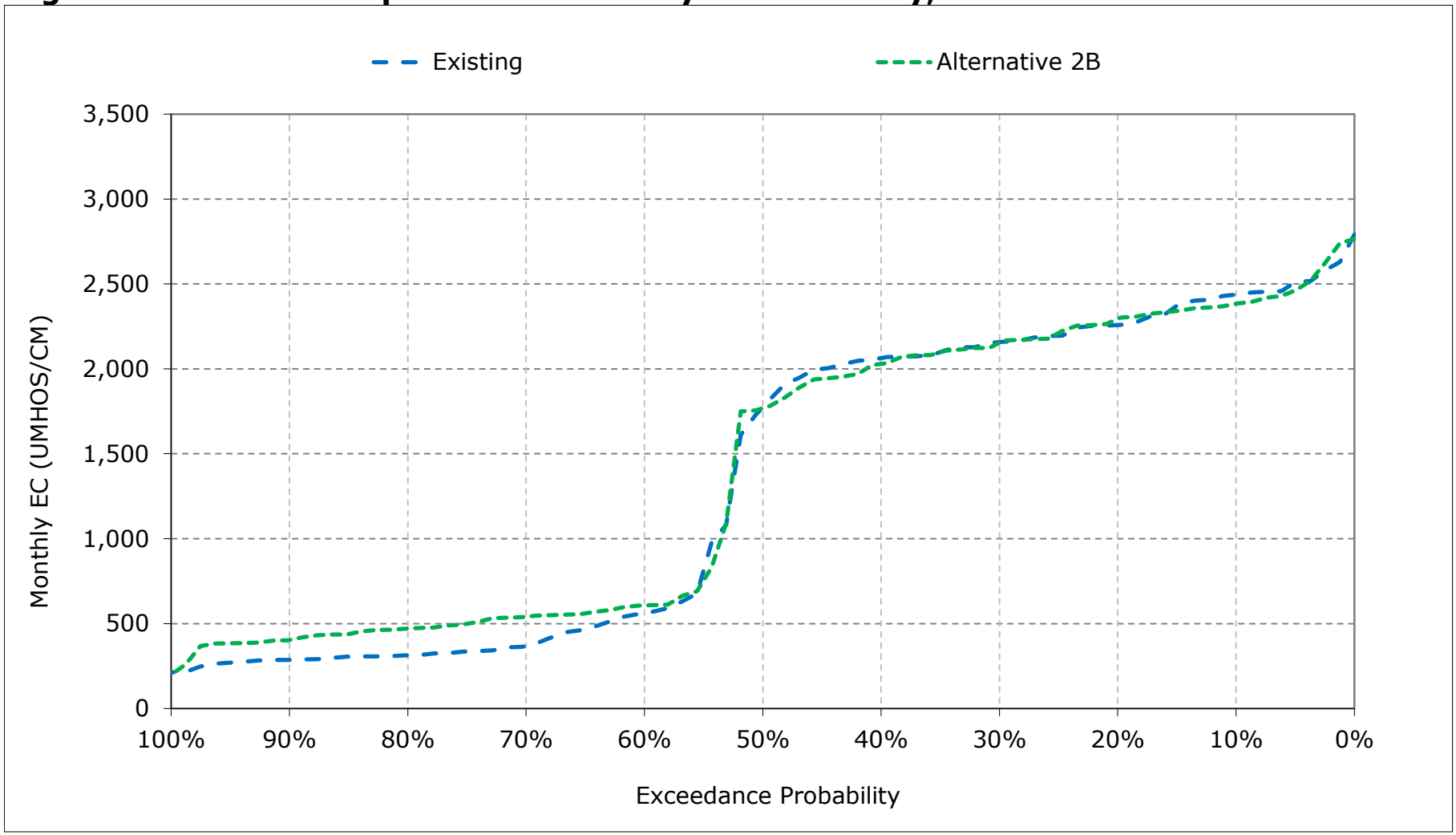


**Figure 12-17. San Joaquin River at Jersey Point Salinity, November EC**

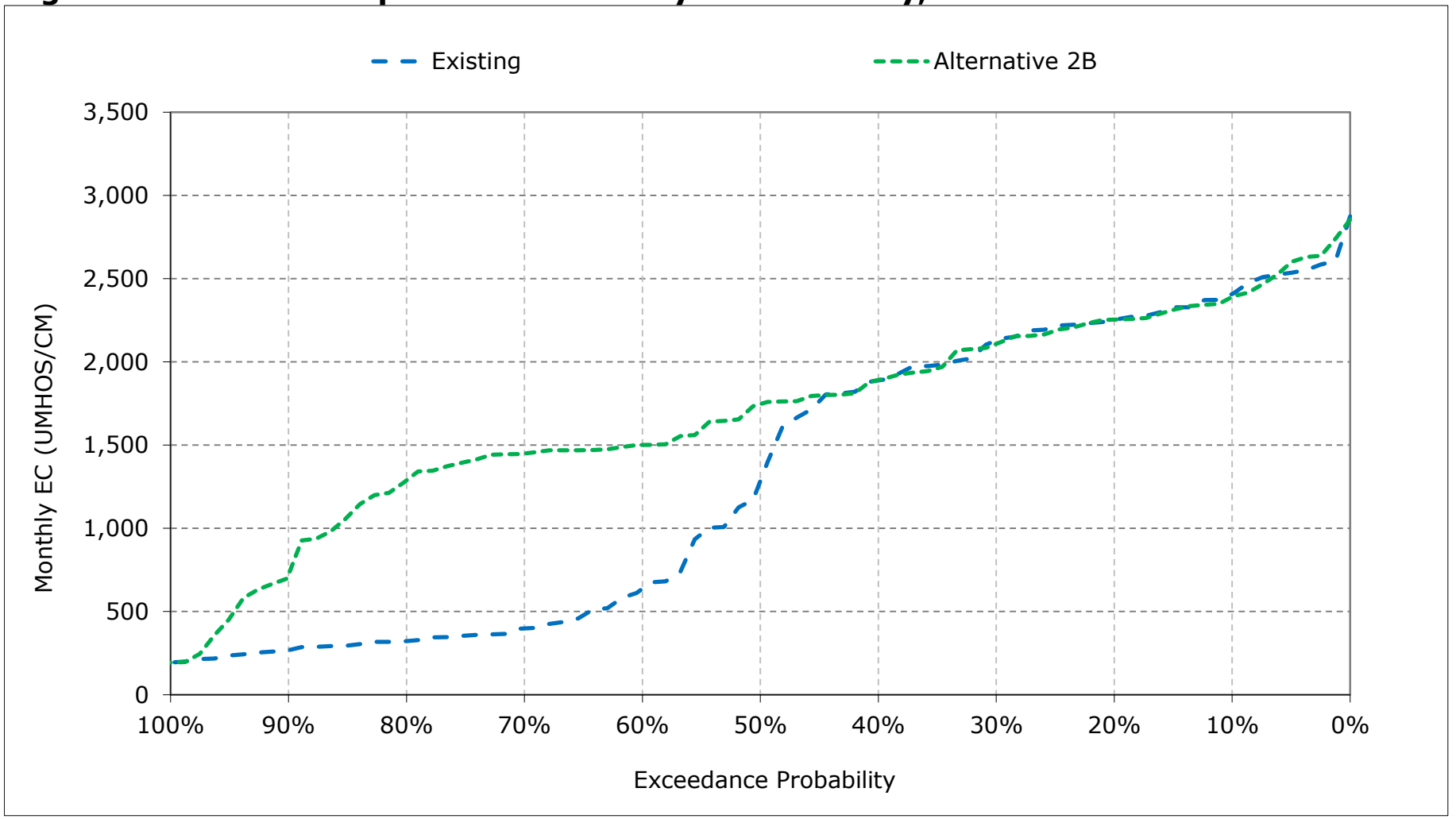
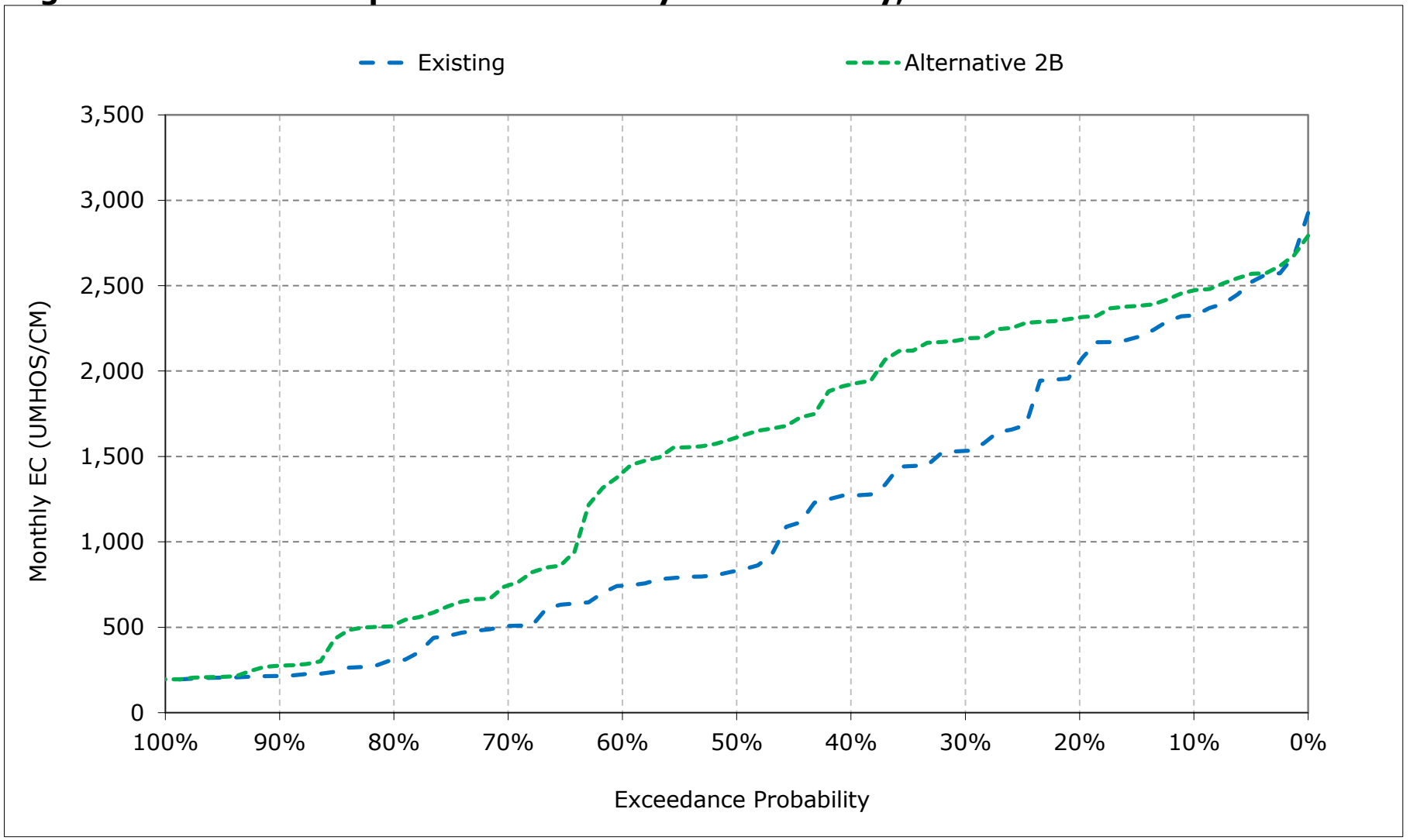


**Figure 12-18. San Joaquin River at Jersey Point Salinity, December EC**



## Table 13-1. San Joaquin River at San Andreas, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 652 | 638 | 694 | 569 | 318 | 233 | 241 | 246 | 236 | 360 | 470 | 586 |
| **20%** | 584 | 586 | 652 | 496 | 274 | 227 | 232 | 241 | 219 | 301 | 424 | 567 |
| **30%** | 564 | 560 | 581 | 414 | 245 | 217 | 226 | 237 | 215 | 267 | 391 | 539 |
| **40%** | 544 | 523 | 470 | 362 | 232 | 211 | 222 | 232 | 210 | 255 | 359 | 516 |
| **50%** | 500 | 422 | 322 | 308 | 227 | 206 | 217 | 224 | 206 | 220 | 341 | 470 |
| **60%** | 219 | 258 | 290 | 258 | 219 | 202 | 212 | 217 | 202 | 210 | 322 | 411 |
| **70%** | 213 | 215 | 263 | 230 | 208 | 197 | 208 | 214 | 194 | 204 | 292 | 372 |
| **80%** | 207 | 204 | 223 | 212 | 199 | 194 | 205 | 203 | 192 | 197 | 284 | 304 |
| **90%** | 203 | 198 | 195 | 202 | 195 | 191 | 192 | 185 | 188 | 193 | 272 | 272 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 410 | 409 | 419 | 353 | 244 | 212 | 218 | 225 | 217 | 259 | 351 | 448 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 340 | 325 | 268 | 226 | 205 | 198 | 202 | 201 | 193 | 198 | 276 | 349 |
| **Above Normal (15%)** | 448 | 408 | 416 | 307 | 225 | 203 | 213 | 217 | 202 | 206 | 295 | 282 |
| **Below Normal (17%)** | 412 | 428 | 482 | 384 | 235 | 212 | 223 | 228 | 205 | 244 | 355 | 532 |
| **Dry (22%)** | 424 | 453 | 472 | 411 | 261 | 214 | 228 | 235 | 216 | 306 | 412 | 527 |
| **Critical (15%)** | 498 | 499 | 593 | 551 | 331 | 250 | 235 | 265 | 303 | 389 | 478 | 609 |

### Alternative 2B

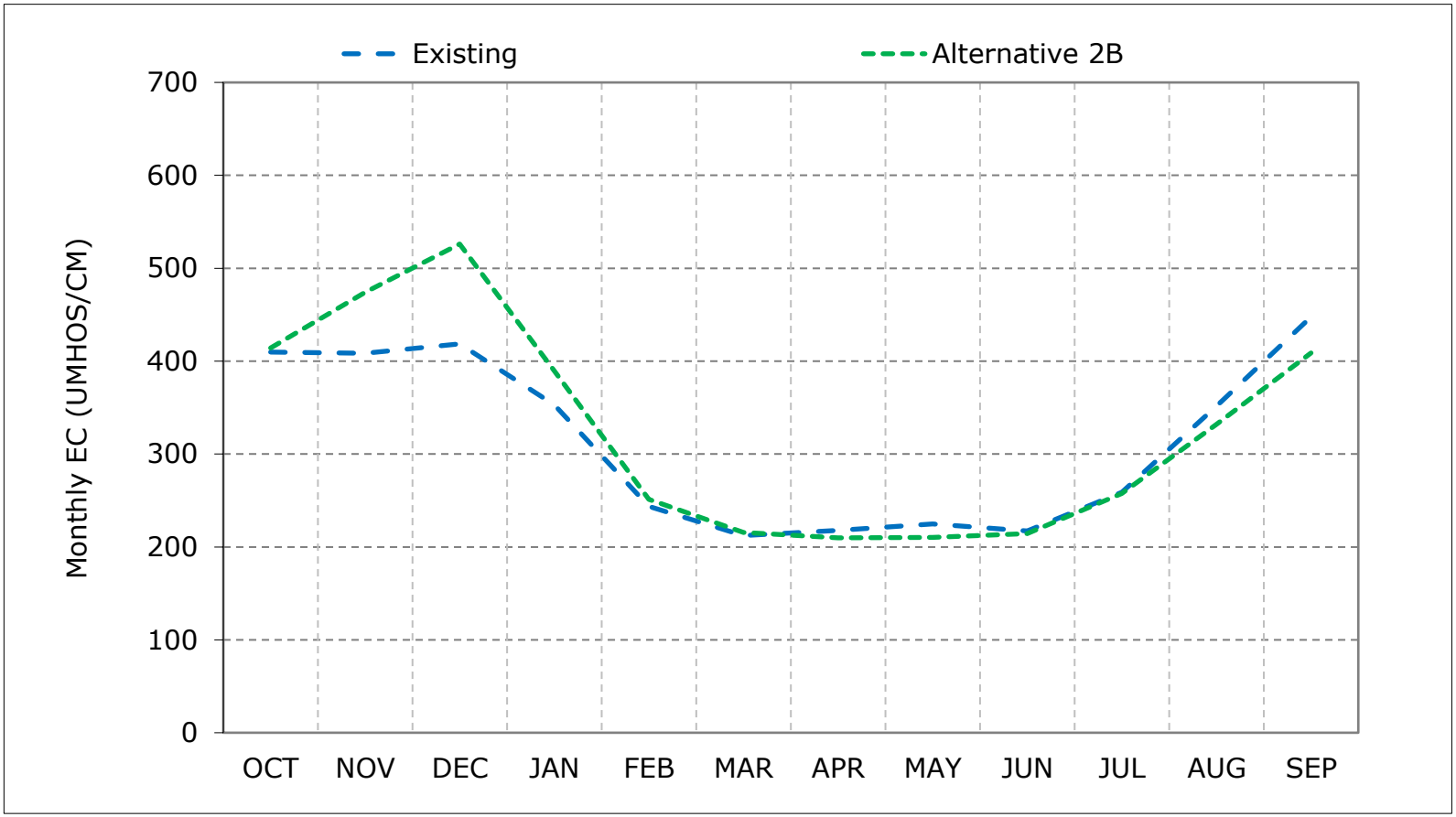
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 640 | 652 | 744 | 680 | 346 | 237 | 229 | 230 | 239 | 365 | 470 | 623 |
| **20%** | 610 | 597 | 709 | 568 | 278 | 230 | 223 | 224 | 217 | 290 | 419 | 591 |
| **30%** | 577 | 566 | 692 | 502 | 250 | 219 | 217 | 216 | 210 | 266 | 397 | 569 |
| **40%** | 557 | 533 | 634 | 419 | 232 | 214 | 213 | 212 | 204 | 245 | 372 | 525 |
| **50%** | 527 | 486 | 612 | 309 | 229 | 208 | 208 | 208 | 197 | 218 | 345 | 496 |
| **60%** | 233 | 409 | 543 | 260 | 220 | 204 | 202 | 201 | 193 | 209 | 265 | 234 |
| **70%** | 212 | 373 | 342 | 231 | 208 | 199 | 199 | 196 | 191 | 205 | 239 | 224 |
| **80%** | 205 | 342 | 282 | 213 | 201 | 196 | 196 | 190 | 189 | 198 | 233 | 219 |
| **90%** | 199 | 282 | 208 | 203 | 195 | 193 | 188 | 180 | 185 | 193 | 217 | 211 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 414 | 474 | 526 | 389 | 251 | 216 | 210 | 210 | 214 | 257 | 332 | 409 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 346 | 409 | 346 | 235 | 205 | 199 | 196 | 190 | 190 | 198 | 228 | 213 |
| **Above Normal (15%)** | 448 | 476 | 547 | 345 | 228 | 206 | 205 | 200 | 195 | 205 | 245 | 227 |
| **Below Normal (17%)** | 422 | 490 | 597 | 419 | 235 | 213 | 212 | 208 | 198 | 234 | 370 | 582 |
| **Dry (22%)** | 423 | 507 | 617 | 491 | 279 | 219 | 216 | 216 | 213 | 303 | 413 | 542 |
| **Critical (15%)** | 506 | 545 | 675 | 581 | 352 | 259 | 233 | 259 | 308 | 395 | 477 | 613 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -11 | **14** | **49** | **111** | **29** | **4** | -12 | -16 | **2** | **5** | **1** | **36** |
| **20%** | **26** | **11** | **57** | **73** | **5** | **3** | -10 | -17 | -2 | -11 | -5 | **24** |
| **30%** | **13** | **6** | **110** | **87** | **5** | **2** | -10 | -22 | -5 | 0 | **6** | **31** |
| **40%** | **13** | **10** | **164** | **57** | **1** | **4** | -9 | -20 | -6 | -10 | **14** | **9** |
| **50%** | **27** | **64** | **290** | **1** | **2** | **2** | -9 | -15 | -10 | -2 | **4** | **26** |
| **60%** | **14** | **151** | **253** | **2** | **0** | **1** | -9 | -16 | -8 | -1 | -57 | -176 |
| **70%** | -1 | **159** | **79** | **1** | 0 | **3** | -8 | -18 | -2 | **1** | -53 | -148 |
| **80%** | -3 | **138** | **59** | **1** | **2** | **2** | -9 | -13 | -4 | **1** | -51 | -85 |
| **90%** | -4 | **84** | **12** | **1** | **0** | **2** | -4 | -5 | -3 | 0 | -55 | -61 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **4** | **65** | **108** | **36** | **7** | **3** | -8 | -14 | -3 | -1 | -20 | -39 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **6** | **83** | **78** | **9** | **0** | **1** | -6 | -11 | -3 | **0** | -48 | -136 |
| **Above Normal (15%)** | **0** | **68** | **131** | **39** | **3** | **3** | -9 | -17 | -7 | 0 | -50 | -54 |
| **Below Normal (17%)** | **10** | **62** | **115** | **35** | **0** | **1** | -11 | -20 | -6 | -10 | **16** | **51** |
| **Dry (22%)** | -1 | **54** | **145** | **80** | **18** | **4** | -11 | -19 | -3 | -3 | **1** | **14** |
| **Critical (15%)** | **8** | **46** | **82** | **29** | **21** | **9** | -1 | -6 | **5** | **6** | 0 | **3** |

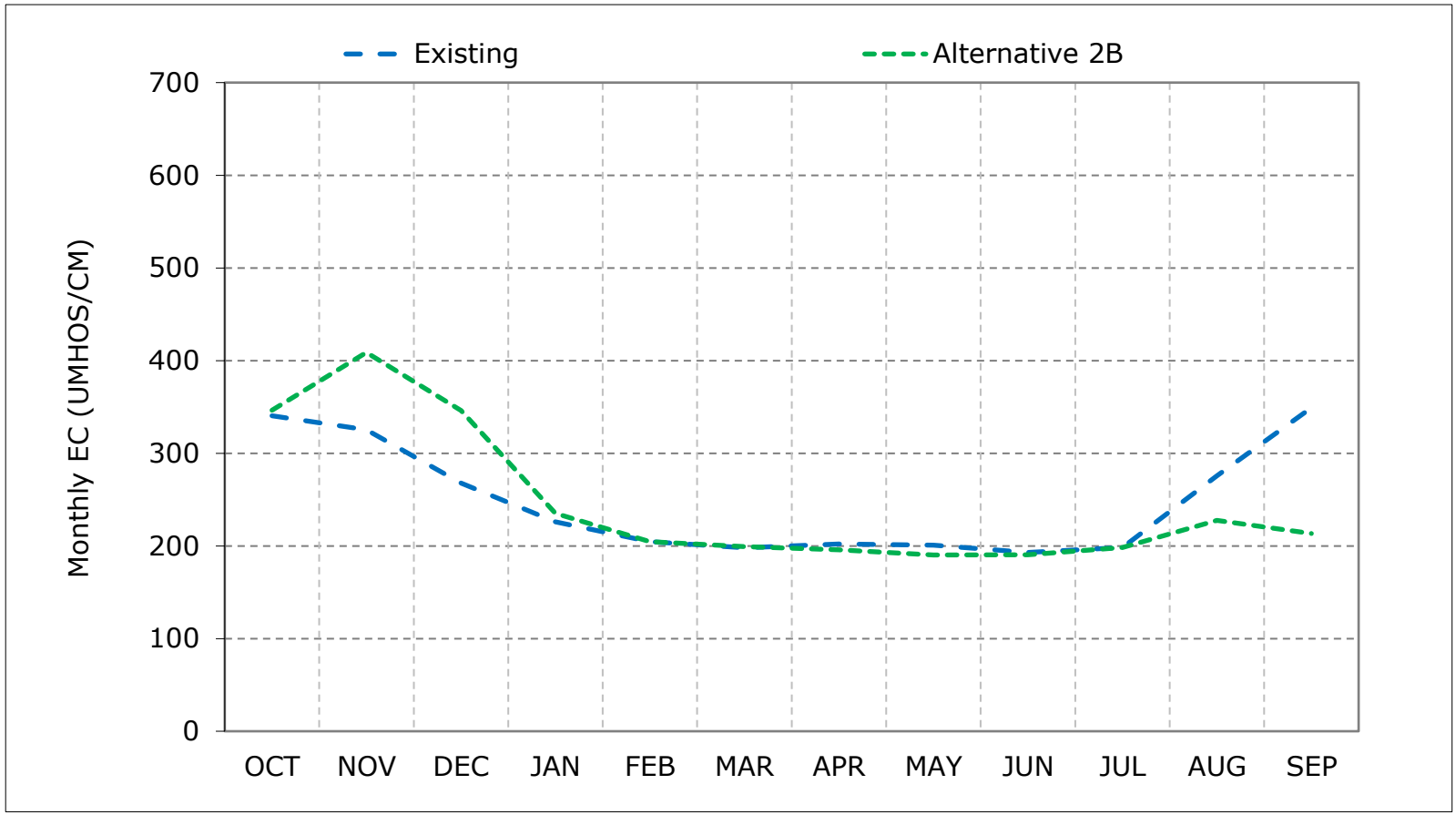
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 13-1. San Joaquin River at San Andreas, Long-Term Average EC**



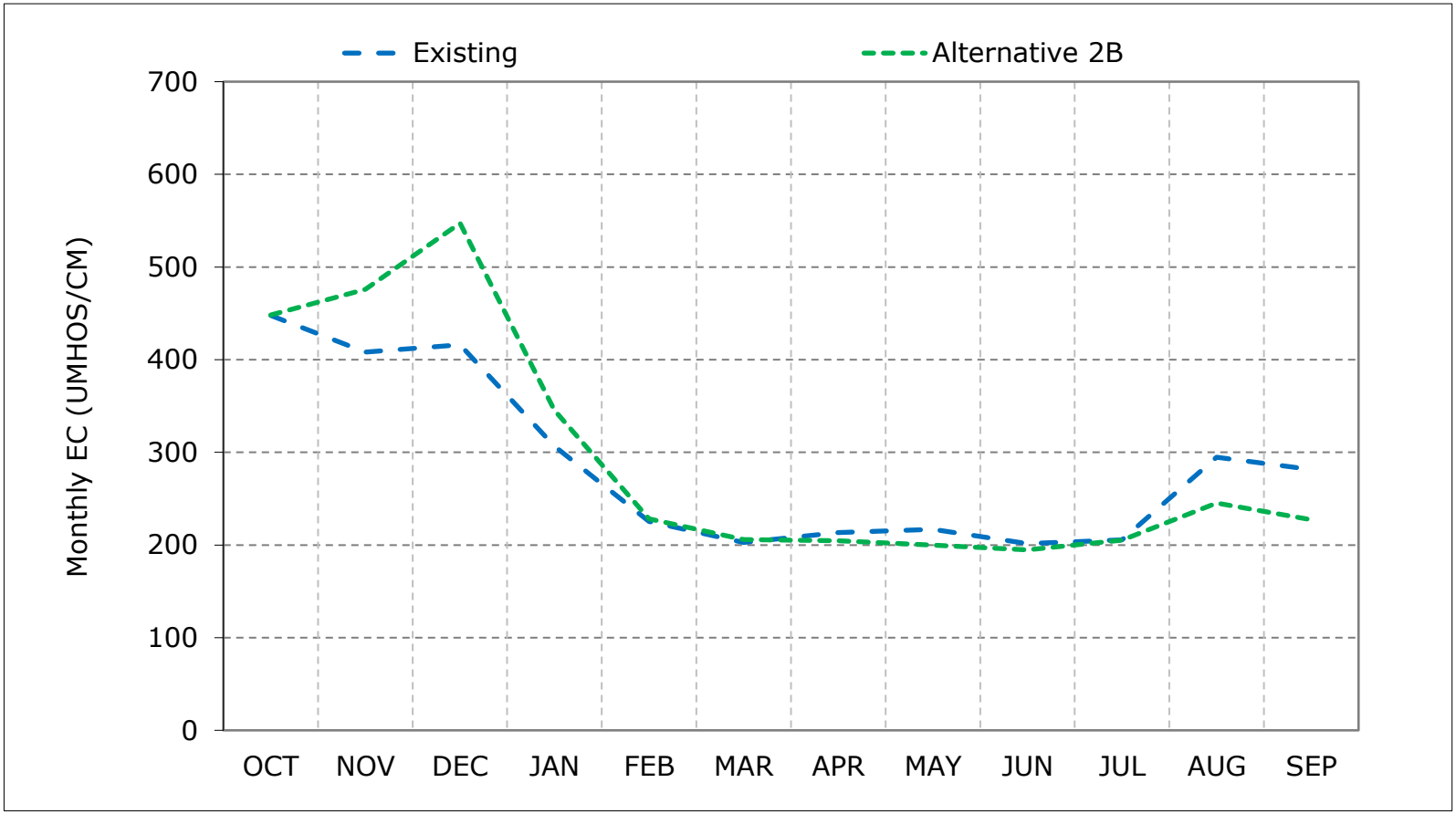

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 13-2. San Joaquin River at San Andreas, Wet Year Average EC**



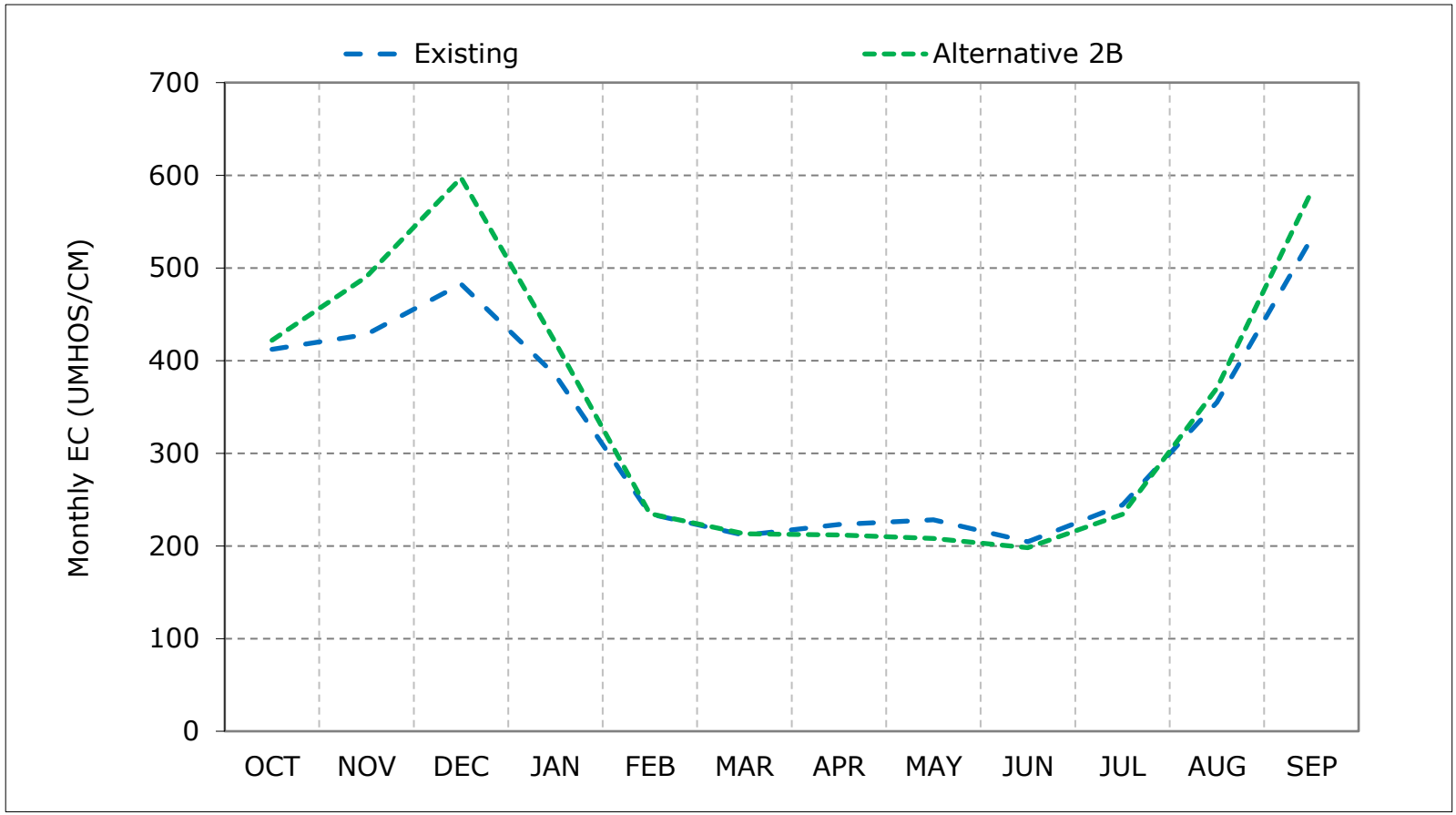

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 13-3. San Joaquin River at San Andreas, Above Normal Year Average EC**



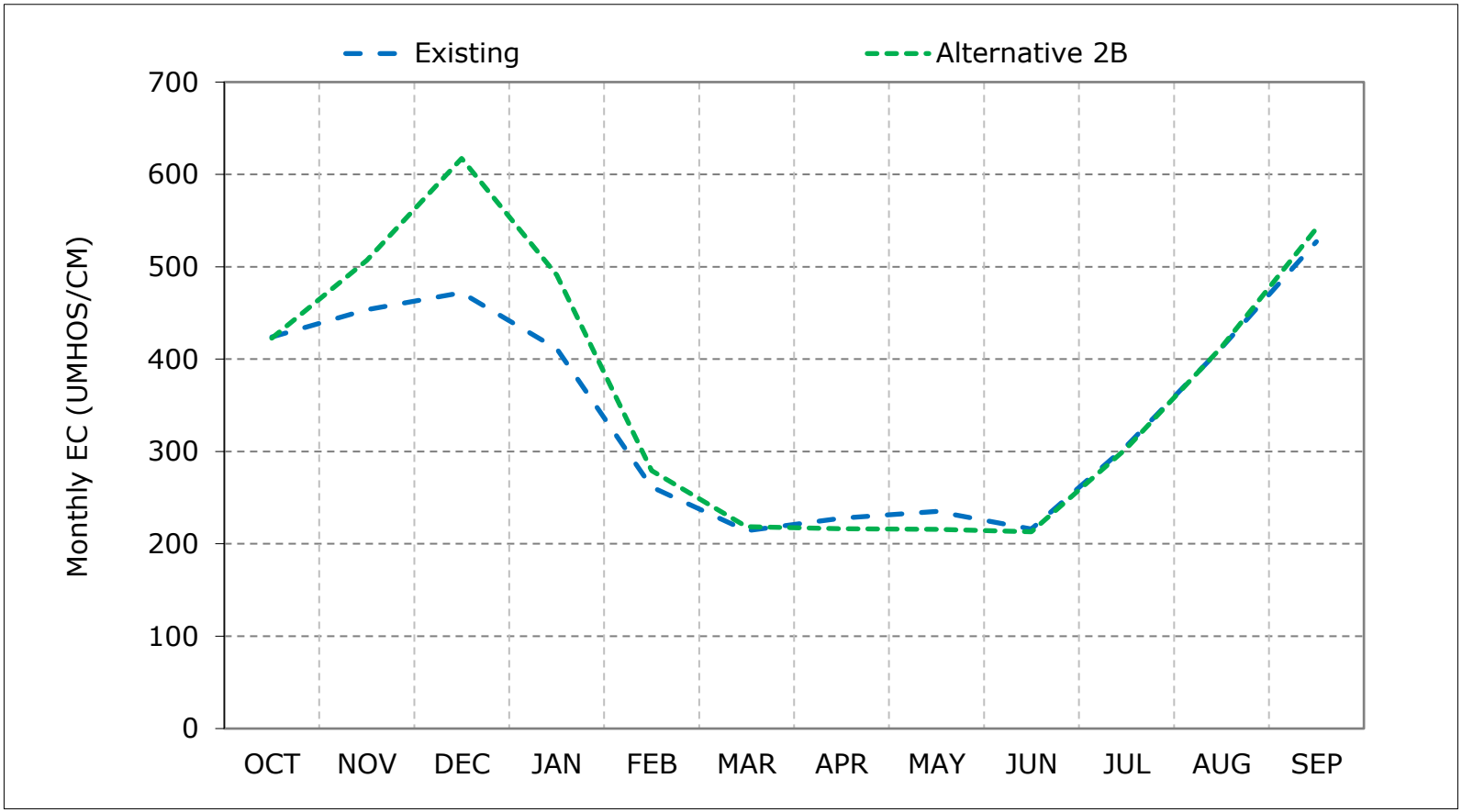

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 13-4. San Joaquin River at San Andreas, Below Normal Year Average EC**



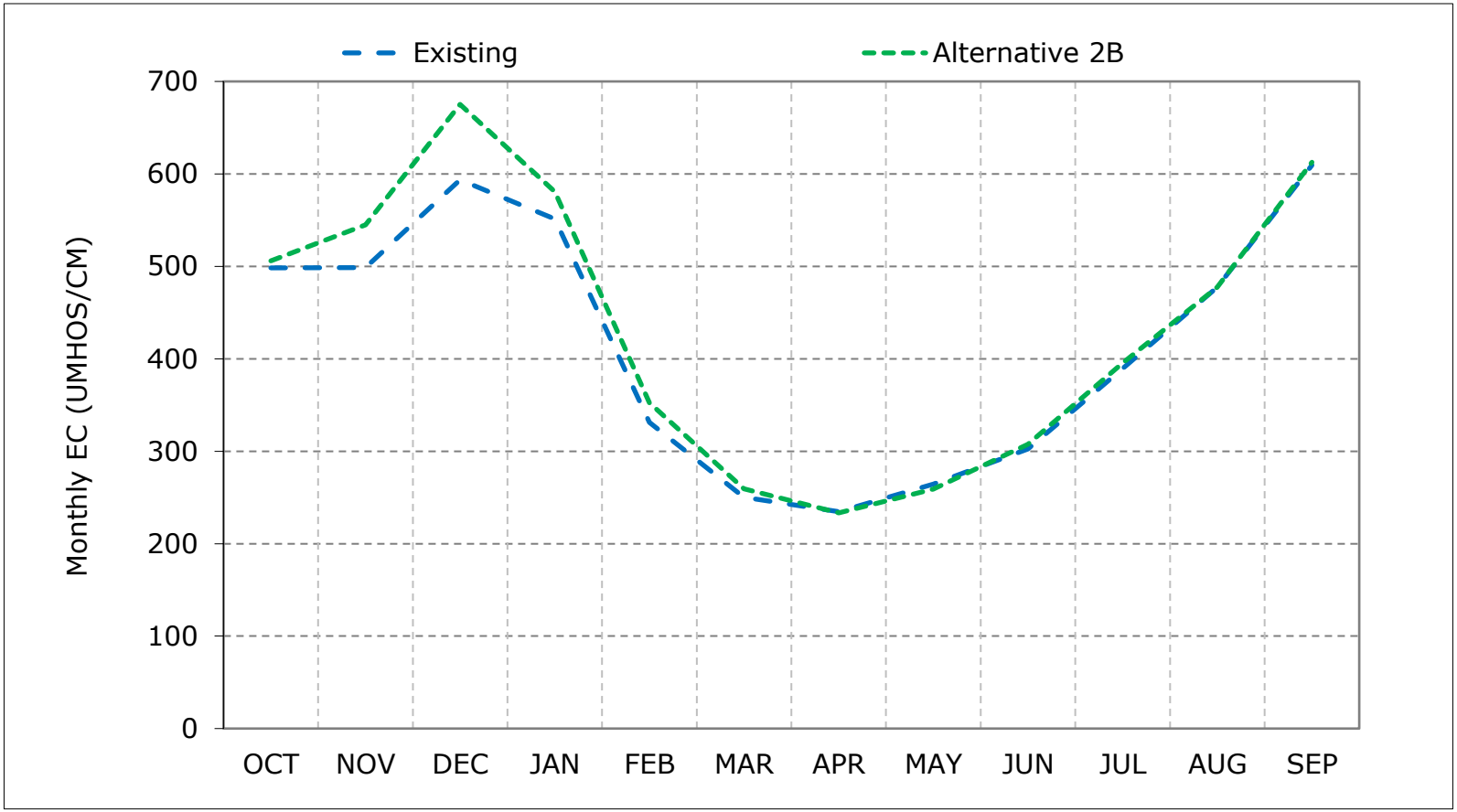

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 13-5. San Joaquin River at San Andreas, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 13-6. San Joaquin River at San Andreas, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 13-7. San Joaquin River at San Andreas, January EC**

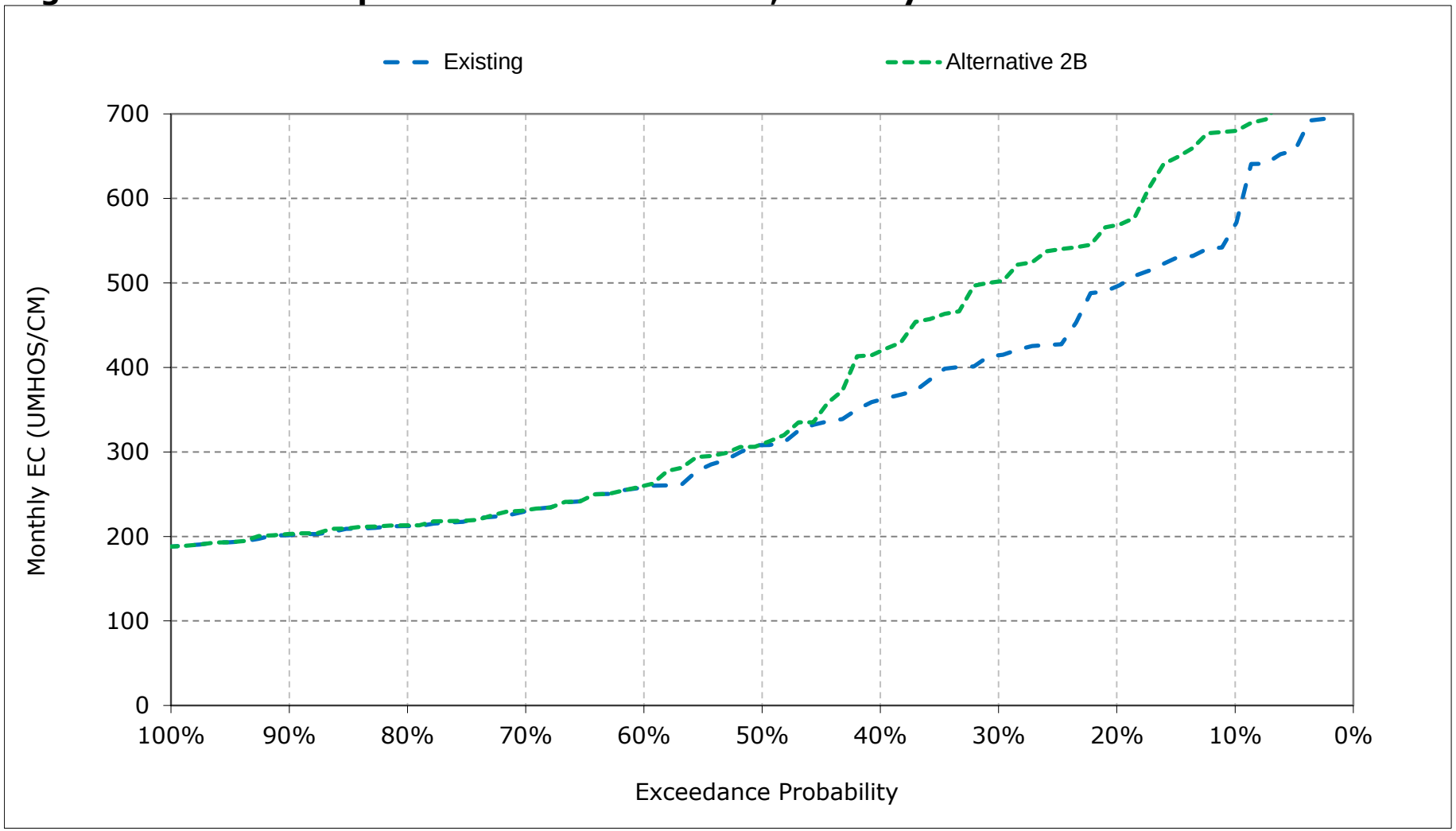


**Figure 13-8. San Joaquin River at San Andreas, February EC**

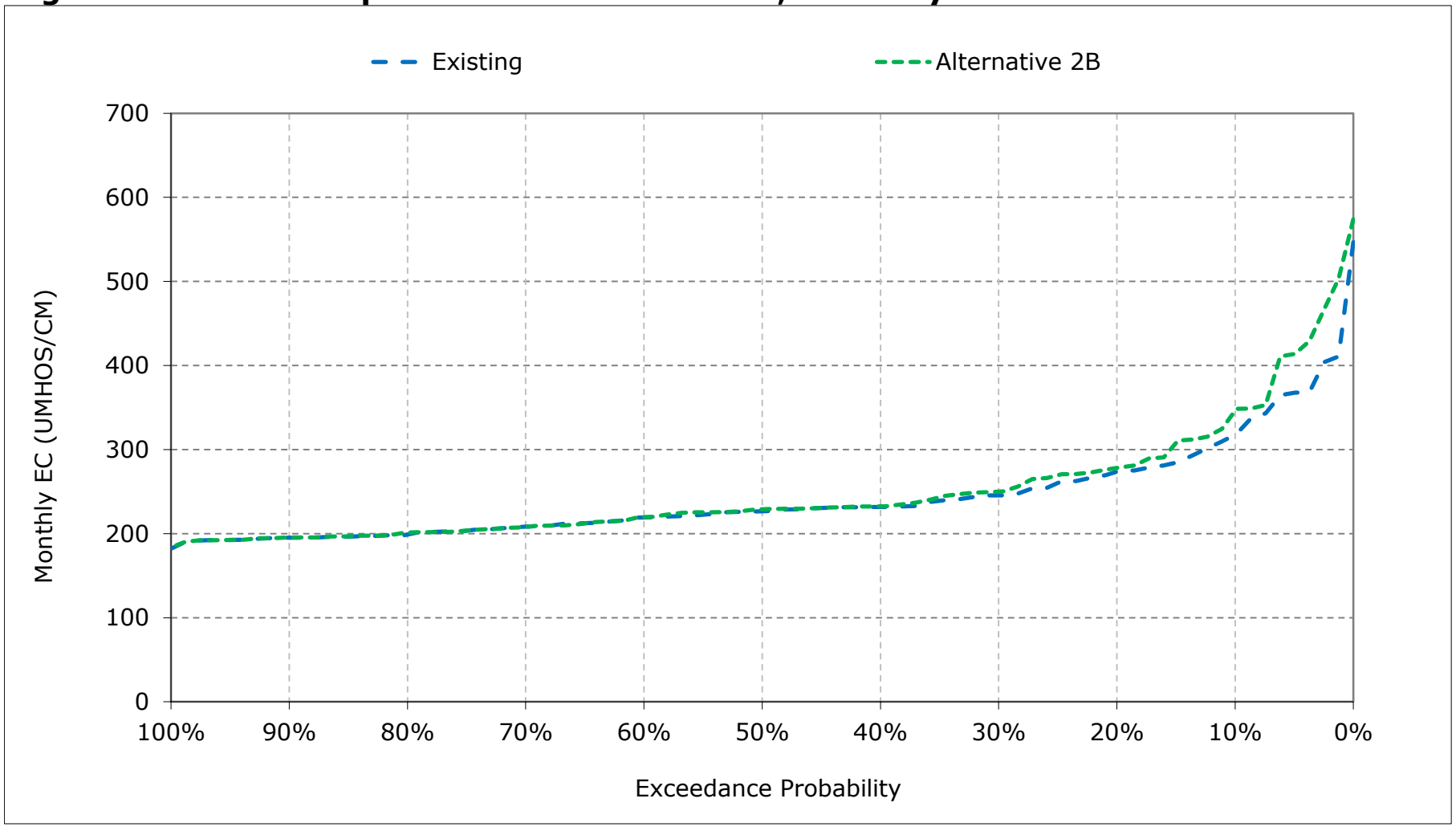


**Figure 13-9. San Joaquin River at San Andreas, March EC**

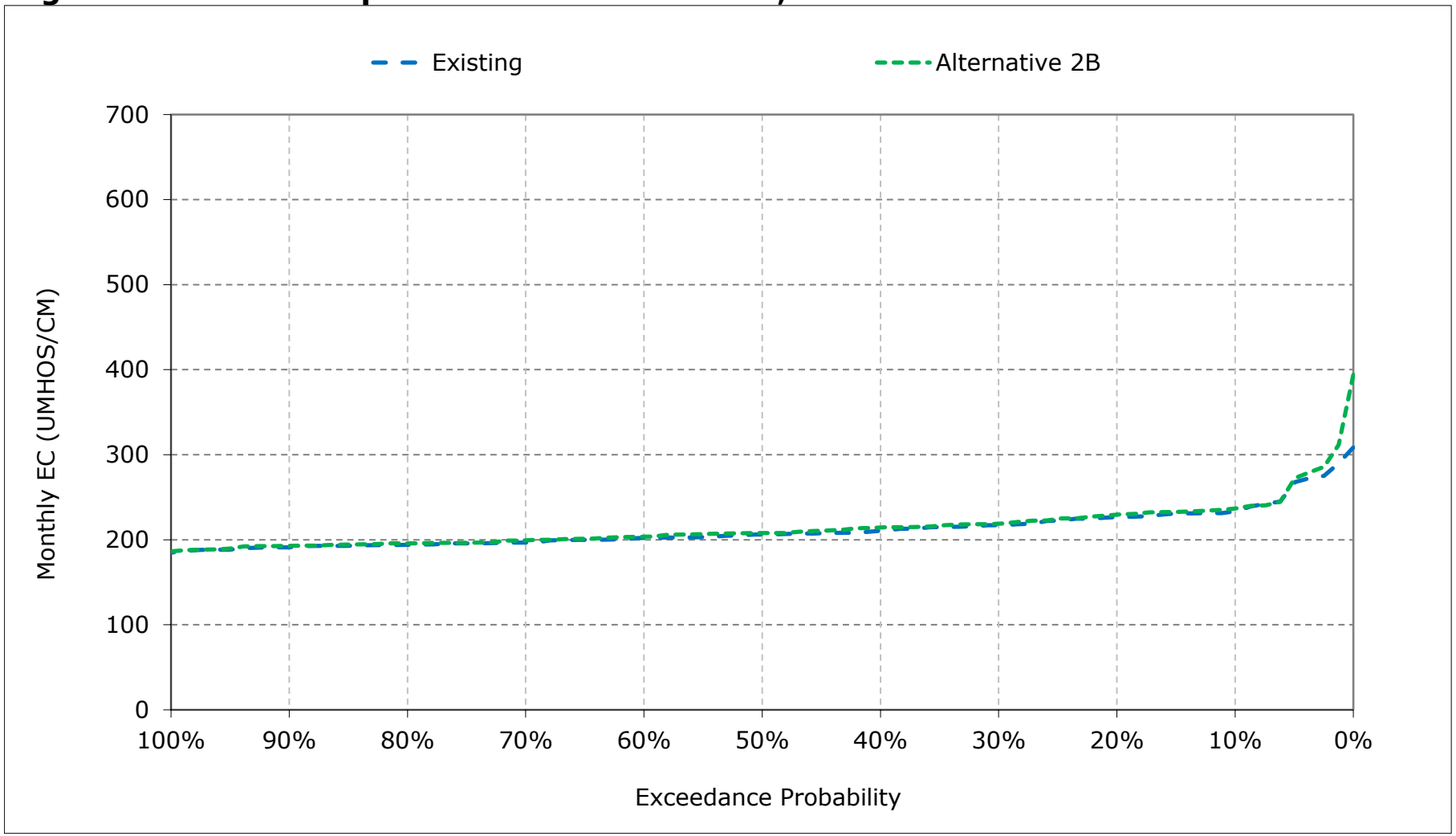


**Figure 13-10. San Joaquin River at San Andreas, April EC**

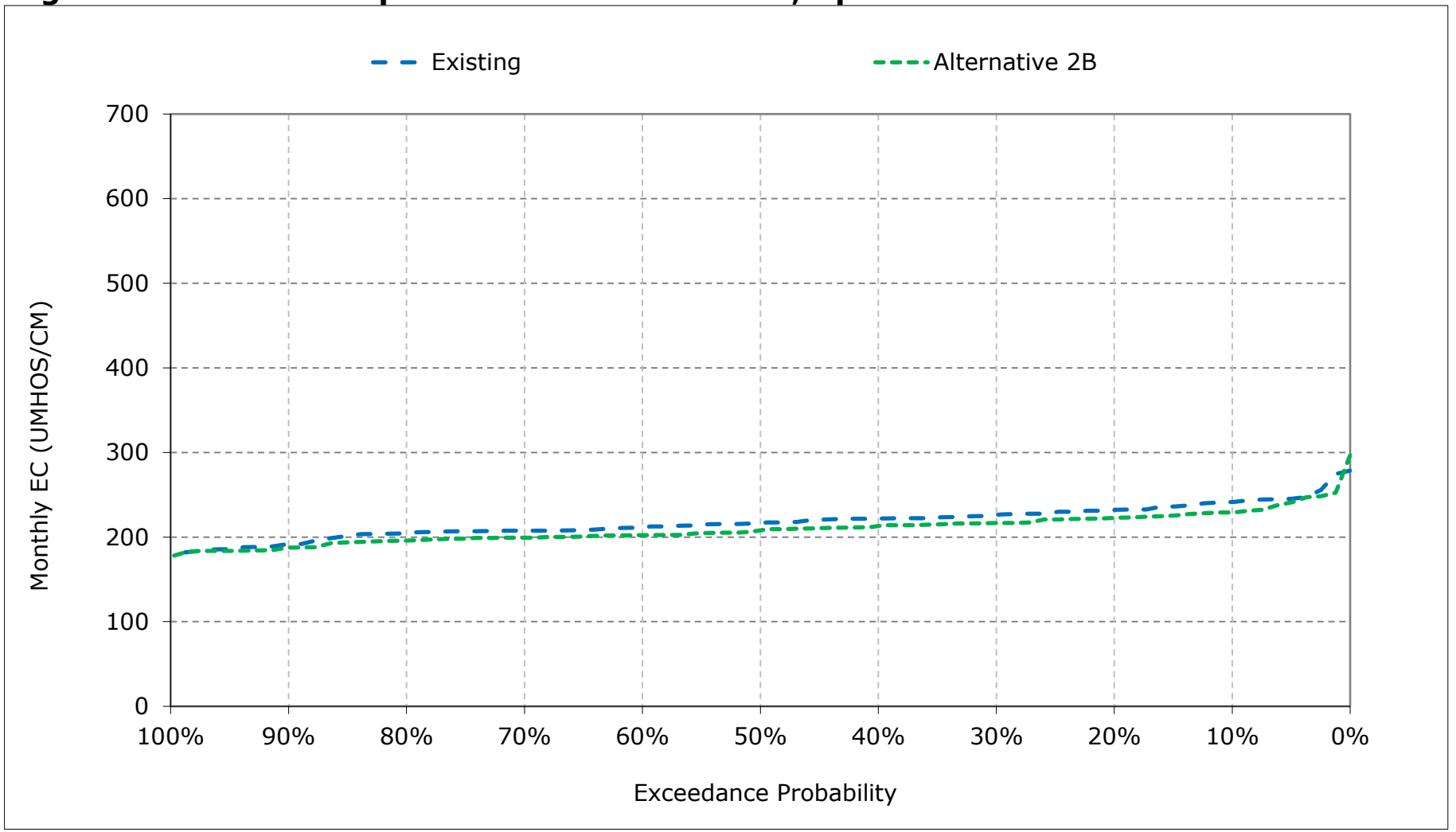


**Figure 13-11. San Joaquin River at San Andreas, May EC**

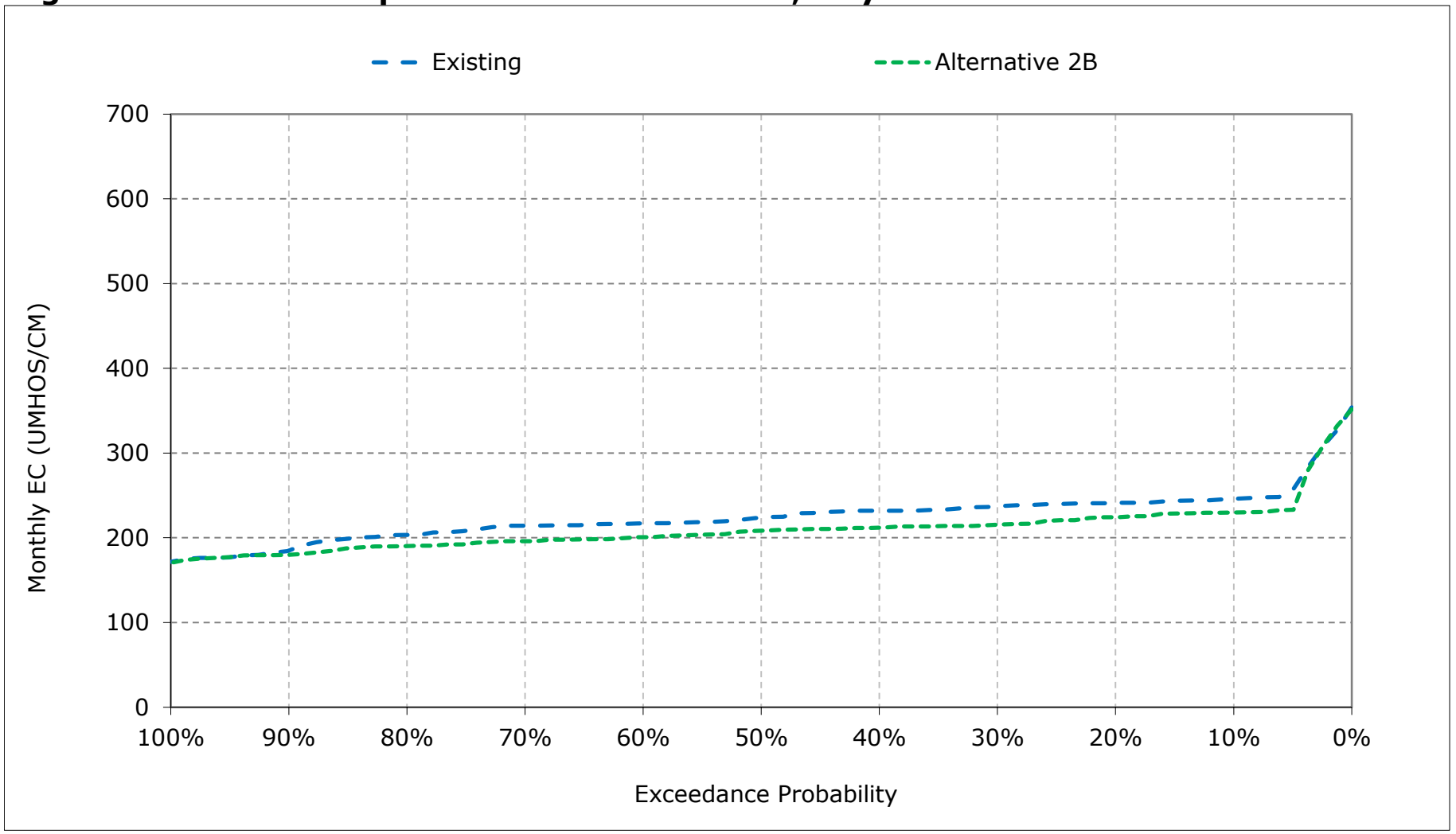


**Figure 13-12. San Joaquin River at San Andreas, June EC**

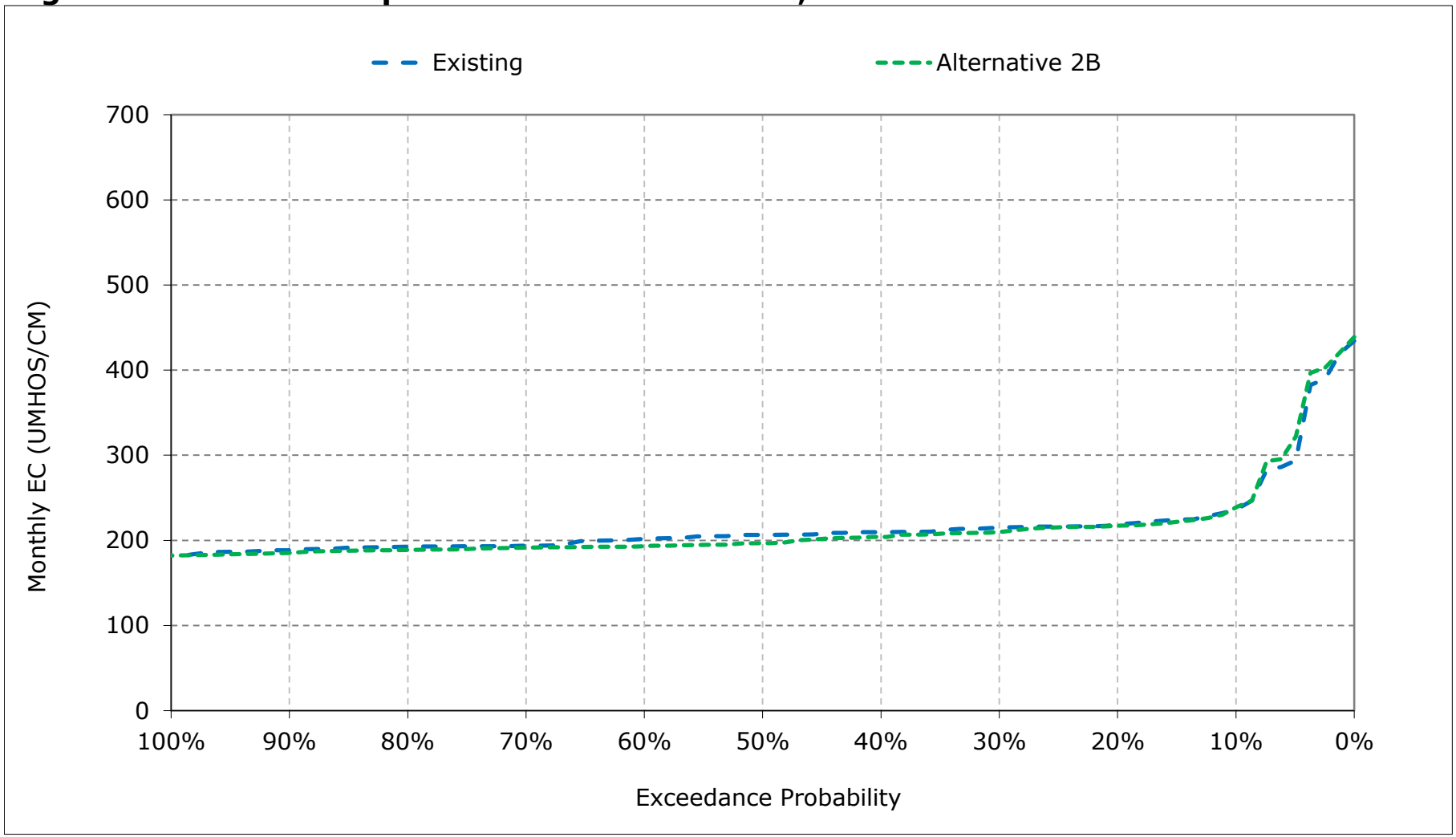


**Figure 13-13. San Joaquin River at San Andreas, July EC**

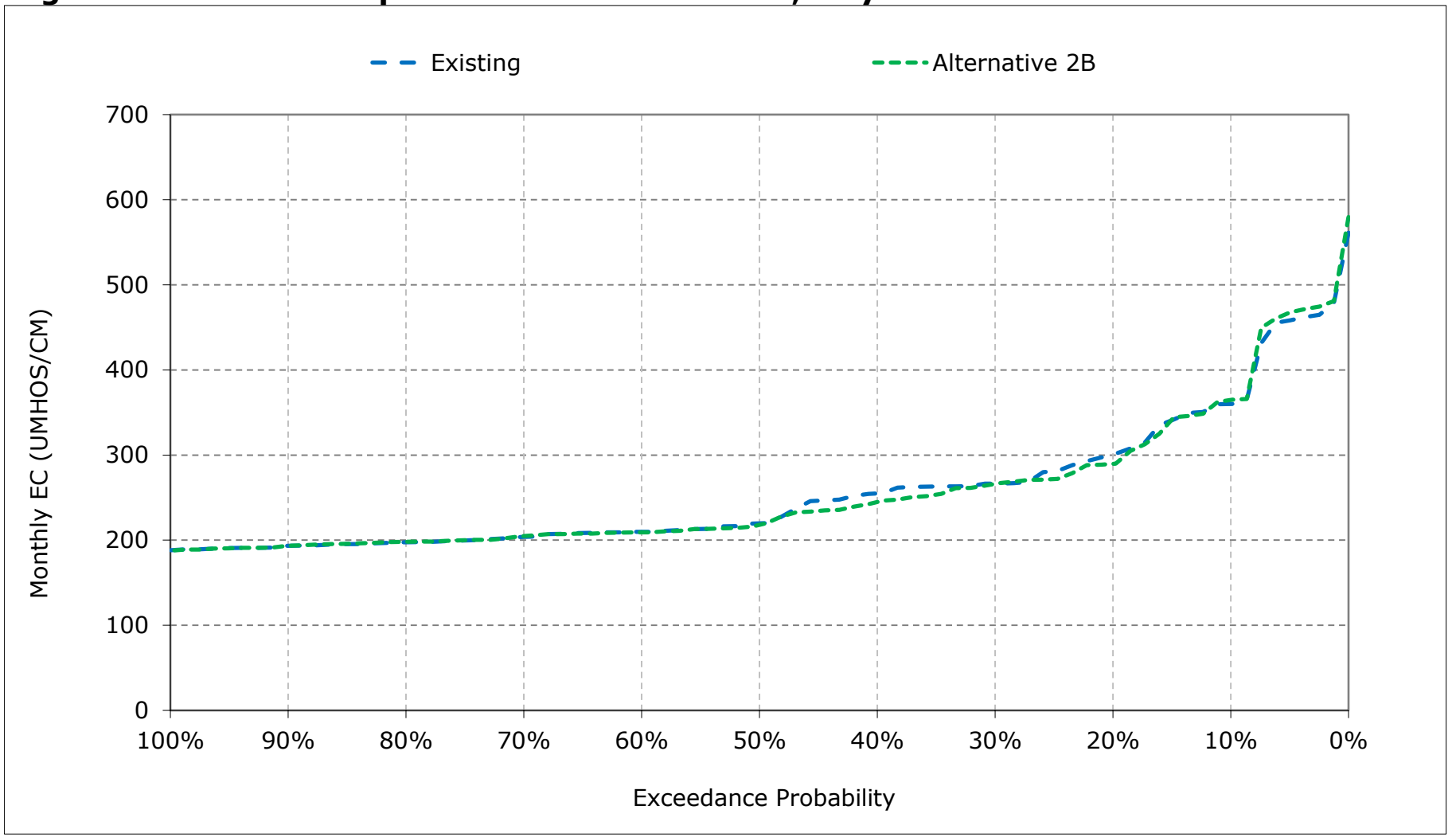


**Figure 13-14. San Joaquin River at San Andreas, August EC**

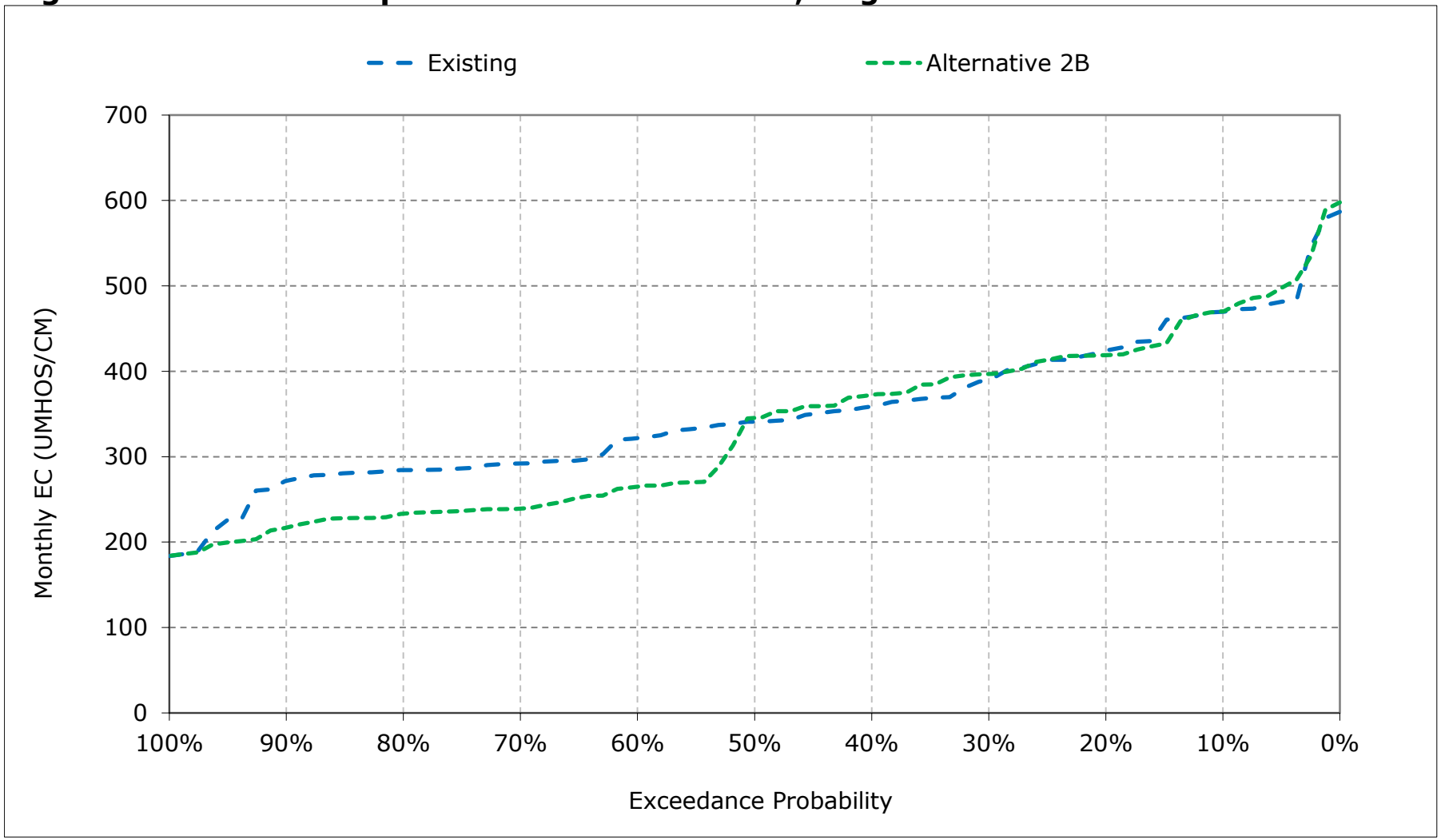


**Figure 13-15. San Joaquin River at San Andreas, September EC**

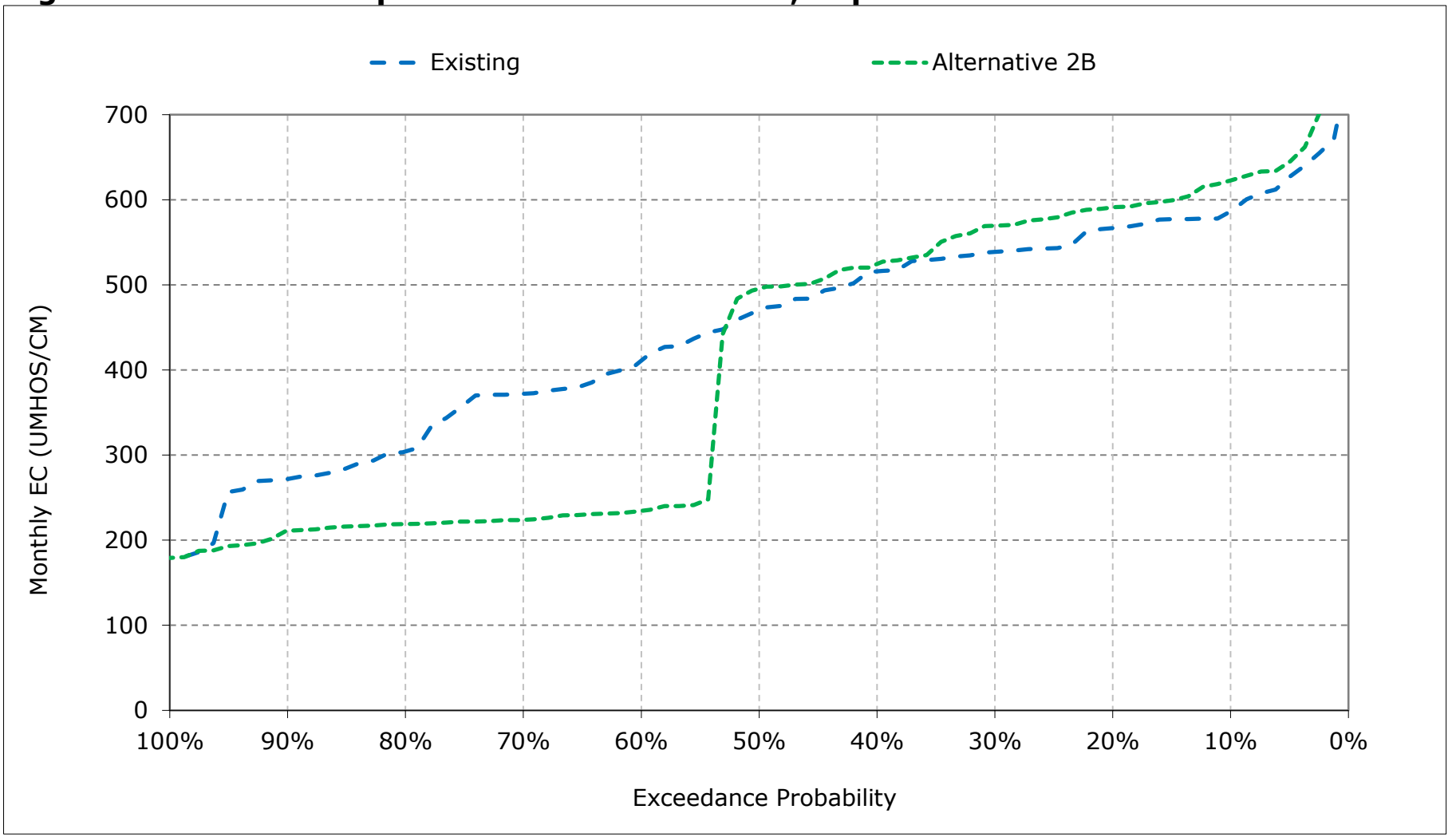


**Figure 13-16. San Joaquin River at San Andreas, October EC**

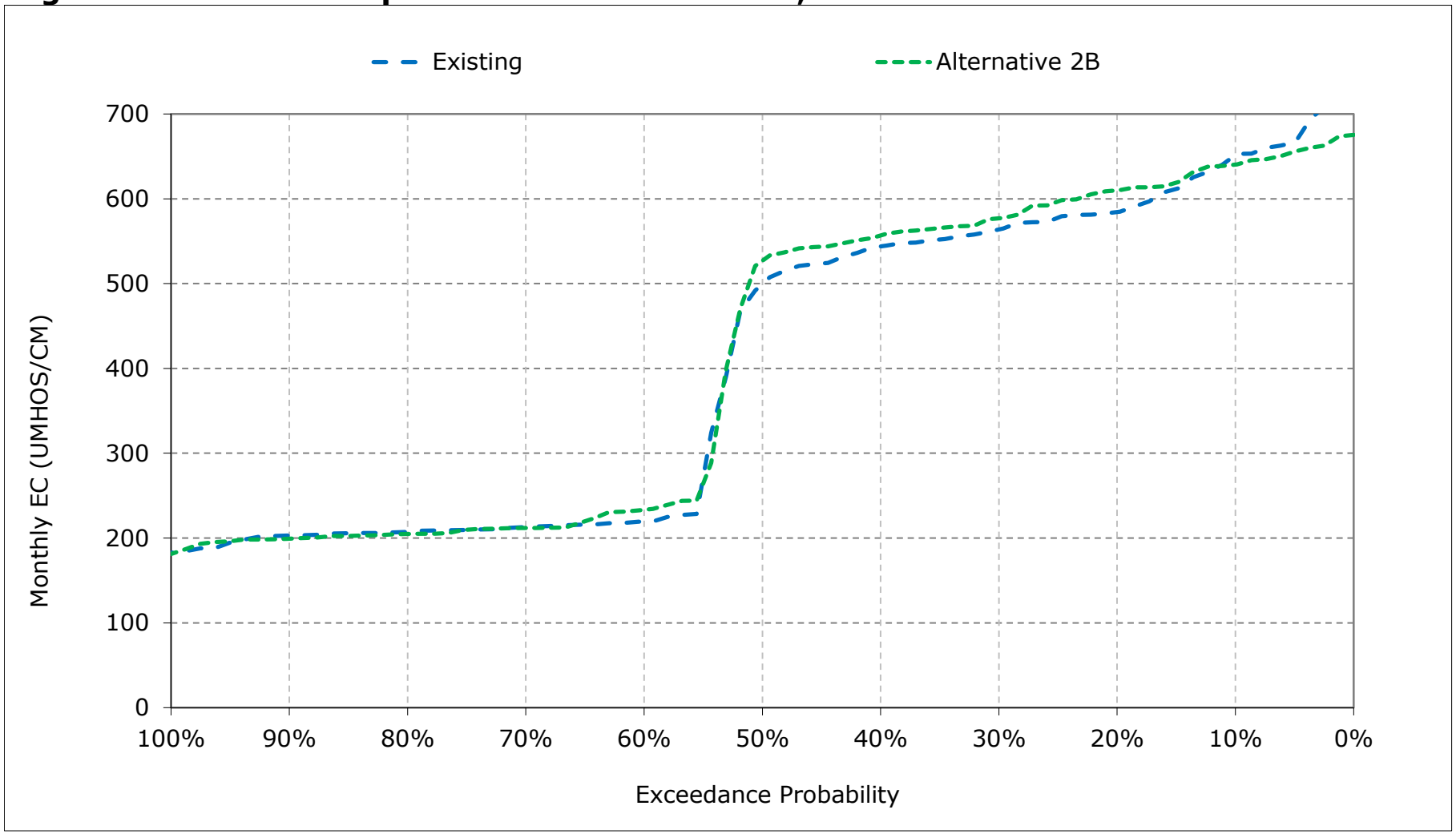


**Figure 13-17. San Joaquin River at San Andreas, November EC**

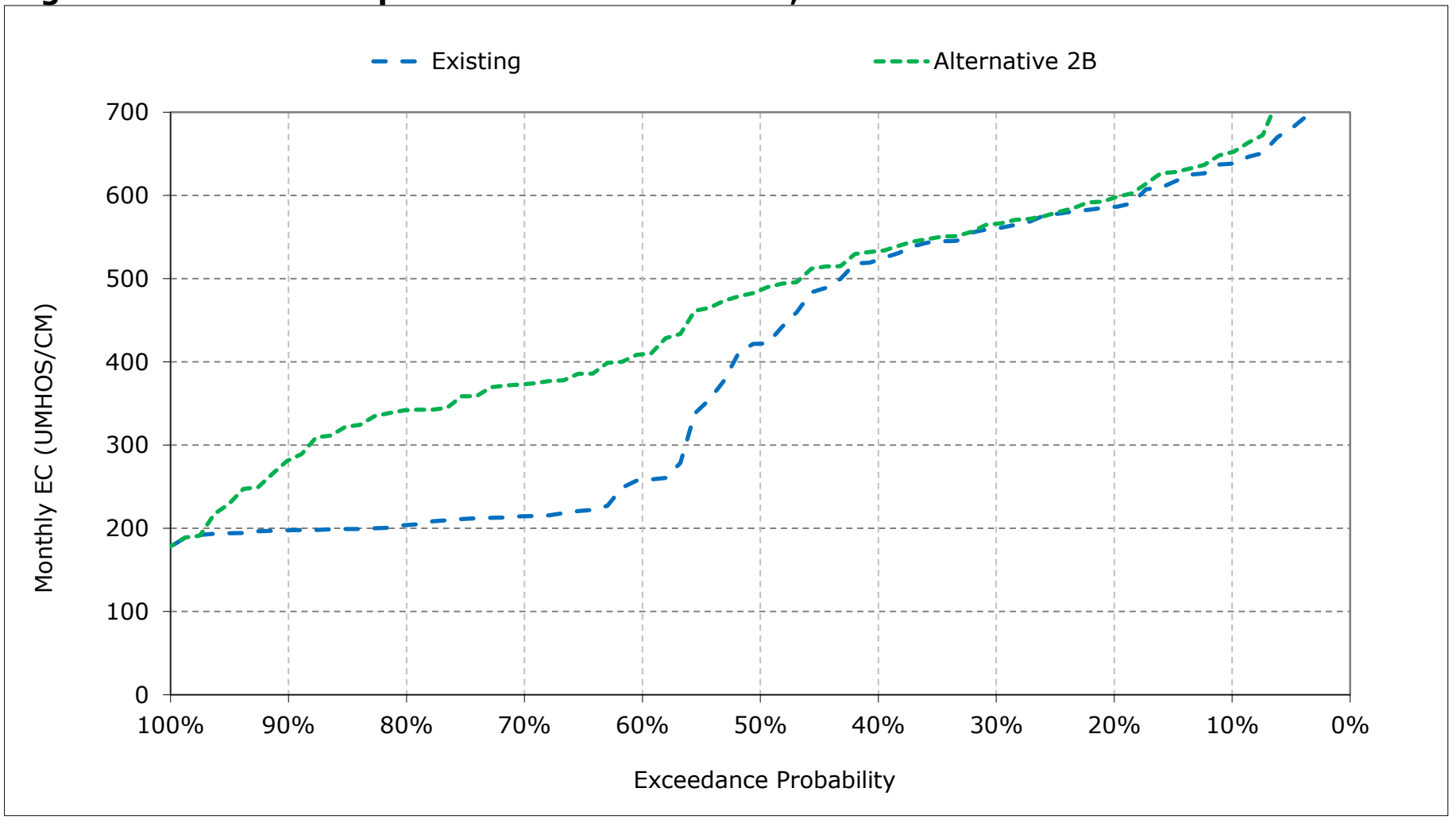
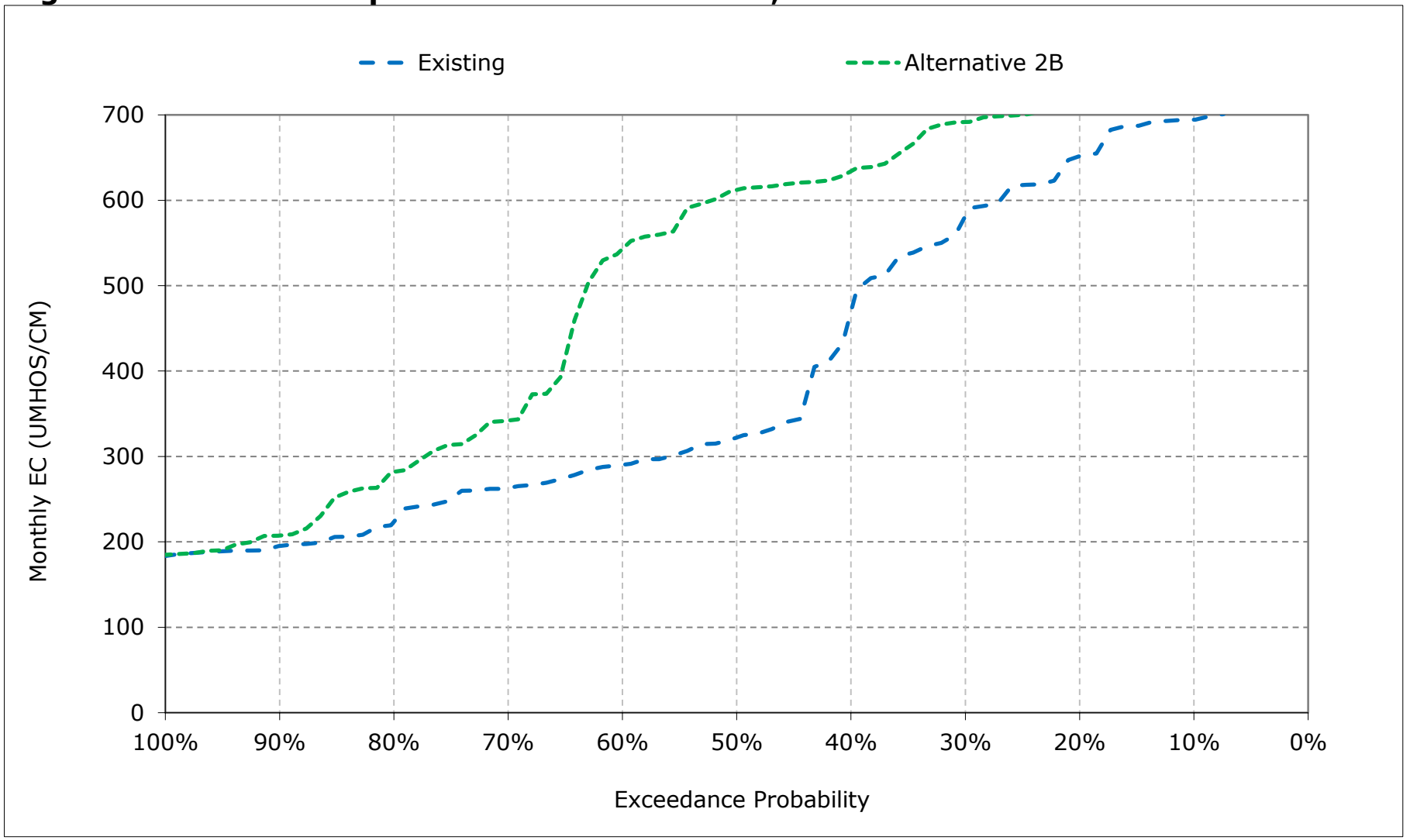


**Figure 13-18. San Joaquin River at San Andreas, December EC**



## Table 14-1. San Joaquin River at Prisoners Point, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 599 | 595 | 688 | 651 | 443 | 341 | 366 | 352 | 292 | 375 | 473 | 569 |
| **20%** | 565 | 550 | 649 | 545 | 396 | 323 | 353 | 336 | 274 | 301 | 407 | 549 |
| **30%** | 550 | 524 | 588 | 507 | 382 | 308 | 341 | 328 | 264 | 278 | 379 | 519 |
| **40%** | 534 | 484 | 505 | 423 | 355 | 298 | 329 | 322 | 253 | 262 | 359 | 495 |
| **50%** | 495 | 450 | 374 | 402 | 335 | 282 | 317 | 316 | 247 | 253 | 338 | 463 |
| **60%** | 261 | 275 | 308 | 376 | 315 | 276 | 313 | 307 | 243 | 231 | 314 | 433 |
| **70%** | 247 | 242 | 284 | 346 | 287 | 269 | 294 | 300 | 241 | 224 | 287 | 410 |
| **80%** | 236 | 231 | 253 | 318 | 278 | 254 | 275 | 283 | 235 | 219 | 280 | 358 |
| **90%** | 227 | 224 | 237 | 286 | 265 | 240 | 257 | 226 | 228 | 208 | 271 | 322 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 410 | 402 | 438 | 438 | 340 | 290 | 313 | 306 | 259 | 271 | 347 | 453 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (23%)** | 394 | 388 | 401 | 362 | 337 | 298 | 261 | 248 | 266 | 237 | 264 | 339 |
| **Above Normal (24%)** | 421 | 418 | 429 | 417 | 348 | 302 | 321 | 314 | 245 | 223 | 318 | 452 |
| **Below Normal (10%)** | 374 | 333 | 344 | 389 | 325 | 293 | 340 | 316 | 233 | 237 | 323 | 438 |
| **Dry (16%)** | 386 | 365 | 413 | 446 | 310 | 278 | 350 | 338 | 246 | 290 | 396 | 523 |
| **Critical (27%)** | 441 | 445 | 526 | 536 | 360 | 278 | 320 | 325 | 282 | 347 | 426 | 515 |

### Alternative 2B

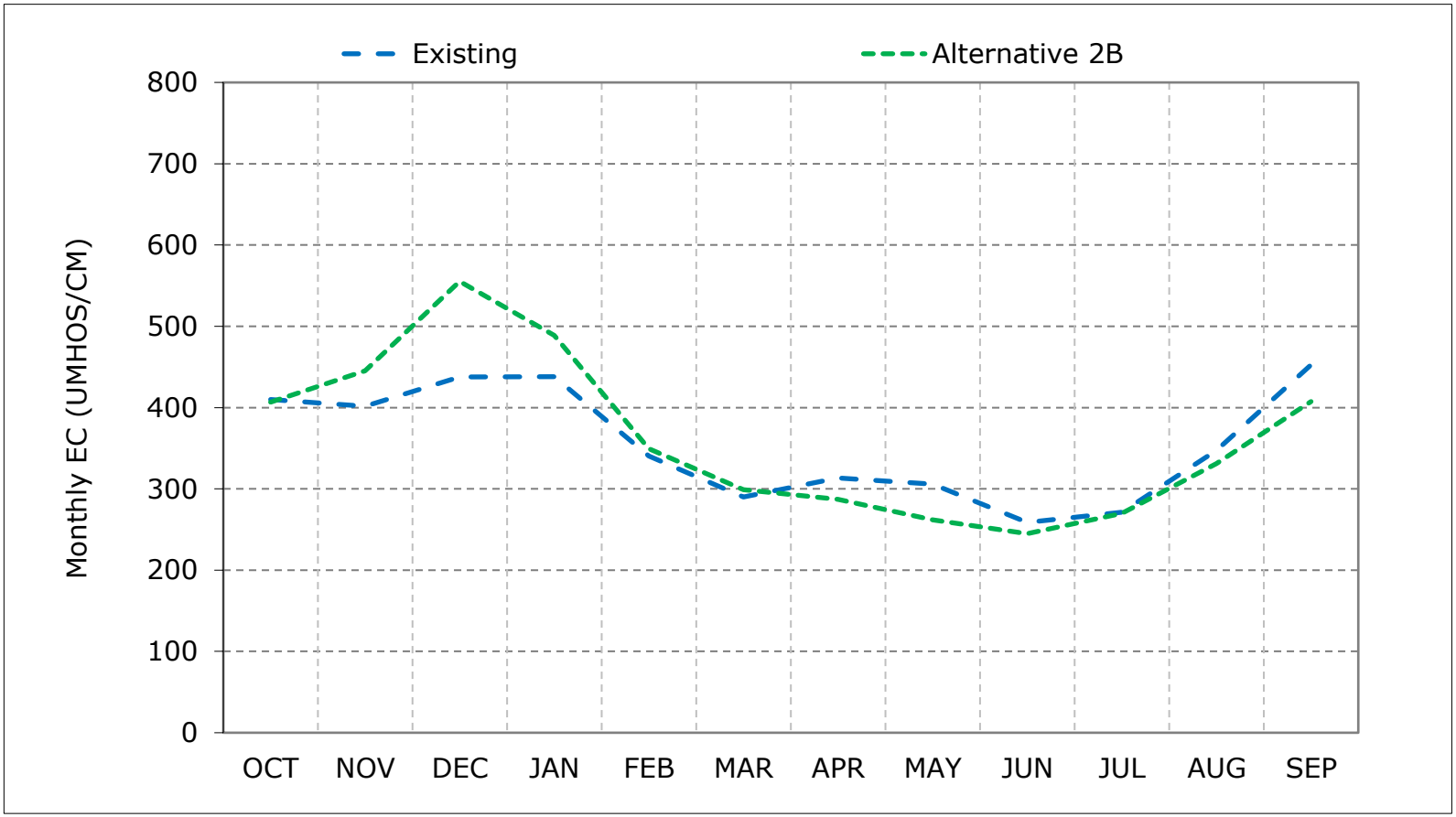
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 600 | 590 | 733 | 747 | 444 | 355 | 337 | 296 | 288 | 374 | 479 | 627 |
| **20%** | 582 | 557 | 695 | 679 | 412 | 335 | 324 | 284 | 267 | 291 | 413 | 585 |
| **30%** | 561 | 533 | 672 | 607 | 392 | 315 | 309 | 273 | 251 | 265 | 385 | 538 |
| **40%** | 551 | 508 | 647 | 525 | 368 | 302 | 295 | 269 | 239 | 260 | 361 | 491 |
| **50%** | 514 | 458 | 626 | 419 | 347 | 291 | 289 | 264 | 230 | 248 | 339 | 443 |
| **60%** | 226 | 388 | 573 | 384 | 316 | 283 | 278 | 259 | 224 | 231 | 271 | 263 |
| **70%** | 216 | 352 | 443 | 349 | 293 | 272 | 266 | 252 | 222 | 221 | 243 | 252 |
| **80%** | 212 | 314 | 387 | 324 | 277 | 262 | 253 | 249 | 218 | 217 | 233 | 243 |
| **90%** | 206 | 280 | 290 | 290 | 264 | 244 | 239 | 216 | 211 | 208 | 228 | 234 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 407 | 445 | 555 | 489 | 349 | 299 | 287 | 262 | 245 | 270 | 331 | 407 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (23%)** | 392 | 428 | 484 | 372 | 334 | 298 | 253 | 234 | 262 | 238 | 228 | 228 |
| **Above Normal (24%)** | 427 | 449 | 506 | 447 | 346 | 307 | 298 | 272 | 225 | 219 | 293 | 373 |
| **Below Normal (10%)** | 348 | 435 | 552 | 521 | 347 | 315 | 324 | 266 | 214 | 232 | 297 | 369 |
| **Dry (16%)** | 375 | 416 | 579 | 521 | 321 | 293 | 307 | 271 | 225 | 280 | 388 | 537 |
| **Critical (27%)** | 441 | 478 | 649 | 596 | 383 | 290 | 282 | 270 | 271 | 352 | 433 | 531 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | **1** | -5 | **44** | **96** | **0** | **14** | -28 | -56 | -4 | -1 | **5** | **58** |
| **20%** | **17** | **7** | **46** | **134** | **15** | **12** | -29 | -53 | -7 | -10 | **7** | **36** |
| **30%** | **11** | **9** | **83** | **99** | **11** | **7** | -32 | -55 | -13 | -12 | **6** | **19** |
| **40%** | **16** | **24** | **142** | **102** | **13** | **4** | -35 | -53 | -14 | -2 | **2** | -5 |
| **50%** | **19** | **8** | **252** | **17** | **12** | **9** | -29 | -52 | -18 | -4 | **1** | -20 |
| **60%** | -35 | **113** | **265** | **8** | **1** | **7** | -34 | -47 | -19 | **1** | -43 | -171 |
| **70%** | -30 | **110** | **159** | **3** | **6** | **4** | -28 | -48 | -20 | -3 | -44 | -158 |
| **80%** | -24 | **83** | **134** | **6** | 0 | **8** | -22 | -35 | -17 | -2 | -46 | -115 |
| **90%** | -20 | **56** | **53** | **4** | -2 | **5** | -19 | -10 | -17 | 0 | -43 | -88 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | -3 | **44** | **118** | **51** | **9** | **9** | -26 | -44 | -14 | -2 | -16 | -45 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (23%)** | -2 | **40** | **83** | **9** | -3 | **0** | -8 | -14 | -4 | **1** | -35 | -111 |
| **Above Normal (24%)** | **6** | **31** | **78** | **31** | -1 | **5** | -23 | -42 | -20 | -4 | -24 | -78 |
| **Below Normal (10%)** | -26 | **102** | **208** | **132** | **22** | **22** | -15 | -50 | -19 | -5 | -27 | -69 |
| **Dry (16%)** | -12 | **51** | **166** | **76** | **11** | **16** | -43 | -67 | -21 | -11 | -8 | **14** |
| **Critical (27%)** | **0** | **33** | **123** | **60** | **24** | **11** | -38 | -54 | -11 | **5** | **6** | **16** |

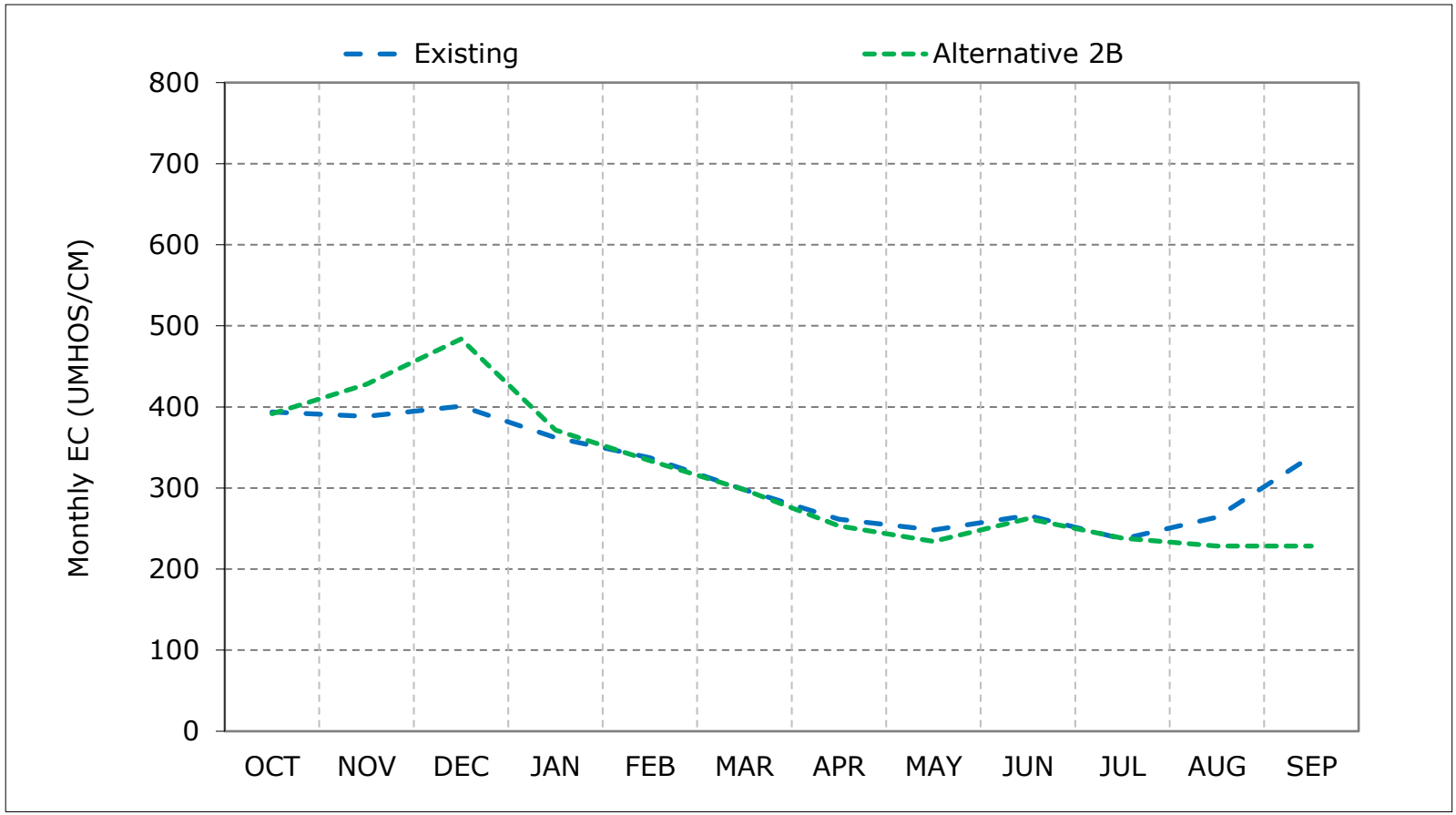
a Based on the 82-year simulation period.
b As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 14-1. San Joaquin River at Prisoners Point, Long-Term Average EC**



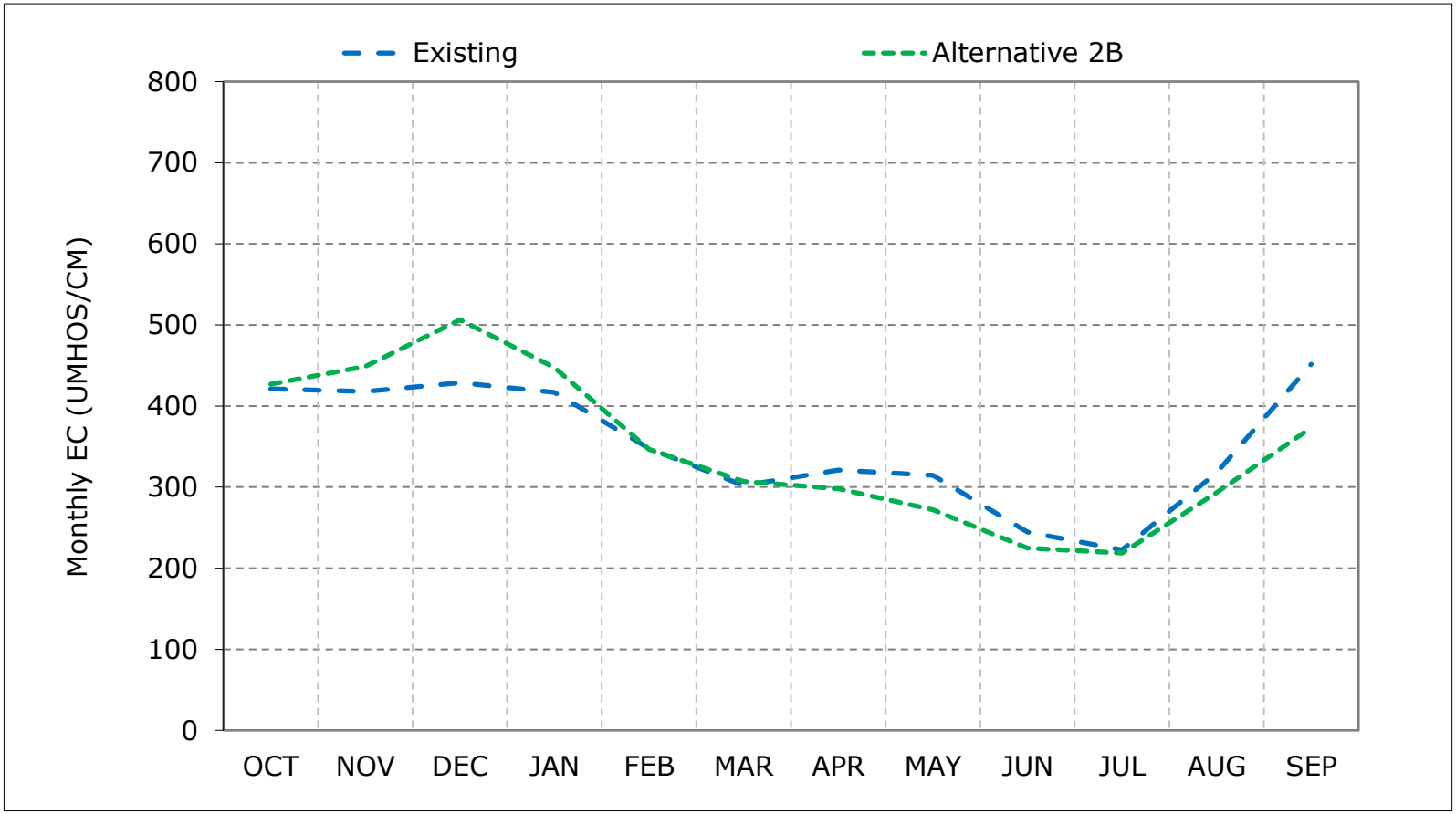

*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 14-2. San Joaquin River at Prisoners Point, Wet Year Average EC**



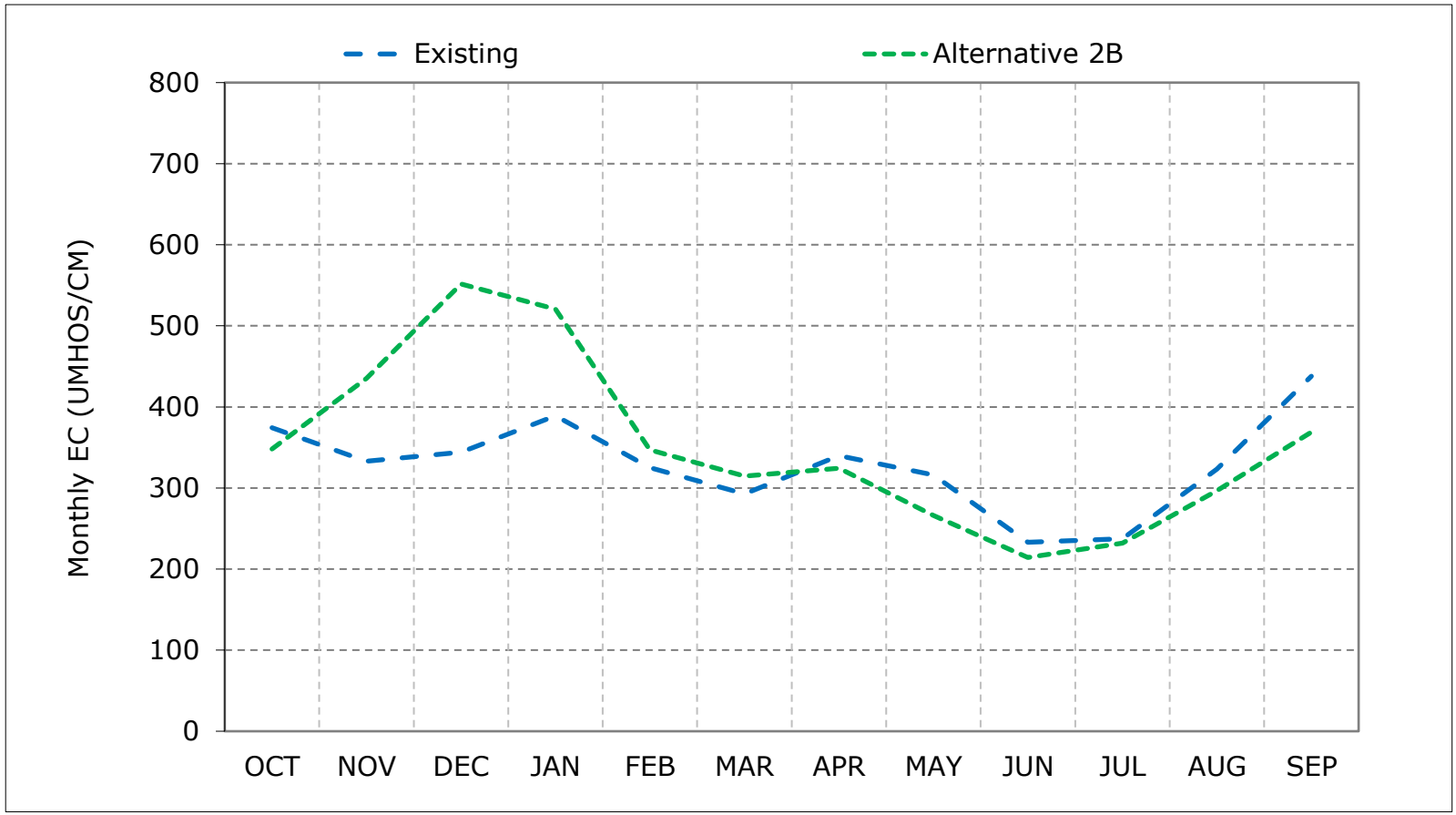

*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 14-3. San Joaquin River at Prisoners Point, Above Normal Year Average EC**



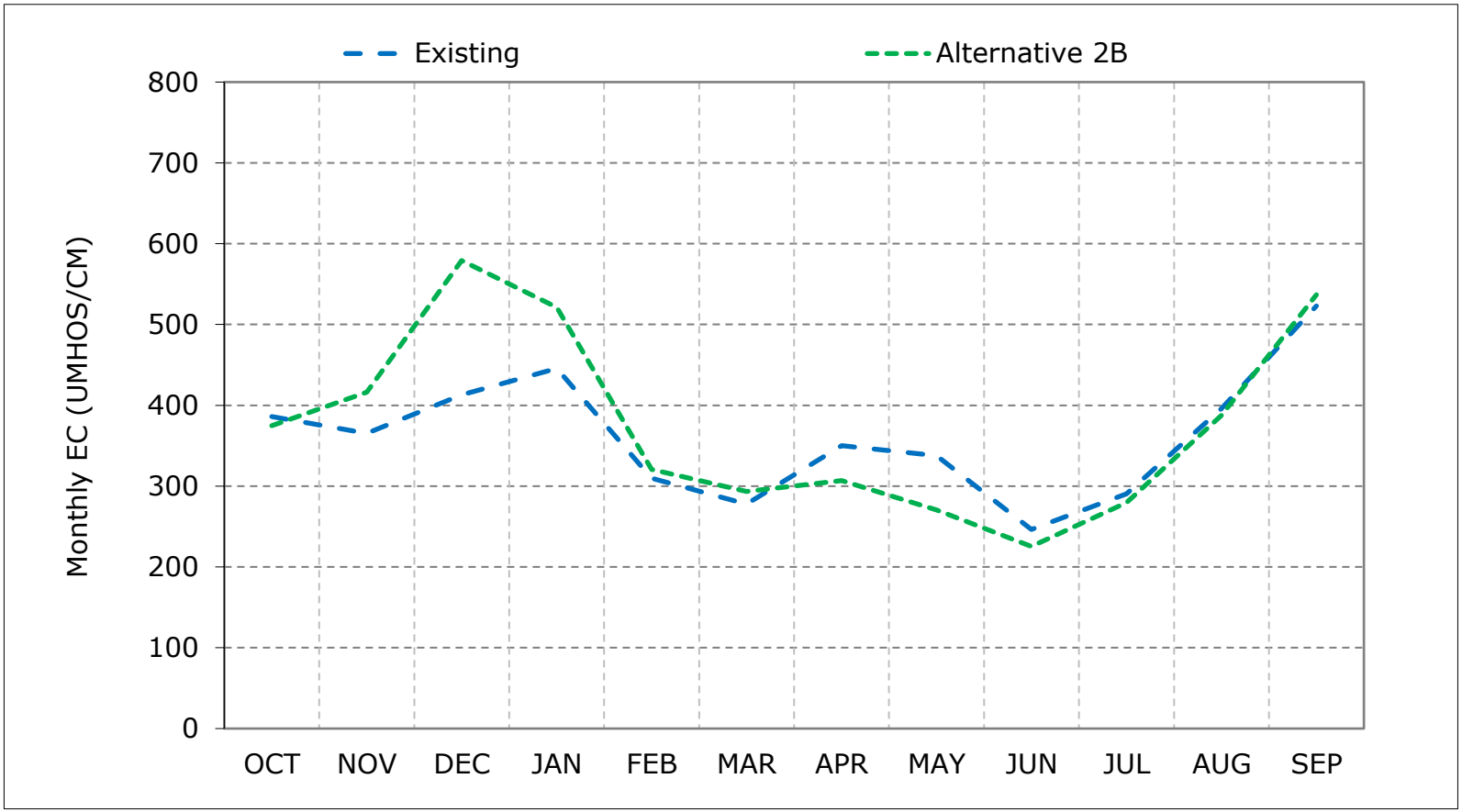

*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 14-4. San Joaquin River at Prisoners Point, Below Normal Year Average EC**



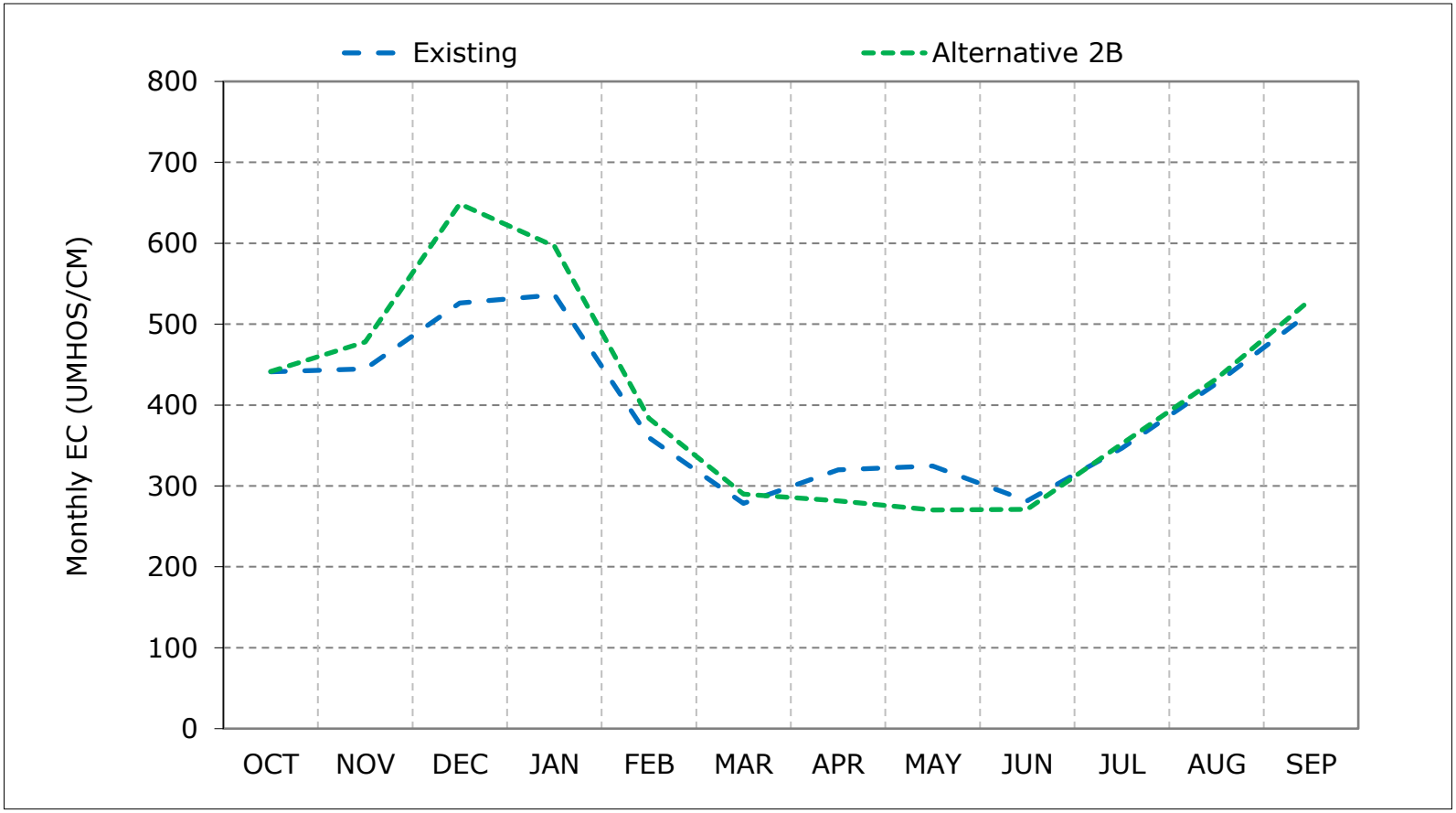

*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 14-5. San Joaquin River at Prisoners Point, Dry Year Average EC**




*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 14-6. San Joaquin River at Prisoners Point, Critical Year Average EC**




*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 14-7. San Joaquin River at Prisoners Point, January EC**

**Figure 14-8. San Joaquin River at Prisoners Point, February EC**

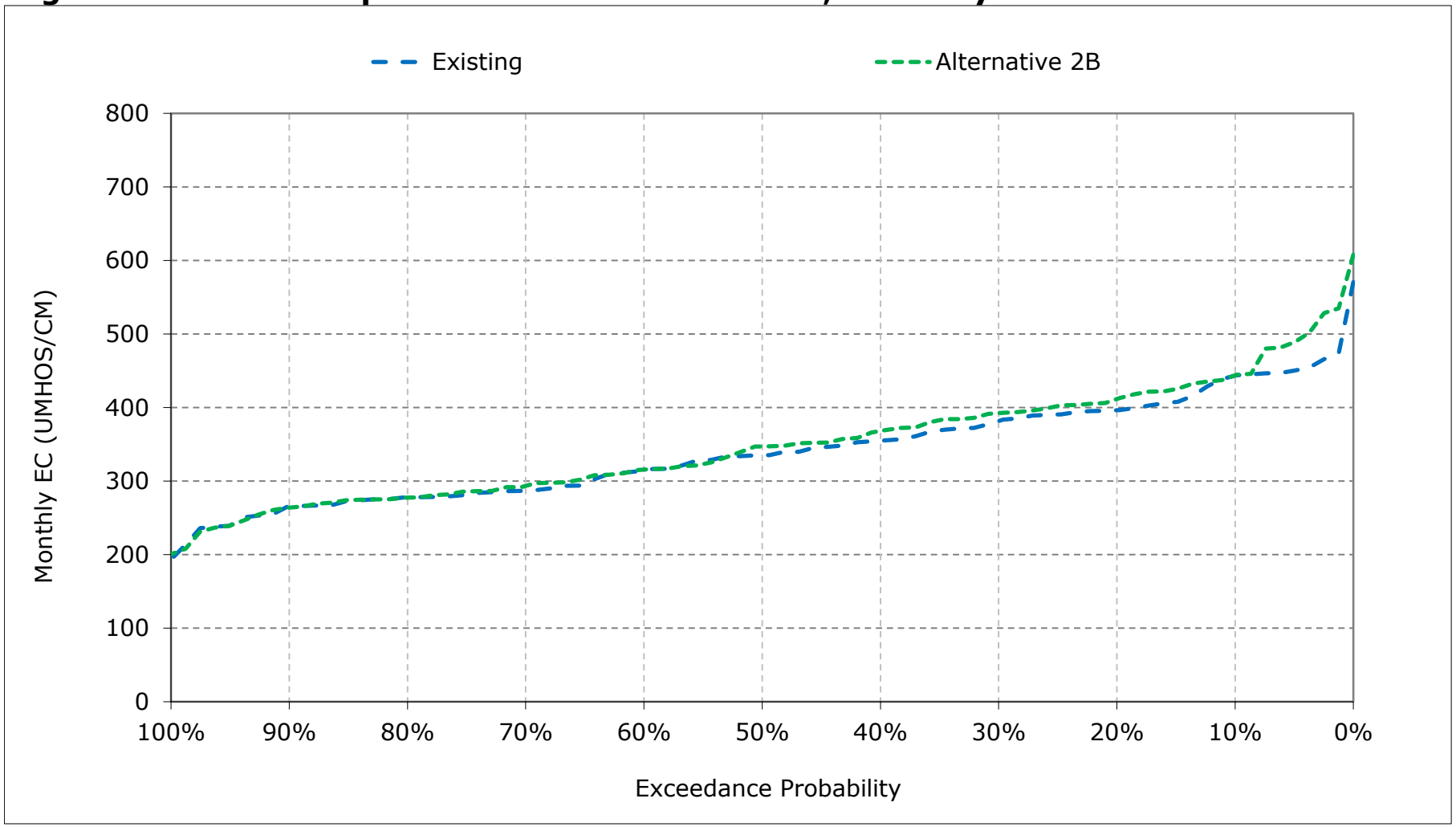


**Figure 14-9. San Joaquin River at Prisoners Point, March EC**

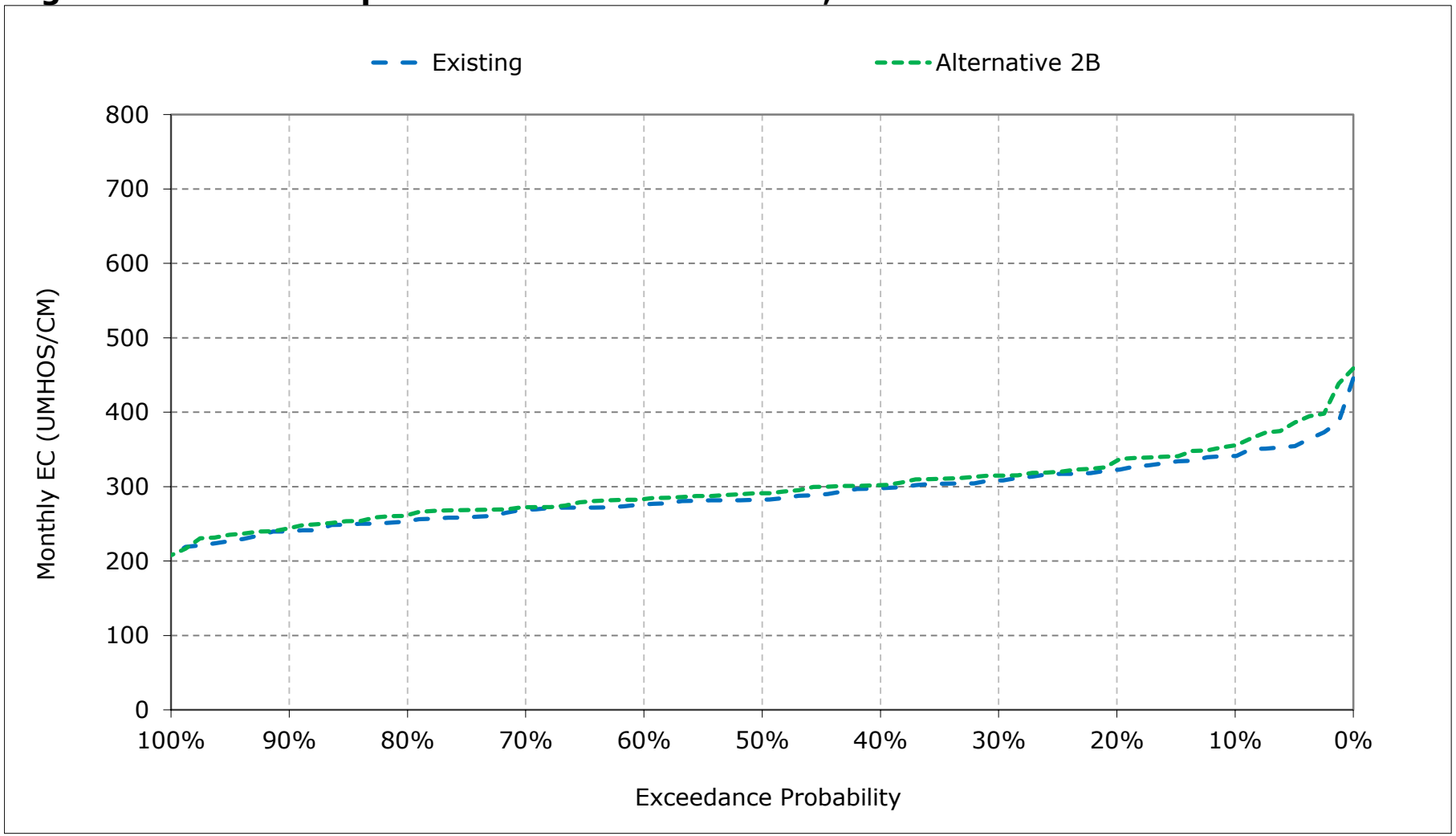


**Figure 14-10. San Joaquin River at Prisoners Point, April EC**

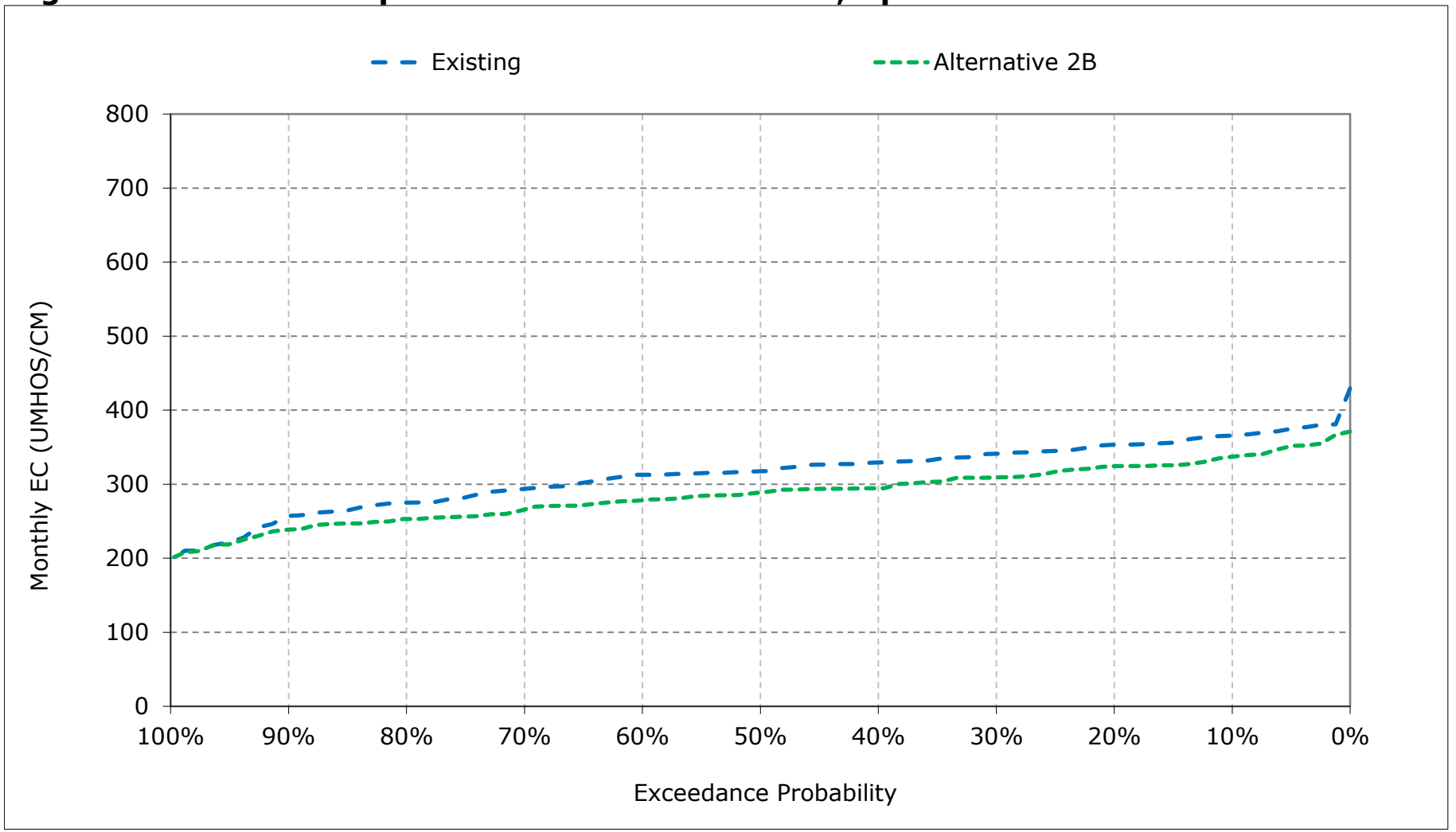


**Figure 14-11. San Joaquin River at Prisoners Point, May EC**

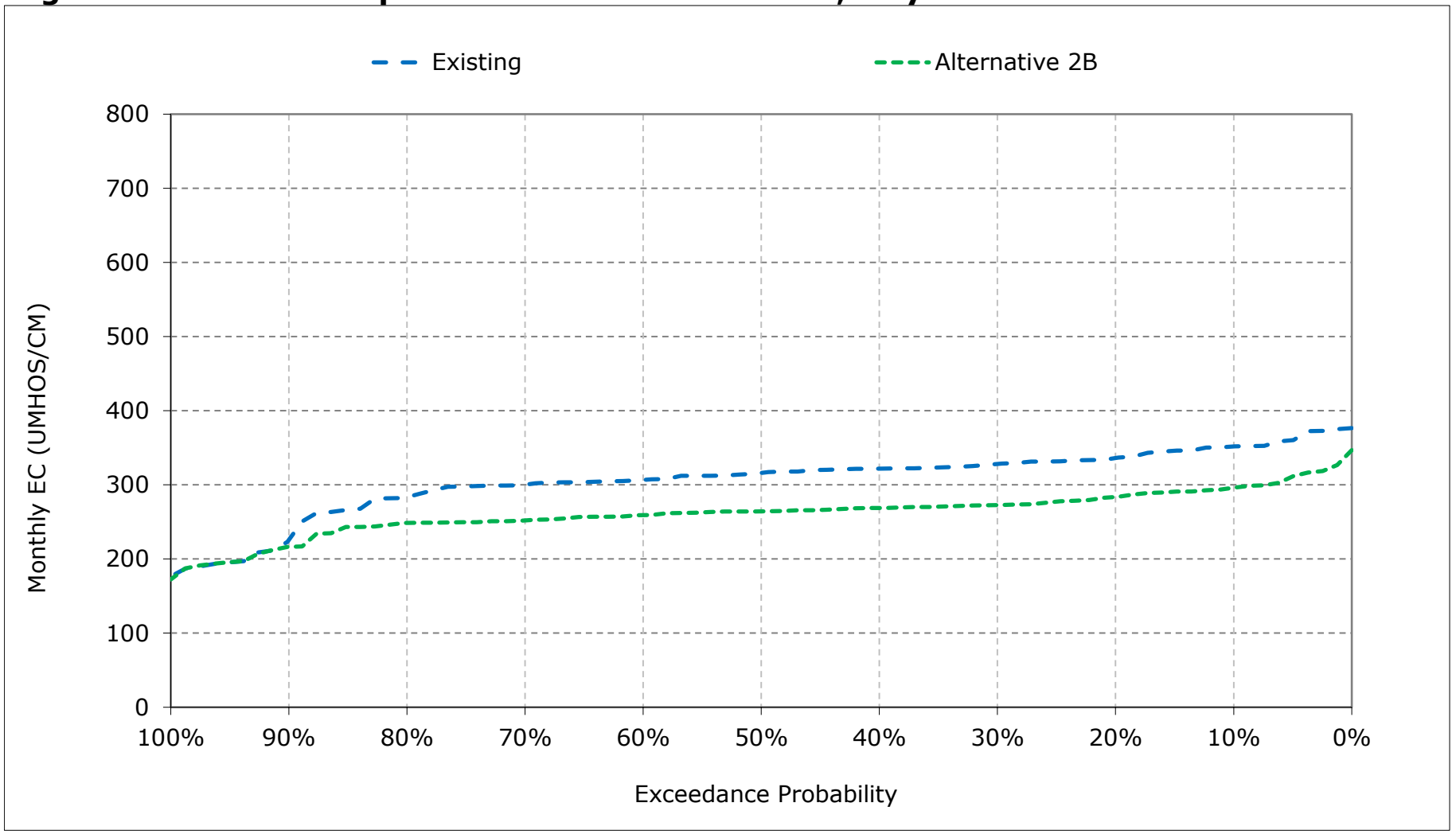


**Figure 14-12. San Joaquin River at Prisoners Point, June EC**

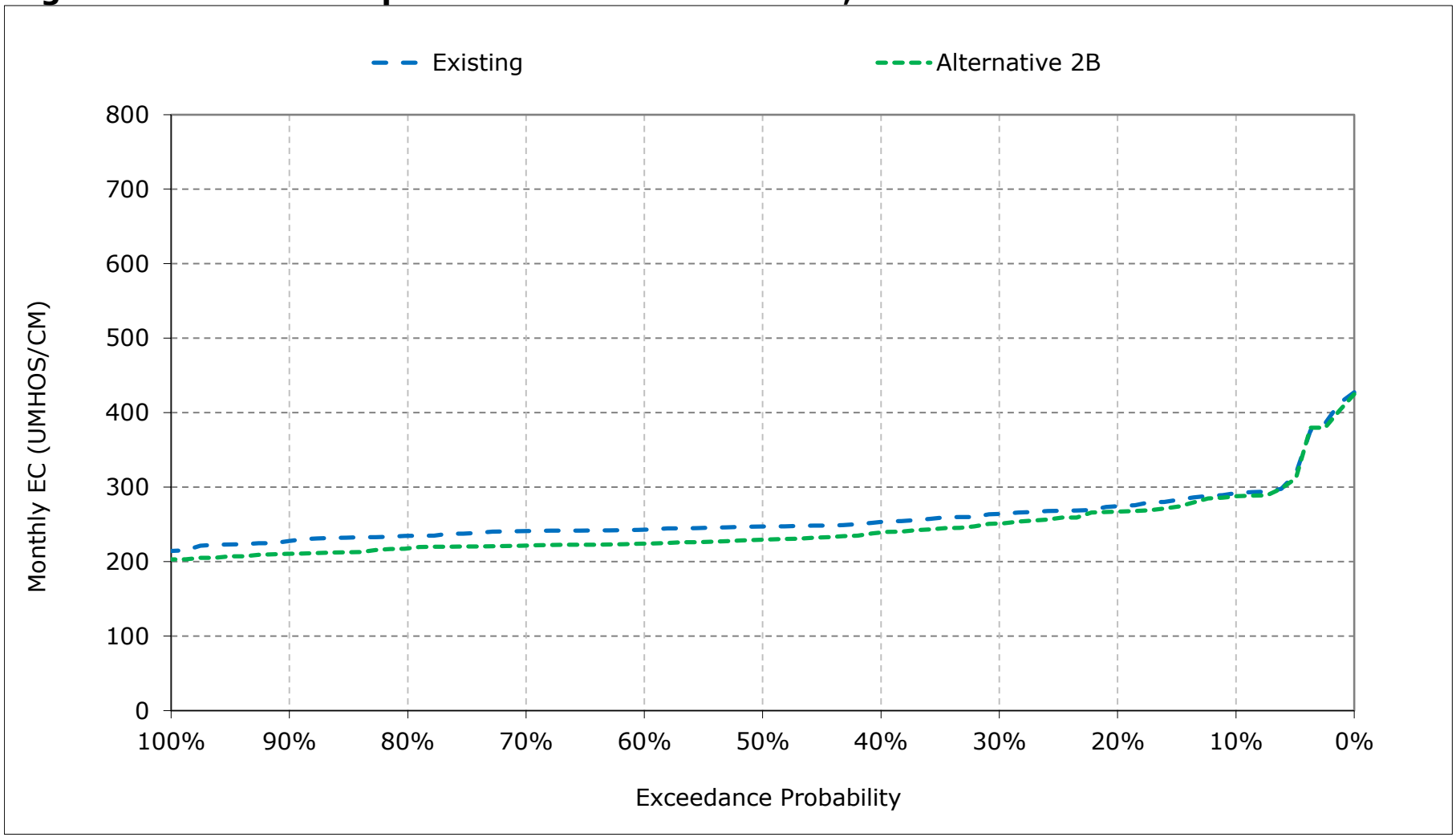


**Figure 14-13. San Joaquin River at Prisoners Point, July EC**

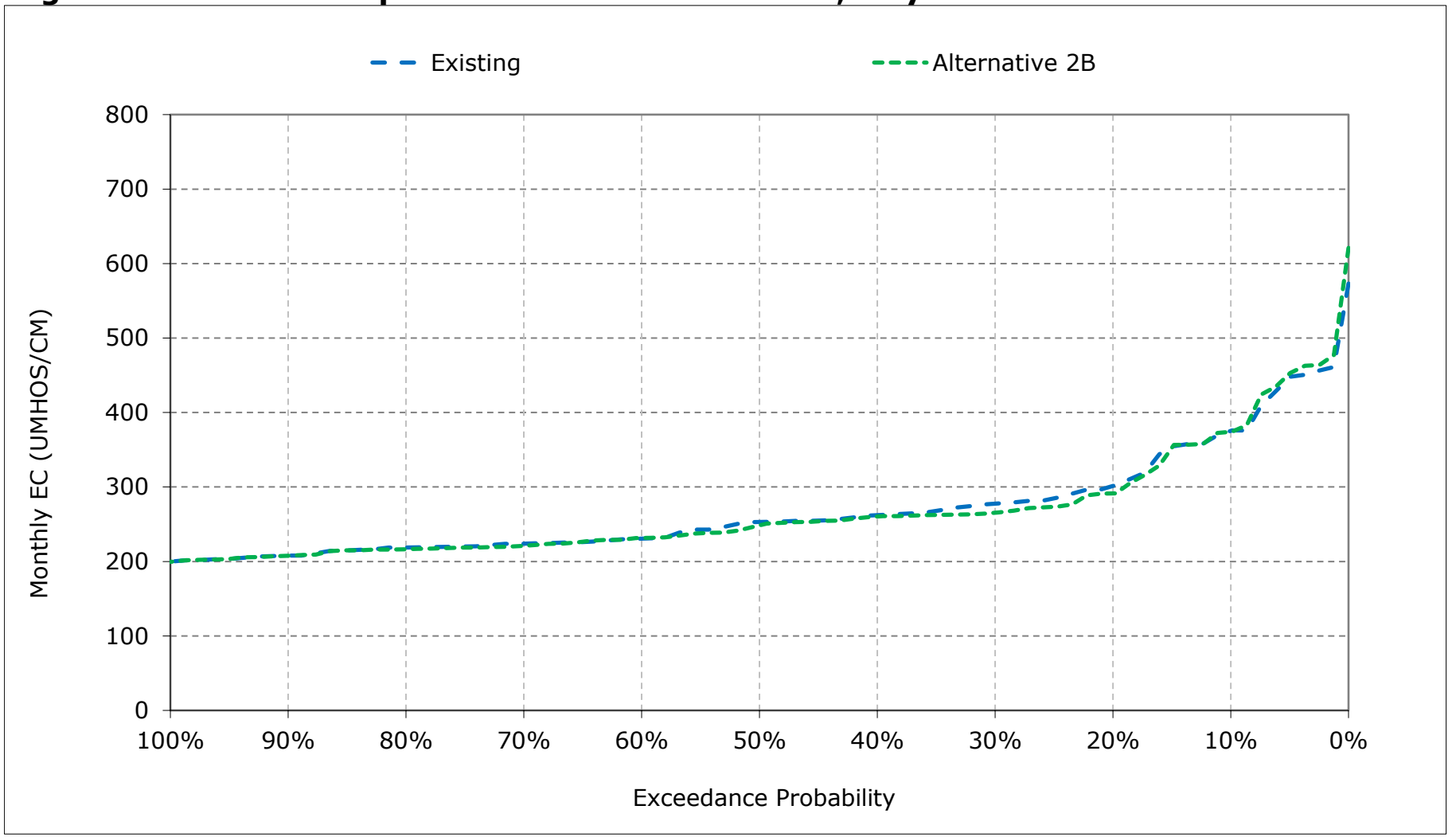


**Figure 14-14. San Joaquin River at Prisoners Point, August EC**

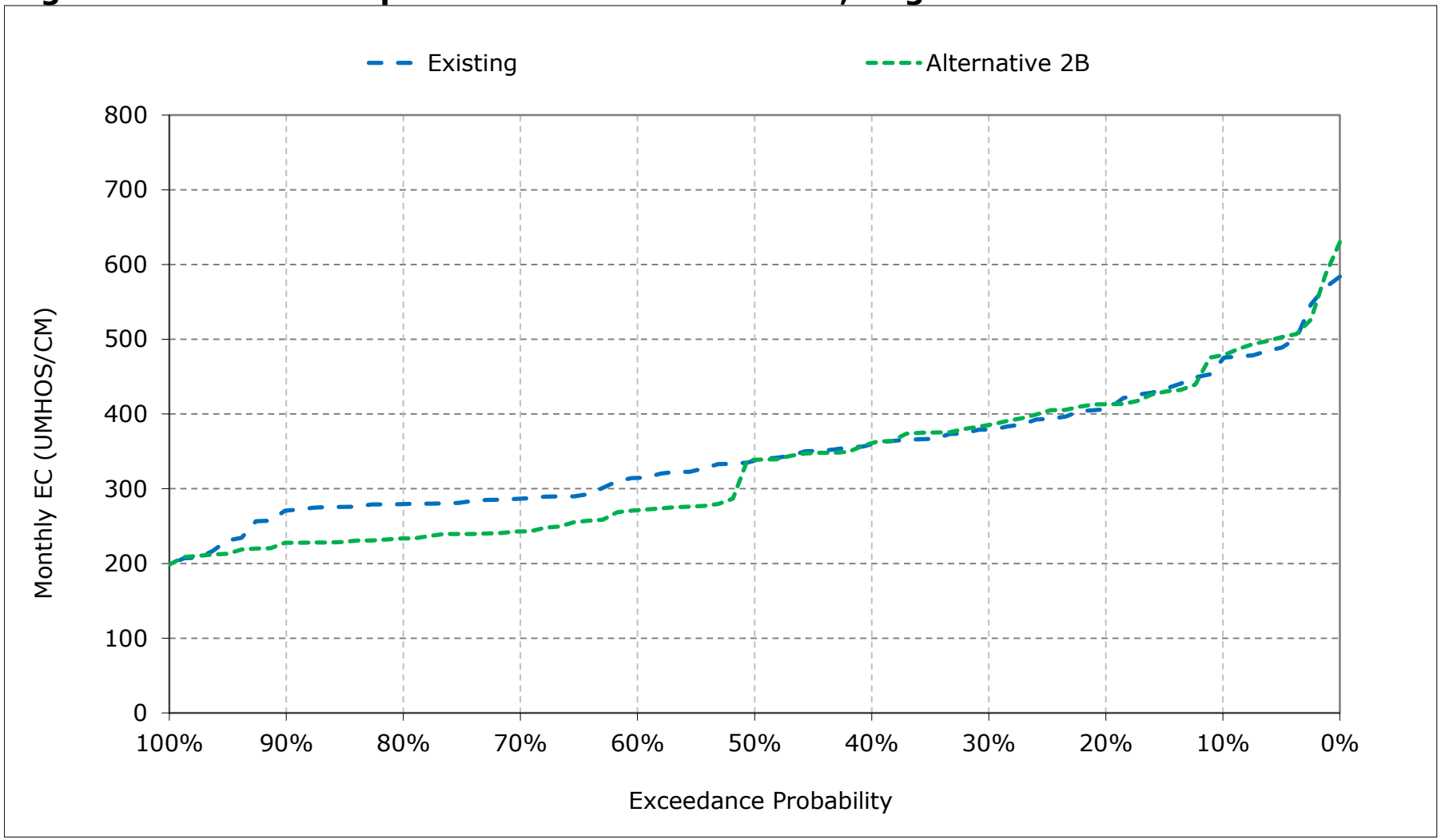


**Figure 14-15. San Joaquin River at Prisoners Point, September EC**

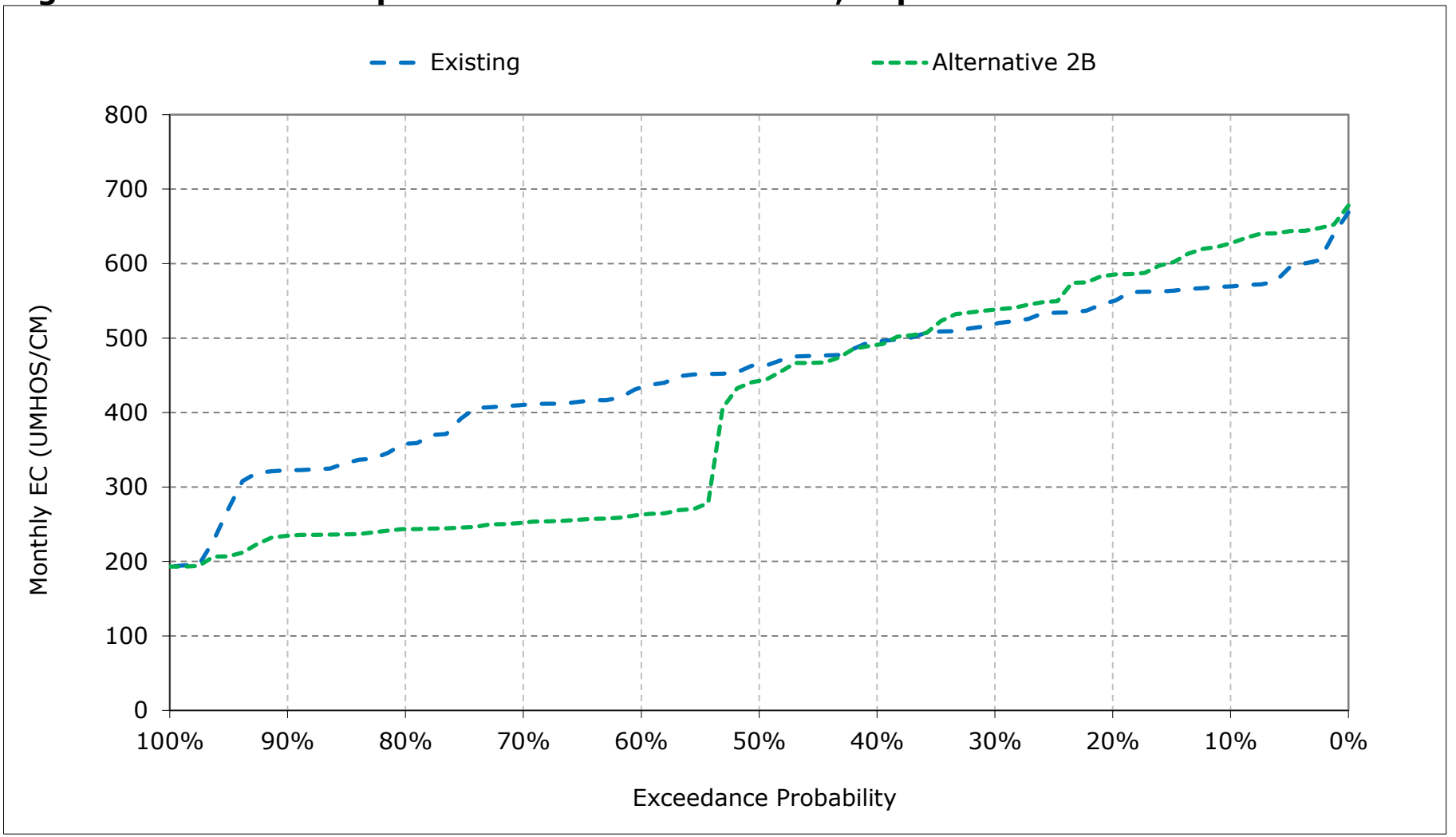


**Figure 14-16. San Joaquin River at Prisoners Point, October EC**

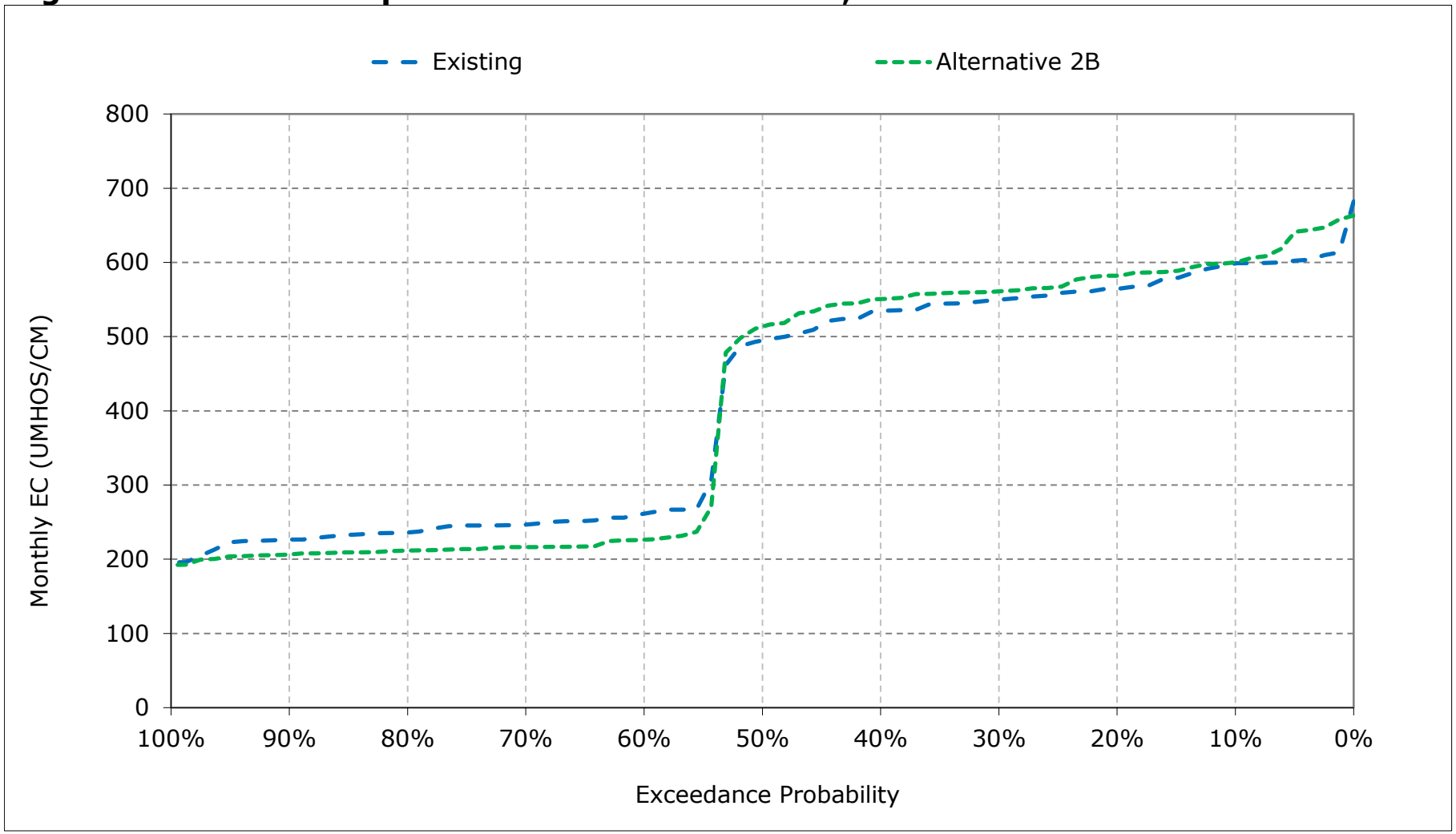


**Figure 14-17. San Joaquin River at Prisoners Point, November EC**

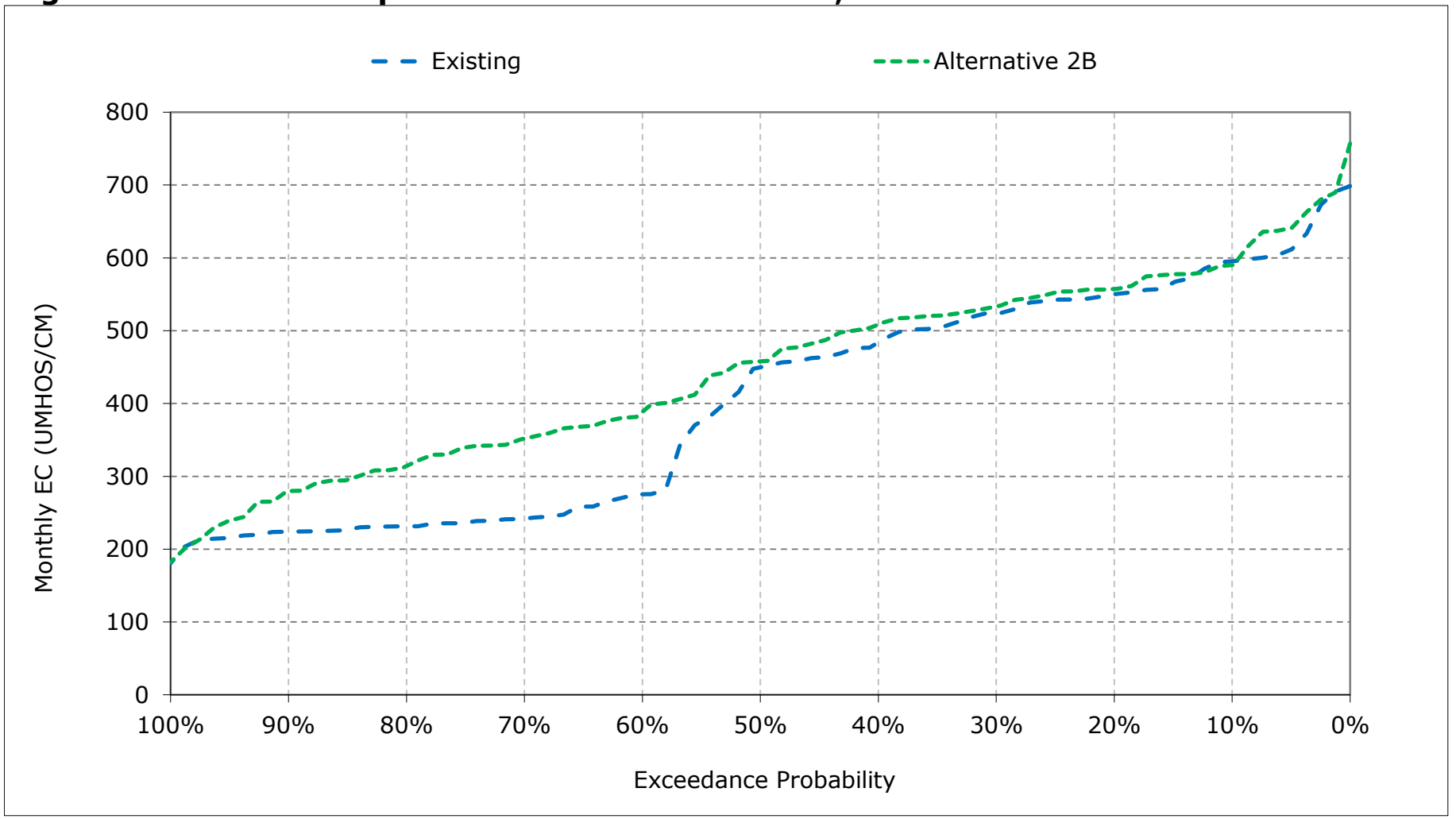
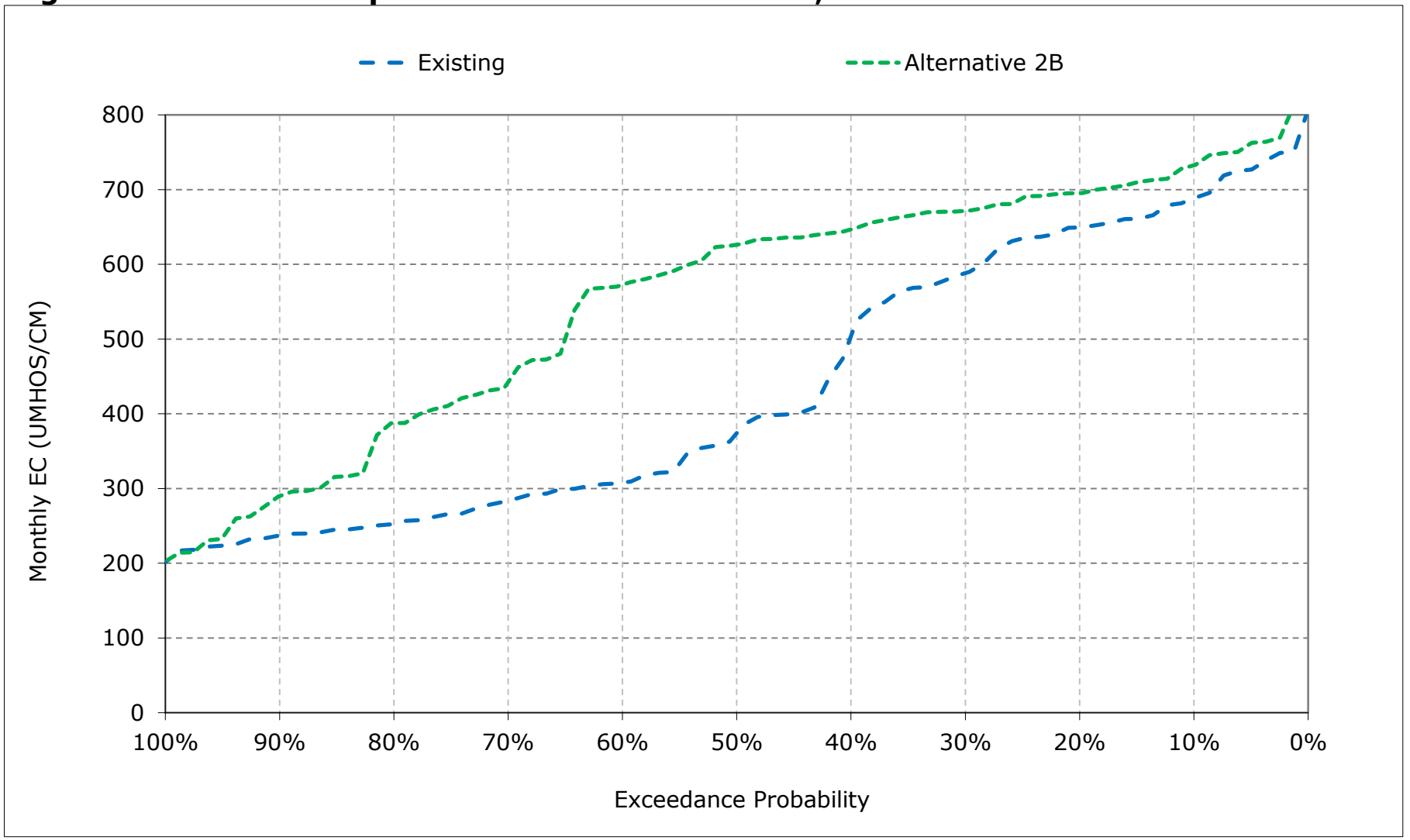


**Figure 14-18. San Joaquin River at Prisoners Point, December EC**



## Table 15-1. Old River at Rock Slough Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 871 | 839 | 912 | 833 | 508 | 361 | 357 | 375 | 301 | 483 | 645 | 799 |
| **20%** | 831 | 768 | 869 | 699 | 418 | 316 | 339 | 352 | 273 | 374 | 544 | 774 |
| **30%** | 806 | 729 | 787 | 610 | 394 | 295 | 324 | 325 | 263 | 338 | 495 | 722 |
| **40%** | 776 | 673 | 627 | 524 | 360 | 287 | 309 | 314 | 259 | 303 | 471 | 664 |
| **50%** | 714 | 588 | 444 | 459 | 341 | 273 | 301 | 308 | 256 | 272 | 432 | 622 |
| **60%** | 275 | 310 | 342 | 419 | 306 | 264 | 288 | 298 | 252 | 254 | 397 | 571 |
| **70%** | 263 | 251 | 299 | 342 | 289 | 254 | 283 | 293 | 248 | 245 | 357 | 535 |
| **80%** | 259 | 236 | 272 | 312 | 275 | 243 | 270 | 282 | 240 | 230 | 344 | 476 |
| **90%** | 249 | 223 | 243 | 275 | 262 | 233 | 247 | 247 | 233 | 220 | 324 | 436 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 555 | 522 | 544 | 517 | 360 | 285 | 302 | 308 | 270 | 319 | 449 | 614 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 459 | 415 | 371 | 343 | 331 | 285 | 289 | 280 | 243 | 235 | 335 | 492 |
| **Above Normal (15%)** | 618 | 541 | 542 | 485 | 345 | 286 | 321 | 328 | 252 | 244 | 361 | 454 |
| **Below Normal (17%)** | 573 | 549 | 617 | 591 | 338 | 270 | 317 | 335 | 252 | 305 | 470 | 762 |
| **Dry (22%)** | 560 | 571 | 617 | 566 | 361 | 268 | 296 | 309 | 264 | 389 | 545 | 686 |
| **Critical (15%)** | 668 | 632 | 729 | 769 | 459 | 330 | 301 | 315 | 373 | 487 | 613 | 755 |

### Alternative 2B

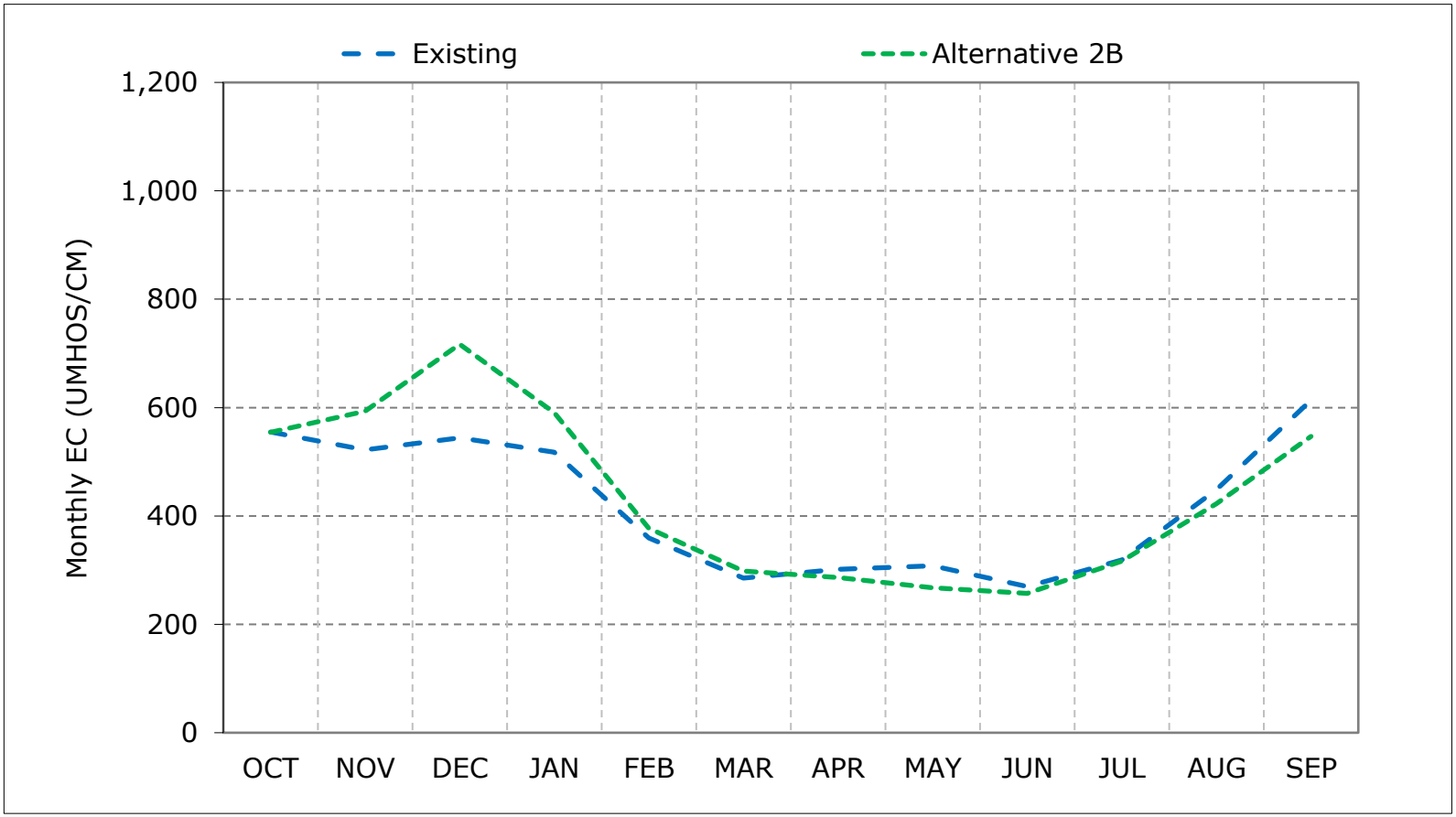
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 882 | 825 | 941 | 981 | 529 | 383 | 337 | 297 | 288 | 486 | 657 | 876 |
| **20%** | 839 | 772 | 909 | 877 | 477 | 336 | 311 | 281 | 265 | 358 | 556 | 816 |
| **30%** | 818 | 735 | 889 | 787 | 409 | 305 | 295 | 277 | 252 | 319 | 510 | 746 |
| **40%** | 796 | 705 | 858 | 655 | 379 | 295 | 291 | 268 | 243 | 299 | 473 | 672 |
| **50%** | 742 | 630 | 836 | 501 | 351 | 285 | 280 | 262 | 238 | 273 | 436 | 595 |
| **60%** | 253 | 512 | 763 | 440 | 318 | 271 | 275 | 257 | 233 | 252 | 334 | 336 |
| **70%** | 236 | 447 | 568 | 355 | 298 | 263 | 267 | 253 | 230 | 240 | 289 | 315 |
| **80%** | 229 | 403 | 484 | 321 | 277 | 250 | 260 | 247 | 225 | 231 | 274 | 302 |
| **90%** | 221 | 341 | 308 | 284 | 263 | 244 | 247 | 237 | 219 | 221 | 250 | 281 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 554 | 593 | 717 | 591 | 377 | 298 | 287 | 268 | 257 | 317 | 423 | 547 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 457 | 511 | 525 | 372 | 334 | 296 | 273 | 249 | 232 | 236 | 271 | 283 |
| **Above Normal (15%)** | 619 | 617 | 735 | 575 | 363 | 301 | 296 | 266 | 232 | 241 | 298 | 319 |
| **Below Normal (17%)** | 571 | 623 | 789 | 677 | 344 | 279 | 289 | 270 | 233 | 286 | 489 | 841 |
| **Dry (22%)** | 551 | 622 | 824 | 699 | 398 | 285 | 285 | 270 | 251 | 385 | 543 | 707 |
| **Critical (15%)** | 686 | 670 | 870 | 816 | 491 | 343 | 307 | 303 | 373 | 501 | 618 | 764 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | **11** | -14 | **29** | **149** | **21** | **21** | -20 | -78 | -14 | **2** | **12** | **76** |
| **20%** | **8** | **4** | **40** | **178** | **59** | **20** | -28 | -71 | -8 | -15 | **12** | **42** |
| **30%** | **12** | **6** | **102** | **177** | **15** | **10** | -29 | -48 | -11 | -19 | **16** | **24** |
| **40%** | **20** | **32** | **231** | **131** | **19** | **9** | -19 | -46 | -16 | -4 | **2** | **8** |
| **50%** | **28** | **42** | **391** | **41** | **10** | **12** | -21 | -46 | -18 | **1** | **4** | -26 |
| **60%** | -22 | **202** | **421** | **20** | **11** | **7** | -13 | -41 | -19 | -2 | -63 | -235 |
| **70%** | -28 | **195** | **269** | **14** | **9** | **9** | -15 | -40 | -17 | -5 | -67 | -220 |
| **80%** | -30 | **166** | **212** | **9** | **3** | **7** | -10 | -35 | -15 | **1** | -70 | -175 |
| **90%** | -27 | **118** | **64** | **9** | **0** | **11** | **0** | -10 | -14 | **0** | -75 | -155 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | -1 | **71** | **173** | **73** | **17** | **13** | -15 | -40 | -13 | -2 | -26 | -67 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | -2 | **95** | **154** | **29** | **3** | **11** | -16 | -31 | -11 | **0** | -64 | -209 |
| **Above Normal (15%)** | **0** | **76** | **193** | **90** | **18** | **14** | -25 | -62 | -20 | -3 | -64 | -134 |
| **Below Normal (17%)** | -2 | **75** | **172** | **86** | **6** | **9** | -28 | -66 | -19 | -19 | **19** | **79** |
| **Dry (22%)** | -9 | **51** | **207** | **134** | **37** | **17** | -11 | -39 | -13 | -5 | -2 | **20** |
| **Critical (15%)** | **17** | **39** | **141** | **47** | **32** | **14** | **7** | -11 | 0 | **14** | **5** | **9** |

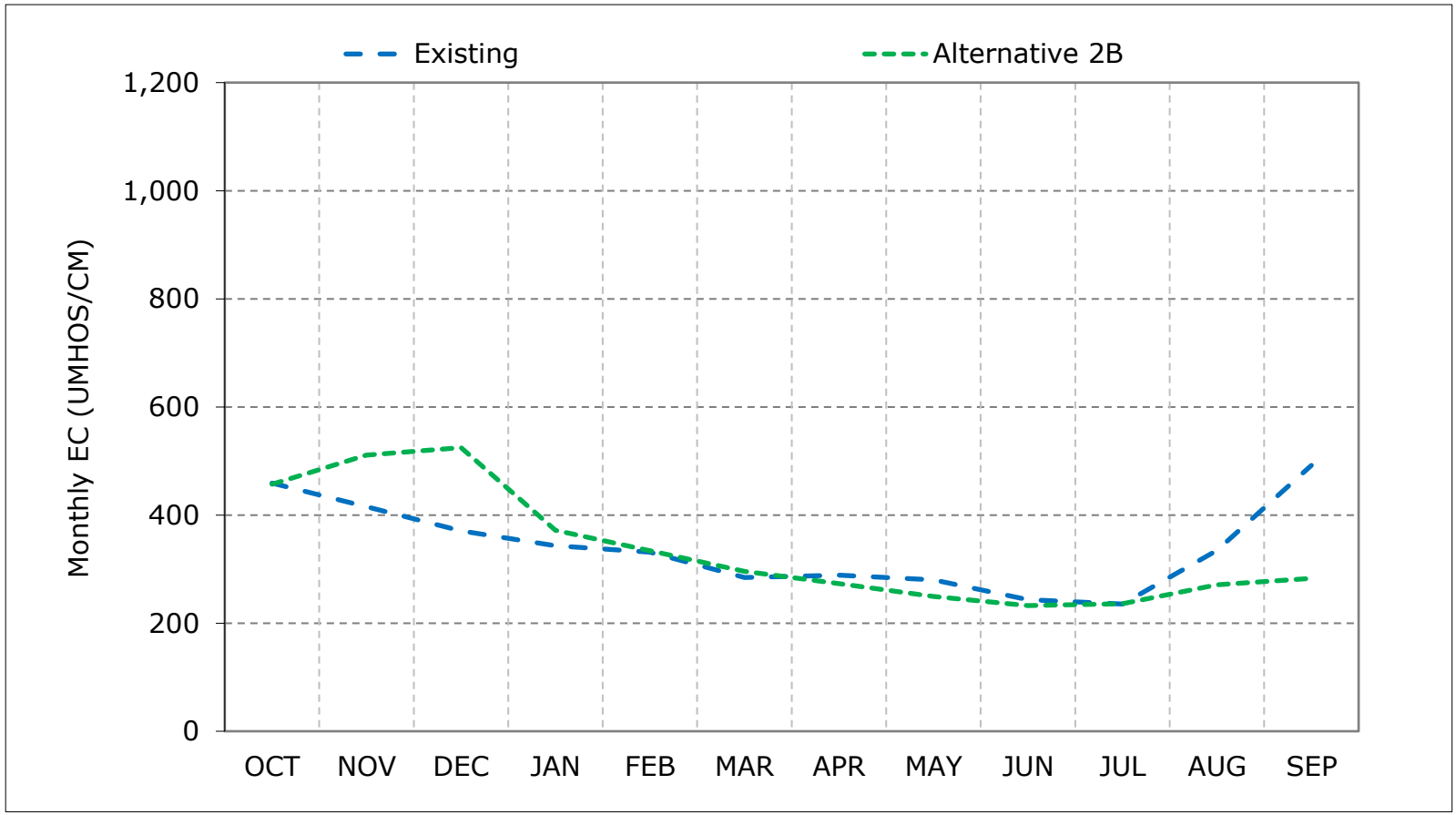
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 15-1. Old River at Rock Slough Salinity, Long-Term Average EC**



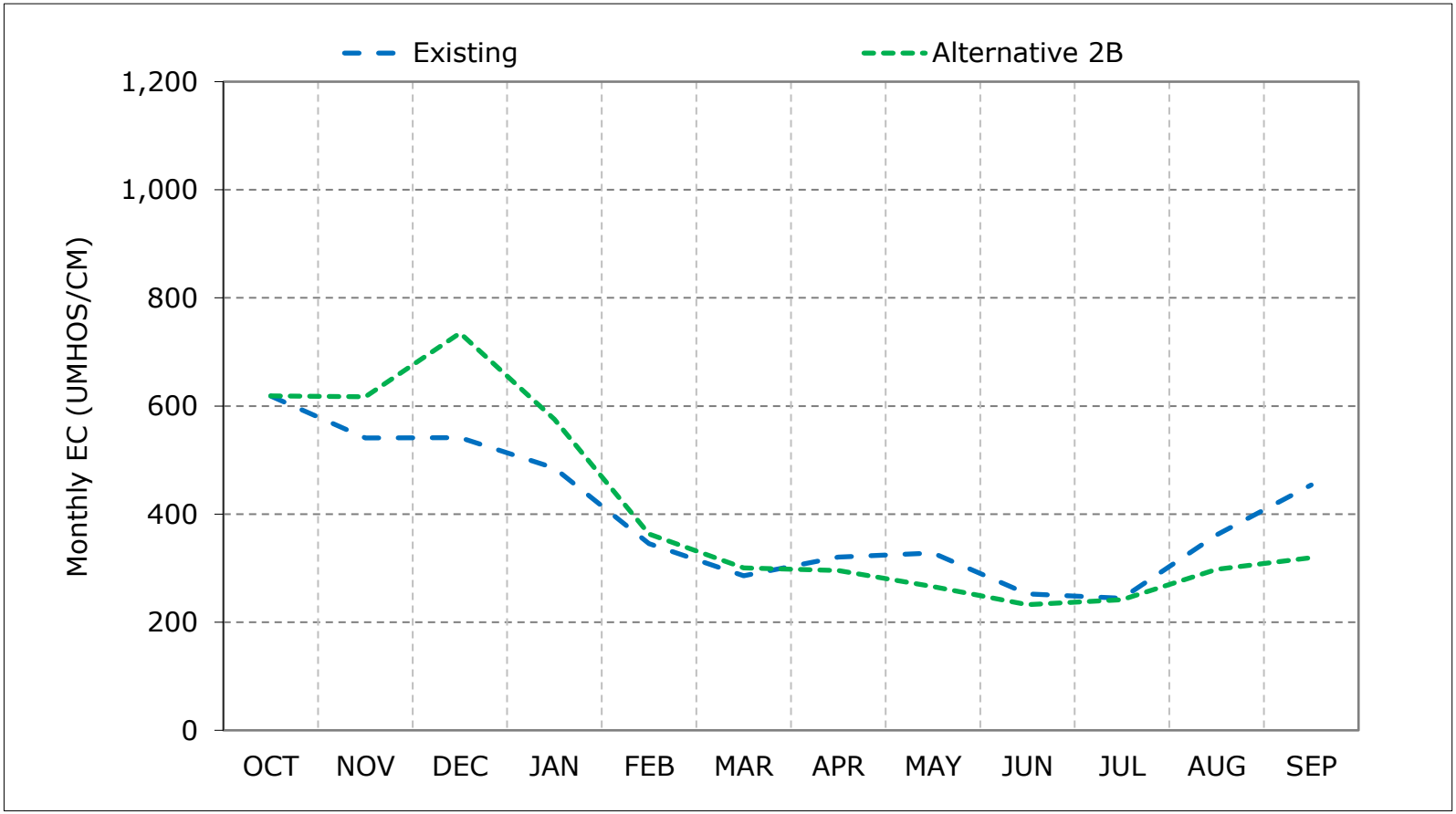

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 15-2. Old River at Rock Slough Salinity, Wet Year Average EC**



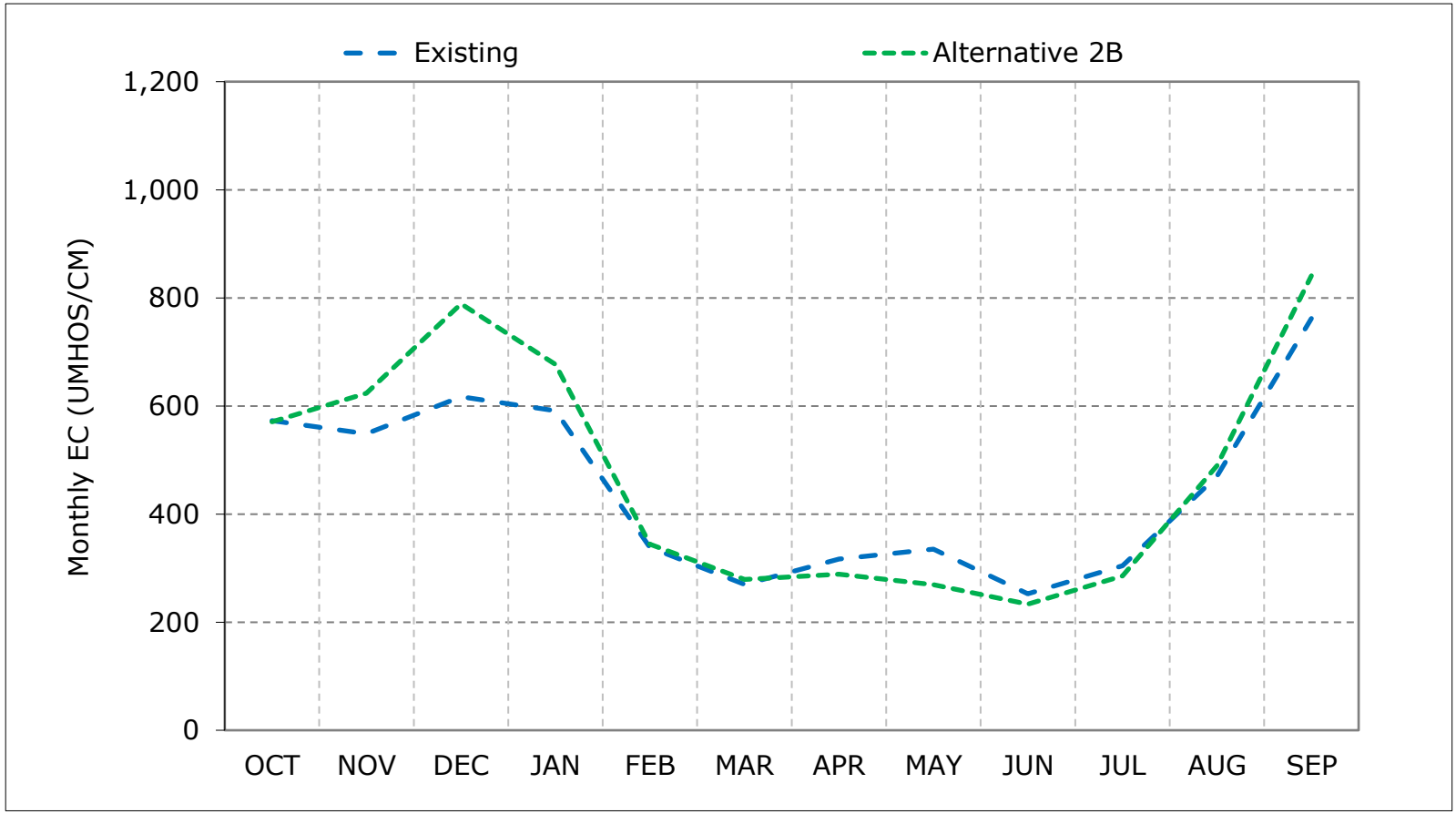

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 15-3. Old River at Rock Slough Salinity, Above Normal Year Average EC**



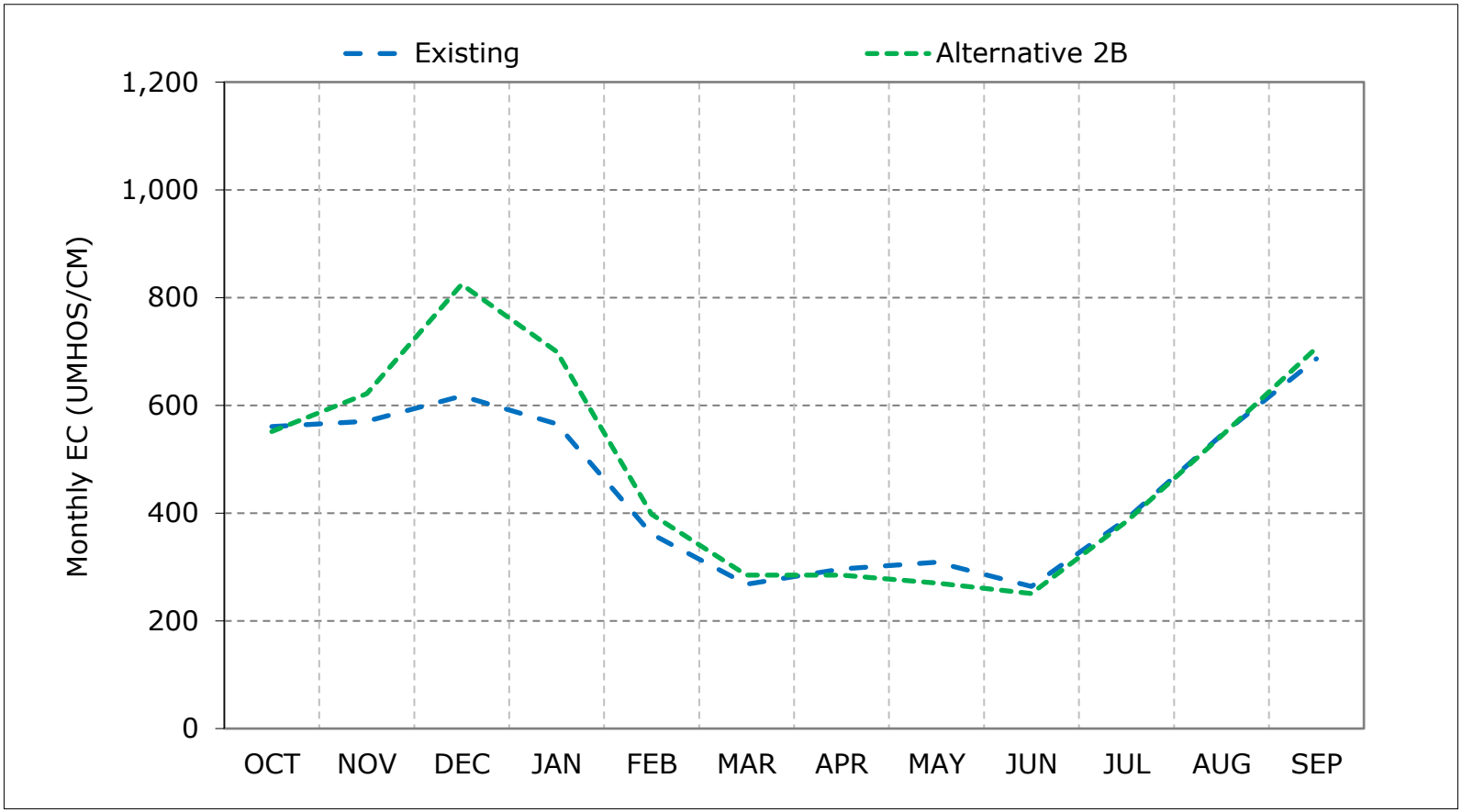

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 15-4. Old River at Rock Slough Salinity, Below Normal Year Average EC**



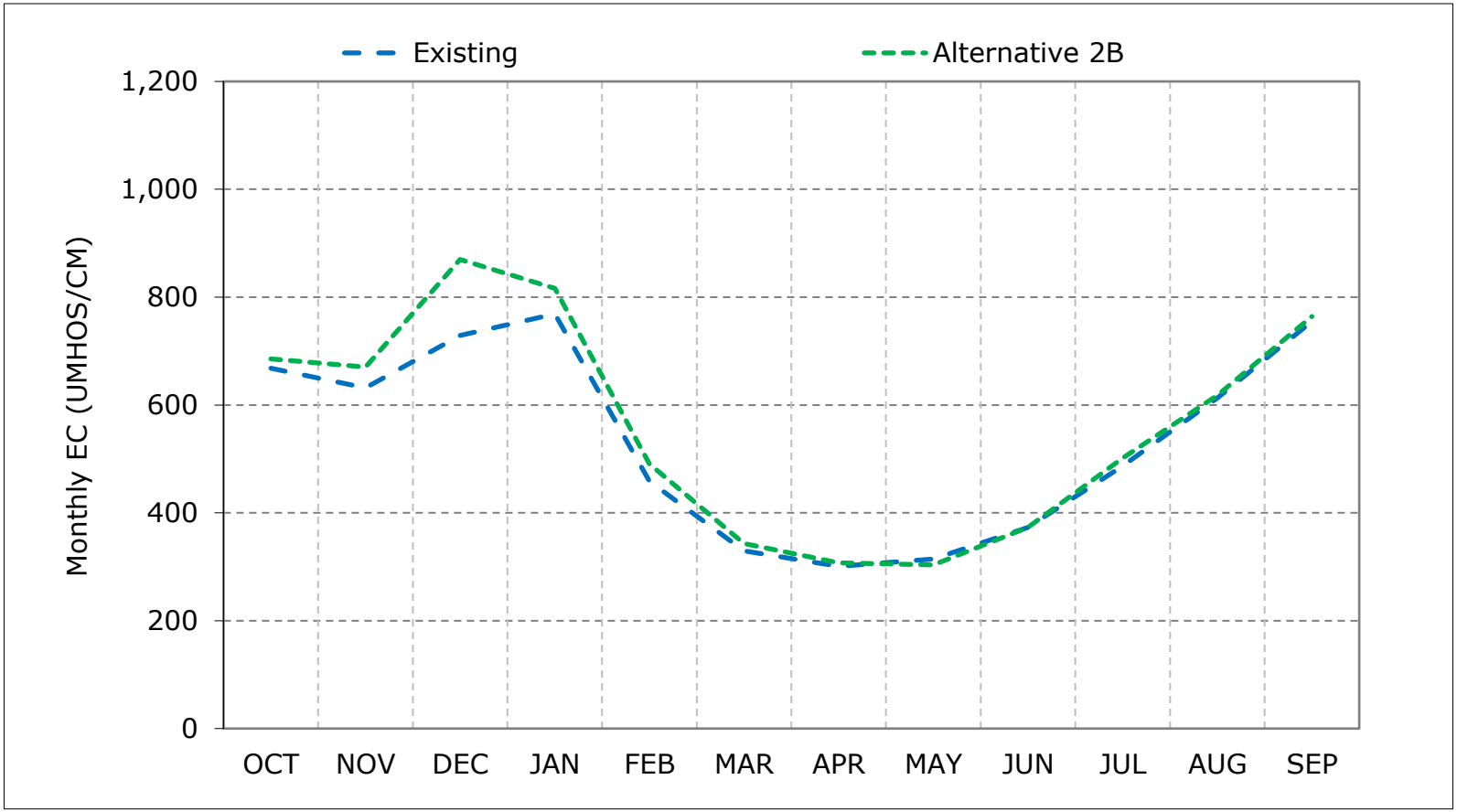

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 15-5. Old River at Rock Slough Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 15-6. Old River at Rock Slough Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 15-7. Old River at Rock Slough Salinity, January EC**

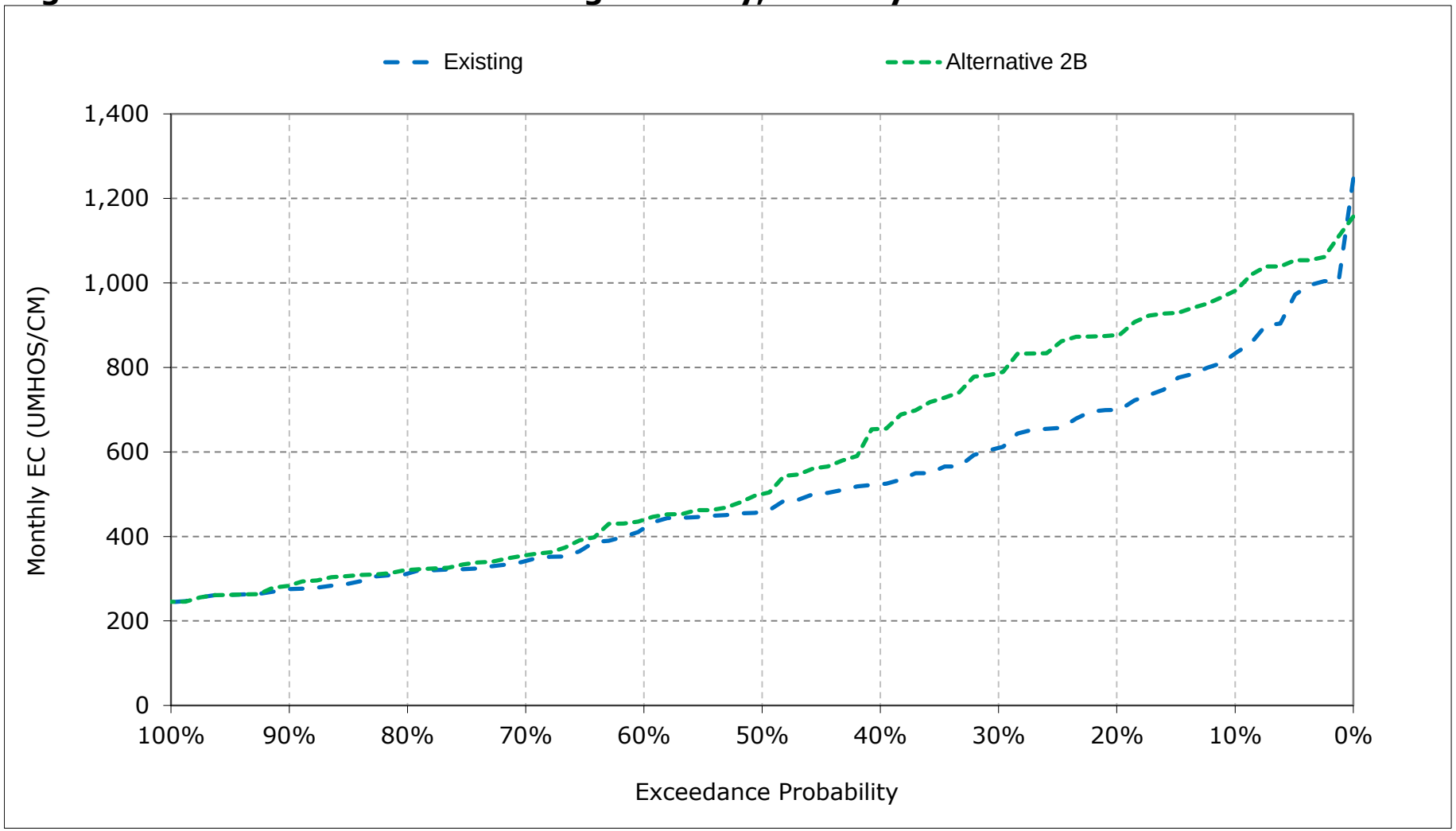


**Figure 15-8. Old River at Rock Slough Salinity, February EC**

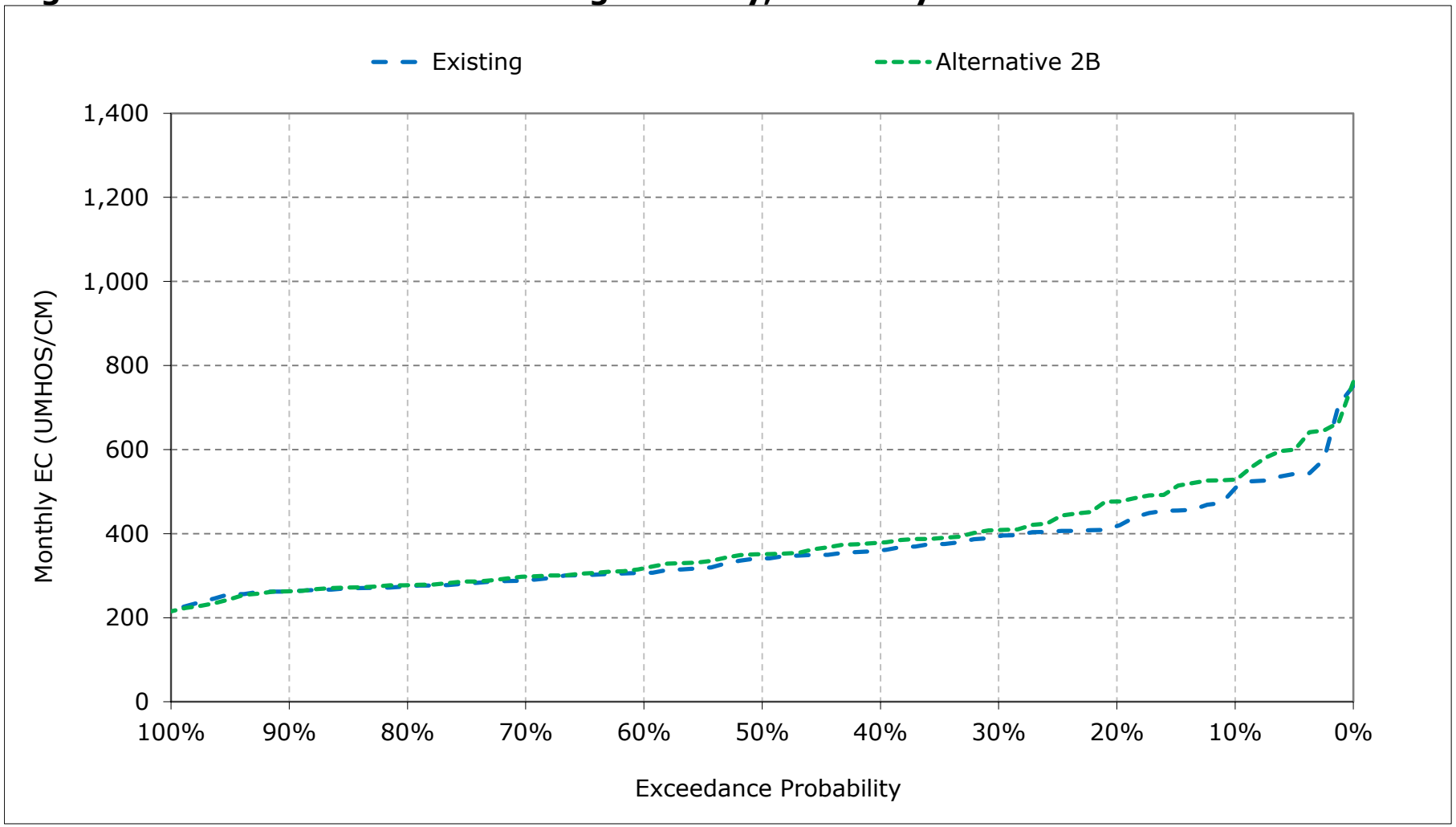


**Figure 15-9. Old River at Rock Slough Salinity, March EC**

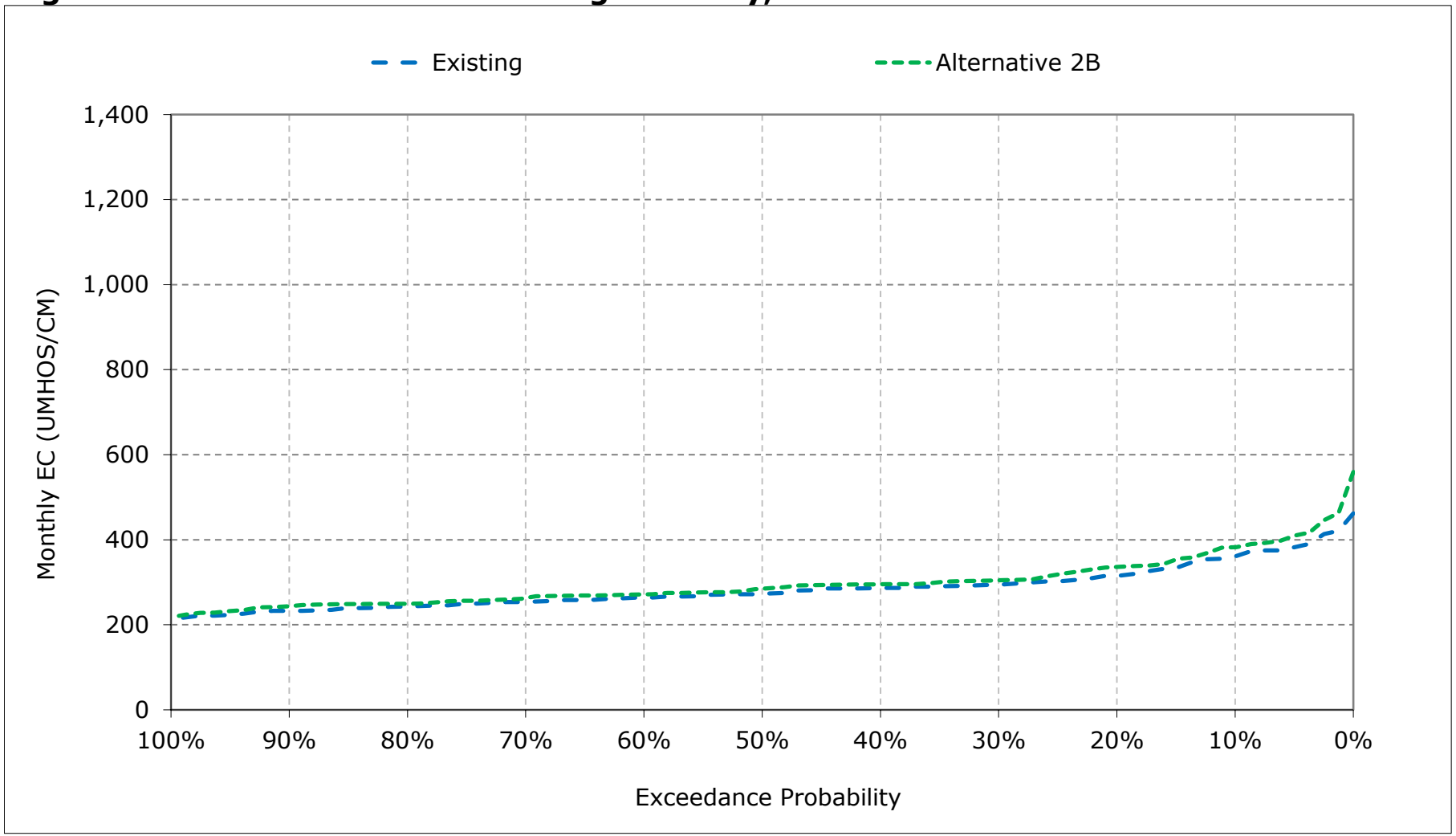


**Figure 15-10. Old River at Rock Slough Salinity, April EC**

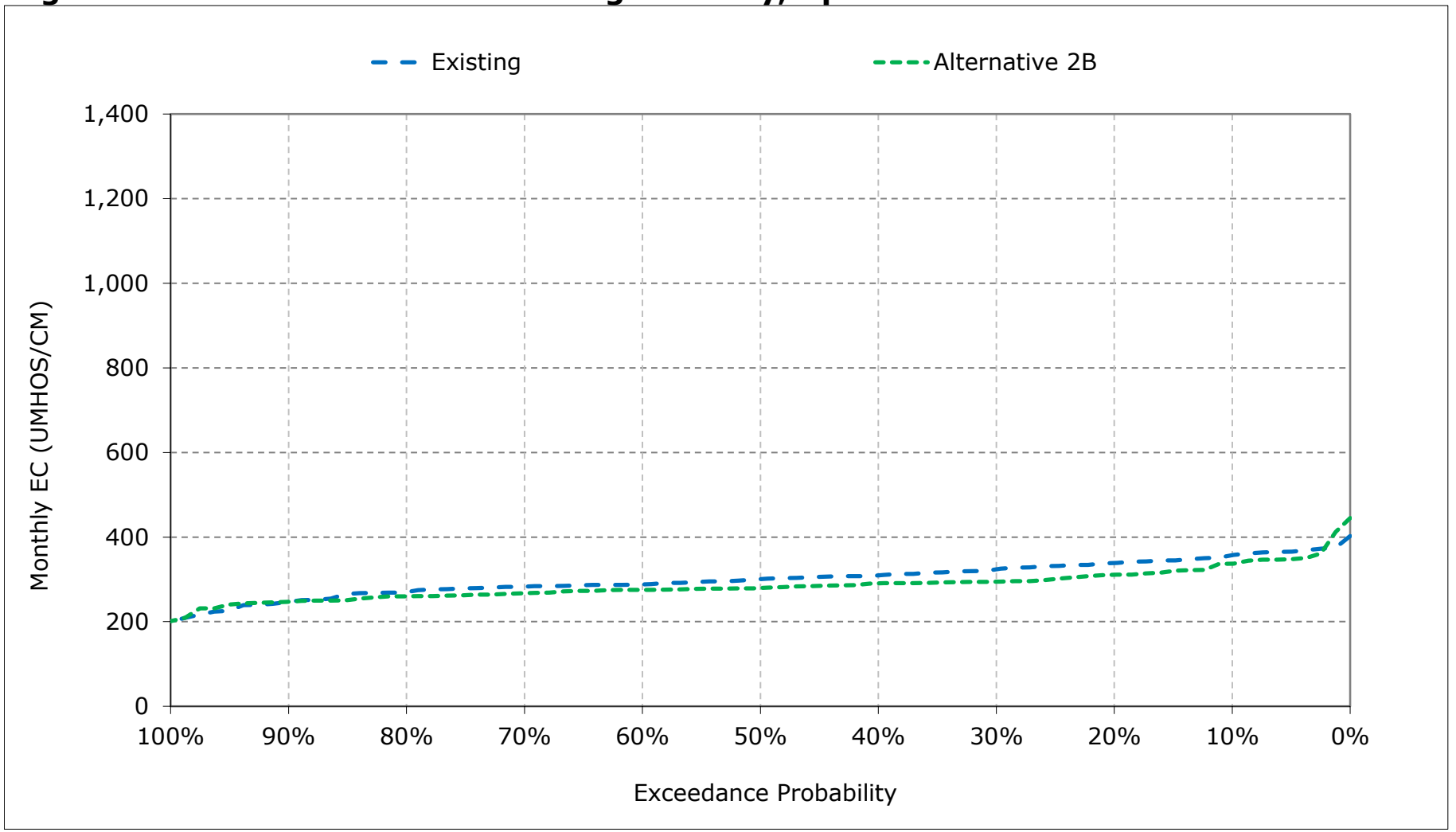


**Figure 15-11. Old River at Rock Slough Salinity, May EC**

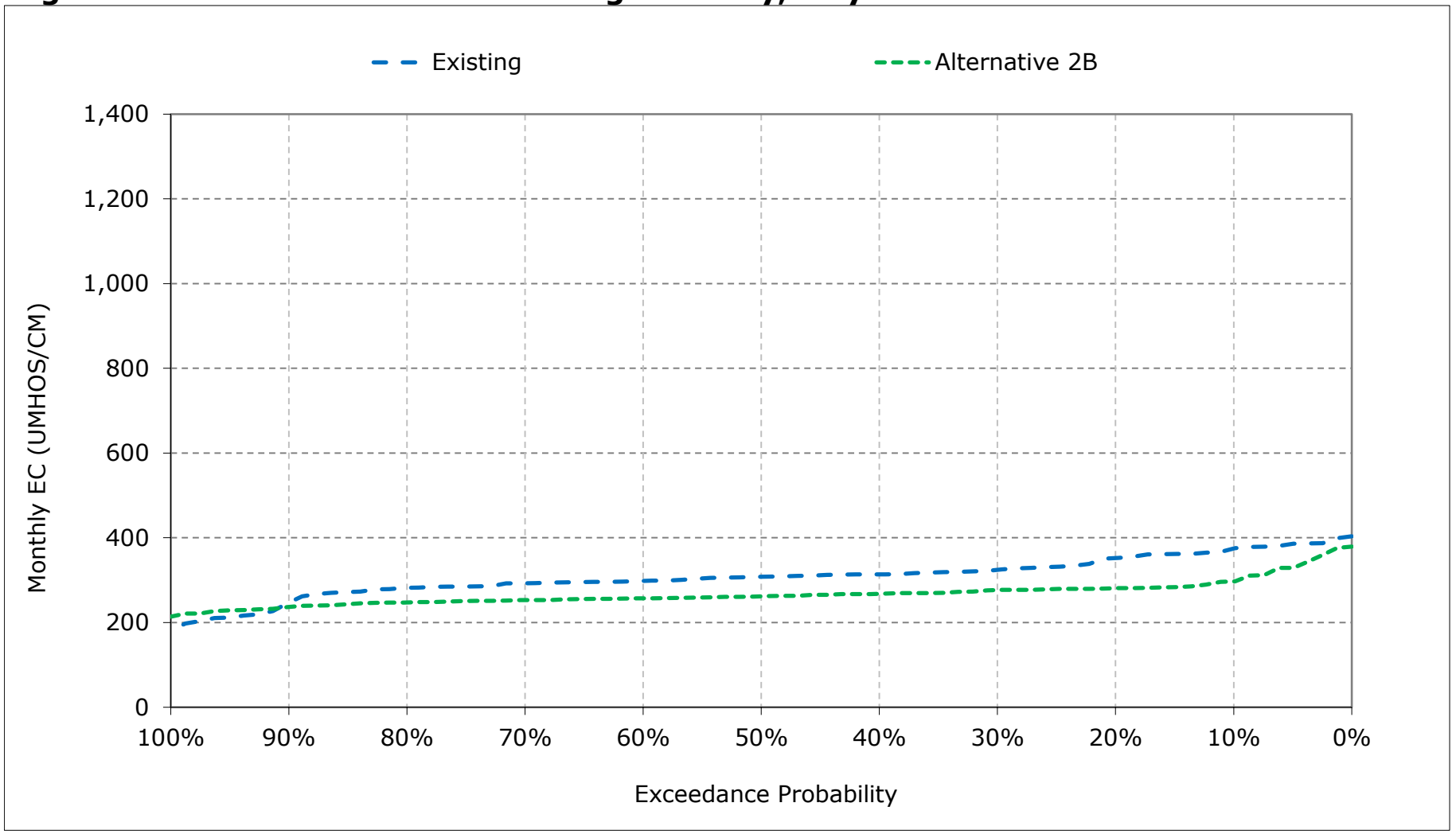


**Figure 15-12. Old River at Rock Slough Salinity, June EC**

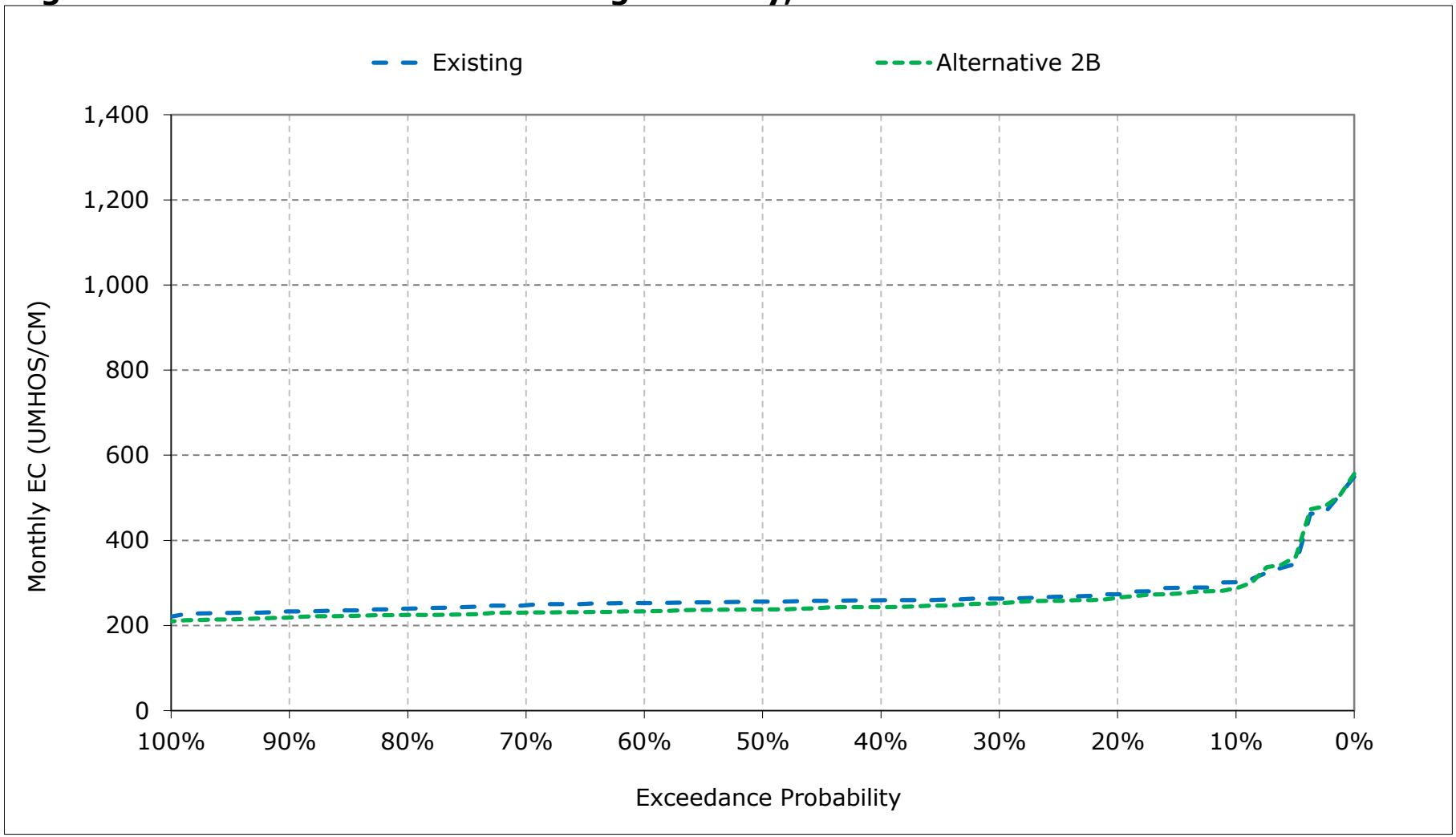


**Figure 15-13. Old River at Rock Slough Salinity, July EC**

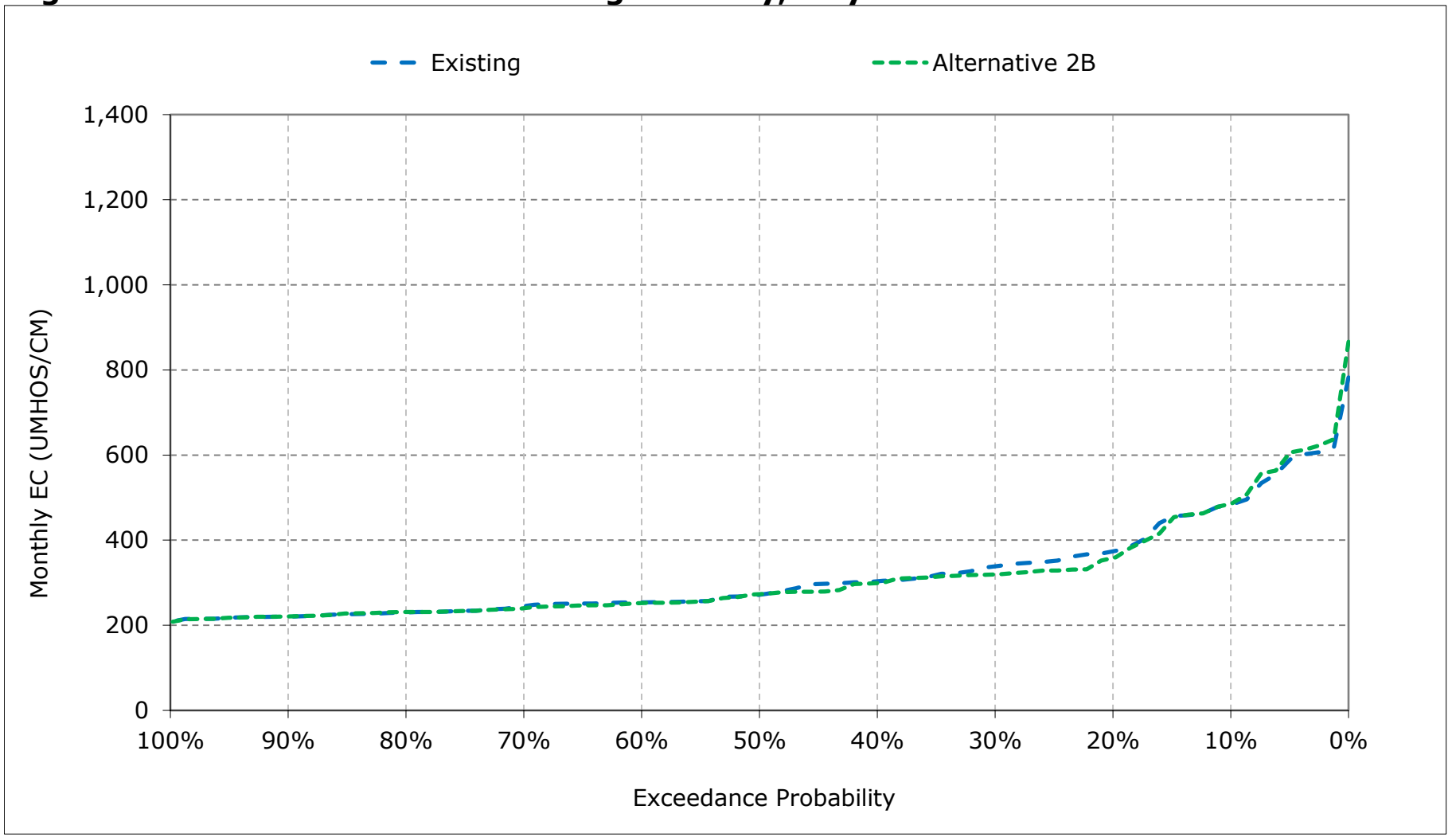


**Figure 15-14. Old River at Rock Slough Salinity, August EC**

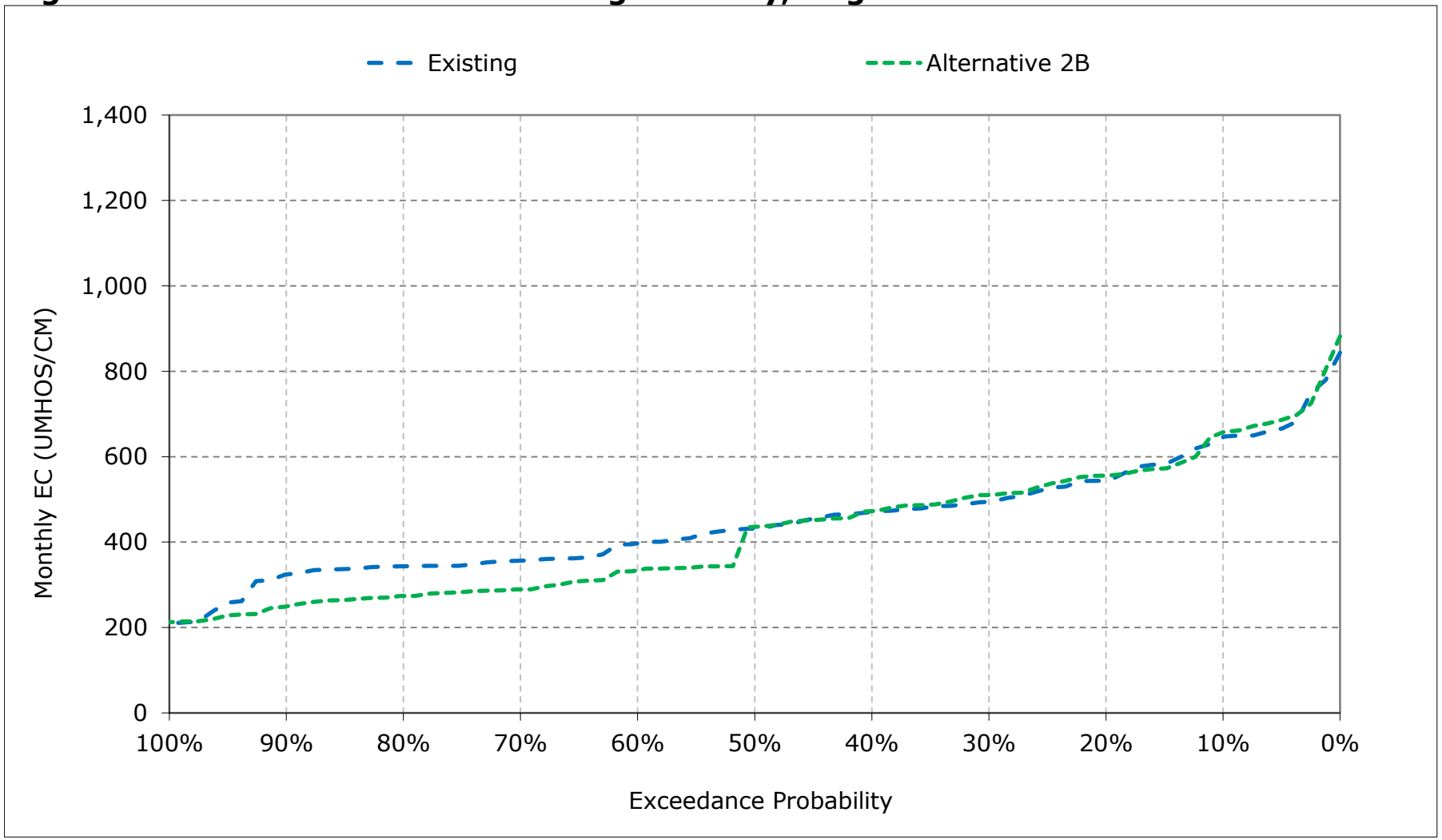


**Figure 15-15. Old River at Rock Slough Salinity, September EC**

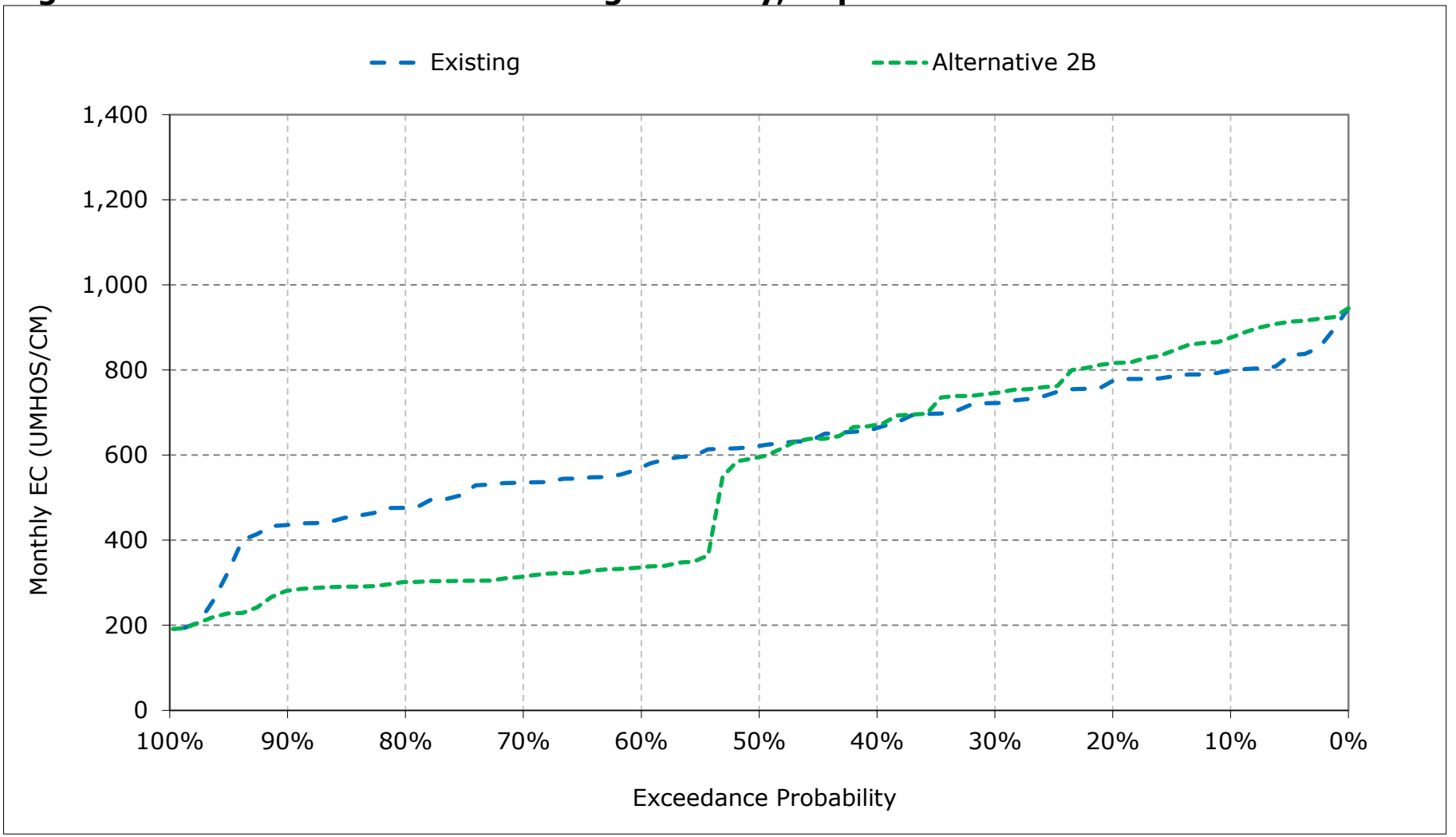


**Figure 15-16. Old River at Rock Slough Salinity, October EC**

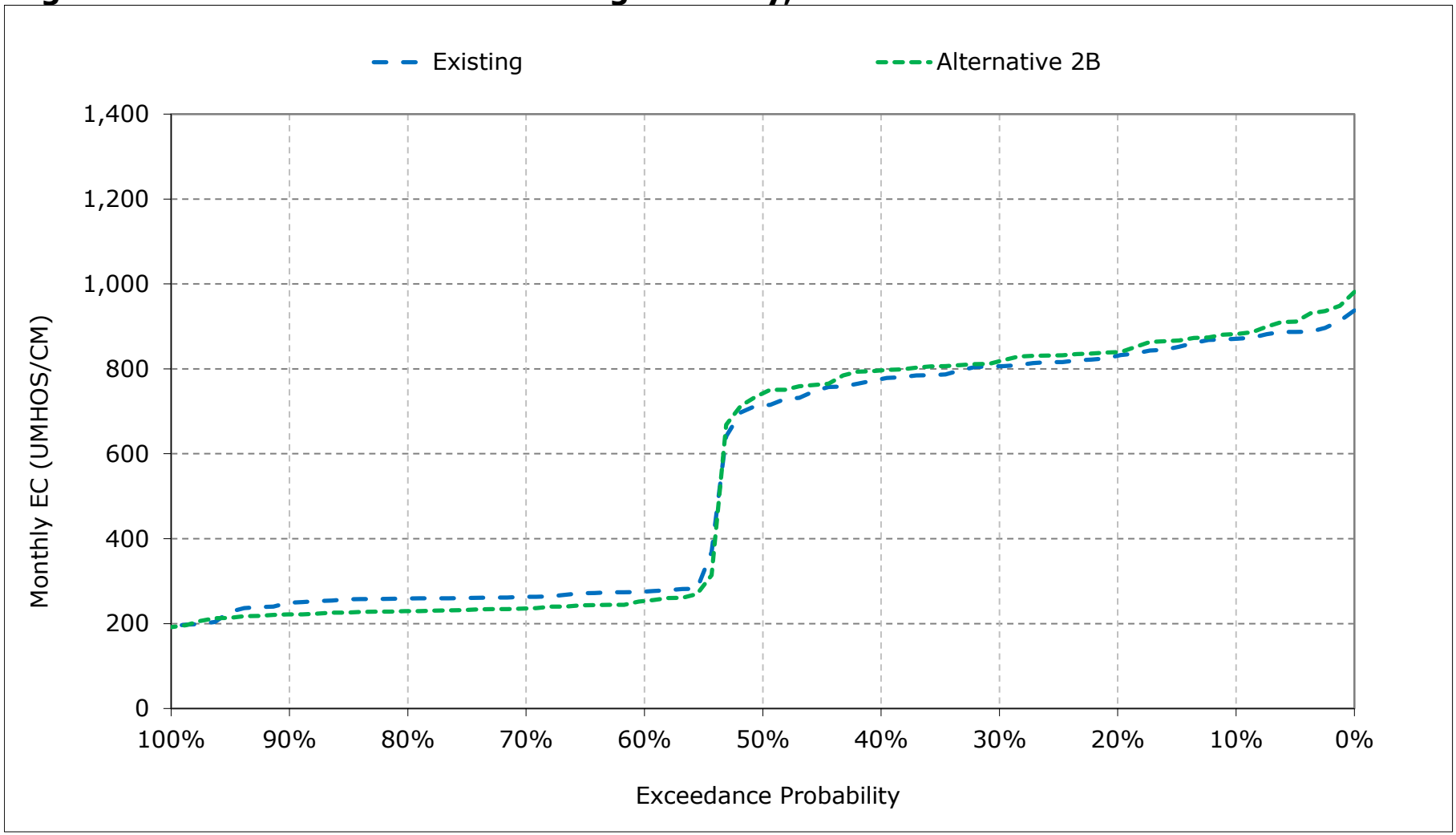


**Figure 15-17. Old River at Rock Slough Salinity, November EC**

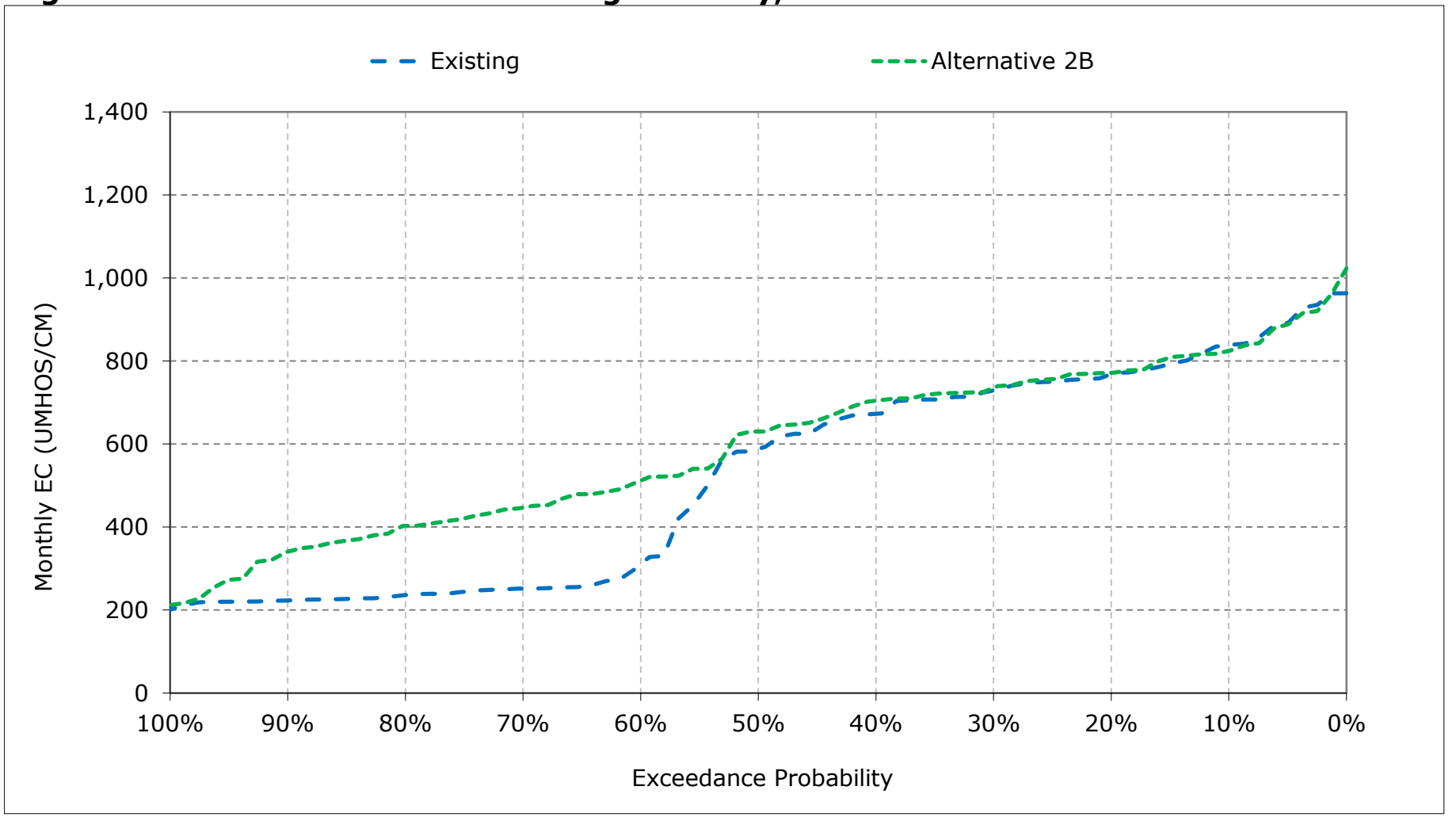
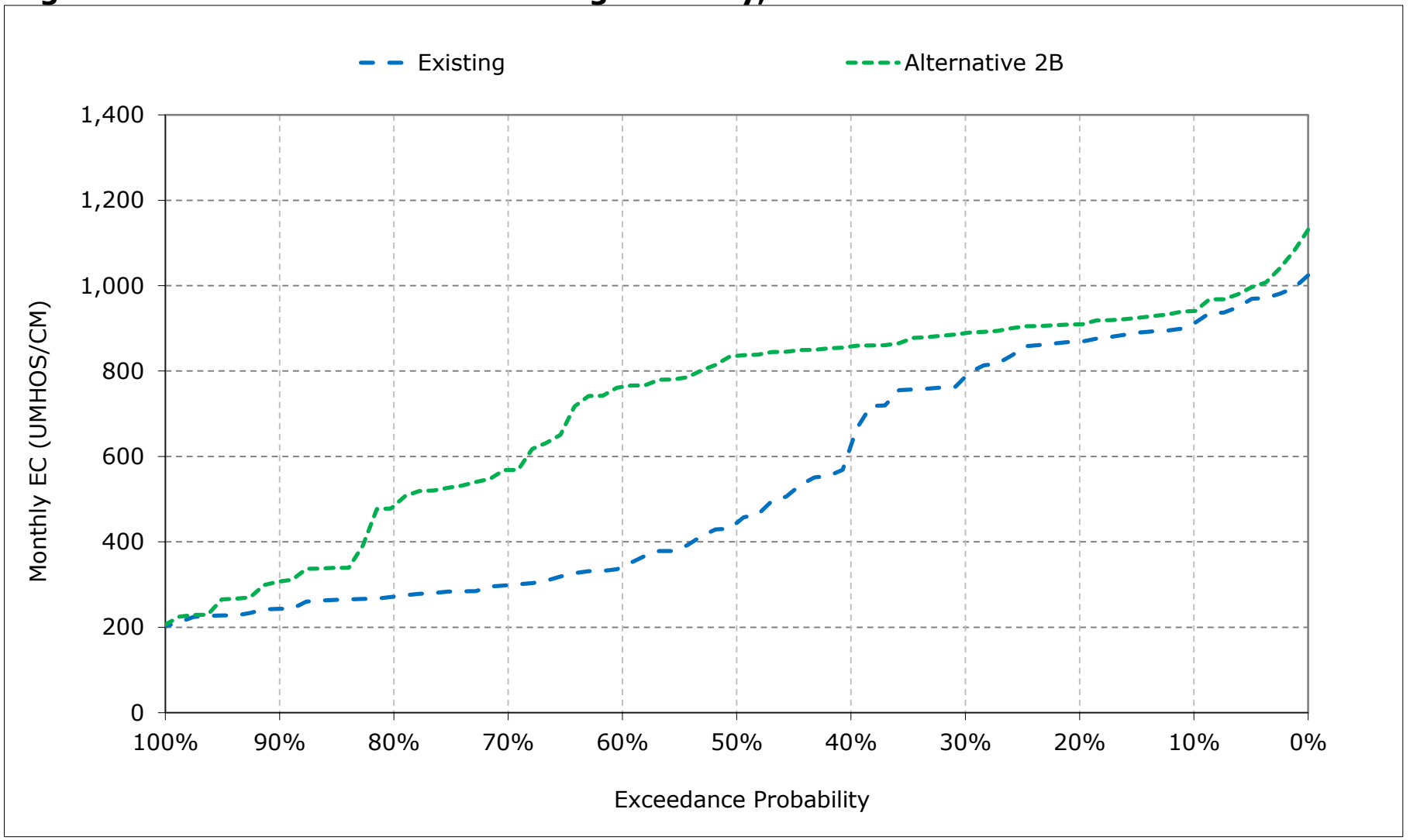


**Figure 15-18. Old River at Rock Slough Salinity, December EC**



## Table 16-1. Banks Pumping Plant South Delta Exports Salinity, Monthly EC

### Existing

| | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Statistic** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 667 | 668 | 727 | 769 | 621 | 518 | 467 | 469 | 430 | 401 | 532 | 593 |
| **20%** | 641 | 604 | 685 | 726 | 567 | 454 | 433 | 442 | 384 | 367 | 435 | 566 |
| **30%** | 625 | 592 | 660 | 604 | 520 | 432 | 407 | 427 | 370 | 322 | 393 | 545 |
| **40%** | 599 | 570 | 603 | 561 | 503 | 409 | 390 | 414 | 364 | 315 | 380 | 530 |
| **50%** | 572 | 549 | 441 | 516 | 461 | 392 | 377 | 397 | 354 | 310 | 351 | 496 |
| **60%** | 357 | 336 | 371 | 491 | 443 | 380 | 360 | 385 | 347 | 300 | 328 | 472 |
| **70%** | 336 | 311 | 329 | 455 | 418 | 361 | 346 | 360 | 341 | 282 | 311 | 456 |
| **80%** | 314 | 301 | 305 | 418 | 398 | 336 | 310 | 334 | 325 | 274 | 304 | 427 |
| **90%** | 296 | 294 | 294 | 384 | 346 | 311 | 267 | 230 | 294 | 266 | 293 | 401 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | 486 | 469 | 499 | 555 | 477 | 401 | 372 | 381 | 358 | 323 | 376 | 490 |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | 433 | 403 | 409 | 434 | 393 | 337 | 299 | 300 | 312 | 282 | 303 | 437 |
| **Above Normal (15%)** | 528 | 500 | 500 | 554 | 494 | 396 | 362 | 374 | 348 | 285 | 310 | 412 |
| **Below Normal (17%)** | 500 | 478 | 533 | 618 | 483 | 404 | 384 | 398 | 354 | 298 | 382 | 565 |
| **Dry (22%)** | 484 | 489 | 540 | 582 | 510 | 434 | 420 | 433 | 377 | 341 | 445 | 518 |
| **Critical (15%)** | 546 | 545 | 589 | 706 | 586 | 487 | 458 | 462 | 447 | 451 | 488 | 555 |

### Alternative 2B

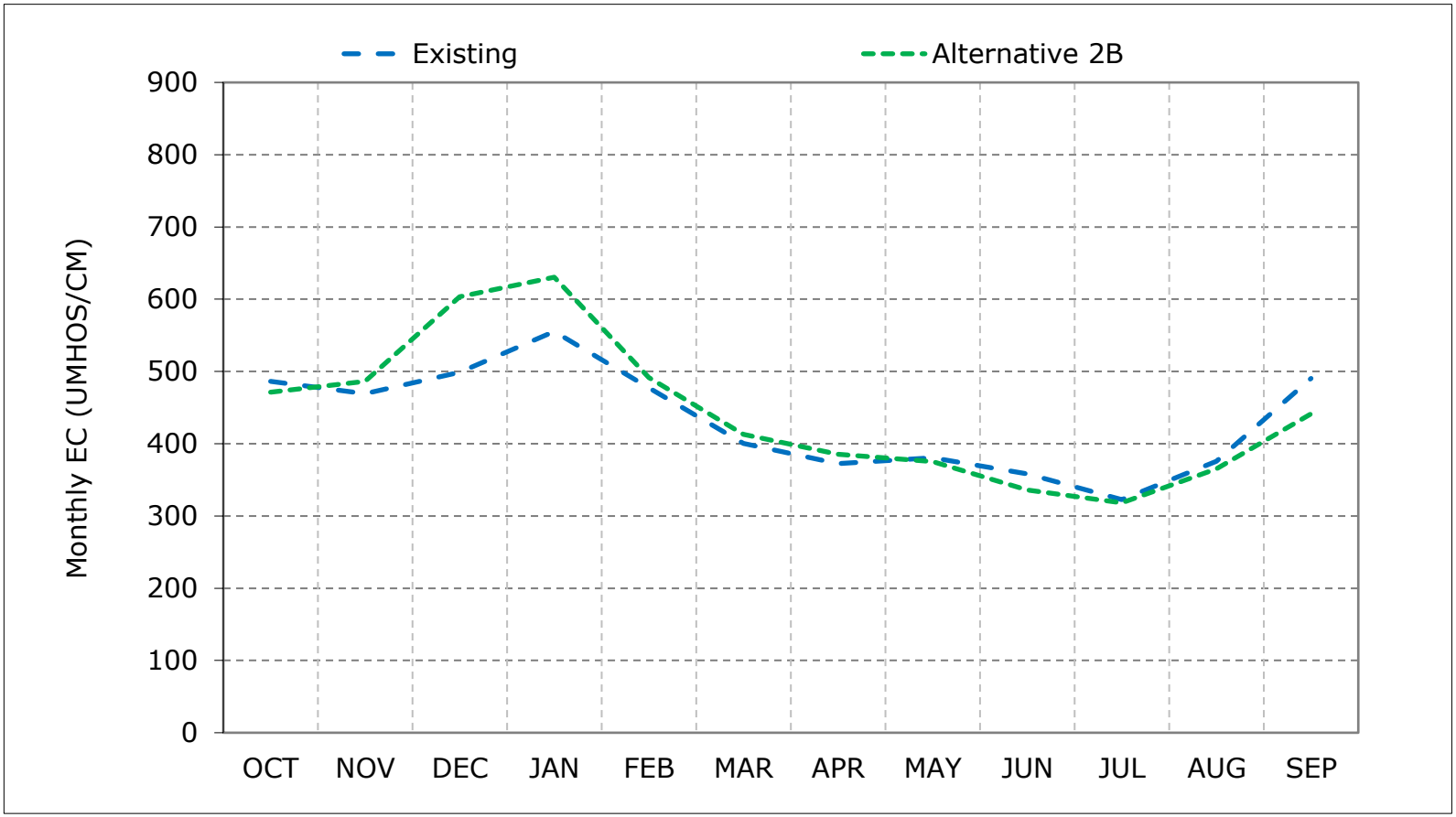
| | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Statistic** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 701 | 656 | 738 | 896 | 676 | 525 | 480 | 459 | 406 | 406 | 536 | 630 |
| **20%** | 662 | 617 | 707 | 849 | 617 | 487 | 451 | 435 | 355 | 358 | 433 | 588 |
| **30%** | 642 | 593 | 691 | 763 | 561 | 457 | 435 | 416 | 338 | 321 | 394 | 548 |
| **40%** | 605 | 580 | 670 | 720 | 517 | 427 | 411 | 405 | 332 | 310 | 369 | 498 |
| **50%** | 581 | 550 | 646 | 601 | 492 | 404 | 397 | 394 | 326 | 301 | 353 | 462 |
| **60%** | 278 | 388 | 620 | 535 | 442 | 390 | 372 | 369 | 319 | 292 | 301 | 328 |
| **70%** | 274 | 368 | 583 | 488 | 419 | 367 | 344 | 349 | 313 | 279 | 286 | 317 |
| **80%** | 269 | 338 | 494 | 432 | 389 | 335 | 317 | 322 | 306 | 267 | 281 | 304 |
| **90%** | 263 | 309 | 345 | 399 | 337 | 321 | 271 | 256 | 288 | 260 | 276 | 294 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | 471 | 486 | 604 | 630 | 492 | 413 | 385 | 375 | 336 | 318 | 365 | 441 |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | 412 | 428 | 510 | 470 | 389 | 342 | 302 | 295 | 299 | 281 | 281 | 294 |
| **Above Normal (15%)** | 513 | 522 | 620 | 653 | 511 | 415 | 376 | 361 | 321 | 279 | 287 | 317 |
| **Below Normal (17%)** | 480 | 498 | 630 | 702 | 495 | 414 | 403 | 391 | 324 | 286 | 386 | 611 |
| **Dry (22%)** | 465 | 495 | 658 | 702 | 546 | 458 | 446 | 431 | 345 | 336 | 439 | 525 |
| **Critical (15%)** | 557 | 550 | 679 | 763 | 609 | 494 | 465 | 461 | 431 | 449 | 490 | 560 |

### Alternative 2B minus Existing

| | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Statistic** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | **34** | -13 | **11** | **127** | **55** | **6** | **13** | -10 | -24 | **5** | **3** | **38** |
| **20%** | **20** | **12** | **22** | **123** | **50** | **32** | **18** | -8 | -29 | -8 | -2 | **21** |
| **30%** | **17** | **1** | **31** | **160** | **41** | **25** | **28** | -11 | -32 | -1 | **1** | **3** |
| **40%** | **6** | **10** | **67** | **159** | **14** | **18** | **21** | -10 | -32 | -5 | -10 | -31 |
| **50%** | **9** | **1** | **205** | **85** | **31** | **12** | **20** | -3 | -28 | -9 | **3** | -34 |
| **60%** | -79 | **52** | **249** | **44** | -1 | **9** | **13** | -16 | -28 | -8 | -27 | -144 |
| **70%** | -62 | **57** | **255** | **33** | **0** | **6** | -2 | -11 | -28 | -2 | -25 | -139 |
| **80%** | -45 | **37** | **189** | **13** | -10 | -2 | **7** | -13 | -19 | -6 | -23 | -123 |
| **90%** | -33 | **15** | **51** | **14** | -9 | **11** | **4** | **26** | -5 | -6 | -17 | -107 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | -15 | **17** | **105** | **75** | **14** | **12** | **13** | -5 | -22 | -4 | -11 | -49 |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | -21 | **25** | **101** | **36** | -4 | **5** | **3** | -5 | -12 | -1 | -22 | -143 |
| **Above Normal (15%)** | -16 | **22** | **119** | **99** | **17** | **19** | **14** | -13 | -27 | -6 | -22 | -96 |
| **Below Normal (17%)** | -19 | **20** | **97** | **84** | **12** | **11** | **19** | -7 | -30 | -12 | **5** | **46** |
| **Dry (22%)** | -19 | **7** | **118** | **121** | **36** | **24** | **27** | -2 | -32 | -5 | -6 | **7** |
| **Critical (15%)** | **11** | **5** | **89** | **57** | **23** | **6** | **7** | -1 | -16 | -2 | **2** | **5** |

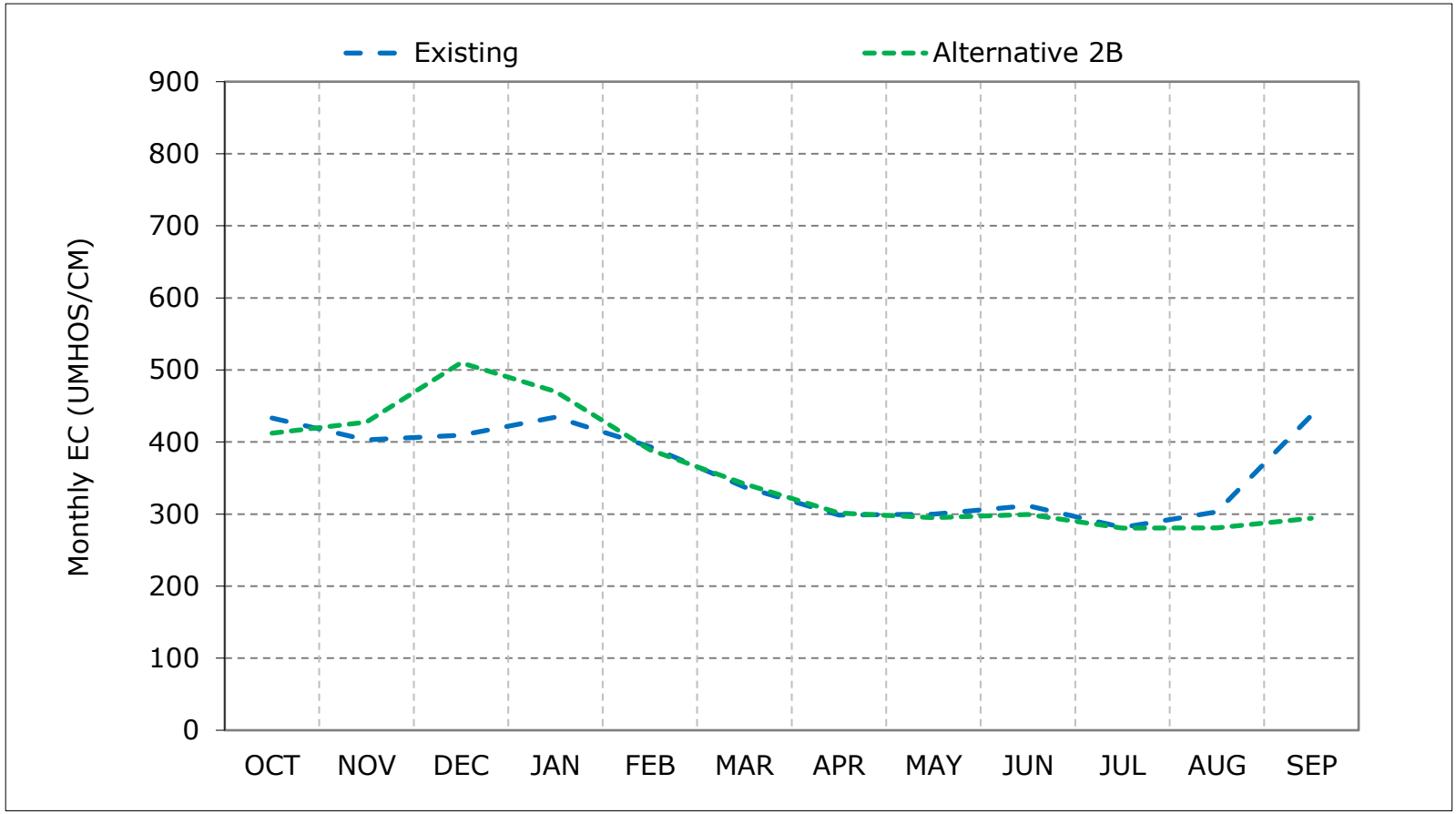
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 16-1. Banks Pumping Plant South Delta Exports Salinity, Long-Term Average**



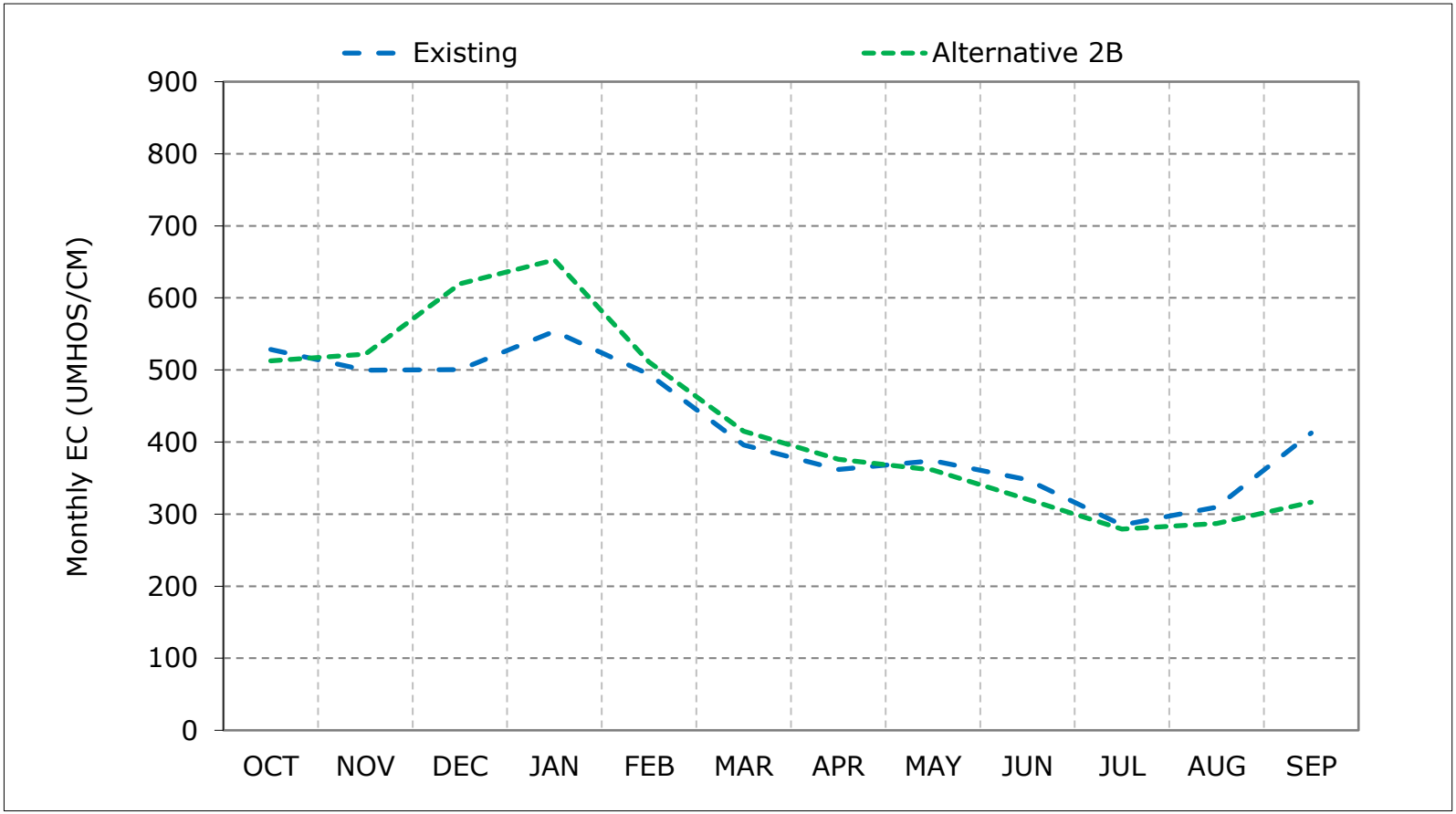

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 16-2. Banks Pumping Plant South Delta Exports Salinity, Wet Year Average**



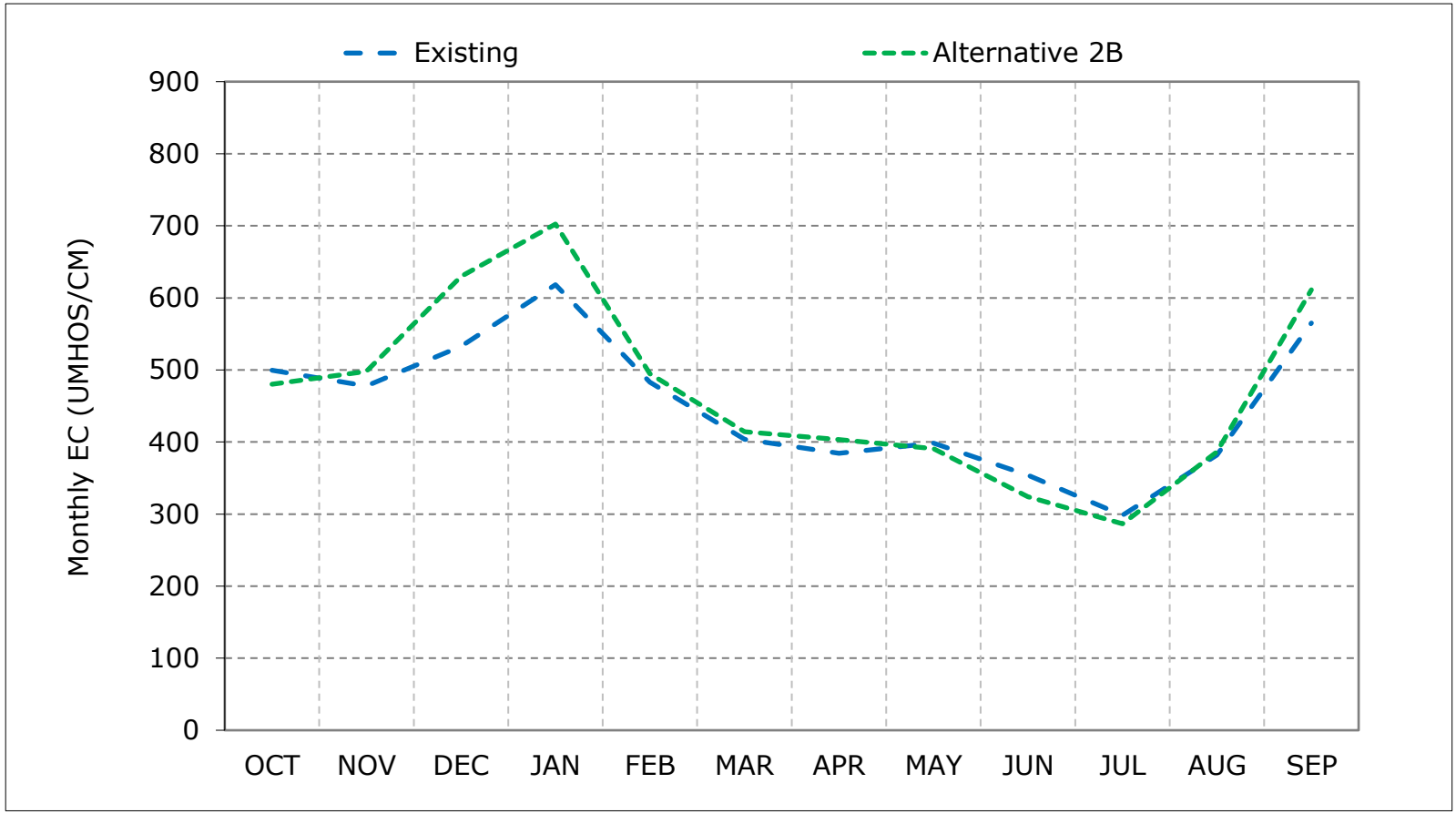

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 16-3. Banks Pumping Plant South Delta Exports Salinity, Above Normal Year Ave**



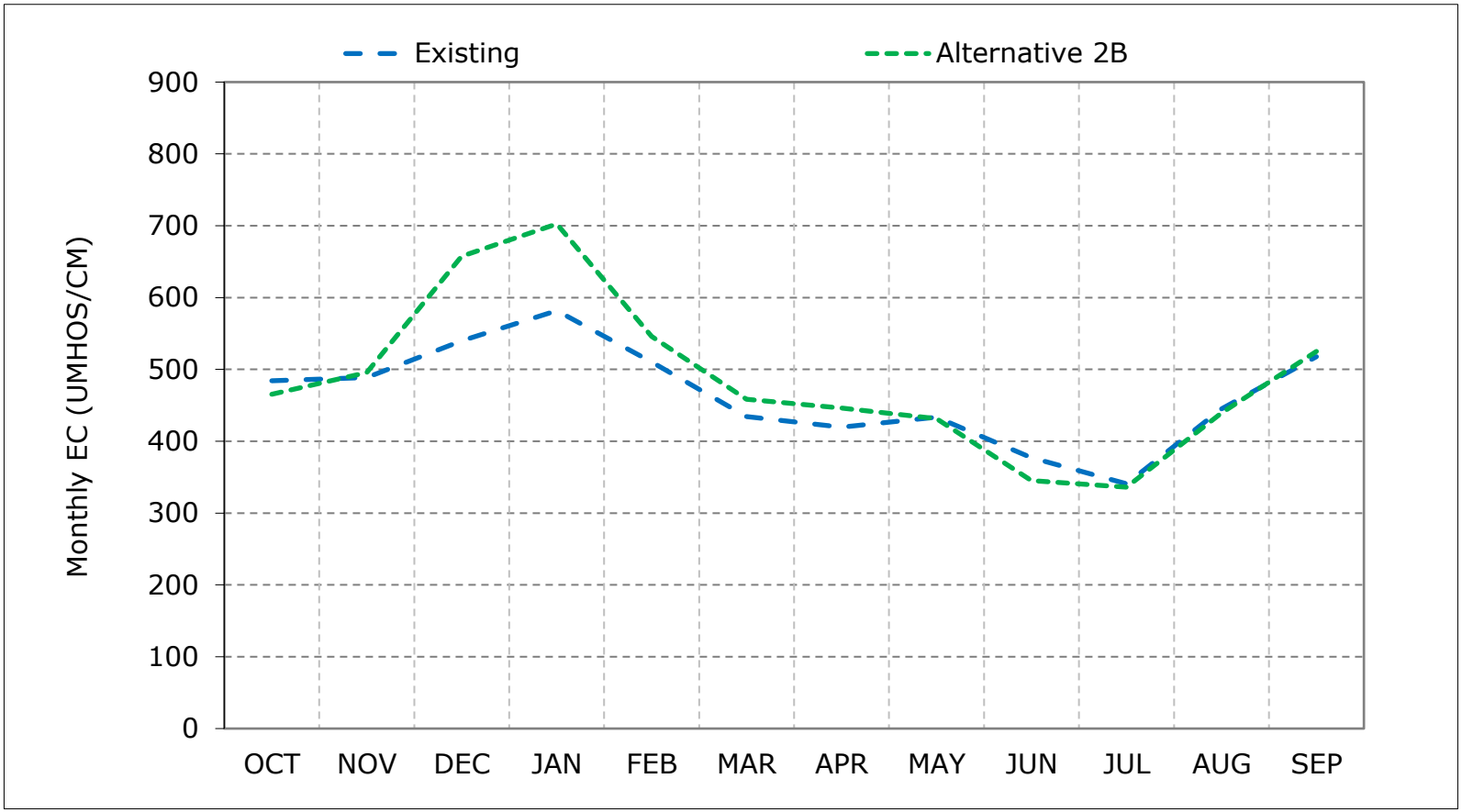

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 16-4. Banks Pumping Plant South Delta Exports Salinity, Below Normal Year Ave**



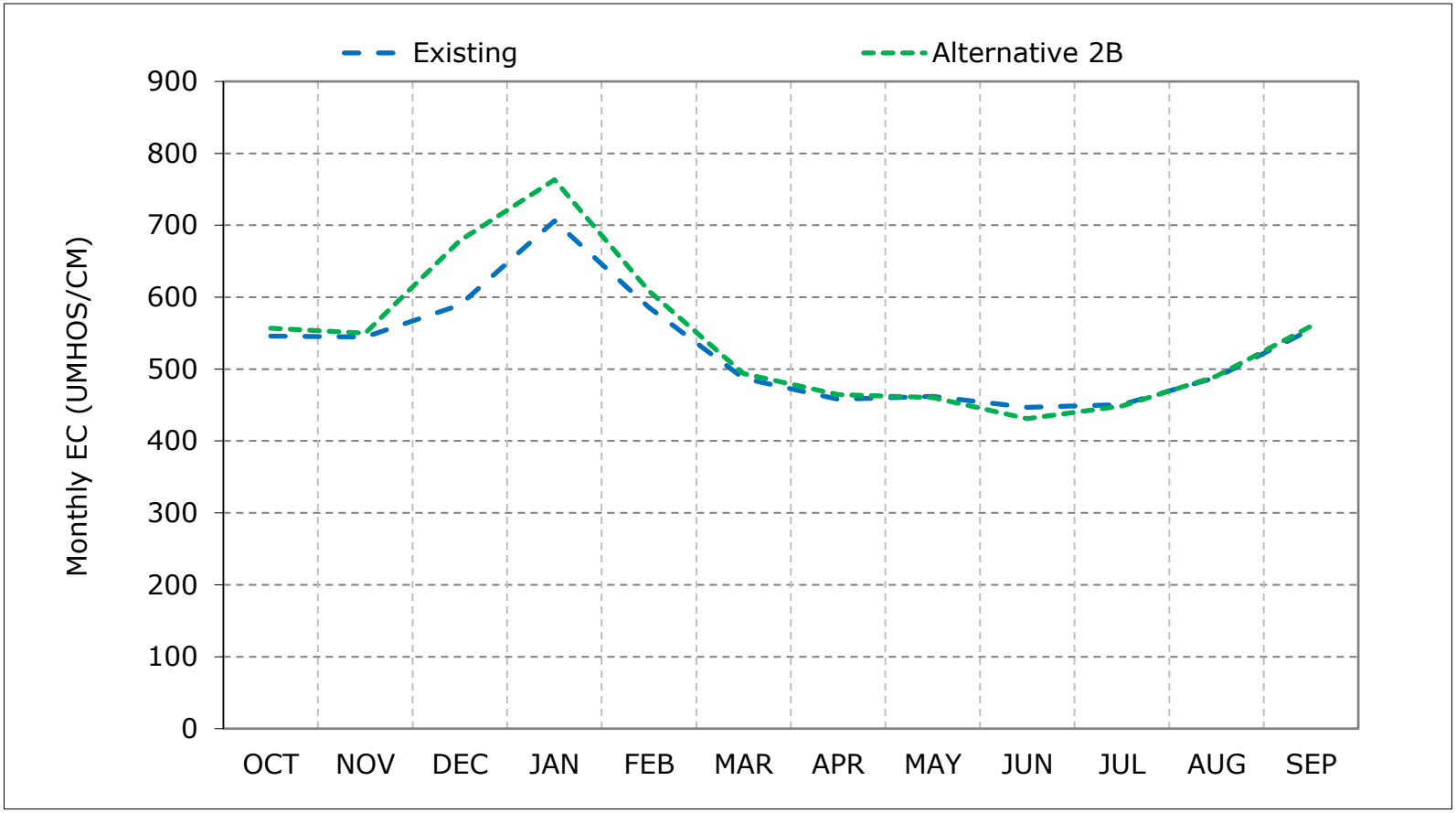

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 16-5. Banks Pumping Plant South Delta Exports Salinity, Dry Year Average**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 16-6. Banks Pumping Plant South Delta Exports Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 16-7. Banks Pumping Plant South Delta Exports Salinity, January EC**

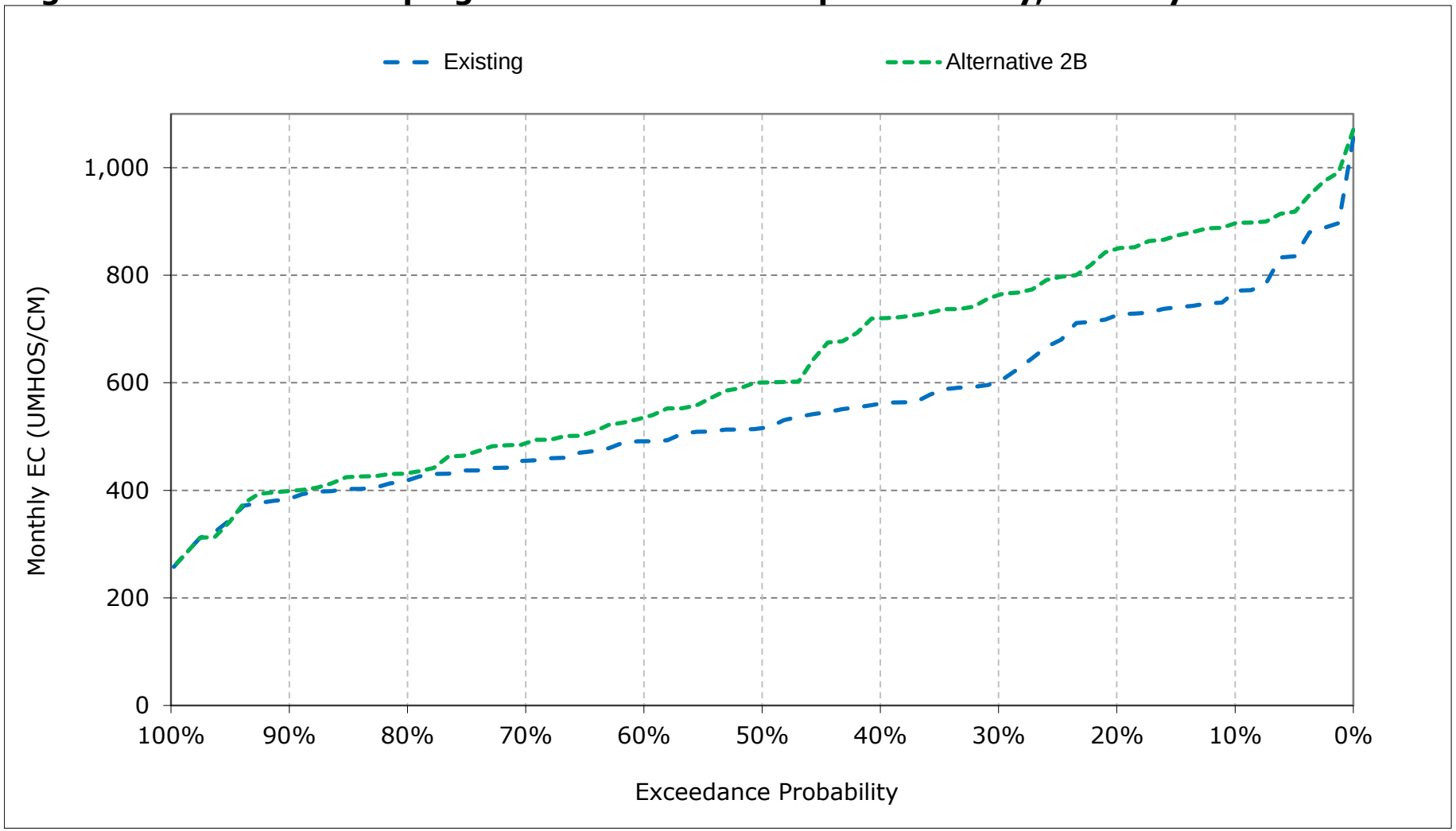


**Figure 16-8. Banks Pumping Plant South Delta Exports Salinity, February EC**

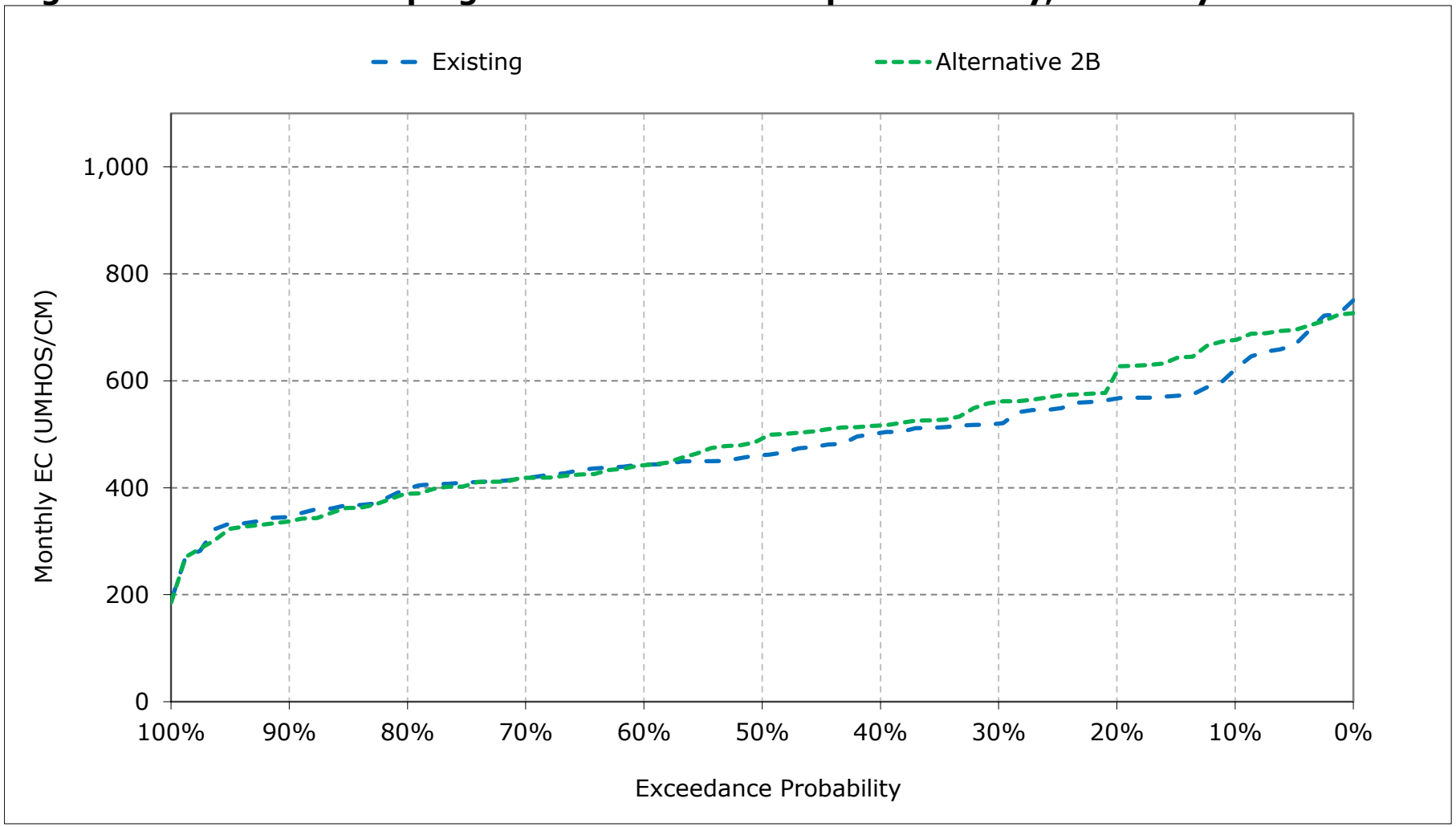


**Figure 16-9. Banks Pumping Plant South Delta Exports Salinity, March EC**

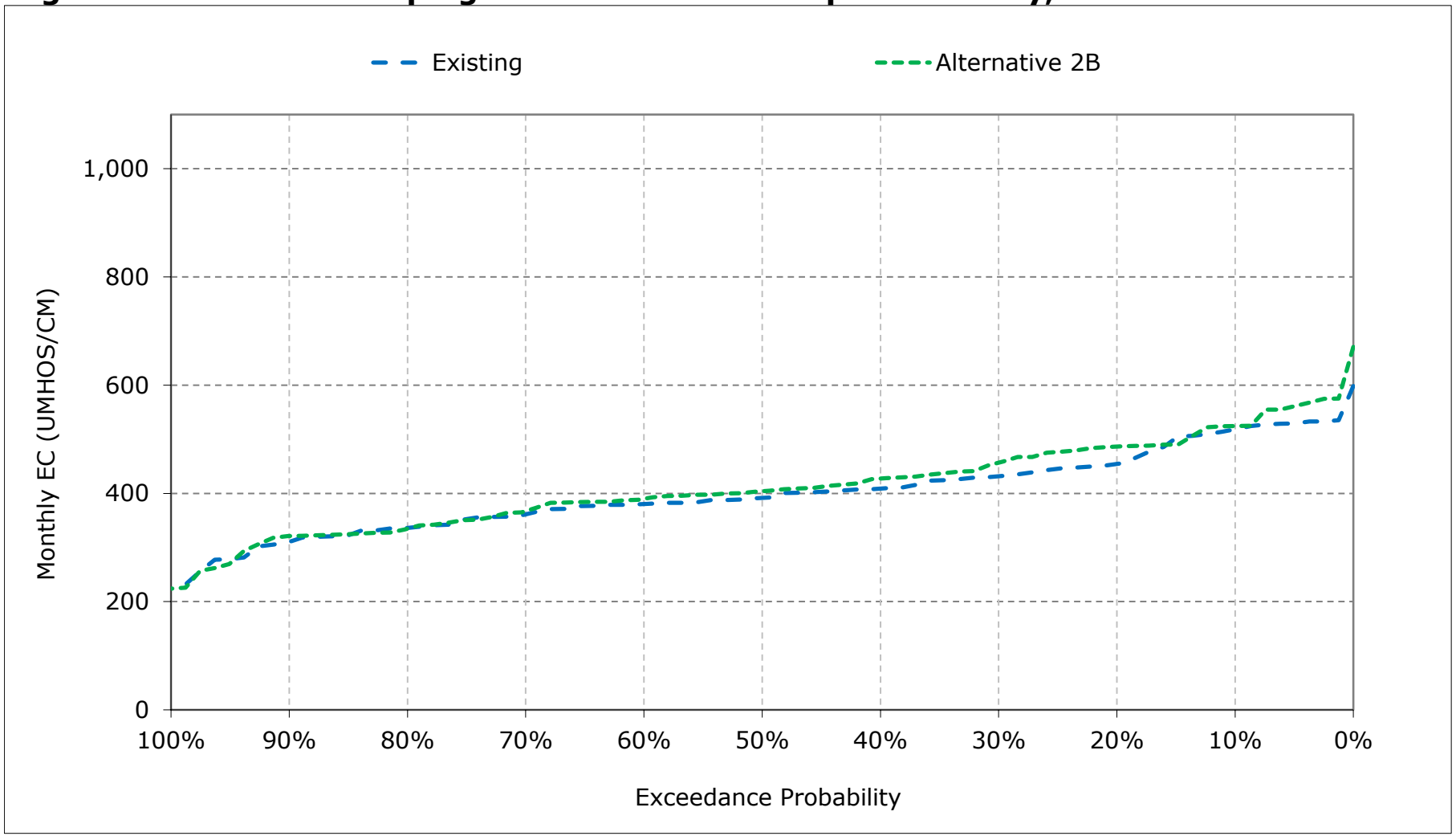


**Figure 16-10. Banks Pumping Plant South Delta Exports Salinity, April EC**

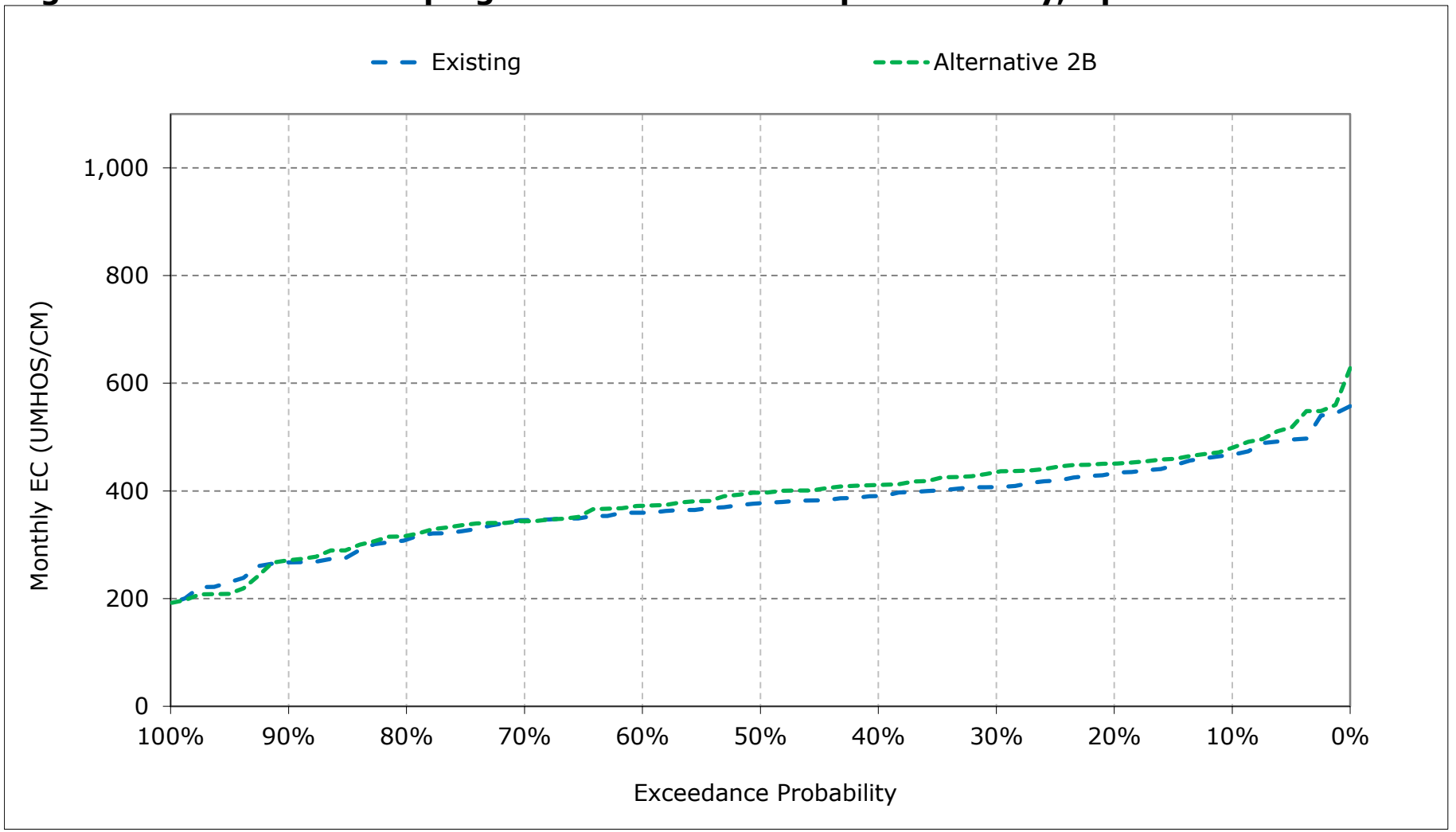


**Figure 16-11. Banks Pumping Plant South Delta Exports Salinity, May EC**

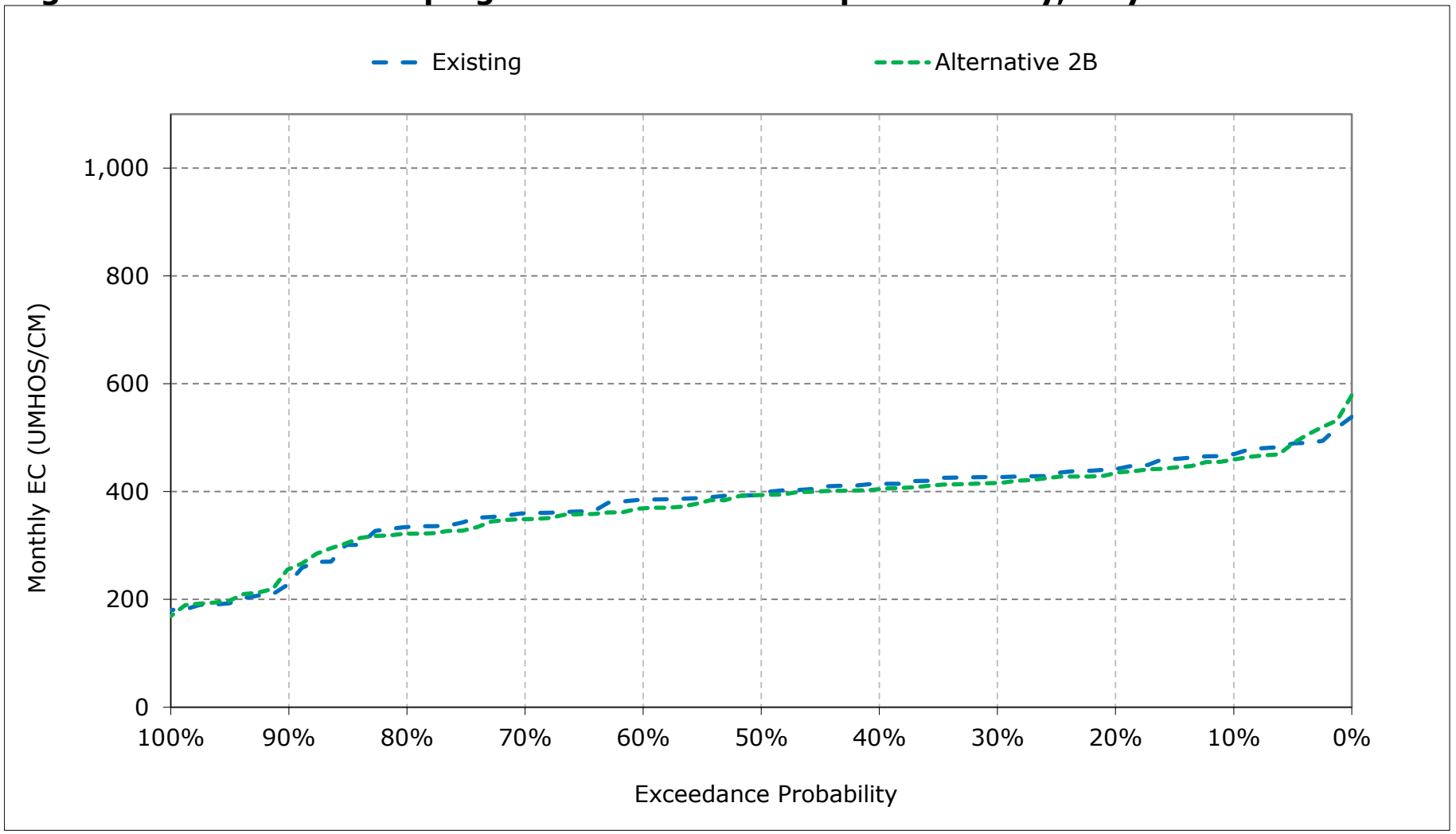


**Figure 16-12. Banks Pumping Plant South Delta Exports Salinity, June EC**

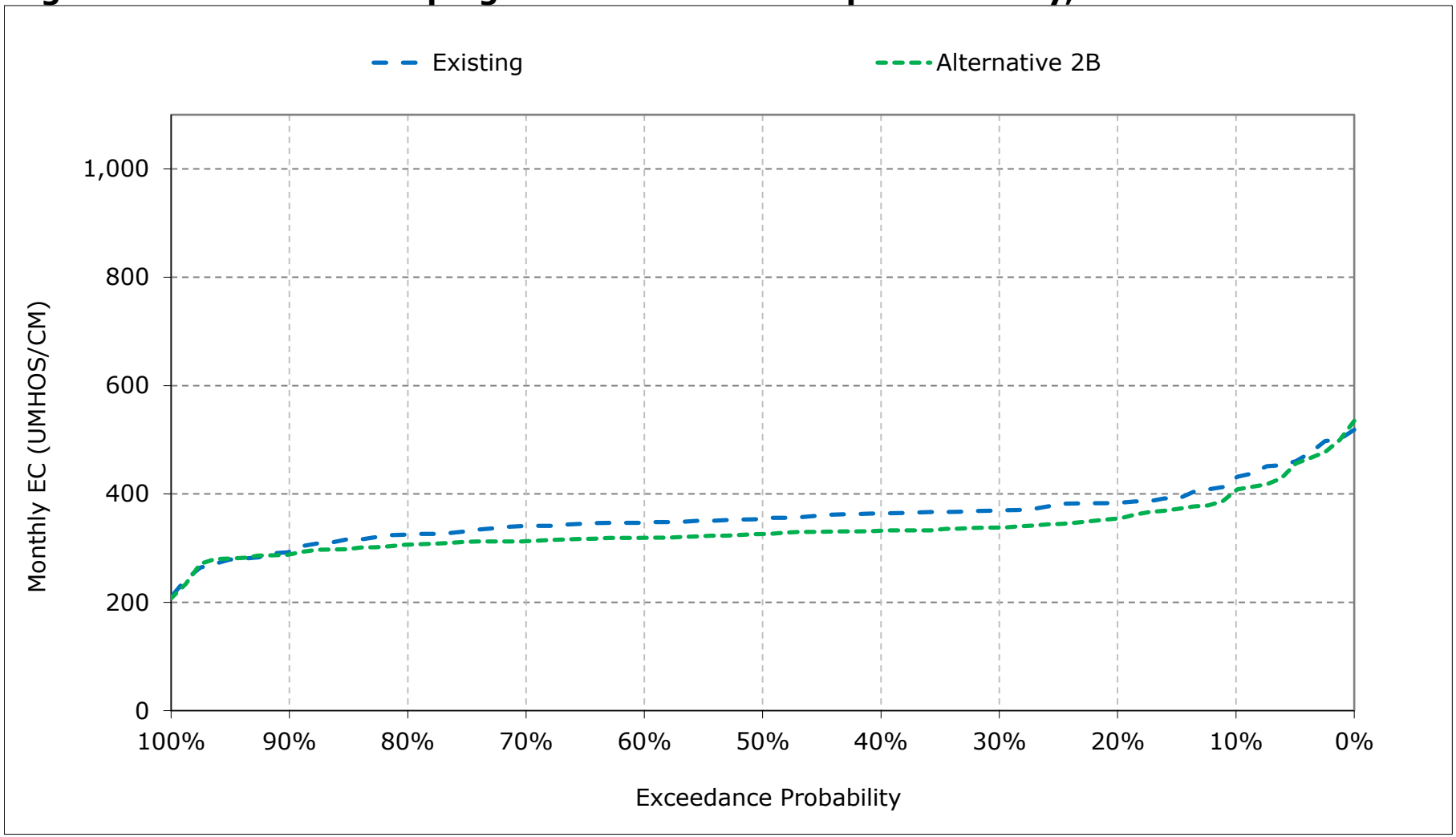


**Figure 16-13. Banks Pumping Plant South Delta Exports Salinity, July EC**

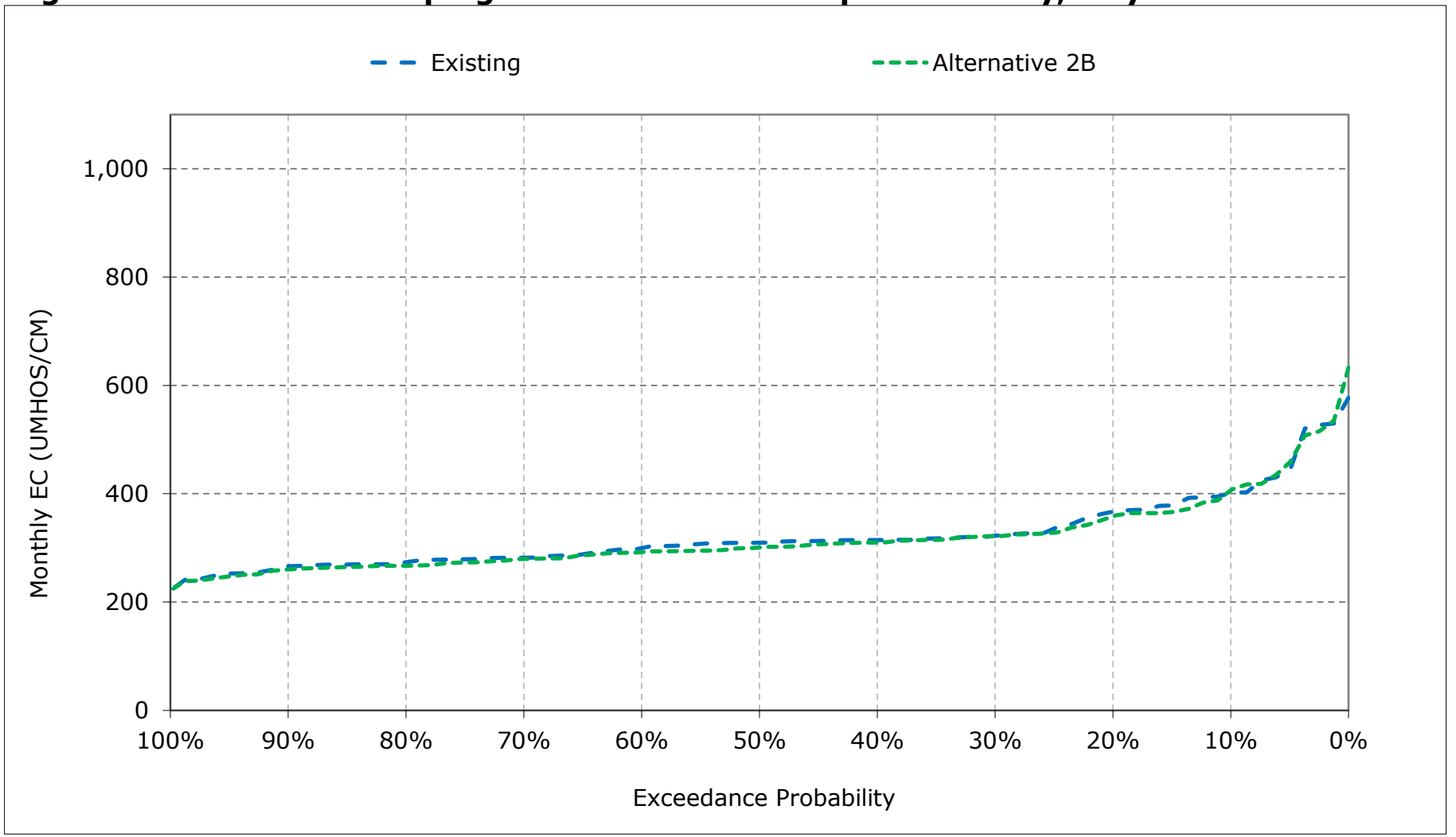


**Figure 16-14. Banks Pumping Plant South Delta Exports Salinity, August EC**

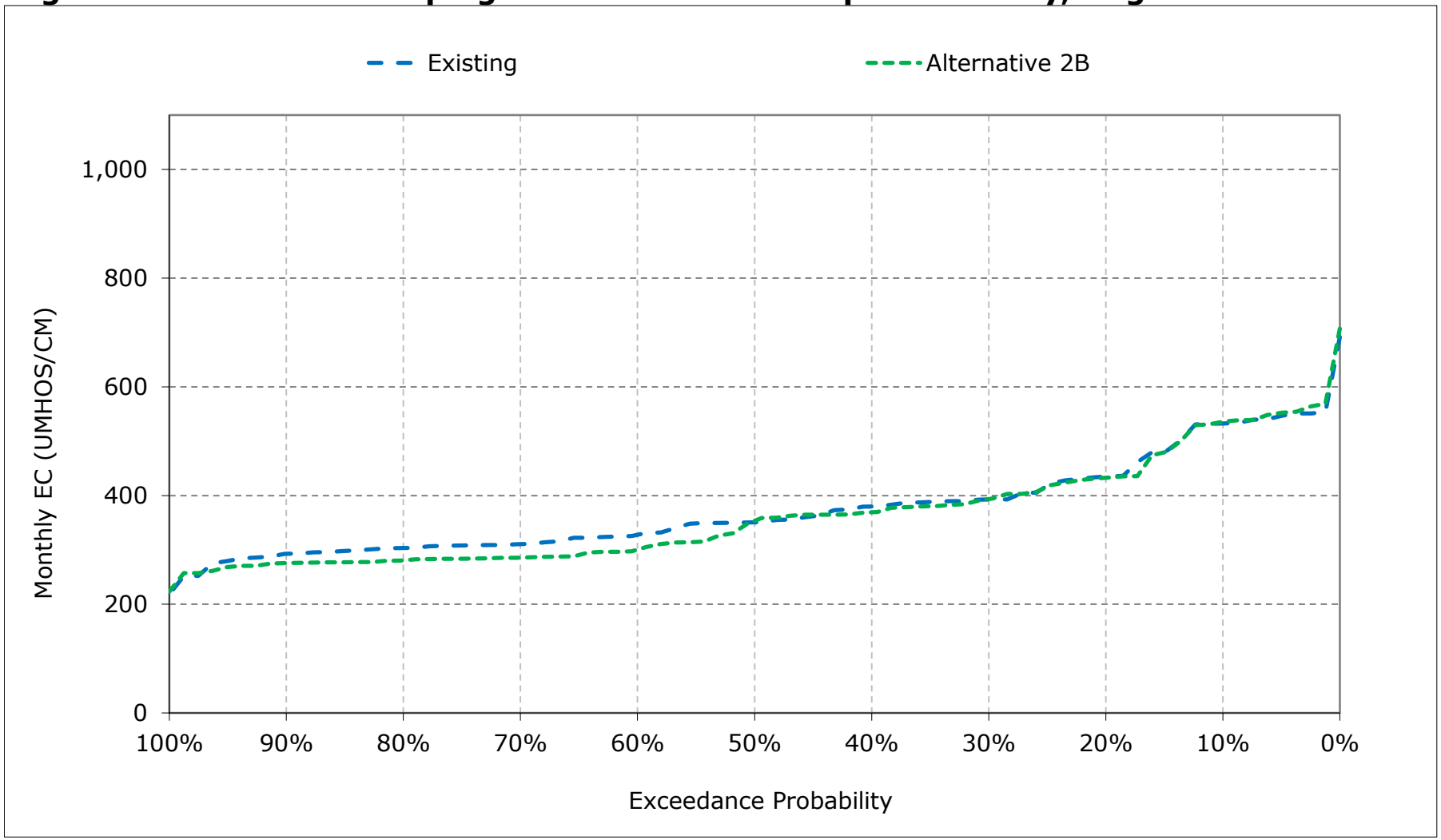


**Figure 16-15. Banks Pumping Plant South Delta Exports Salinity, September EC**

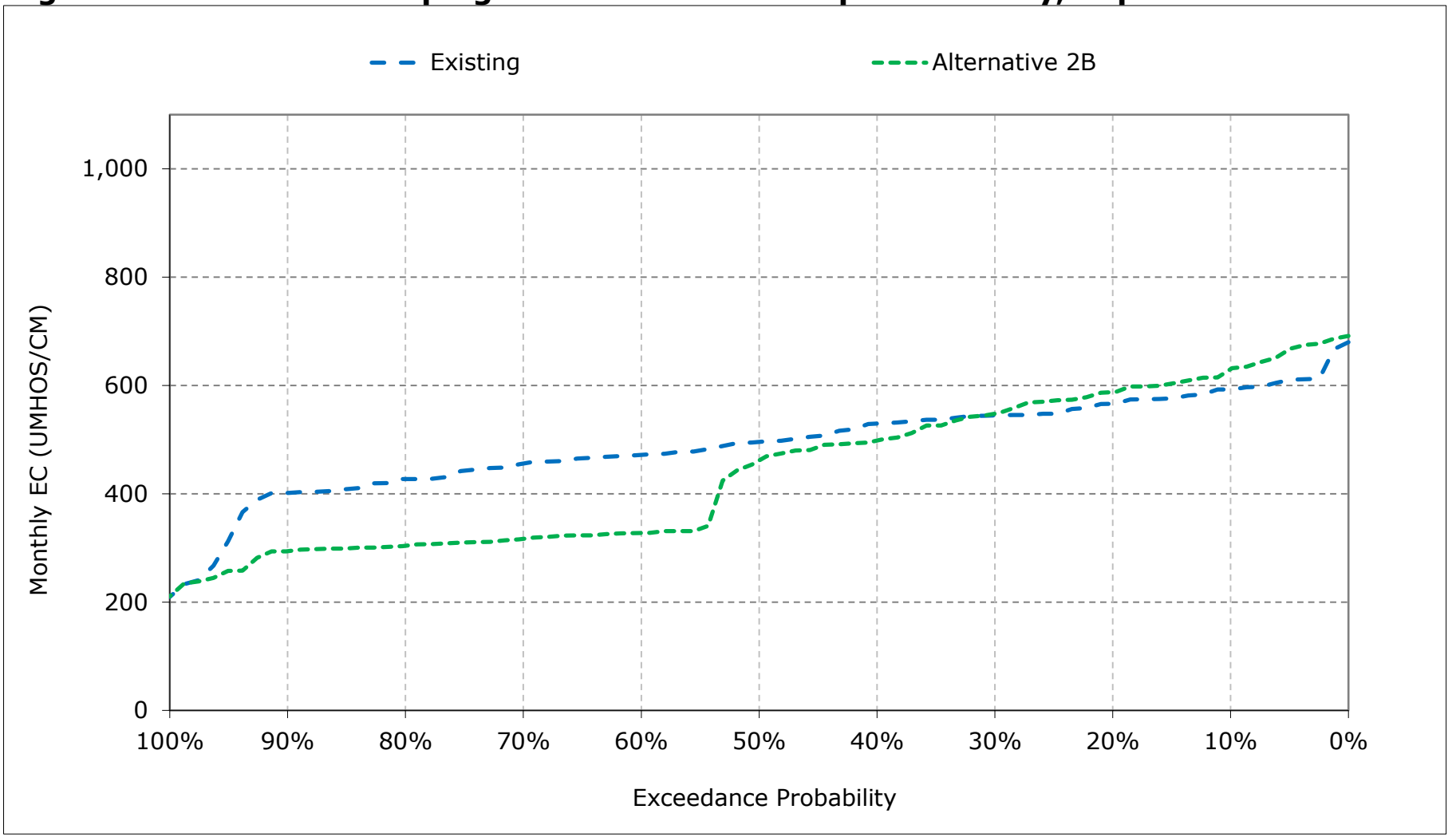


**Figure 16-16. Banks Pumping Plant South Delta Exports Salinity, October EC**

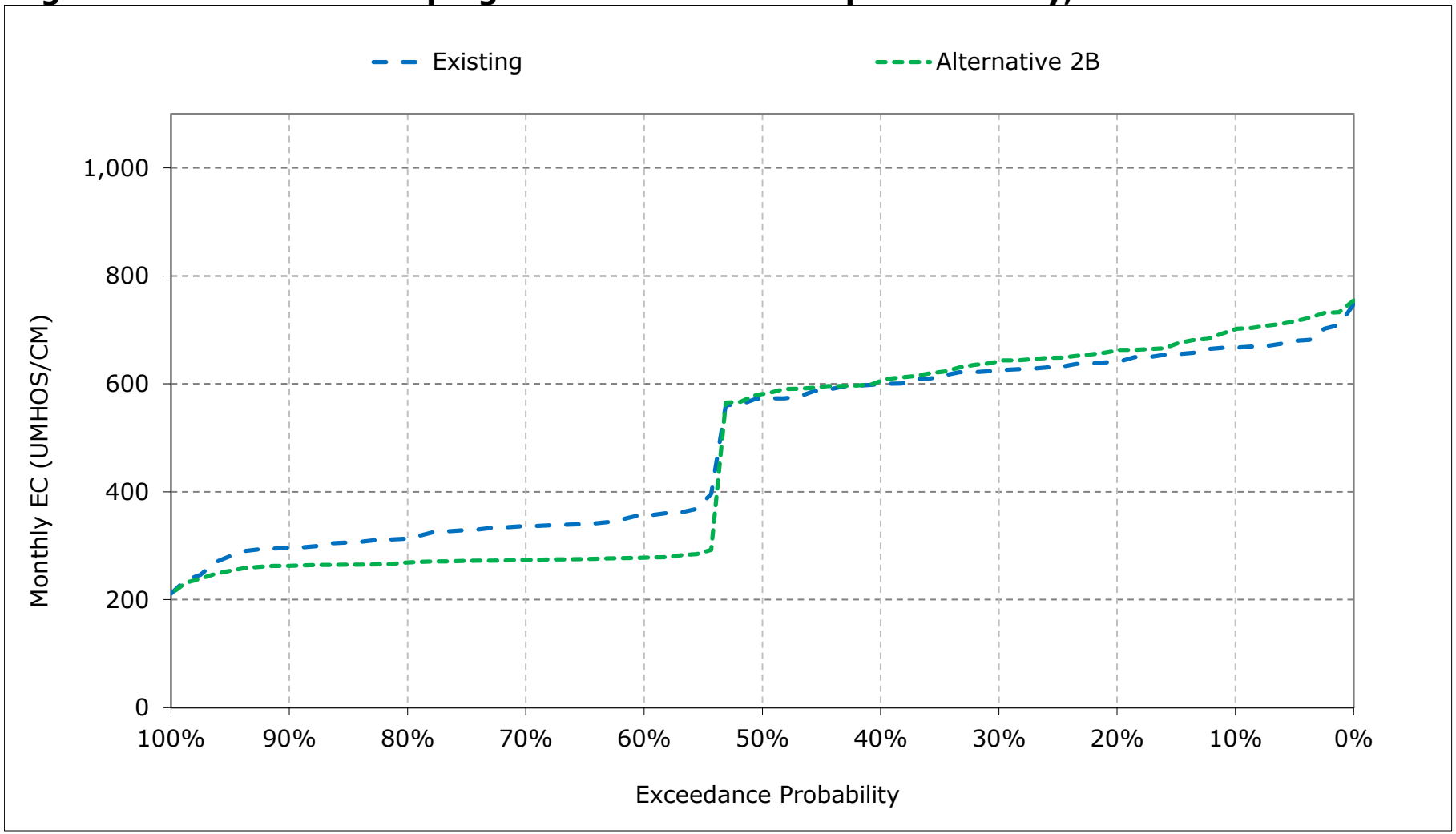


**Figure 16-17. Banks Pumping Plant South Delta Exports Salinity, November EC**

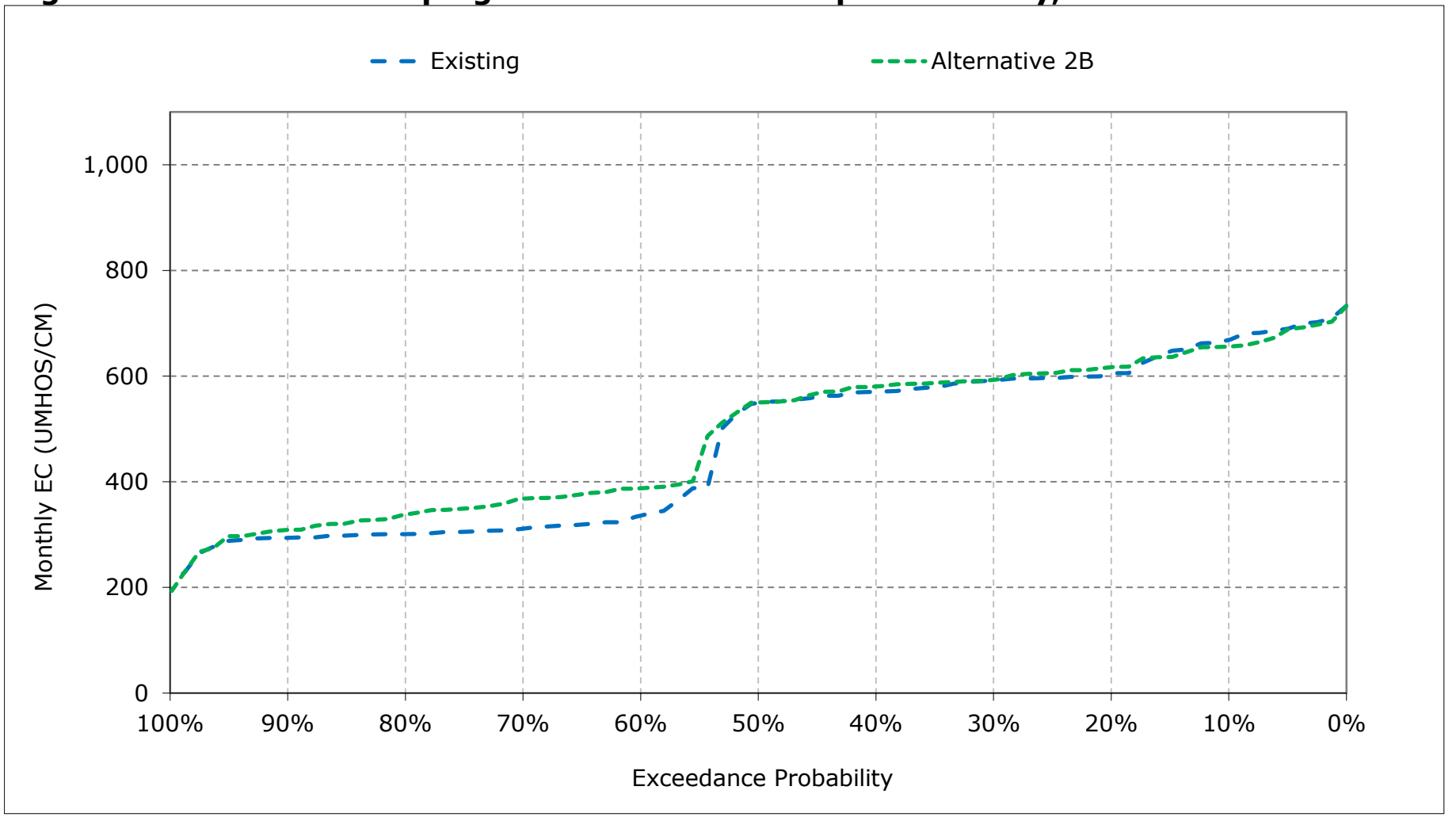
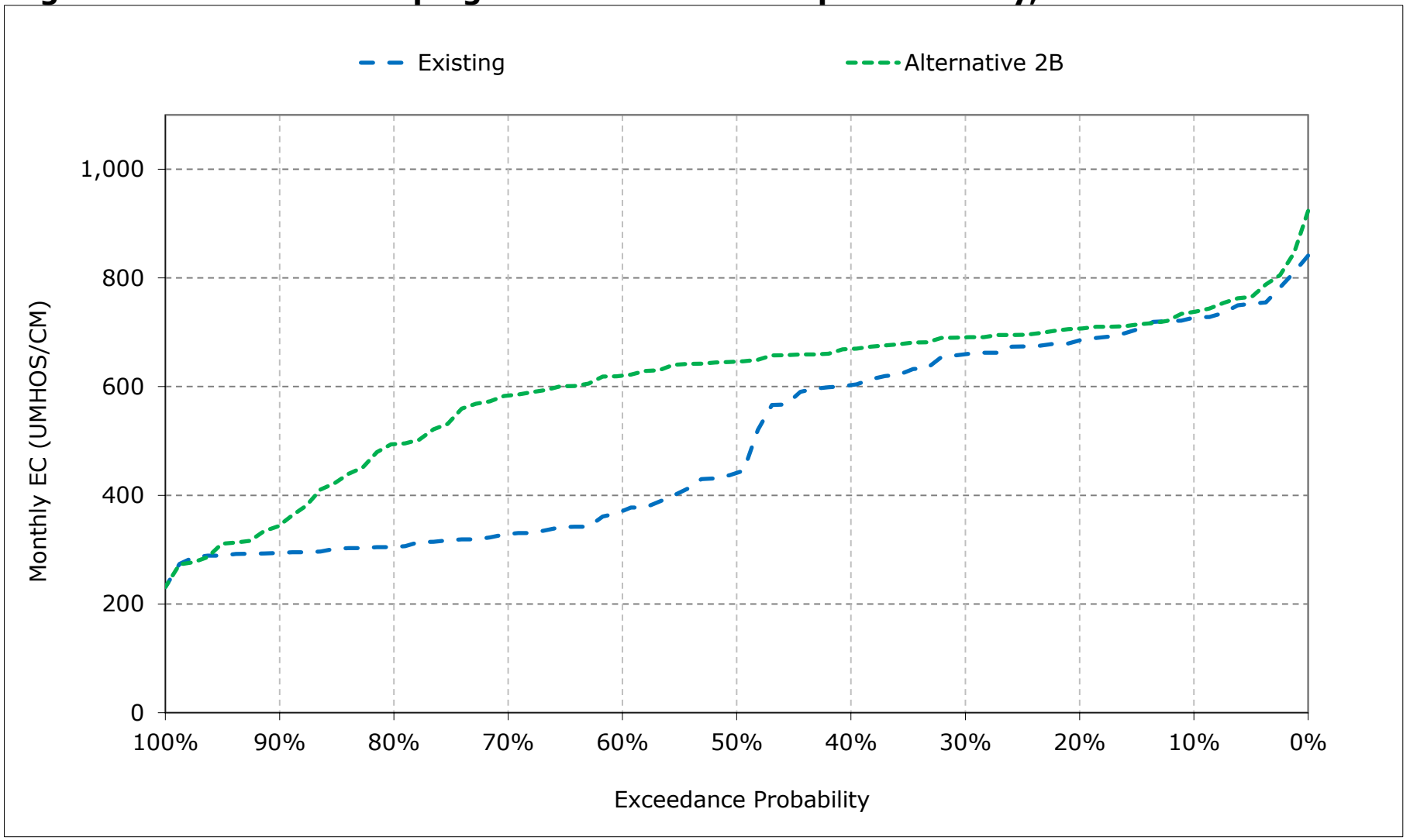


**Figure 16-18. Banks Pumping Plant South Delta Exports Salinity, December EC**



## Table 17-1. Jones Pumping Plant South Delta Exports Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 652 | 661 | 764 | 777 | 681 | 619 | 511 | 463 | 409 | 413 | 537 | 597 |
| **20%** | 633 | 604 | 726 | 752 | 660 | 591 | 487 | 445 | 384 | 385 | 464 | 580 |
| **30%** | 618 | 593 | 699 | 674 | 617 | 552 | 459 | 431 | 377 | 377 | 425 | 556 |
| **40%** | 596 | 572 | 654 | 643 | 592 | 530 | 437 | 420 | 370 | 365 | 413 | 546 |
| **50%** | 566 | 548 | 543 | 613 | 569 | 490 | 403 | 392 | 366 | 345 | 392 | 516 |
| **60%** | 372 | 405 | 497 | 580 | 523 | 415 | 375 | 376 | 360 | 338 | 369 | 484 |
| **70%** | 358 | 359 | 453 | 547 | 470 | 362 | 341 | 363 | 354 | 323 | 347 | 456 |
| **80%** | 343 | 339 | 433 | 522 | 399 | 323 | 304 | 333 | 342 | 309 | 338 | 434 |
| **90%** | 330 | 329 | 426 | 427 | 331 | 299 | 251 | 226 | 329 | 291 | 329 | 403 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 492 | 489 | 577 | 614 | 534 | 472 | 393 | 380 | 368 | 355 | 404 | 501 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 440 | 430 | 502 | 503 | 406 | 343 | 295 | 299 | 343 | 324 | 330 | 436 |
| **Above Normal (15%)** | 531 | 508 | 575 | 615 | 544 | 413 | 377 | 375 | 366 | 330 | 347 | 422 |
| **Below Normal (17%)** | 502 | 500 | 599 | 653 | 523 | 464 | 409 | 399 | 363 | 340 | 416 | 571 |
| **Dry (22%)** | 494 | 509 | 610 | 651 | 627 | 566 | 458 | 433 | 367 | 369 | 471 | 537 |
| **Critical (15%)** | 548 | 556 | 663 | 750 | 679 | 680 | 505 | 458 | 433 | 447 | 504 | 585 |

### Alternative 2B

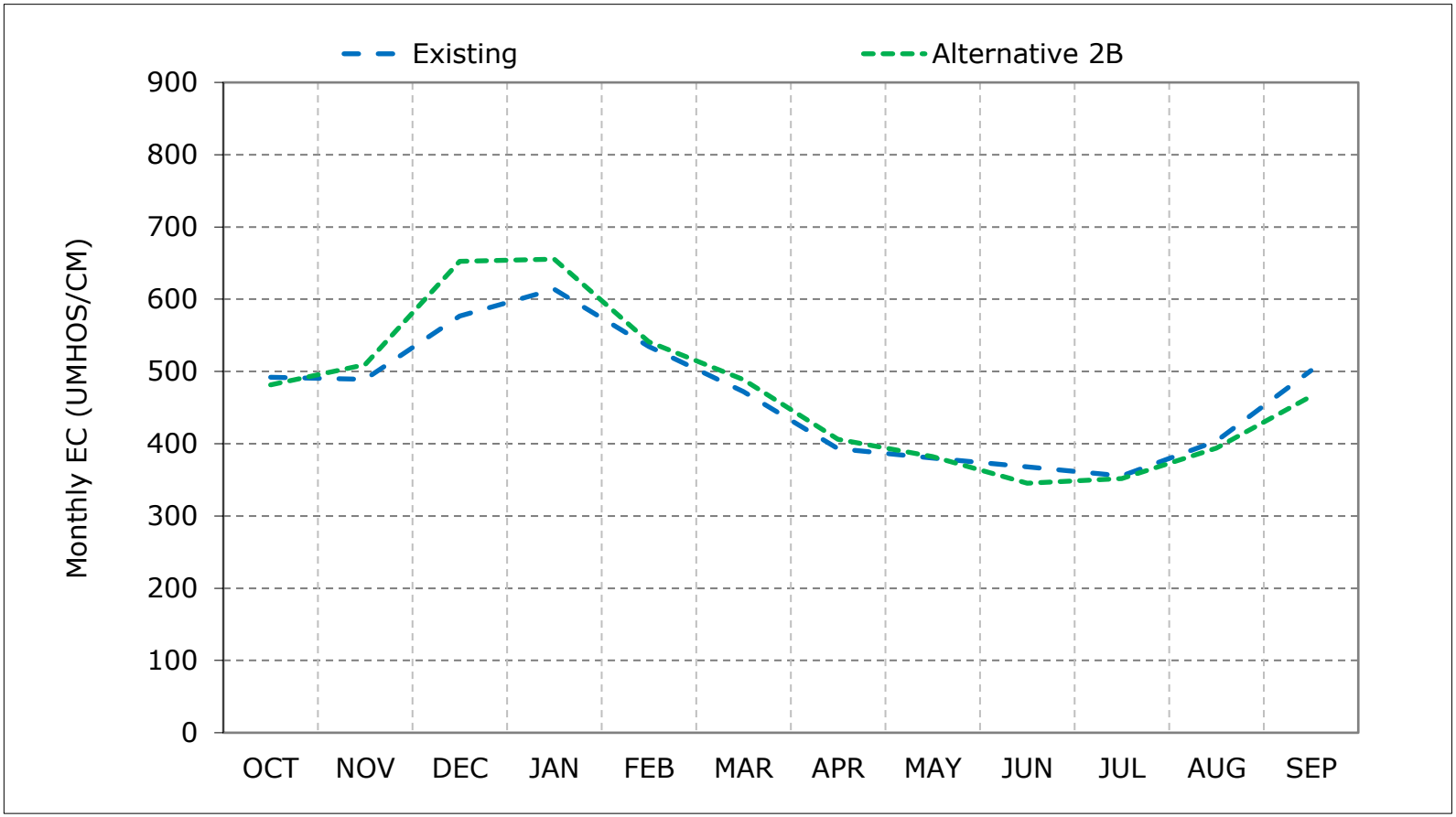
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 657 | 651 | 767 | 844 | 733 | 661 | 583 | 507 | 389 | 410 | 542 | 631 |
| **20%** | 625 | 619 | 742 | 812 | 680 | 607 | 522 | 477 | 367 | 383 | 456 | 601 |
| **30%** | 609 | 598 | 726 | 761 | 635 | 579 | 481 | 441 | 352 | 376 | 426 | 566 |
| **40%** | 589 | 583 | 704 | 730 | 604 | 541 | 422 | 393 | 347 | 355 | 414 | 532 |
| **50%** | 573 | 556 | 696 | 661 | 563 | 508 | 388 | 372 | 338 | 337 | 394 | 502 |
| **60%** | 344 | 440 | 678 | 614 | 523 | 442 | 359 | 357 | 336 | 327 | 337 | 366 |
| **70%** | 331 | 419 | 630 | 553 | 459 | 365 | 339 | 351 | 327 | 316 | 321 | 356 |
| **80%** | 325 | 393 | 547 | 521 | 398 | 326 | 304 | 321 | 319 | 305 | 316 | 341 |
| **90%** | 321 | 359 | 466 | 427 | 336 | 296 | 246 | 221 | 306 | 288 | 300 | 326 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 481 | 509 | 652 | 655 | 541 | 489 | 406 | 382 | 345 | 352 | 394 | 466 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 431 | 460 | 567 | 519 | 400 | 350 | 287 | 288 | 332 | 322 | 308 | 327 |
| **Above Normal (15%)** | 516 | 536 | 668 | 670 | 548 | 417 | 354 | 349 | 341 | 326 | 323 | 356 |
| **Below Normal (17%)** | 483 | 518 | 672 | 699 | 524 | 484 | 399 | 378 | 336 | 332 | 421 | 608 |
| **Dry (22%)** | 486 | 521 | 698 | 724 | 645 | 600 | 485 | 454 | 334 | 362 | 467 | 545 |
| **Critical (15%)** | 547 | 562 | 731 | 783 | 701 | 701 | 607 | 516 | 407 | 450 | 510 | 591 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | **6** | -10 | **3** | **67** | **52** | **42** | **73** | **44** | -20 | -2 | **5** | **34** |
| **20%** | -9 | **15** | **16** | **61** | **20** | **16** | **36** | **32** | -17 | -2 | -8 | **21** |
| **30%** | -9 | **5** | **27** | **87** | **18** | **27** | **22** | **10** | -25 | -1 | **2** | **10** |
| **40%** | -7 | **10** | **49** | **88** | **12** | **11** | -15 | -27 | -23 | -10 | **1** | -14 |
| **50%** | **6** | **9** | **153** | **48** | -5 | **18** | -15 | -20 | -27 | -8 | **3** | -14 |
| **60%** | -29 | **35** | **181** | **34** | 0 | **27** | -16 | -19 | -24 | -11 | -33 | -119 |
| **70%** | -27 | **60** | **177** | **6** | -11 | **3** | -2 | -12 | -28 | -7 | -26 | -99 |
| **80%** | -19 | **54** | **114** | 0 | -1 | **4** | -1 | -12 | -24 | -4 | -22 | -93 |
| **90%** | -9 | **30** | **40** | 0 | **5** | -3 | -5 | -4 | -23 | -3 | -29 | -77 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | -10 | **20** | **76** | **42** | **6** | **17** | **13** | **2** | -23 | -4 | -10 | -36 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | -9 | **30** | **64** | **16** | -5 | **7** | -9 | -12 | -10 | -1 | -23 | -109 |
| **Above Normal (15%)** | -15 | **29** | **93** | **55** | **3** | **3** | -23 | -26 | -25 | -4 | -24 | -67 |
| **Below Normal (17%)** | -19 | **18** | **73** | **47** | **1** | **20** | -10 | -21 | -27 | -8 | **5** | **36** |
| **Dry (22%)** | -8 | **12** | **88** | **72** | **18** | **35** | **28** | **21** | -33 | -7 | -4 | **8** |
| **Critical (15%)** | -1 | **7** | **68** | **33** | **22** | **21** | **102** | **58** | -26 | **3** | **6** | **5** |

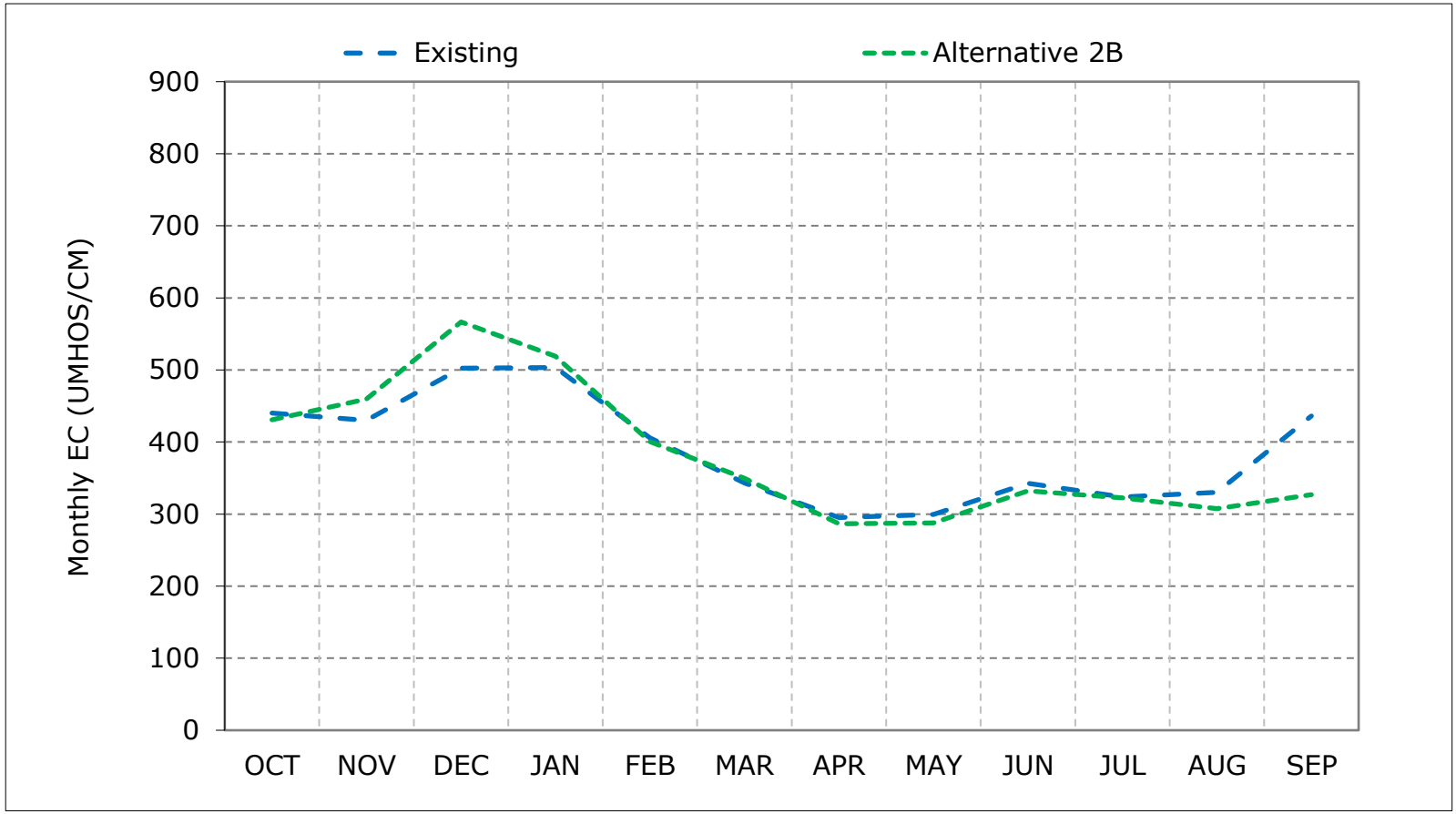
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 17-1. Jones Pumping Plant South Delta Exports Salinity, Long-Term Average**



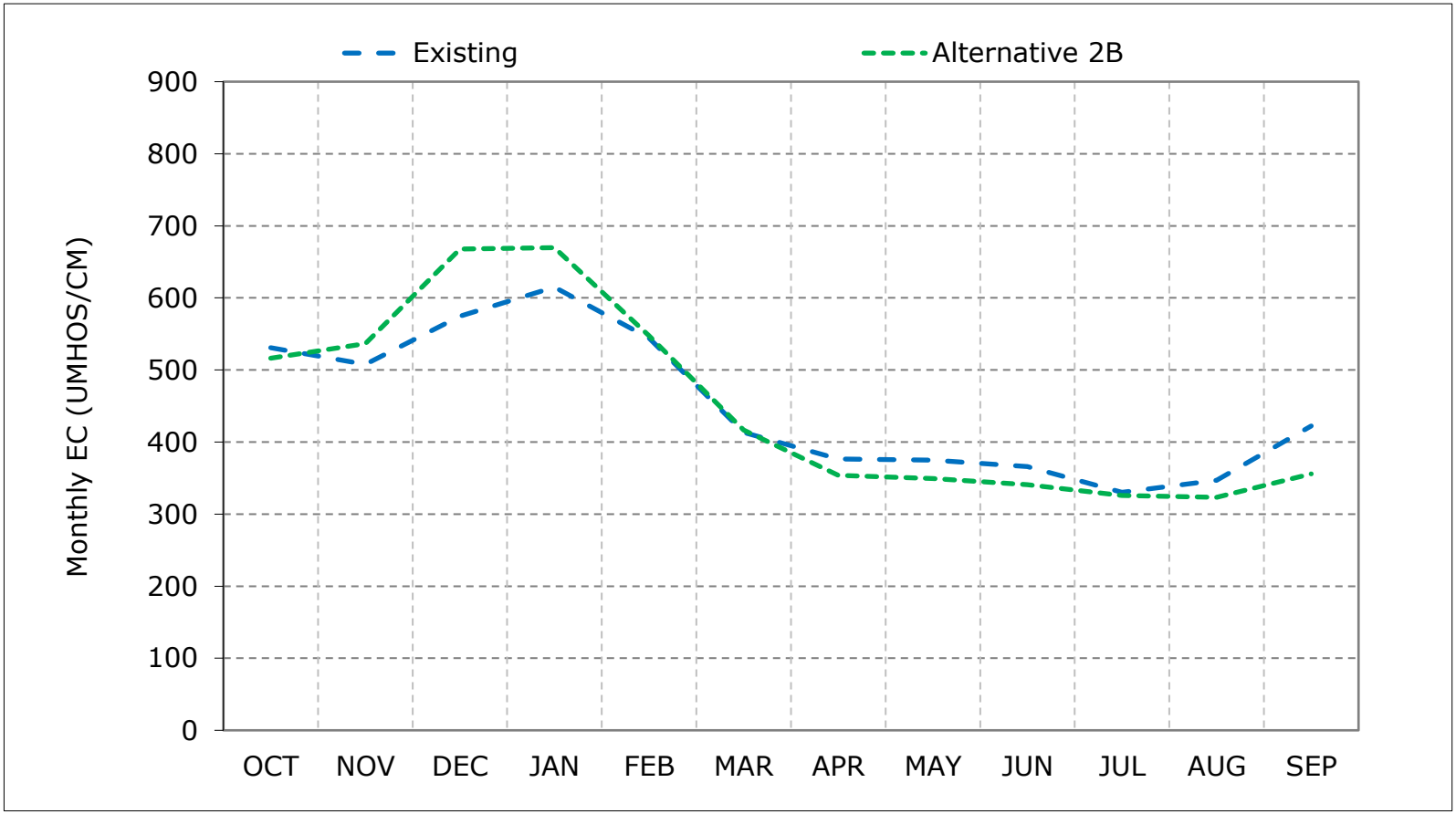

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 17-2. Jones Pumping Plant South Delta Exports Salinity, Wet Year Average**



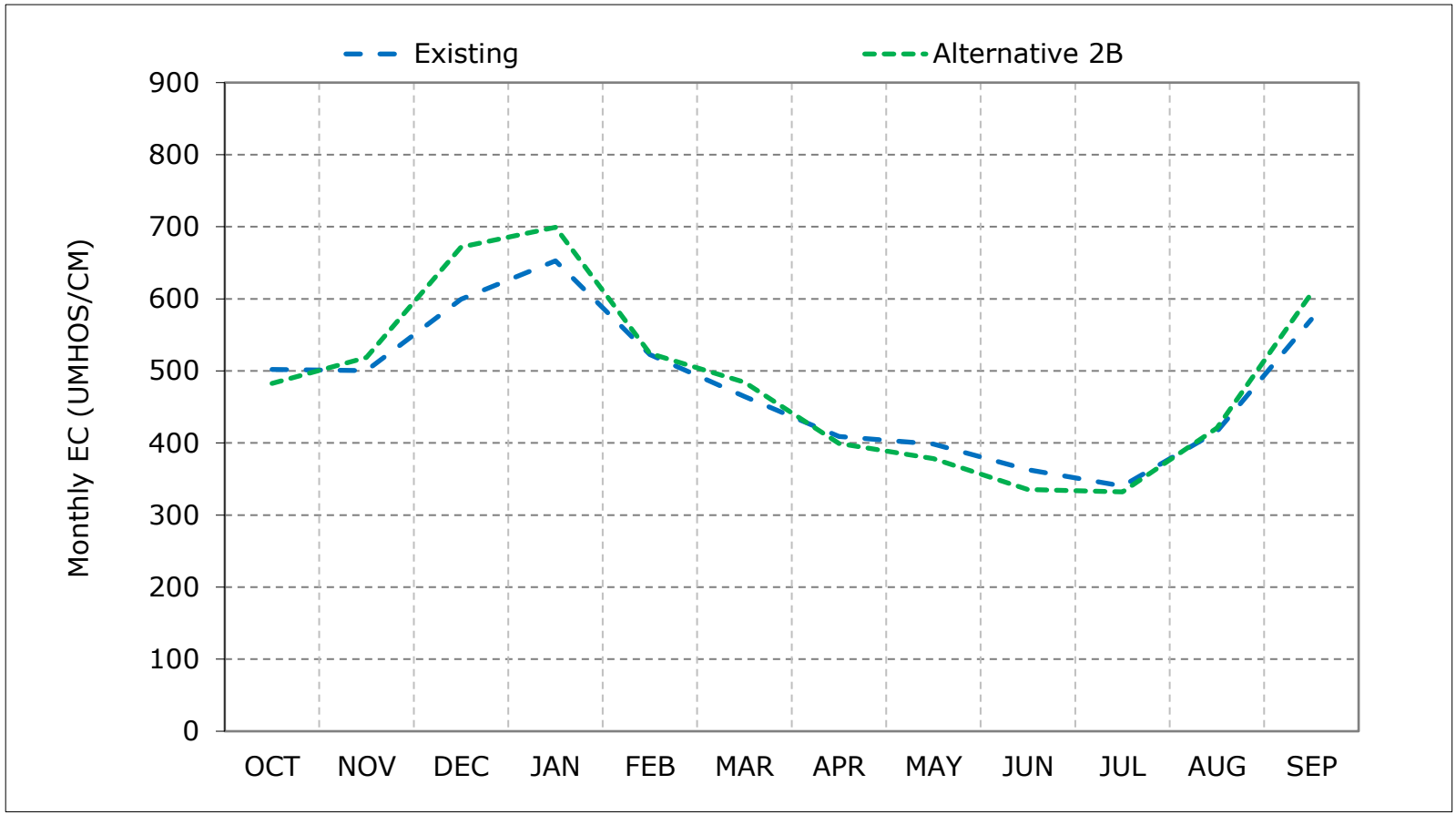

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 17-3. Jones Pumping Plant South Delta Exports Salinity, Above Normal Year Aver**



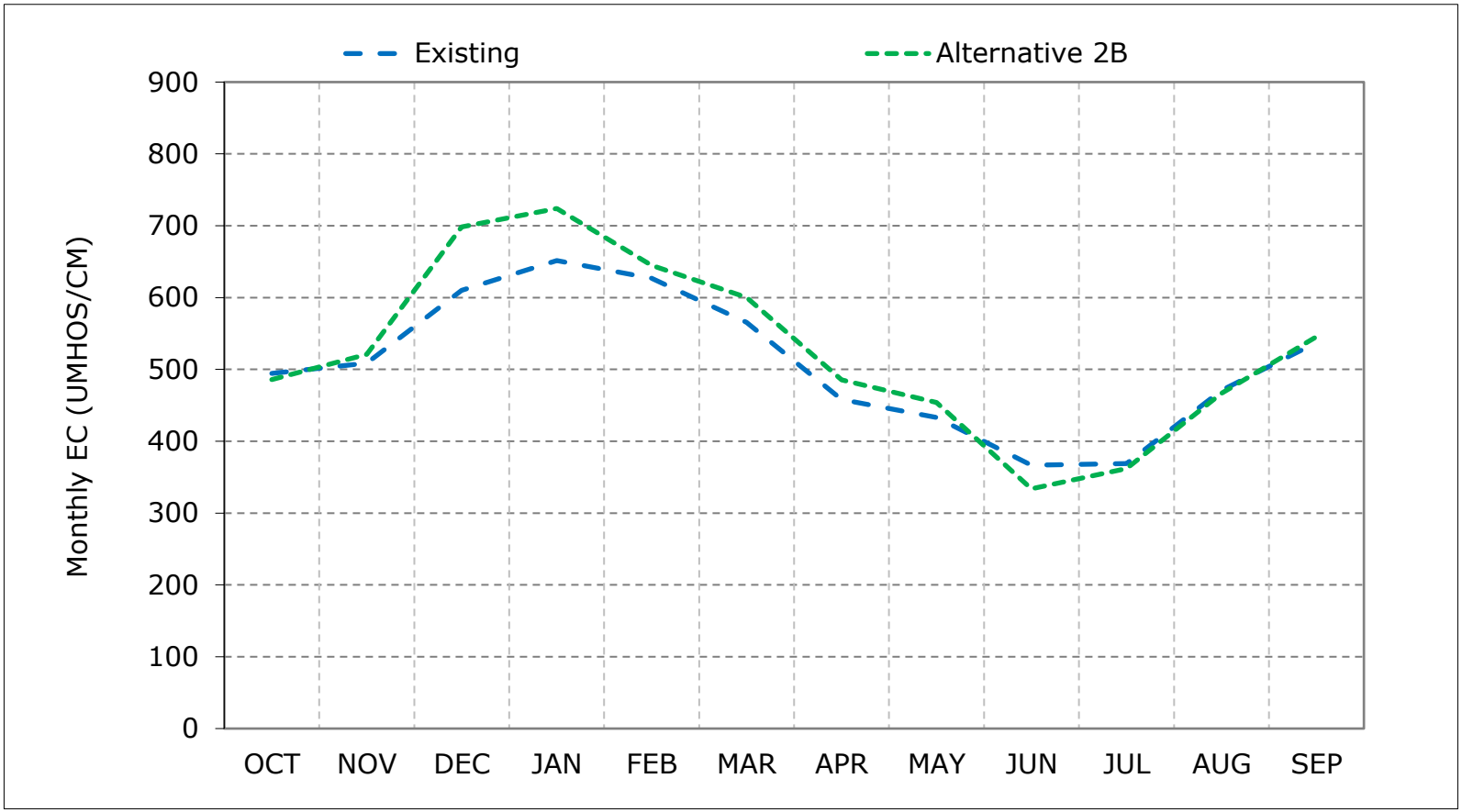

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 17-4. Jones Pumping Plant South Delta Exports Salinity, Below Normal Year Aver**



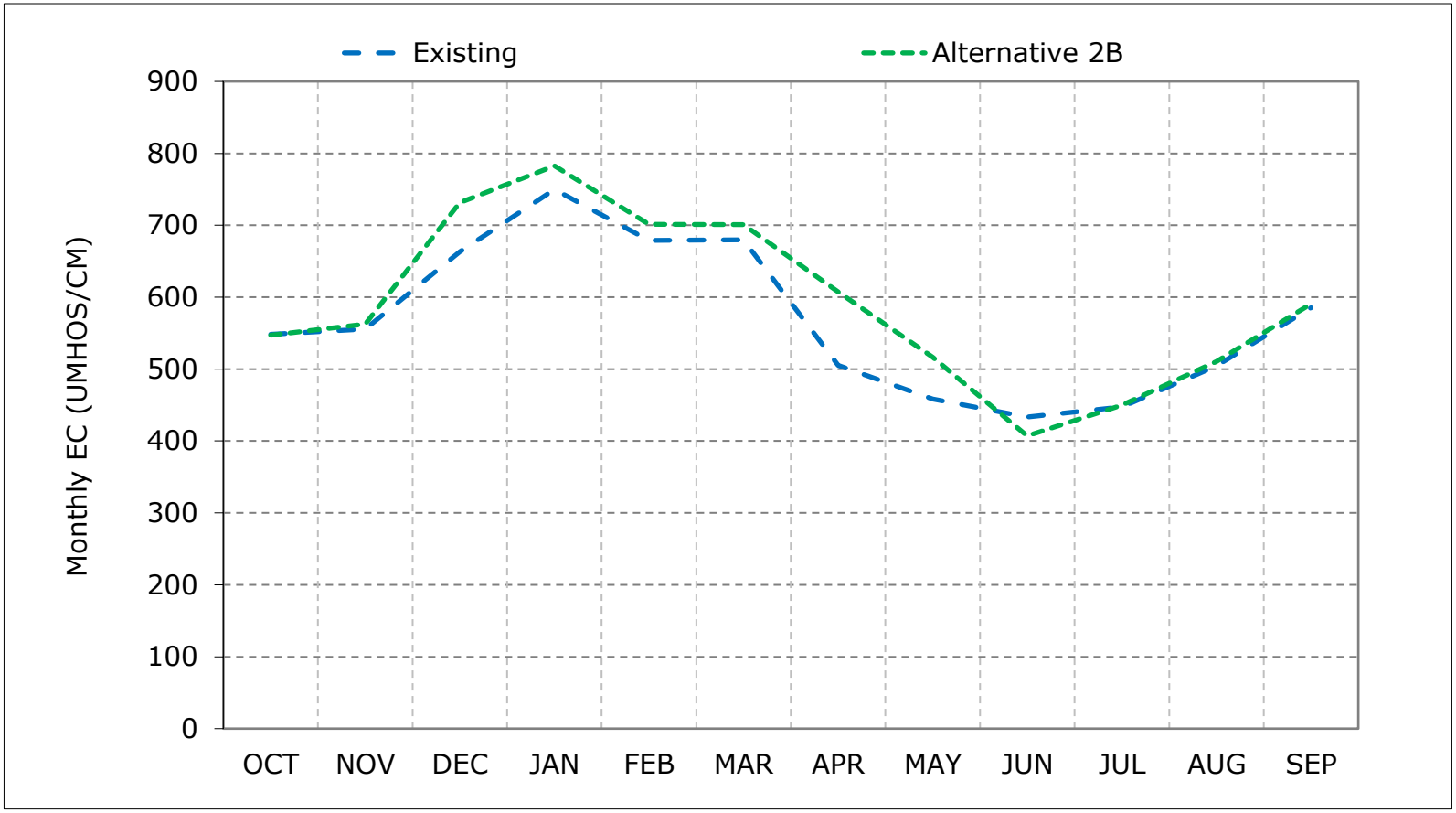

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 17-5. Jones Pumping Plant South Delta Exports Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 17-6. Jones Pumping Plant South Delta Exports Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 17-7. Jones Pumping Plant South Delta Exports Salinity, January EC**

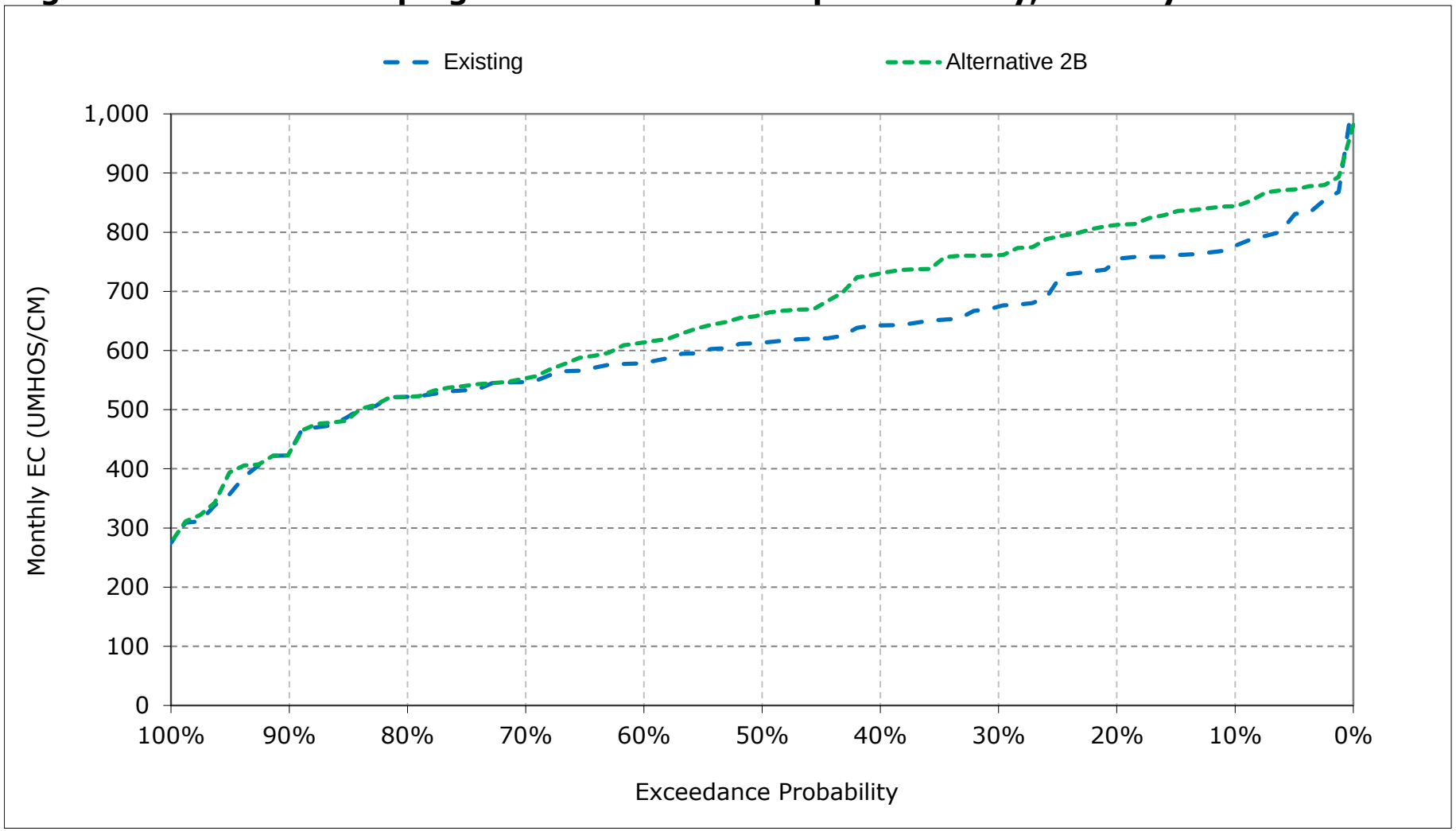


**Figure 17-8. Jones Pumping Plant South Delta Exports Salinity, February EC**

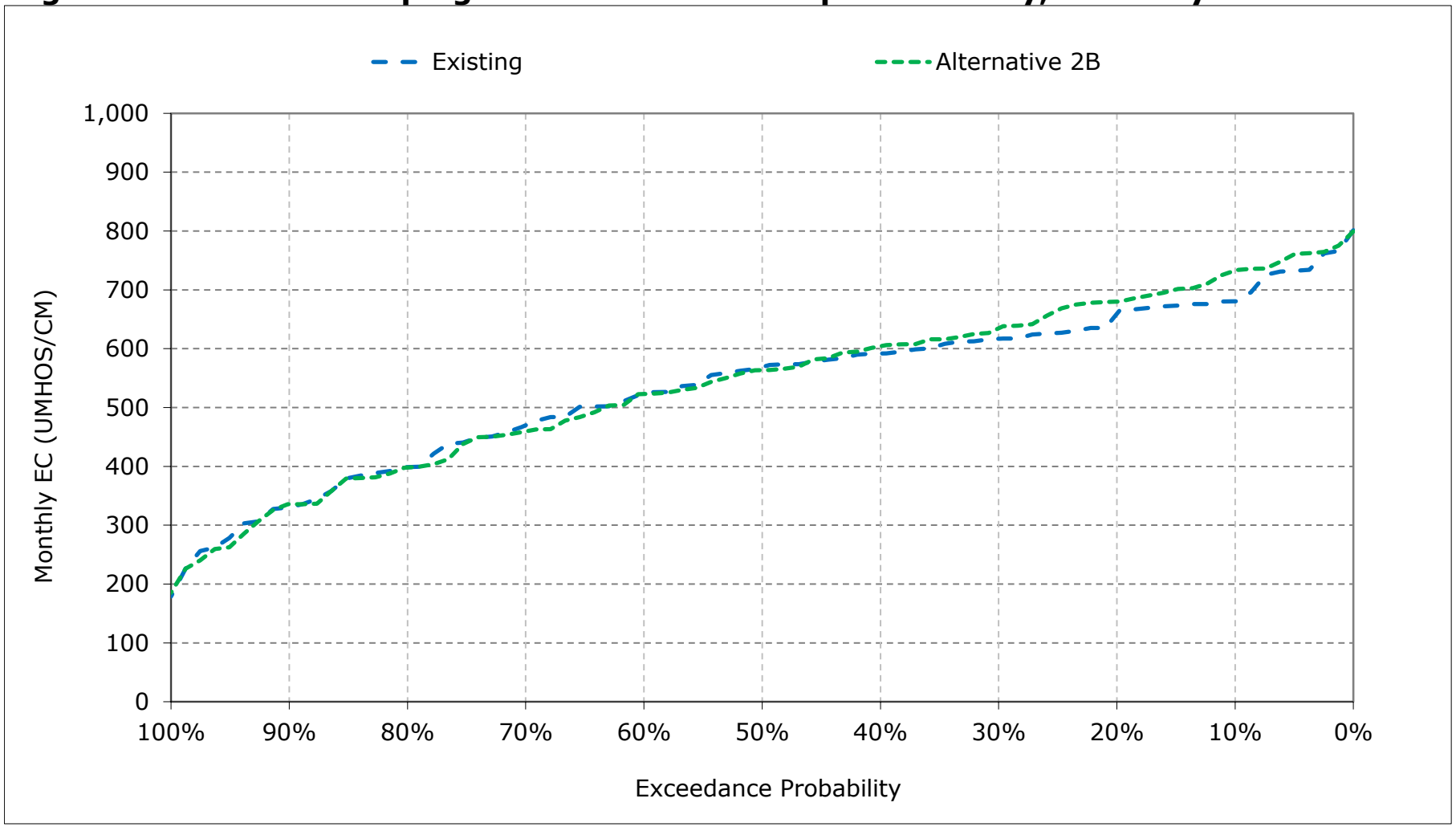


**Figure 17-9. Jones Pumping Plant South Delta Exports Salinity, March EC**

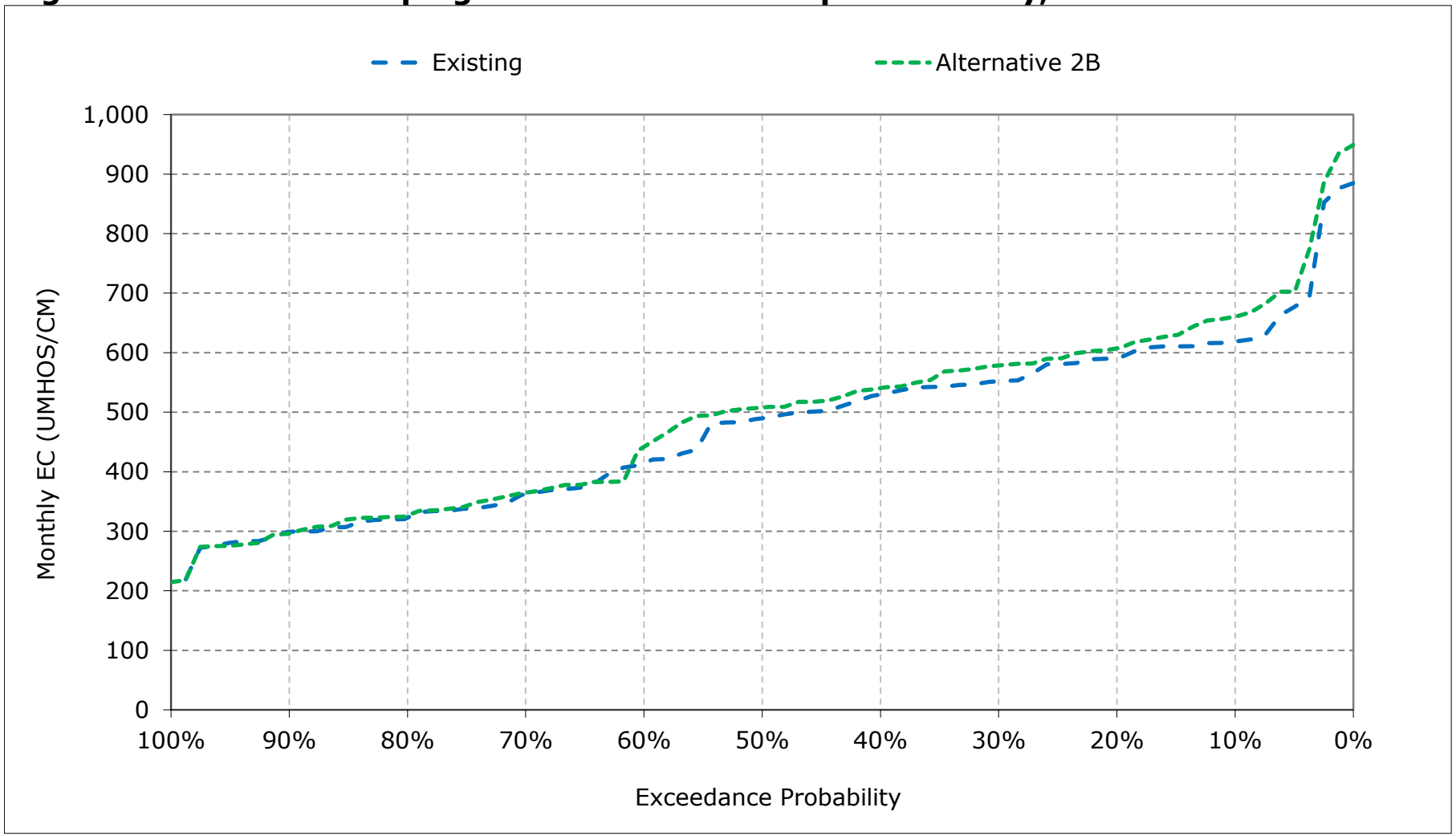


**Figure 17-10. Jones Pumping Plant South Delta Exports Salinity, April EC**

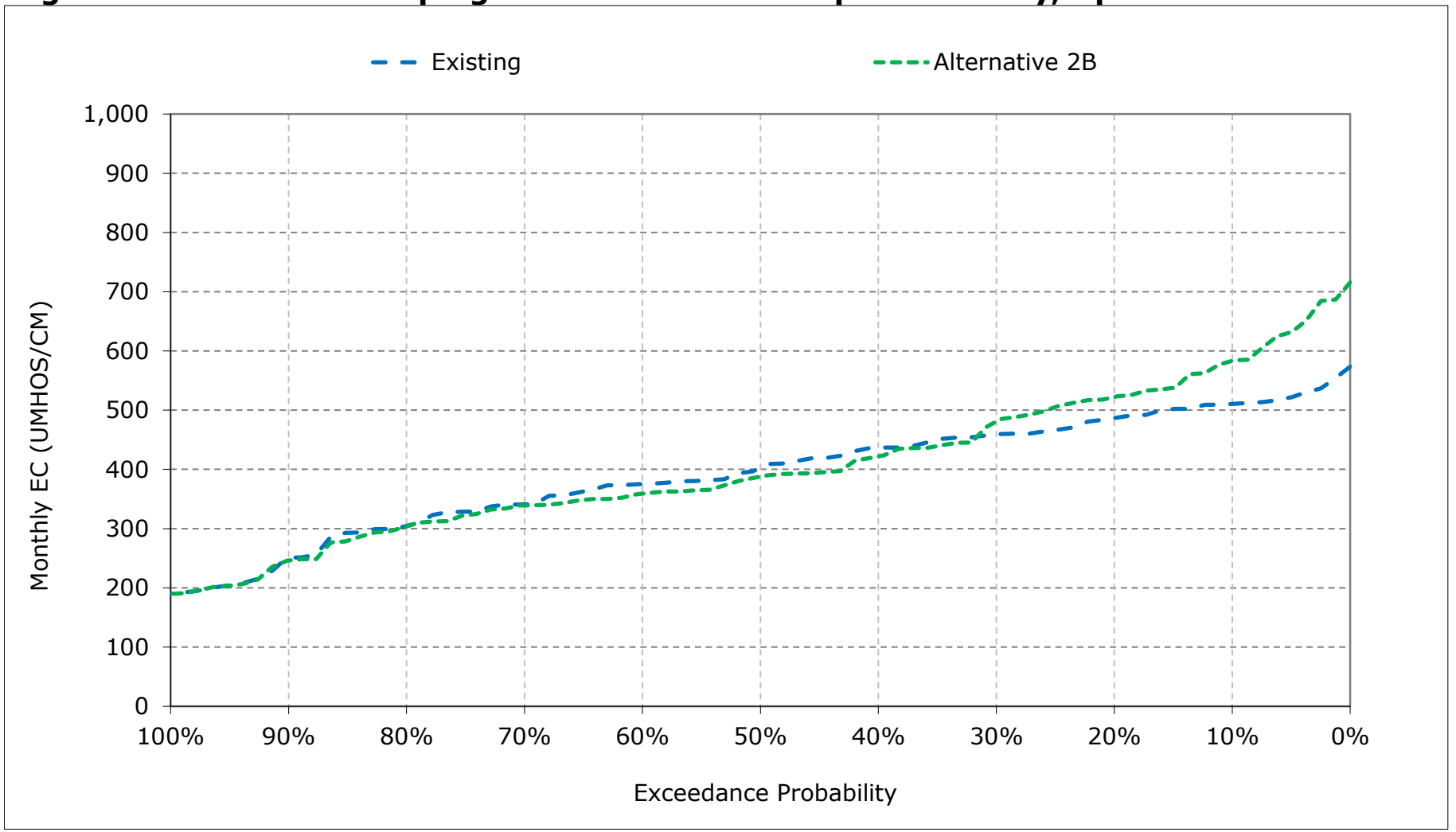


**Figure 17-11. Jones Pumping Plant South Delta Exports Salinity, May EC**

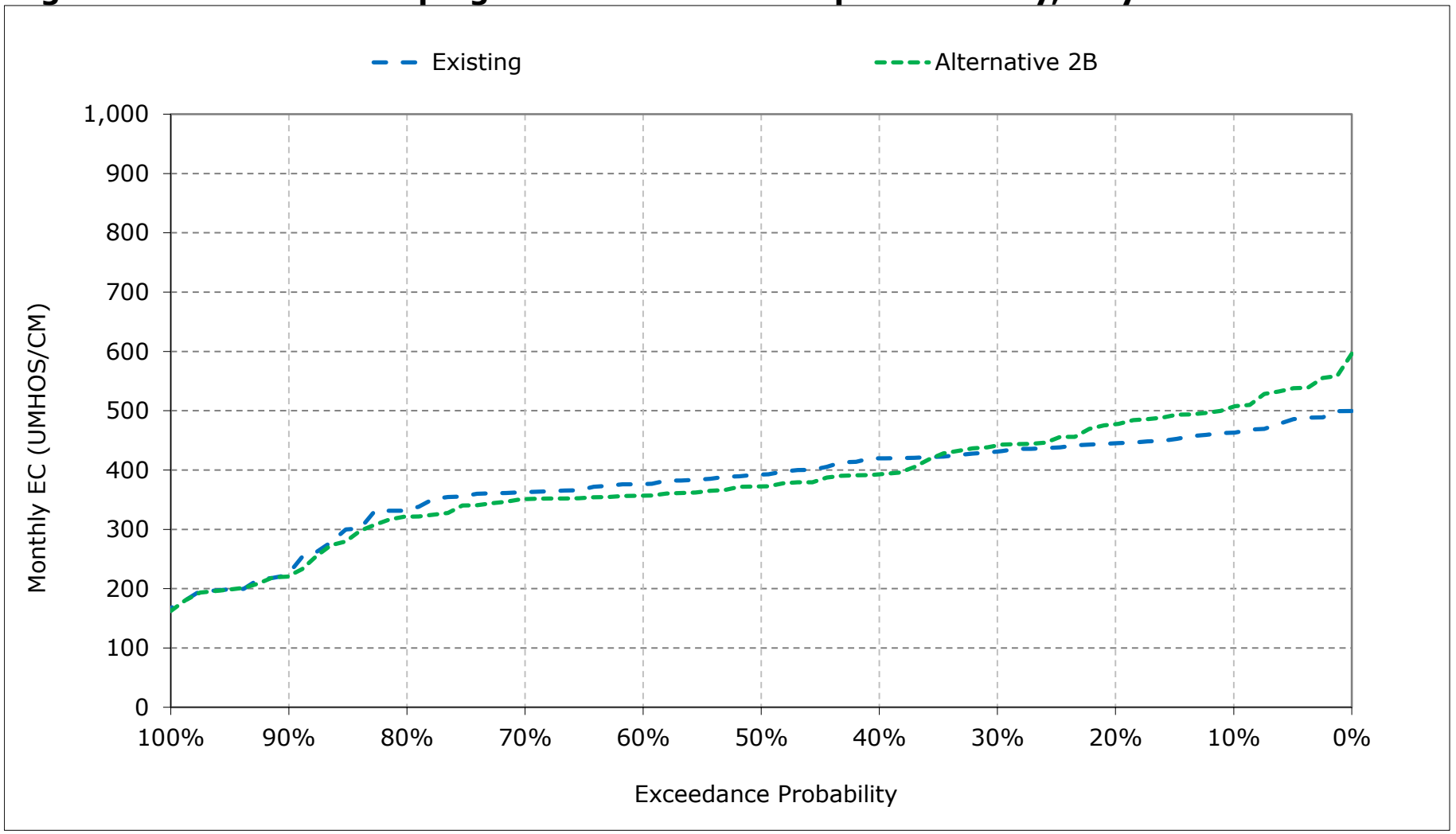


**Figure 17-12. Jones Pumping Plant South Delta Exports Salinity, June EC**

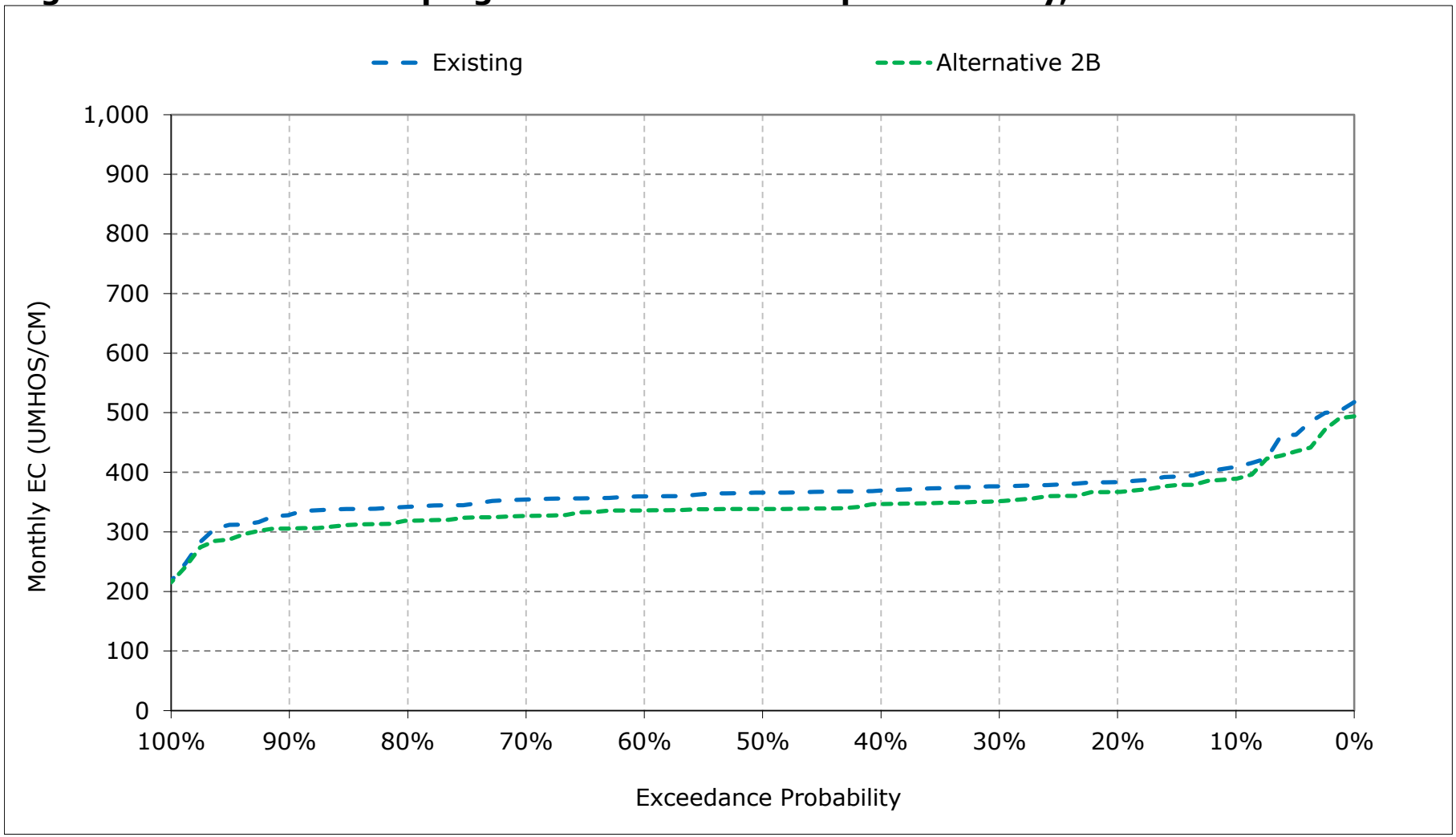


**Figure 17-13. Jones Pumping Plant South Delta Exports Salinity, July EC**

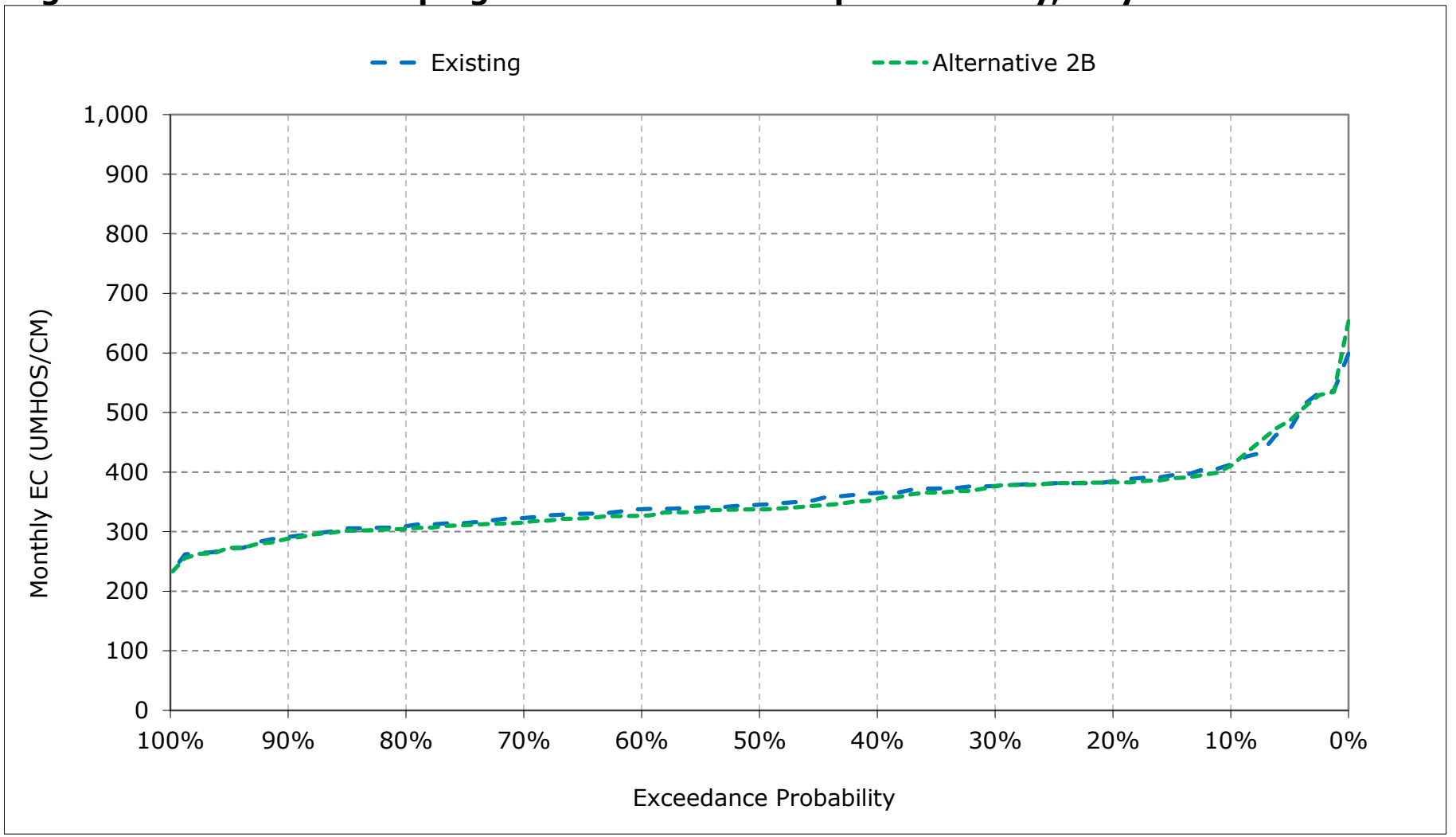


**Figure 17-14. Jones Pumping Plant South Delta Exports Salinity, August EC**

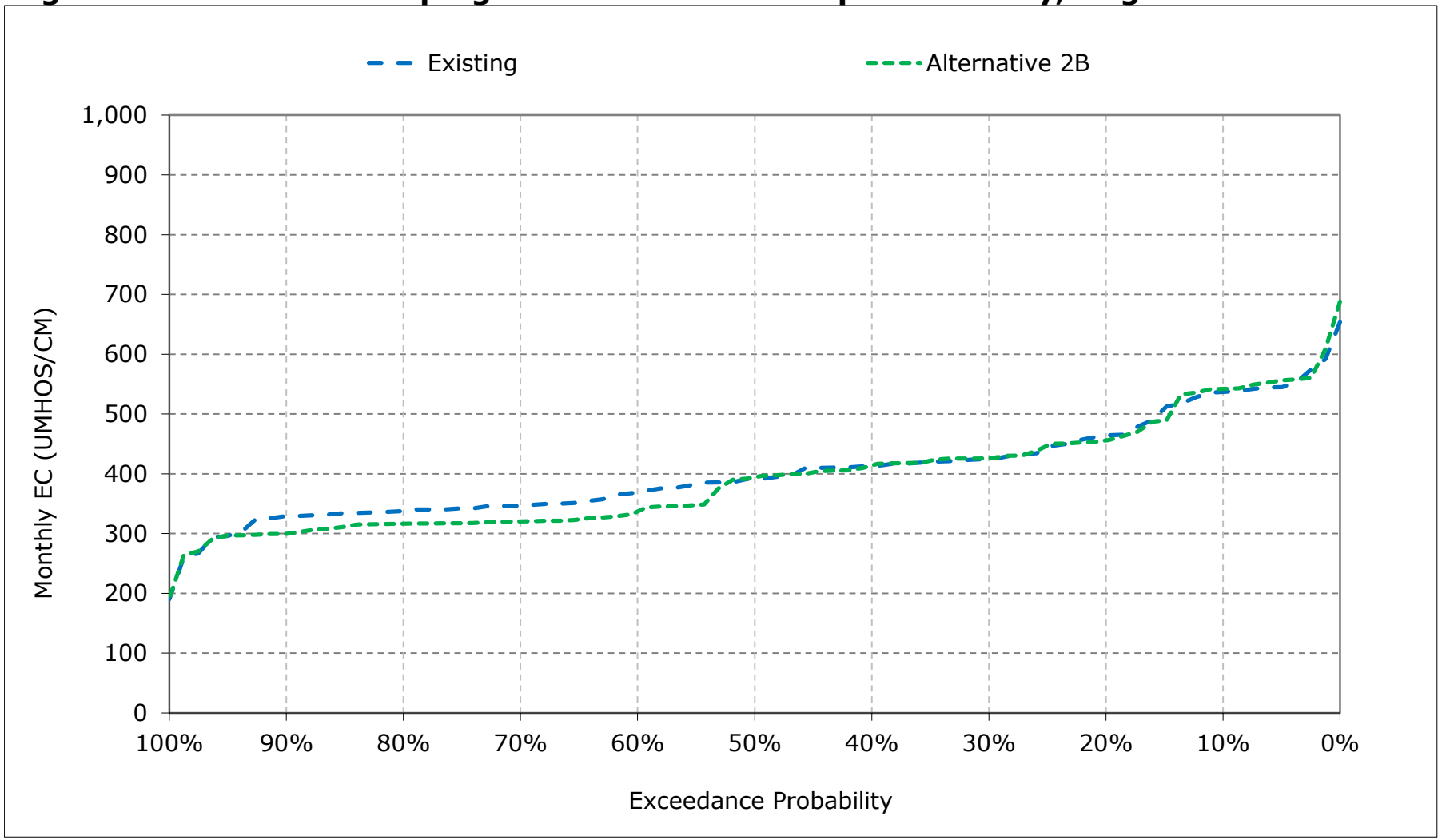


**Figure 17-15. Jones Pumping Plant South Delta Exports Salinity, September EC**

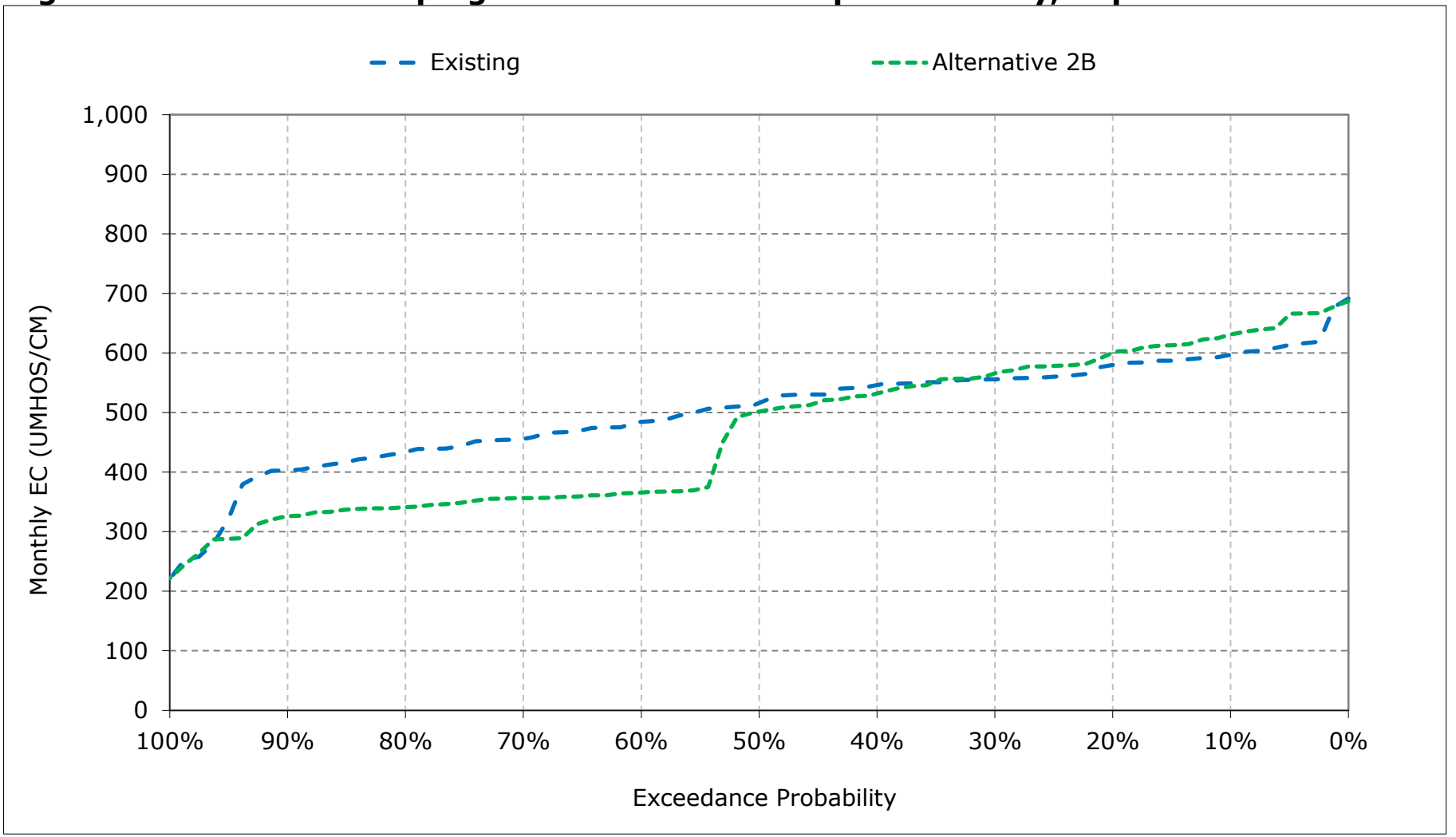


**Figure 17-16. Jones Pumping Plant South Delta Exports Salinity, October EC**

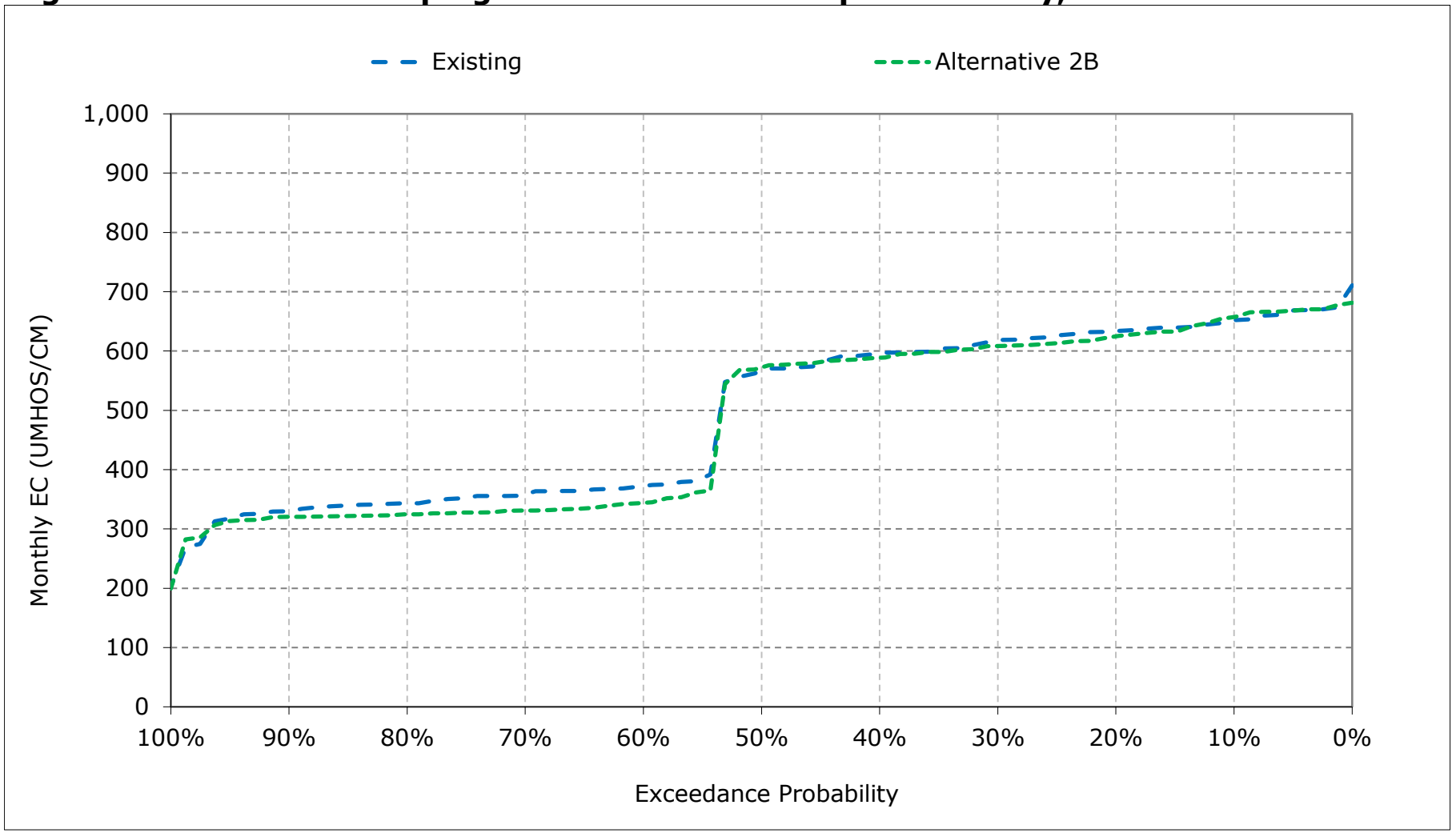


**Figure 17-17. Jones Pumping Plant South Delta Exports Salinity, November EC**

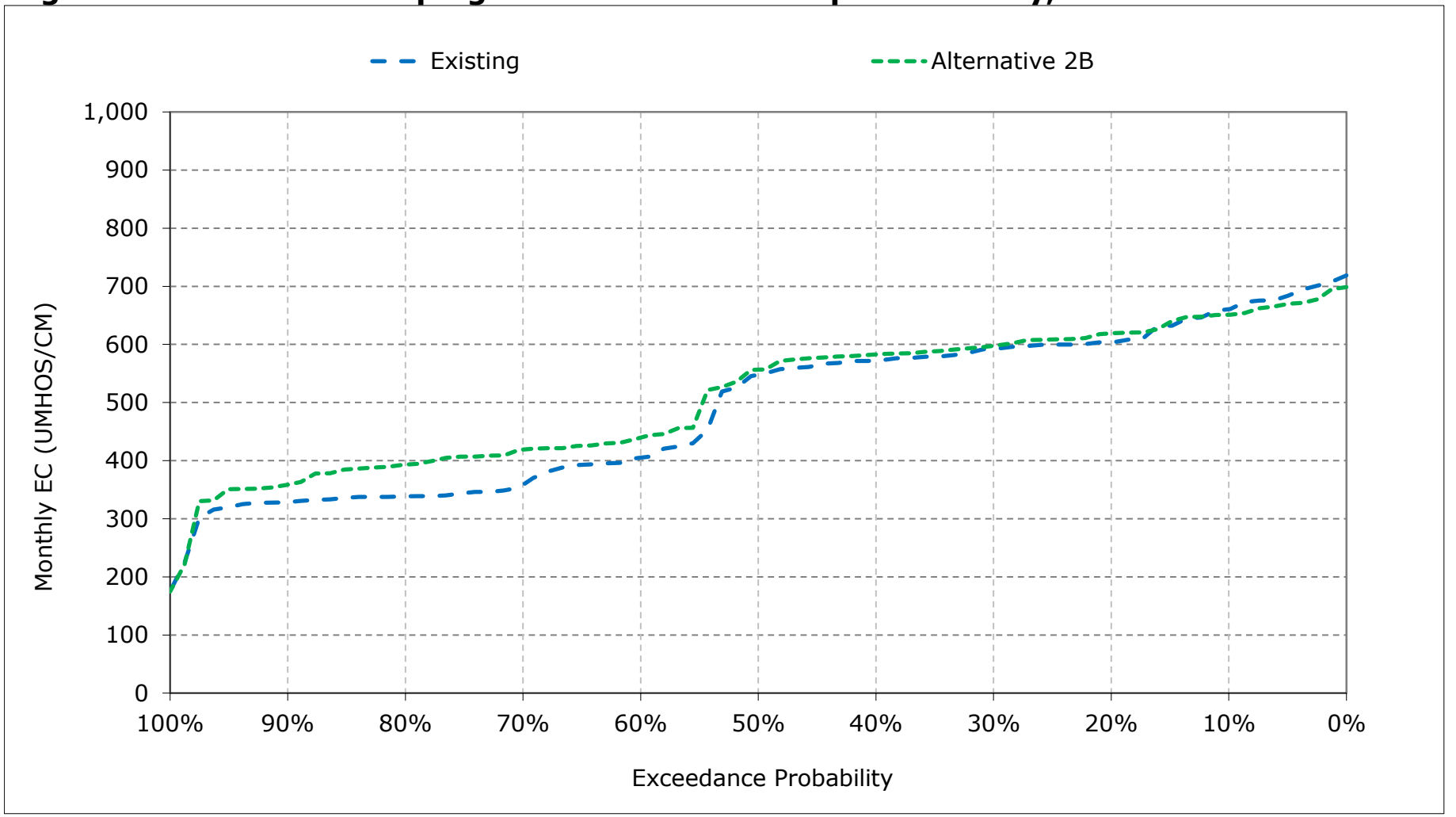
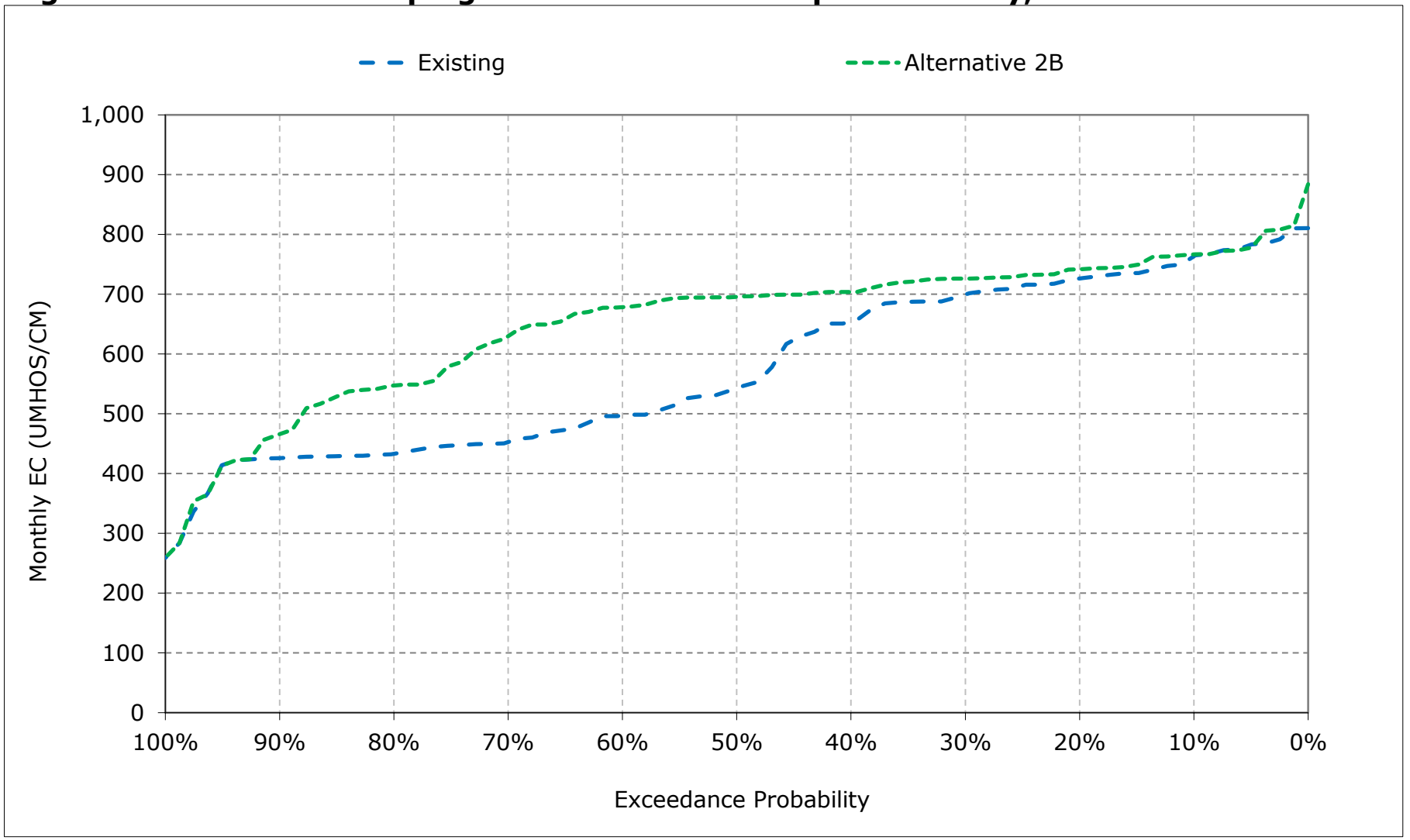


**Figure 17-18. Jones Pumping Plant South Delta Exports Salinity, December EC**



## Table 18-1. Old River at Highway 4, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 753 | 741 | 807 | 782 | 558 | 435 | 417 | 418 | 360 | 425 | 570 | 689 |
| **20%** | 725 | 677 | 768 | 719 | 512 | 406 | 401 | 402 | 327 | 352 | 482 | 660 |
| **30%** | 710 | 650 | 722 | 612 | 487 | 370 | 380 | 391 | 315 | 332 | 442 | 624 |
| **40%** | 678 | 620 | 613 | 561 | 458 | 359 | 374 | 385 | 310 | 315 | 423 | 590 |
| **50%** | 634 | 580 | 424 | 518 | 421 | 347 | 363 | 377 | 307 | 290 | 387 | 559 |
| **60%** | 319 | 322 | 368 | 471 | 387 | 338 | 351 | 367 | 303 | 275 | 364 | 516 |
| **70%** | 303 | 286 | 313 | 429 | 366 | 324 | 336 | 354 | 297 | 268 | 330 | 496 |
| **80%** | 292 | 273 | 286 | 373 | 348 | 314 | 299 | 331 | 286 | 261 | 320 | 448 |
| **90%** | 278 | 266 | 280 | 351 | 327 | 288 | 246 | 220 | 273 | 252 | 309 | 418 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 516 | 492 | 519 | 552 | 435 | 356 | 350 | 357 | 315 | 321 | 408 | 547 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 444 | 410 | 395 | 417 | 389 | 331 | 288 | 293 | 283 | 265 | 317 | 464 |
| **Above Normal (15%)** | 566 | 513 | 517 | 540 | 450 | 351 | 352 | 363 | 303 | 266 | 333 | 433 |
| **Below Normal (17%)** | 533 | 510 | 570 | 612 | 422 | 346 | 364 | 381 | 304 | 301 | 422 | 656 |
| **Dry (22%)** | 518 | 525 | 575 | 581 | 443 | 359 | 390 | 394 | 316 | 362 | 492 | 596 |
| **Critical (15%)** | 599 | 580 | 649 | 741 | 523 | 419 | 409 | 407 | 408 | 457 | 541 | 644 |

### Alternative 2B

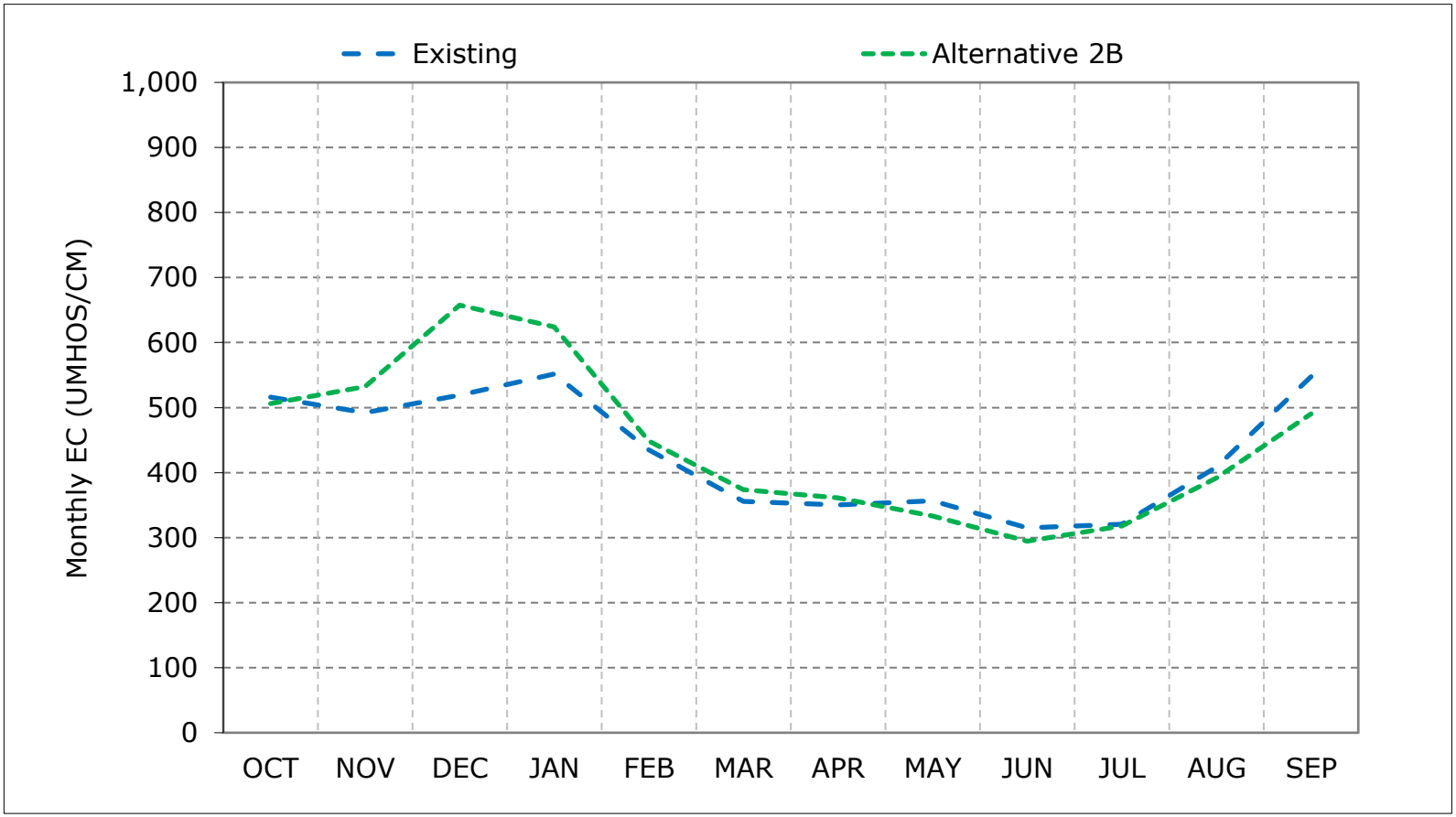
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 774 | 730 | 824 | 943 | 613 | 485 | 433 | 391 | 338 | 429 | 581 | 747 |
| **20%** | 740 | 684 | 797 | 866 | 542 | 421 | 411 | 358 | 307 | 347 | 489 | 696 |
| **30%** | 715 | 649 | 782 | 771 | 500 | 394 | 395 | 351 | 293 | 323 | 448 | 638 |
| **40%** | 687 | 629 | 759 | 688 | 468 | 378 | 373 | 345 | 288 | 307 | 419 | 583 |
| **50%** | 650 | 581 | 734 | 570 | 432 | 366 | 364 | 338 | 282 | 282 | 394 | 531 |
| **60%** | 265 | 440 | 681 | 504 | 410 | 348 | 354 | 327 | 277 | 273 | 319 | 331 |
| **70%** | 258 | 400 | 580 | 444 | 373 | 337 | 340 | 317 | 273 | 262 | 288 | 318 |
| **80%** | 250 | 367 | 510 | 405 | 352 | 323 | 322 | 309 | 265 | 260 | 277 | 303 |
| **90%** | 247 | 323 | 327 | 362 | 328 | 301 | 283 | 277 | 259 | 251 | 265 | 290 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 506 | 532 | 658 | 624 | 449 | 374 | 361 | 333 | 295 | 318 | 392 | 490 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 431 | 467 | 521 | 450 | 390 | 345 | 305 | 288 | 271 | 265 | 277 | 290 |
| **Above Normal (15%)** | 556 | 560 | 674 | 633 | 456 | 375 | 361 | 325 | 278 | 262 | 292 | 319 |
| **Below Normal (17%)** | 520 | 553 | 704 | 696 | 429 | 365 | 371 | 337 | 277 | 286 | 433 | 718 |
| **Dry (22%)** | 502 | 550 | 737 | 704 | 476 | 386 | 398 | 360 | 290 | 358 | 489 | 610 |
| **Critical (15%)** | 609 | 597 | 763 | 788 | 551 | 426 | 415 | 394 | 389 | 465 | 546 | 651 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | **20** | -11 | **16** | **161** | **54** | **50** | **15** | -27 | -22 | **3** | **11** | **58** |
| **20%** | **15** | **8** | **29** | **147** | **30** | **15** | **10** | -44 | -20 | -5 | **7** | **37** |
| **30%** | **5** | -1 | **60** | **159** | **13** | **24** | **15** | -40 | -22 | -9 | **6** | **14** |
| **40%** | **8** | **9** | **146** | **127** | **10** | **19** | -1 | -40 | -23 | -8 | -4 | -8 |
| **50%** | **16** | **1** | **309** | **52** | **11** | **20** | **2** | -39 | -25 | -8 | **7** | -28 |
| **60%** | -54 | **118** | **313** | **33** | **23** | **10** | **3** | -40 | -26 | -2 | -45 | -185 |
| **70%** | -45 | **114** | **267** | **15** | **7** | **13** | **4** | -37 | -25 | -7 | -42 | -178 |
| **80%** | -41 | **94** | **225** | **32** | **3** | **9** | **23** | -22 | -20 | -1 | -42 | -145 |
| **90%** | -31 | **56** | **48** | **11** | **1** | **12** | **37** | **57** | -13 | -1 | -44 | -129 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | -10 | **40** | **138** | **72** | **13** | **18** | **11** | -24 | -20 | -3 | -17 | -57 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | -13 | **57** | **127** | **33** | **0** | **13** | **17** | -4 | -12 | **0** | -41 | -174 |
| **Above Normal (15%)** | -9 | **46** | **156** | **93** | **6** | **24** | **9** | -38 | -25 | -4 | -41 | -114 |
| **Below Normal (17%)** | -13 | **43** | **133** | **84** | **6** | **19** | **7** | -43 | -26 | -15 | **11** | **62** |
| **Dry (22%)** | -16 | **25** | **162** | **124** | **33** | **27** | **8** | -34 | -27 | -4 | -3 | **14** |
| **Critical (15%)** | **10** | **17** | **114** | **46** | **28** | **7** | **6** | -12 | -19 | **8** | **5** | **7** |

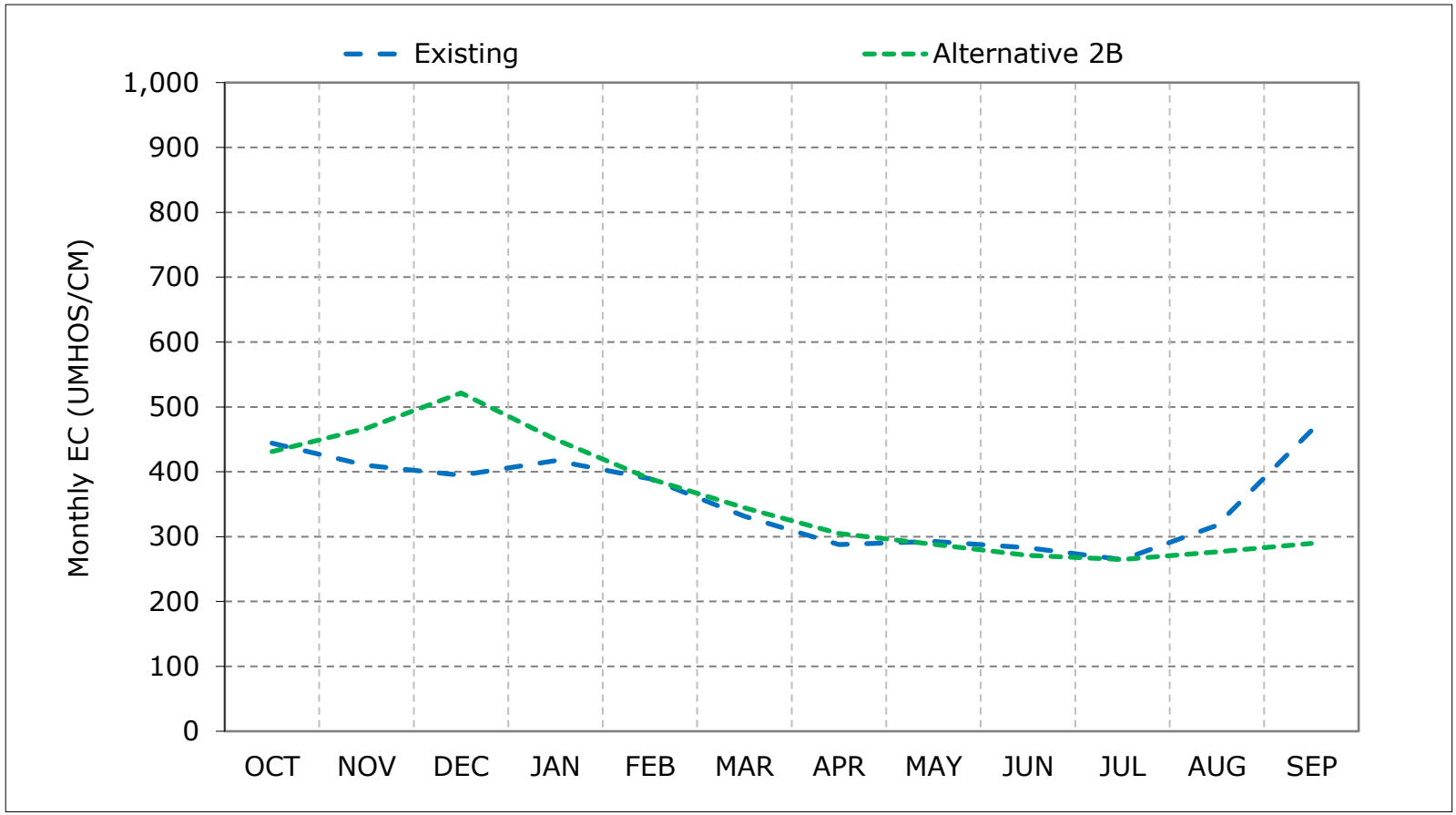
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 18-1. Old River at Highway 4, Long-Term Average EC**



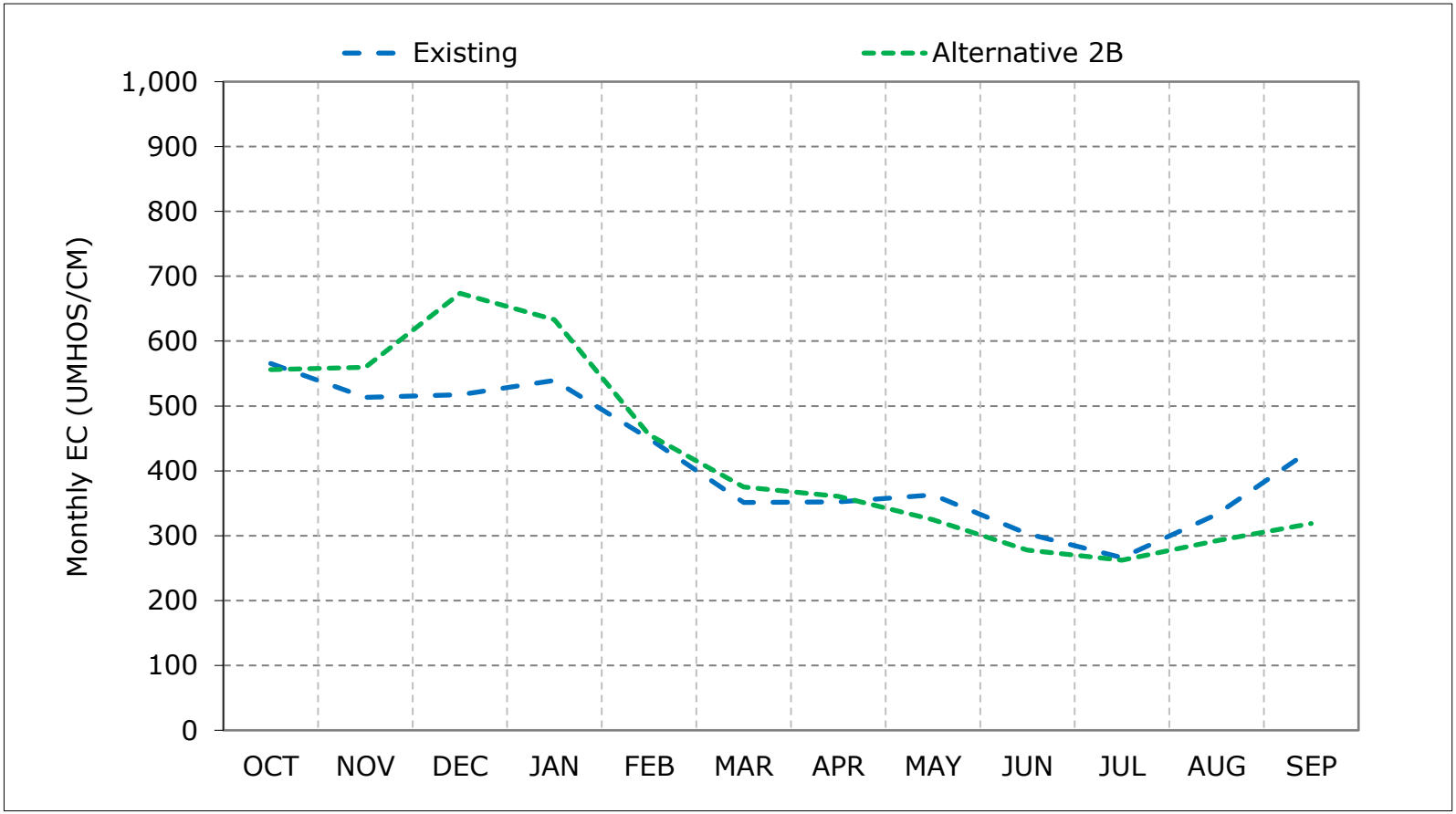

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 18-2. Old River at Highway 4, Wet Year Average EC**



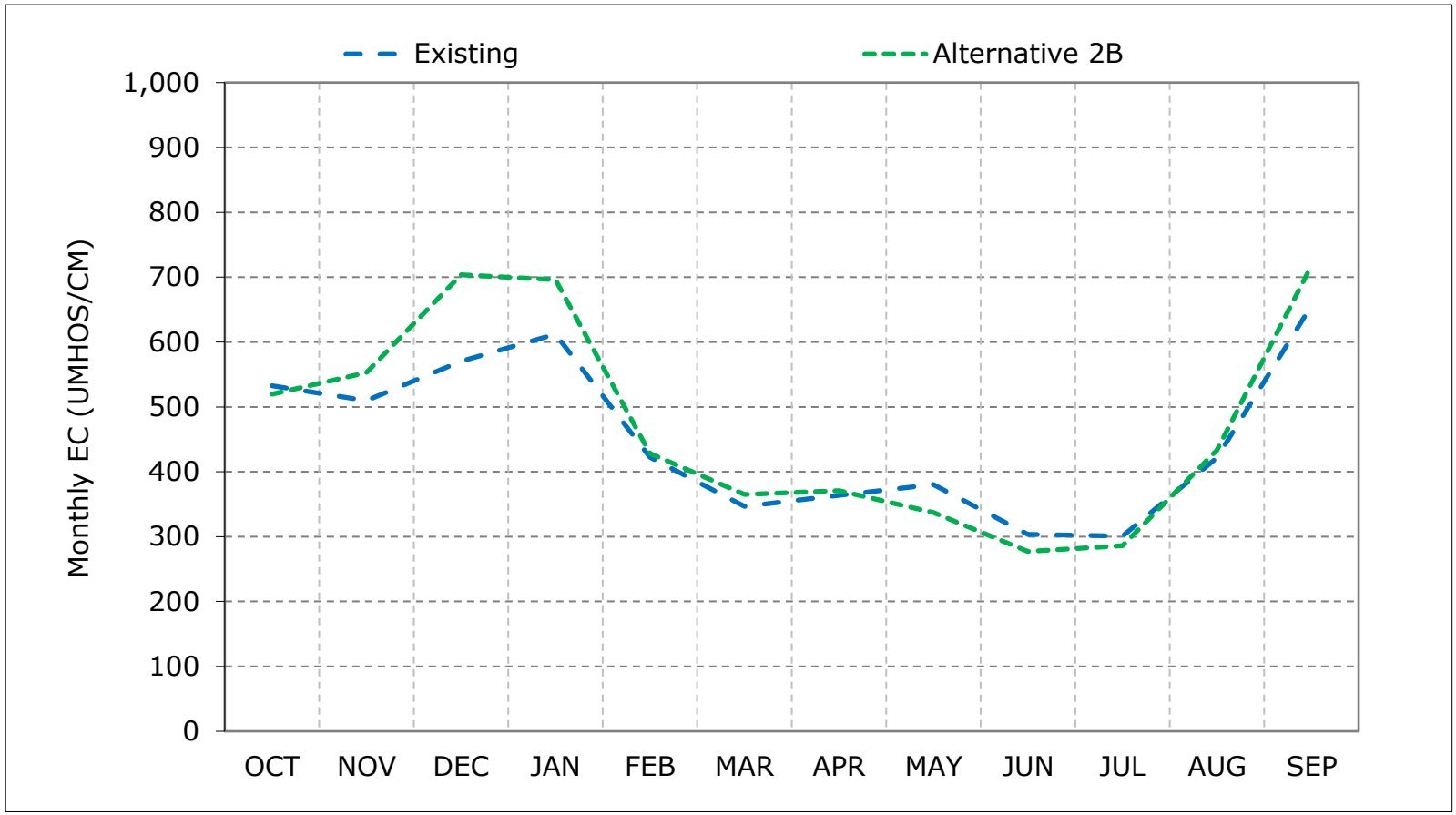

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 18-3. Old River at Highway 4, Above Normal Year Average EC**



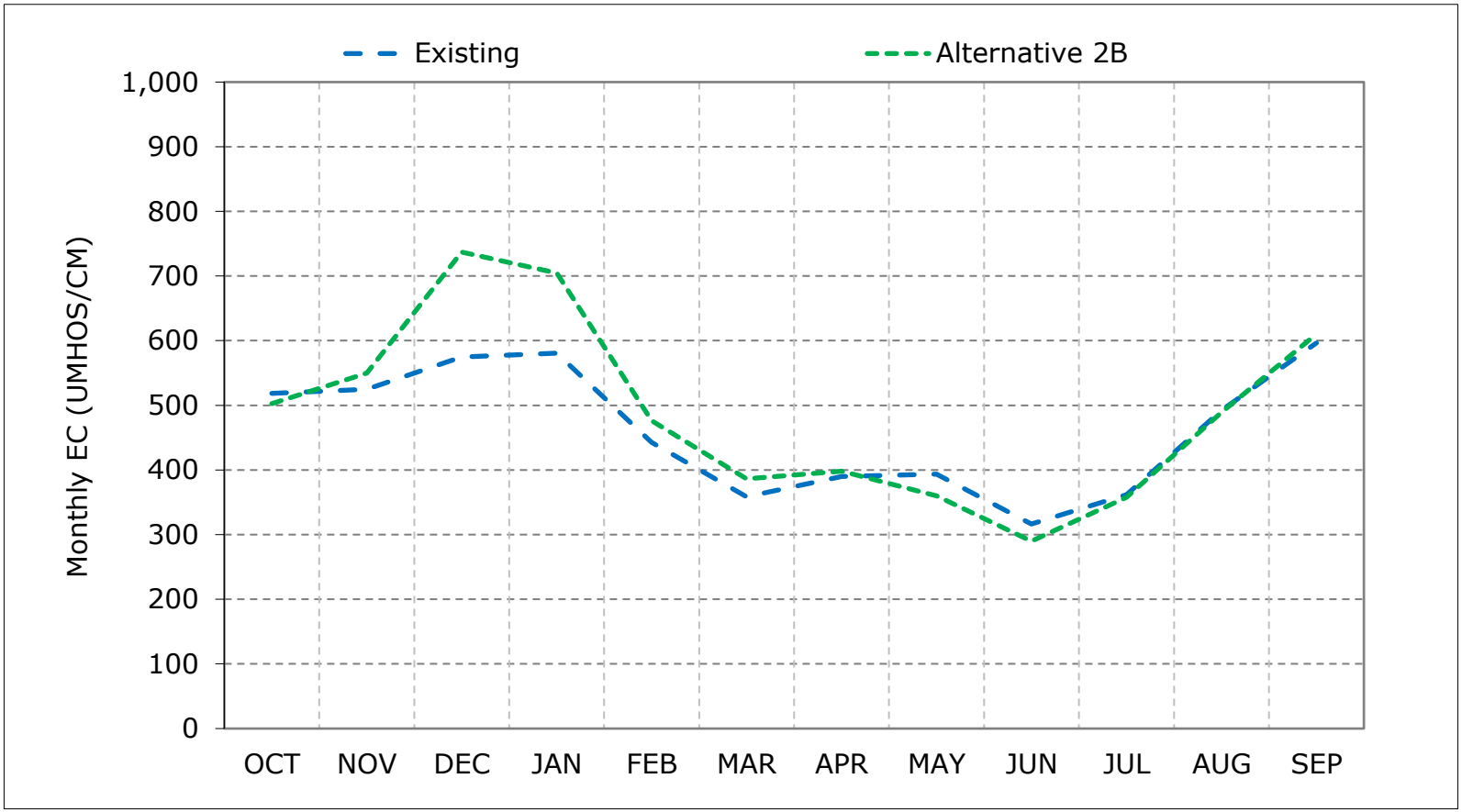

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 18-4. Old River at Highway 4, Below Normal Year Average EC**



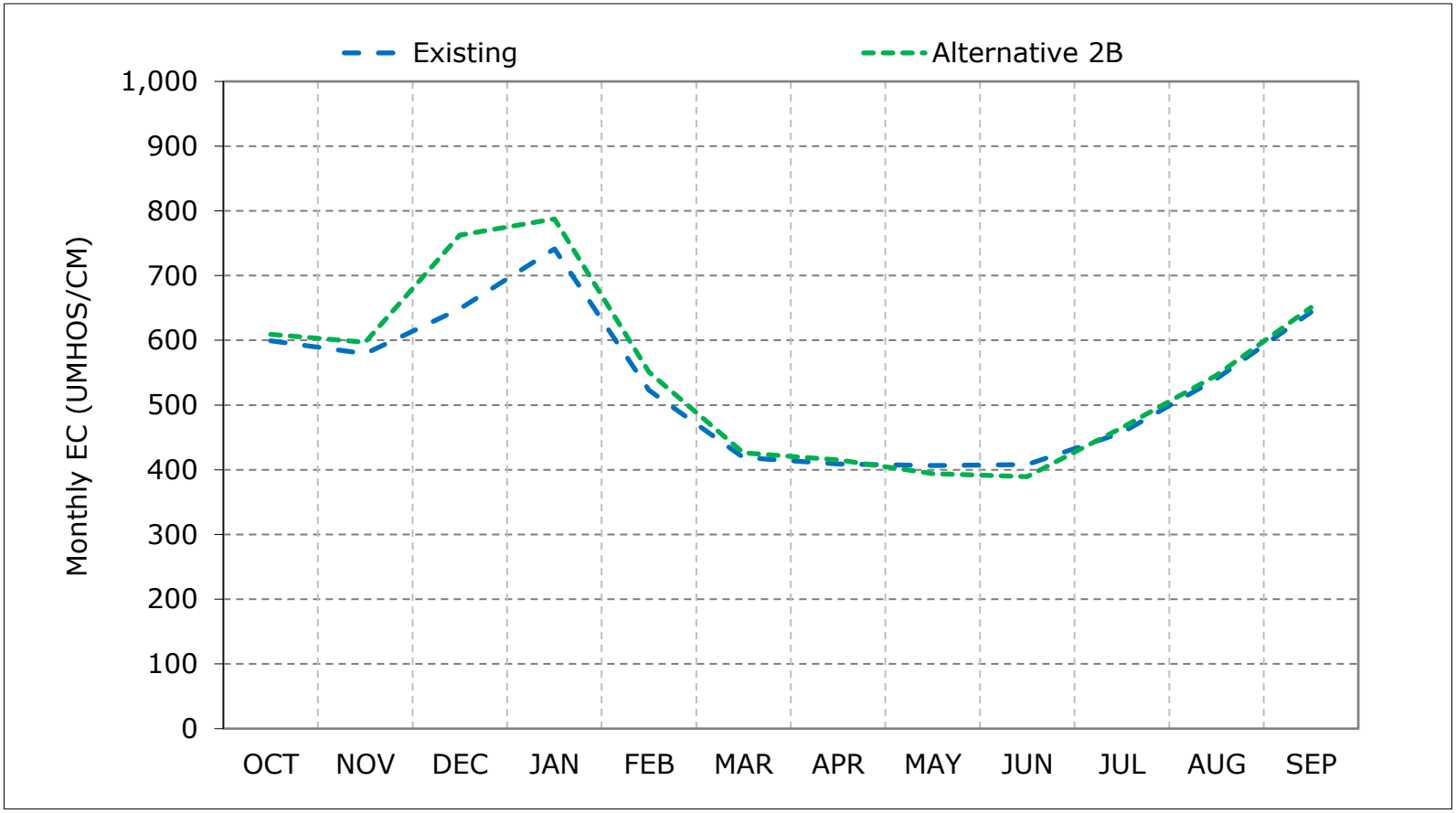

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 18-5. Old River at Highway 4, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 18-6. Old River at Highway 4, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 18-7. Old River at Highway 4, January EC**

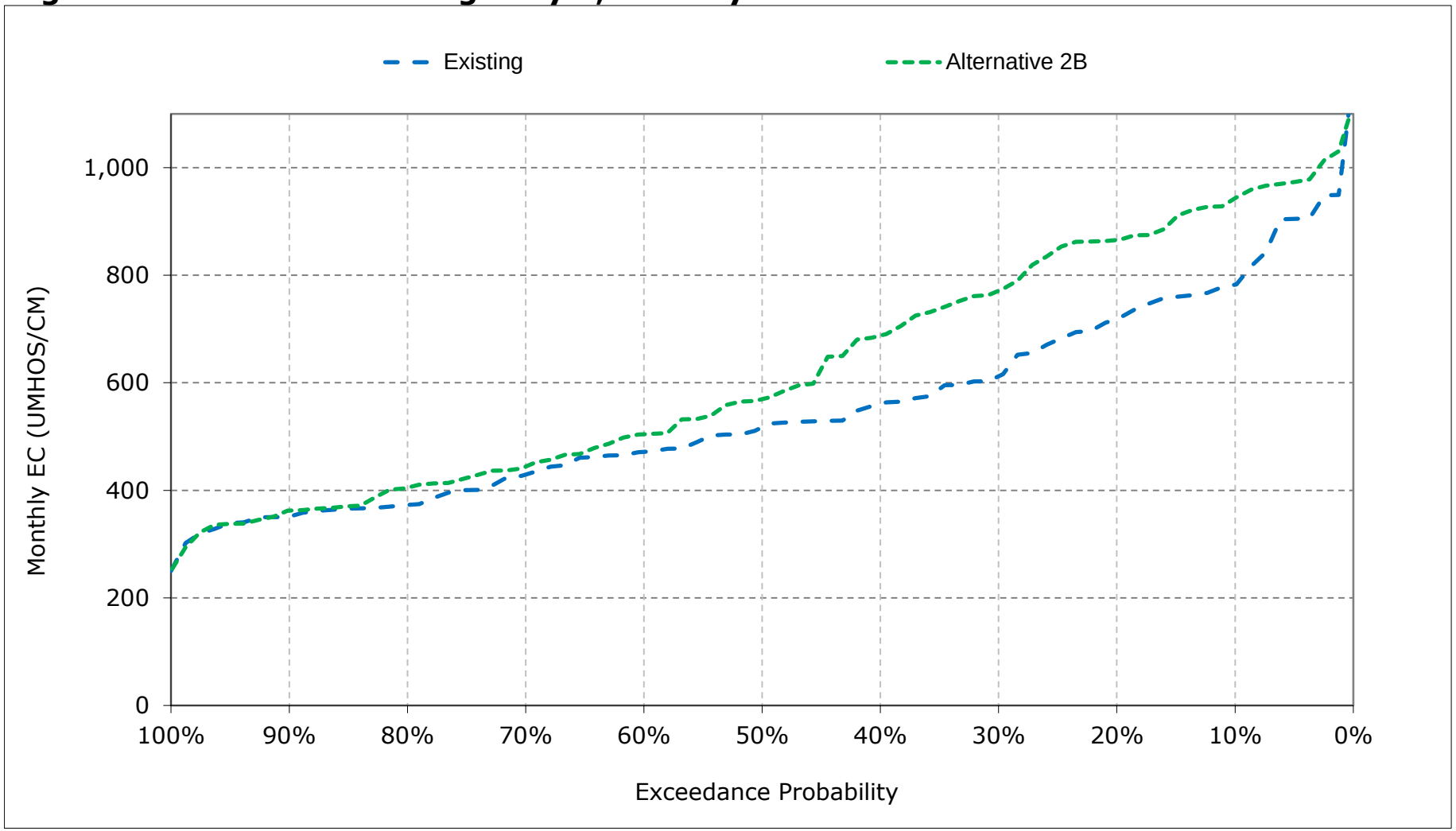


**Figure 18-8. Old River at Highway 4, February EC**

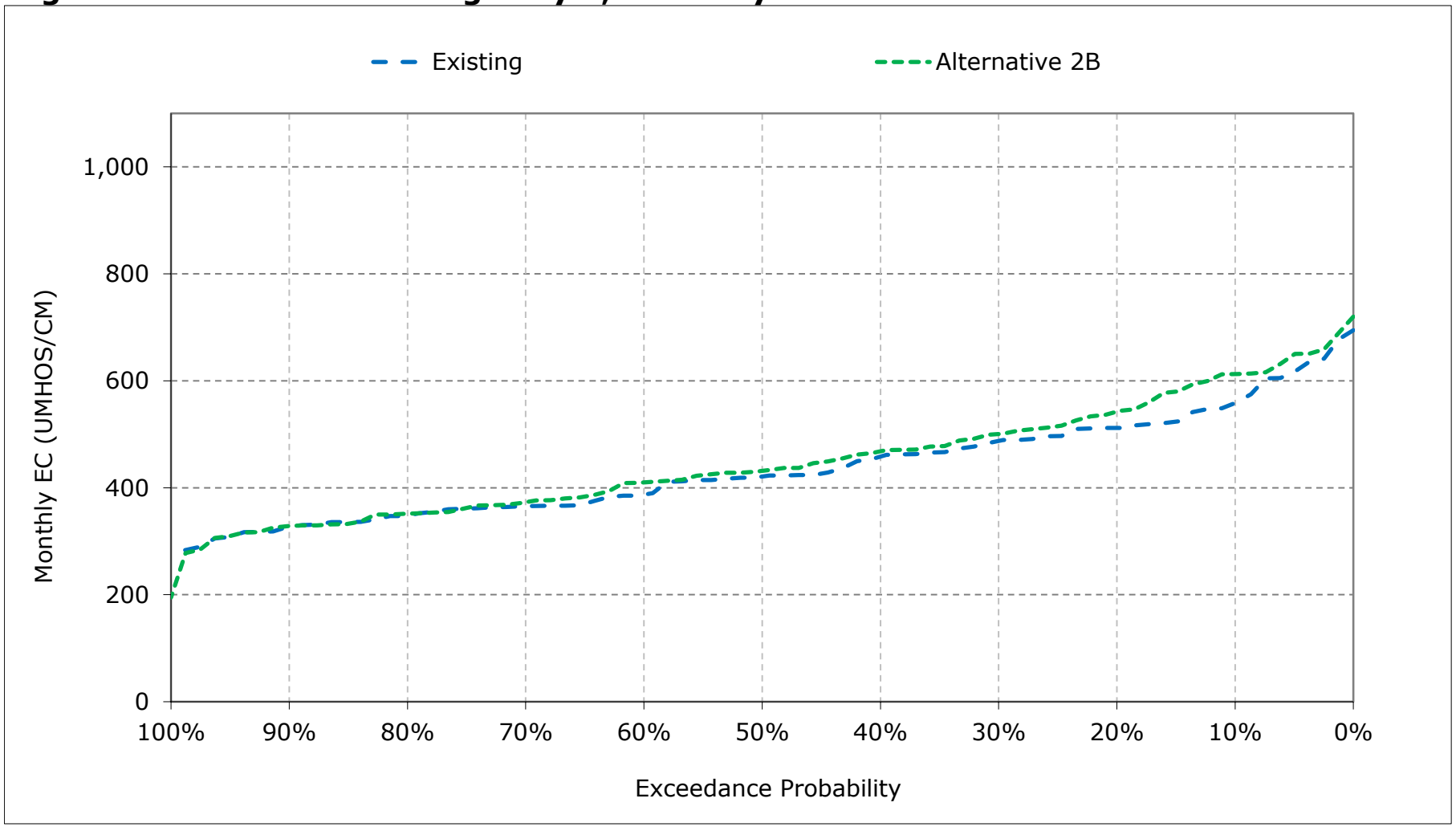


**Figure 18-9. Old River at Highway 4, March EC**

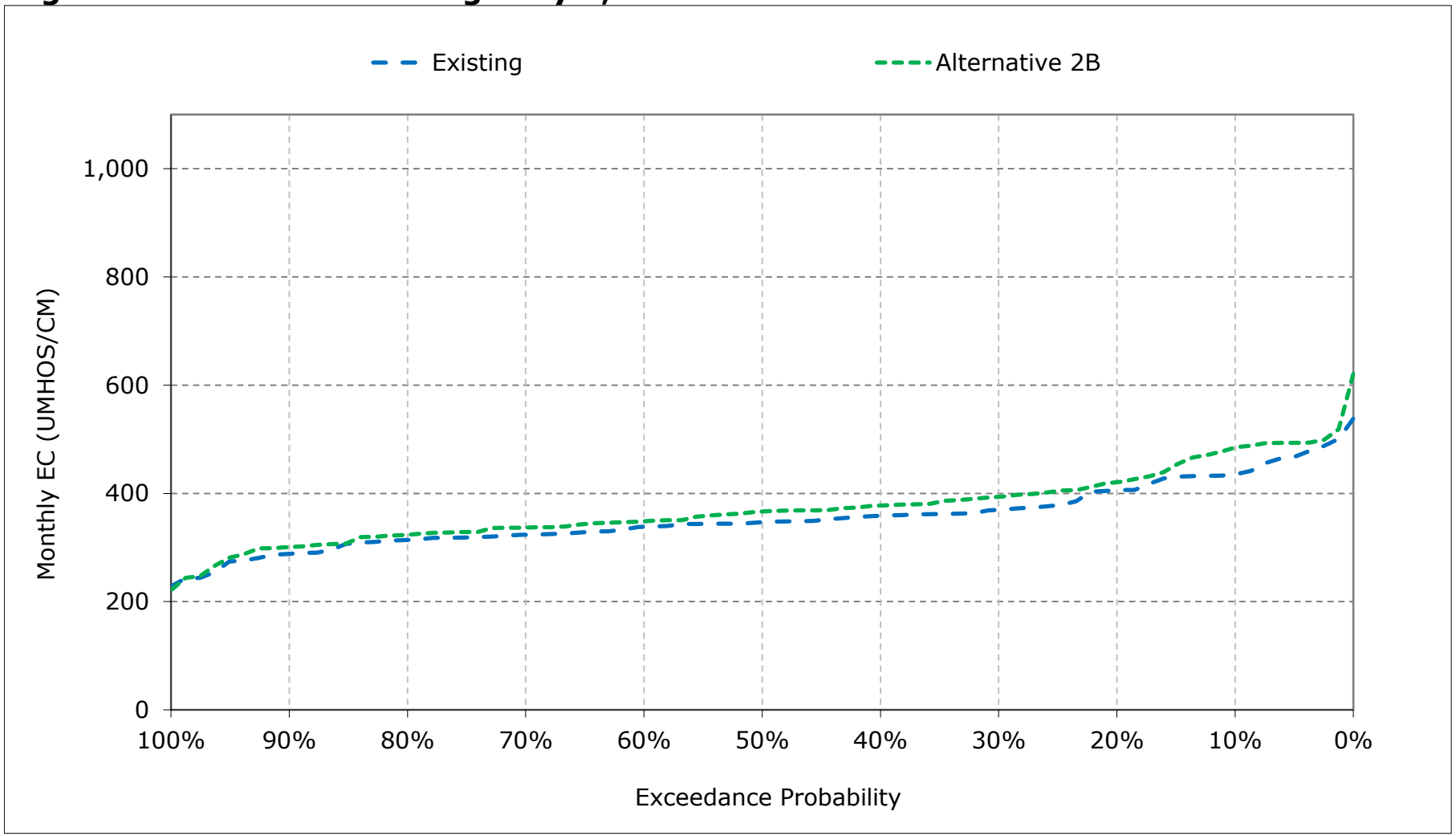


**Figure 18-10. Old River at Highway 4, April EC**

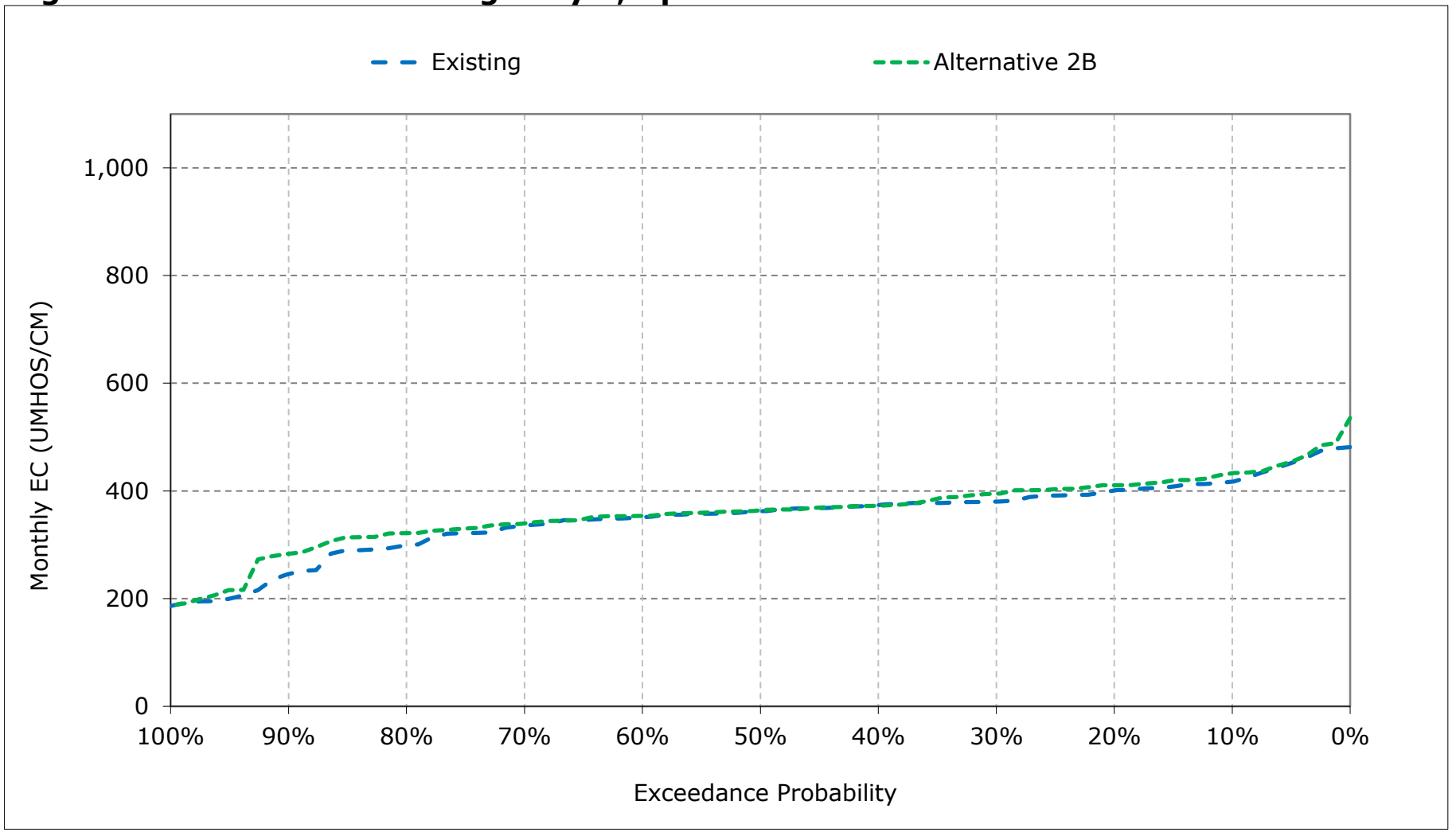


**Figure 18-11. Old River at Highway 4, May EC**

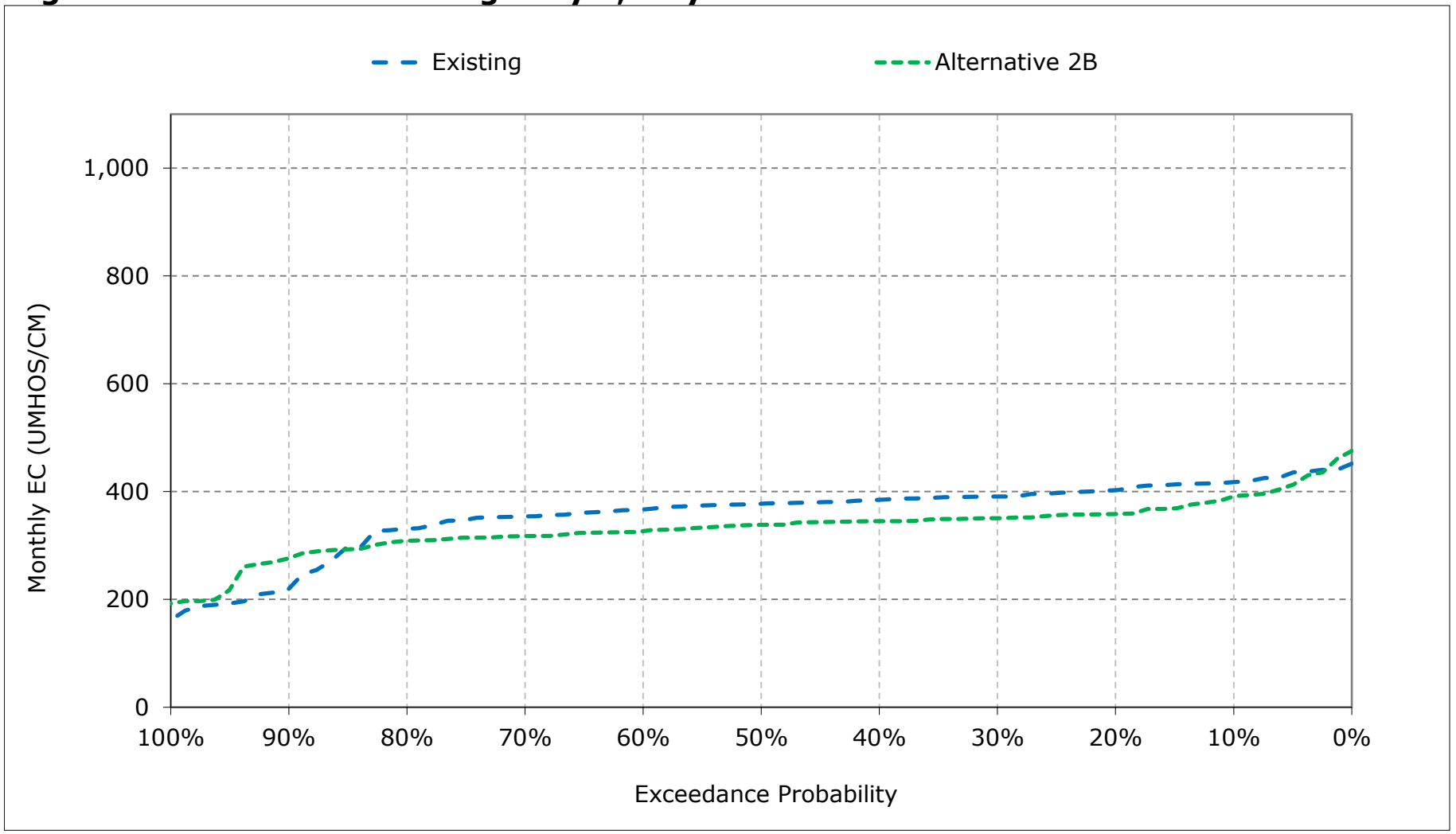


**Figure 18-12. Old River at Highway 4, June EC**

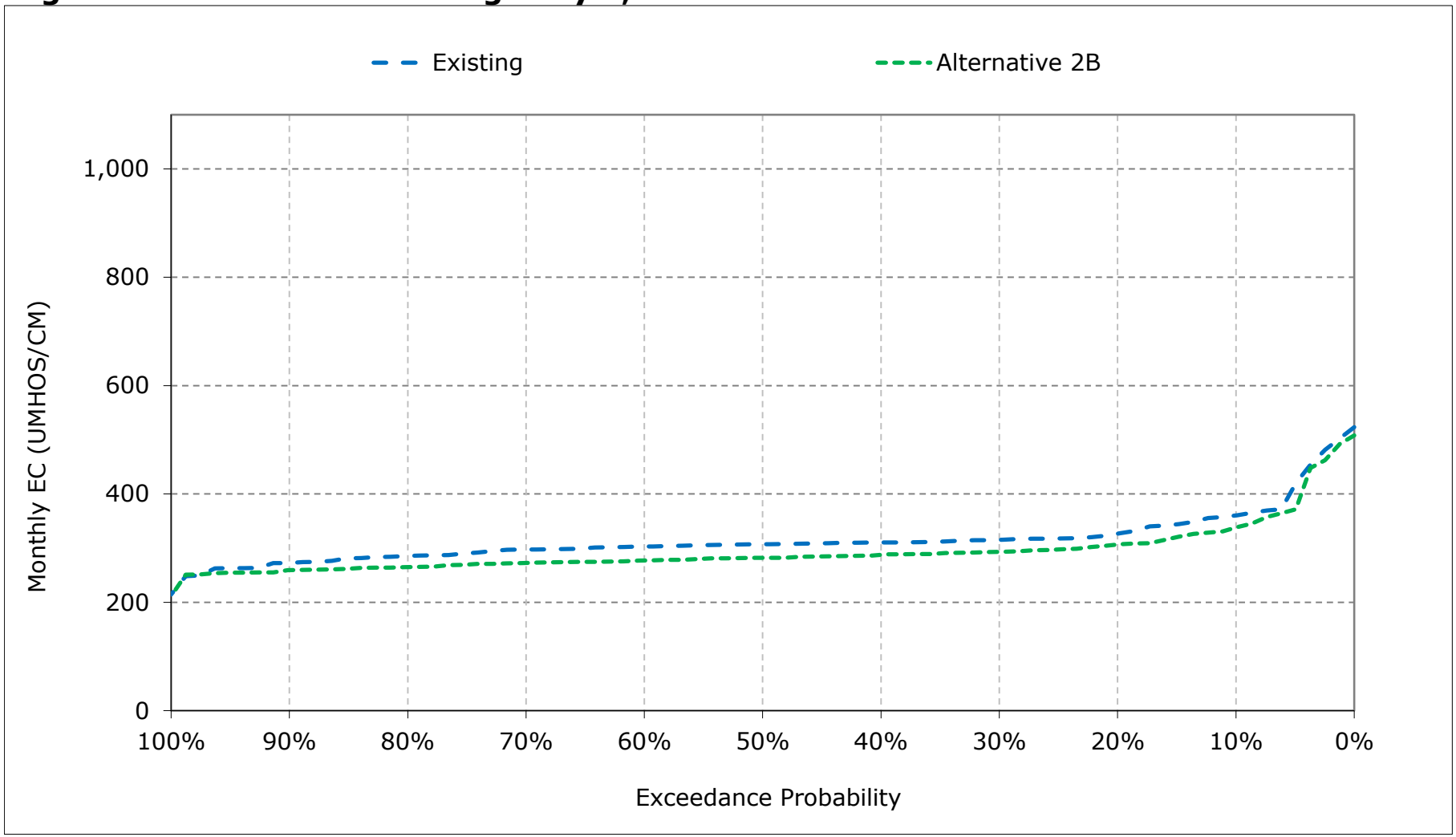


**Figure 18-13. Old River at Highway 4, July EC**

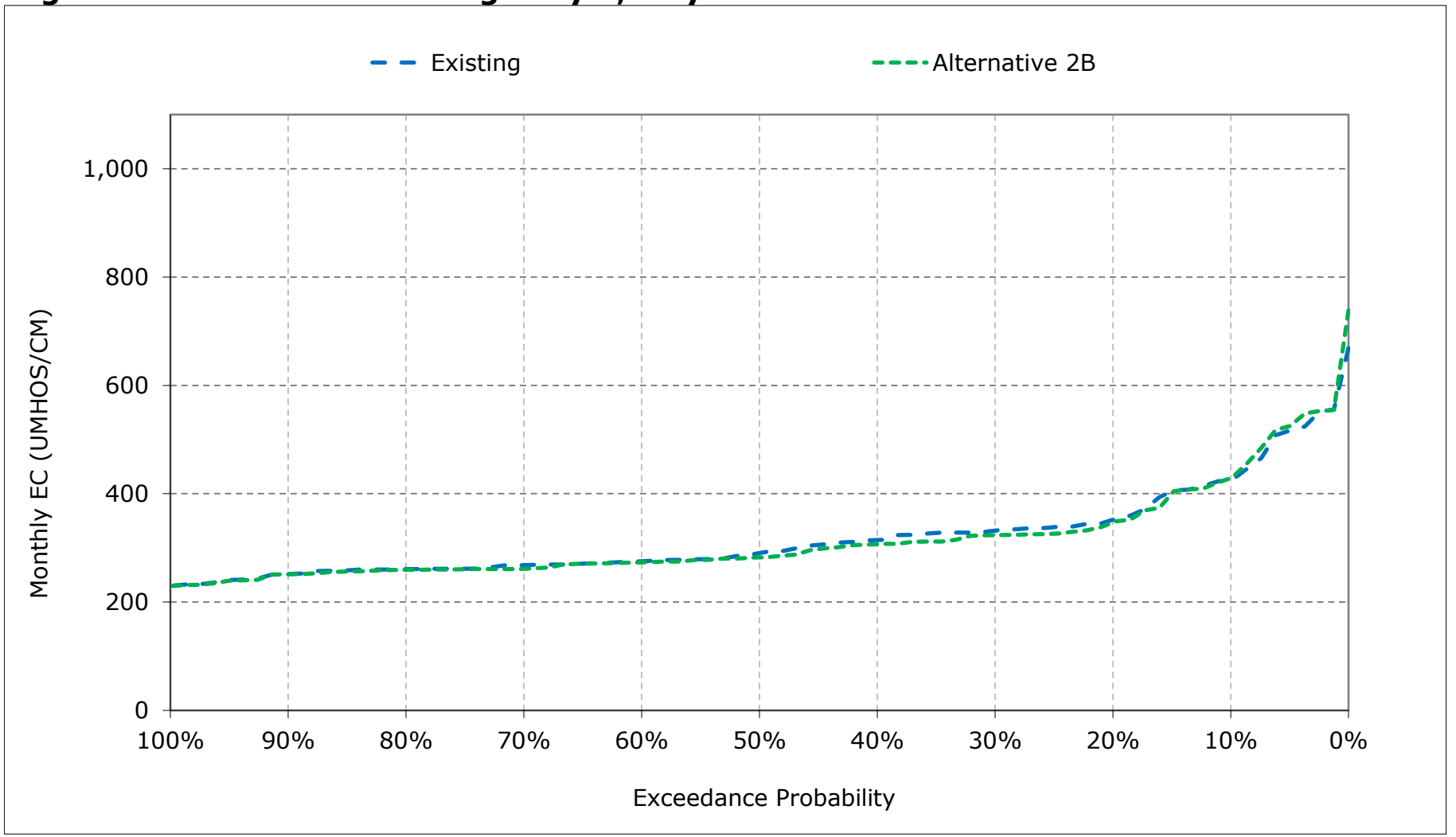


**Figure 18-14. Old River at Highway 4, August EC**

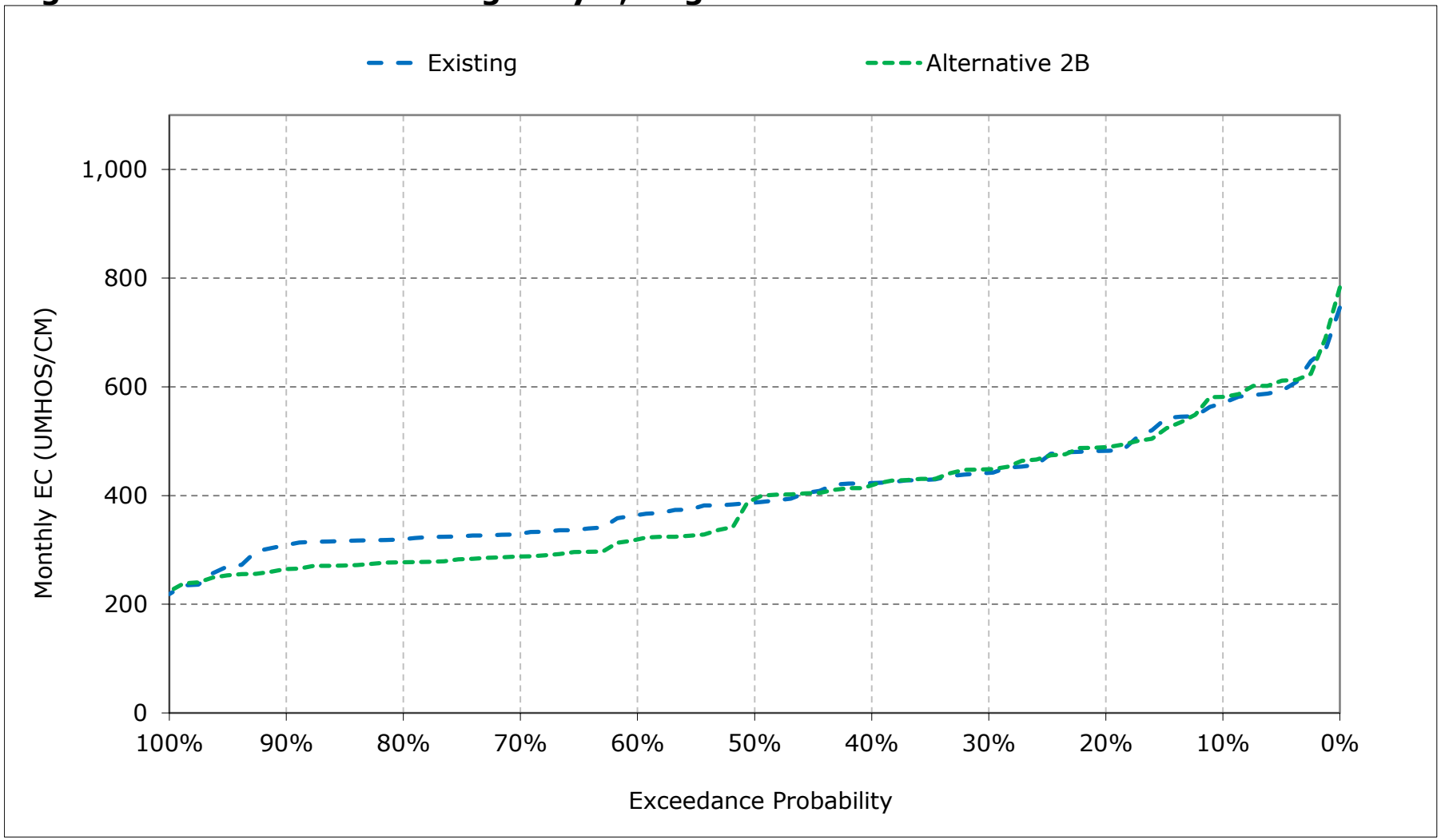


**Figure 18-15. Old River at Highway 4, September EC**

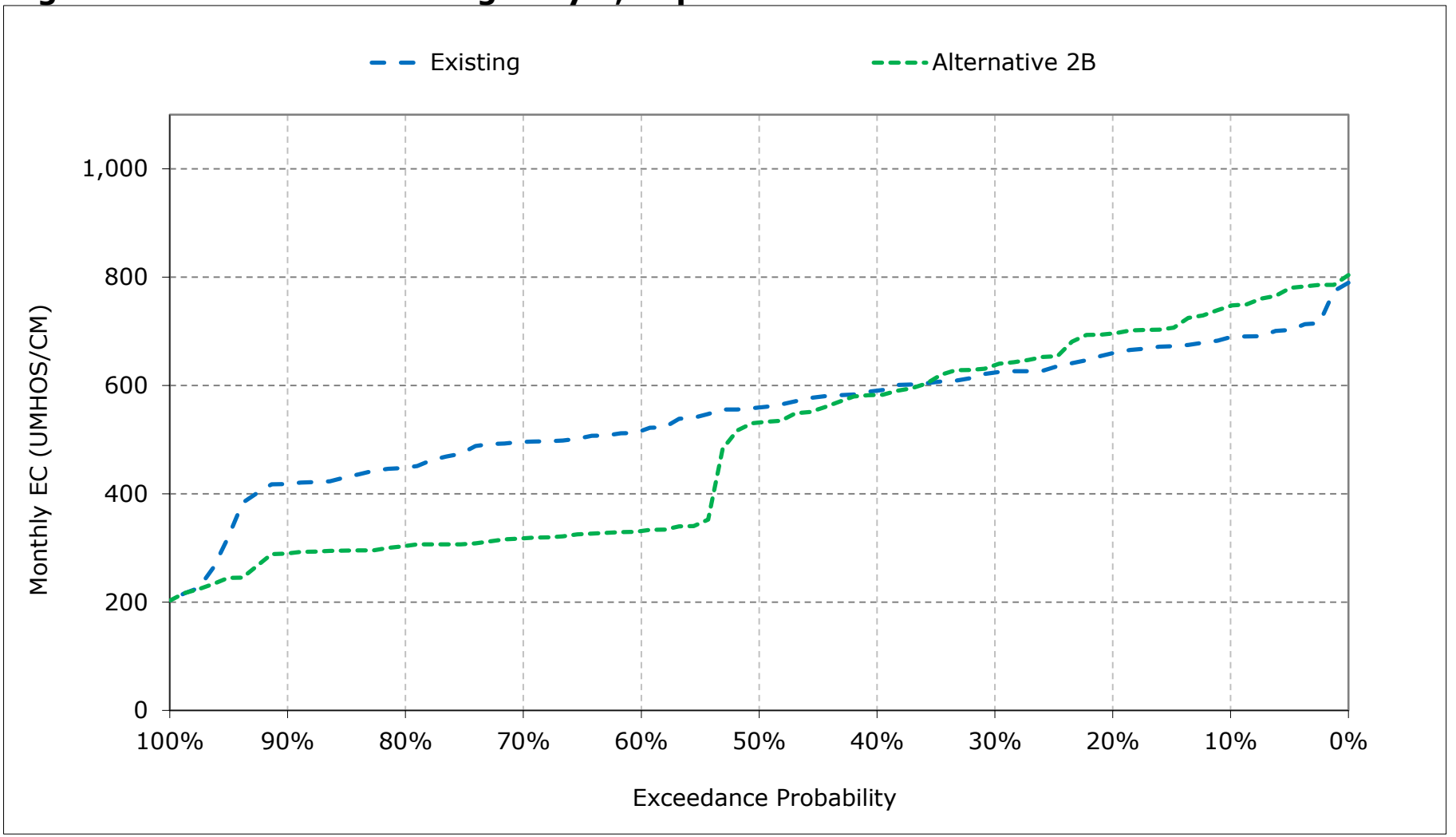


**Figure 18-16. Old River at Highway 4, October EC**

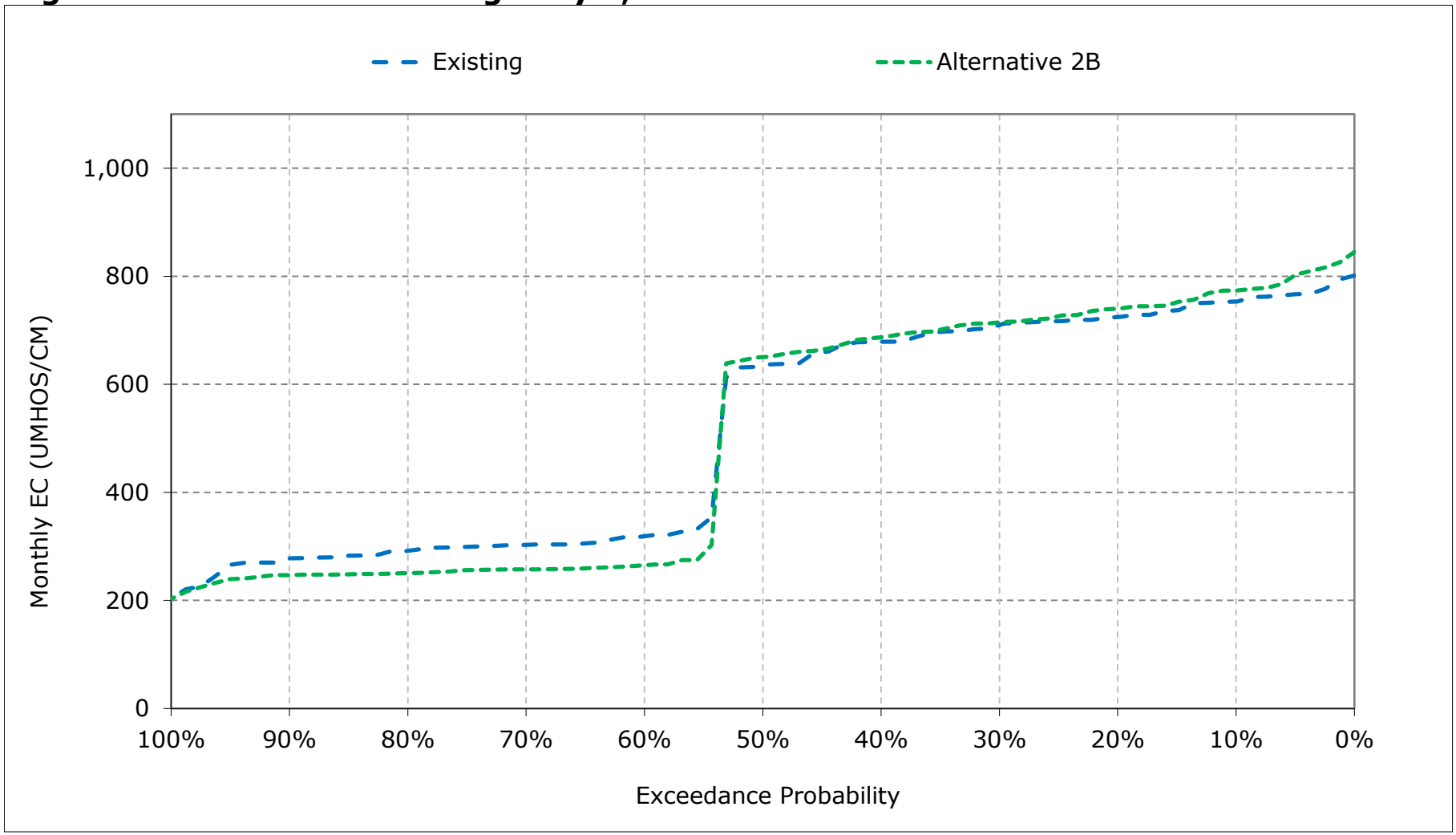


**Figure 18-17. Old River at Highway 4, November EC**

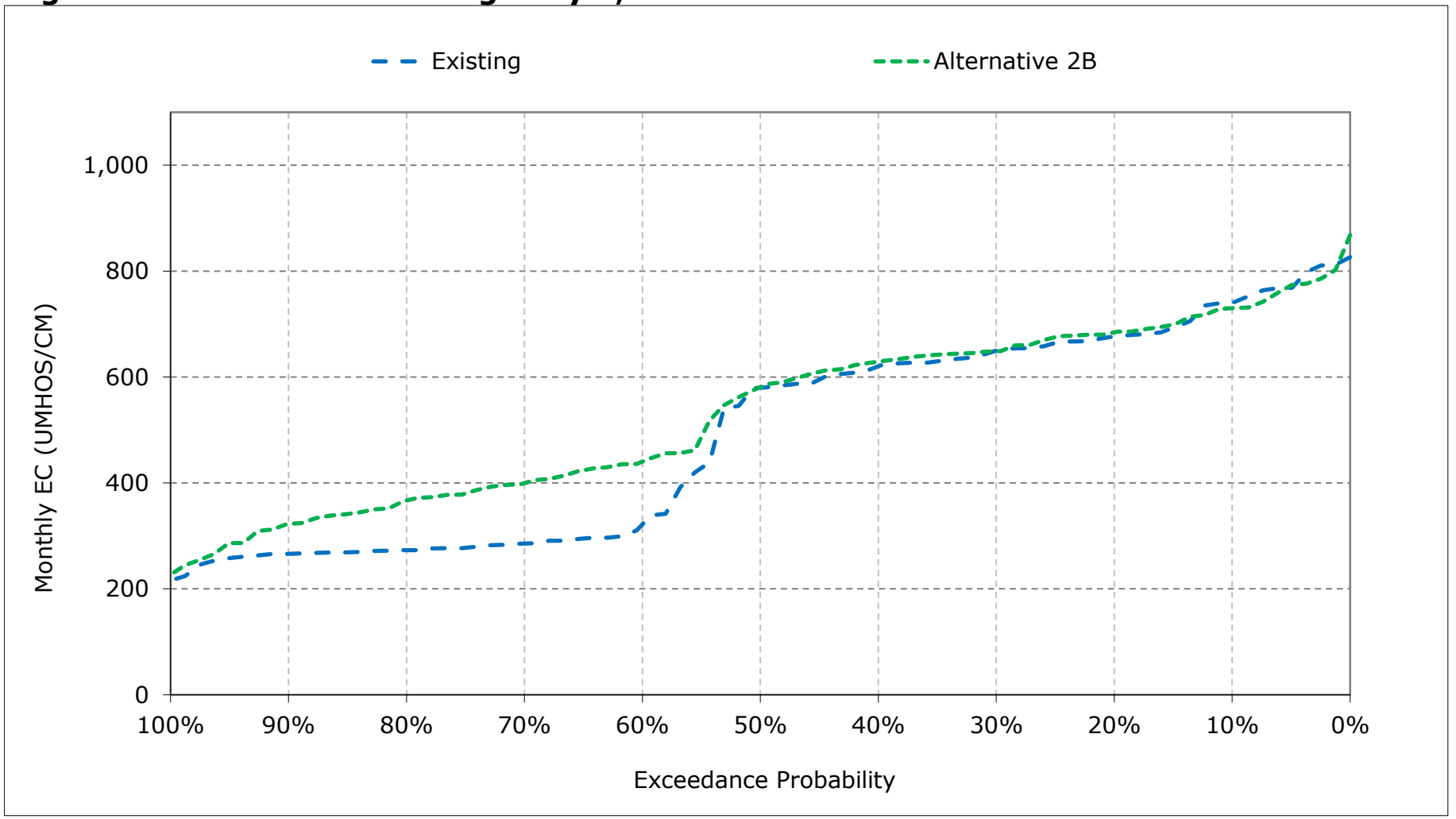
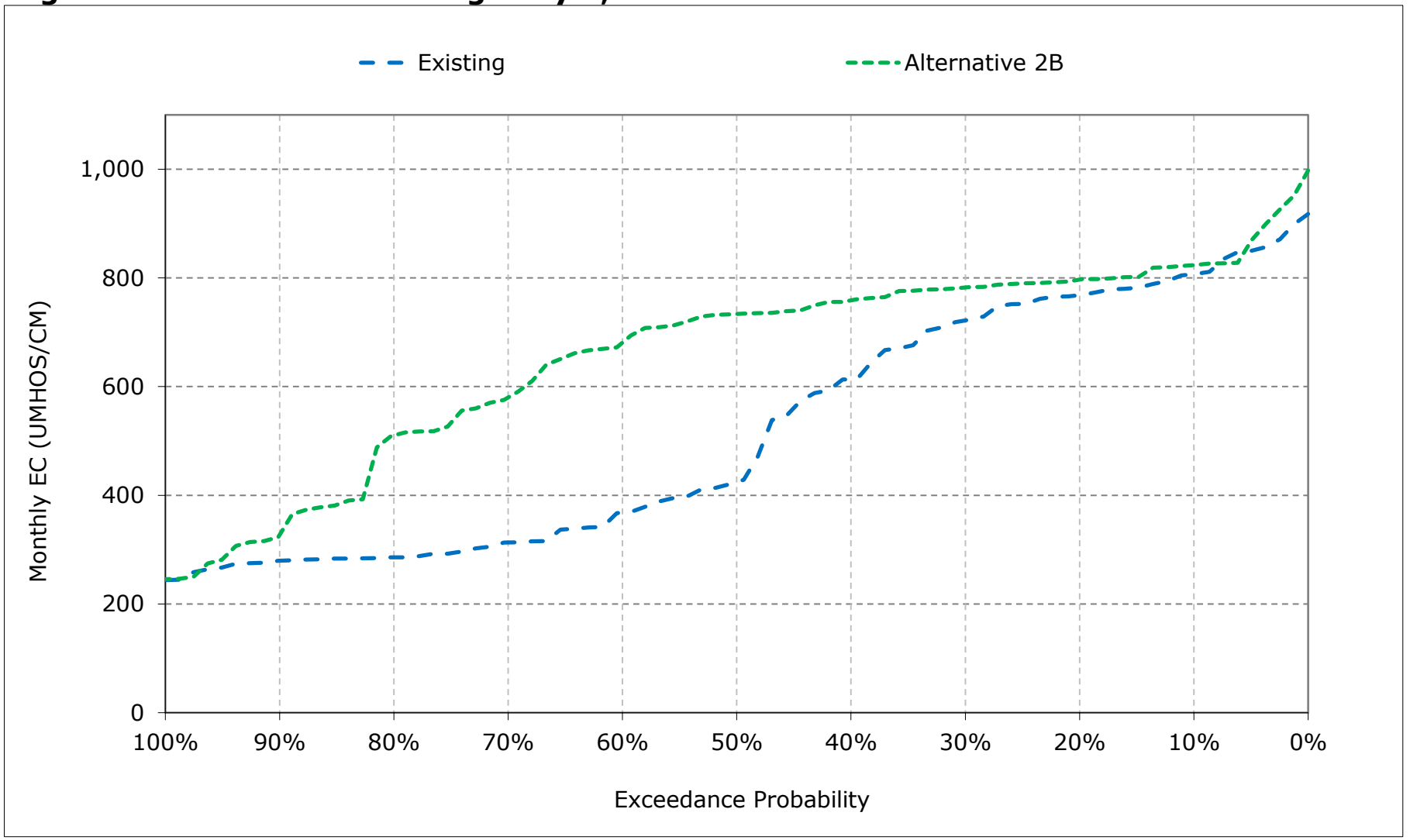


**Figure 18-18. Old River at Highway 4, December EC**



## Table 19-1. Victoria Canal Salinity, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 512 | 528 | 585 | 672 | 620 | 535 | 496 | 471 | 426 | 368 | 427 | 458 |
| **20%** | 490 | 483 | 556 | 646 | 576 | 497 | 470 | 453 | 386 | 356 | 378 | 446 |
| **30%** | 477 | 467 | 538 | 583 | 550 | 481 | 450 | 438 | 375 | 327 | 350 | 439 |
| **40%** | 467 | 453 | 514 | 553 | 537 | 464 | 430 | 420 | 369 | 310 | 330 | 427 |
| **50%** | 446 | 431 | 436 | 526 | 503 | 440 | 410 | 389 | 363 | 298 | 308 | 412 |
| **60%** | 368 | 359 | 377 | 502 | 482 | 419 | 369 | 374 | 358 | 289 | 301 | 394 |
| **70%** | 354 | 348 | 337 | 481 | 469 | 395 | 333 | 359 | 348 | 280 | 293 | 386 |
| **80%** | 333 | 341 | 318 | 448 | 432 | 347 | 302 | 327 | 336 | 271 | 284 | 355 |
| **90%** | 320 | 330 | 295 | 427 | 368 | 323 | 246 | 215 | 322 | 258 | 270 | 338 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 418 | 414 | 443 | 541 | 501 | 433 | 387 | 379 | 365 | 311 | 330 | 401 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 388 | 377 | 400 | 477 | 428 | 362 | 292 | 293 | 330 | 303 | 285 | 374 |
| **Above Normal (15%)** | 440 | 433 | 440 | 544 | 528 | 427 | 375 | 370 | 360 | 295 | 281 | 344 |
| **Below Normal (17%)** | 421 | 414 | 455 | 572 | 513 | 447 | 402 | 398 | 360 | 282 | 321 | 425 |
| **Dry (22%)** | 420 | 424 | 463 | 549 | 535 | 488 | 462 | 438 | 376 | 301 | 380 | 418 |
| **Critical (15%)** | 451 | 463 | 498 | 628 | 568 | 492 | 471 | 466 | 432 | 391 | 416 | 465 |

### Alternative 2B

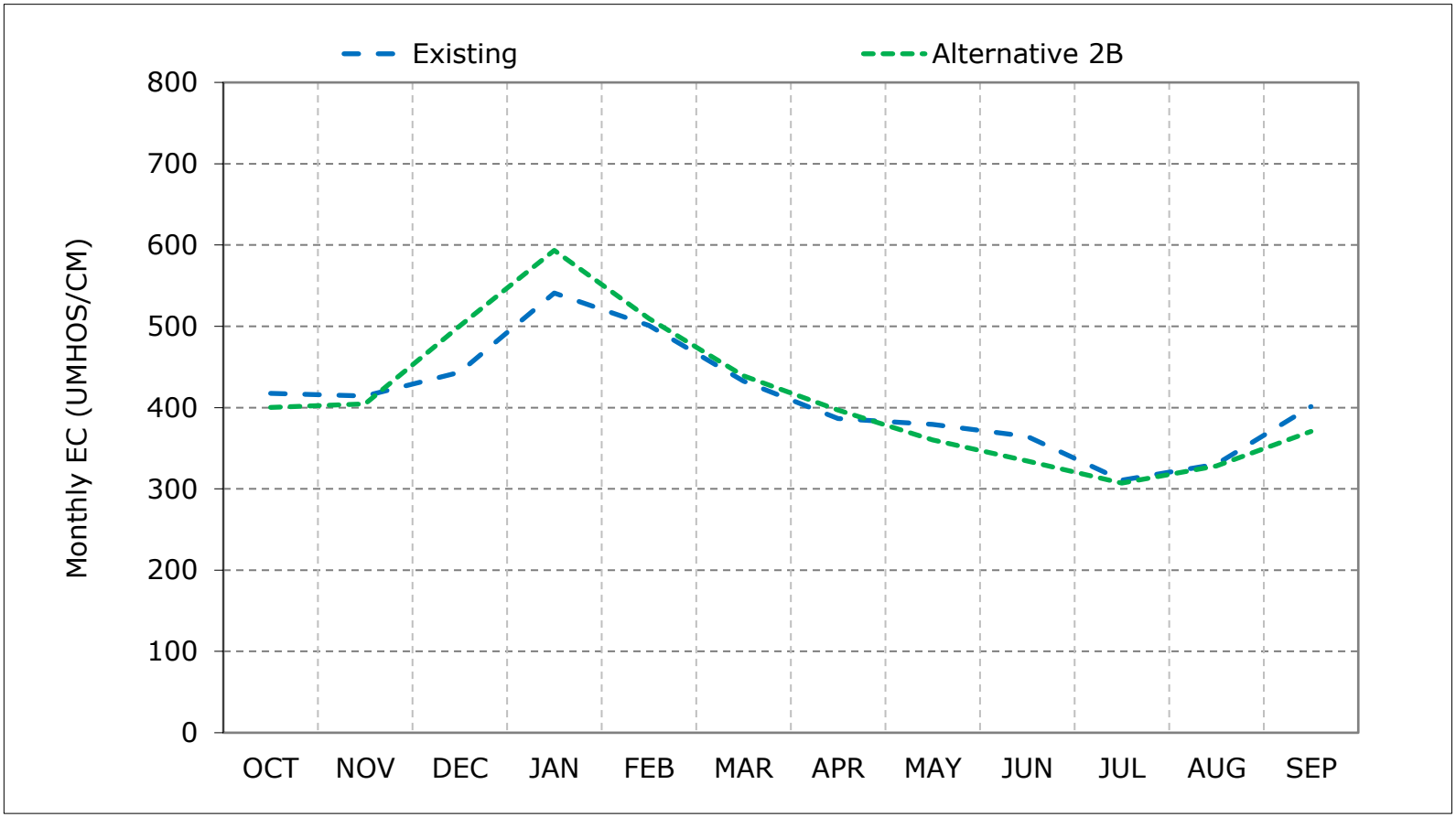
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 527 | 523 | 603 | 754 | 650 | 555 | 502 | 436 | 374 | 368 | 432 | 468 |
| **20%** | 497 | 501 | 565 | 724 | 604 | 509 | 470 | 408 | 354 | 355 | 367 | 450 |
| **30%** | 487 | 467 | 553 | 672 | 576 | 490 | 451 | 396 | 341 | 322 | 348 | 440 |
| **40%** | 475 | 449 | 532 | 646 | 534 | 470 | 437 | 378 | 335 | 305 | 331 | 422 |
| **50%** | 462 | 437 | 516 | 569 | 512 | 446 | 418 | 367 | 331 | 295 | 306 | 398 |
| **60%** | 302 | 335 | 498 | 552 | 486 | 424 | 384 | 356 | 327 | 283 | 298 | 301 |
| **70%** | 295 | 324 | 470 | 516 | 465 | 384 | 352 | 346 | 321 | 273 | 291 | 295 |
| **80%** | 287 | 313 | 432 | 477 | 432 | 359 | 320 | 327 | 312 | 262 | 277 | 288 |
| **90%** | 282 | 303 | 356 | 435 | 366 | 328 | 280 | 257 | 299 | 256 | 265 | 282 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 400 | 404 | 500 | 593 | 510 | 439 | 397 | 360 | 334 | 307 | 328 | 371 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 364 | 367 | 450 | 501 | 428 | 366 | 312 | 295 | 318 | 302 | 281 | 283 |
| **Above Normal (15%)** | 423 | 426 | 512 | 616 | 543 | 434 | 383 | 350 | 332 | 289 | 276 | 292 |
| **Below Normal (17%)** | 399 | 403 | 504 | 628 | 514 | 453 | 422 | 373 | 327 | 275 | 322 | 452 |
| **Dry (22%)** | 403 | 413 | 529 | 632 | 554 | 503 | 475 | 408 | 332 | 297 | 377 | 422 |
| **Critical (15%)** | 454 | 451 | 548 | 673 | 584 | 490 | 447 | 426 | 385 | 388 | 417 | 468 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | **16** | -5 | **18** | **82** | **30** | **20** | **6** | -36 | -51 | **0** | **5** | **11** |
| **20%** | **7** | **18** | **9** | **78** | **29** | **12** | **1** | -45 | -33 | -1 | -11 | **4** |
| **30%** | **9** | -1 | **14** | **89** | **26** | **9** | **2** | -42 | -34 | -5 | -3 | **1** |
| **40%** | **8** | -4 | **18** | **93** | -3 | **6** | **7** | -42 | -34 | -5 | **1** | -5 |
| **50%** | **16** | **6** | **80** | **43** | **9** | **5** | **8** | -22 | -32 | -2 | -2 | -14 |
| **60%** | -67 | -24 | **121** | **50** | **4** | **4** | **15** | -18 | -31 | -5 | -2 | -93 |
| **70%** | -59 | -25 | **133** | **35** | -3 | -11 | **19** | -13 | -27 | -7 | -2 | -92 |
| **80%** | -46 | -28 | **114** | **28** | **1** | **12** | **18** | **0** | -24 | -9 | -7 | -67 |
| **90%** | -38 | -27 | **62** | **8** | -3 | **6** | **34** | **42** | -22 | -3 | -5 | -56 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | -17 | -10 | **57** | **52** | **9** | **6** | **10** | -19 | -30 | -4 | -2 | -31 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | -24 | -10 | **51** | **23** | 0 | **4** | **20** | **2** | -12 | -1 | -4 | -90 |
| **Above Normal (15%)** | -18 | -6 | **72** | **72** | **14** | **8** | **8** | -20 | -28 | -6 | -5 | -53 |
| **Below Normal (17%)** | -22 | -10 | **49** | **56** | **1** | **6** | **20** | -25 | -33 | -7 | **1** | **26** |
| **Dry (22%)** | -17 | -11 | **66** | **83** | **19** | **15** | **13** | -30 | -44 | -3 | -3 | **4** |
| **Critical (15%)** | **3** | -12 | **50** | **46** | **16** | -1 | -23 | -40 | -47 | -3 | **1** | **3** |

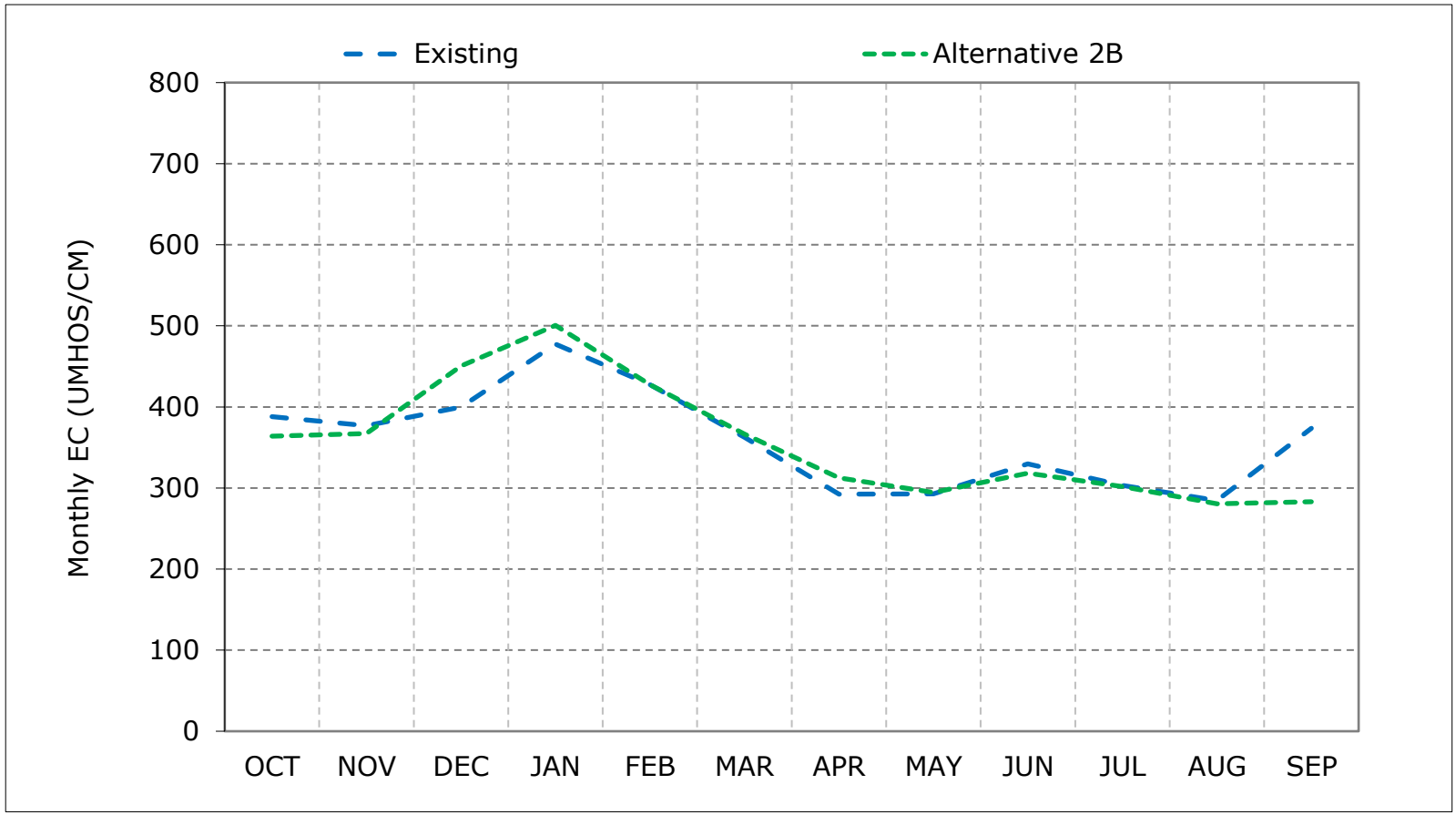
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 19-1. Victoria Canal Salinity, Long-Term Average EC**



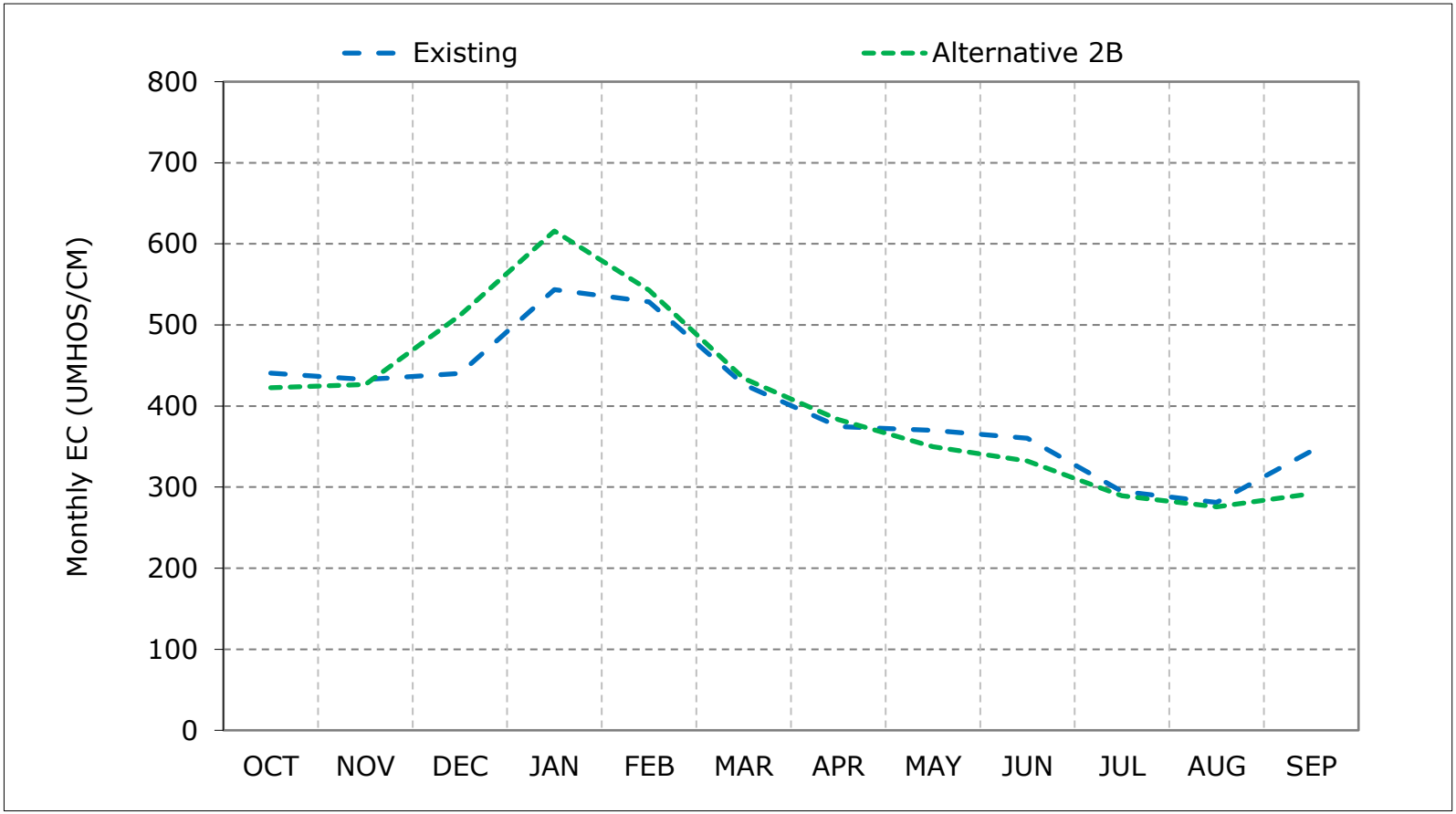

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 19-2. Victoria Canal Salinity, Wet Year Average EC**



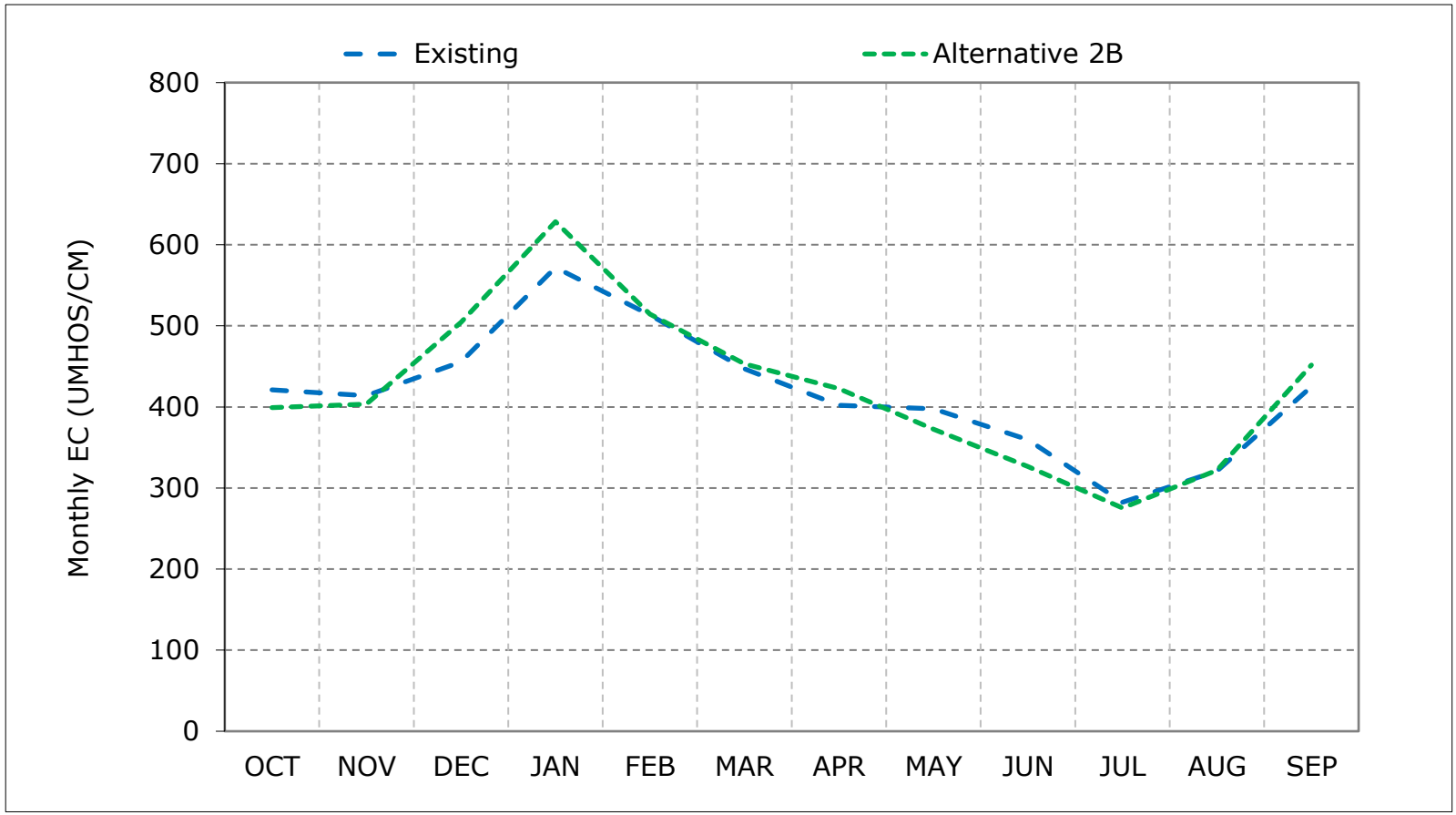

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 19-3. Victoria Canal Salinity, Above Normal Year Average EC**



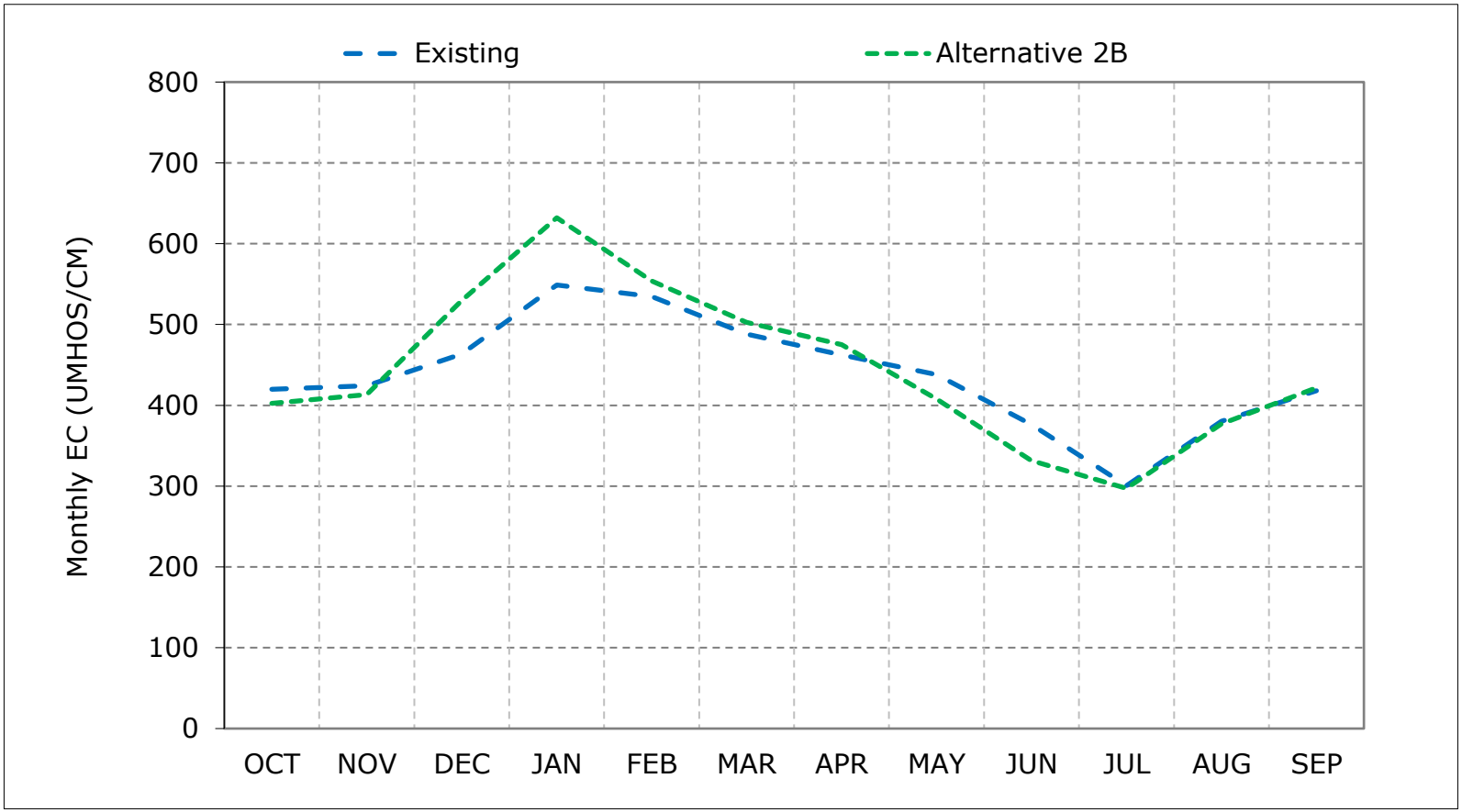

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 19-4. Victoria Canal Salinity, Below Normal Year Average EC**



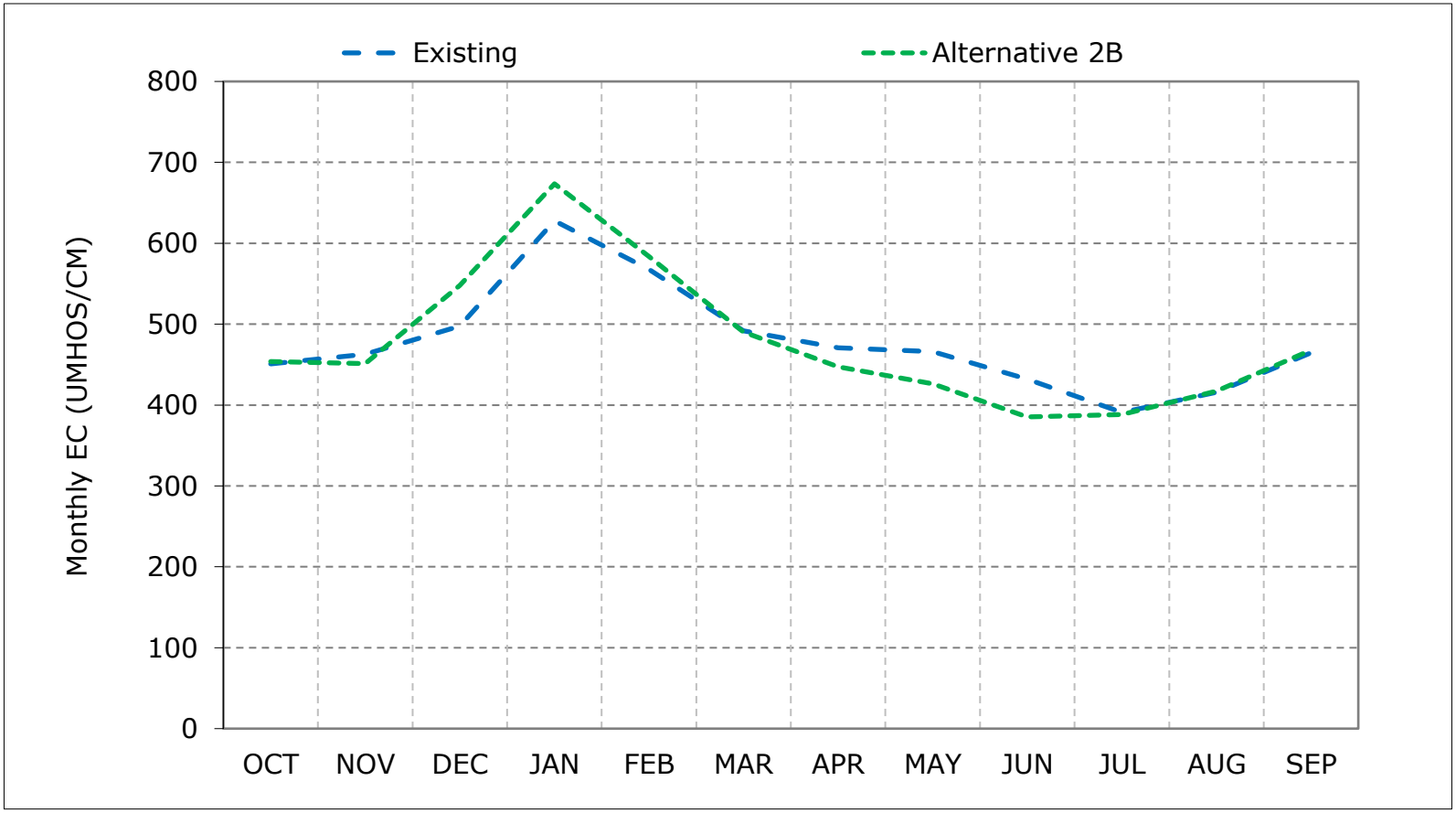

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 19-5. Victoria Canal Salinity, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 19-6. Victoria Canal Salinity, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 19-7. Victoria Canal Salinity, January EC**

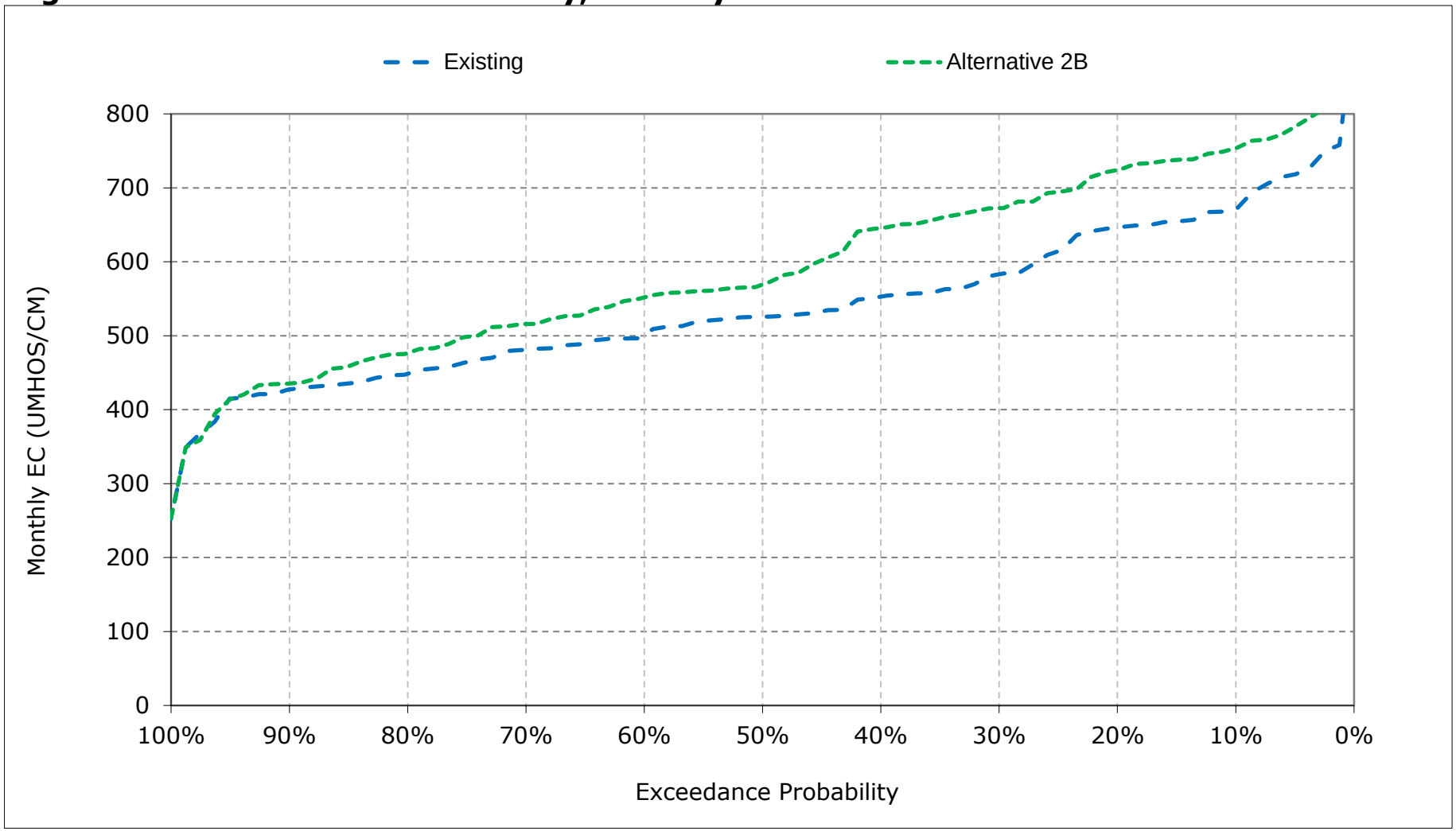


**Figure 19-8. Victoria Canal Salinity, February EC**

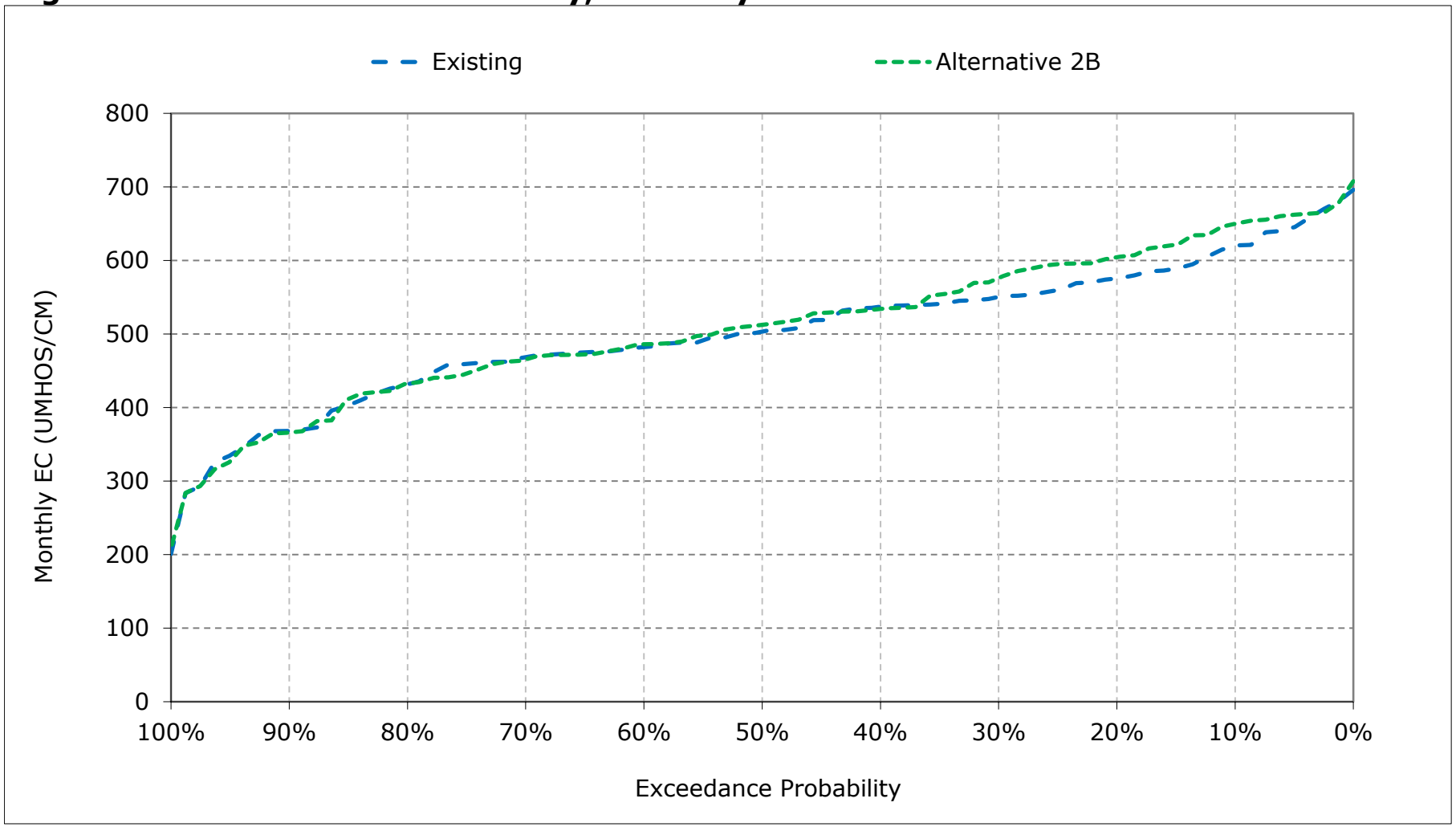


**Figure 19-9. Victoria Canal Salinity, March EC**

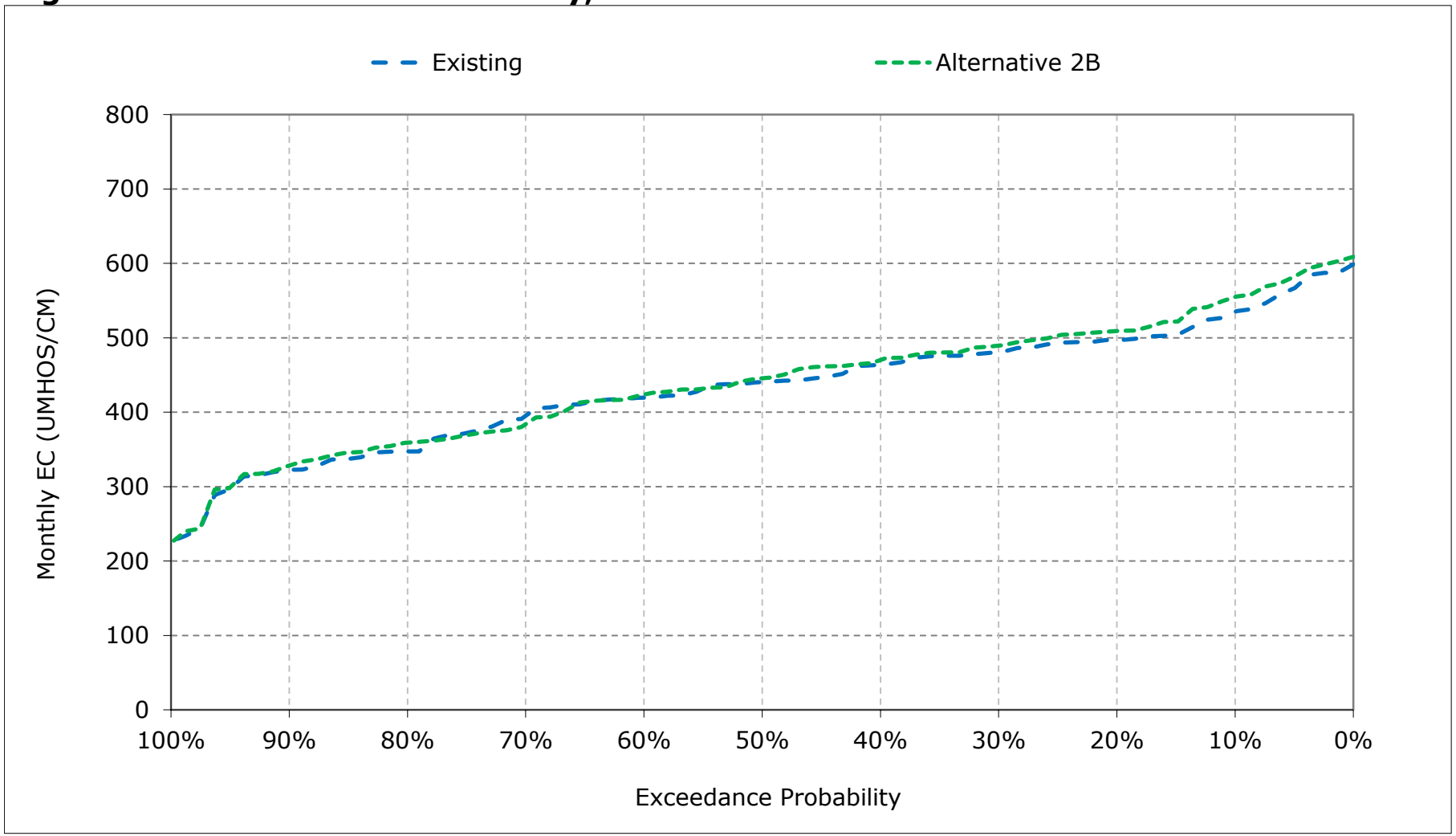


**Figure 19-10. Victoria Canal Salinity, April EC**

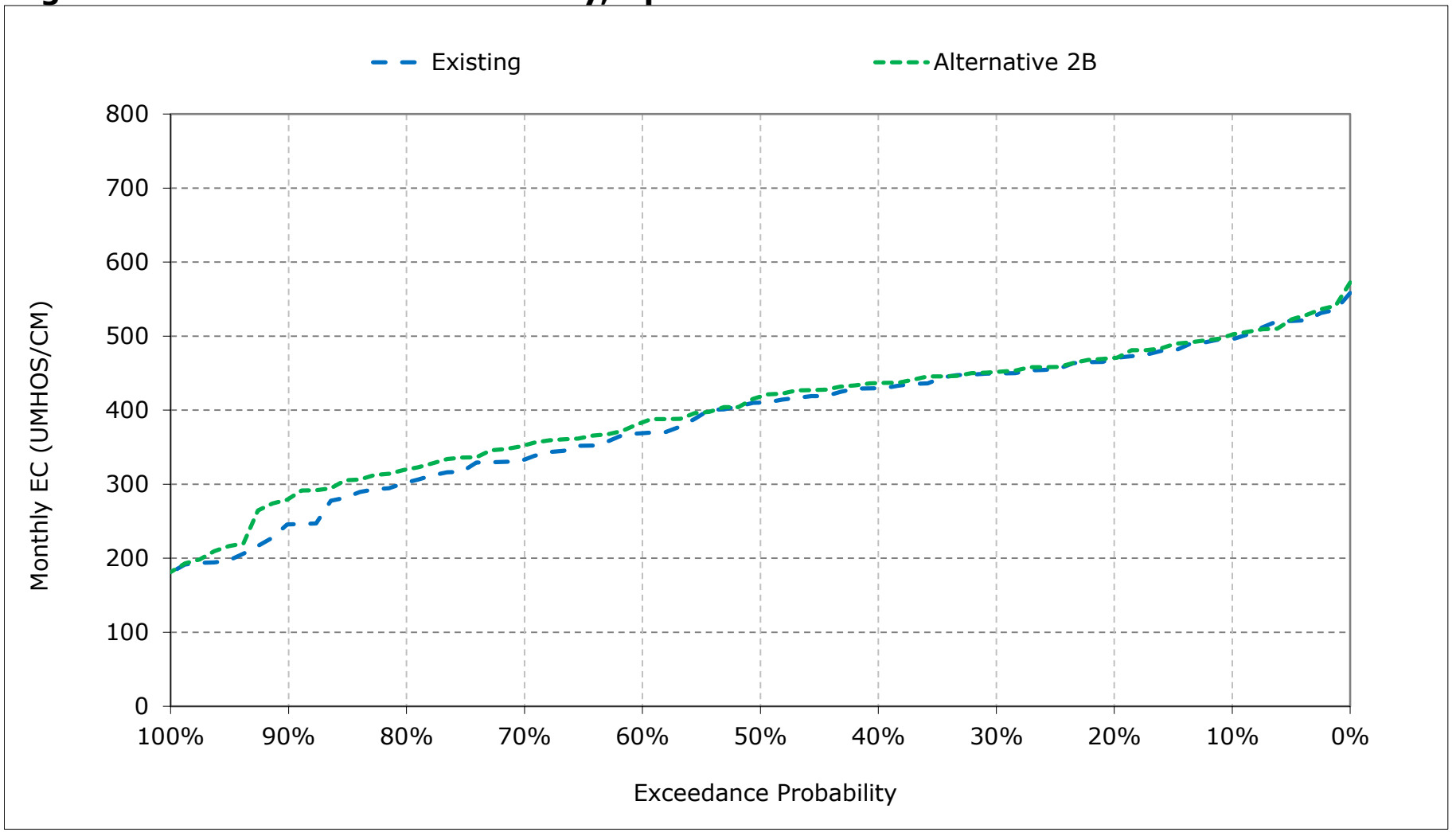


**Figure 19-11. Victoria Canal Salinity, May EC**

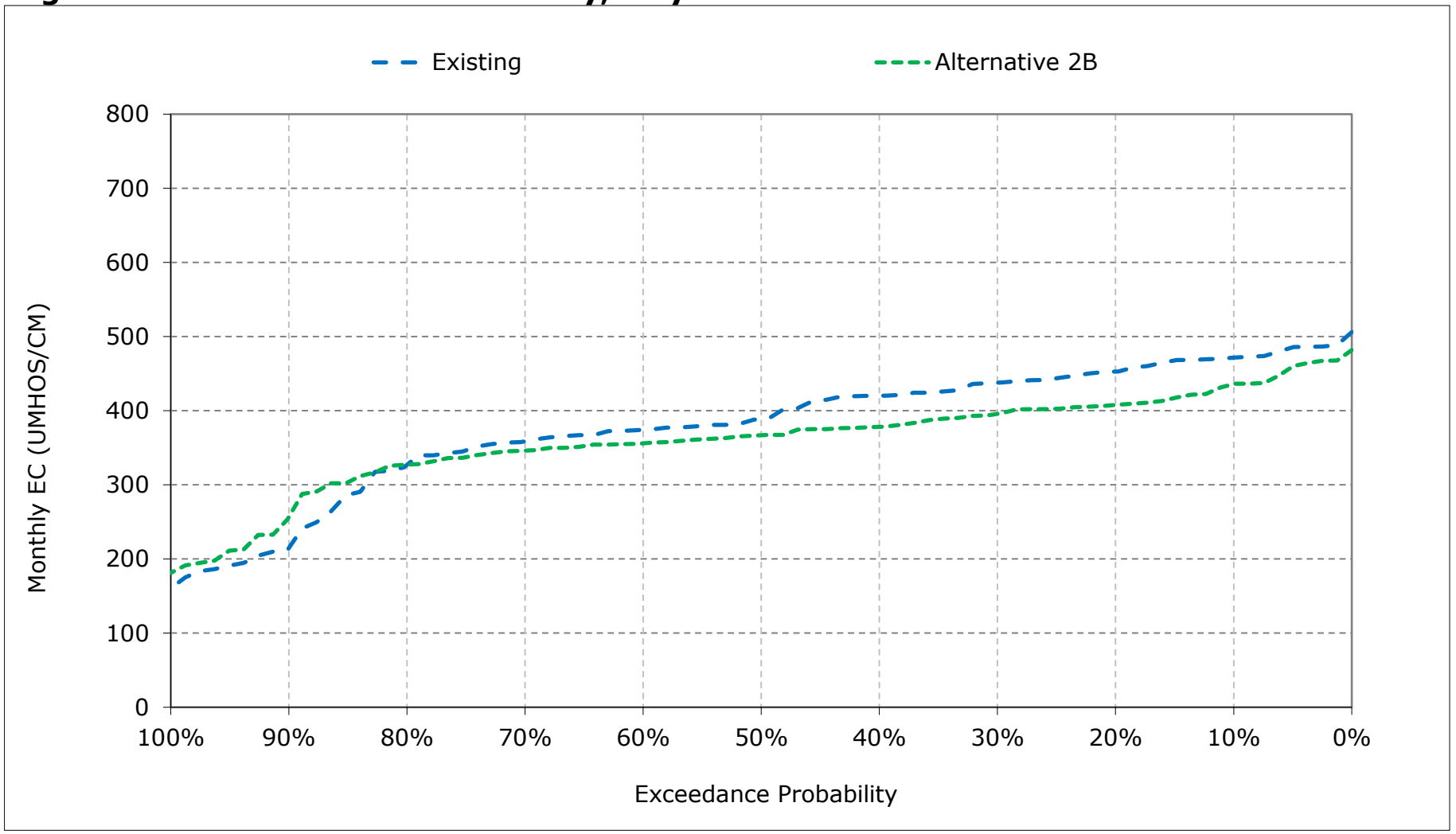


**Figure 19-12. Victoria Canal Salinity, June EC**

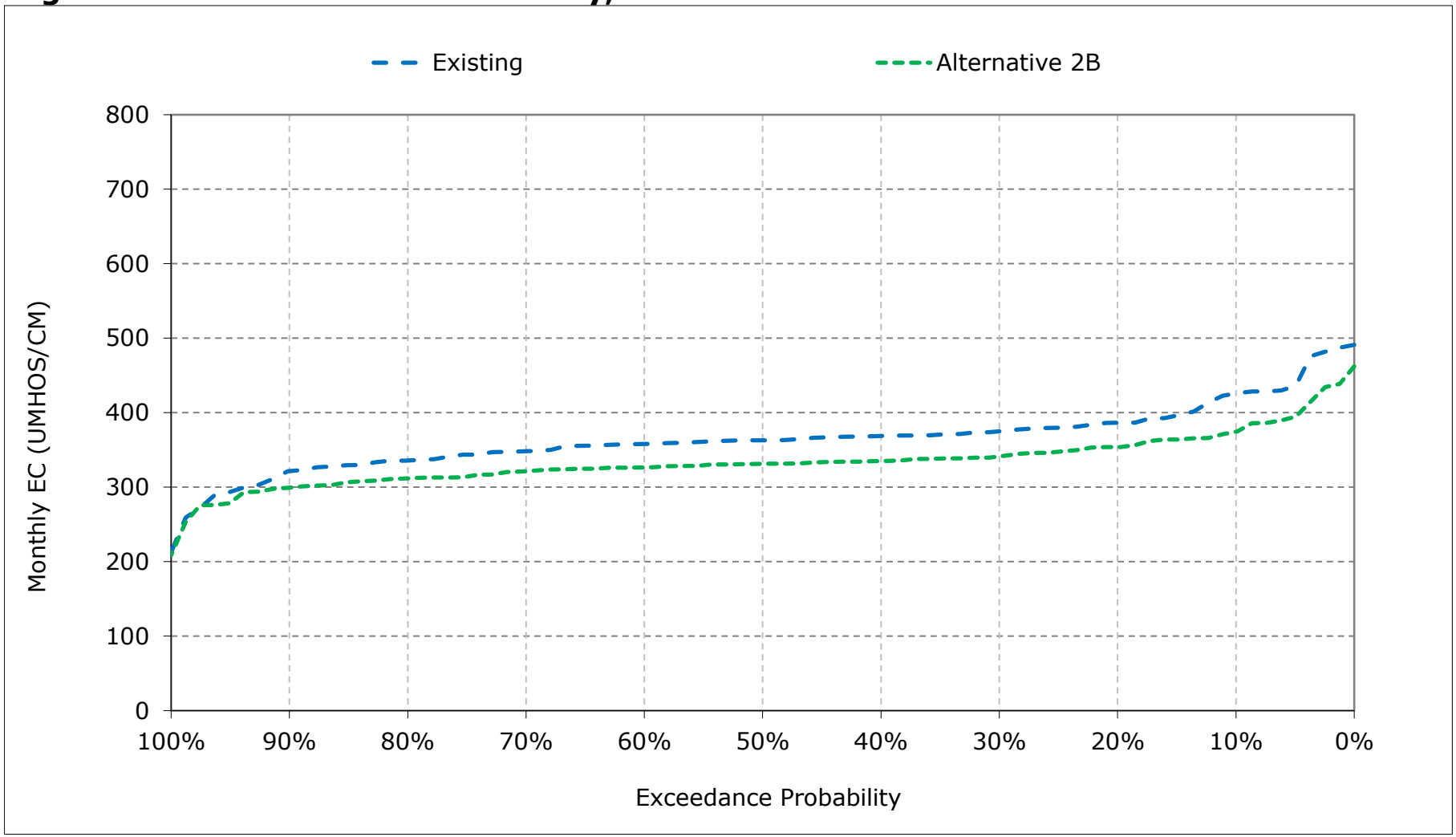


**Figure 19-13. Victoria Canal Salinity, July EC**

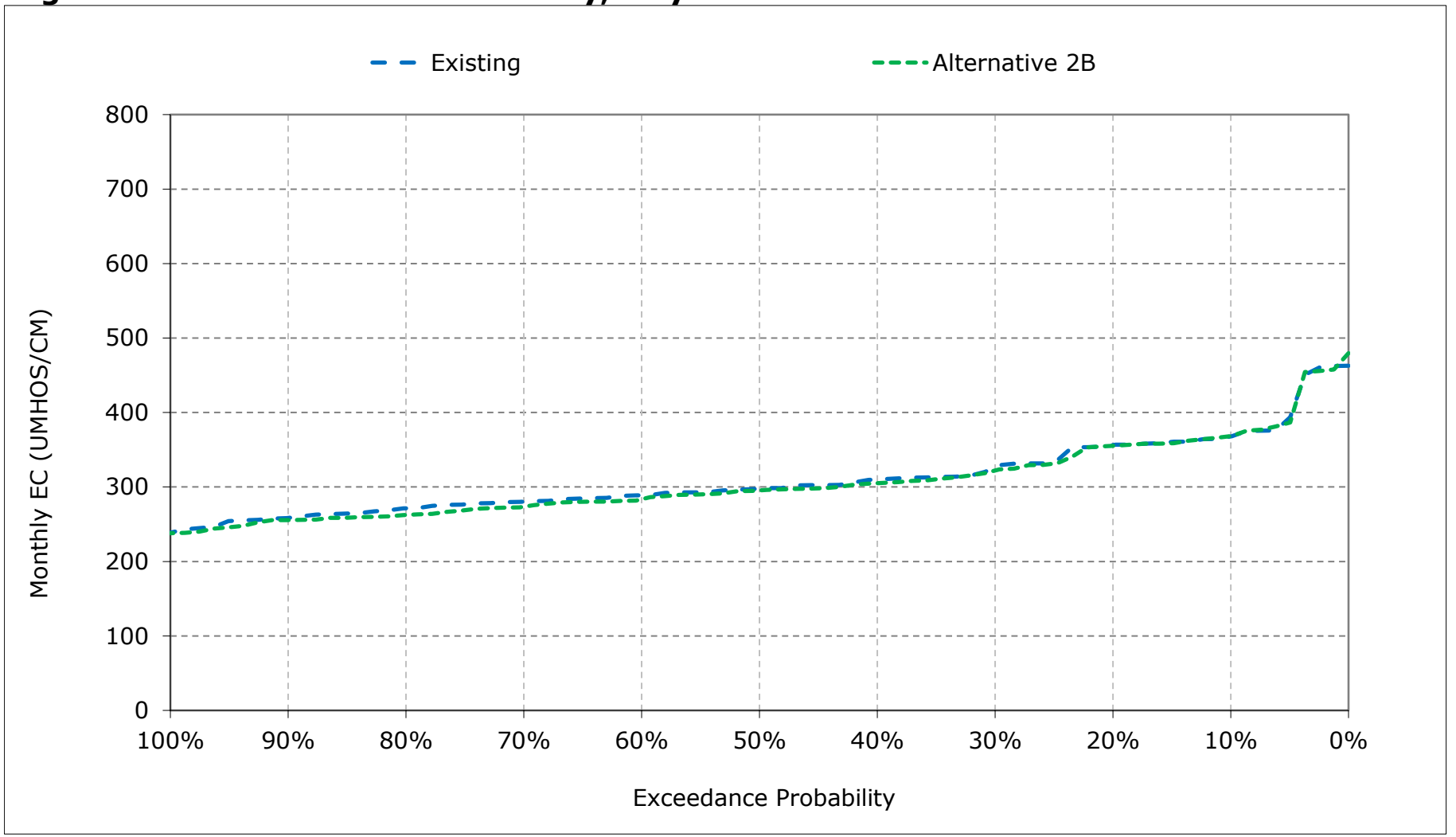


**Figure 19-14. Victoria Canal Salinity, August EC**

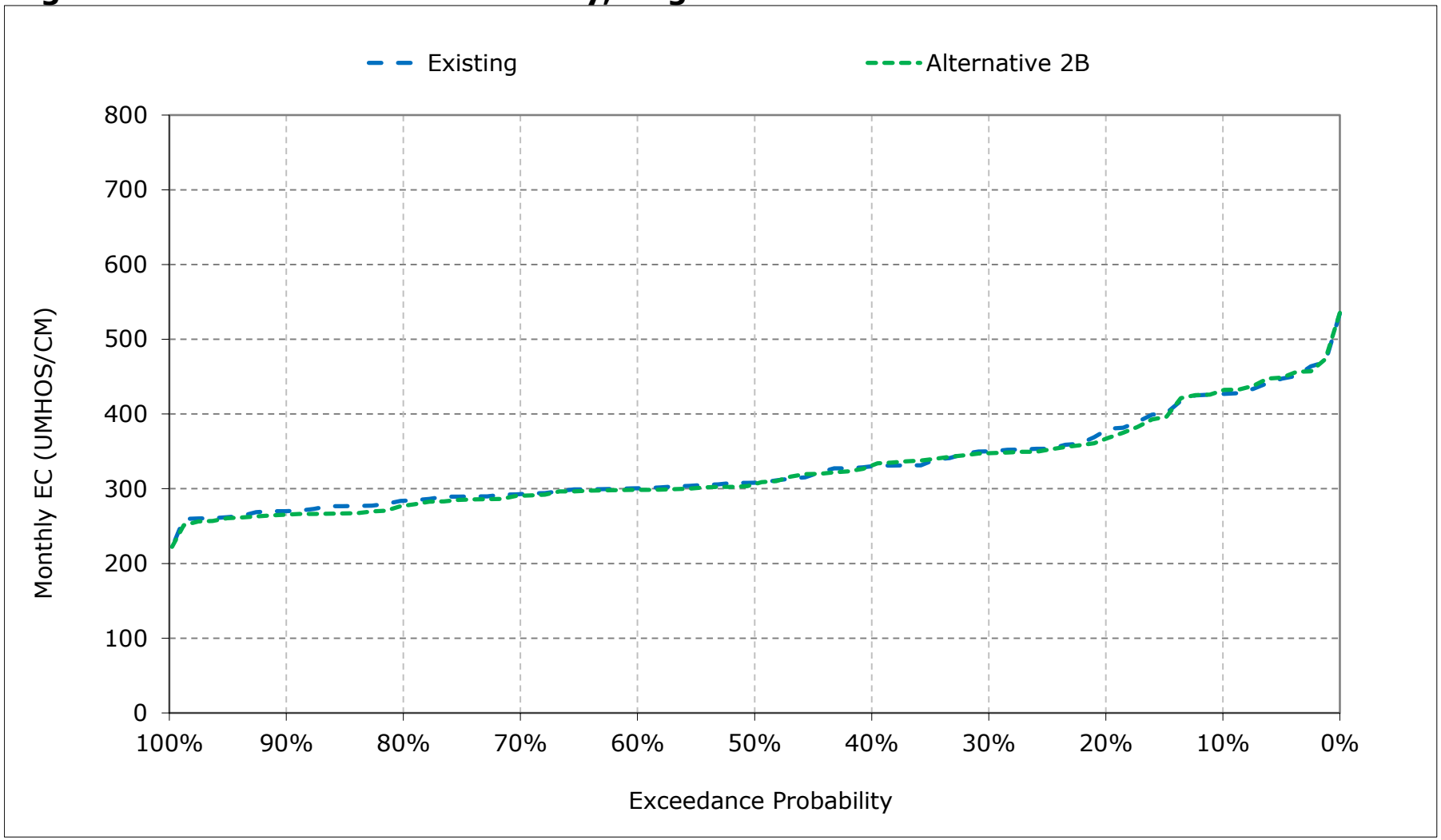


**Figure 19-15. Victoria Canal Salinity, September EC**

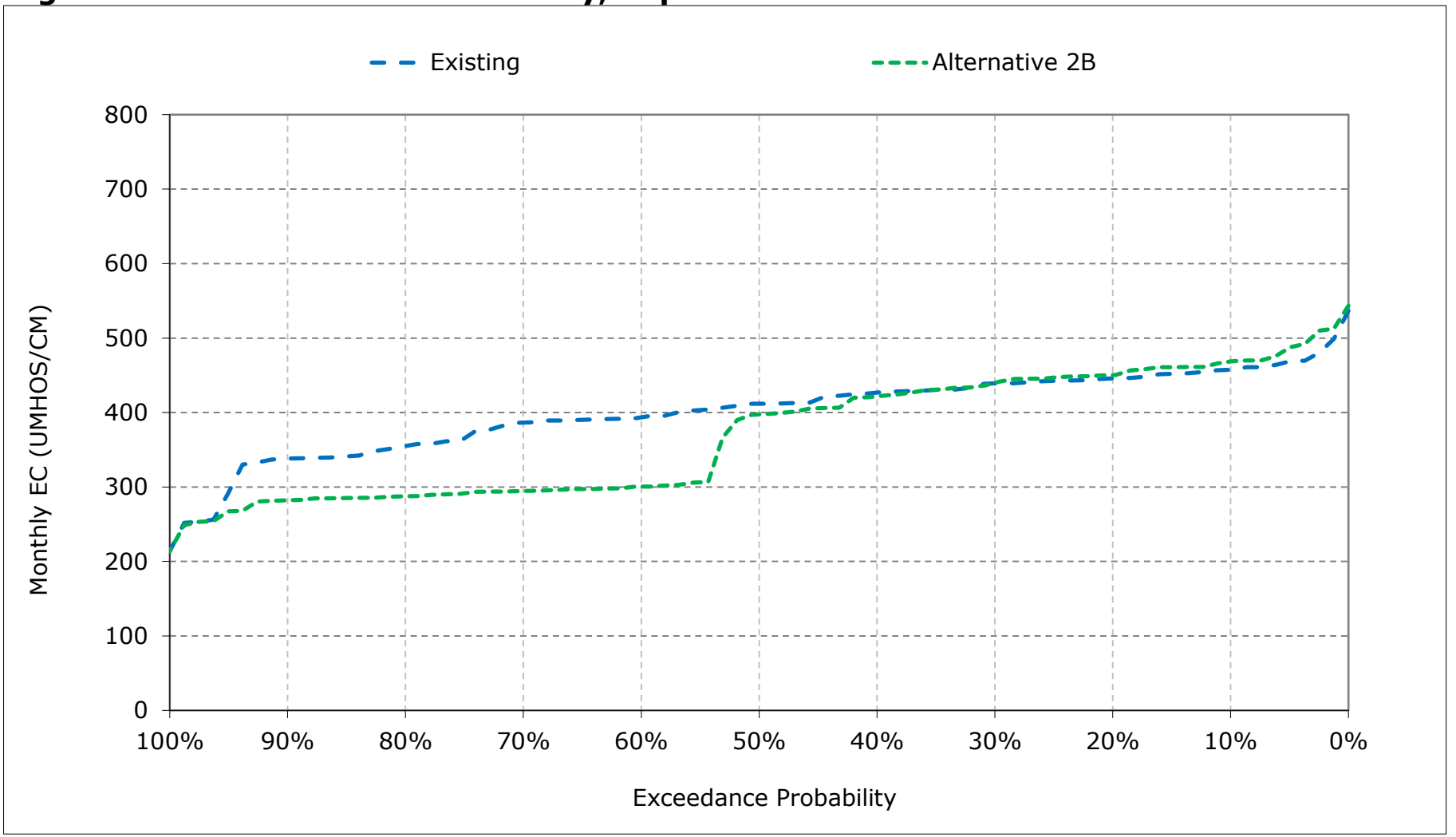


**Figure 19-16. Victoria Canal Salinity, October EC**

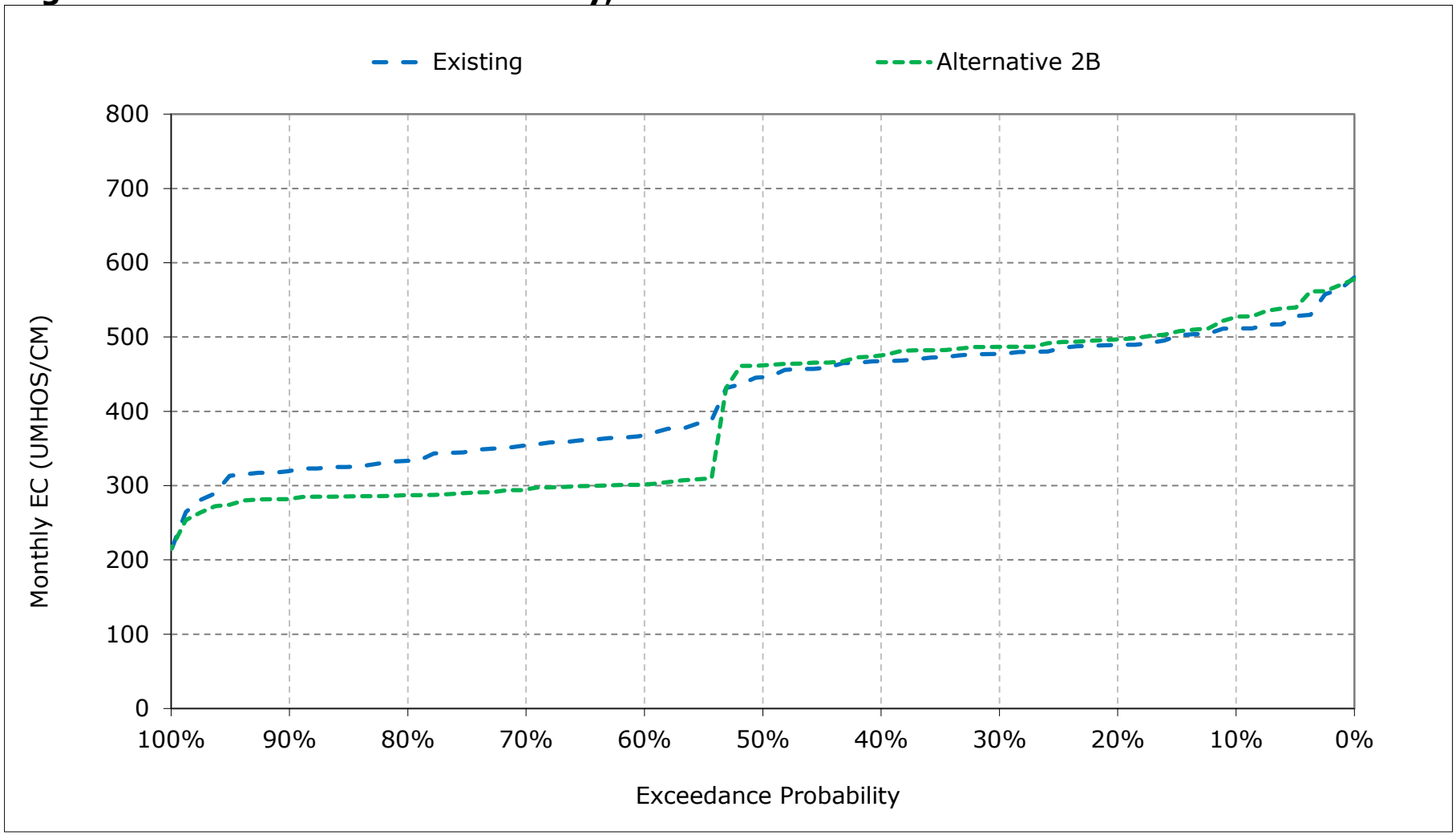


**Figure 19-17. Victoria Canal Salinity, November EC**

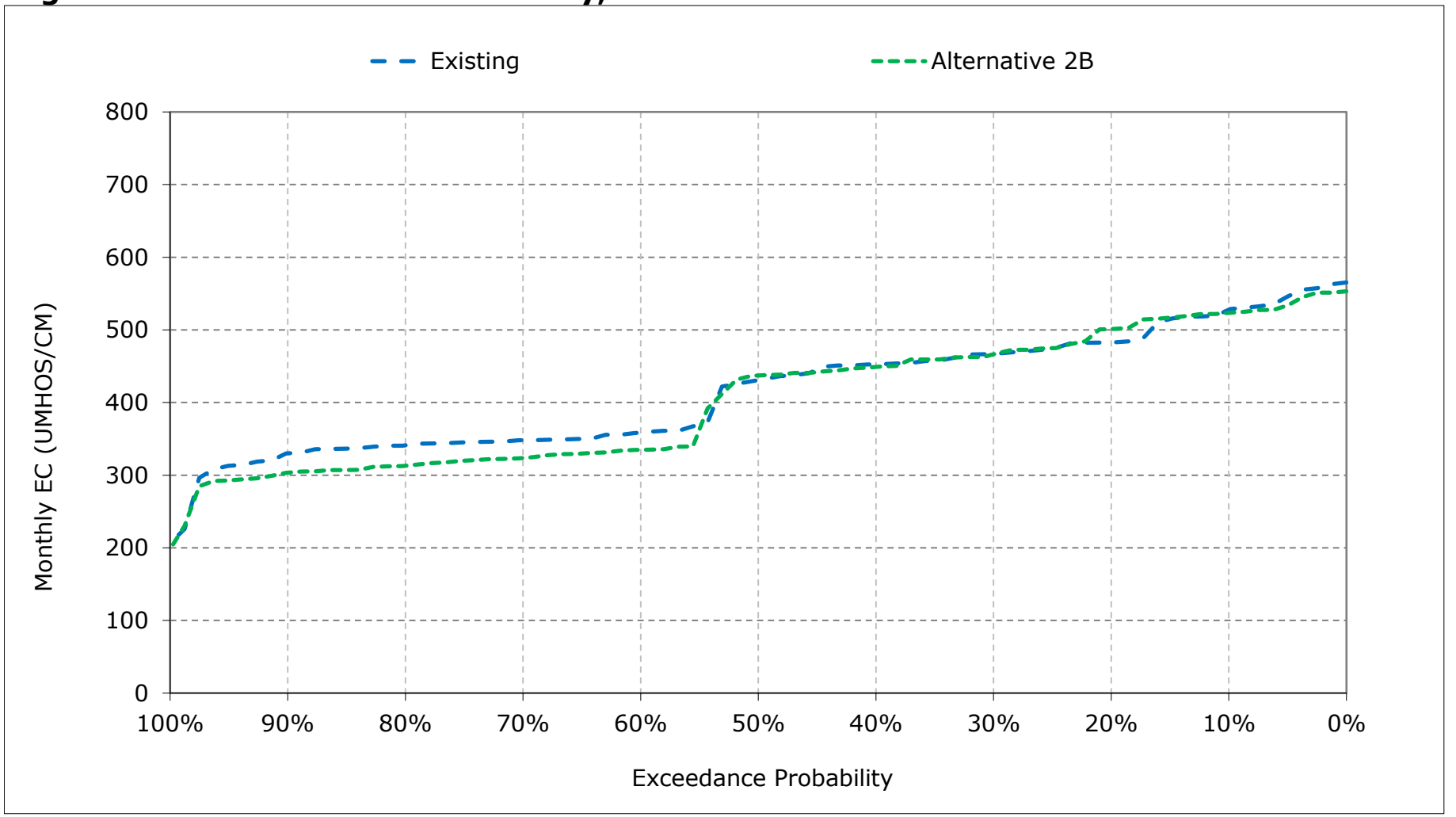
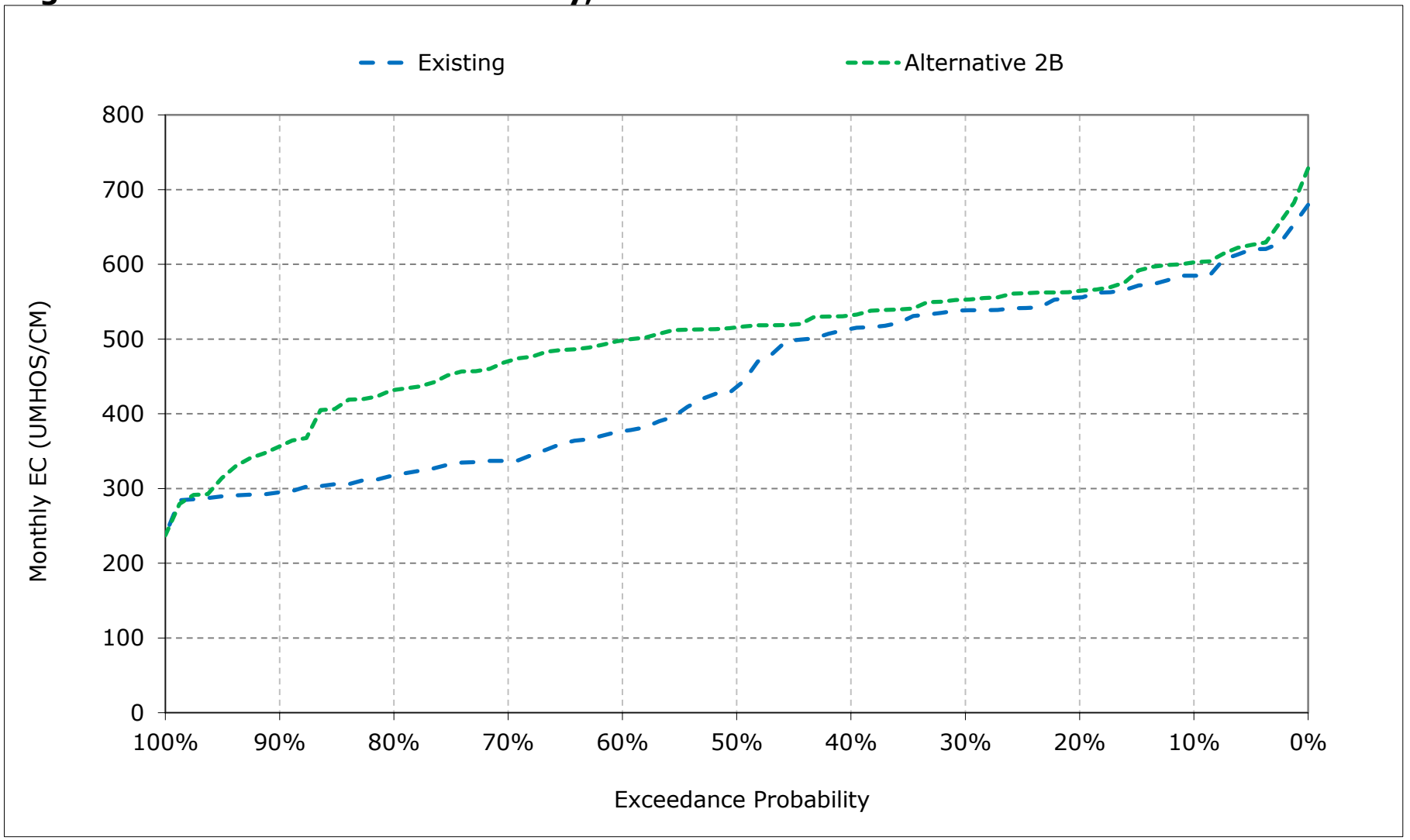


**Figure 19-18. Victoria Canal Salinity, December EC**



## Table 20-1. Montezuma Slough at Hunter Cut, Monthly EC

### Existing

| | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Statistic** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 14,303 | 13,057 | 12,428 | 8,885 | 5,277 | 7,041 | 8,378 | 9,233 | 11,109 | 13,262 | 15,769 | 17,520 |
| **20%** | 13,613 | 12,740 | 11,353 | 7,778 | 3,597 | 4,779 | 5,007 | 7,390 | 9,703 | 12,148 | 14,600 | 16,623 |
| **30%** | 13,446 | 12,375 | 9,063 | 6,661 | 2,354 | 2,382 | 3,009 | 6,006 | 8,988 | 11,691 | 14,302 | 16,320 |
| **40%** | 13,049 | 11,875 | 7,384 | 4,663 | 1,667 | 1,942 | 2,465 | 4,098 | 7,777 | 10,014 | 12,642 | 15,391 |
| **50%** | 11,963 | 7,496 | 5,410 | 4,054 | 1,009 | 1,394 | 2,116 | 2,838 | 6,228 | 9,244 | 11,794 | 14,703 |
| **60%** | 6,829 | 6,147 | 5,020 | 2,313 | 587 | 578 | 895 | 1,861 | 5,217 | 8,225 | 11,379 | 10,866 |
| **70%** | 4,377 | 4,057 | 3,532 | 783 | 380 | 345 | 568 | 1,202 | 4,086 | 7,598 | 10,682 | 8,378 |
| **80%** | 4,087 | 3,878 | 2,109 | 425 | 256 | 267 | 294 | 537 | 2,288 | 6,285 | 10,276 | 8,012 |
| **90%** | 3,952 | 3,596 | 826 | 267 | 225 | 214 | 220 | 223 | 513 | 4,037 | 10,092 | 7,606 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | 9,361 | 8,338 | 6,453 | 4,148 | 1,994 | 2,333 | 2,847 | 3,994 | 6,400 | 9,152 | 12,245 | 12,699 |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | 7,609 | 5,949 | 2,748 | 930 | 345 | 428 | 588 | 1,023 | 2,551 | 5,354 | 9,579 | 7,450 |
| **Above Normal (15%)** | 9,683 | 8,294 | 6,445 | 2,967 | 906 | 587 | 851 | 1,651 | 4,553 | 7,411 | 10,619 | 10,803 |
| **Below Normal (17%)** | 9,724 | 9,042 | 7,837 | 4,942 | 1,574 | 2,075 | 2,419 | 3,513 | 6,467 | 9,511 | 12,205 | 15,013 |
| **Dry (22%)** | 9,817 | 9,417 | 7,993 | 6,187 | 3,273 | 3,494 | 4,332 | 6,146 | 8,990 | 11,860 | 14,461 | 16,483 |
| **Critical (15%)** | 11,730 | 11,119 | 10,564 | 8,319 | 5,223 | 6,765 | 8,012 | 10,109 | 12,627 | 14,640 | 16,371 | 17,592 |

### Alternative 2B

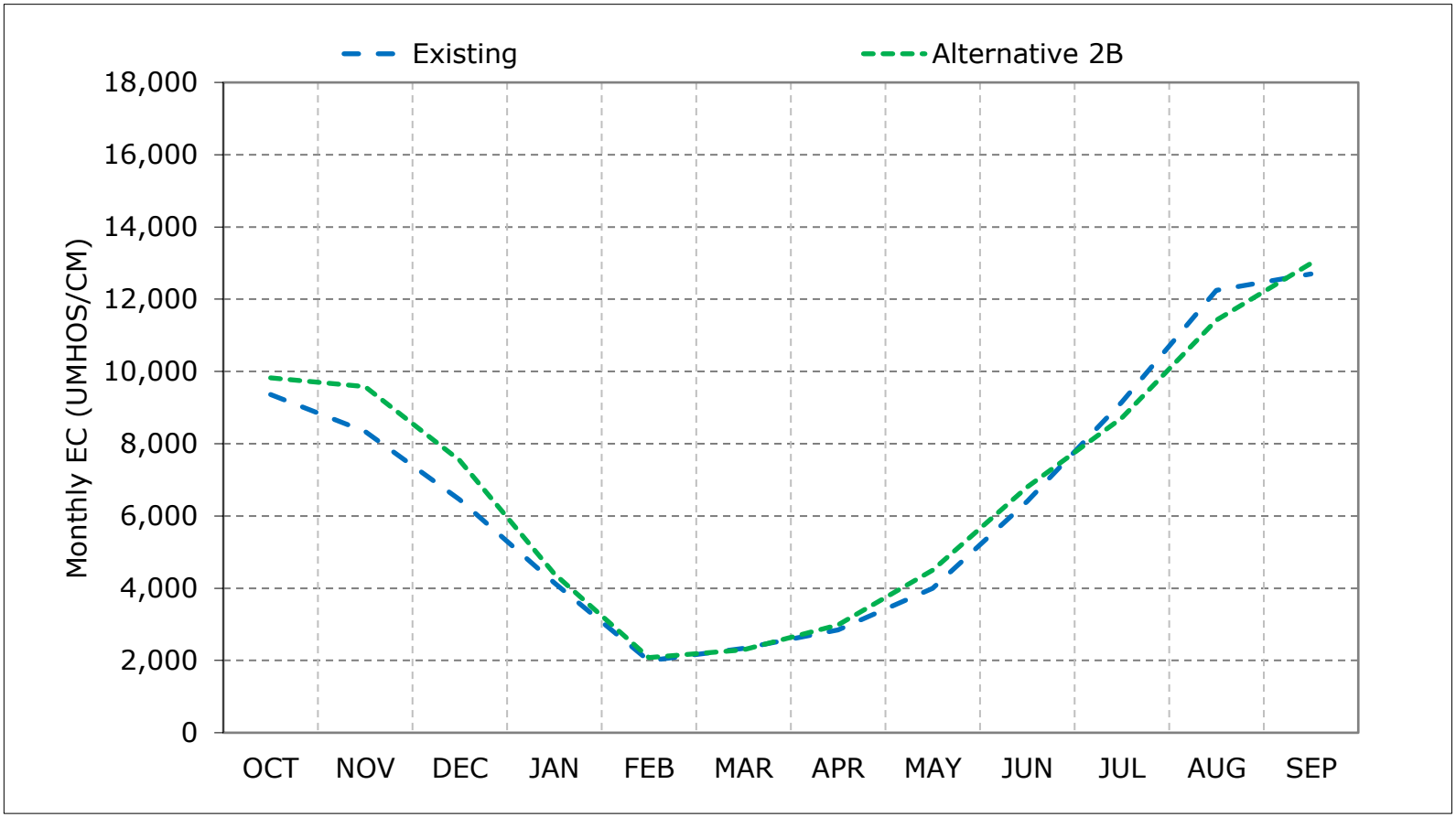
| | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Statistic** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 14,241 | 13,031 | 12,421 | 9,589 | 5,342 | 6,974 | 8,562 | 9,425 | 11,278 | 13,278 | 15,760 | 17,416 |
| **20%** | 13,600 | 12,699 | 11,254 | 8,668 | 3,625 | 4,890 | 5,230 | 8,470 | 10,478 | 12,370 | 14,750 | 16,666 |
| **30%** | 13,424 | 12,356 | 10,130 | 7,308 | 2,604 | 2,385 | 3,375 | 7,014 | 9,461 | 11,678 | 14,371 | 16,532 |
| **40%** | 12,993 | 11,785 | 9,830 | 4,952 | 1,659 | 1,671 | 2,729 | 5,056 | 8,428 | 8,693 | 11,157 | 14,593 |
| **50%** | 11,780 | 8,732 | 9,089 | 4,060 | 1,024 | 1,142 | 2,365 | 3,506 | 6,790 | 8,124 | 10,393 | 13,797 |
| **60%** | 6,424 | 8,357 | 7,772 | 2,317 | 543 | 541 | 1,124 | 2,565 | 6,026 | 7,219 | 10,180 | 10,293 |
| **70%** | 6,302 | 8,145 | 4,721 | 808 | 374 | 321 | 621 | 1,613 | 4,388 | 6,545 | 9,719 | 10,041 |
| **80%** | 6,082 | 7,449 | 2,982 | 402 | 260 | 269 | 315 | 665 | 2,404 | 5,473 | 8,475 | 9,857 |
| **90%** | 5,571 | 5,035 | 1,322 | 310 | 232 | 221 | 222 | 243 | 545 | 4,043 | 7,998 | 9,275 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | 9,821 | 9,581 | 7,540 | 4,397 | 2,080 | 2,294 | 2,983 | 4,501 | 6,799 | 8,712 | 11,417 | 12,993 |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | 8,199 | 7,593 | 3,618 | 980 | 342 | 409 | 682 | 1,357 | 2,909 | 5,493 | 9,185 | 9,131 |
| **Above Normal (15%)** | 10,274 | 9,555 | 7,812 | 3,157 | 853 | 520 | 980 | 2,255 | 4,987 | 7,507 | 10,430 | 10,001 |
| **Below Normal (17%)** | 10,219 | 10,261 | 9,107 | 5,083 | 1,536 | 1,925 | 2,608 | 4,316 | 6,980 | 6,378 | 8,139 | 14,176 |
| **Dry (22%)** | 10,246 | 10,493 | 9,222 | 6,736 | 3,534 | 3,431 | 4,485 | 6,799 | 9,482 | 12,000 | 14,568 | 16,587 |
| **Critical (15%)** | 11,779 | 11,755 | 11,418 | 8,735 | 5,526 | 6,877 | 8,155 | 10,331 | 12,803 | 14,681 | 16,337 | 17,581 |

### Alternative 2B minus Existing

| | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Statistic** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -62 | -26 | -7 | **704** | **65** | -67 | **183** | **192** | **170** | **16** | -8 | -104 |
| **20%** | -13 | -40 | -99 | **890** | **27** | **111** | **223** | **1,079** | **775** | **222** | **150** | **43** |
| **30%** | -22 | -20 | **1,067** | **647** | **250** | **3** | **365** | **1,008** | **473** | -13 | **69** | **213** |
| **40%** | -55 | -90 | **2,446** | **288** | -9 | -271 | **264** | **958** | **651** | -1,321 | -1,485 | -797 |
| **50%** | -182 | **1,236** | **3,679** | **6** | **14** | -252 | **249** | **668** | **562** | -1,120 | -1,401 | -907 |
| **60%** | -404 | **2,210** | **2,752** | **4** | -44 | -37 | **229** | **704** | **809** | -1,005 | -1,199 | -573 |
| **70%** | **1,925** | **4,088** | **1,190** | **25** | -6 | -24 | **54** | **411** | **302** | -1,053 | -963 | **1,662** |
| **80%** | **1,994** | **3,571** | **873** | -23 | **4** | **2** | **20** | **129** | **116** | -812 | -1,801 | **1,845** |
| **90%** | **1,619** | **1,439** | **496** | **43** | **7** | **7** | **2** | **19** | **33** | **6** | -2,093 | **1,668** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period[a]** | **459** | **1,243** | **1,087** | **249** | **86** | -39 | **135** | **507** | **399** | -440 | -828 | **294** |
| **Water Year Types[b]** | | | | | | | | | | | | |
| **Wet (32%)** | **590** | **1,644** | **870** | **50** | -3 | -19 | **93** | **334** | **358** | **139** | -394 | **1,682** |
| **Above Normal (15%)** | **591** | **1,261** | **1,368** | **190** | -53 | -67 | **129** | **604** | **434** | **96** | -188 | -802 |
| **Below Normal (17%)** | **495** | **1,219** | **1,270** | **141** | -38 | -150 | **188** | **803** | **514** | -3,134 | -4,066 | -837 |
| **Dry (22%)** | **429** | **1,076** | **1,229** | **549** | **260** | -63 | **153** | **653** | **492** | **139** | **107** | **105** |
| **Critical (15%)** | **49** | **636** | **854** | **416** | **303** | **112** | **143** | **222** | **177** | **41** | -34 | -11 |

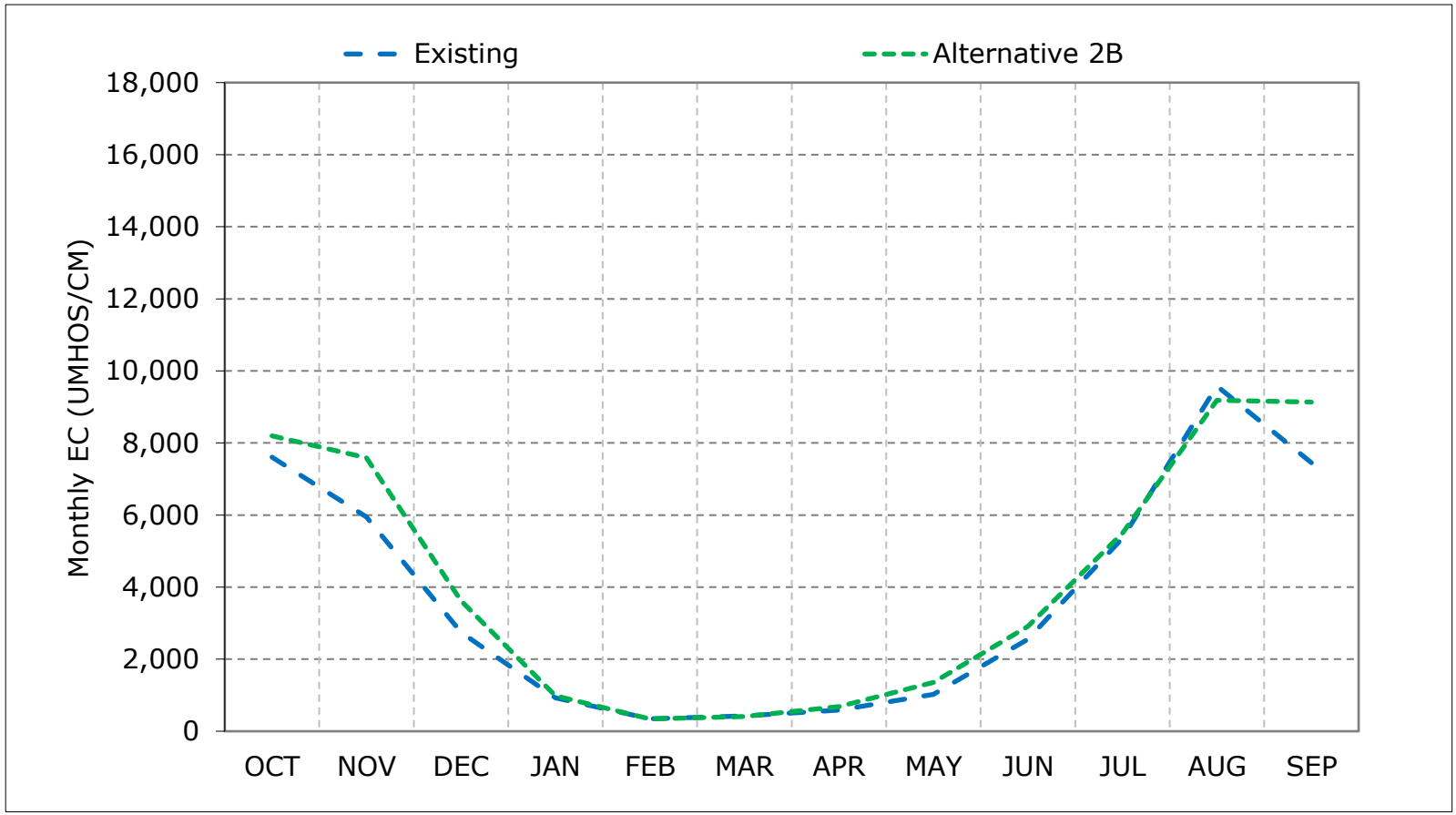
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 20-1. Montezuma Slough at Hunter Cut, Long-Term Average EC**



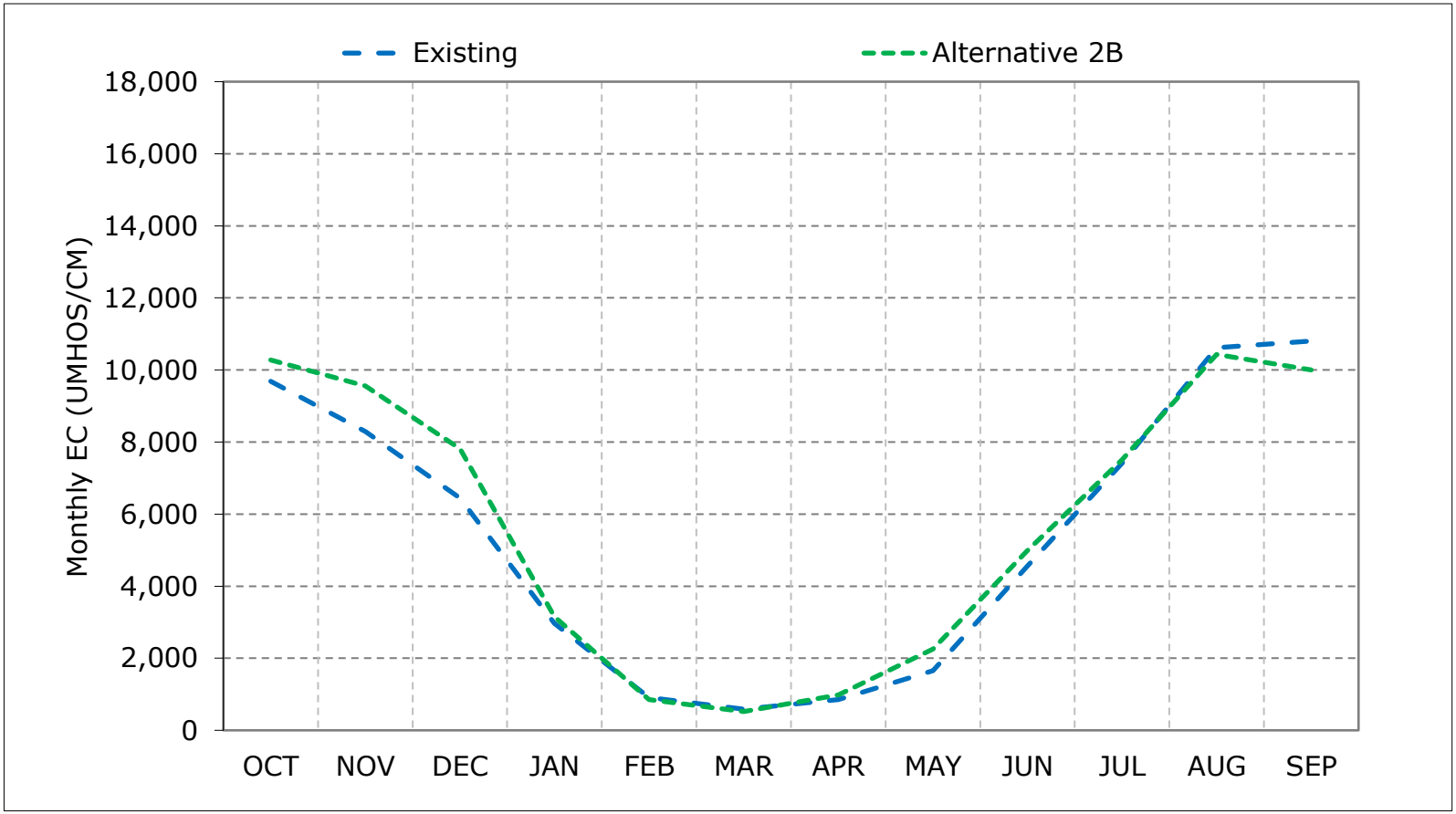

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 20-2. Montezuma Slough at Hunter Cut, Wet Year Average EC**



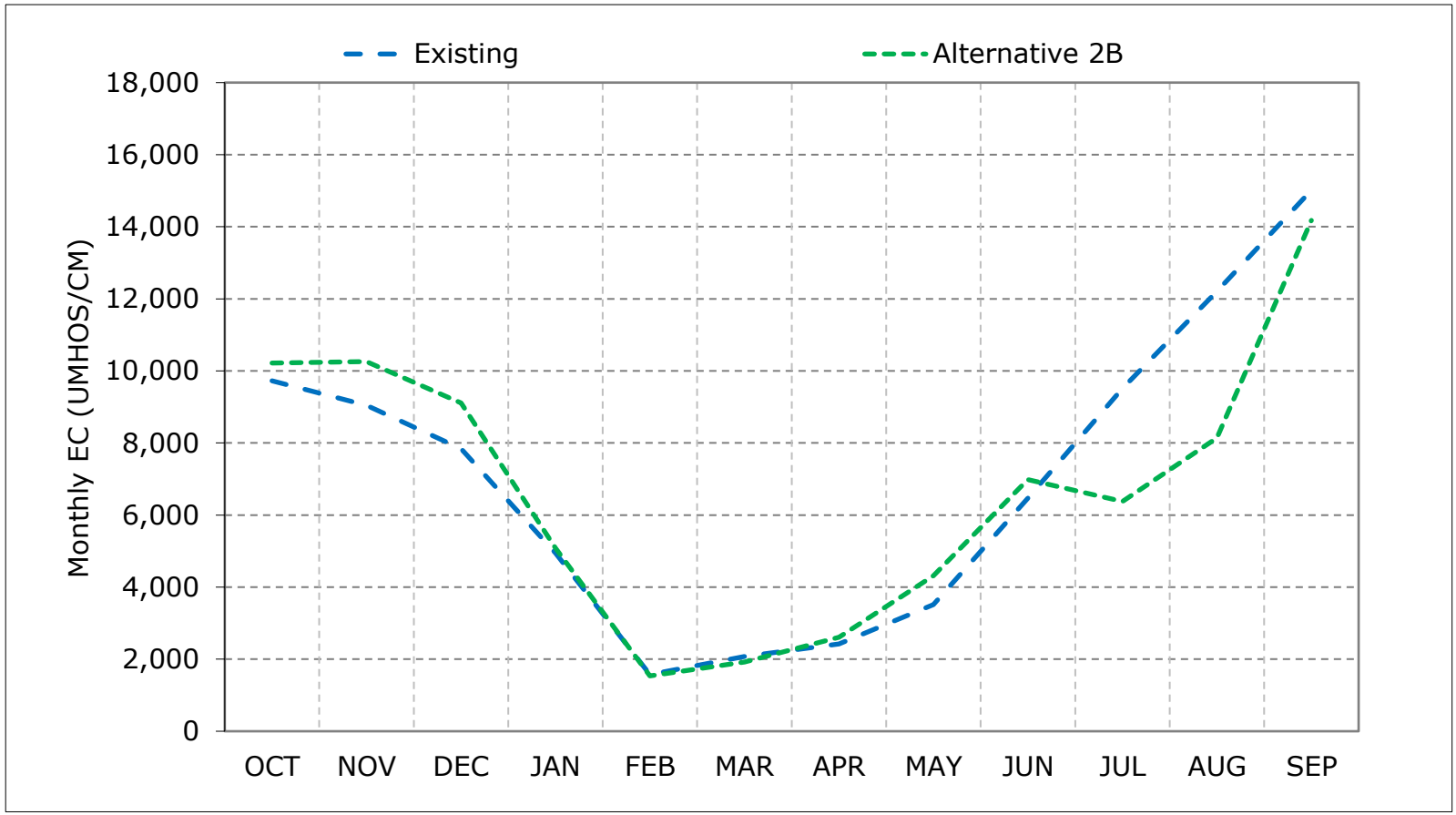

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 20-3. Montezuma Slough at Hunter Cut, Above Normal Year Average EC**



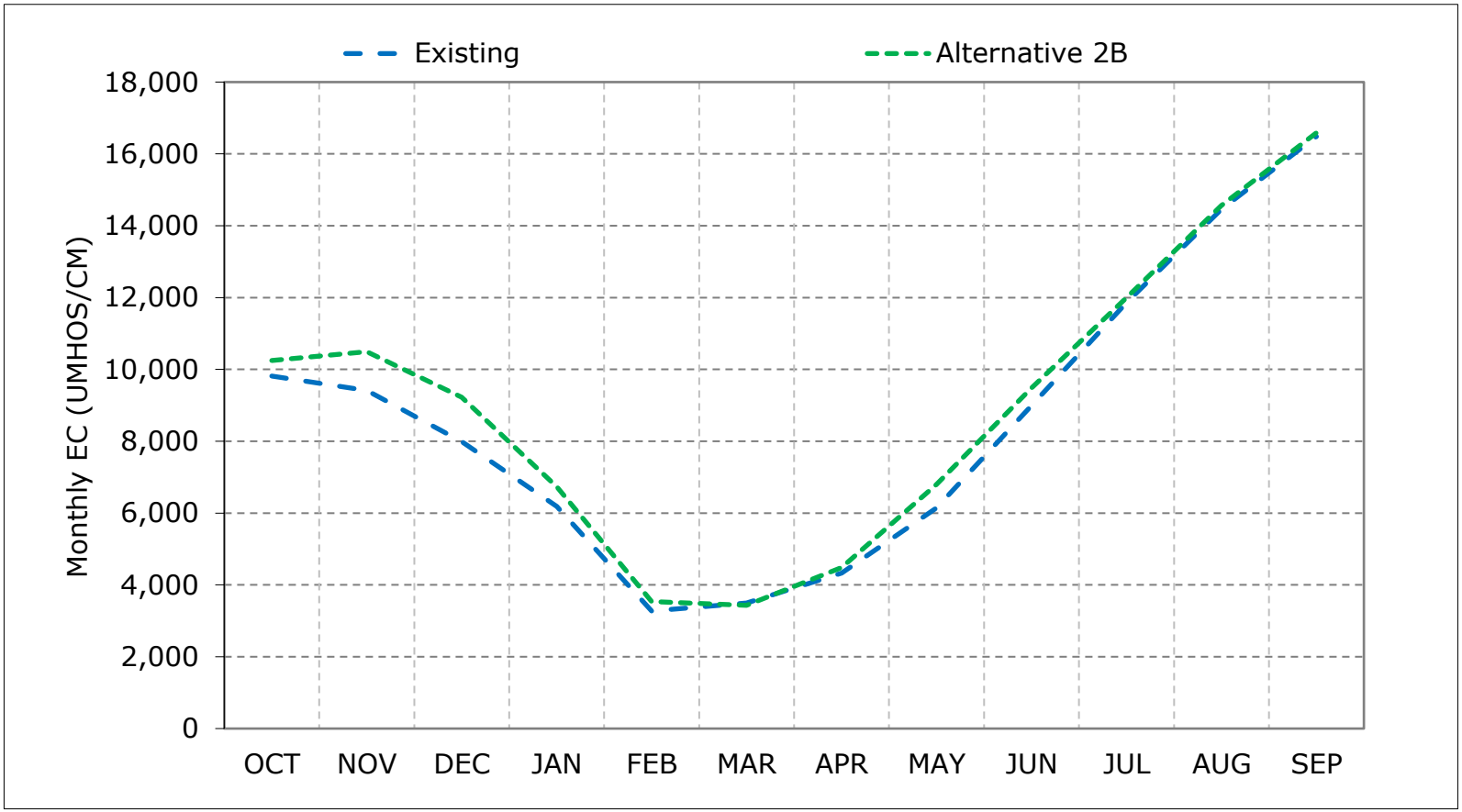

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 20-4. Montezuma Slough at Hunter Cut, Below Normal Year Average EC**



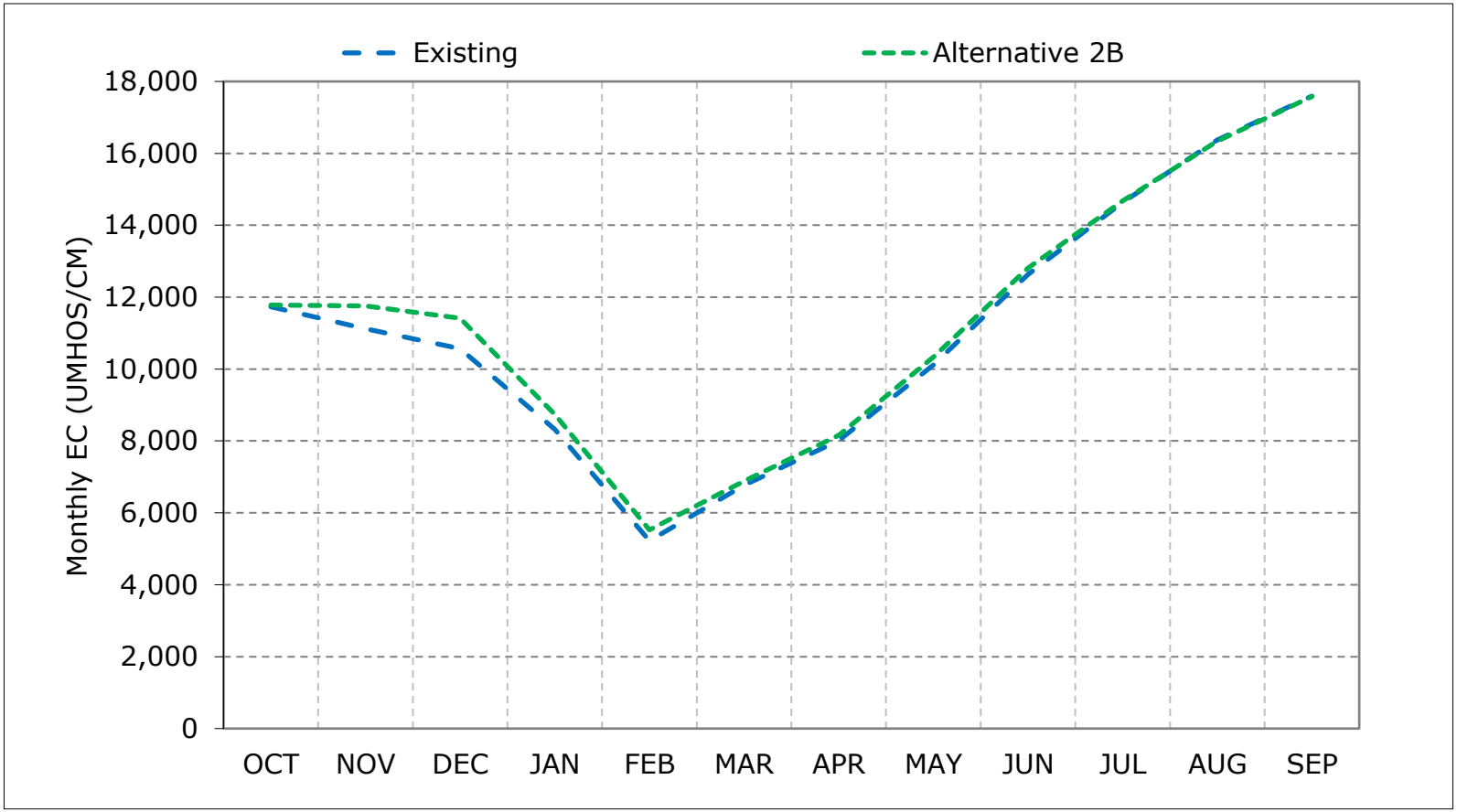

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 20-5. Montezuma Slough at Hunter Cut, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 20-6. Montezuma Slough at Hunter Cut, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 20-7. Montezuma Slough at Hunter Cut, January EC**

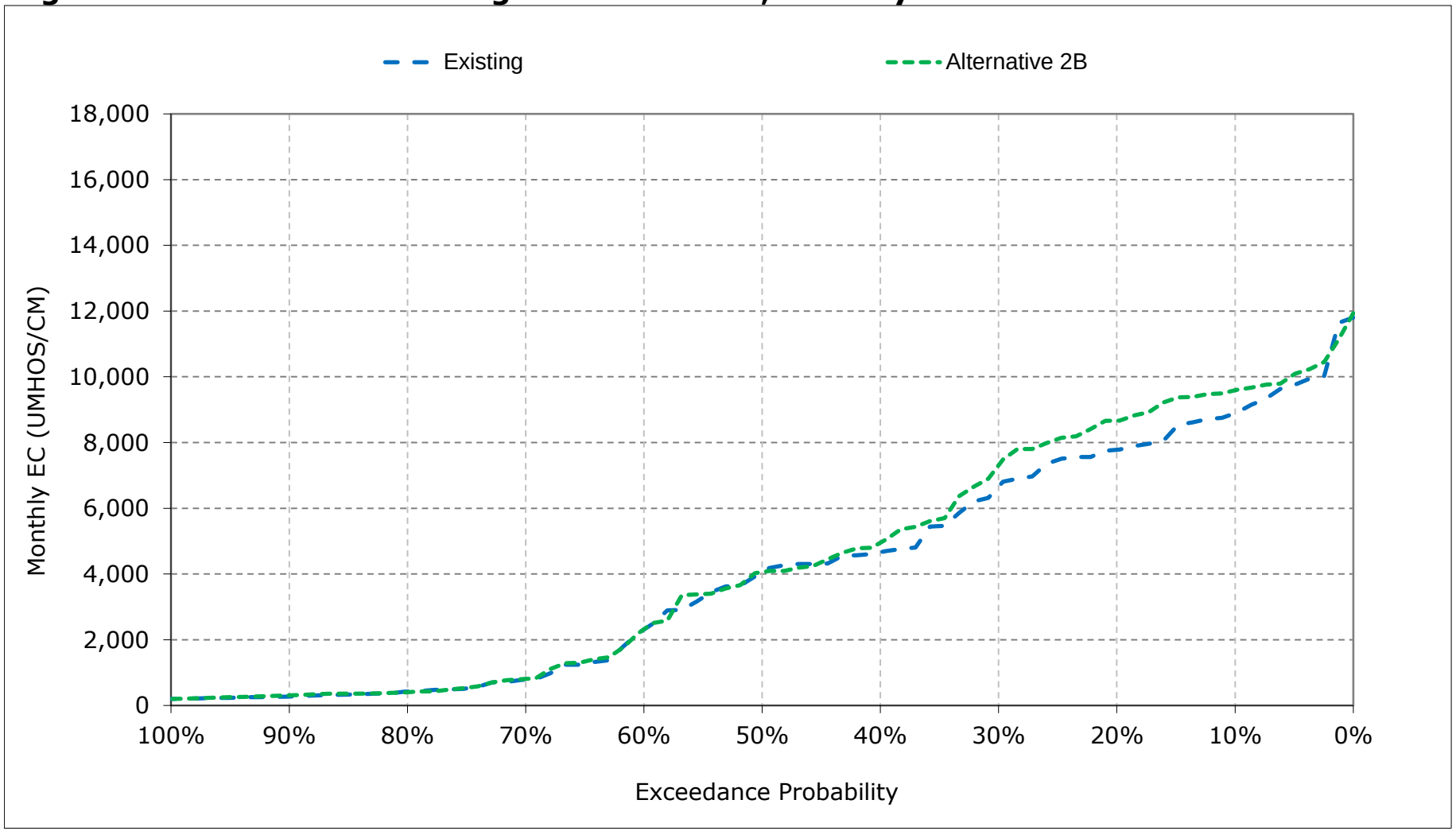


**Figure 20-8. Montezuma Slough at Hunter Cut, February EC**

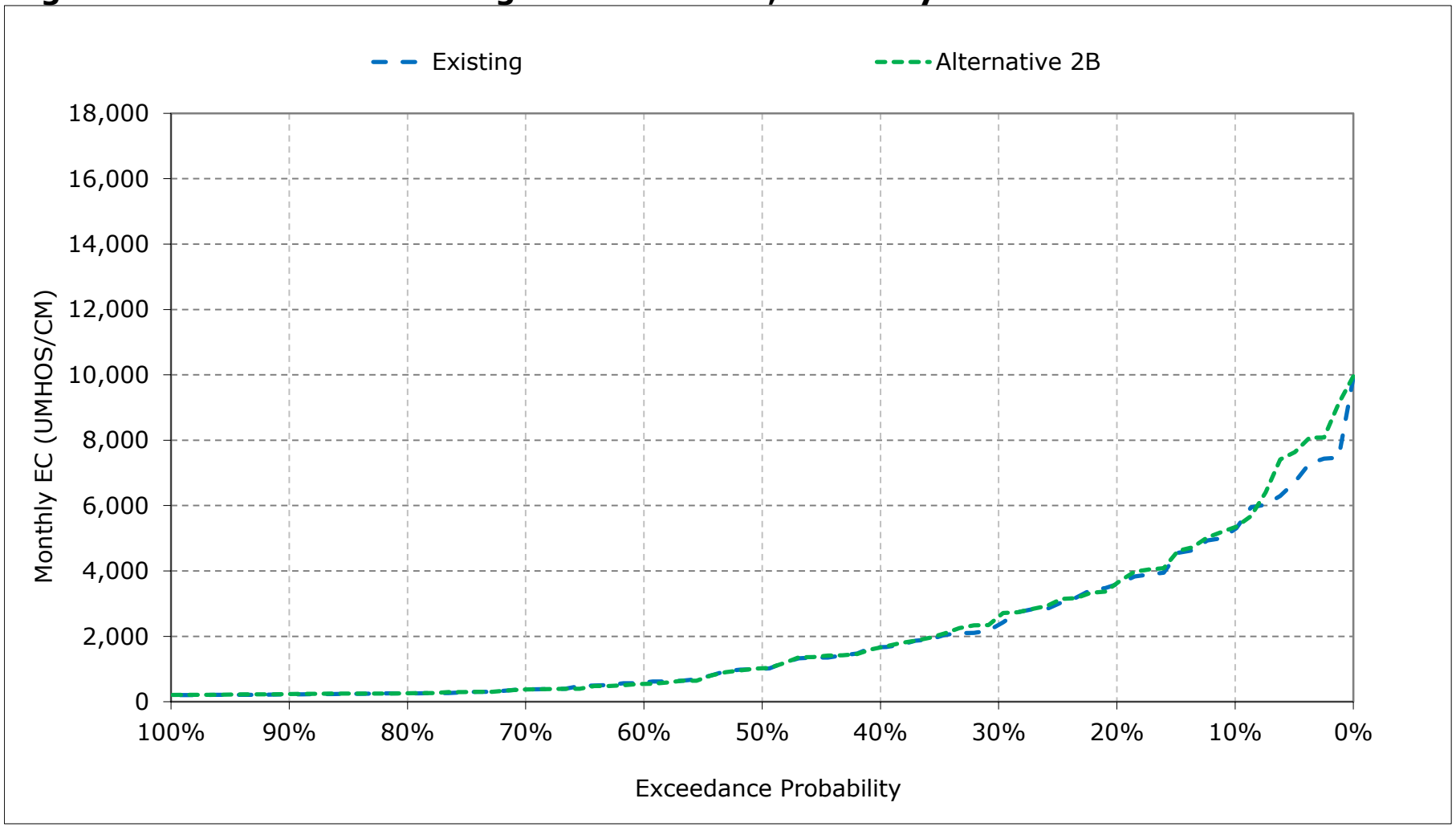


**Figure 20-9. Montezuma Slough at Hunter Cut, March EC**

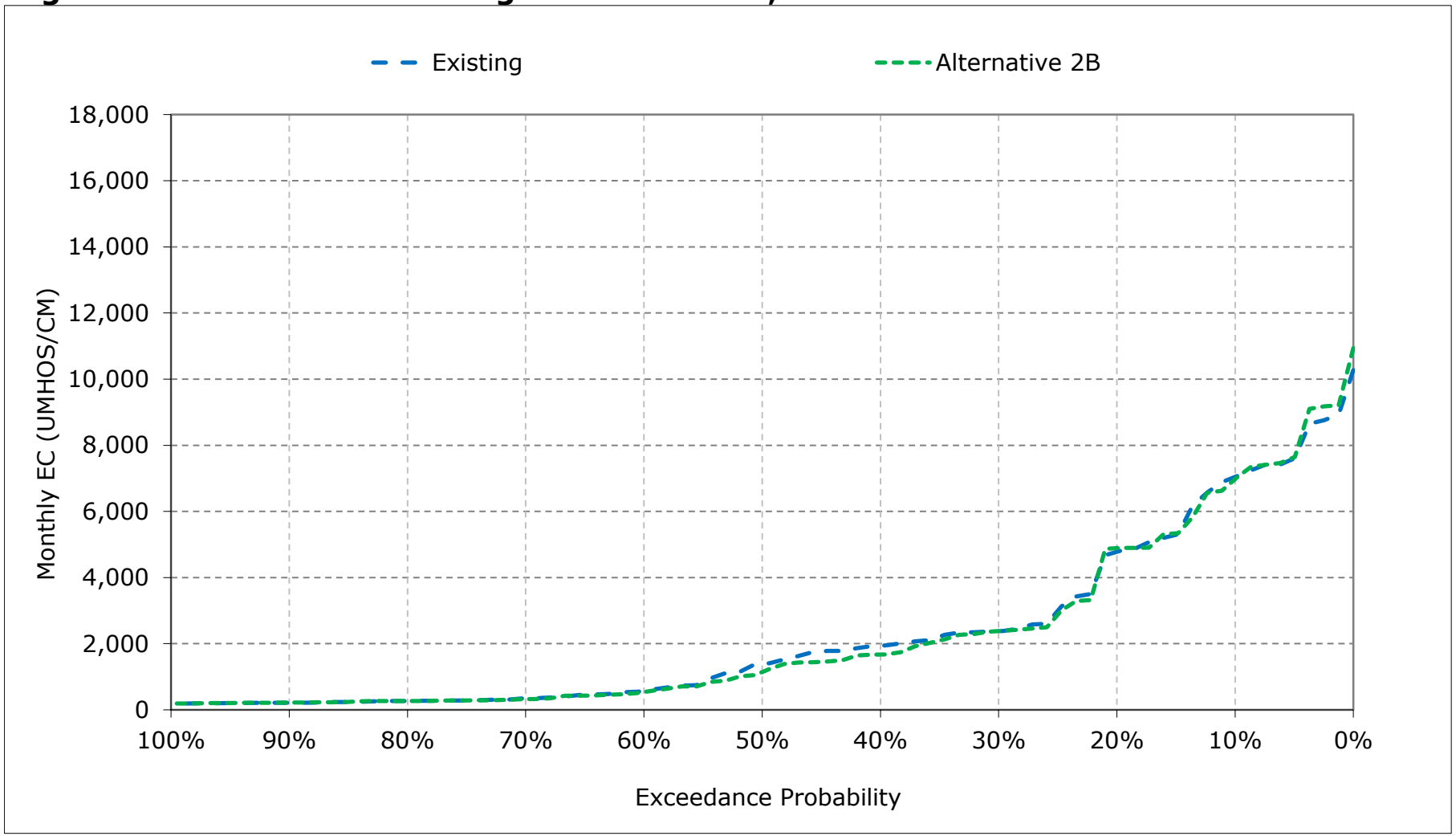


**Figure 20-10. Montezuma Slough at Hunter Cut, April EC**

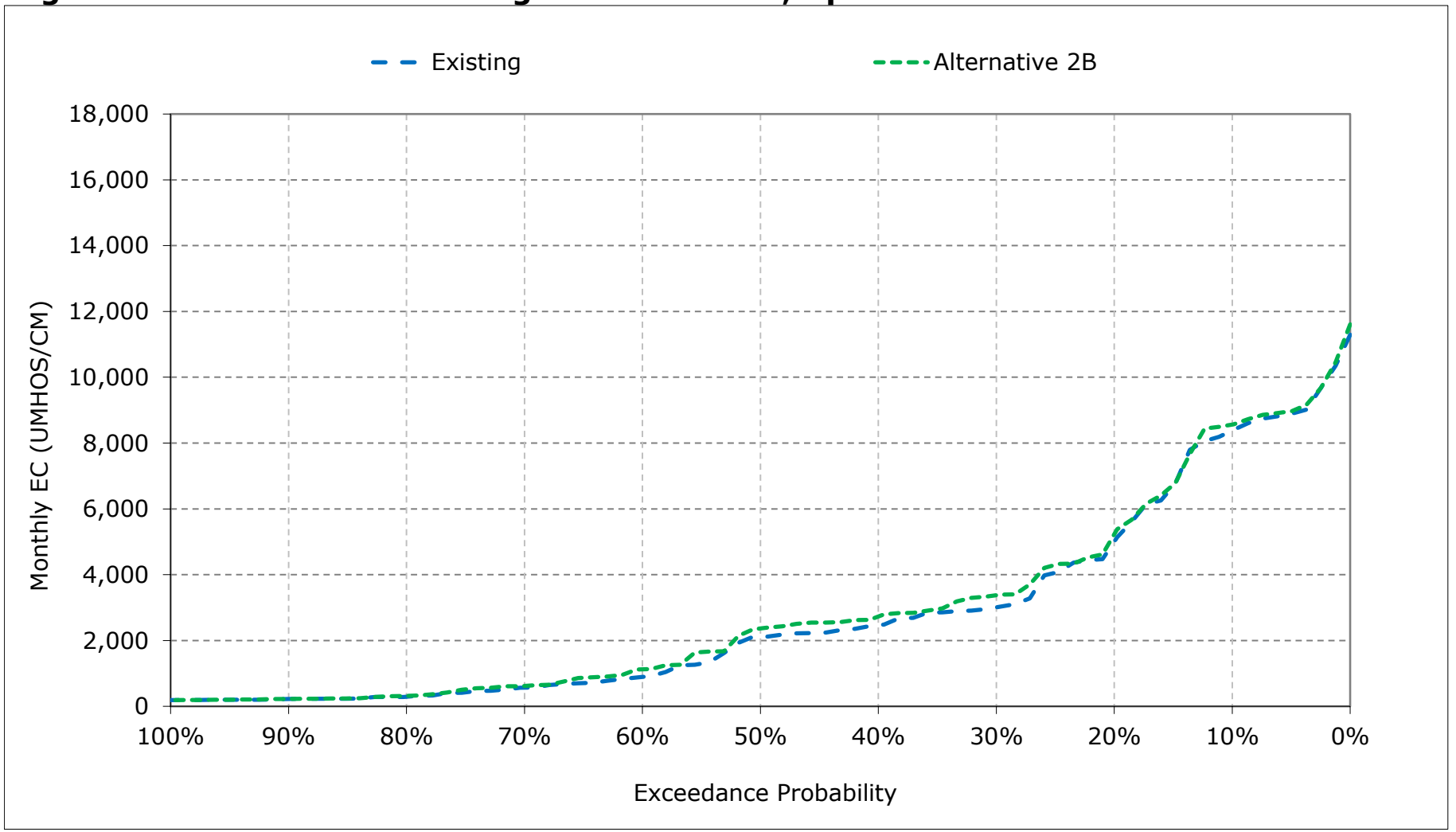


**Figure 20-11. Montezuma Slough at Hunter Cut, May EC**

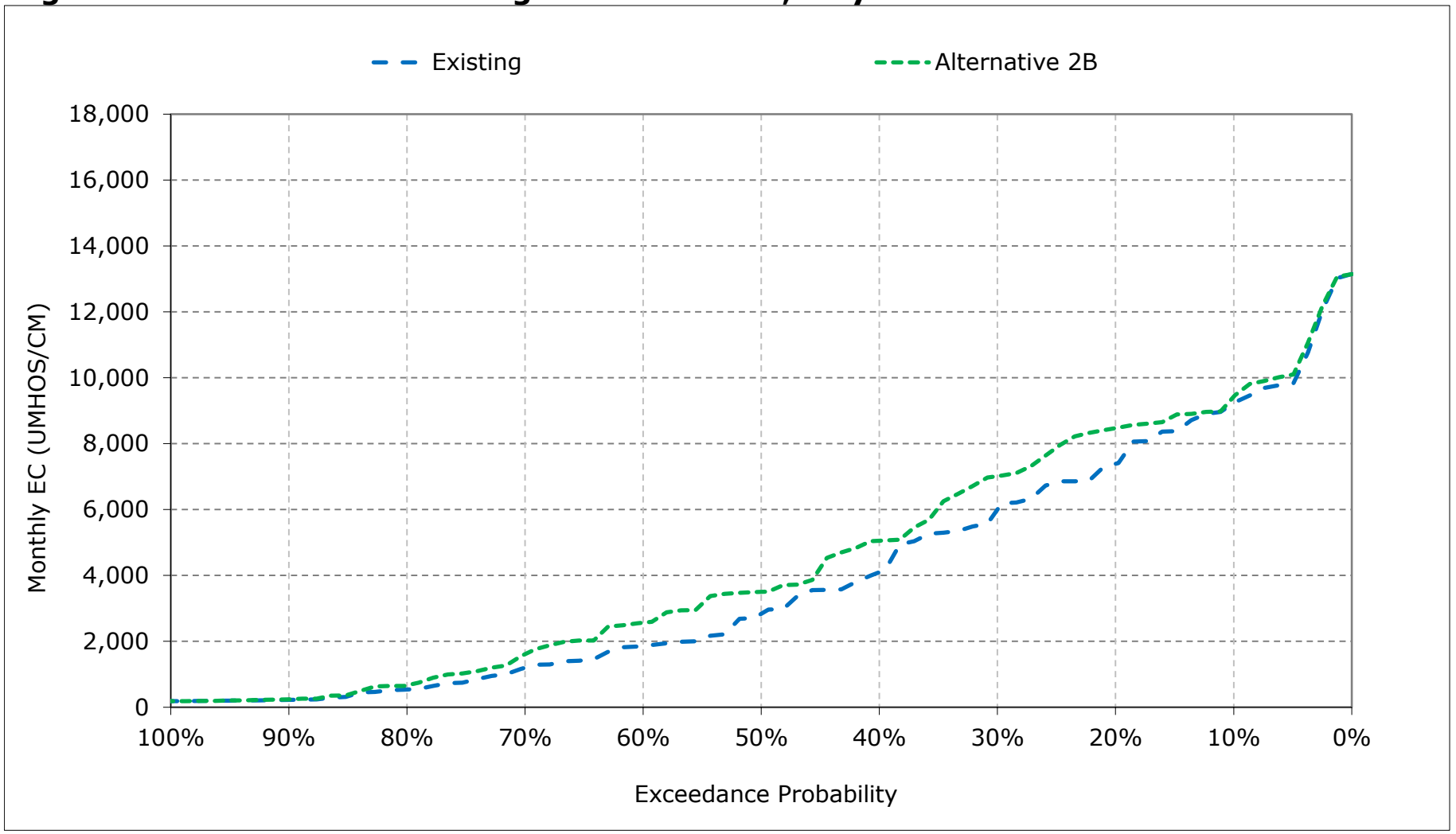


**Figure 20-12. Montezuma Slough at Hunter Cut, June EC**

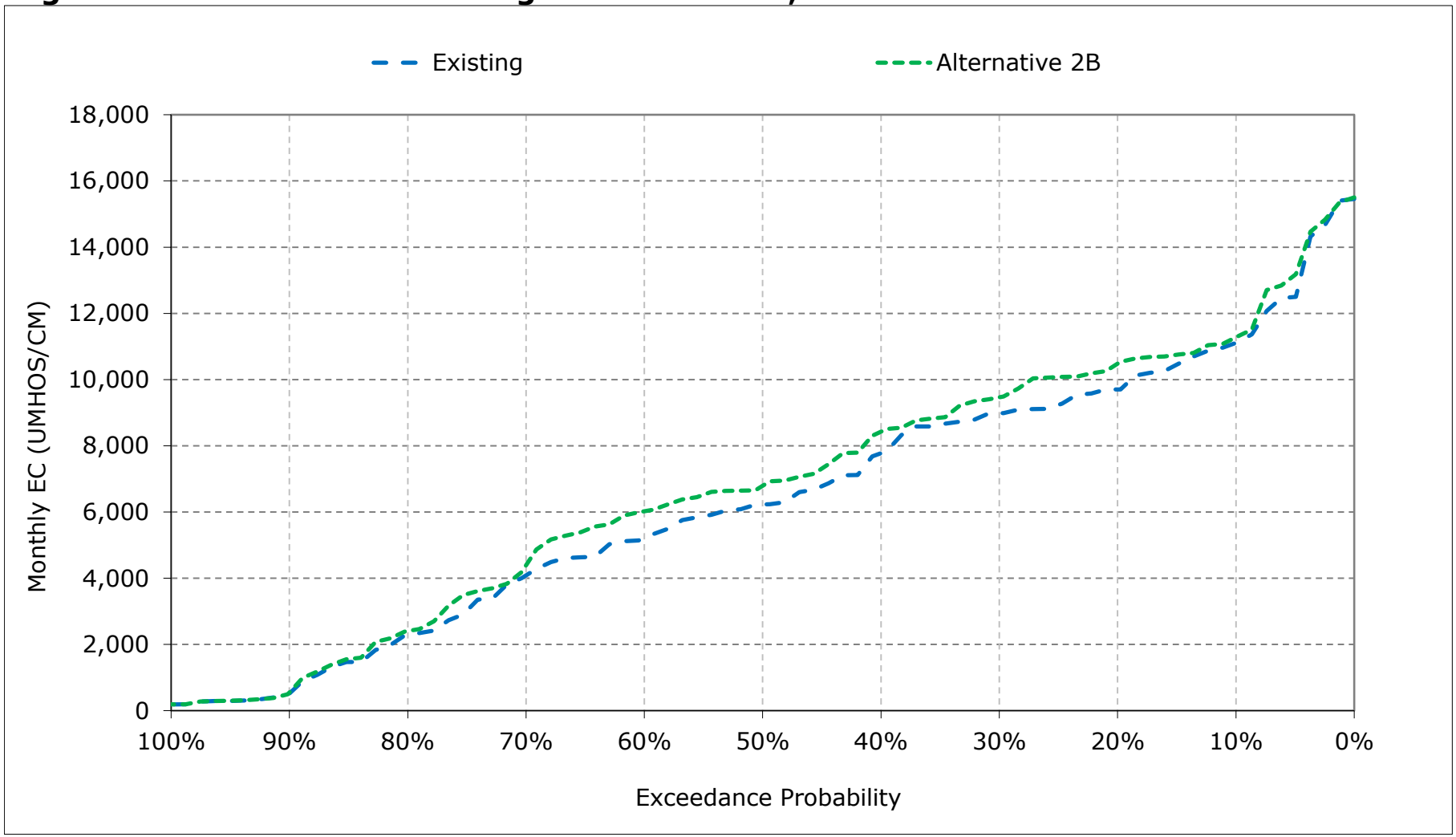


**Figure 20-13. Montezuma Slough at Hunter Cut, July EC**

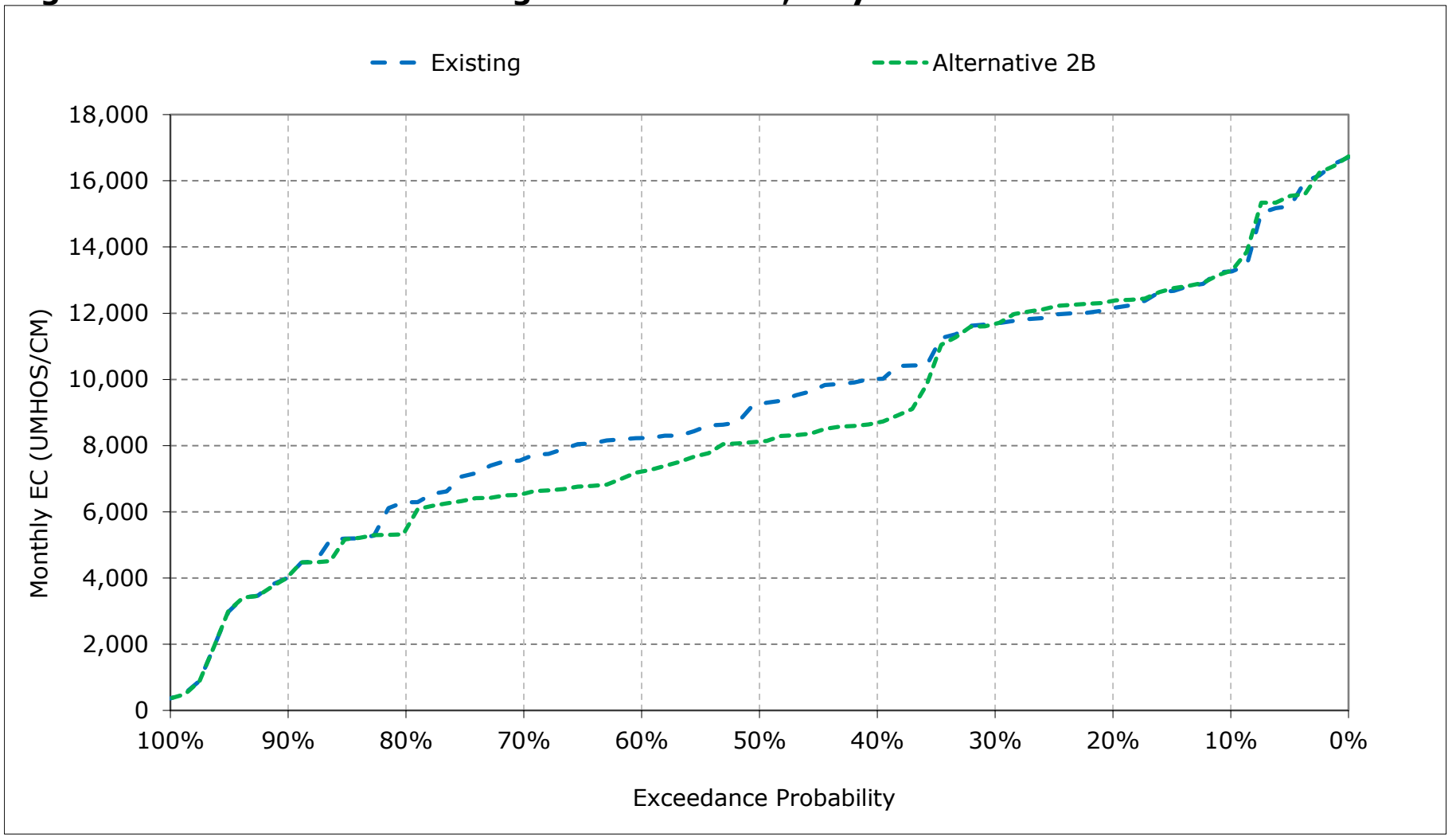


**Figure 20-14. Montezuma Slough at Hunter Cut, August EC**

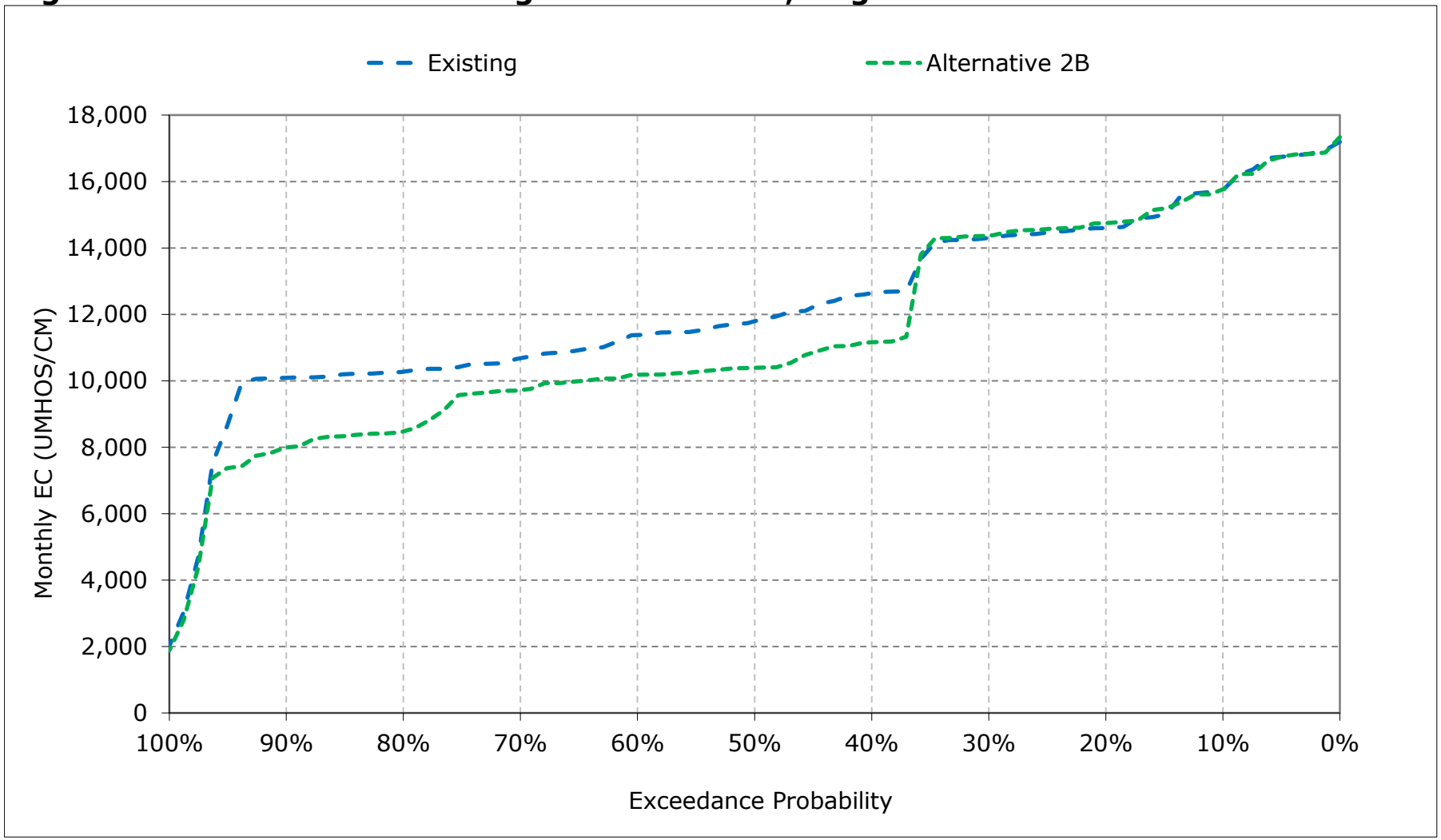


**Figure 20-15. Montezuma Slough at Hunter Cut, September EC**

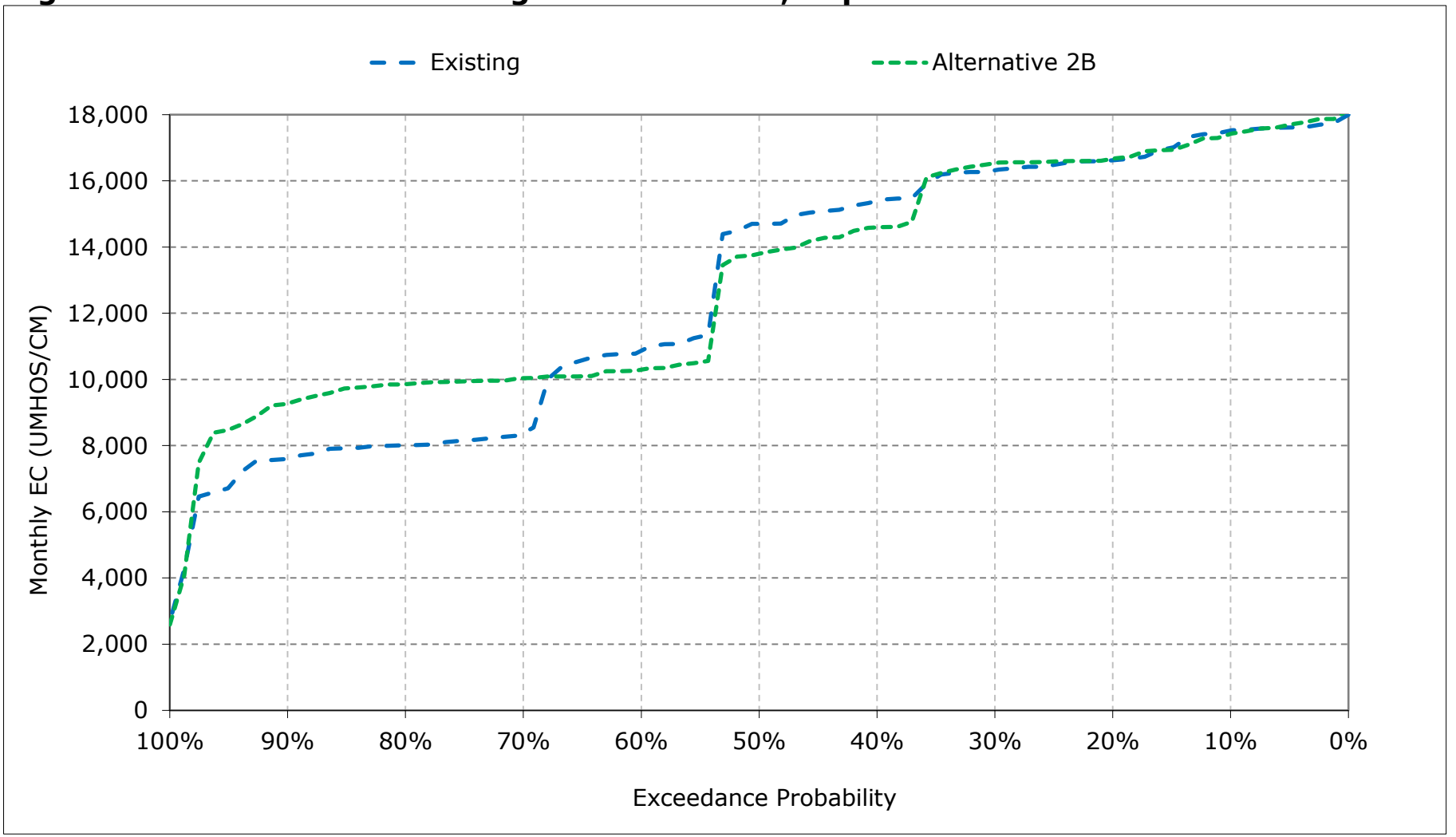


**Figure 20-16. Montezuma Slough at Hunter Cut, October EC**

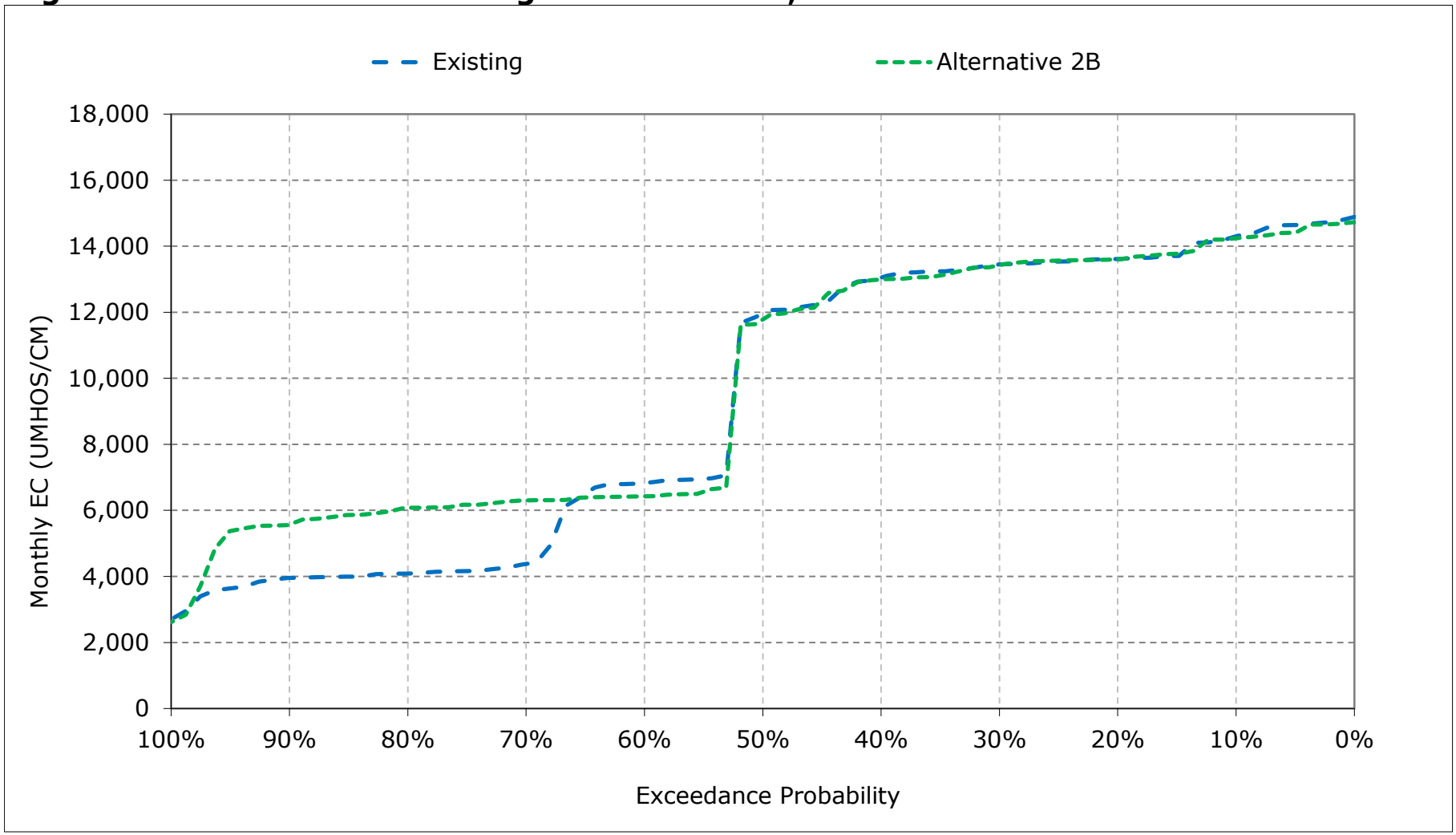


**Figure 20-17. Montezuma Slough at Hunter Cut, November EC**

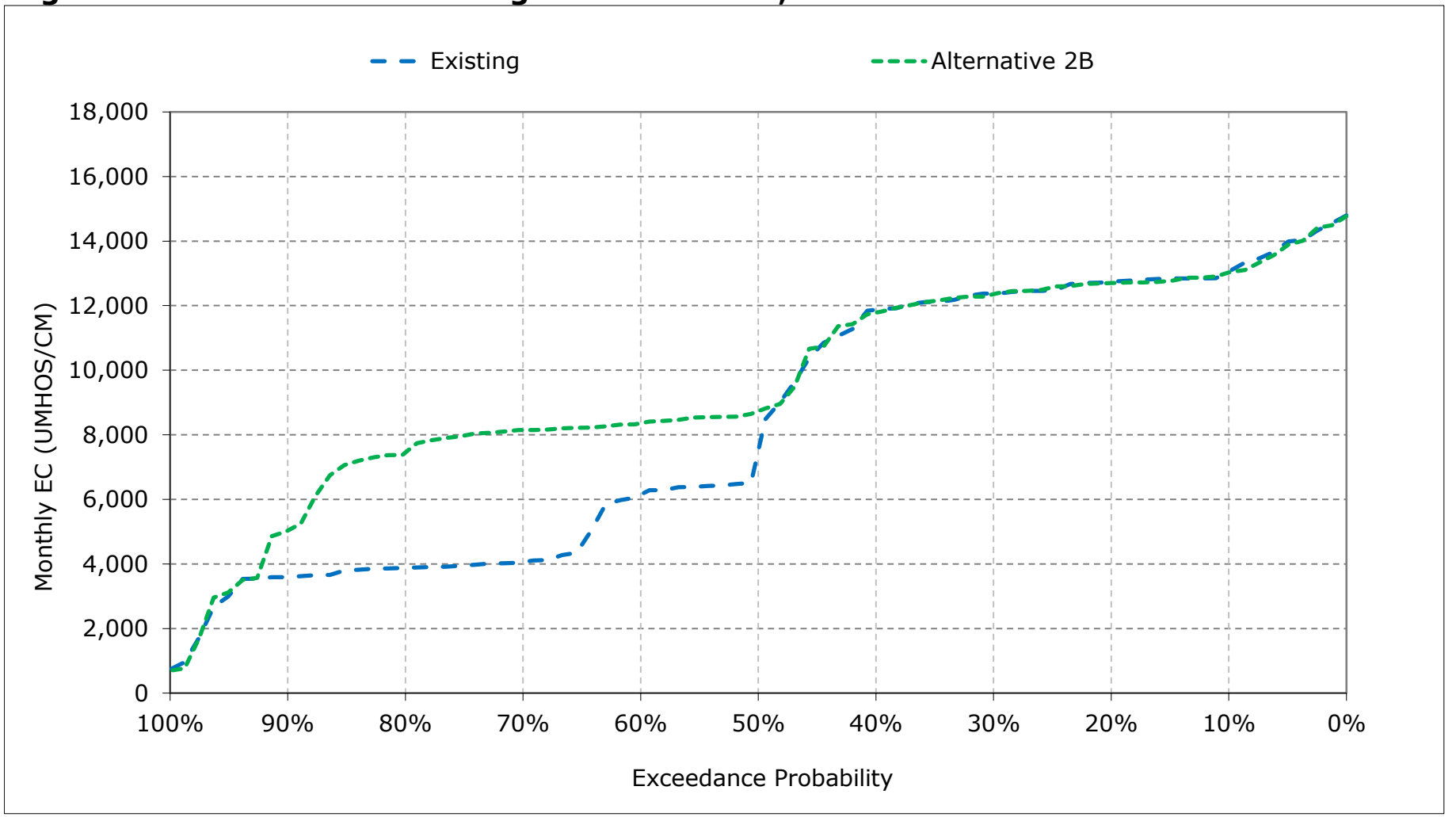
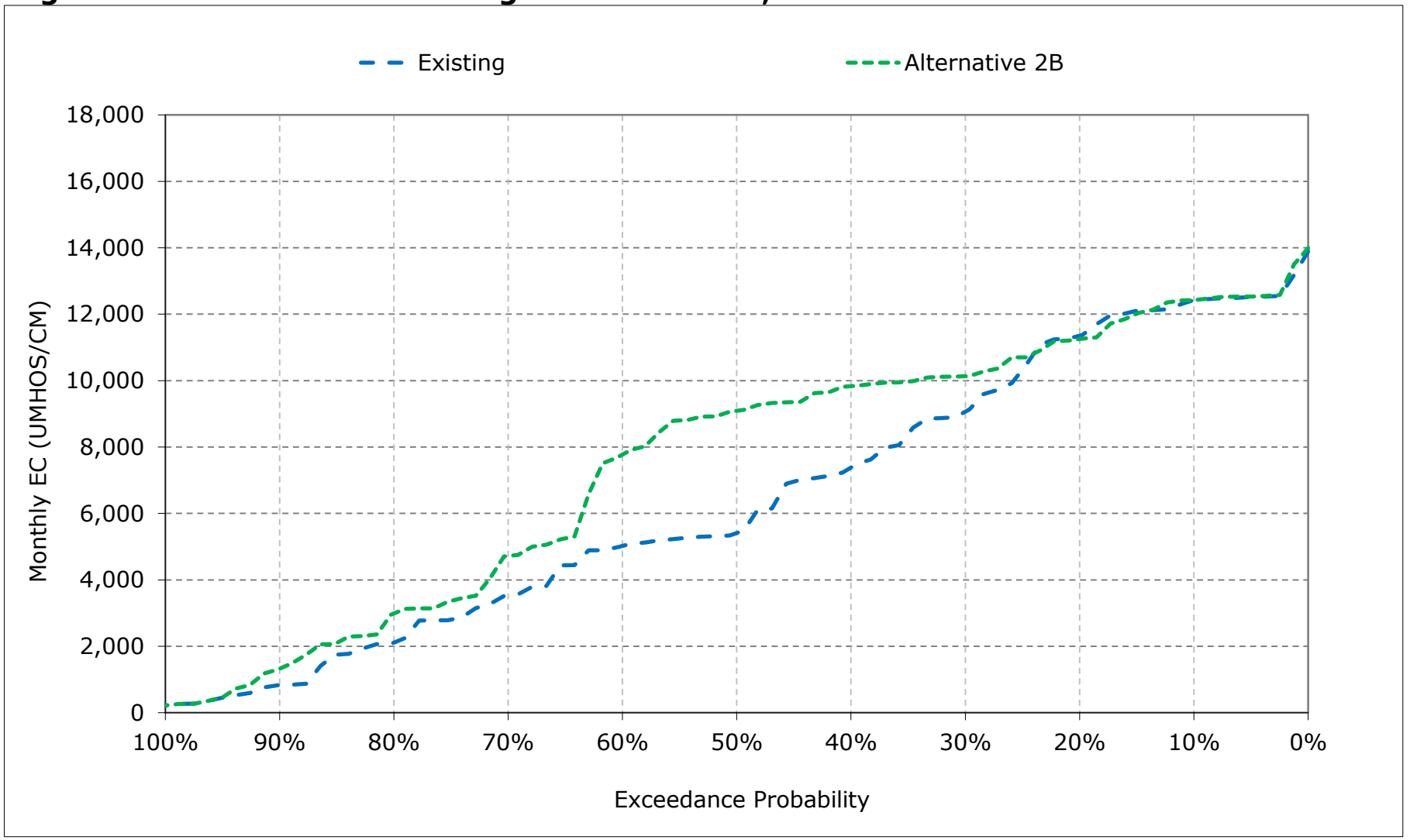


**Figure 20-18. Montezuma Slough at Hunter Cut, December EC**



## Table 21-1. Montezuma Slough at Beldons Landing, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 10,397 | 9,185 | 8,459 | 4,859 | 1,913 | 4,528 | 6,910 | 7,642 | 9,408 | 11,291 | 13,926 | 16,150 |
| **20%** | 9,726 | 8,768 | 6,977 | 4,038 | 1,247 | 2,844 | 3,734 | 5,911 | 7,904 | 10,245 | 12,836 | 15,110 |
| **30%** | 9,507 | 8,484 | 4,779 | 3,185 | 773 | 1,475 | 2,438 | 4,408 | 6,998 | 9,651 | 12,376 | 14,722 |
| **40%** | 9,254 | 7,931 | 3,817 | 1,903 | 557 | 1,021 | 1,574 | 2,715 | 5,707 | 8,399 | 10,521 | 13,462 |
| **50%** | 7,993 | 3,576 | 2,678 | 1,632 | 309 | 853 | 1,248 | 1,882 | 4,248 | 7,091 | 9,759 | 12,895 |
| **60%** | 3,553 | 2,817 | 2,383 | 718 | 232 | 347 | 586 | 1,126 | 3,297 | 6,637 | 9,000 | 9,885 |
| **70%** | 1,942 | 1,552 | 1,139 | 269 | 208 | 236 | 365 | 672 | 2,535 | 5,545 | 8,218 | 8,353 |
| **80%** | 1,727 | 1,379 | 809 | 210 | 198 | 210 | 239 | 366 | 1,132 | 4,226 | 8,042 | 7,889 |
| **90%** | 1,622 | 1,278 | 280 | 196 | 191 | 195 | 195 | 200 | 293 | 2,201 | 7,617 | 7,573 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 6,094 | 5,097 | 3,652 | 2,040 | 821 | 1,517 | 2,173 | 3,003 | 4,836 | 7,331 | 10,172 | 11,631 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 4,627 | 3,136 | 1,198 | 410 | 220 | 288 | 391 | 672 | 1,598 | 3,726 | 7,266 | 7,212 |
| **Above Normal (15%)** | 6,377 | 5,107 | 3,446 | 1,297 | 368 | 370 | 528 | 1,022 | 2,874 | 5,632 | 8,335 | 9,858 |
| **Below Normal (17%)** | 6,393 | 5,547 | 4,642 | 2,292 | 548 | 1,255 | 1,742 | 2,463 | 4,577 | 7,545 | 10,081 | 13,190 |
| **Dry (22%)** | 6,458 | 5,971 | 4,487 | 3,024 | 1,240 | 2,210 | 3,276 | 4,600 | 7,033 | 9,806 | 12,571 | 14,904 |
| **Critical (15%)** | 8,098 | 7,502 | 6,769 | 4,543 | 2,264 | 4,595 | 6,530 | 8,271 | 10,822 | 12,880 | 14,817 | 16,249 |

### Alternative 2B

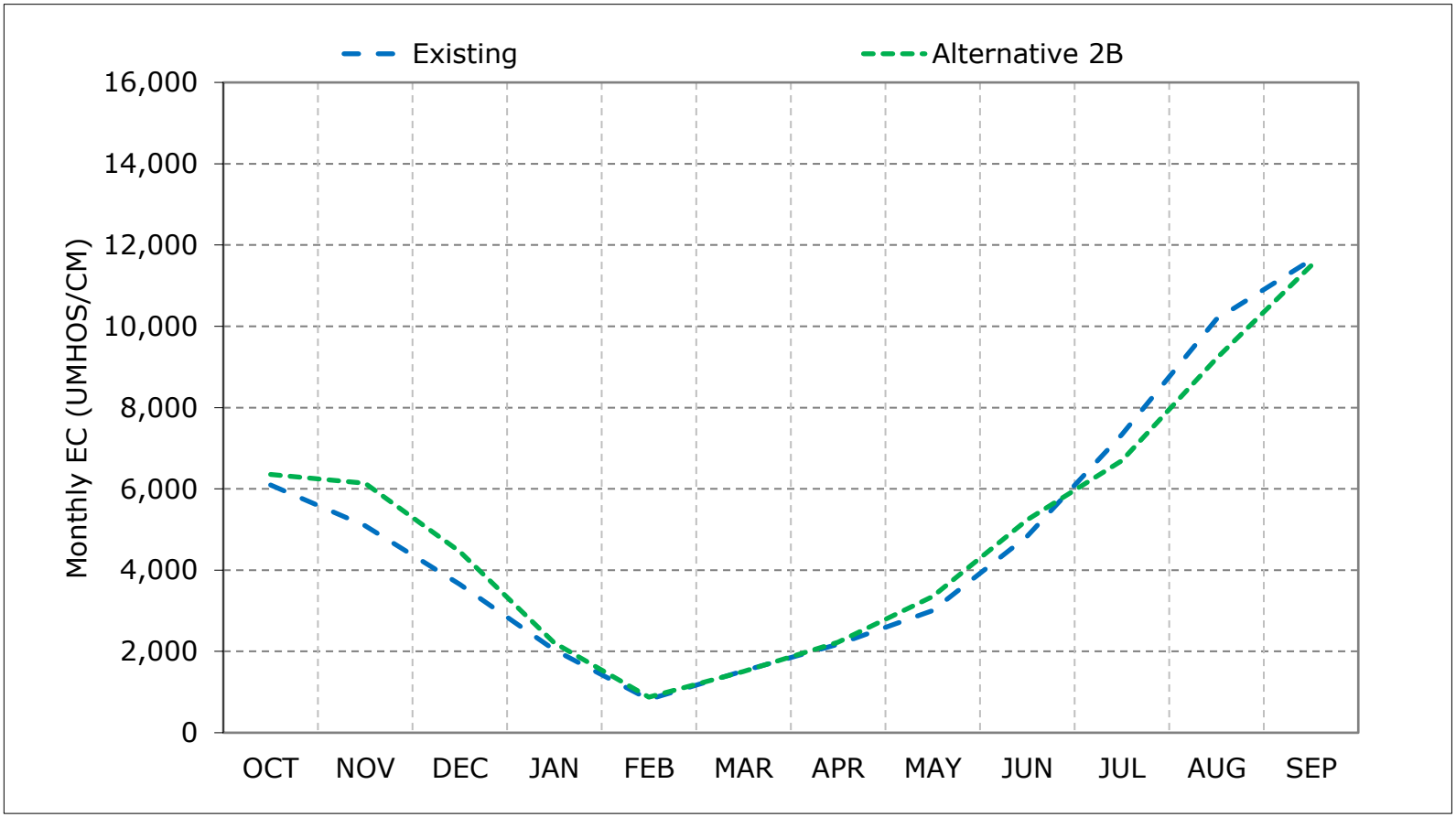
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 10,380 | 9,196 | 8,451 | 5,568 | 1,992 | 4,474 | 7,122 | 7,724 | 9,520 | 11,346 | 13,920 | 16,065 |
| **20%** | 9,747 | 8,773 | 7,004 | 4,532 | 1,233 | 2,910 | 3,539 | 6,398 | 8,753 | 10,430 | 12,986 | 15,096 |
| **30%** | 9,453 | 8,527 | 6,363 | 3,429 | 833 | 1,493 | 2,592 | 5,157 | 7,757 | 9,626 | 12,493 | 14,899 |
| **40%** | 9,156 | 7,960 | 5,858 | 2,102 | 571 | 888 | 1,722 | 3,504 | 6,046 | 7,161 | 9,033 | 11,466 |
| **50%** | 8,049 | 5,302 | 4,937 | 1,585 | 311 | 681 | 1,339 | 2,173 | 4,748 | 6,448 | 8,198 | 10,816 |
| **60%** | 3,257 | 4,984 | 3,771 | 734 | 221 | 335 | 614 | 1,567 | 4,072 | 4,807 | 7,884 | 9,442 |
| **70%** | 3,071 | 4,746 | 1,919 | 276 | 208 | 231 | 385 | 949 | 2,767 | 3,308 | 7,450 | 9,043 |
| **80%** | 2,915 | 4,219 | 1,151 | 210 | 200 | 208 | 242 | 409 | 1,388 | 3,173 | 5,455 | 8,911 |
| **90%** | 2,587 | 2,228 | 542 | 195 | 192 | 195 | 197 | 203 | 311 | 2,070 | 4,803 | 8,333 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 6,356 | 6,141 | 4,461 | 2,215 | 875 | 1,505 | 2,229 | 3,350 | 5,237 | 6,692 | 9,210 | 11,490 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 4,976 | 4,497 | 1,743 | 421 | 214 | 279 | 429 | 880 | 1,915 | 3,891 | 6,978 | 8,143 |
| **Above Normal (15%)** | 6,711 | 6,105 | 4,510 | 1,438 | 341 | 328 | 575 | 1,388 | 3,320 | 5,726 | 8,220 | 9,081 |
| **Below Normal (17%)** | 6,692 | 6,561 | 5,620 | 2,395 | 536 | 1,170 | 1,799 | 3,010 | 5,136 | 3,102 | 4,956 | 11,168 |
| **Dry (22%)** | 6,697 | 6,926 | 5,467 | 3,409 | 1,380 | 2,198 | 3,319 | 5,086 | 7,547 | 10,001 | 12,686 | 15,019 |
| **Critical (15%)** | 8,090 | 8,072 | 7,442 | 4,878 | 2,481 | 4,689 | 6,648 | 8,453 | 11,009 | 12,952 | 14,786 | 16,232 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -17 | **11** | -7 | **710** | **78** | -54 | **212** | **82** | **112** | **55** | -6 | -85 |
| **20%** | **21** | **5** | **27** | **494** | -14 | **67** | -195 | **487** | **850** | **184** | **150** | -14 |
| **30%** | -54 | **43** | **1,584** | **244** | **60** | **18** | **154** | **749** | **759** | -24 | **117** | **177** |
| **40%** | -99 | **29** | **2,040** | **199** | **14** | -133 | **148** | **788** | **339** | -1,238 | -1,488 | -1,996 |
| **50%** | **56** | **1,725** | **2,260** | -47 | **3** | -171 | **91** | **292** | **501** | -643 | -1,561 | -2,079 |
| **60%** | -297 | **2,167** | **1,389** | **16** | -10 | -11 | **28** | **441** | **775** | -1,830 | -1,116 | -443 |
| **70%** | **1,129** | **3,194** | **780** | **7** | -1 | -6 | **21** | **277** | **232** | -2,237 | -768 | **691** |
| **80%** | **1,188** | **2,840** | **342** | **0** | **2** | -2 | **3** | **43** | **255** | -1,052 | -2,587 | **1,021** |
| **90%** | **965** | **950** | **262** | 0 | **0** | 0 | **2** | **3** | **18** | -131 | -2,815 | **759** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **262** | **1,044** | **809** | **175** | **55** | -12 | **55** | **346** | **401** | -639 | -962 | -141 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **349** | **1,360** | **545** | **11** | -6 | -9 | **39** | **208** | **317** | **166** | -288 | **930** |
| **Above Normal (15%)** | **335** | **998** | **1,064** | **141** | -27 | -41 | **46** | **366** | **446** | **94** | -115 | -777 |
| **Below Normal (17%)** | **299** | **1,014** | **978** | **103** | -11 | -85 | **57** | **547** | **559** | -4,442 | -5,125 | -2,021 |
| **Dry (22%)** | **239** | **955** | **980** | **385** | **141** | -13 | **43** | **486** | **514** | **194** | **116** | **115** |
| **Critical (15%)** | -8 | **571** | **673** | **336** | **216** | **94** | **118** | **182** | **187** | **71** | -31 | -17 |

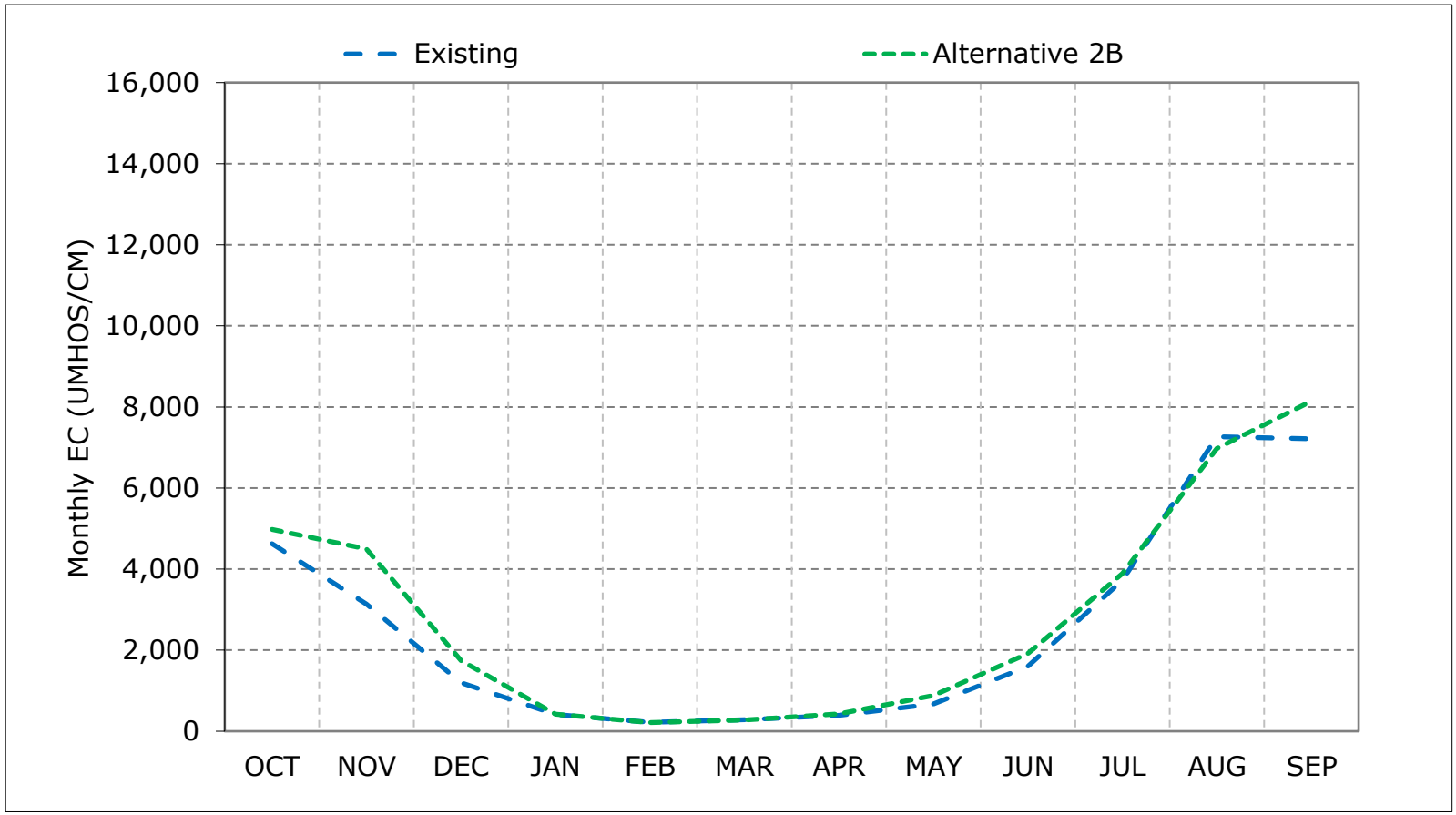
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

## Figure 21-1. Montezuma Slough at Beldons Landing, Long-Term Average EC



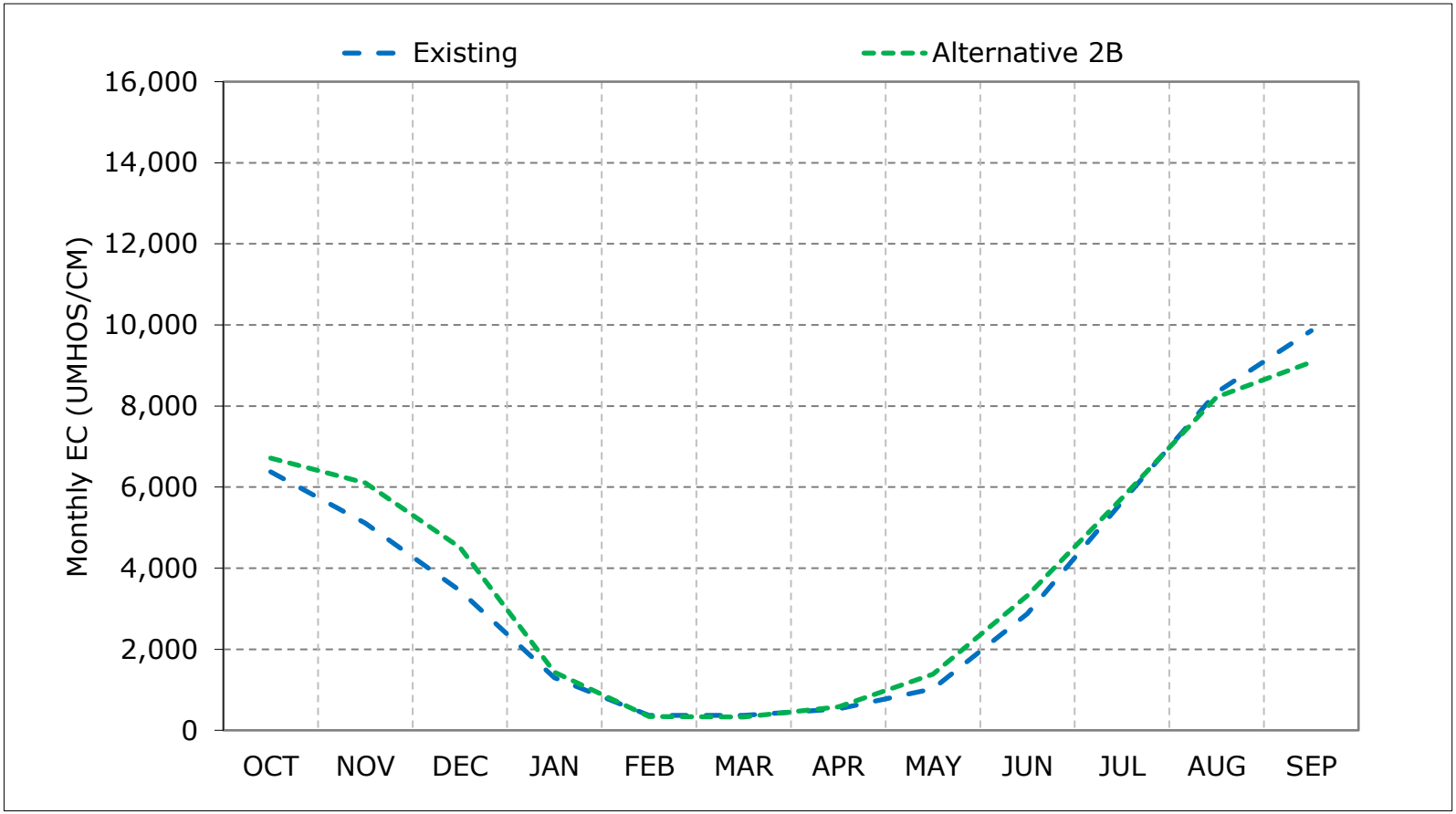

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 21-2. Montezuma Slough at Beldons Landing, Wet Year Average EC**



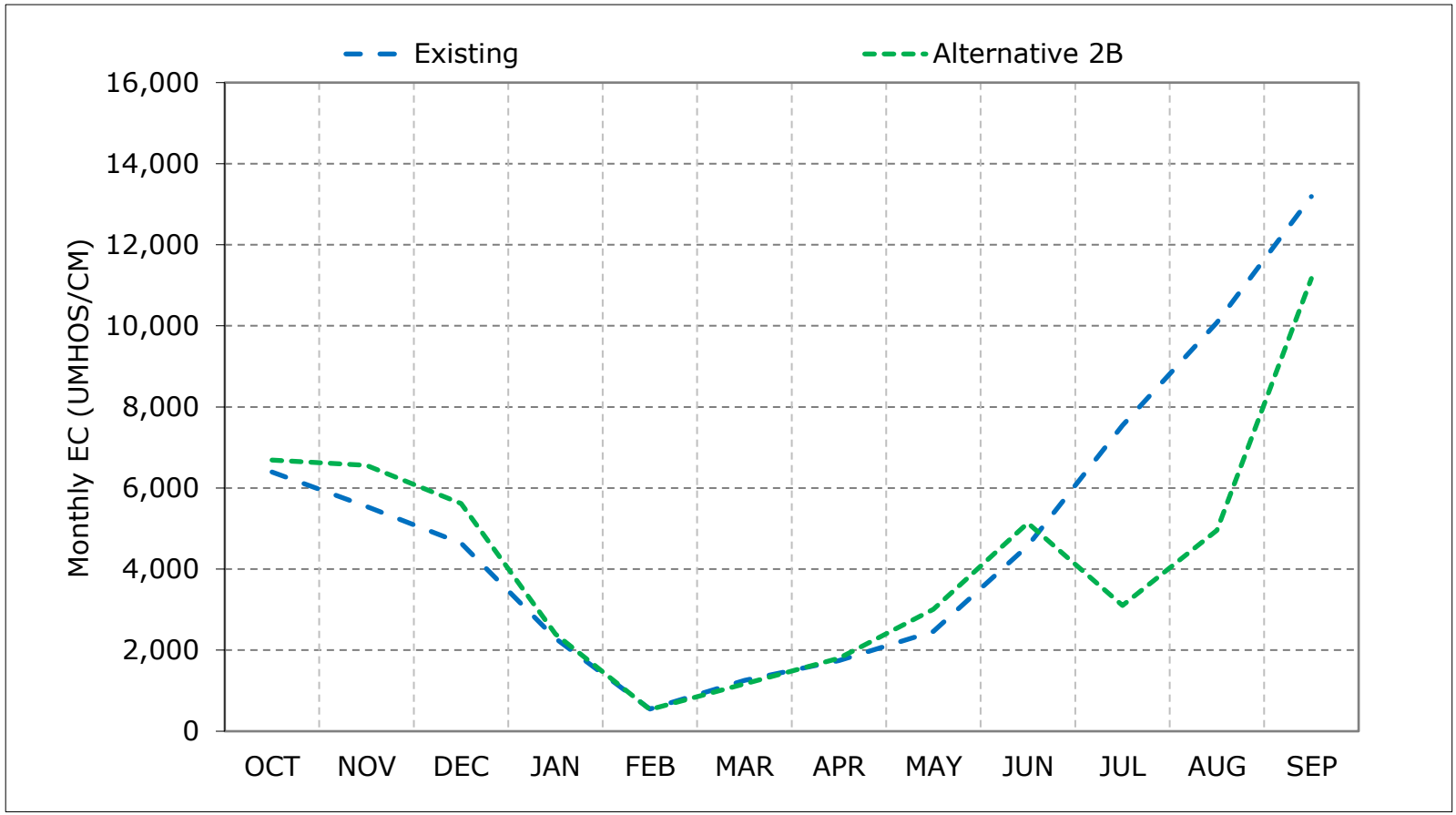

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 21-3. Montezuma Slough at Beldons Landing, Above Normal Year Average EC**



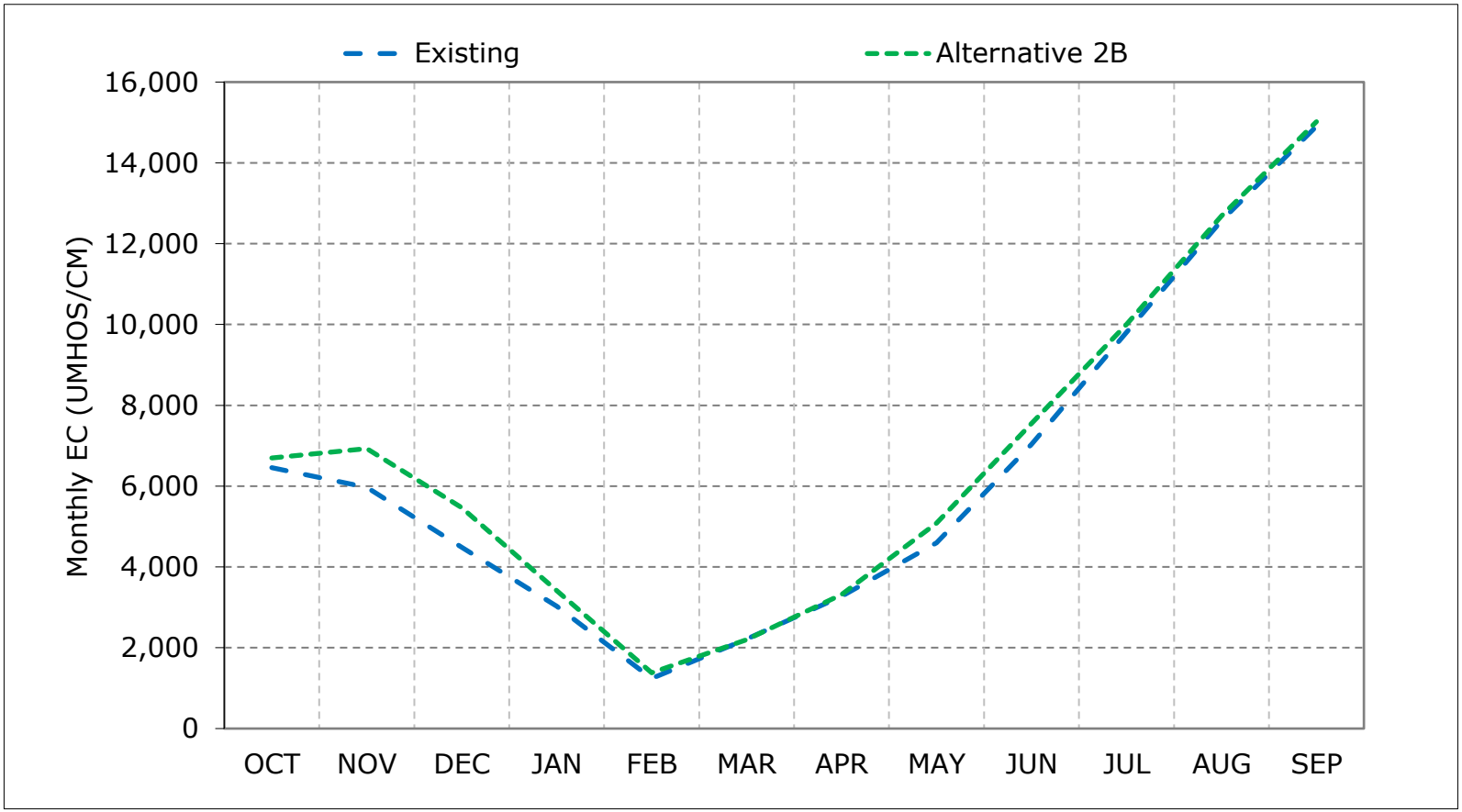

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 21-4. Montezuma Slough at Beldons Landing, Below Normal Year Average EC**



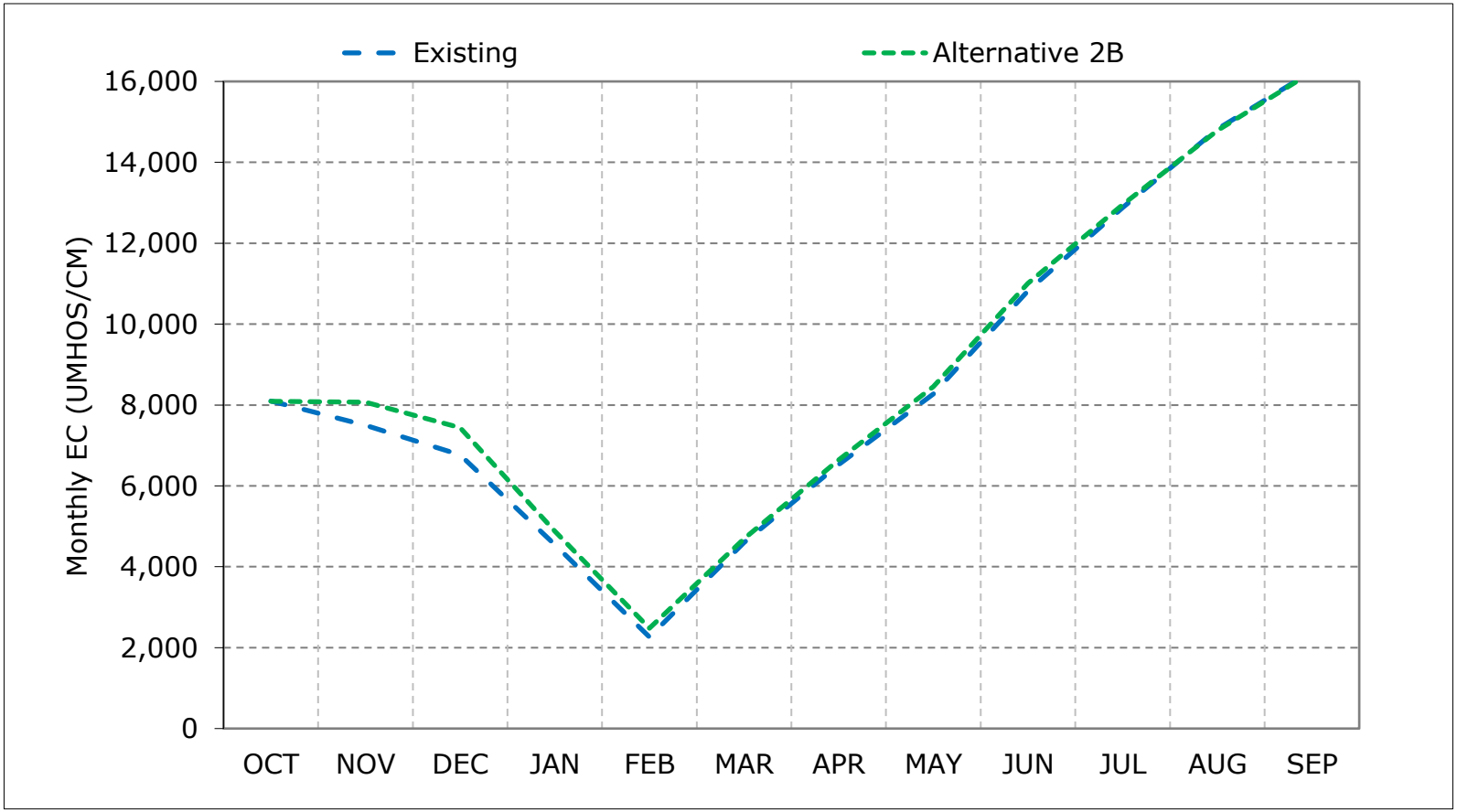

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 21-5. Montezuma Slough at Beldons Landing, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 21-6. Montezuma Slough at Beldons Landing, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 21-7. Montezuma Slough at Beldons Landing, January EC**

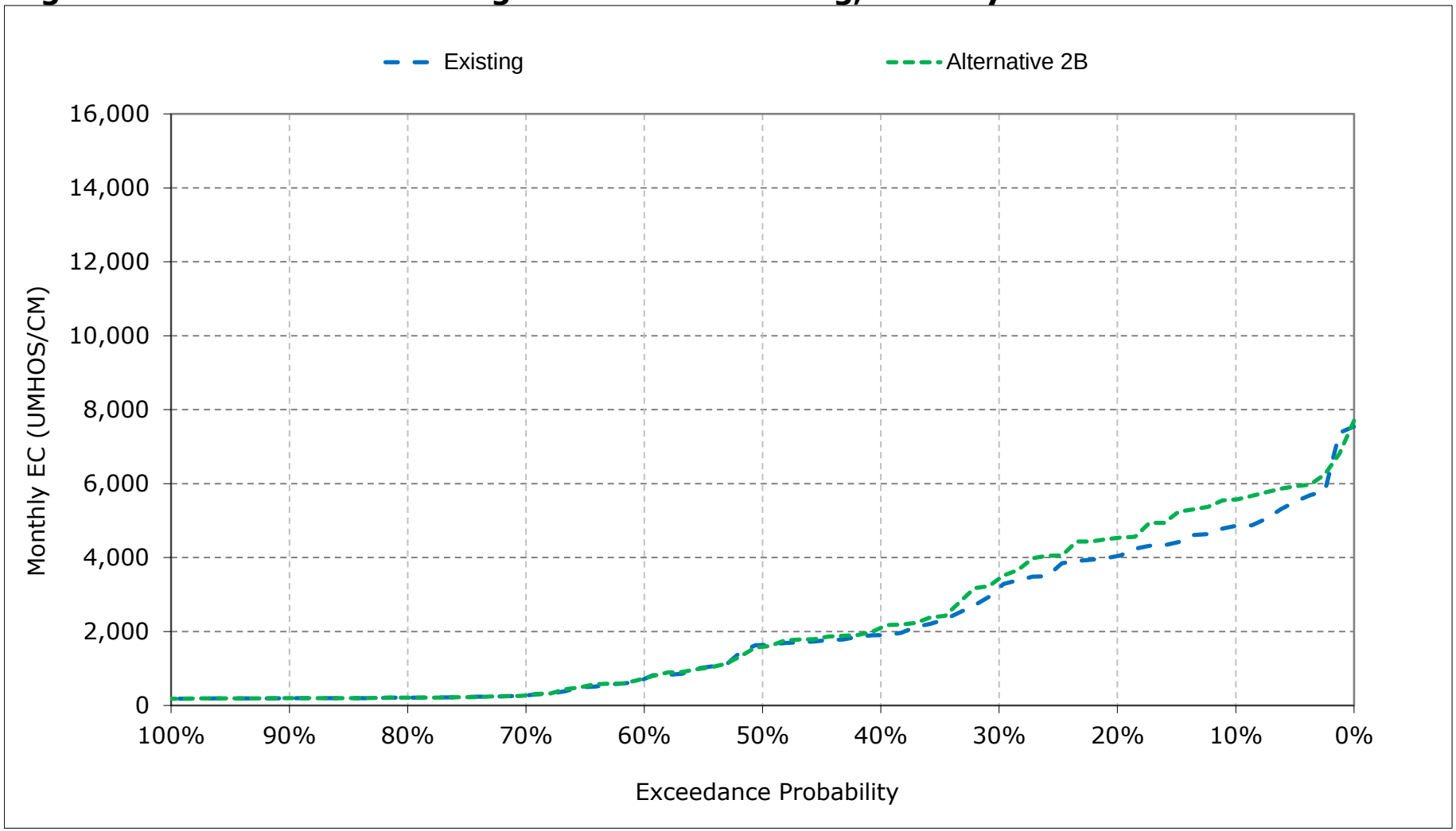


**Figure 21-8. Montezuma Slough at Beldons Landing, February EC**

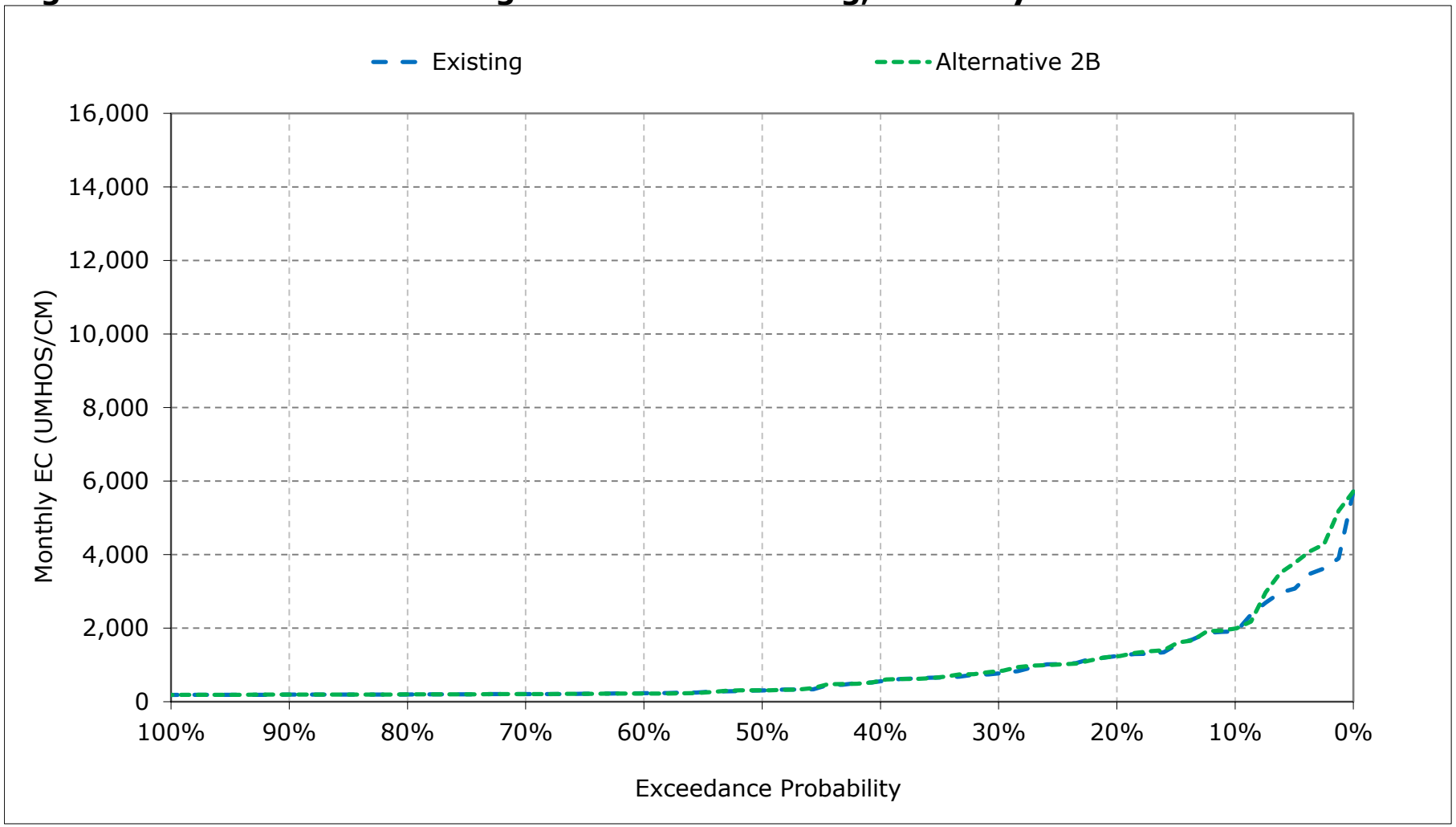


**Figure 21-9. Montezuma Slough at Beldons Landing, March EC**

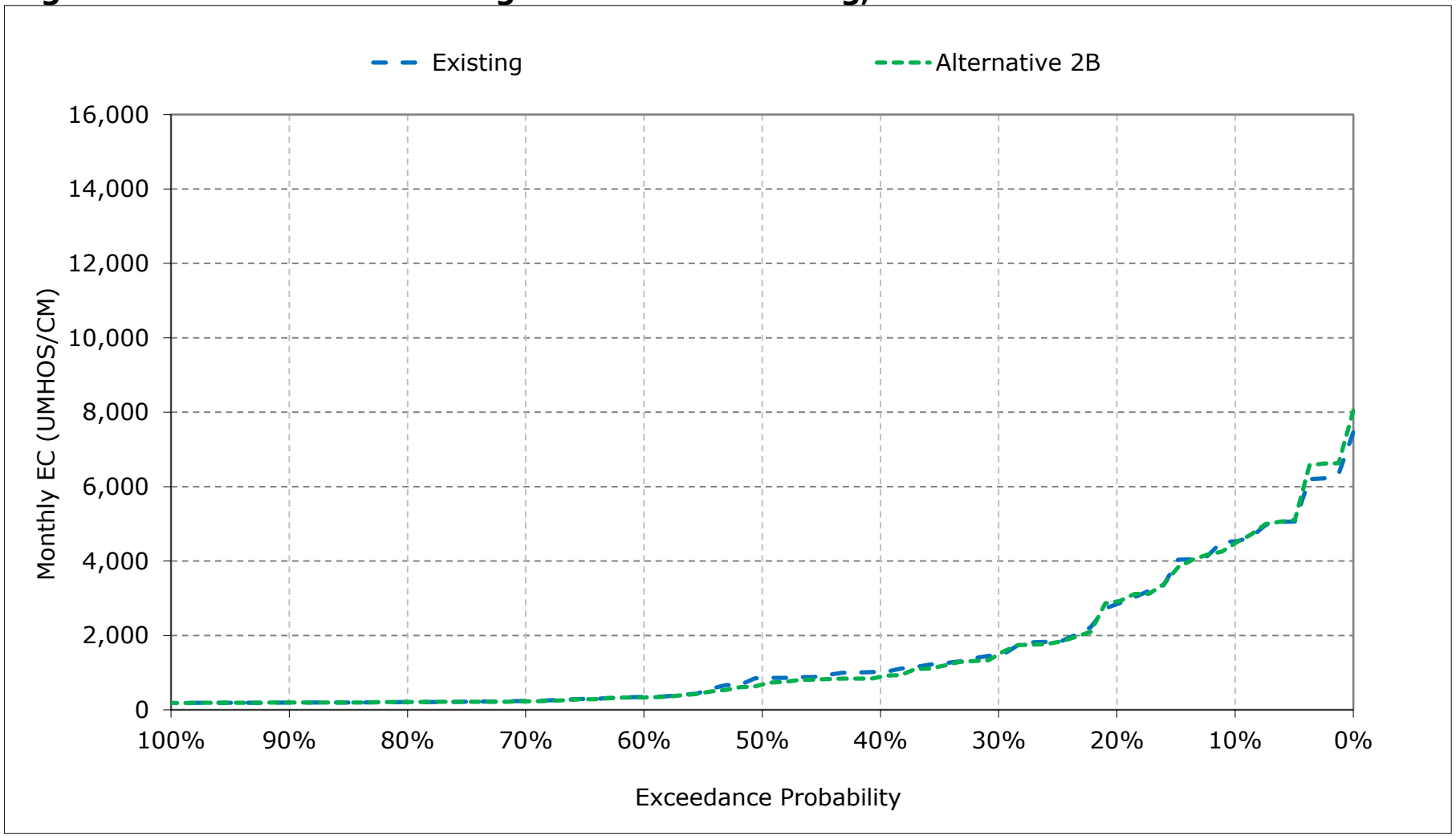


**Figure 21-10. Montezuma Slough at Beldons Landing, April EC**

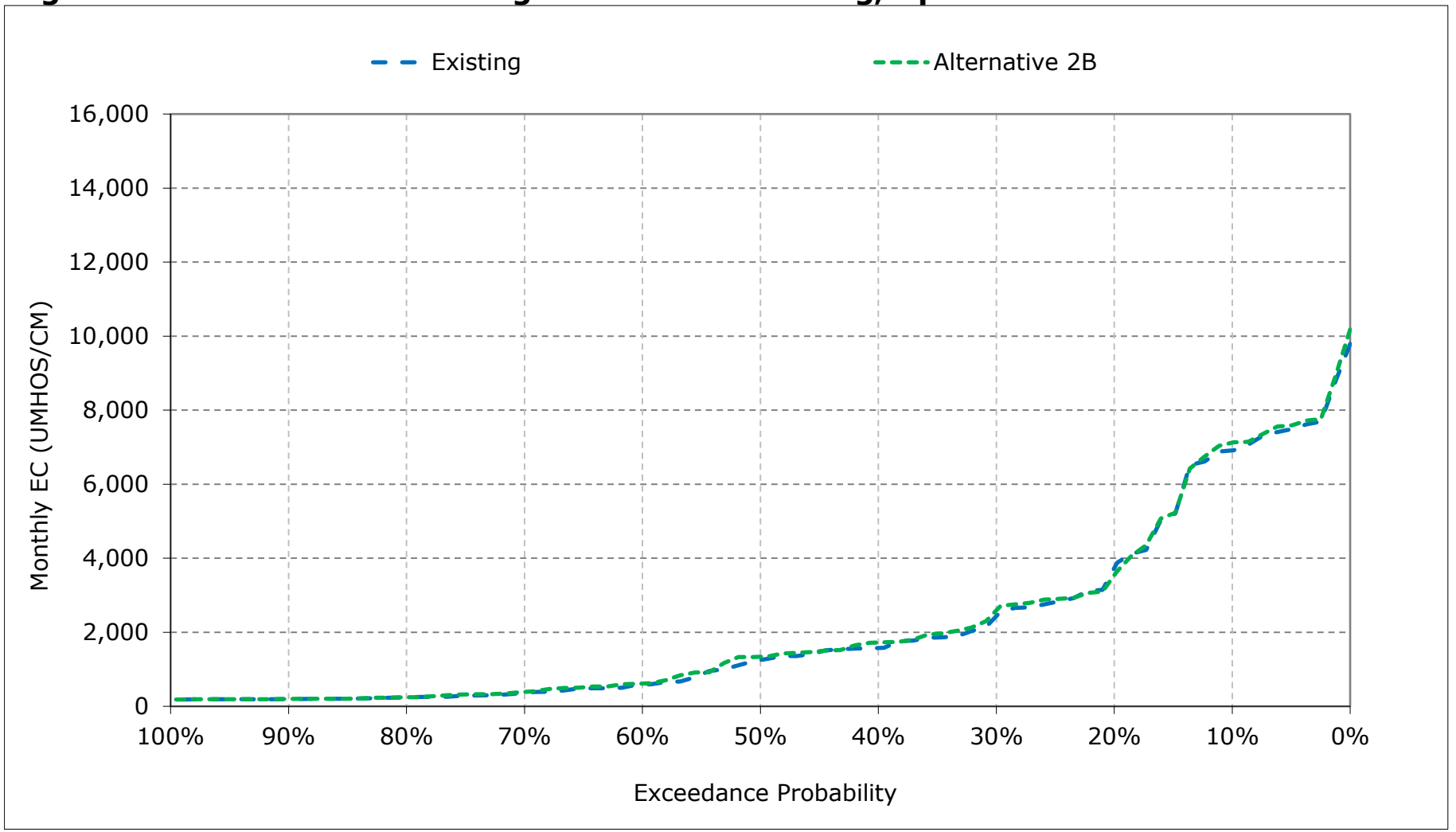


**Figure 21-11. Montezuma Slough at Beldons Landing, May EC**

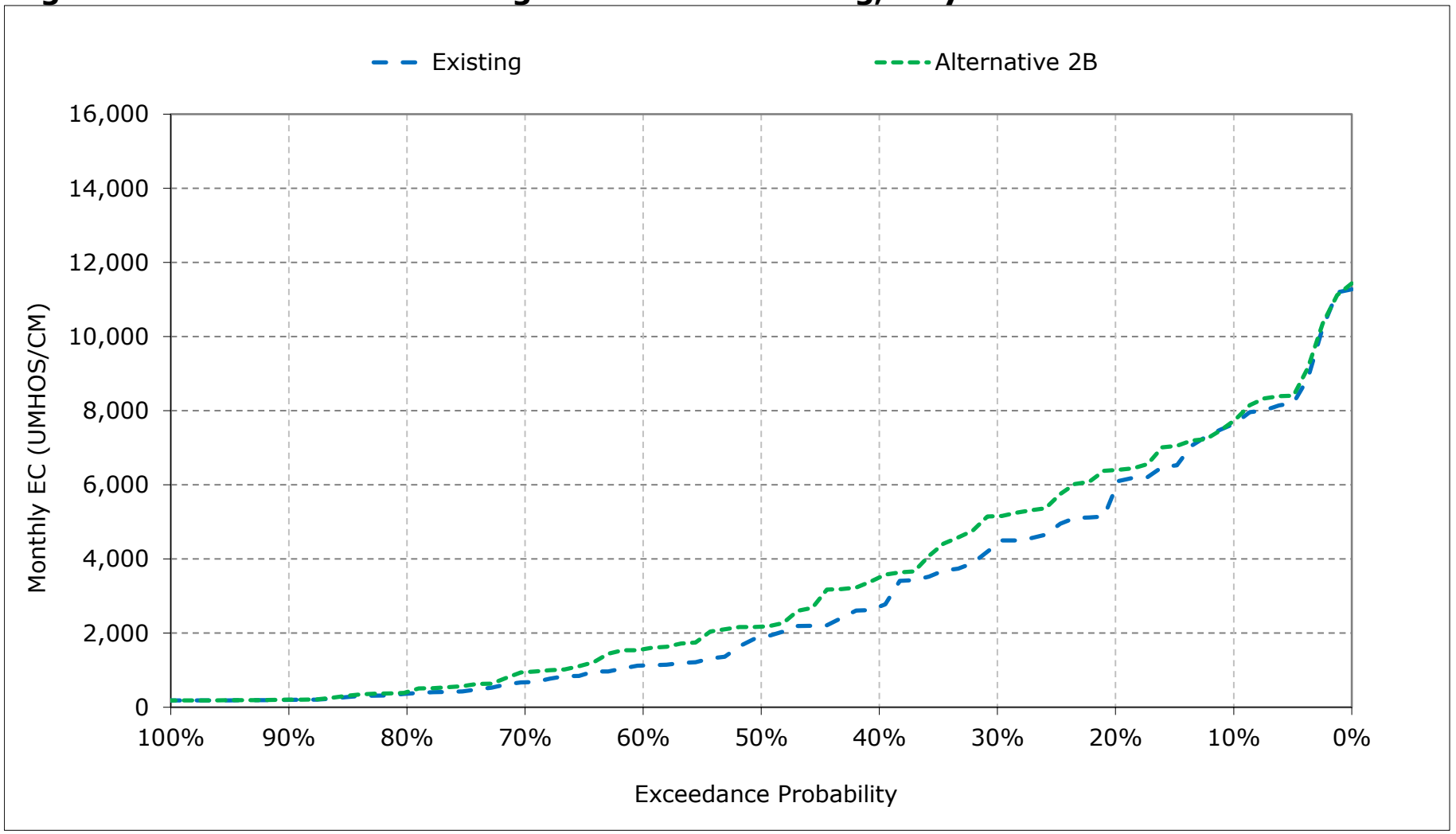


**Figure 21-12. Montezuma Slough at Beldons Landing, June EC**

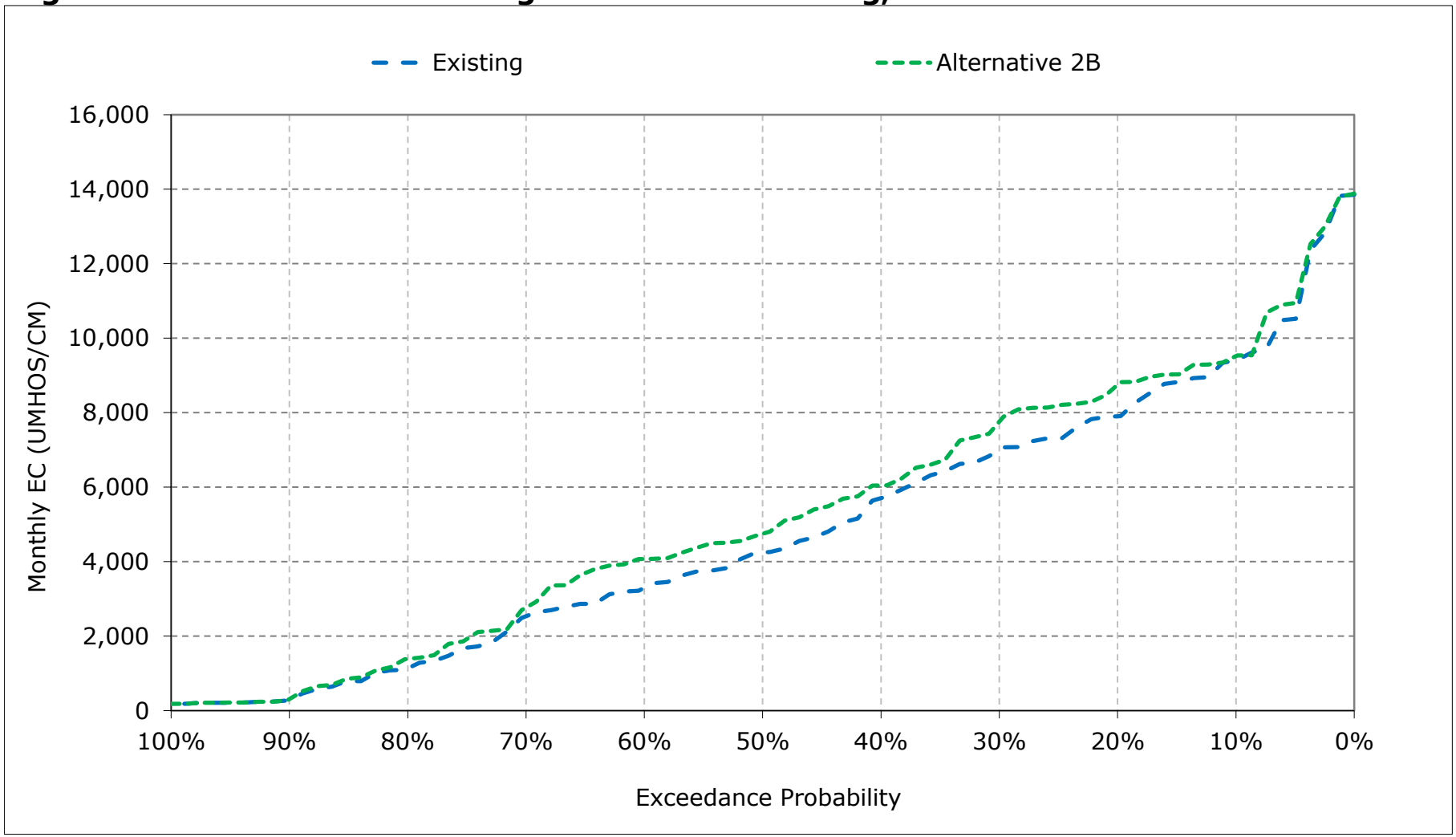


**Figure 21-13. Montezuma Slough at Beldons Landing, July EC**

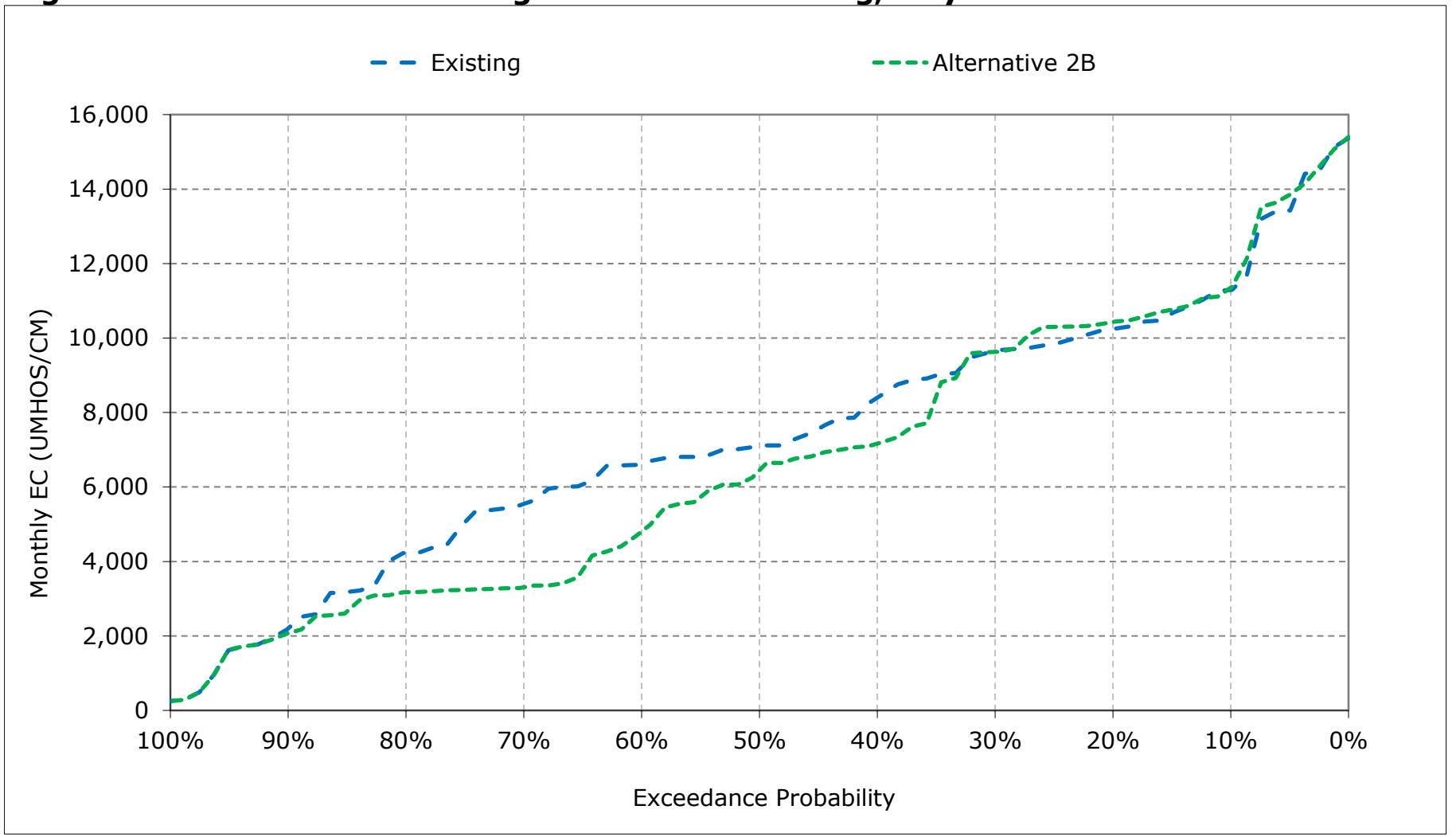


**Figure 21-14. Montezuma Slough at Beldons Landing, August EC**

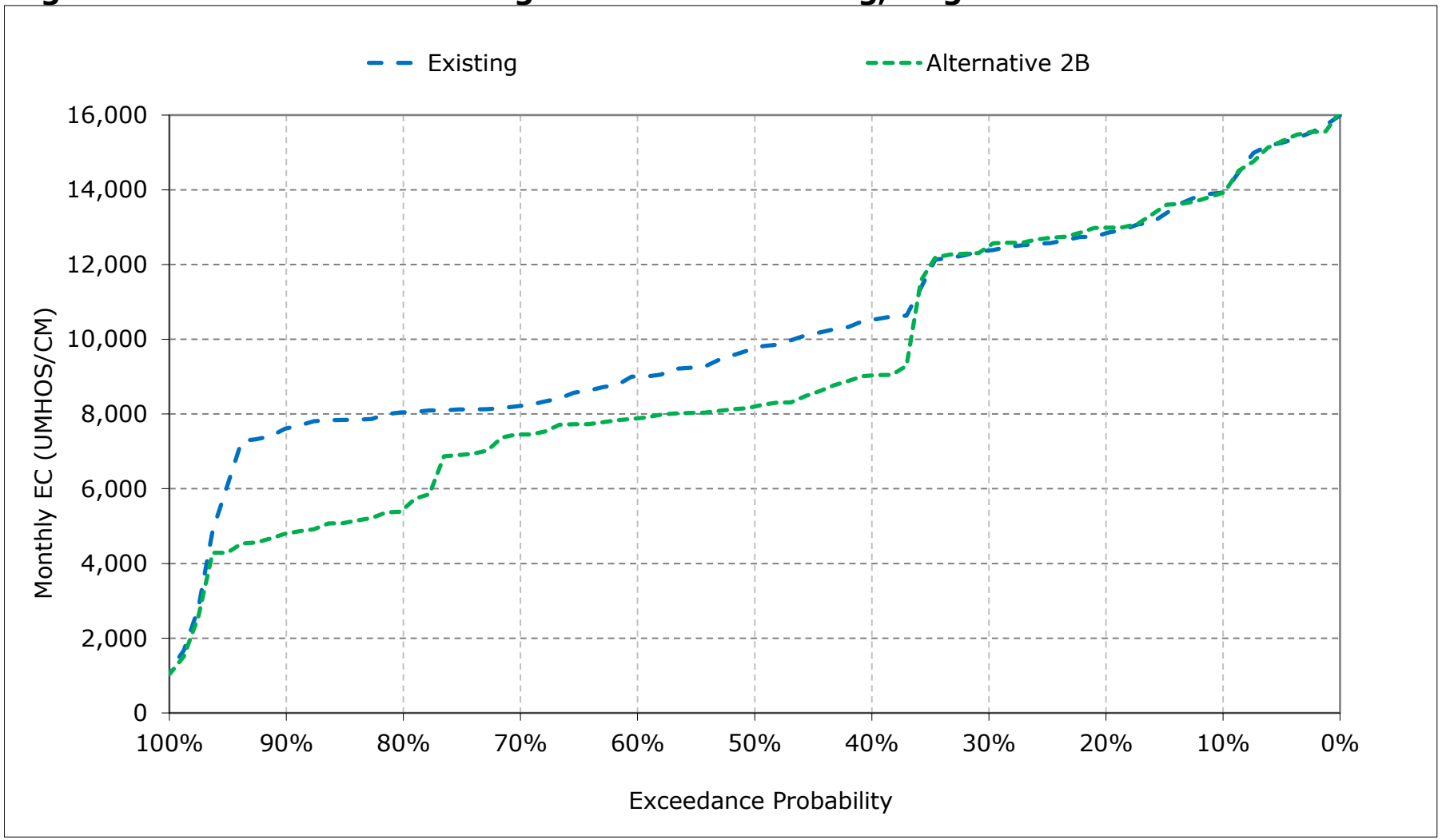


**Figure 21-15. Montezuma Slough at Beldons Landing, September EC**

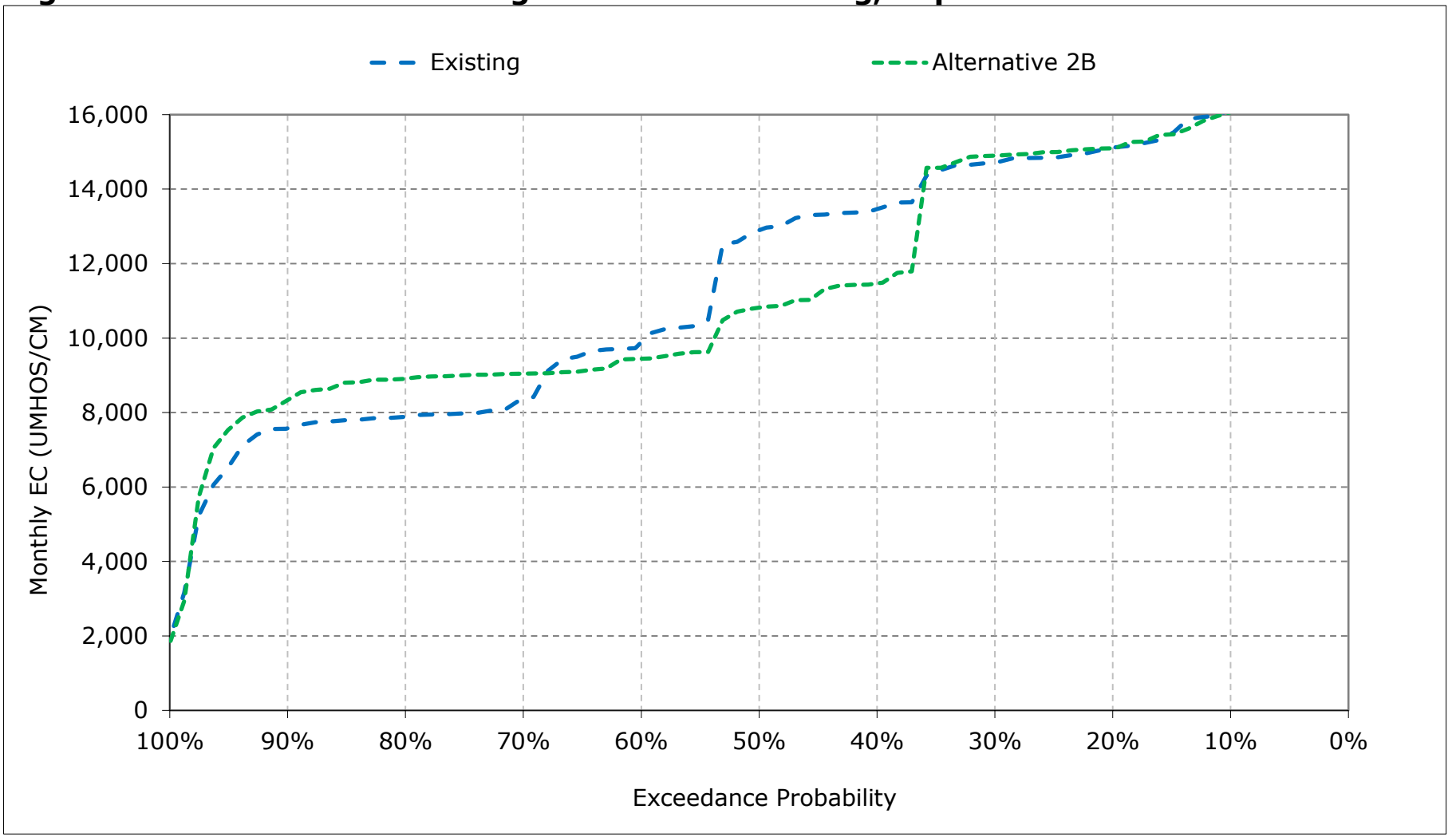


**Figure 21-16. Montezuma Slough at Beldons Landing, October EC**

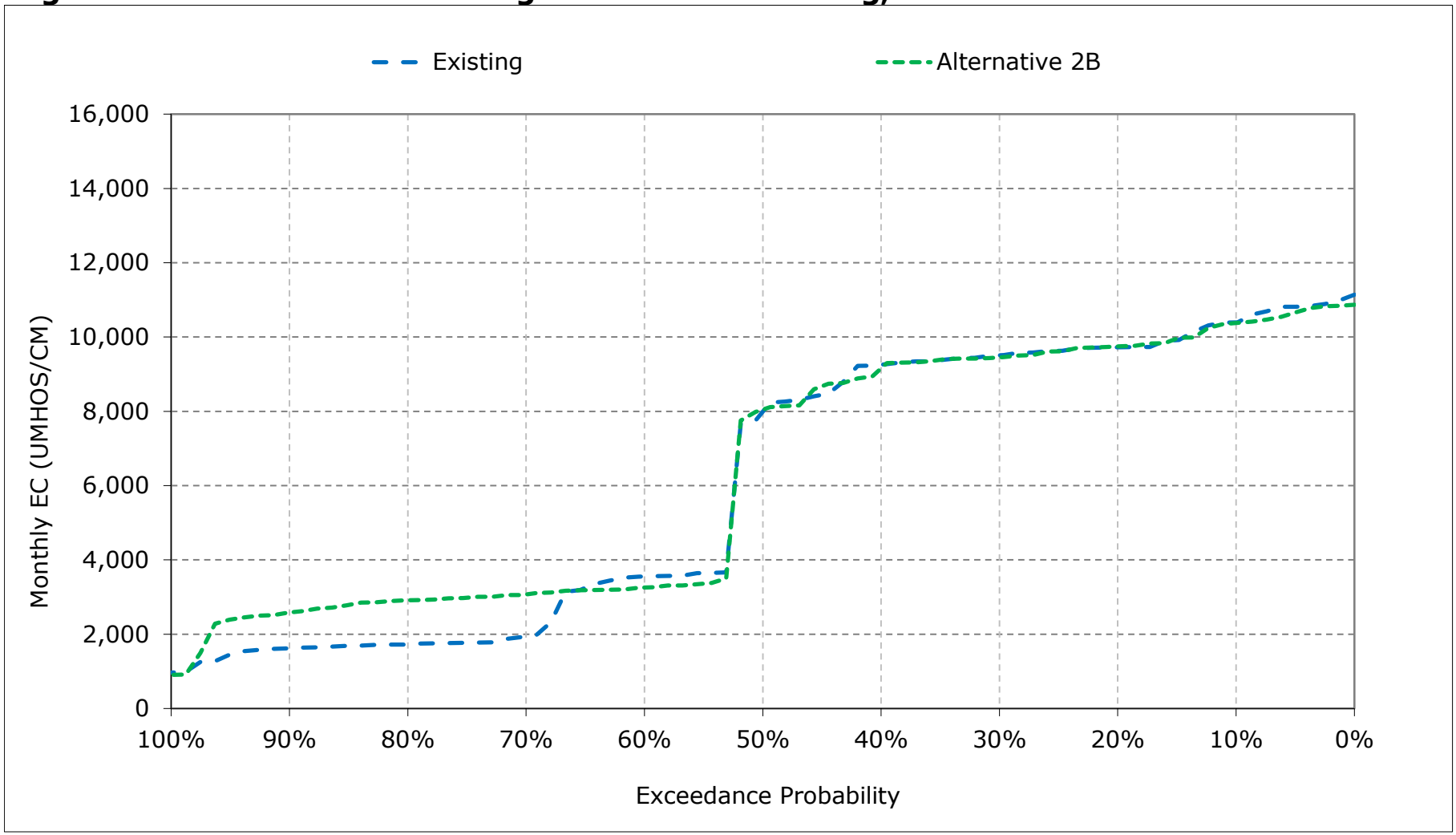


**Figure 21-17. Montezuma Slough at Beldons Landing, November EC**

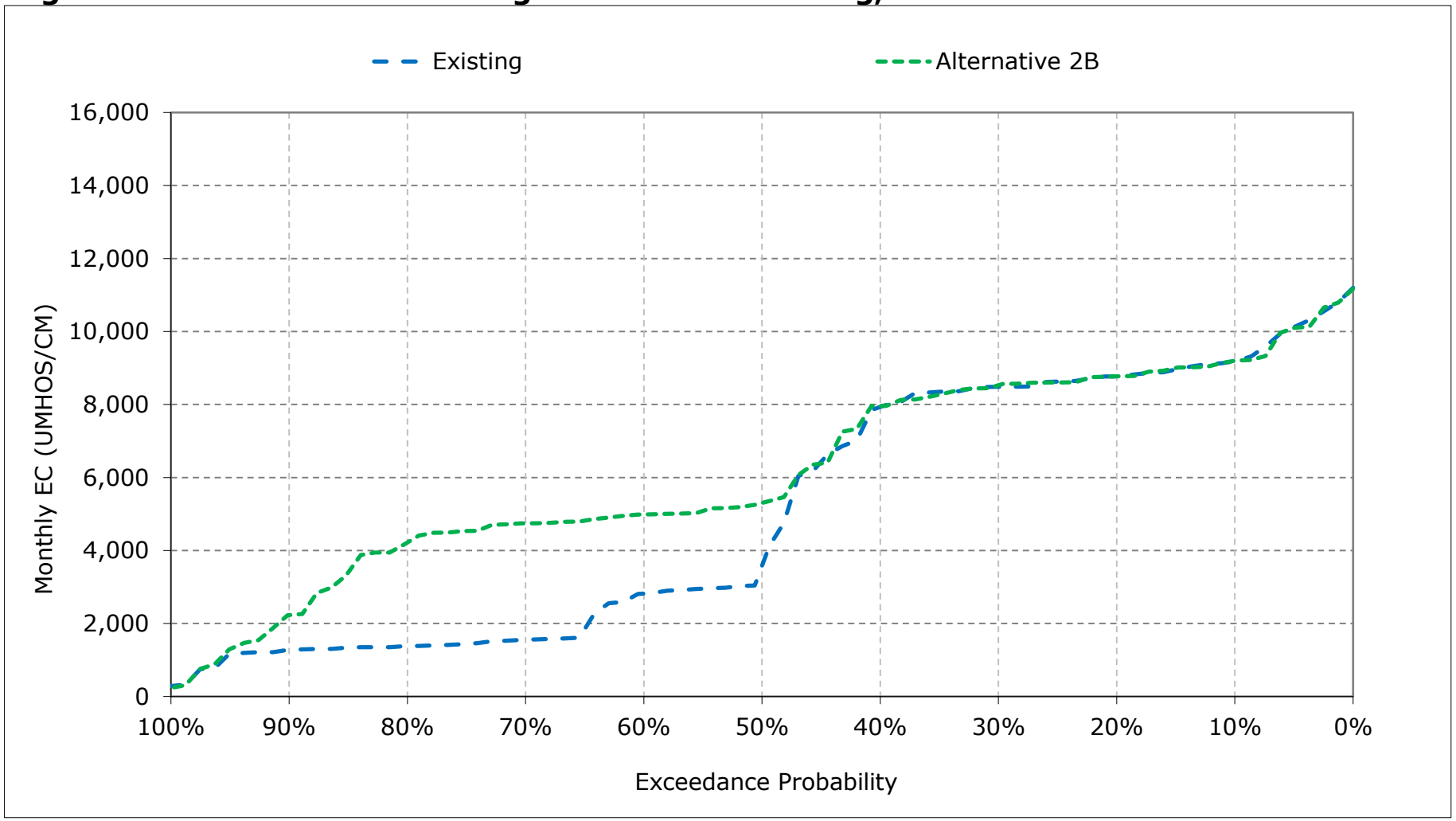
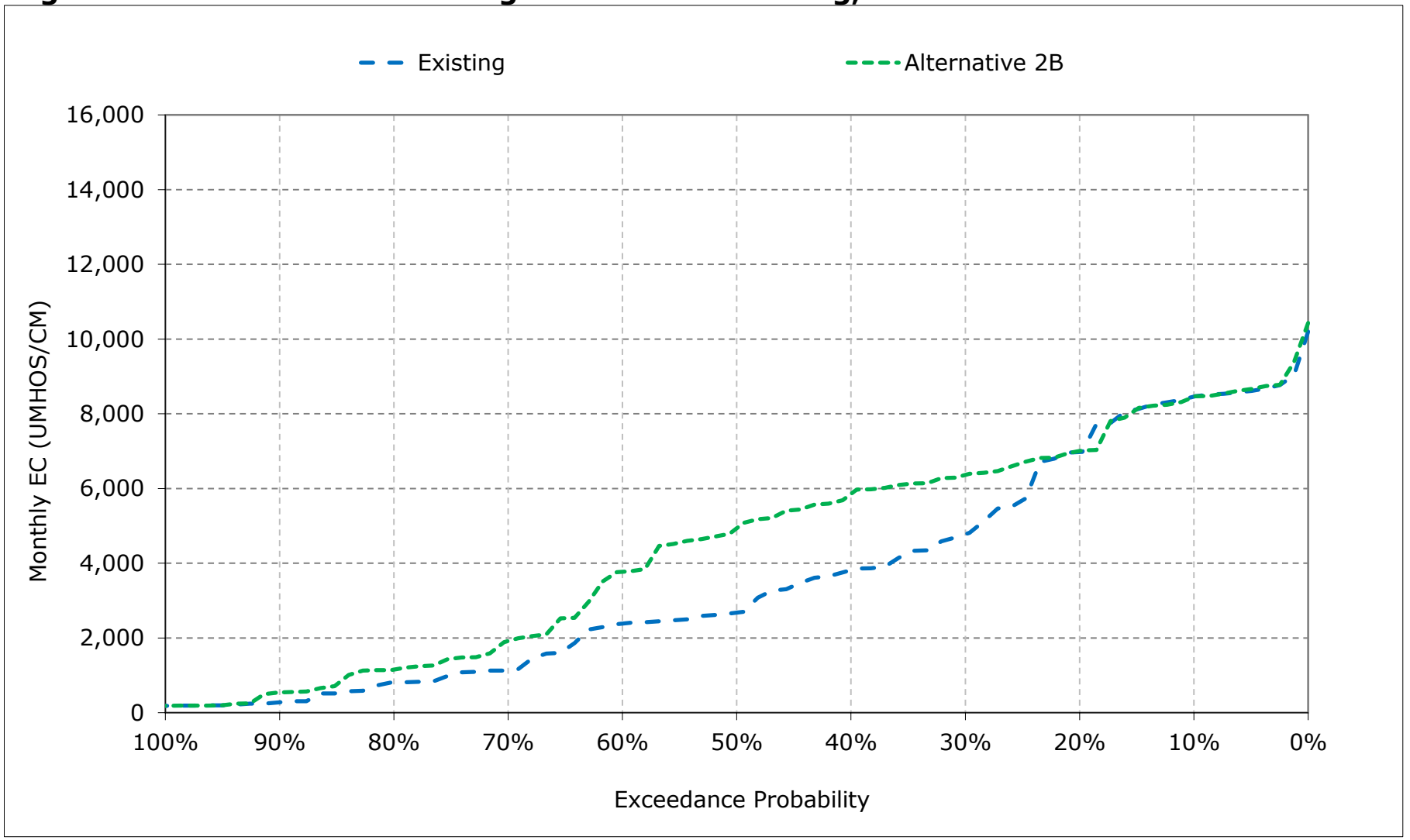


**Figure 21-18. Montezuma Slough at Beldons Landing, December EC**



## Table 22-1. Montezuma Slough at National Steel, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 9,954 | 9,125 | 8,457 | 4,653 | 1,816 | 2,545 | 3,804 | 4,644 | 6,213 | 8,195 | 10,808 | 12,703 |
| **20%** | 9,229 | 8,637 | 6,804 | 3,899 | 1,124 | 1,367 | 1,768 | 3,345 | 4,995 | 7,041 | 9,632 | 11,765 |
| **30%** | 9,052 | 8,374 | 4,484 | 2,833 | 652 | 572 | 901 | 2,305 | 4,418 | 6,564 | 9,202 | 11,431 |
| **40%** | 8,727 | 7,798 | 3,679 | 1,533 | 404 | 420 | 647 | 1,272 | 3,512 | 5,011 | 7,333 | 10,280 |
| **50%** | 7,640 | 3,102 | 2,891 | 1,212 | 294 | 314 | 517 | 795 | 2,474 | 4,376 | 6,703 | 9,444 |
| **60%** | 3,261 | 2,578 | 2,661 | 560 | 216 | 219 | 258 | 476 | 1,892 | 3,681 | 6,260 | 5,782 |
| **70%** | 1,713 | 1,418 | 984 | 234 | 201 | 197 | 219 | 317 | 1,279 | 3,211 | 5,581 | 3,969 |
| **80%** | 1,581 | 1,192 | 526 | 206 | 196 | 192 | 198 | 215 | 583 | 2,384 | 5,361 | 3,625 |
| **90%** | 1,454 | 1,079 | 216 | 194 | 190 | 188 | 190 | 191 | 202 | 1,260 | 5,181 | 3,495 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 5,761 | 4,915 | 3,553 | 1,861 | 748 | 792 | 1,141 | 1,755 | 3,112 | 4,810 | 7,313 | 7,990 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 4,322 | 2,914 | 1,051 | 377 | 206 | 212 | 243 | 368 | 902 | 2,087 | 4,915 | 3,315 |
| **Above Normal (15%)** | 6,040 | 4,890 | 3,344 | 1,082 | 327 | 225 | 276 | 462 | 1,698 | 3,150 | 5,651 | 5,655 |
| **Below Normal (17%)** | 6,054 | 5,358 | 4,640 | 1,977 | 471 | 564 | 734 | 1,238 | 2,758 | 4,649 | 7,004 | 9,832 |
| **Dry (22%)** | 6,143 | 5,820 | 4,349 | 2,849 | 1,103 | 1,044 | 1,594 | 2,553 | 4,454 | 6,716 | 9,368 | 11,615 |
| **Critical (15%)** | 7,687 | 7,403 | 6,723 | 4,237 | 2,133 | 2,501 | 3,744 | 5,458 | 7,717 | 9,698 | 11,446 | 12,866 |

### Alternative 2B

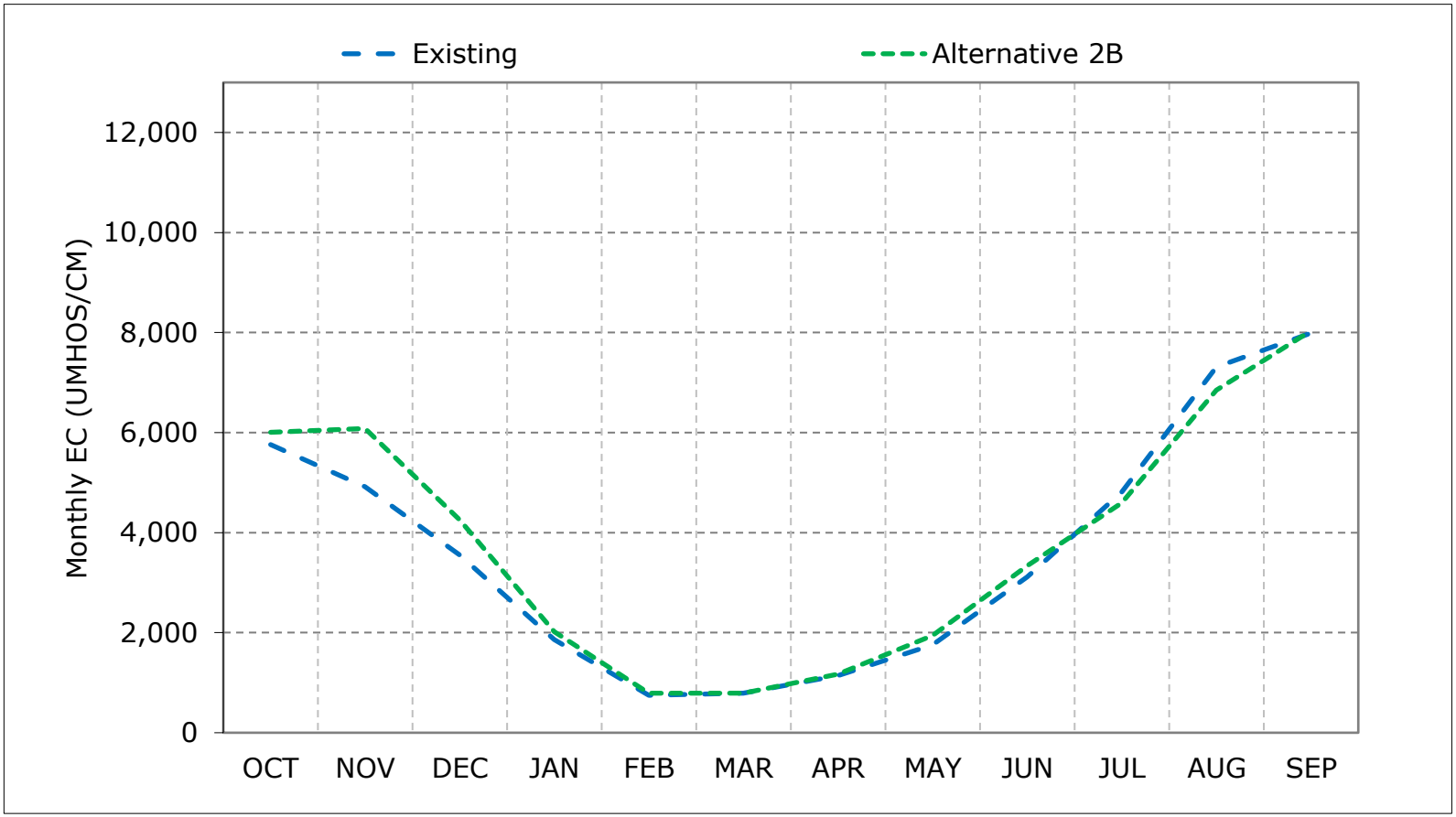
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 9,831 | 9,060 | 8,396 | 5,521 | 1,836 | 2,510 | 3,940 | 4,753 | 6,356 | 8,327 | 10,807 | 12,564 |
| **20%** | 9,291 | 8,714 | 6,789 | 4,373 | 1,152 | 1,398 | 1,757 | 3,870 | 5,539 | 7,230 | 9,736 | 11,789 |
| **30%** | 9,041 | 8,493 | 6,337 | 3,167 | 672 | 562 | 1,028 | 2,820 | 4,734 | 6,505 | 9,295 | 11,612 |
| **40%** | 8,727 | 7,891 | 5,636 | 1,681 | 400 | 361 | 693 | 1,687 | 3,886 | 4,018 | 5,967 | 9,292 |
| **50%** | 7,712 | 5,471 | 4,505 | 1,125 | 308 | 289 | 562 | 998 | 2,825 | 3,623 | 5,556 | 8,352 |
| **60%** | 3,026 | 5,137 | 3,381 | 556 | 216 | 218 | 283 | 677 | 2,269 | 3,167 | 5,221 | 5,174 |
| **70%** | 2,860 | 4,874 | 1,419 | 238 | 202 | 196 | 225 | 376 | 1,372 | 2,862 | 5,102 | 4,885 |
| **80%** | 2,652 | 4,180 | 777 | 203 | 196 | 192 | 199 | 218 | 608 | 2,321 | 4,941 | 4,745 |
| **90%** | 2,372 | 1,795 | 335 | 194 | 190 | 189 | 188 | 185 | 203 | 1,265 | 4,541 | 4,475 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 6,006 | 6,080 | 4,257 | 2,020 | 790 | 791 | 1,172 | 1,946 | 3,335 | 4,593 | 6,846 | 8,035 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 4,650 | 4,417 | 1,449 | 376 | 203 | 209 | 258 | 465 | 1,075 | 2,192 | 4,464 | 4,336 |
| **Above Normal (15%)** | 6,349 | 6,000 | 4,321 | 1,183 | 289 | 216 | 293 | 616 | 1,887 | 3,235 | 5,323 | 4,853 |
| **Below Normal (17%)** | 6,343 | 6,478 | 5,535 | 2,039 | 457 | 531 | 772 | 1,538 | 3,027 | 2,922 | 5,290 | 8,762 |
| **Dry (22%)** | 6,376 | 6,886 | 5,238 | 3,226 | 1,217 | 1,038 | 1,631 | 2,868 | 4,781 | 6,852 | 9,479 | 11,725 |
| **Critical (15%)** | 7,656 | 8,088 | 7,316 | 4,590 | 2,313 | 2,562 | 3,811 | 5,579 | 7,870 | 9,719 | 11,396 | 12,847 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -123 | -65 | -61 | **868** | **20** | -34 | **136** | **109** | **144** | **132** | -1 | -139 |
| **20%** | **62** | **77** | -15 | **474** | **28** | **31** | -11 | **524** | **543** | **188** | **105** | **24** |
| **30%** | -11 | **119** | **1,853** | **334** | **20** | -11 | **127** | **515** | **316** | -60 | **93** | **180** |
| **40%** | **0** | **93** | **1,957** | **149** | -3 | -59 | **46** | **416** | **374** | -993 | -1,366 | -988 |
| **50%** | **72** | **2,369** | **1,615** | -86 | **13** | -25 | **45** | **202** | **351** | -753 | -1,148 | -1,091 |
| **60%** | -235 | **2,560** | **721** | -4 | 0 | -1 | **25** | **200** | **377** | -514 | -1,039 | -608 |
| **70%** | **1,147** | **3,456** | **435** | **4** | **1** | -1 | **6** | **60** | **93** | -348 | -480 | **916** |
| **80%** | **1,071** | **2,988** | **251** | -3 | **0** | **0** | **1** | **4** | **24** | -64 | -420 | **1,120** |
| **90%** | **918** | **715** | **119** | **0** | **0** | **0** | -2 | -6 | **1** | **5** | -640 | **981** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **245** | **1,164** | **704** | **160** | **42** | 0 | **31** | **191** | **223** | -216 | -467 | **45** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **328** | **1,503** | **398** | -1 | -3 | -3 | **15** | **97** | **174** | **105** | -451 | **1,021** |
| **Above Normal (15%)** | **310** | **1,110** | **977** | **102** | -38 | -9 | **17** | **154** | **189** | **84** | -328 | -801 |
| **Below Normal (17%)** | **288** | **1,120** | **895** | **62** | -14 | -33 | **37** | **299** | **269** | -1,728 | -1,714 | -1,070 |
| **Dry (22%)** | **233** | **1,066** | **889** | **377** | **113** | -6 | **37** | **315** | **327** | **136** | **111** | **110** |
| **Critical (15%)** | -31 | **685** | **592** | **353** | **180** | **62** | **66** | **121** | **153** | **21** | -51 | -19 |

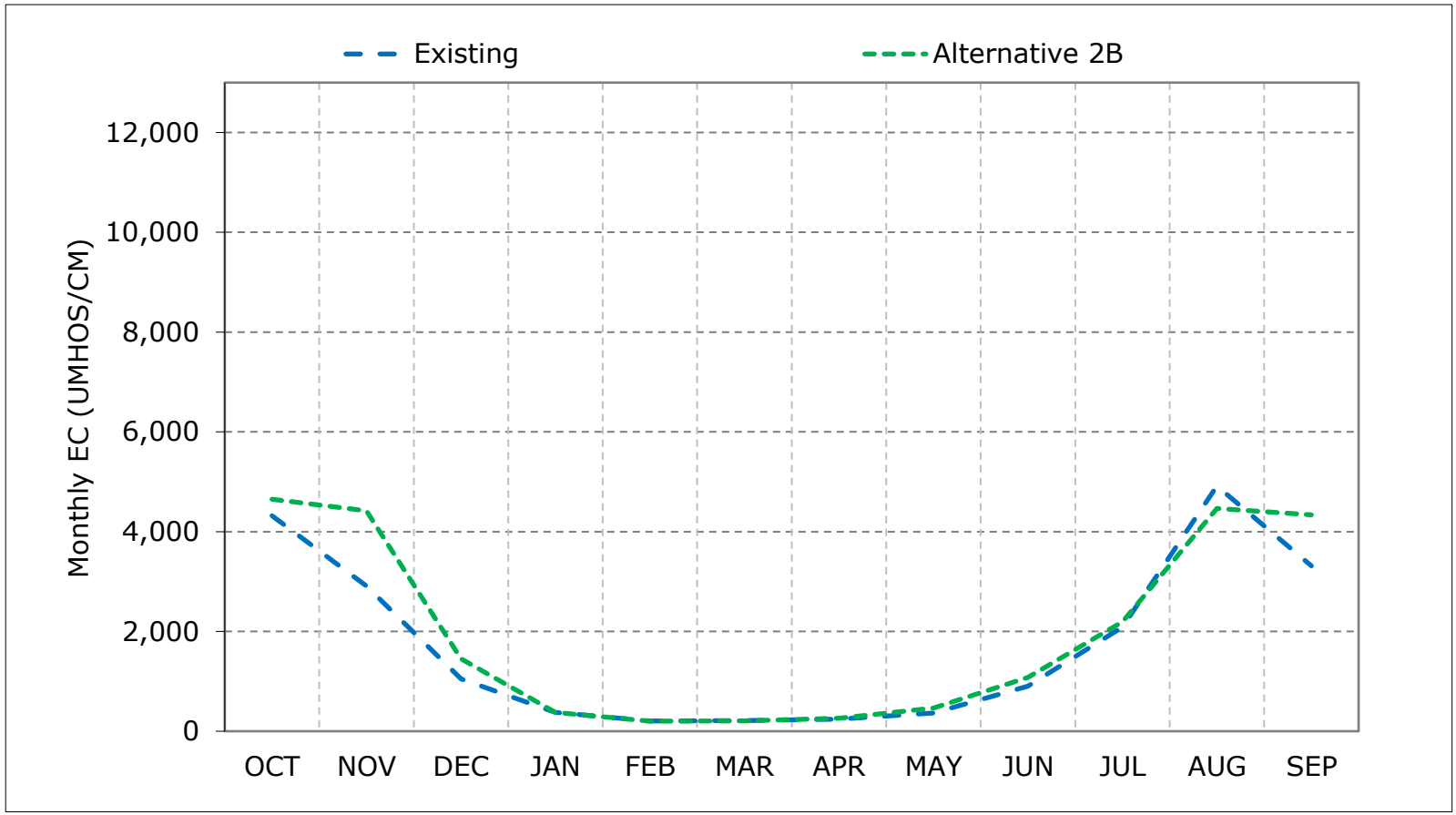
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 22-1. Montezuma Slough at National Steel, Long-Term Average EC**



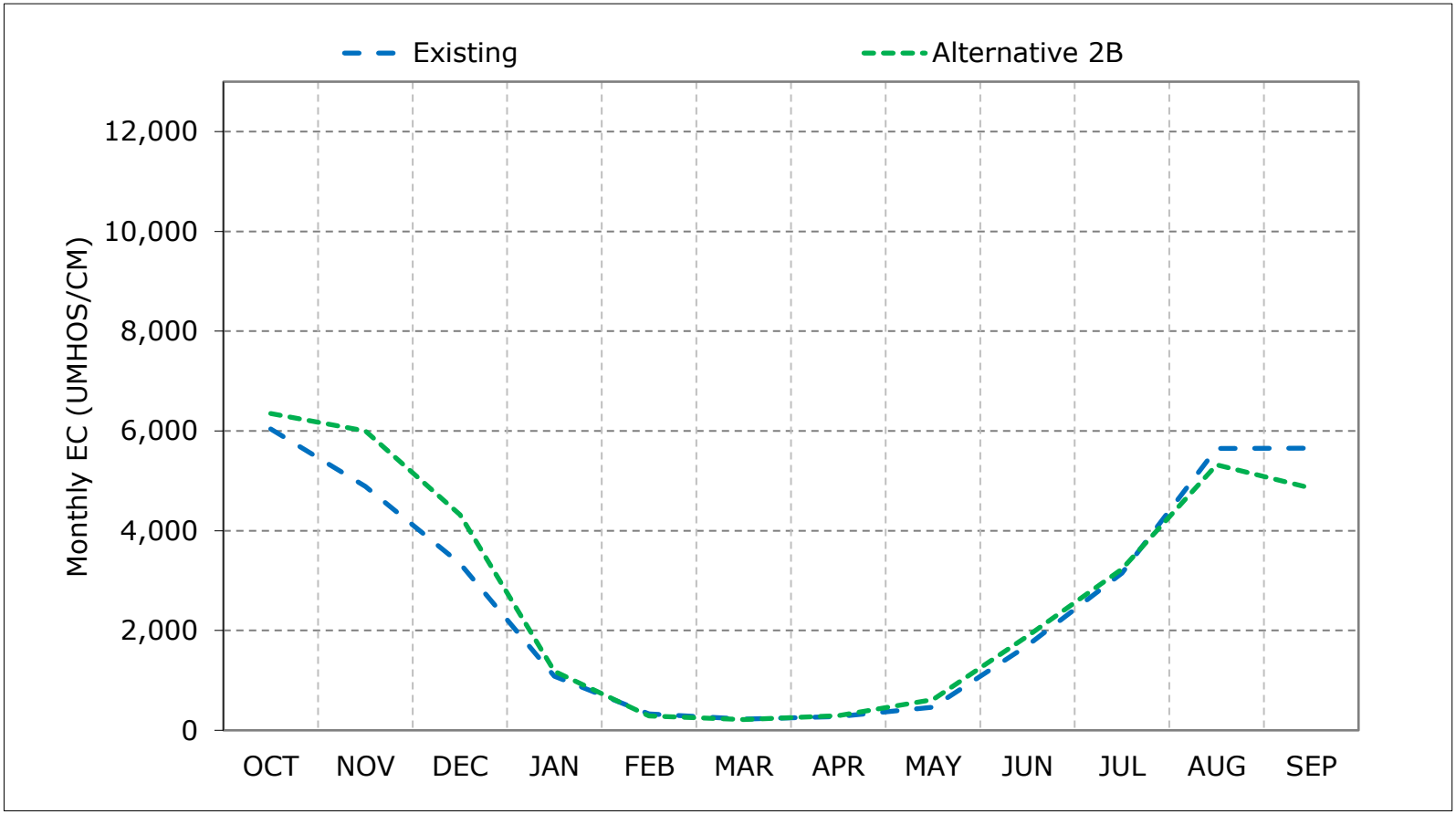

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 22-2. Montezuma Slough at National Steel, Wet Year Average EC**



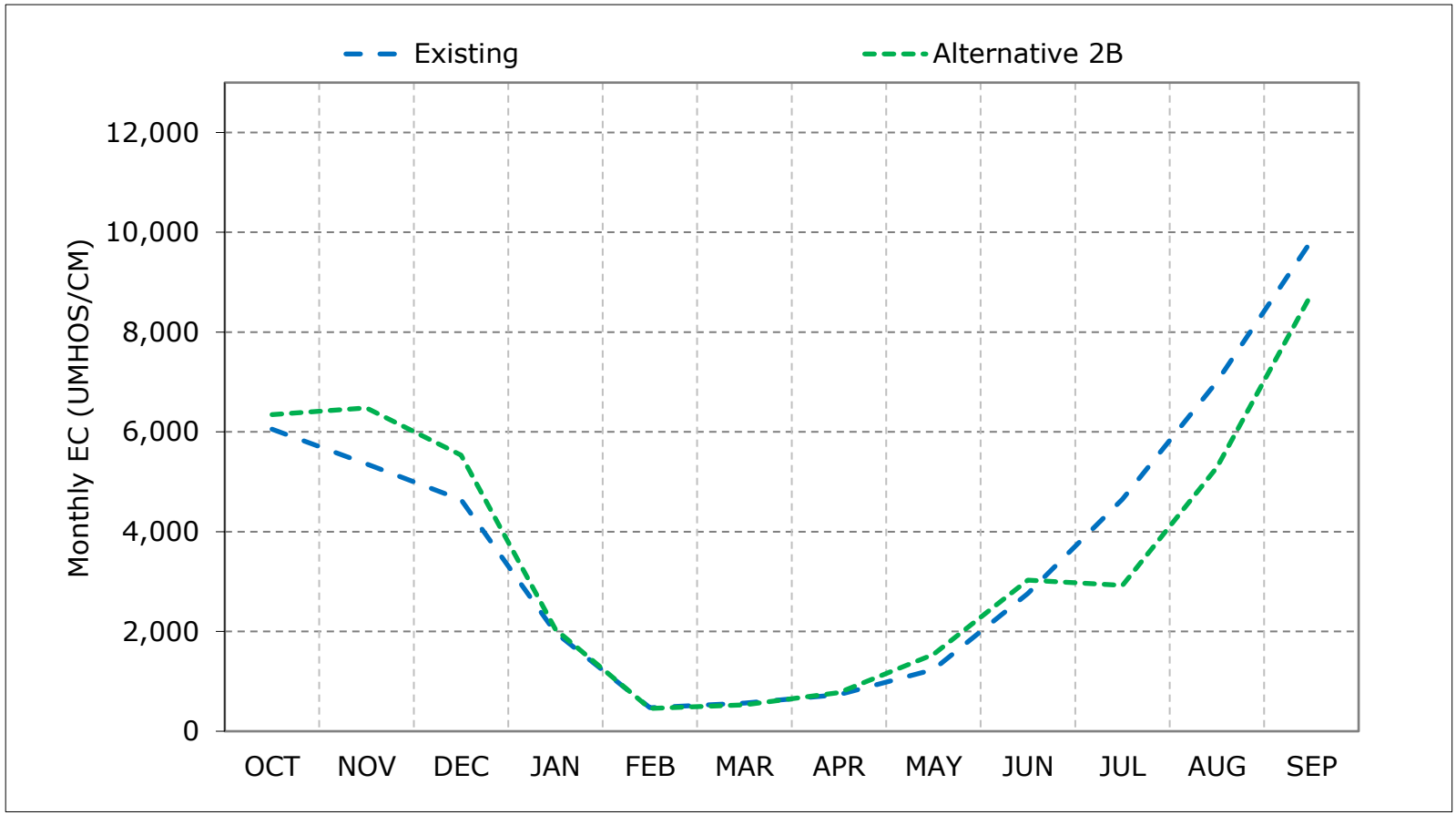

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 22-3. Montezuma Slough at National Steel, Above Normal Year Average EC**



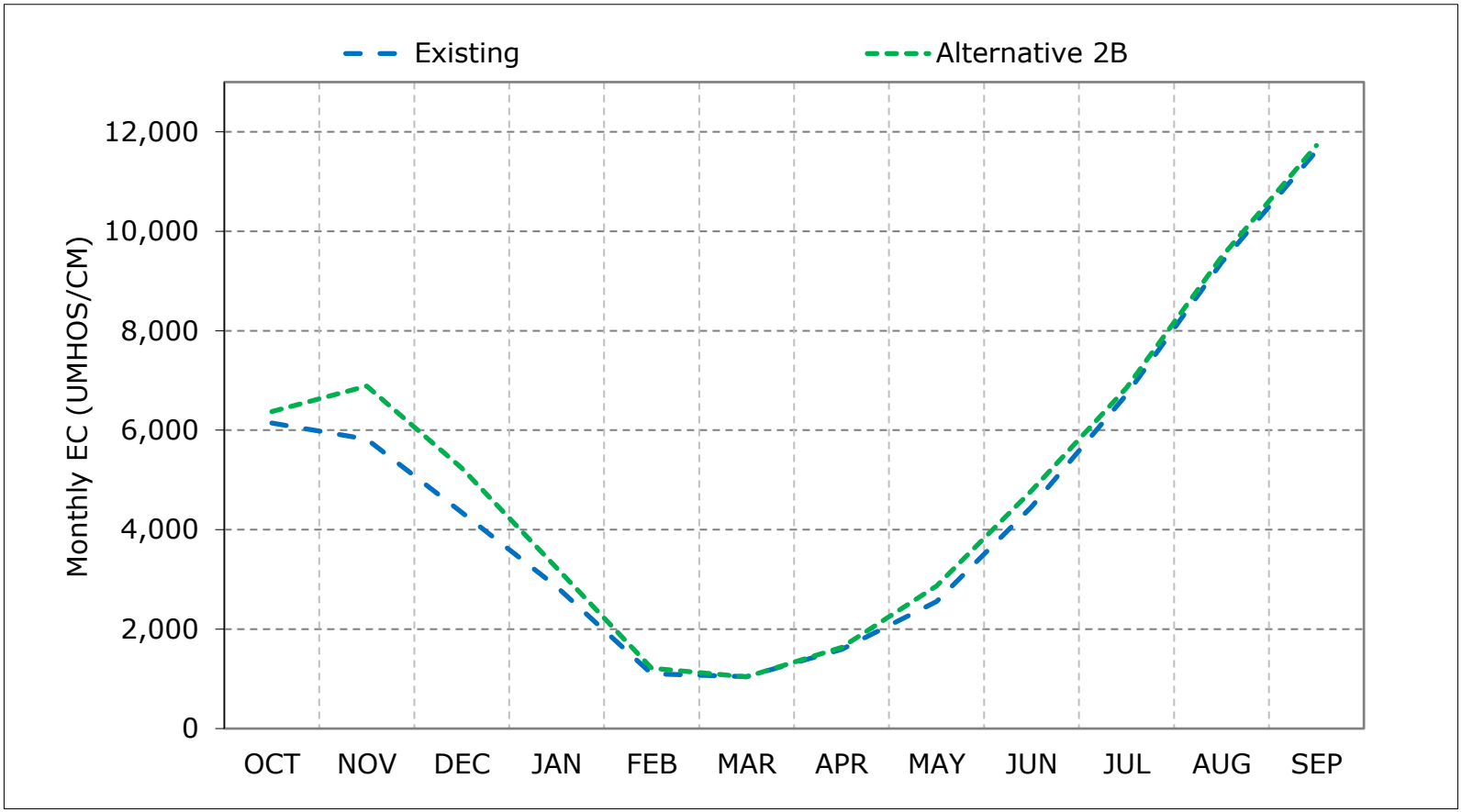

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 22-4. Montezuma Slough at National Steel, Below Normal Year Average EC**



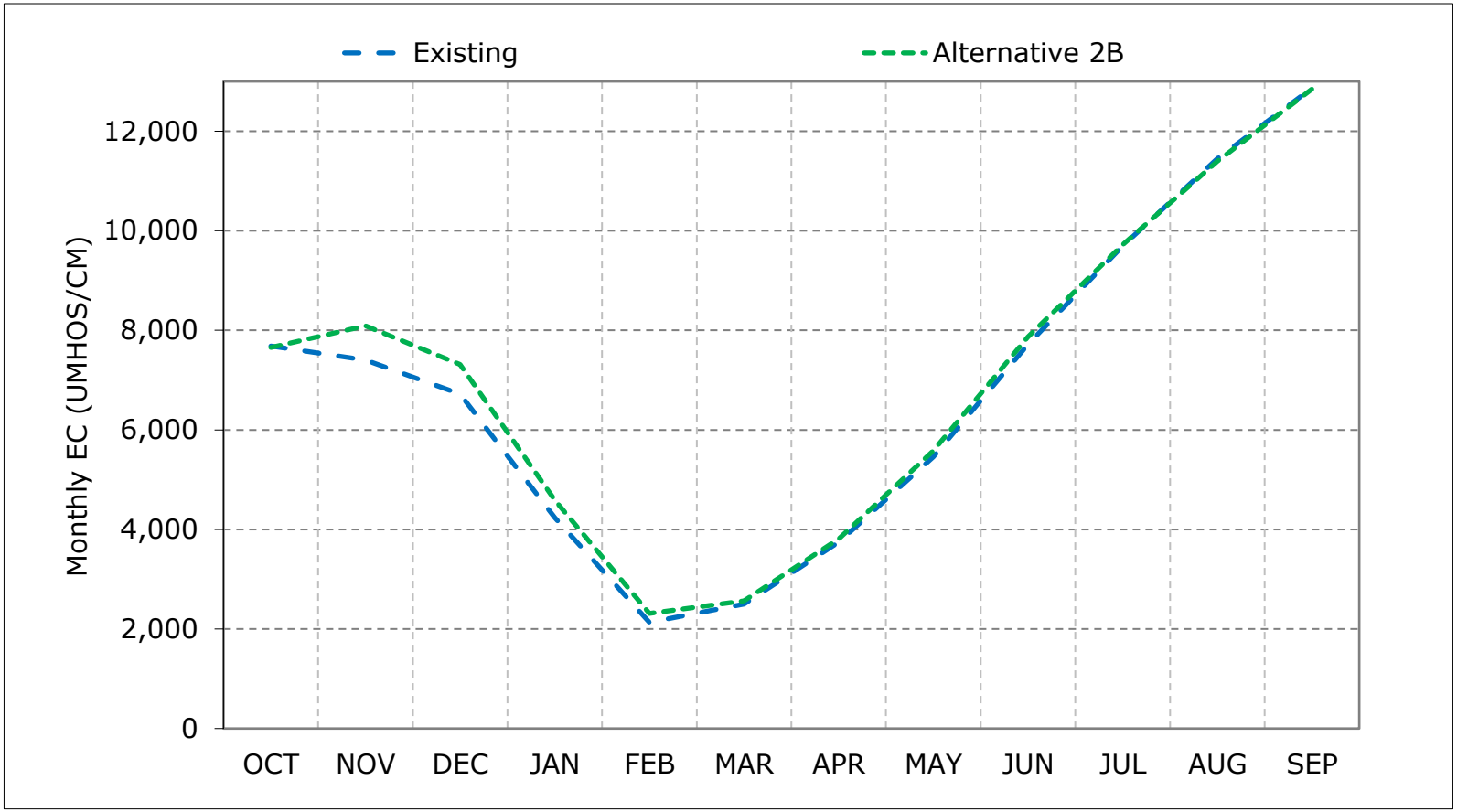

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 22-5. Montezuma Slough at National Steel, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 22-6. Montezuma Slough at National Steel, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 22-7. Montezuma Slough at National Steel, January EC**

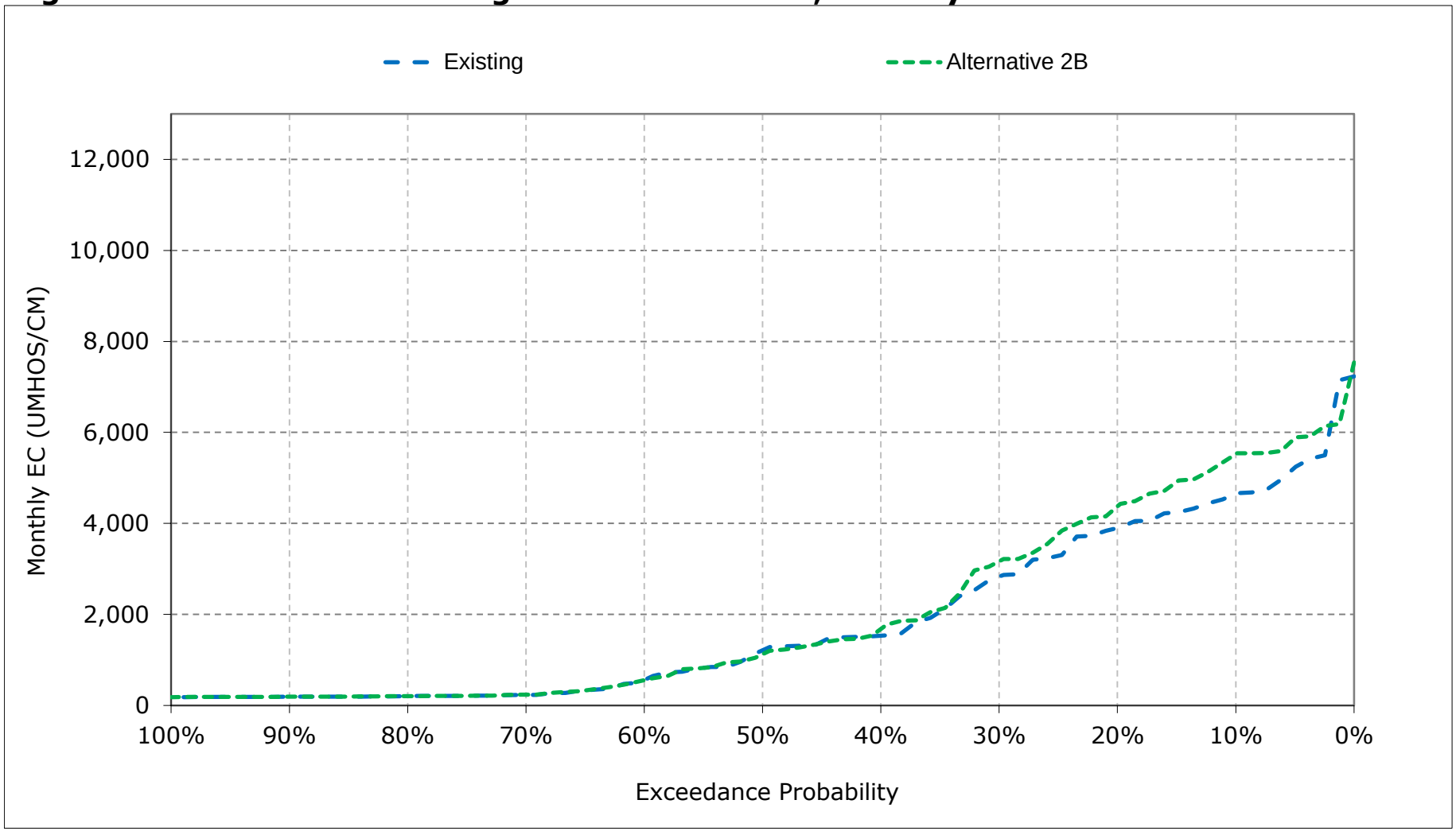


**Figure 22-8. Montezuma Slough at National Steel, February EC**

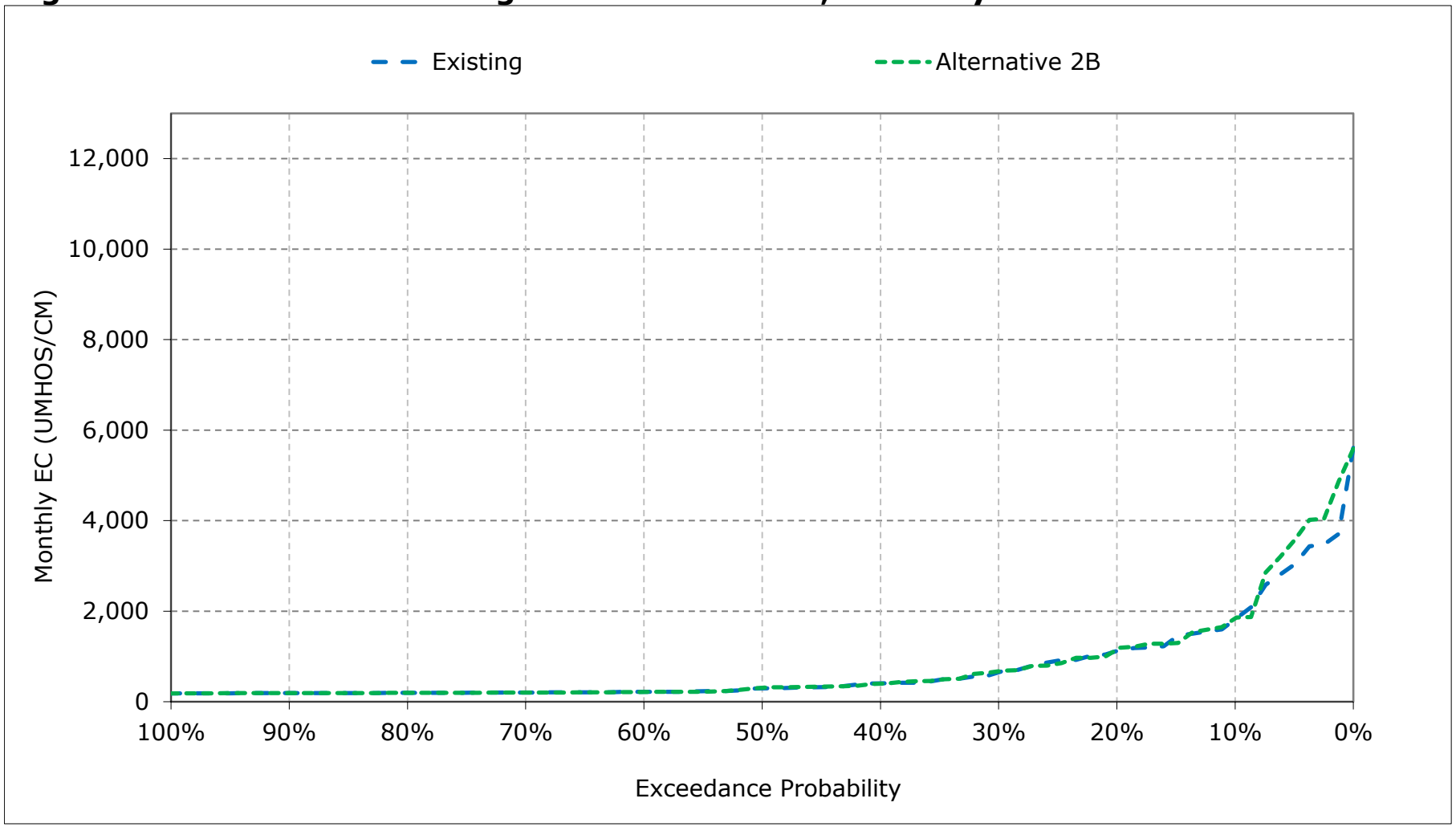


**Figure 22-9. Montezuma Slough at National Steel, March EC**

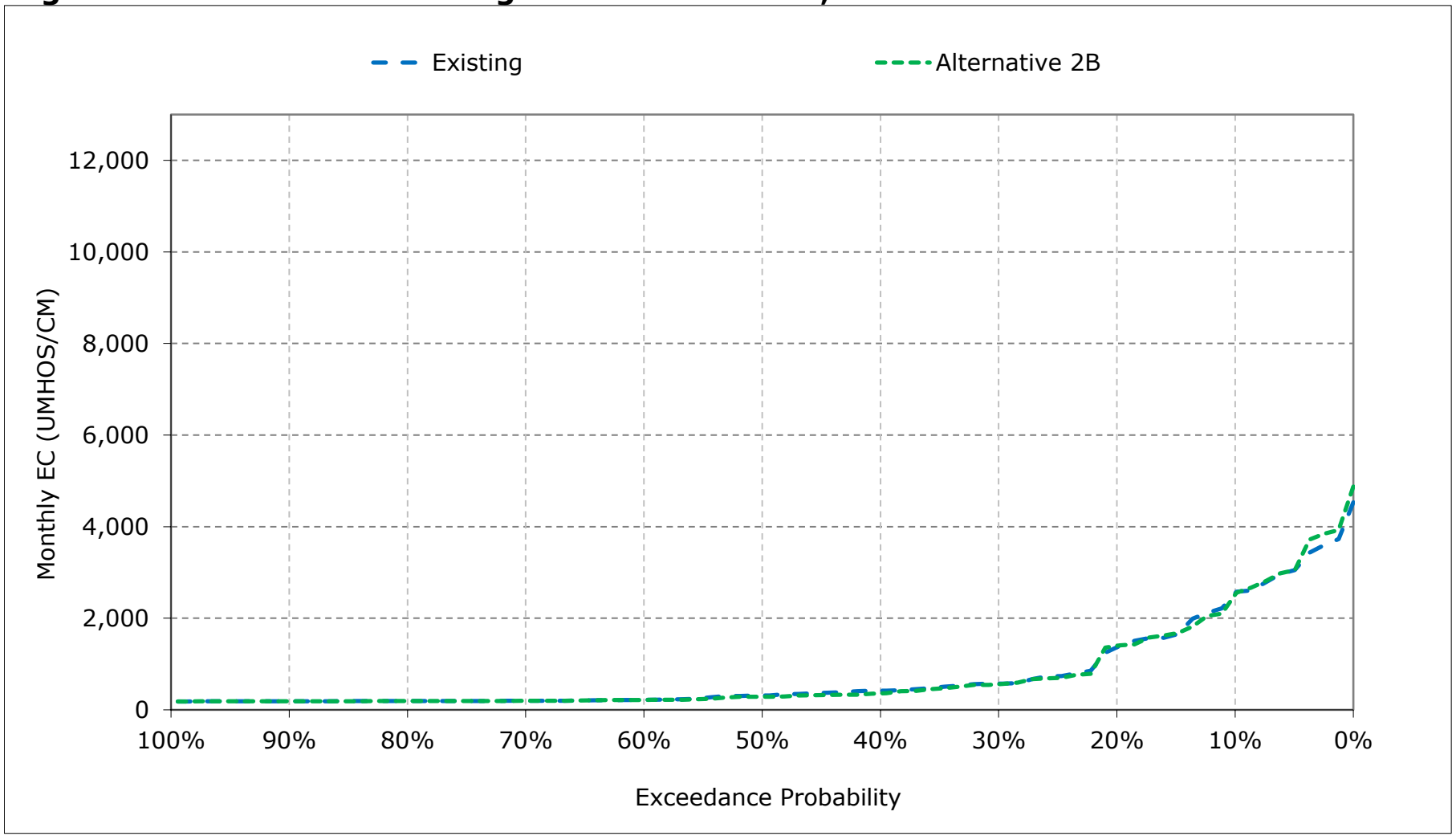


**Figure 22-10. Montezuma Slough at National Steel, April EC**

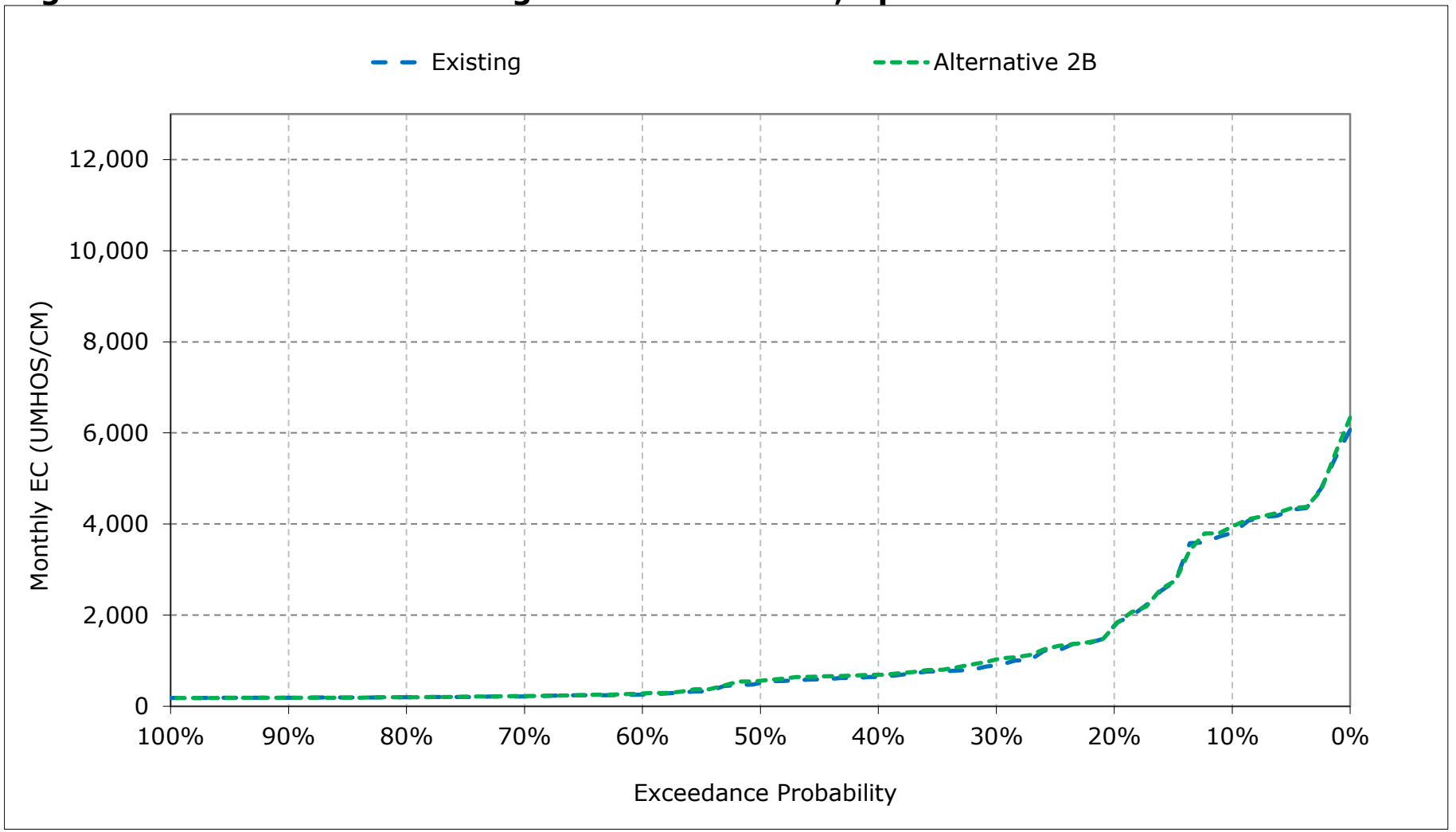


**Figure 22-11. Montezuma Slough at National Steel, May EC**

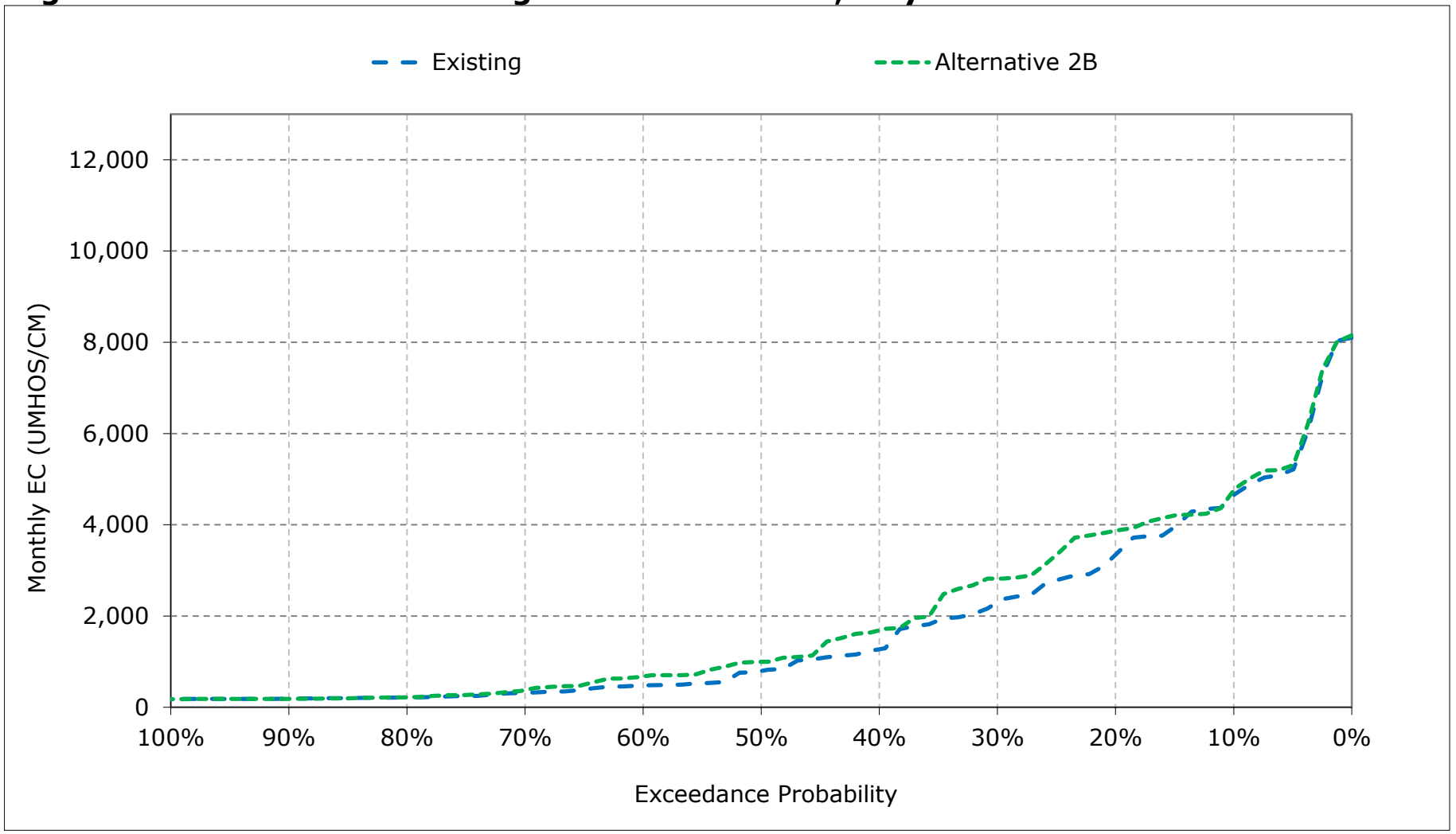


**Figure 22-12. Montezuma Slough at National Steel, June EC**

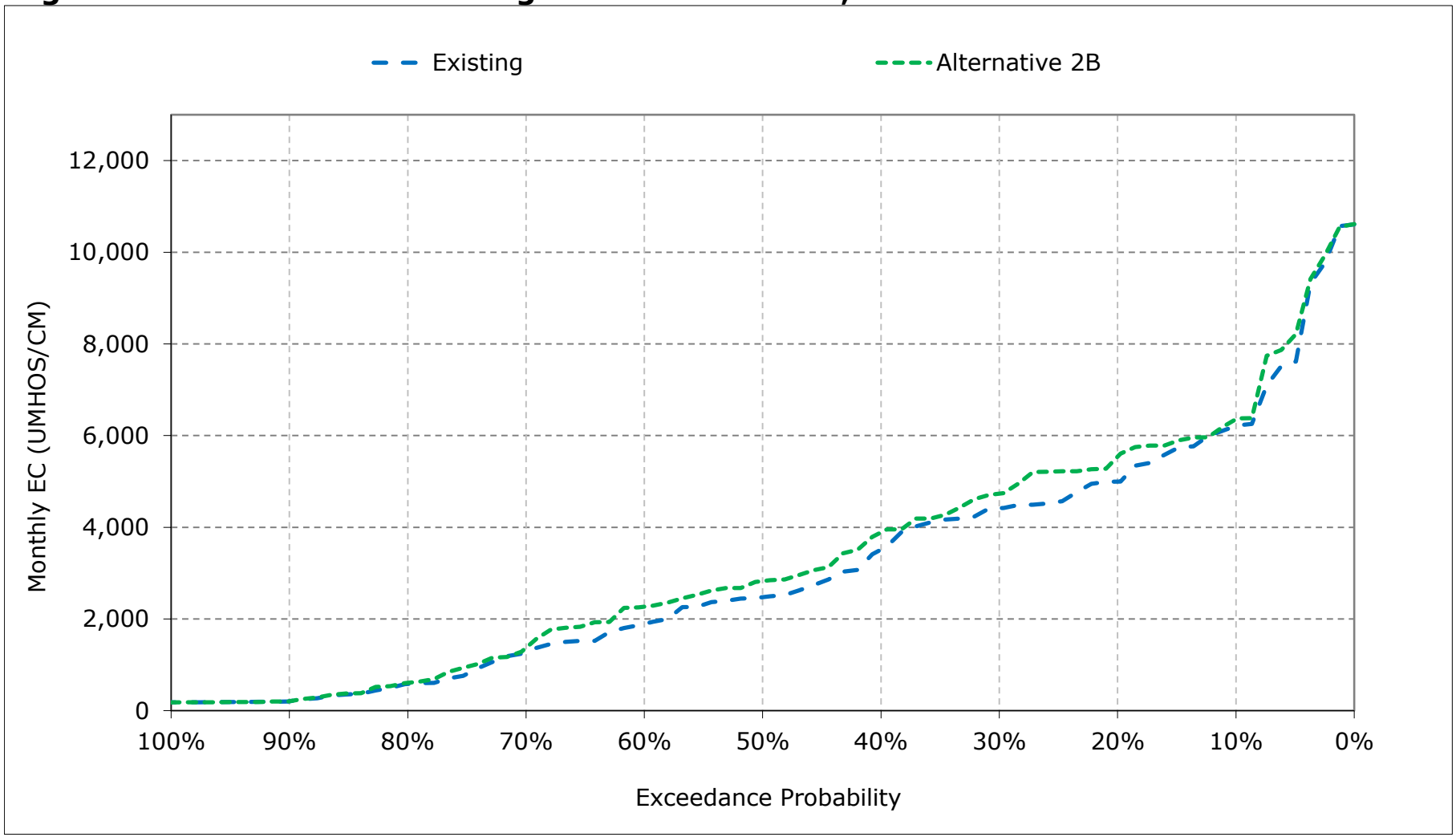


**Figure 22-13. Montezuma Slough at National Steel, July EC**

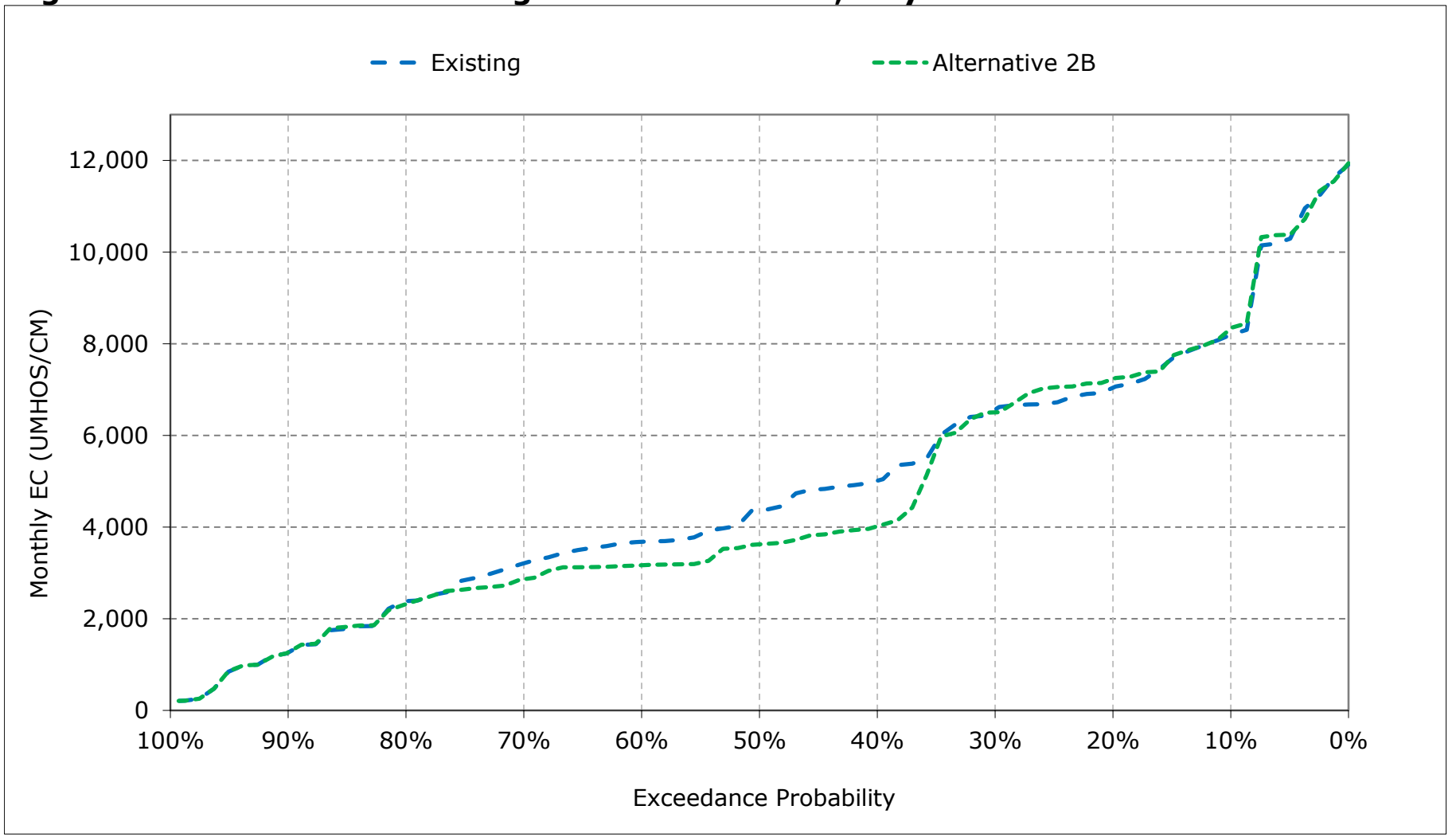


**Figure 22-14. Montezuma Slough at National Steel, August EC**

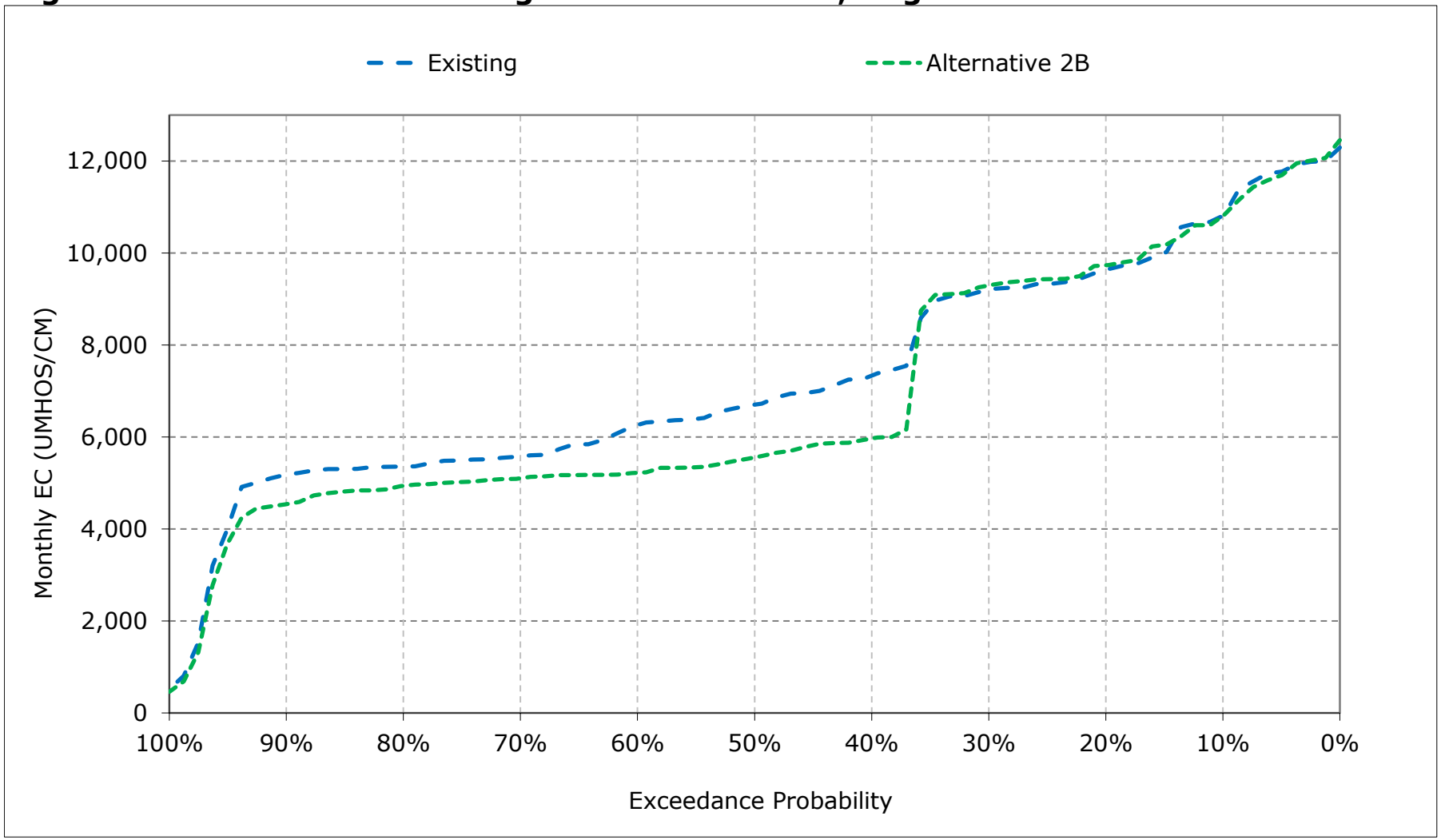


**Figure 22-15. Montezuma Slough at National Steel, September EC**

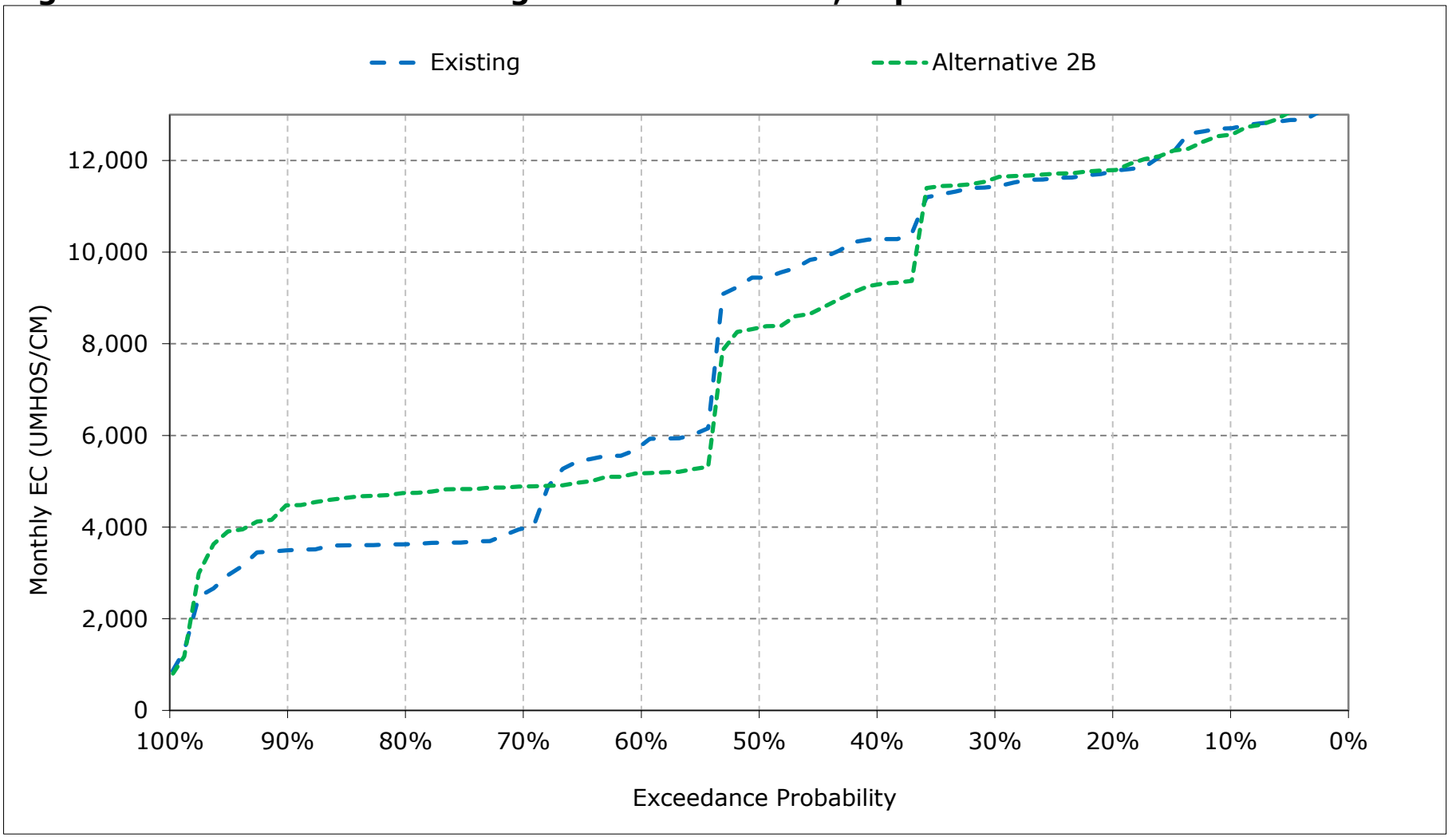


**Figure 22-16. Montezuma Slough at National Steel, October EC**

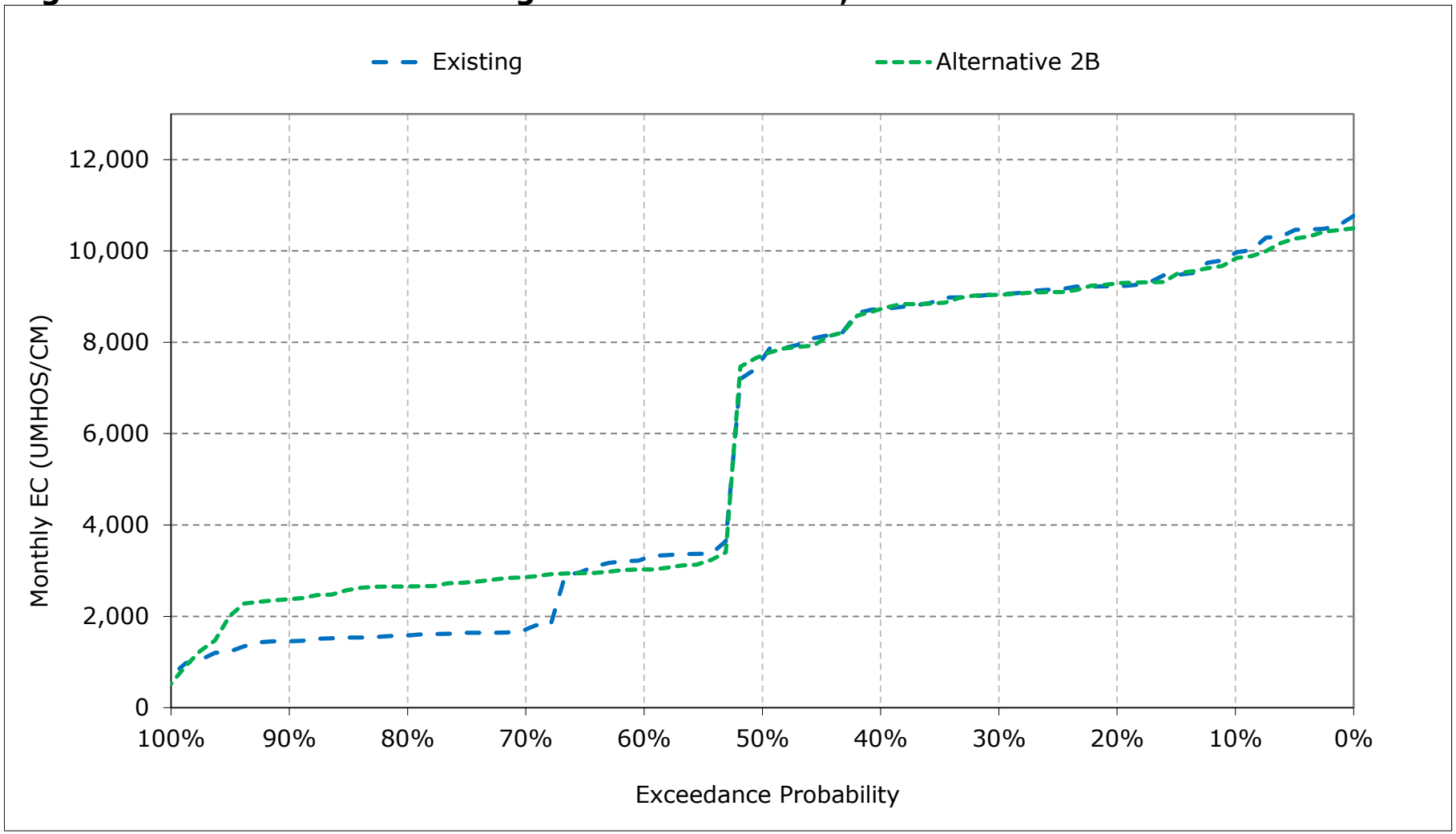


**Figure 22-17. Montezuma Slough at National Steel, November EC**

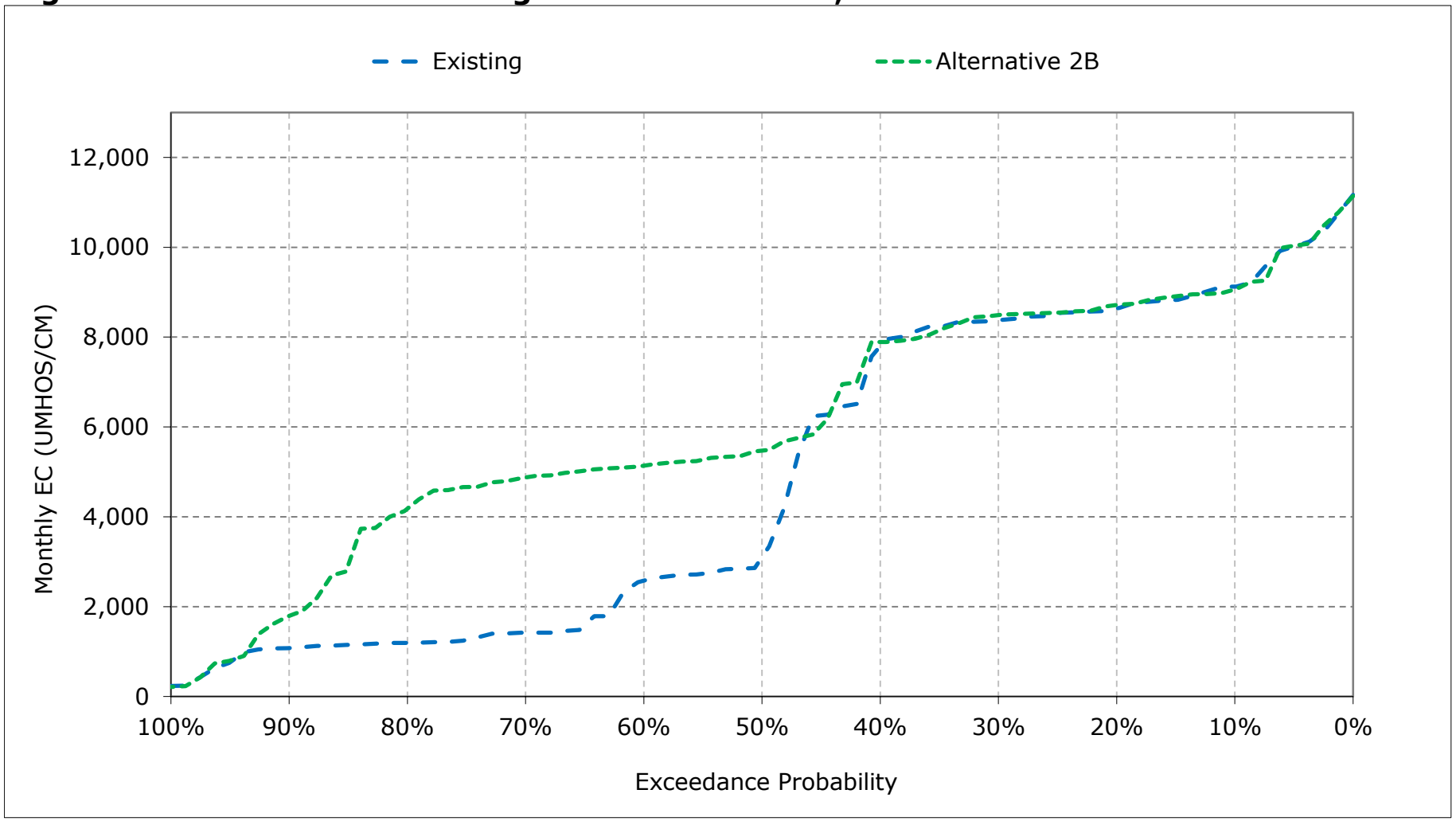
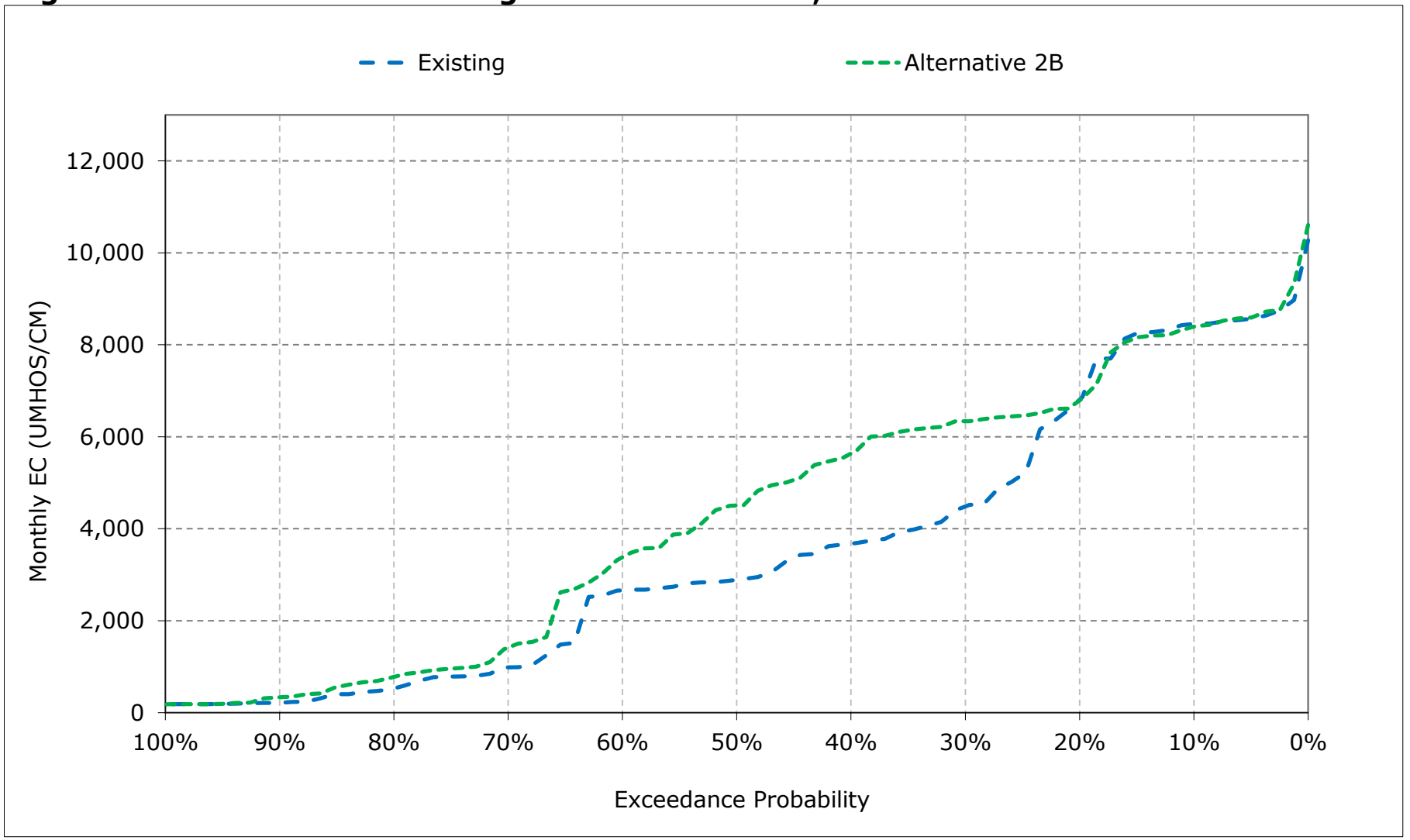


**Figure 22-18. Montezuma Slough at National Steel, December EC**



## Table 24-1. Suisun Bay near Ryer, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 16,703 | 16,015 | 15,488 | 11,386 | 7,089 | 6,452 | 6,809 | 8,008 | 10,019 | 12,230 | 14,812 | 16,142 |
| **20%** | 16,148 | 15,774 | 14,171 | 10,495 | 4,725 | 3,858 | 3,849 | 6,638 | 8,637 | 11,068 | 13,505 | 15,448 |
| **30%** | 15,916 | 15,470 | 11,450 | 8,581 | 2,917 | 1,699 | 2,338 | 5,281 | 8,222 | 10,697 | 13,287 | 15,185 |
| **40%** | 15,735 | 14,990 | 9,986 | 5,728 | 1,498 | 1,354 | 1,874 | 3,479 | 7,141 | 8,868 | 11,631 | 14,351 |
| **50%** | 14,602 | 9,441 | 8,019 | 4,311 | 971 | 778 | 1,301 | 2,191 | 5,868 | 8,434 | 10,884 | 13,391 |
| **60%** | 8,926 | 8,249 | 7,489 | 2,674 | 460 | 410 | 657 | 1,505 | 4,956 | 6,859 | 10,648 | 8,464 |
| **70%** | 5,620 | 5,430 | 3,989 | 611 | 227 | 232 | 375 | 901 | 3,747 | 6,559 | 10,126 | 5,357 |
| **80%** | 5,344 | 5,115 | 1,942 | 256 | 209 | 200 | 235 | 424 | 2,021 | 5,757 | 9,751 | 4,985 |
| **90%** | 5,183 | 4,760 | 700 | 200 | 195 | 193 | 194 | 203 | 408 | 3,978 | 9,429 | 4,569 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 11,389 | 10,451 | 8,186 | 5,114 | 2,419 | 1,908 | 2,260 | 3,446 | 5,856 | 8,256 | 11,405 | 10,801 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 9,330 | 7,468 | 3,198 | 977 | 293 | 340 | 467 | 836 | 2,318 | 4,779 | 9,075 | 4,646 |
| **Above Normal (15%)** | 11,798 | 10,318 | 8,360 | 3,352 | 937 | 390 | 637 | 1,293 | 4,323 | 6,367 | 9,917 | 8,307 |
| **Below Normal (17%)** | 11,868 | 11,458 | 10,147 | 5,928 | 1,744 | 1,595 | 1,737 | 2,893 | 5,947 | 8,438 | 11,257 | 13,867 |
| **Dry (22%)** | 11,938 | 11,818 | 10,281 | 8,042 | 4,052 | 2,794 | 3,382 | 5,287 | 8,126 | 10,864 | 13,402 | 15,325 |
| **Critical (15%)** | 14,060 | 13,820 | 13,391 | 10,499 | 6,844 | 5,860 | 6,696 | 9,139 | 11,546 | 13,558 | 15,118 | 16,271 |

### Alternative 2B

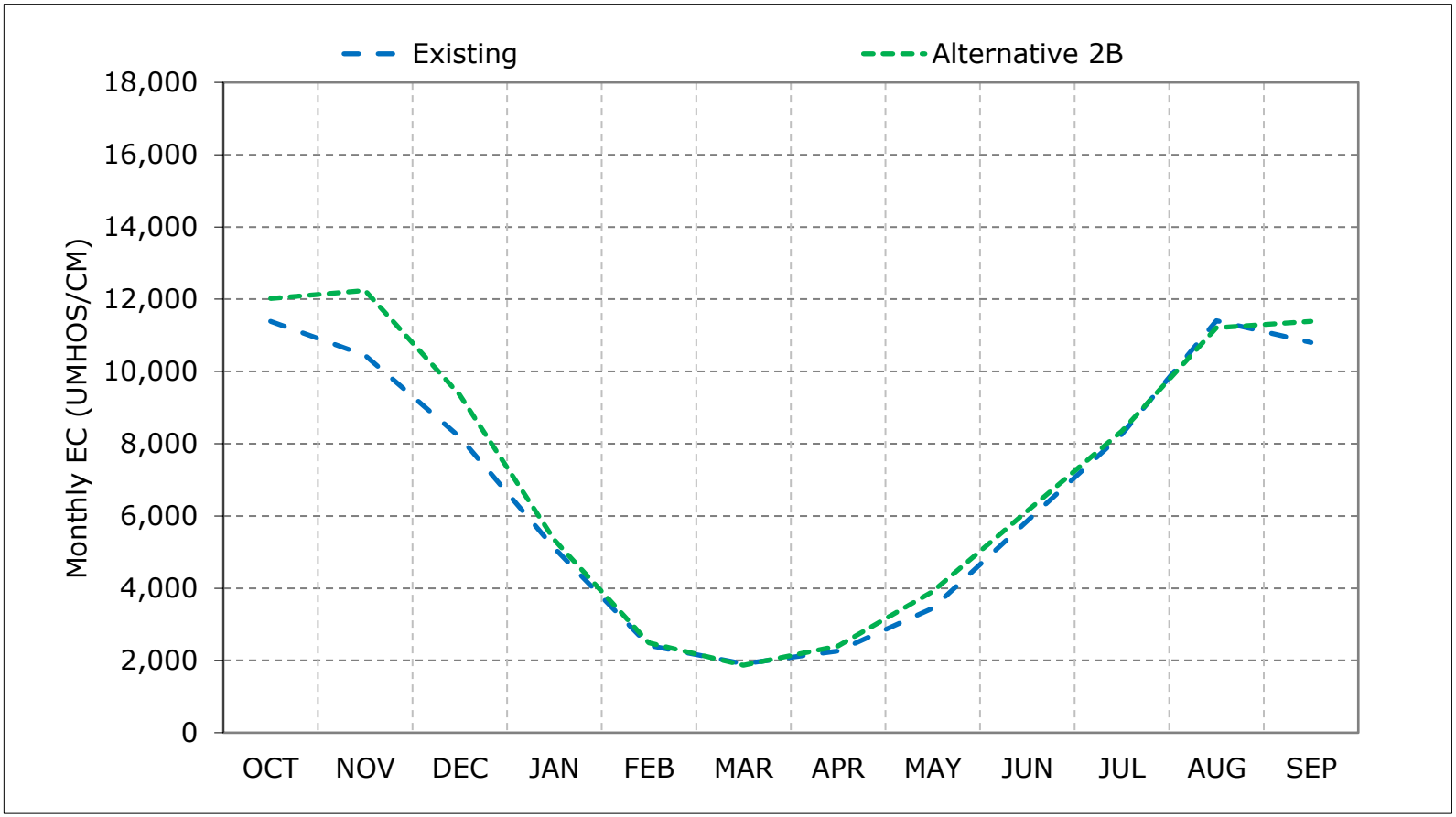
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 16,677 | 16,035 | 15,485 | 12,605 | 7,151 | 6,424 | 6,876 | 8,275 | 10,047 | 12,283 | 14,709 | 16,071 |
| **20%** | 16,159 | 15,777 | 14,032 | 11,220 | 4,513 | 3,768 | 4,412 | 7,532 | 9,205 | 11,196 | 13,636 | 15,514 |
| **30%** | 15,918 | 15,521 | 13,327 | 9,317 | 2,957 | 1,585 | 2,730 | 6,245 | 8,385 | 10,686 | 13,406 | 15,337 |
| **40%** | 15,615 | 14,952 | 12,796 | 6,131 | 1,515 | 1,254 | 2,082 | 4,216 | 7,852 | 9,016 | 11,968 | 14,591 |
| **50%** | 14,609 | 11,723 | 11,641 | 4,420 | 913 | 689 | 1,390 | 2,837 | 6,167 | 8,380 | 11,145 | 13,494 |
| **60%** | 8,383 | 11,449 | 9,883 | 2,634 | 357 | 345 | 731 | 2,205 | 5,522 | 7,092 | 9,970 | 7,648 |
| **70%** | 8,255 | 11,216 | 5,239 | 612 | 226 | 225 | 455 | 1,283 | 3,988 | 6,741 | 9,416 | 7,507 |
| **80%** | 7,903 | 10,508 | 2,665 | 241 | 210 | 201 | 246 | 525 | 2,127 | 5,791 | 9,188 | 7,256 |
| **90%** | 7,492 | 6,157 | 817 | 200 | 196 | 193 | 193 | 207 | 424 | 3,983 | 8,867 | 6,806 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 12,016 | 12,241 | 9,353 | 5,344 | 2,491 | 1,868 | 2,403 | 3,905 | 6,137 | 8,345 | 11,207 | 11,390 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 10,125 | 9,843 | 4,014 | 980 | 282 | 321 | 555 | 1,124 | 2,597 | 4,879 | 8,425 | 6,776 |
| **Above Normal (15%)** | 12,604 | 12,146 | 9,917 | 3,429 | 808 | 349 | 761 | 1,817 | 4,562 | 6,479 | 9,467 | 7,367 |
| **Below Normal (17%)** | 12,544 | 13,204 | 11,566 | 5,936 | 1,668 | 1,464 | 1,956 | 3,621 | 6,245 | 8,567 | 11,594 | 14,046 |
| **Dry (22%)** | 12,544 | 13,308 | 11,660 | 8,685 | 4,330 | 2,701 | 3,573 | 5,908 | 8,502 | 10,951 | 13,508 | 15,424 |
| **Critical (15%)** | 14,116 | 14,805 | 14,316 | 11,012 | 7,165 | 5,957 | 6,812 | 9,344 | 11,704 | 13,556 | 15,069 | 16,262 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -25 | **20** | -3 | **1,218** | **61** | -28 | **67** | **267** | **28** | **54** | -103 | -71 |
| **20%** | **11** | **3** | -138 | **725** | -212 | -91 | **563** | **894** | **569** | **128** | **132** | **66** |
| **30%** | **2** | **51** | **1,877** | **736** | **40** | -114 | **392** | **965** | **162** | -11 | **119** | **152** |
| **40%** | -119 | -37 | **2,810** | **403** | **17** | -99 | **209** | **737** | **711** | **148** | **336** | **239** |
| **50%** | **7** | **2,283** | **3,622** | **109** | -58 | -89 | **89** | **645** | **300** | -54 | **261** | **103** |
| **60%** | -543 | **3,199** | **2,395** | -40 | -103 | -66 | **73** | **700** | **565** | **233** | -678 | -816 |
| **70%** | **2,636** | **5,786** | **1,249** | **0** | -2 | -7 | **80** | **382** | **242** | **182** | -710 | **2,150** |
| **80%** | **2,559** | **5,394** | **723** | -14 | **1** | **2** | **11** | **101** | **106** | **34** | -564 | **2,270** |
| **90%** | **2,308** | **1,397** | **117** | **0** | **1** | 0 | -1 | **4** | **16** | **5** | -562 | **2,238** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **627** | **1,790** | **1,167** | **230** | **73** | -41 | **143** | **458** | **280** | **89** | -198 | **589** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **795** | **2,375** | **816** | **3** | -11 | -19 | **88** | **288** | **279** | **100** | -650 | **2,130** |
| **Above Normal (15%)** | **806** | **1,829** | **1,558** | **77** | -129 | -40 | **125** | **524** | **239** | **112** | -450 | -940 |
| **Below Normal (17%)** | **677** | **1,746** | **1,419** | **8** | -76 | -131 | **218** | **728** | **298** | **129** | **337** | **179** |
| **Dry (22%)** | **606** | **1,490** | **1,379** | **643** | **278** | -93 | **192** | **621** | **376** | **87** | **105** | **99** |
| **Critical (15%)** | **56** | **985** | **925** | **513** | **322** | **97** | **116** | **205** | **158** | -2 | -49 | -8 |

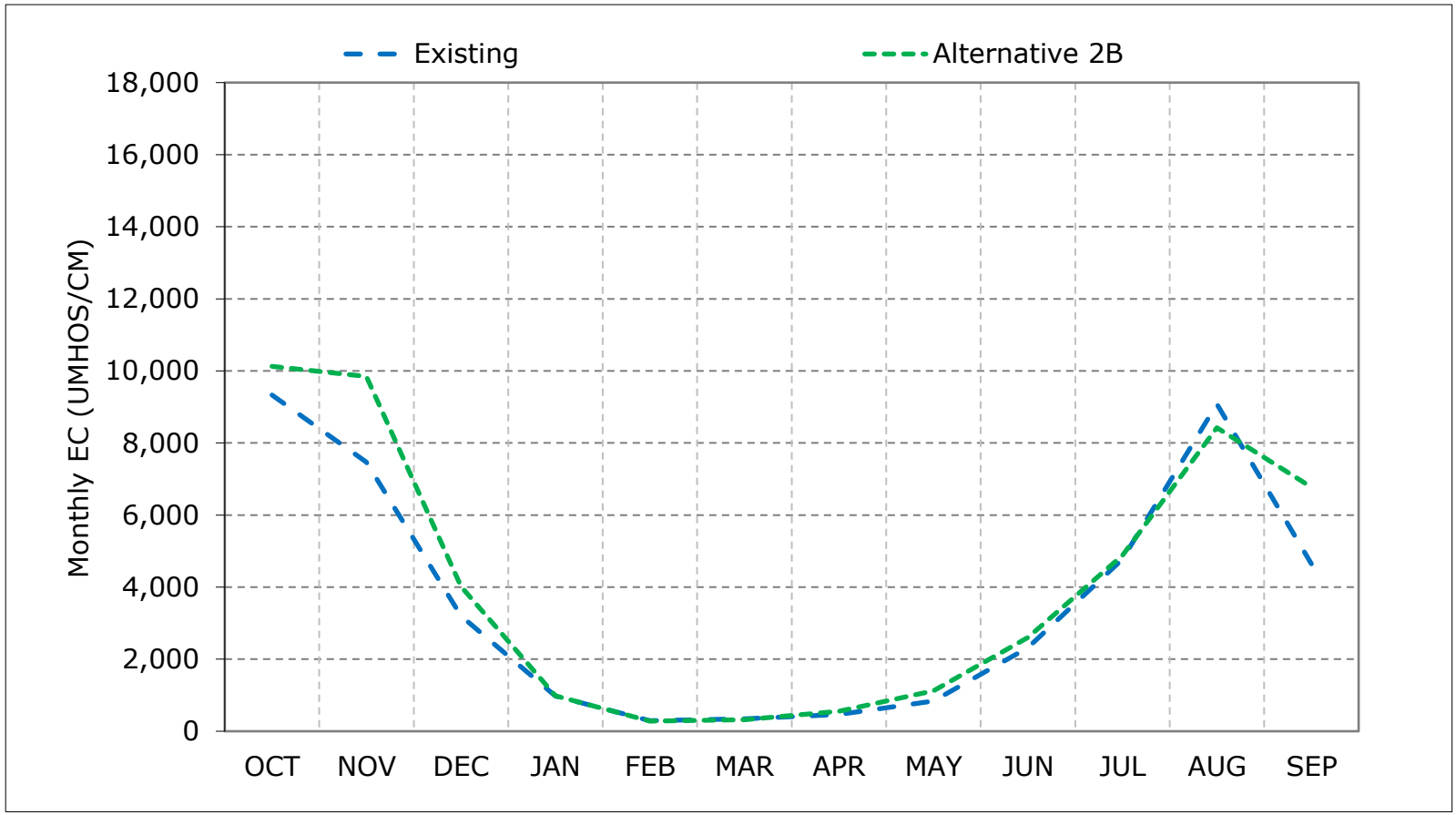
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

**Figure 24-1. Suisun Bay near Ryer, Long-Term Average EC**



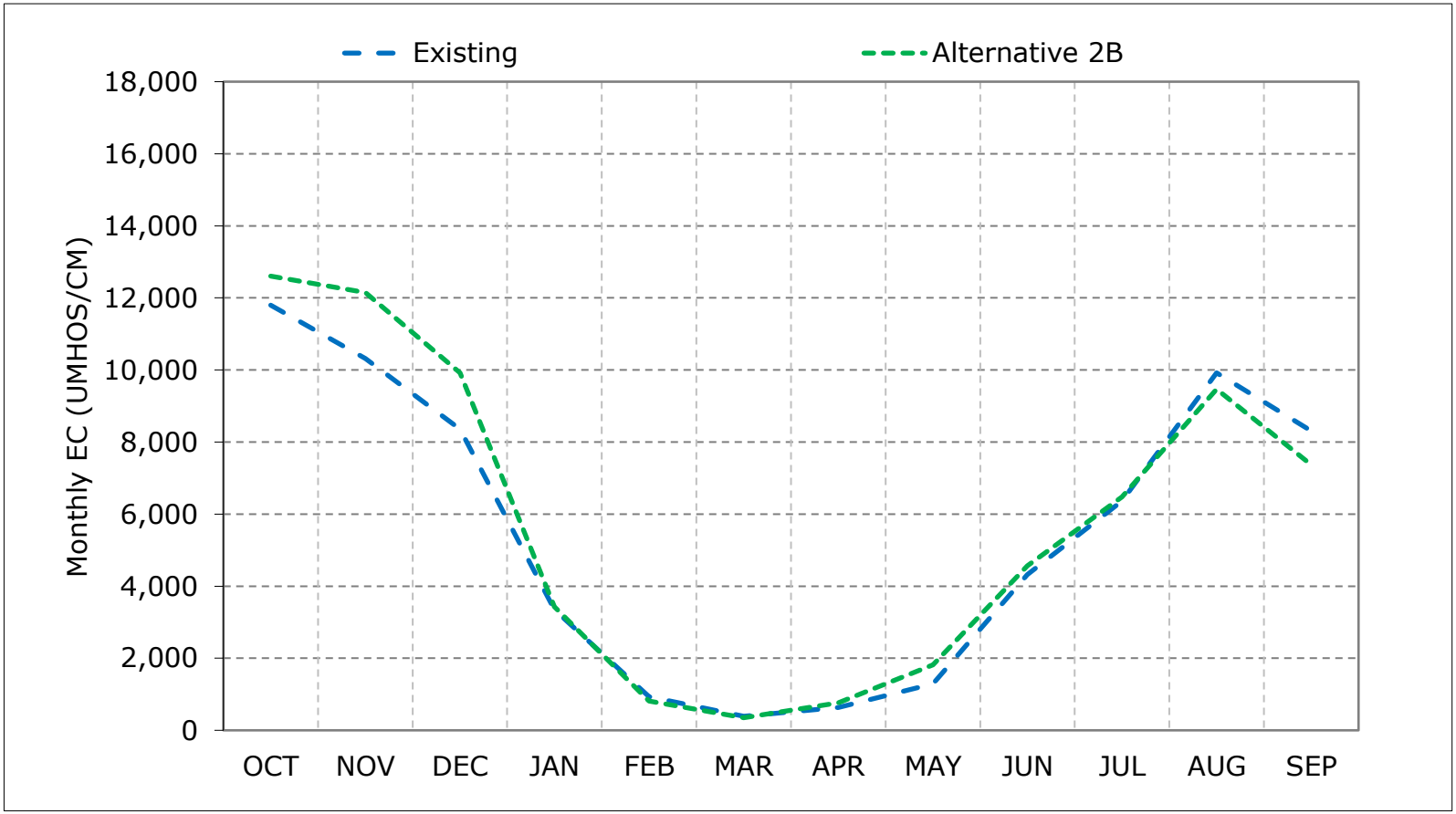

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 24-2. Suisun Bay near Ryer, Wet Year Average EC**



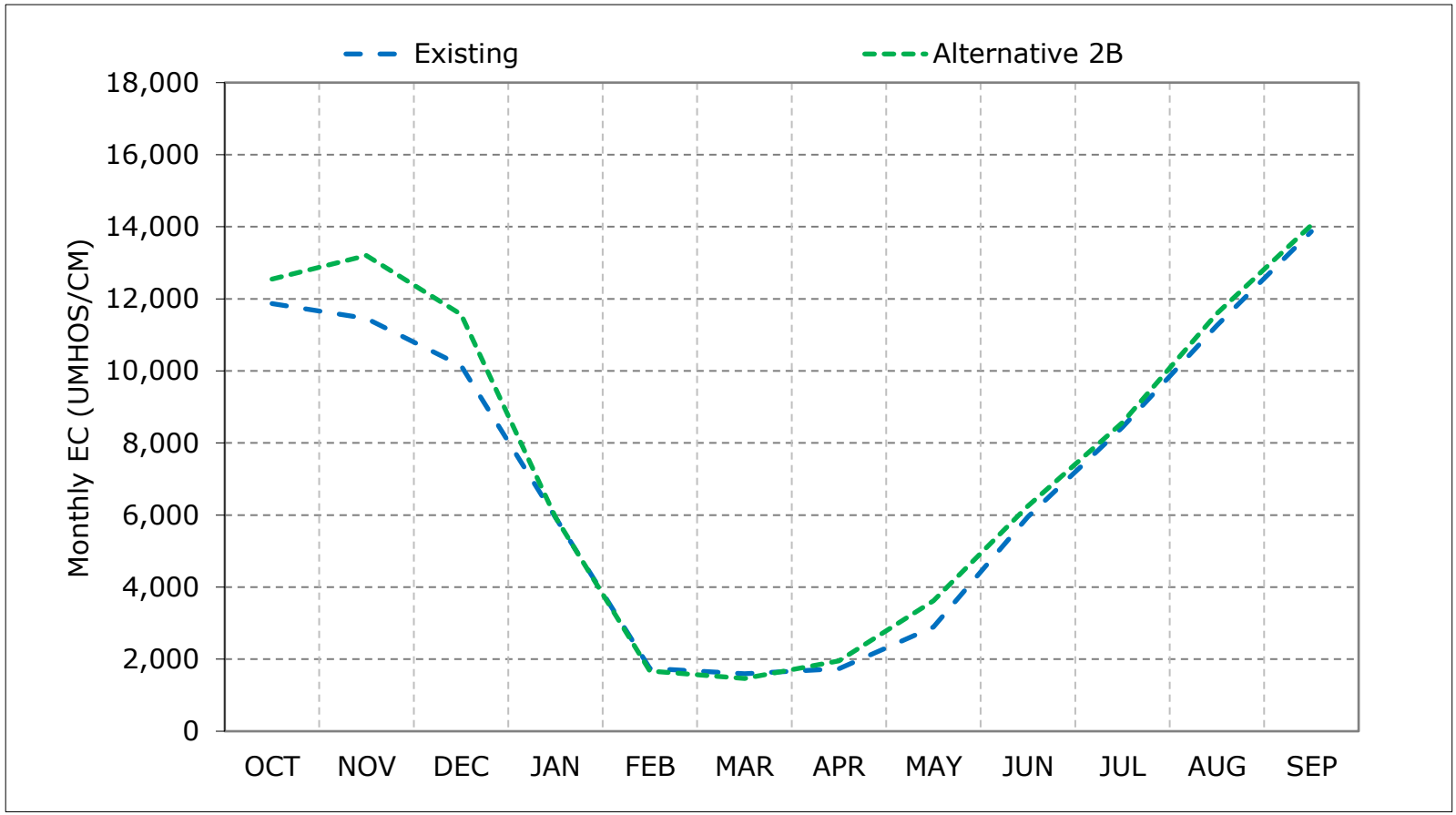

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 24-3. Suisun Bay near Ryer, Above Normal Year Average EC**



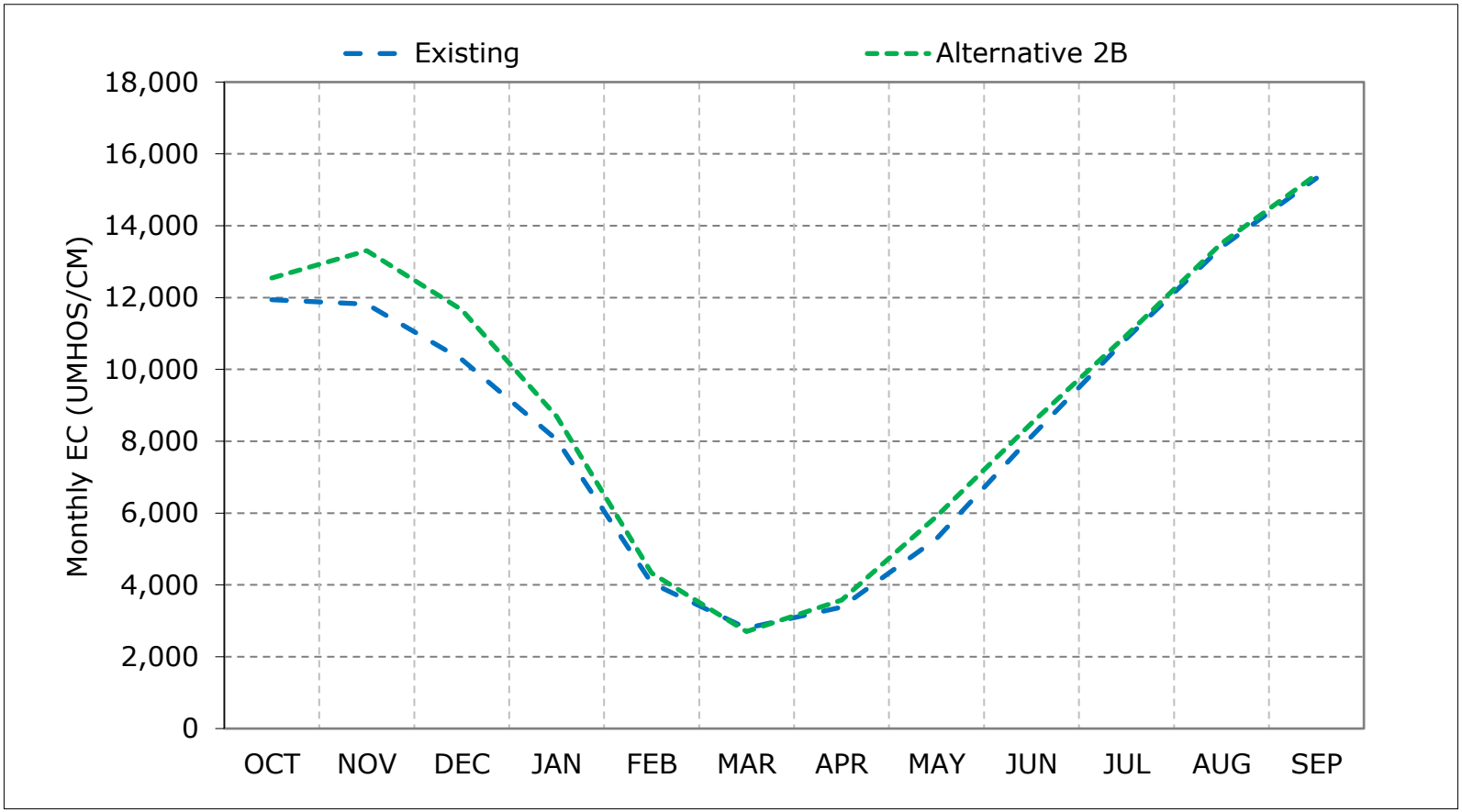

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 24-4. Suisun Bay near Ryer, Below Normal Year Average EC**



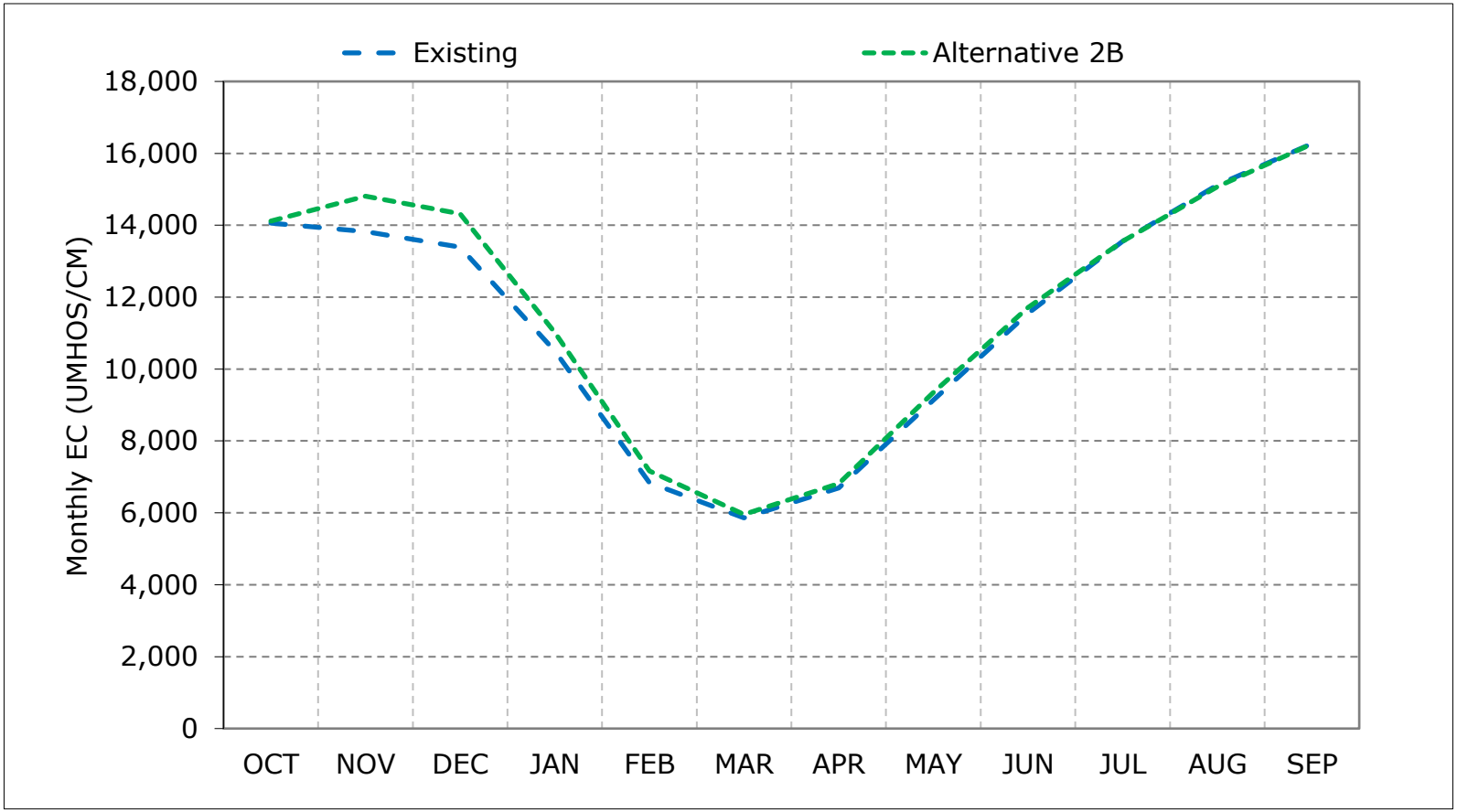

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 24-5. Suisun Bay near Ryer, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 24-6. Suisun Bay near Ryer, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 24-7. Suisun Bay near Ryer, January EC**

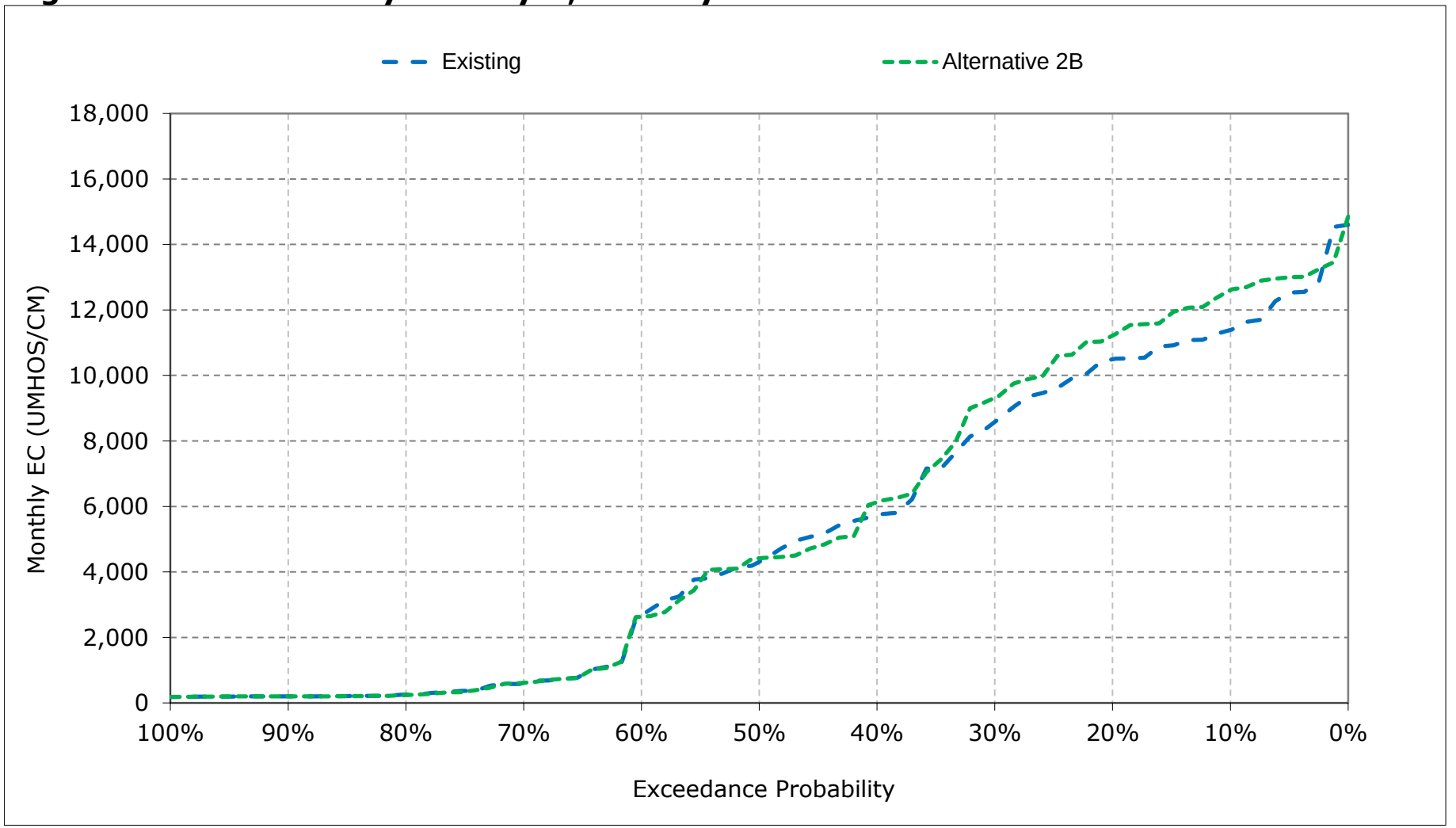


**Figure 24-8. Suisun Bay near Ryer, February EC**

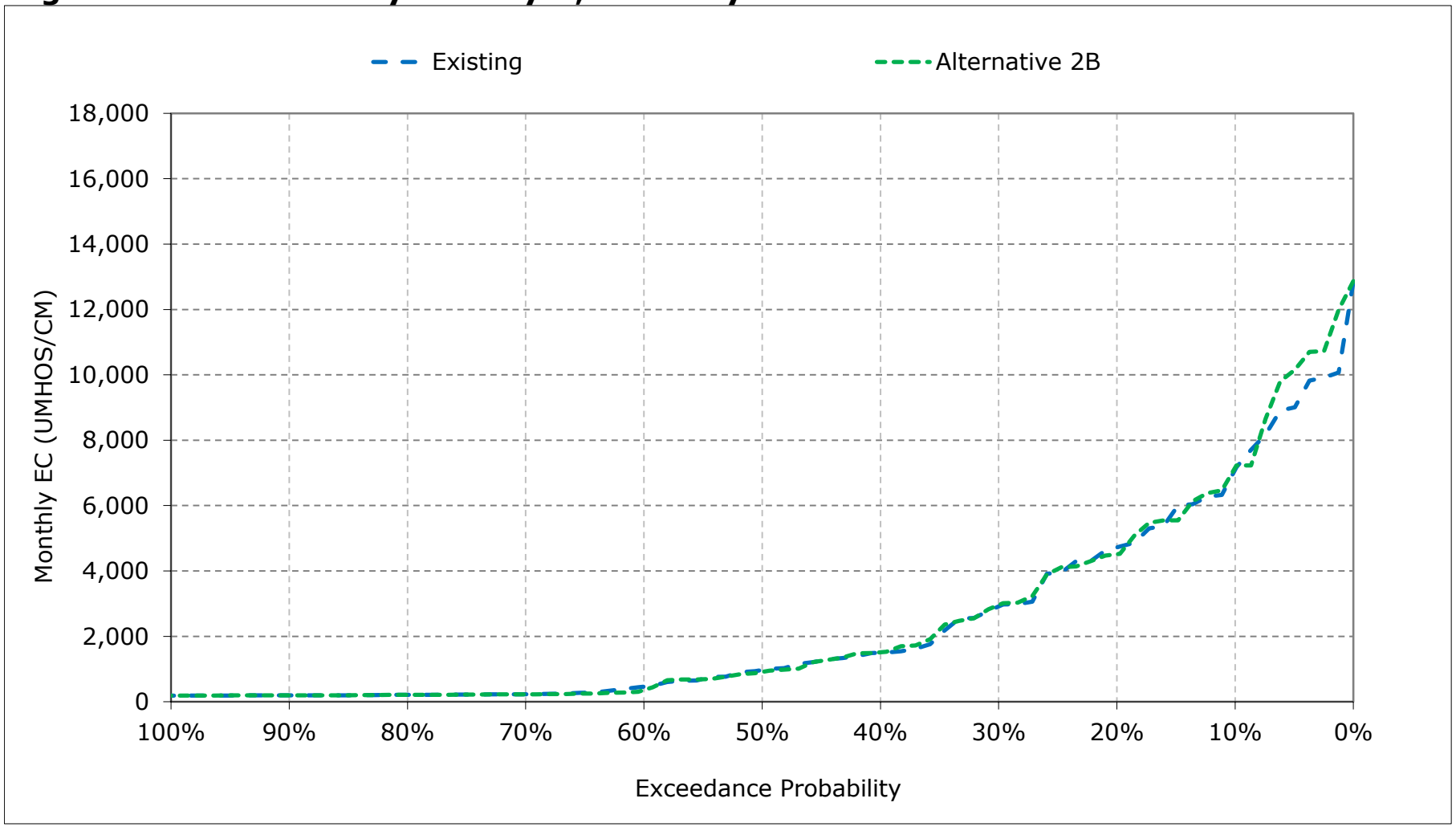


**Figure 24-9. Suisun Bay near Ryer, March EC**

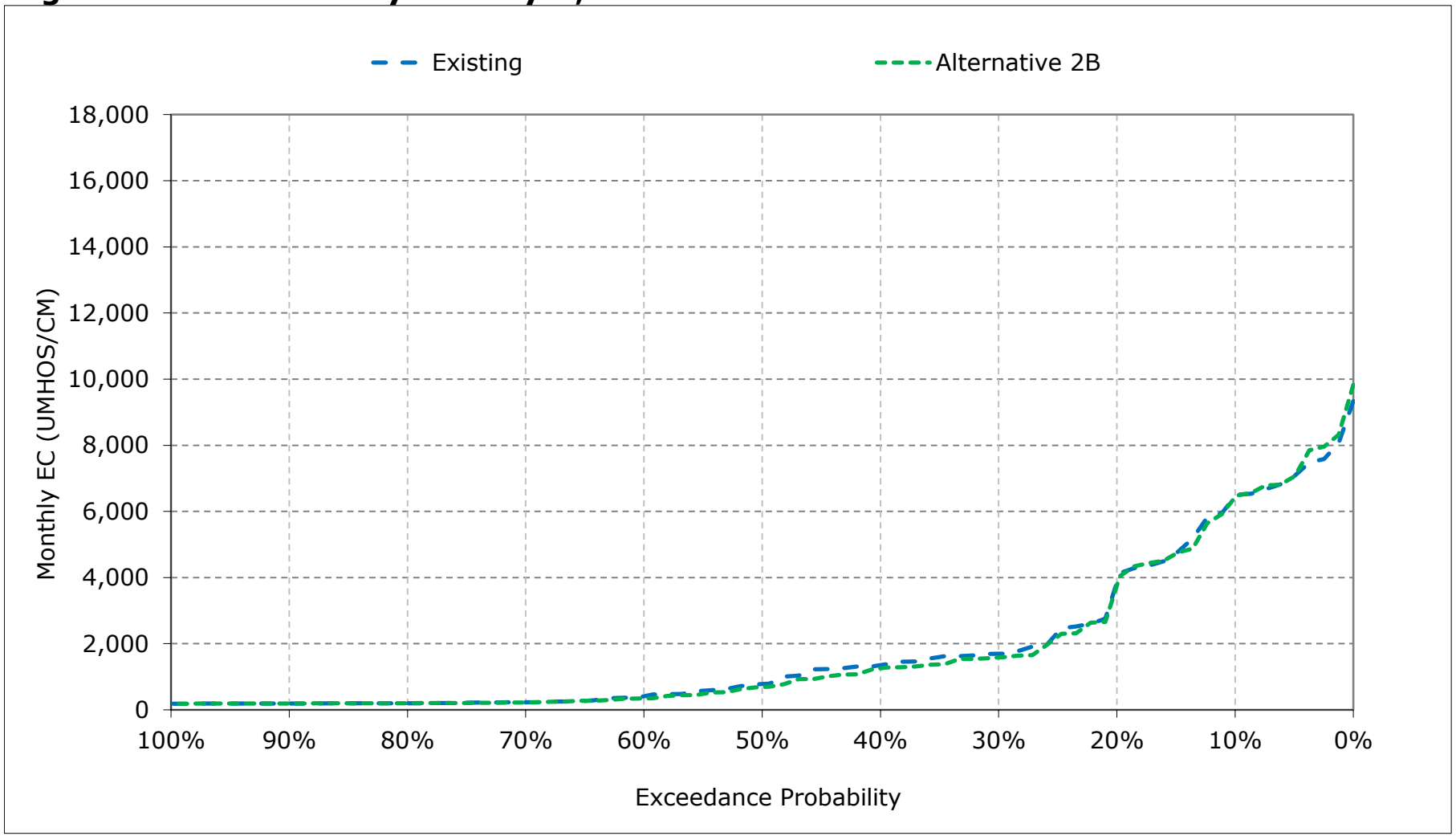


**Figure 24-10. Suisun Bay near Ryer, April EC**

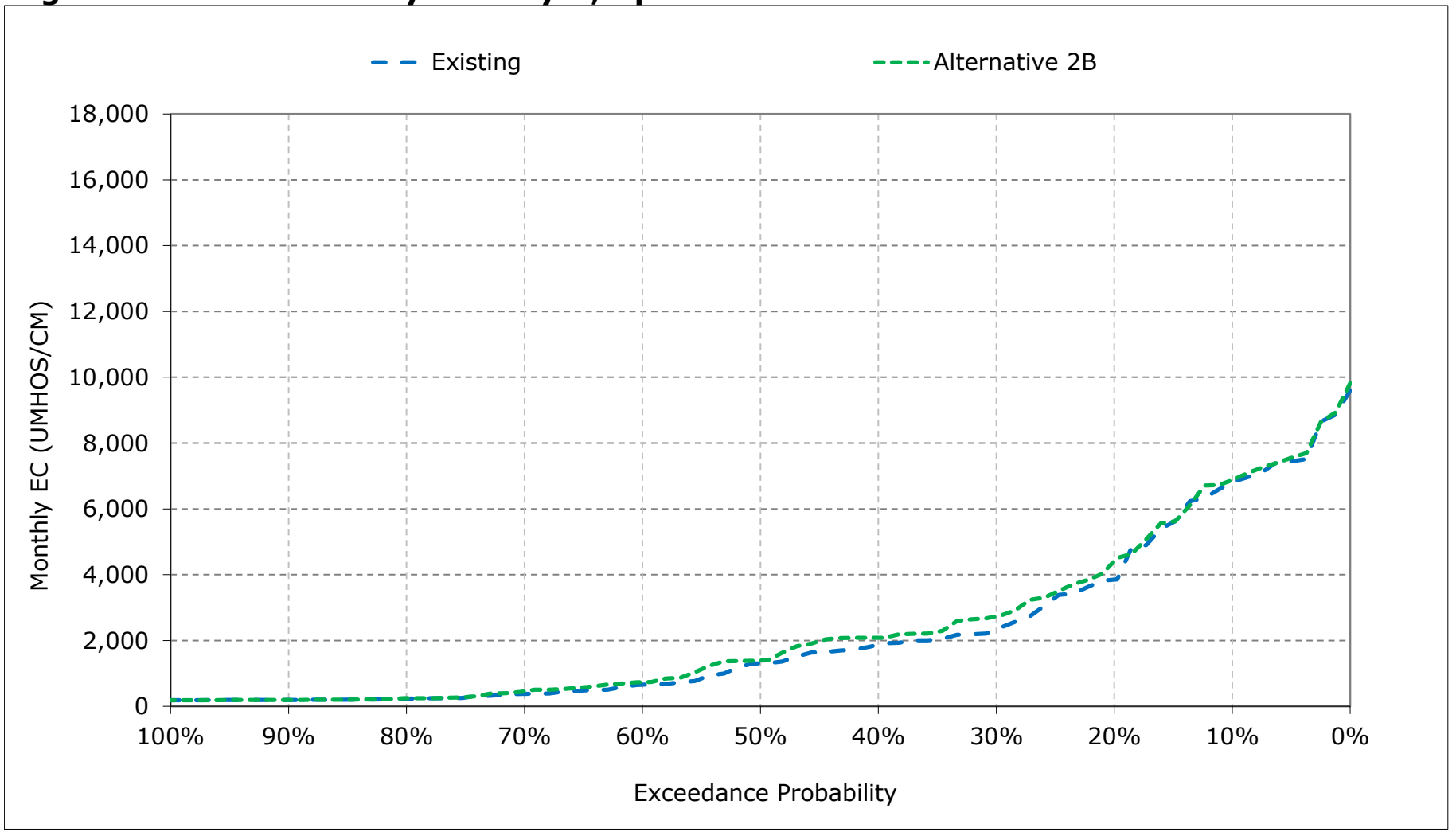


**Figure 24-11. Suisun Bay near Ryer, May EC**

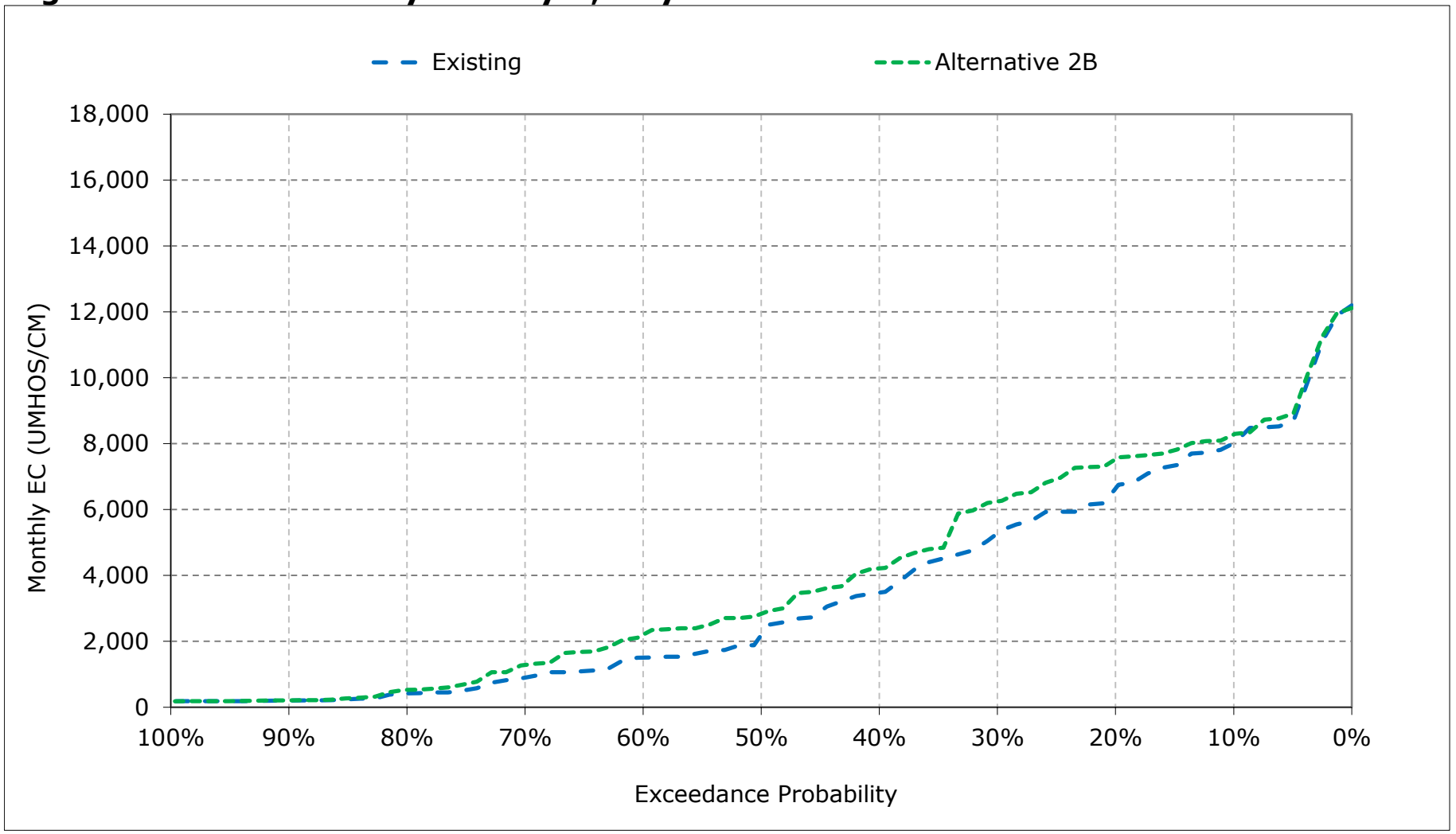


**Figure 24-12. Suisun Bay near Ryer, June EC**

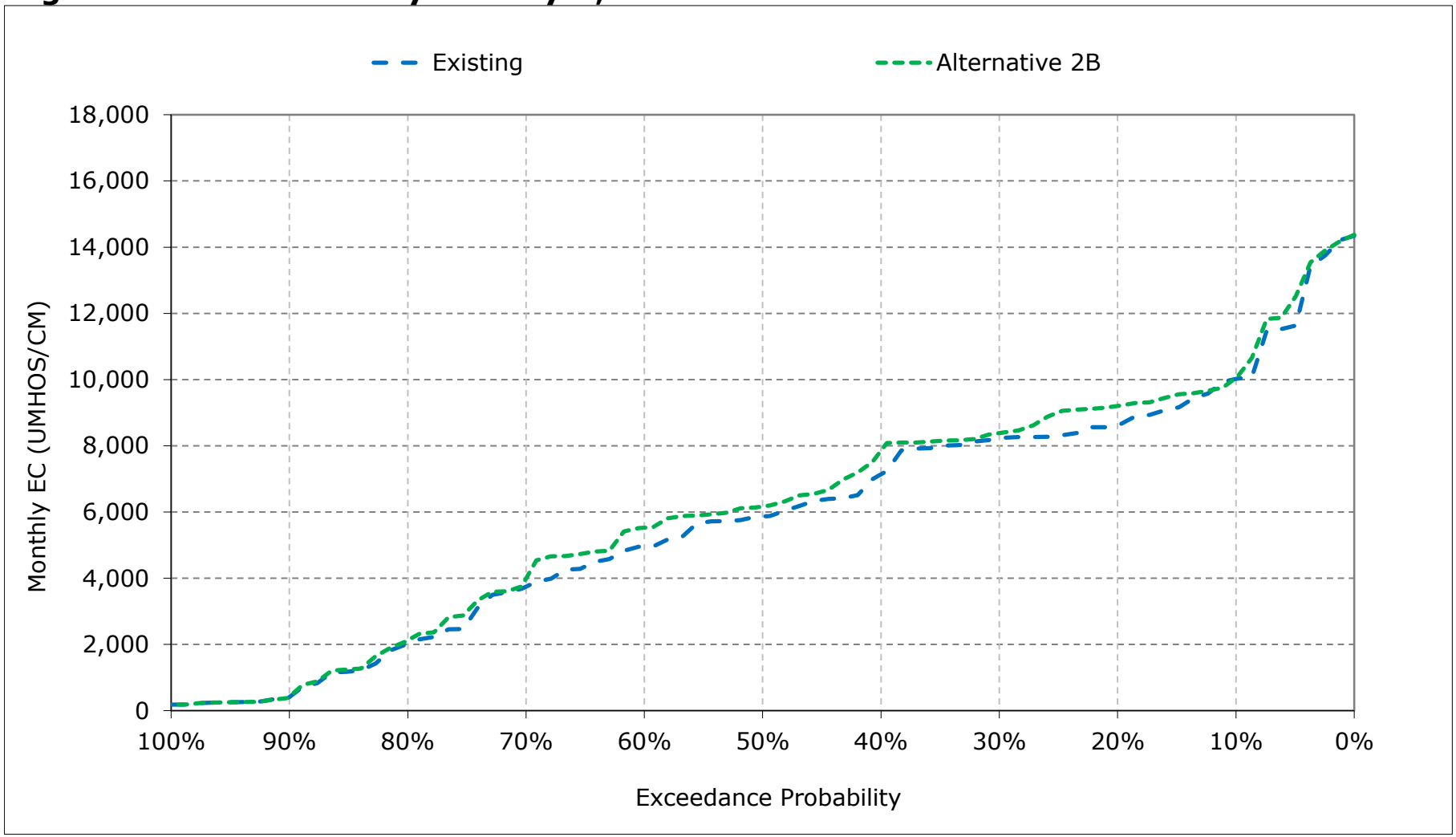


**Figure 24-13. Suisun Bay near Ryer, July EC**

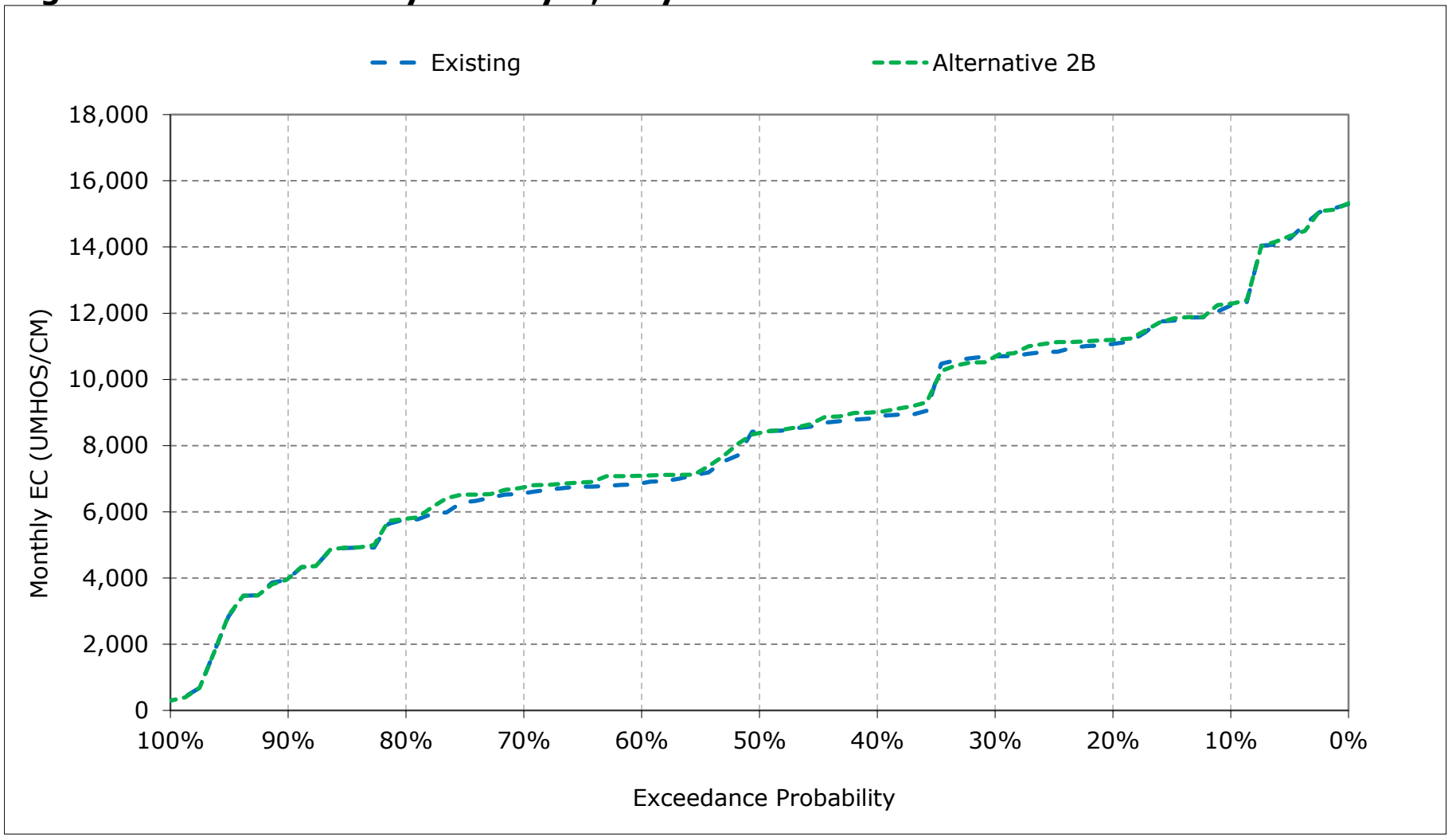


**Figure 24-14. Suisun Bay near Ryer, August EC**

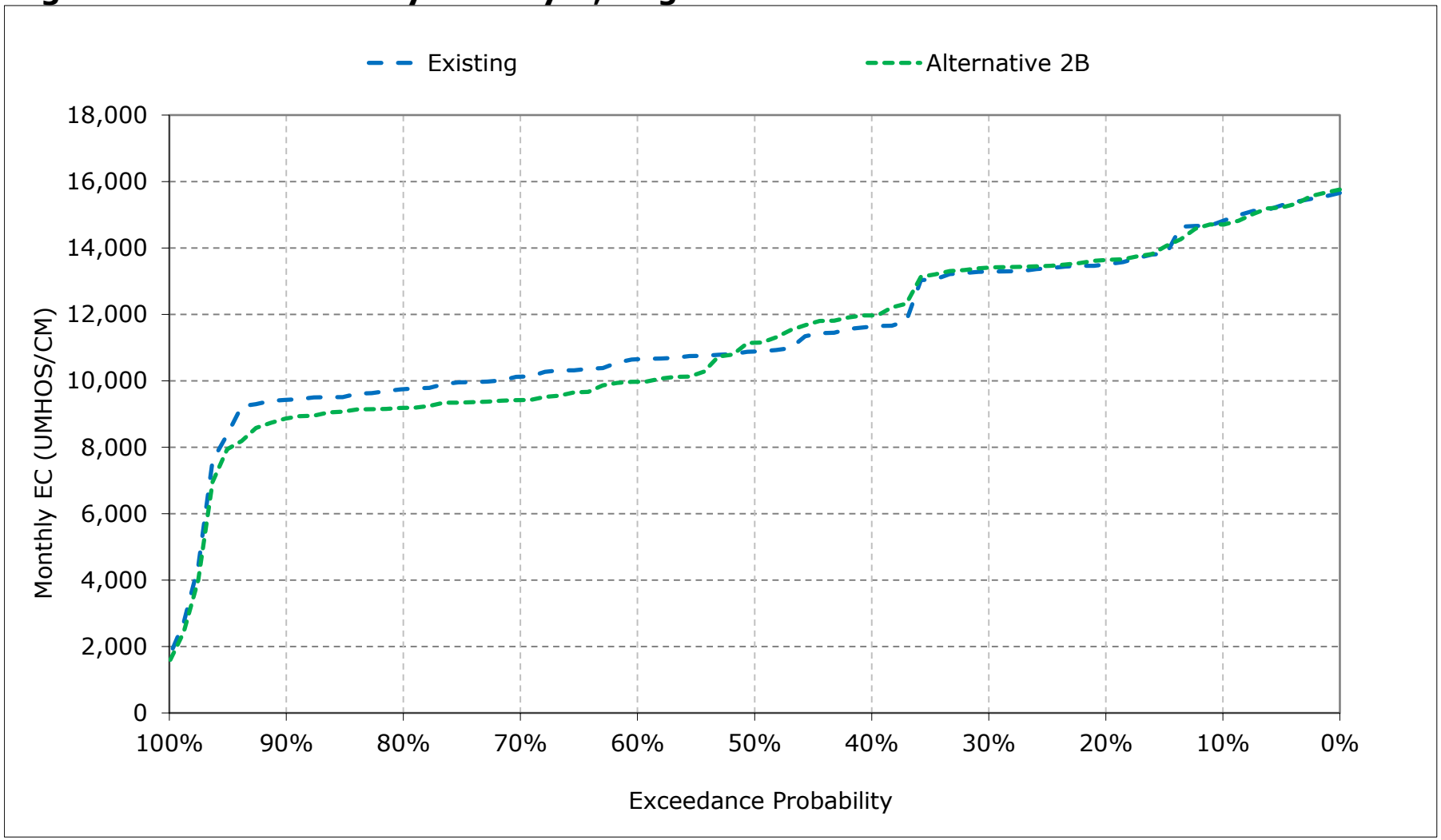


**Figure 24-15. Suisun Bay near Ryer, September EC**

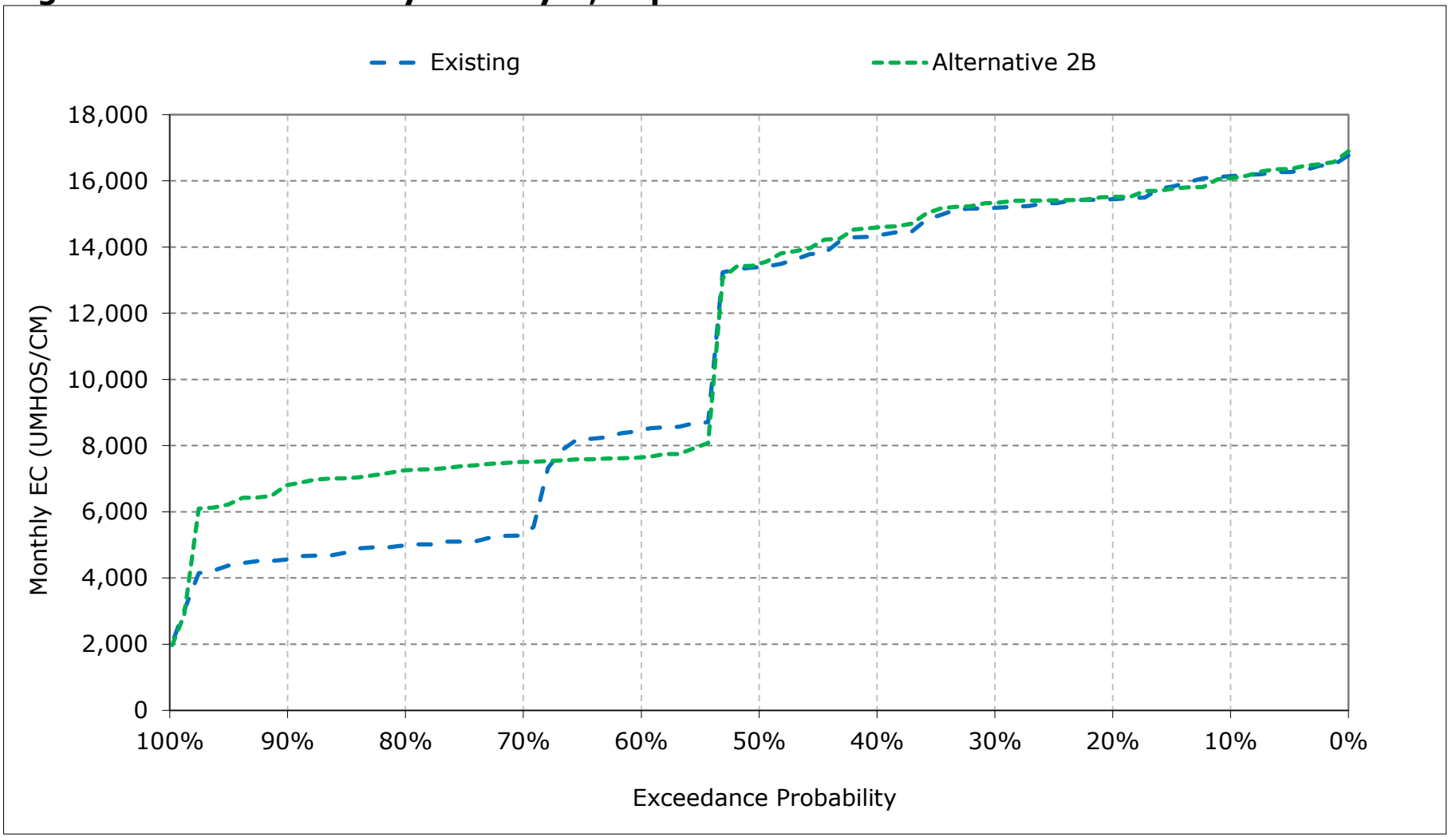


**Figure 24-16. Suisun Bay near Ryer, October EC**

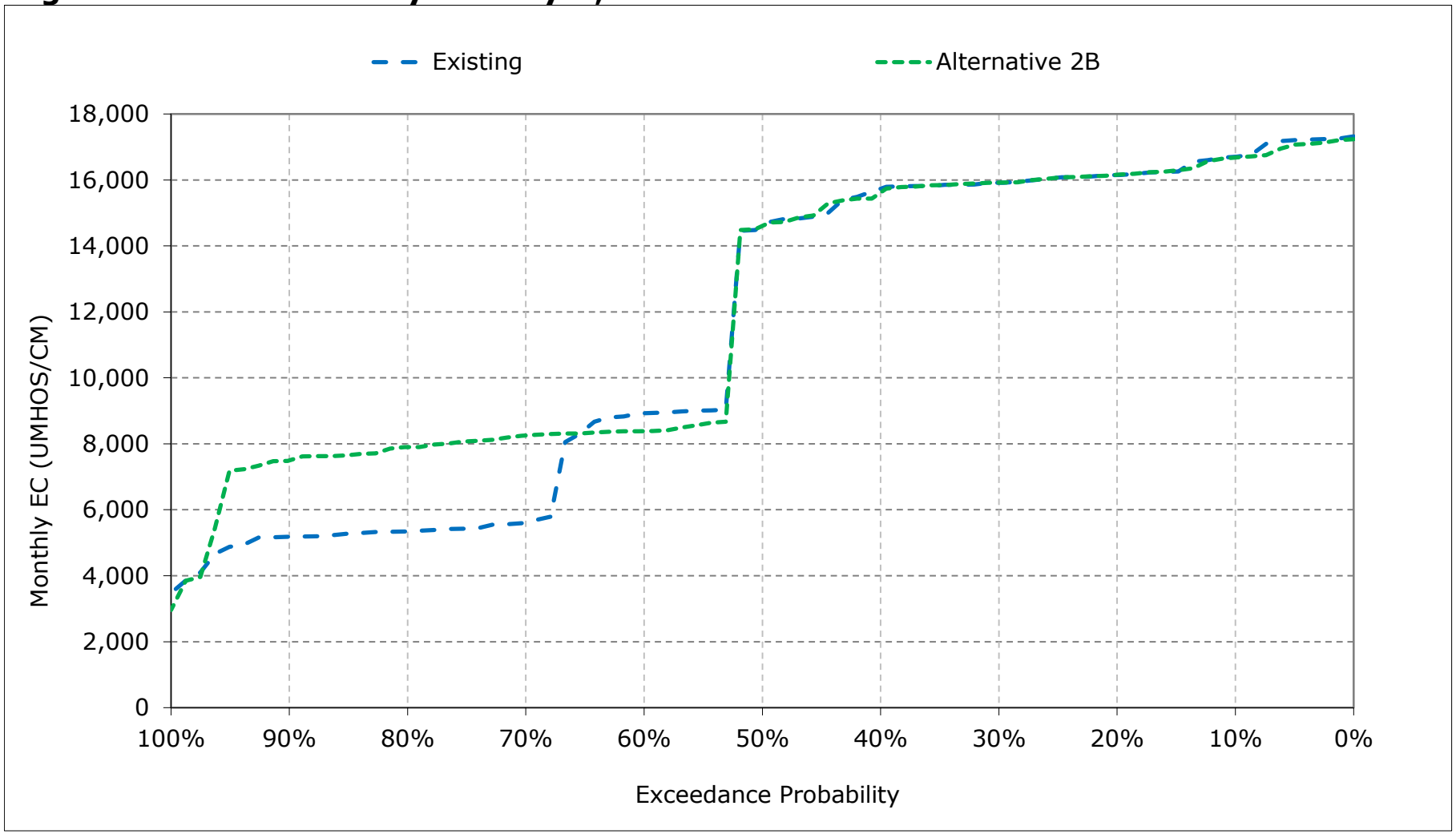


**Figure 24-17. Suisun Bay near Ryer, November EC**

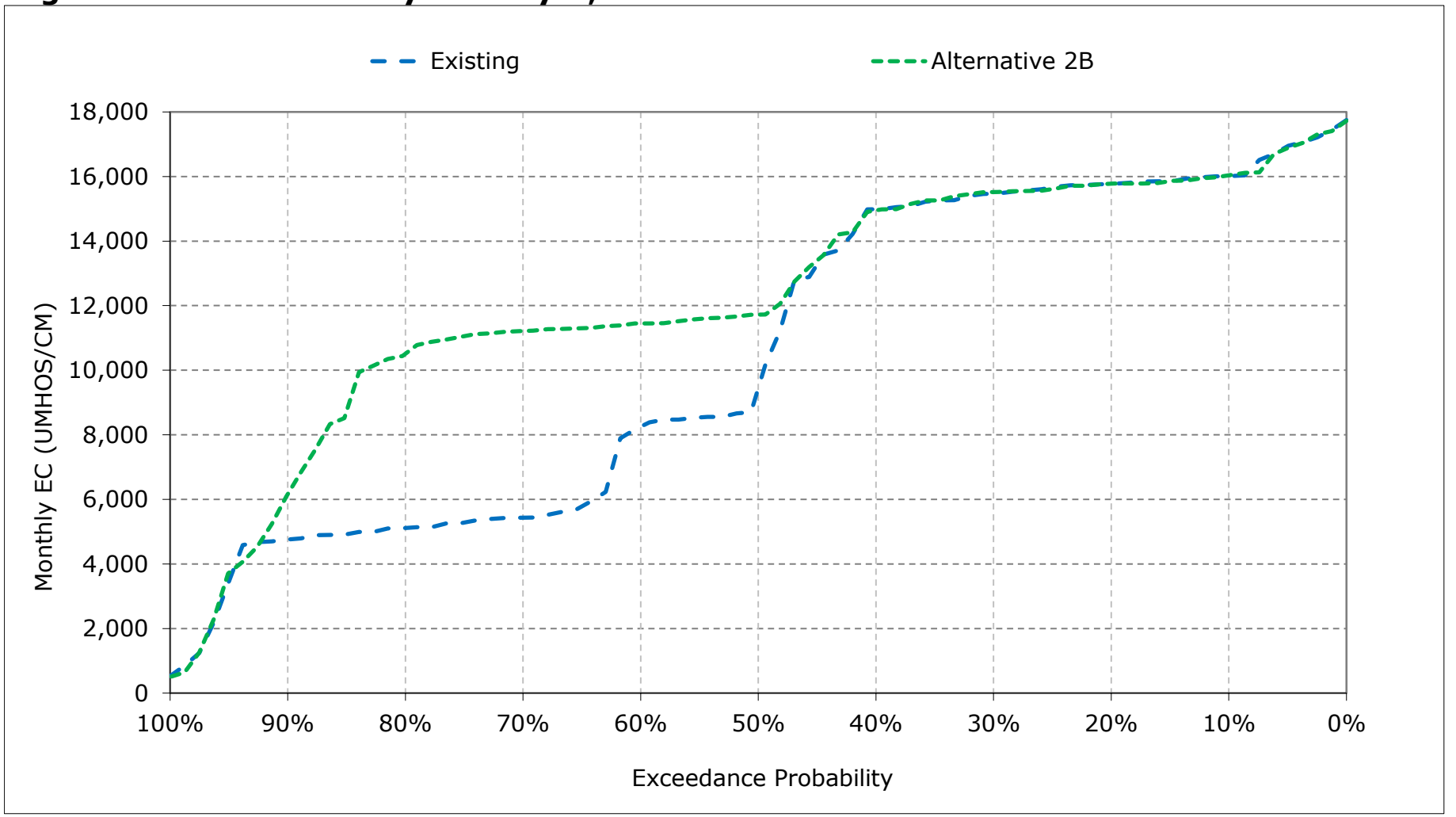
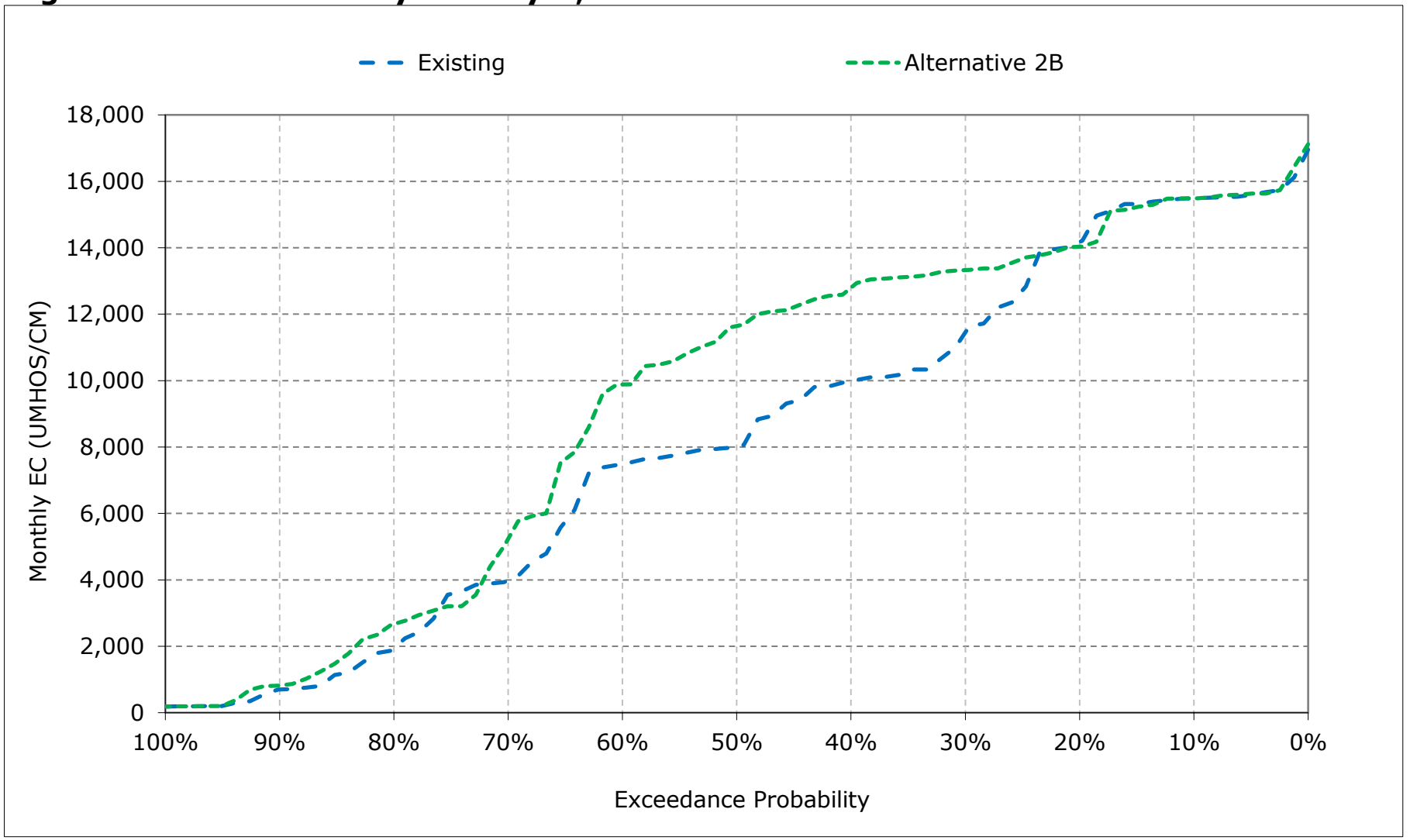


**Figure 24-18. Suisun Bay near Ryer, December EC**



## Table 25-1. Goodyear Slough Outfall at Naval Fleet, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 15,892 | 14,512 | 13,771 | 11,027 | 6,751 | 6,925 | 8,314 | 9,177 | 10,969 | 13,003 | 15,505 | 17,386 |
| **20%** | 15,210 | 14,126 | 13,187 | 9,217 | 5,084 | 4,597 | 5,072 | 7,317 | 9,558 | 11,956 | 14,356 | 16,448 |
| **30%** | 15,018 | 13,803 | 11,361 | 8,298 | 3,298 | 2,680 | 3,253 | 5,694 | 8,748 | 11,430 | 14,002 | 16,127 |
| **40%** | 14,589 | 13,202 | 8,662 | 6,455 | 2,889 | 1,936 | 2,477 | 3,954 | 7,467 | 9,981 | 12,348 | 15,121 |
| **50%** | 13,454 | 9,486 | 6,219 | 5,439 | 1,454 | 1,551 | 1,999 | 2,768 | 5,876 | 8,944 | 11,483 | 14,507 |
| **60%** | 8,092 | 7,681 | 5,684 | 3,477 | 1,052 | 651 | 917 | 1,705 | 4,846 | 8,278 | 10,936 | 11,184 |
| **70%** | 5,206 | 5,149 | 4,838 | 1,426 | 591 | 444 | 622 | 1,129 | 3,773 | 7,413 | 10,196 | 9,021 |
| **80%** | 4,926 | 5,008 | 3,536 | 719 | 389 | 349 | 343 | 539 | 1,971 | 5,929 | 9,848 | 8,689 |
| **90%** | 4,779 | 4,733 | 1,399 | 394 | 273 | 269 | 243 | 238 | 470 | 3,501 | 9,518 | 8,221 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 10,631 | 9,660 | 7,630 | 5,272 | 2,747 | 2,402 | 2,853 | 3,891 | 6,149 | 8,927 | 11,897 | 12,834 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 8,799 | 7,246 | 3,710 | 1,360 | 541 | 465 | 598 | 999 | 2,365 | 5,094 | 9,112 | 8,043 |
| **Above Normal (15%)** | 10,954 | 9,676 | 7,687 | 4,170 | 1,394 | 717 | 857 | 1,601 | 4,190 | 7,257 | 10,188 | 11,099 |
| **Below Normal (17%)** | 11,001 | 10,398 | 9,021 | 6,431 | 2,384 | 2,126 | 2,465 | 3,412 | 6,121 | 9,317 | 11,872 | 14,786 |
| **Dry (22%)** | 11,093 | 10,708 | 9,331 | 7,590 | 4,475 | 3,591 | 4,329 | 5,975 | 8,734 | 11,602 | 14,206 | 16,297 |
| **Critical (15%)** | 13,156 | 12,445 | 11,890 | 10,023 | 6,709 | 6,824 | 7,974 | 9,880 | 12,462 | 14,438 | 16,208 | 17,477 |

### Alternative 2B

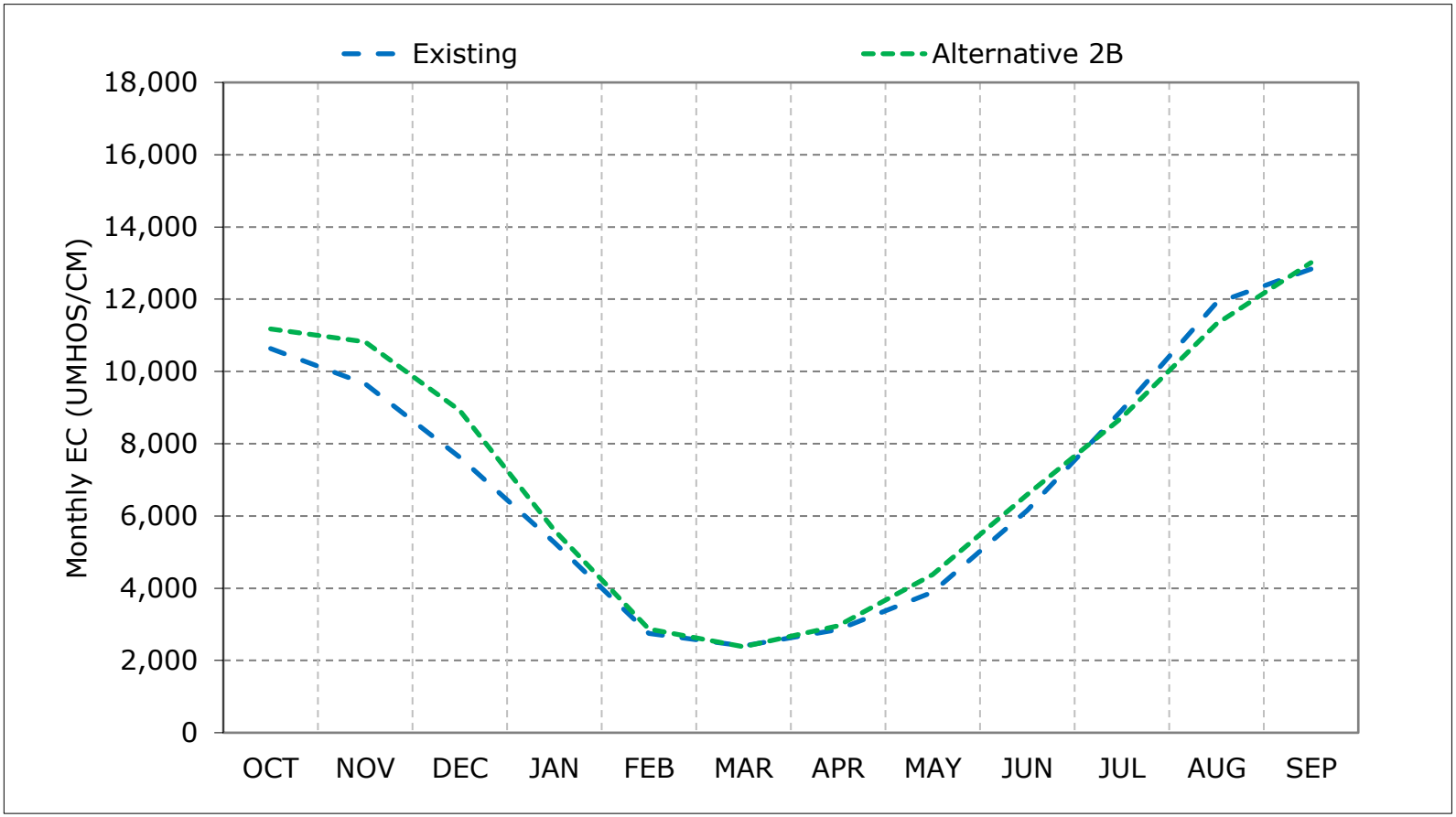
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 15,778 | 14,426 | 13,792 | 11,214 | 6,957 | 6,756 | 8,568 | 9,250 | 11,150 | 12,998 | 15,496 | 17,257 |
| **20%** | 15,249 | 14,048 | 13,061 | 10,574 | 5,210 | 4,683 | 4,966 | 8,239 | 10,387 | 12,165 | 14,530 | 16,493 |
| **30%** | 15,040 | 13,747 | 11,534 | 9,027 | 3,539 | 2,674 | 3,340 | 6,782 | 9,329 | 11,426 | 14,095 | 16,343 |
| **40%** | 14,430 | 13,060 | 11,267 | 6,931 | 2,824 | 1,678 | 2,628 | 4,833 | 8,057 | 8,804 | 10,846 | 14,160 |
| **50%** | 13,170 | 9,689 | 10,784 | 5,506 | 1,567 | 1,293 | 2,230 | 3,351 | 6,505 | 8,291 | 10,022 | 13,448 |
| **60%** | 7,640 | 9,316 | 9,734 | 3,387 | 949 | 613 | 1,096 | 2,413 | 5,682 | 7,824 | 9,788 | 10,616 |
| **70%** | 7,454 | 9,127 | 5,908 | 1,496 | 626 | 436 | 677 | 1,466 | 4,089 | 7,182 | 9,468 | 10,351 |
| **80%** | 7,192 | 8,818 | 4,367 | 761 | 401 | 365 | 368 | 684 | 2,160 | 5,949 | 9,187 | 10,230 |
| **90%** | 6,853 | 6,705 | 2,444 | 523 | 318 | 272 | 268 | 259 | 507 | 3,507 | 8,665 | 9,626 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 11,173 | 10,818 | 8,921 | 5,606 | 2,870 | 2,380 | 2,958 | 4,373 | 6,586 | 8,723 | 11,313 | 13,013 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 9,492 | 8,788 | 4,901 | 1,482 | 551 | 457 | 674 | 1,315 | 2,742 | 5,245 | 8,790 | 9,415 |
| **Above Normal (15%)** | 11,653 | 10,881 | 9,220 | 4,463 | 1,360 | 645 | 960 | 2,164 | 4,690 | 7,336 | 10,071 | 10,343 |
| **Below Normal (17%)** | 11,571 | 11,540 | 10,467 | 6,692 | 2,348 | 1,994 | 2,597 | 4,172 | 6,714 | 7,528 | 9,034 | 13,802 |
| **Dry (22%)** | 11,591 | 11,708 | 10,703 | 8,239 | 4,827 | 3,571 | 4,433 | 6,604 | 9,262 | 11,757 | 14,313 | 16,406 |
| **Critical (15%)** | 13,244 | 12,977 | 12,859 | 10,471 | 7,076 | 6,947 | 8,112 | 10,099 | 12,647 | 14,492 | 16,177 | 17,465 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -114 | -86 | **21** | **187** | **205** | -170 | **254** | **72** | **180** | -6 | -8 | -129 |
| **20%** | **39** | -78 | -125 | **1,357** | **126** | **86** | -106 | **922** | **829** | **209** | **174** | **45** |
| **30%** | **22** | -56 | **173** | **729** | **241** | -6 | **88** | **1,089** | **580** | -5 | **93** | **216** |
| **40%** | -159 | -142 | **2,605** | **476** | -66 | -258 | **150** | **879** | **590** | -1,177 | -1,502 | -961 |
| **50%** | -284 | **204** | **4,565** | **67** | **113** | -258 | **231** | **583** | **629** | -653 | -1,461 | -1,059 |
| **60%** | -452 | **1,635** | **4,049** | -90 | -103 | -38 | **180** | **709** | **836** | -453 | -1,148 | -569 |
| **70%** | **2,248** | **3,977** | **1,070** | **70** | **35** | -8 | **55** | **337** | **316** | -231 | -728 | **1,330** |
| **80%** | **2,266** | **3,809** | **831** | **42** | **12** | **16** | **25** | **145** | **189** | **20** | -662 | **1,542** |
| **90%** | **2,074** | **1,972** | **1,045** | **128** | **45** | **4** | **25** | **22** | **37** | **7** | -853 | **1,405** |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **542** | **1,158** | **1,292** | **334** | **123** | -22 | **105** | **482** | **437** | -204 | -585 | **179** |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **693** | **1,542** | **1,190** | **121** | **11** | -9 | **76** | **315** | **377** | **151** | -321 | **1,372** |
| **Above Normal (15%)** | **699** | **1,205** | **1,533** | **293** | -34 | -72 | **103** | **563** | **501** | **79** | -117 | -757 |
| **Below Normal (17%)** | **570** | **1,142** | **1,446** | **261** | -36 | -132 | **132** | **760** | **593** | -1,789 | -2,838 | -984 |
| **Dry (22%)** | **498** | **1,000** | **1,372** | **649** | **352** | -20 | **104** | **629** | **528** | **156** | **107** | **109** |
| **Critical (15%)** | **88** | **533** | **969** | **448** | **366** | **124** | **138** | **219** | **185** | **54** | -31 | -12 |

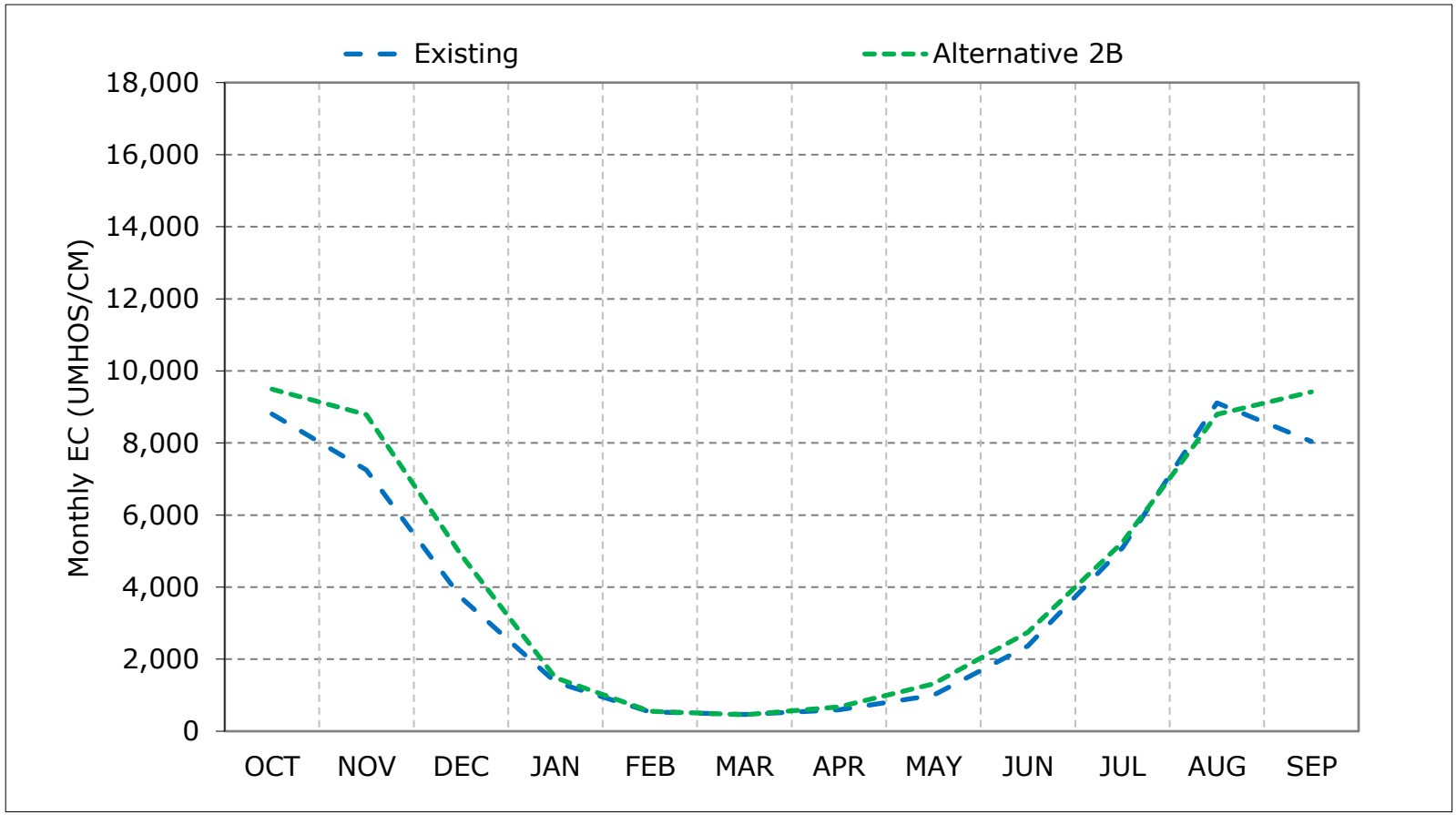
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

## Figure 25-1. Goodyear Slough Outfall at Naval Fleet, Long-Term Average EC



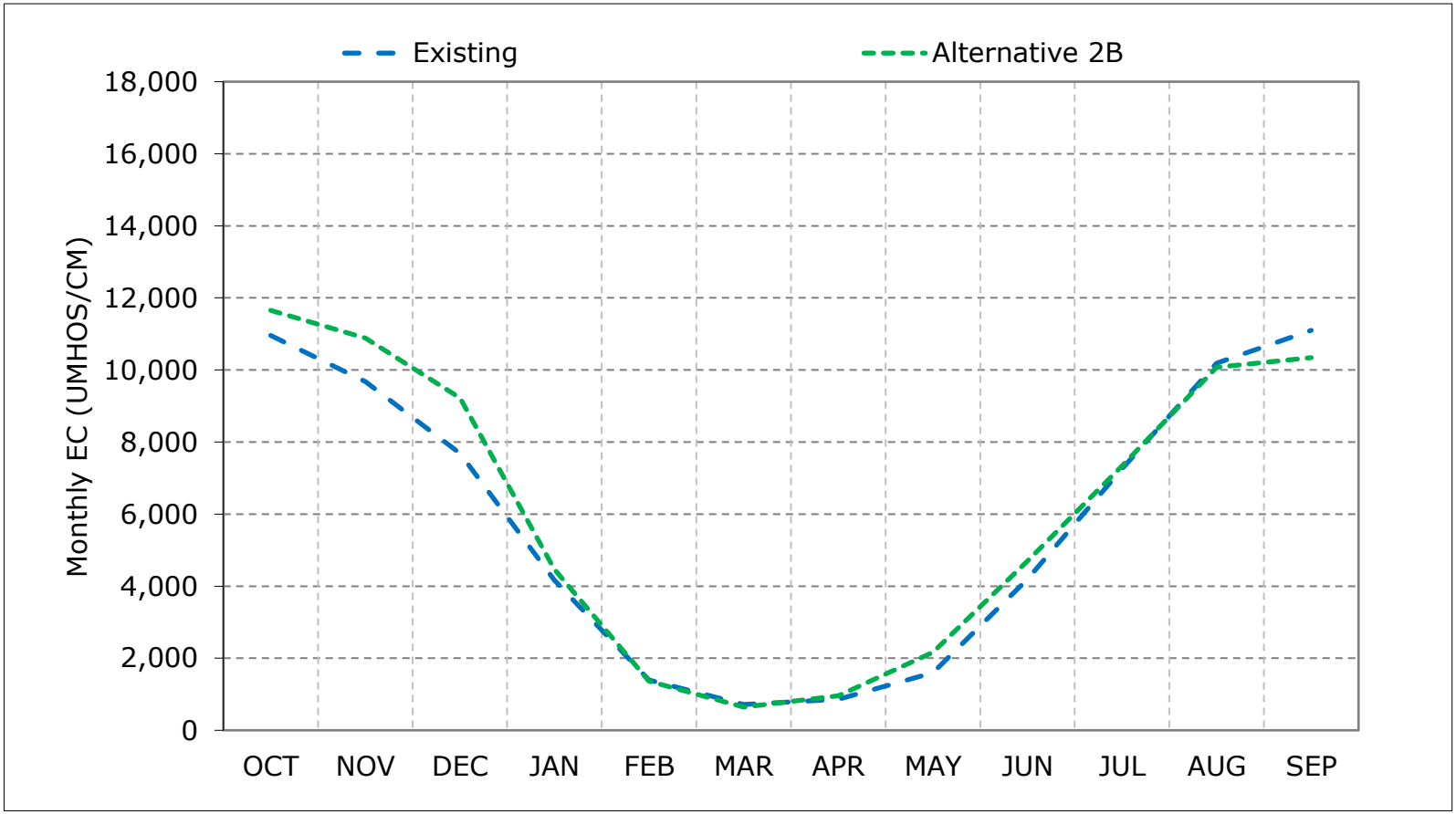

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 25-2. Goodyear Slough Outfall at Naval Fleet, Wet Year Average EC**



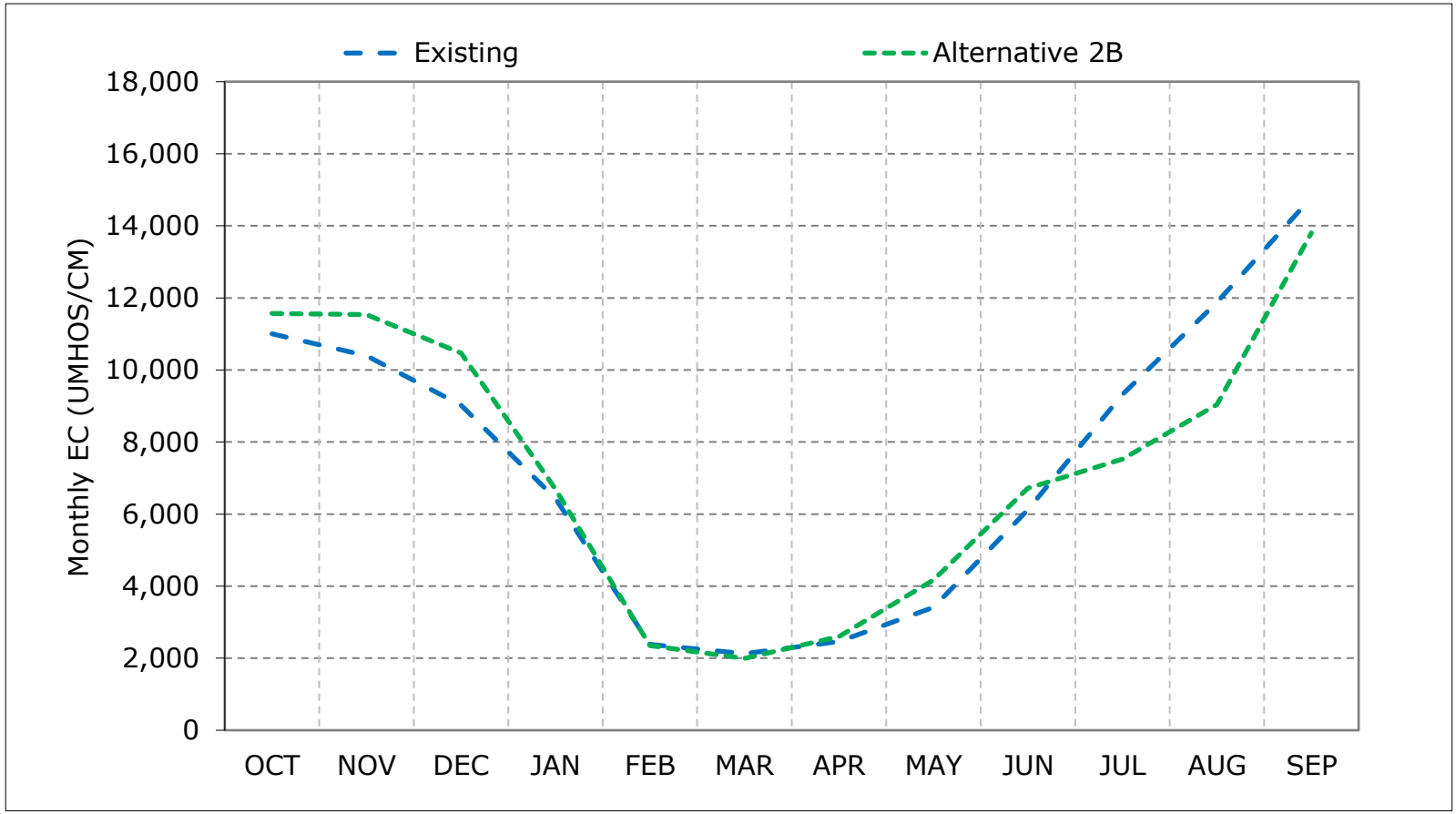

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 25-3. Goodyear Slough Outfall at Naval Fleet, Above Normal Year Average EC**



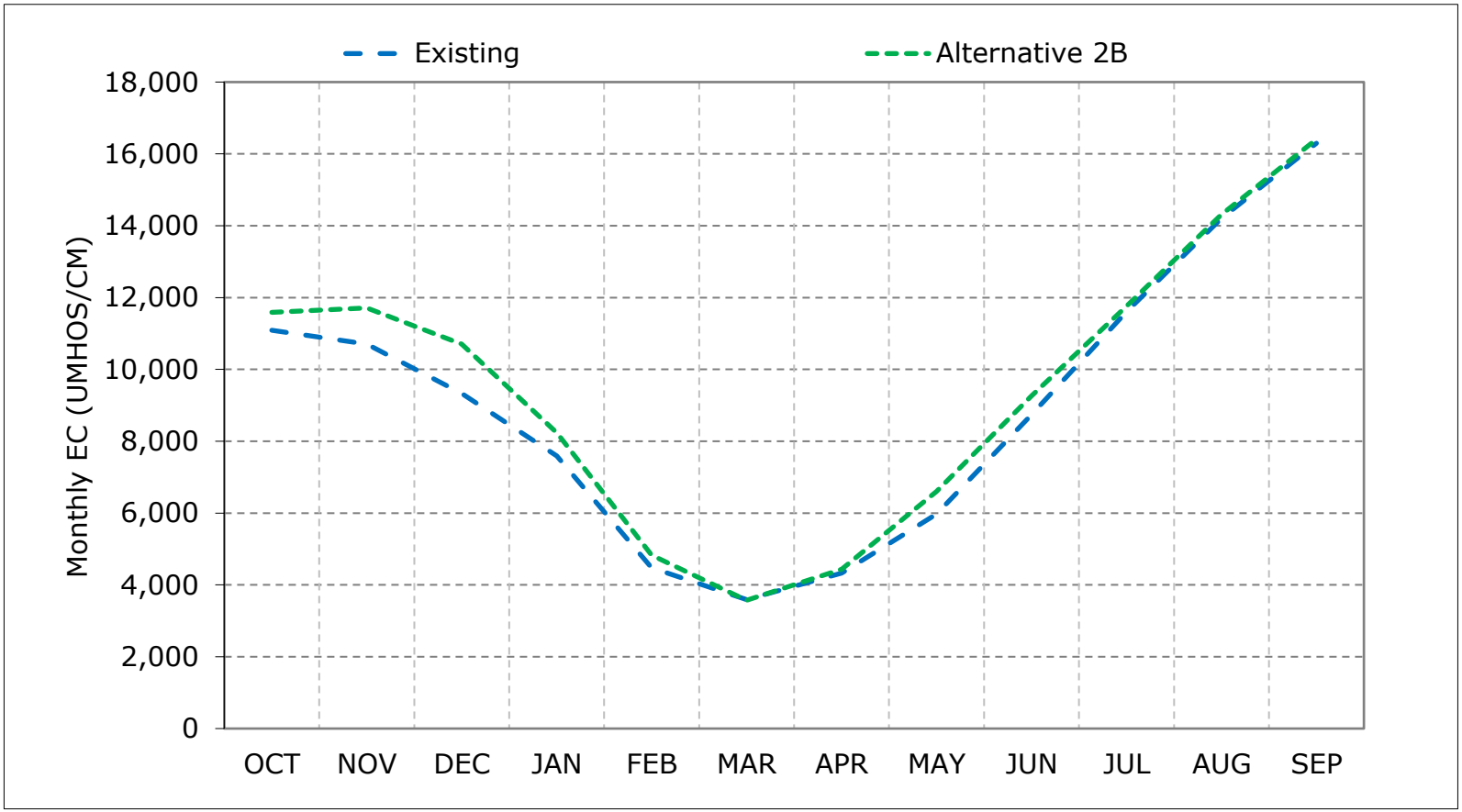

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 25-4. Goodyear Slough Outfall at Naval Fleet, Below Normal Year Average EC**



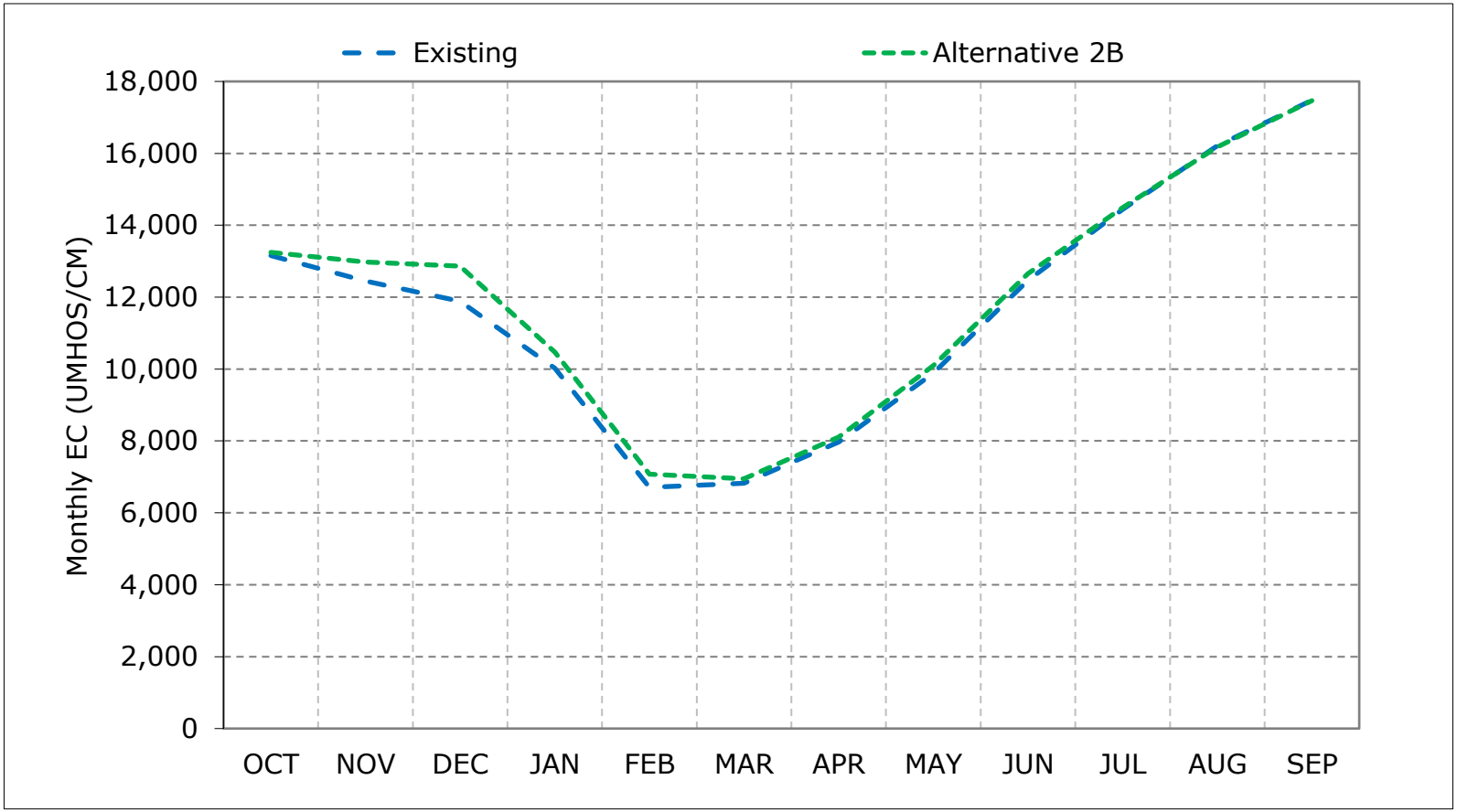

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 25-5. Goodyear Slough Outfall at Naval Fleet, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 25-6. Goodyear Slough Outfall at Naval Fleet, Critical Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 25-7. Goodyear Slough Outfall at Naval Fleet, January EC**

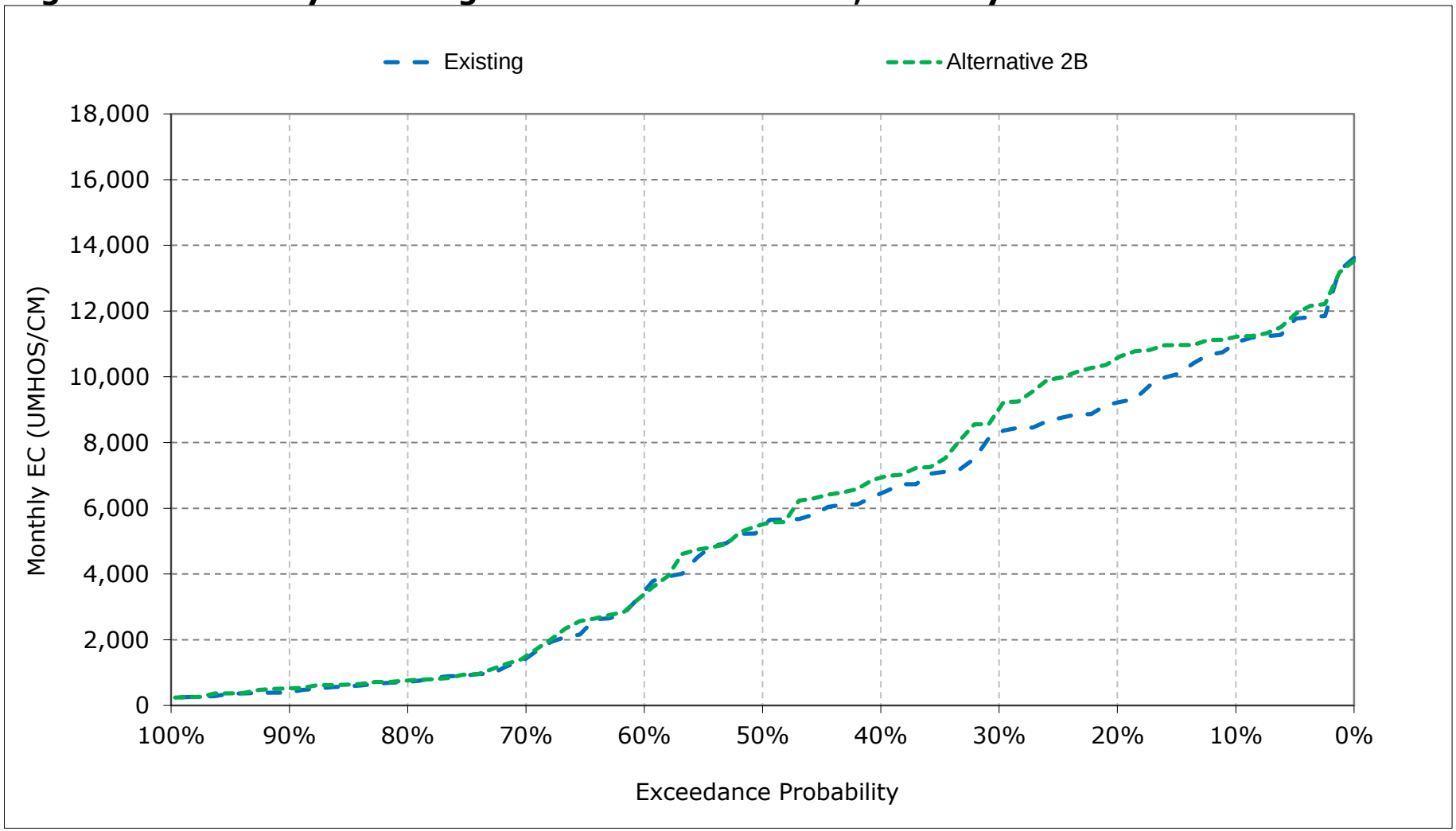


**Figure 25-8. Goodyear Slough Outfall at Naval Fleet, February EC**

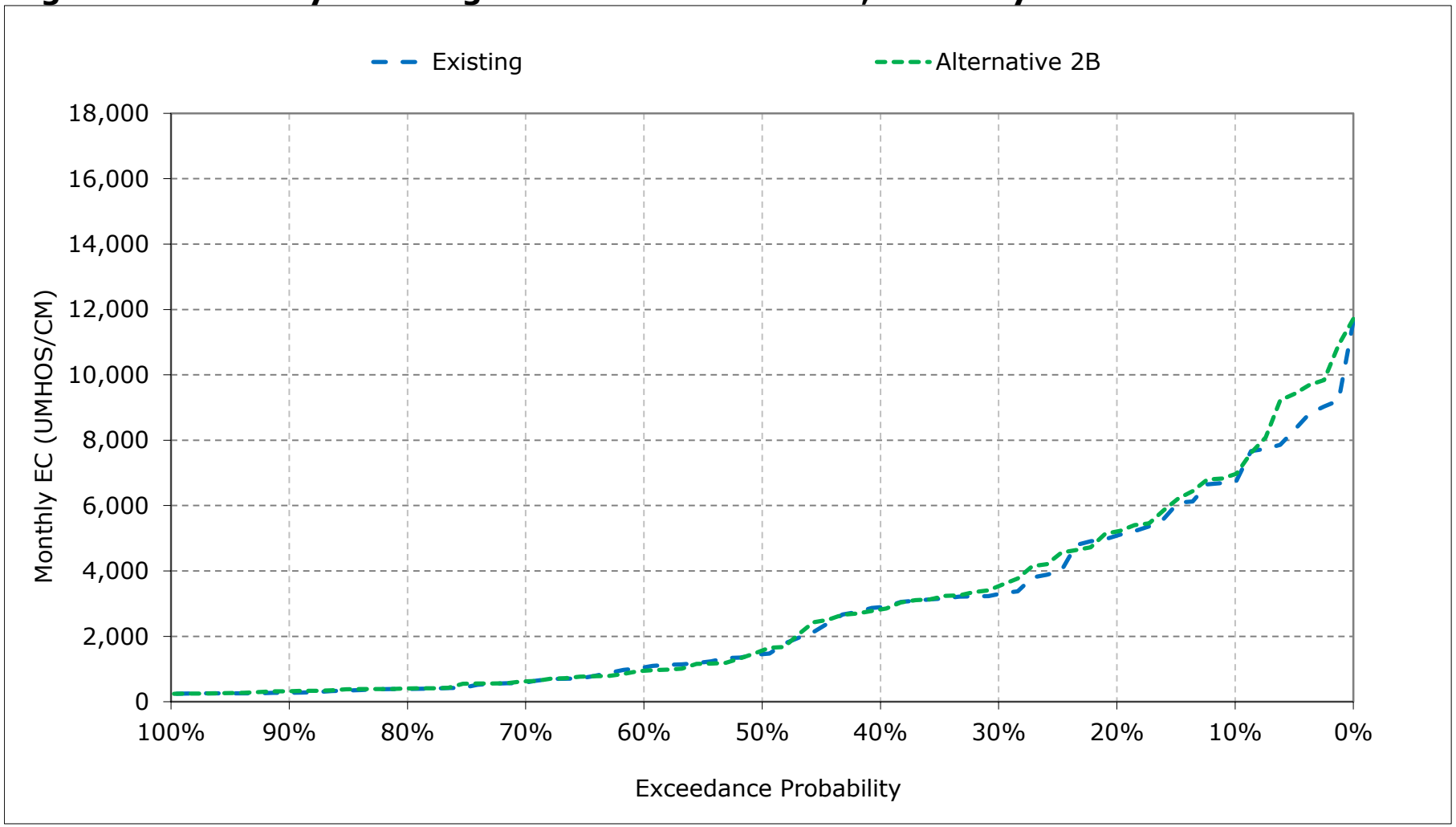


**Figure 25-9. Goodyear Slough Outfall at Naval Fleet, March EC**

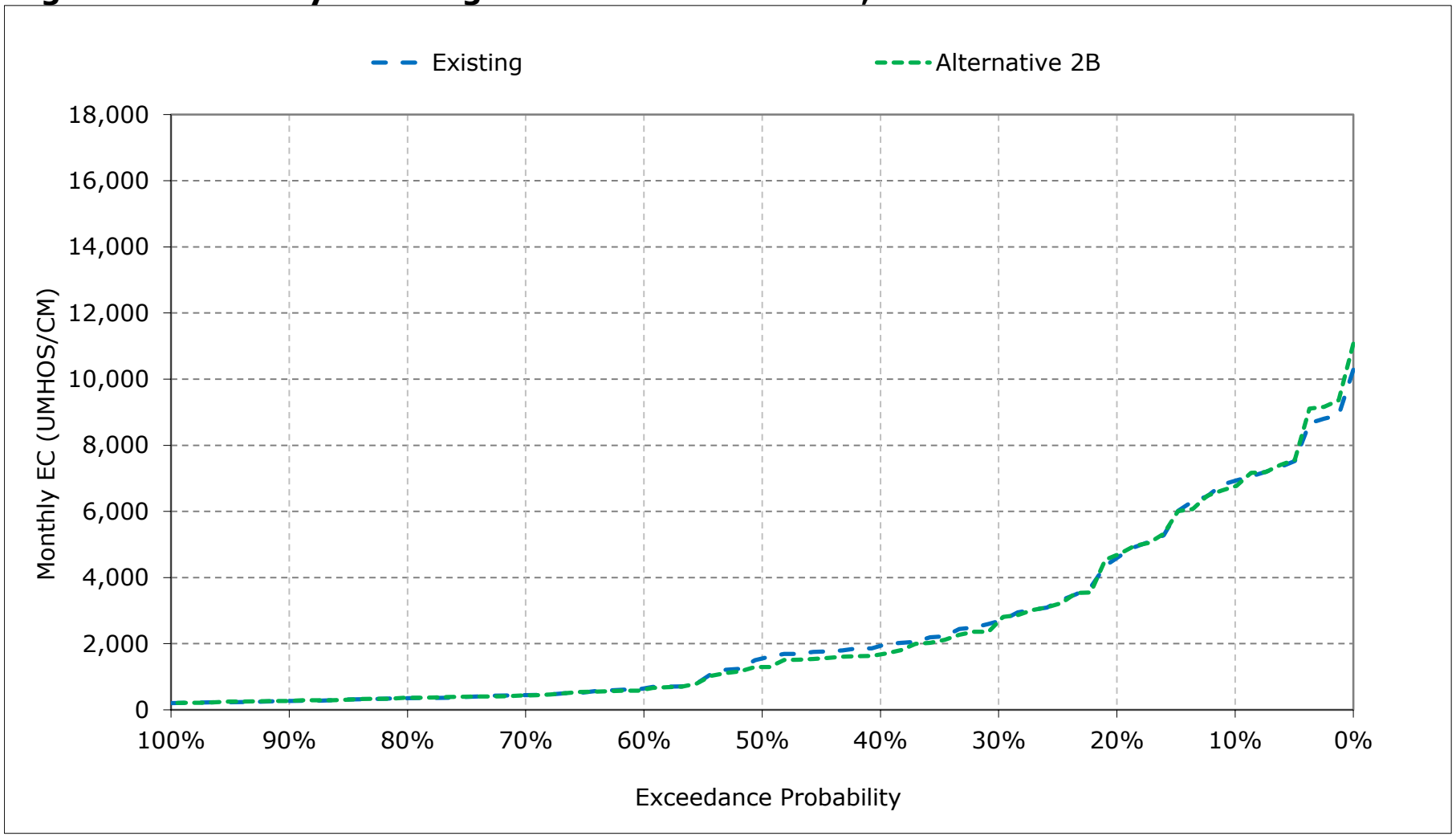


**Figure 25-10. Goodyear Slough Outfall at Naval Fleet, April EC**

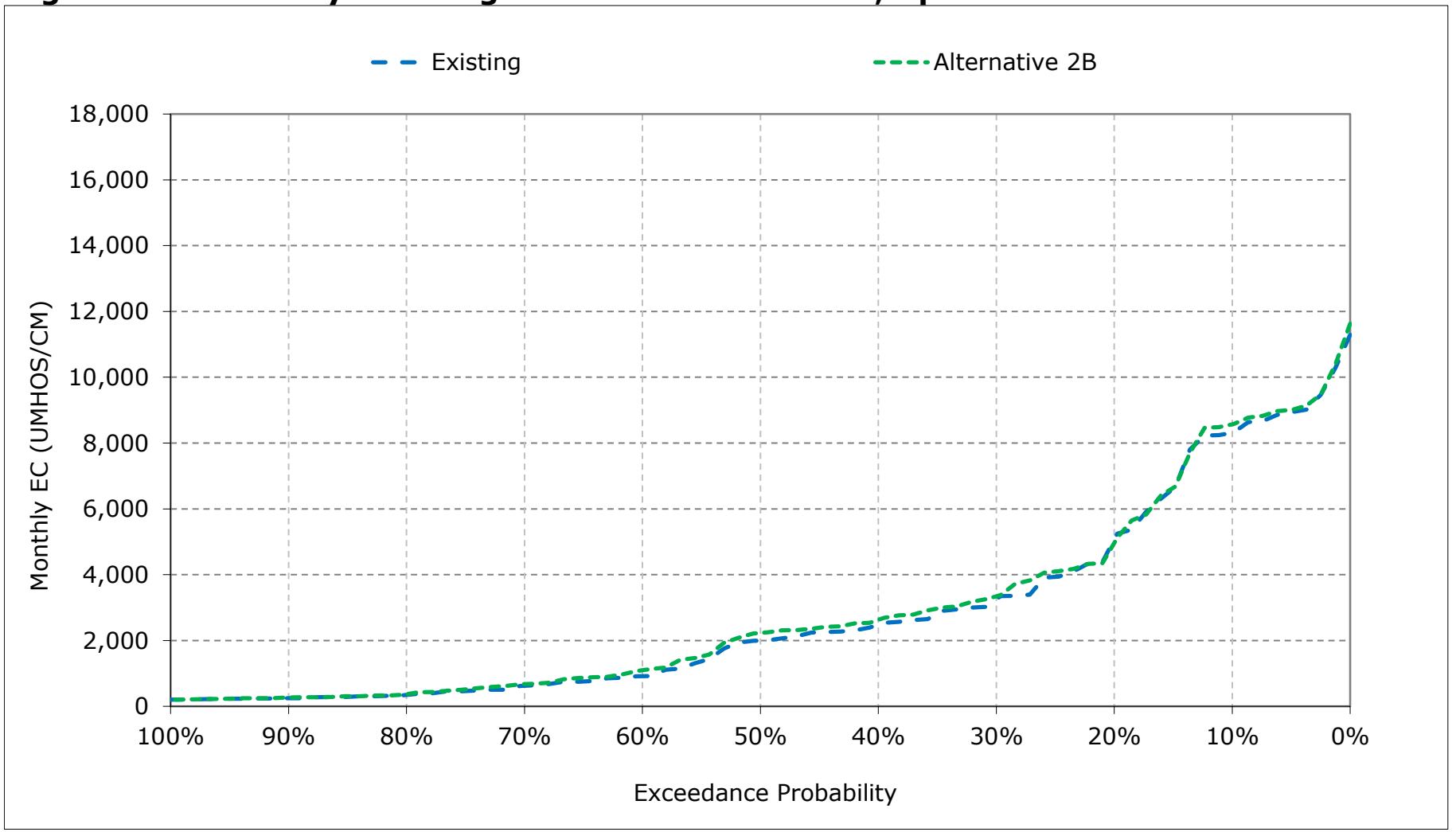


**Figure 25-11. Goodyear Slough Outfall at Naval Fleet, May EC**

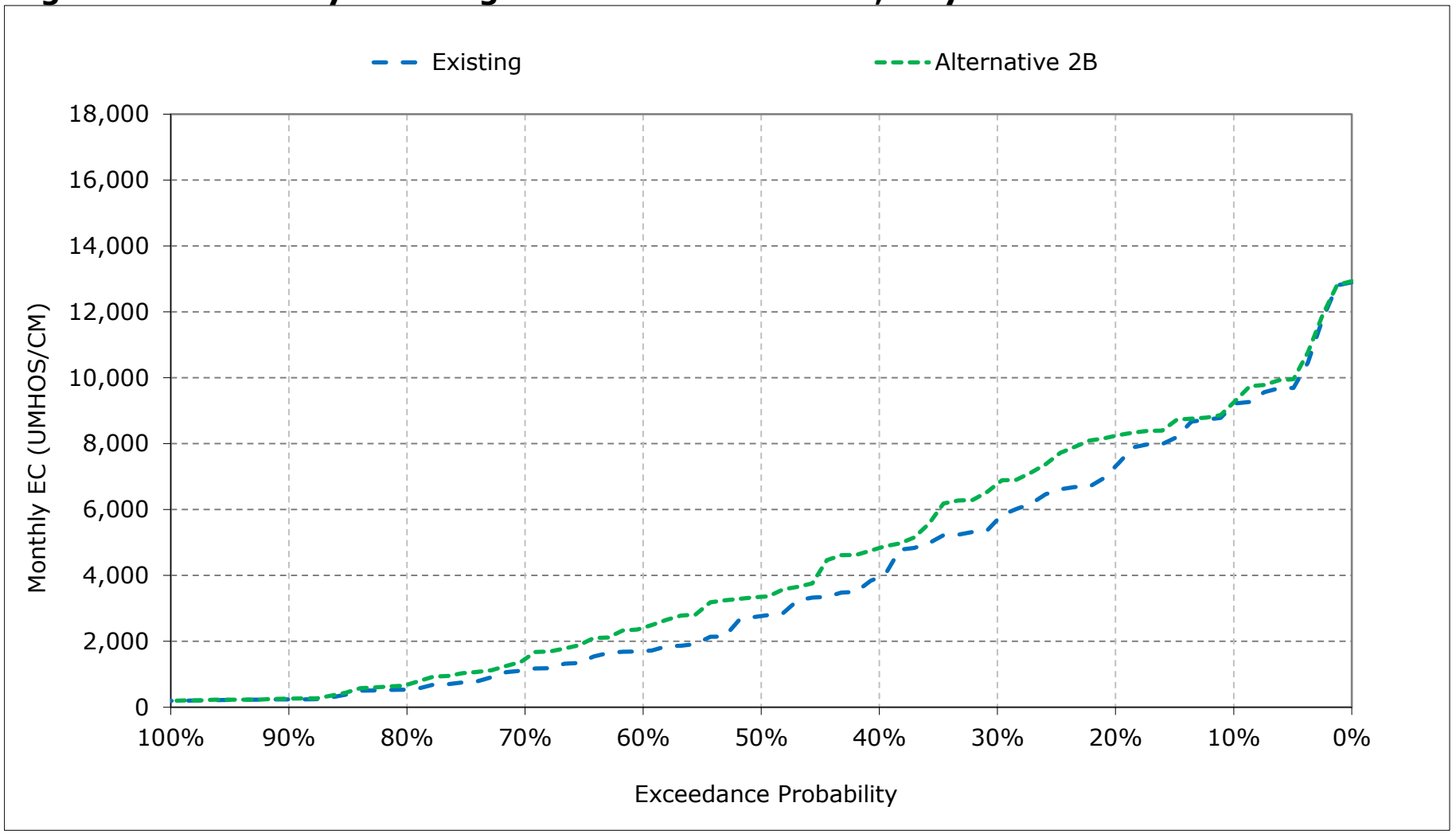


**Figure 25-12. Goodyear Slough Outfall at Naval Fleet, June EC**

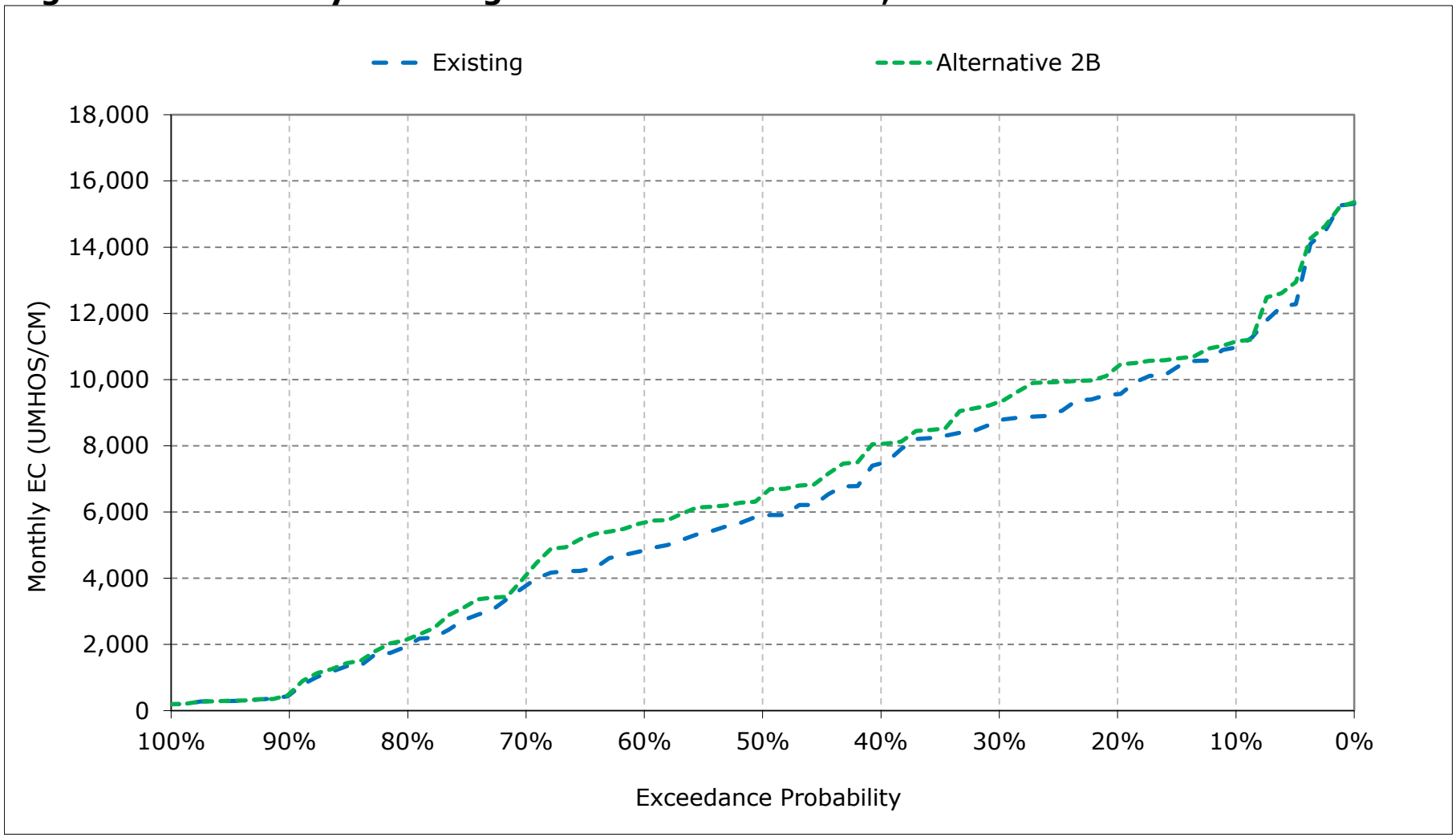


**Figure 25-13. Goodyear Slough Outfall at Naval Fleet, July EC**

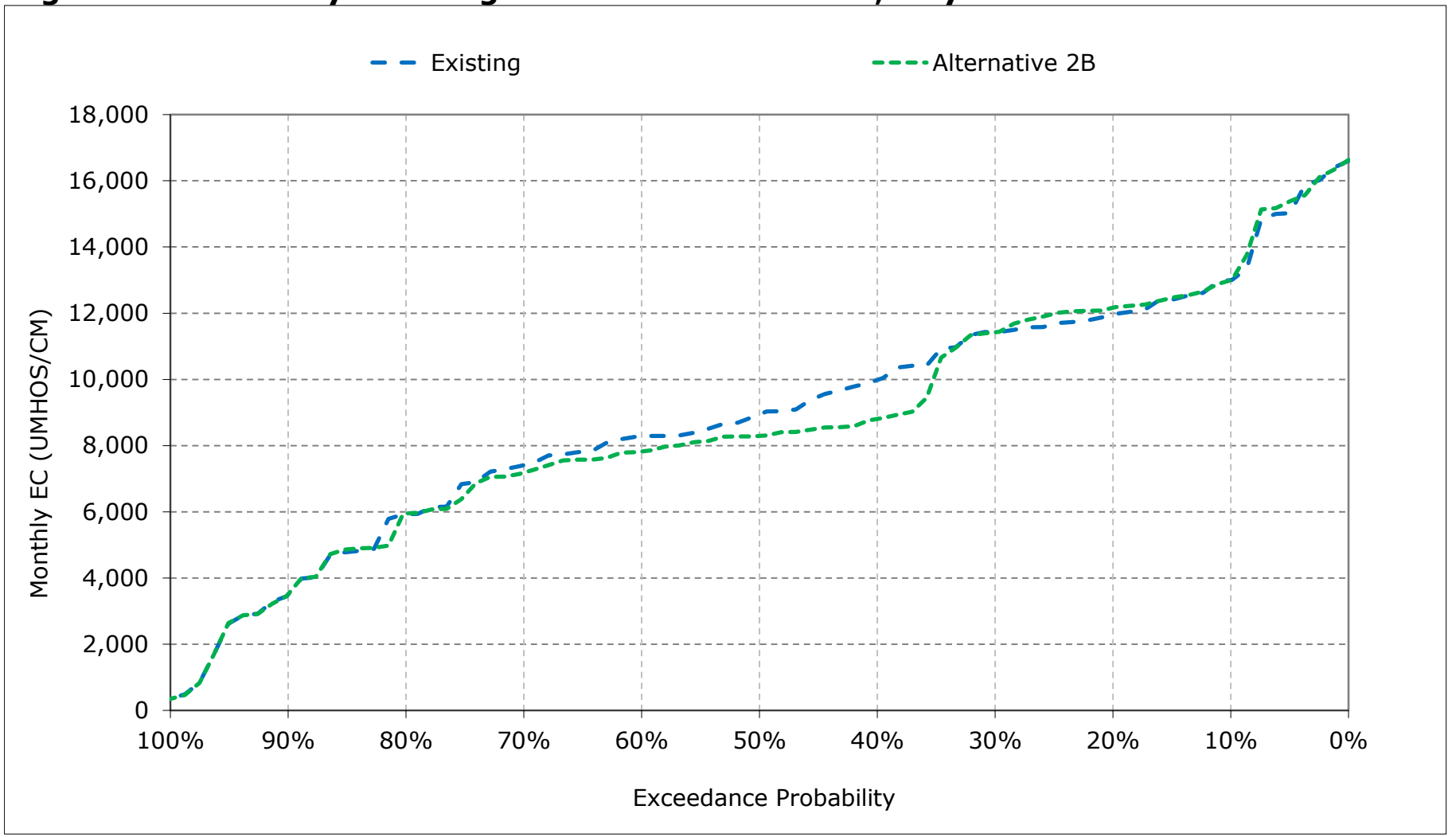


**Figure 25-14. Goodyear Slough Outfall at Naval Fleet, August EC**

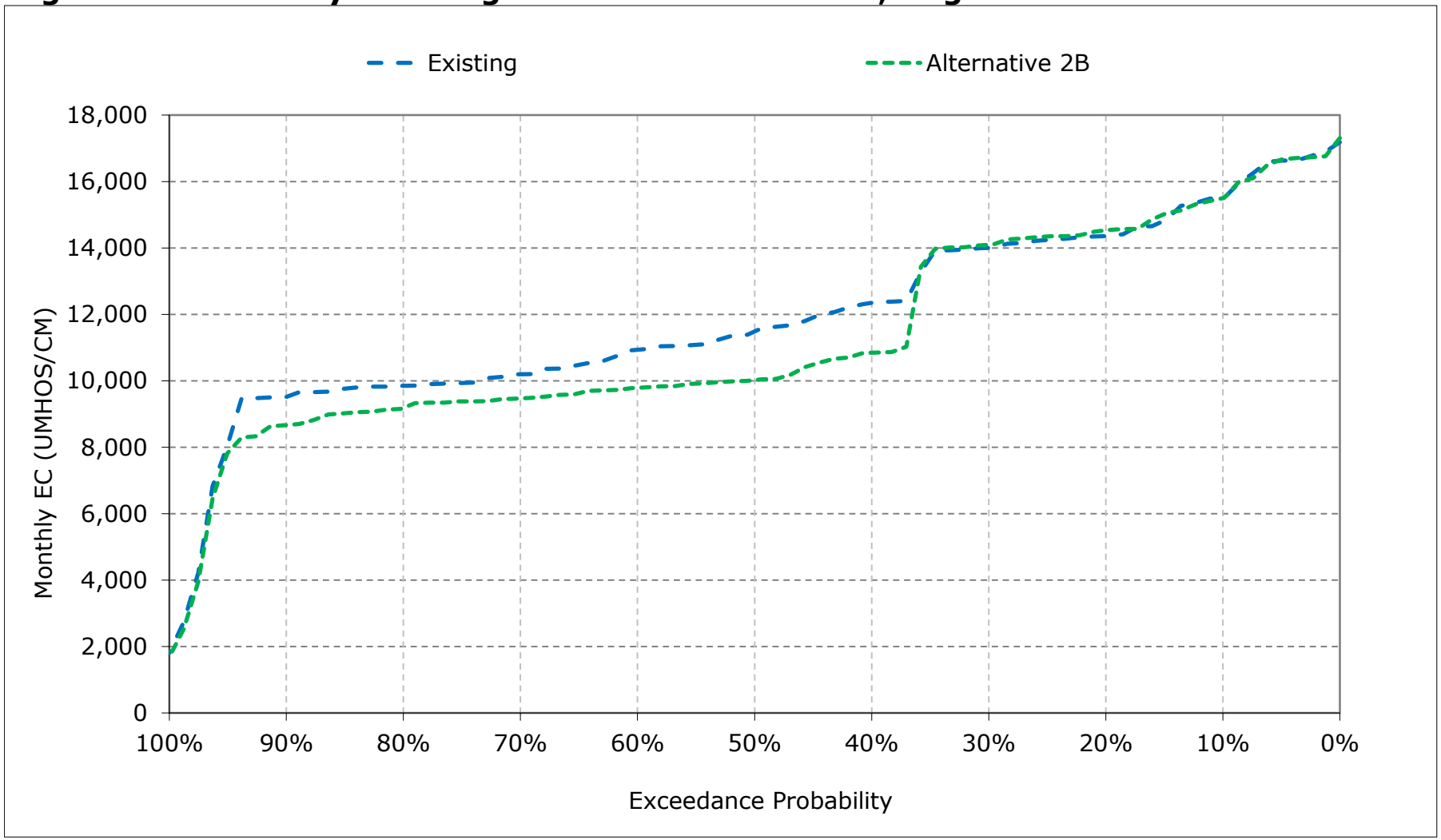


**Figure 25-15. Goodyear Slough Outfall at Naval Fleet, September EC**

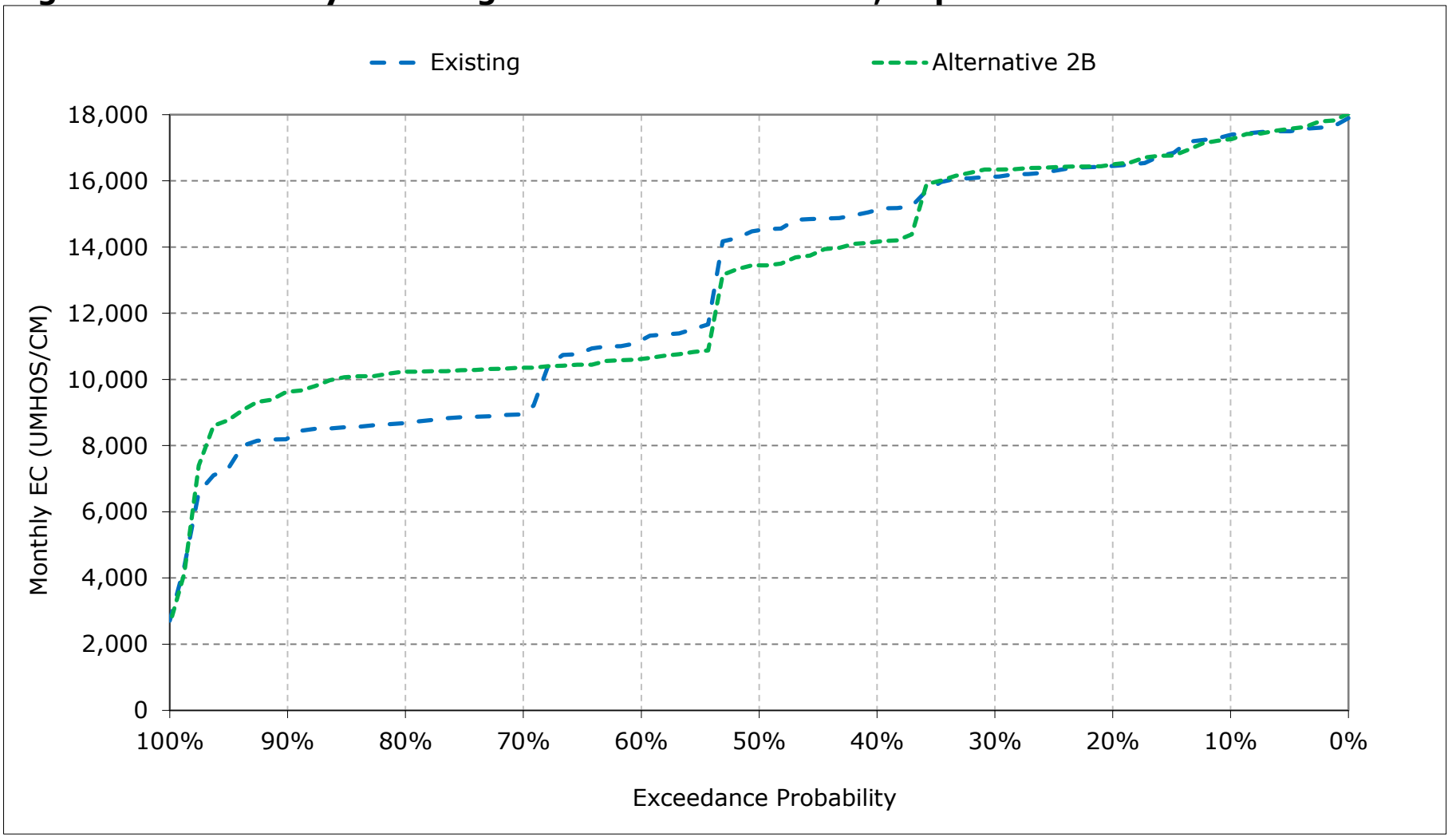


**Figure 25-16. Goodyear Slough Outfall at Naval Fleet, October EC**

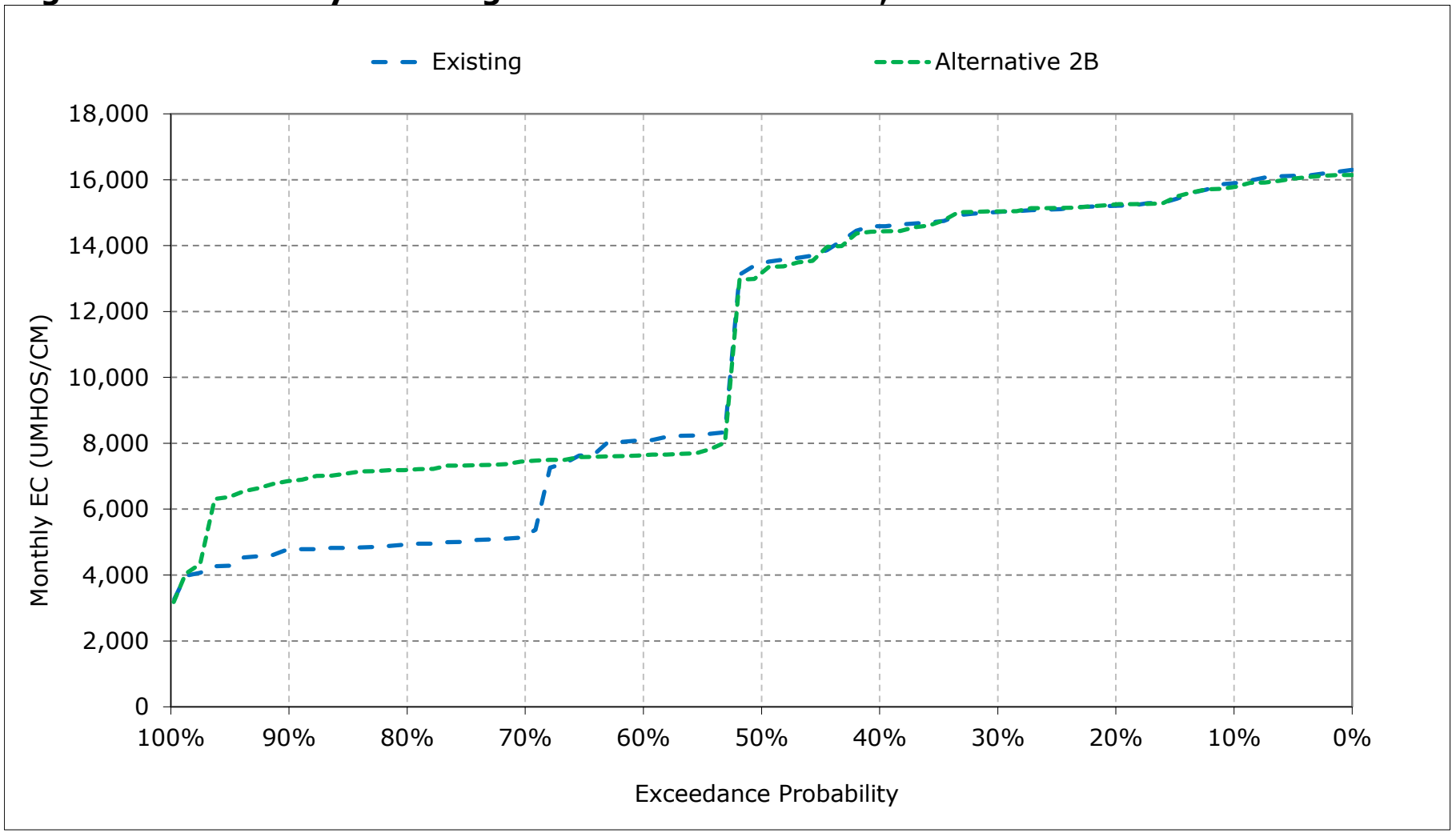


**Figure 25-17. Goodyear Slough Outfall at Naval Fleet, November EC**

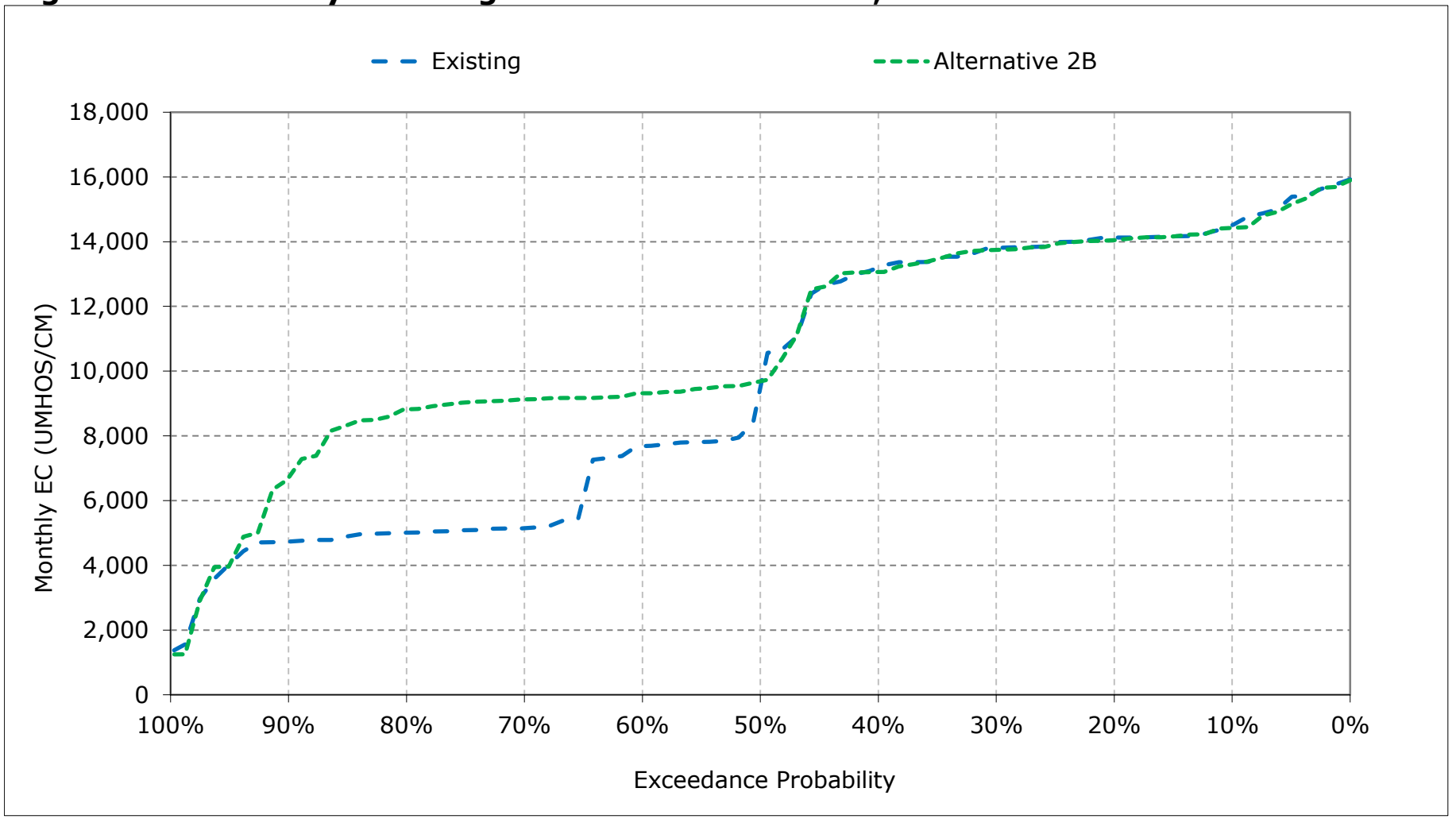
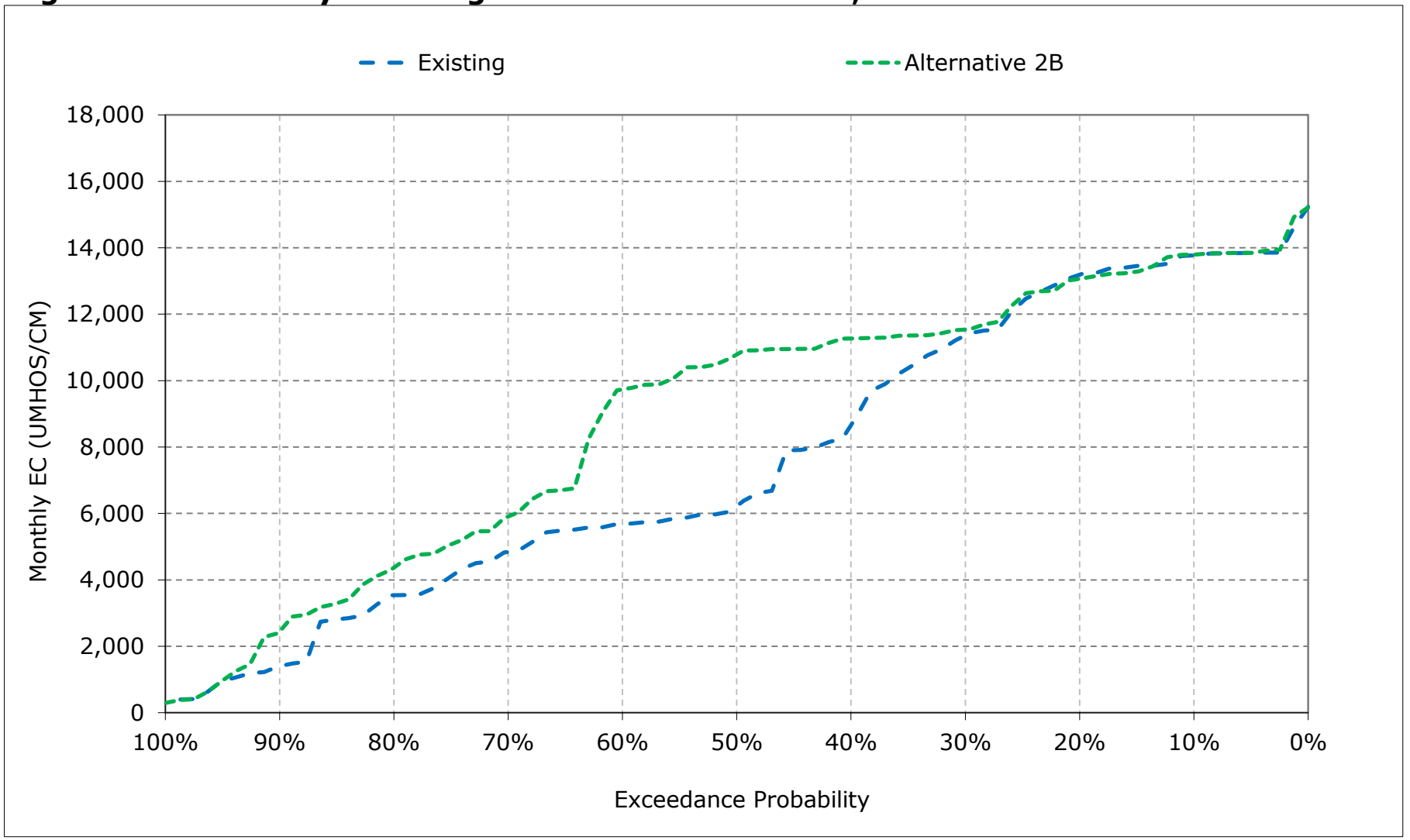


**Figure 25-18. Goodyear Slough Outfall at Naval Fleet, December EC**



## Table 26-1. Threemile Slough, Monthly EC

### Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 2,347 | 1,984 | 1,700 | 742 | 307 | 268 | 271 | 375 | 546 | 998 | 1,698 | 2,252 |
| **20%** | 2,022 | 1,719 | 1,215 | 597 | 249 | 218 | 220 | 297 | 406 | 728 | 1,373 | 1,891 |
| **30%** | 1,969 | 1,620 | 697 | 465 | 232 | 203 | 208 | 248 | 382 | 633 | 1,284 | 1,810 |
| **40%** | 1,838 | 1,414 | 616 | 366 | 216 | 198 | 201 | 219 | 329 | 424 | 824 | 1,539 |
| **50%** | 1,467 | 529 | 469 | 295 | 207 | 194 | 199 | 208 | 290 | 390 | 739 | 1,179 |
| **60%** | 432 | 345 | 401 | 234 | 198 | 190 | 195 | 205 | 240 | 290 | 698 | 426 |
| **70%** | 289 | 237 | 272 | 206 | 192 | 188 | 192 | 198 | 219 | 279 | 635 | 389 |
| **80%** | 265 | 226 | 219 | 196 | 188 | 187 | 190 | 191 | 192 | 244 | 597 | 365 |
| **90%** | 256 | 214 | 188 | 188 | 186 | 185 | 187 | 186 | 186 | 225 | 559 | 340 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 1,220 | 980 | 701 | 395 | 240 | 211 | 216 | 266 | 375 | 531 | 955 | 1,145 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 882 | 556 | 291 | 212 | 190 | 188 | 191 | 193 | 209 | 243 | 568 | 336 |
| **Above Normal (15%)** | 1,290 | 1,007 | 604 | 300 | 207 | 191 | 195 | 200 | 254 | 275 | 618 | 418 |
| **Below Normal (17%)** | 1,253 | 980 | 886 | 404 | 218 | 201 | 205 | 220 | 293 | 399 | 778 | 1,366 |
| **Dry (22%)** | 1,331 | 1,197 | 793 | 492 | 264 | 216 | 218 | 260 | 388 | 673 | 1,326 | 1,846 |
| **Critical (15%)** | 1,679 | 1,549 | 1,330 | 729 | 368 | 287 | 301 | 556 | 931 | 1,354 | 1,784 | 2,316 |

### Alternative 2B

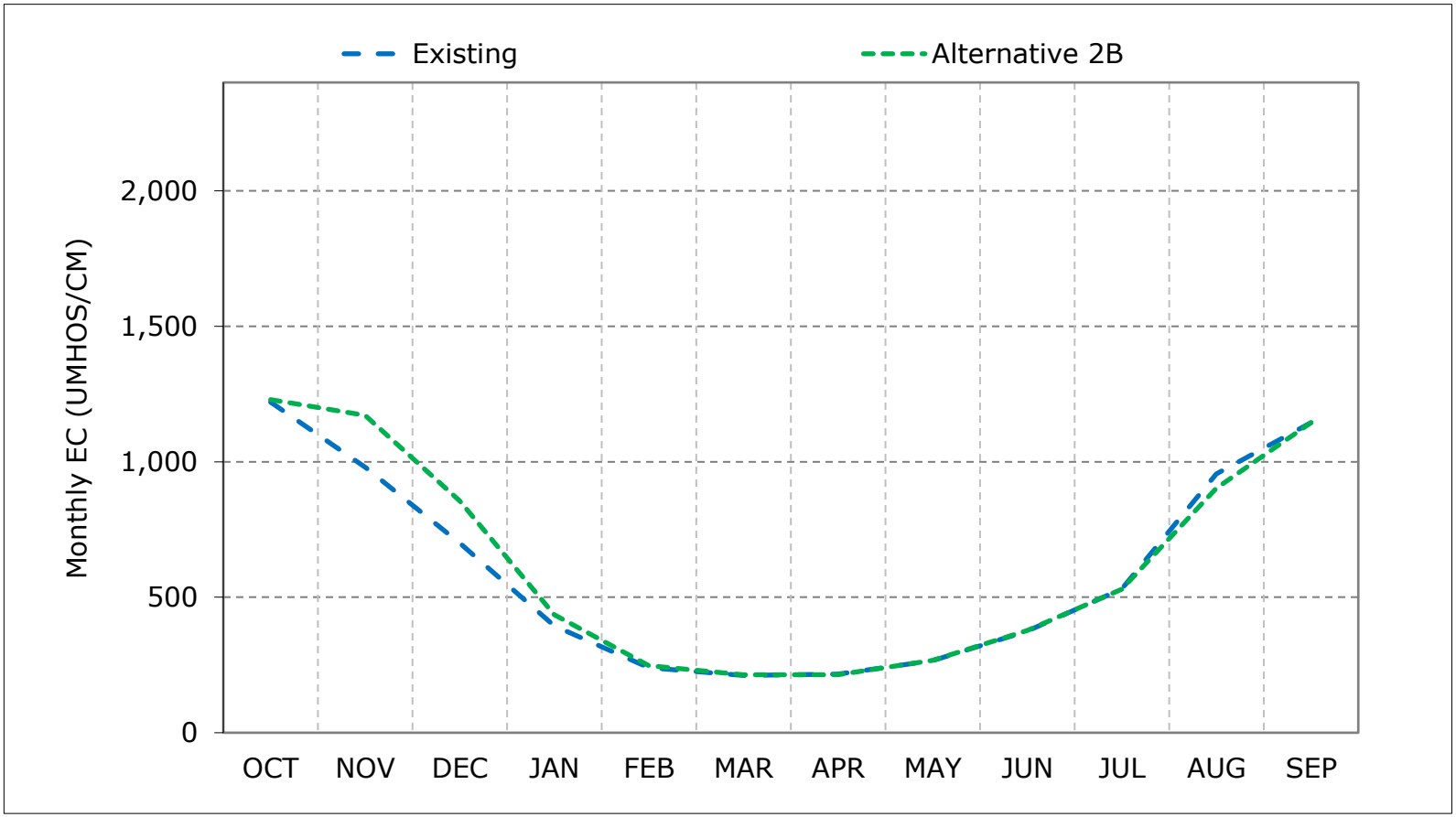
| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | 2,312 | 1,991 | 1,709 | 905 | 318 | 267 | 265 | 373 | 556 | 983 | 1,634 | 2,169 |
| **20%** | 2,063 | 1,742 | 1,262 | 701 | 259 | 218 | 221 | 301 | 425 | 732 | 1,372 | 1,921 |
| **30%** | 1,945 | 1,682 | 1,178 | 523 | 234 | 207 | 207 | 256 | 388 | 634 | 1,308 | 1,849 |
| **40%** | 1,809 | 1,411 | 1,001 | 398 | 218 | 200 | 199 | 210 | 318 | 412 | 937 | 1,701 |
| **50%** | 1,491 | 882 | 746 | 290 | 208 | 195 | 196 | 202 | 271 | 369 | 821 | 1,290 |
| **60%** | 401 | 809 | 593 | 240 | 196 | 192 | 192 | 195 | 232 | 297 | 520 | 324 |
| **70%** | 366 | 778 | 358 | 209 | 192 | 189 | 189 | 189 | 211 | 280 | 474 | 310 |
| **80%** | 352 | 664 | 268 | 197 | 188 | 187 | 188 | 185 | 189 | 250 | 451 | 296 |
| **90%** | 320 | 334 | 201 | 188 | 186 | 185 | 185 | 182 | 184 | 225 | 422 | 266 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | 1,229 | 1,171 | 856 | 435 | 248 | 214 | 214 | 267 | 378 | 530 | 902 | 1,144 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | 896 | 792 | 371 | 215 | 189 | 189 | 189 | 190 | 211 | 245 | 419 | 282 |
| **Above Normal (15%)** | 1,293 | 1,177 | 808 | 335 | 207 | 192 | 192 | 193 | 239 | 277 | 478 | 308 |
| **Below Normal (17%)** | 1,283 | 1,162 | 1,088 | 432 | 218 | 201 | 203 | 218 | 283 | 390 | 865 | 1,523 |
| **Dry (22%)** | 1,333 | 1,383 | 998 | 577 | 283 | 219 | 216 | 268 | 398 | 680 | 1,342 | 1,881 |
| **Critical (15%)** | 1,669 | 1,680 | 1,472 | 804 | 398 | 297 | 302 | 561 | 957 | 1,335 | 1,759 | 2,300 |

### Alternative 2B minus Existing

| Statistic | Monthly EC (UMHOS/CM) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| **Probability of Exceedance** | | | | | | | | | | | | |
| **10%** | -35 | **7** | **8** | **163** | **11** | -1 | -6 | -2 | **10** | -15 | -65 | -82 |
| **20%** | **41** | **23** | **47** | **104** | **9** | **0** | **1** | **4** | **19** | **4** | -1 | **30** |
| **30%** | -24 | **62** | **481** | **58** | **2** | **3** | -1 | **8** | **6** | **1** | **24** | **39** |
| **40%** | -28 | -3 | **385** | **32** | **2** | **2** | -2 | -8 | -11 | -11 | **114** | **162** |
| **50%** | **24** | **352** | **276** | -5 | **1** | **1** | -3 | -6 | -19 | -21 | **82** | **111** |
| **60%** | -31 | **464** | **192** | **6** | -2 | **1** | -3 | -10 | -8 | **7** | -178 | -101 |
| **70%** | **77** | **541** | **87** | **3** | **0** | **0** | -3 | -8 | -7 | **1** | -161 | -79 |
| **80%** | **87** | **438** | **49** | **2** | 0 | **0** | -3 | -6 | -3 | **6** | -146 | -69 |
| **90%** | **64** | **120** | **13** | **0** | **0** | **1** | -2 | -4 | -2 | 0 | -137 | -74 |
| **Long Term** | | | | | | | | | | | | |
| **Full Simulation Period**[a] | **9** | **191** | **155** | **41** | **8** | **2** | -2 | **0** | **3** | -2 | -53 | -1 |
| **Water Year Types**[b] | | | | | | | | | | | | |
| **Wet (32%)** | **14** | **236** | **80** | **4** | 0 | **1** | -2 | -3 | **2** | **3** | -148 | -53 |
| **Above Normal (15%)** | **2** | **170** | **204** | **35** | **0** | **1** | -3 | -7 | -15 | **2** | -140 | -109 |
| **Below Normal (17%)** | **30** | **182** | **202** | **28** | 0 | **0** | -2 | -1 | -10 | -9 | **87** | **157** |
| **Dry (22%)** | **2** | **186** | **205** | **85** | **19** | **2** | -2 | **8** | **10** | **8** | **15** | **36** |
| **Critical (15%)** | -9 | **131** | **142** | **75** | **29** | **10** | **2** | **6** | **26** | -19 | -25 | -16 |

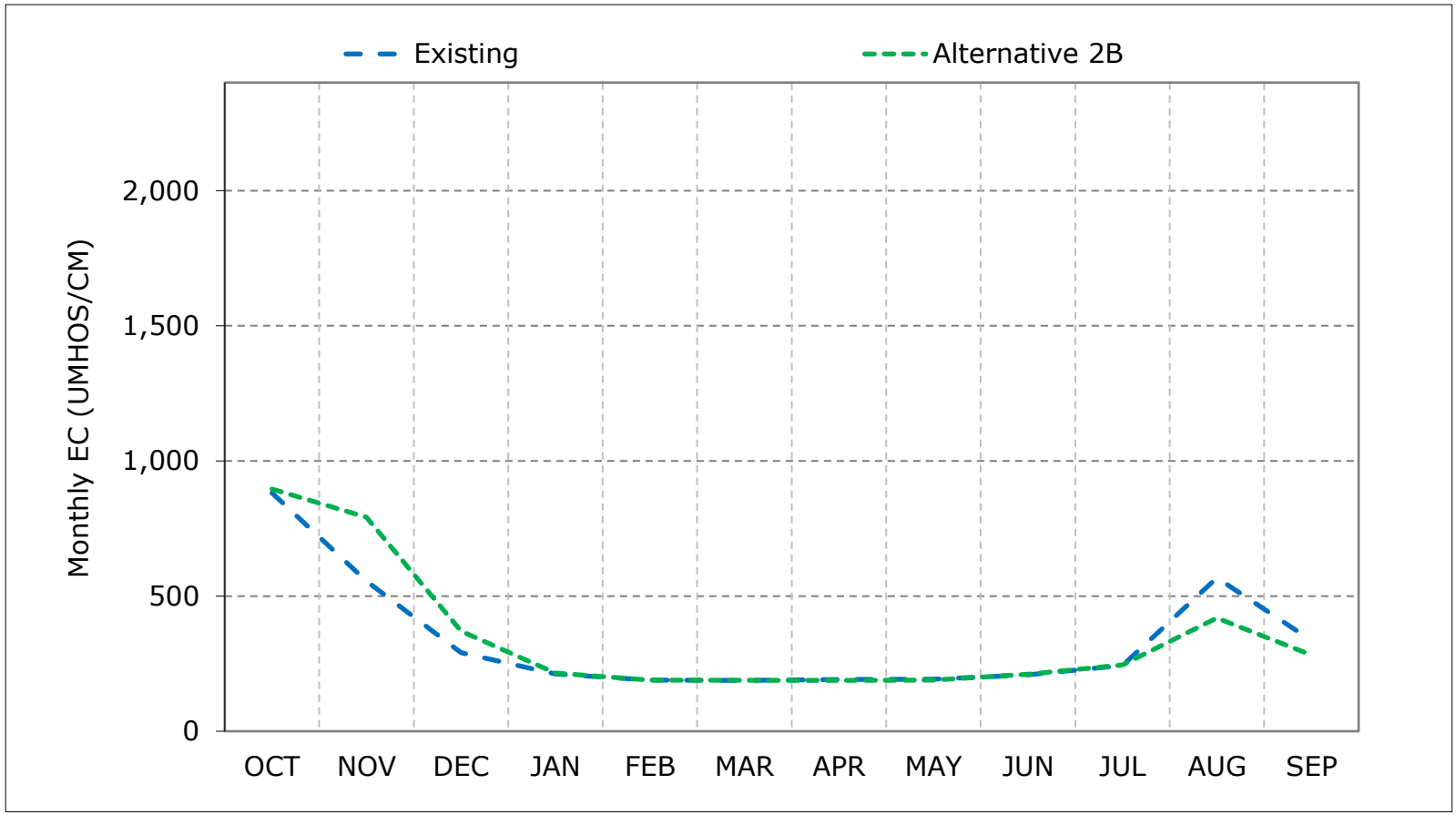
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

## Figure 26-1. Threemile Slough, Long-Term Average EC



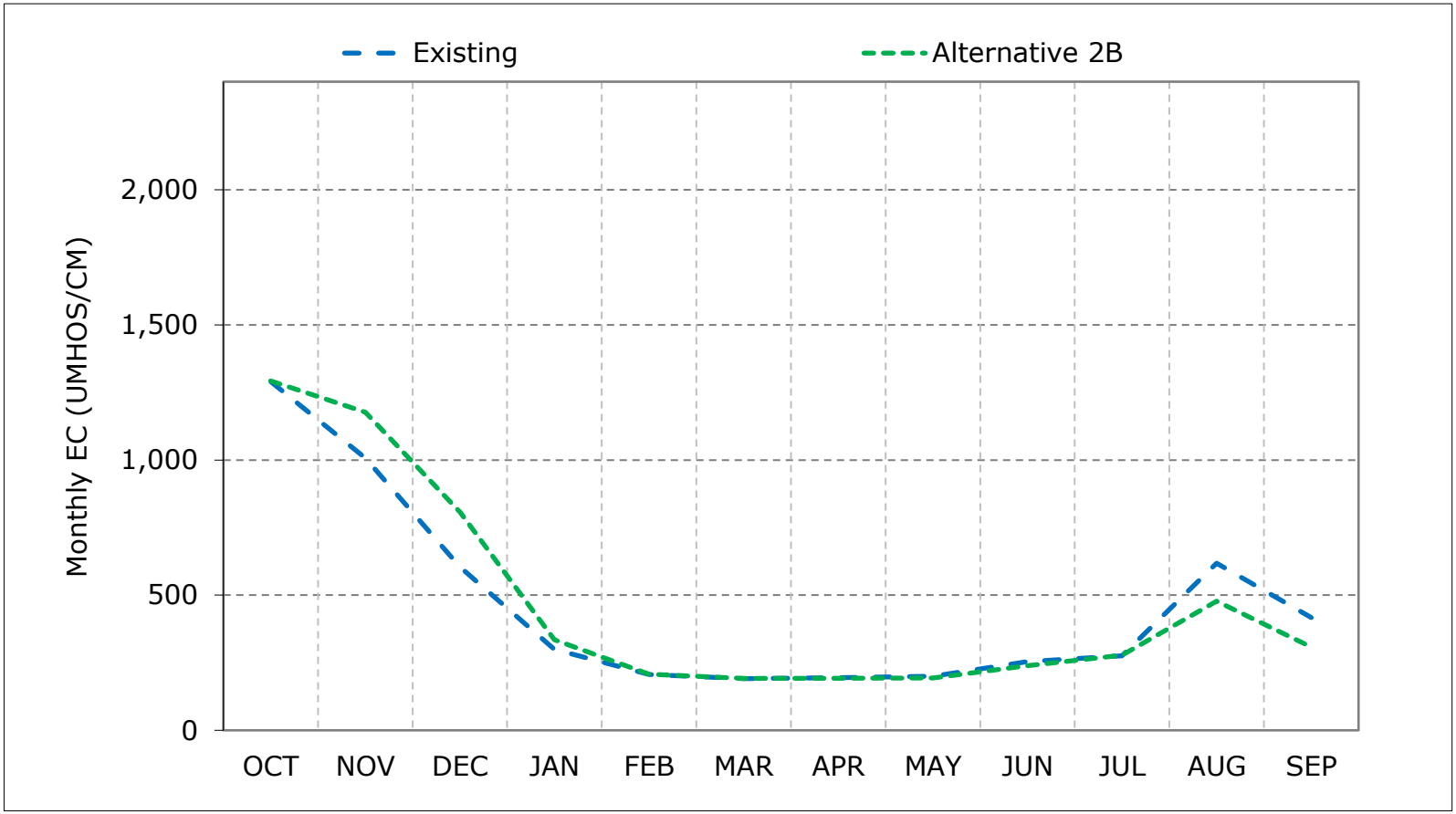

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

## Figure 26-2. Threemile Slough, Wet Year Average EC



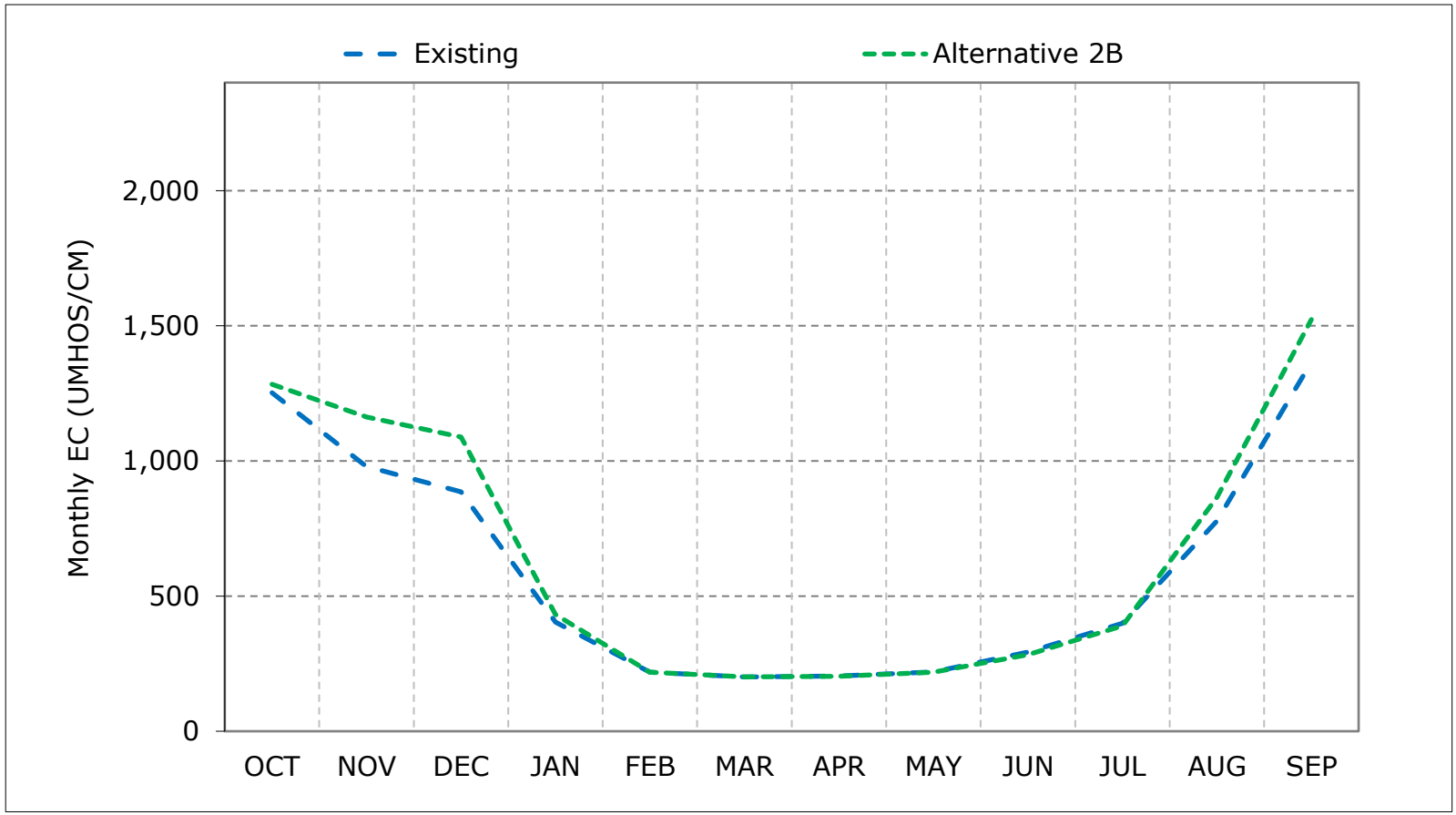

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

## Figure 26-3. Threemile Slough, Above Normal Year Average EC



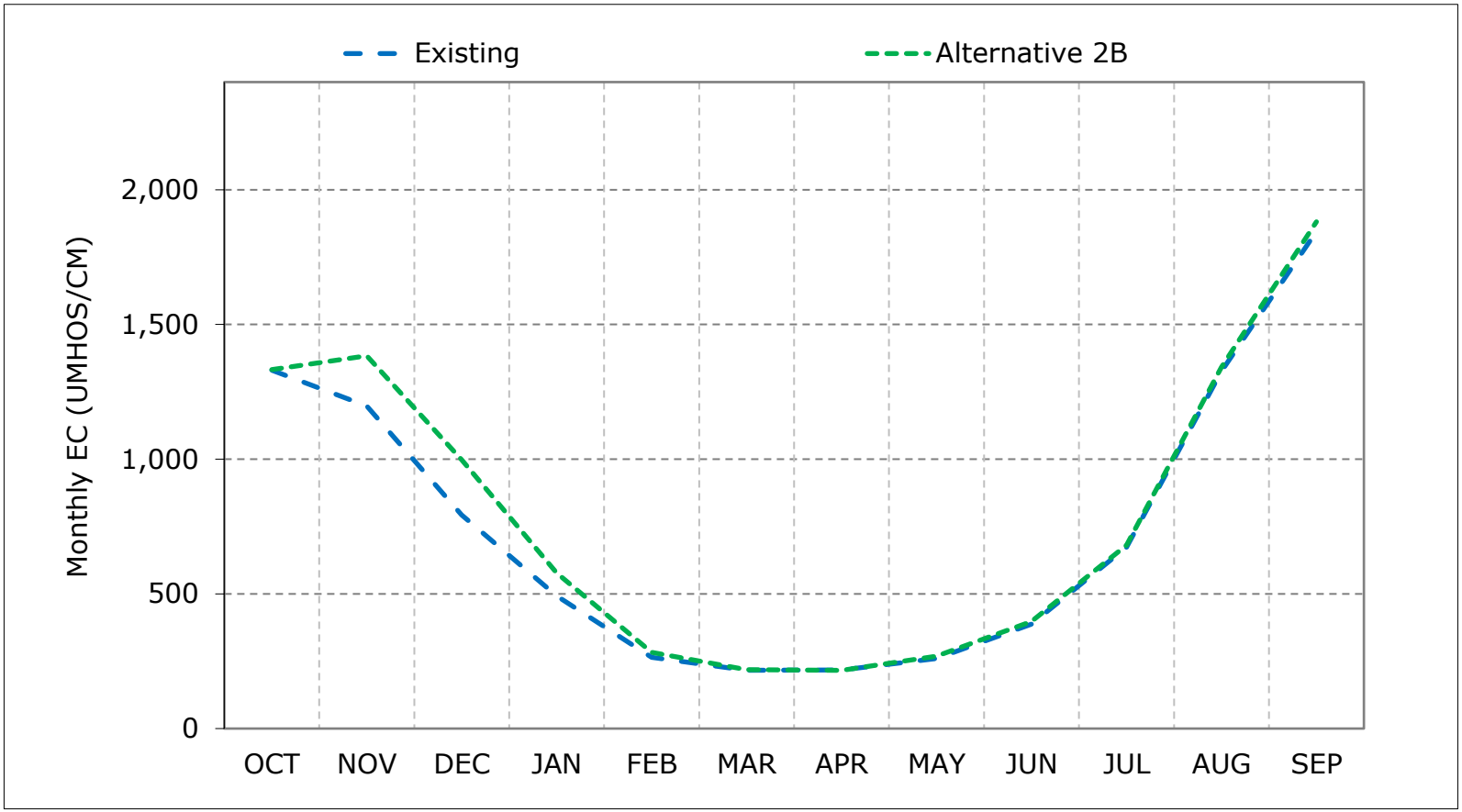

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 26-4. Threemile Slough, Below Normal Year Average EC**



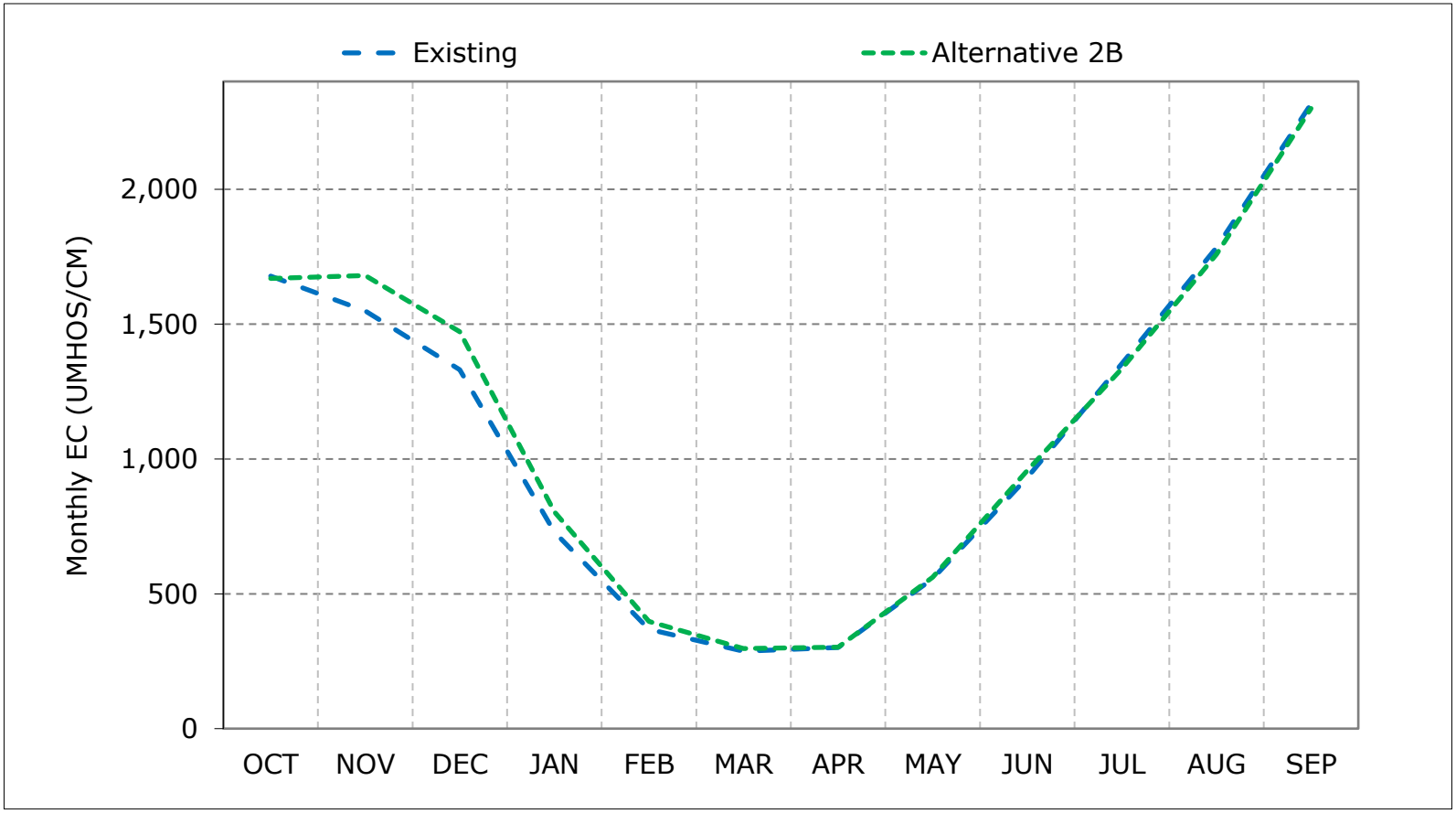

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 26-5. Threemile Slough, Dry Year Average EC**




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

## Figure 26-6. Threemile Slough, Critical Year Average EC




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

**Figure 26-7. Threemile Slough, January EC**

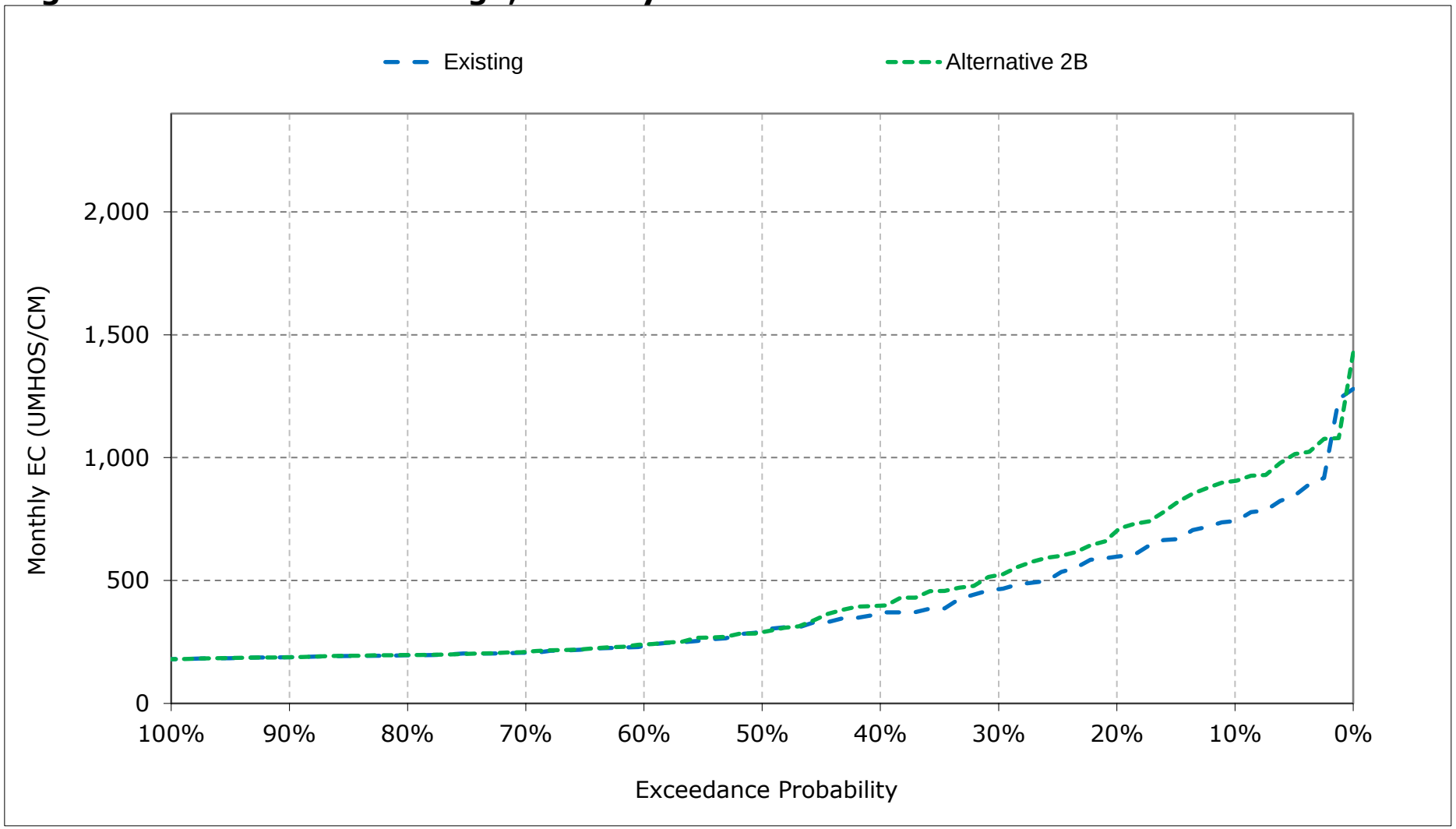


**Figure 26-8. Threemile Slough, February EC**

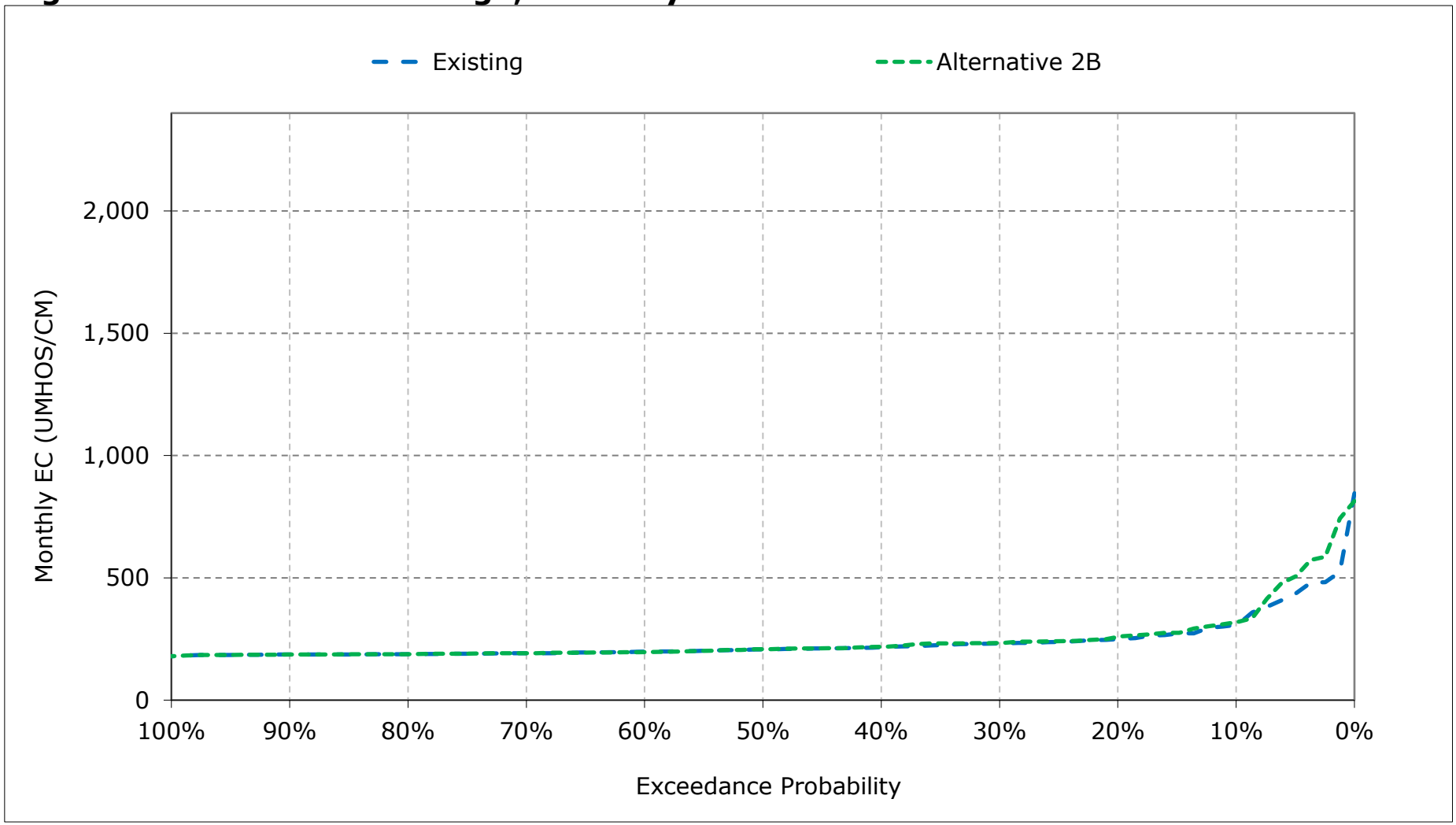


**Figure 26-9. Threemile Slough, March EC**

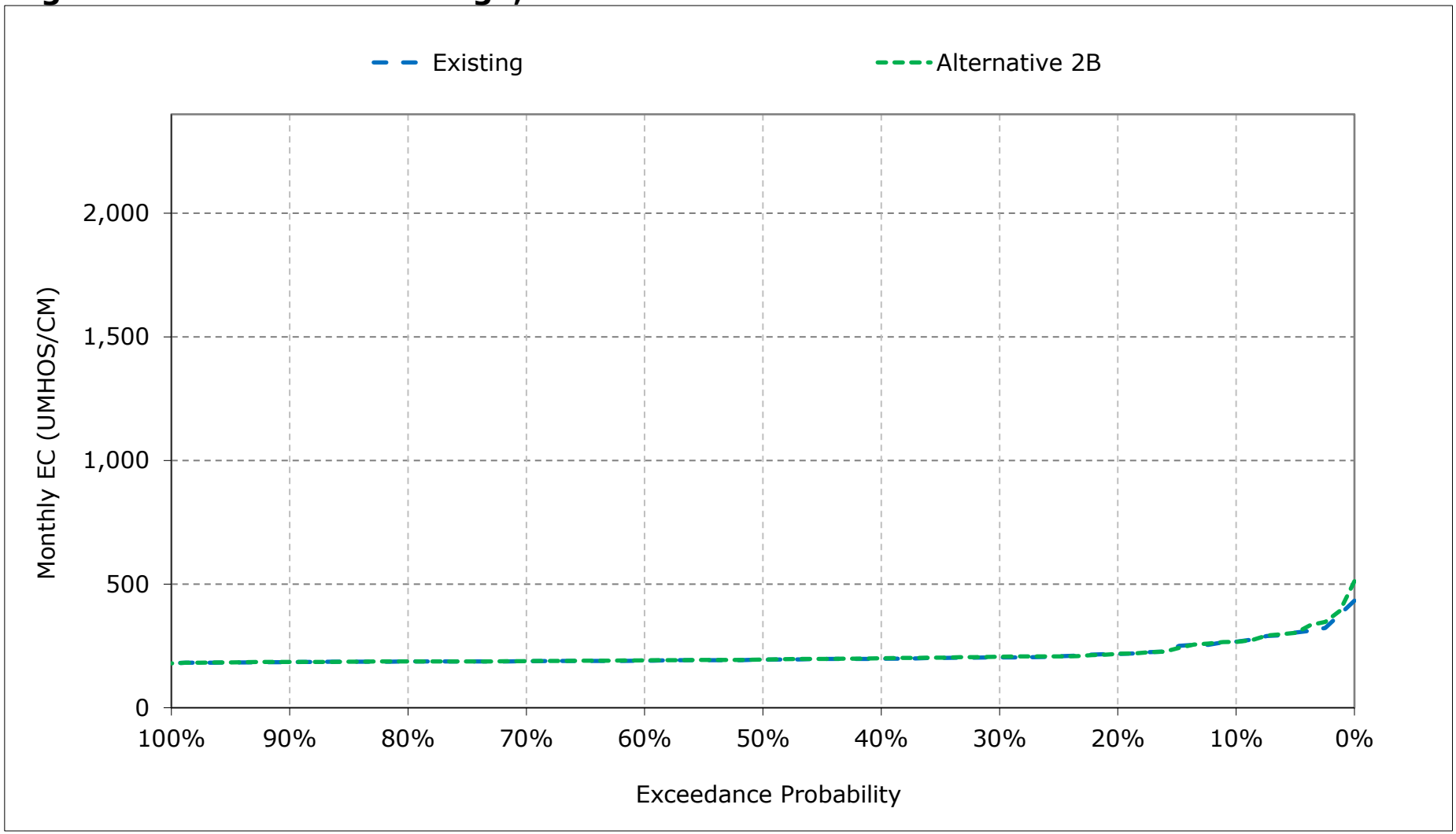


**Figure 26-10. Threemile Slough, April EC**

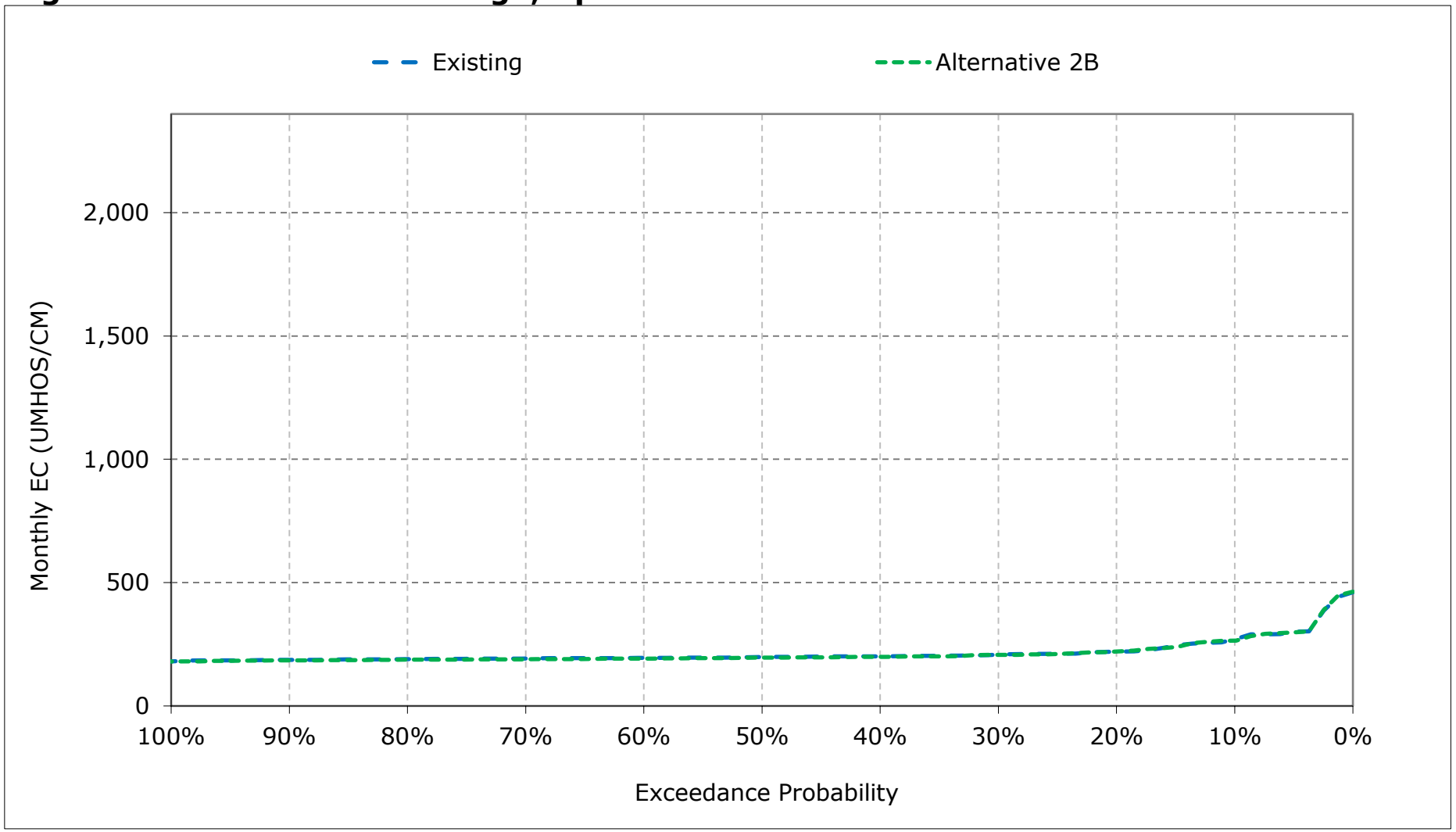


**Figure 26-11. Threemile Slough, May EC**

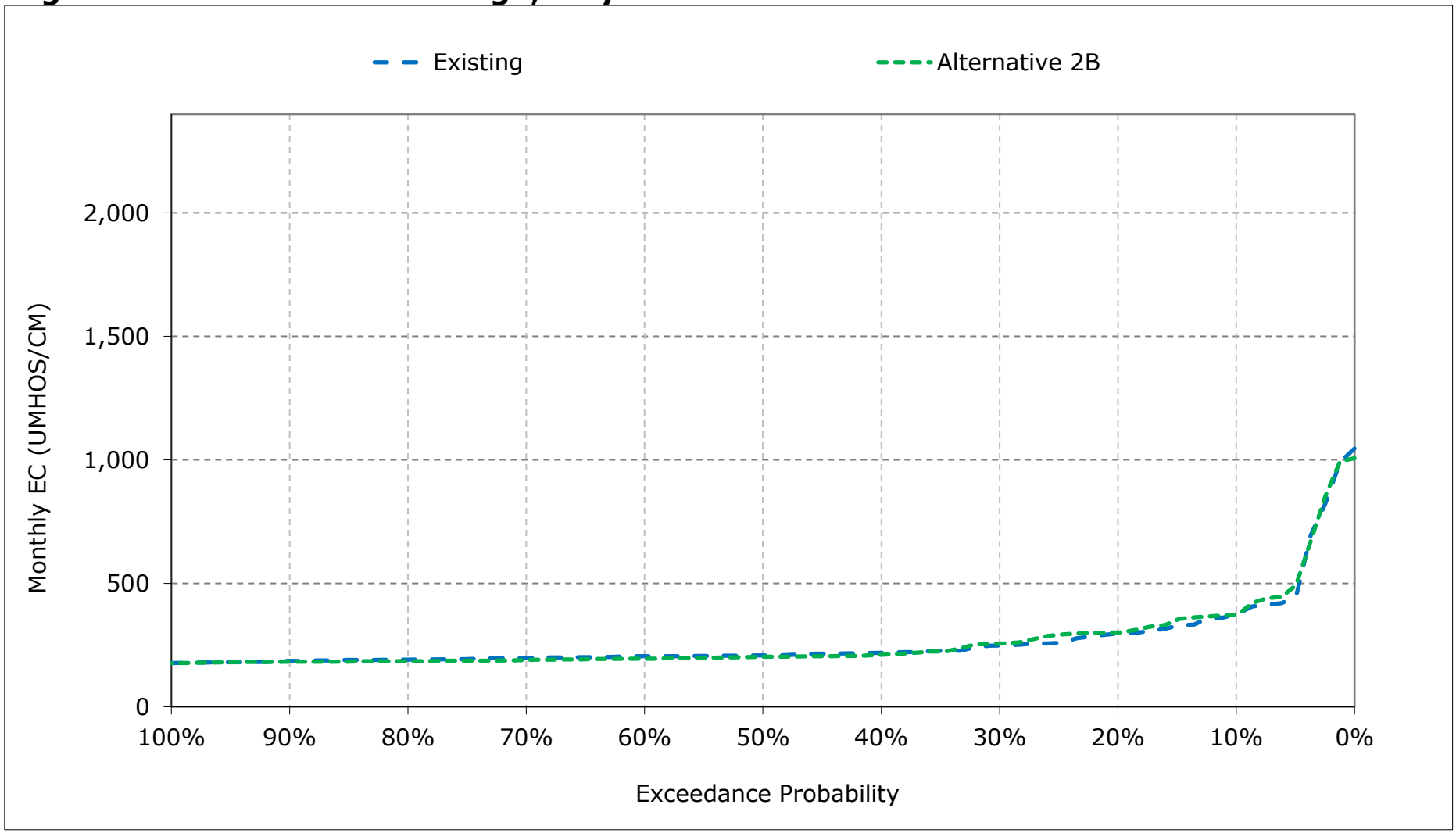


**Figure 26-12. Threemile Slough, June EC**

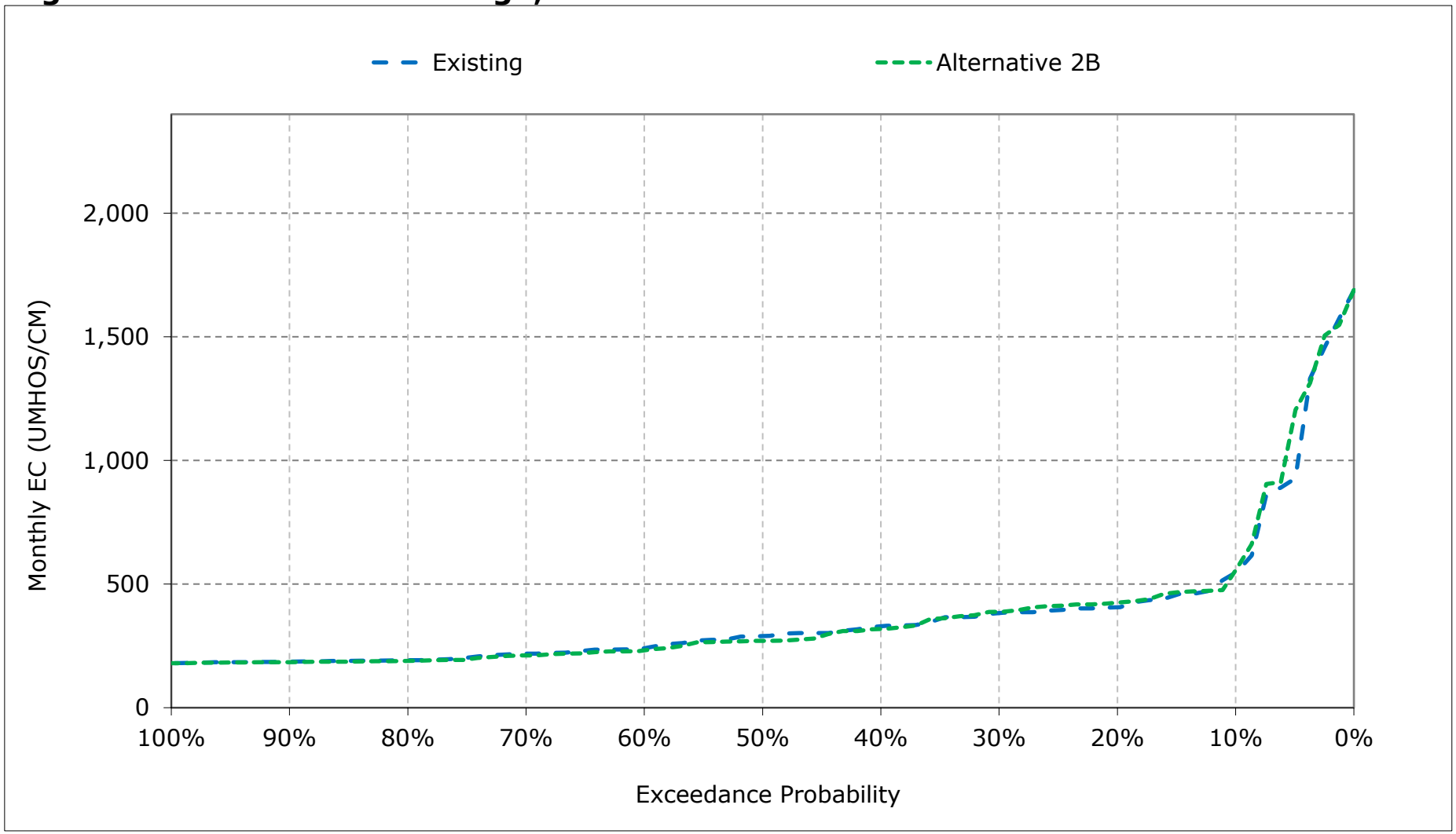


**Figure 26-13. Threemile Slough, July EC**

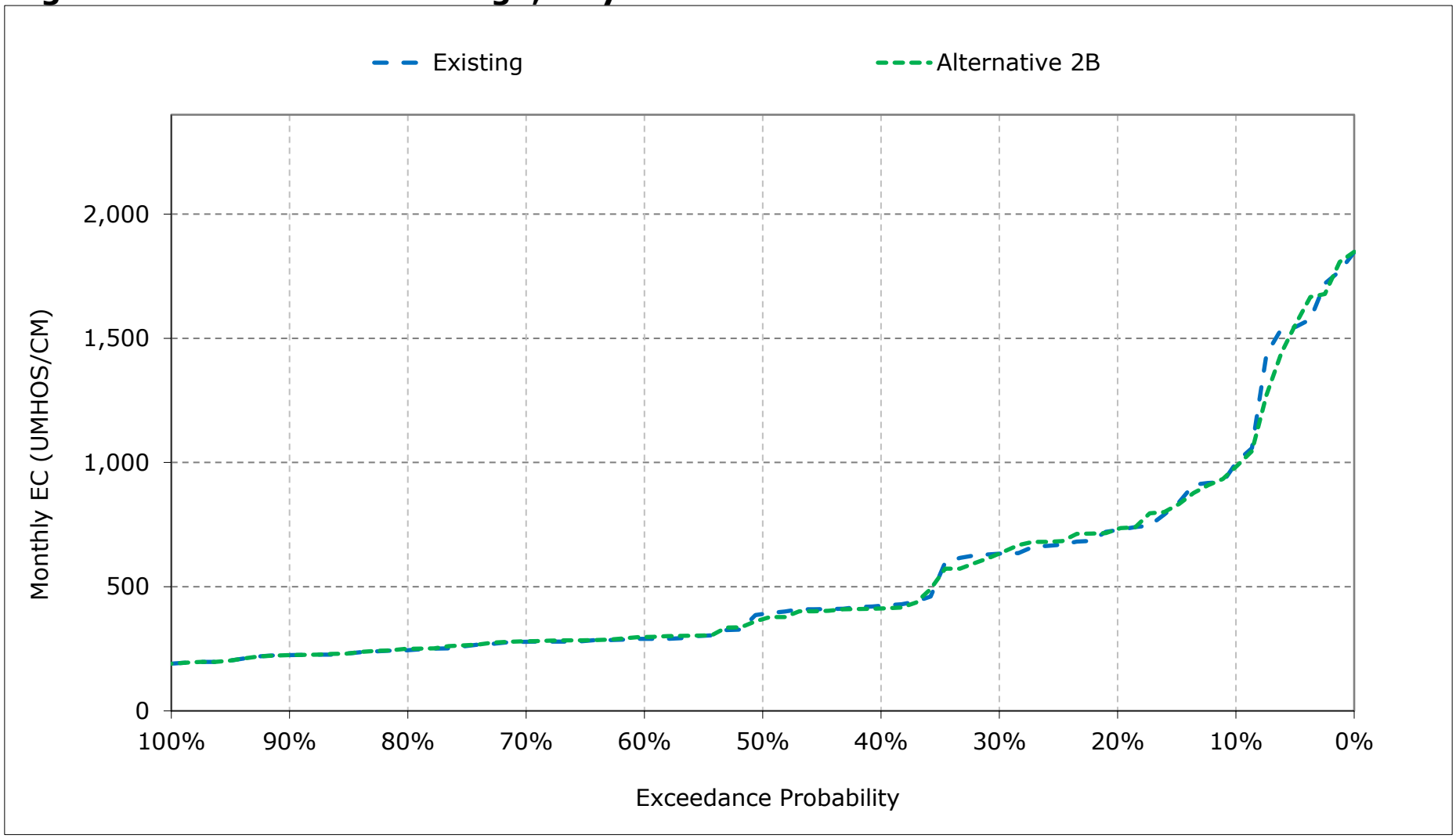


**Figure 26-14. Threemile Slough, August EC**

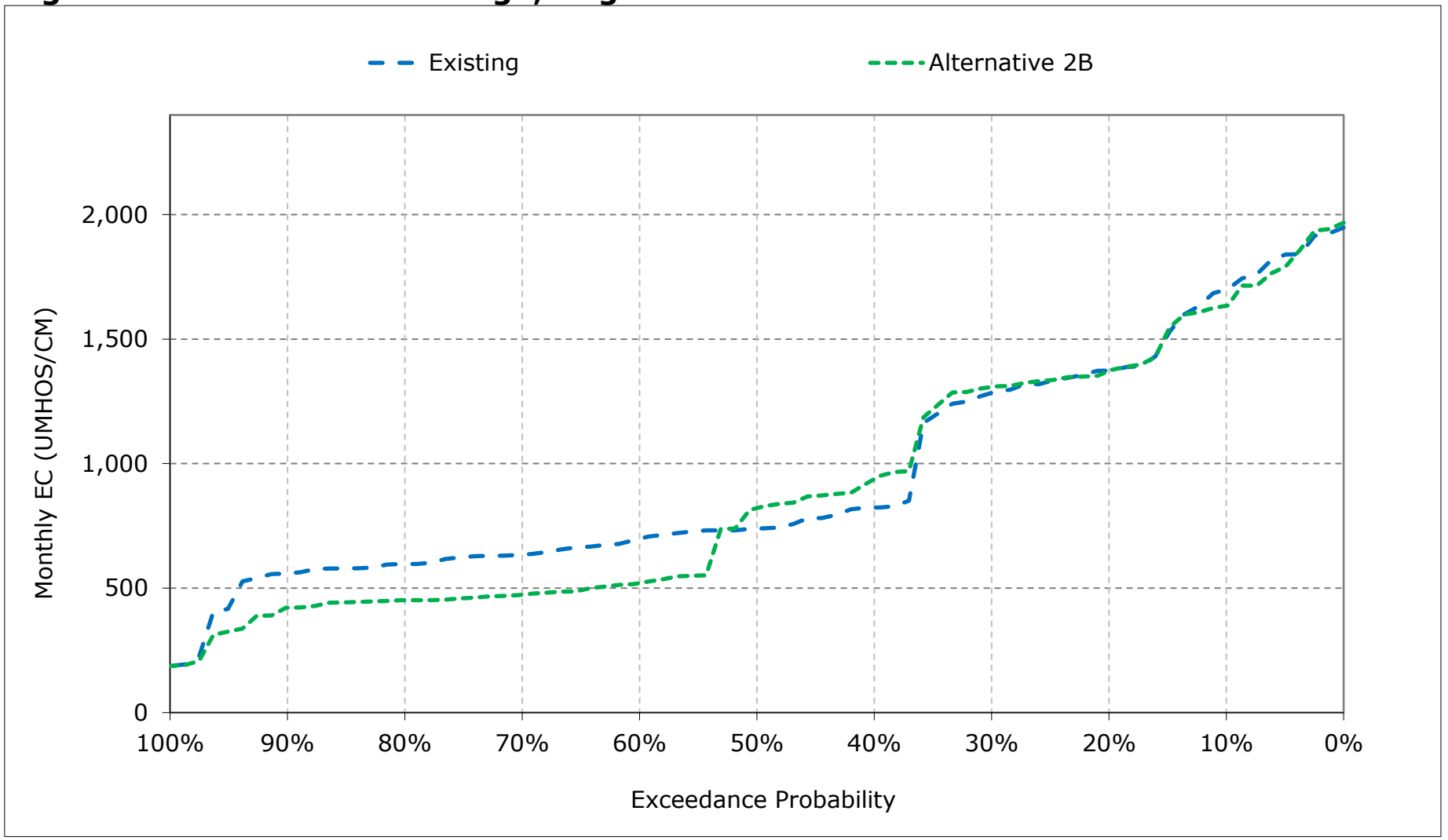


**Figure 26-15. Threemile Slough, September EC**

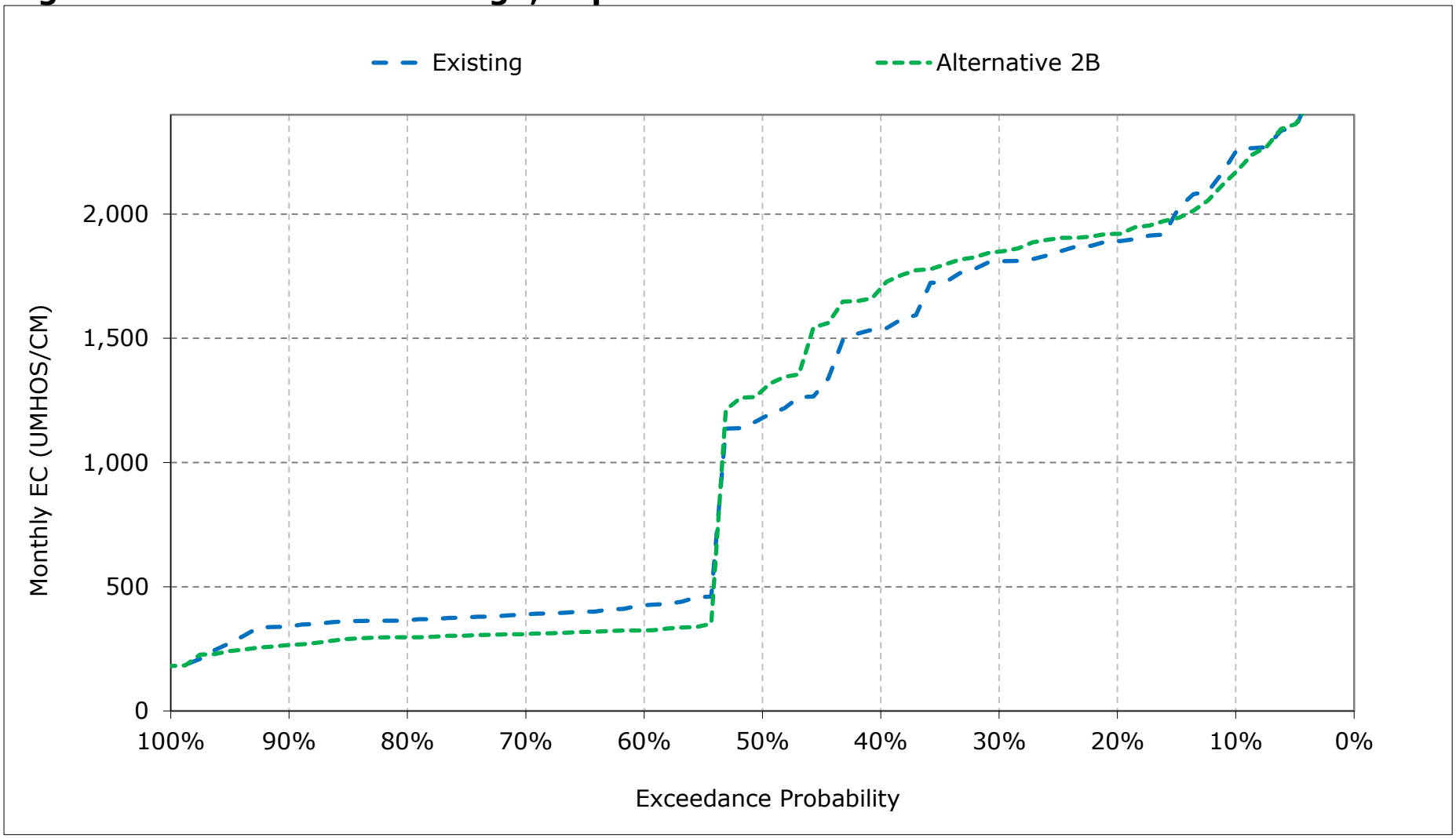


**Figure 26-16. Threemile Slough, October EC**

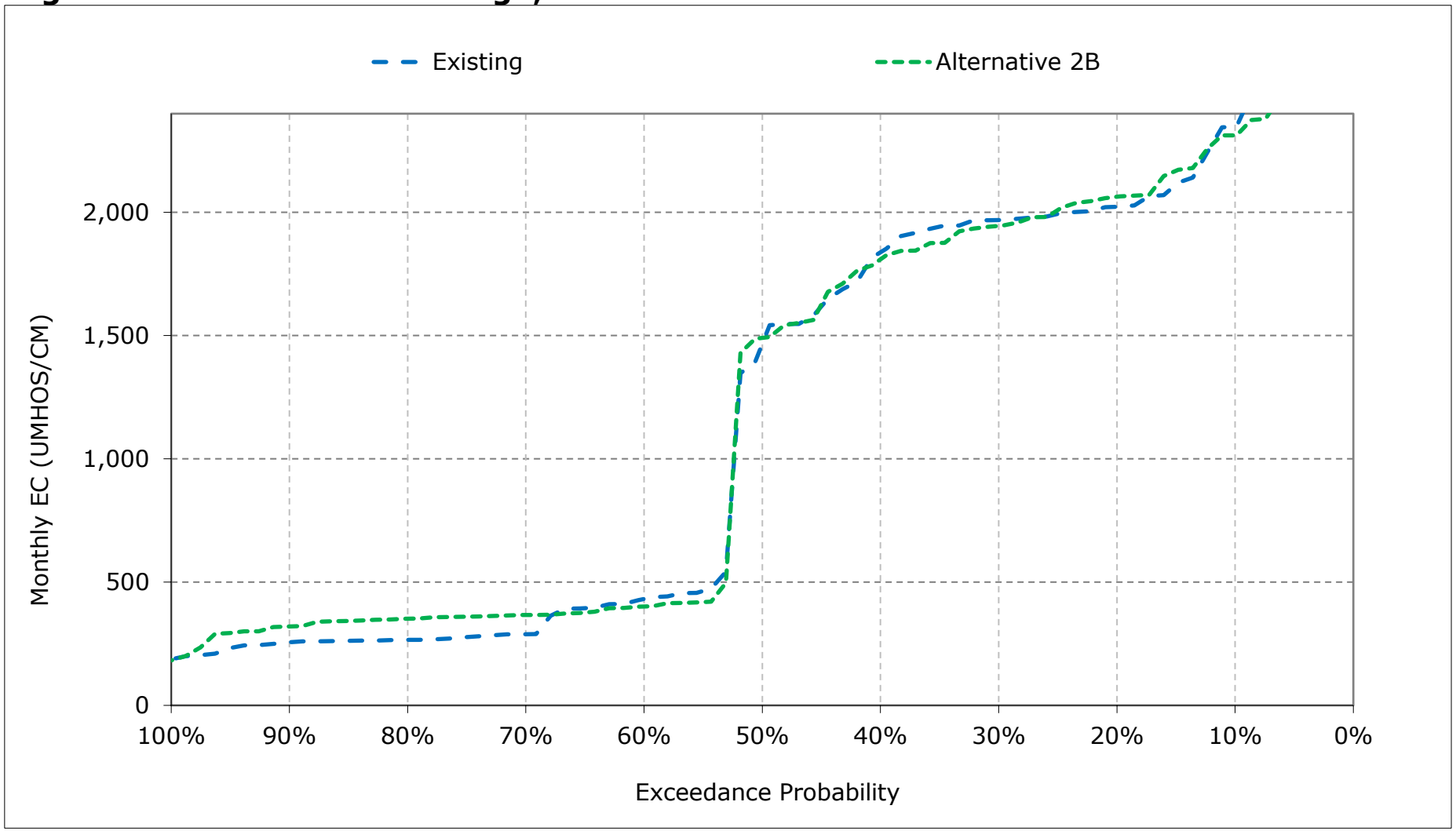


**Figure 26-17. Threemile Slough, November EC**

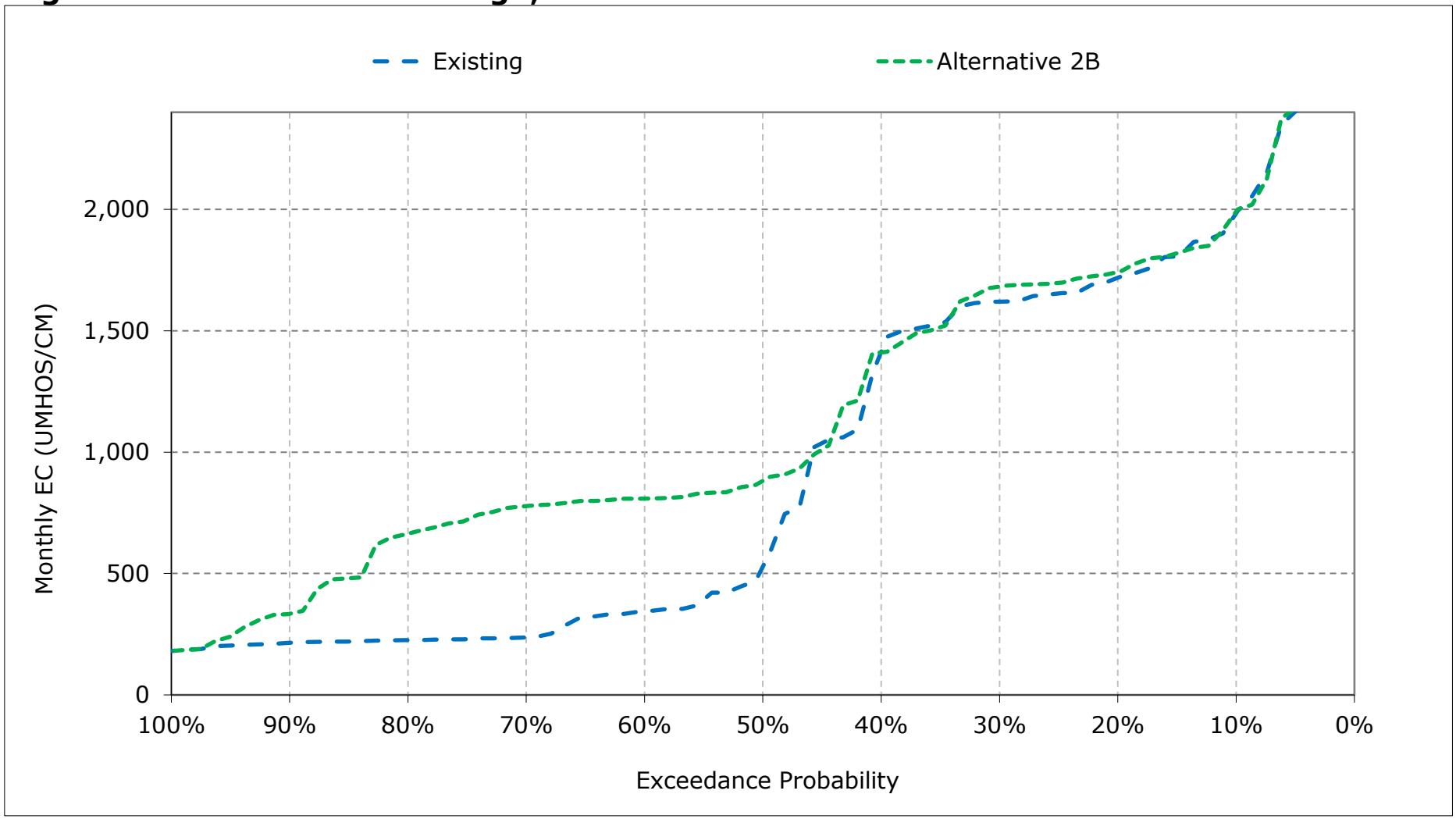
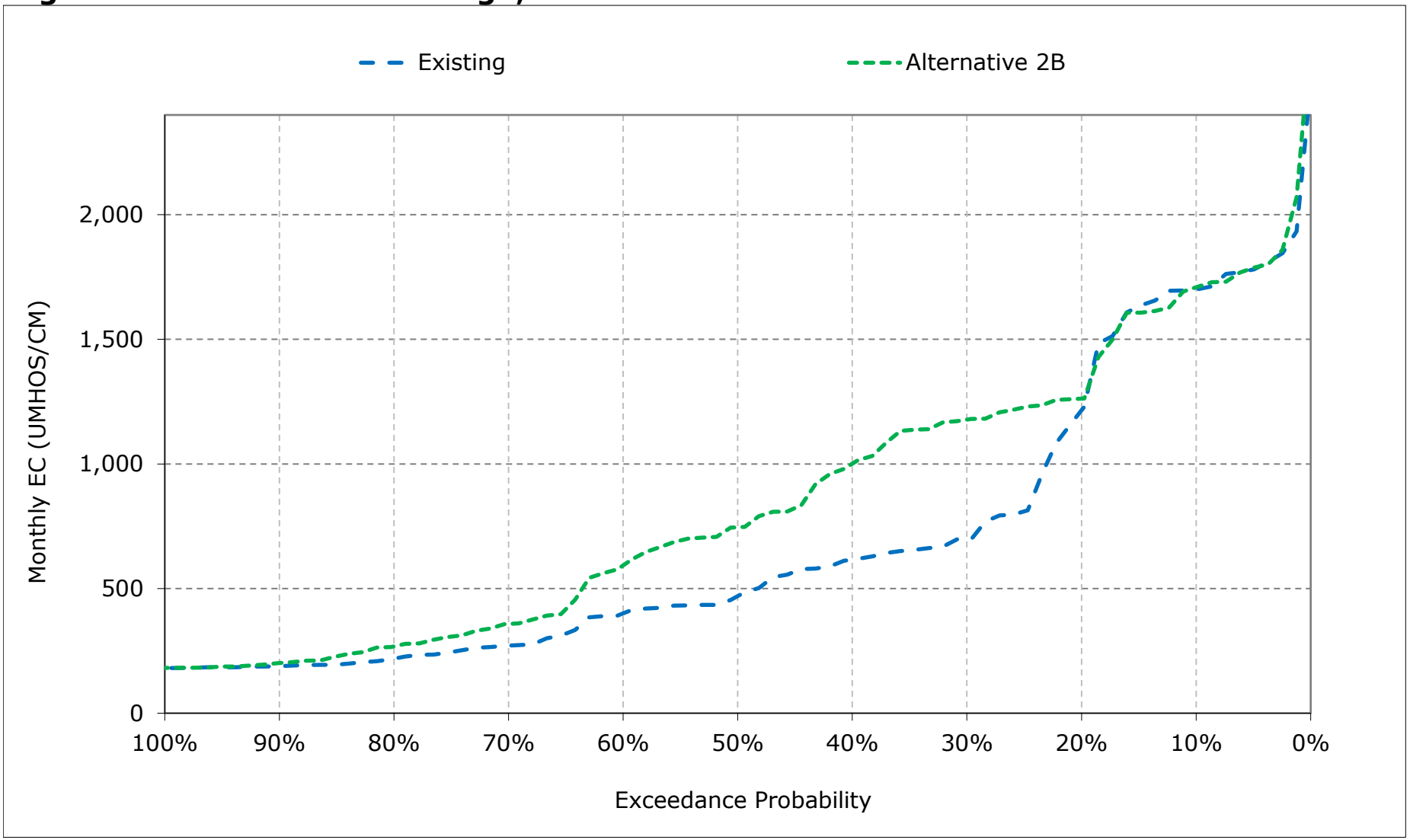


**Figure 26-18. Threemile Slough, December EC**



# Appendix C – Modeling

## Attachment 3-8 – Chloride Results (DSM2-QUAL)

***NOTE: Attachment 3-8 is a new attachment that has been added to the DEIR since initial publication, as part of the FEIR process. The additional attachment is not shown in underline for ease of reading.***

The following results of the DSM2-QUAL model are included for Delta chloride conditions for the following alternatives:

- Existing Conditions
- Refined Alternative 2b

| Title | Model Parameter | Table Numbers | Figure Numbers |
|---|---|---|---|
| Sacramento River at Mallard Slough Salinity | RSAC075 | 1-1 | 1-1 to 1-18 |
| Sacramento River at Rio Vista Salinity | RSAC101 | 2-1 | 2-1 to 2-18 |
| Sacramento River at Collinsville Salinity | RSAC081 | 3-1 | 3-1 to 3-18 |
| San Joaquin River at Jersey Point Salinity | RSAN018 | 4-1 | 4-1 to 4-18 |
| San Joaquin River at San Andreas Salinity | RSAN032 | 5-1 | 5-1 to 5-18 |
| San Joaquin River at Prisoners Point Salinity | RSAN037 | 6-1 | 6-1 to 6-18 |
| Old River at Highway 4 | ROLD034 | 7-1 | 7-1 to 7-18 |
| Victoria Canal | CHVCT000 | 8-1 | 8-1 to 8-18 |
| Contra Costa Pumping Plant Chloride | ROLD024 | 9-1 | 9-1 to 9-18 |
| San Joaquin River at Antioch Chloride | RSAN007 | 10-1 | 10-1 to 10-18 |
| Banks Pumping Plant South Delta Exports Chloride | CLIFTON_COURT | 11-1 | 11-1 to 11-18 |
| Jones Pumping Plant South Delta Exports Chloride | CHDMC006 | 12-1 | 12-1 to 12-18 |
| North Bay Aqueduct Chloride | SLBAR002 | 13-1 | 13-1 to 13-18 |

Report formats

- Monthly tables comparing two scenarios (exceedance values, long-term average, and average by water year type)
- Monthly pattern charts (long-term average and average by water year type) including all scenarios
- Monthly exceedance charts (all months) including all scenarios

## Table 1-1. Sacramento River at Mallard Slough Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 4,015 | 3,822 | 3,637 | 2,412 | 1,260 | 1,094 | 1,174 | 1,545 | 2,008 | 2,652 | 3,365 | 3,719 |
| 20% | 3,828 | 3,720 | 3,179 | 2,137 | 783 | 590 | 617 | 1,178 | 1,669 | 2,310 | 2,998 | 3,544 |
| 30% | 3,766 | 3,614 | 2,348 | 1,643 | 415 | 223 | 316 | 914 | 1,595 | 2,196 | 2,917 | 3,478 |
| 40% | 3,689 | 3,468 | 1,973 | 946 | 181 | 149 | 236 | 544 | 1,352 | 1,697 | 2,436 | 3,232 |
| 50% | 3,369 | 1,816 | 1,688 | 682 | 99 | 71 | 127 | 307 | 1,109 | 1,552 | 2,267 | 2,911 |
| 60% | 1,826 | 1,581 | 1,537 | 367 | 32 | 29 | 53 | 182 | 867 | 1,225 | 2,209 | 1,505 |
| 70% | 1,068 | 943 | 625 | 52 | 21 | 19 | 29 | 93 | 633 | 1,144 | 2,080 | 835 |
| 80% | 1,001 | 848 | 256 | 21 | 18 | 18 | 19 | 29 | 282 | 1,004 | 1,998 | 746 |
| 90% | 957 | 760 | 54 | 17 | 17 | 17 | 17 | 17 | 31 | 696 | 1,910 | 672 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2,564 | 2,279 | 1,738 | 981 | 404 | 292 | 353 | 605 | 1,127 | 1,633 | 2,438 | 2,279 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 2,021 | 1,495 | 562 | 147 | 27 | 31 | 48 | 106 | 378 | 831 | 1,852 | 686 |
| Above Normal (15%) | 2,675 | 2,250 | 1,740 | 575 | 125 | 35 | 66 | 162 | 779 | 1,119 | 2,036 | 1,473 |
| Below Normal (17%) | 2,687 | 2,514 | 2,225 | 1,090 | 249 | 208 | 229 | 447 | 1,098 | 1,600 | 2,353 | 3,062 |
| Dry (22%) | 2,713 | 2,638 | 2,183 | 1,578 | 677 | 422 | 517 | 919 | 1,575 | 2,241 | 2,957 | 3,511 |
| Critical (15%) | 3,265 | 3,198 | 3,046 | 2,170 | 1,272 | 1,020 | 1,199 | 1,840 | 2,458 | 3,012 | 3,430 | 3,778 |

### Alternative 2B

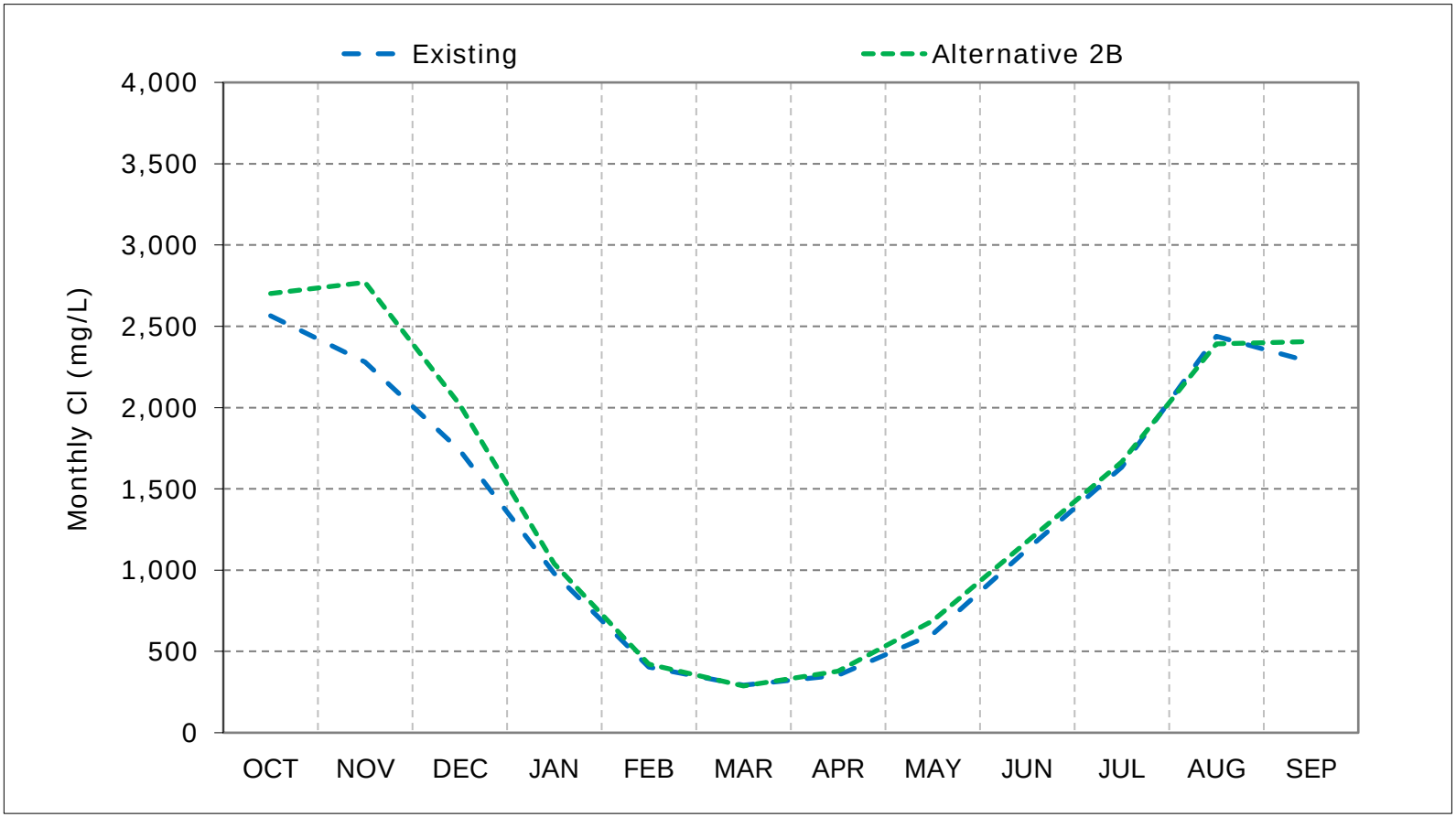
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3,993 | 3,793 | 3,613 | 2,739 | 1,238 | 1,103 | 1,189 | 1,607 | 2,023 | 2,653 | 3,328 | 3,714 |
| 20% | 3,813 | 3,716 | 3,175 | 2,313 | 777 | 555 | 688 | 1,374 | 1,798 | 2,341 | 3,018 | 3,566 |
| 30% | 3,754 | 3,653 | 3,018 | 1,821 | 396 | 186 | 419 | 1,124 | 1,630 | 2,175 | 2,953 | 3,514 |
| 40% | 3,672 | 3,478 | 2,796 | 1,024 | 202 | 137 | 291 | 677 | 1,462 | 1,825 | 2,694 | 3,347 |
| 50% | 3,387 | 2,627 | 2,404 | 694 | 96 | 57 | 151 | 404 | 1,137 | 1,612 | 2,474 | 2,964 |
| 60% | 1,708 | 2,539 | 1,930 | 350 | 25 | 25 | 65 | 285 | 970 | 1,266 | 1,984 | 1,309 |
| 70% | 1,665 | 2,478 | 844 | 55 | 21 | 19 | 33 | 136 | 706 | 1,187 | 1,861 | 1,272 |
| 80% | 1,572 | 2,201 | 404 | 21 | 18 | 18 | 19 | 37 | 299 | 1,026 | 1,810 | 1,201 |
| 90% | 1,463 | 1,087 | 88 | 18 | 17 | 17 | 17 | 17 | 32 | 698 | 1,733 | 1,091 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 2,702 | 2,770 | 2,020 | 1,040 | 421 | 288 | 378 | 689 | 1,175 | 1,665 | 2,391 | 2,406 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 2,198 | 2,137 | 734 | 146 | 26 | 29 | 62 | 155 | 429 | 852 | 1,642 | 1,125 |
| Above Normal (15%) | 2,851 | 2,738 | 2,130 | 599 | 97 | 31 | 84 | 245 | 804 | 1,147 | 1,870 | 1,231 |
| Below Normal (17%) | 2,838 | 2,988 | 2,577 | 1,097 | 236 | 190 | 268 | 579 | 1,137 | 1,706 | 2,588 | 3,161 |
| Dry (22%) | 2,846 | 3,061 | 2,533 | 1,737 | 734 | 407 | 554 | 1,045 | 1,649 | 2,262 | 2,987 | 3,539 |
| Critical (15%) | 3,267 | 3,481 | 3,275 | 2,308 | 1,347 | 1,041 | 1,218 | 1,884 | 2,497 | 3,004 | 3,414 | 3,775 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -22 | -29 | -23 | 327 | -22 | 10 | 15 | 62 | 15 | 0 | -37 | -5 |
| 20% | -15 | -4 | -4 | 177 | -7 | -36 | 71 | 196 | 128 | 31 | 20 | 23 |
| 30% | -12 | 39 | 670 | 178 | -18 | -36 | 103 | 210 | 35 | -21 | 35 | 36 |
| 40% | -18 | 10 | 822 | 78 | 21 | -12 | 55 | 133 | 111 | 127 | 258 | 115 |
| 50% | 19 | 812 | 716 | 12 | -3 | -14 | 25 | 97 | 28 | 60 | 207 | 53 |
| 60% | -118 | 958 | 393 | -17 | -6 | -4 | 13 | 103 | 103 | 41 | -225 | -196 |
| 70% | 597 | 1,535 | 219 | 3 | 0 | 0 | 4 | 43 | 73 | 43 | -219 | 436 |
| 80% | 571 | 1,353 | 148 | 0 | 0 | 0 | 0 | 8 | 17 | 22 | -188 | 455 |
| 90% | 506 | 327 | 33 | 0 | 0 | 0 | -1 | 0 | 0 | 1 | -177 | 419 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 137 | 491 | 282 | 59 | 17 | -5 | 25 | 84 | 48 | 32 | -46 | 127 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 177 | 643 | 172 | -1 | -2 | -2 | 14 | 49 | 51 | 21 | -210 | 439 |
| Above Normal (15%) | 176 | 488 | 391 | 24 | -28 | -4 | 19 | 83 | 25 | 29 | -166 | -241 |
| Below Normal (17%) | 151 | 475 | 353 | 6 | -12 | -19 | 38 | 132 | 39 | 106 | 236 | 99 |
| Dry (22%) | 133 | 424 | 349 | 159 | 57 | -15 | 37 | 127 | 74 | 20 | 30 | 28 |
| Critical (15%) | 2 | 283 | 229 | 138 | 75 | 21 | 20 | 44 | 39 | -8 | -17 | -3 |

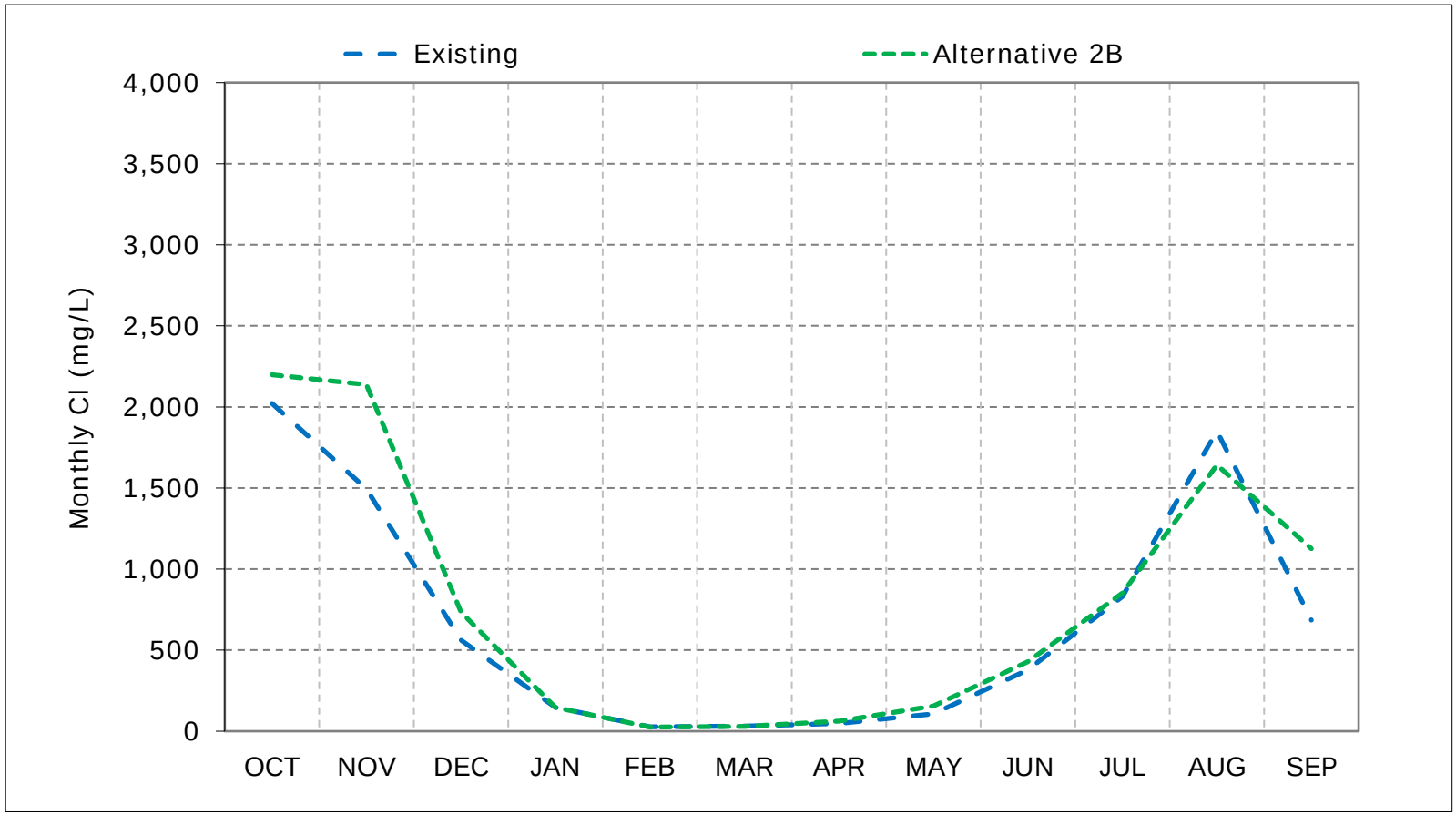
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 1-1. Sacramento River at Mallard Slough Chloride, Long-Term Average Cl



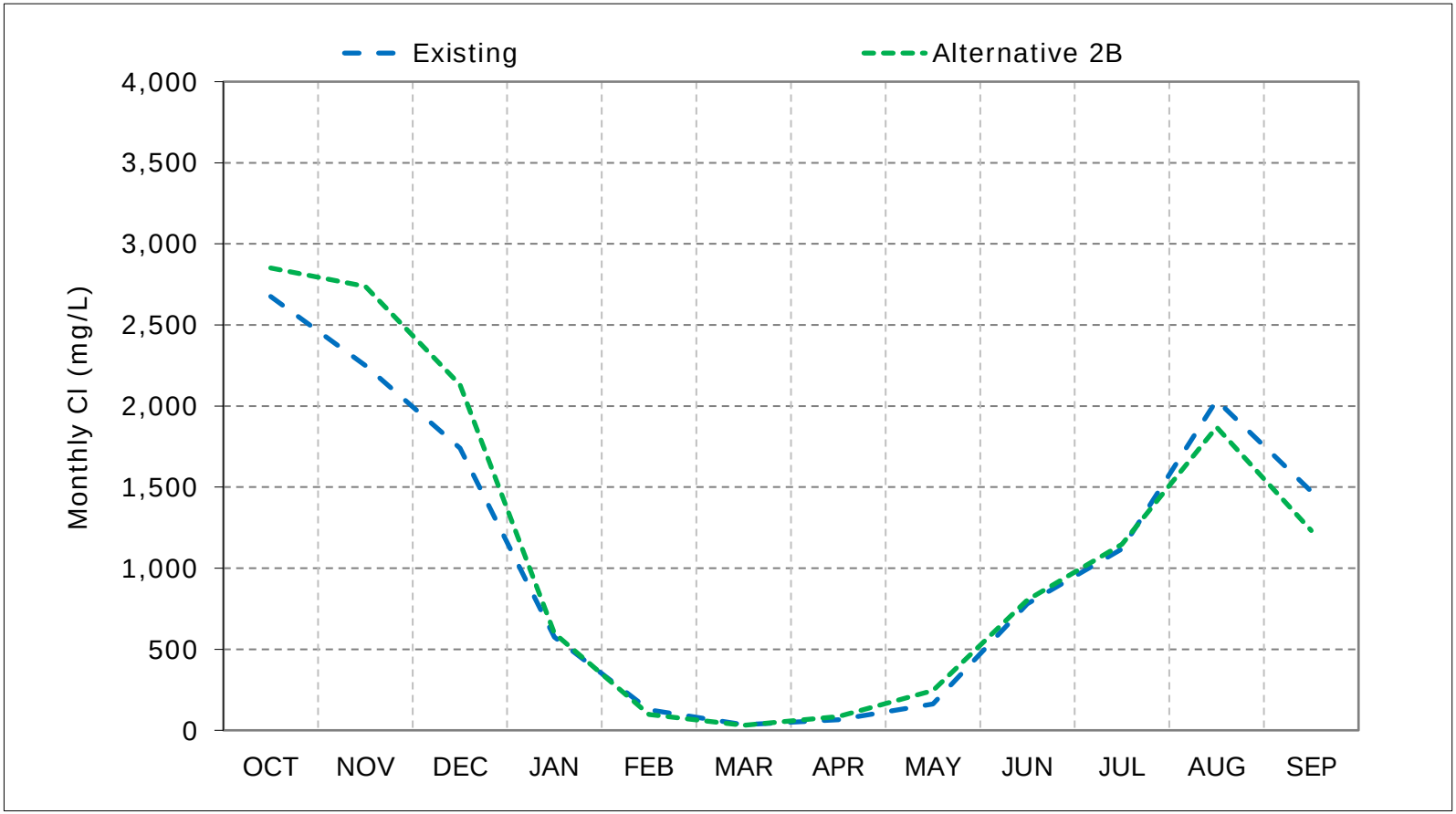

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-2. Sacramento River at Mallard Slough Chloride, Wet Year Average Cl



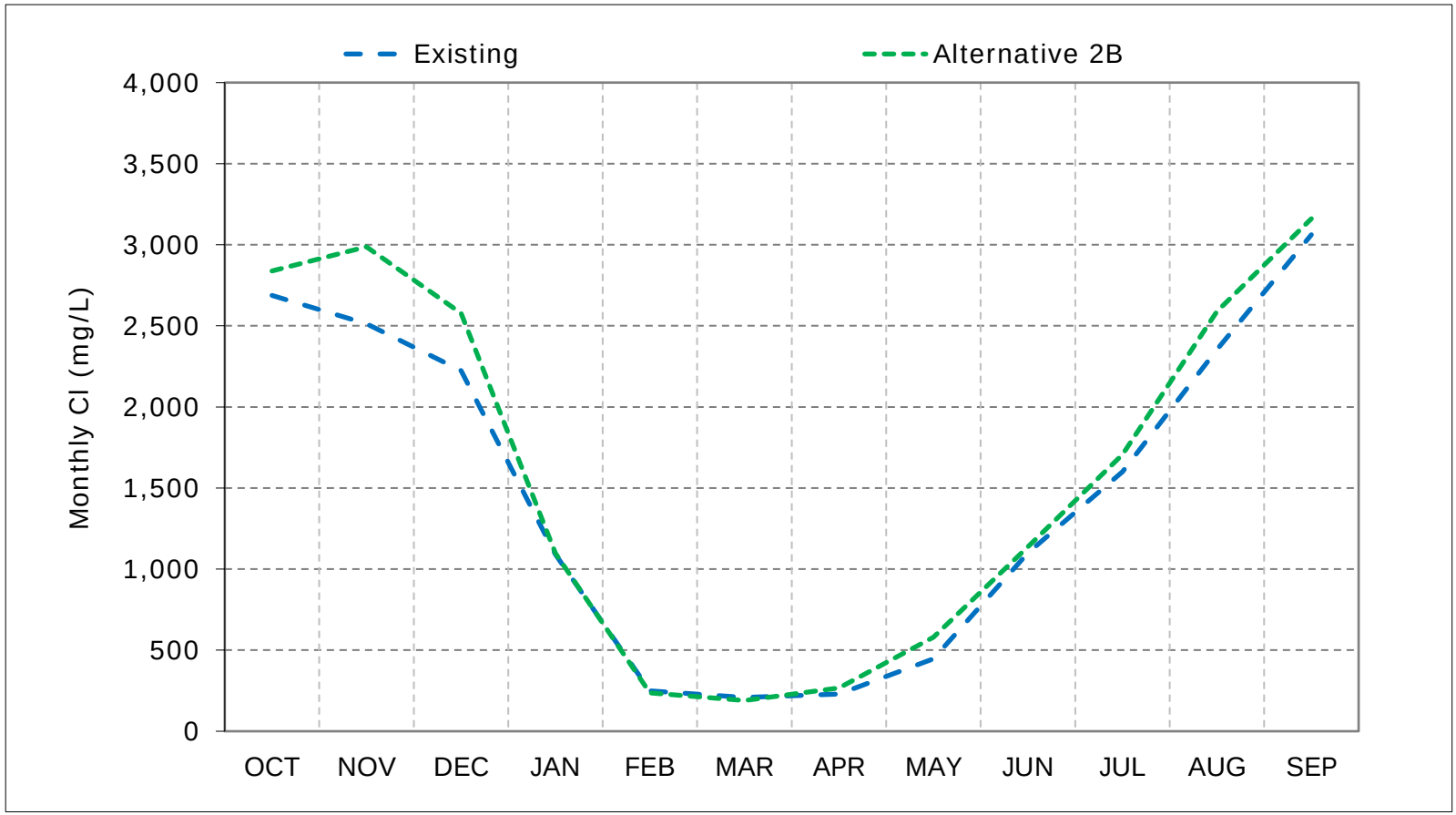

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-3. Sacramento River at Mallard Slough Chloride, Above Normal Year Average C



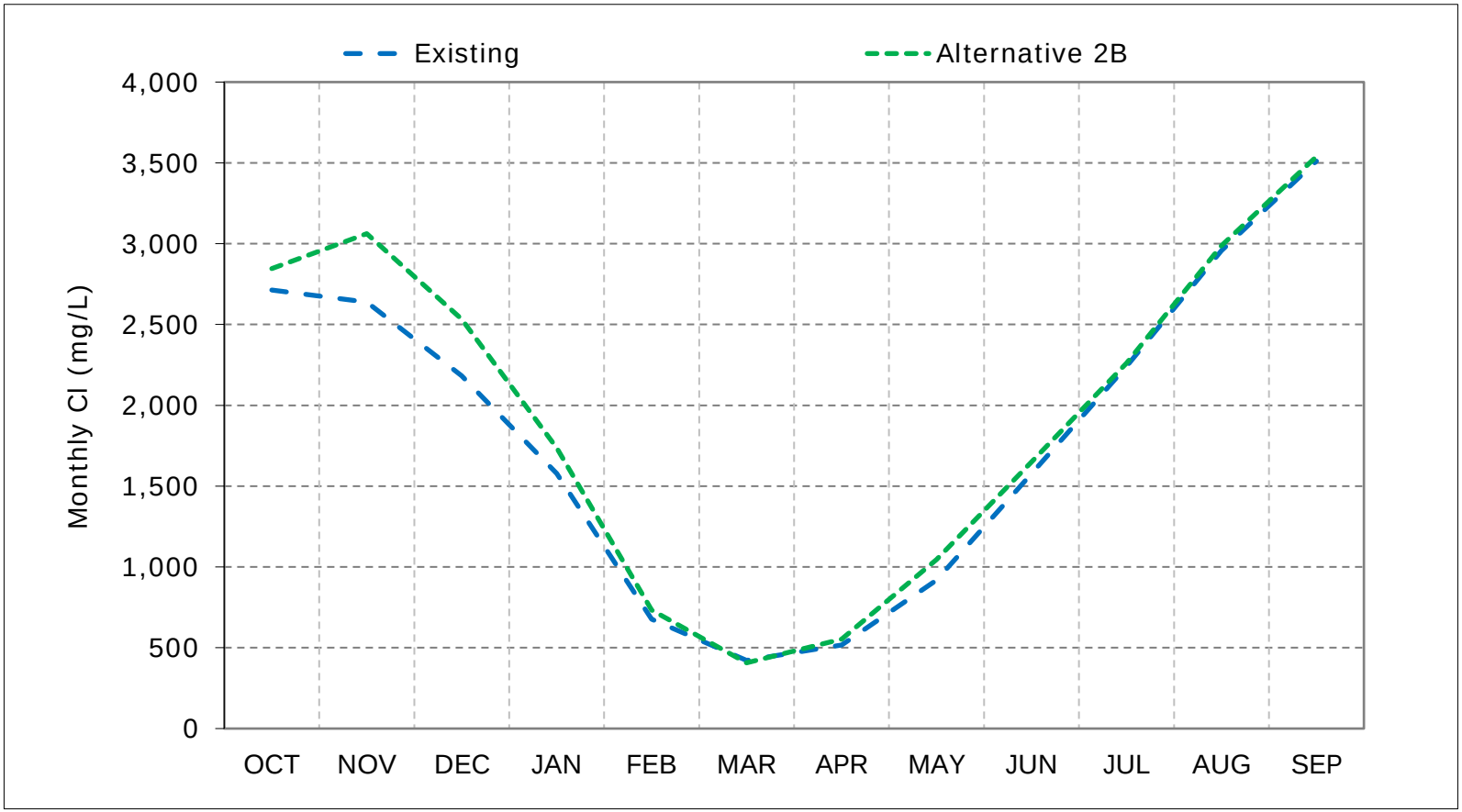

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-4. Sacramento River at Mallard Slough Chloride, Below Normal Year Average C



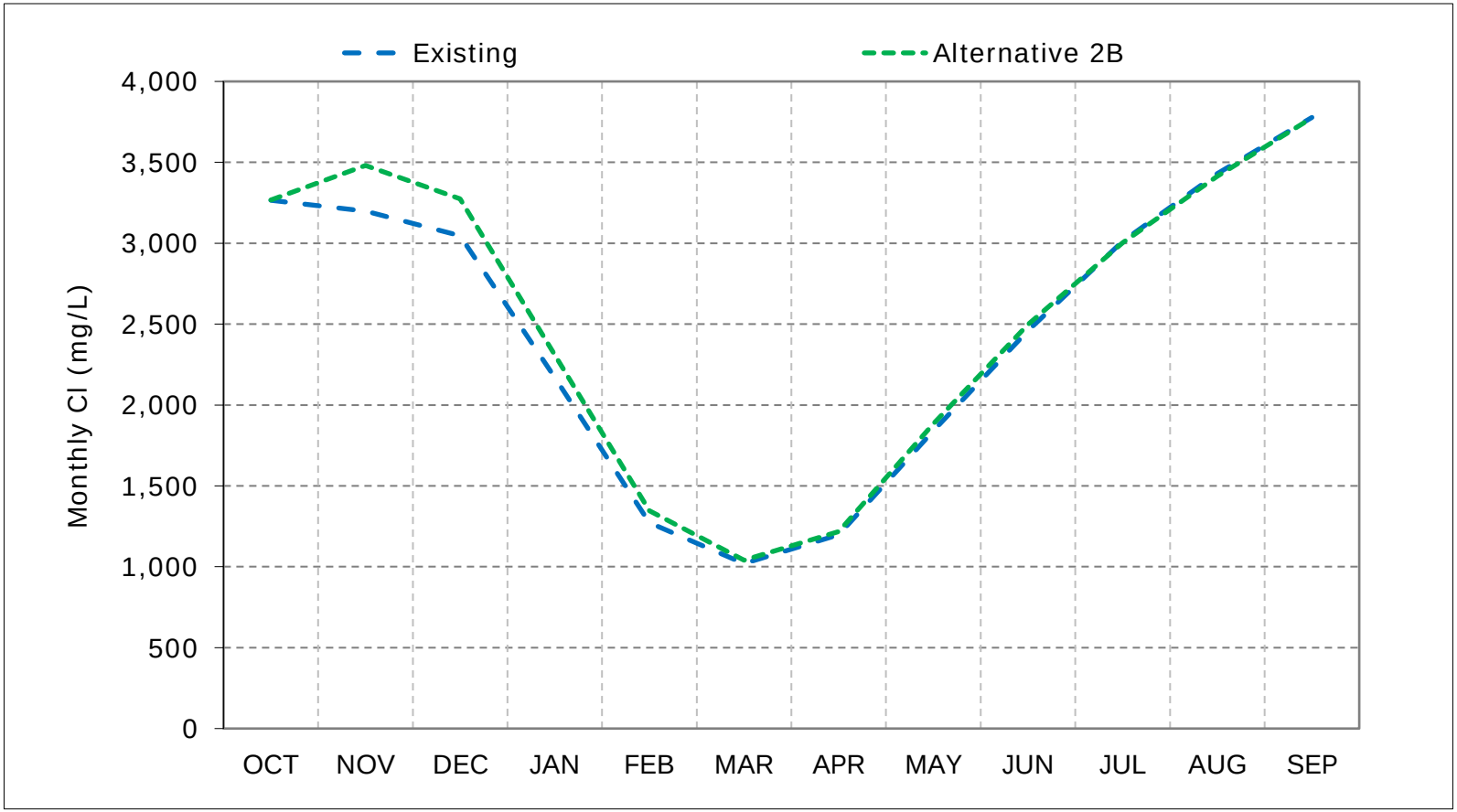

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-5. Sacramento River at Mallard Slough Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-6. Sacramento River at Mallard Slough Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-7. Sacramento River at Mallard Slough Chloride, January Cl

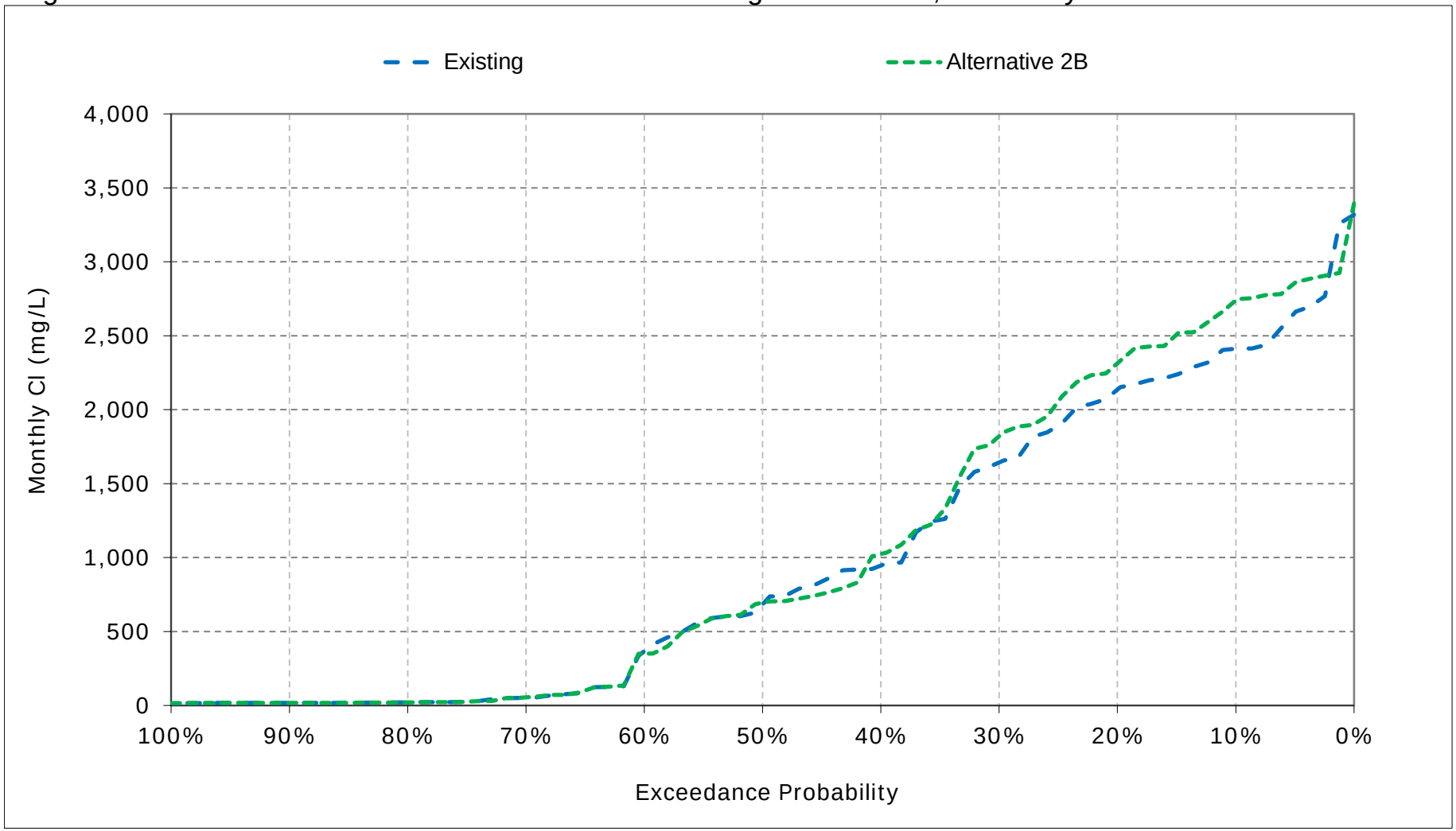


Figure 1-8. Sacramento River at Mallard Slough Chloride, February Cl

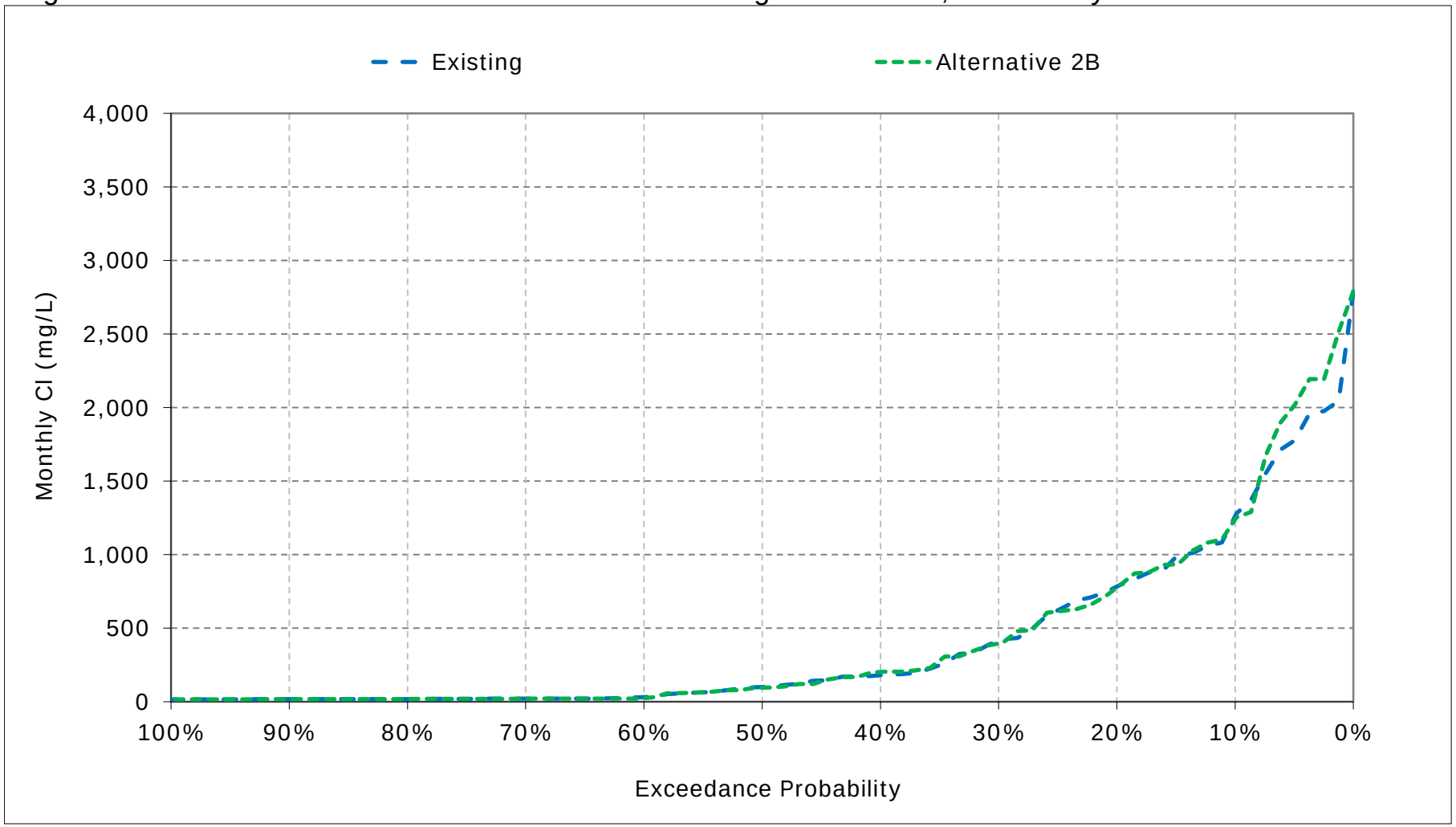


Figure 1-9. Sacramento River at Mallard Slough Chloride, March Cl

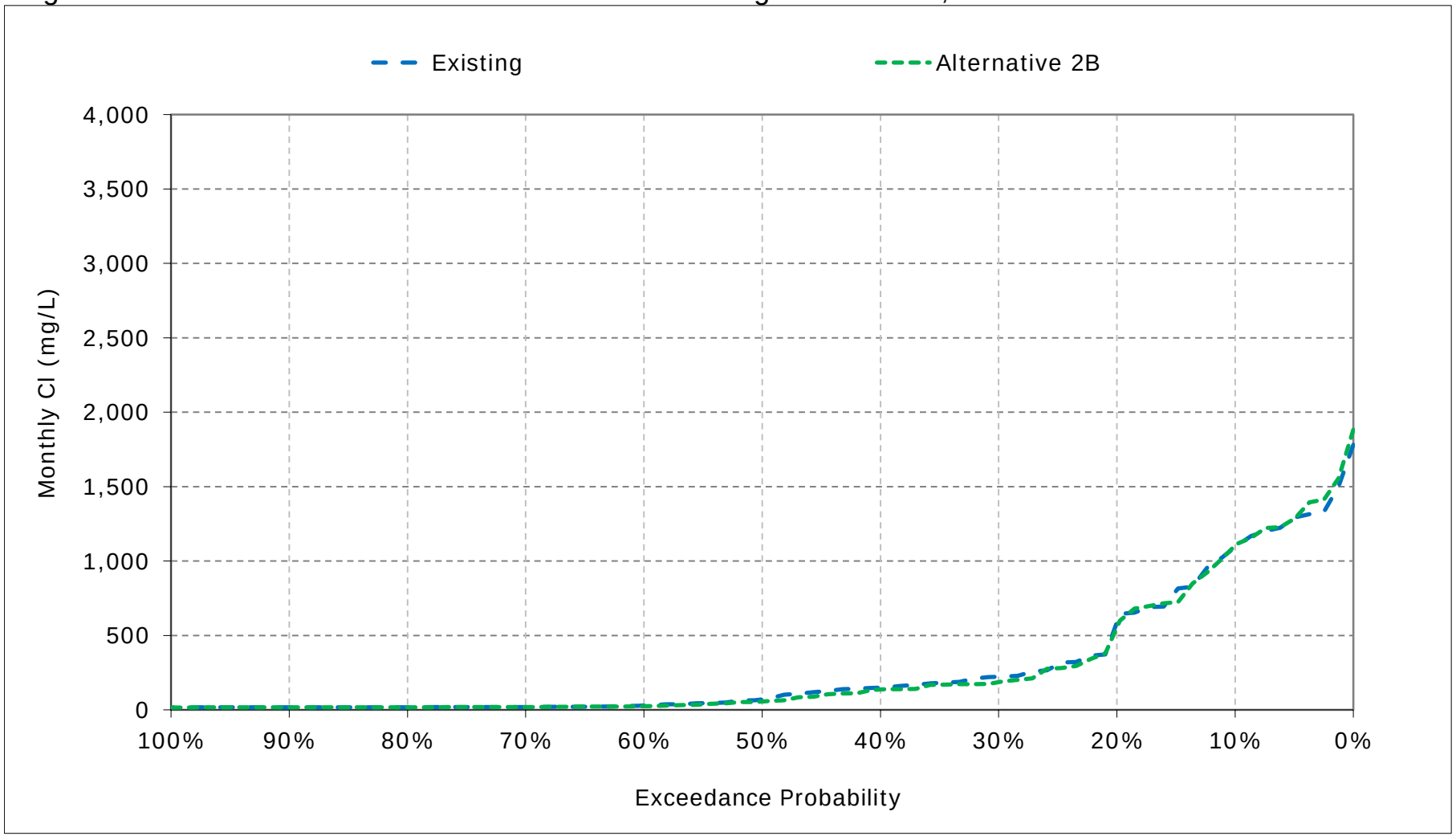


Figure 1-10. Sacramento River at Mallard Slough Chloride, April Cl

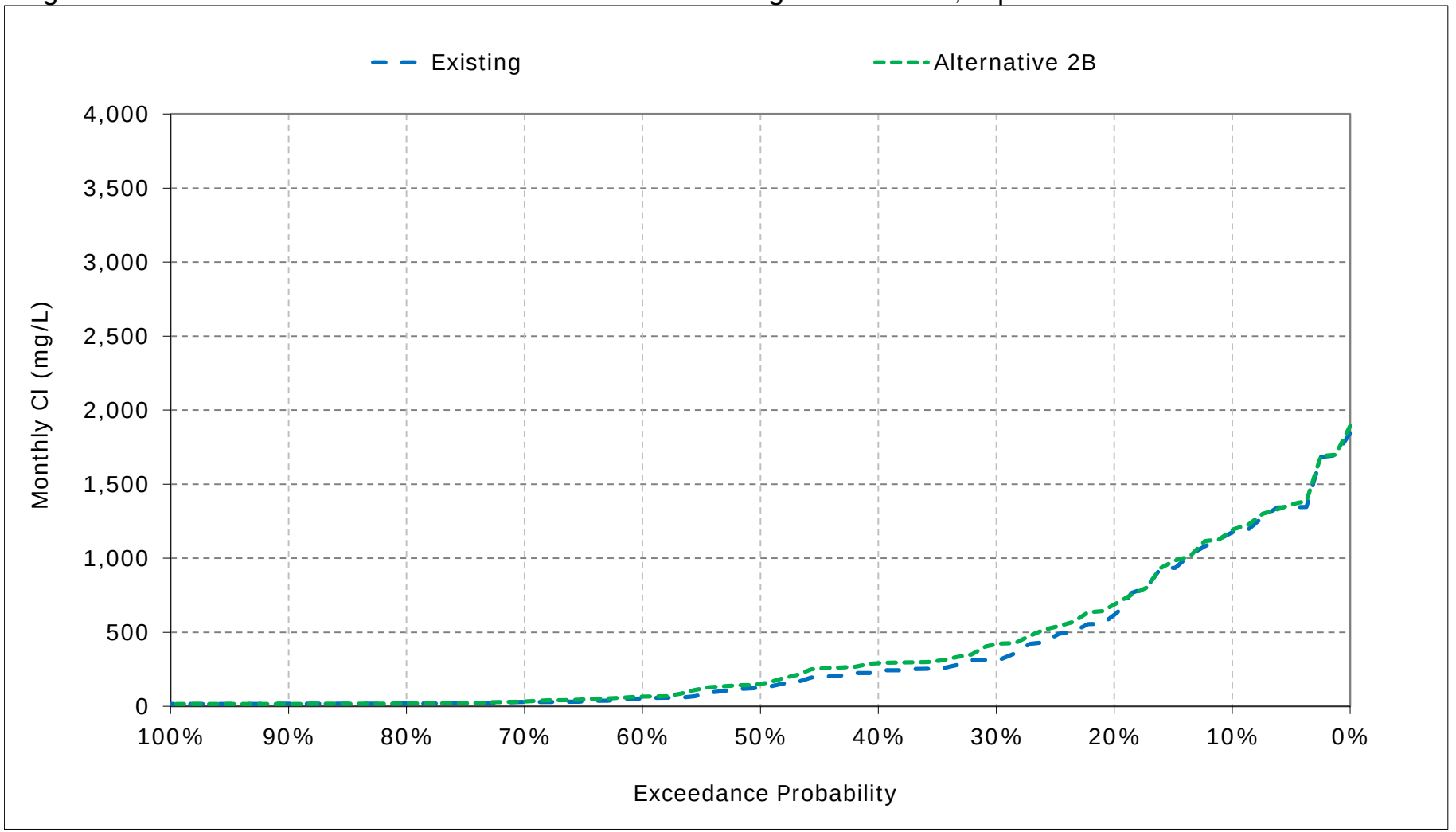


Figure 1-11. Sacramento River at Mallard Slough Chloride, May Cl

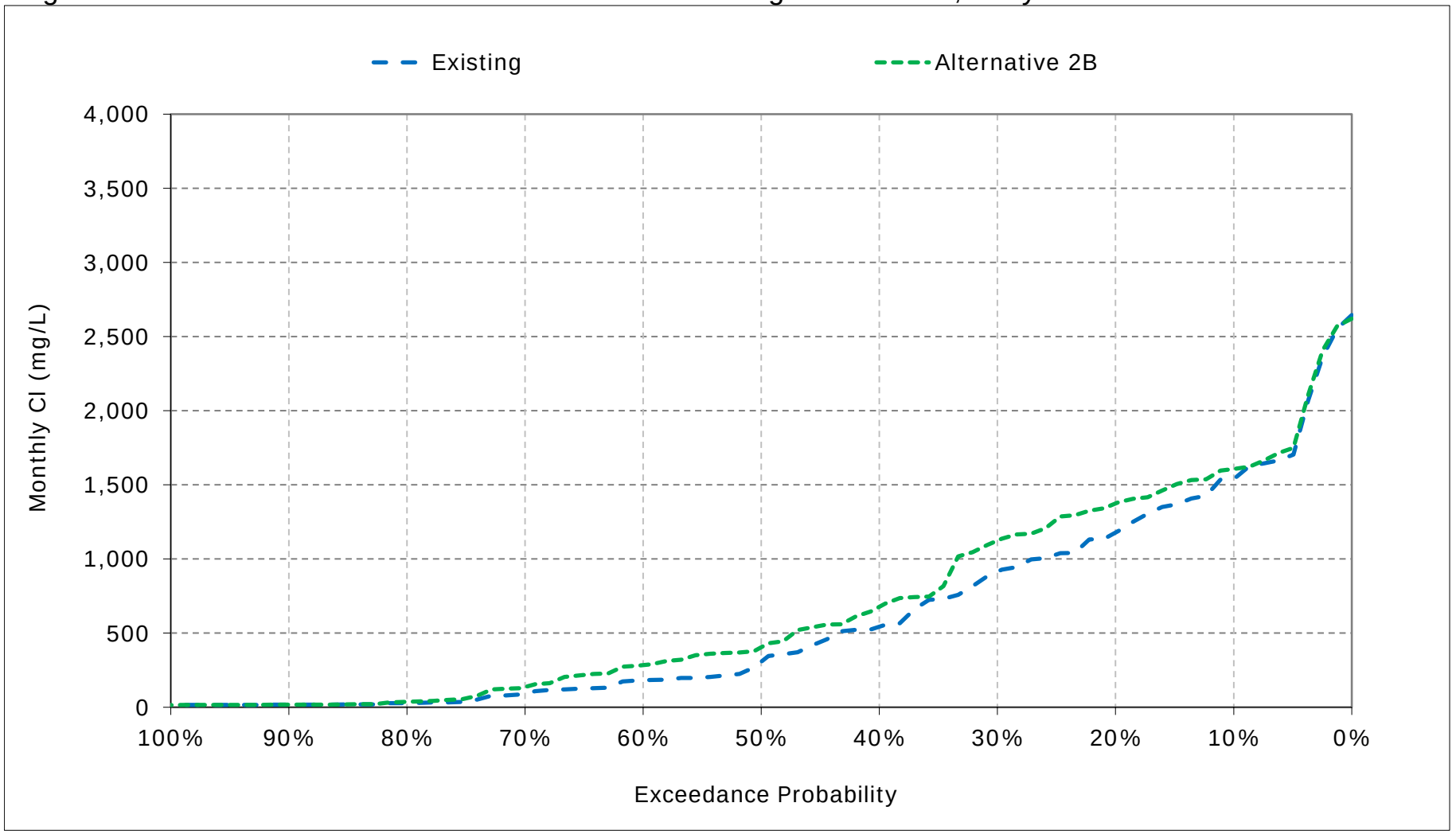


Figure 1-12. Sacramento River at Mallard Slough Chloride, June Cl

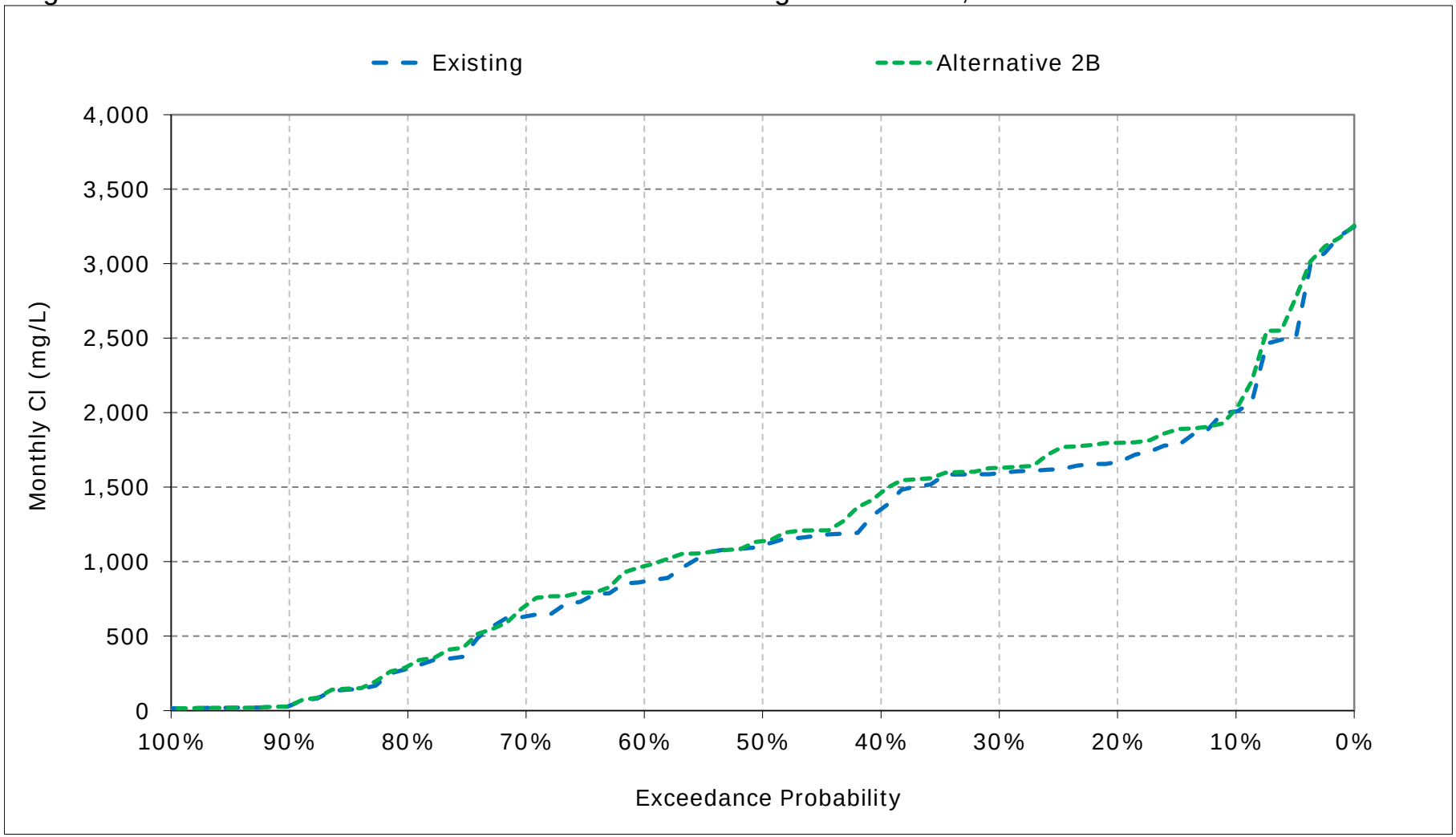


Figure 1-13. Sacramento River at Mallard Slough Chloride, July Cl

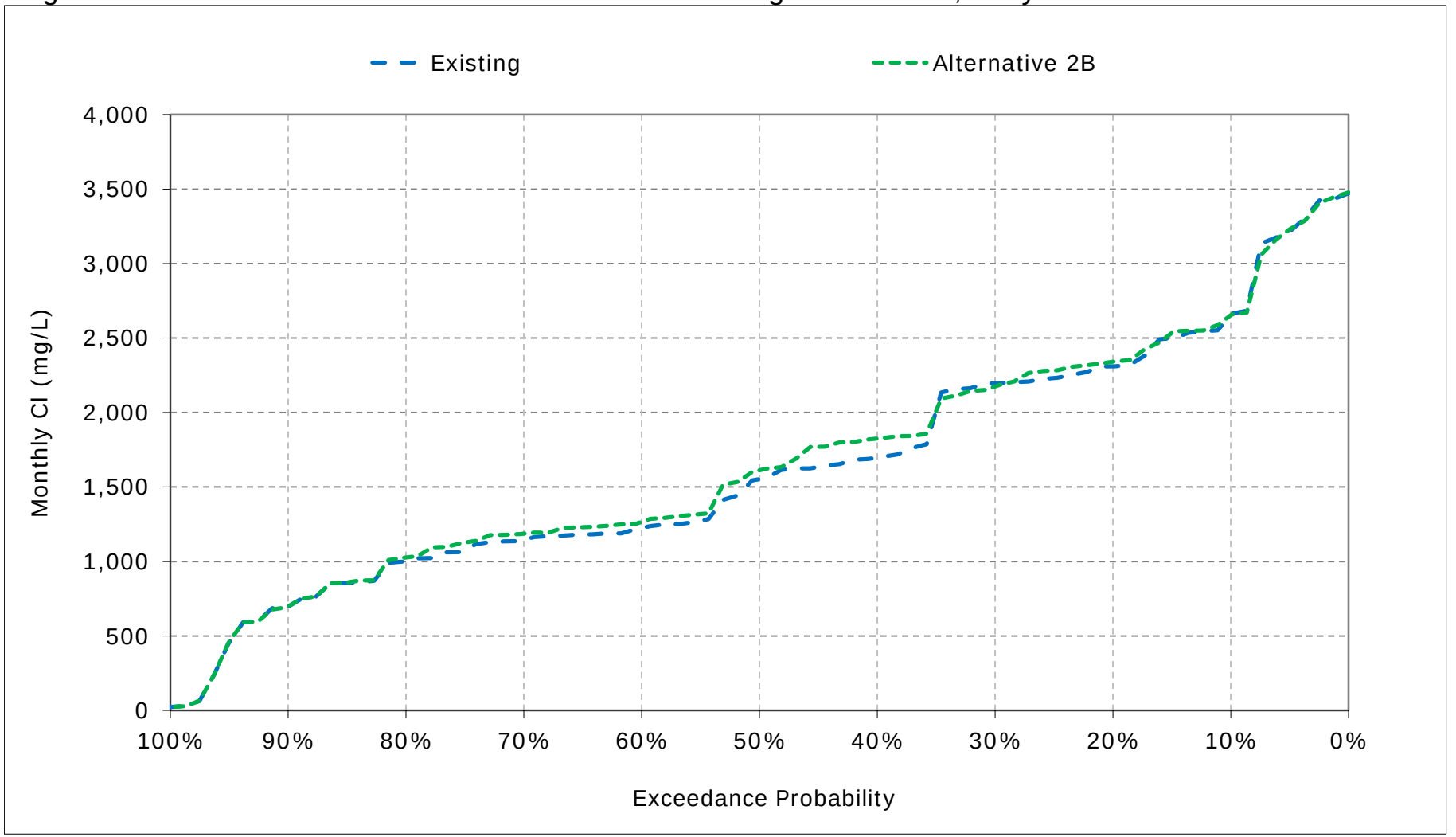


Figure 1-14. Sacramento River at Mallard Slough Chloride, August Cl

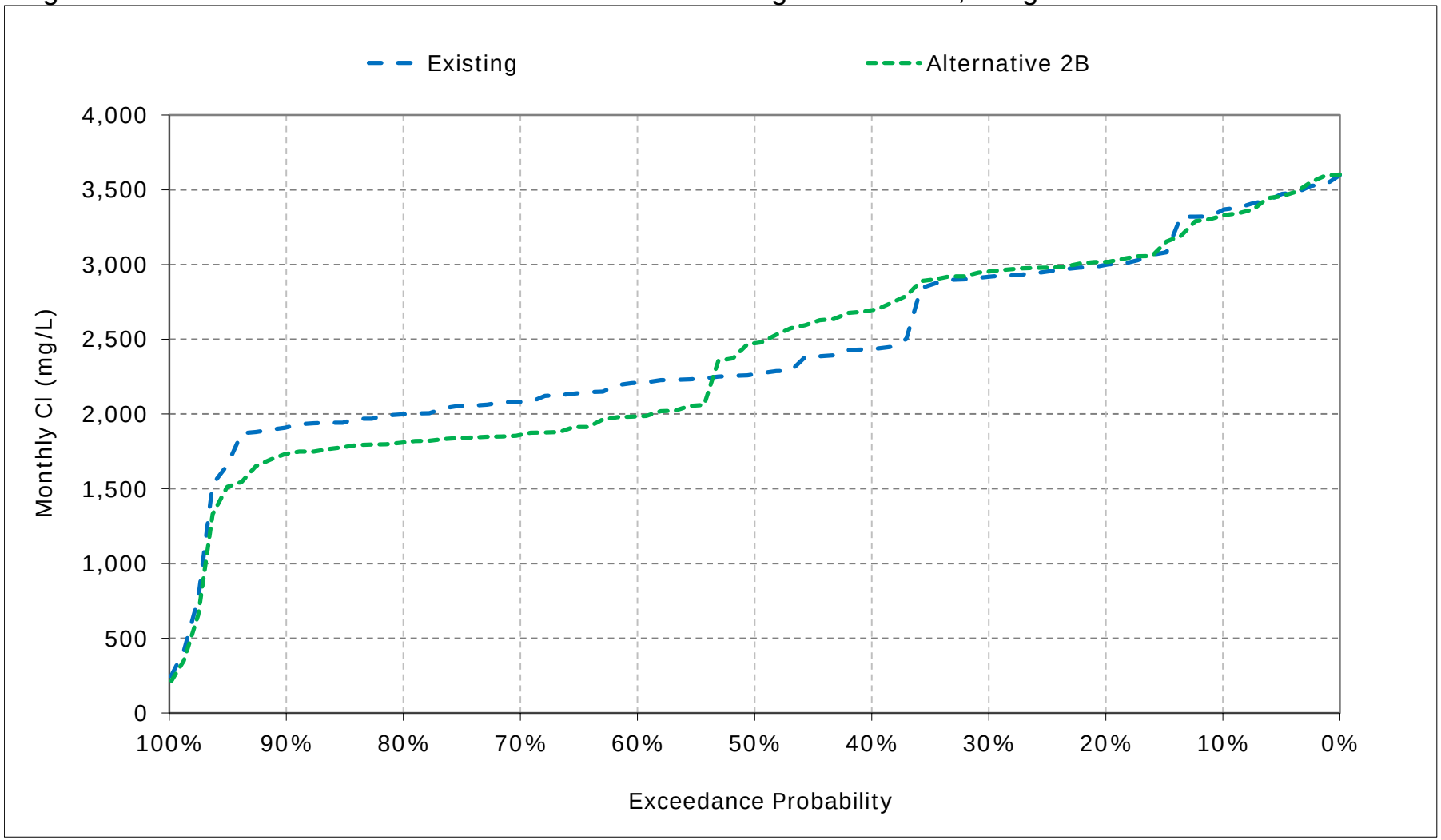


Figure 1-15. Sacramento River at Mallard Slough Chloride, September Cl

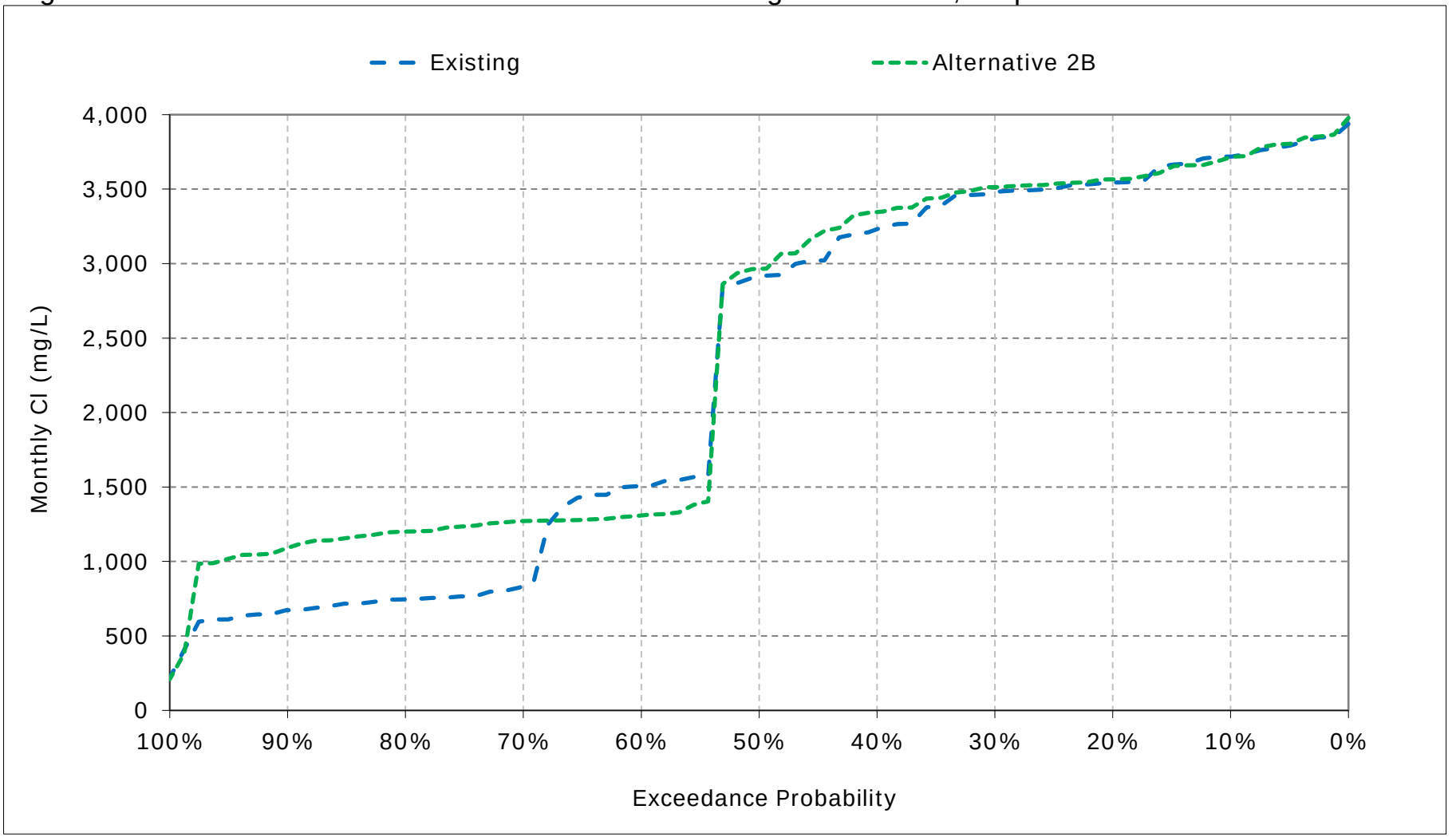


Figure 1-16. Sacramento River at Mallard Slough Chloride, October Cl

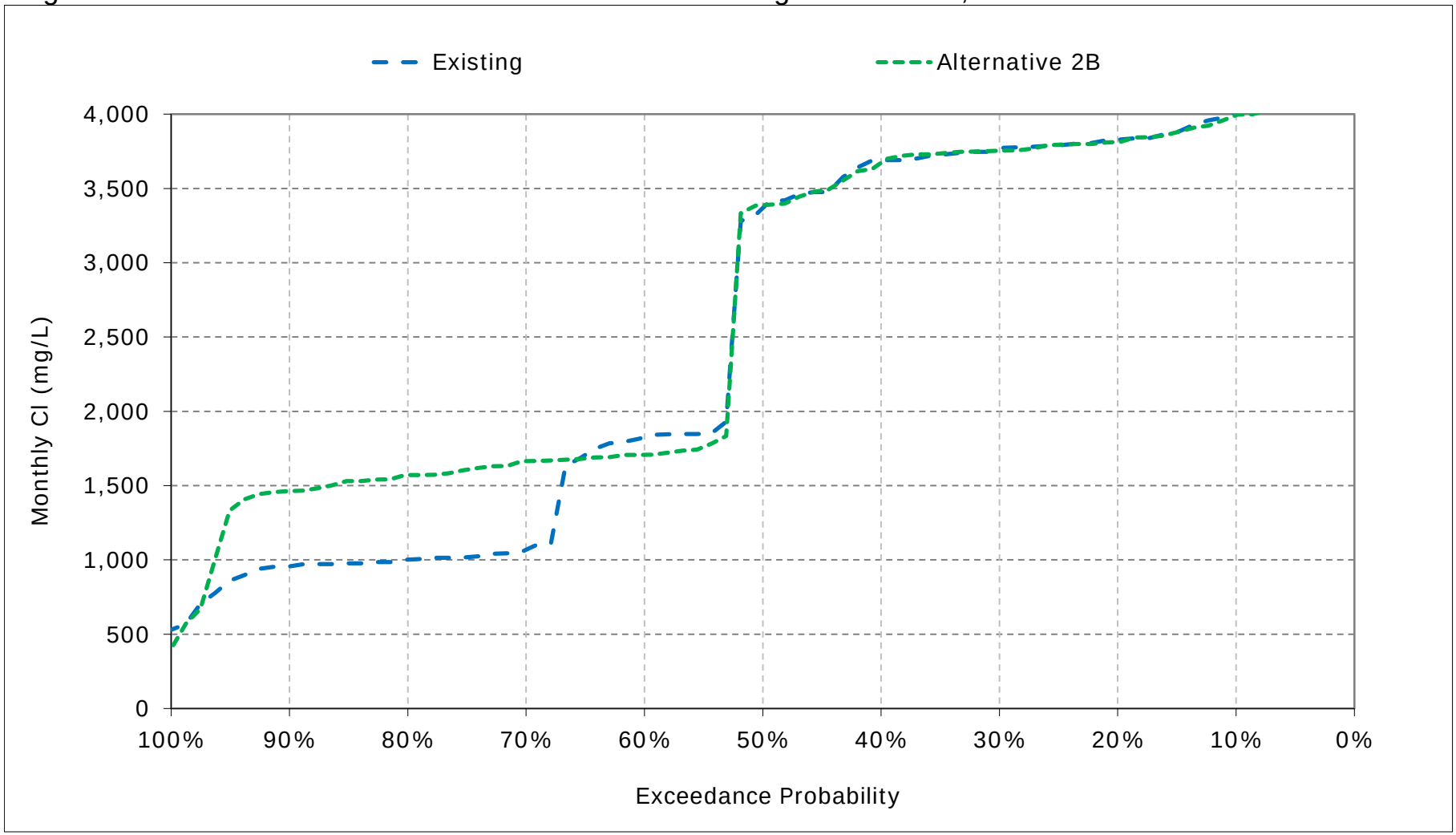


Figure 1-17. Sacramento River at Mallard Slough Chloride, November Cl

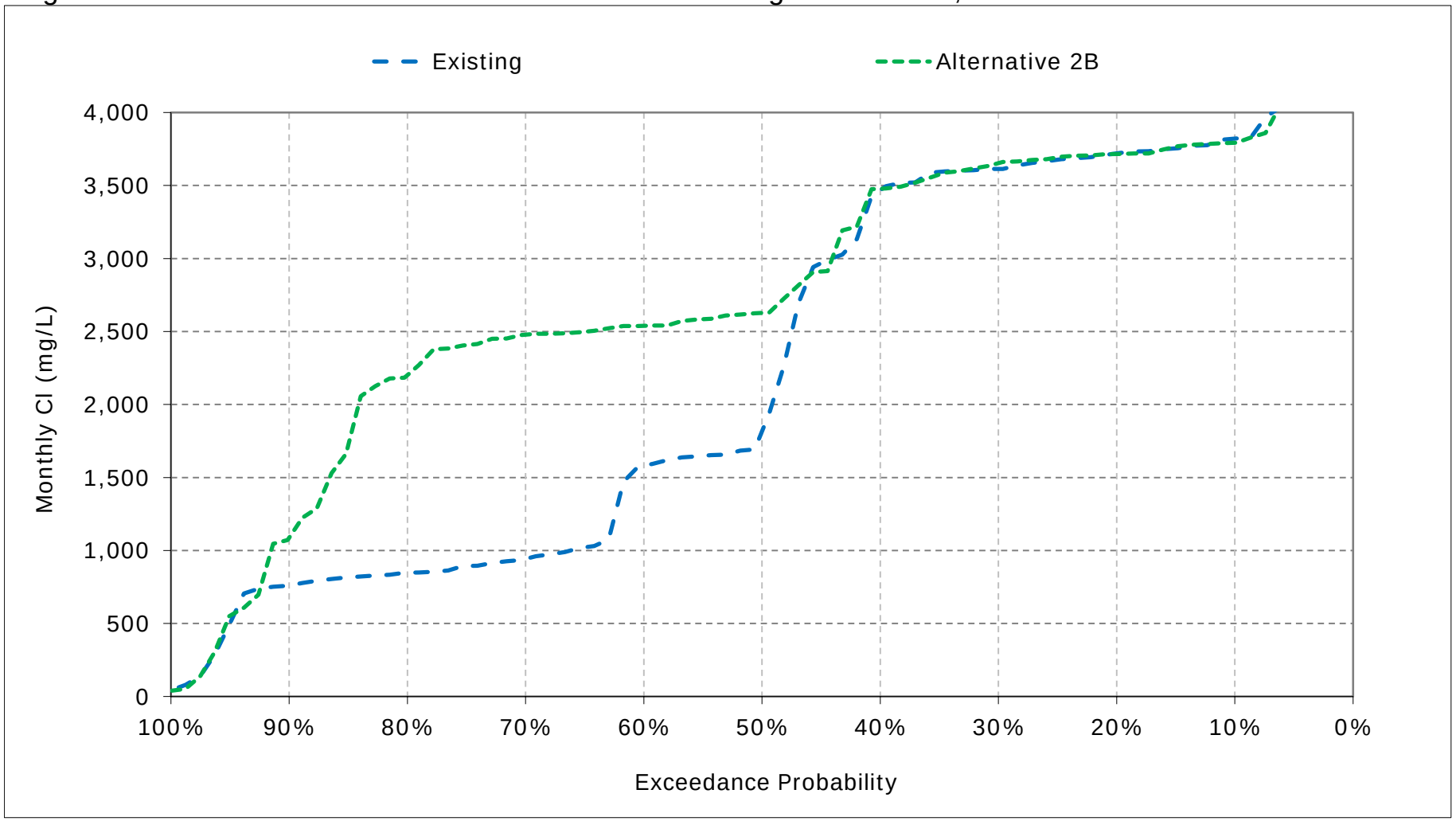
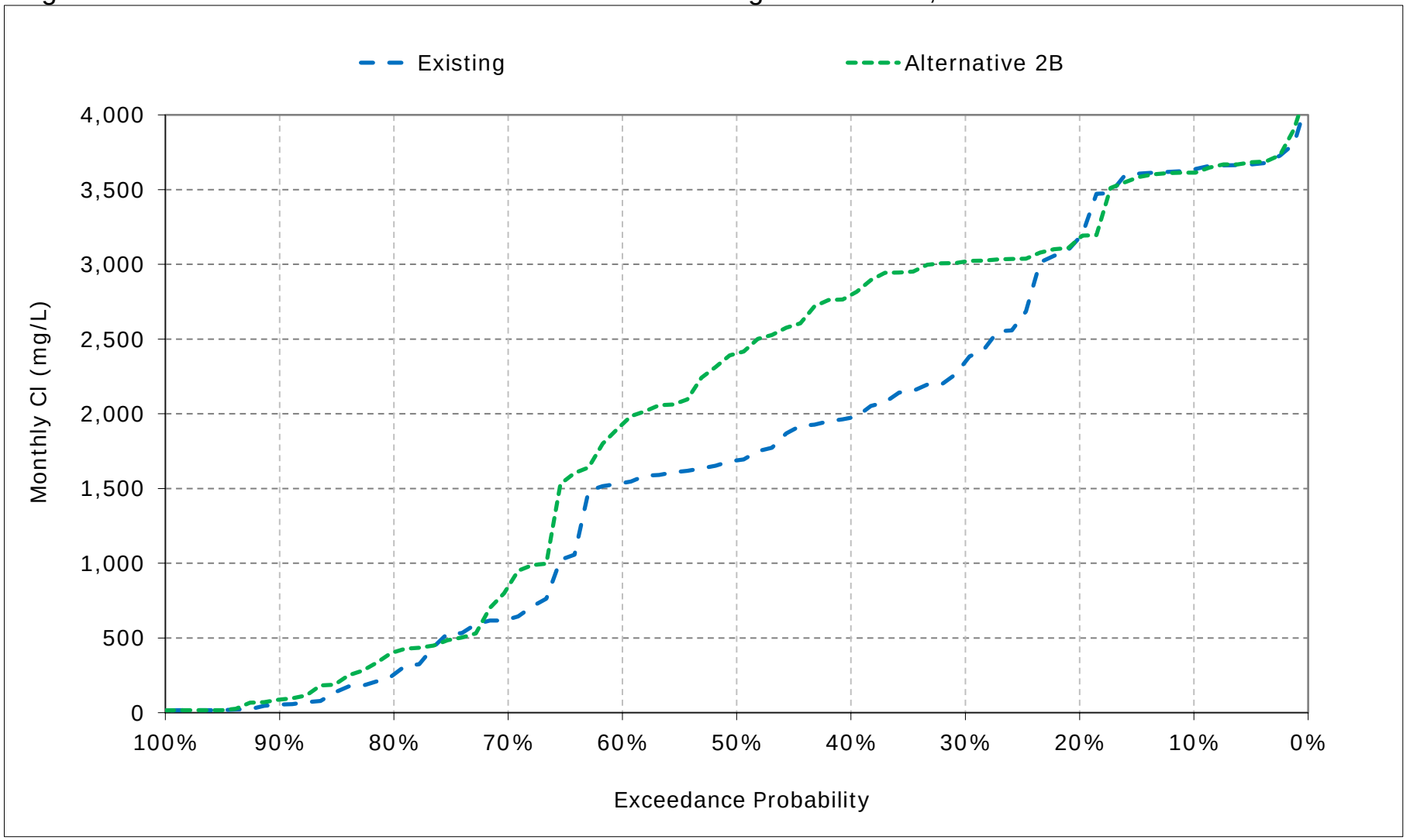


Figure 1-18. Sacramento River at Mallard Slough Chloride, December Cl



## Table 2-1. Sacramento River at Rio Vista Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 90 | 70 | 55 | 25 | 18 | 17 | 17 | 18 | 20 | 30 | 55 | 80 |
| 20% | 70 | 52 | 34 | 22 | 17 | 16 | 16 | 17 | 18 | 23 | 44 | 60 |
| 30% | 64 | 46 | 23 | 20 | 17 | 16 | 16 | 16 | 17 | 21 | 40 | 56 |
| 40% | 56 | 35 | 20 | 19 | 17 | 16 | 16 | 16 | 17 | 18 | 24 | 44 |
| 50% | 42 | 18 | 19 | 18 | 16 | 15 | 15 | 16 | 17 | 17 | 23 | 31 |
| 60% | 18 | 16 | 18 | 17 | 16 | 15 | 15 | 15 | 16 | 16 | 22 | 17 |
| 70% | 16 | 15 | 16 | 17 | 15 | 15 | 15 | 15 | 16 | 16 | 21 | 15 |
| 80% | 16 | 15 | 16 | 16 | 15 | 15 | 15 | 15 | 15 | 16 | 20 | 15 |
| 90% | 16 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 45 | 35 | 26 | 19 | 16 | 16 | 16 | 16 | 19 | 22 | 31 | 39 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 34 | 22 | 17 | 16 | 15 | 15 | 15 | 15 | 15 | 16 | 20 | 15 |
| Above Normal (15%) | 45 | 36 | 22 | 18 | 16 | 15 | 15 | 15 | 16 | 16 | 21 | 17 |
| Below Normal (17%) | 44 | 31 | 32 | 19 | 16 | 16 | 16 | 16 | 16 | 17 | 23 | 38 |
| Dry (22%) | 50 | 43 | 27 | 21 | 17 | 16 | 16 | 16 | 18 | 22 | 41 | 57 |
| Critical (15%) | 61 | 55 | 45 | 25 | 19 | 17 | 17 | 21 | 32 | 45 | 60 | 87 |

### Alternative 2B

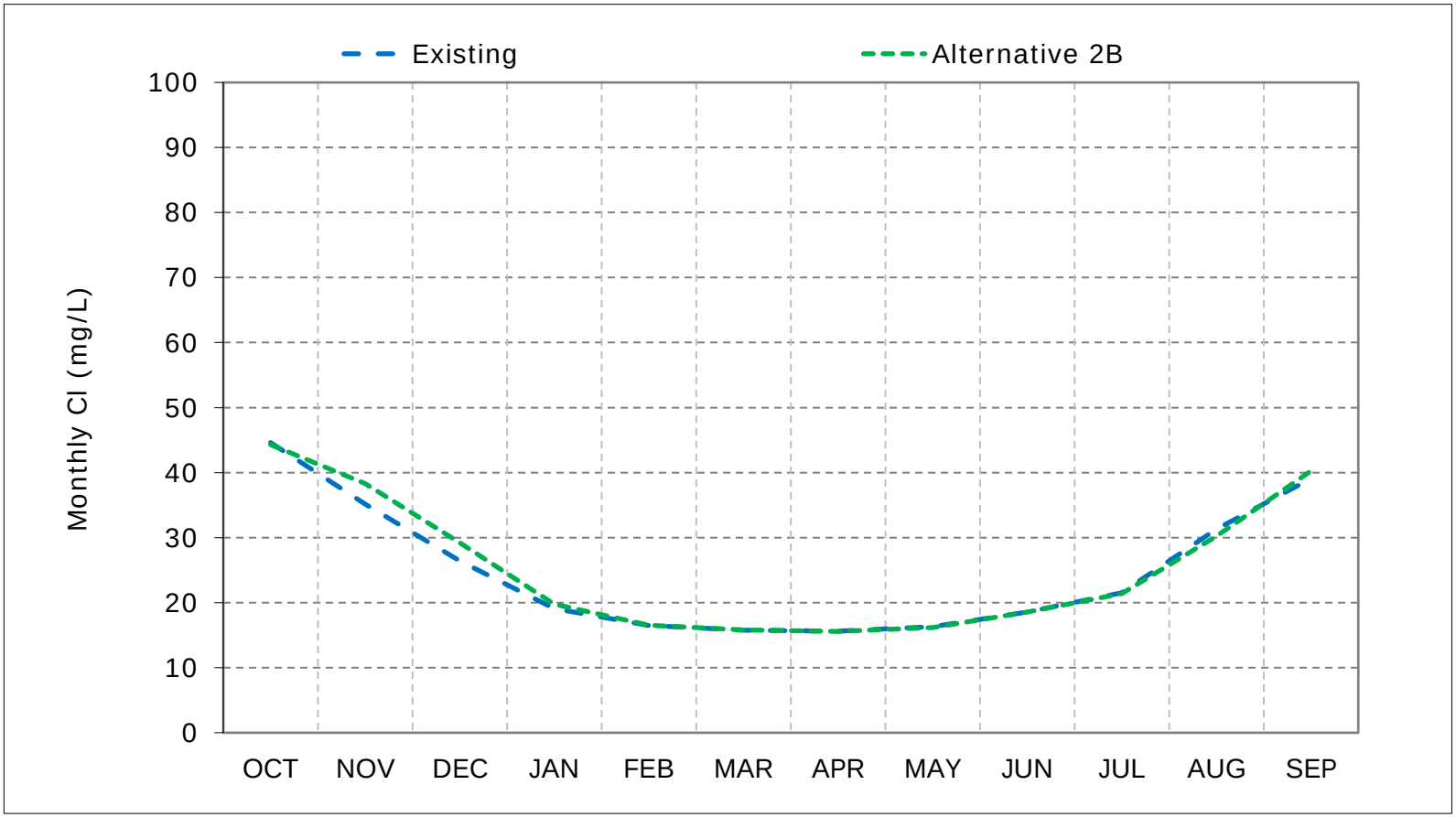
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 82 | 71 | 53 | 27 | 18 | 17 | 17 | 18 | 20 | 29 | 56 | 78 |
| 20% | 71 | 55 | 36 | 24 | 17 | 16 | 16 | 17 | 18 | 23 | 43 | 62 |
| 30% | 64 | 49 | 32 | 21 | 17 | 16 | 16 | 16 | 17 | 21 | 39 | 57 |
| 40% | 54 | 36 | 27 | 19 | 17 | 16 | 16 | 16 | 17 | 18 | 25 | 51 |
| 50% | 43 | 25 | 23 | 18 | 16 | 15 | 15 | 15 | 16 | 17 | 24 | 35 |
| 60% | 17 | 23 | 21 | 17 | 16 | 15 | 15 | 15 | 16 | 16 | 19 | 16 |
| 70% | 17 | 23 | 17 | 17 | 15 | 15 | 15 | 15 | 15 | 16 | 18 | 16 |
| 80% | 17 | 21 | 16 | 16 | 15 | 15 | 15 | 15 | 15 | 16 | 18 | 16 |
| 90% | 16 | 16 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 18 | 15 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 44 | 38 | 29 | 20 | 17 | 16 | 16 | 16 | 19 | 21 | 30 | 40 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 33 | 25 | 17 | 16 | 15 | 15 | 15 | 15 | 15 | 16 | 18 | 16 |
| Above Normal (15%) | 44 | 39 | 26 | 18 | 16 | 15 | 15 | 15 | 16 | 16 | 18 | 16 |
| Below Normal (17%) | 45 | 34 | 36 | 19 | 16 | 16 | 16 | 15 | 16 | 17 | 24 | 44 |
| Dry (22%) | 49 | 47 | 31 | 22 | 17 | 16 | 16 | 16 | 18 | 22 | 41 | 59 |
| Critical (15%) | 61 | 58 | 49 | 27 | 19 | 17 | 17 | 21 | 33 | 44 | 59 | 85 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -8 | 0 | -1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -2 |
| 20% | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 2 |
| 30% | 0 | 2 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 40% | -2 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| 50% | 2 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | 4 |
| 60% | -1 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -1 |
| 70% | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 0 |
| 80% | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 1 |
| 90% | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 1 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 1 |
| Above Normal (15%) | -1 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -1 |
| Below Normal (17%) | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 |
| Dry (22%) | -1 | 3 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Critical (15%) | 0 | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | -2 |

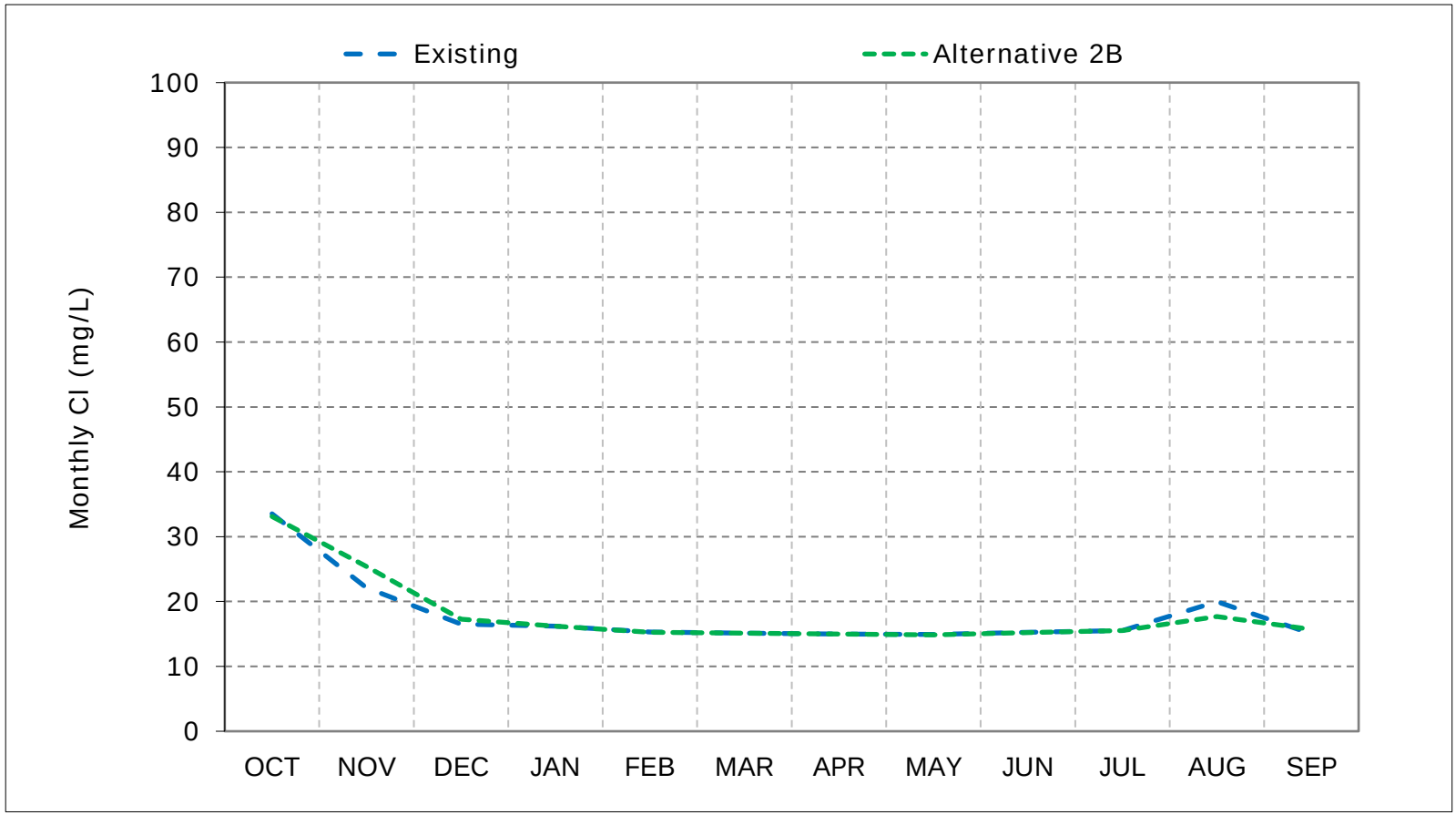
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 2-1. Sacramento River at Rio Vista Chloride, Long-Term Average Cl



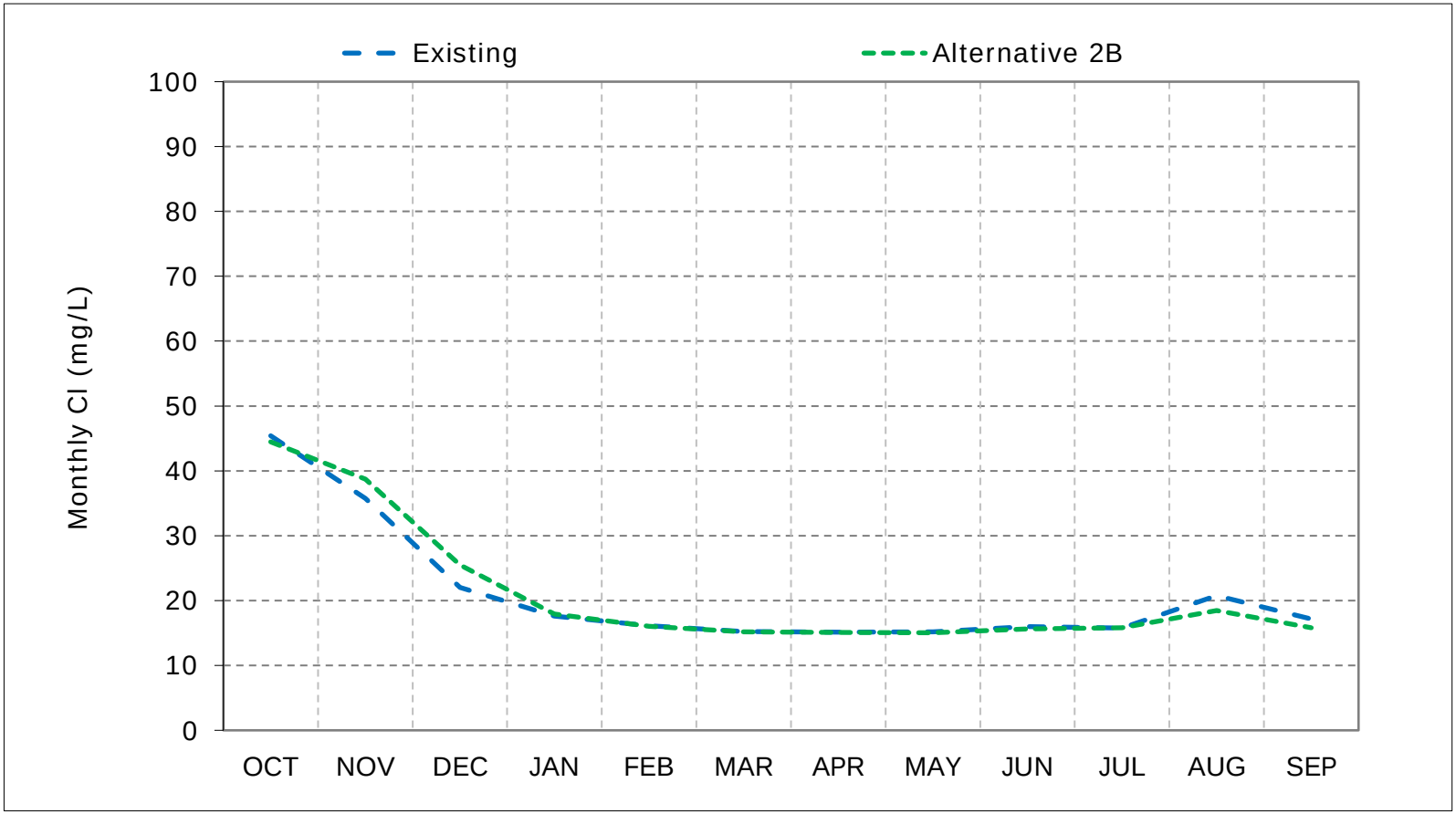

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-2. Sacramento River at Rio Vista Chloride, Wet Year Average Cl



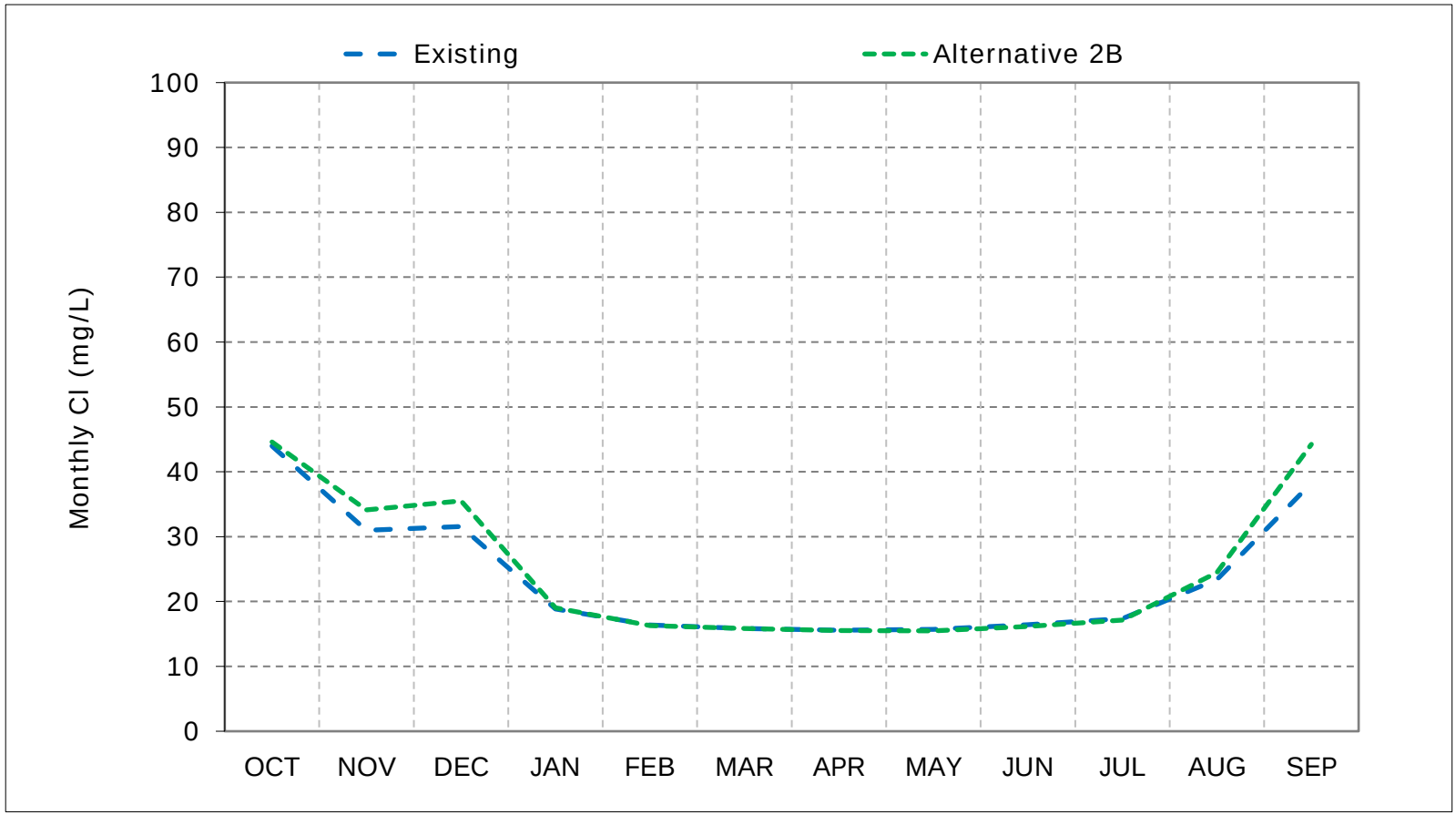

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-3. Sacramento River at Rio Vista Chloride, Above Normal Year Average Cl



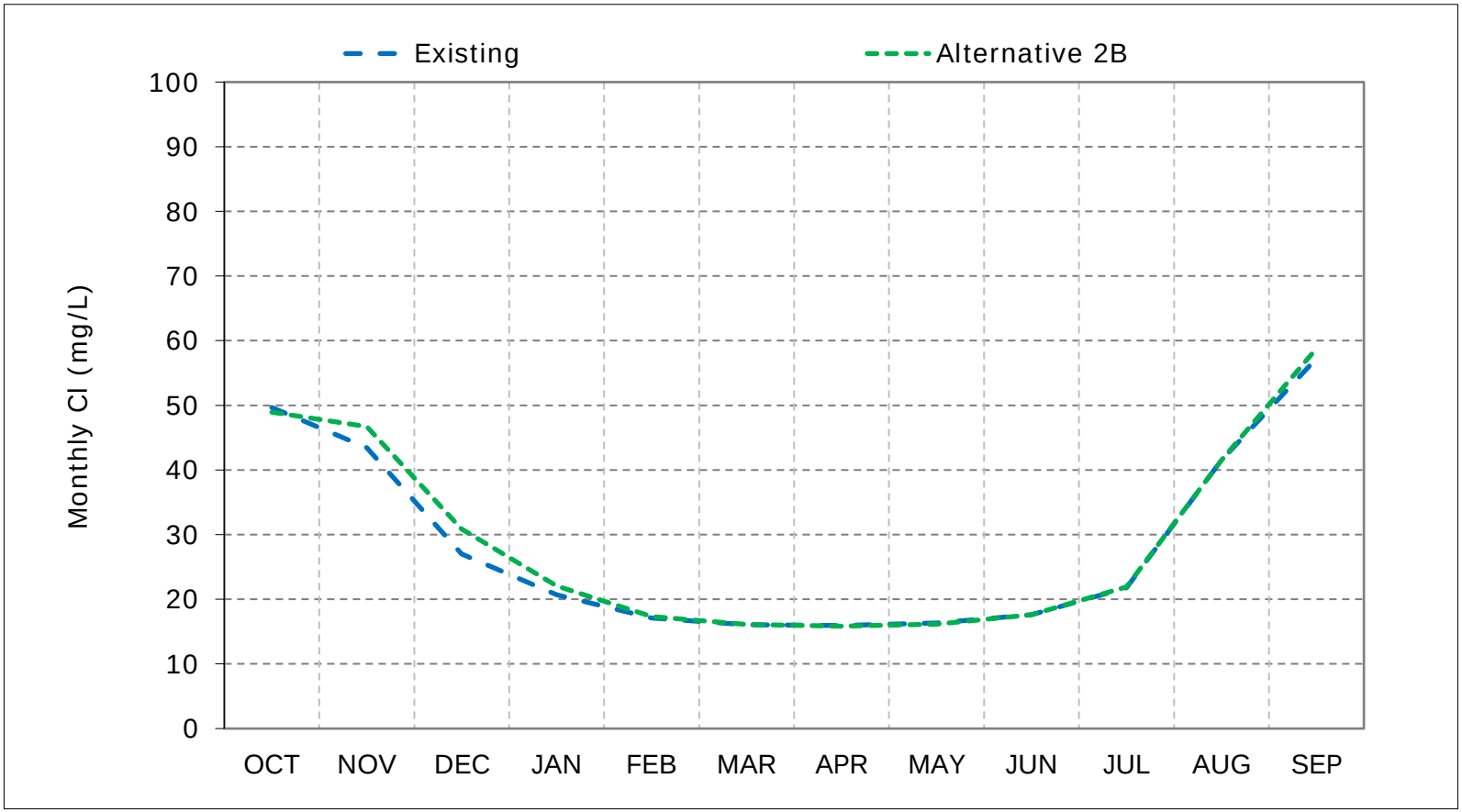

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-4. Sacramento River at Rio Vista Chloride, Below Normal Year Average Cl



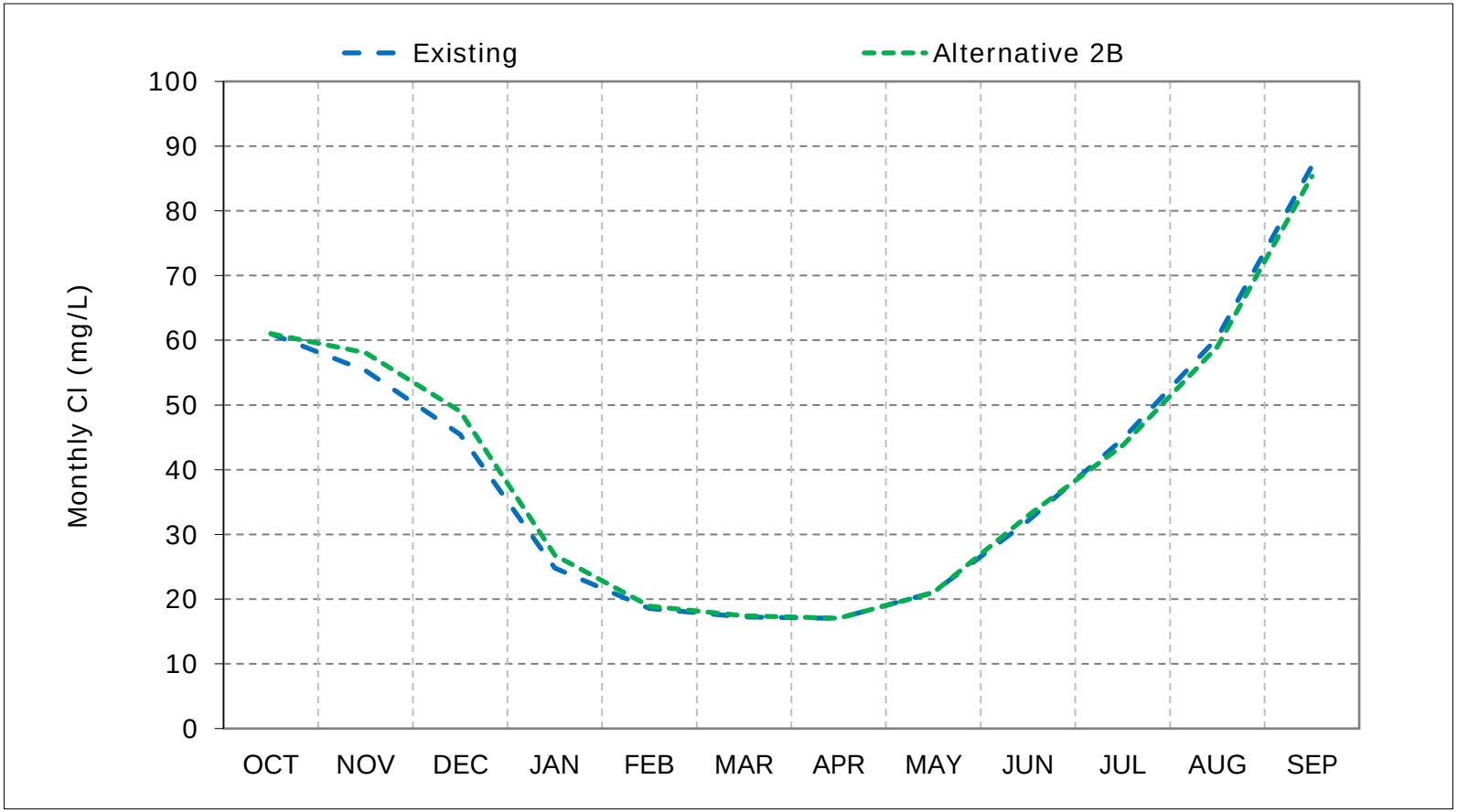

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-5. Sacramento River at Rio Vista Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-6. Sacramento River at Rio Vista Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-7. Sacramento River at Rio Vista Chloride, January Cl

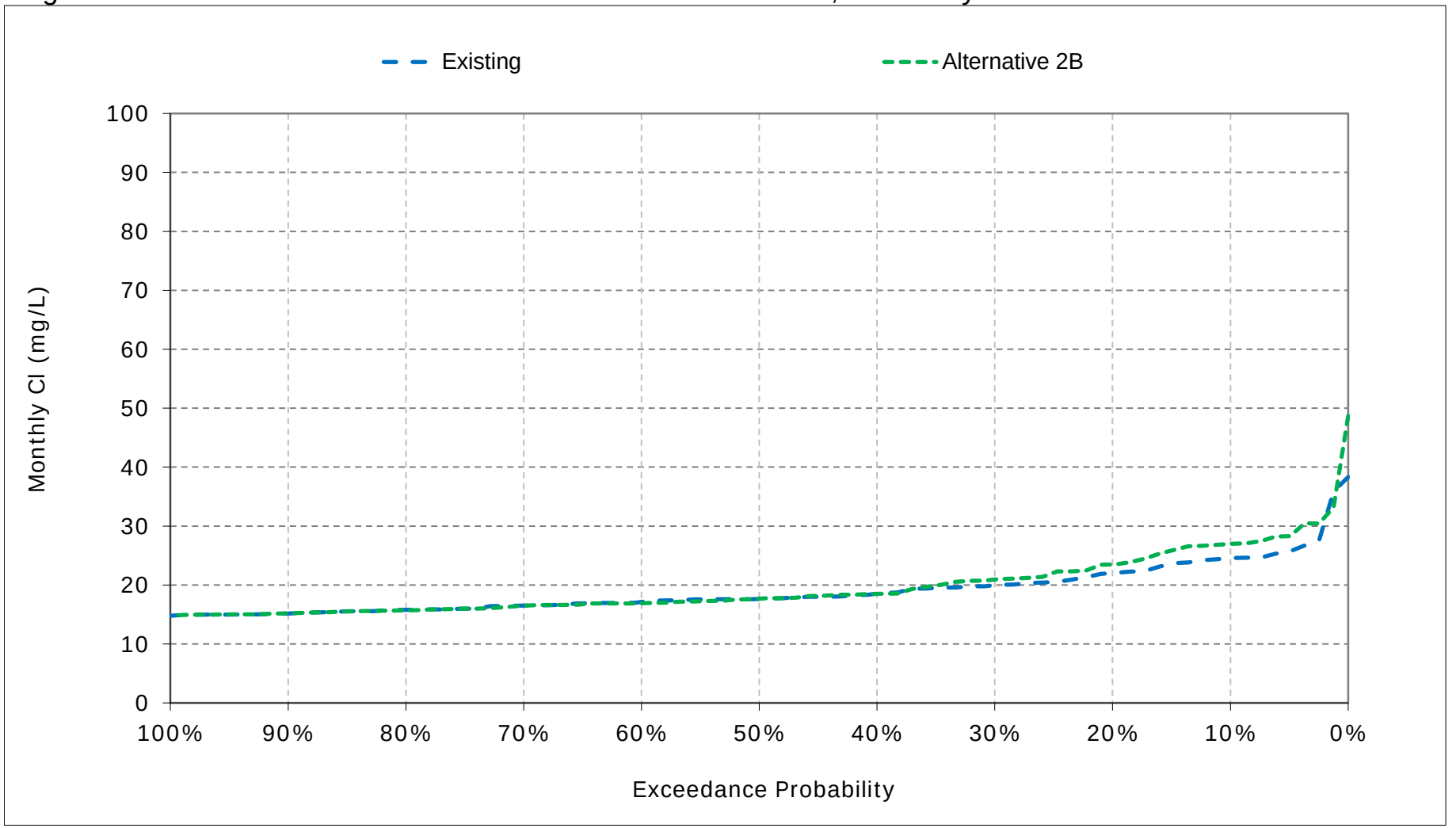


Figure 2-8. Sacramento River at Rio Vista Chloride, February Cl

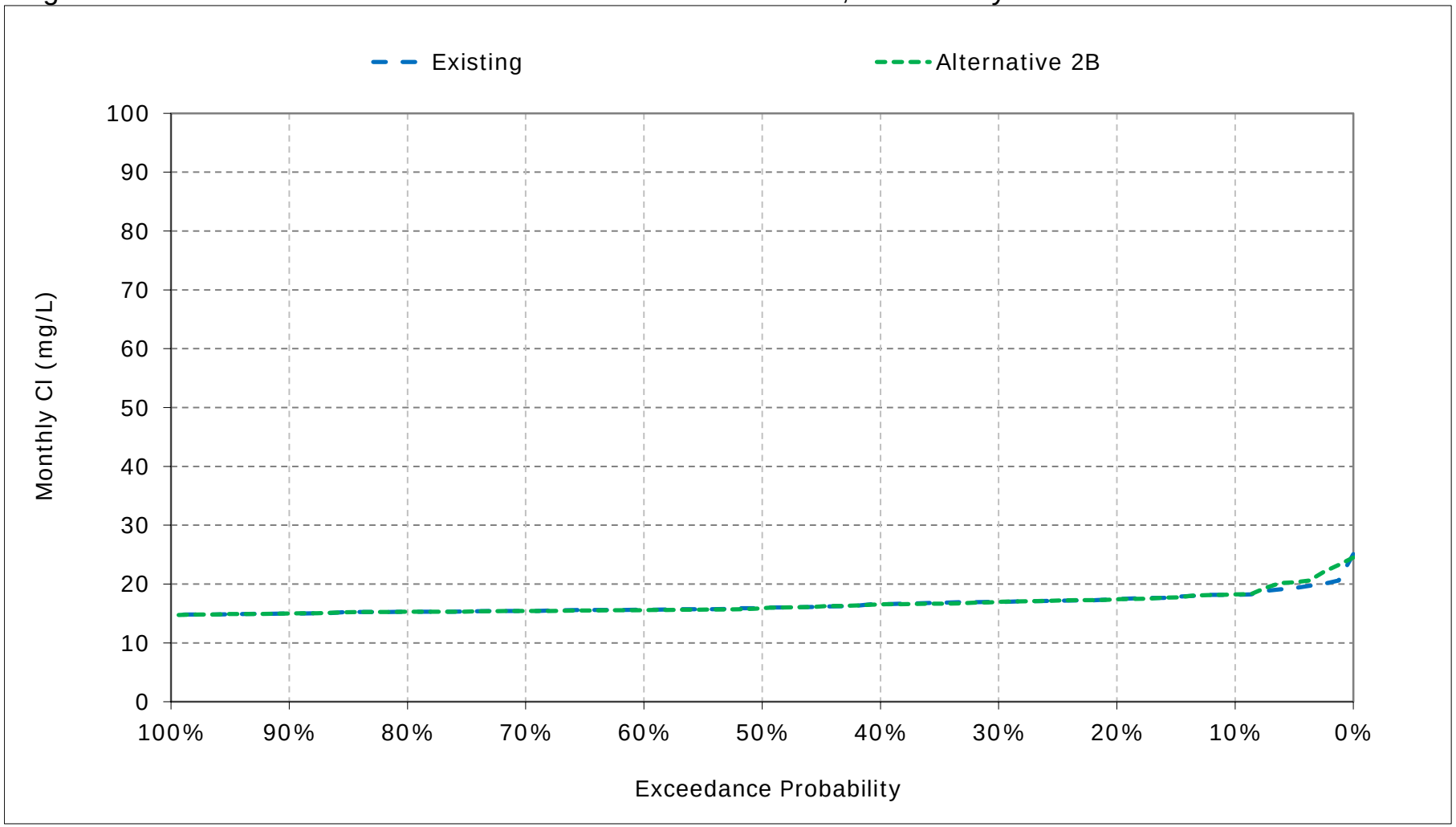


Figure 2-9. Sacramento River at Rio Vista Chloride, March Cl

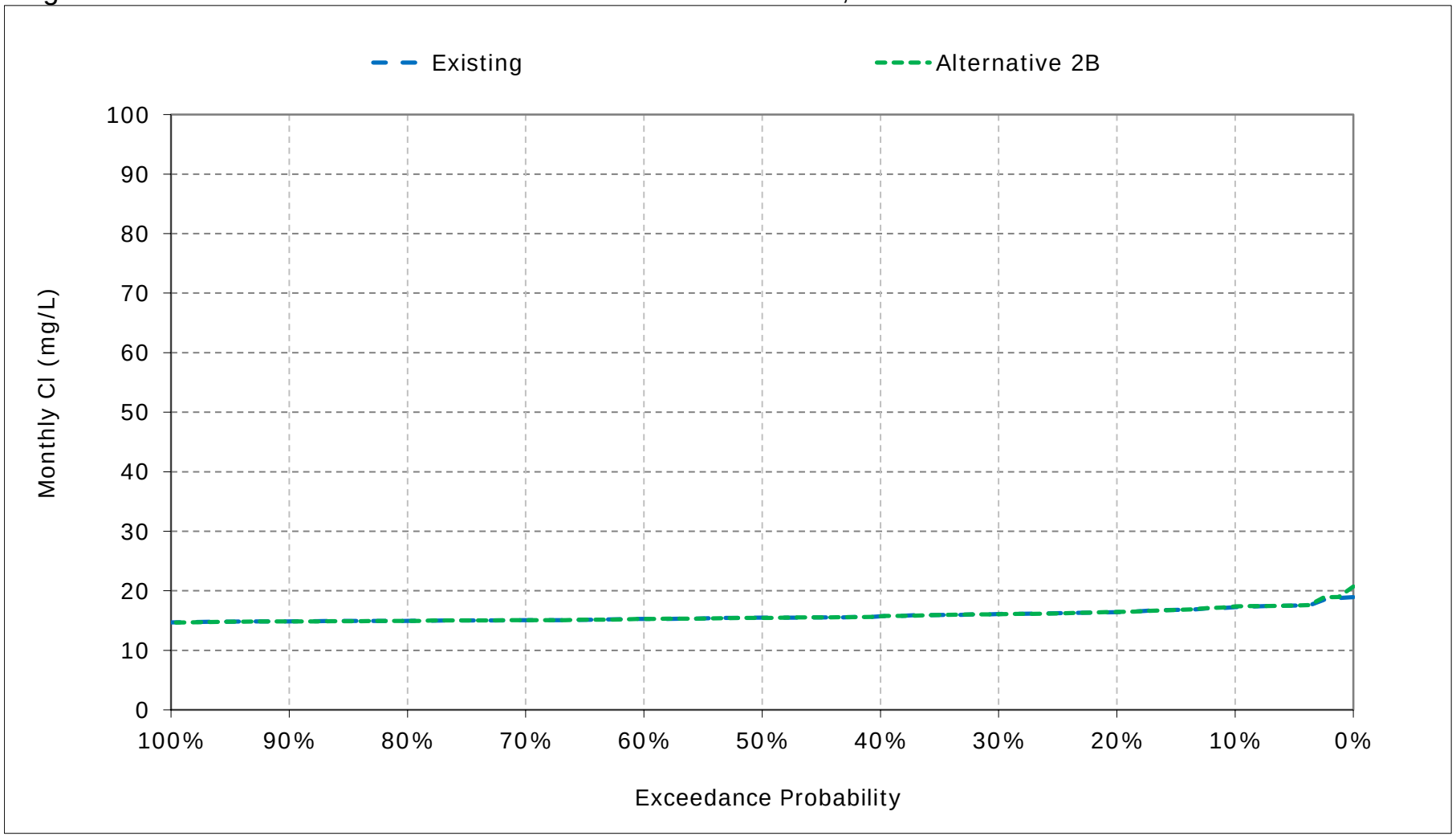


Figure 2-10. Sacramento River at Rio Vista Chloride, April Cl

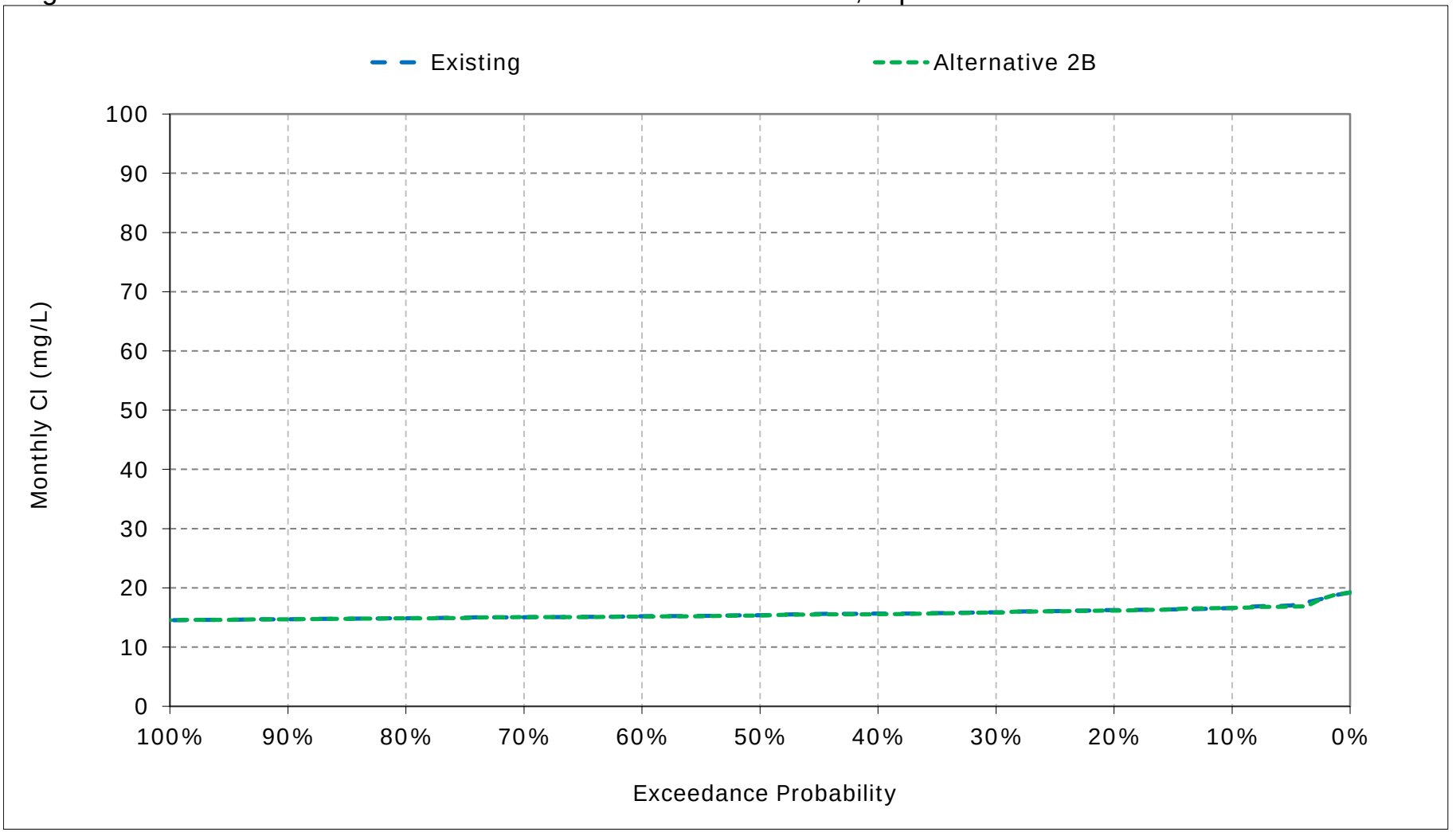


Figure 2-11. Sacramento River at Rio Vista Chloride, May Cl

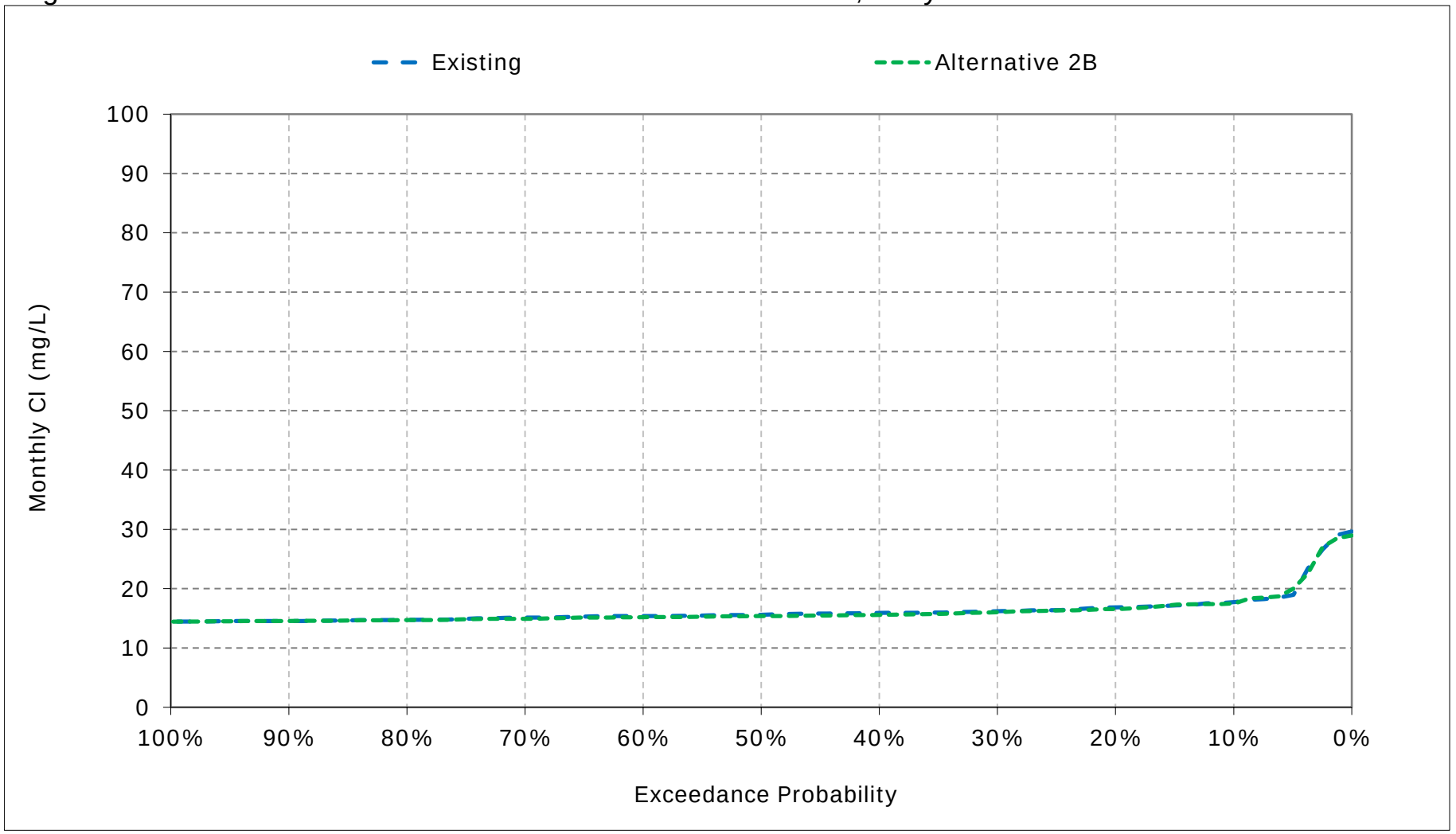


Figure 2-12. Sacramento River at Rio Vista Chloride, June Cl

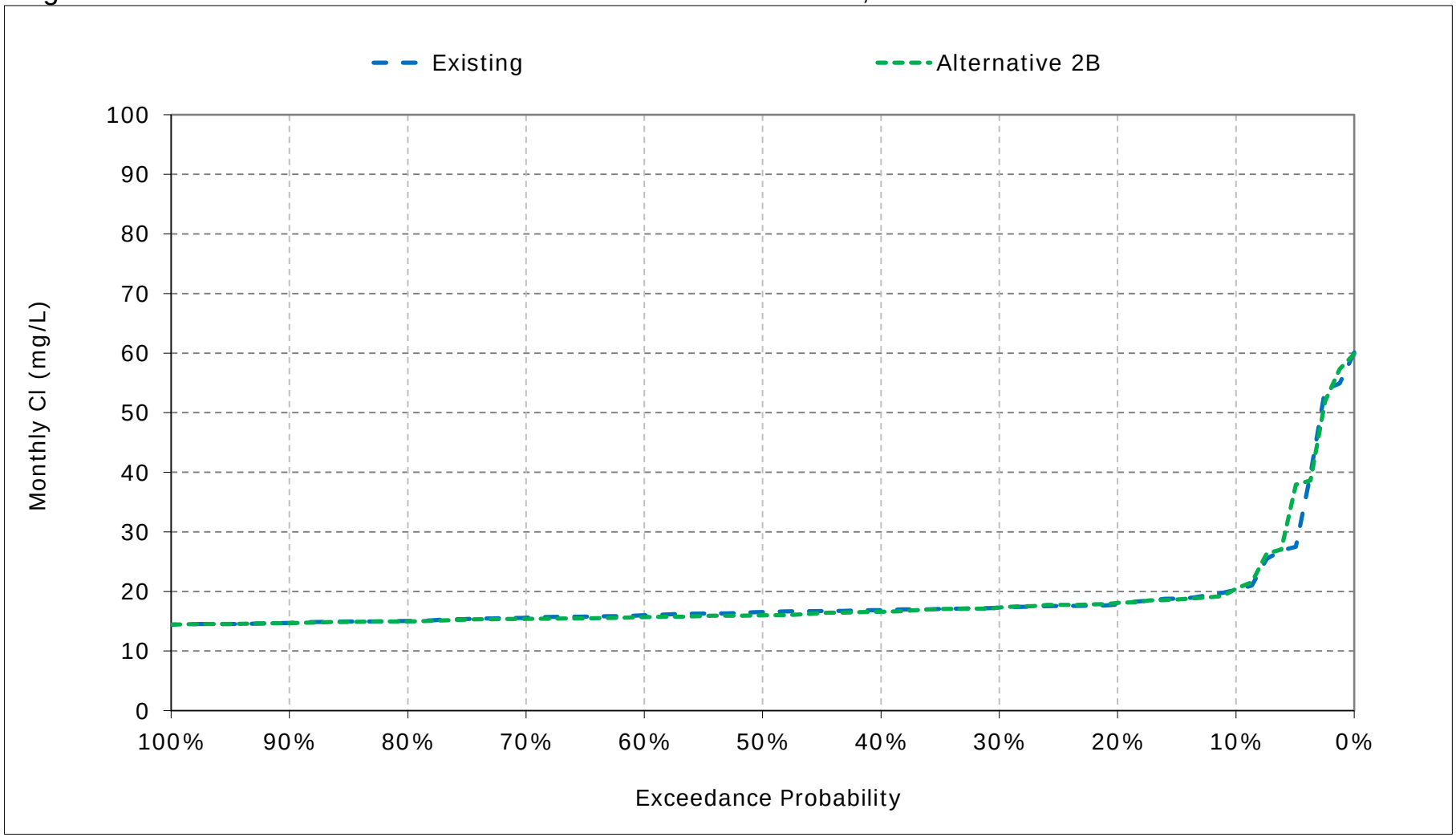


Figure 2-13. Sacramento River at Rio Vista Chloride, July Cl

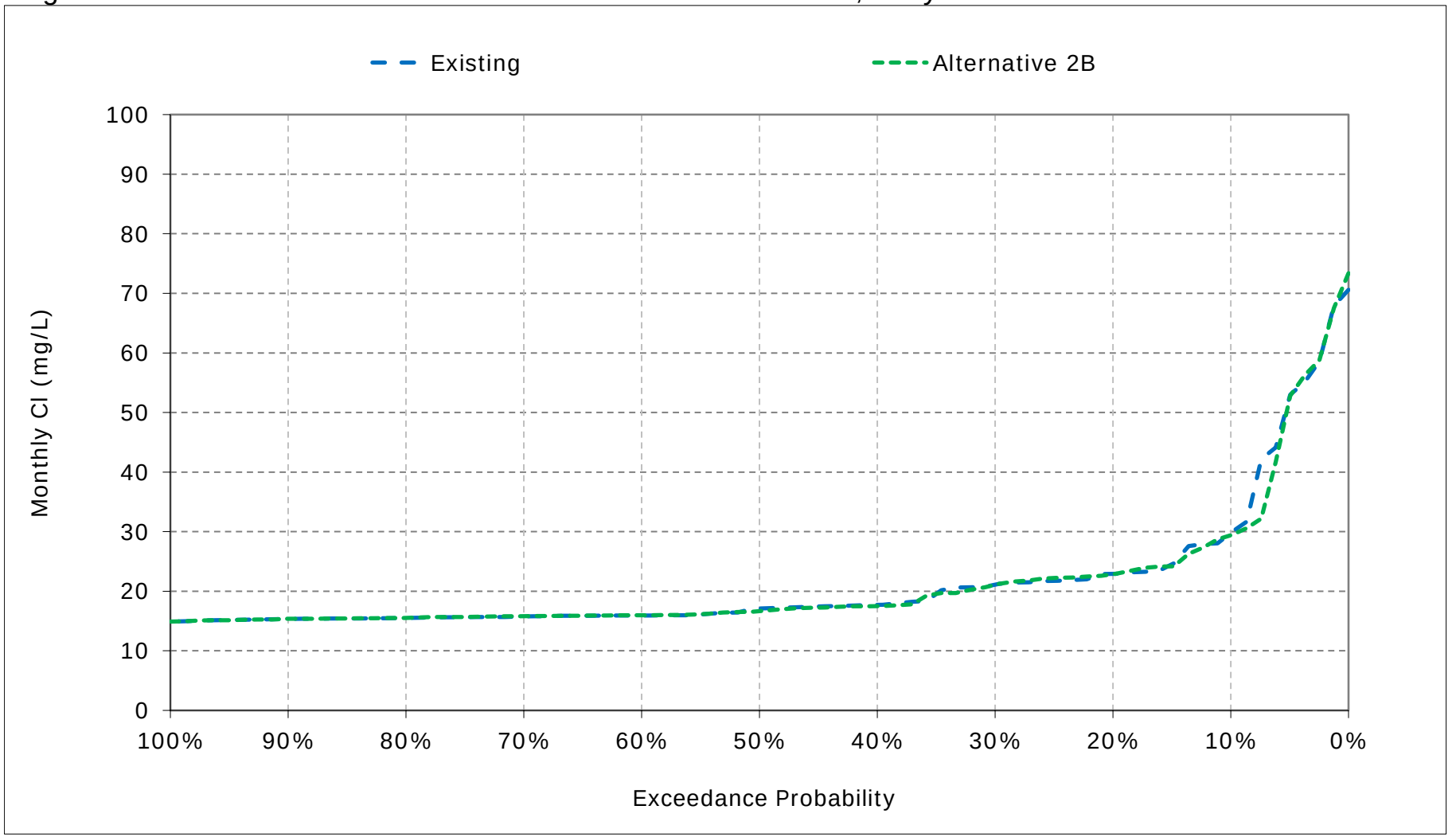


Figure 2-14. Sacramento River at Rio Vista Chloride, August Cl

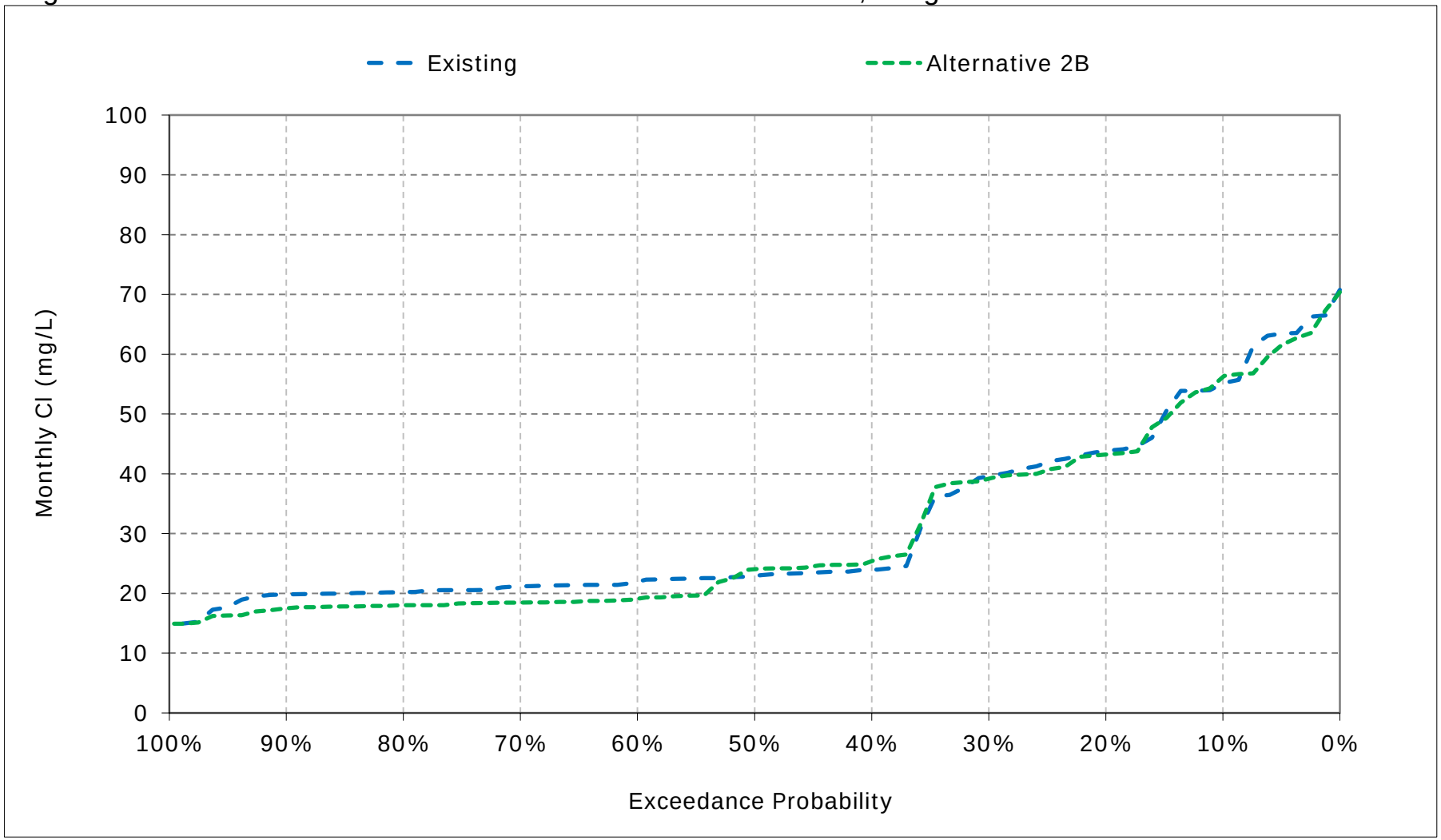


Figure 2-15. Sacramento River at Rio Vista Chloride, September Cl

Figure 2-16. Sacramento River at Rio Vista Chloride, October Cl

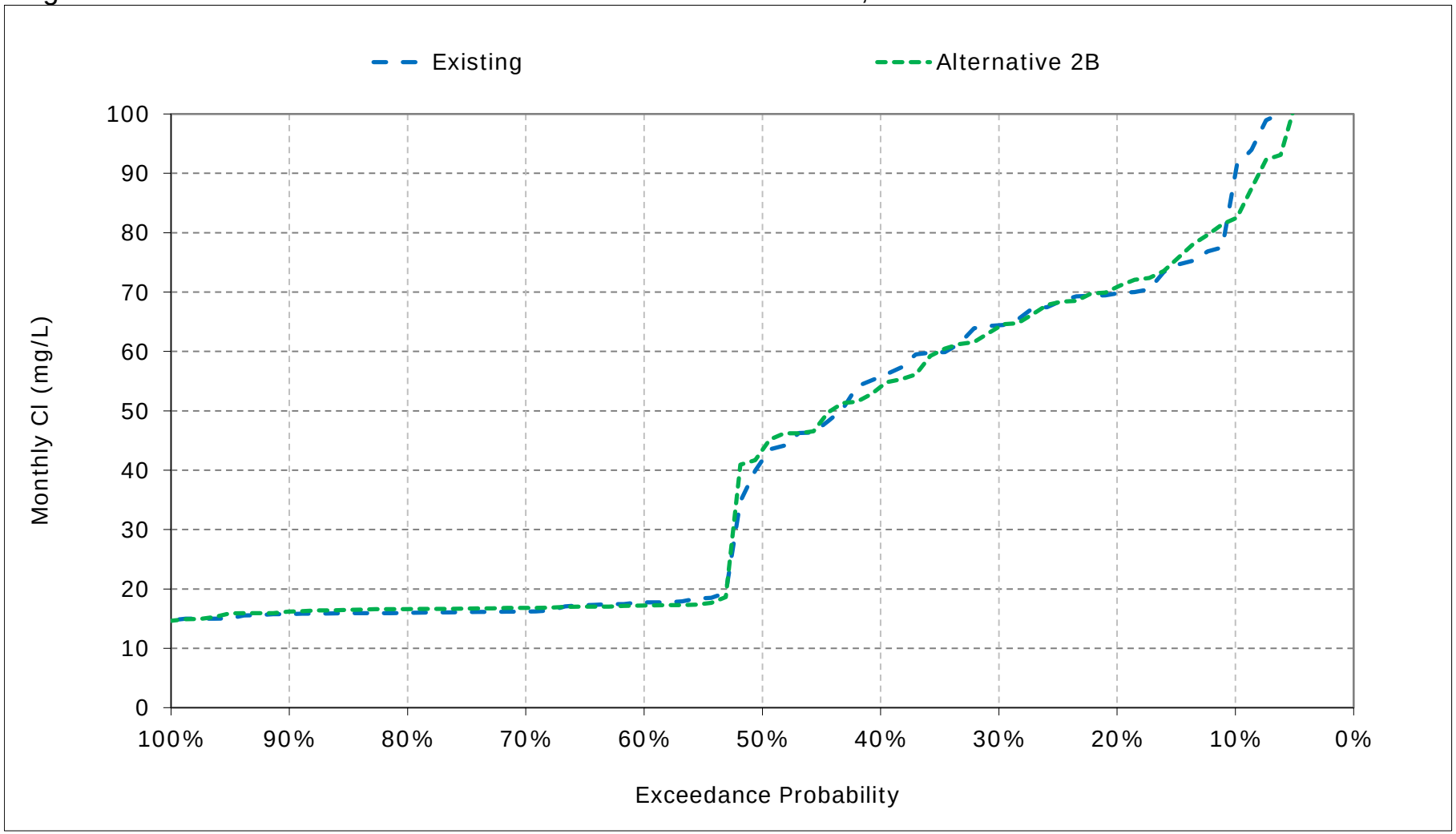


Figure 2-17. Sacramento River at Rio Vista Chloride, November Cl

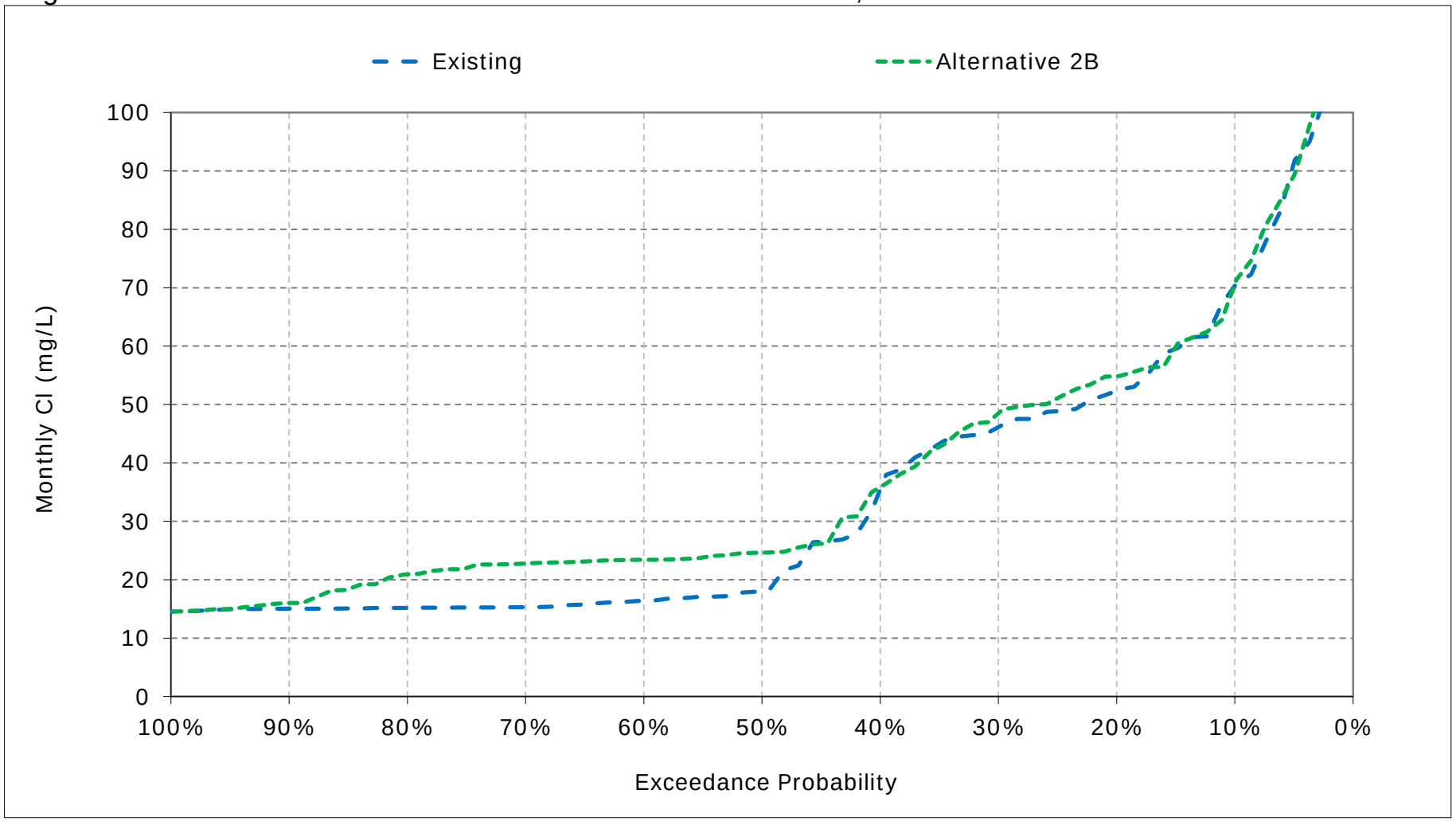
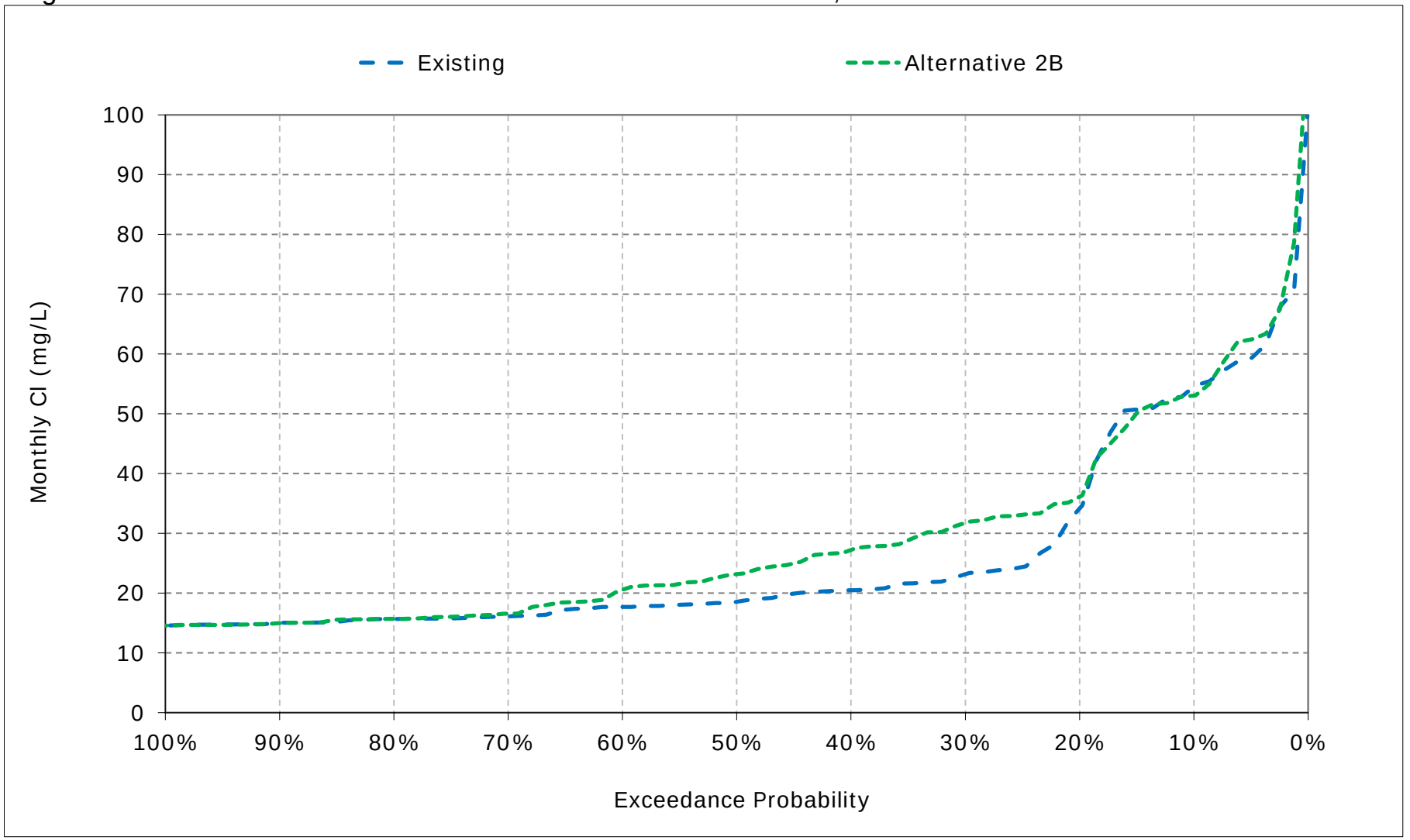


Figure 2-18. Sacramento River at Rio Vista Chloride, December Cl



## Table 3-1. Sacramento River at Collinsville Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2,964 | 2,757 | 2,546 | 1,405 | 564 | 475 | 527 | 828 | 1,134 | 1,699 | 2,329 | 2,681 |
| 20% | 2,755 | 2,593 | 2,051 | 1,164 | 332 | 225 | 243 | 552 | 893 | 1,378 | 1,993 | 2,497 |
| 30% | 2,699 | 2,527 | 1,366 | 835 | 142 | 67 | 103 | 399 | 851 | 1,249 | 1,923 | 2,440 |
| 40% | 2,607 | 2,353 | 1,119 | 422 | 62 | 39 | 66 | 193 | 676 | 874 | 1,456 | 2,189 |
| 50% | 2,303 | 928 | 893 | 304 | 37 | 24 | 30 | 94 | 555 | 752 | 1,331 | 1,866 |
| 60% | 1,010 | 788 | 826 | 135 | 20 | 19 | 21 | 49 | 375 | 560 | 1,295 | 739 |
| 70% | 520 | 412 | 239 | 23 | 18 | 17 | 19 | 27 | 258 | 508 | 1,204 | 359 |
| 80% | 479 | 342 | 98 | 19 | 17 | 16 | 17 | 18 | 83 | 433 | 1,135 | 309 |
| 90% | 444 | 307 | 22 | 16 | 16 | 16 | 16 | 16 | 18 | 304 | 1,068 | 278 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1,724 | 1,470 | 1,062 | 533 | 190 | 126 | 153 | 295 | 603 | 906 | 1,519 | 1,479 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 1,290 | 859 | 281 | 74 | 19 | 18 | 23 | 43 | 161 | 366 | 1,053 | 279 |
| Above Normal (15%) | 1,810 | 1,460 | 1,010 | 283 | 56 | 19 | 27 | 51 | 364 | 504 | 1,163 | 719 |
| Below Normal (17%) | 1,814 | 1,610 | 1,401 | 563 | 99 | 72 | 80 | 175 | 533 | 807 | 1,393 | 2,014 |
| Dry (22%) | 1,847 | 1,752 | 1,317 | 851 | 303 | 167 | 201 | 413 | 832 | 1,297 | 1,952 | 2,468 |
| Critical (15%) | 2,290 | 2,221 | 2,029 | 1,268 | 634 | 471 | 574 | 1,048 | 1,539 | 2,007 | 2,383 | 2,732 |

### Alternative 2B

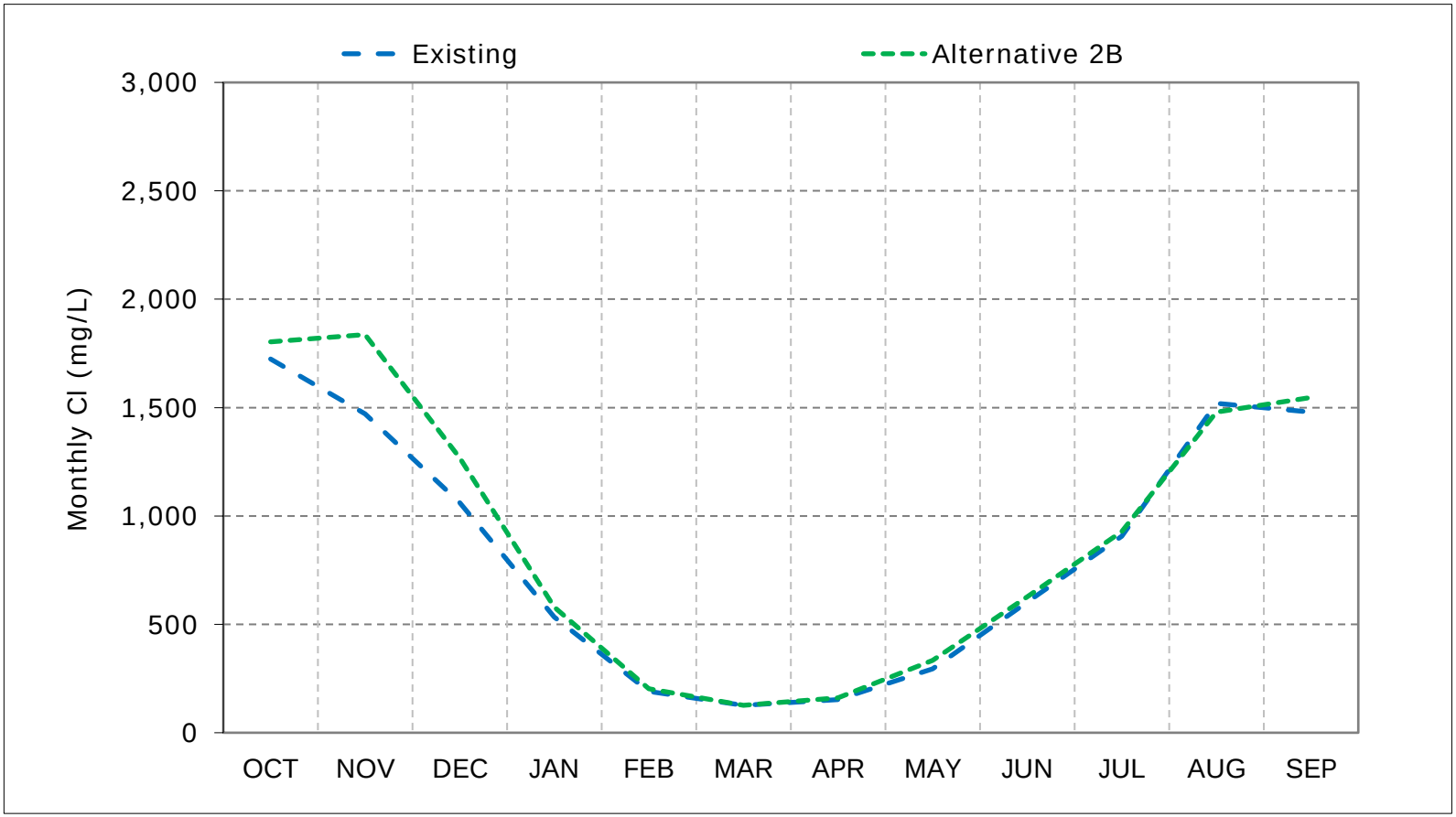
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2,927 | 2,720 | 2,539 | 1,659 | 553 | 481 | 538 | 864 | 1,151 | 1,682 | 2,283 | 2,628 |
| 20% | 2,750 | 2,612 | 2,059 | 1,304 | 341 | 205 | 258 | 660 | 966 | 1,399 | 2,006 | 2,516 |
| 30% | 2,691 | 2,558 | 1,941 | 955 | 161 | 54 | 144 | 505 | 857 | 1,222 | 1,945 | 2,462 |
| 40% | 2,591 | 2,373 | 1,740 | 465 | 58 | 33 | 85 | 254 | 723 | 970 | 1,712 | 2,321 |
| 50% | 2,308 | 1,667 | 1,360 | 280 | 40 | 22 | 38 | 132 | 542 | 801 | 1,520 | 1,916 |
| 60% | 943 | 1,581 | 1,009 | 121 | 20 | 19 | 22 | 79 | 413 | 592 | 1,098 | 595 |
| 70% | 891 | 1,521 | 367 | 24 | 18 | 17 | 19 | 33 | 295 | 531 | 997 | 571 |
| 80% | 828 | 1,304 | 182 | 18 | 17 | 16 | 17 | 18 | 88 | 460 | 968 | 528 |
| 90% | 732 | 556 | 37 | 16 | 16 | 16 | 16 | 16 | 18 | 306 | 904 | 461 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1,803 | 1,837 | 1,268 | 580 | 202 | 126 | 162 | 333 | 627 | 928 | 1,479 | 1,547 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 1,395 | 1,331 | 391 | 72 | 18 | 18 | 26 | 61 | 186 | 379 | 870 | 496 |
| Above Normal (15%) | 1,910 | 1,812 | 1,302 | 309 | 42 | 18 | 31 | 78 | 363 | 520 | 1,009 | 548 |
| Below Normal (17%) | 1,906 | 1,961 | 1,667 | 577 | 94 | 67 | 94 | 233 | 543 | 890 | 1,613 | 2,128 |
| Dry (22%) | 1,923 | 2,085 | 1,579 | 966 | 336 | 163 | 216 | 481 | 874 | 1,313 | 1,978 | 2,493 |
| Critical (15%) | 2,281 | 2,439 | 2,203 | 1,377 | 687 | 484 | 582 | 1,074 | 1,570 | 1,992 | 2,365 | 2,728 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -38 | -37 | -7 | 254 | -10 | 6 | 10 | 36 | 17 | -17 | -46 | -53 |
| 20% | -5 | 19 | 8 | 140 | 8 | -20 | 16 | 108 | 73 | 21 | 13 | 19 |
| 30% | -8 | 31 | 575 | 120 | 19 | -12 | 41 | 106 | 6 | -27 | 23 | 21 |
| 40% | -16 | 20 | 621 | 43 | -4 | -7 | 19 | 62 | 47 | 97 | 256 | 132 |
| 50% | 5 | 739 | 467 | -24 | 3 | -2 | 7 | 38 | -13 | 49 | 189 | 50 |
| 60% | -67 | 793 | 183 | -14 | 0 | -1 | 0 | 30 | 38 | 32 | -197 | -144 |
| 70% | 372 | 1,108 | 128 | 1 | 0 | 0 | 1 | 6 | 36 | 23 | -207 | 212 |
| 80% | 349 | 962 | 84 | 0 | 0 | 0 | -1 | 0 | 5 | 27 | -168 | 219 |
| 90% | 288 | 249 | 15 | 0 | 0 | 0 | 0 | -1 | 0 | 1 | -164 | 183 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 79 | 366 | 206 | 47 | 12 | 0 | 9 | 39 | 23 | 22 | -40 | 68 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 105 | 472 | 110 | -1 | -1 | 0 | 4 | 19 | 25 | 13 | -182 | 217 |
| Above Normal (15%) | 100 | 352 | 292 | 26 | -14 | -1 | 5 | 27 | -1 | 17 | -154 | -171 |
| Below Normal (17%) | 92 | 351 | 266 | 14 | -5 | -4 | 14 | 58 | 9 | 83 | 220 | 114 |
| Dry (22%) | 77 | 333 | 262 | 115 | 34 | -4 | 15 | 69 | 42 | 17 | 26 | 26 |
| Critical (15%) | -9 | 218 | 174 | 109 | 52 | 13 | 8 | 25 | 31 | -14 | -19 | -5 |

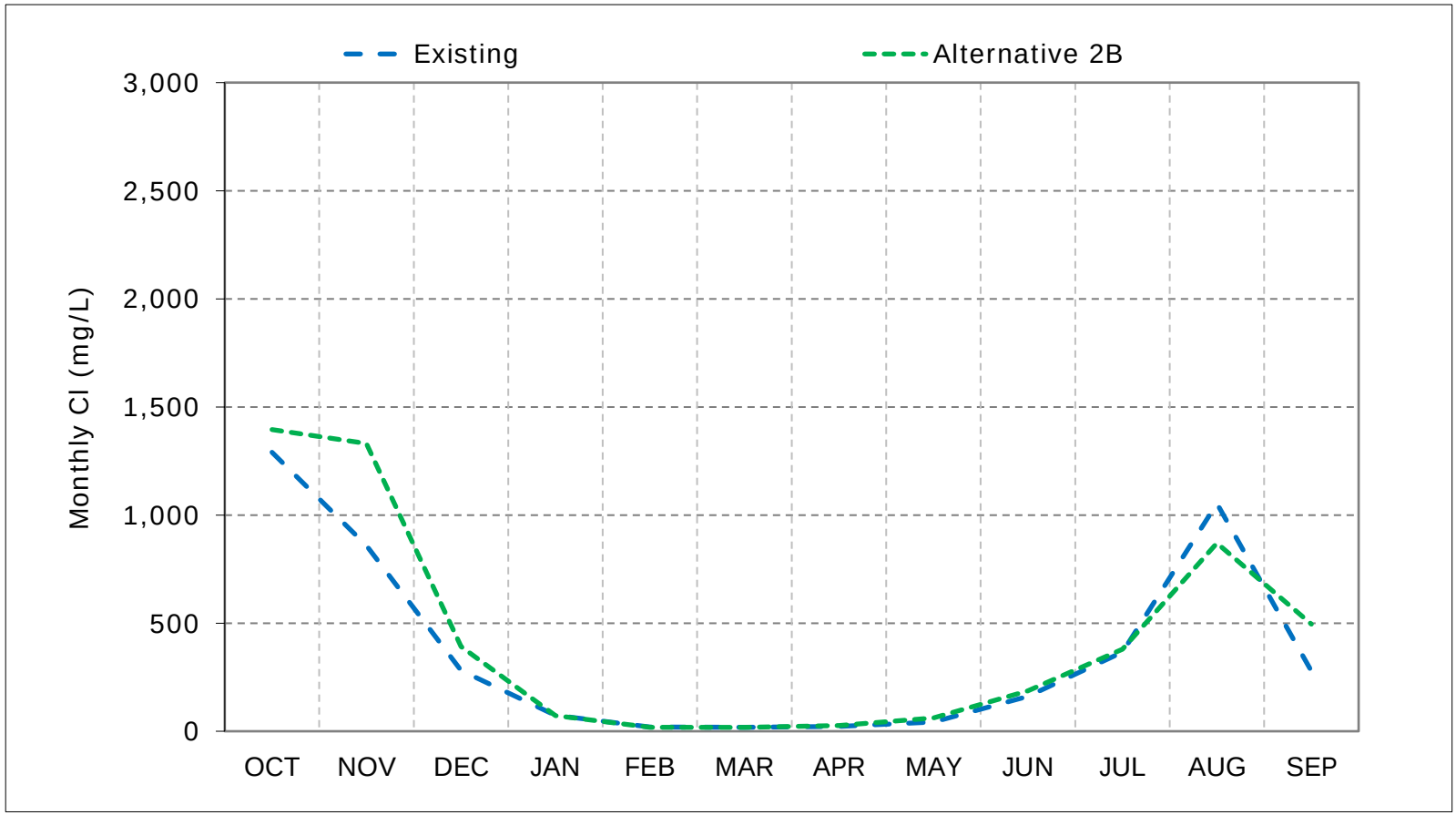
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 3-1. Sacramento River at Collinsville Chloride, Long-Term Average Cl



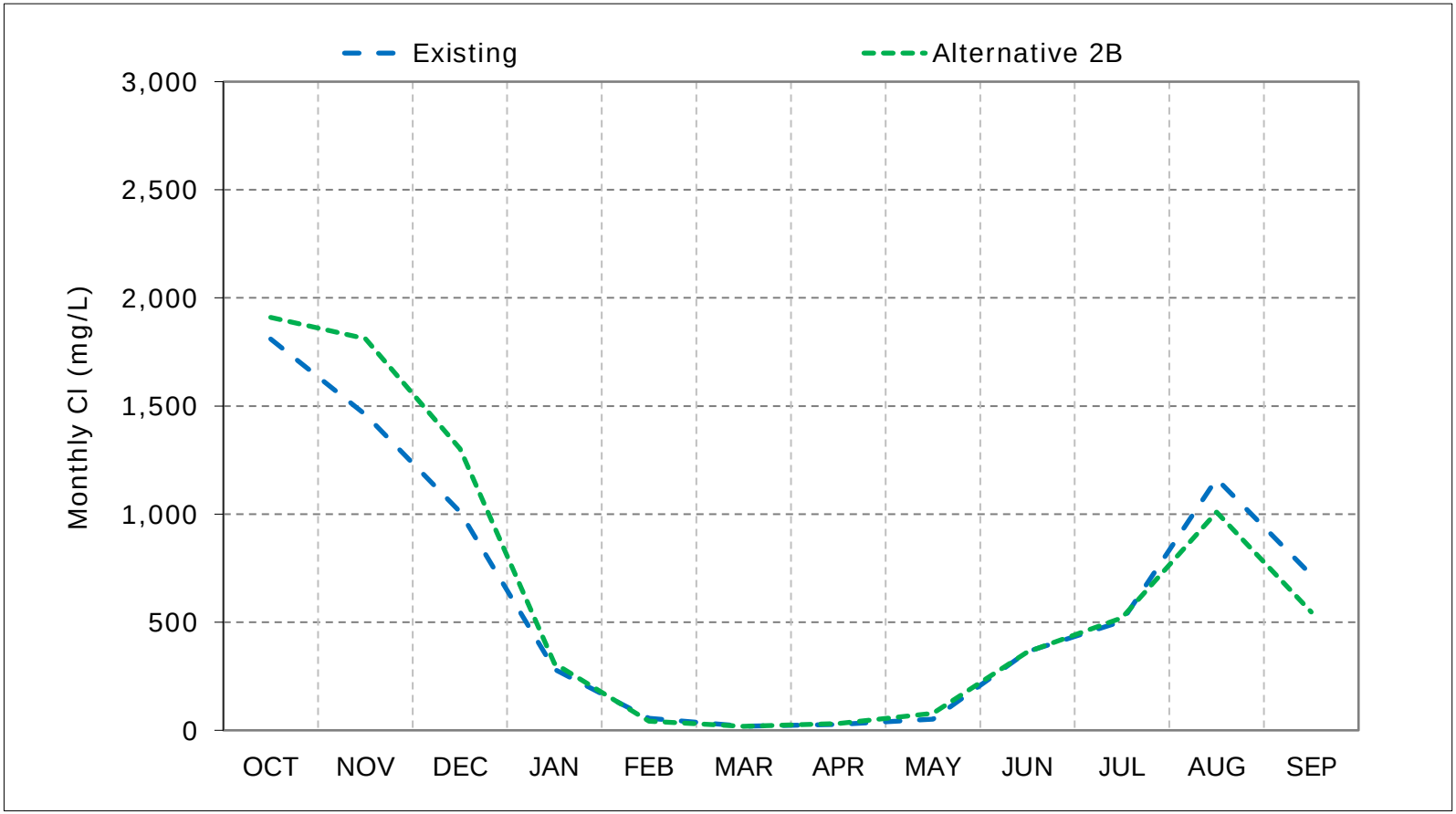

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-2. Sacramento River at Collinsville Chloride, Wet Year Average Cl



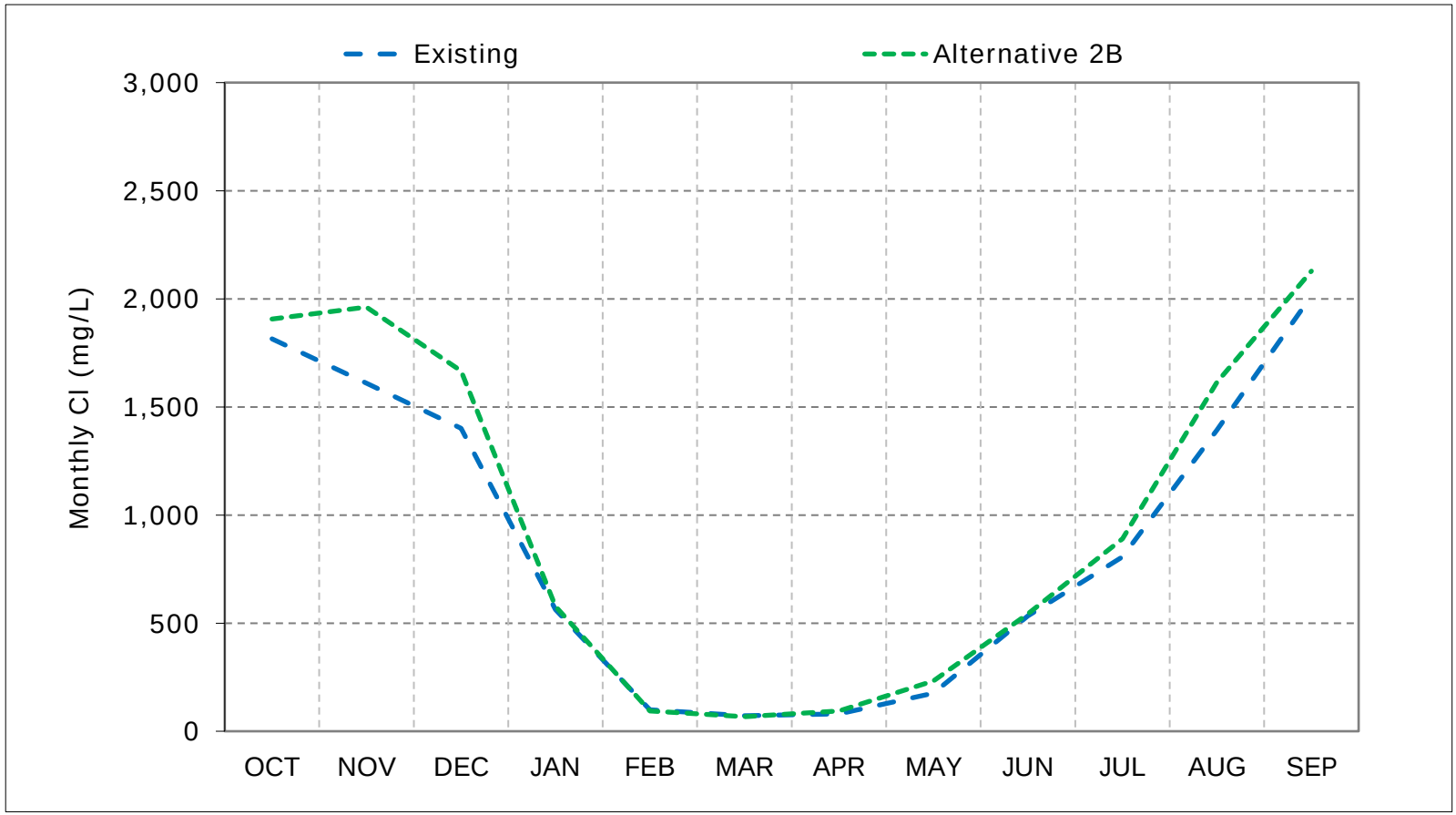

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-3. Sacramento River at Collinsville Chloride, Above Normal Year Average C



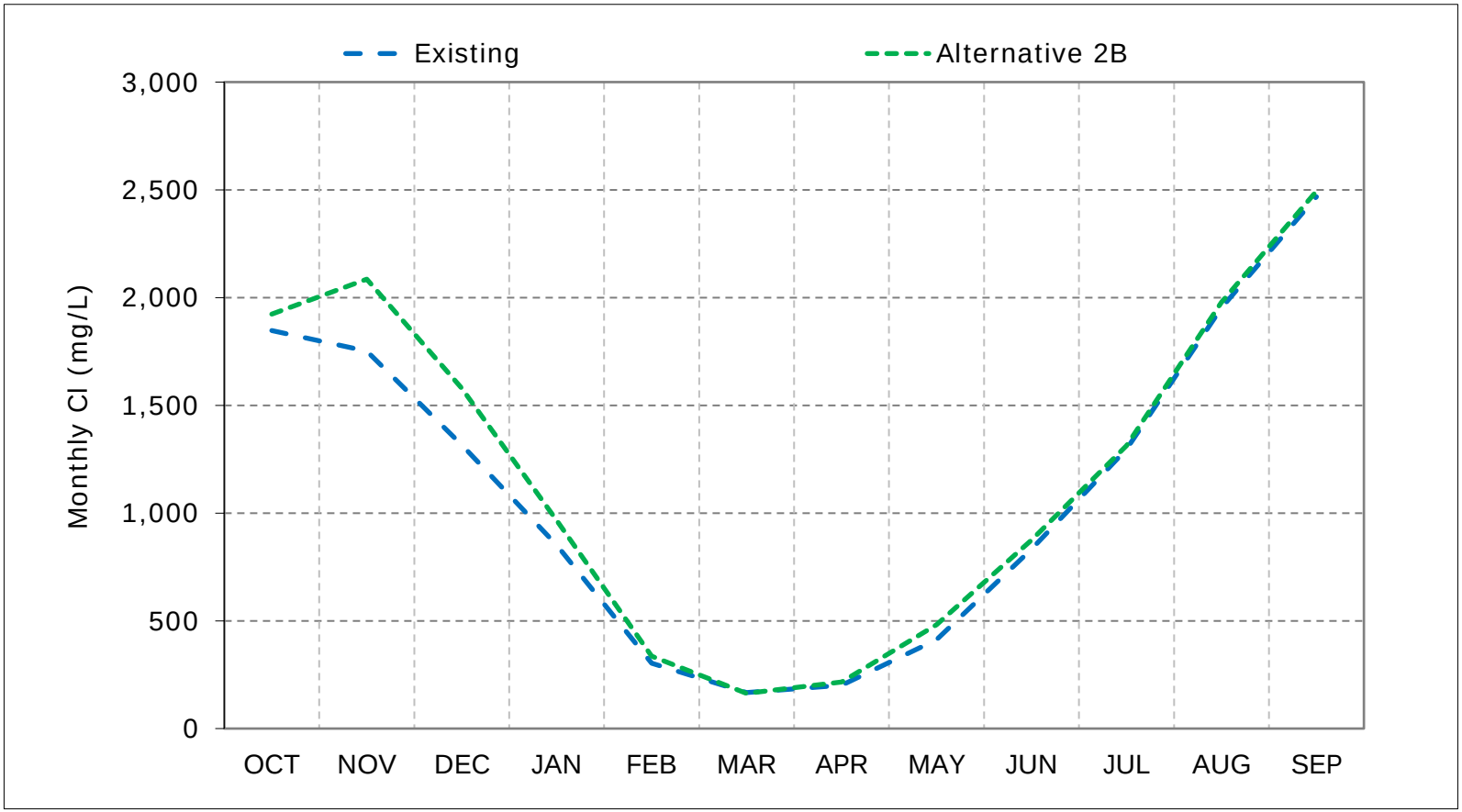

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-4. Sacramento River at Collinsville Chloride, Below Normal Year Average C



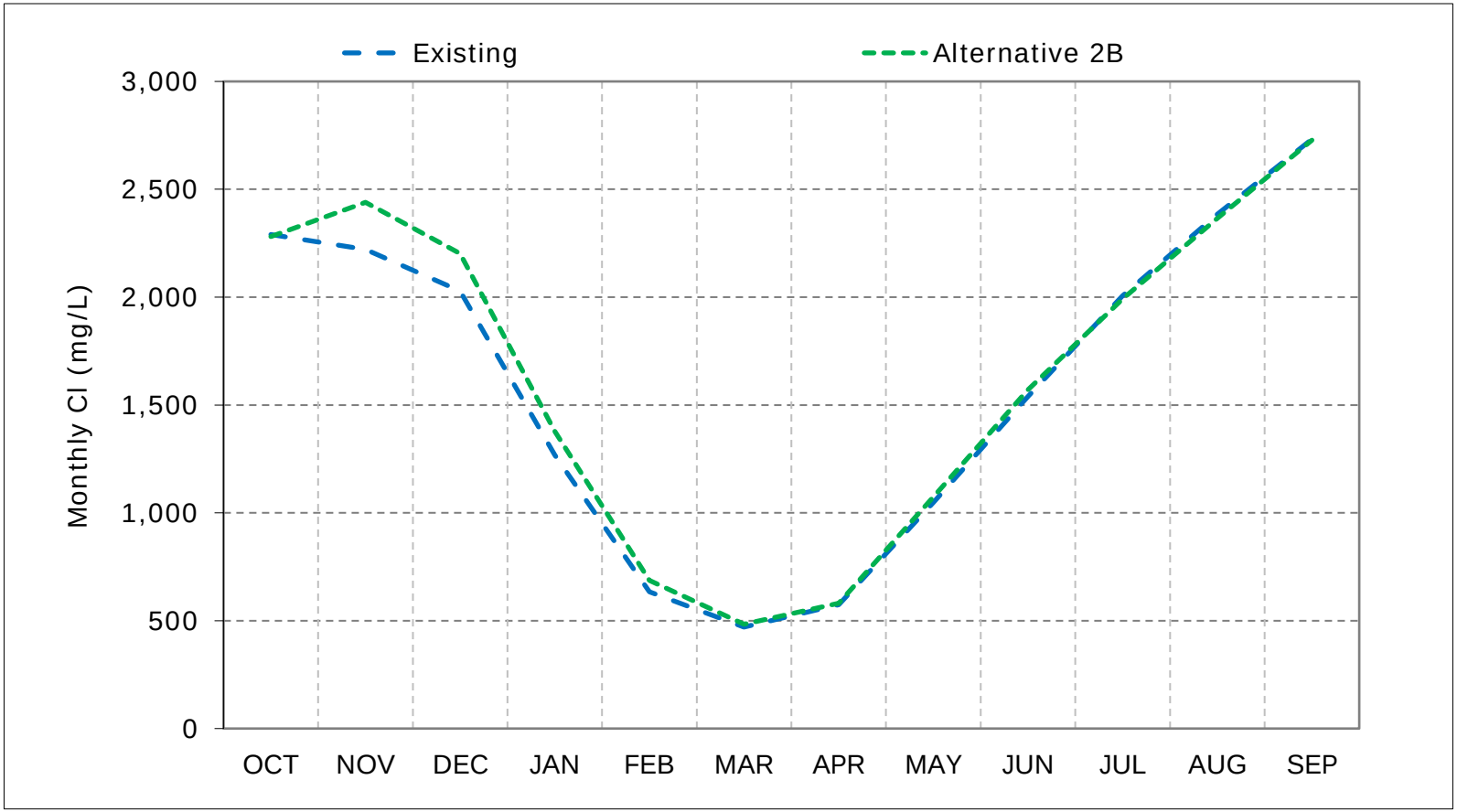

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-5. Sacramento River at Collinsville Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-6. Sacramento River at Collinsville Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-7. Sacramento River at Collinsville Chloride, January Cl

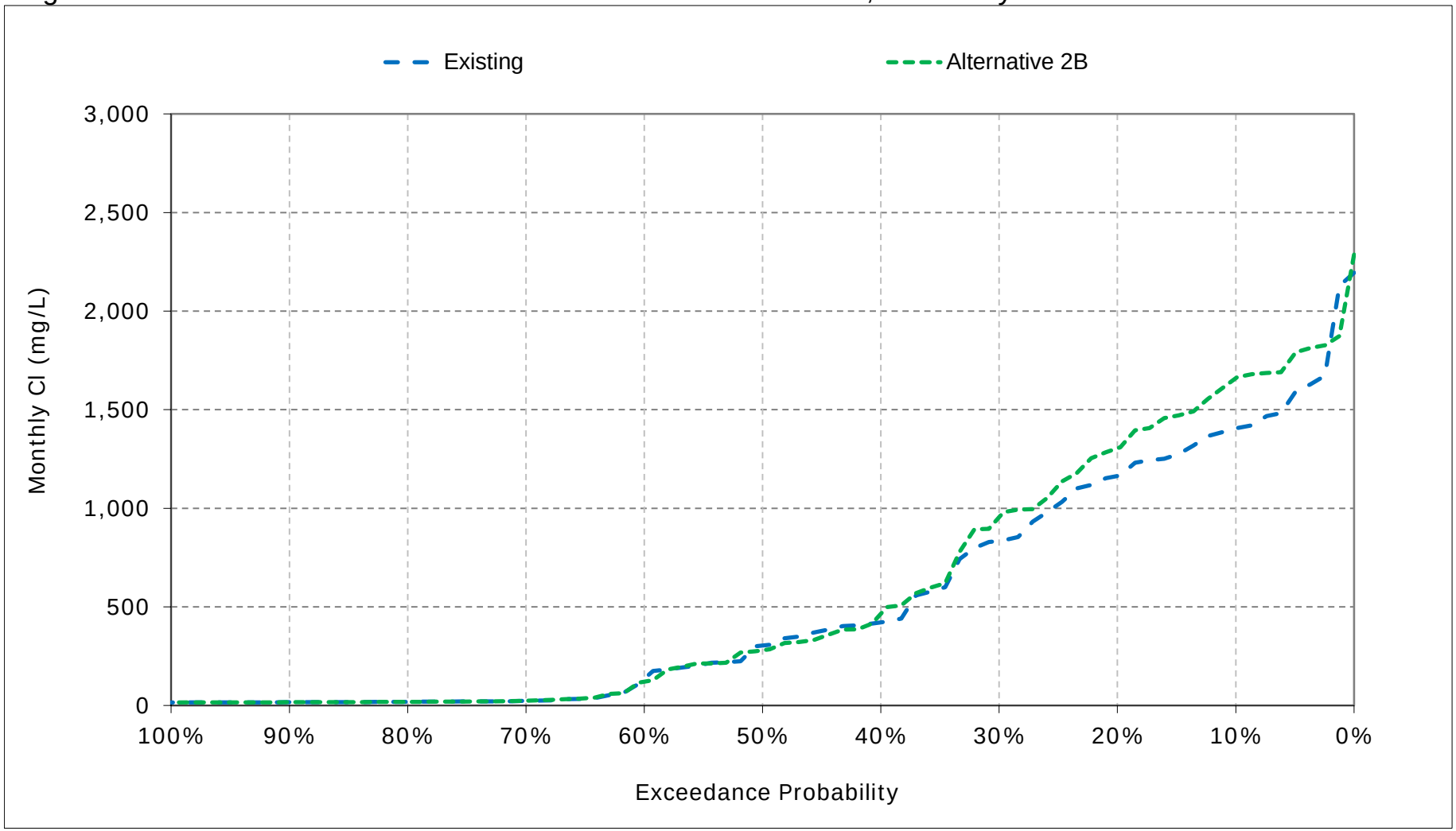


Figure 3-8. Sacramento River at Collinsville Chloride, February Cl

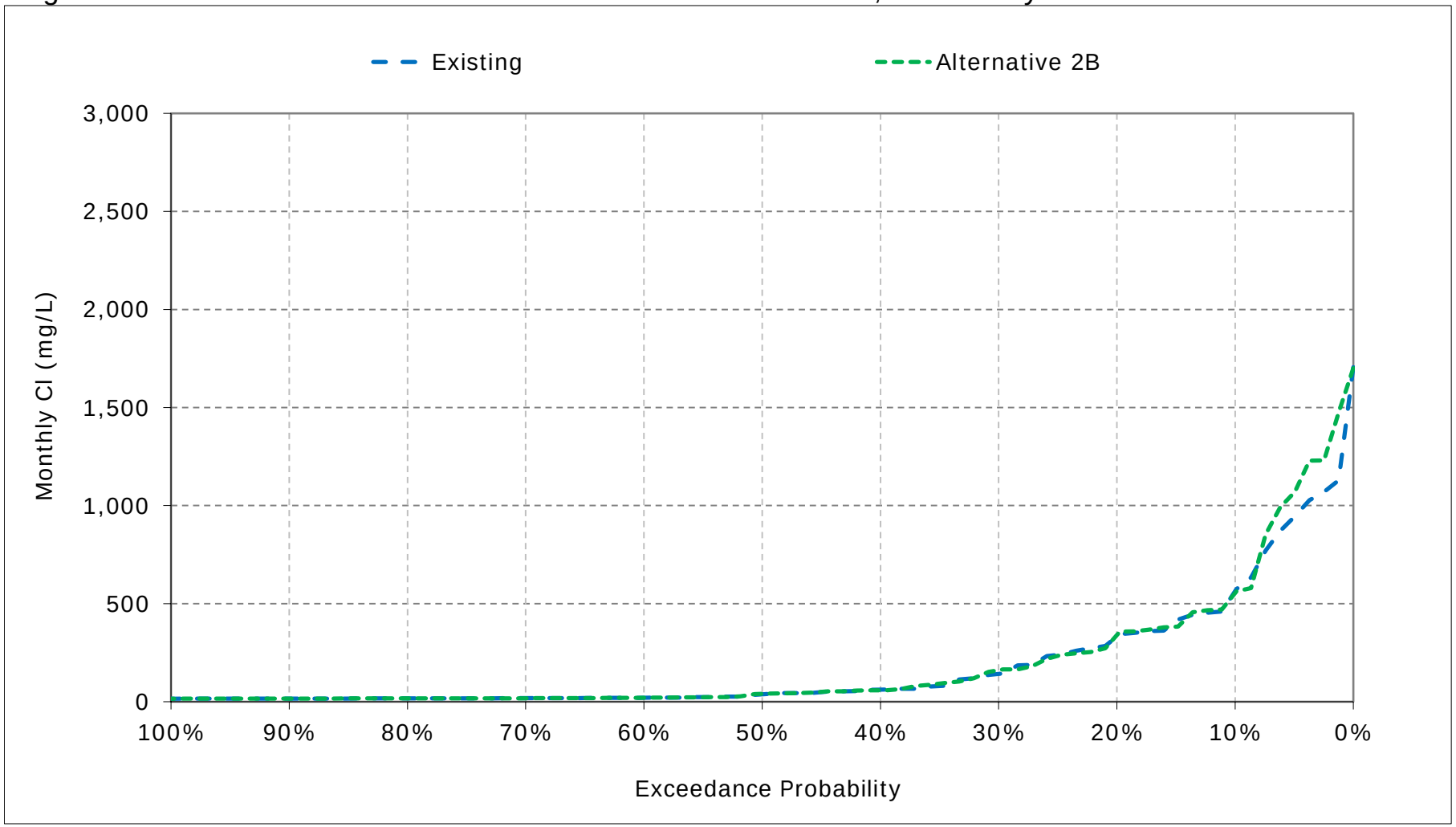


Figure 3-9. Sacramento River at Collinsville Chloride, March Cl

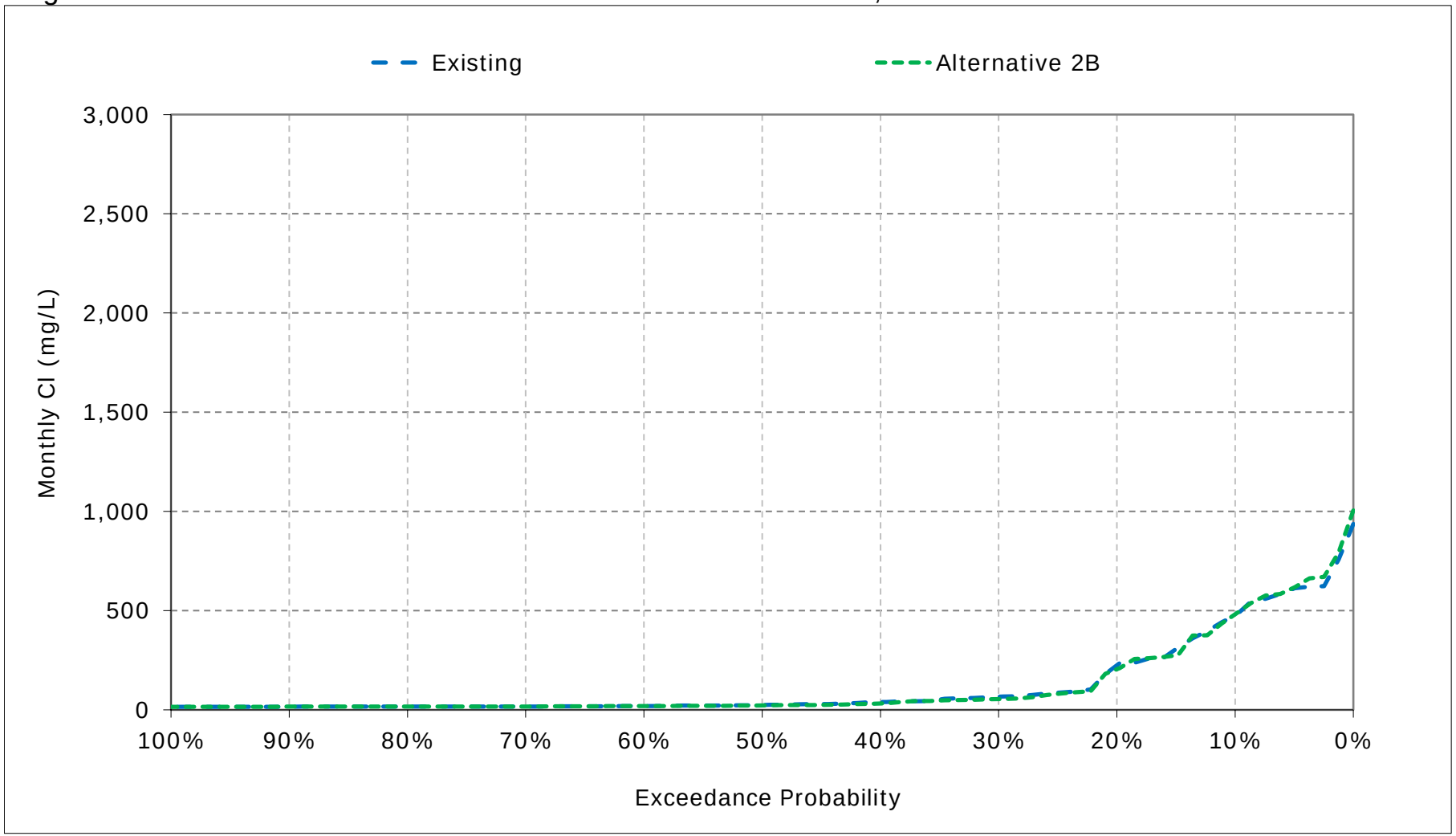


Figure 3-10. Sacramento River at Collinsville Chloride, April Cl

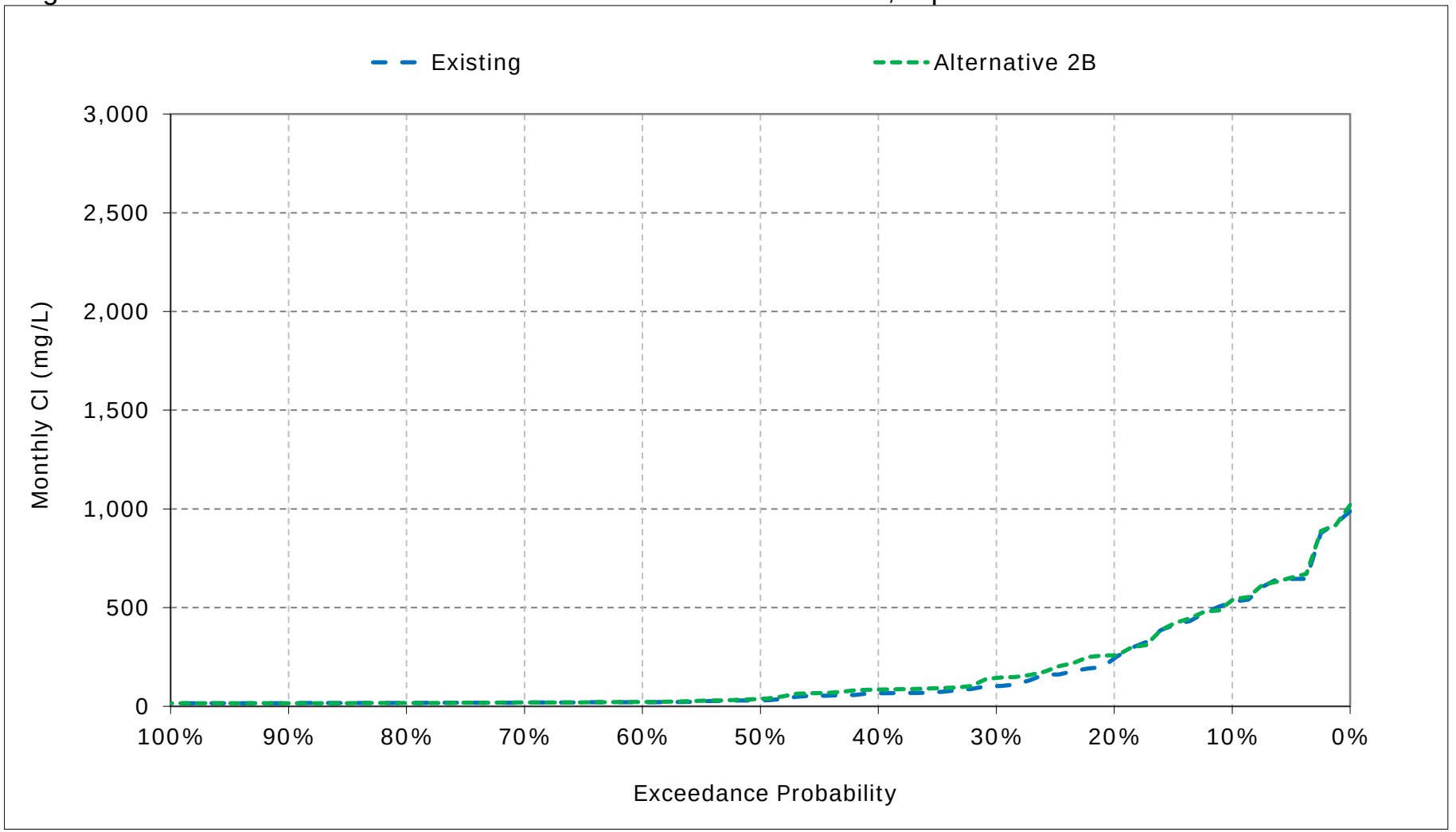


Figure 3-11. Sacramento River at Collinsville Chloride, May Cl

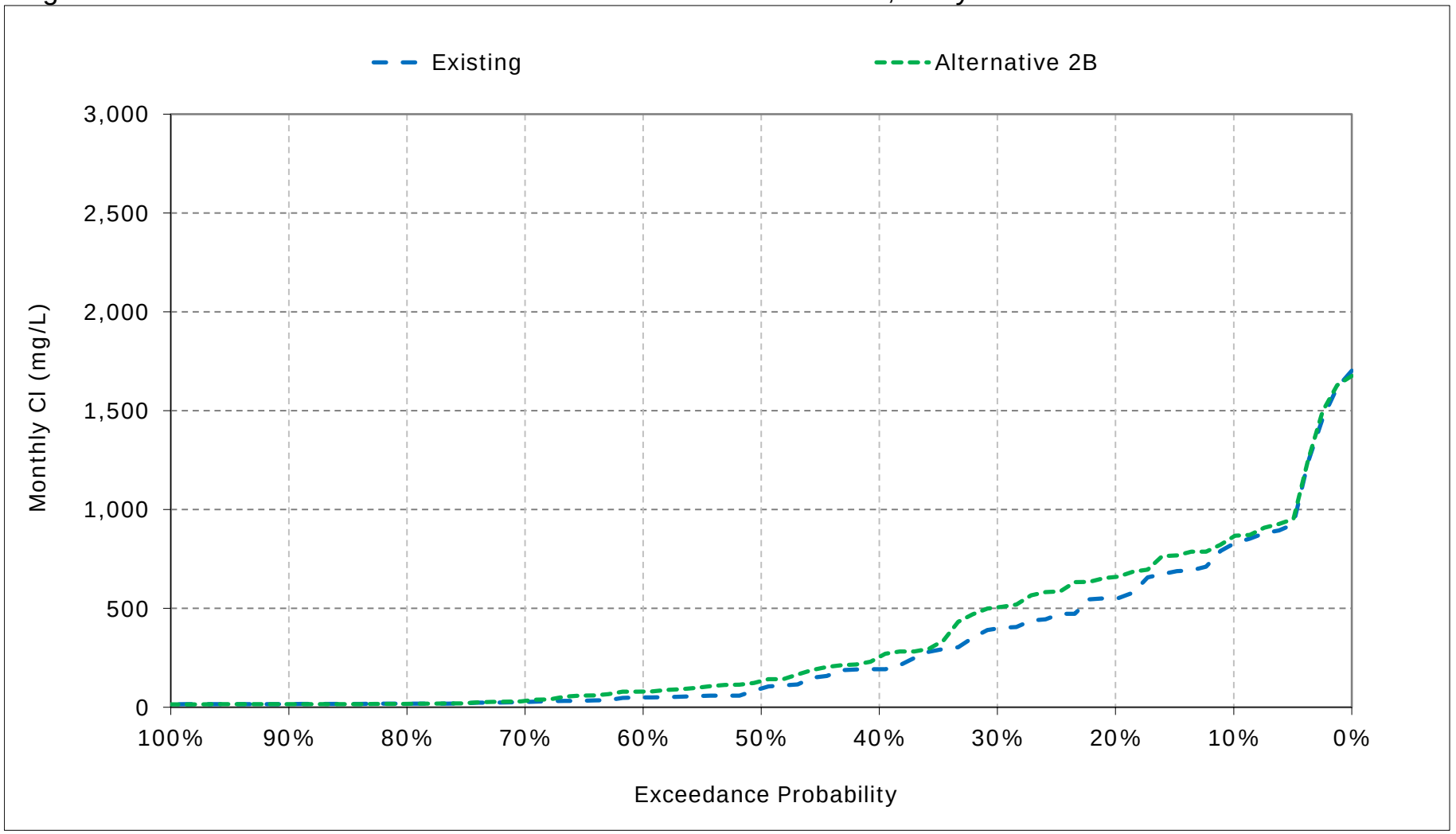


Figure 3-12. Sacramento River at Collinsville Chloride, June Cl

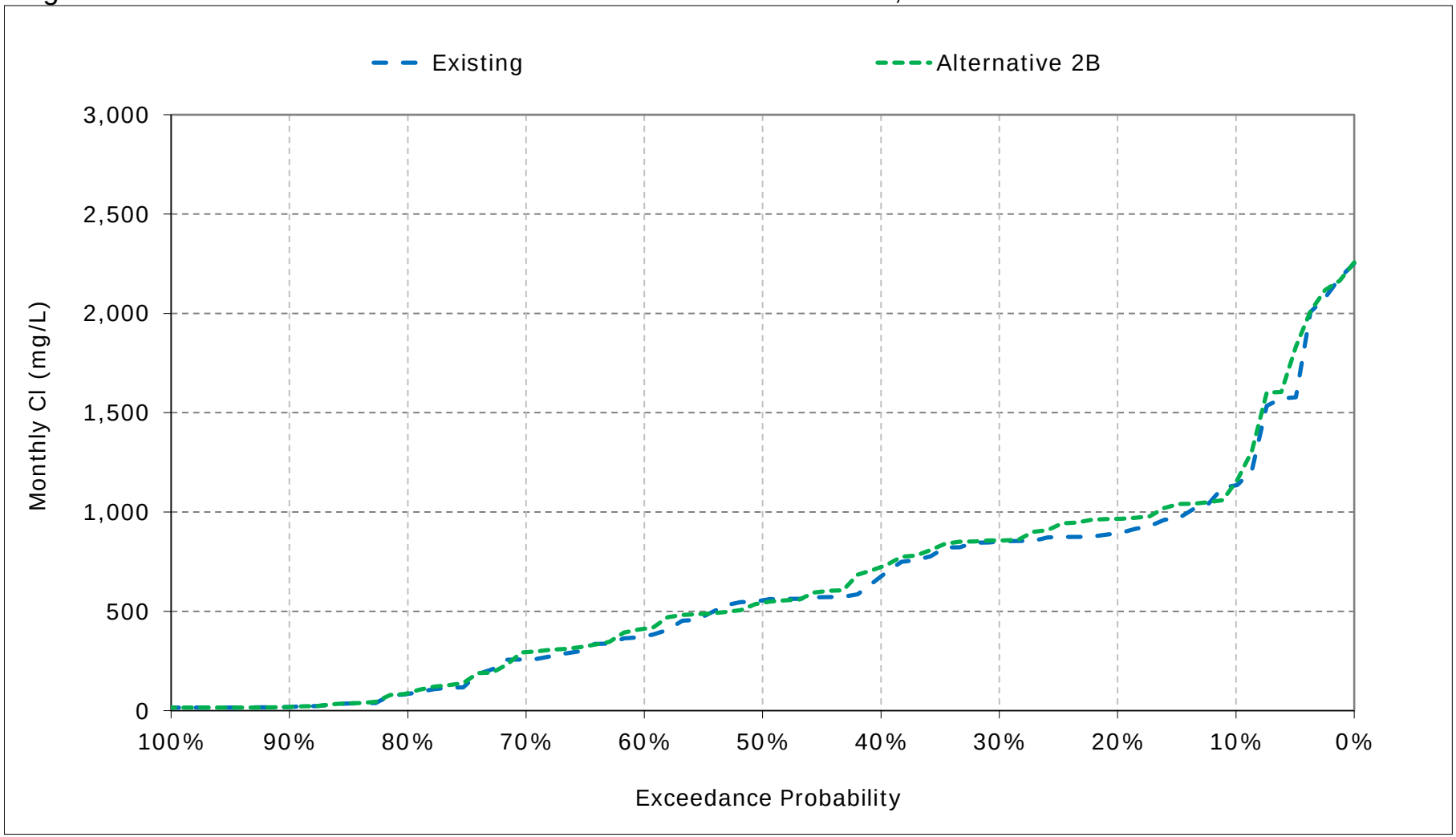


Figure 3-13. Sacramento River at Collinsville Chloride, July Cl

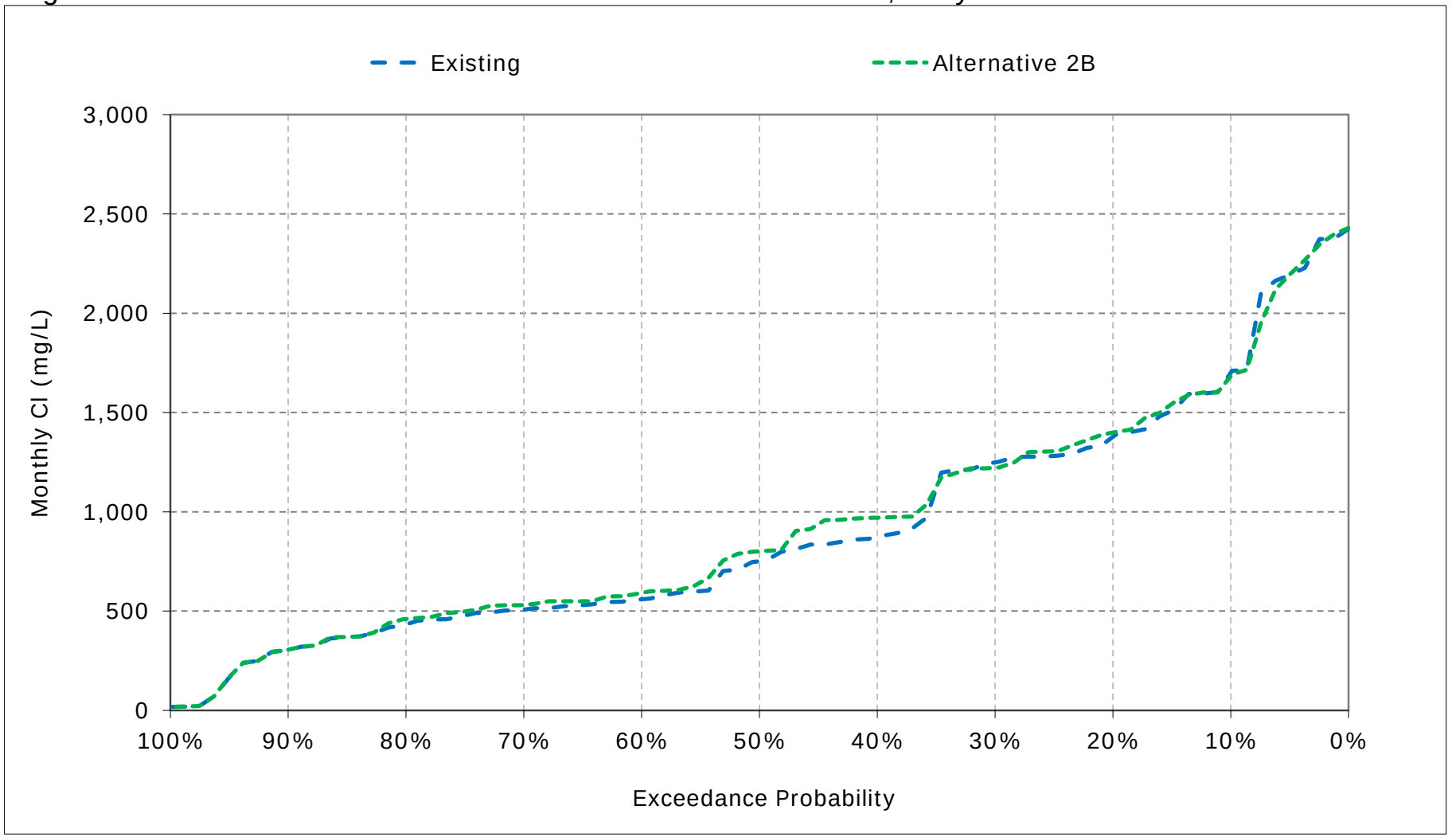


Figure 3-14. Sacramento River at Collinsville Chloride, August Cl

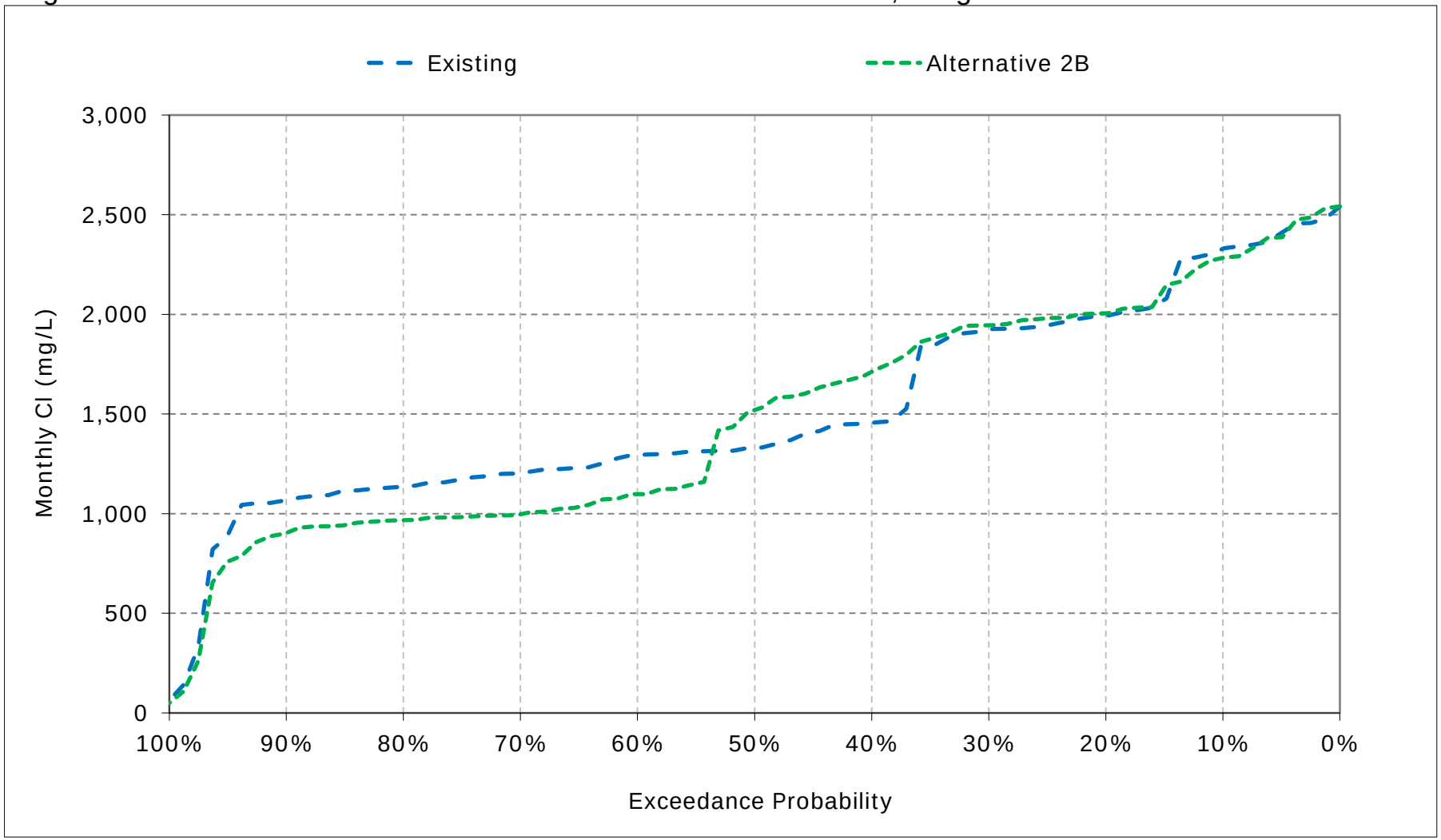


Figure 3-15. Sacramento River at Collinsville Chloride, September Cl

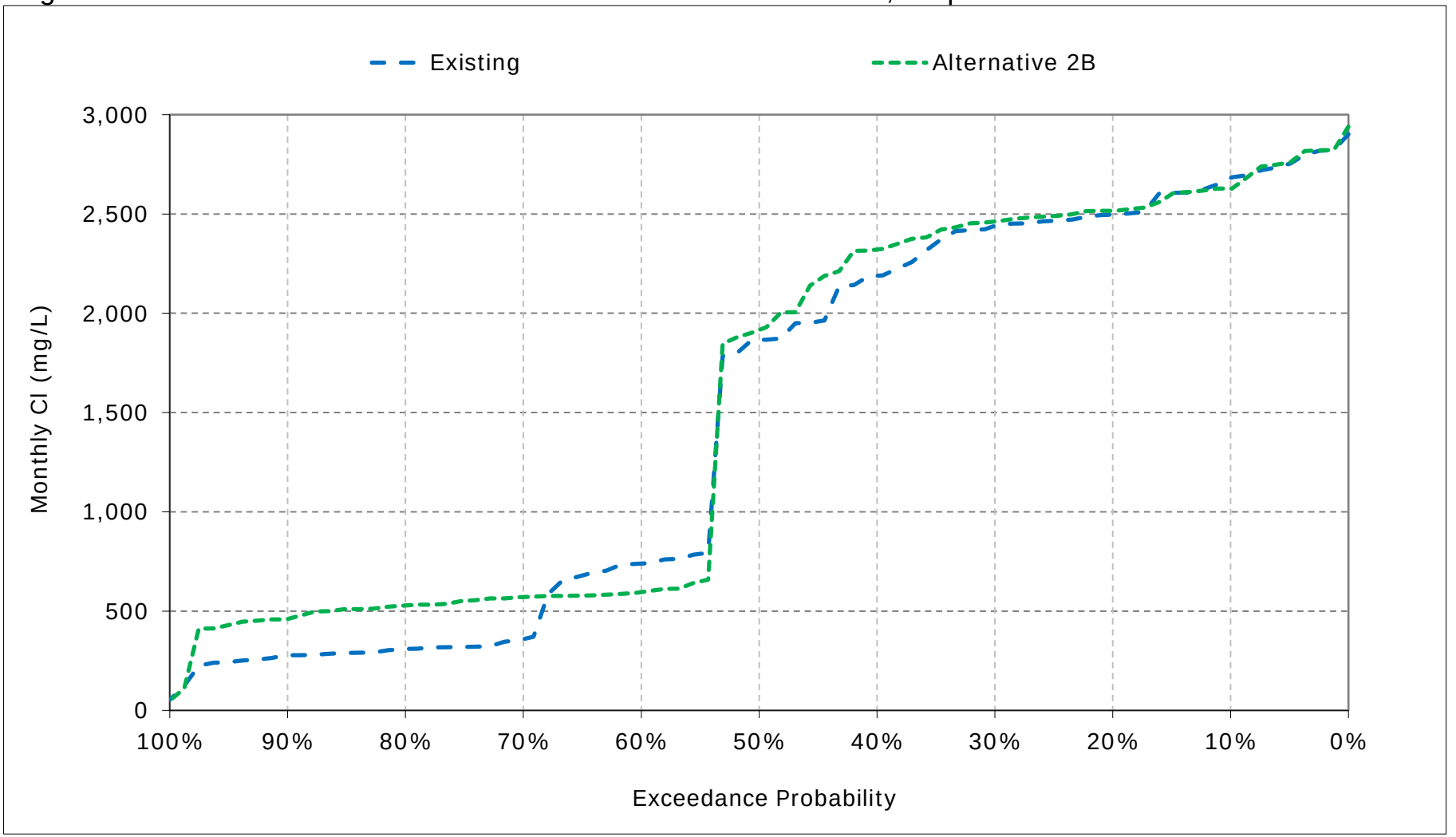


Figure 3-16. Sacramento River at Collinsville Chloride, October Cl

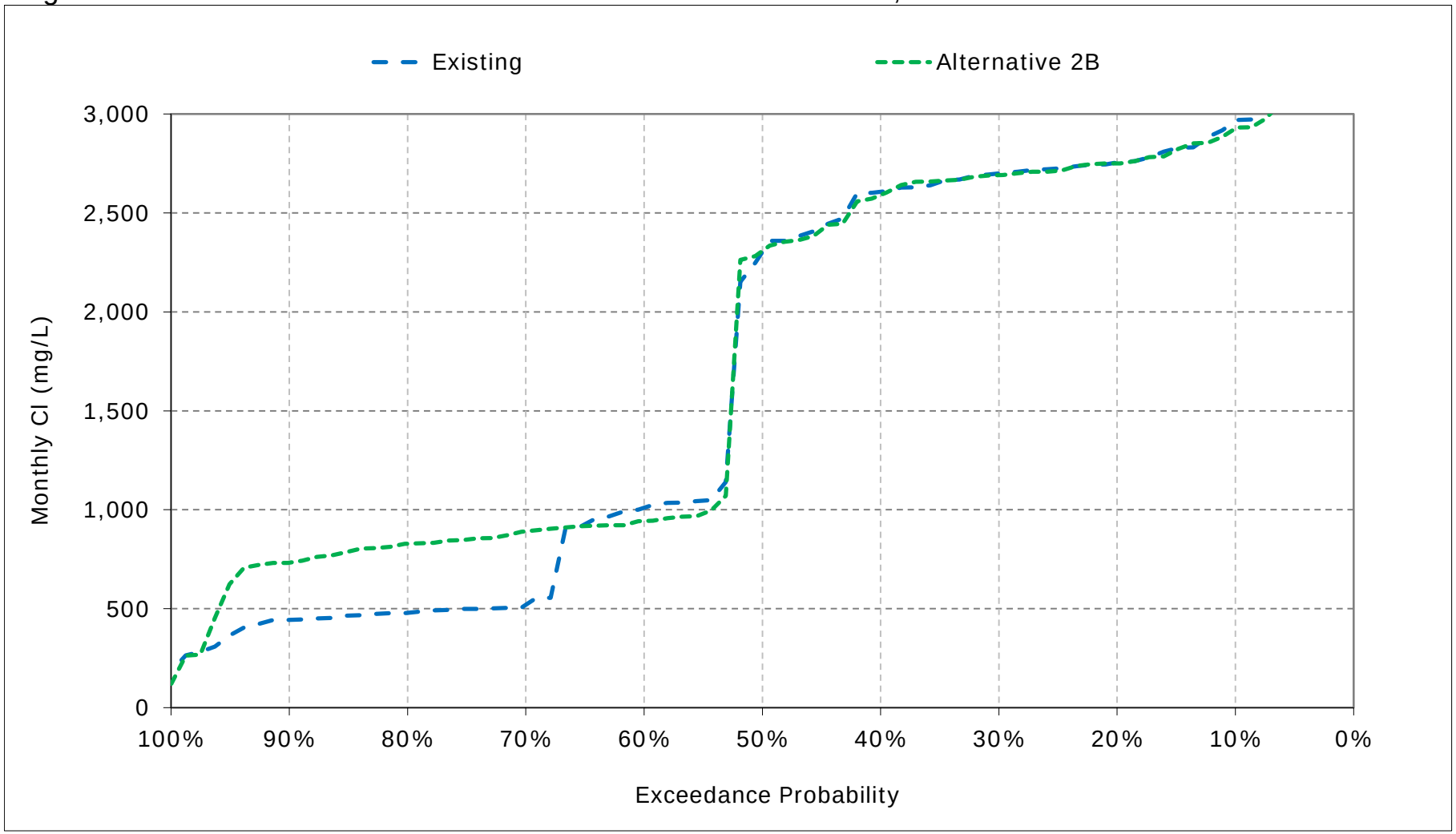


Figure 3-17. Sacramento River at Collinsville Chloride, November Cl

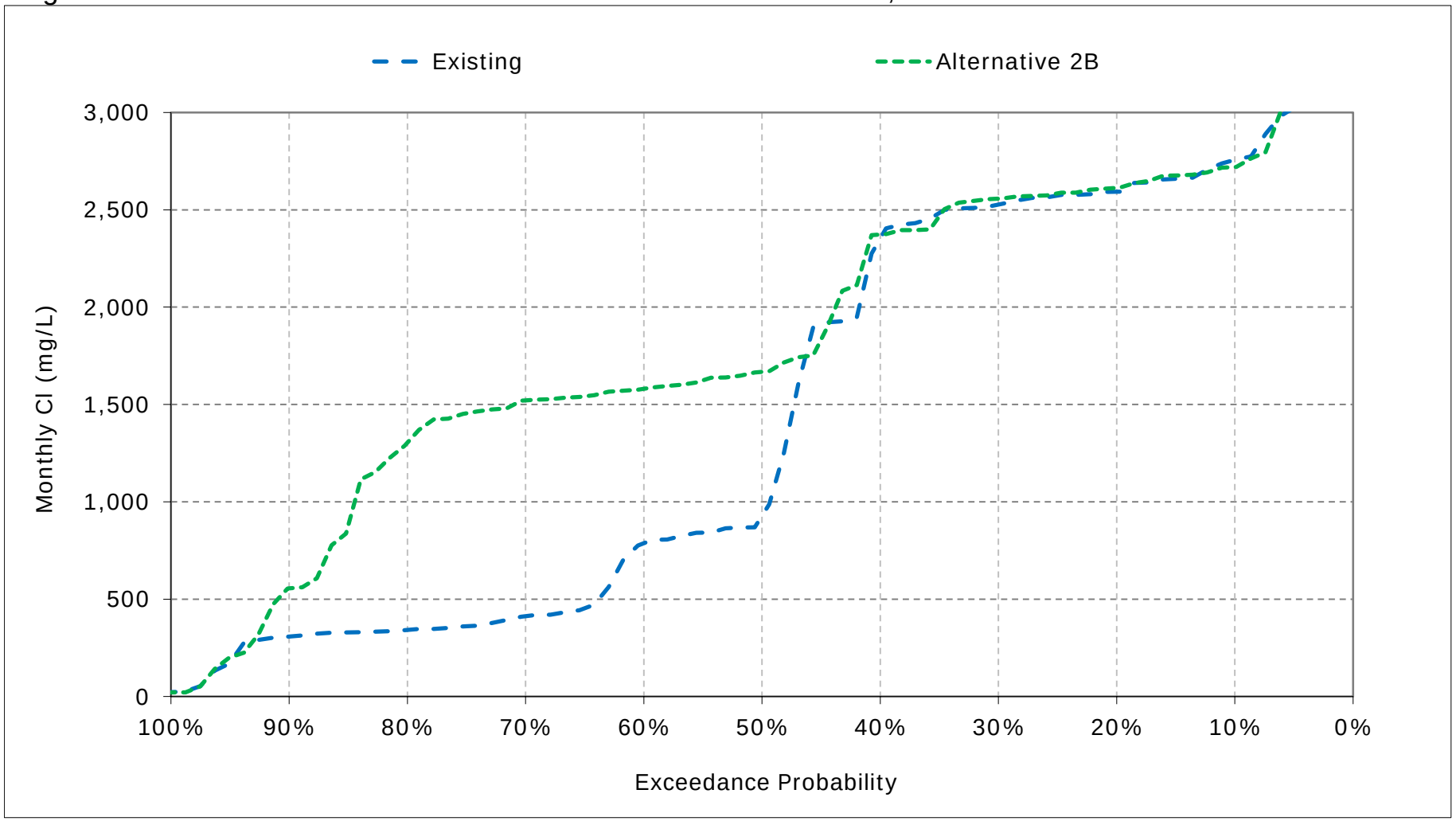
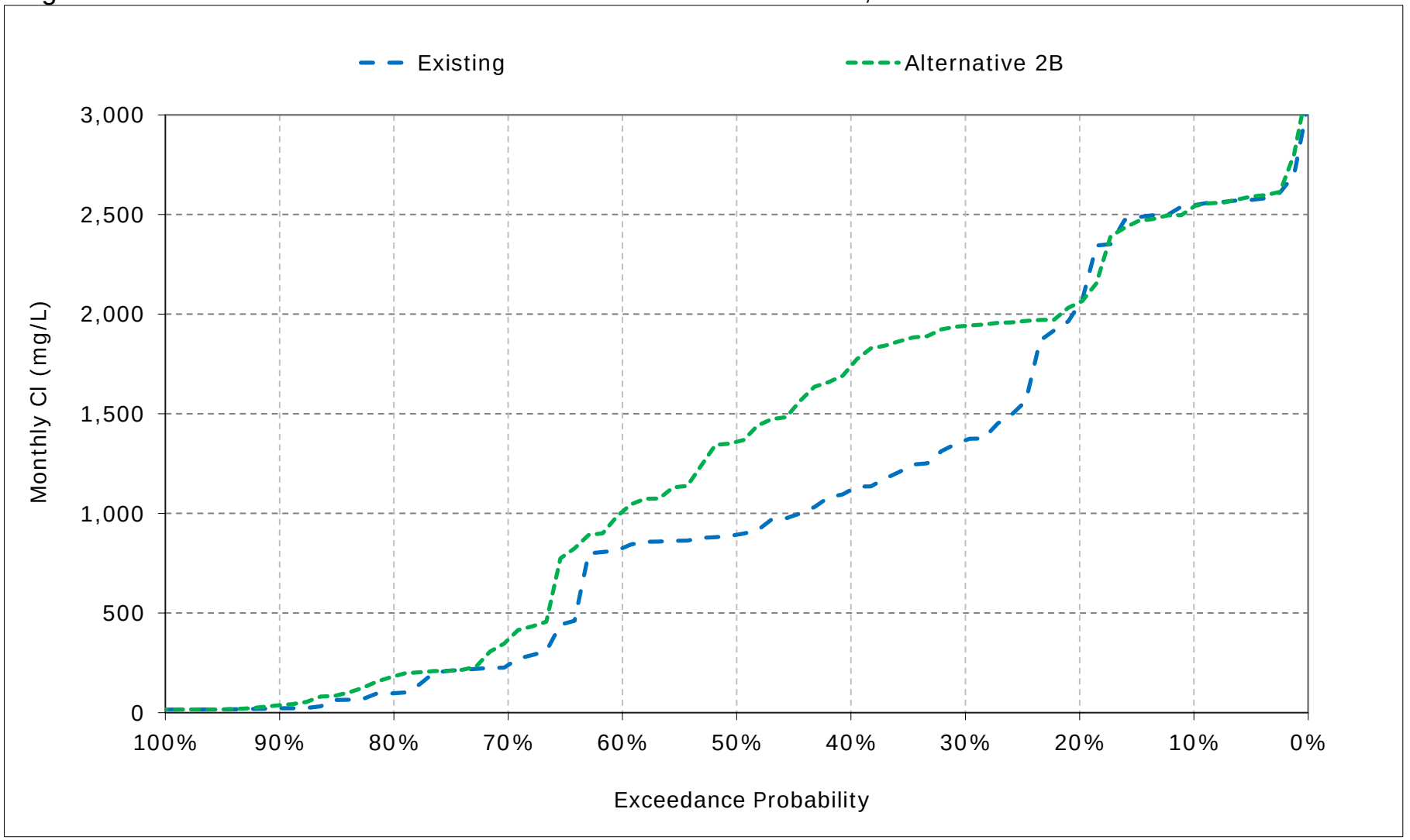


Figure 3-18. Sacramento River at Collinsville Chloride, December Cl



## Table 4-1. San Joaquin River at Jersey Point Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 645 | 636 | 613 | 338 | 112 | 47 | 37 | 63 | 110 | 358 | 447 | 640 |
| 20% | 593 | 592 | 535 | 271 | 63 | 29 | 25 | 36 | 84 | 274 | 391 | 612 |
| 30% | 565 | 557 | 387 | 203 | 38 | 25 | 23 | 28 | 77 | 203 | 370 | 591 |
| 40% | 538 | 488 | 312 | 142 | 33 | 23 | 23 | 25 | 54 | 180 | 342 | 556 |
| 50% | 456 | 316 | 187 | 97 | 29 | 22 | 22 | 24 | 39 | 120 | 320 | 494 |
| 60% | 110 | 132 | 162 | 50 | 26 | 21 | 21 | 23 | 26 | 90 | 294 | 243 |
| 70% | 55 | 64 | 95 | 28 | 24 | 20 | 21 | 22 | 23 | 76 | 277 | 226 |
| 80% | 39 | 42 | 38 | 23 | 21 | 19 | 20 | 21 | 19 | 46 | 254 | 209 |
| 90% | 32 | 28 | 20 | 21 | 20 | 18 | 19 | 19 | 18 | 25 | 235 | 200 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 336 | 324 | 274 | 143 | 51 | 29 | 26 | 36 | 68 | 166 | 322 | 410 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 242 | 208 | 91 | 34 | 23 | 21 | 21 | 20 | 22 | 48 | 233 | 184 |
| Above Normal (15%) | 376 | 317 | 268 | 99 | 30 | 21 | 22 | 22 | 32 | 73 | 270 | 219 |
| Below Normal (17%) | 354 | 368 | 360 | 163 | 35 | 23 | 23 | 25 | 46 | 163 | 349 | 602 |
| Dry (22%) | 357 | 386 | 336 | 197 | 63 | 28 | 24 | 31 | 78 | 275 | 370 | 594 |
| Critical (15%) | 448 | 439 | 485 | 315 | 132 | 61 | 46 | 102 | 213 | 353 | 461 | 591 |

### Alternative 2B

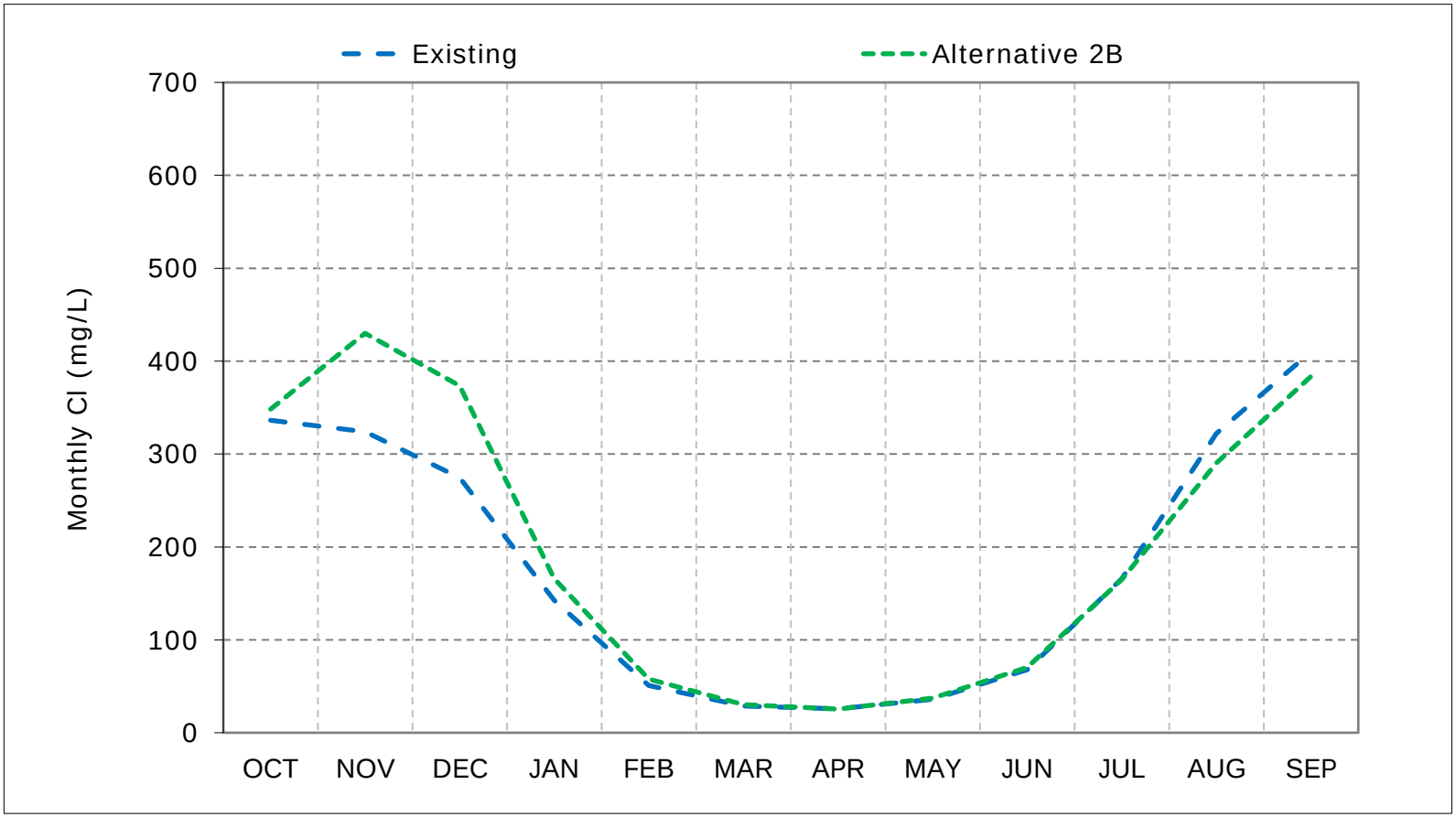
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 629 | 631 | 655 | 406 | 128 | 50 | 37 | 70 | 120 | 361 | 458 | 689 |
| 20% | 604 | 592 | 609 | 328 | 68 | 29 | 25 | 46 | 95 | 262 | 424 | 655 |
| 30% | 564 | 551 | 574 | 259 | 44 | 25 | 22 | 29 | 78 | 208 | 388 | 619 |
| 40% | 528 | 489 | 498 | 187 | 35 | 24 | 22 | 23 | 53 | 169 | 364 | 565 |
| 50% | 454 | 448 | 409 | 96 | 29 | 23 | 21 | 21 | 33 | 111 | 320 | 511 |
| 60% | 123 | 378 | 351 | 58 | 26 | 22 | 20 | 20 | 26 | 90 | 214 | 141 |
| 70% | 104 | 363 | 162 | 28 | 23 | 20 | 20 | 19 | 22 | 79 | 176 | 124 |
| 80% | 84 | 317 | 96 | 24 | 21 | 19 | 19 | 18 | 18 | 47 | 159 | 115 |
| 90% | 65 | 155 | 29 | 22 | 20 | 18 | 19 | 17 | 18 | 25 | 125 | 86 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 348 | 430 | 374 | 166 | 58 | 30 | 25 | 37 | 70 | 165 | 290 | 384 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 262 | 343 | 160 | 39 | 24 | 21 | 20 | 19 | 22 | 49 | 139 | 95 |
| Above Normal (15%) | 394 | 416 | 390 | 126 | 32 | 22 | 20 | 20 | 28 | 73 | 181 | 128 |
| Below Normal (17%) | 375 | 469 | 475 | 187 | 37 | 23 | 22 | 26 | 44 | 154 | 397 | 662 |
| Dry (22%) | 360 | 480 | 471 | 250 | 78 | 30 | 24 | 37 | 85 | 270 | 383 | 610 |
| Critical (15%) | 440 | 513 | 555 | 329 | 153 | 68 | 49 | 110 | 225 | 362 | 465 | 600 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -15 | -5 | 42 | 68 | 16 | 3 | 0 | 7 | 10 | 3 | 11 | 49 |
| 20% | 10 | 0 | 74 | 57 | 5 | 0 | -1 | 9 | 11 | -11 | 33 | 42 |
| 30% | -1 | -6 | 187 | 56 | 5 | 0 | -1 | 1 | 1 | 5 | 18 | 28 |
| 40% | -10 | 1 | 185 | 45 | 2 | 0 | -1 | -2 | -1 | -11 | 22 | 9 |
| 50% | -2 | 132 | 222 | -1 | 1 | 1 | -1 | -3 | -5 | -8 | 0 | 17 |
| 60% | 13 | 246 | 189 | 8 | 0 | 1 | -1 | -3 | -1 | 0 | -81 | -102 |
| 70% | 49 | 299 | 68 | 1 | 0 | 0 | -1 | -3 | -1 | 3 | -102 | -102 |
| 80% | 45 | 275 | 58 | 1 | 0 | 0 | -1 | -3 | -1 | 1 | -94 | -95 |
| 90% | 33 | 127 | 9 | 1 | 0 | 0 | -1 | -2 | -1 | 0 | -110 | -113 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 12 | 106 | 99 | 23 | 7 | 1 | 0 | 2 | 2 | -1 | -32 | -26 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 20 | 135 | 69 | 5 | 0 | 0 | -1 | -2 | 0 | 1 | -94 | -89 |
| Above Normal (15%) | 18 | 99 | 122 | 27 | 2 | 1 | -1 | -3 | -4 | 1 | -90 | -90 |
| Below Normal (17%) | 21 | 101 | 116 | 25 | 1 | 0 | -1 | 1 | -1 | -8 | 47 | 60 |
| Dry (22%) | 2 | 93 | 135 | 53 | 15 | 1 | 0 | 5 | 7 | -5 | 12 | 16 |
| Critical (15%) | -7 | 74 | 71 | 13 | 21 | 7 | 3 | 8 | 11 | 9 | 4 | 10 |

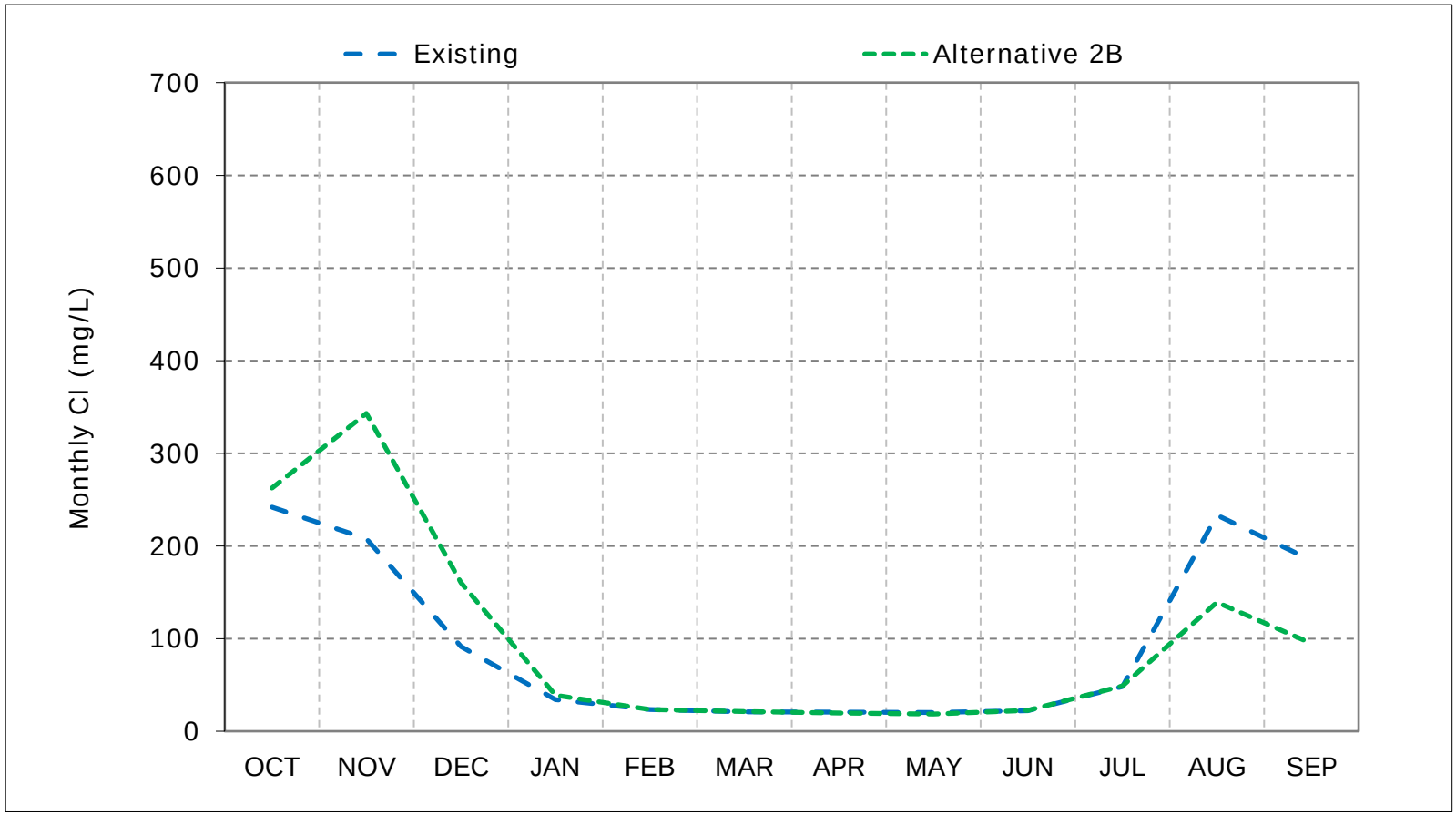
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 4-1. San Joaquin River at Jersey Point Chloride, Long-Term Average Cl



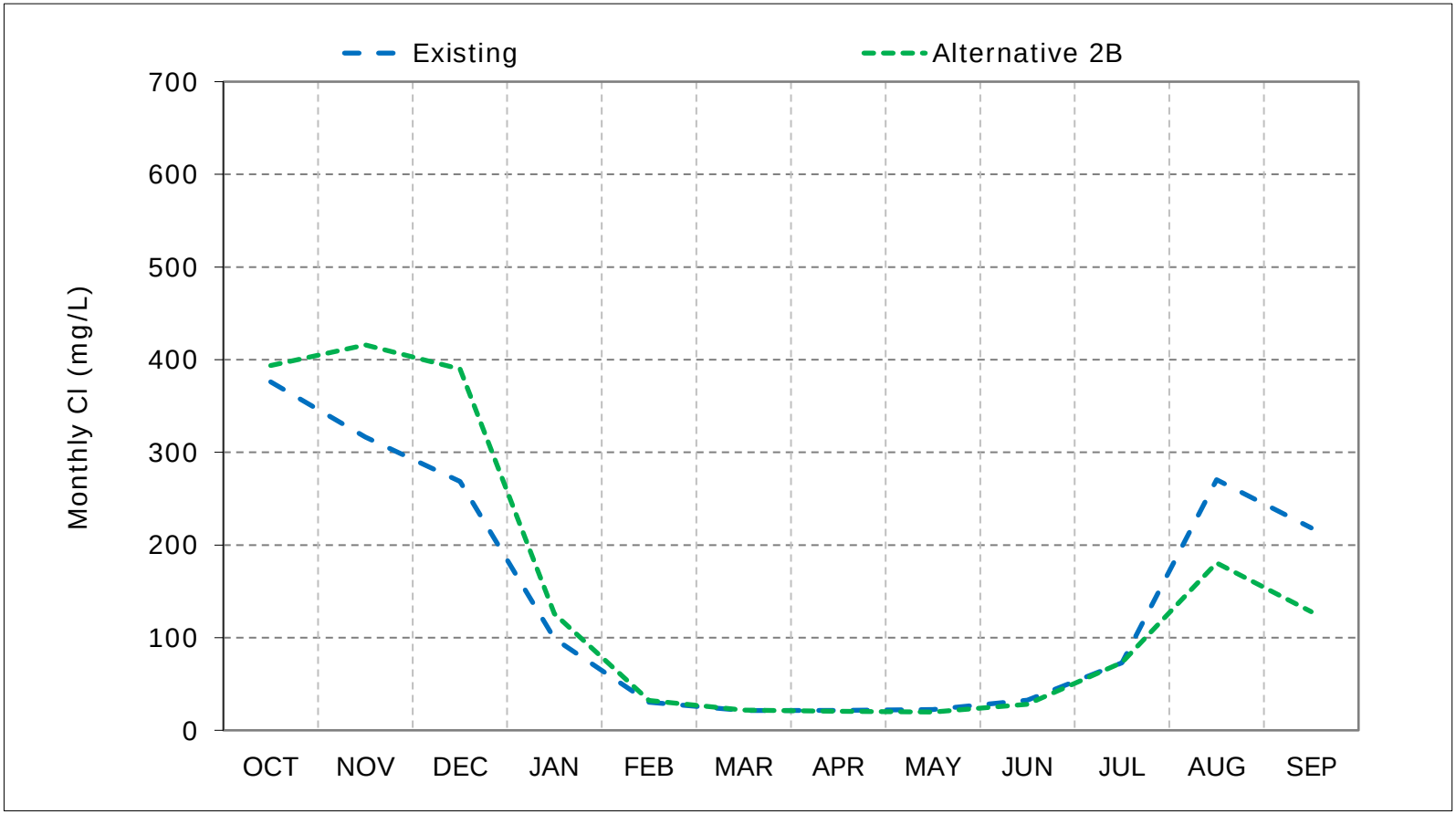

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-2. San Joaquin River at Jersey Point Chloride, Wet Year Average Cl



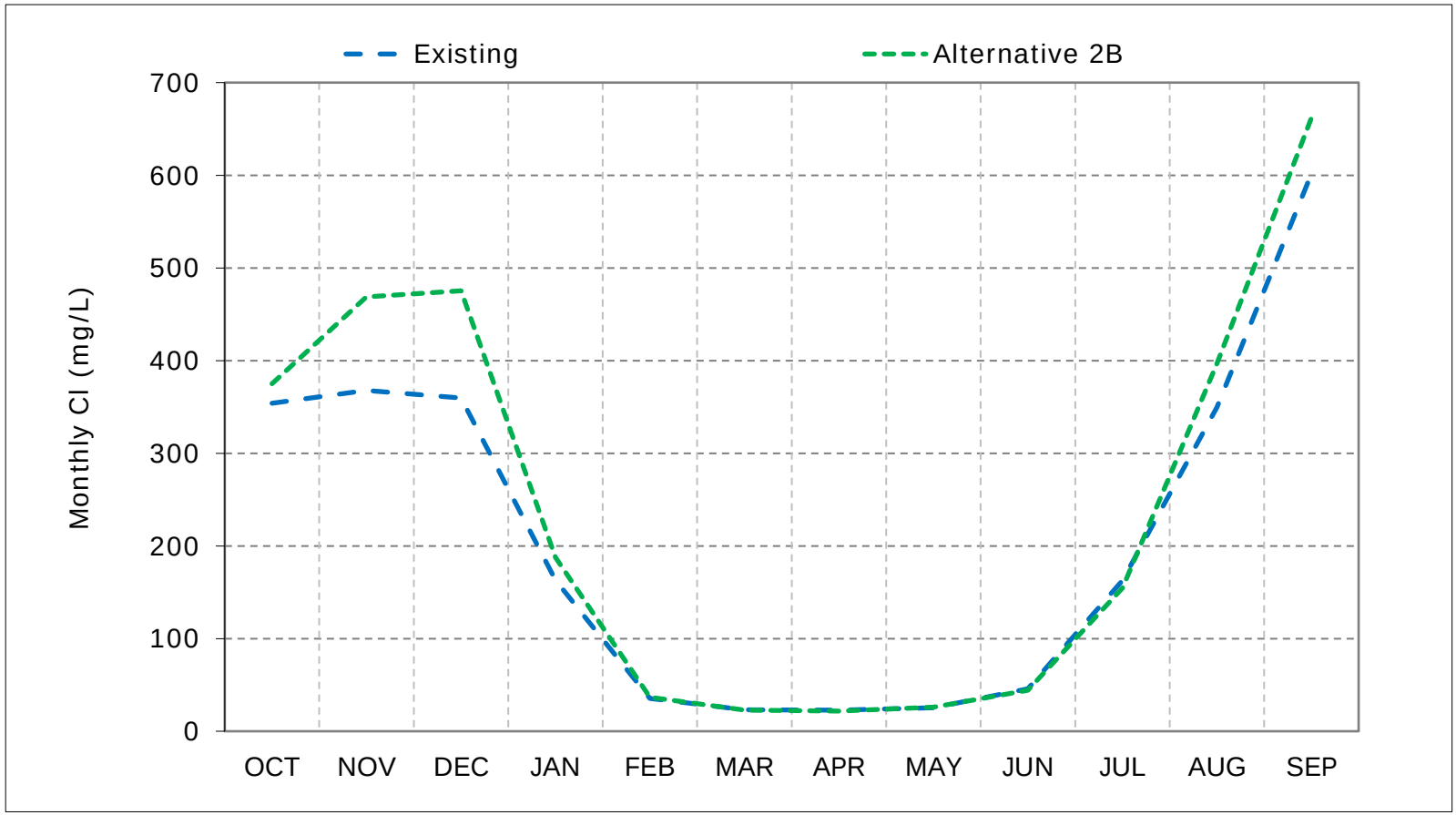

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-3. San Joaquin River at Jersey Point Chloride, Above Normal Year Average C



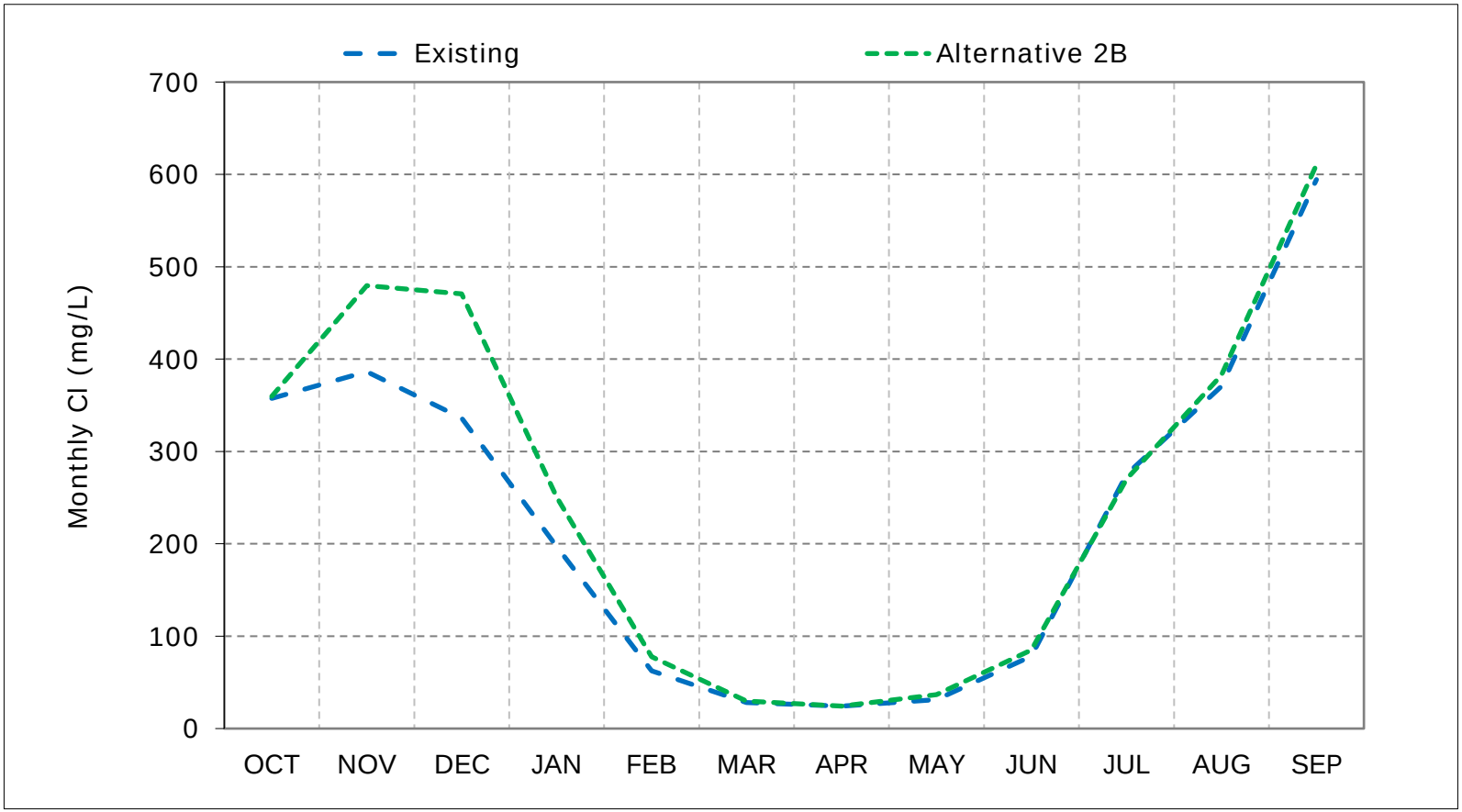

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-4. San Joaquin River at Jersey Point Chloride, Below Normal Year Average C



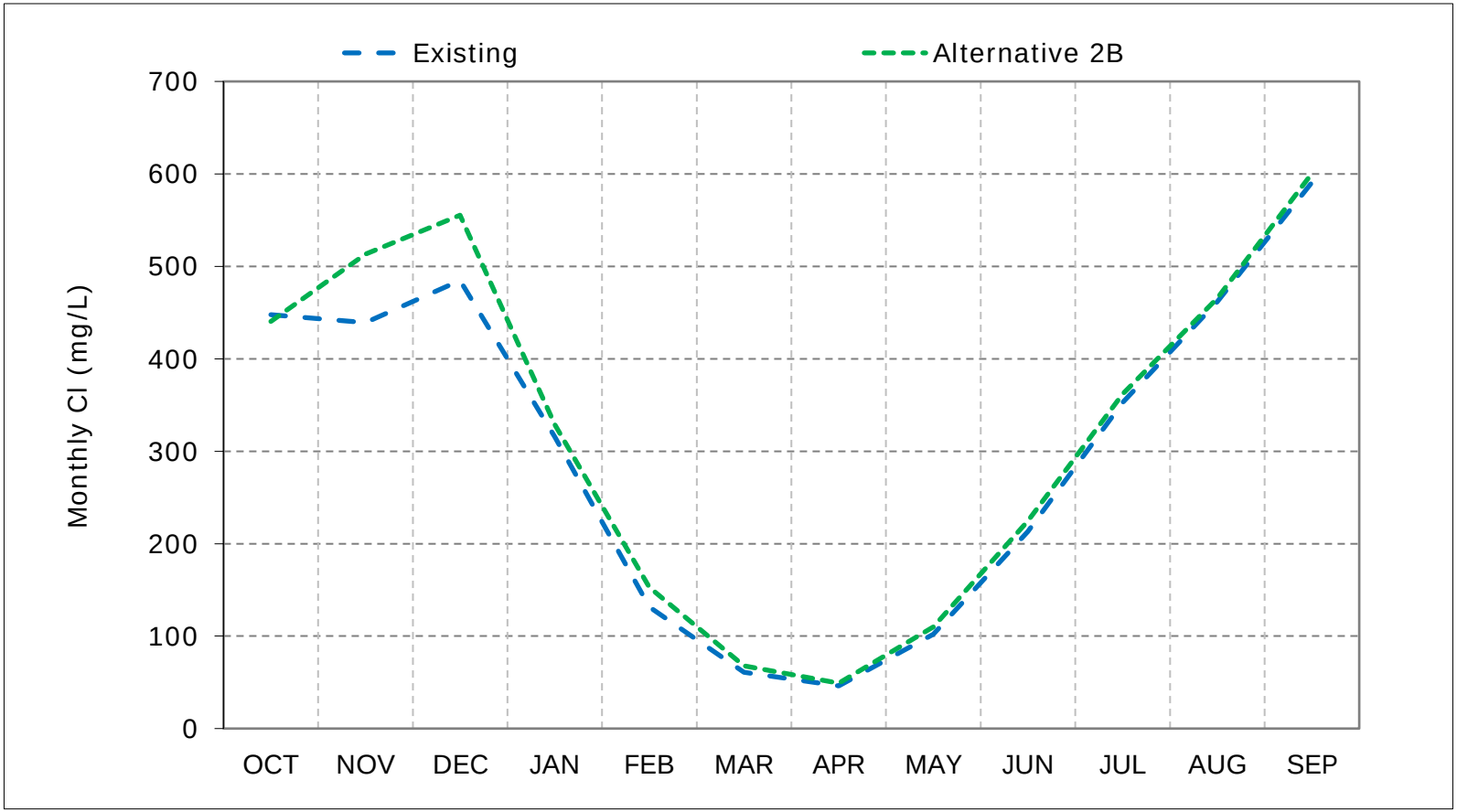

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-5. San Joaquin River at Jersey Point Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-6. San Joaquin River at Jersey Point Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-7. San Joaquin River at Jersey Point Chloride, January Cl

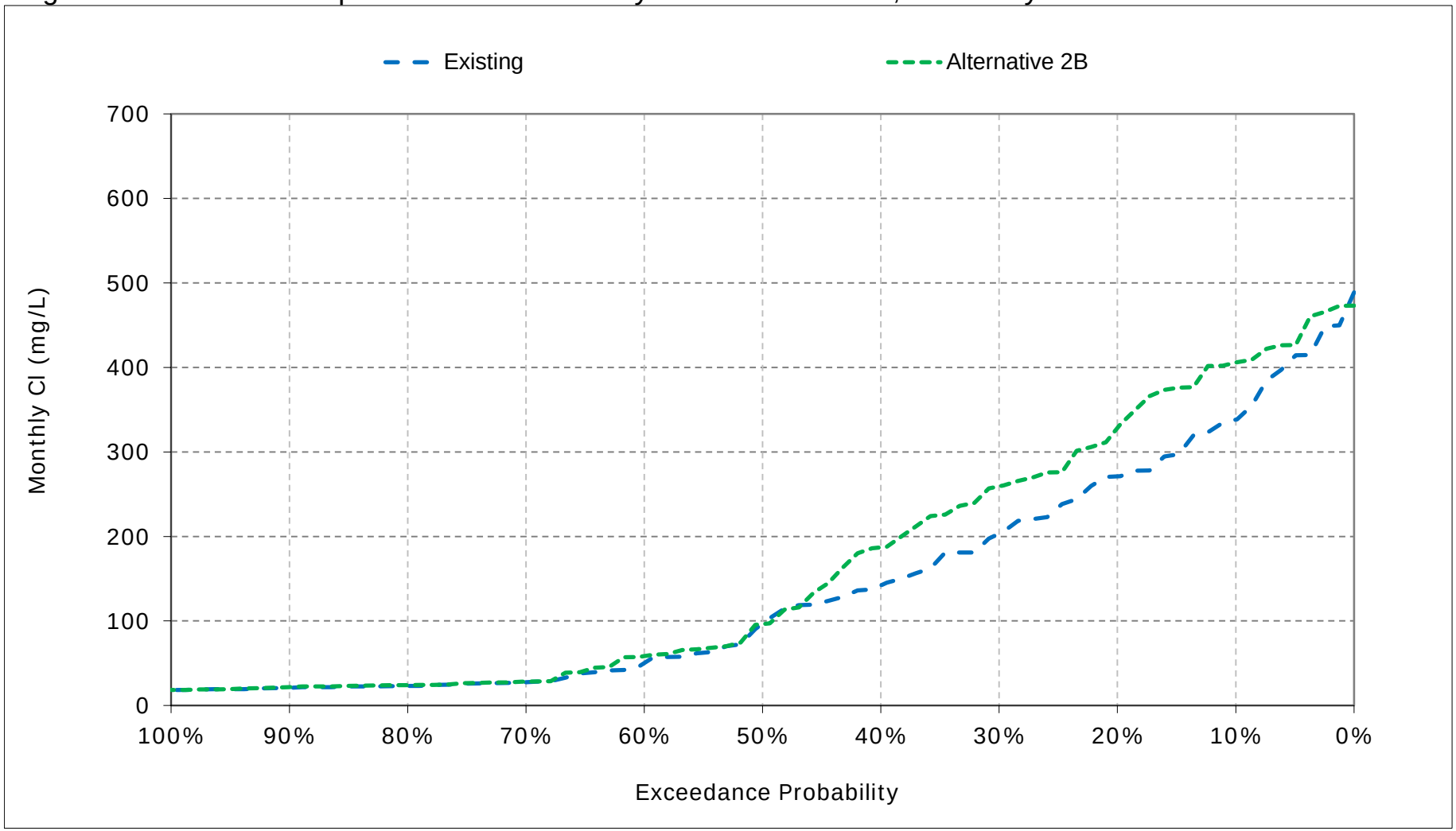


Figure 4-8. San Joaquin River at Jersey Point Chloride, February Cl

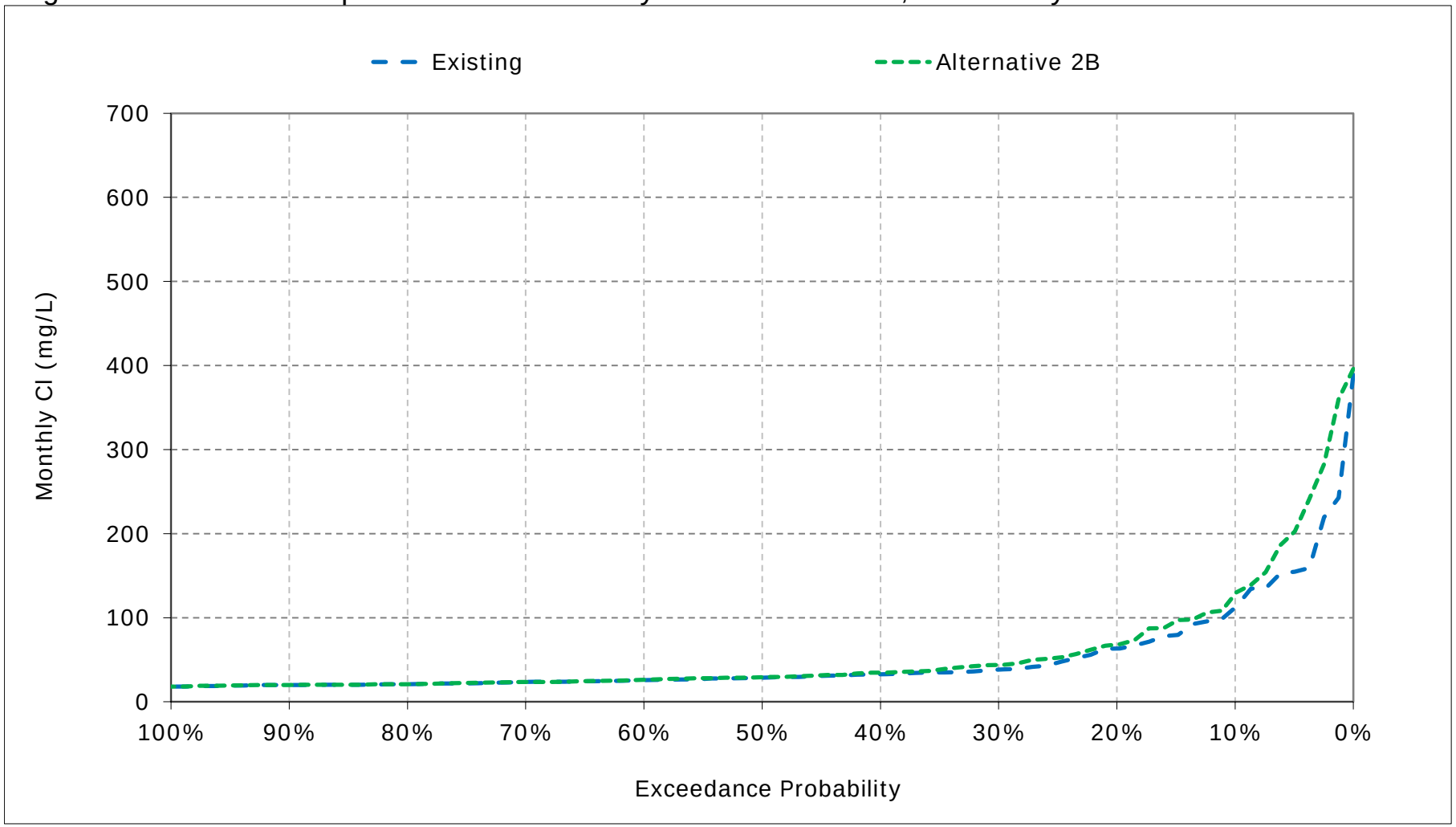


Figure 4-9. San Joaquin River at Jersey Point Chloride, March Cl

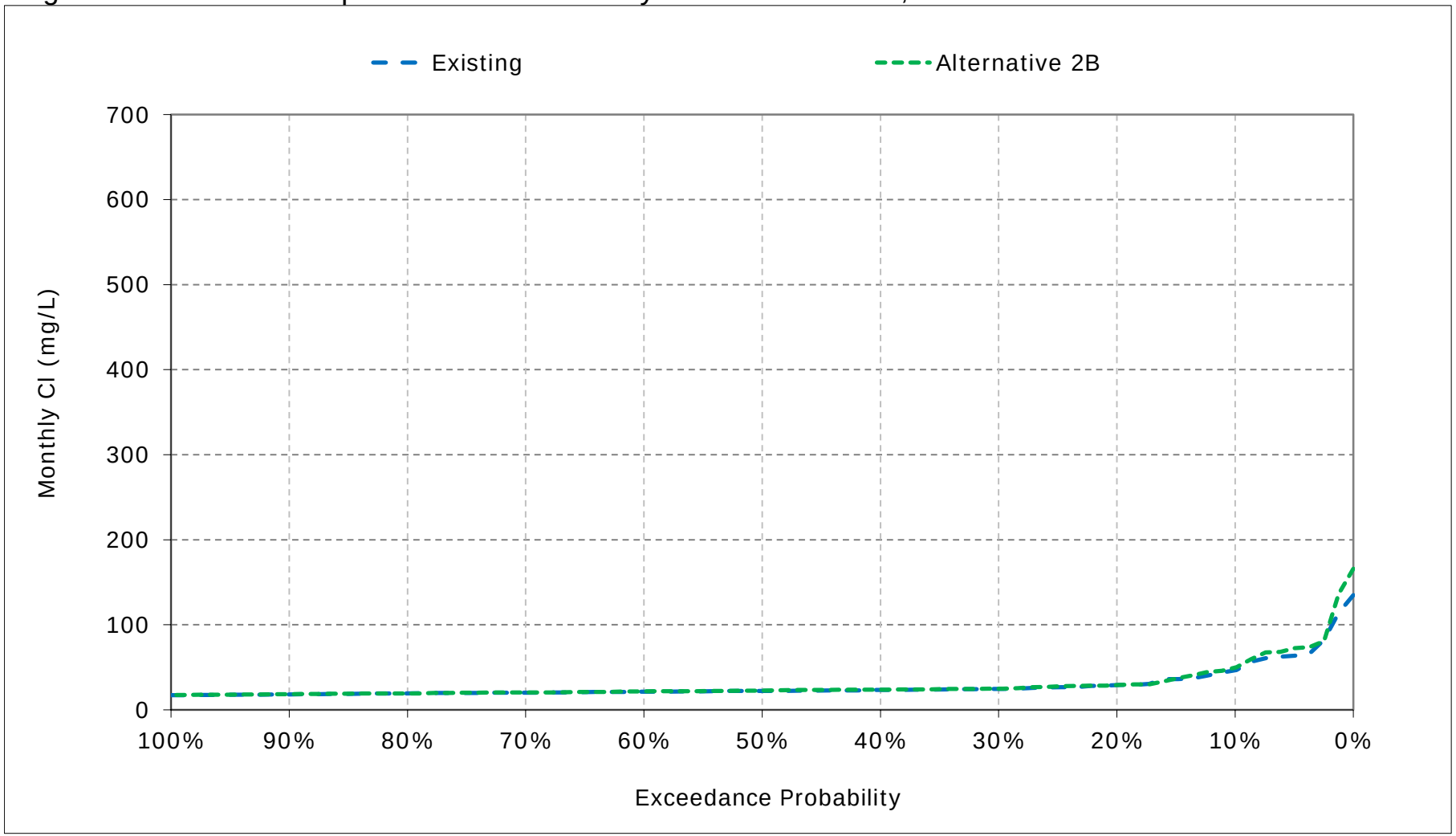


Figure 4-10. San Joaquin River at Jersey Point Chloride, April Cl

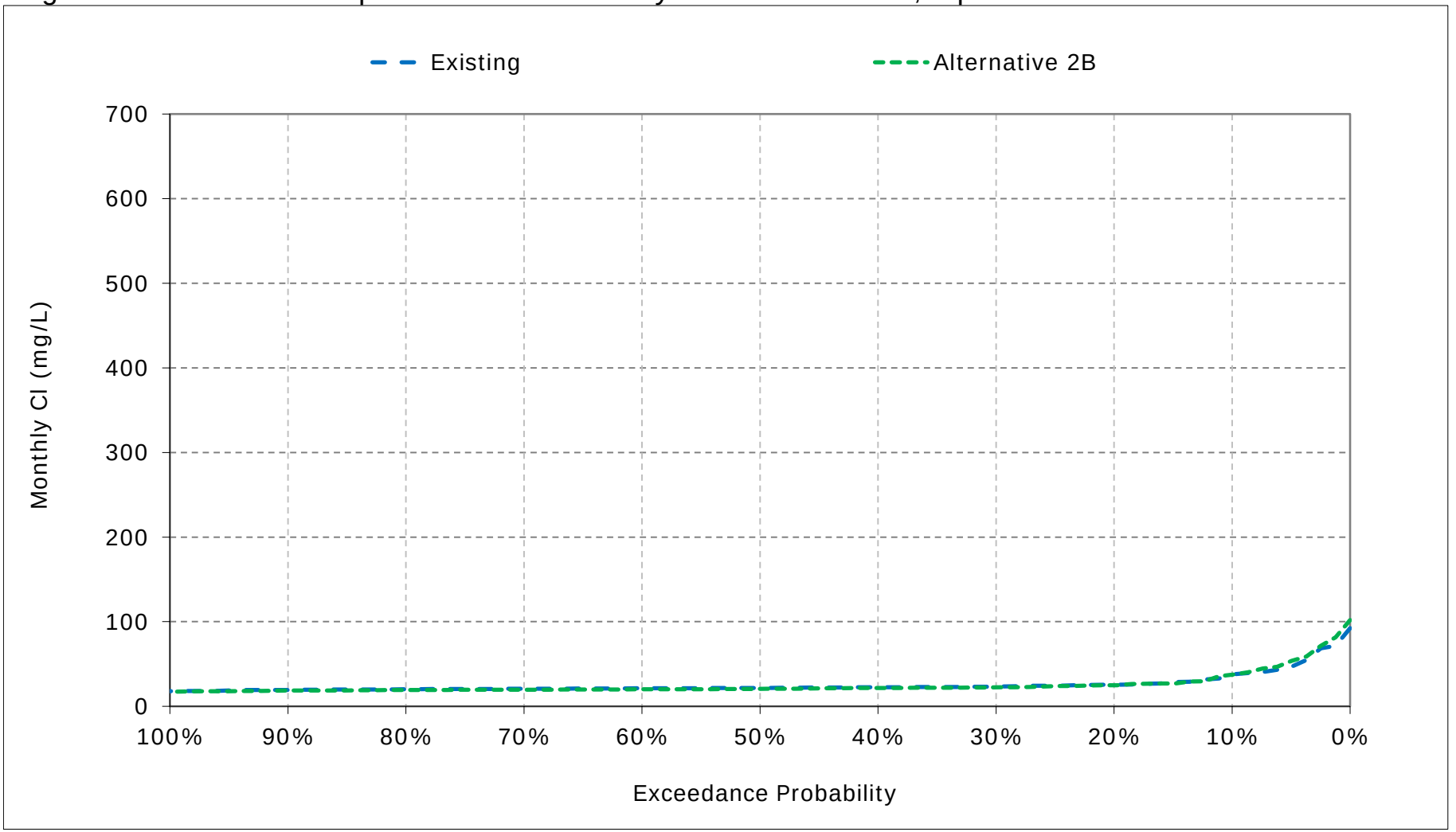


Figure 4-11. San Joaquin River at Jersey Point Chloride, May Cl

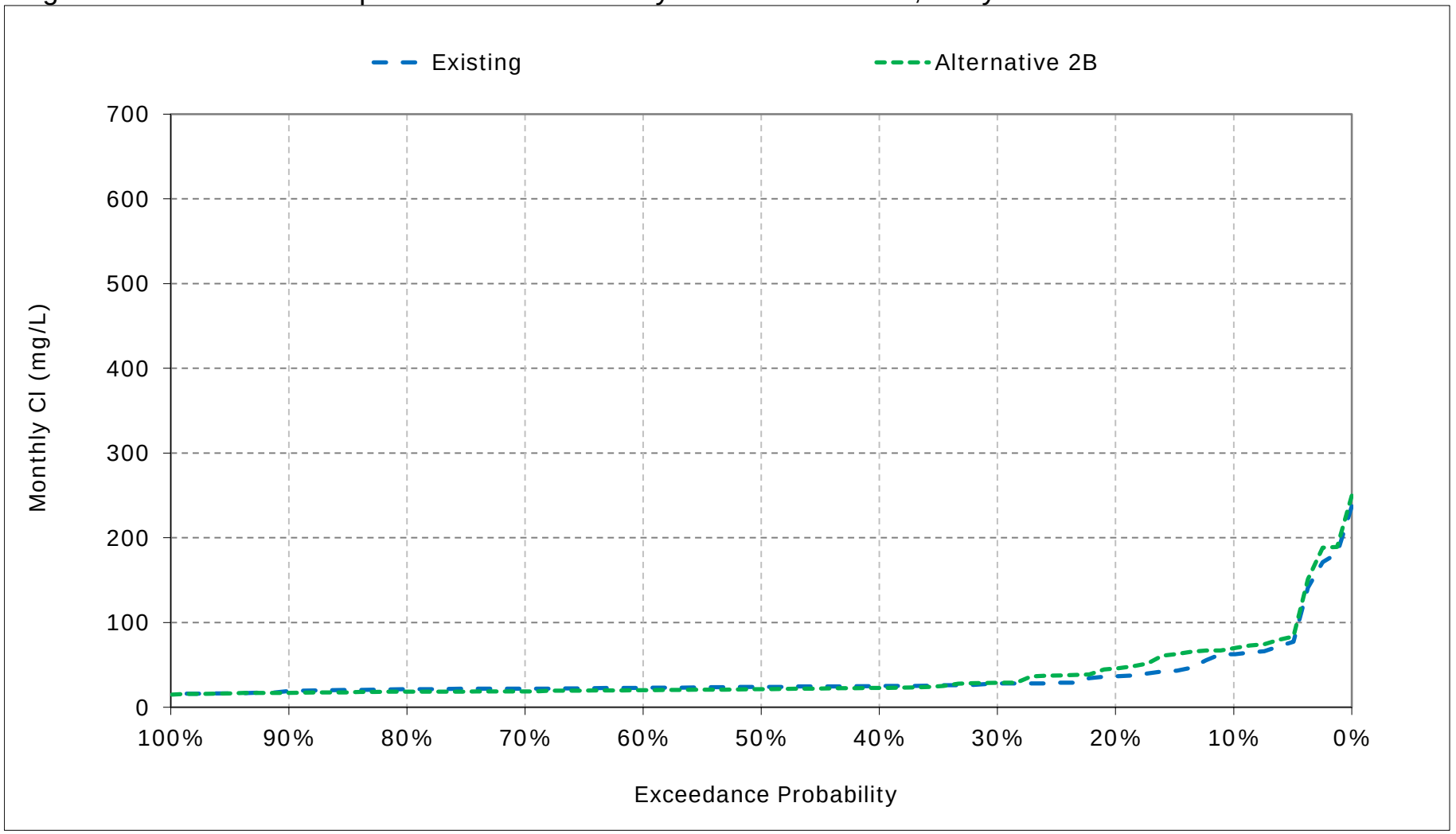


Figure 4-12. San Joaquin River at Jersey Point Chloride, June Cl

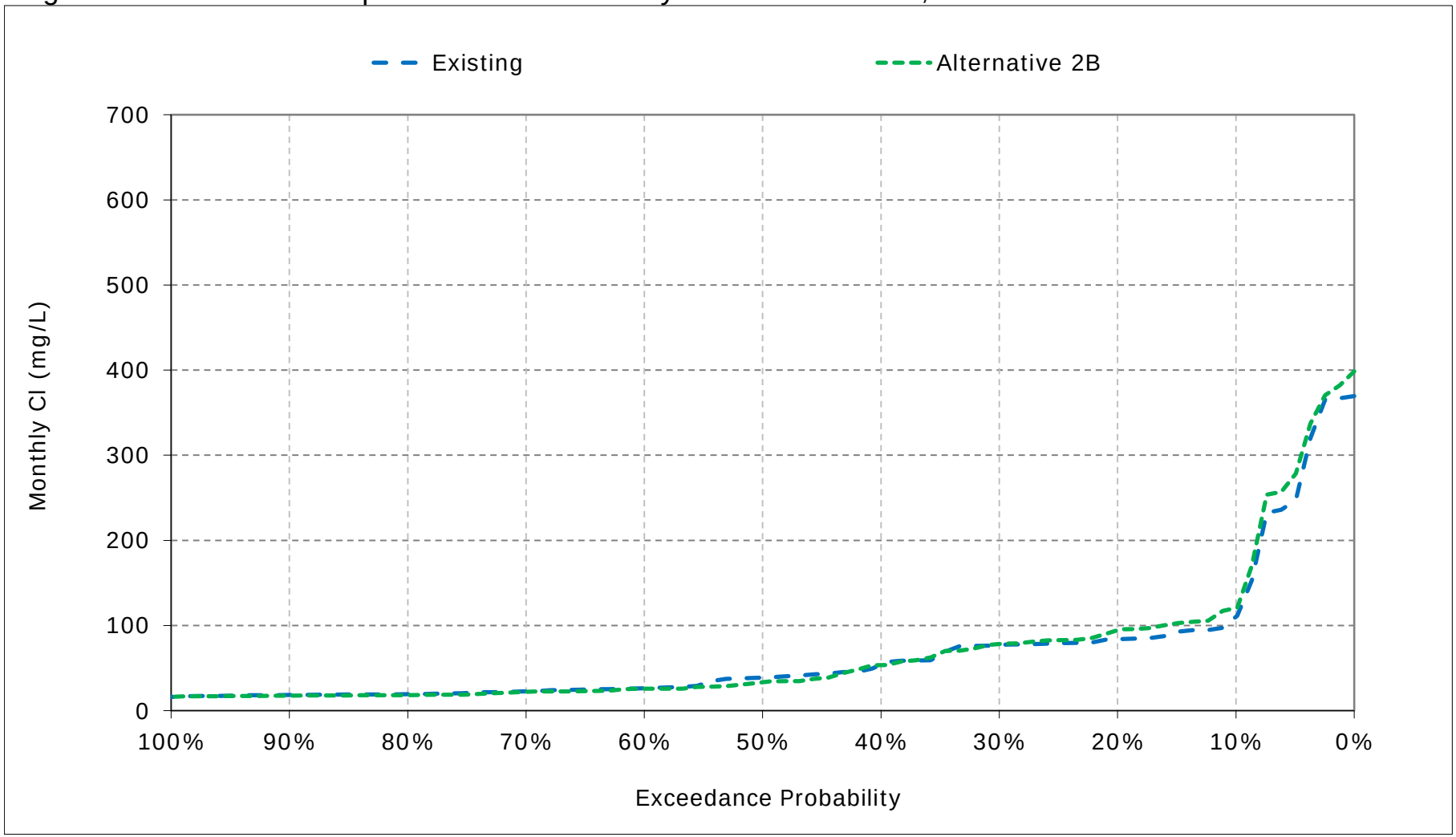


Figure 4-13. San Joaquin River at Jersey Point Chloride, July Cl

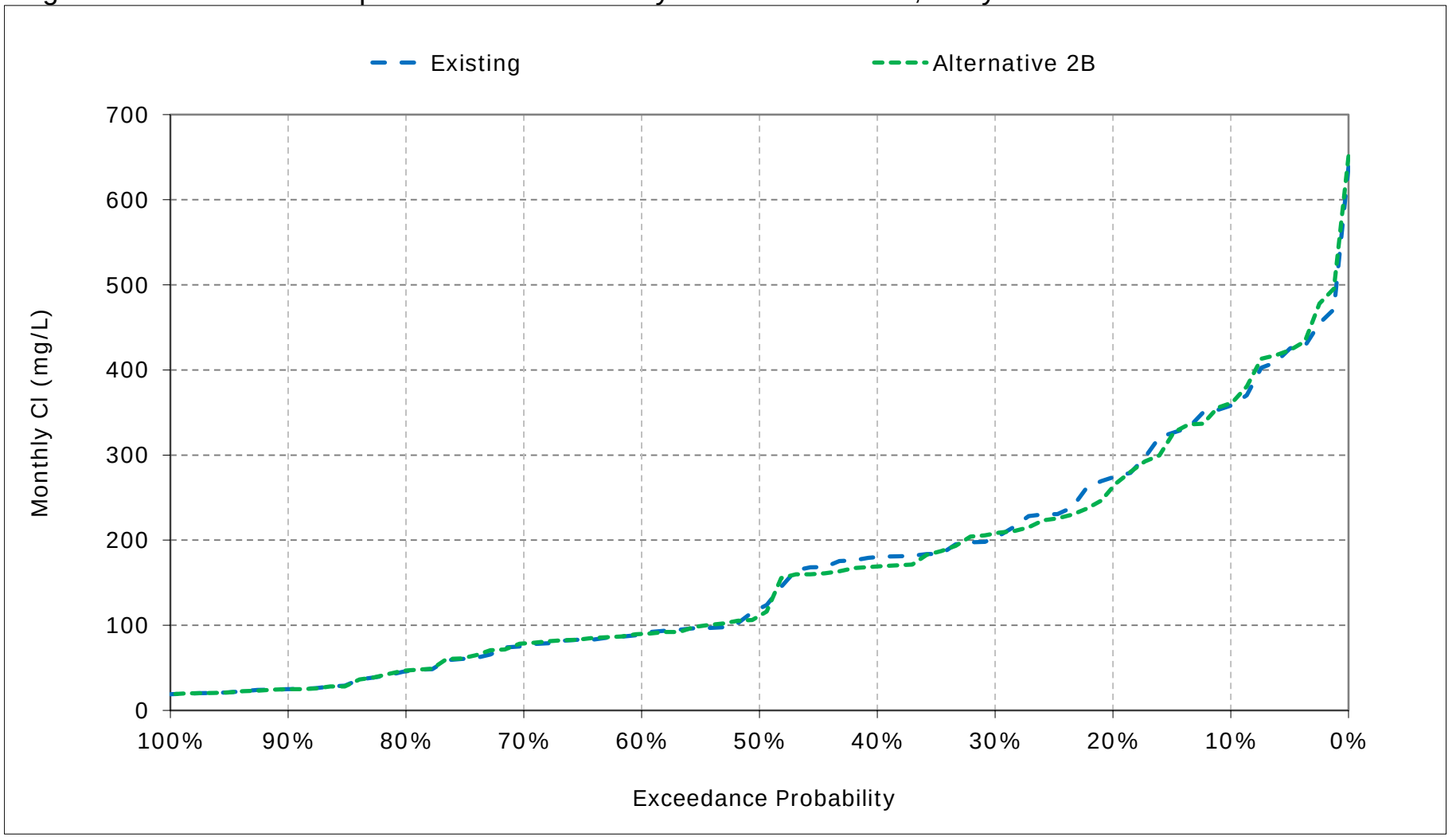


Figure 4-14. San Joaquin River at Jersey Point Chloride, August Cl

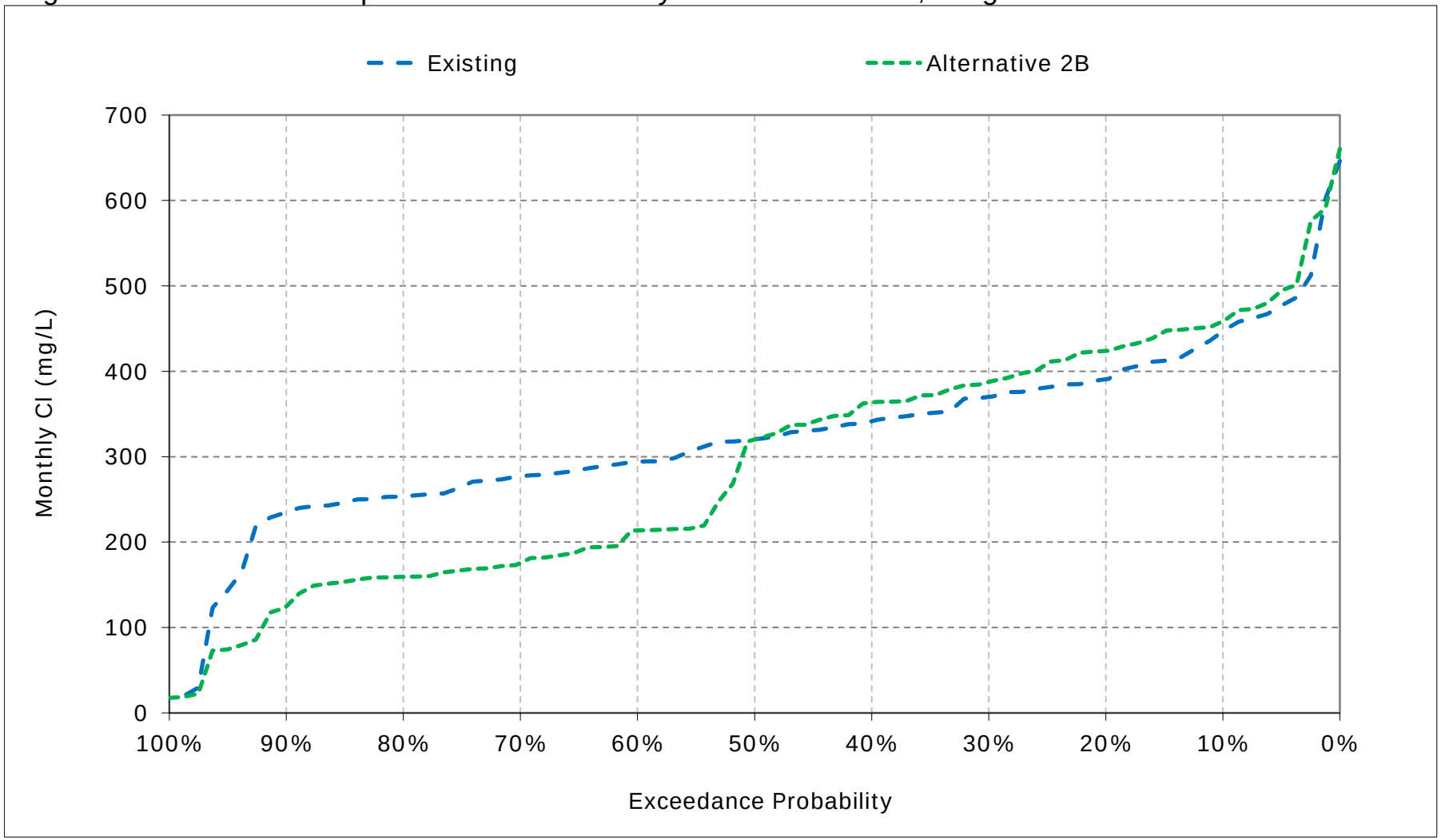


Figure 4-15. San Joaquin River at Jersey Point Chloride, September Cl

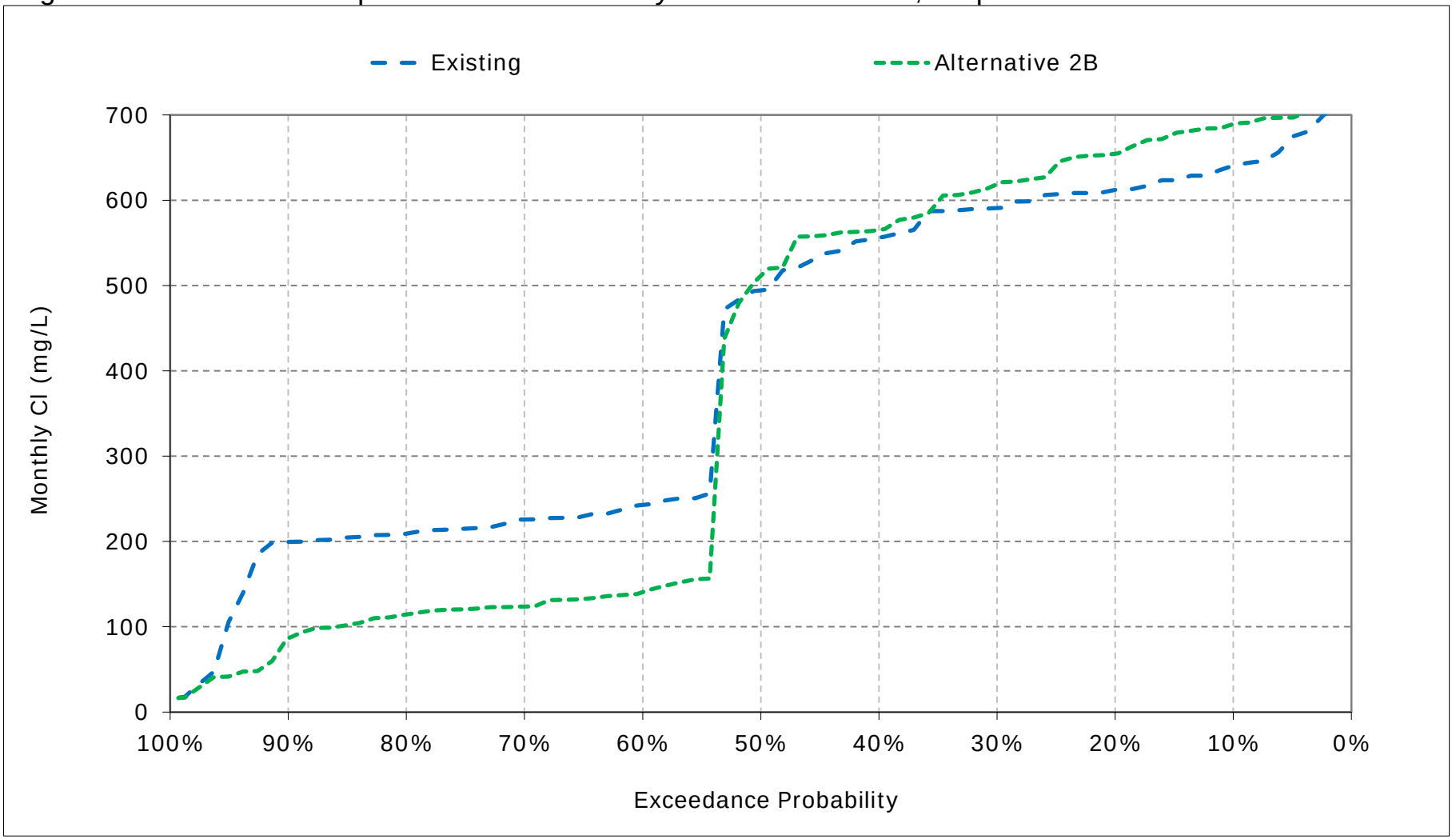


Figure 4-16. San Joaquin River at Jersey Point Chloride, October Cl

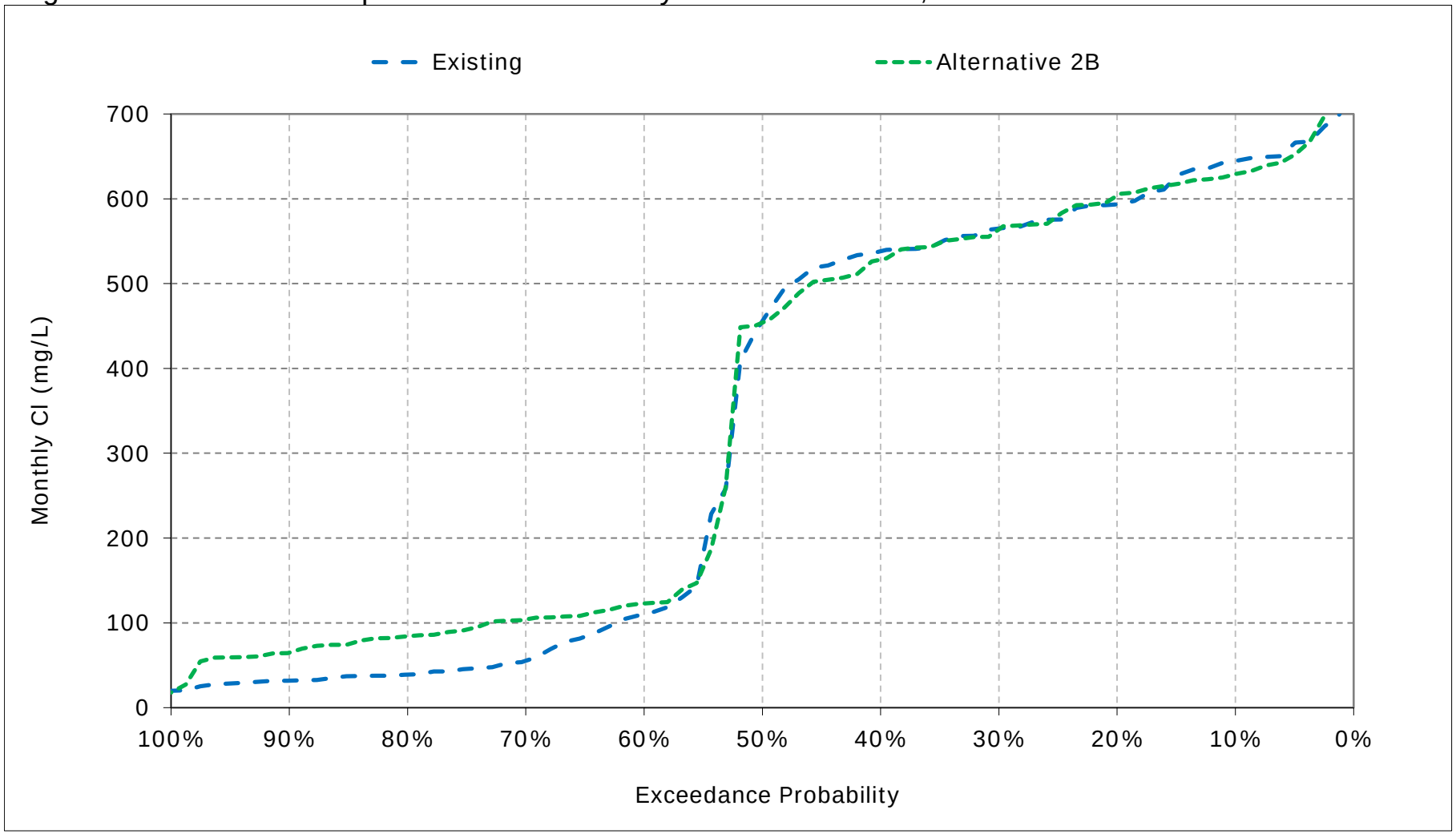


Figure 4-17. San Joaquin River at Jersey Point Chloride, November Cl

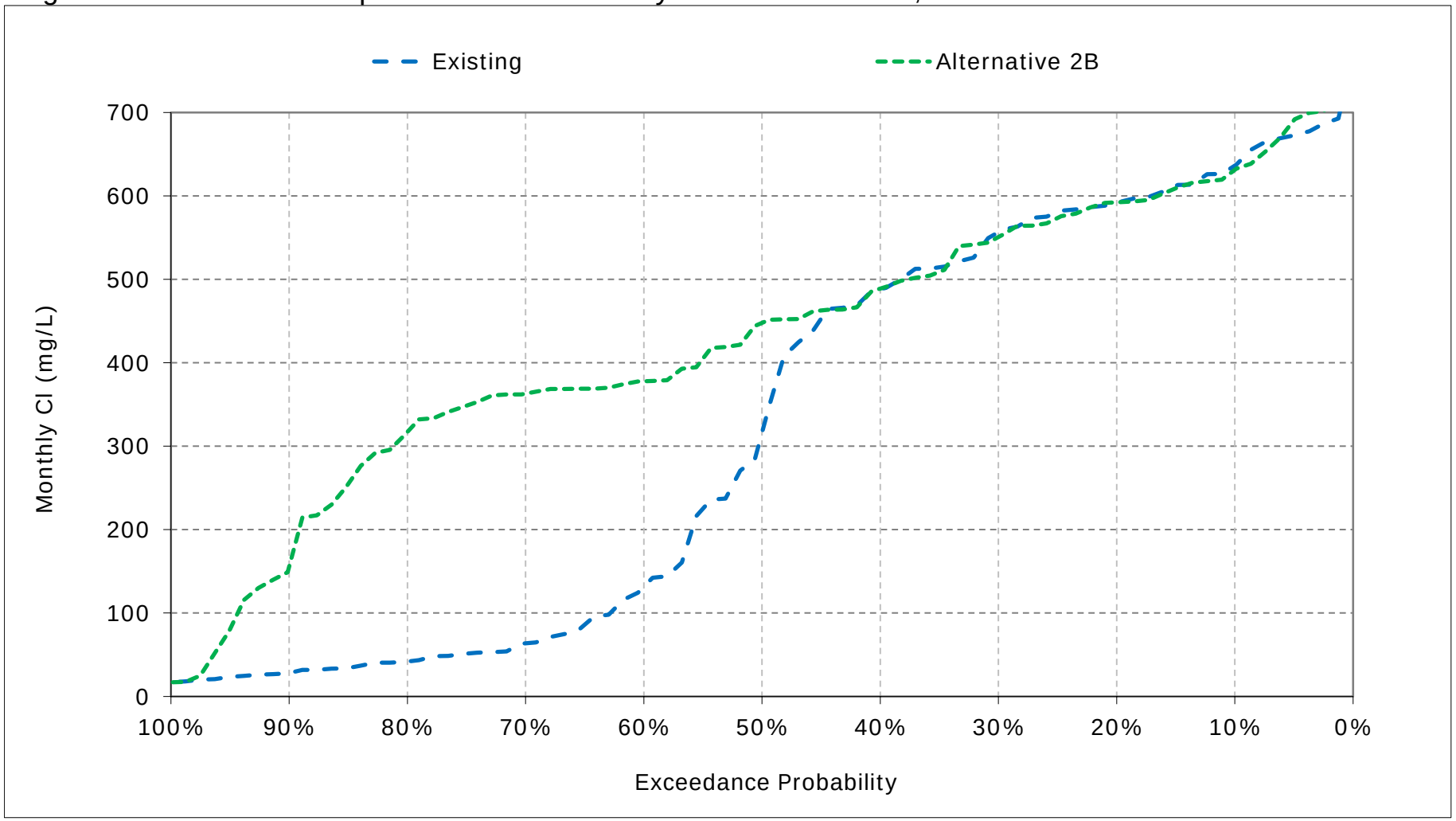
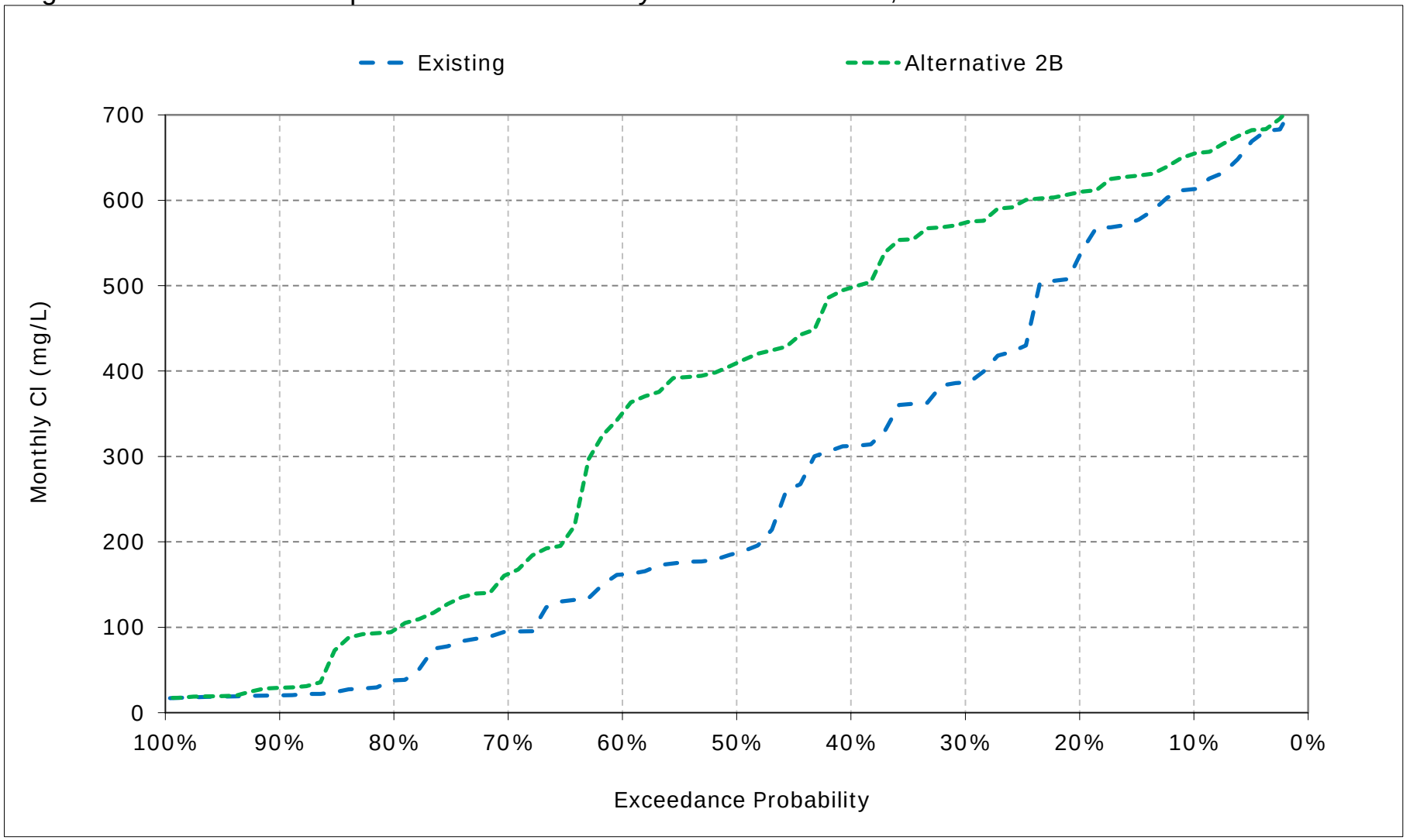


Figure 4-18. San Joaquin River at Jersey Point Chloride, December Cl



## Table 5-1. San Joaquin River at San Andreas Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 136 | 132 | 148 | 112 | 41 | 23 | 24 | 25 | 23 | 53 | 84 | 117 |
| 20% | 117 | 117 | 136 | 91 | 29 | 22 | 23 | 24 | 21 | 36 | 71 | 112 |
| 30% | 111 | 110 | 116 | 68 | 25 | 21 | 22 | 24 | 20 | 28 | 61 | 104 |
| 40% | 105 | 99 | 84 | 53 | 23 | 20 | 21 | 23 | 19 | 26 | 52 | 97 |
| 50% | 92 | 70 | 42 | 38 | 22 | 19 | 20 | 22 | 19 | 21 | 47 | 84 |
| 60% | 21 | 27 | 33 | 27 | 21 | 18 | 20 | 21 | 18 | 19 | 42 | 67 |
| 70% | 20 | 20 | 27 | 22 | 19 | 18 | 19 | 20 | 17 | 19 | 33 | 56 |
| 80% | 19 | 19 | 21 | 20 | 18 | 17 | 19 | 19 | 17 | 18 | 31 | 37 |
| 90% | 18 | 18 | 17 | 18 | 17 | 17 | 17 | 16 | 16 | 17 | 29 | 29 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 71 | 71 | 72 | 54 | 26 | 20 | 21 | 22 | 21 | 30 | 51 | 78 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 53 | 49 | 33 | 23 | 19 | 18 | 18 | 18 | 17 | 18 | 31 | 52 |
| Above Normal (15%) | 81 | 70 | 70 | 41 | 22 | 18 | 20 | 21 | 18 | 19 | 34 | 31 |
| Below Normal (17%) | 72 | 76 | 89 | 61 | 23 | 20 | 21 | 22 | 19 | 25 | 51 | 102 |
| Dry (22%) | 75 | 82 | 85 | 68 | 29 | 20 | 22 | 23 | 20 | 38 | 67 | 100 |
| Critical (15%) | 94 | 94 | 119 | 107 | 46 | 26 | 23 | 29 | 39 | 62 | 86 | 124 |

### Alternative 2B

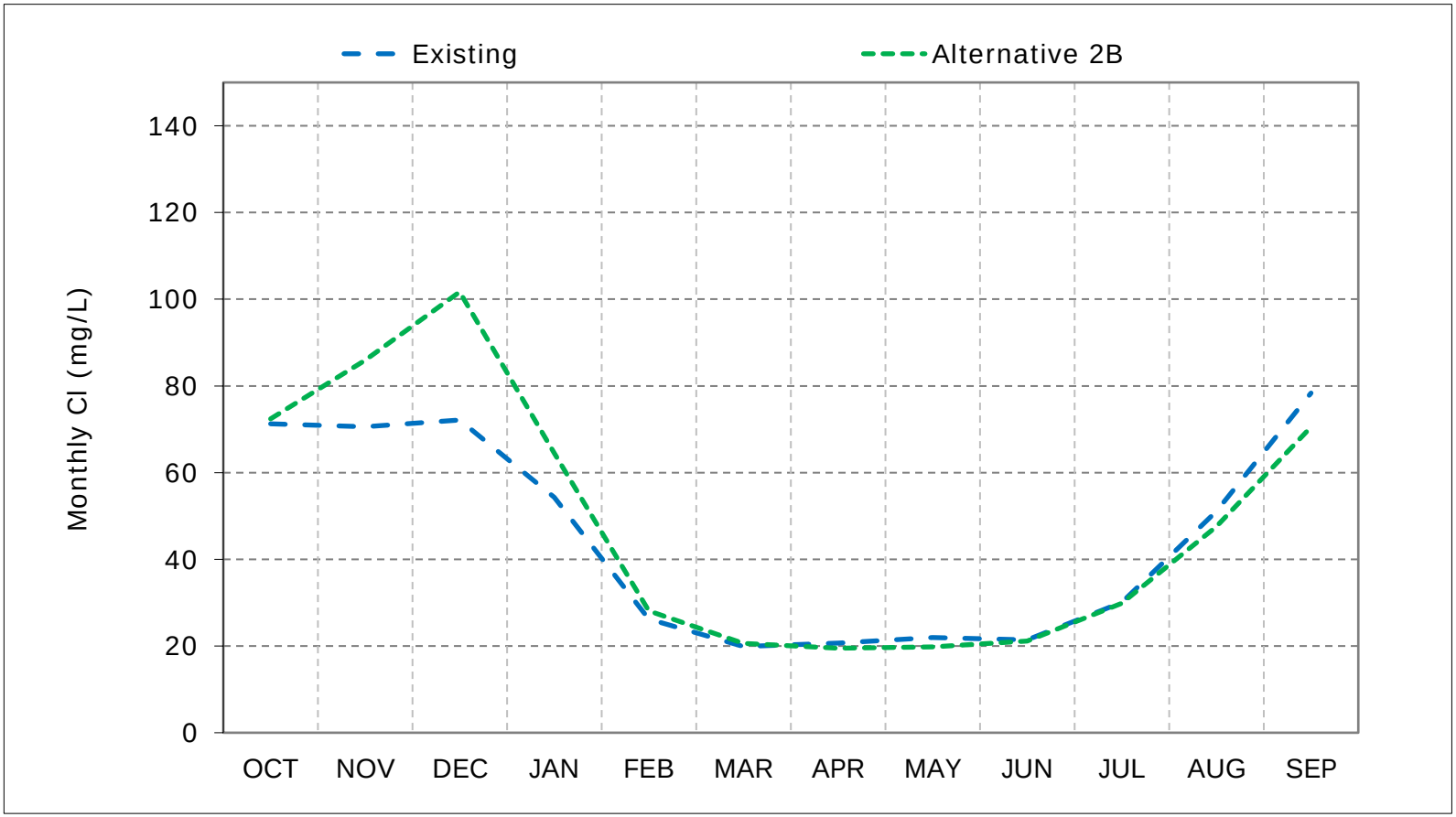
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 133 | 136 | 162 | 144 | 49 | 24 | 22 | 22 | 24 | 54 | 84 | 127 |
| 20% | 124 | 120 | 152 | 112 | 30 | 22 | 21 | 22 | 21 | 33 | 69 | 118 |
| 30% | 114 | 111 | 147 | 93 | 26 | 21 | 20 | 20 | 19 | 28 | 63 | 112 |
| 40% | 109 | 102 | 131 | 69 | 23 | 20 | 20 | 20 | 19 | 25 | 56 | 99 |
| 50% | 100 | 89 | 124 | 38 | 22 | 19 | 19 | 19 | 17 | 21 | 48 | 91 |
| 60% | 23 | 67 | 105 | 27 | 21 | 19 | 18 | 18 | 17 | 19 | 28 | 23 |
| 70% | 20 | 56 | 48 | 23 | 19 | 18 | 18 | 17 | 17 | 19 | 24 | 22 |
| 80% | 19 | 47 | 30 | 20 | 18 | 17 | 17 | 17 | 16 | 18 | 23 | 21 |
| 90% | 18 | 30 | 19 | 18 | 17 | 17 | 16 | 15 | 16 | 17 | 21 | 20 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 72 | 86 | 102 | 65 | 28 | 21 | 19 | 20 | 21 | 30 | 48 | 71 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 55 | 68 | 53 | 25 | 19 | 18 | 17 | 17 | 17 | 18 | 22 | 20 |
| Above Normal (15%) | 81 | 86 | 108 | 52 | 23 | 19 | 19 | 18 | 17 | 19 | 25 | 22 |
| Below Normal (17%) | 74 | 90 | 121 | 71 | 23 | 20 | 20 | 19 | 18 | 23 | 56 | 116 |
| Dry (22%) | 75 | 95 | 126 | 91 | 33 | 21 | 20 | 20 | 20 | 38 | 68 | 104 |
| Critical (15%) | 96 | 105 | 142 | 116 | 52 | 29 | 23 | 28 | 41 | 63 | 86 | 125 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -3 | 4 | 14 | 32 | 8 | 1 | -2 | -2 | 0 | 1 | 0 | 10 |
| 20% | 7 | 3 | 16 | 21 | 1 | 0 | -1 | -3 | 0 | -3 | -1 | 7 |
| 30% | 4 | 2 | 31 | 25 | 1 | 0 | -1 | -3 | -1 | 0 | 2 | 9 |
| 40% | 4 | 3 | 47 | 16 | 0 | 1 | -1 | -3 | -1 | -2 | 4 | 3 |
| 50% | 8 | 18 | 83 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | 1 | 7 |
| 60% | 2 | 40 | 72 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | -14 | -44 |
| 70% | 0 | 36 | 20 | 0 | 0 | 0 | -1 | -3 | 0 | 0 | -9 | -34 |
| 80% | 0 | 29 | 9 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | -8 | -16 |
| 90% | -1 | 13 | 2 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | -8 | -9 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1 | 15 | 30 | 10 | 2 | 1 | -1 | -2 | 0 | 0 | -3 | -8 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 2 | 20 | 19 | 2 | 0 | 0 | -1 | -2 | 0 | 0 | -9 | -32 |
| Above Normal (15%) | 0 | 16 | 38 | 11 | 1 | 0 | -1 | -3 | -1 | 0 | -9 | -9 |
| Below Normal (17%) | 2 | 14 | 32 | 10 | 0 | 0 | -2 | -3 | -1 | -2 | 4 | 14 |
| Dry (22%) | 0 | 13 | 41 | 23 | 4 | 1 | -2 | -3 | 0 | -1 | 0 | 4 |
| Critical (15%) | 2 | 11 | 23 | 8 | 6 | 3 | 0 | -1 | 2 | 2 | 0 | 1 |

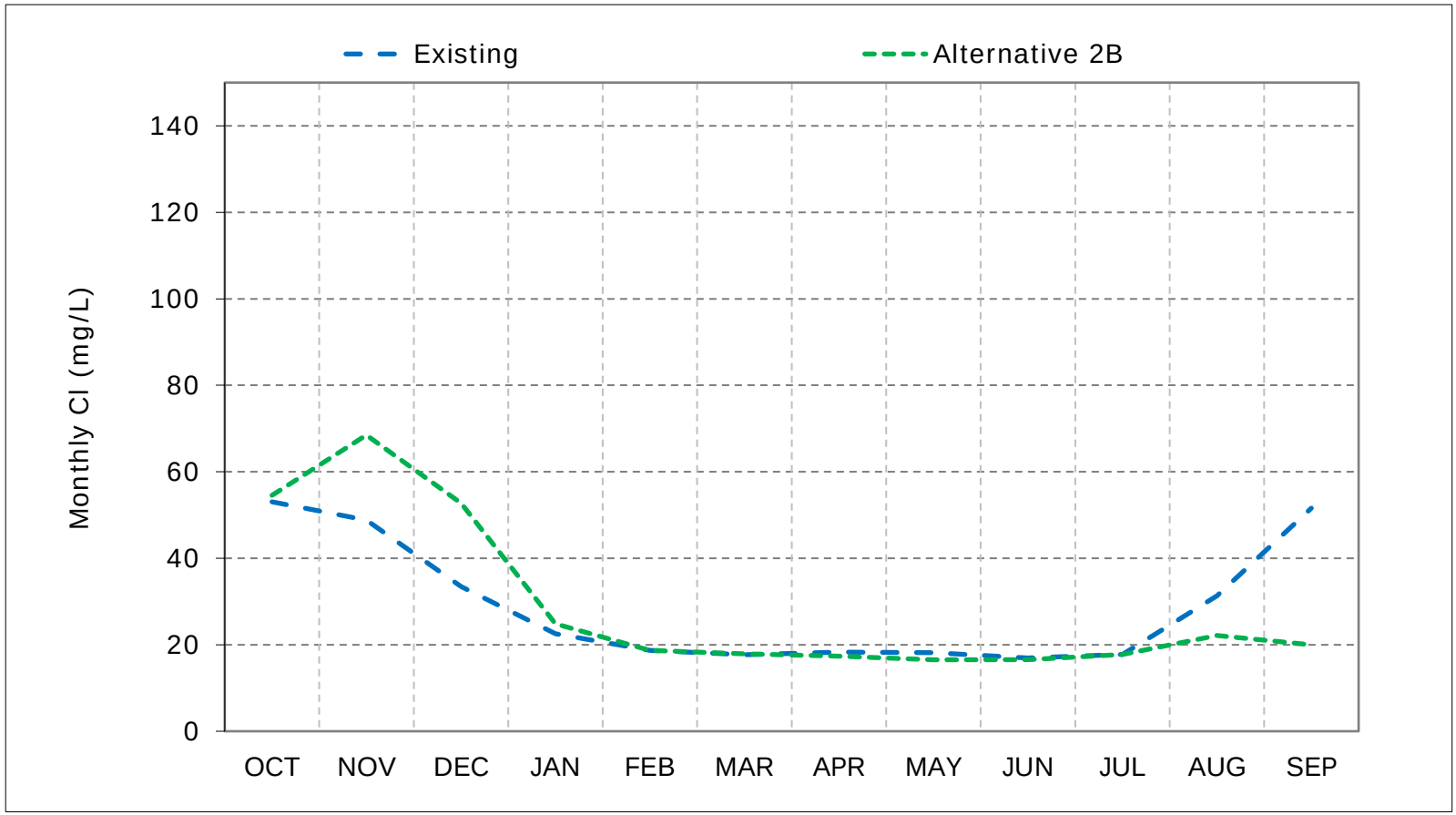
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 5-1. San Joaquin River at San Andreas Chloride, Long-Term Average Cl



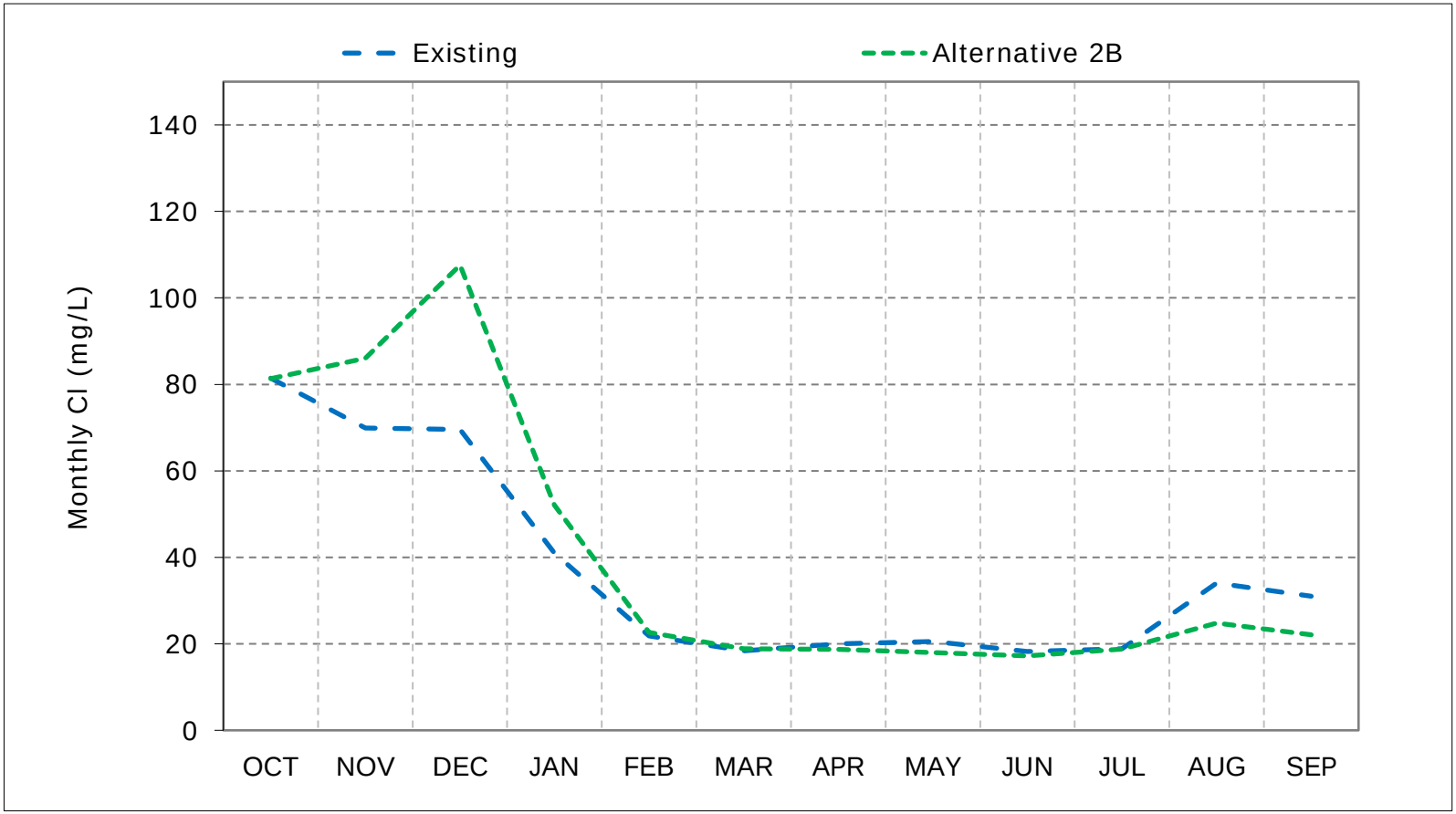

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-2. San Joaquin River at San Andreas Chloride, Wet Year Average Cl



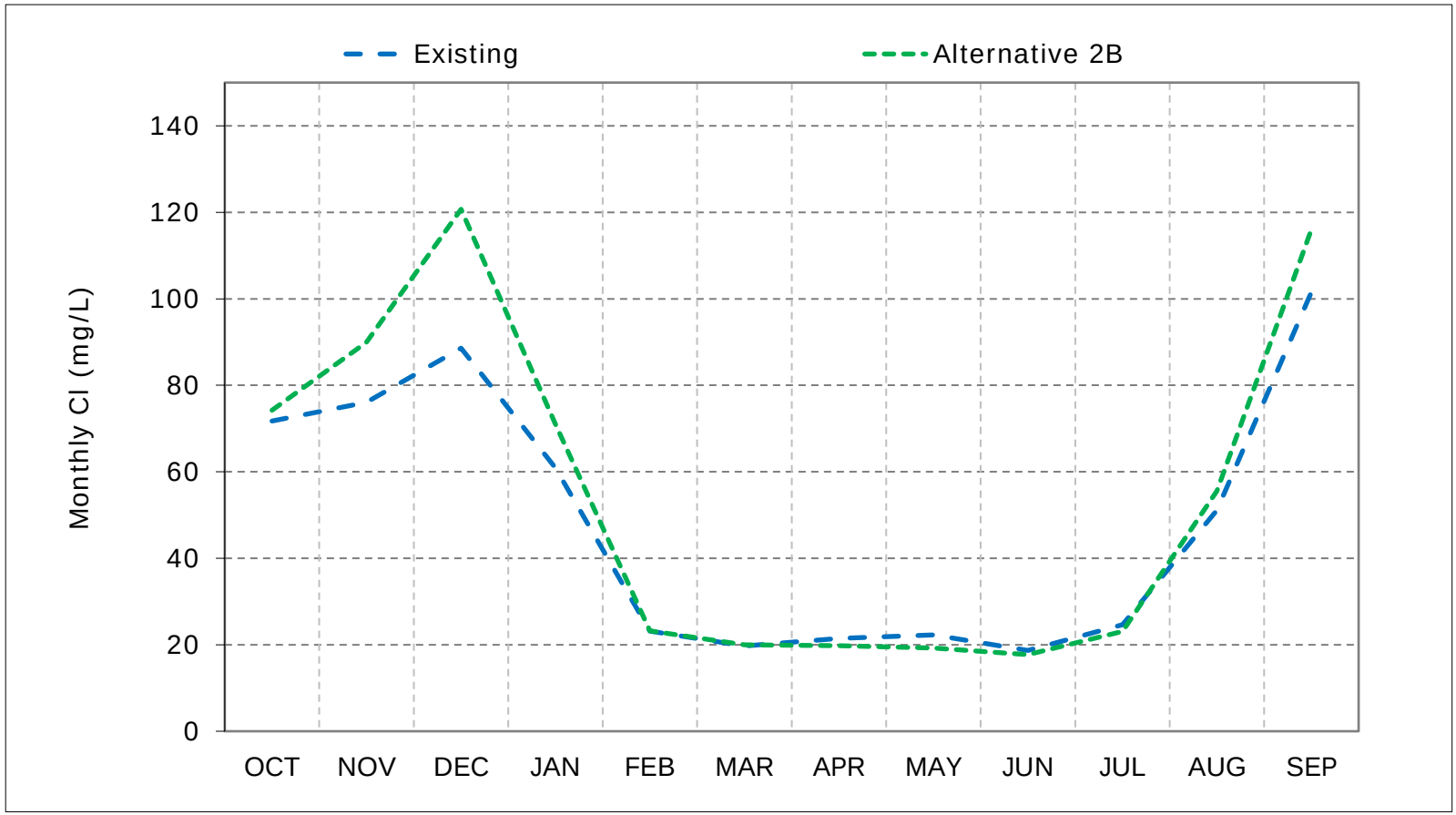

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-3. San Joaquin River at San Andreas Chloride, Above Normal Year Average C



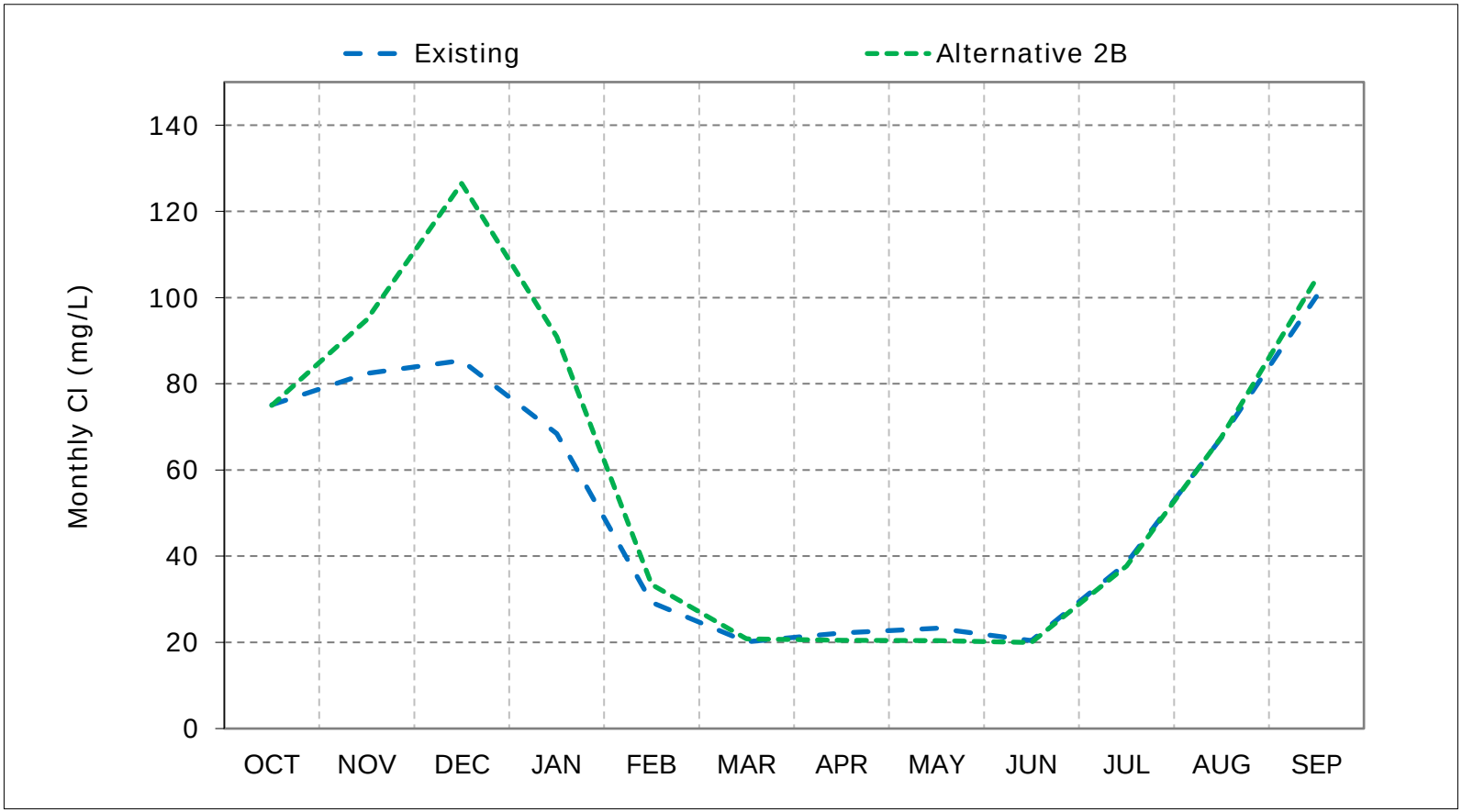

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-4. San Joaquin River at San Andreas Chloride, Below Normal Year Average C



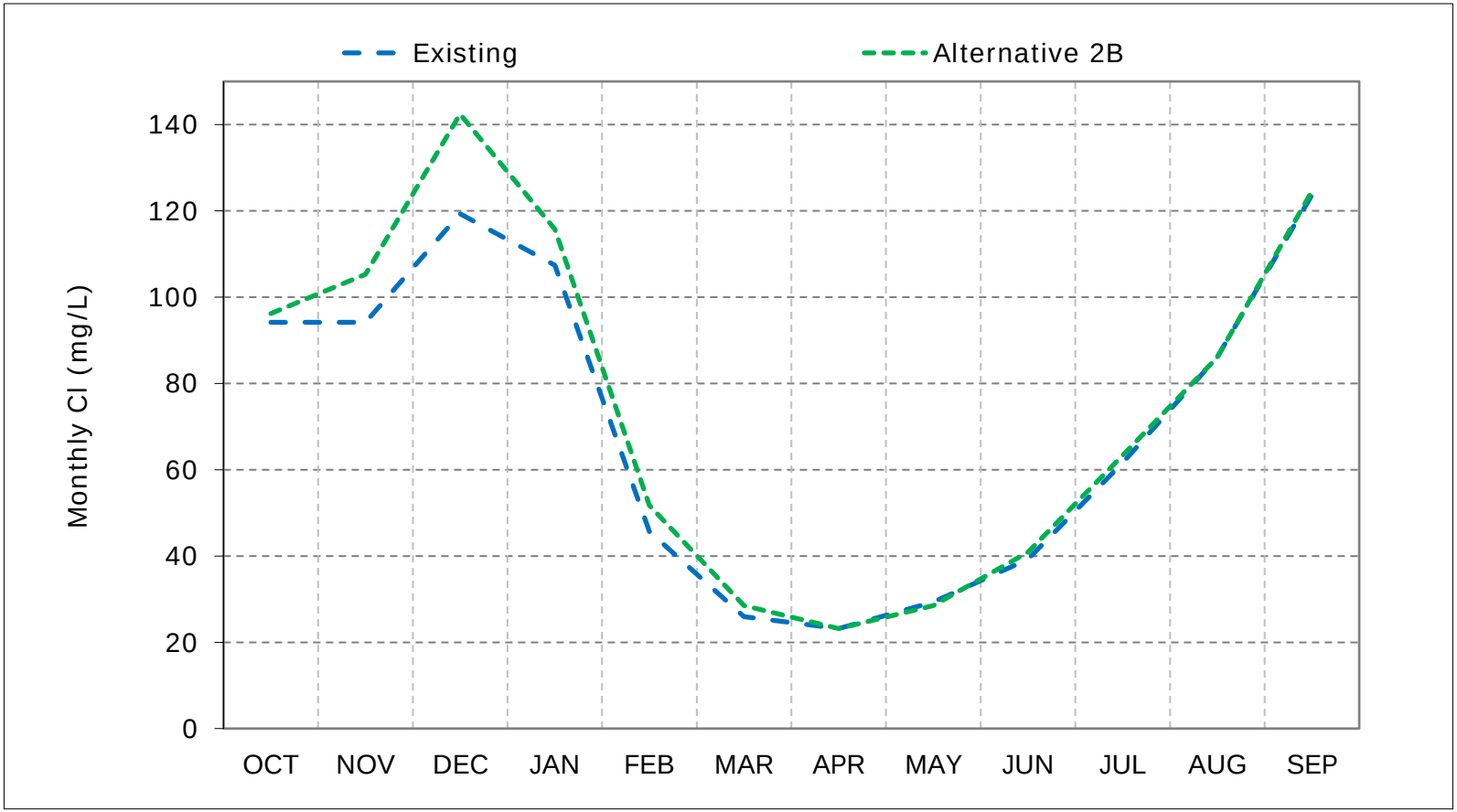

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-5. San Joaquin River at San Andreas Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-6. San Joaquin River at San Andreas Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-7. San Joaquin River at San Andreas Chloride, January Cl

Figure 5-8. San Joaquin River at San Andreas Chloride, February Cl

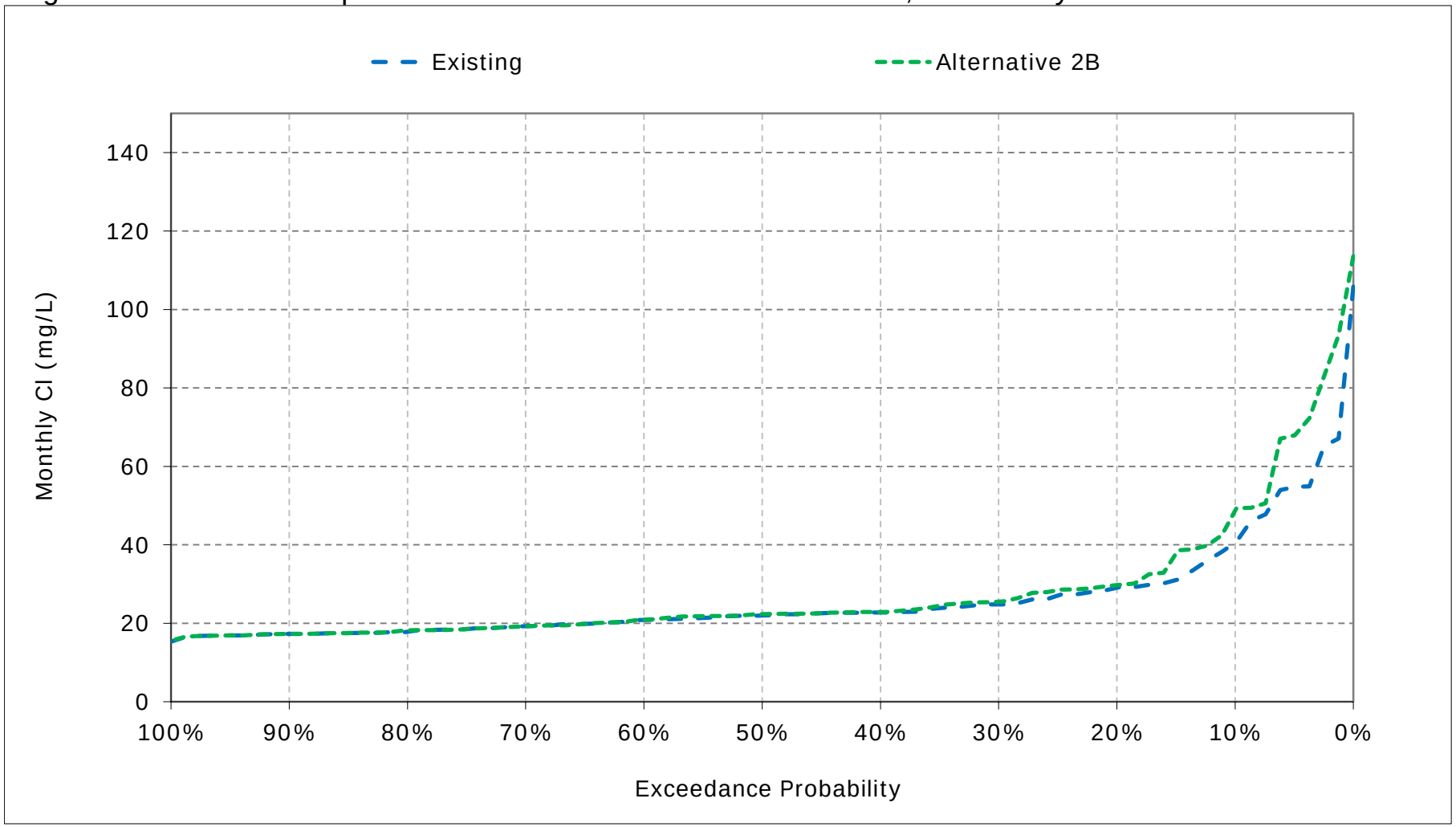


Figure 5-9. San Joaquin River at San Andreas Chloride, March Cl

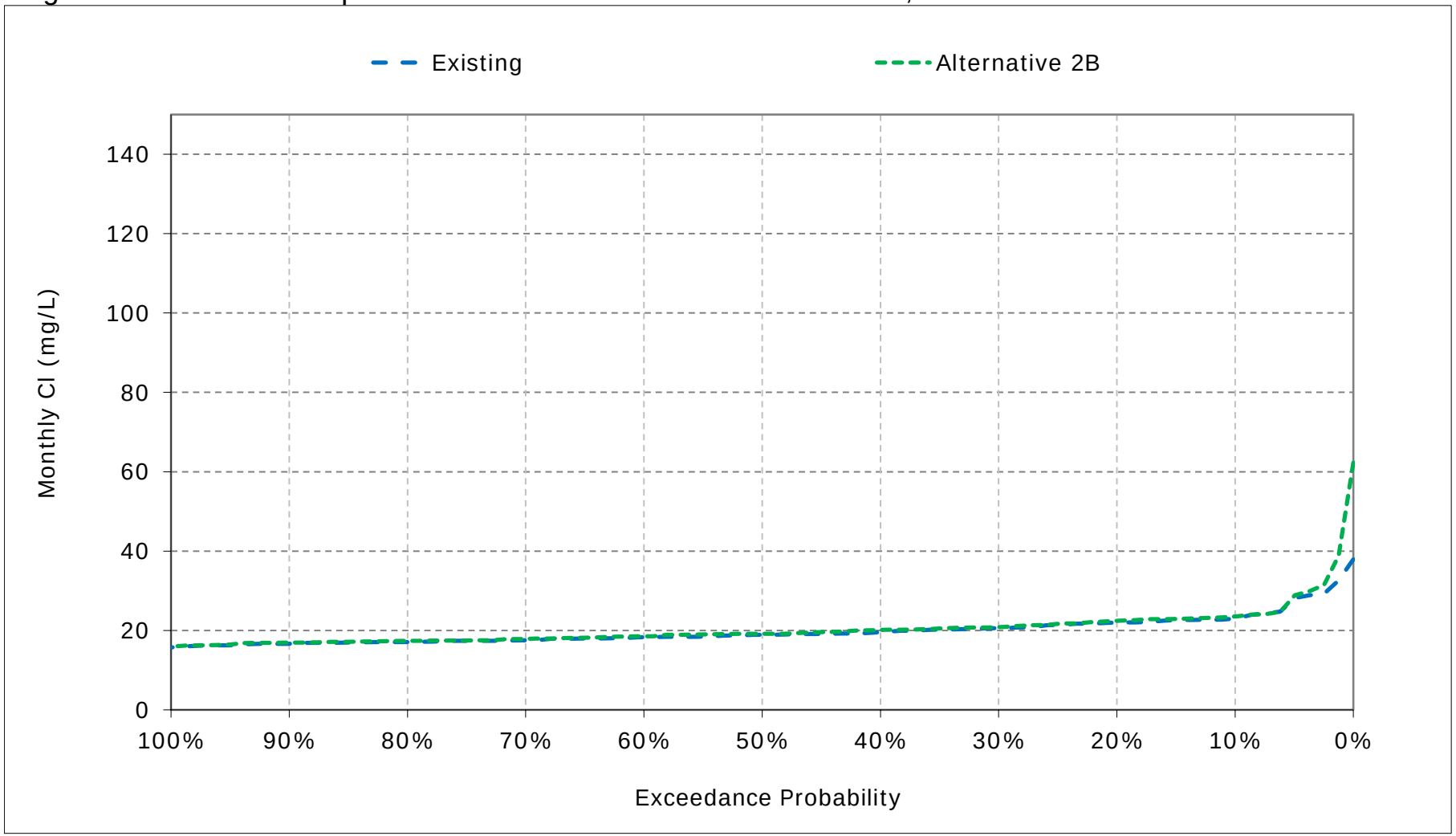


Figure 5-10. San Joaquin River at San Andreas Chloride, April Cl

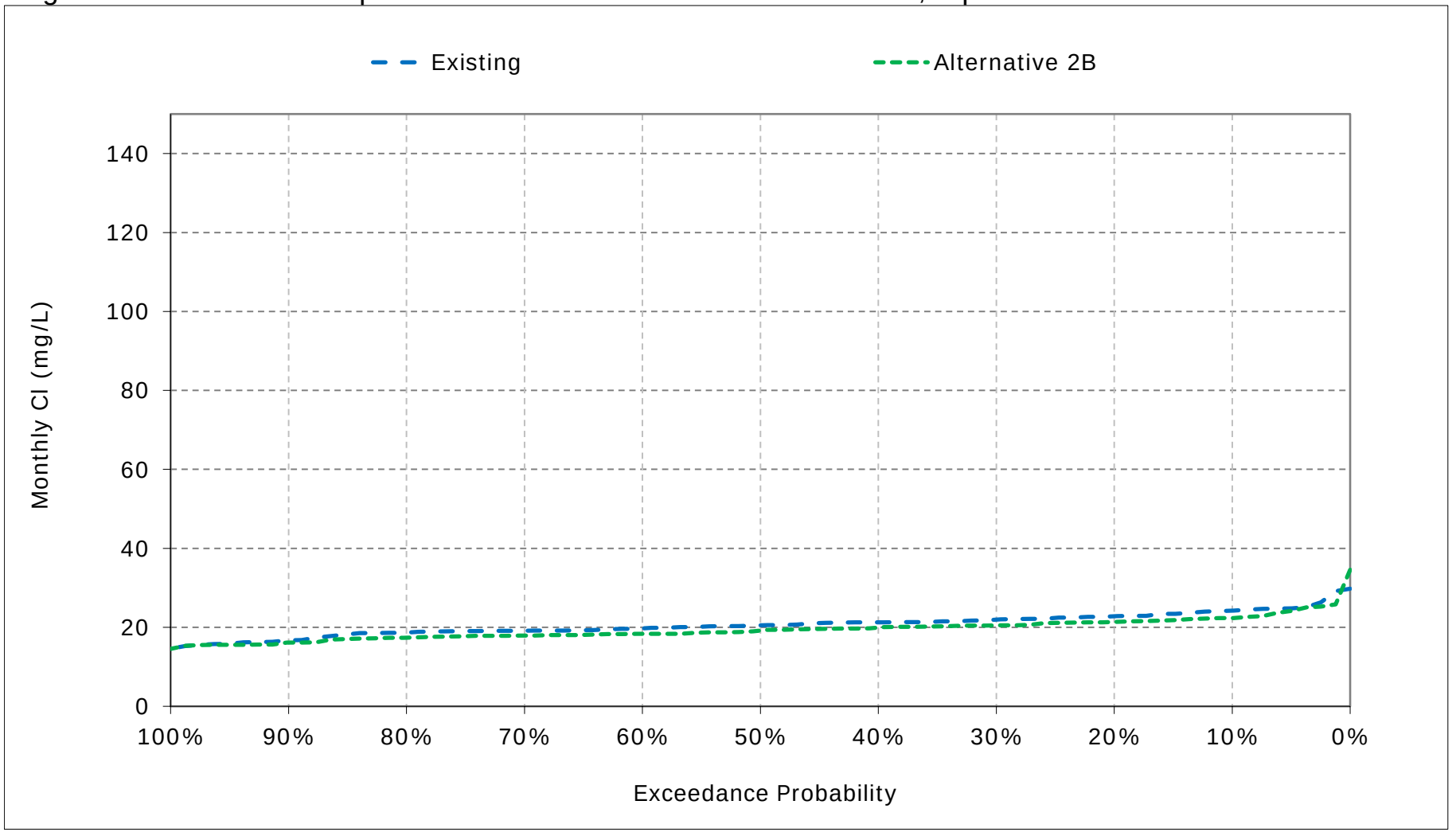


Figure 5-11. San Joaquin River at San Andreas Chloride, May Cl

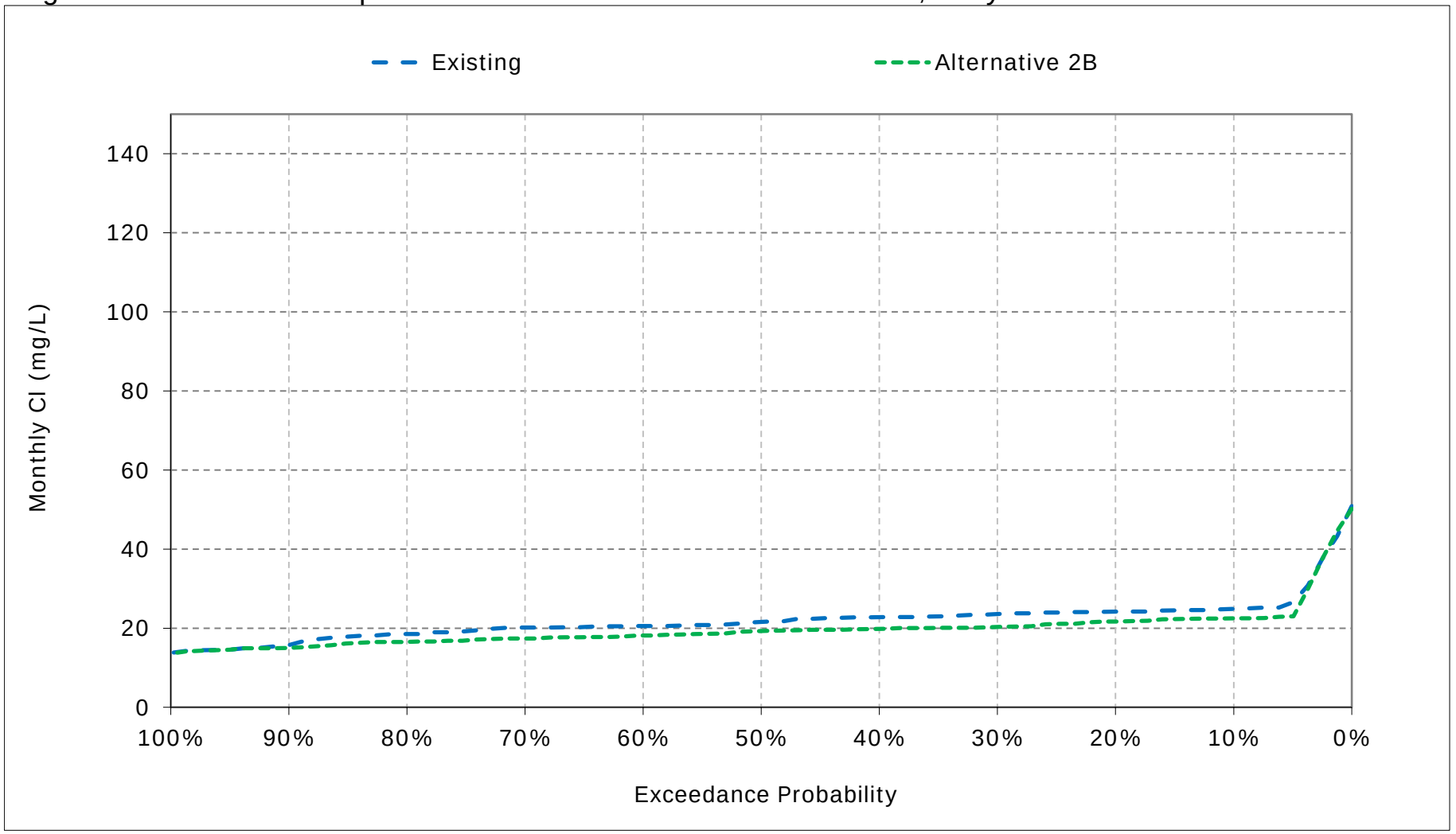


Figure 5-12. San Joaquin River at San Andreas Chloride, June Cl

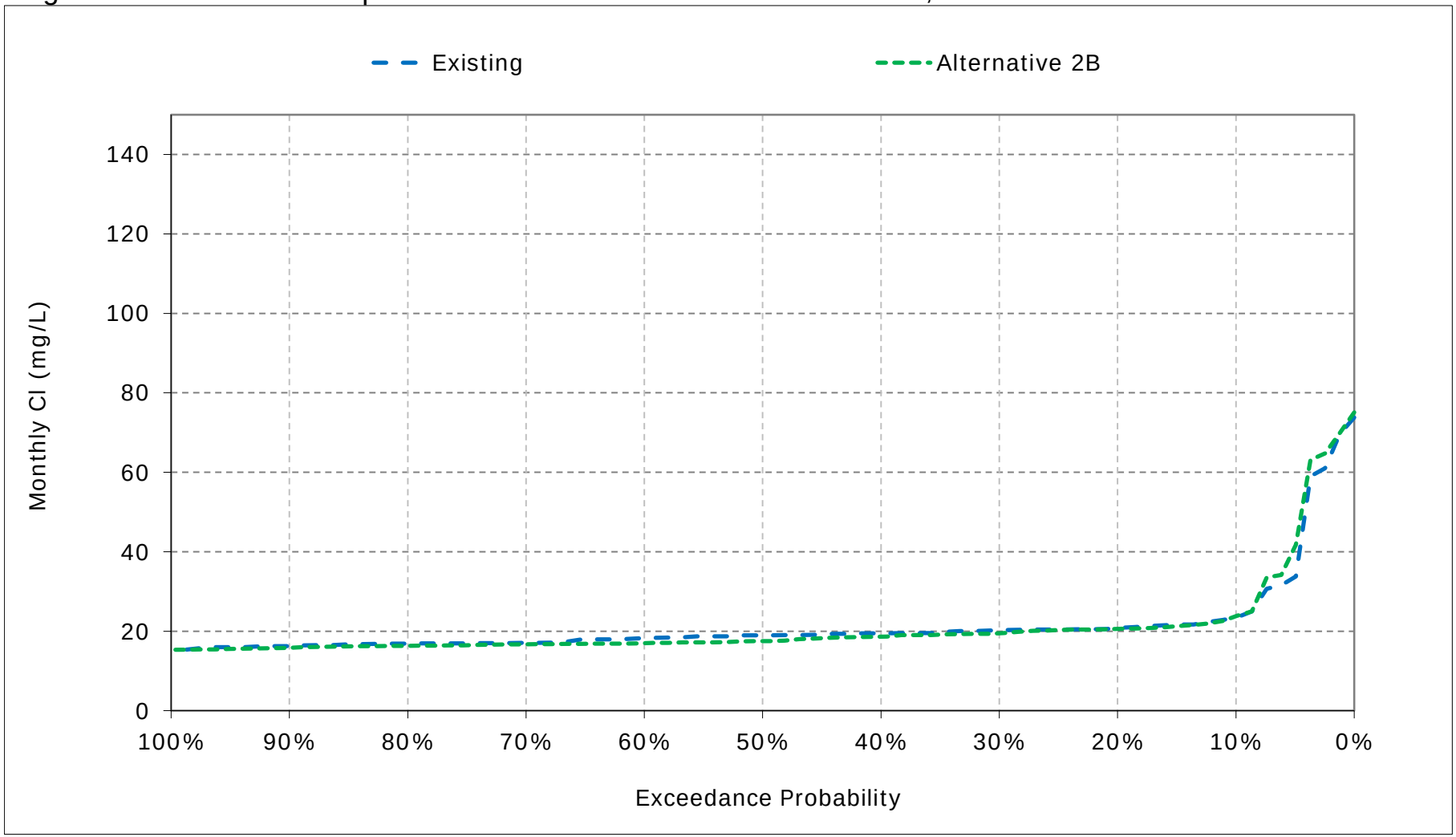


Figure 5-13. San Joaquin River at San Andreas Chloride, July Cl

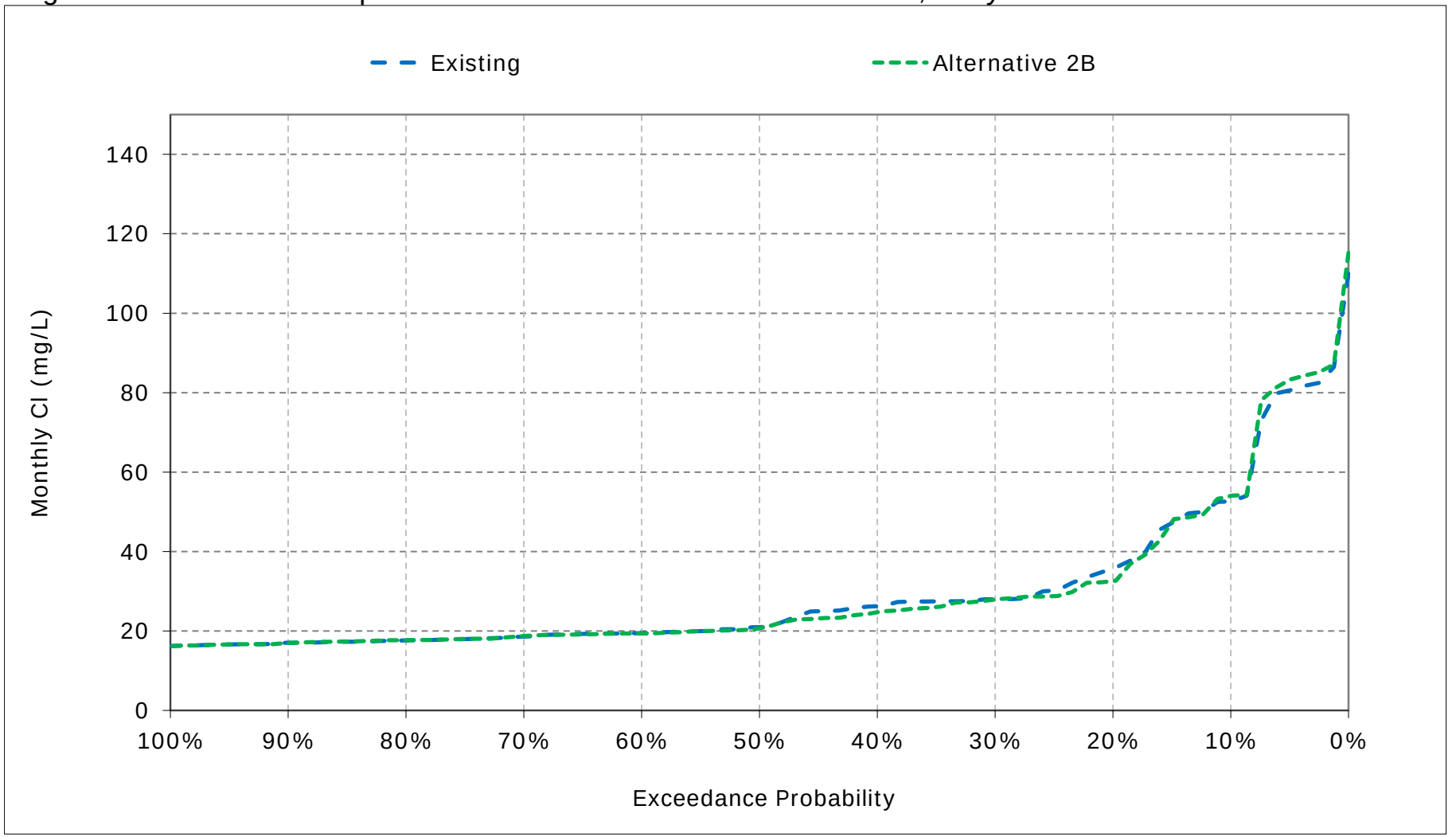


Figure 5-14. San Joaquin River at San Andreas Chloride, August Cl

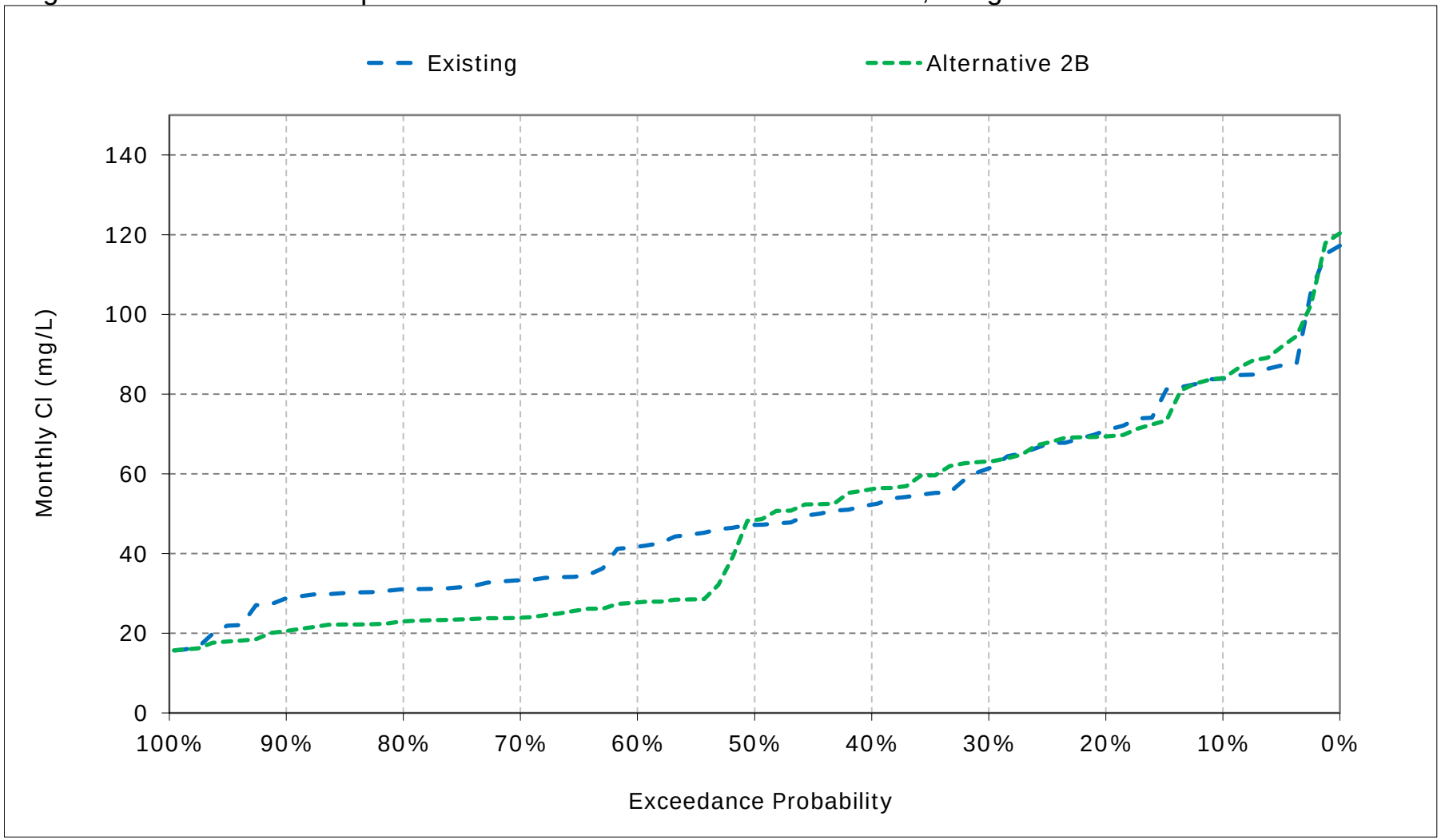


Figure 5-15. San Joaquin River at San Andreas Chloride, September Cl

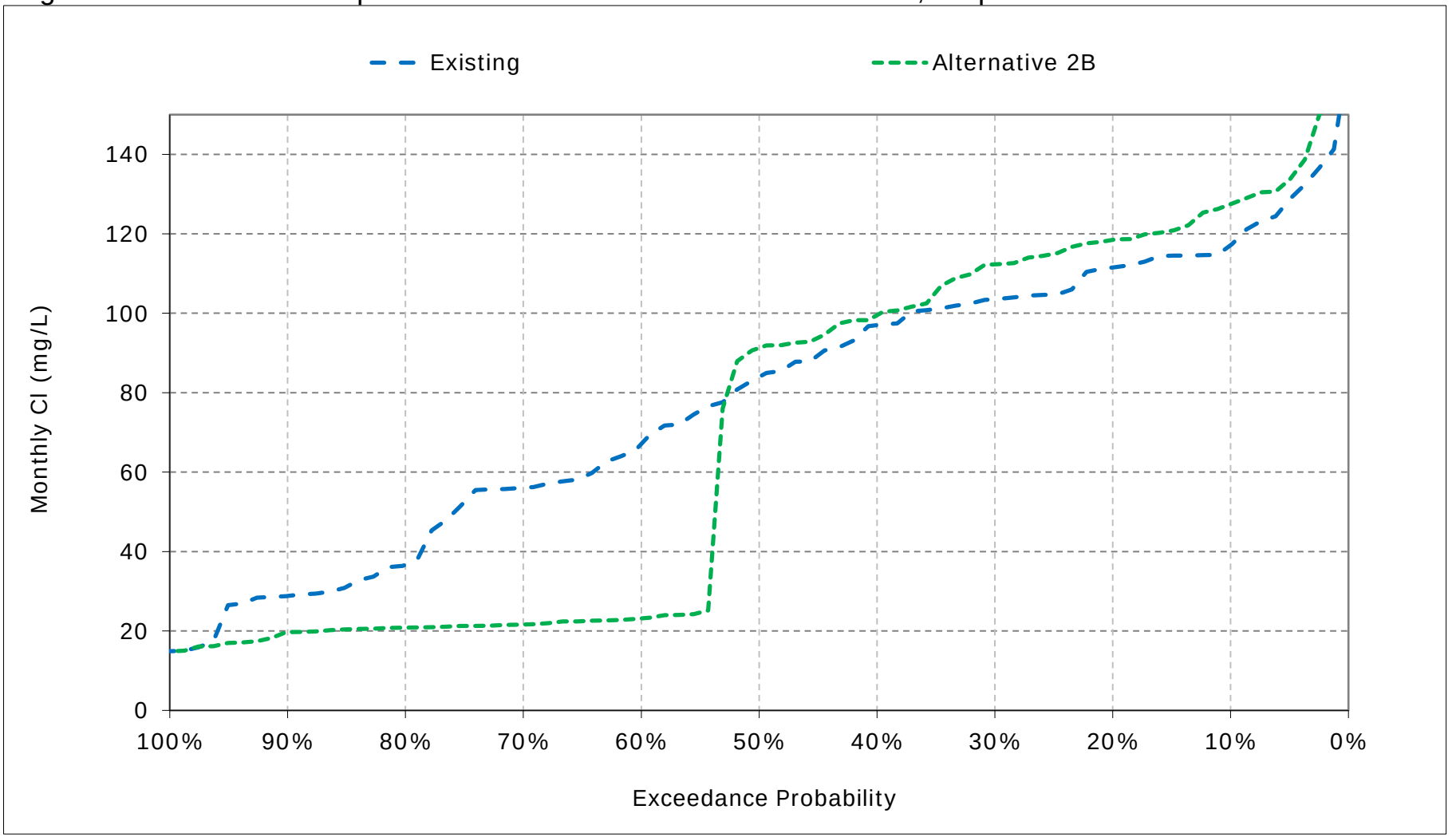


Figure 5-16. San Joaquin River at San Andreas Chloride, October Cl

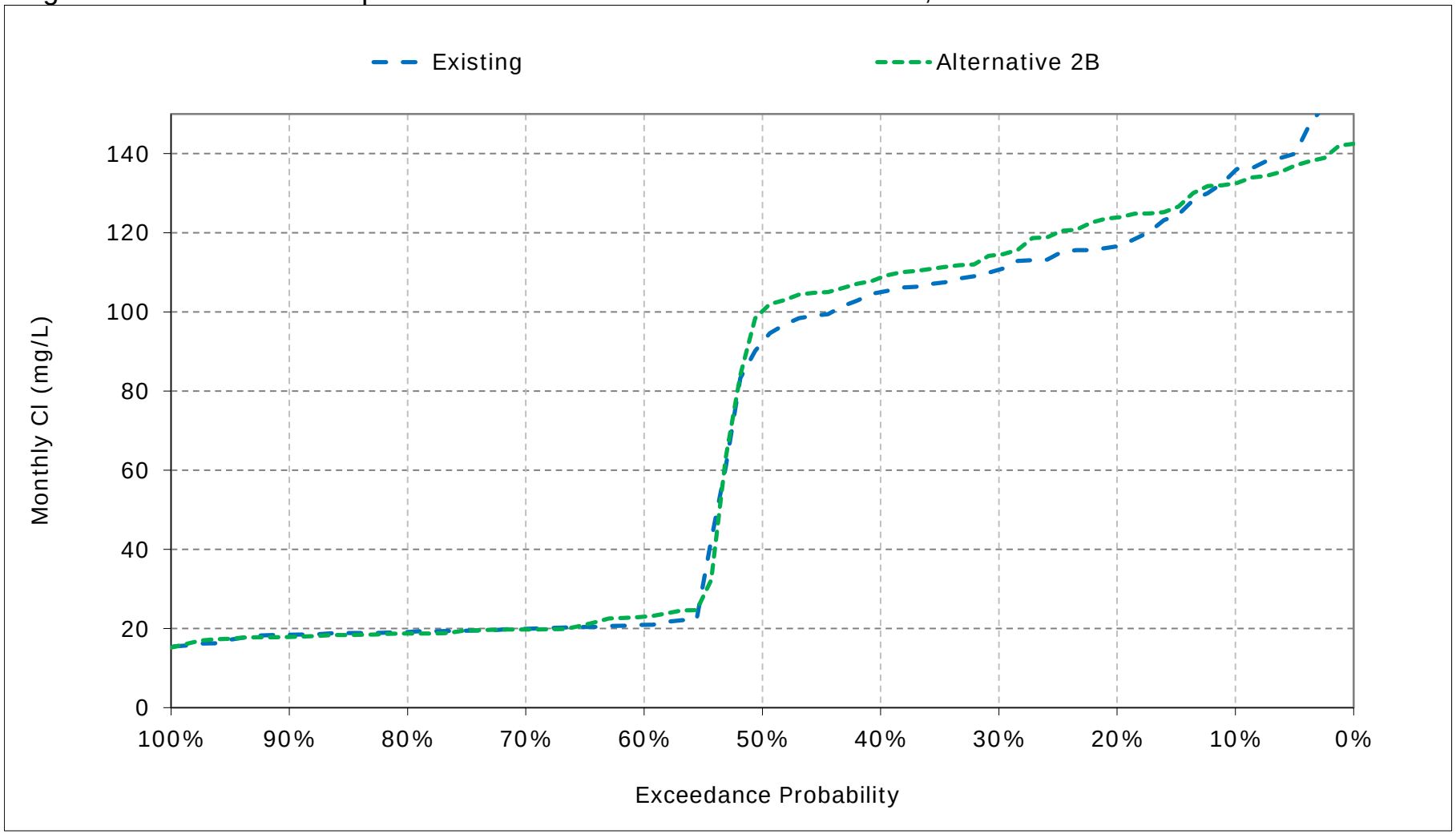


Figure 5-17. San Joaquin River at San Andreas Chloride, November Cl

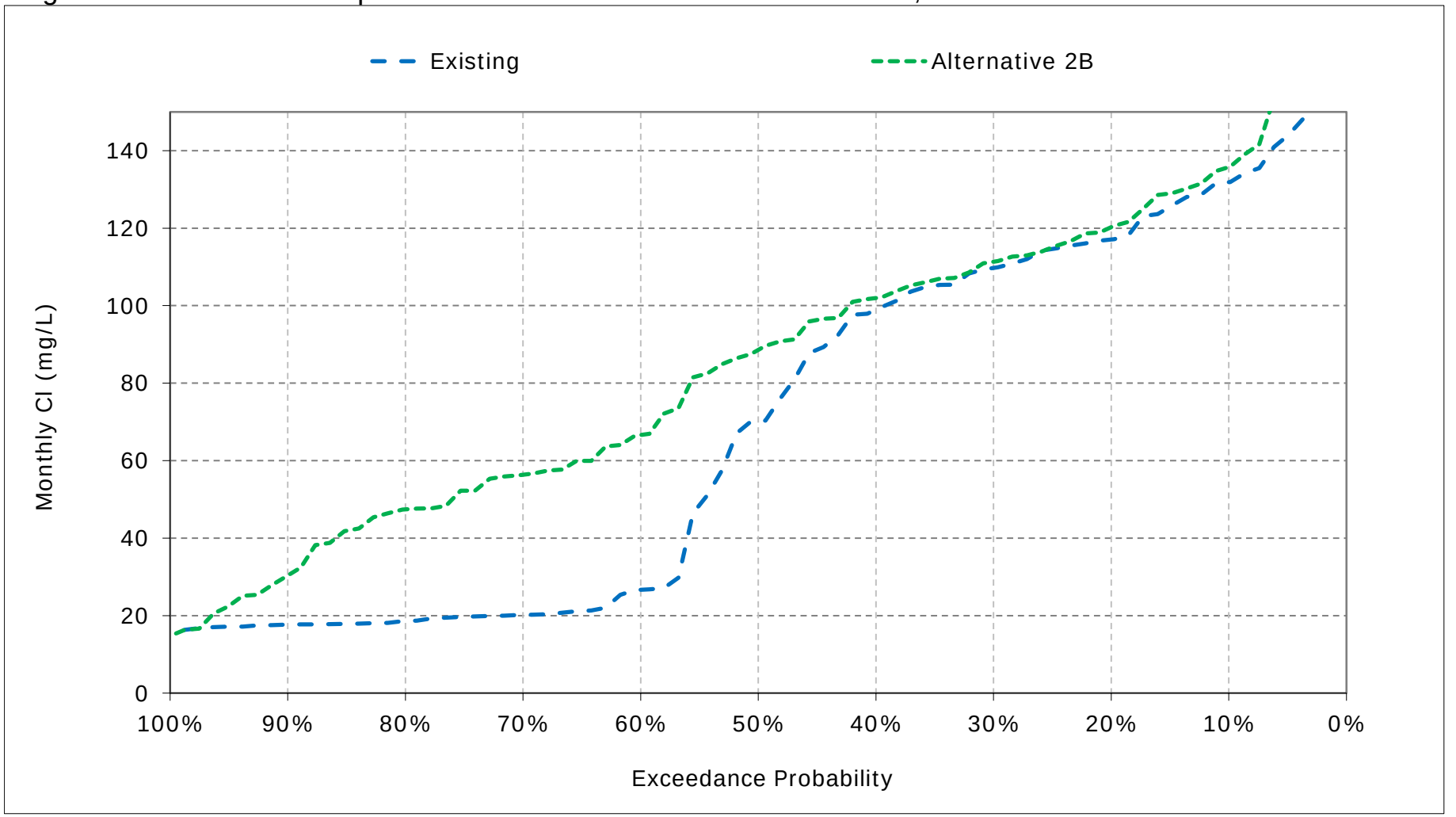
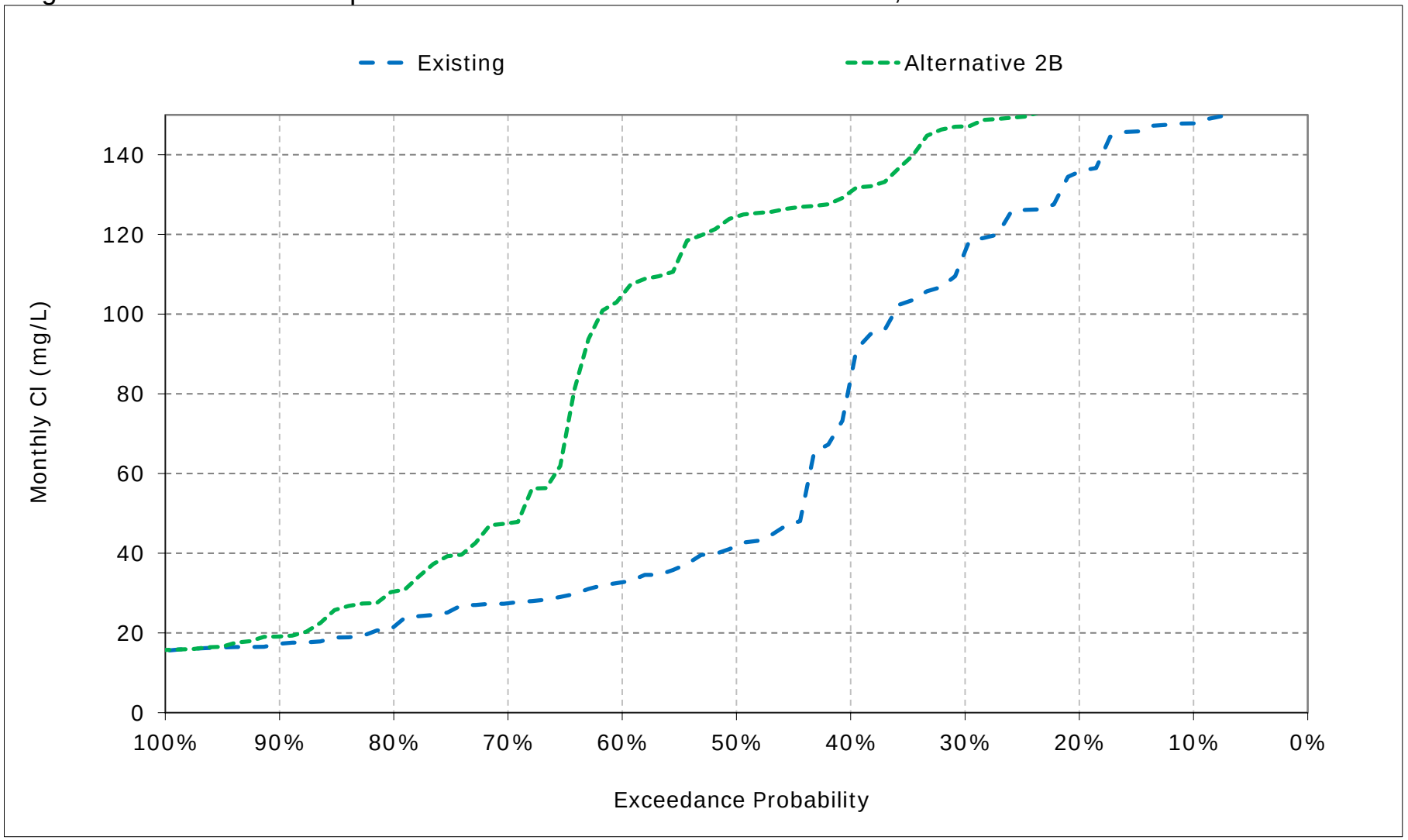


Figure 5-18. San Joaquin River at San Andreas Chloride, December Cl



## Table 6-1. San Joaquin River at Prisoners Point Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 121 | 120 | 146 | 135 | 76 | 47 | 54 | 50 | 33 | 57 | 85 | 112 |
| 20% | 111 | 107 | 135 | 105 | 63 | 42 | 51 | 46 | 29 | 36 | 66 | 107 |
| 30% | 107 | 99 | 118 | 95 | 59 | 38 | 47 | 44 | 28 | 30 | 58 | 98 |
| 40% | 102 | 88 | 94 | 71 | 51 | 35 | 44 | 42 | 26 | 27 | 52 | 91 |
| 50% | 91 | 78 | 57 | 65 | 45 | 31 | 40 | 40 | 25 | 26 | 46 | 82 |
| 60% | 27 | 29 | 38 | 57 | 40 | 29 | 39 | 37 | 24 | 23 | 40 | 74 |
| 70% | 25 | 24 | 31 | 49 | 32 | 28 | 34 | 36 | 24 | 22 | 32 | 67 |
| 80% | 23 | 23 | 26 | 41 | 30 | 26 | 29 | 31 | 23 | 21 | 30 | 52 |
| 90% | 22 | 22 | 24 | 31 | 28 | 24 | 27 | 22 | 22 | 19 | 29 | 42 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 69 | 67 | 76 | 75 | 48 | 34 | 40 | 39 | 28 | 32 | 50 | 80 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 55 | 51 | 45 | 46 | 40 | 32 | 31 | 30 | 26 | 22 | 31 | 61 |
| Above Normal (15%) | 80 | 69 | 75 | 69 | 52 | 39 | 41 | 38 | 26 | 21 | 33 | 45 |
| Below Normal (17%) | 72 | 72 | 91 | 87 | 48 | 35 | 47 | 43 | 24 | 26 | 53 | 106 |
| Dry (22%) | 71 | 74 | 88 | 81 | 46 | 32 | 48 | 45 | 25 | 40 | 66 | 92 |
| Critical (15%) | 86 | 83 | 110 | 121 | 62 | 37 | 41 | 44 | 42 | 59 | 79 | 104 |

### Alternative 2B

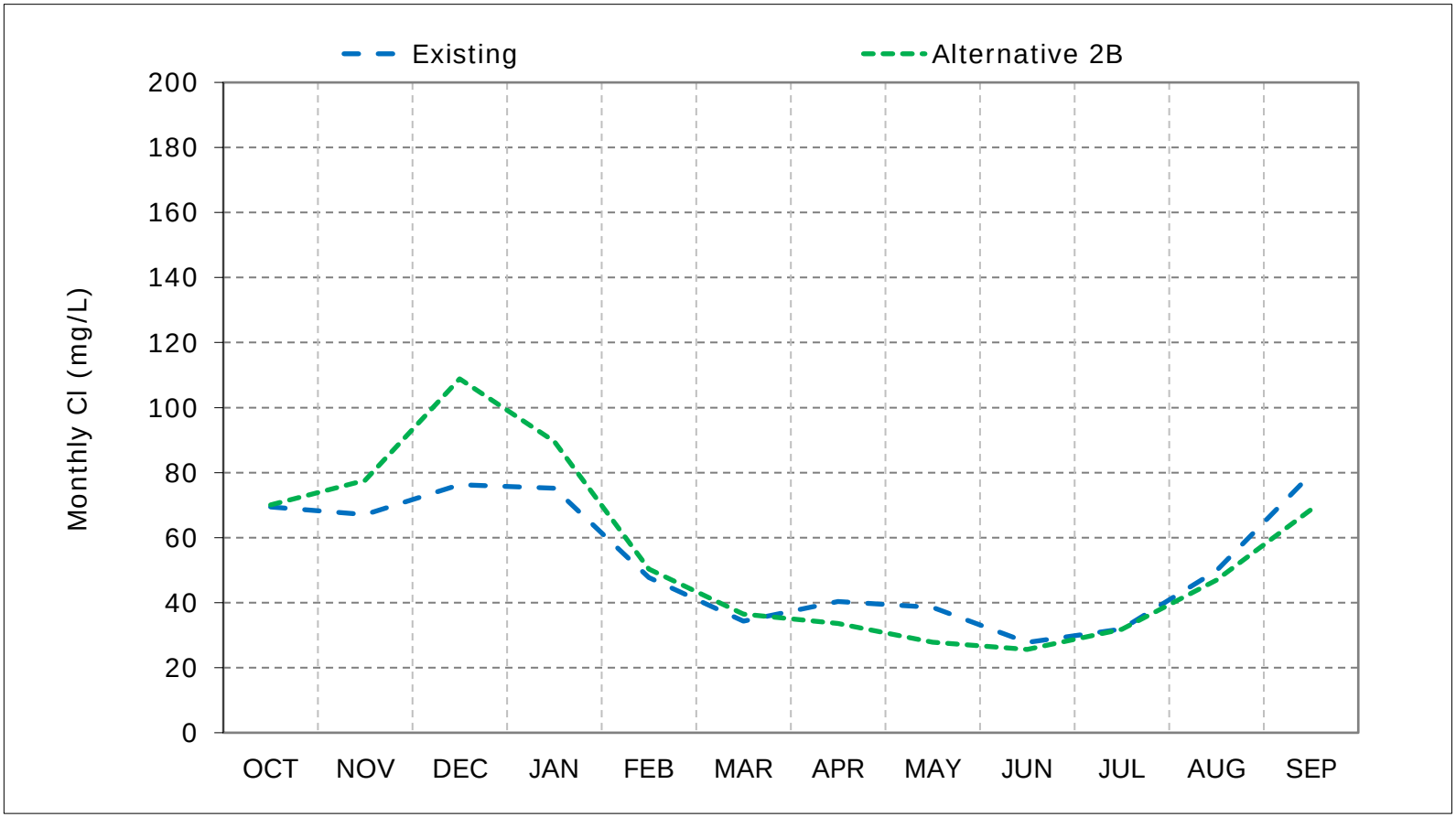
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 121 | 118 | 159 | 163 | 77 | 51 | 46 | 34 | 32 | 57 | 86 | 129 |
| 20% | 116 | 109 | 148 | 144 | 67 | 45 | 42 | 31 | 28 | 33 | 68 | 117 |
| 30% | 110 | 102 | 141 | 123 | 62 | 40 | 38 | 29 | 26 | 28 | 60 | 103 |
| 40% | 107 | 95 | 134 | 100 | 55 | 36 | 34 | 28 | 24 | 27 | 53 | 90 |
| 50% | 96 | 81 | 128 | 69 | 49 | 33 | 32 | 28 | 22 | 25 | 47 | 76 |
| 60% | 22 | 61 | 113 | 60 | 40 | 31 | 30 | 27 | 22 | 23 | 29 | 27 |
| 70% | 20 | 50 | 76 | 50 | 34 | 29 | 28 | 26 | 21 | 21 | 24 | 26 |
| 80% | 20 | 39 | 60 | 42 | 30 | 27 | 26 | 25 | 21 | 20 | 23 | 25 |
| 90% | 19 | 30 | 33 | 33 | 28 | 25 | 24 | 20 | 20 | 19 | 22 | 23 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 70 | 78 | 109 | 90 | 50 | 36 | 34 | 28 | 26 | 32 | 47 | 69 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 55 | 65 | 71 | 51 | 40 | 33 | 28 | 24 | 24 | 22 | 23 | 23 |
| Above Normal (15%) | 80 | 81 | 114 | 87 | 53 | 42 | 35 | 28 | 24 | 21 | 25 | 26 |
| Below Normal (17%) | 73 | 82 | 123 | 103 | 48 | 37 | 38 | 29 | 21 | 24 | 56 | 121 |
| Dry (22%) | 70 | 82 | 130 | 109 | 52 | 36 | 38 | 29 | 22 | 39 | 66 | 97 |
| Critical (15%) | 89 | 90 | 137 | 130 | 69 | 39 | 32 | 33 | 40 | 62 | 80 | 107 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0 | -1 | 13 | 27 | 0 | 4 | -8 | -16 | -1 | 0 | 1 | 17 |
| 20% | 5 | 2 | 13 | 38 | 4 | 3 | -8 | -15 | -1 | -3 | 2 | 10 |
| 30% | 3 | 3 | 24 | 28 | 3 | 2 | -9 | -15 | -2 | -2 | 2 | 5 |
| 40% | 5 | 7 | 41 | 29 | 4 | 1 | -10 | -13 | -2 | 0 | 0 | -1 |
| 50% | 5 | 2 | 72 | 5 | 3 | 2 | -8 | -12 | -3 | -1 | 0 | -6 |
| 60% | -5 | 31 | 76 | 2 | 0 | 1 | -9 | -11 | -3 | 0 | -11 | -46 |
| 70% | -5 | 26 | 45 | 1 | 2 | 1 | -6 | -10 | -3 | 0 | -7 | -41 |
| 80% | -4 | 17 | 34 | 2 | 0 | 1 | -3 | -5 | -3 | 0 | -7 | -28 |
| 90% | -3 | 8 | 9 | 1 | 0 | 1 | -3 | -1 | -3 | 0 | -6 | -19 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1 | 11 | 33 | 14 | 3 | 2 | -7 | -11 | -2 | 0 | -3 | -11 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0 | 14 | 26 | 5 | 0 | 0 | -3 | -6 | -1 | 0 | -8 | -38 |
| Above Normal (15%) | 0 | 12 | 39 | 17 | 2 | 3 | -6 | -10 | -3 | 0 | -8 | -19 |
| Below Normal (17%) | 1 | 10 | 33 | 16 | 0 | 2 | -9 | -14 | -3 | -2 | 3 | 15 |
| Dry (22%) | -1 | 8 | 42 | 28 | 7 | 4 | -10 | -16 | -3 | -1 | 0 | 4 |
| Critical (15%) | 3 | 7 | 27 | 9 | 7 | 2 | -8 | -11 | -2 | 3 | 1 | 3 |

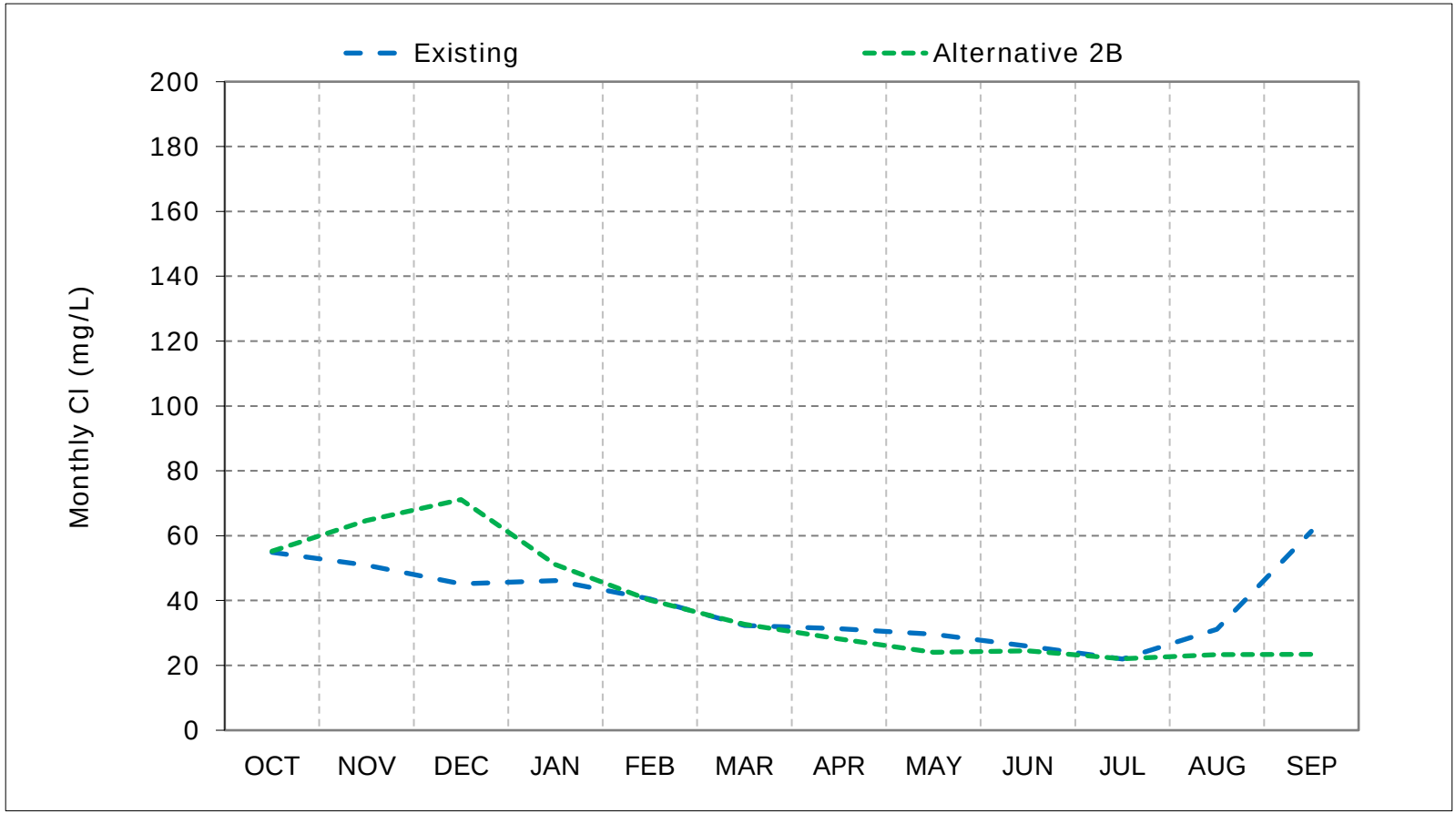
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 6-1. San Joaquin River at Prisoners Point Chloride, Long-Term Average Cl



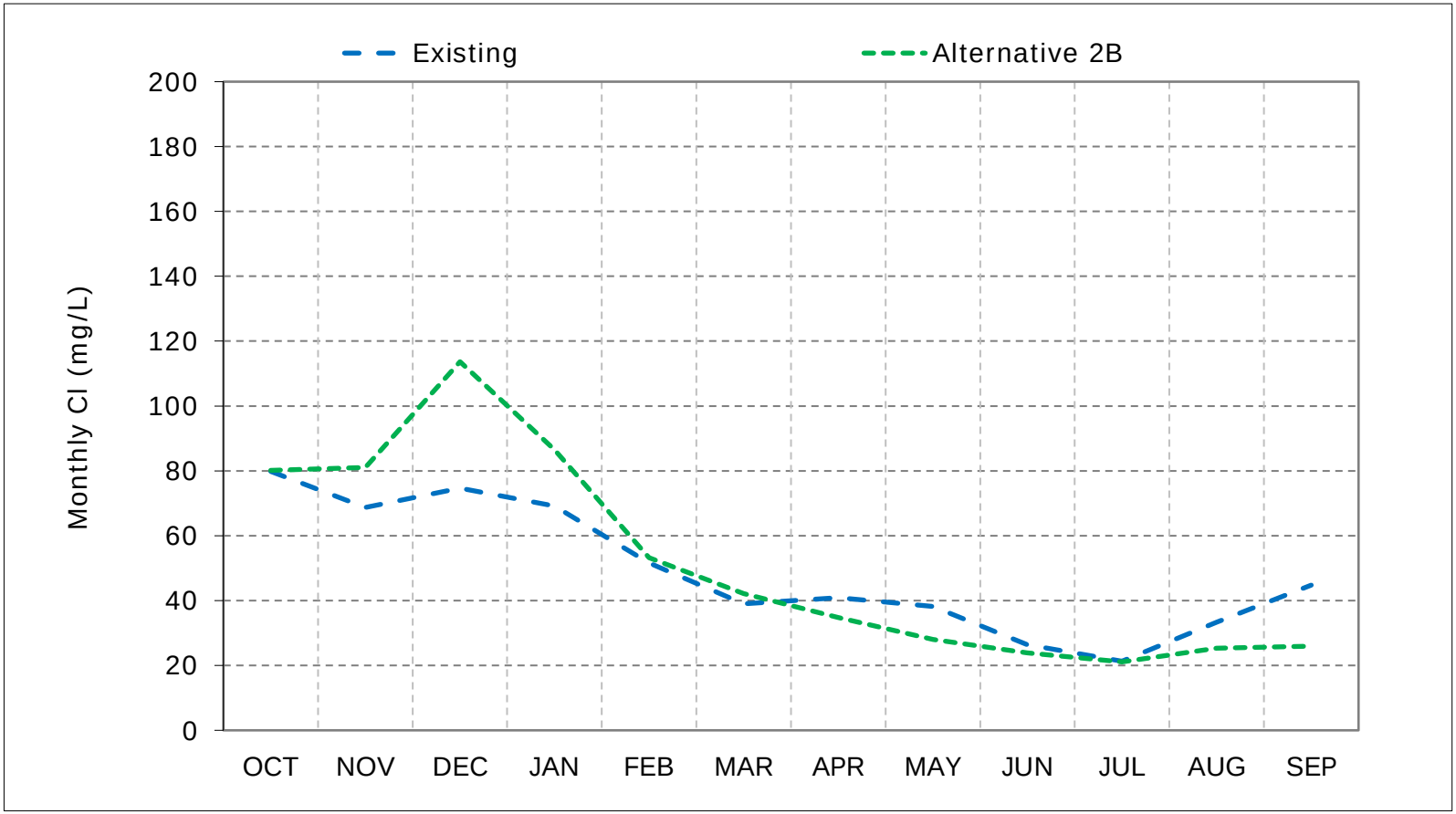

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-2. San Joaquin River at Prisoners Point Chloride, Wet Year Average Cl



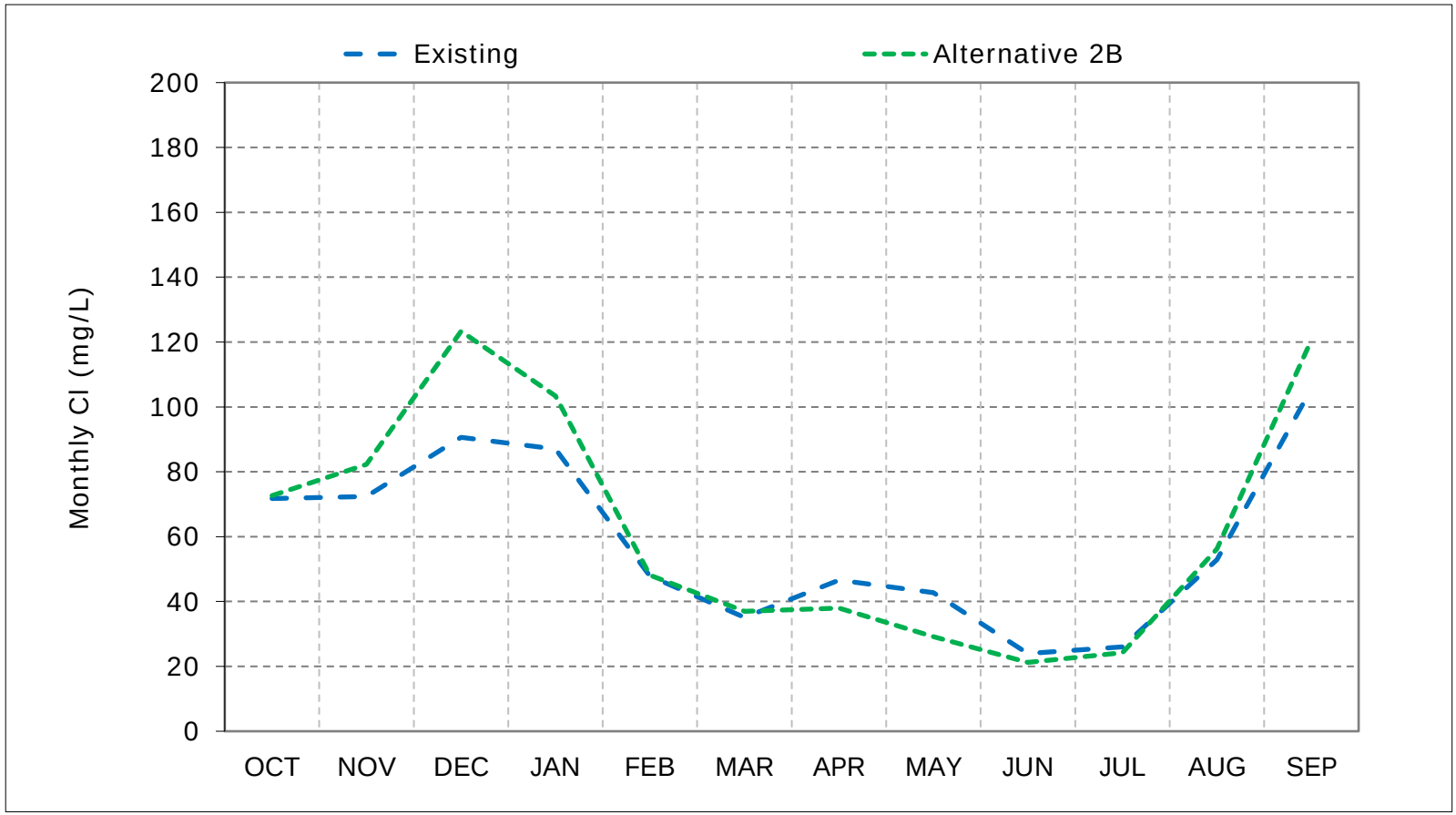

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-3. San Joaquin River at Prisoners Point Chloride, Above Normal Year Average C



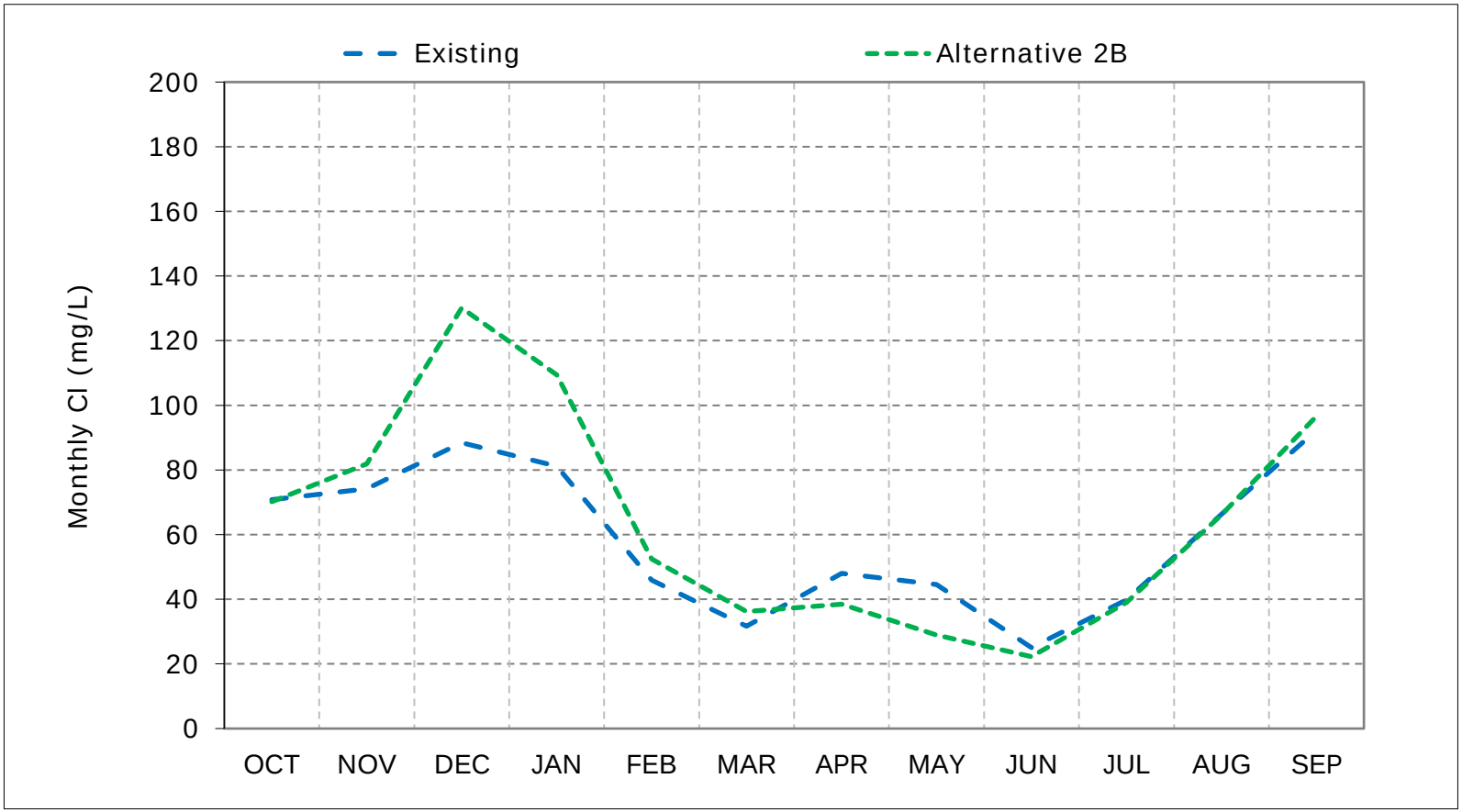

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-4. San Joaquin River at Prisoners Point Chloride, Below Normal Year Average C



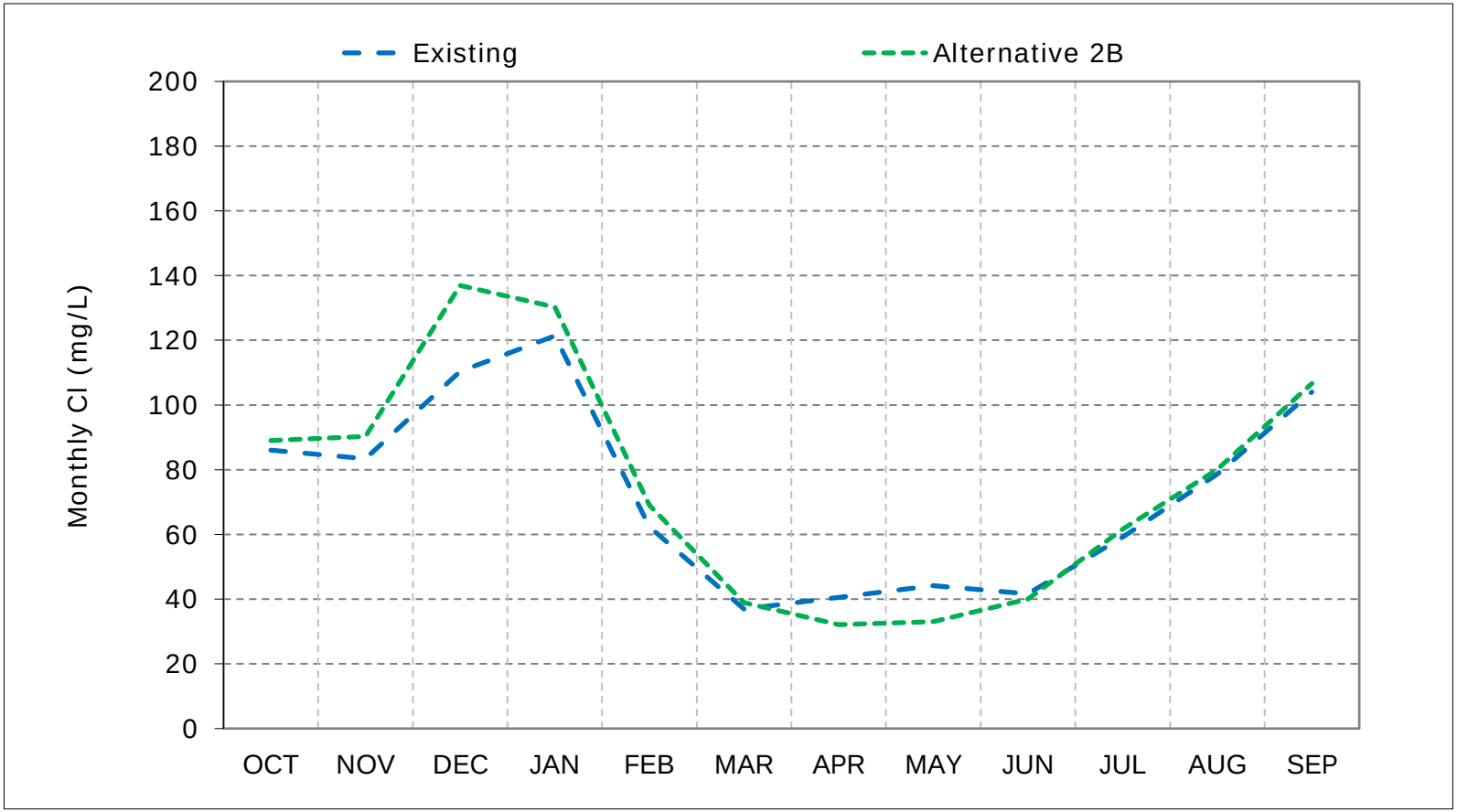

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-5. San Joaquin River at Prisoners Point Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-6. San Joaquin River at Prisoners Point Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-7. San Joaquin River at Prisoners Point Chloride, January Cl

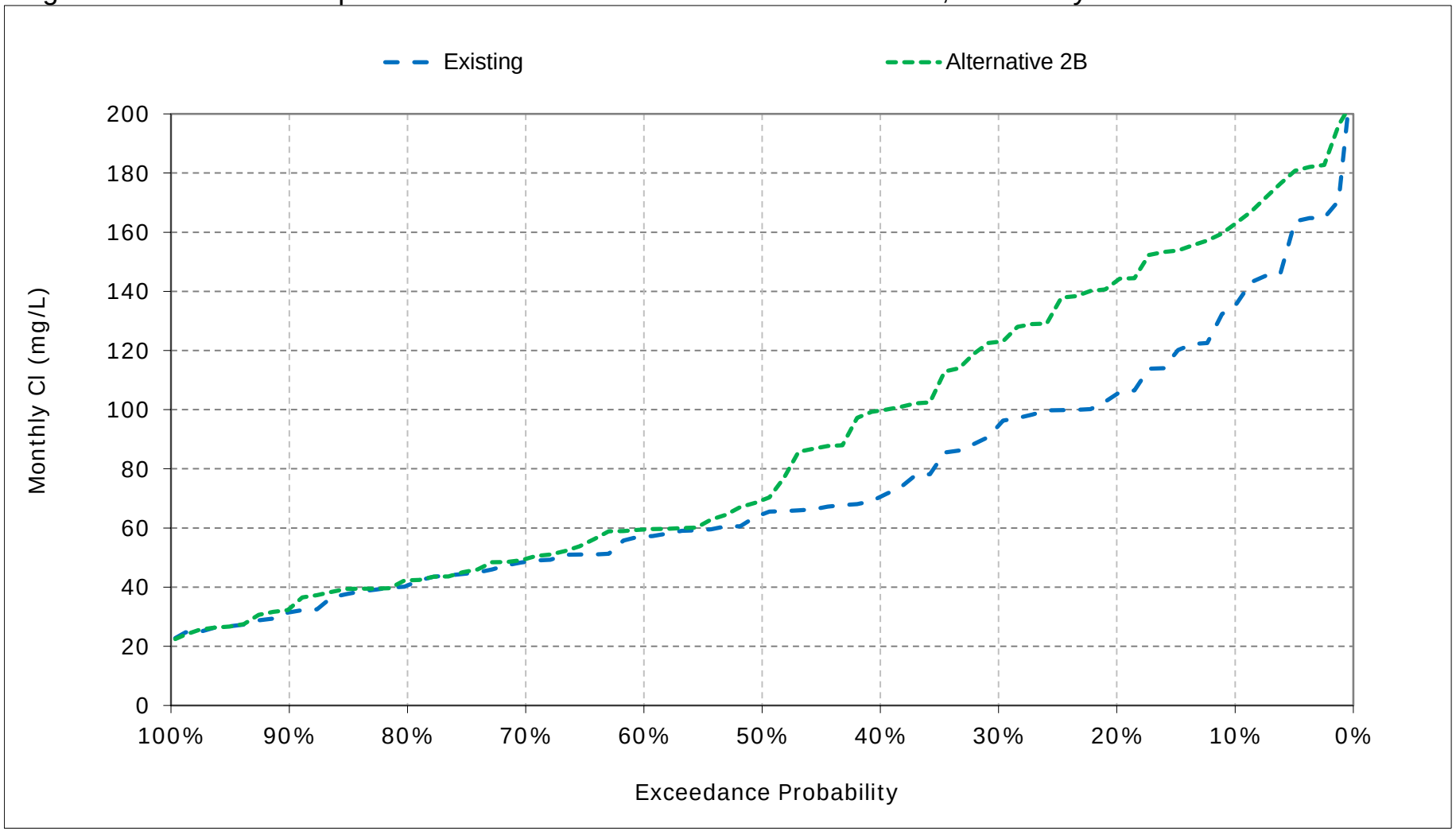


Figure 6-8. San Joaquin River at Prisoners Point Chloride, February Cl

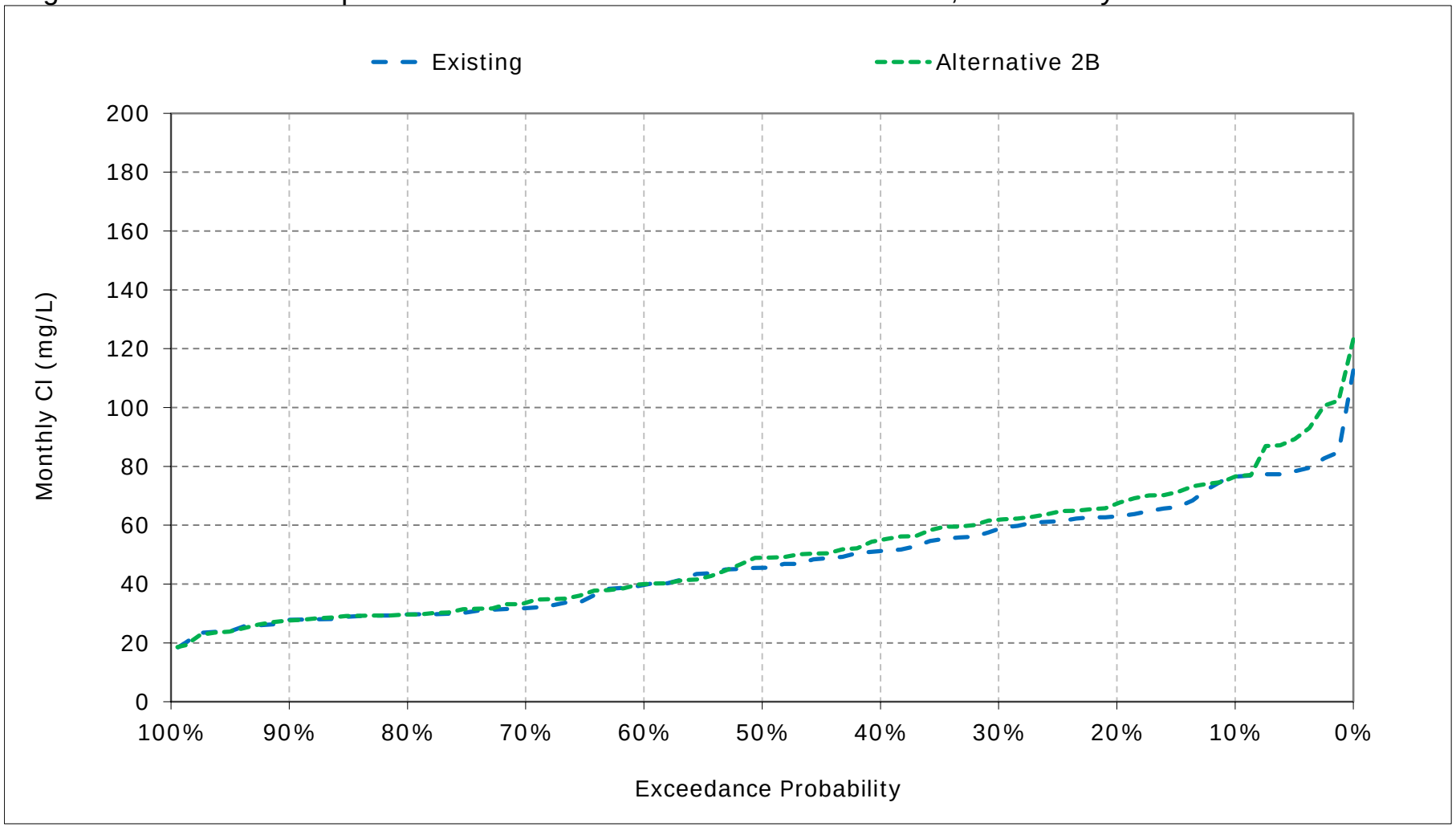


Figure 6-9. San Joaquin River at Prisoners Point Chloride, March Cl

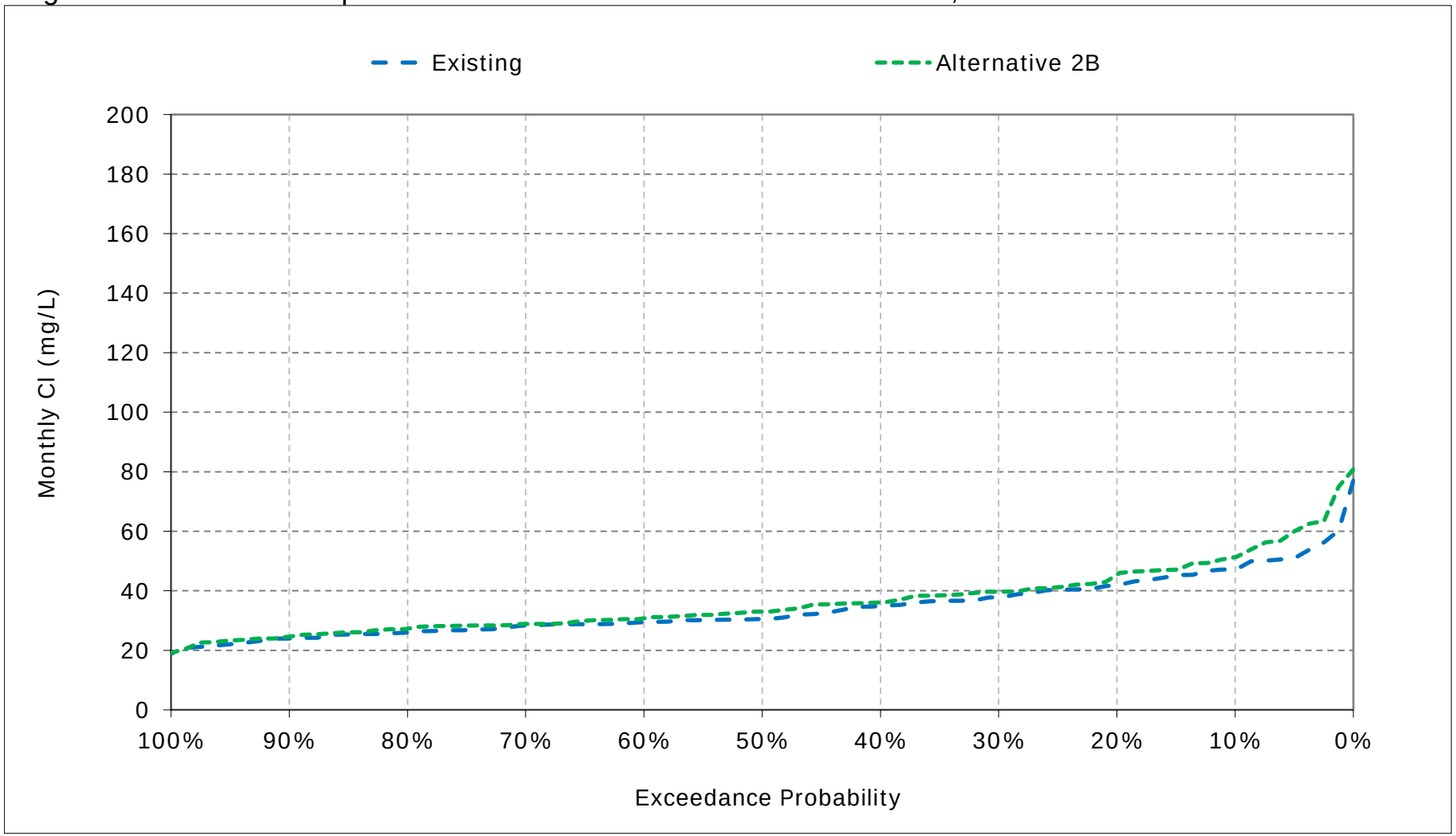


Figure 6-10. San Joaquin River at Prisoners Point Chloride, April Cl

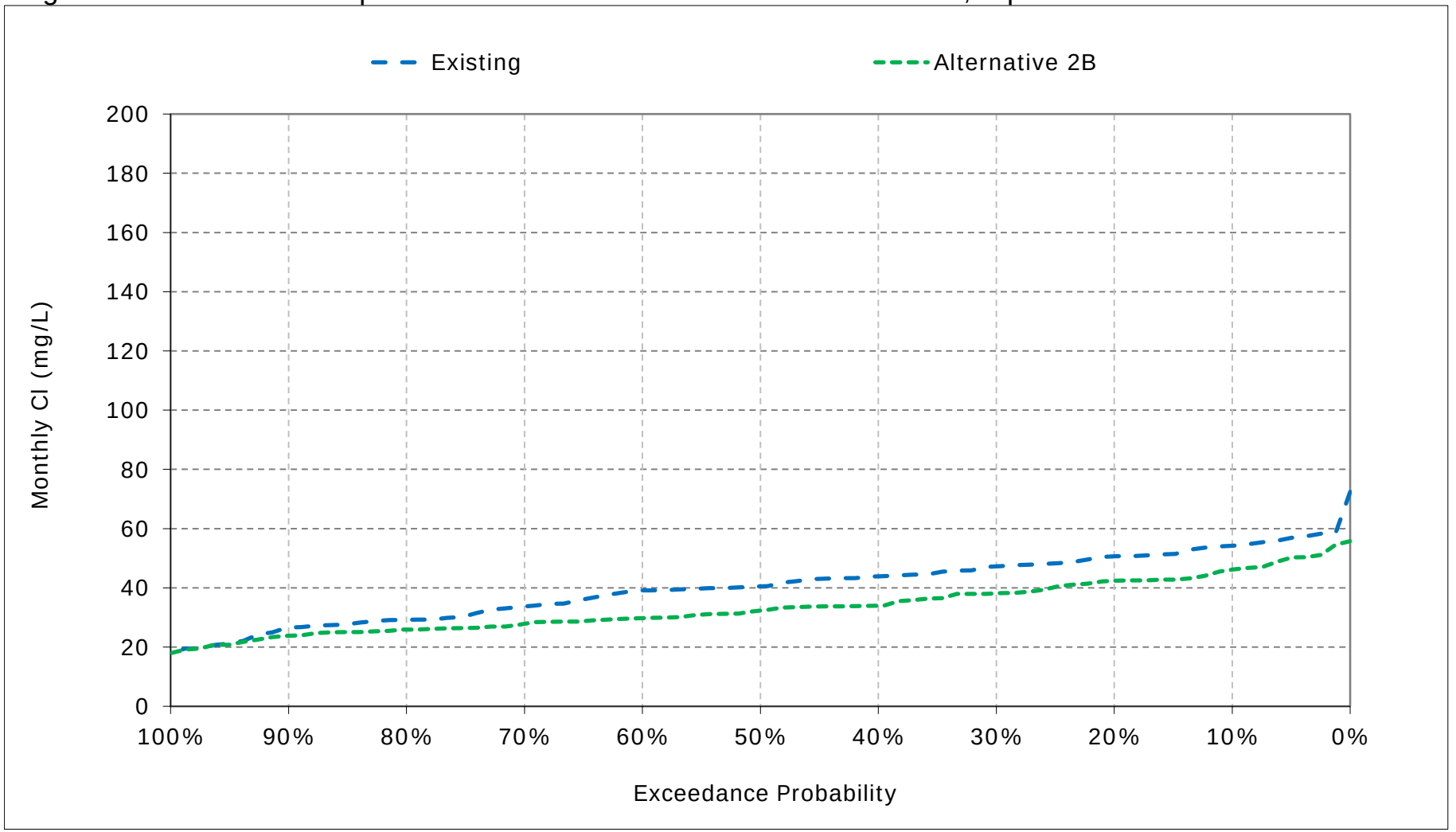


Figure 6-11. San Joaquin River at Prisoners Point Chloride, May Cl

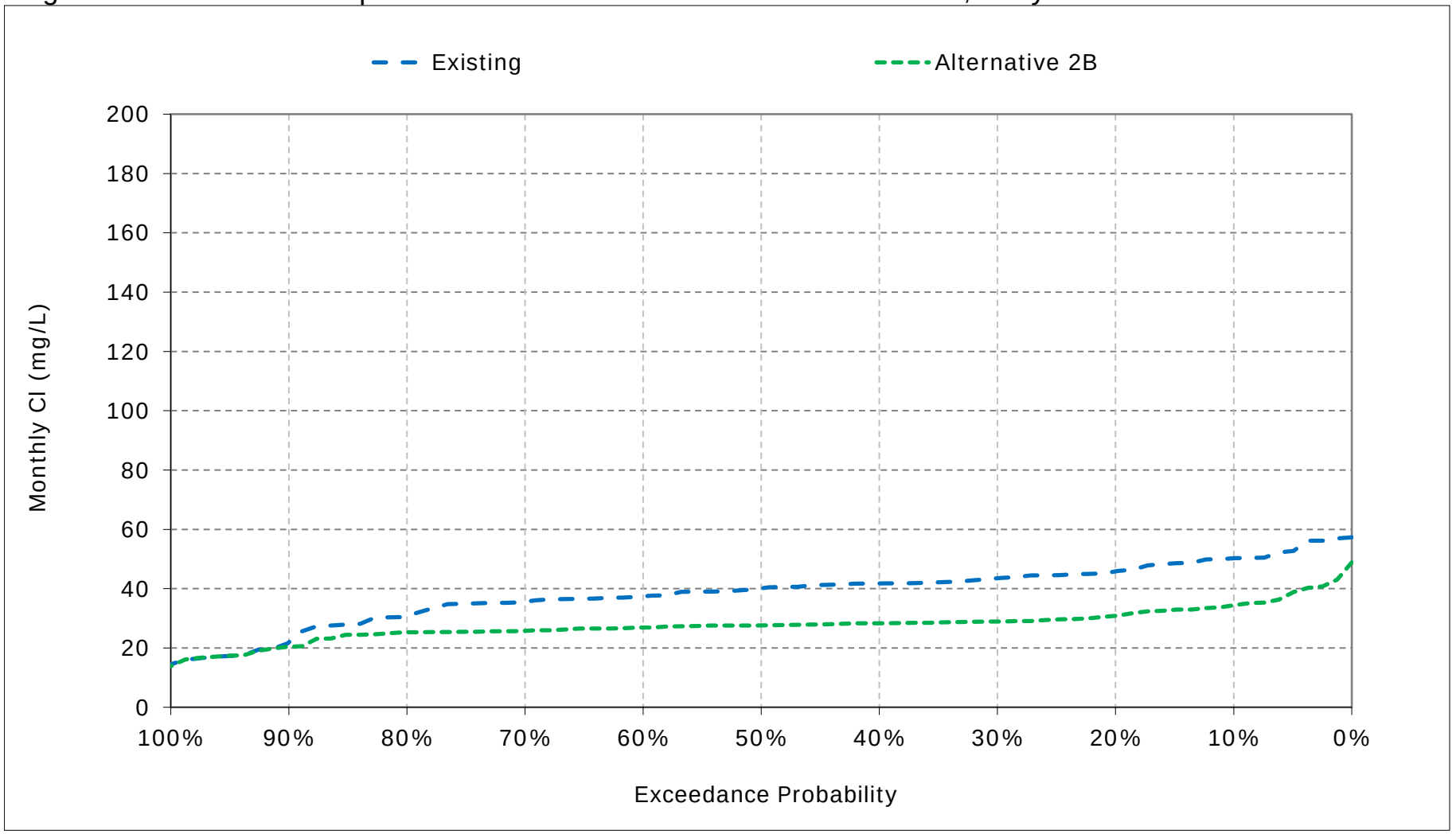


Figure 6-12. San Joaquin River at Prisoners Point Chloride, June Cl

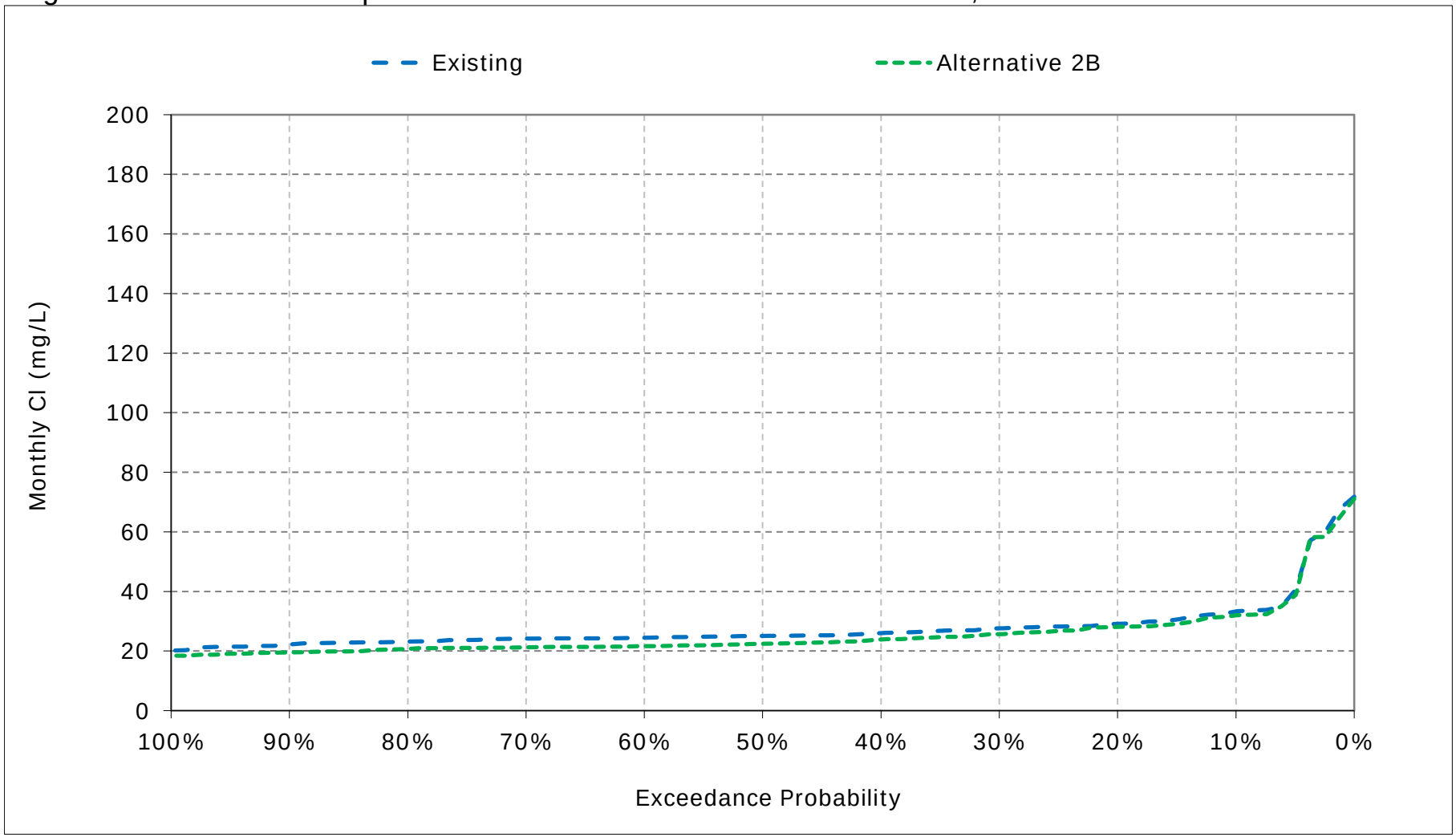


Figure 6-13. San Joaquin River at Prisoners Point Chloride, July Cl

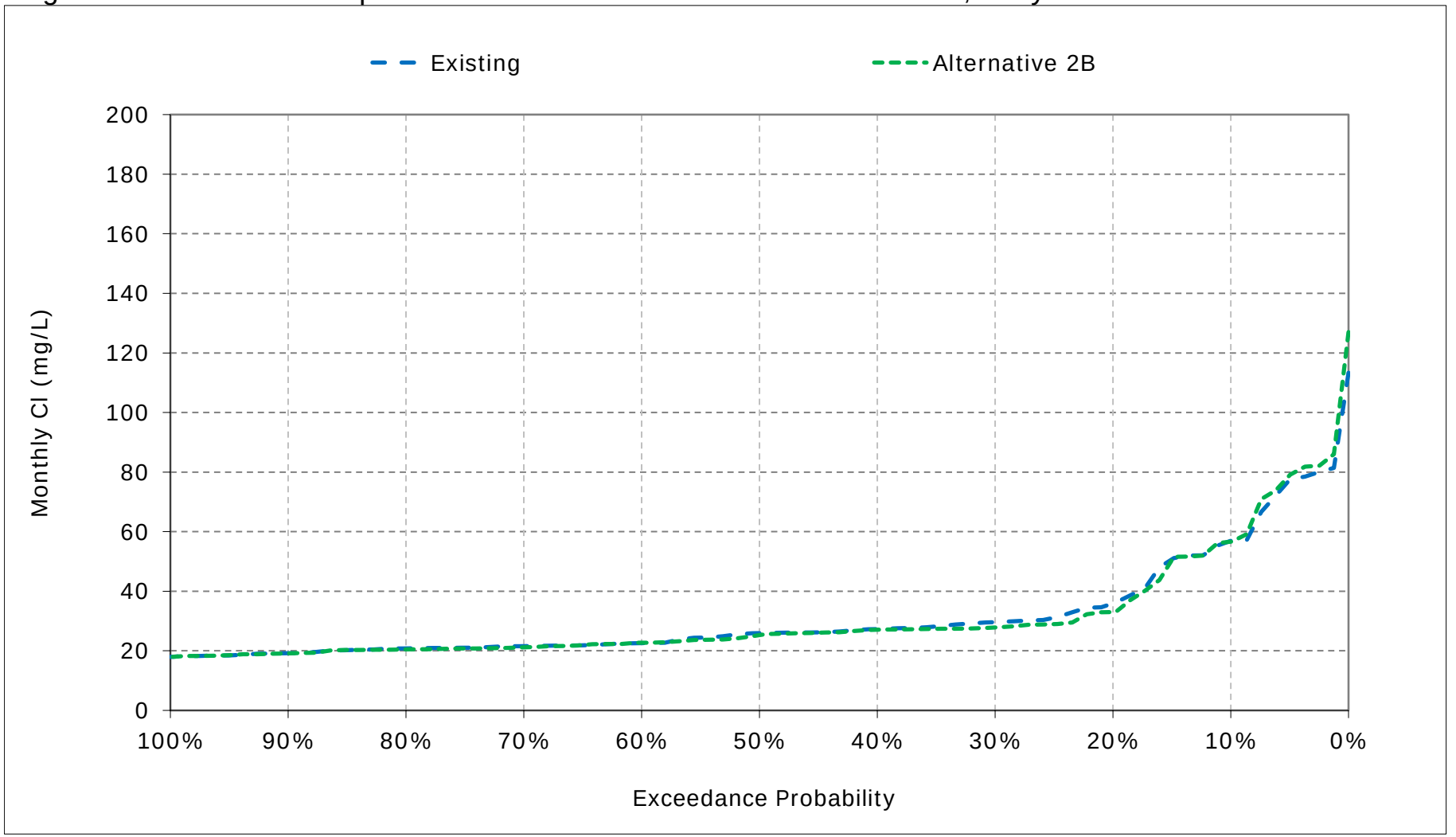


Figure 6-14. San Joaquin River at Prisoners Point Chloride, August Cl

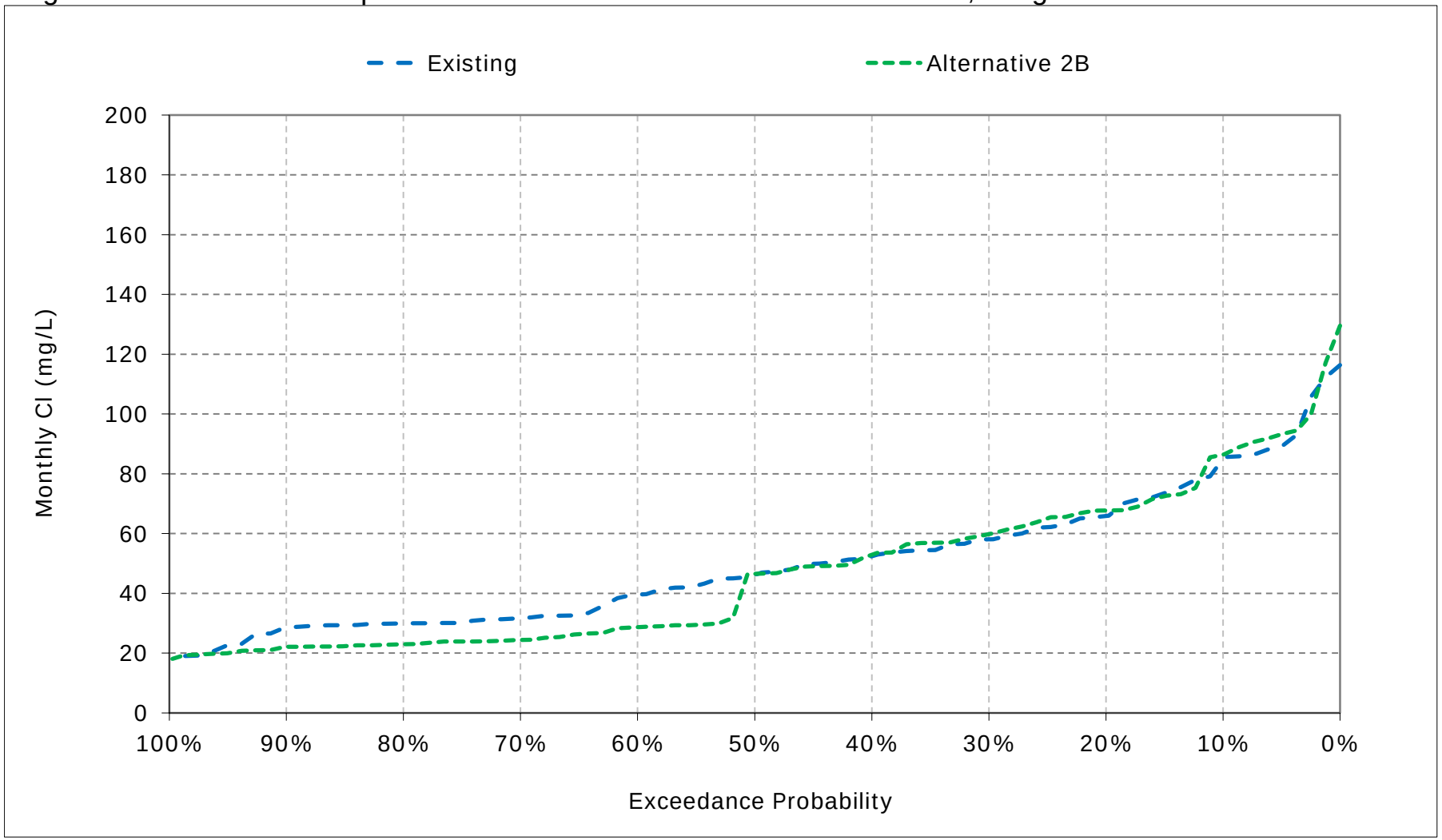


Figure 6-15. San Joaquin River at Prisoners Point Chloride, September Cl

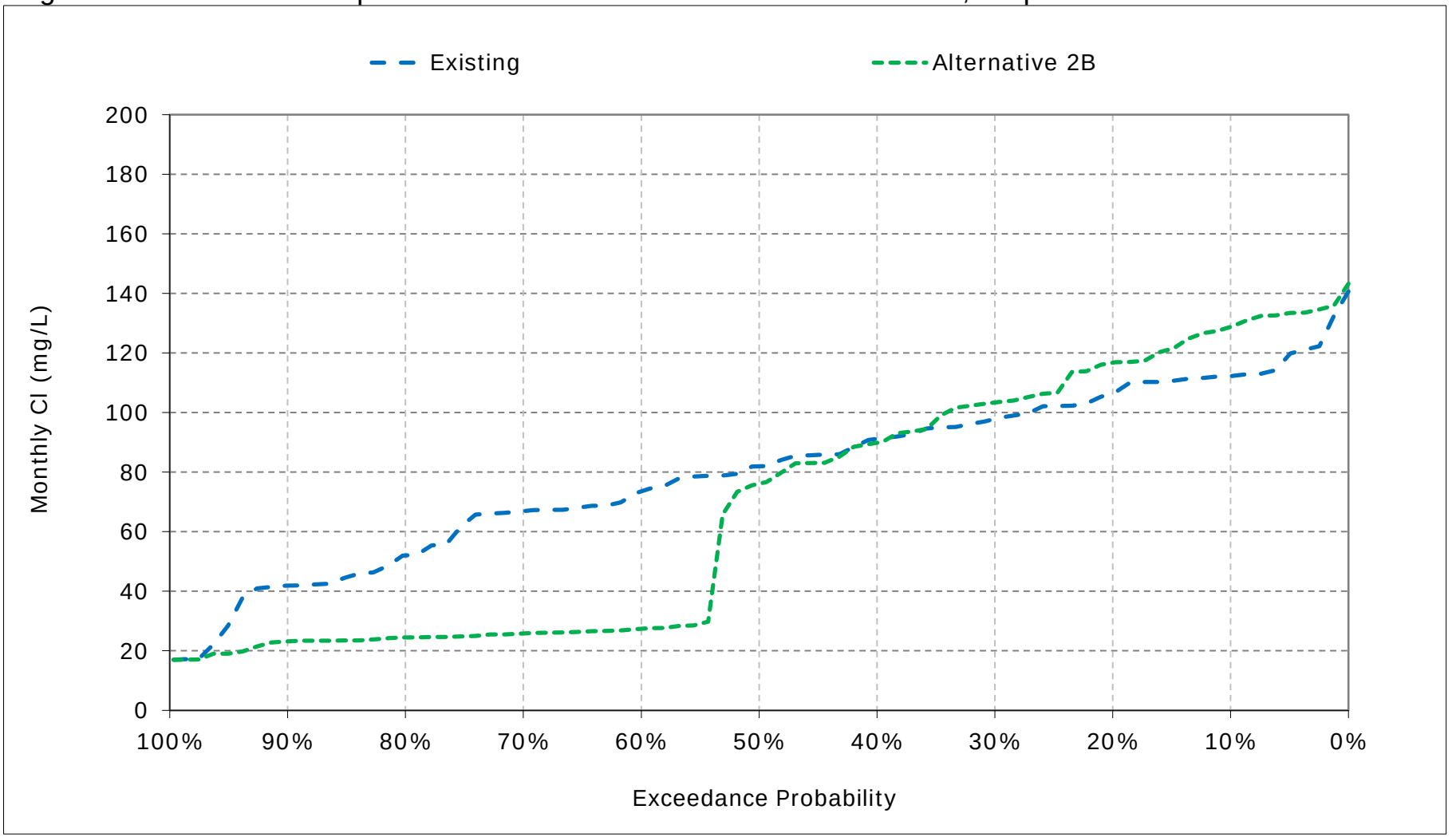


Figure 6-16. San Joaquin River at Prisoners Point Chloride, October Cl

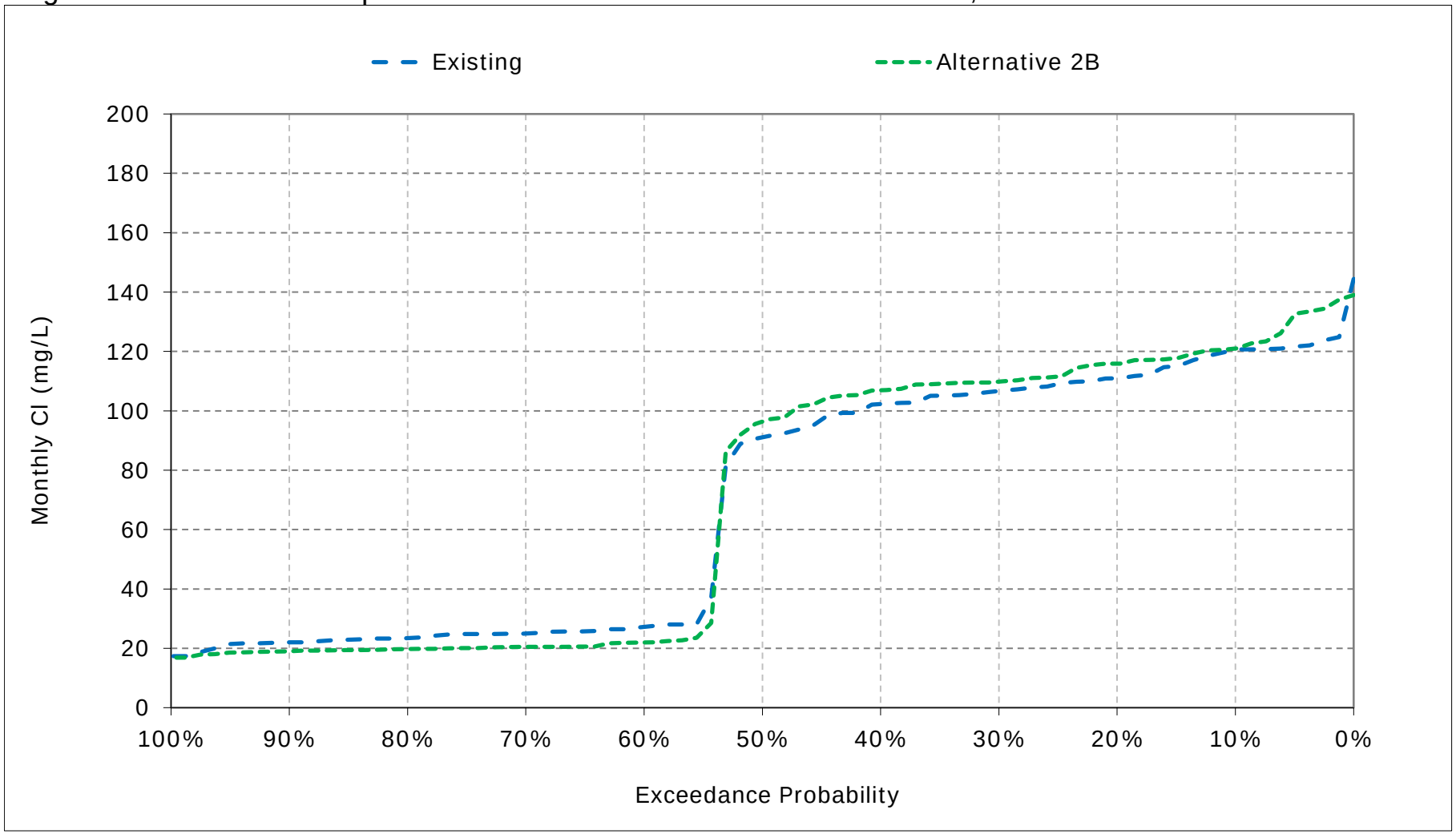


Figure 6-17. San Joaquin River at Prisoners Point Chloride, November Cl

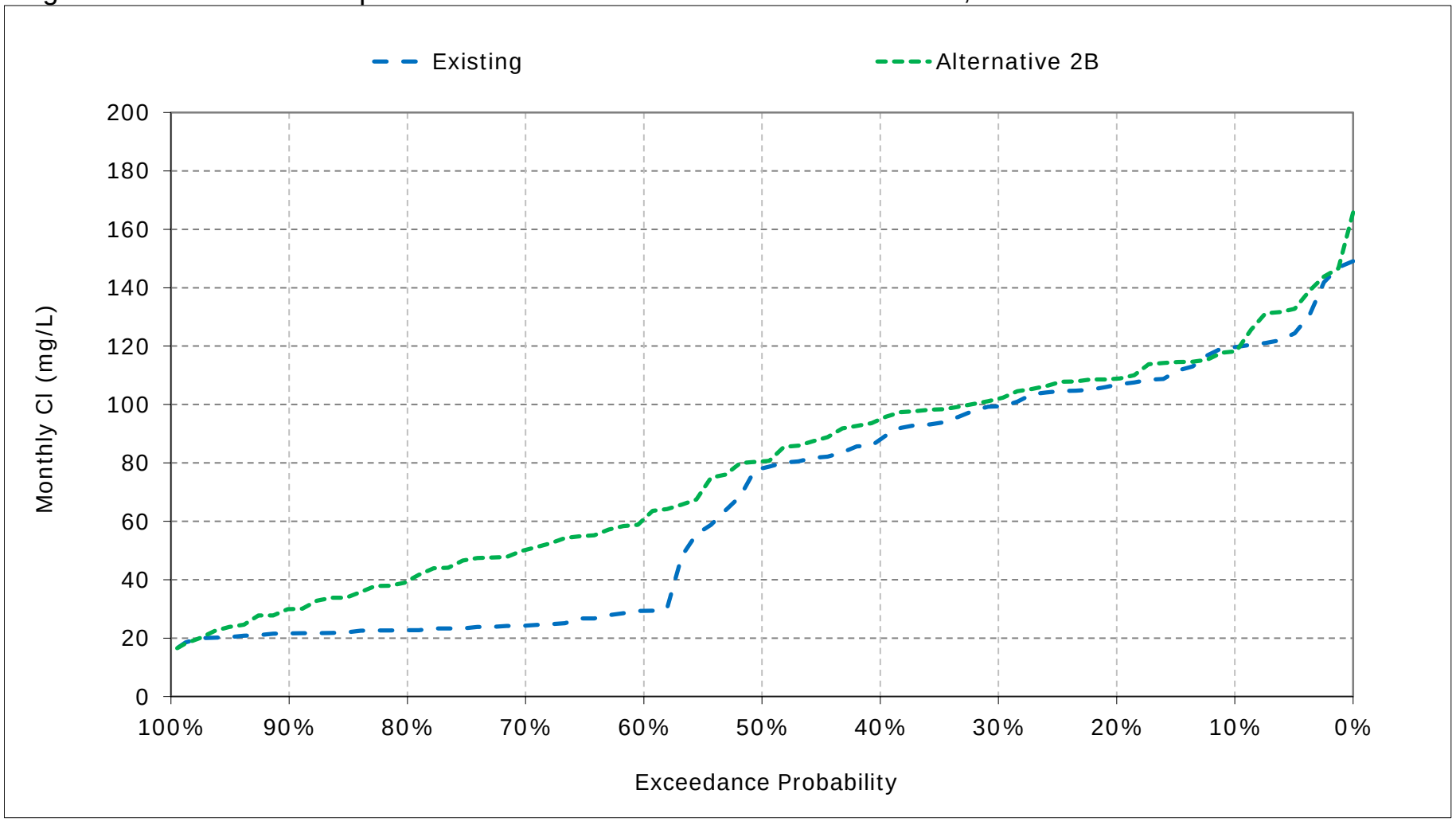
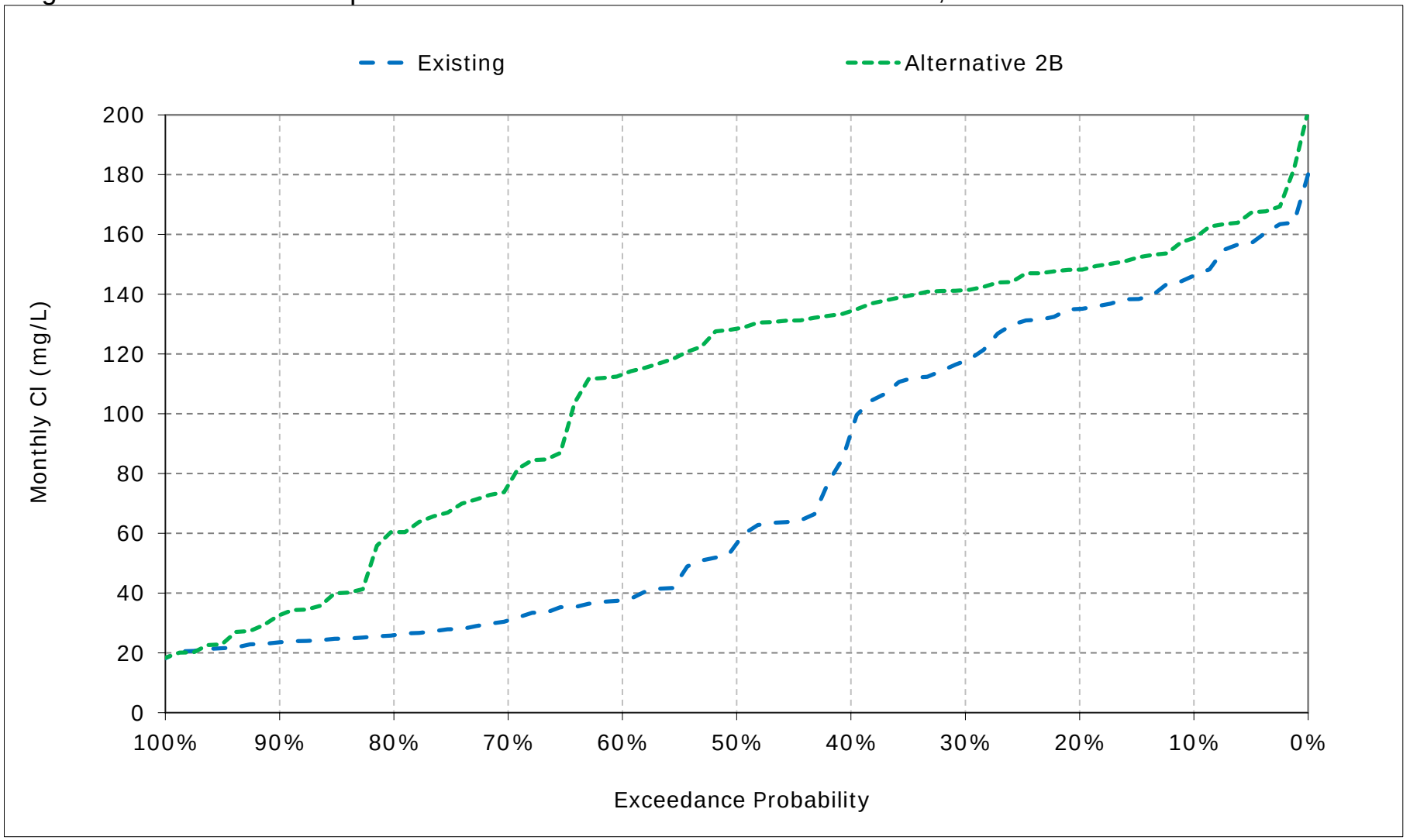


Figure 6-18. San Joaquin River at Prisoners Point Chloride, December Cl



## Table 7-1. Old River at Highway 4 Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 165 | 161 | 180 | 173 | 109 | 74 | 69 | 69 | 53 | 71 | 112 | 146 |
| 20% | 157 | 143 | 169 | 155 | 96 | 66 | 64 | 65 | 43 | 50 | 87 | 138 |
| 30% | 152 | 135 | 156 | 124 | 89 | 55 | 58 | 61 | 40 | 45 | 76 | 128 |
| 40% | 143 | 127 | 125 | 110 | 81 | 52 | 56 | 60 | 38 | 40 | 71 | 118 |
| 50% | 131 | 115 | 71 | 97 | 70 | 49 | 53 | 58 | 38 | 33 | 60 | 109 |
| 60% | 41 | 42 | 55 | 84 | 60 | 46 | 50 | 55 | 36 | 29 | 54 | 97 |
| 70% | 36 | 31 | 39 | 72 | 54 | 42 | 46 | 51 | 35 | 28 | 44 | 91 |
| 80% | 33 | 29 | 31 | 56 | 49 | 39 | 35 | 44 | 31 | 27 | 41 | 78 |
| 90% | 30 | 28 | 30 | 50 | 43 | 32 | 25 | 21 | 29 | 26 | 38 | 69 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 98 | 91 | 98 | 107 | 74 | 52 | 51 | 53 | 40 | 43 | 67 | 106 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 78 | 68 | 63 | 69 | 61 | 45 | 36 | 38 | 32 | 28 | 41 | 83 |
| Above Normal (15%) | 111 | 97 | 97 | 104 | 78 | 51 | 50 | 54 | 37 | 28 | 45 | 73 |
| Below Normal (17%) | 102 | 96 | 113 | 124 | 70 | 49 | 54 | 58 | 37 | 36 | 70 | 137 |
| Dry (22%) | 98 | 100 | 114 | 115 | 76 | 52 | 61 | 62 | 40 | 53 | 90 | 120 |
| Critical (15%) | 121 | 115 | 135 | 161 | 99 | 69 | 67 | 66 | 66 | 80 | 104 | 133 |

### Alternative 2B

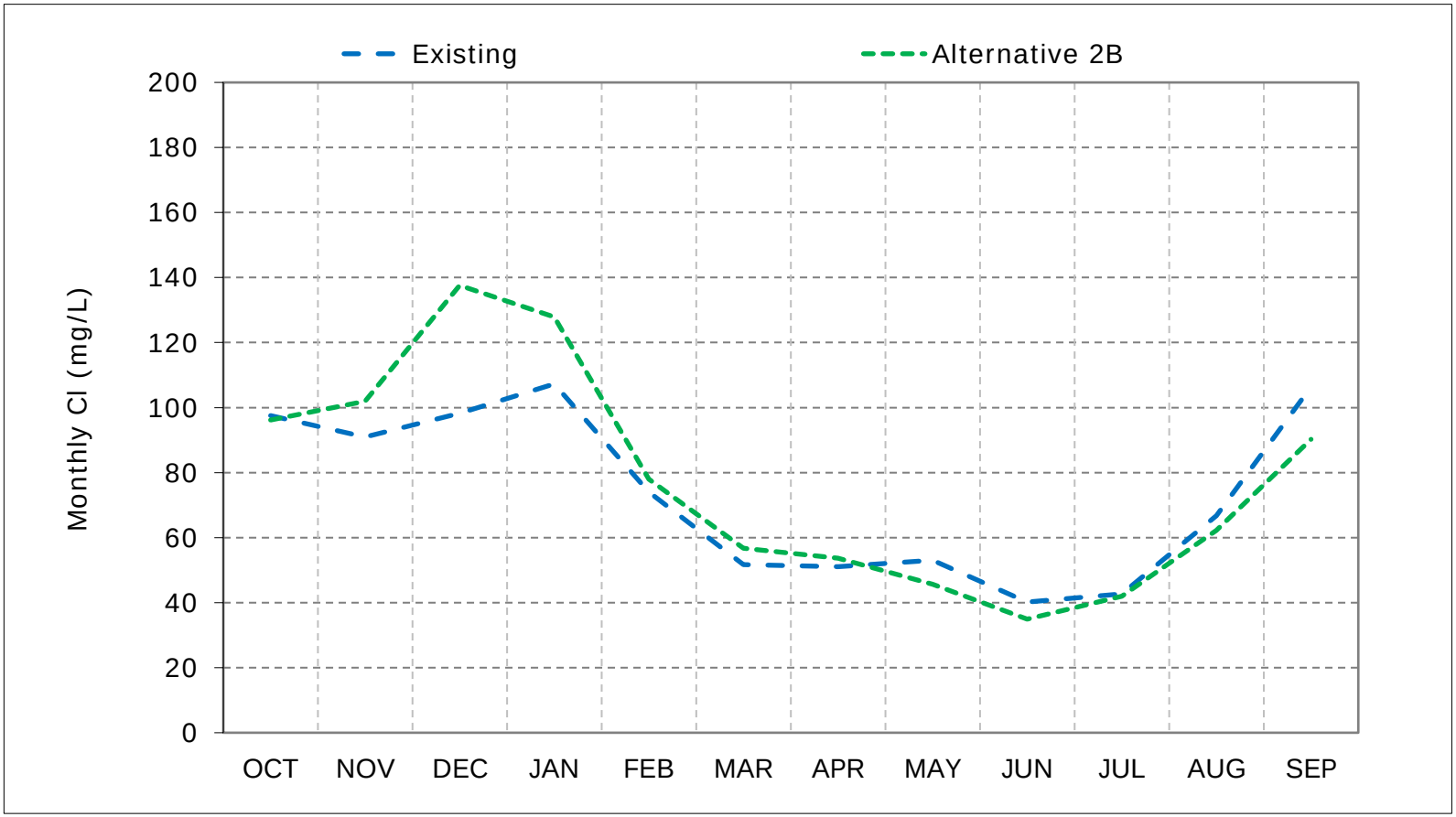
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 170 | 158 | 185 | 219 | 125 | 88 | 73 | 61 | 46 | 72 | 116 | 163 |
| 20% | 161 | 145 | 177 | 197 | 105 | 70 | 67 | 52 | 37 | 49 | 89 | 148 |
| 30% | 154 | 135 | 173 | 170 | 93 | 62 | 63 | 50 | 33 | 42 | 78 | 132 |
| 40% | 146 | 129 | 166 | 146 | 83 | 58 | 56 | 48 | 32 | 37 | 69 | 116 |
| 50% | 135 | 116 | 159 | 112 | 73 | 54 | 54 | 46 | 30 | 31 | 62 | 101 |
| 60% | 28 | 75 | 144 | 94 | 67 | 49 | 51 | 43 | 30 | 29 | 41 | 44 |
| 70% | 27 | 64 | 115 | 77 | 56 | 46 | 47 | 40 | 29 | 27 | 32 | 41 |
| 80% | 26 | 55 | 95 | 65 | 50 | 42 | 42 | 38 | 28 | 27 | 30 | 36 |
| 90% | 25 | 42 | 43 | 53 | 44 | 36 | 31 | 30 | 27 | 26 | 28 | 33 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 96 | 102 | 138 | 128 | 78 | 57 | 54 | 46 | 35 | 42 | 62 | 90 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 76 | 84 | 99 | 78 | 61 | 49 | 39 | 35 | 29 | 28 | 31 | 34 |
| Above Normal (15%) | 110 | 109 | 142 | 130 | 80 | 58 | 53 | 43 | 31 | 27 | 34 | 41 |
| Below Normal (17%) | 100 | 108 | 151 | 148 | 72 | 54 | 56 | 46 | 30 | 32 | 73 | 155 |
| Dry (22%) | 95 | 107 | 160 | 151 | 86 | 60 | 64 | 53 | 33 | 52 | 89 | 124 |
| Critical (15%) | 124 | 120 | 167 | 174 | 107 | 71 | 68 | 62 | 61 | 82 | 106 | 136 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 6 | -3 | 5 | 46 | 15 | 14 | 4 | -8 | -6 | 1 | 3 | 16 |
| 20% | 4 | 2 | 8 | 42 | 9 | 4 | 3 | -13 | -6 | -1 | 2 | 10 |
| 30% | 1 | 0 | 17 | 45 | 4 | 7 | 4 | -11 | -6 | -2 | 2 | 4 |
| 40% | 2 | 2 | 42 | 36 | 3 | 5 | 0 | -11 | -7 | -2 | -1 | -2 |
| 50% | 5 | 0 | 88 | 15 | 3 | 6 | 0 | -11 | -7 | -2 | 2 | -8 |
| 60% | -13 | 34 | 89 | 9 | 7 | 3 | 1 | -11 | -7 | 0 | -13 | -53 |
| 70% | -10 | 32 | 76 | 4 | 2 | 4 | 1 | -10 | -6 | -1 | -12 | -51 |
| 80% | -8 | 26 | 64 | 9 | 1 | 3 | 7 | -6 | -4 | 0 | -11 | -41 |
| 90% | -5 | 14 | 13 | 3 | 0 | 4 | 6 | 9 | -2 | 0 | -10 | -37 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -1 | 11 | 39 | 21 | 4 | 5 | 3 | -7 | -5 | -1 | -4 | -16 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | -2 | 16 | 36 | 9 | 1 | 4 | 4 | -3 | -3 | 0 | -11 | -49 |
| Above Normal (15%) | -1 | 13 | 45 | 27 | 2 | 7 | 2 | -11 | -6 | -1 | -11 | -32 |
| Below Normal (17%) | -2 | 12 | 38 | 24 | 2 | 5 | 2 | -12 | -7 | -4 | 3 | 18 |
| Dry (22%) | -3 | 7 | 46 | 35 | 10 | 8 | 2 | -10 | -7 | -1 | -1 | 4 |
| Critical (15%) | 3 | 5 | 32 | 13 | 8 | 2 | 2 | -4 | -5 | 2 | 1 | 2 |

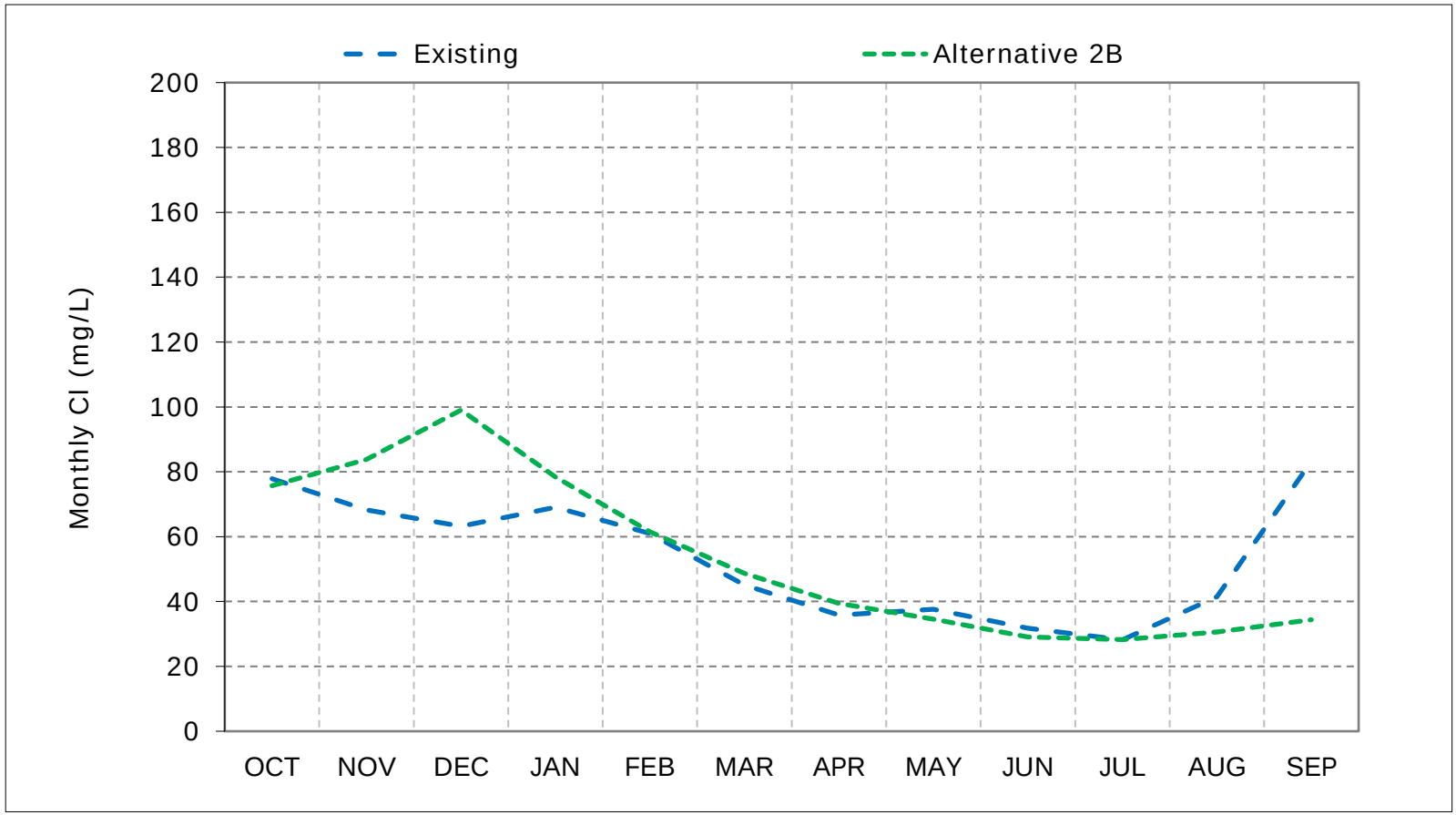
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 7-1. Old River at Highway 4 Chloride, Long-Term Average Cl



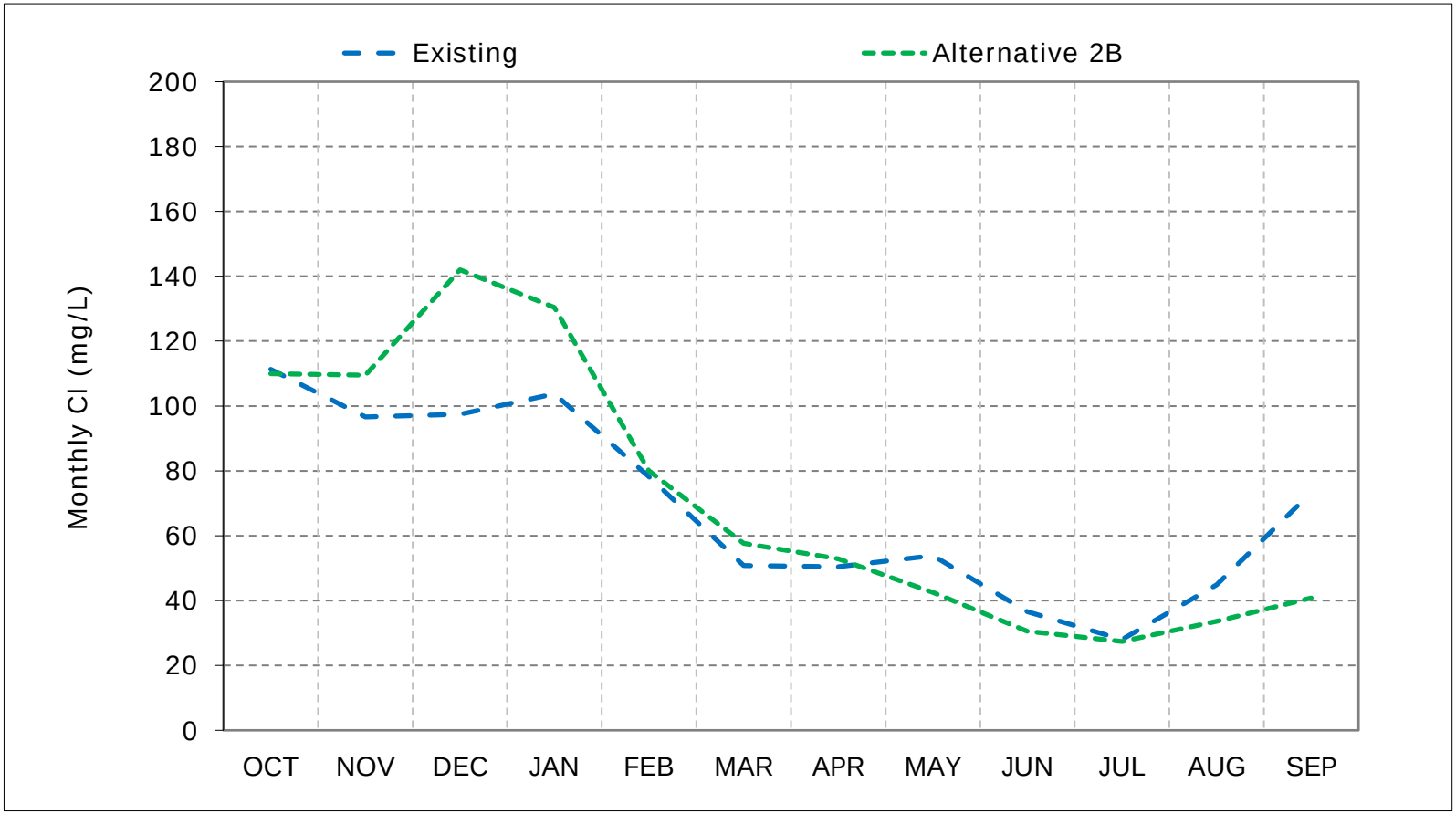

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-2. Old River at Highway 4 Chloride, Wet Year Average Cl



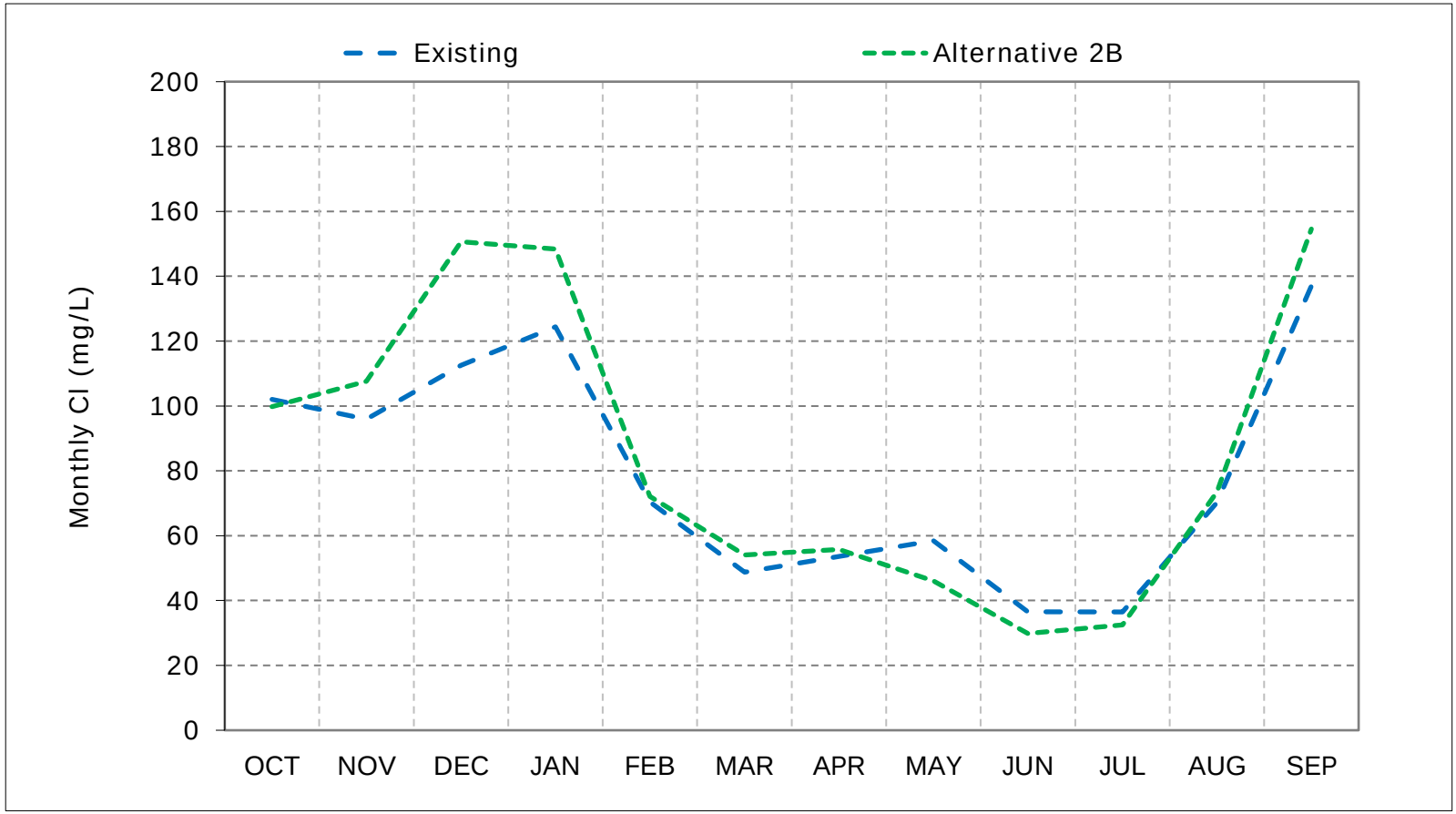

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-3. Old River at Highway 4 Chloride, Above Normal Year Average Cl



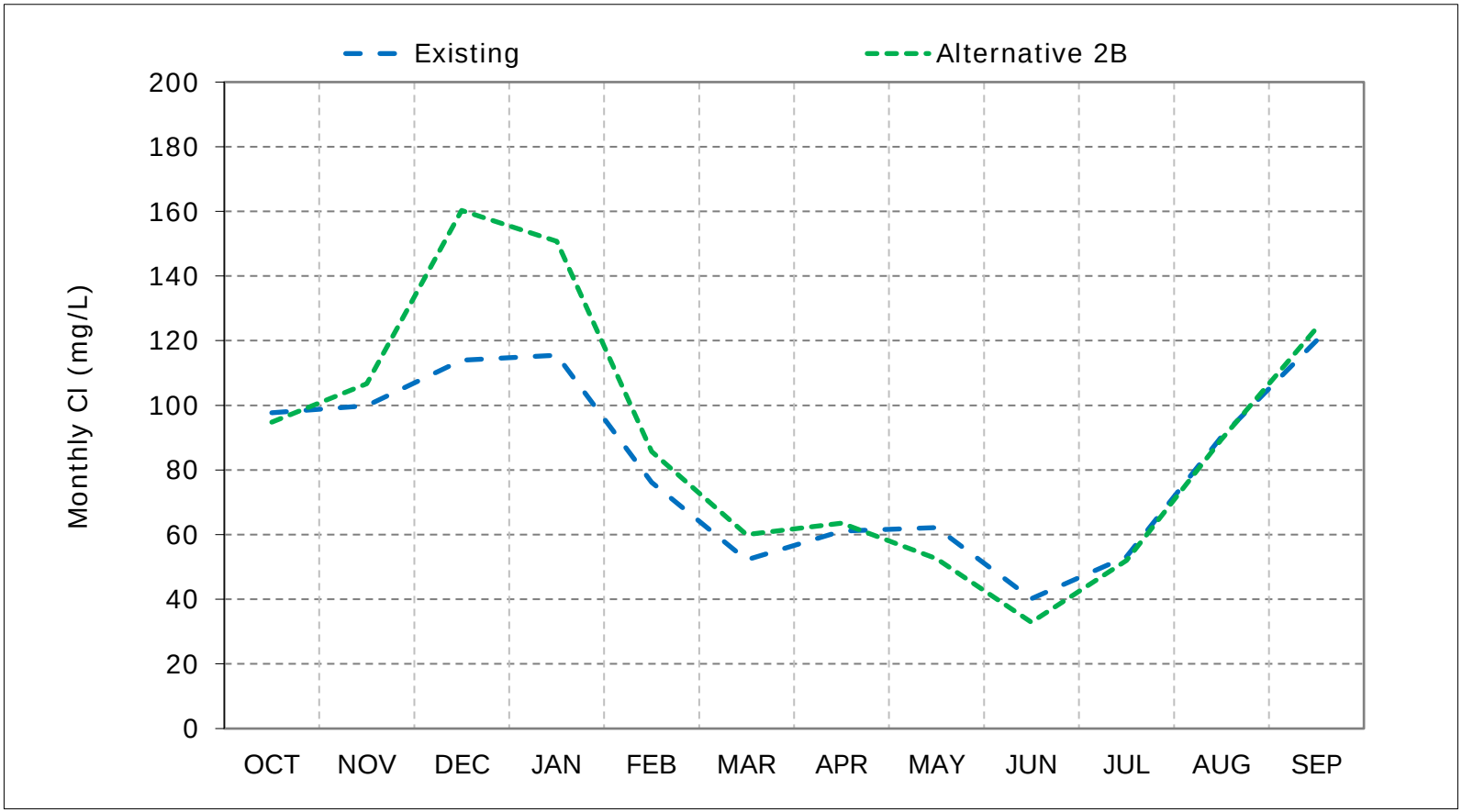

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-4. Old River at Highway 4 Chloride, Below Normal Year Average Cl



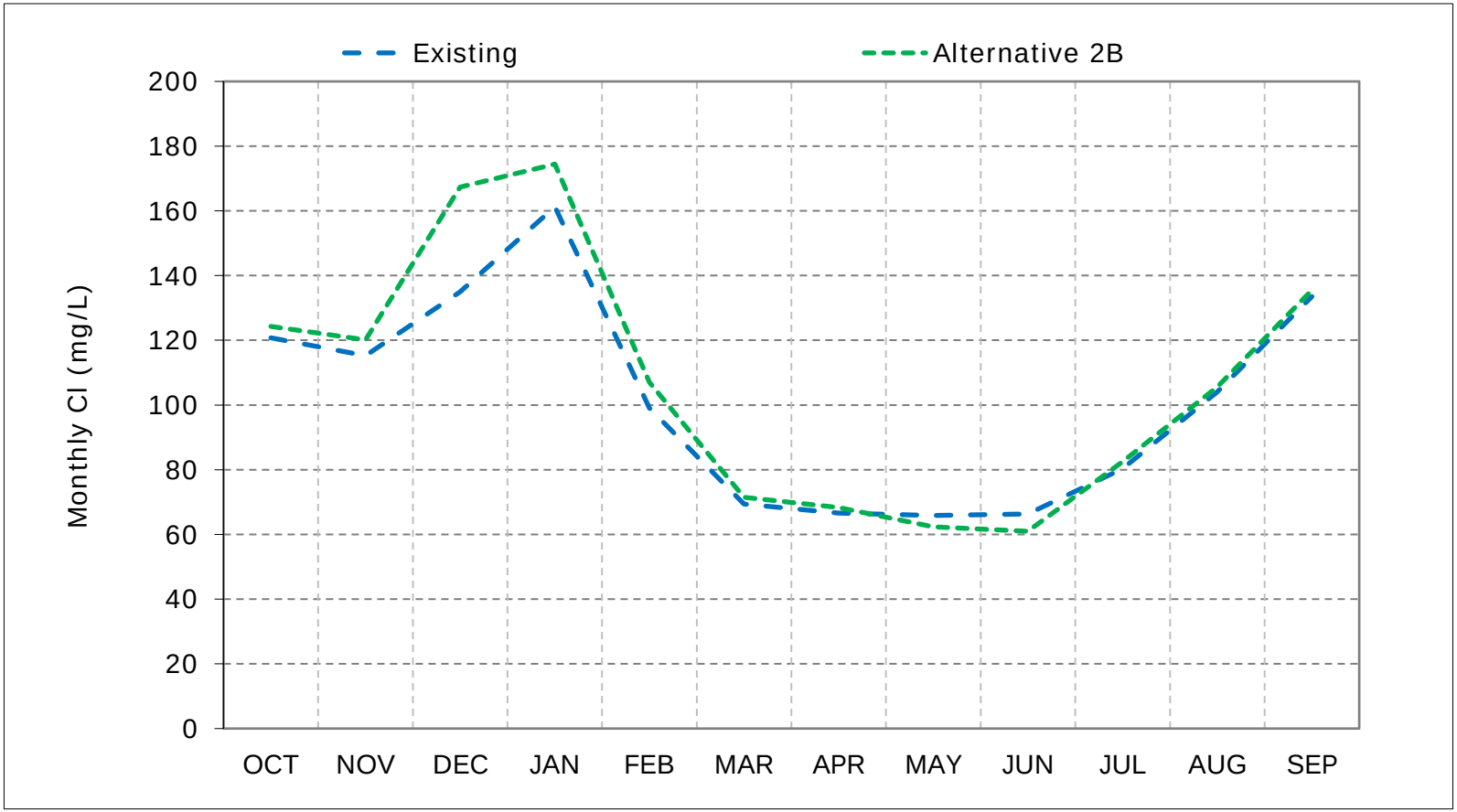

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-5. Old River at Highway 4 Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-6. Old River at Highway 4 Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-7. Old River at Highway 4 Chloride, January Cl

Figure 7-8. Old River at Highway 4 Chloride, February Cl

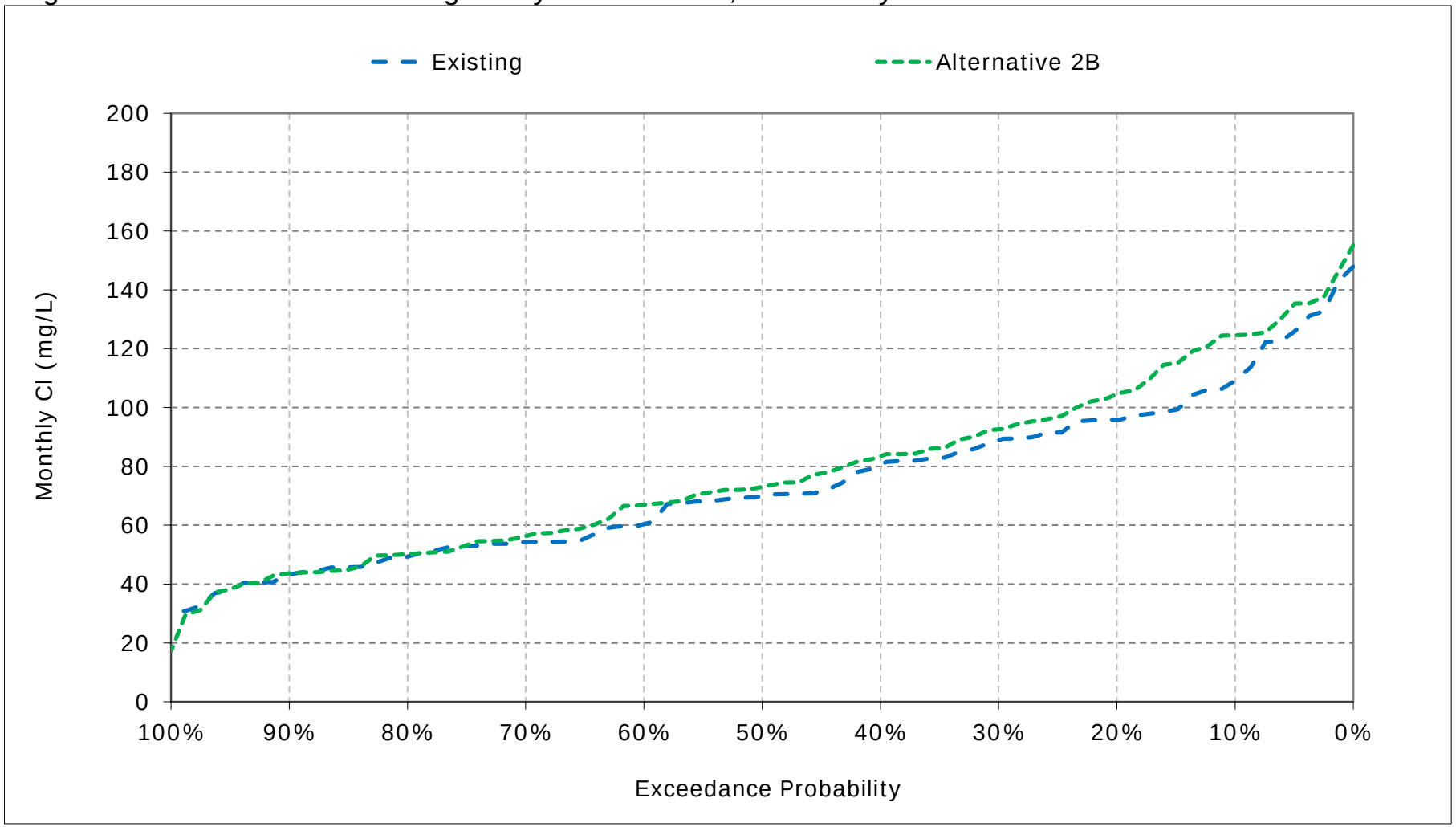


Figure 7-9. Old River at Highway 4 Chloride, March Cl

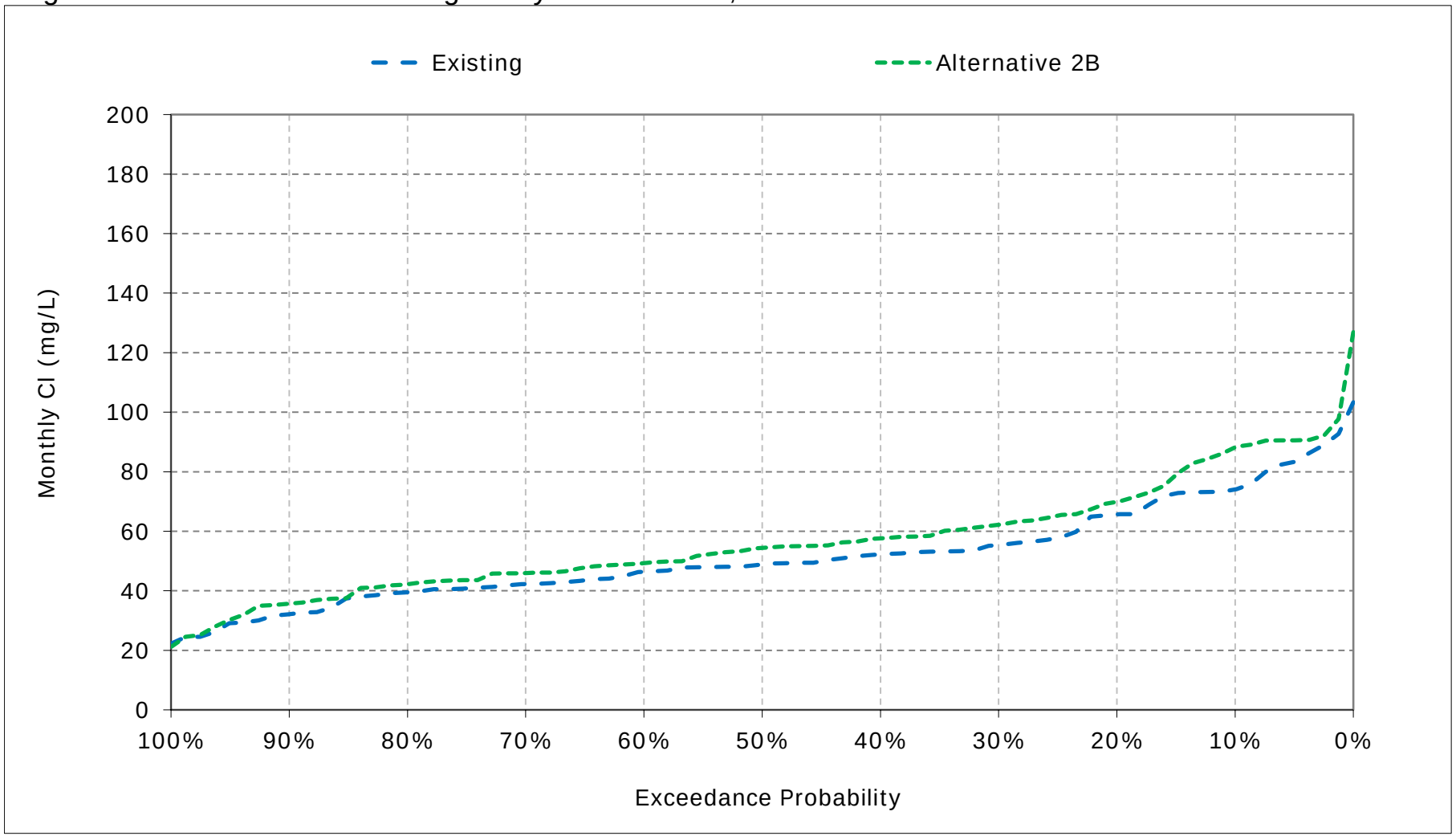


Figure 7-10. Old River at Highway 4 Chloride, April Cl

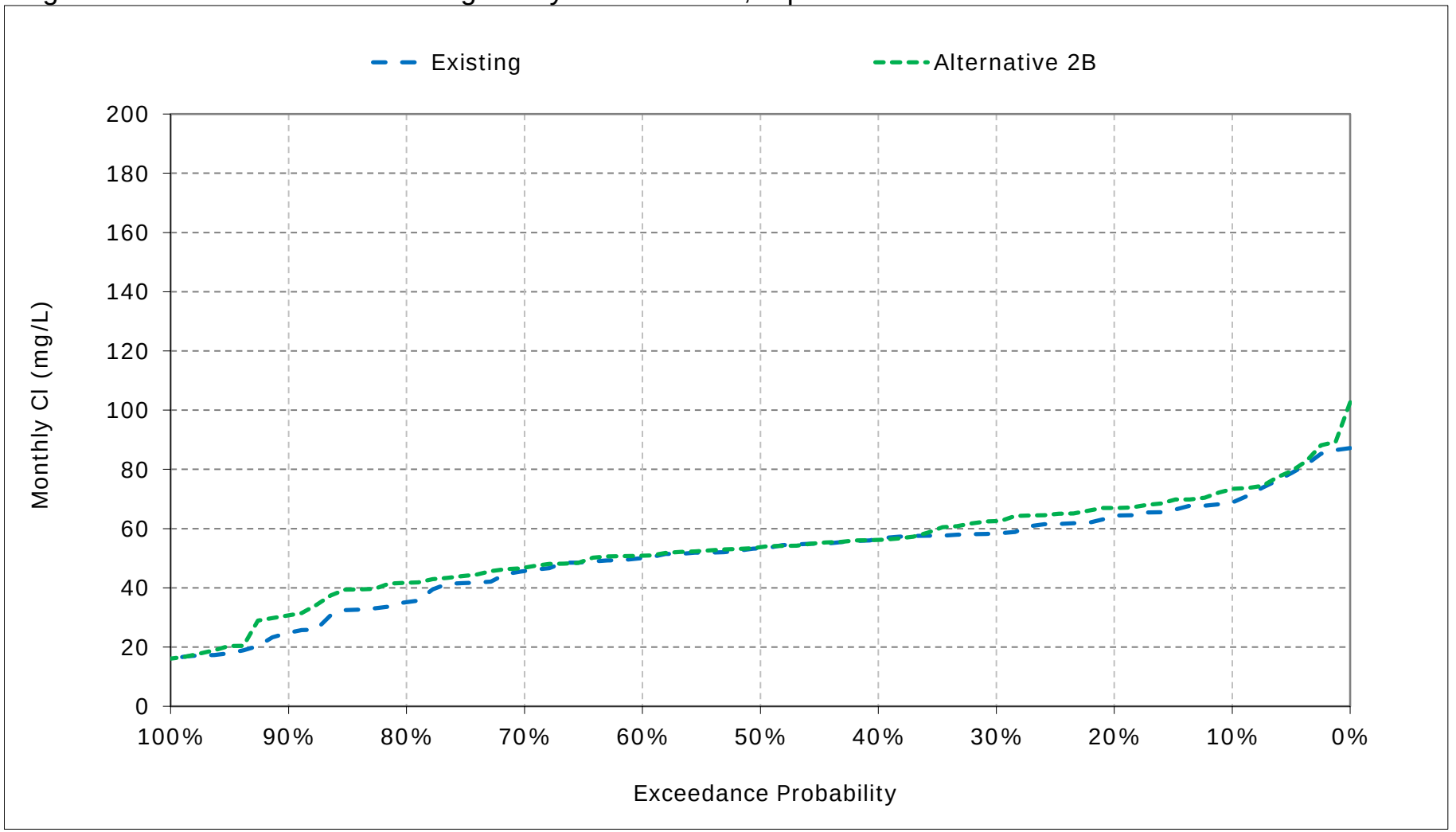


Figure 7-11. Old River at Highway 4 Chloride, May Cl

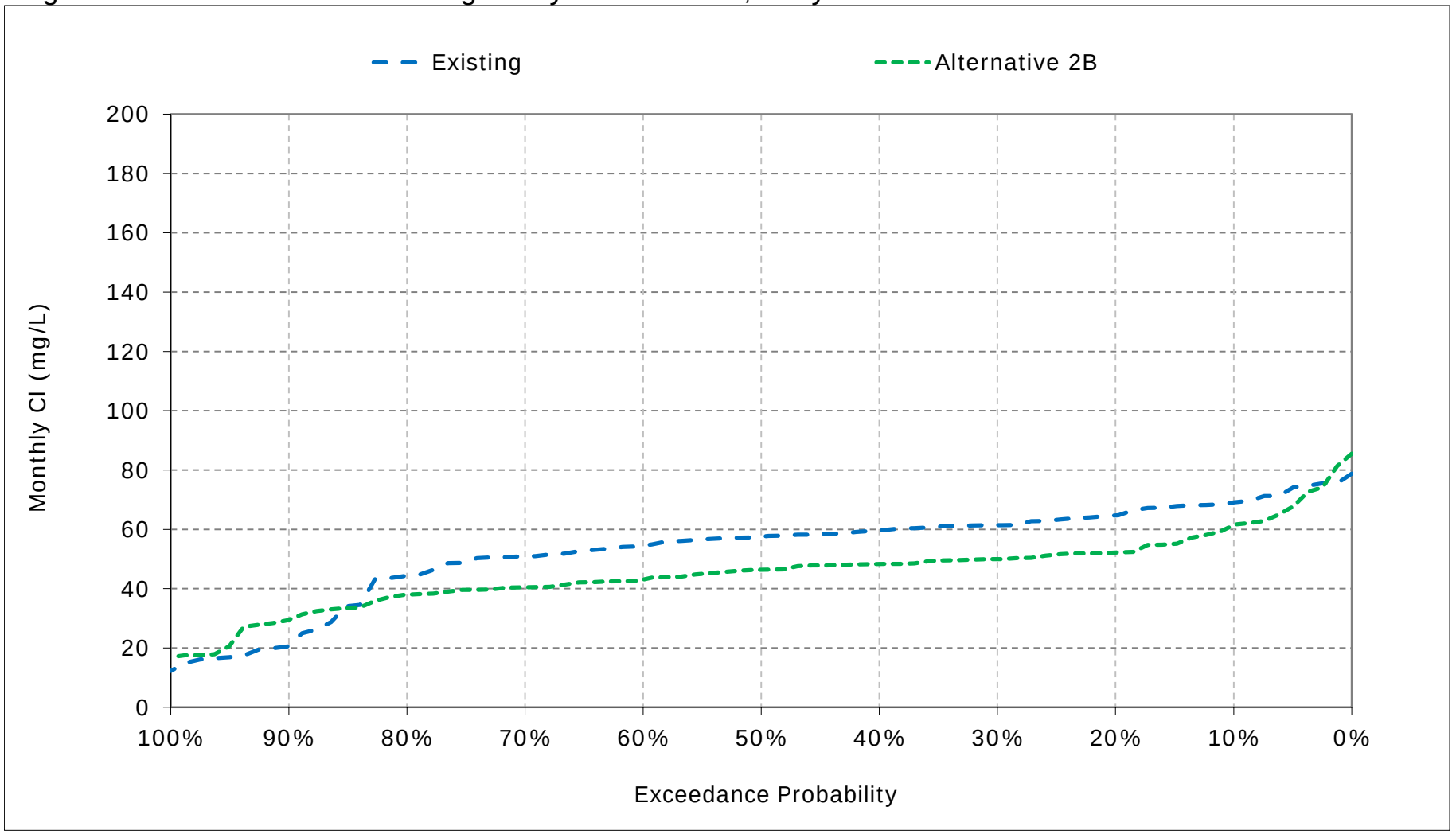


Figure 7-12. Old River at Highway 4 Chloride, June Cl

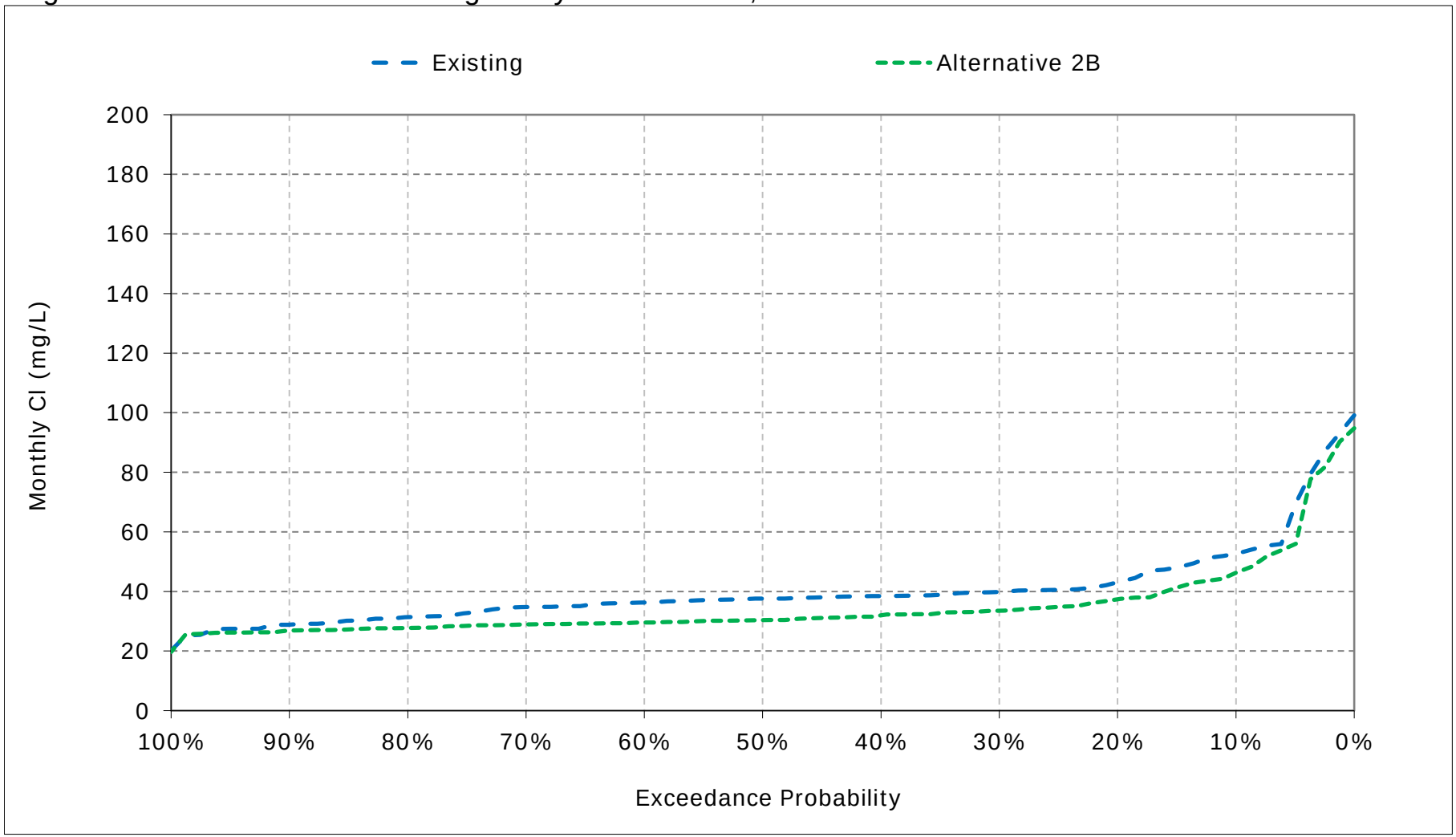


Figure 7-13. Old River at Highway 4 Chloride, July Cl

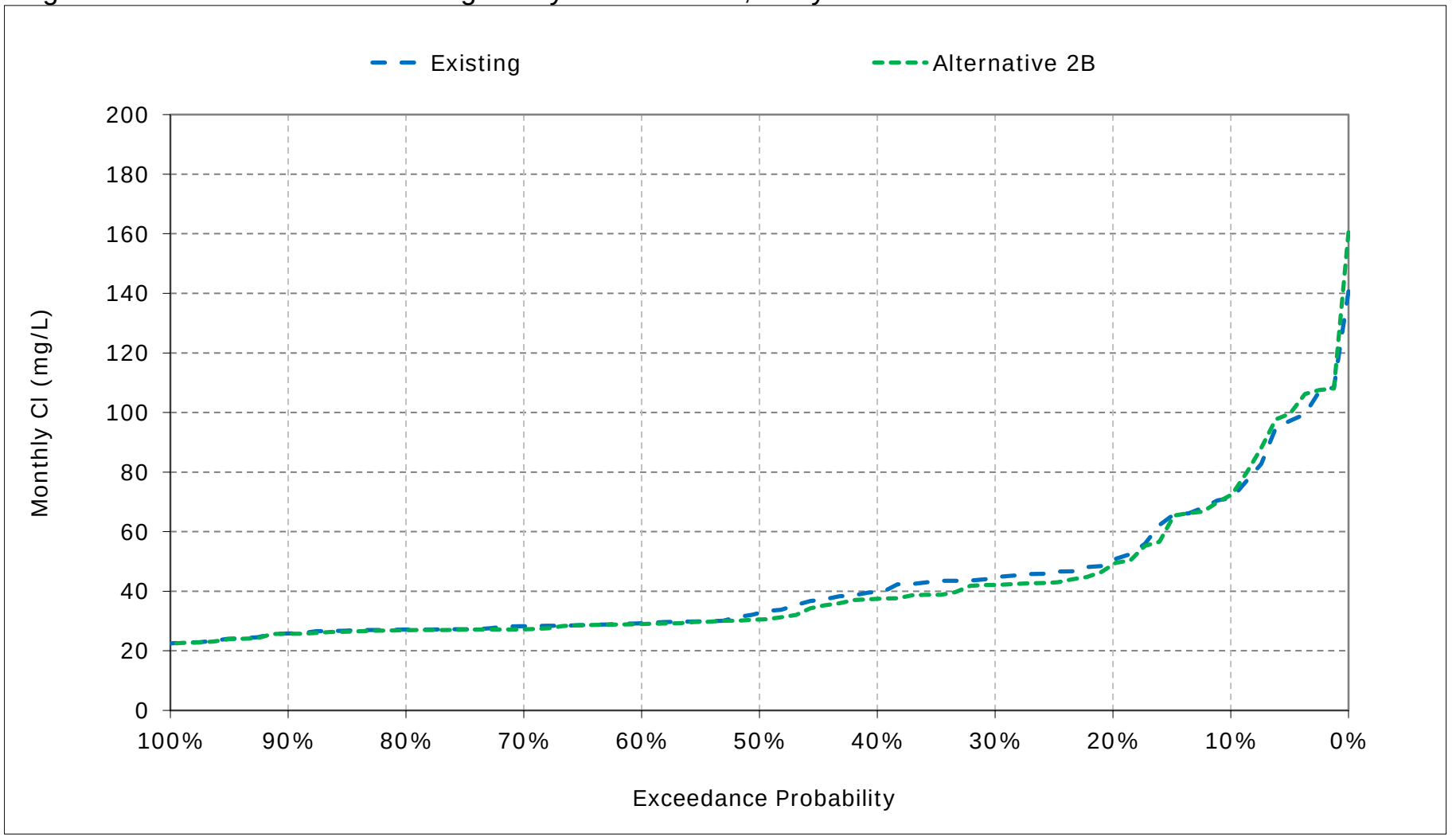


Figure 7-14. Old River at Highway 4 Chloride, August Cl

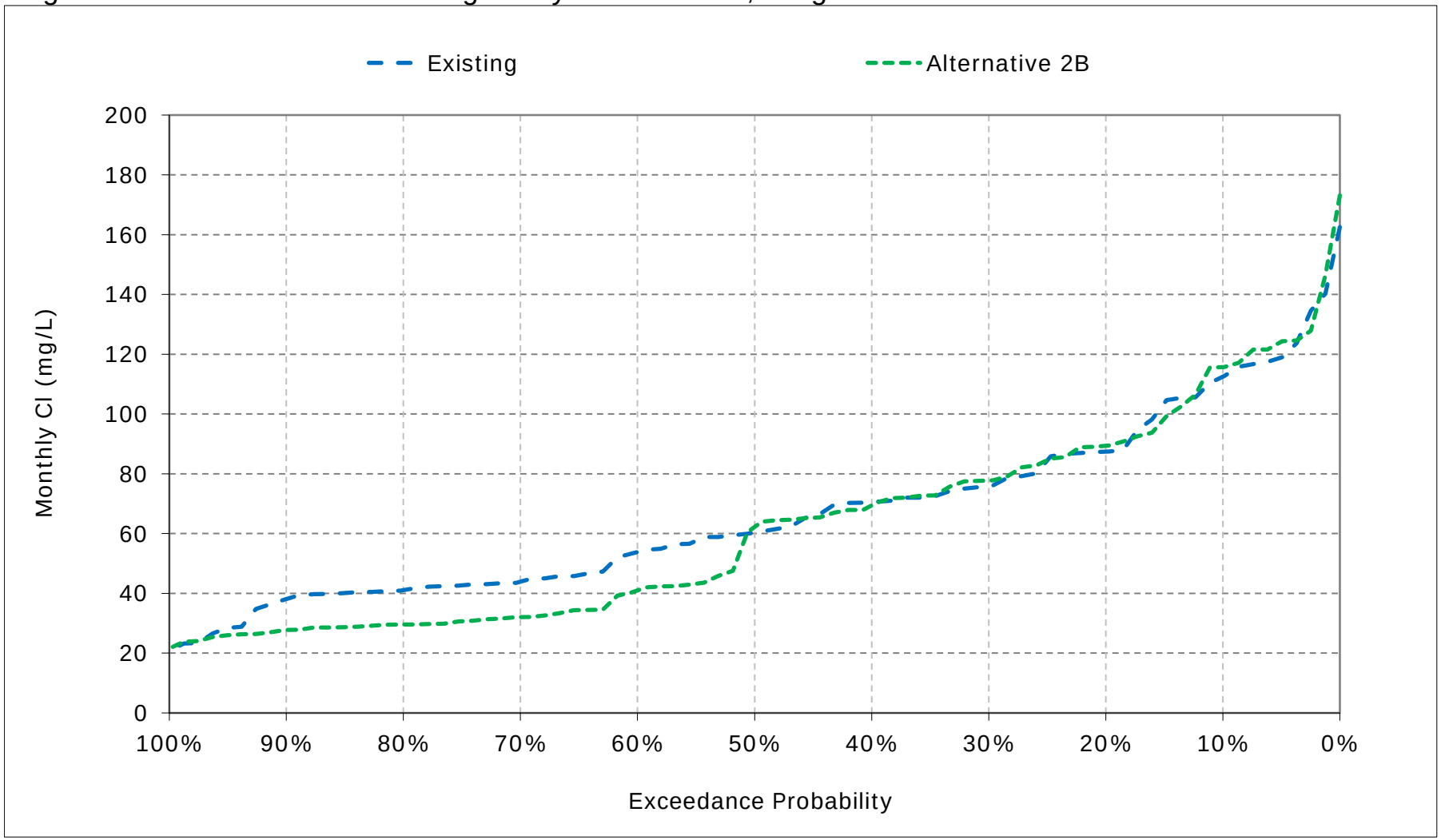


Figure 7-15. Old River at Highway 4 Chloride, September Cl

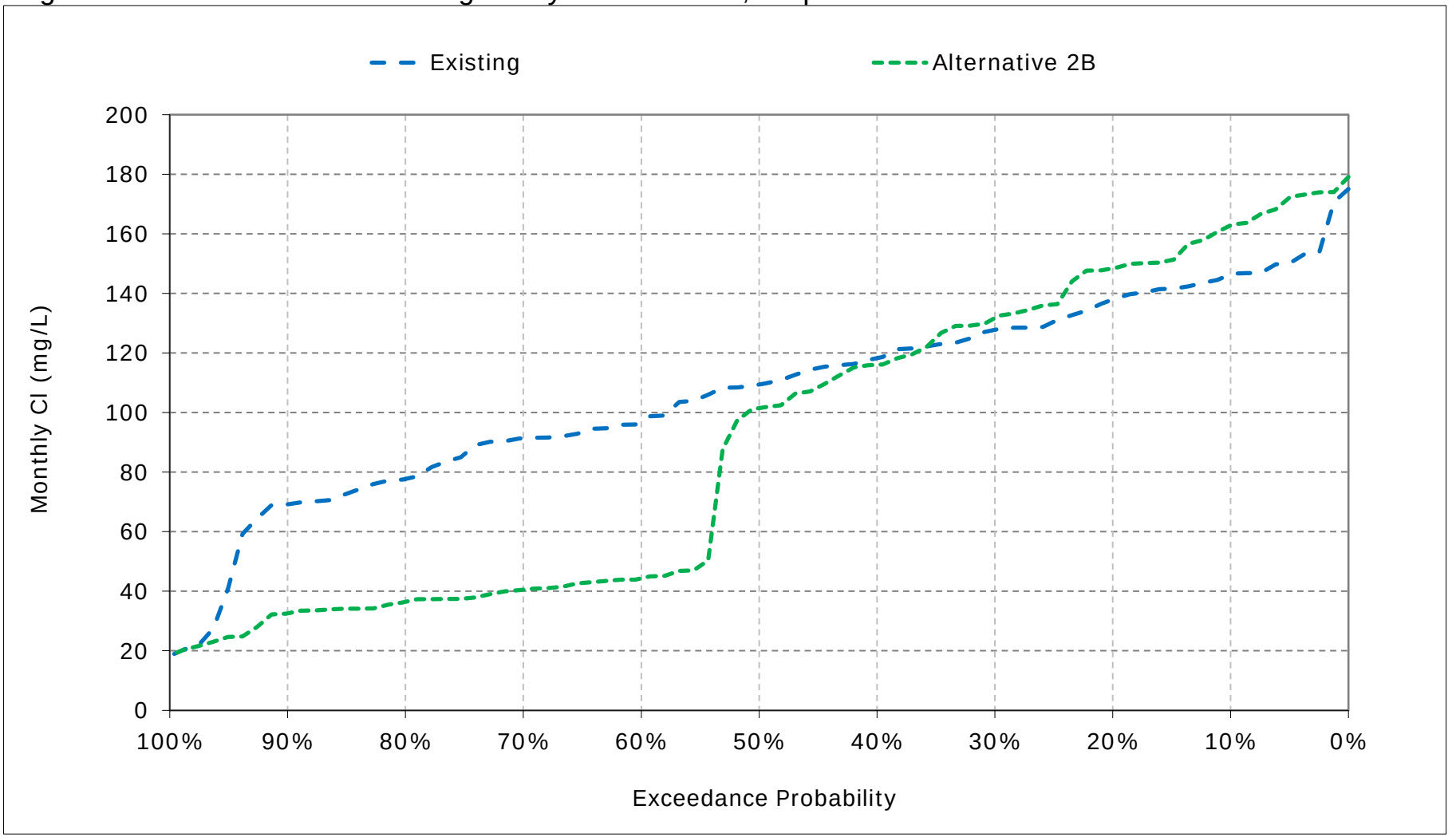


Figure 7-16. Old River at Highway 4 Chloride, October Cl

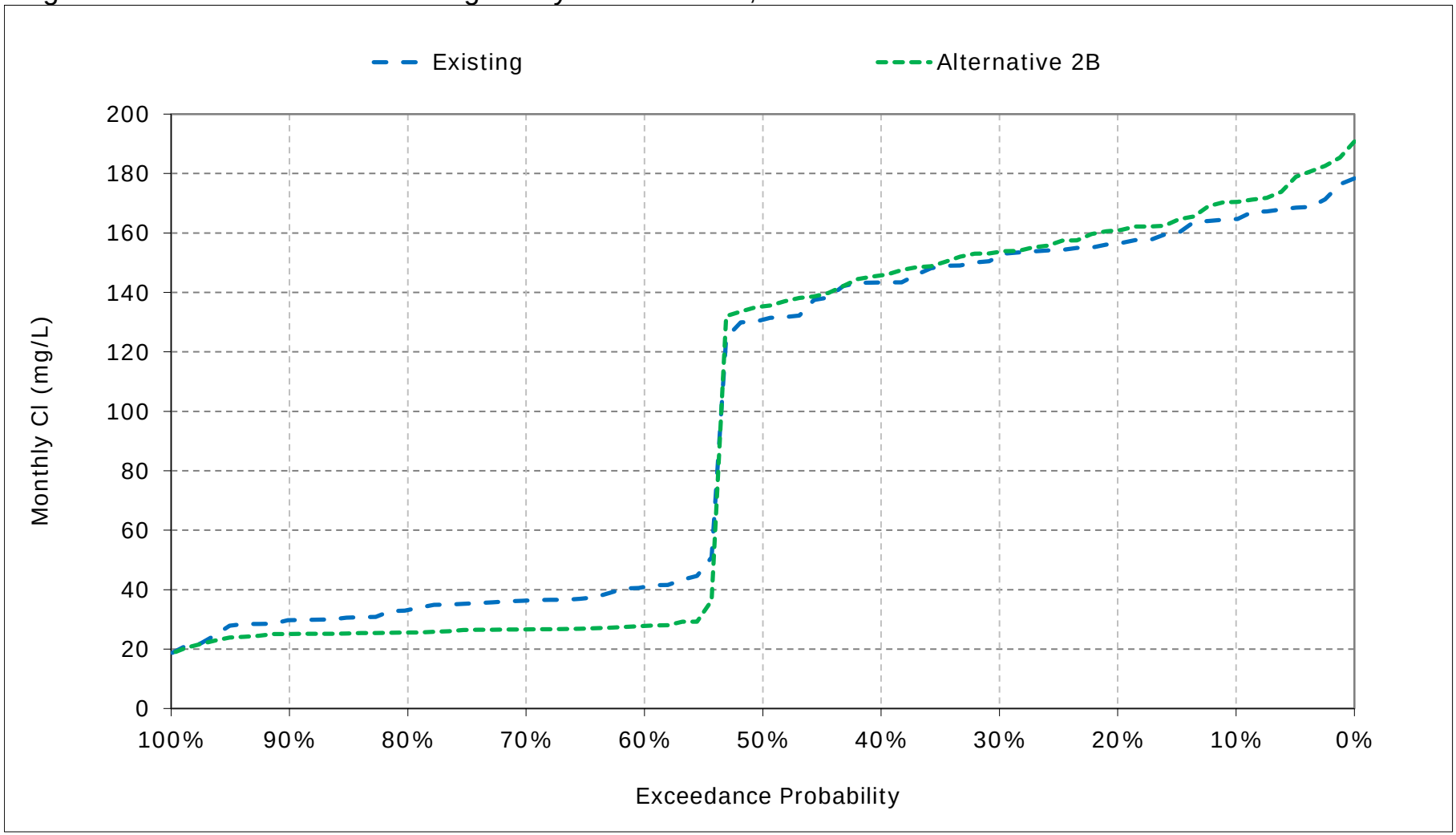


Figure 7-17. Old River at Highway 4 Chloride, November Cl

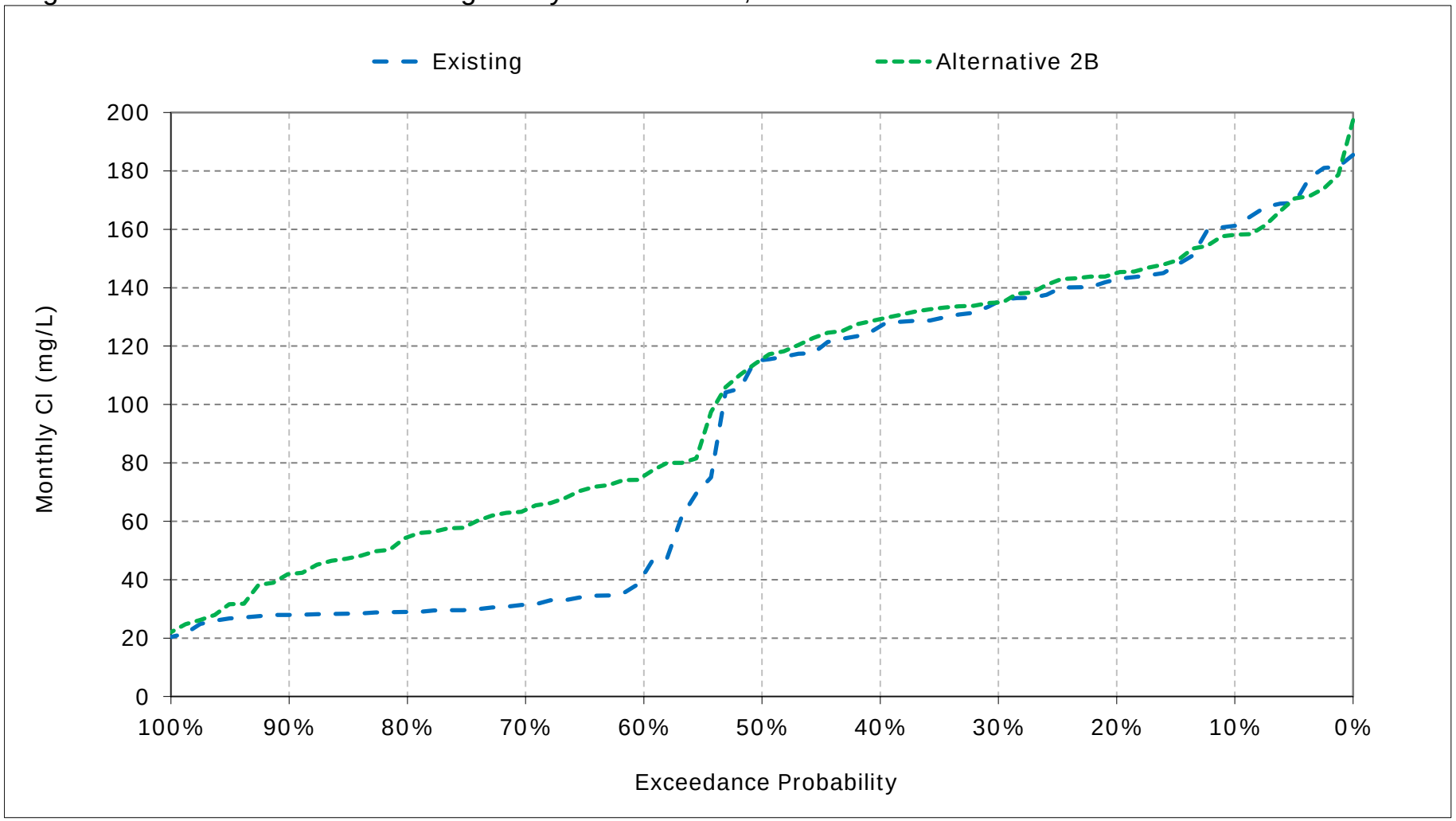
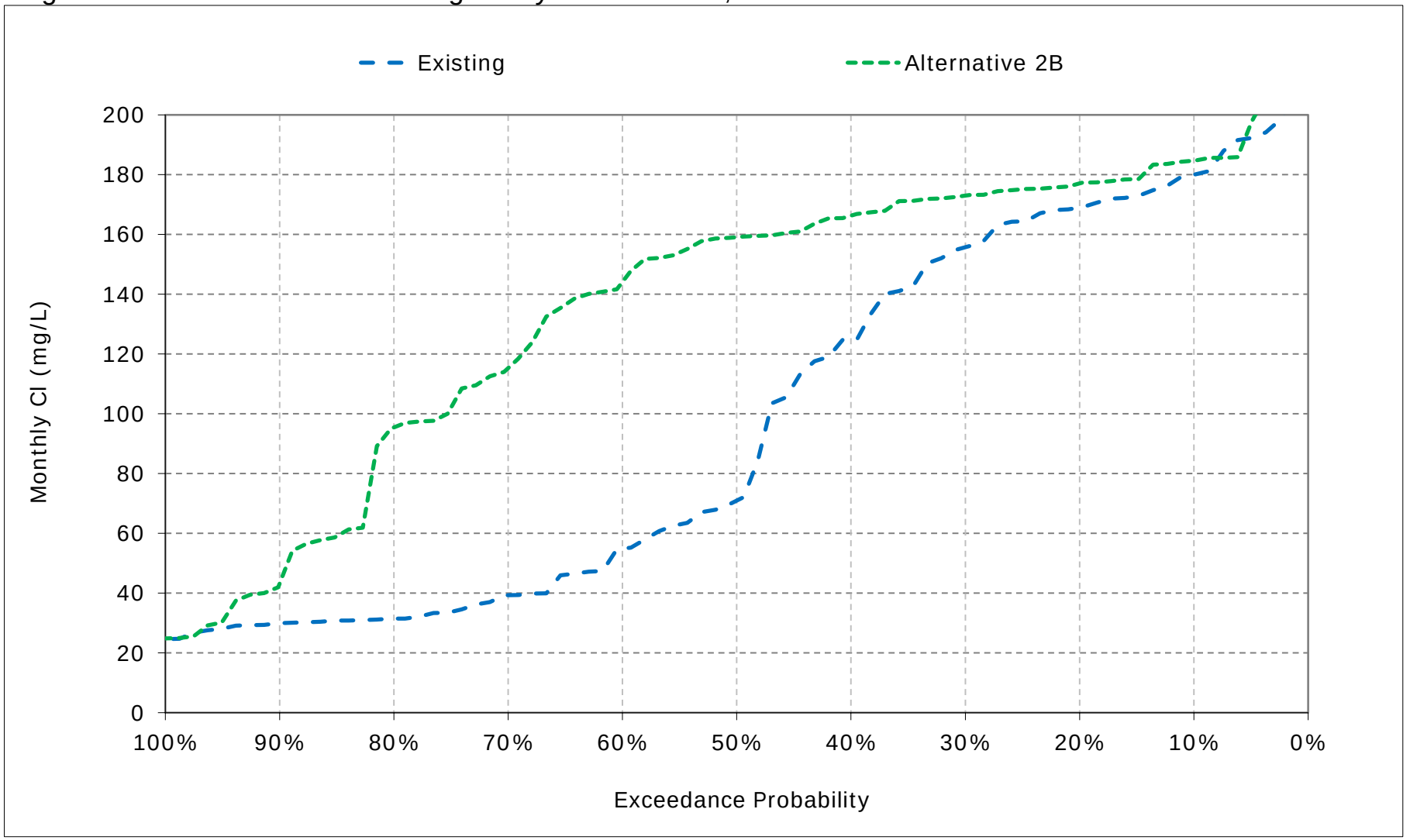


Figure 7-18. Old River at Highway 4 Chloride, December Cl



## Table 8-1. Victoria Canal Chloride, Monthly Cl

### Existing

| | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 96 | 100 | 117 | 141 | 127 | 102 | 91 | 84 | 71 | 55 | 72 | 80 |
| 20% | 90 | 88 | 108 | 134 | 114 | 92 | 84 | 79 | 60 | 51 | 58 | 77 |
| 30% | 86 | 83 | 103 | 116 | 107 | 87 | 78 | 75 | 57 | 43 | 50 | 75 |
| 40% | 83 | 79 | 96 | 108 | 103 | 82 | 72 | 70 | 55 | 38 | 44 | 72 |
| 50% | 77 | 73 | 74 | 100 | 93 | 76 | 67 | 61 | 53 | 35 | 38 | 67 |
| 60% | 55 | 52 | 57 | 93 | 87 | 70 | 55 | 57 | 52 | 32 | 36 | 62 |
| 70% | 51 | 49 | 46 | 87 | 84 | 63 | 45 | 52 | 49 | 30 | 33 | 60 |
| 80% | 45 | 47 | 41 | 78 | 73 | 49 | 36 | 43 | 46 | 29 | 31 | 51 |
| 90% | 41 | 44 | 34 | 72 | 55 | 42 | 25 | 20 | 42 | 27 | 28 | 46 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 69 | 68 | 76 | 104 | 93 | 74 | 61 | 60 | 54 | 39 | 45 | 65 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 61 | 58 | 64 | 86 | 72 | 54 | 37 | 38 | 45 | 38 | 32 | 57 |
| Above Normal (15%) | 76 | 73 | 75 | 105 | 101 | 72 | 57 | 56 | 53 | 36 | 31 | 48 |
| Below Normal (17%) | 70 | 68 | 80 | 113 | 96 | 77 | 65 | 63 | 53 | 31 | 41 | 71 |
| Dry (22%) | 70 | 71 | 82 | 106 | 102 | 89 | 82 | 75 | 57 | 36 | 58 | 69 |
| Critical (15%) | 78 | 82 | 92 | 129 | 112 | 90 | 84 | 83 | 73 | 61 | 68 | 82 |

### Alternative 2B

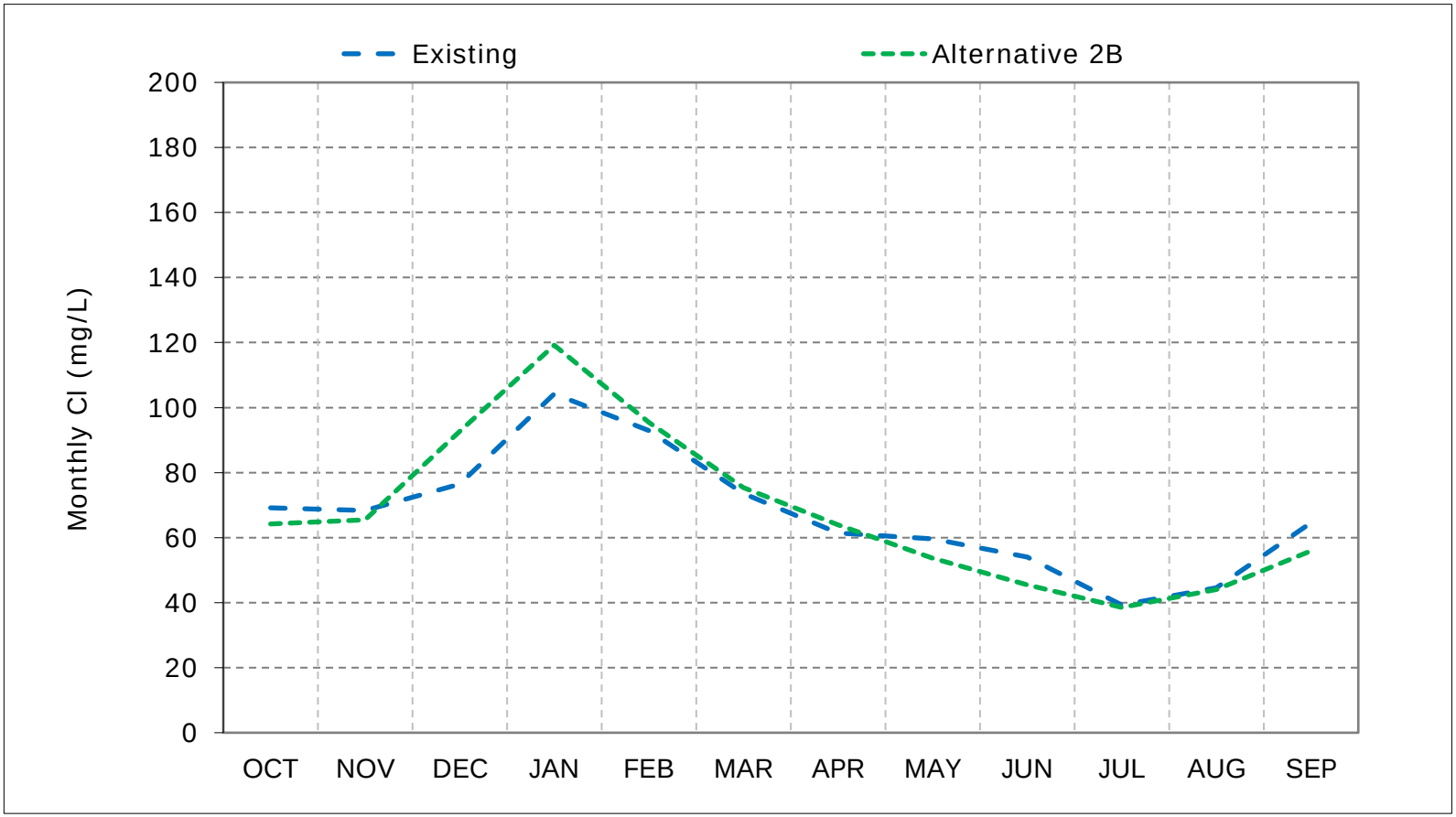
| | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 100 | 99 | 122 | 165 | 135 | 108 | 93 | 74 | 57 | 55 | 73 | 84 |
| 20% | 92 | 93 | 111 | 156 | 122 | 95 | 84 | 66 | 51 | 51 | 55 | 78 |
| 30% | 89 | 83 | 107 | 142 | 114 | 90 | 79 | 63 | 47 | 42 | 49 | 75 |
| 40% | 85 | 78 | 102 | 134 | 102 | 84 | 74 | 58 | 46 | 37 | 44 | 70 |
| 50% | 82 | 75 | 97 | 112 | 96 | 77 | 69 | 55 | 44 | 34 | 37 | 63 |
| 60% | 36 | 45 | 92 | 107 | 89 | 71 | 59 | 51 | 43 | 31 | 35 | 36 |
| 70% | 34 | 42 | 84 | 97 | 83 | 59 | 50 | 49 | 42 | 29 | 33 | 34 |
| 80% | 32 | 39 | 73 | 86 | 73 | 52 | 41 | 43 | 39 | 27 | 30 | 32 |
| 90% | 30 | 36 | 52 | 74 | 54 | 44 | 30 | 27 | 35 | 26 | 28 | 30 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 64 | 65 | 93 | 119 | 95 | 75 | 64 | 54 | 46 | 39 | 44 | 56 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 54 | 55 | 79 | 93 | 72 | 55 | 42 | 37 | 41 | 37 | 31 | 32 |
| Above Normal (15%) | 70 | 72 | 96 | 126 | 105 | 74 | 59 | 50 | 45 | 35 | 30 | 33 |
| Below Normal (17%) | 64 | 65 | 94 | 129 | 97 | 79 | 70 | 56 | 43 | 30 | 42 | 79 |
| Dry (22%) | 65 | 68 | 101 | 130 | 108 | 93 | 85 | 66 | 45 | 35 | 57 | 70 |
| Critical (15%) | 79 | 79 | 106 | 142 | 116 | 90 | 78 | 72 | 60 | 61 | 69 | 83 |

### Alternative 2B minus Existing

| | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 4 | -1 | 5 | 23 | 9 | 6 | 2 | -10 | -15 | 0 | 1 | 3 |
| 20% | 2 | 5 | 3 | 22 | 8 | 4 | 0 | -13 | -9 | 0 | -3 | 1 |
| 30% | 3 | 0 | 4 | 25 | 7 | 3 | 1 | -12 | -10 | -1 | -1 | 0 |
| 40% | 2 | -1 | 5 | 26 | -1 | 2 | 2 | -12 | -10 | -1 | 0 | -1 |
| 50% | 5 | 2 | 23 | 12 | 3 | 1 | 2 | -6 | -9 | -1 | -1 | -4 |
| 60% | -19 | -7 | 35 | 14 | 1 | 1 | 4 | -5 | -9 | -2 | -1 | -26 |
| 70% | -17 | -7 | 38 | 10 | -1 | -3 | 5 | -4 | -8 | -1 | -1 | -26 |
| 80% | -13 | -8 | 33 | 8 | 0 | 3 | 5 | 0 | -7 | -1 | -1 | -19 |
| 90% | -11 | -8 | 18 | 2 | -1 | 2 | 5 | 6 | -6 | 0 | -1 | -16 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -5 | -3 | 16 | 15 | 2 | 2 | 3 | -6 | -9 | -1 | -1 | -9 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | -7 | -3 | 14 | 7 | 0 | 1 | 4 | -1 | -3 | 0 | -1 | -26 |
| Above Normal (15%) | -5 | -2 | 20 | 21 | 4 | 2 | 2 | -6 | -8 | -1 | -1 | -15 |
| Below Normal (17%) | -6 | -3 | 14 | 16 | 0 | 2 | 6 | -7 | -9 | -1 | 0 | 8 |
| Dry (22%) | -5 | -3 | 19 | 24 | 5 | 4 | 4 | -9 | -13 | -1 | -1 | 1 |
| Critical (15%) | 1 | -3 | 14 | 13 | 5 | 0 | -7 | -11 | -13 | -1 | 0 | 1 |

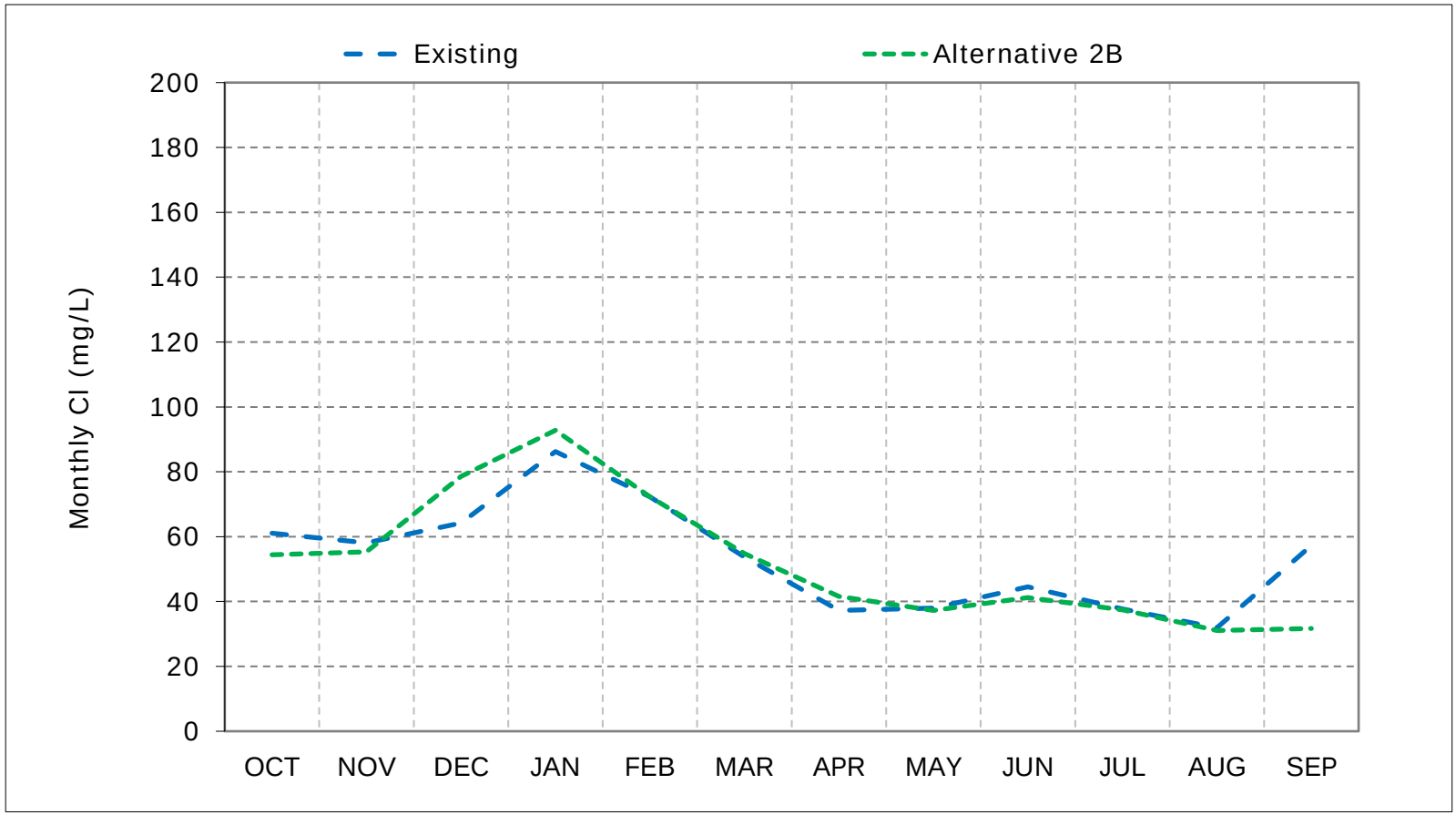
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 8-1. Victoria Canal Chloride, Long-Term Average Cl



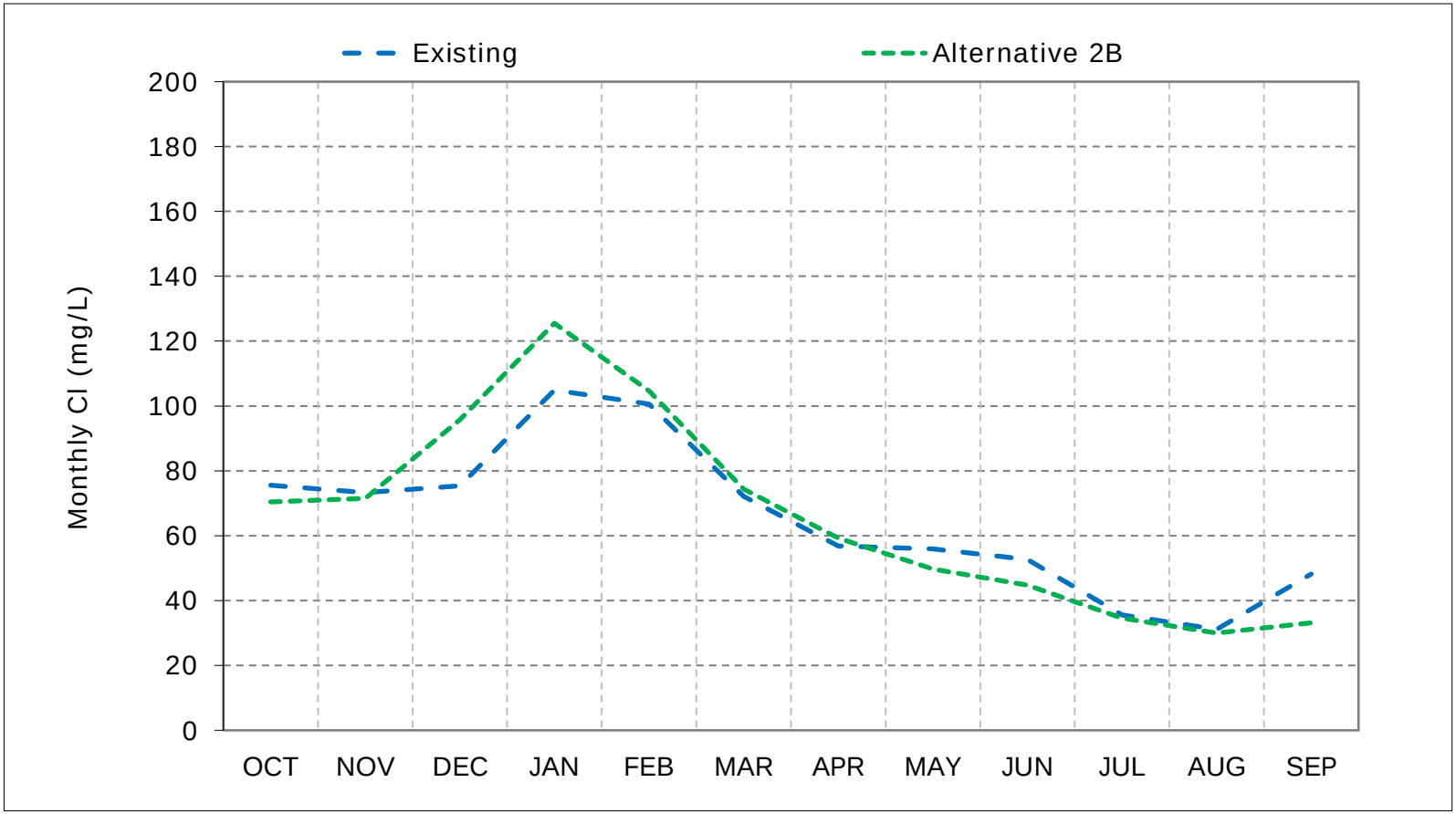

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-2. Victoria Canal Chloride, Wet Year Average Cl



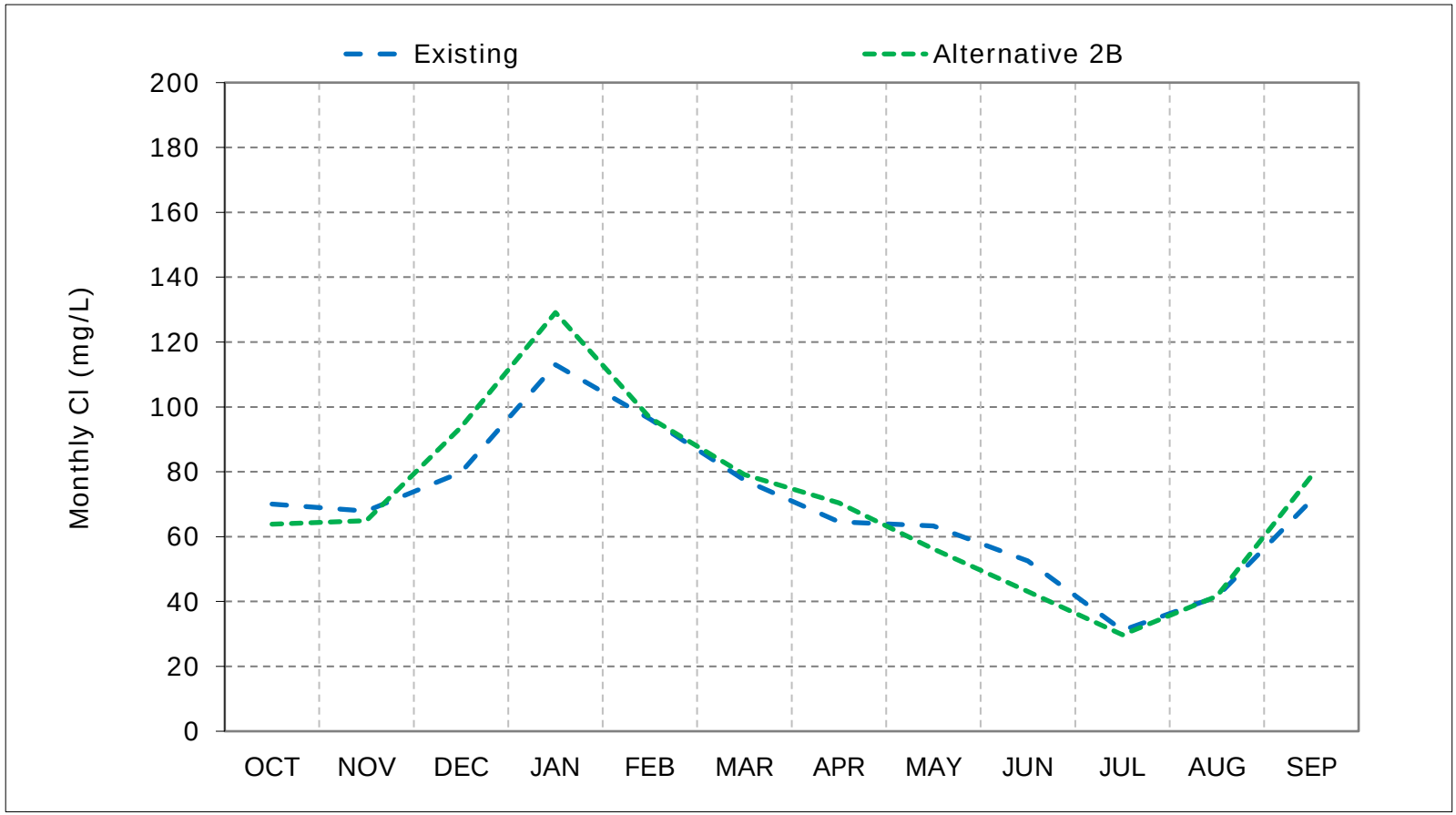

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-3. Victoria Canal Chloride, Above Normal Year Average Cl



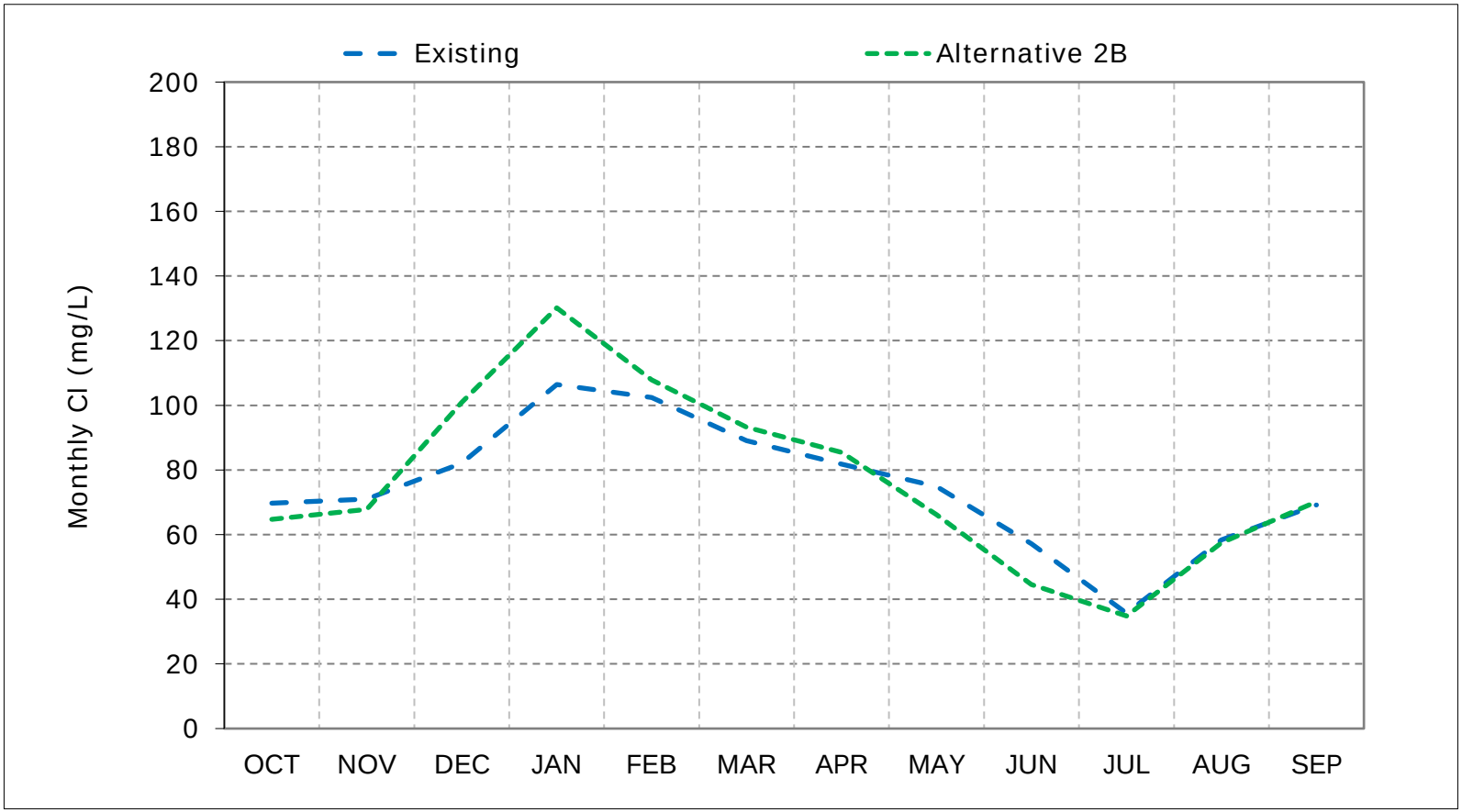

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-4. Victoria Canal Chloride, Below Normal Year Average Cl



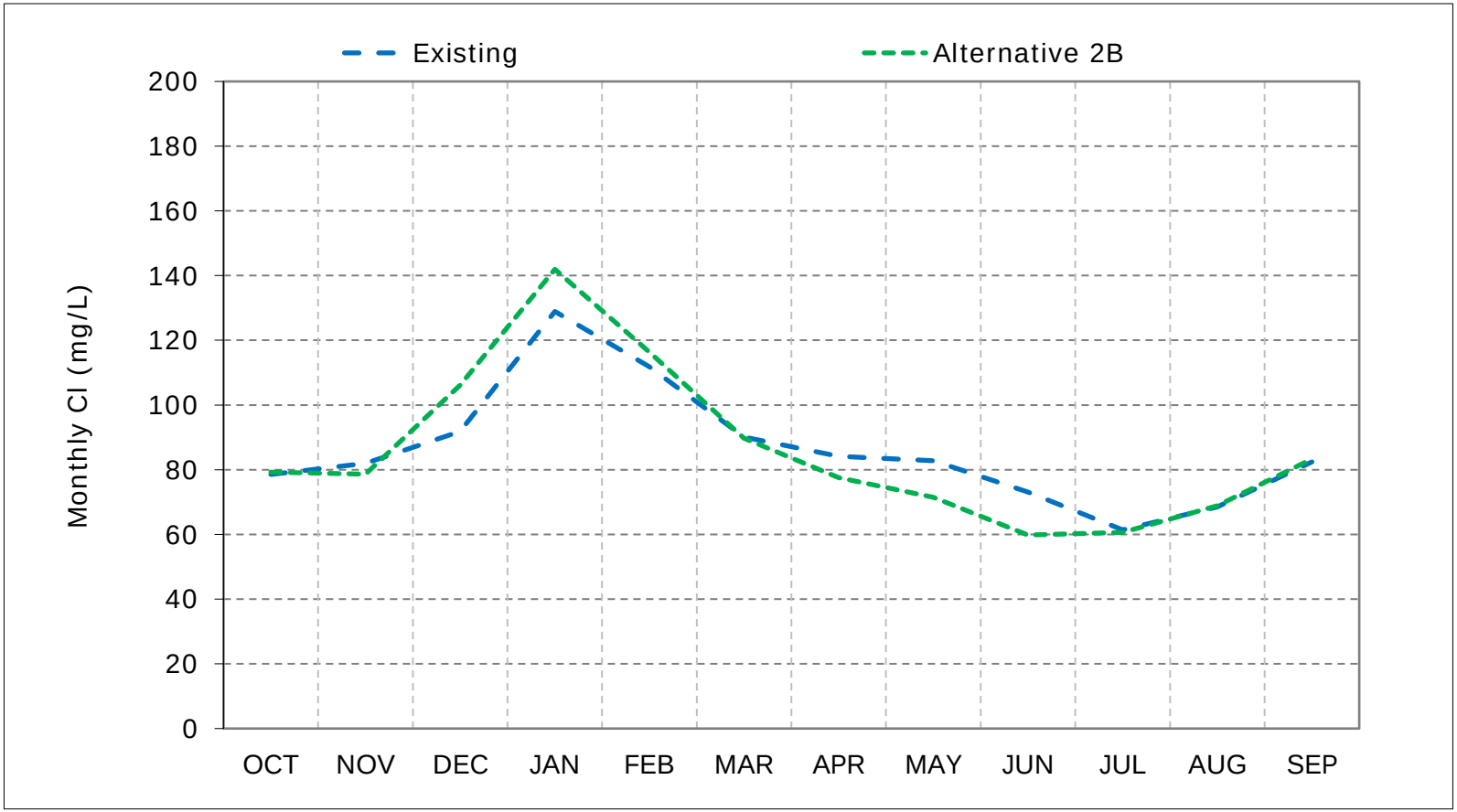

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-5. Victoria Canal Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-6. Victoria Canal Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-7. Victoria Canal Chloride, January Cl

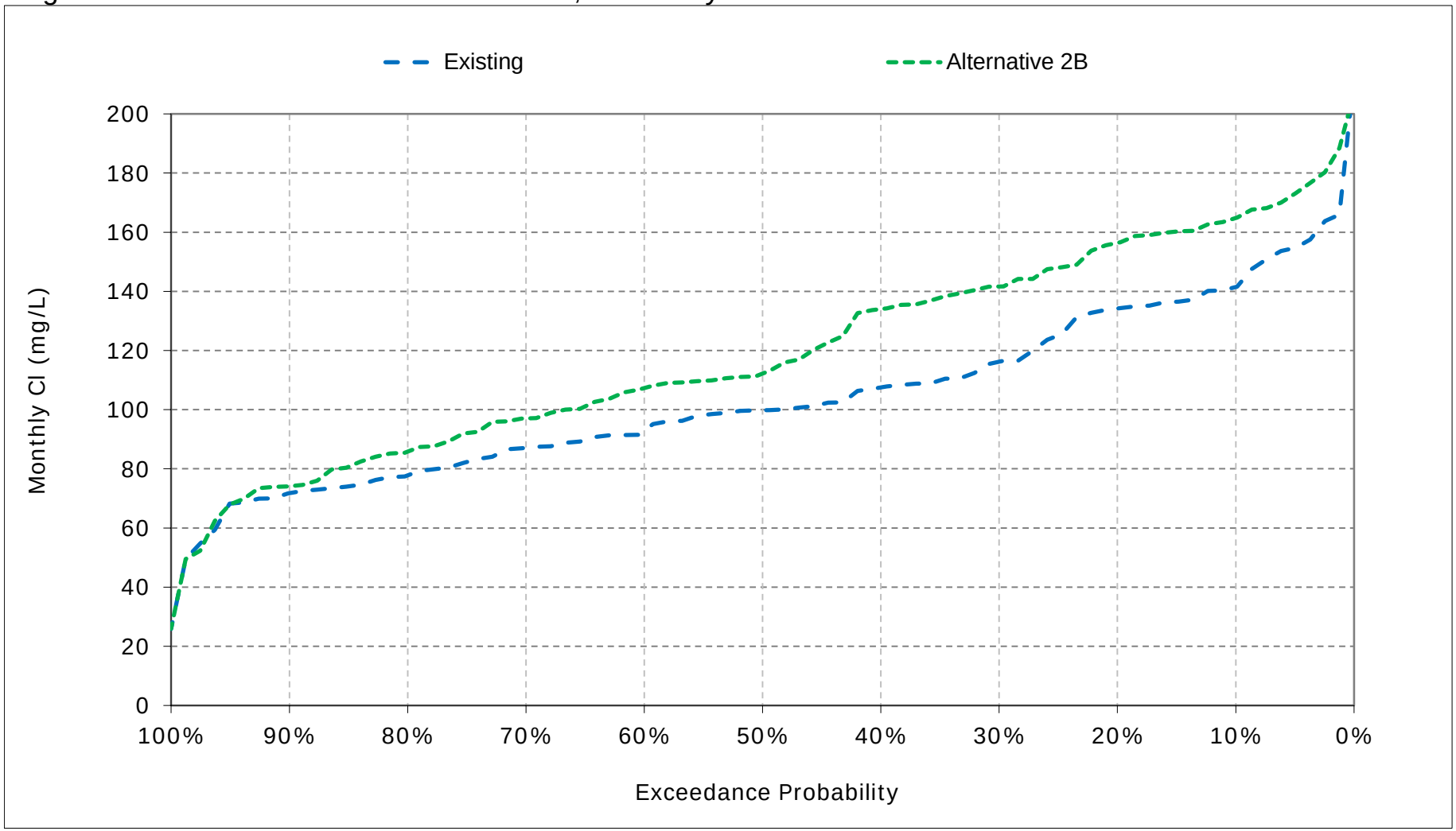


Figure 8-8. Victoria Canal Chloride, February Cl

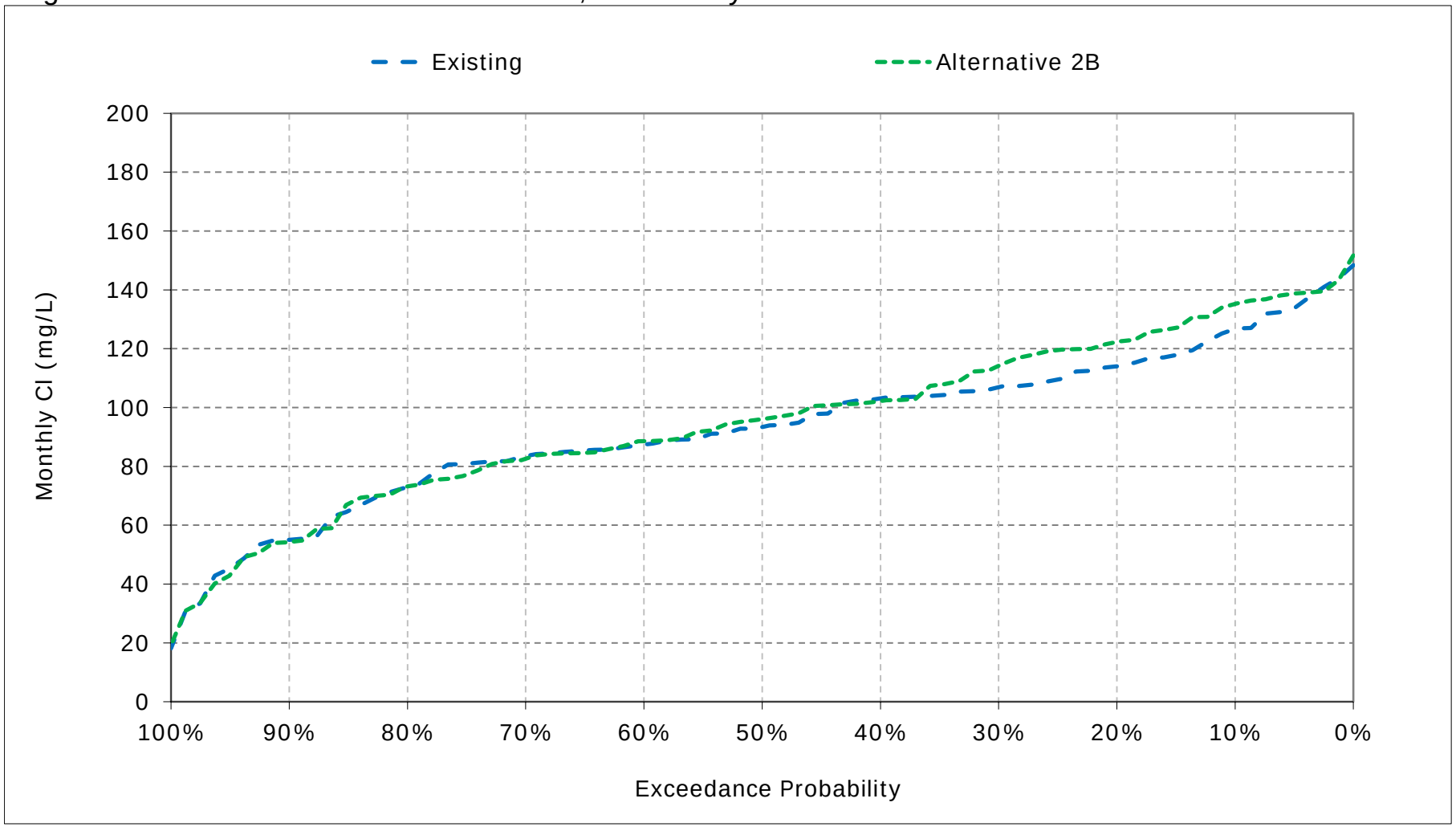


Figure 8-9. Victoria Canal Chloride, March Cl

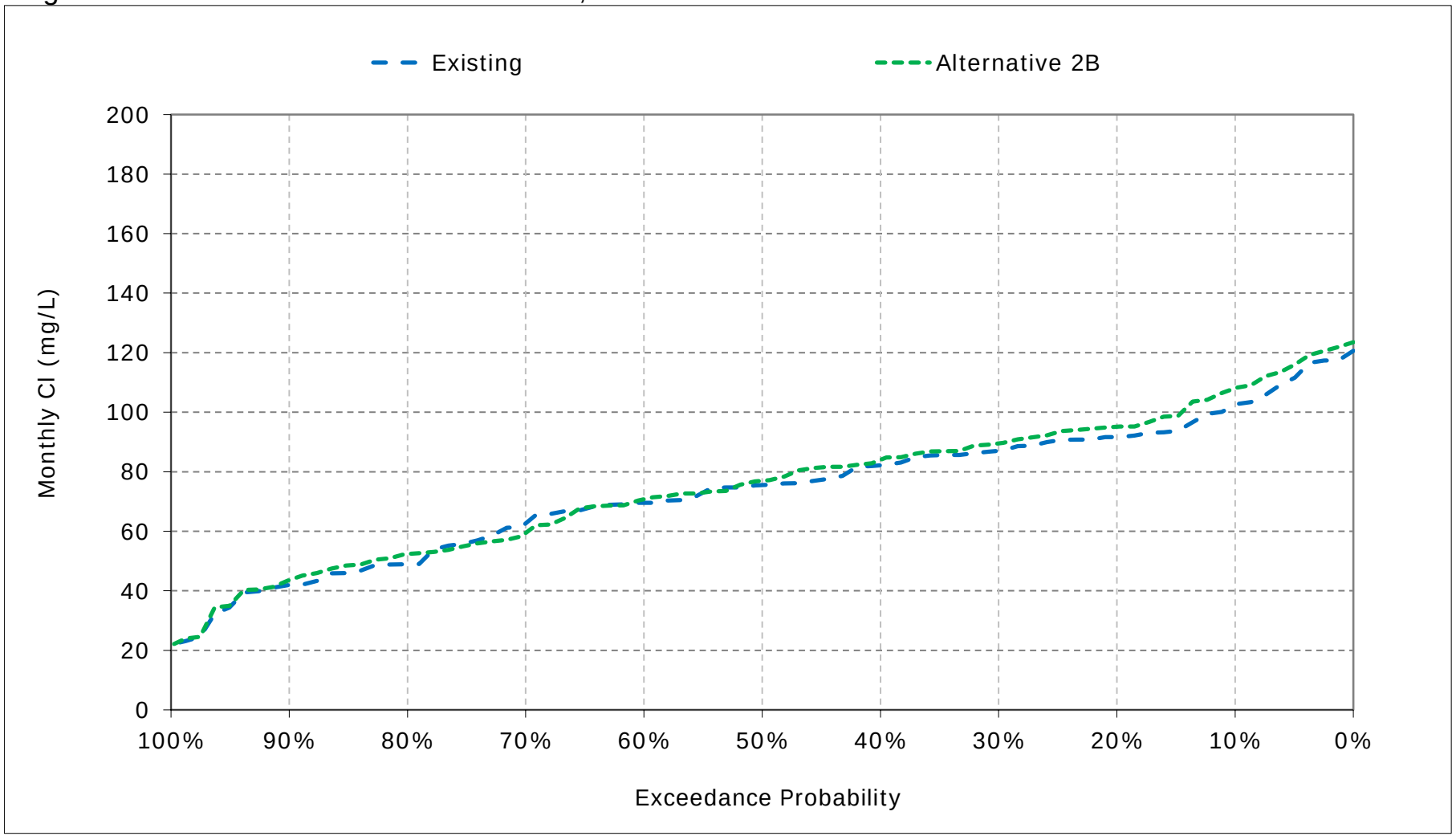


Figure 8-10. Victoria Canal Chloride, April Cl

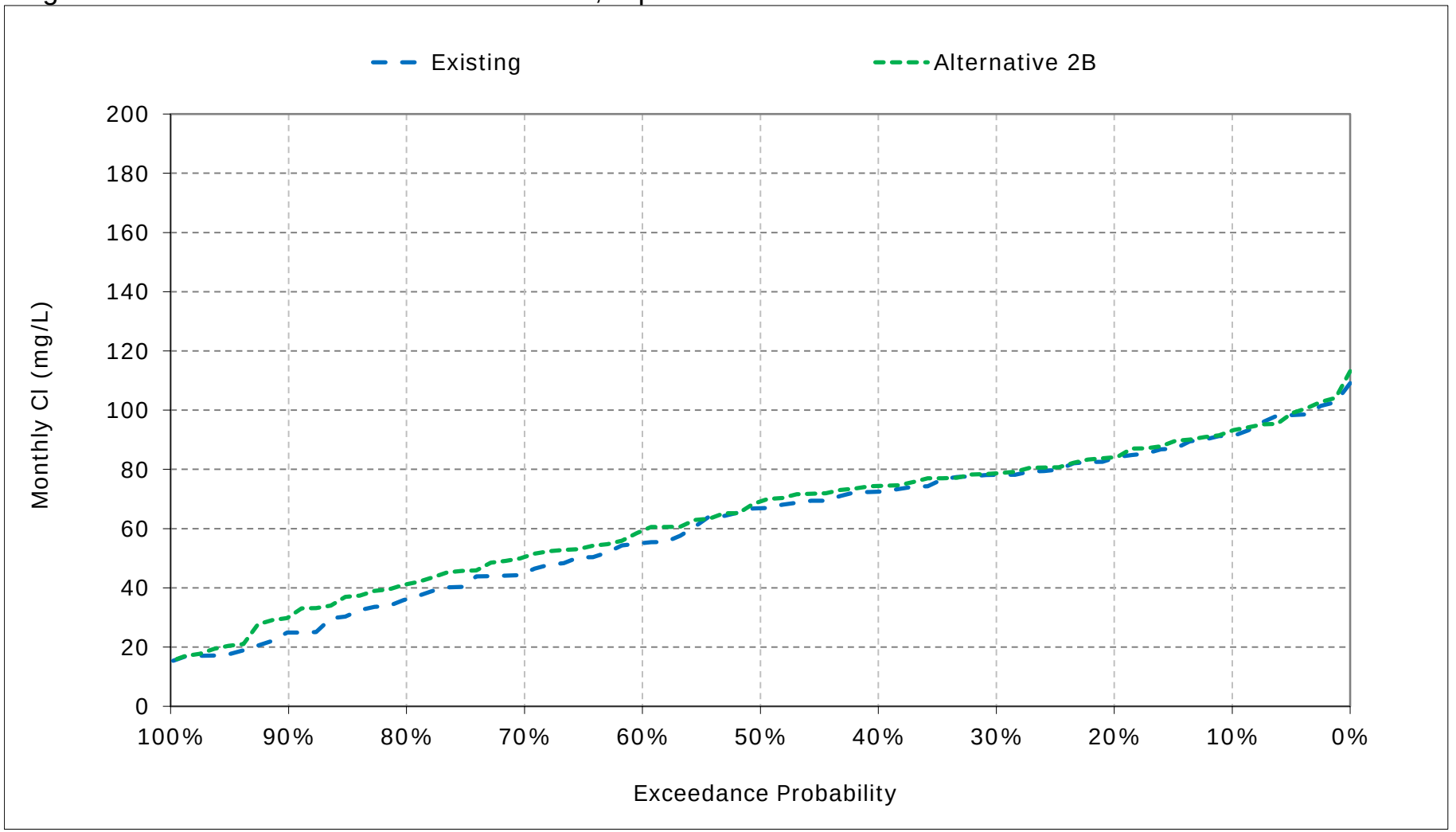


Figure 8-11. Victoria Canal Chloride, May Cl

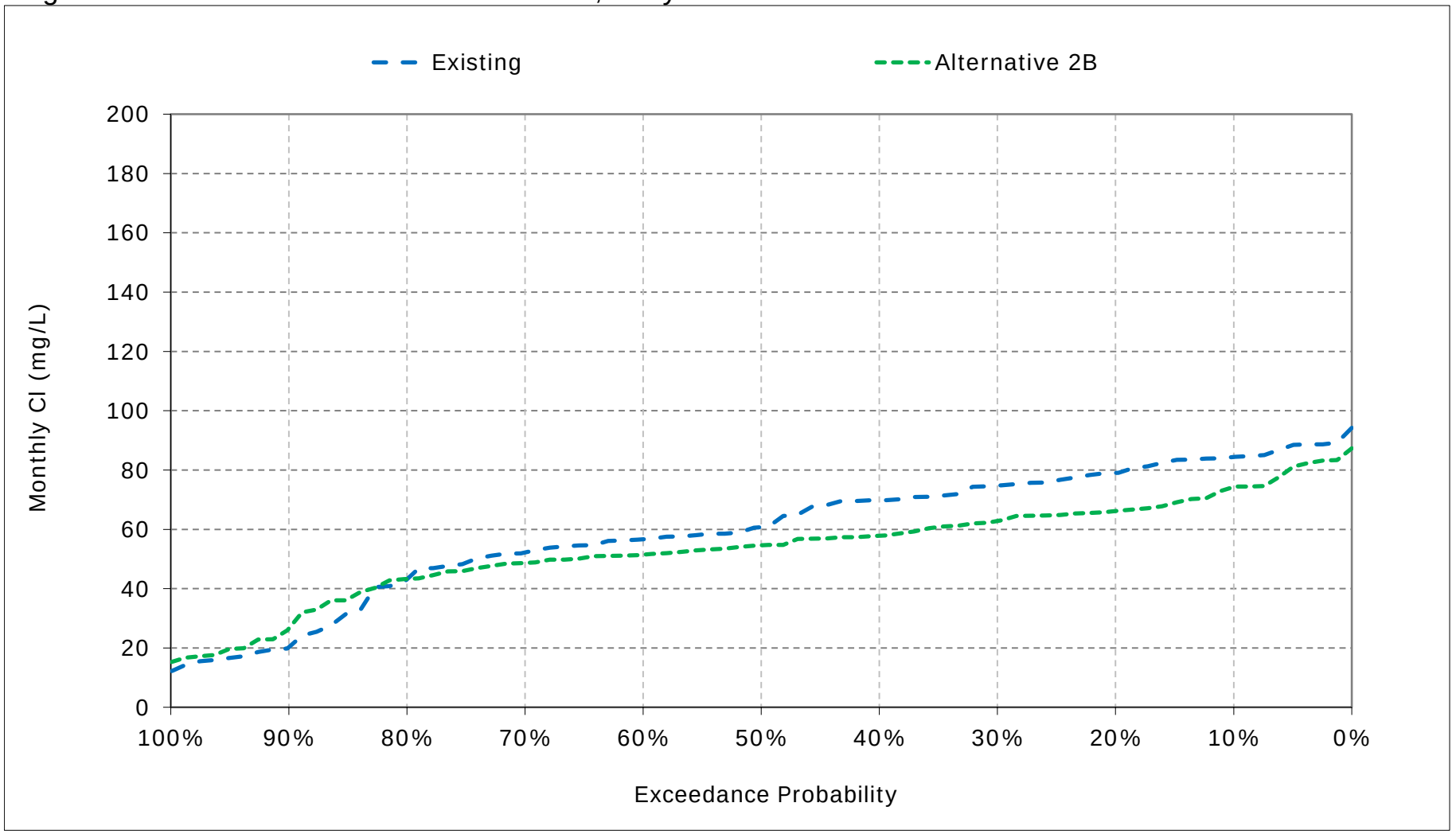


Figure 8-12. Victoria Canal Chloride, June Cl

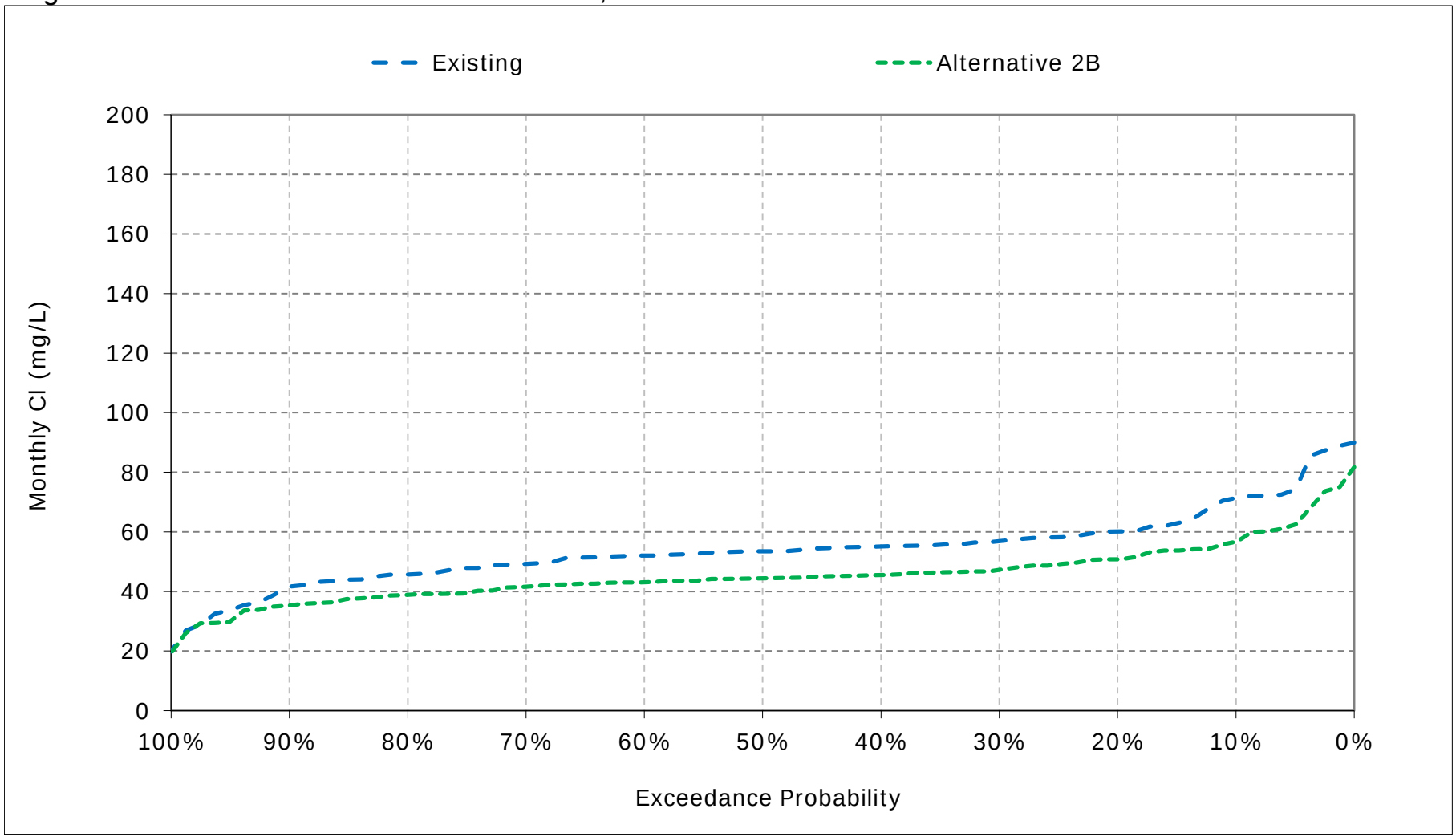


Figure 8-13. Victoria Canal Chloride, July Cl

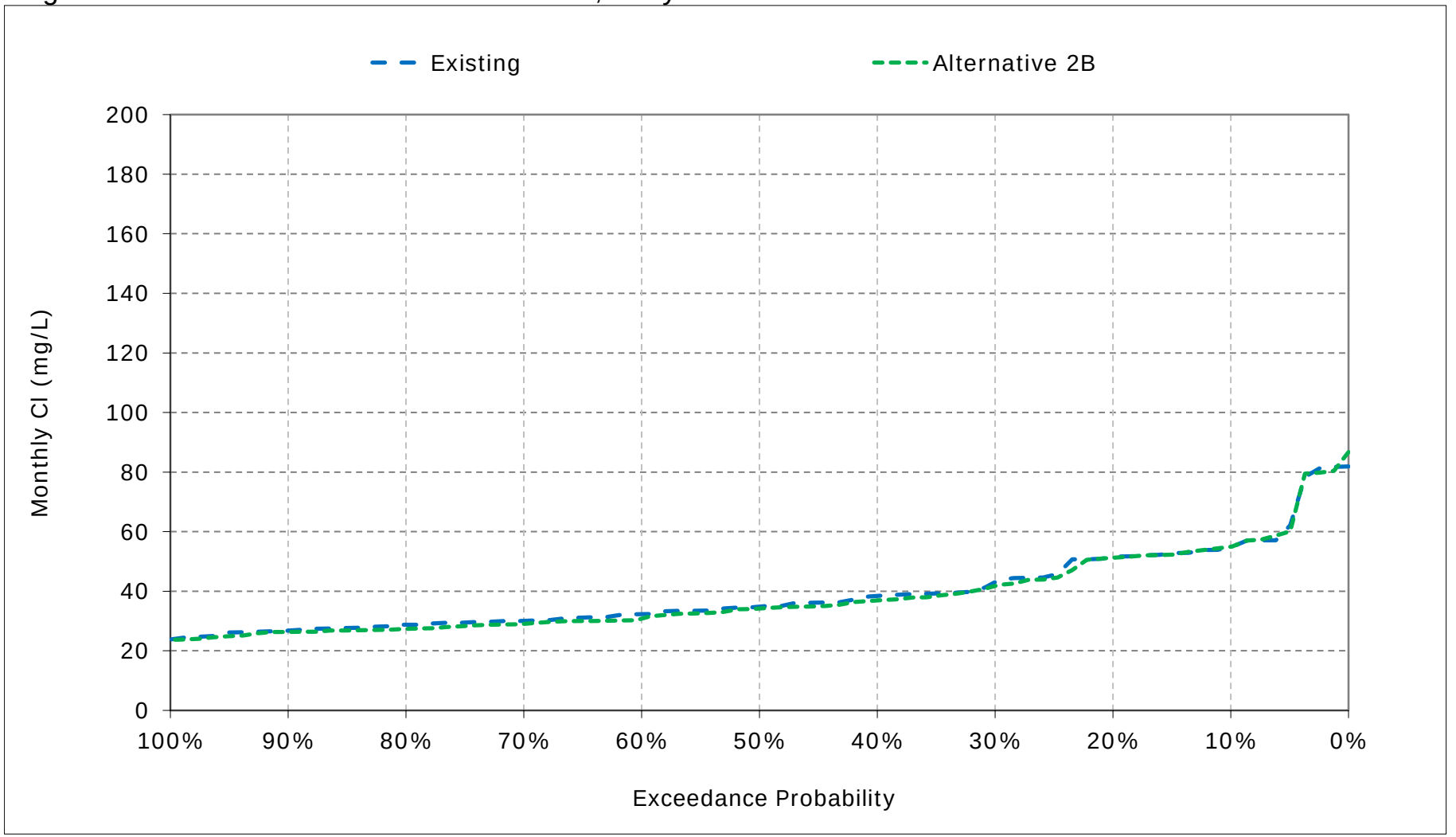


Figure 8-14. Victoria Canal Chloride, August Cl

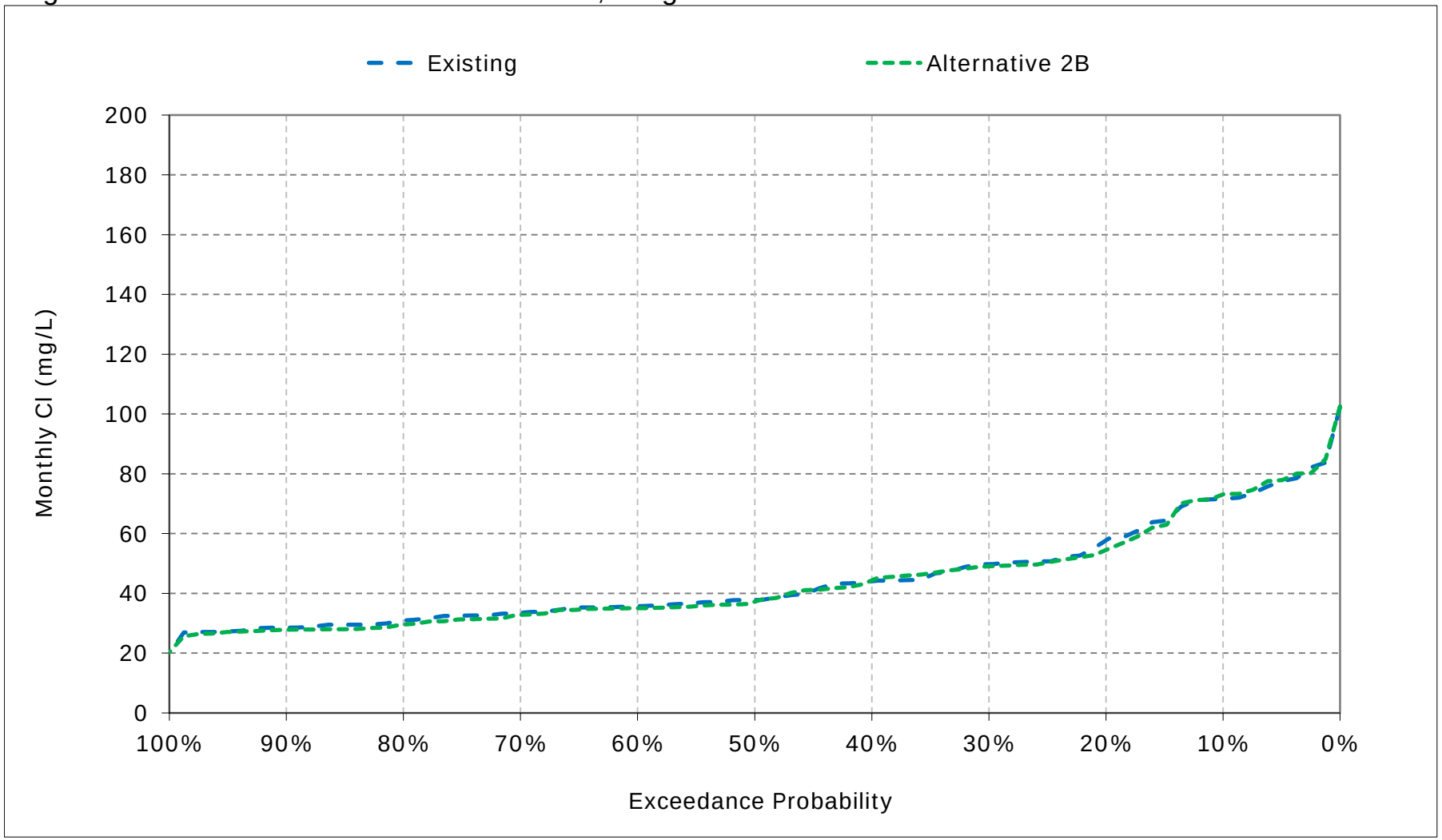


Figure 8-15. Victoria Canal Chloride, September Cl

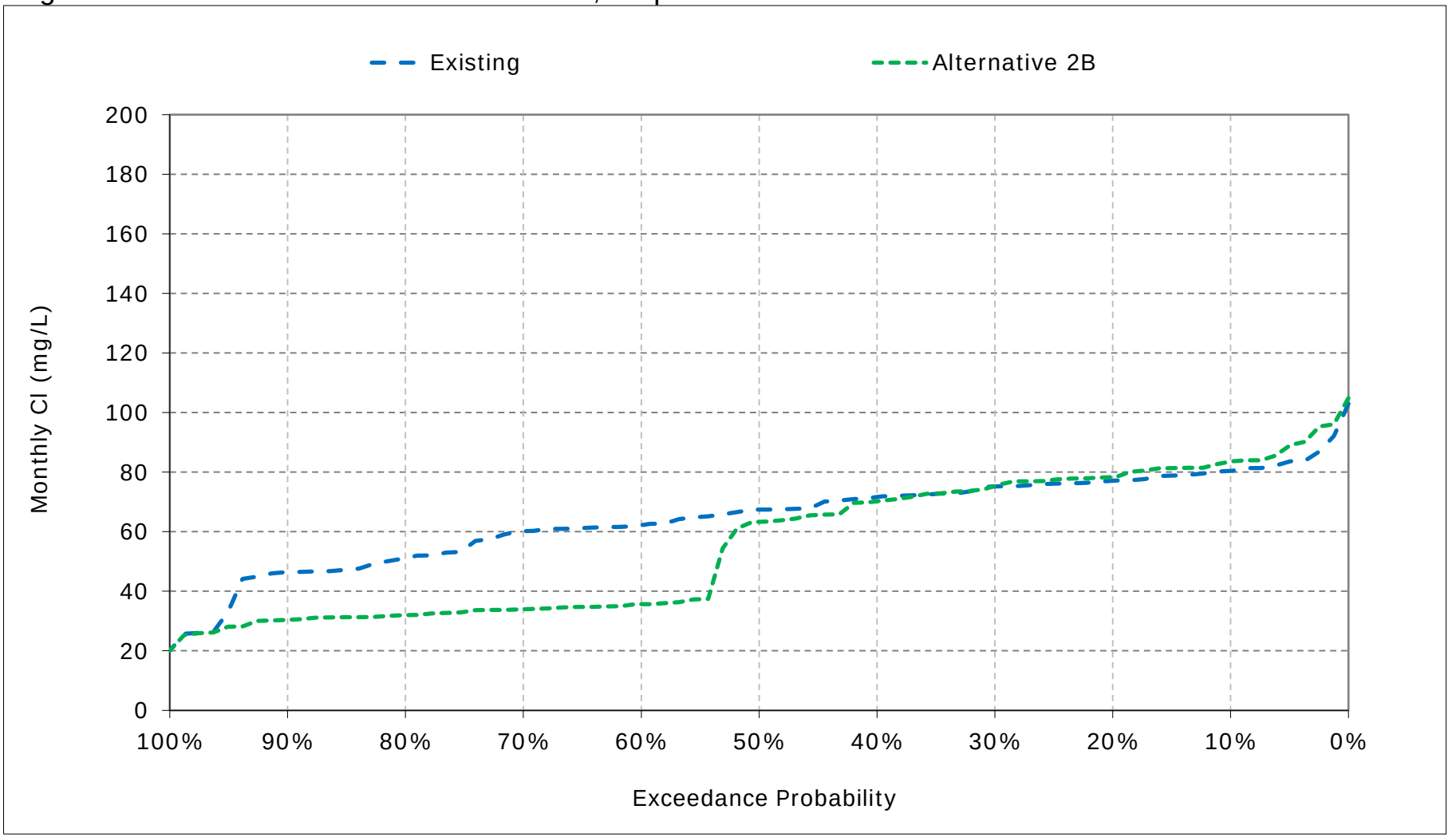


Figure 8-16. Victoria Canal Chloride, October Cl

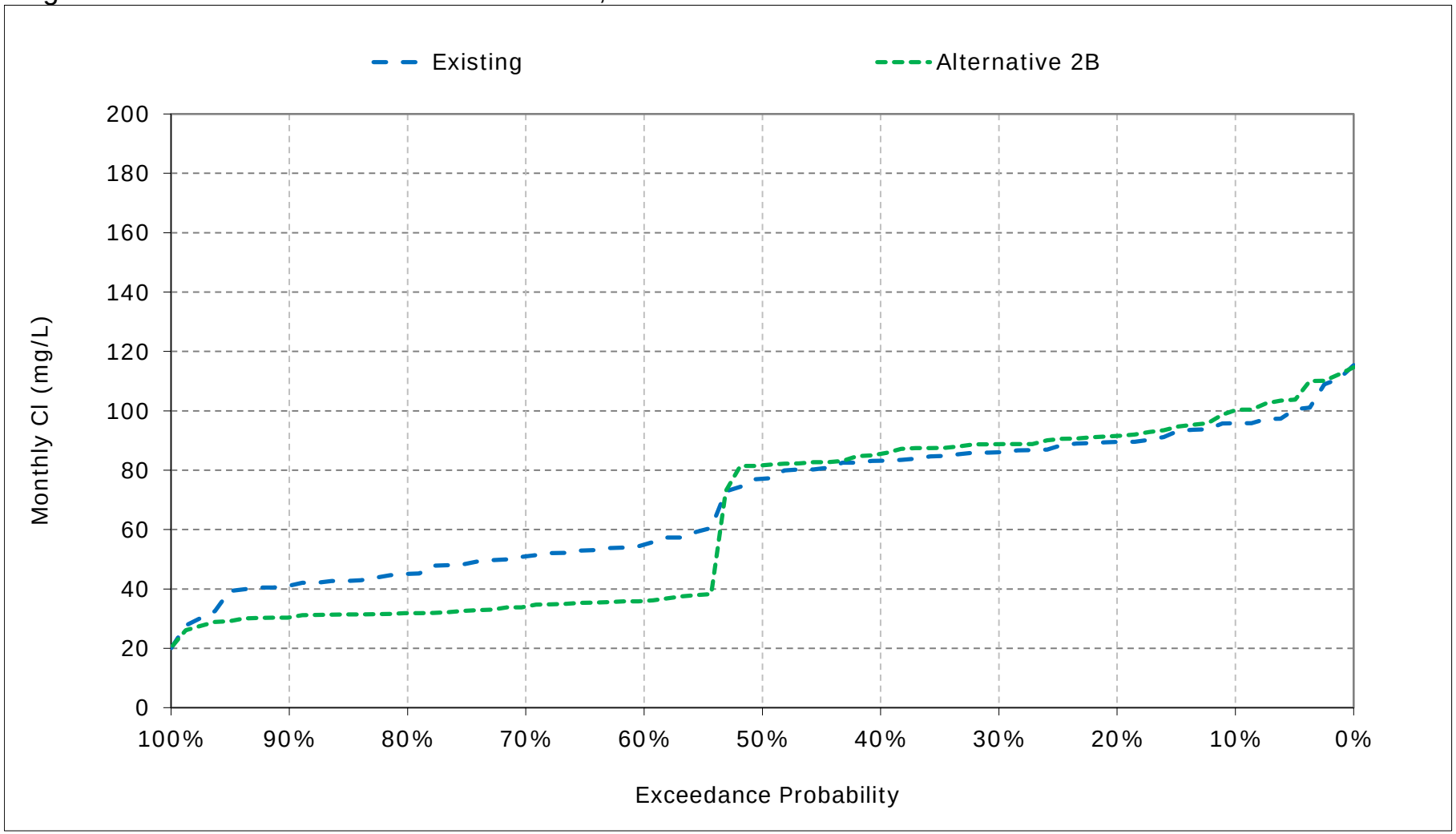


Figure 8-17. Victoria Canal Chloride, November Cl

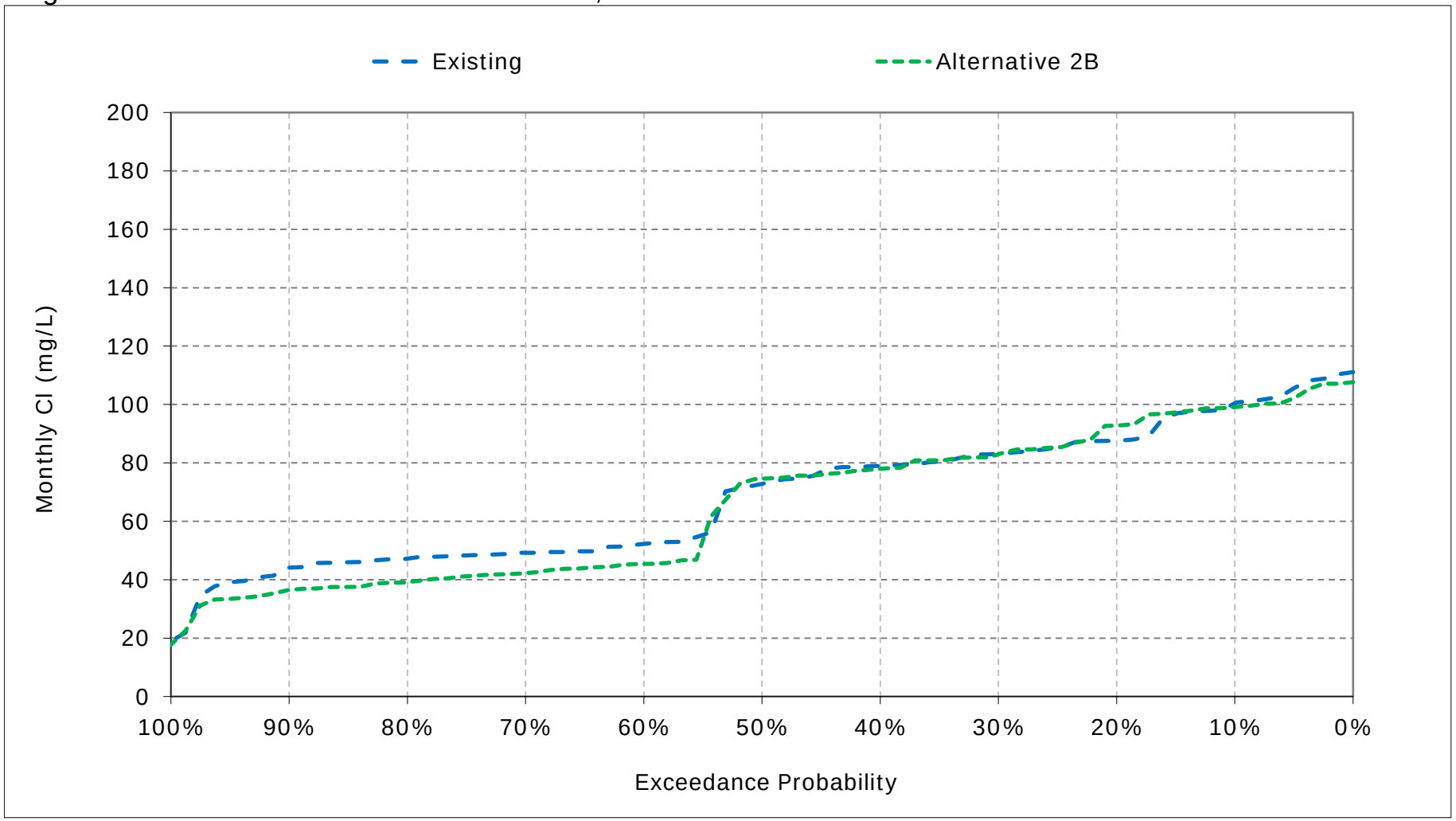
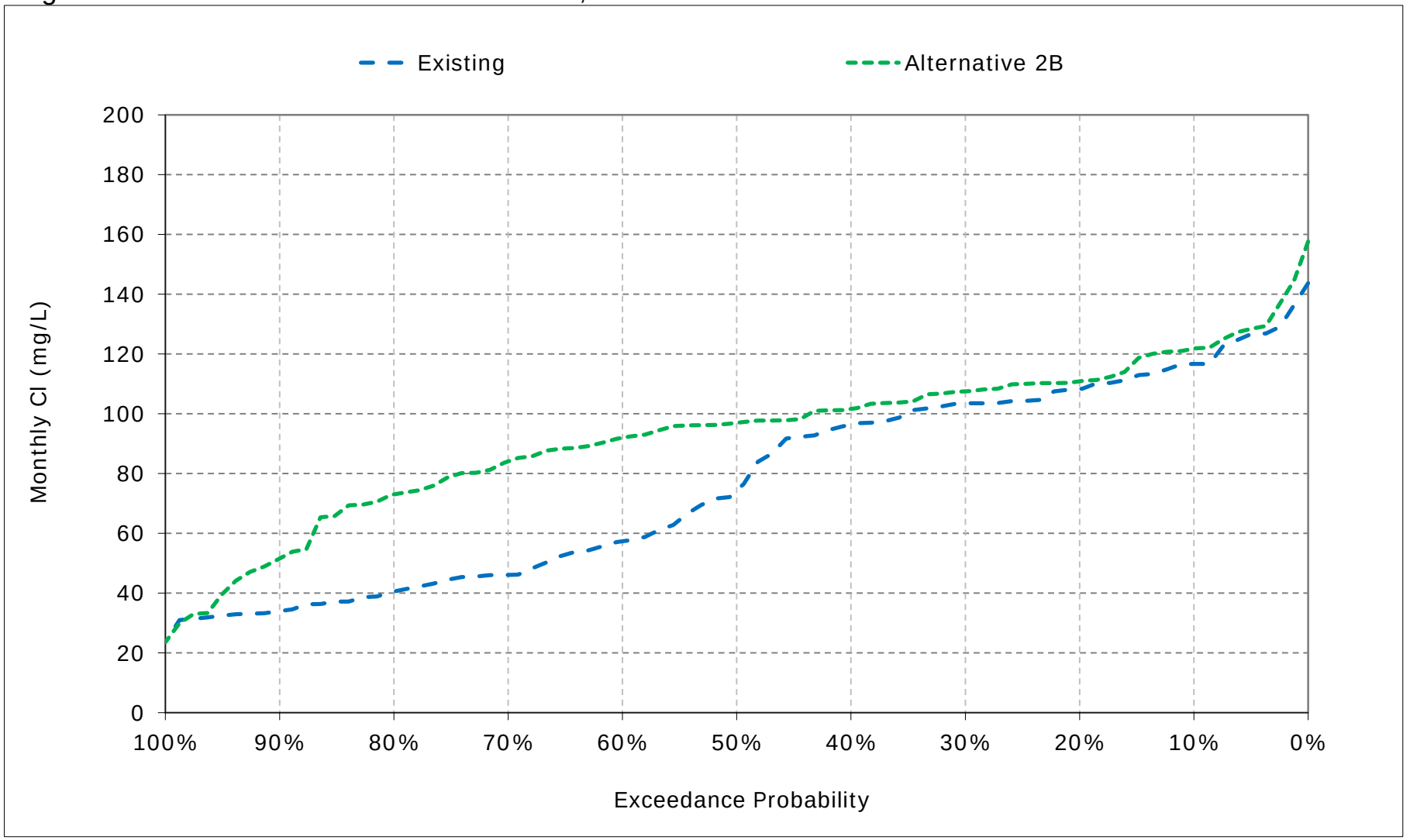


Figure 8-18. Victoria Canal Chloride, December Cl



## Table 9-1. Contra Costa Pumping Plant #1 Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 198 | 189 | 210 | 187 | 95 | 53 | 52 | 57 | 36 | 88 | 134 | 178 |
| 20% | 187 | 169 | 198 | 149 | 69 | 40 | 47 | 50 | 29 | 56 | 105 | 171 |
| 30% | 180 | 158 | 174 | 124 | 62 | 34 | 42 | 43 | 28 | 46 | 91 | 156 |
| 40% | 171 | 142 | 129 | 99 | 53 | 32 | 38 | 39 | 27 | 36 | 84 | 139 |
| 50% | 153 | 117 | 77 | 81 | 47 | 29 | 36 | 38 | 26 | 29 | 73 | 127 |
| 60% | 29 | 38 | 47 | 70 | 37 | 28 | 32 | 35 | 26 | 26 | 63 | 113 |
| 70% | 27 | 26 | 35 | 47 | 32 | 26 | 31 | 33 | 25 | 25 | 52 | 102 |
| 80% | 27 | 23 | 29 | 39 | 29 | 24 | 28 | 30 | 24 | 23 | 48 | 86 |
| 90% | 25 | 21 | 25 | 29 | 27 | 23 | 25 | 25 | 23 | 21 | 42 | 74 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 110 | 101 | 106 | 98 | 53 | 34 | 37 | 39 | 30 | 44 | 78 | 125 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 84 | 72 | 58 | 49 | 45 | 34 | 35 | 33 | 25 | 23 | 47 | 92 |
| Above Normal (15%) | 127 | 106 | 104 | 89 | 49 | 33 | 42 | 44 | 26 | 25 | 53 | 79 |
| Below Normal (17%) | 115 | 109 | 126 | 118 | 47 | 30 | 40 | 45 | 26 | 38 | 84 | 167 |
| Dry (22%) | 111 | 114 | 126 | 111 | 53 | 29 | 36 | 38 | 28 | 61 | 105 | 146 |
| Critical (15%) | 141 | 131 | 158 | 169 | 81 | 44 | 36 | 40 | 56 | 89 | 125 | 165 |

### Alternative 2B

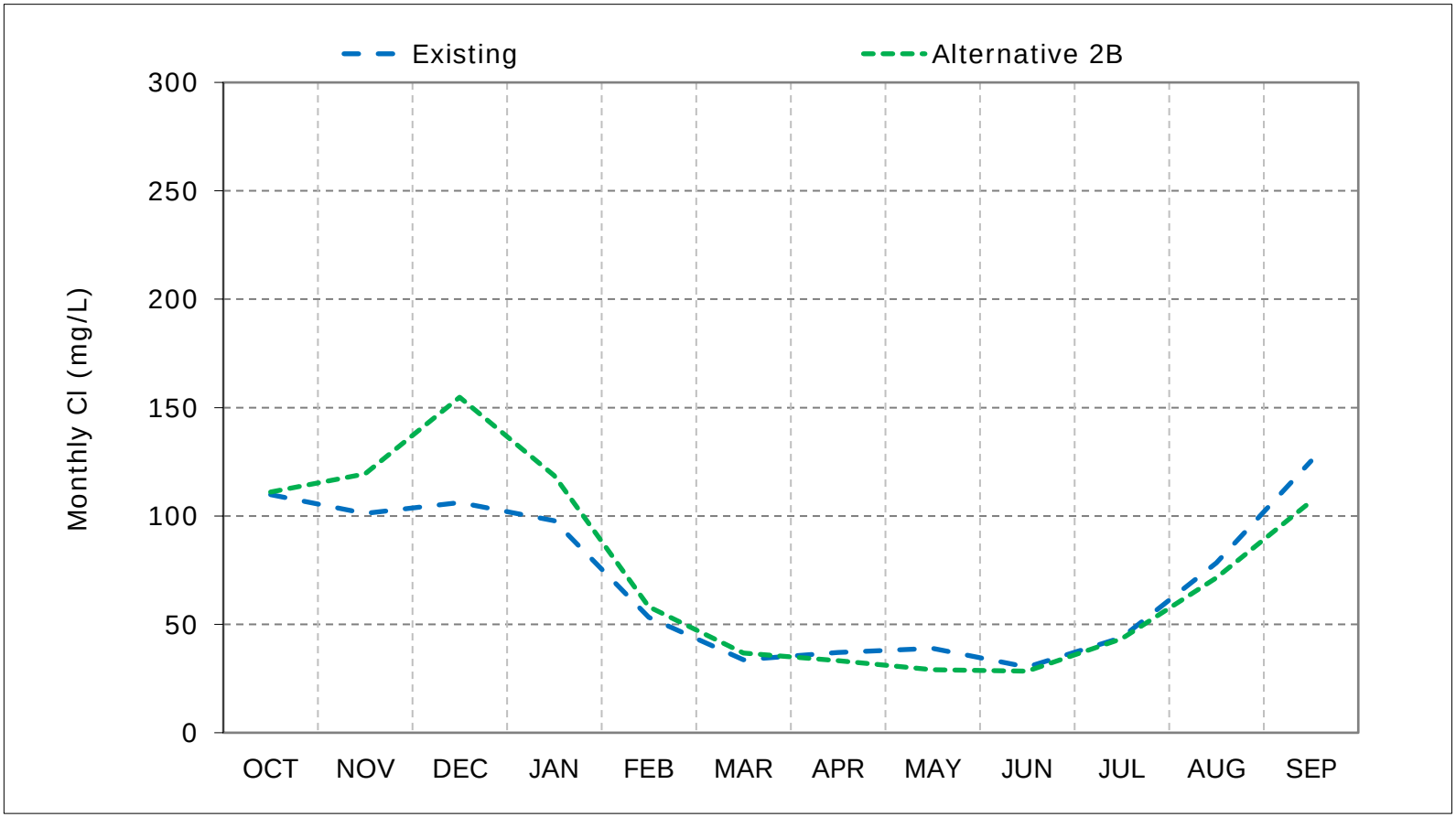
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 201 | 185 | 218 | 230 | 101 | 59 | 46 | 35 | 32 | 88 | 137 | 200 |
| 20% | 189 | 170 | 209 | 200 | 86 | 46 | 39 | 30 | 28 | 52 | 108 | 182 |
| 30% | 183 | 160 | 203 | 174 | 66 | 37 | 34 | 30 | 26 | 41 | 95 | 163 |
| 40% | 177 | 151 | 194 | 137 | 58 | 34 | 33 | 28 | 24 | 35 | 85 | 141 |
| 50% | 162 | 130 | 188 | 93 | 50 | 31 | 30 | 27 | 24 | 29 | 74 | 120 |
| 60% | 26 | 96 | 167 | 75 | 41 | 29 | 29 | 27 | 23 | 26 | 45 | 46 |
| 70% | 23 | 77 | 112 | 51 | 35 | 27 | 28 | 26 | 23 | 24 | 32 | 40 |
| 80% | 22 | 65 | 88 | 41 | 30 | 25 | 27 | 25 | 22 | 23 | 29 | 36 |
| 90% | 21 | 47 | 38 | 31 | 27 | 25 | 25 | 24 | 21 | 21 | 25 | 30 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 111 | 119 | 155 | 119 | 58 | 37 | 33 | 29 | 28 | 43 | 71 | 107 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 85 | 97 | 101 | 57 | 46 | 36 | 30 | 25 | 23 | 23 | 30 | 33 |
| Above Normal (15%) | 129 | 126 | 160 | 114 | 54 | 37 | 36 | 29 | 23 | 24 | 35 | 41 |
| Below Normal (17%) | 116 | 128 | 175 | 143 | 49 | 32 | 33 | 29 | 23 | 33 | 89 | 190 |
| Dry (22%) | 110 | 127 | 185 | 150 | 64 | 33 | 33 | 29 | 26 | 60 | 105 | 151 |
| Critical (15%) | 147 | 141 | 198 | 183 | 90 | 48 | 38 | 37 | 56 | 93 | 126 | 168 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 3 | -4 | 8 | 42 | 6 | 6 | -6 | -22 | -4 | 1 | 3 | 22 |
| 20% | 2 | 1 | 11 | 51 | 17 | 6 | -8 | -20 | -1 | -4 | 3 | 12 |
| 30% | 3 | 2 | 29 | 51 | 4 | 3 | -8 | -13 | -2 | -5 | 4 | 7 |
| 40% | 6 | 9 | 66 | 37 | 5 | 2 | -5 | -11 | -2 | -1 | 0 | 2 |
| 50% | 8 | 12 | 111 | 12 | 3 | 2 | -6 | -10 | -3 | 0 | 1 | -7 |
| 60% | -3 | 58 | 120 | 6 | 3 | 1 | -3 | -8 | -3 | 0 | -18 | -67 |
| 70% | -4 | 52 | 77 | 4 | 3 | 1 | -2 | -7 | -3 | -1 | -19 | -63 |
| 80% | -4 | 41 | 59 | 2 | 0 | 1 | -1 | -5 | -2 | 0 | -19 | -50 |
| 90% | -4 | 26 | 13 | 2 | 0 | 2 | 0 | -2 | -2 | 0 | -17 | -44 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1 | 18 | 49 | 21 | 5 | 3 | -4 | -10 | -2 | -1 | -7 | -19 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 1 | 25 | 42 | 8 | 1 | 3 | -4 | -8 | -2 | 0 | -17 | -59 |
| Above Normal (15%) | 1 | 20 | 55 | 26 | 5 | 4 | -6 | -15 | -3 | 0 | -18 | -38 |
| Below Normal (17%) | 1 | 19 | 49 | 25 | 2 | 2 | -8 | -17 | -3 | -5 | 5 | 23 |
| Dry (22%) | -1 | 13 | 59 | 38 | 10 | 4 | -3 | -9 | -2 | -1 | -1 | 6 |
| Critical (15%) | 5 | 10 | 40 | 13 | 9 | 4 | 2 | -3 | 0 | 4 | 1 | 3 |

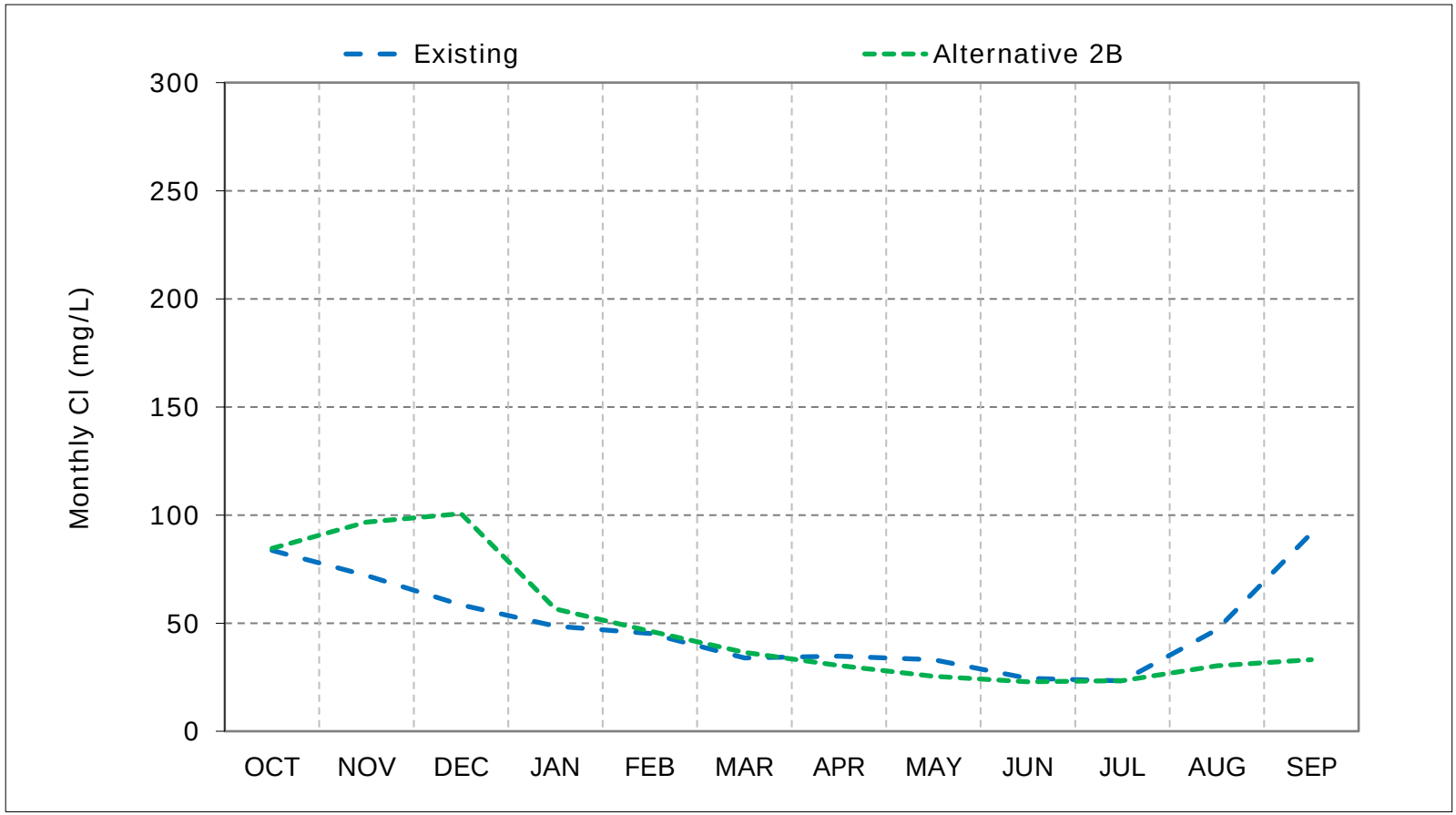
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 9-1. Contra Costa Pumping Plant #1 Chloride, Long-Term Average Cl



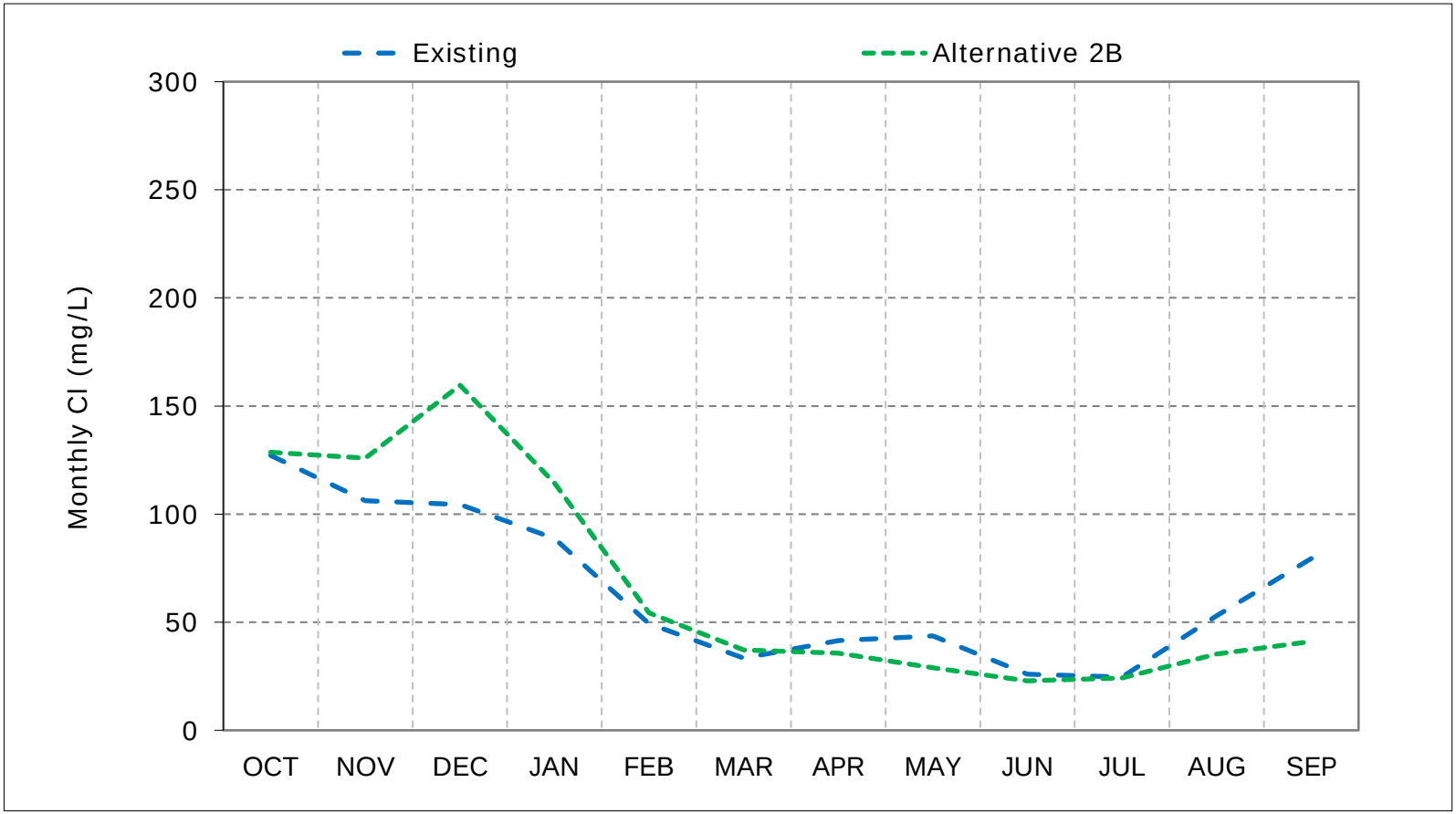

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-2. Contra Costa Pumping Plant #1 Chloride, Wet Year Average Cl



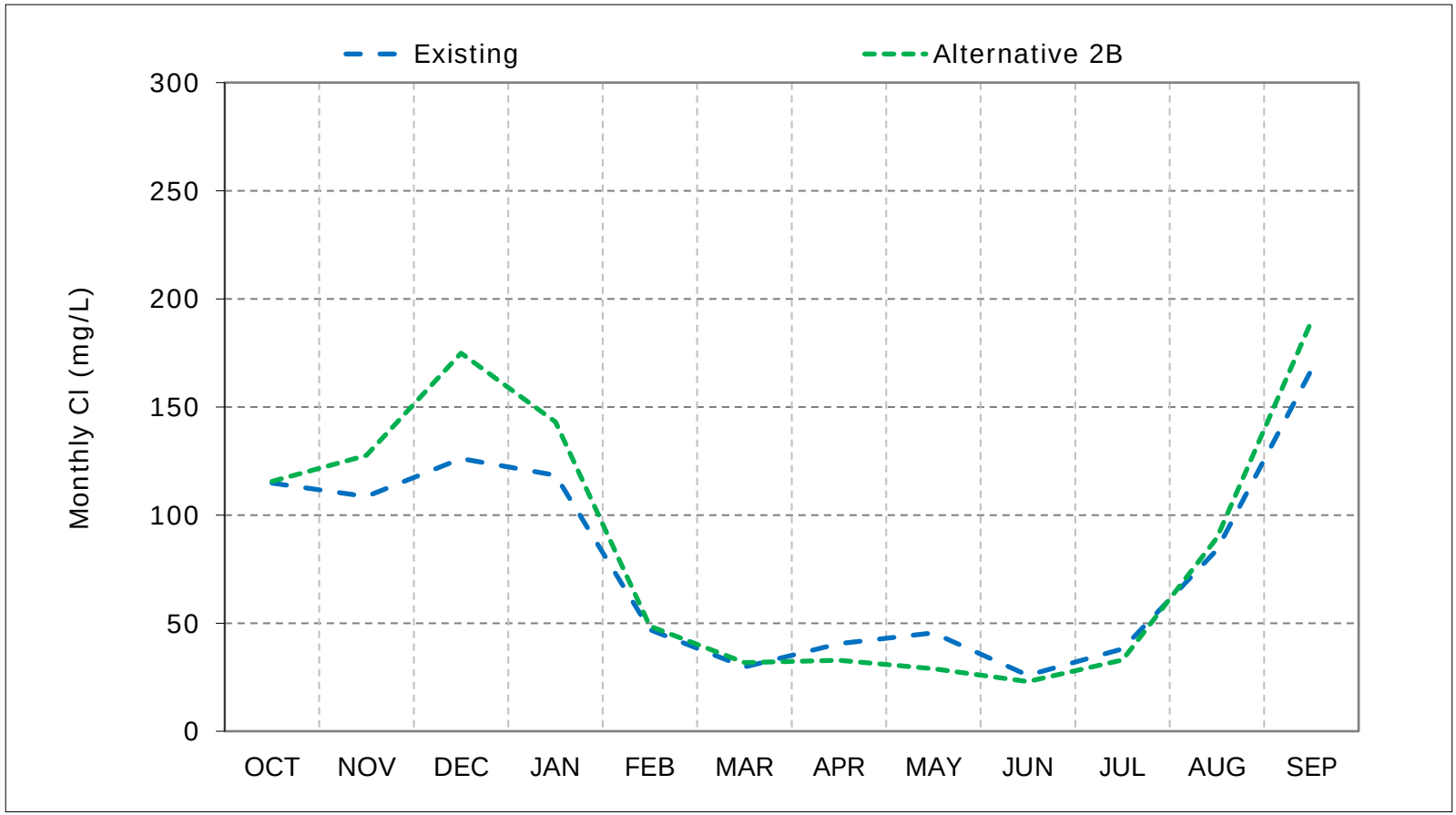

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-3. Contra Costa Pumping Plant #1 Chloride, Above Normal Year Average C



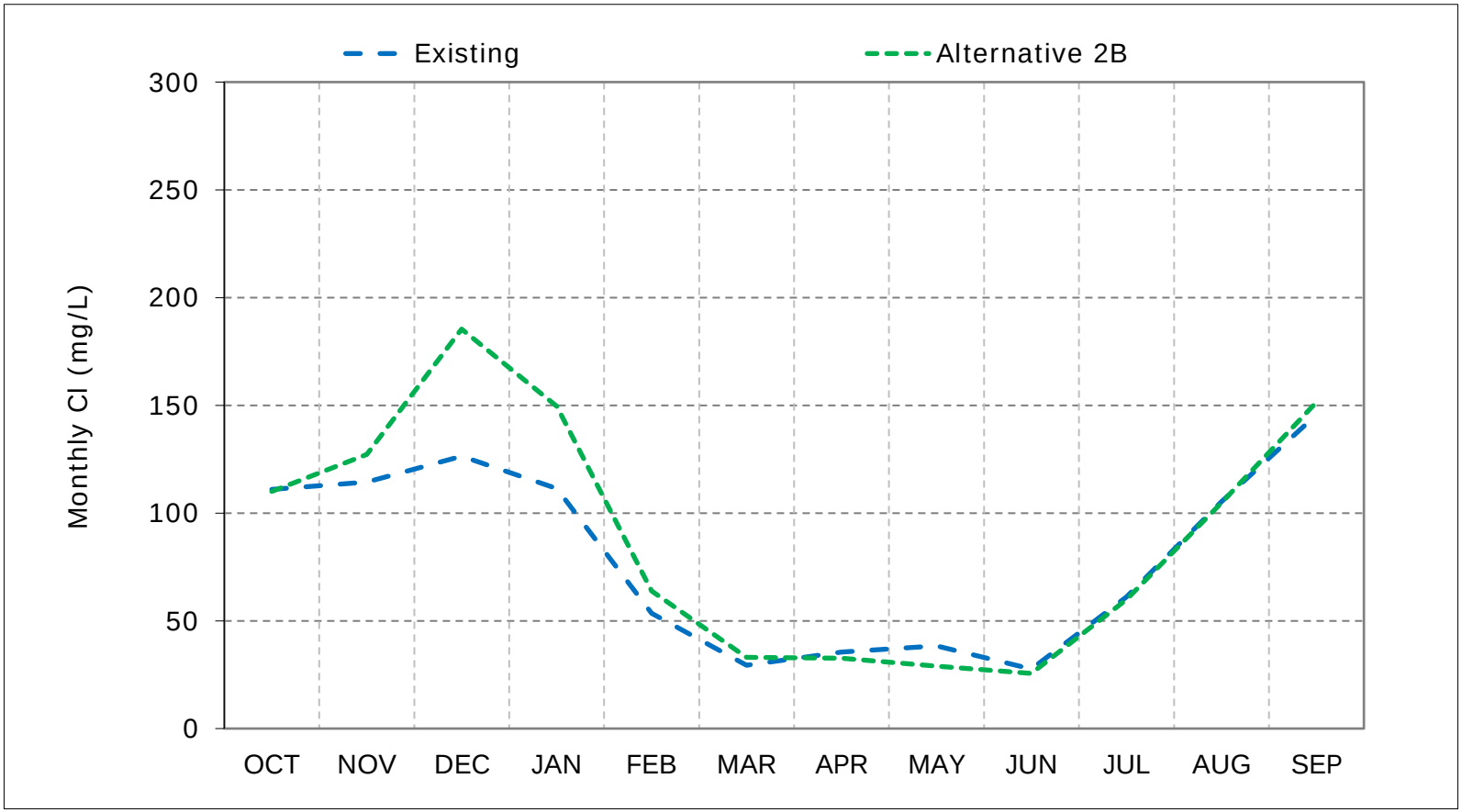

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-4. Contra Costa Pumping Plant #1 Chloride, Below Normal Year Average C



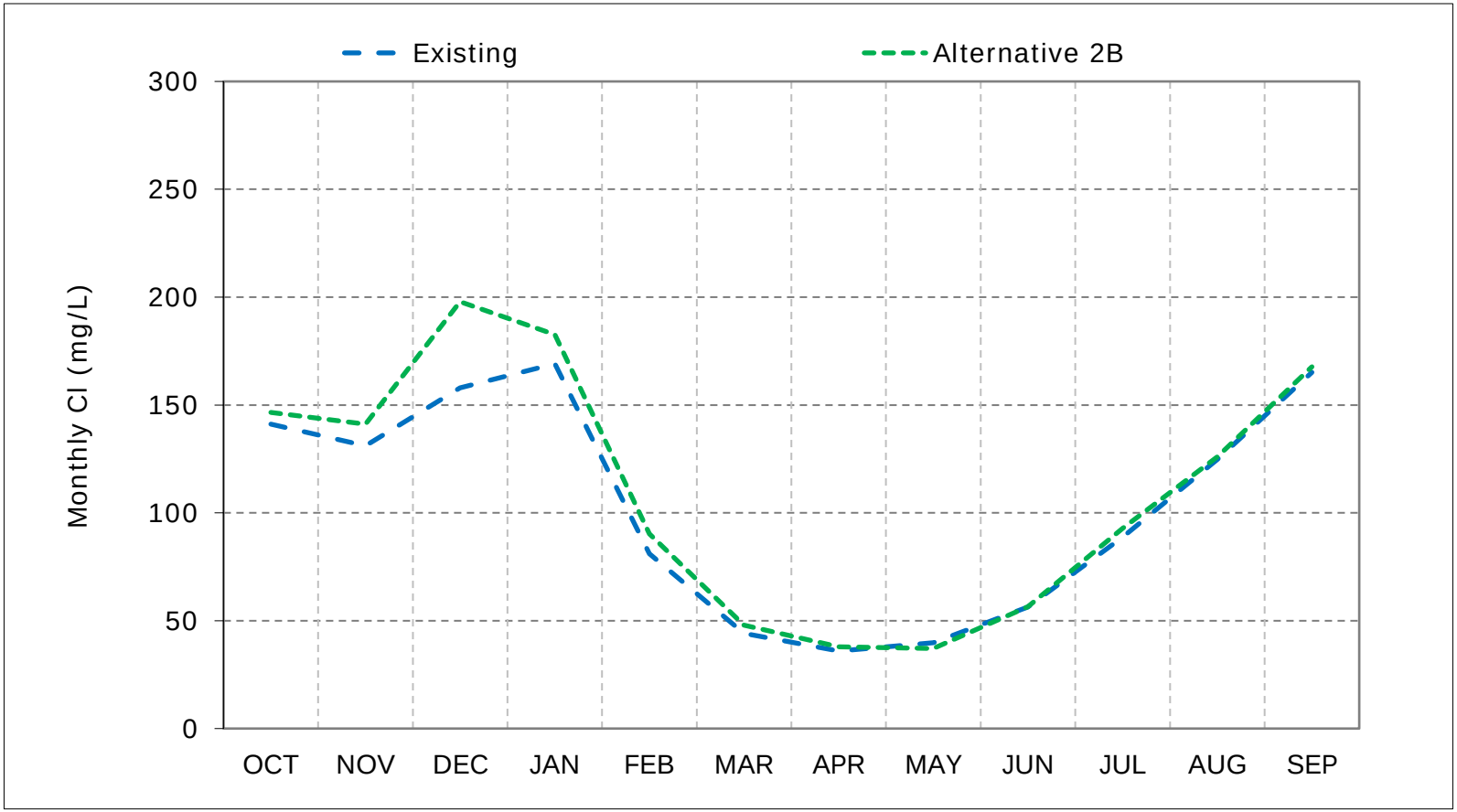

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-5. Contra Costa Pumping Plant #1 Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-6. Contra Costa Pumping Plant #1 Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-7. Contra Costa Pumping Plant #1 Chloride, January Cl

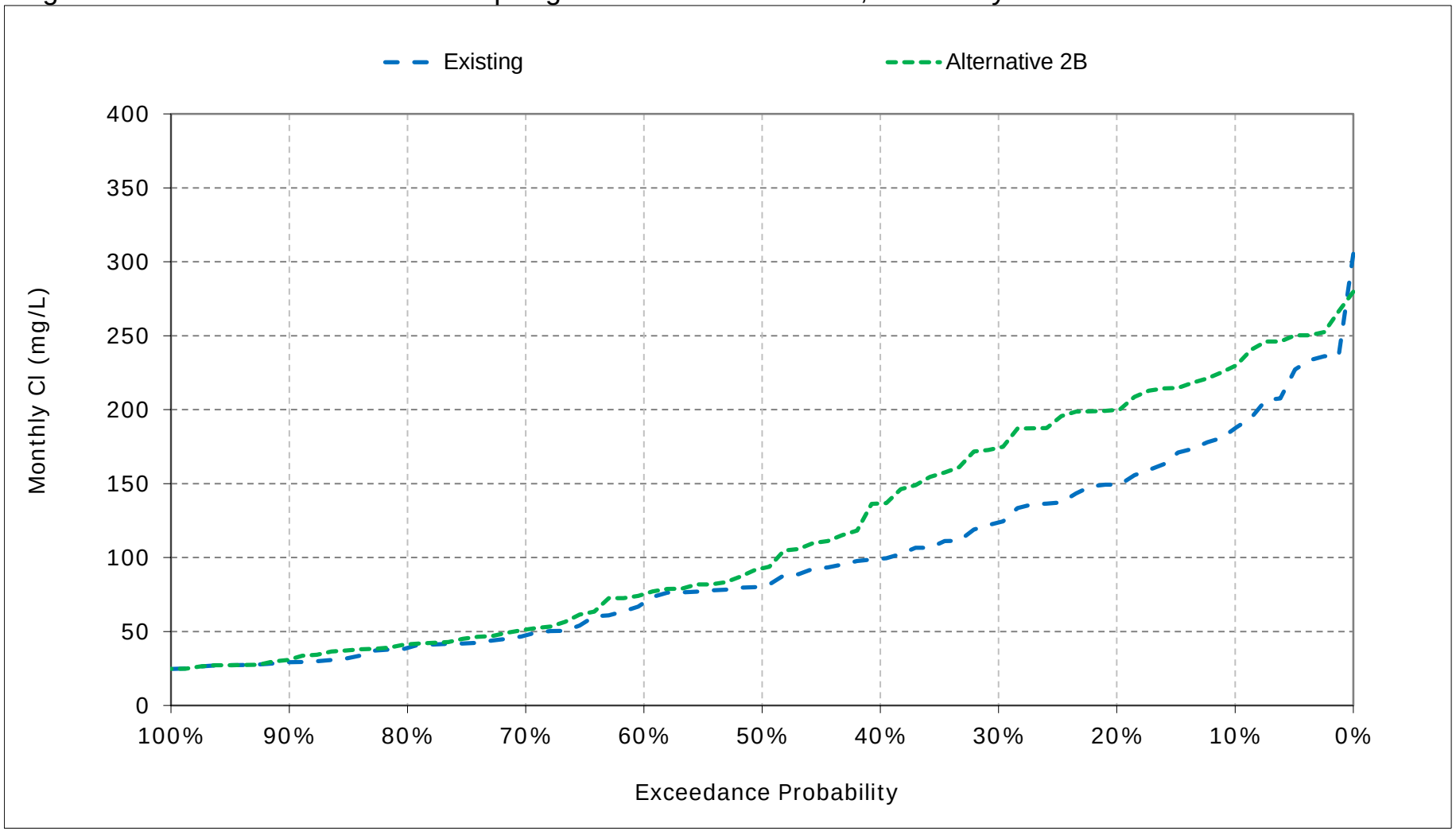


Figure 9-8. Contra Costa Pumping Plant #1 Chloride, February Cl

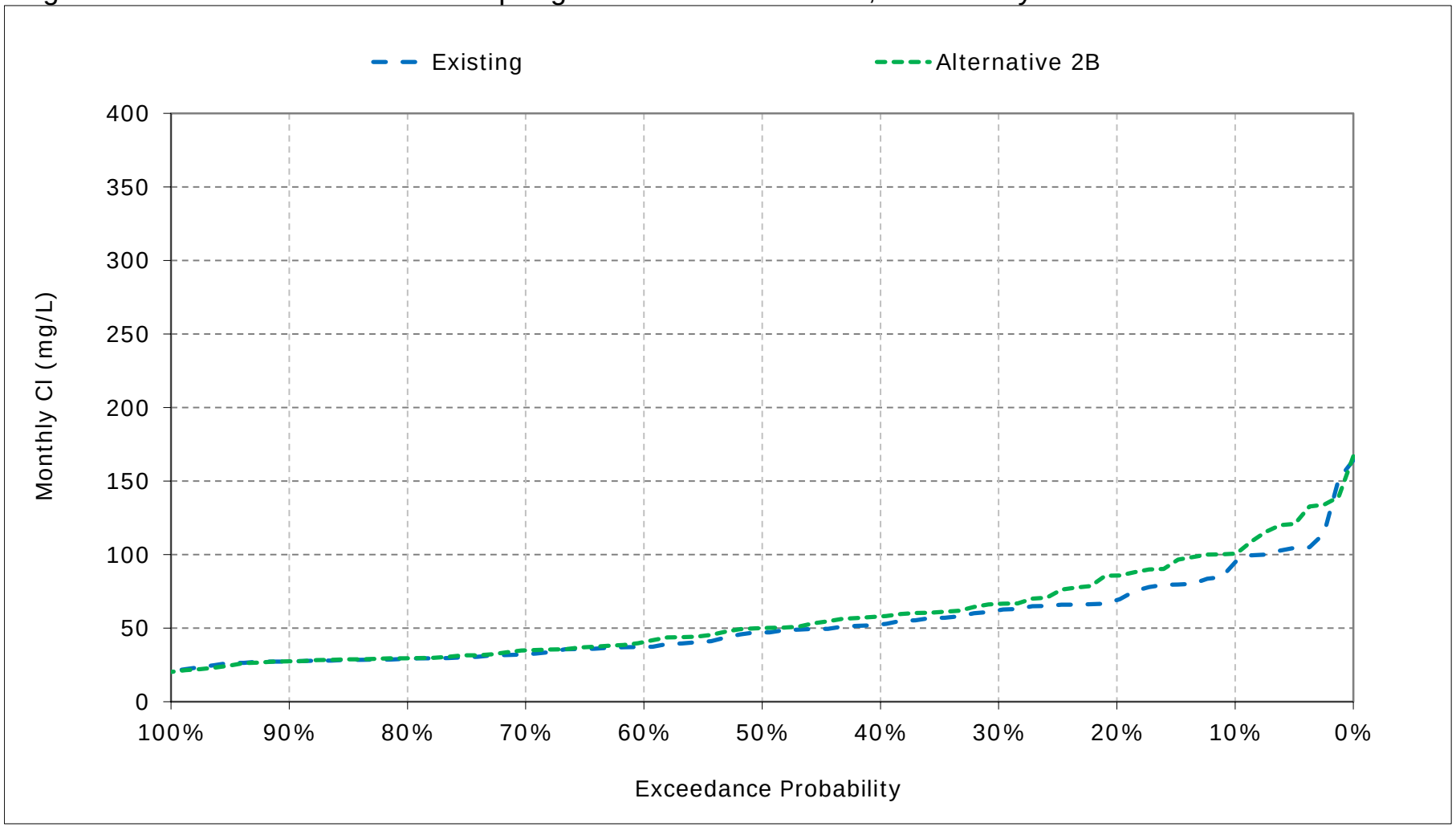


Figure 9-9. Contra Costa Pumping Plant #1 Chloride, March Cl

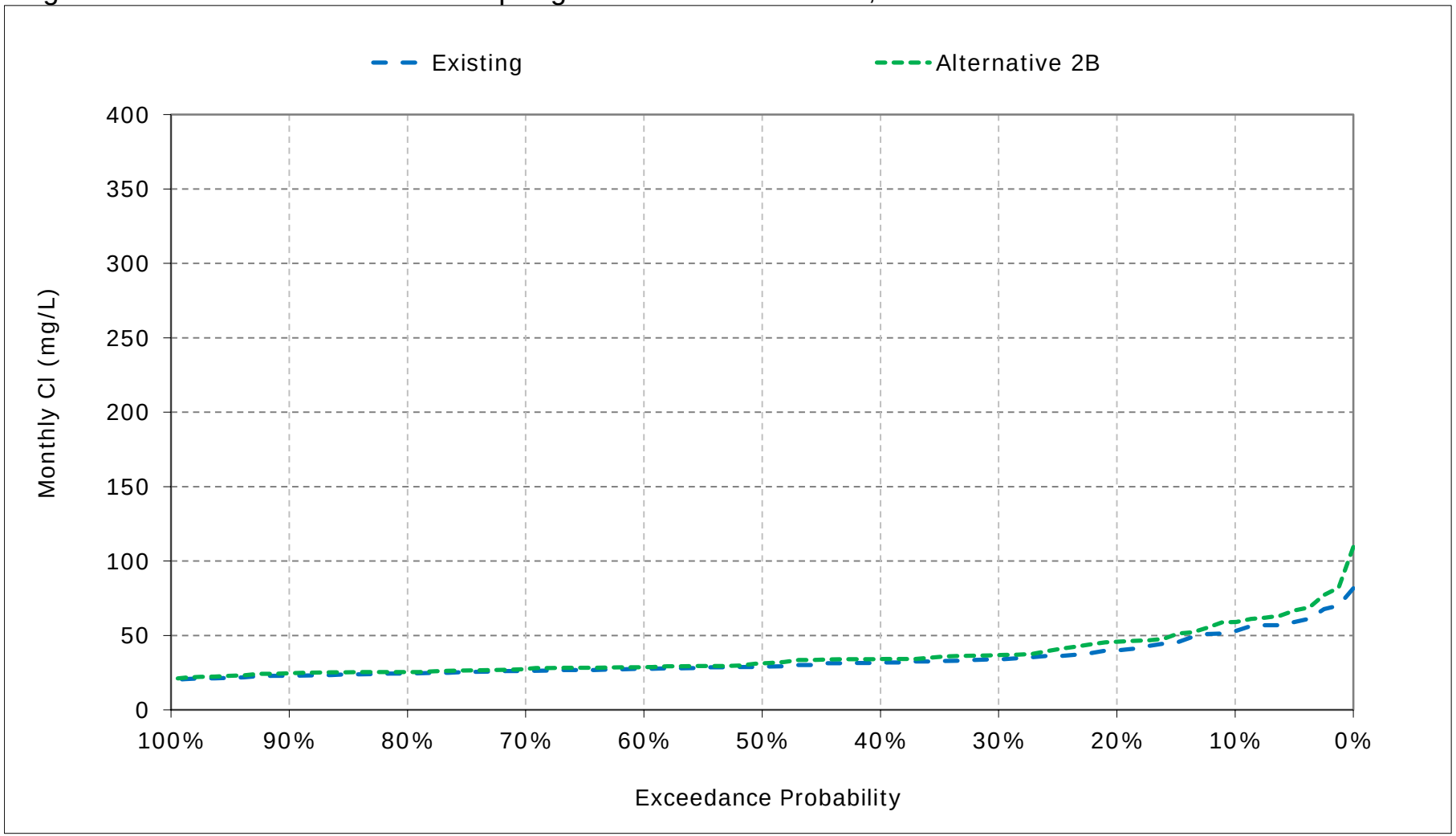


Figure 9-10. Contra Costa Pumping Plant #1 Chloride, April Cl

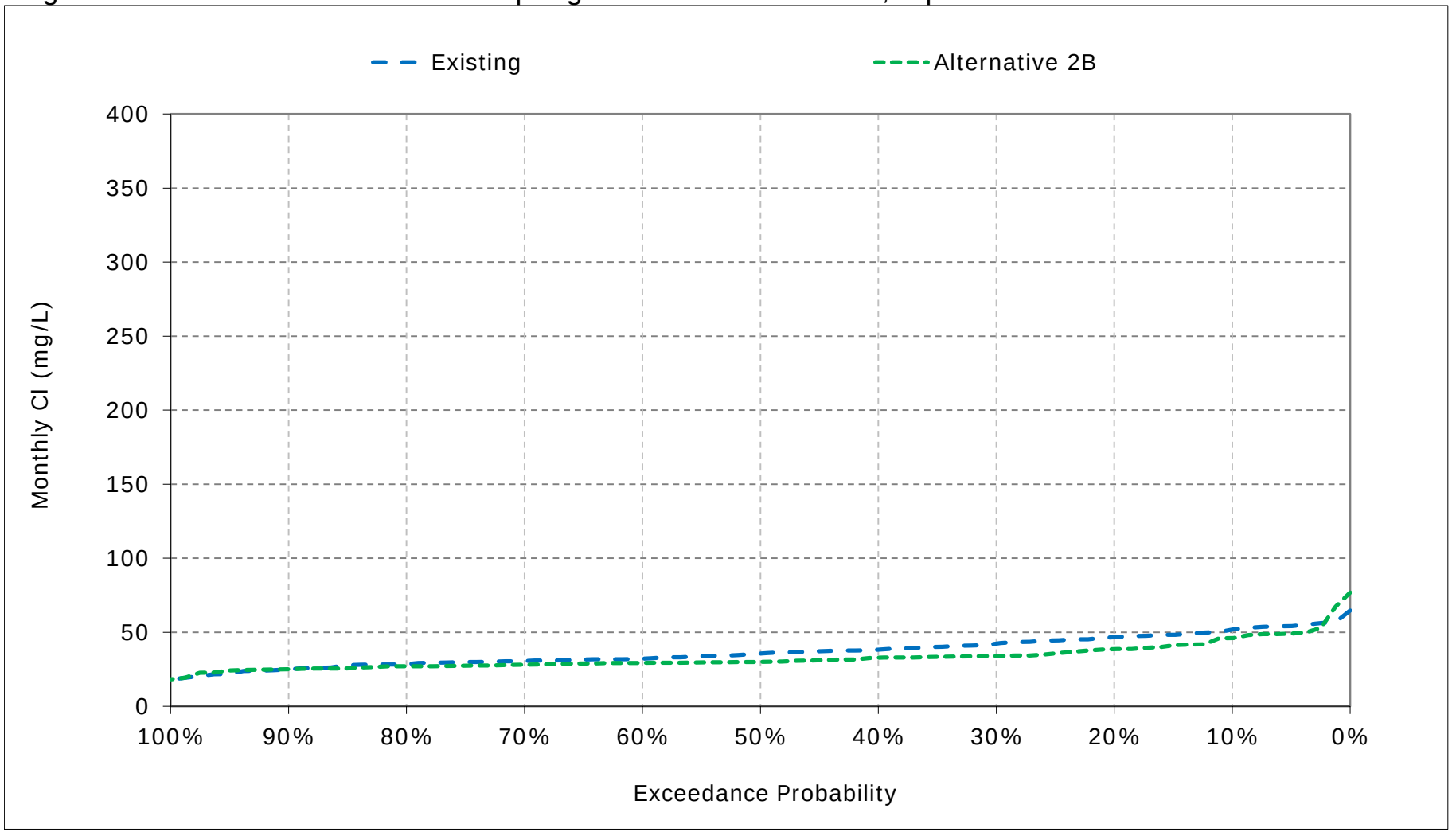


Figure 9-11. Contra Costa Pumping Plant #1 Chloride, May Cl

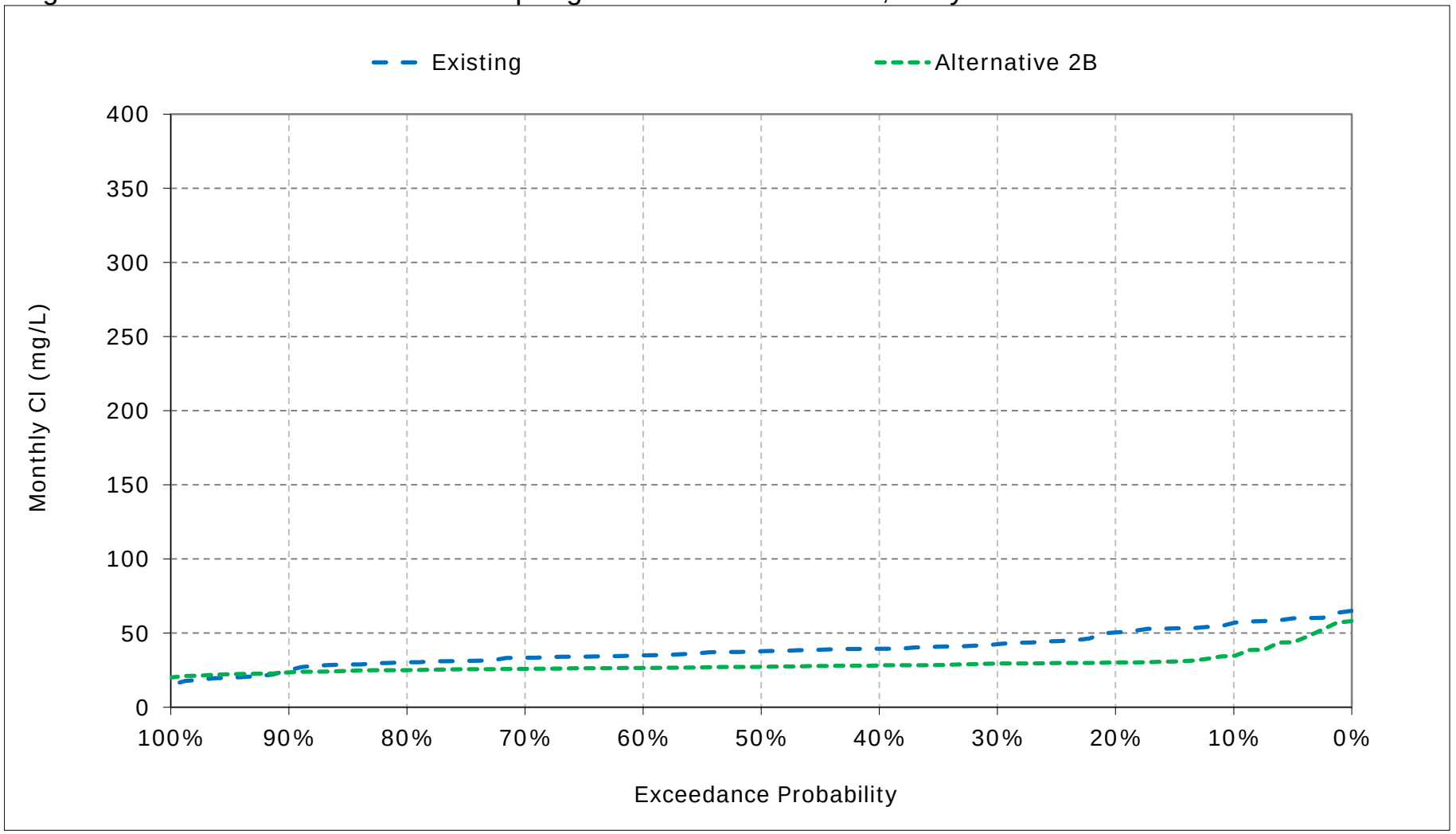


Figure 9-12. Contra Costa Pumping Plant #1 Chloride, June Cl

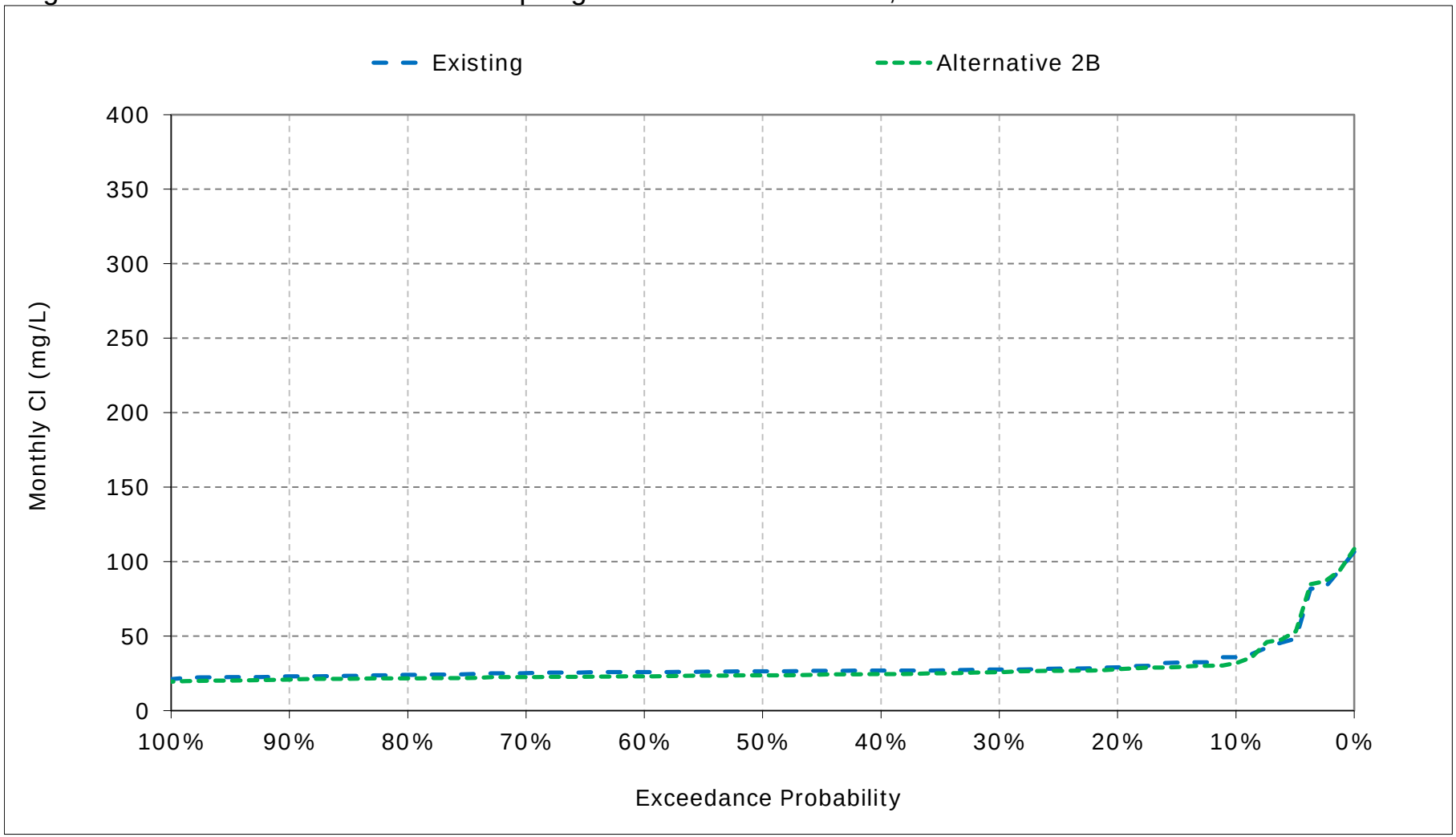


Figure 9-13. Contra Costa Pumping Plant #1 Chloride, July Cl

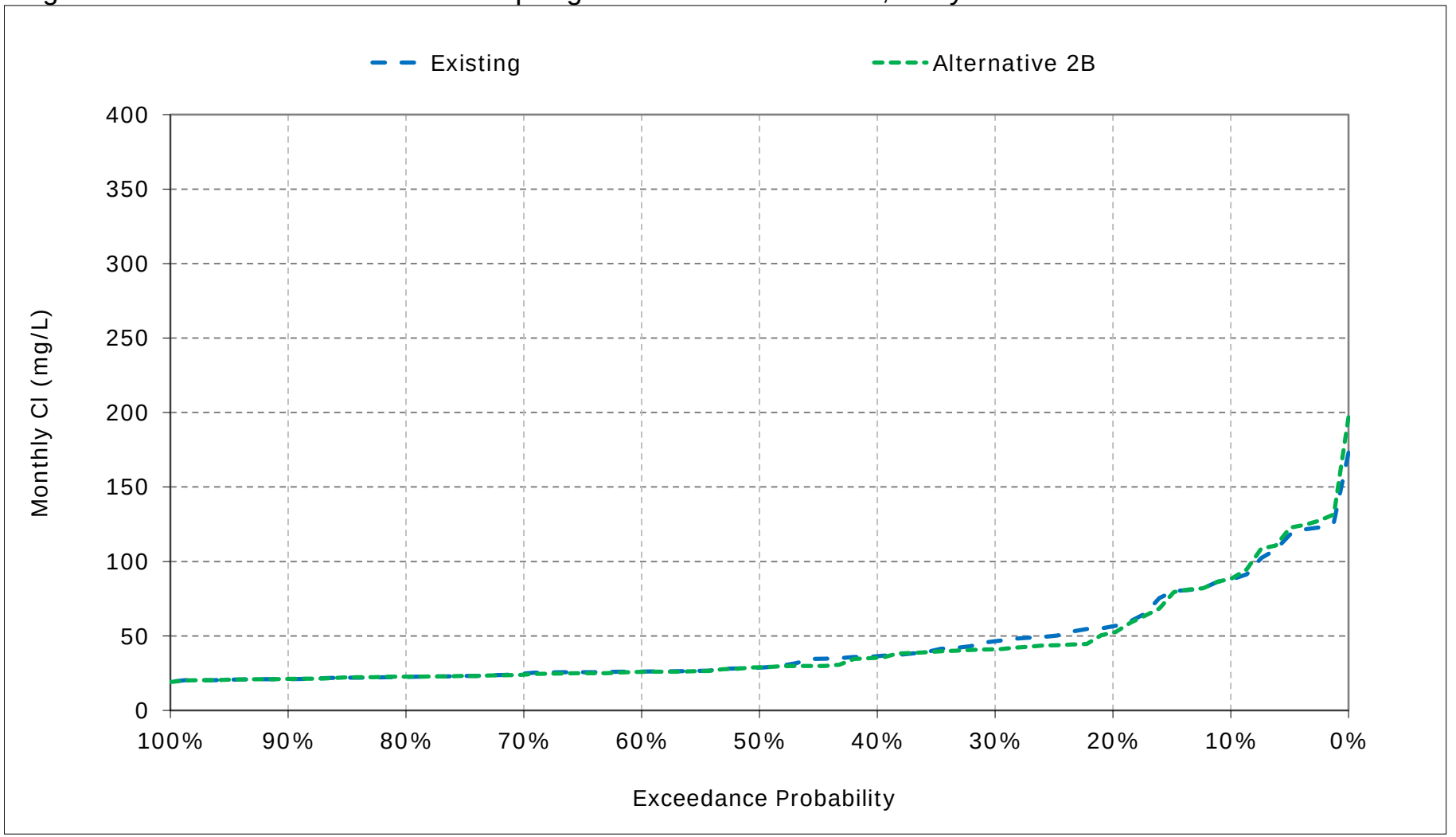


Figure 9-14. Contra Costa Pumping Plant #1 Chloride, August Cl

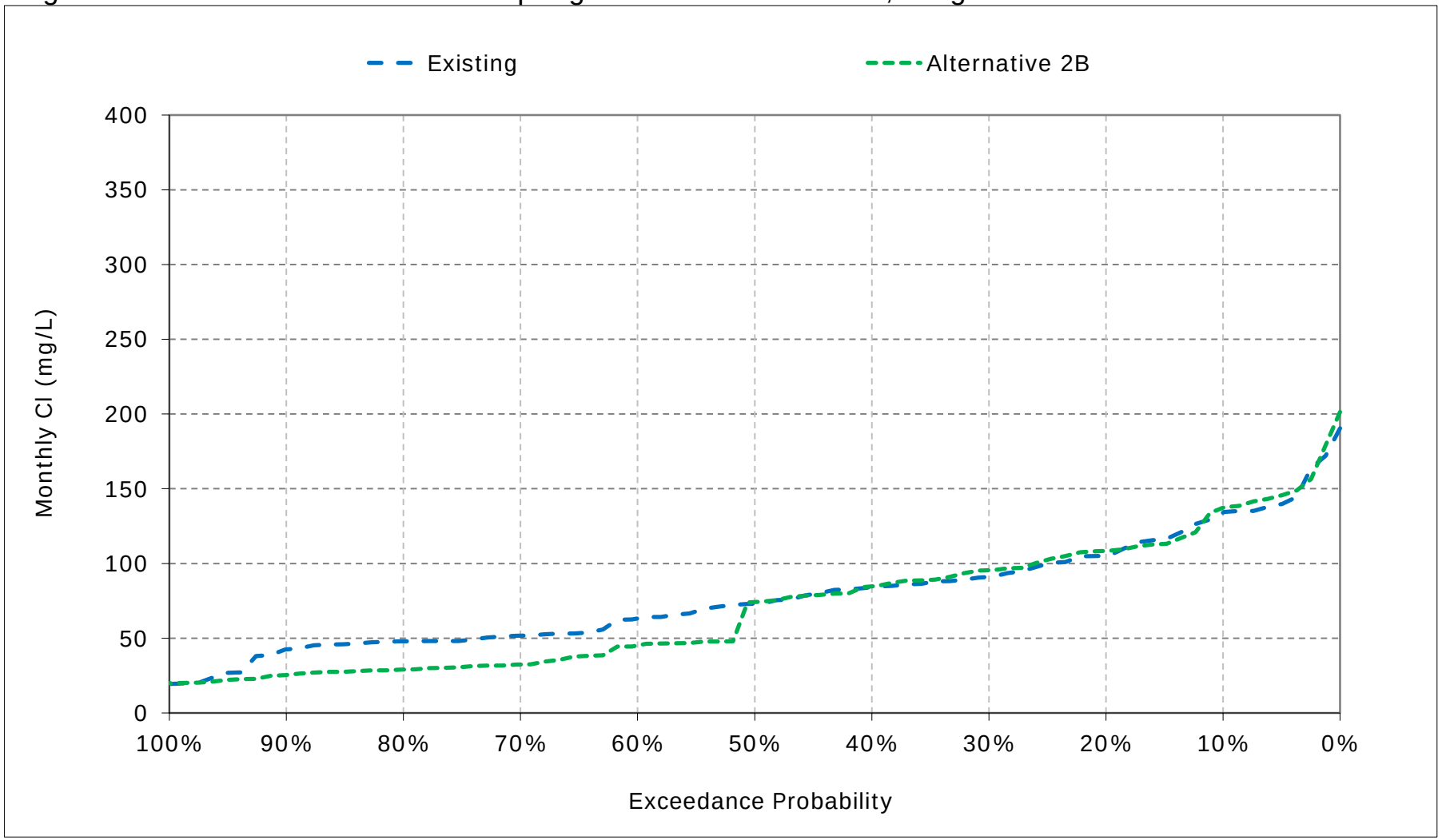


Figure 9-15. Contra Costa Pumping Plant #1 Chloride, September Cl

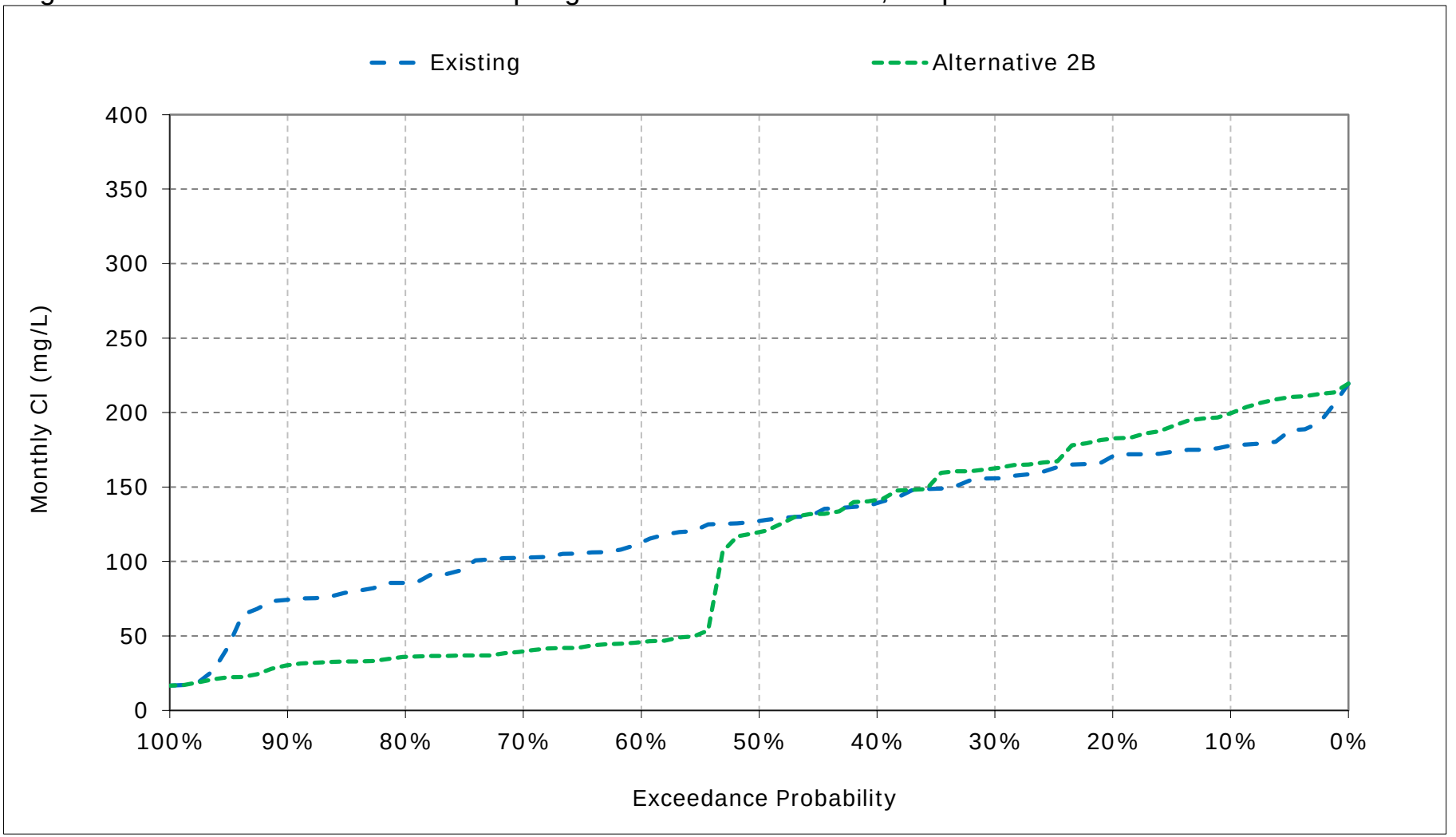


Figure 9-16. Contra Costa Pumping Plant #1 Chloride, October Cl

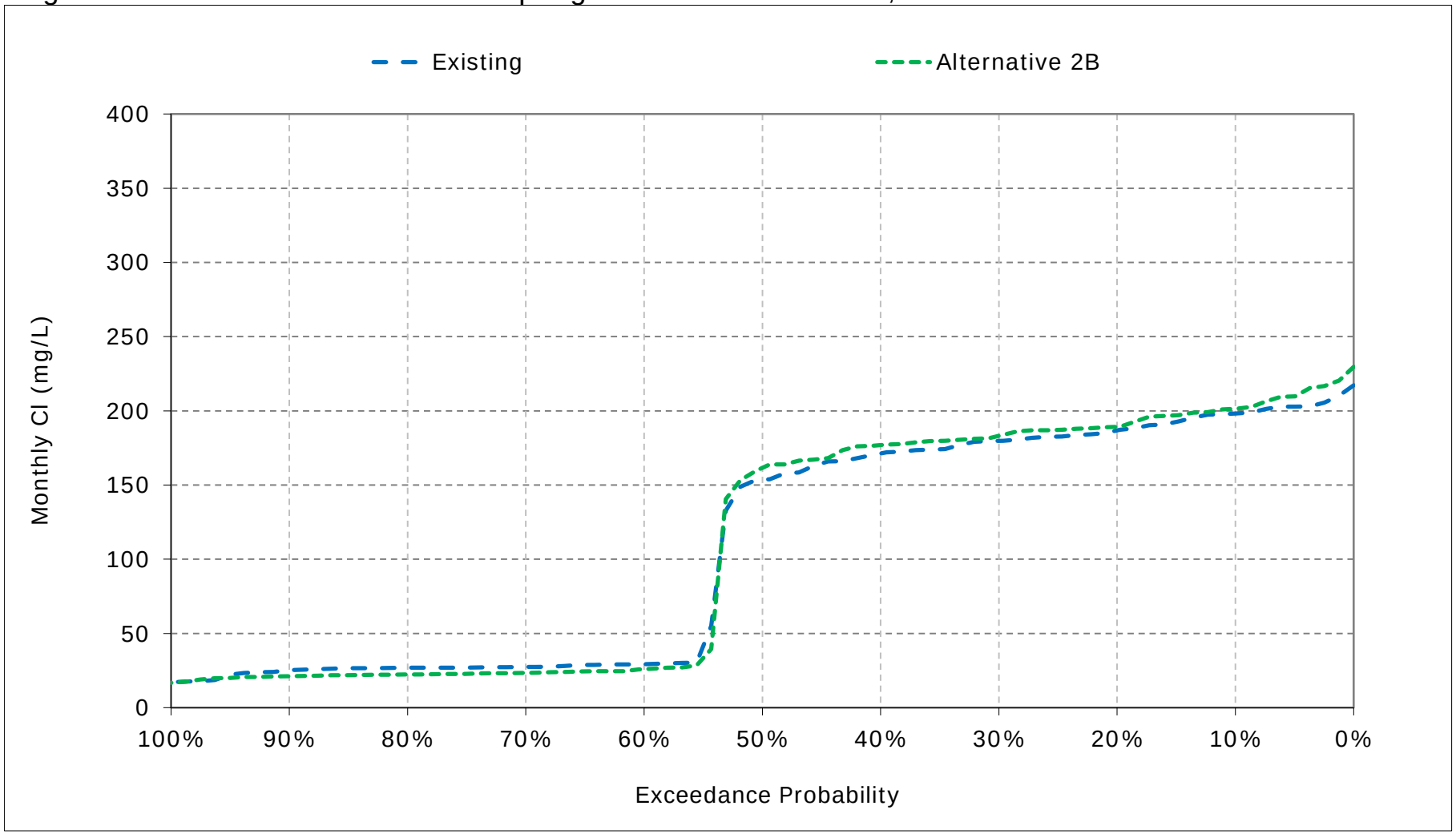


Figure 9-17. Contra Costa Pumping Plant #1 Chloride, November Cl

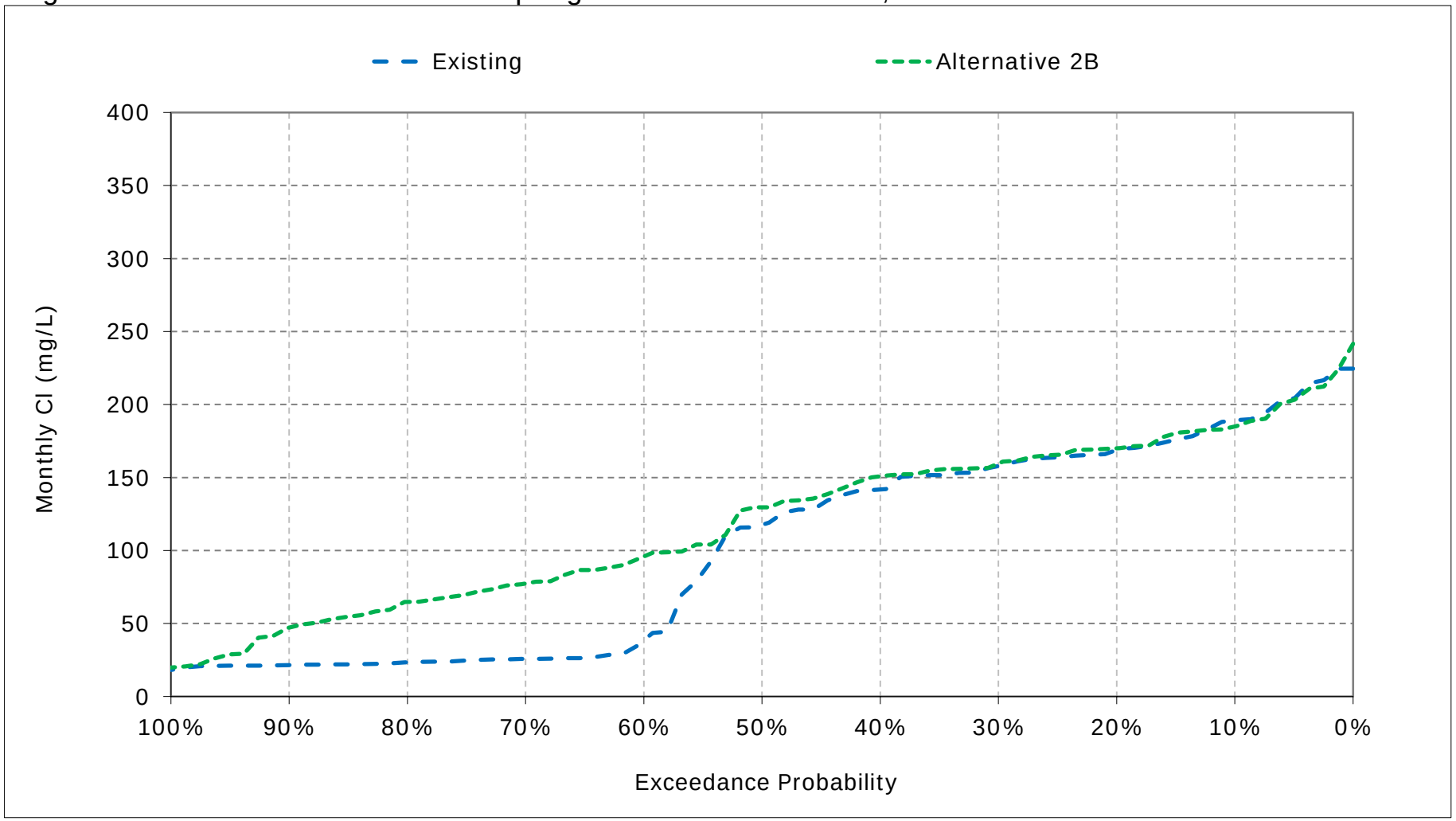
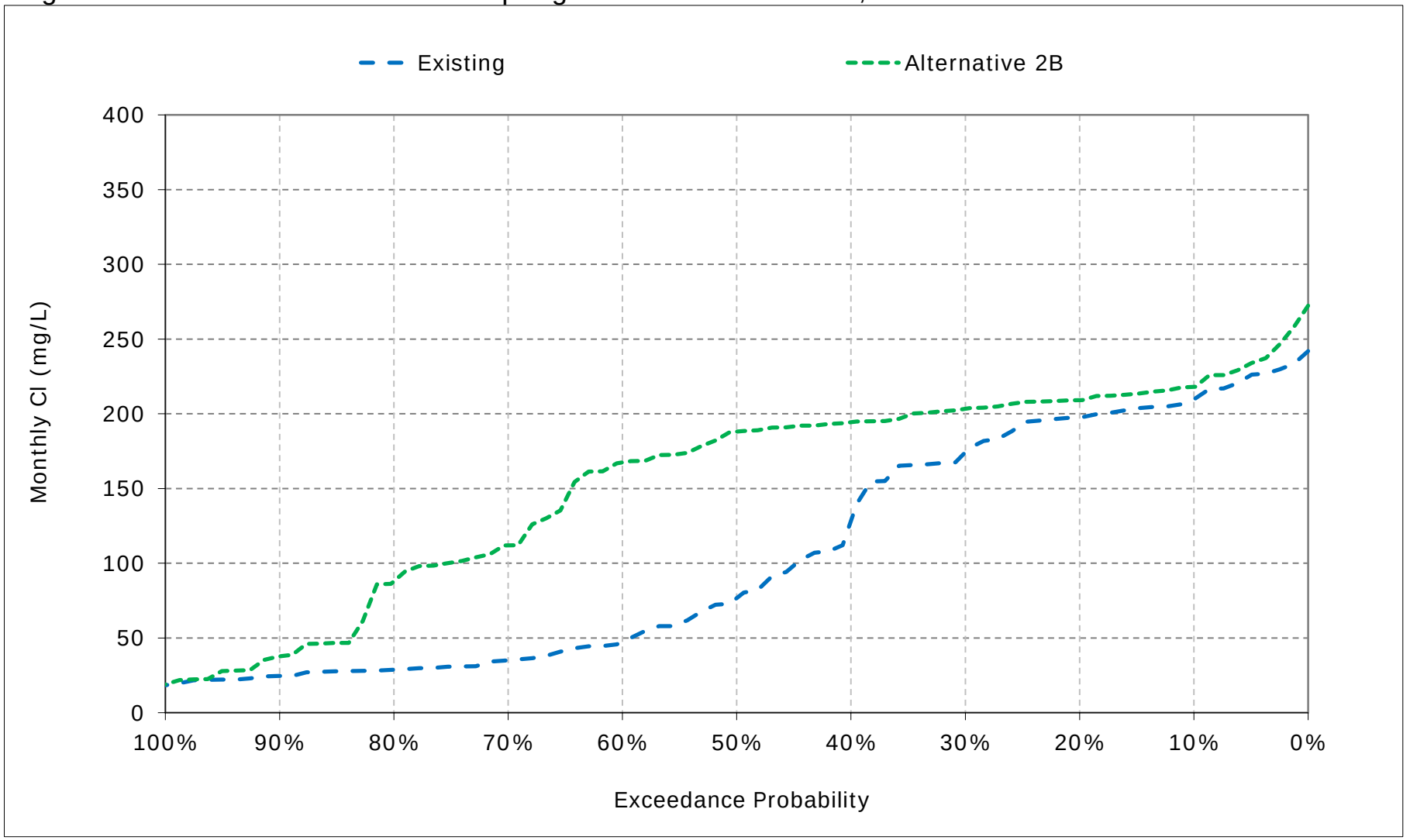


Figure 9-18. Contra Costa Pumping Plant #1 Chloride, December Cl



## Table 10-1. San Joaquin River at Antioch Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2,016 | 1,853 | 1,774 | 907 | 298 | 245 | 224 | 408 | 608 | 1,018 | 1,523 | 1,915 |
| 20% | 1,886 | 1,807 | 1,422 | 756 | 166 | 92 | 94 | 241 | 472 | 851 | 1,328 | 1,797 |
| 30% | 1,857 | 1,714 | 898 | 542 | 98 | 34 | 35 | 155 | 437 | 801 | 1,240 | 1,735 |
| 40% | 1,741 | 1,651 | 744 | 313 | 55 | 27 | 27 | 70 | 321 | 524 | 1,007 | 1,603 |
| 50% | 1,595 | 652 | 568 | 235 | 31 | 24 | 25 | 33 | 260 | 467 | 892 | 1,354 |
| 60% | 534 | 443 | 483 | 90 | 26 | 22 | 22 | 26 | 146 | 301 | 862 | 529 |
| 70% | 271 | 210 | 164 | 27 | 24 | 21 | 21 | 23 | 100 | 278 | 804 | 327 |
| 80% | 221 | 178 | 89 | 23 | 22 | 20 | 20 | 20 | 29 | 222 | 742 | 292 |
| 90% | 191 | 158 | 22 | 21 | 20 | 18 | 19 | 19 | 19 | 138 | 681 | 276 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1,128 | 986 | 722 | 359 | 123 | 71 | 74 | 144 | 319 | 553 | 1,004 | 1,076 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 824 | 571 | 194 | 56 | 25 | 21 | 21 | 26 | 72 | 187 | 682 | 258 |
| Above Normal (15%) | 1,199 | 987 | 687 | 211 | 45 | 22 | 22 | 27 | 167 | 271 | 762 | 521 |
| Below Normal (17%) | 1,191 | 1,084 | 956 | 389 | 66 | 39 | 37 | 73 | 254 | 487 | 939 | 1,471 |
| Dry (22%) | 1,210 | 1,179 | 886 | 543 | 181 | 84 | 81 | 174 | 430 | 827 | 1,280 | 1,768 |
| Critical (15%) | 1,522 | 1,477 | 1,382 | 849 | 391 | 246 | 270 | 556 | 913 | 1,291 | 1,602 | 1,906 |

### Alternative 2B

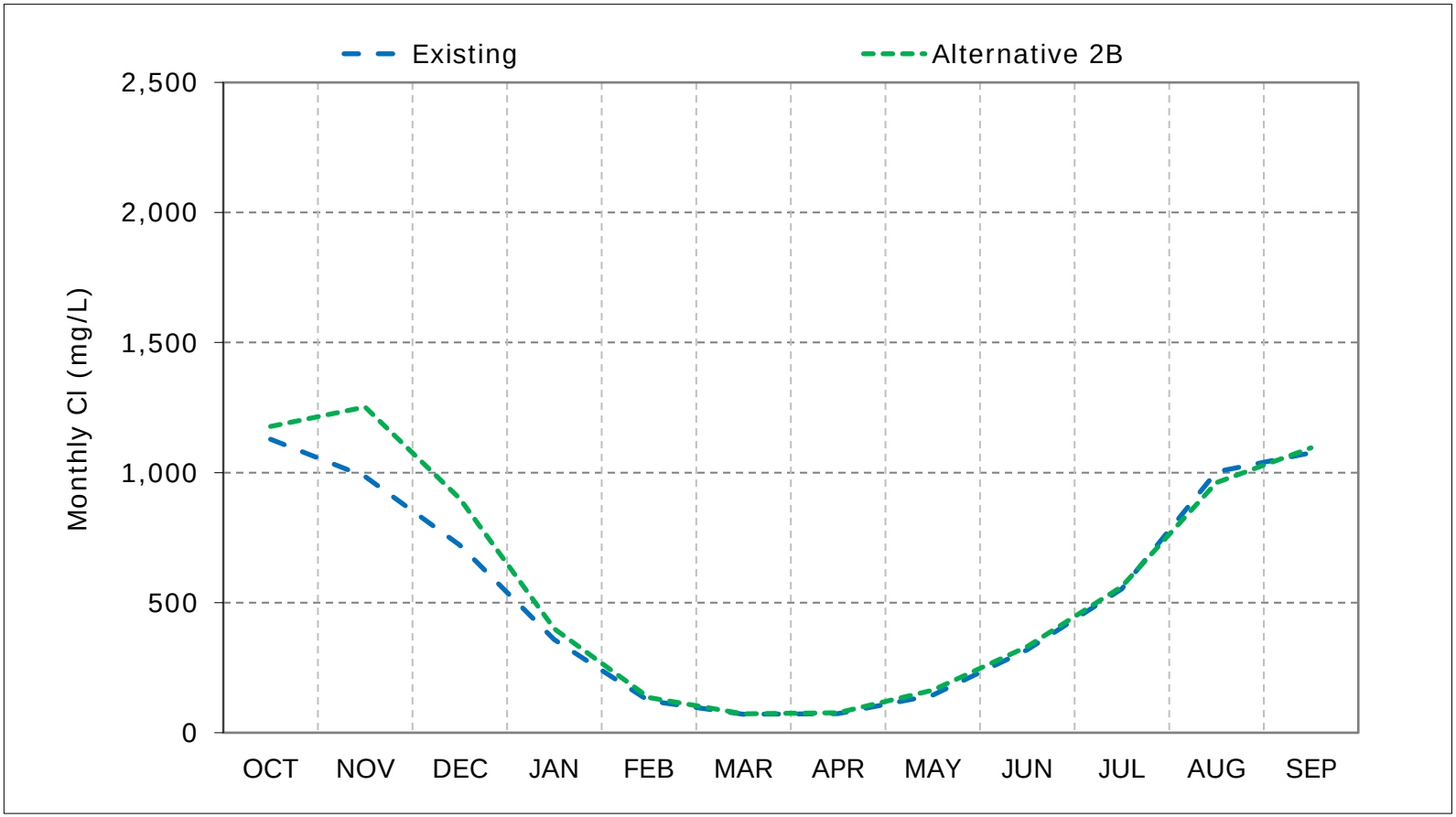
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 1,982 | 1,848 | 1,739 | 1,106 | 307 | 249 | 239 | 424 | 626 | 1,044 | 1,497 | 1,916 |
| 20% | 1,891 | 1,806 | 1,439 | 876 | 184 | 99 | 102 | 301 | 506 | 875 | 1,337 | 1,808 |
| 30% | 1,835 | 1,737 | 1,386 | 607 | 104 | 31 | 46 | 212 | 446 | 796 | 1,283 | 1,752 |
| 40% | 1,767 | 1,651 | 1,233 | 366 | 60 | 26 | 30 | 90 | 346 | 567 | 1,171 | 1,678 |
| 50% | 1,580 | 1,117 | 967 | 235 | 34 | 24 | 25 | 43 | 242 | 475 | 1,020 | 1,430 |
| 60% | 499 | 1,046 | 698 | 95 | 27 | 22 | 21 | 29 | 170 | 322 | 692 | 389 |
| 70% | 468 | 1,010 | 312 | 28 | 24 | 21 | 20 | 22 | 109 | 294 | 616 | 369 |
| 80% | 445 | 841 | 168 | 24 | 22 | 20 | 19 | 18 | 29 | 231 | 583 | 349 |
| 90% | 406 | 347 | 49 | 21 | 20 | 18 | 18 | 17 | 18 | 138 | 524 | 305 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 1,178 | 1,252 | 900 | 399 | 135 | 73 | 77 | 164 | 331 | 562 | 961 | 1,095 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 896 | 912 | 309 | 59 | 25 | 21 | 21 | 32 | 83 | 194 | 517 | 307 |
| Above Normal (15%) | 1,262 | 1,237 | 922 | 247 | 42 | 22 | 22 | 31 | 160 | 278 | 620 | 366 |
| Below Normal (17%) | 1,256 | 1,340 | 1,175 | 418 | 66 | 37 | 42 | 99 | 255 | 520 | 1,091 | 1,584 |
| Dry (22%) | 1,248 | 1,425 | 1,112 | 637 | 211 | 84 | 89 | 216 | 459 | 833 | 1,308 | 1,794 |
| Critical (15%) | 1,508 | 1,643 | 1,521 | 909 | 435 | 258 | 277 | 578 | 940 | 1,287 | 1,593 | 1,911 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | -34 | -5 | -35 | 199 | 9 | 4 | 15 | 15 | 18 | 25 | -26 | 1 |
| 20% | 5 | -1 | 17 | 120 | 18 | 7 | 8 | 60 | 33 | 24 | 9 | 11 |
| 30% | -22 | 23 | 488 | 65 | 6 | -3 | 12 | 57 | 10 | -6 | 43 | 17 |
| 40% | 26 | 0 | 490 | 53 | 4 | -1 | 3 | 20 | 25 | 44 | 164 | 75 |
| 50% | -15 | 465 | 399 | -1 | 3 | 0 | 0 | 10 | -18 | 8 | 128 | 76 |
| 60% | -35 | 603 | 215 | 5 | 1 | 0 | -1 | 3 | 24 | 20 | -170 | -141 |
| 70% | 197 | 800 | 148 | 1 | 0 | 0 | -1 | -1 | 9 | 16 | -187 | 42 |
| 80% | 224 | 664 | 80 | 1 | 0 | 0 | -1 | -2 | 0 | 9 | -159 | 58 |
| 90% | 215 | 189 | 27 | 0 | 0 | 0 | -1 | -2 | -1 | 0 | -157 | 28 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 50 | 267 | 178 | 41 | 13 | 2 | 3 | 20 | 13 | 9 | -42 | 18 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 72 | 341 | 115 | 3 | -1 | 0 | 0 | 6 | 11 | 7 | -165 | 49 |
| Above Normal (15%) | 62 | 251 | 235 | 36 | -3 | 0 | 0 | 5 | -7 | 7 | -142 | -156 |
| Below Normal (17%) | 66 | 256 | 219 | 29 | 0 | -1 | 5 | 27 | 2 | 33 | 153 | 113 |
| Dry (22%) | 38 | 246 | 226 | 94 | 30 | 0 | 7 | 42 | 29 | 6 | 28 | 26 |
| Critical (15%) | -13 | 166 | 140 | 60 | 45 | 12 | 7 | 22 | 26 | -4 | -9 | 5 |

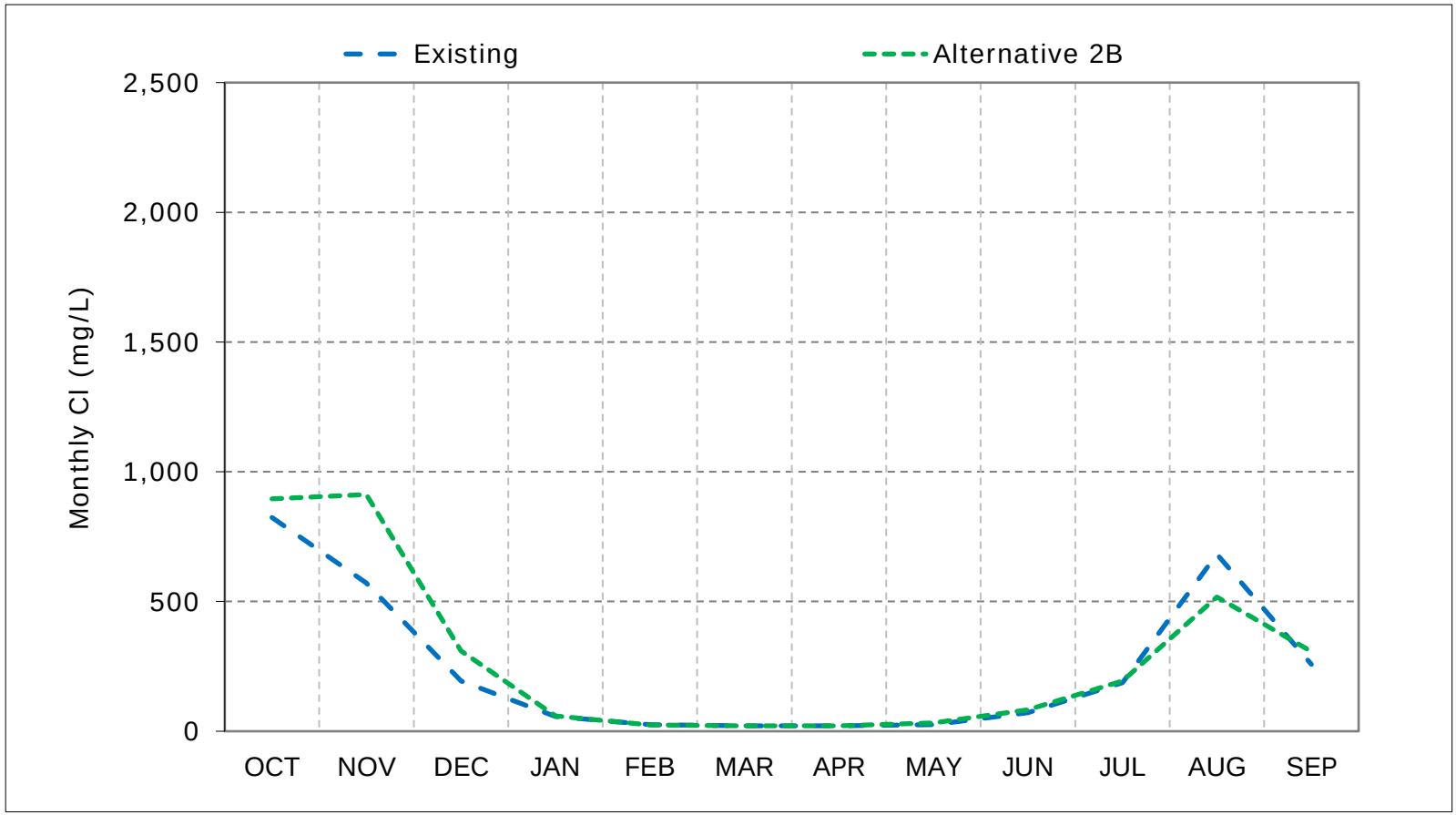
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 10-1. San Joaquin River at Antioch Chloride, Long-Term Average Cl



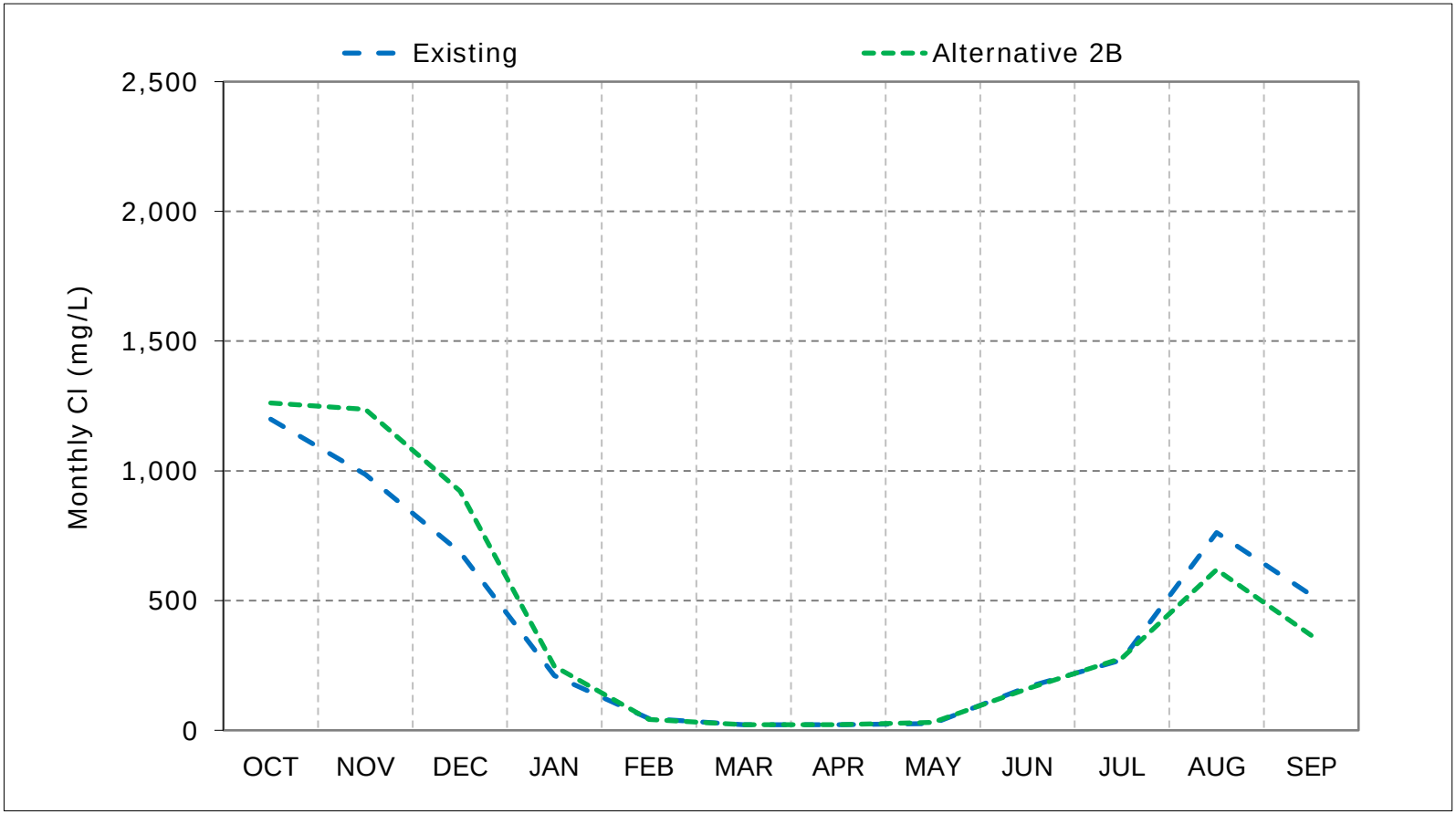

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-2. San Joaquin River at Antioch Chloride, Wet Year Average Cl



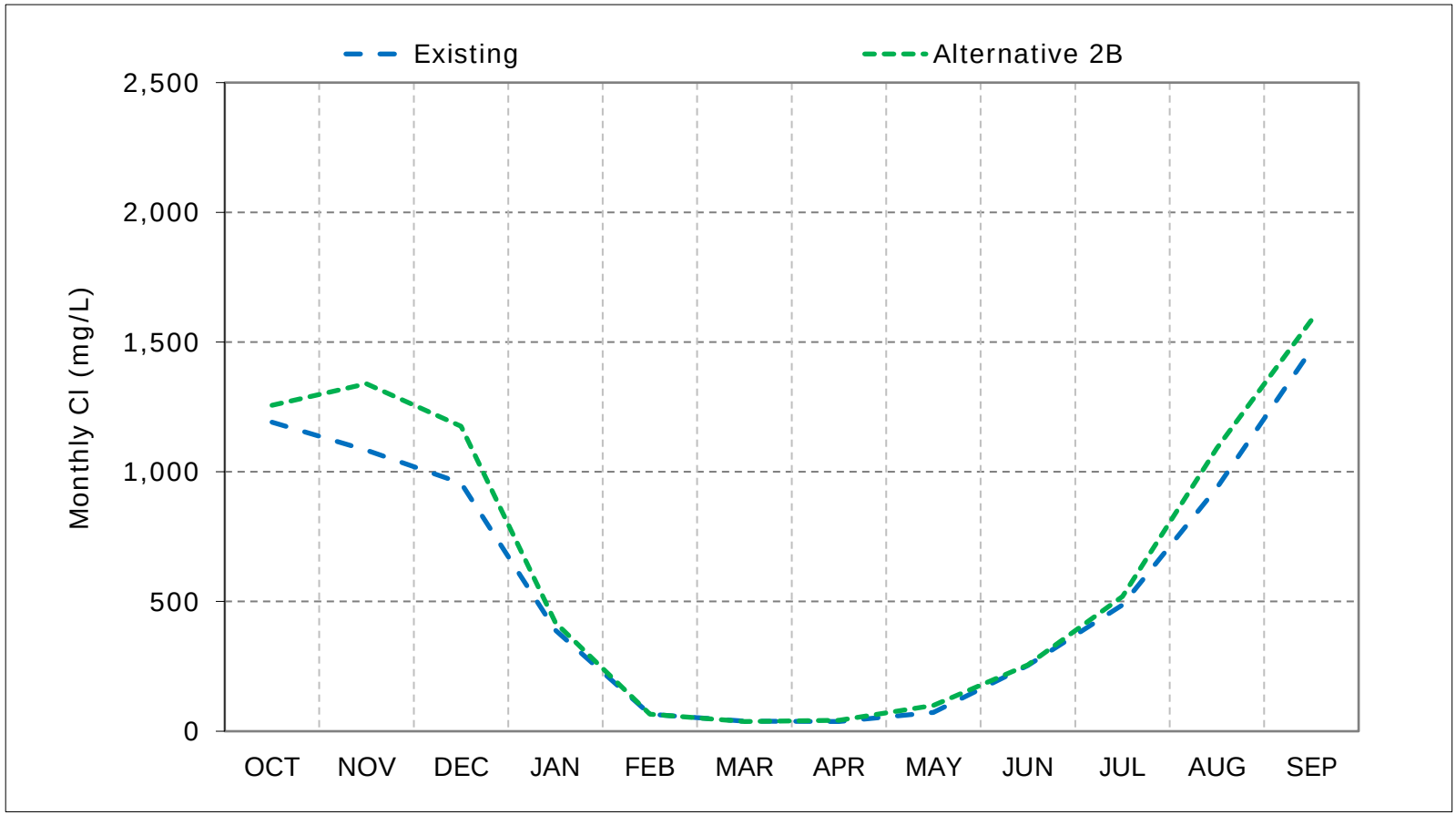

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-3. San Joaquin River at Antioch Chloride, Above Normal Year Average Cl



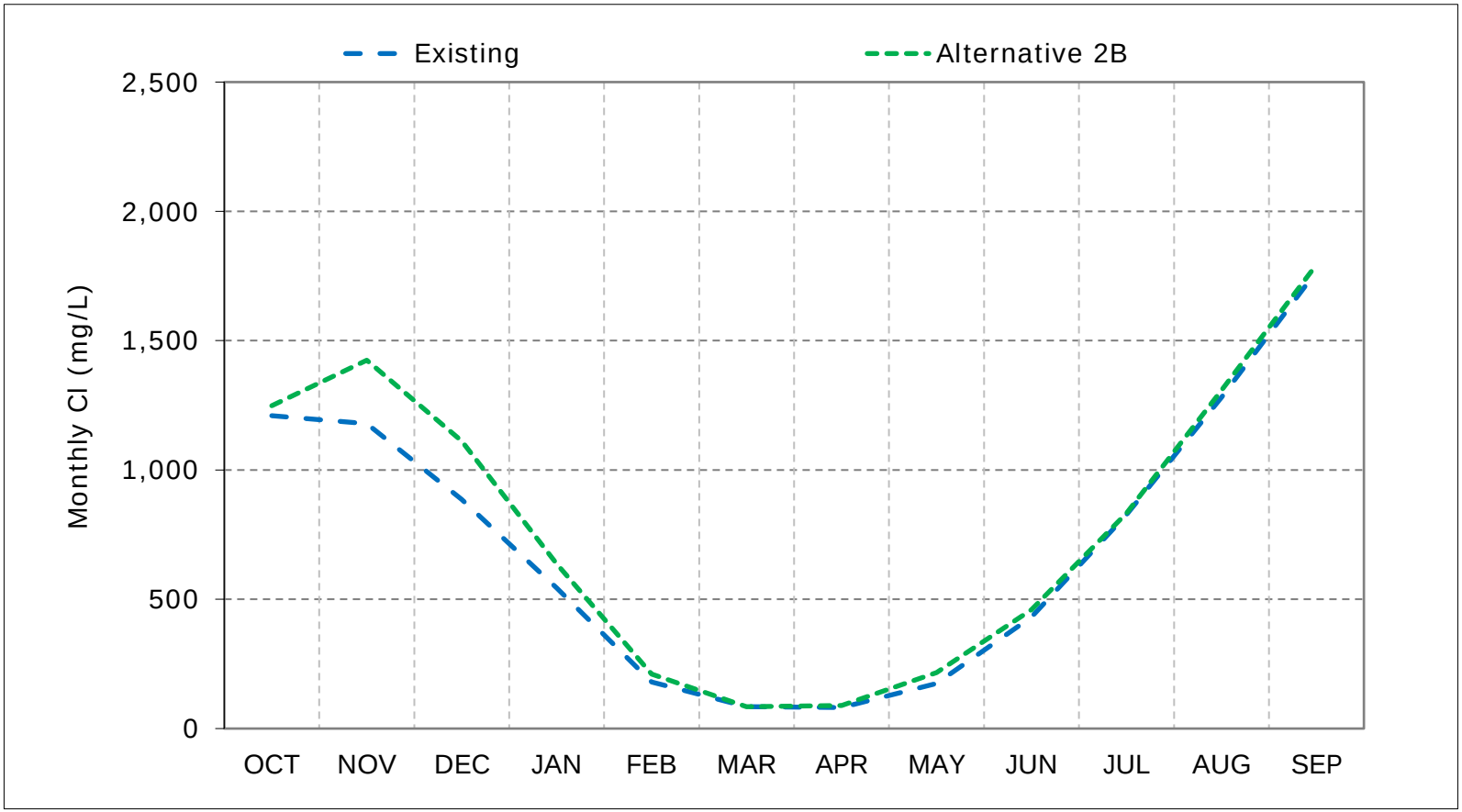

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-4. San Joaquin River at Antioch Chloride, Below Normal Year Average Cl



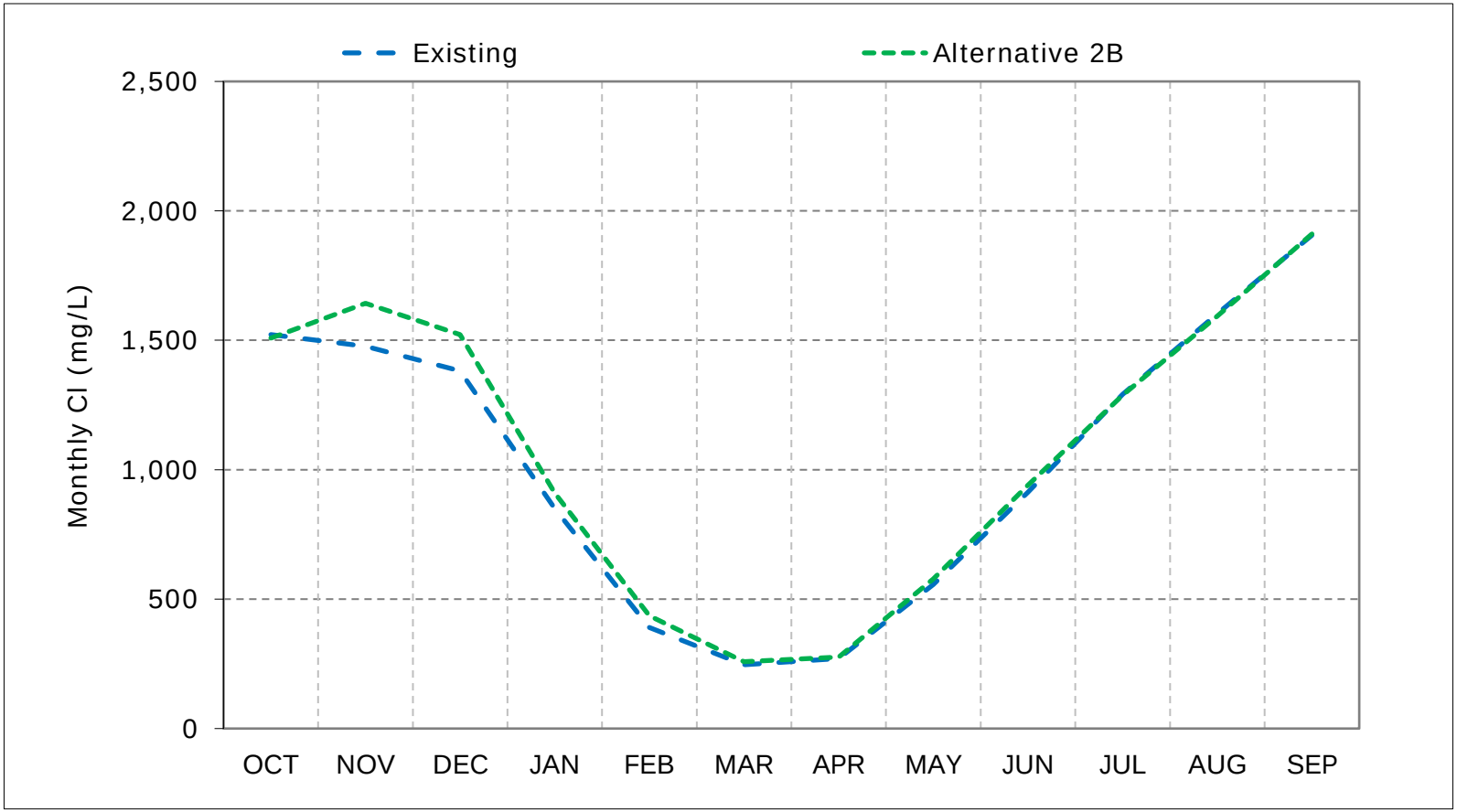

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-5. San Joaquin River at Antioch Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-6. San Joaquin River at Antioch Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-7. San Joaquin River at Antioch Chloride, January Cl

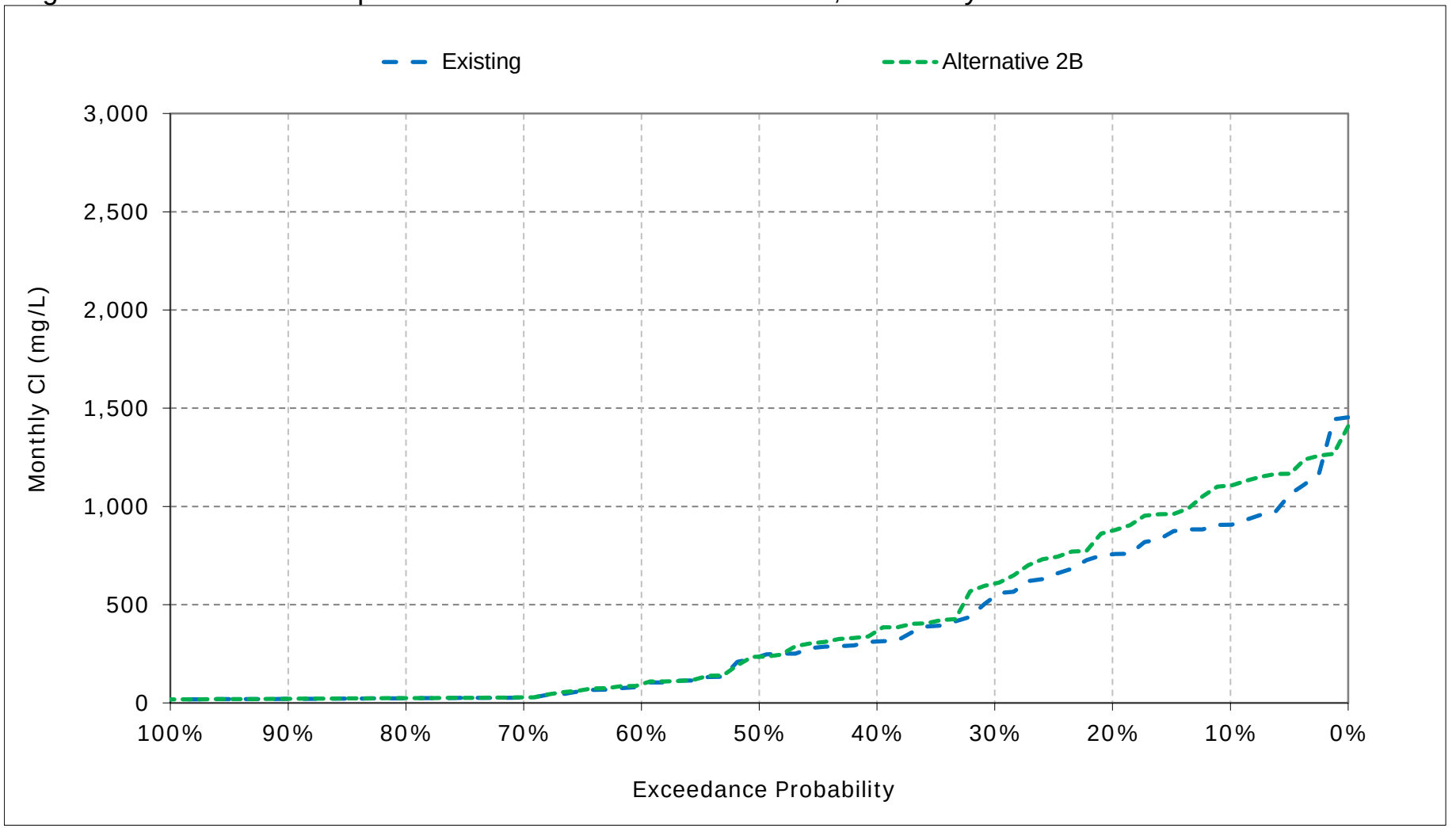


Figure 10-8. San Joaquin River at Antioch Chloride, February Cl

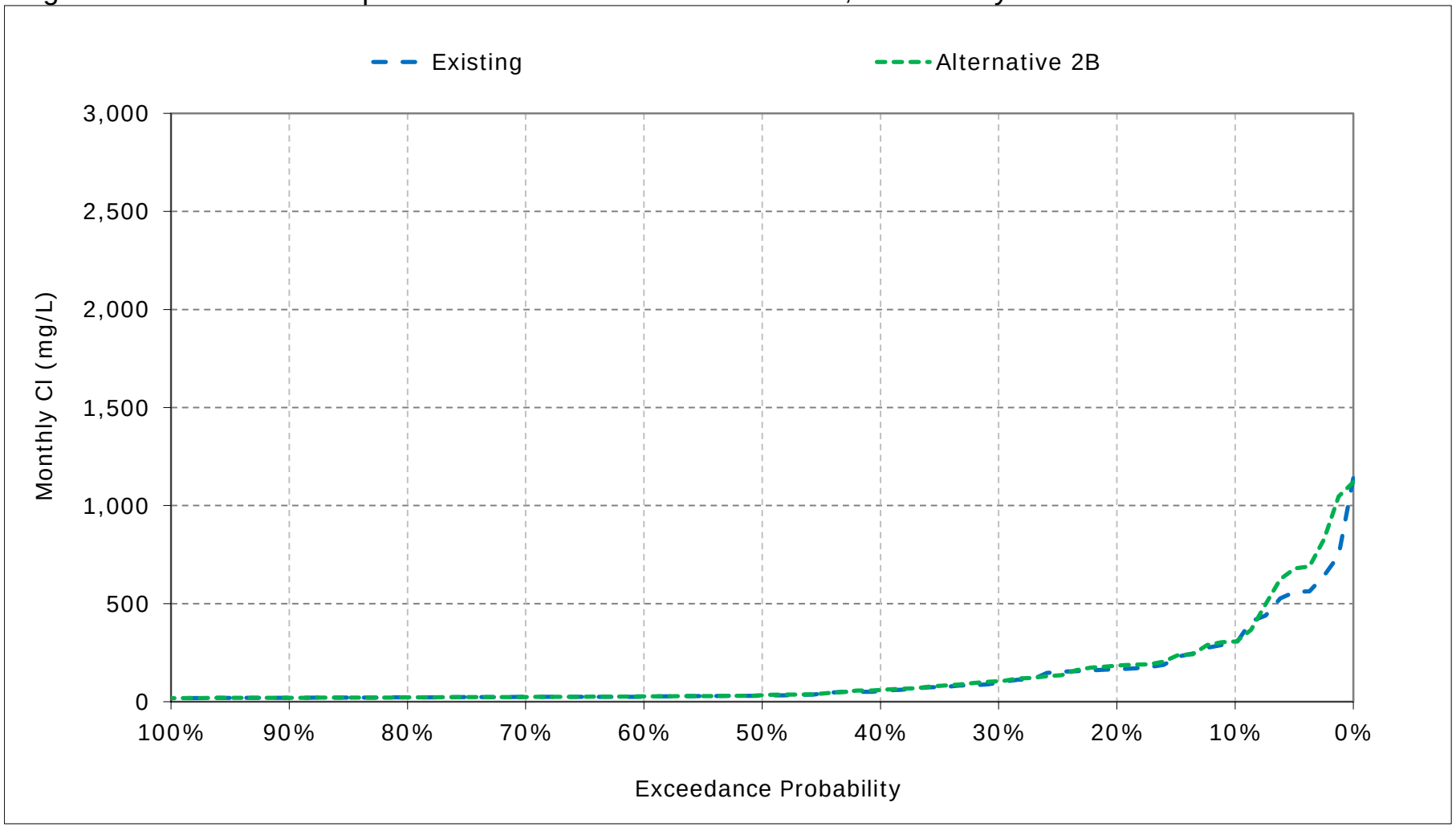


Figure 10-9. San Joaquin River at Antioch Chloride, March Cl

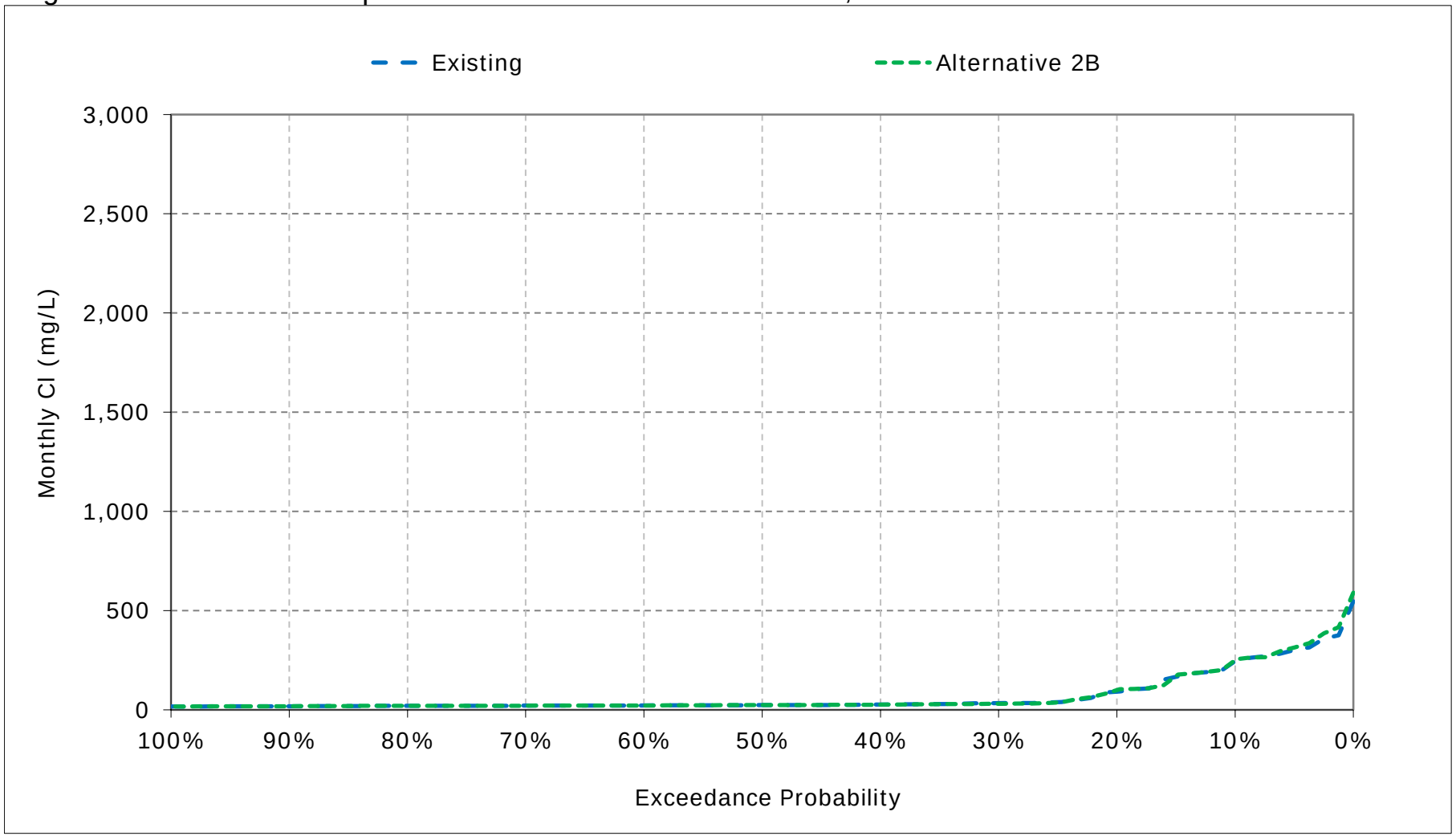


Figure 10-10. San Joaquin River at Antioch Chloride, April Cl

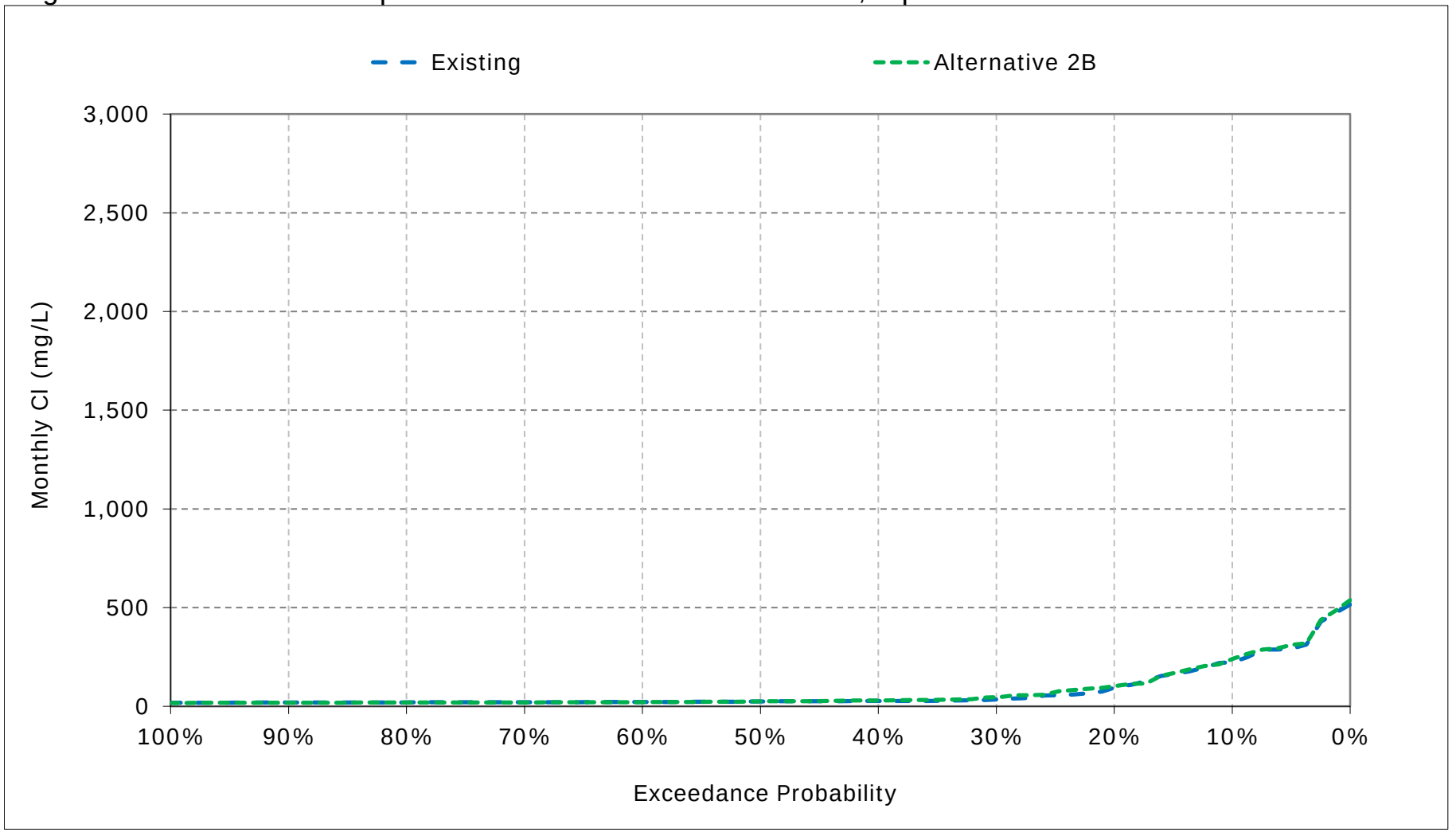


Figure 10-11. San Joaquin River at Antioch Chloride, May Cl

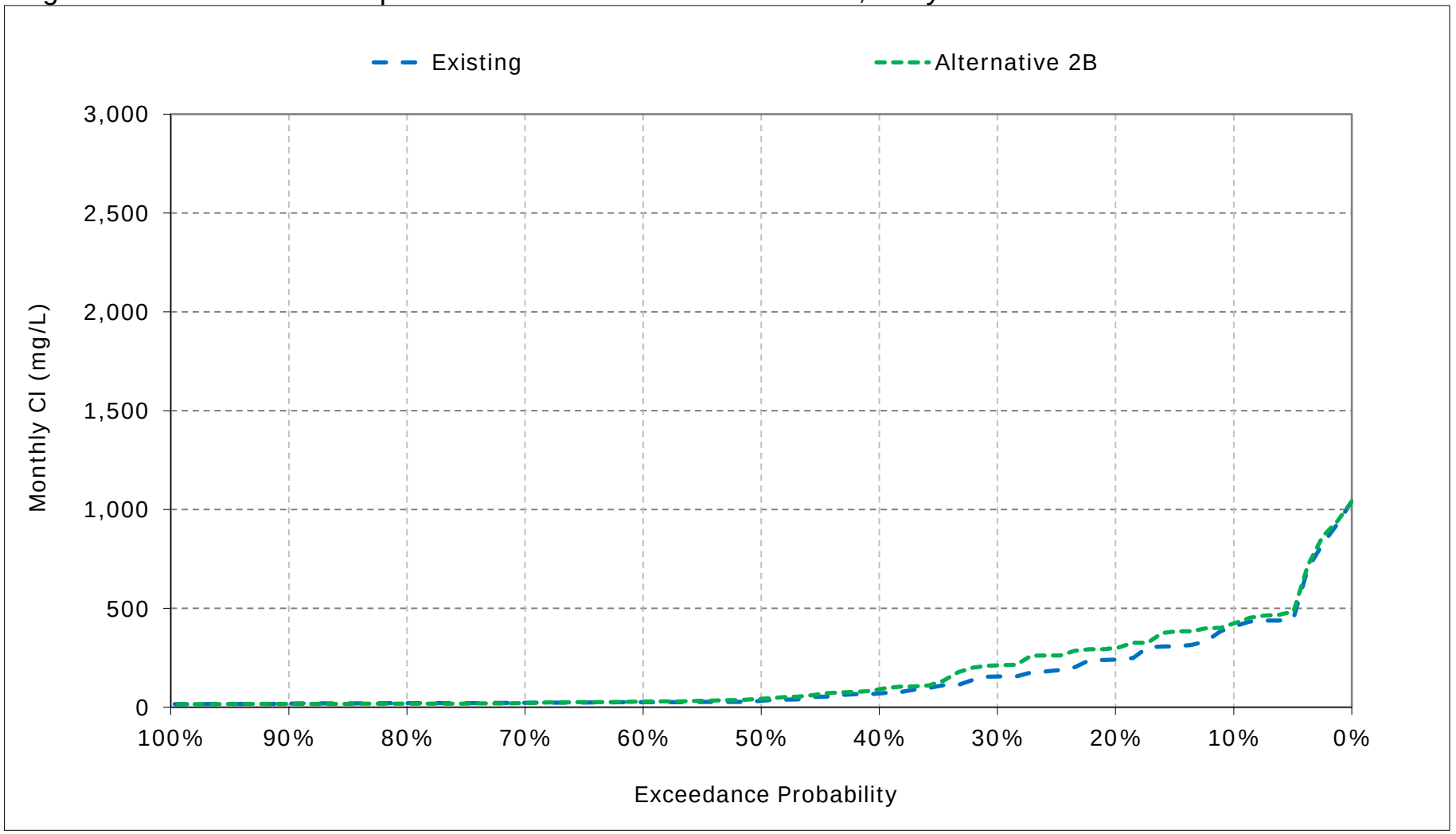


Figure 10-12. San Joaquin River at Antioch Chloride, June Cl

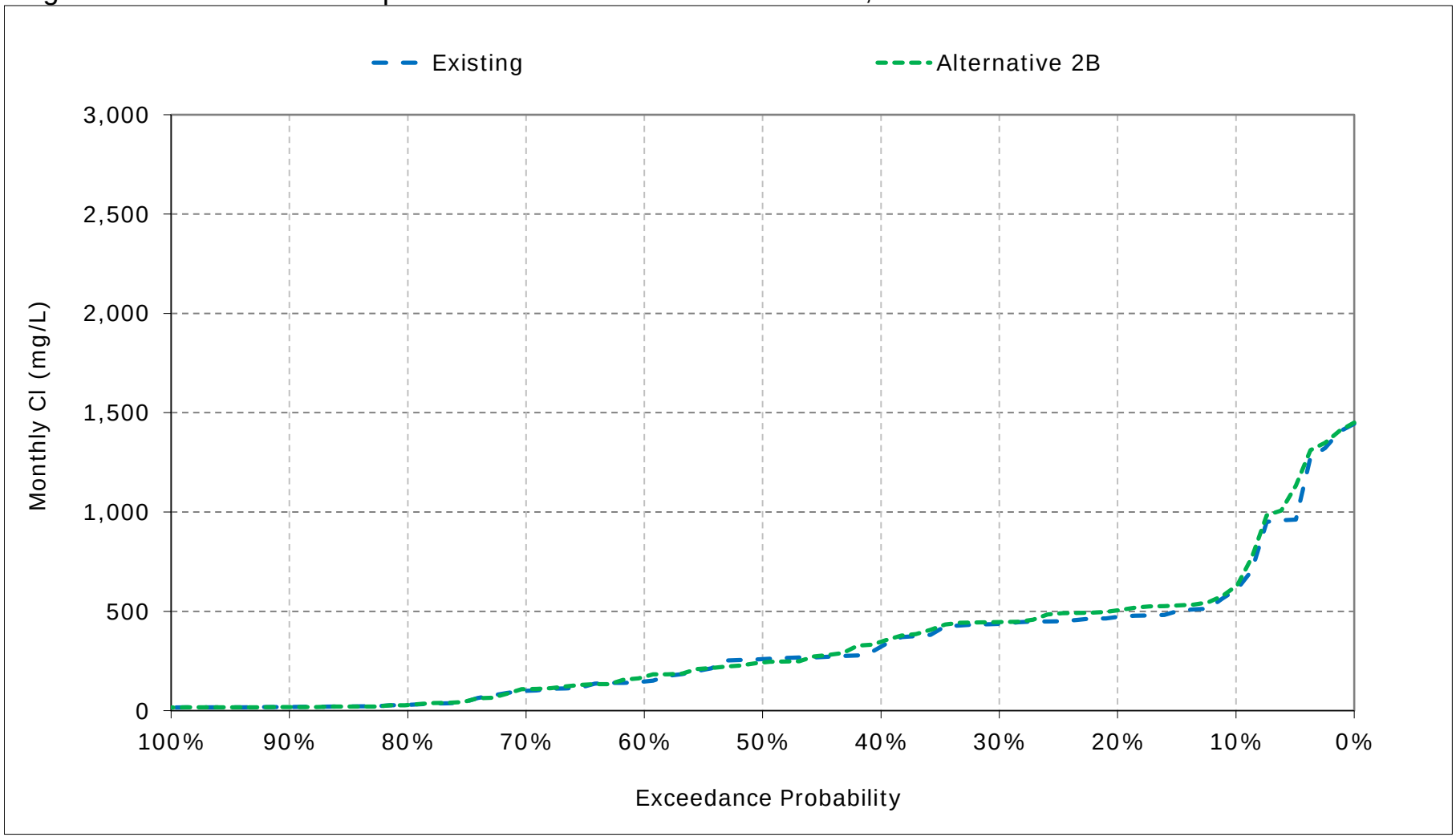


Figure 10-13. San Joaquin River at Antioch Chloride, July Cl

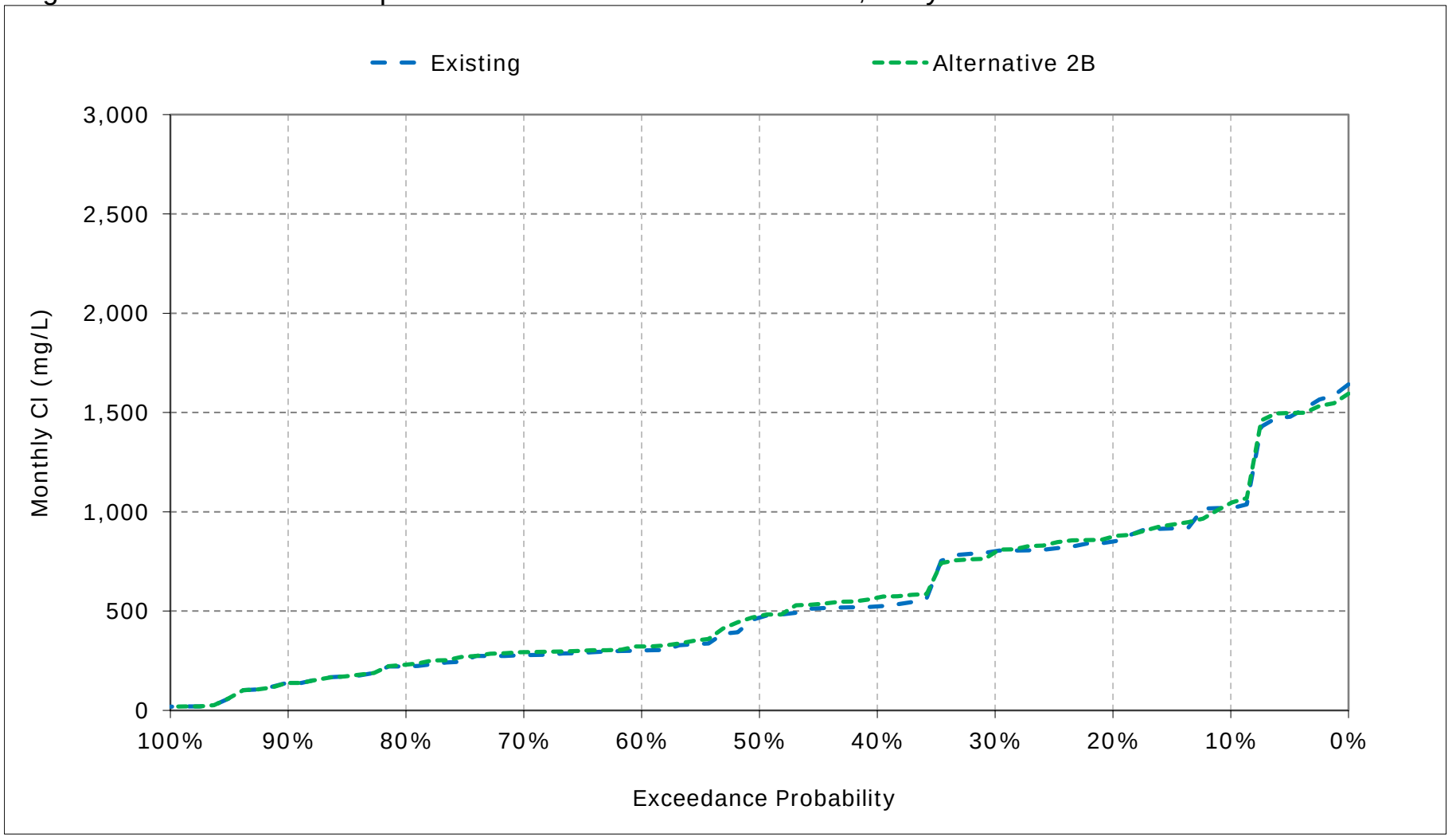


Figure 10-14. San Joaquin River at Antioch Chloride, August Cl

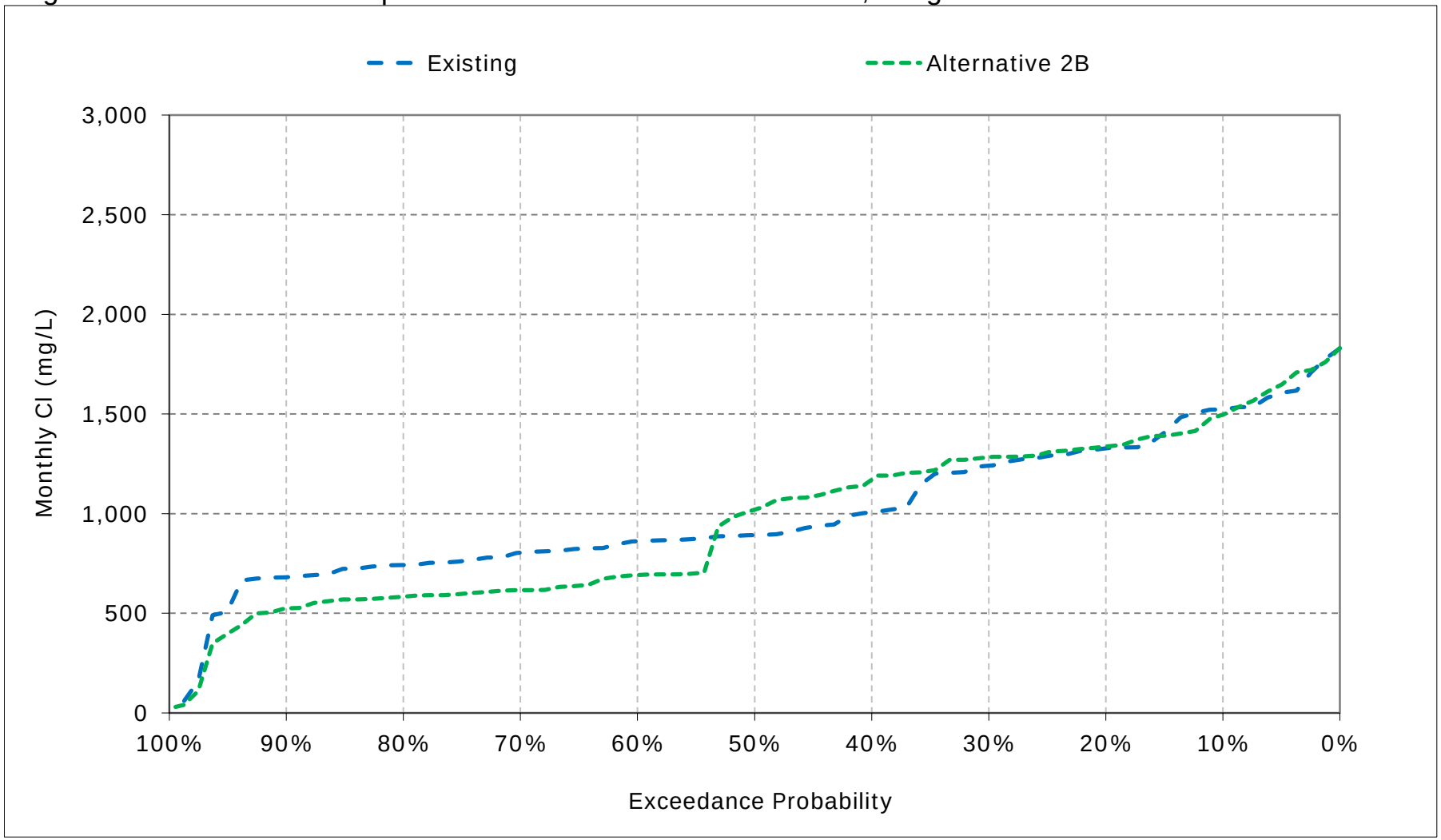


Figure 10-15. San Joaquin River at Antioch Chloride, September Cl

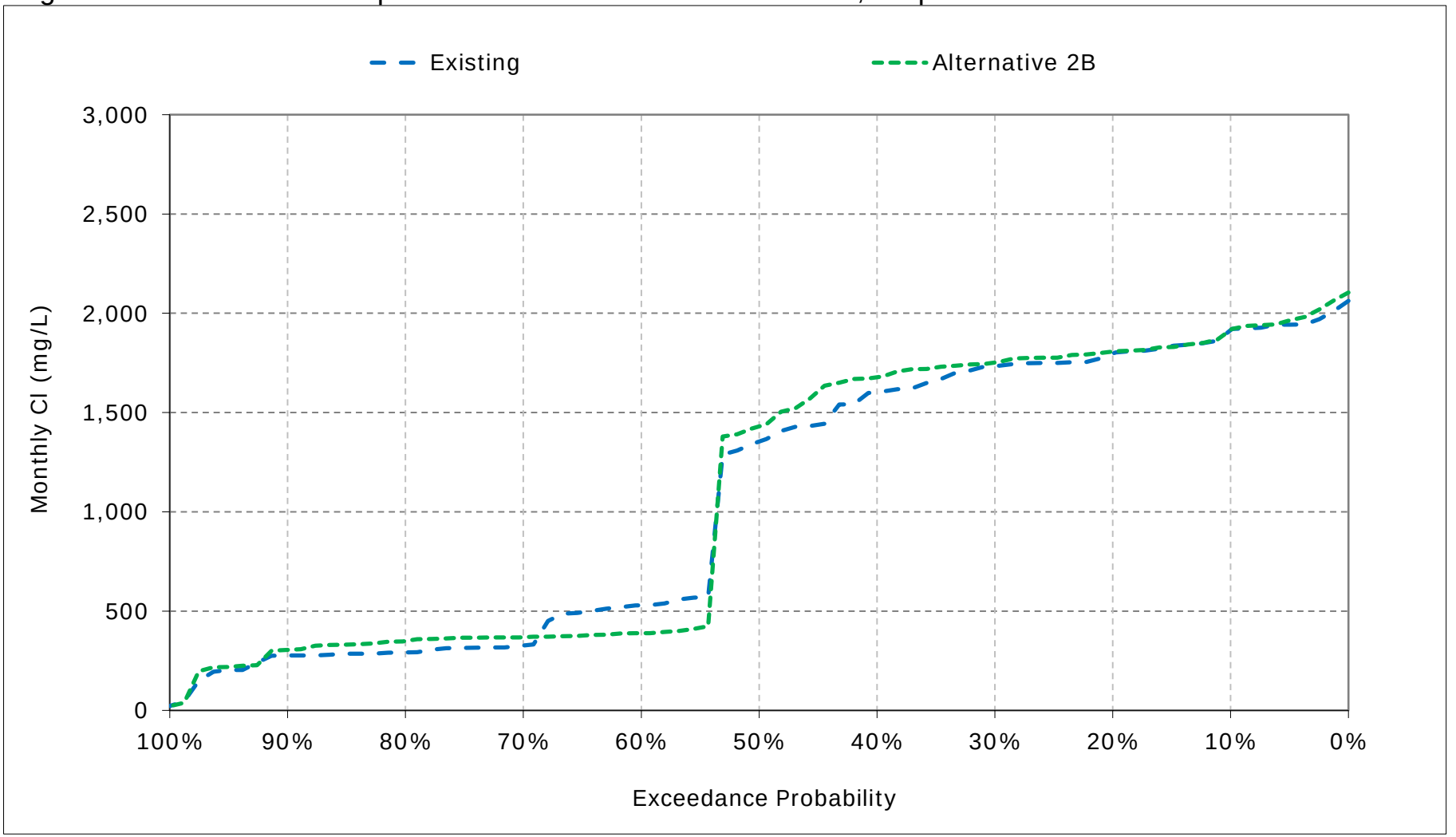


Figure 10-16. San Joaquin River at Antioch Chloride, October Cl

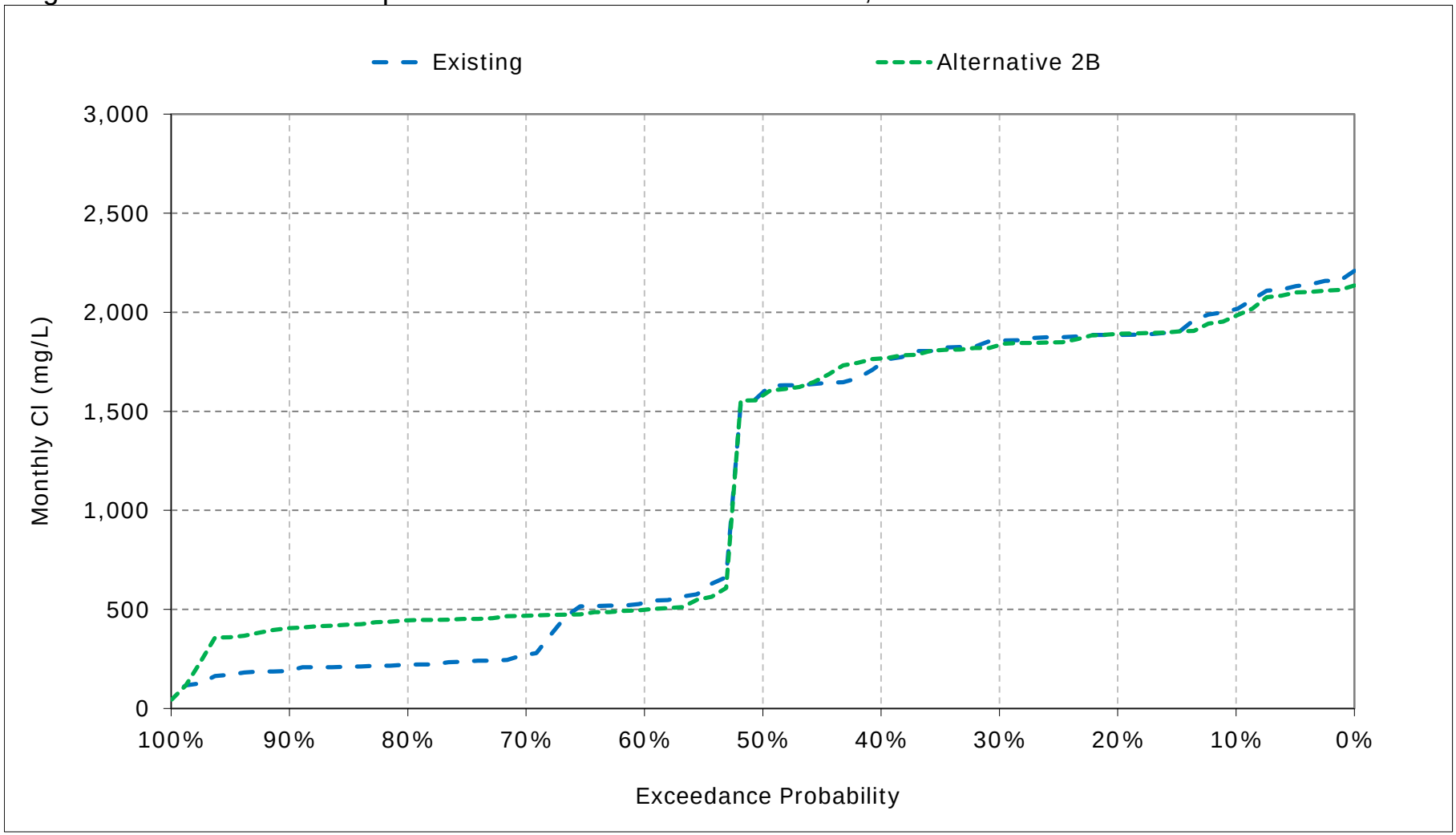


Figure 10-17. San Joaquin River at Antioch Chloride, November Cl

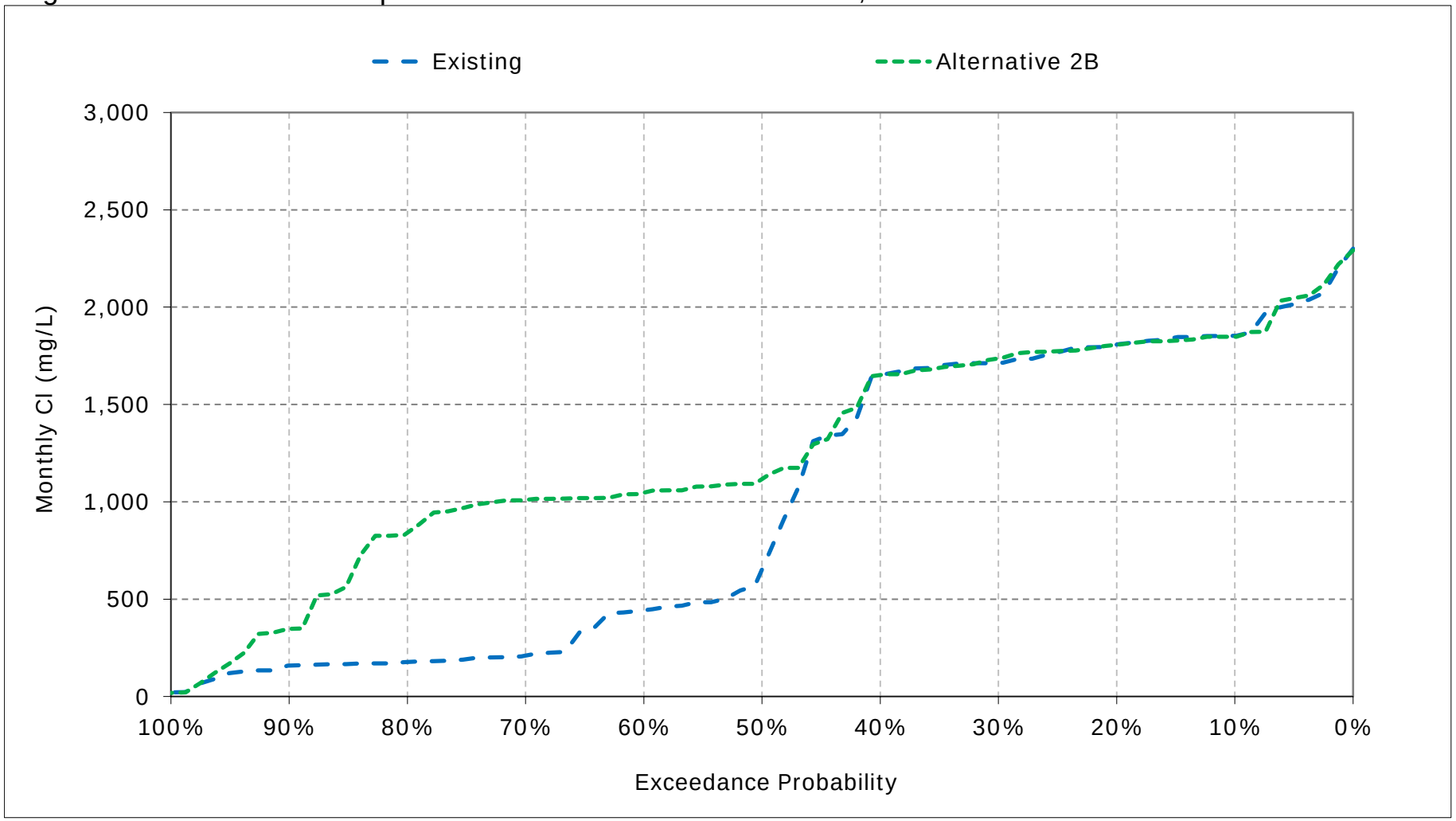
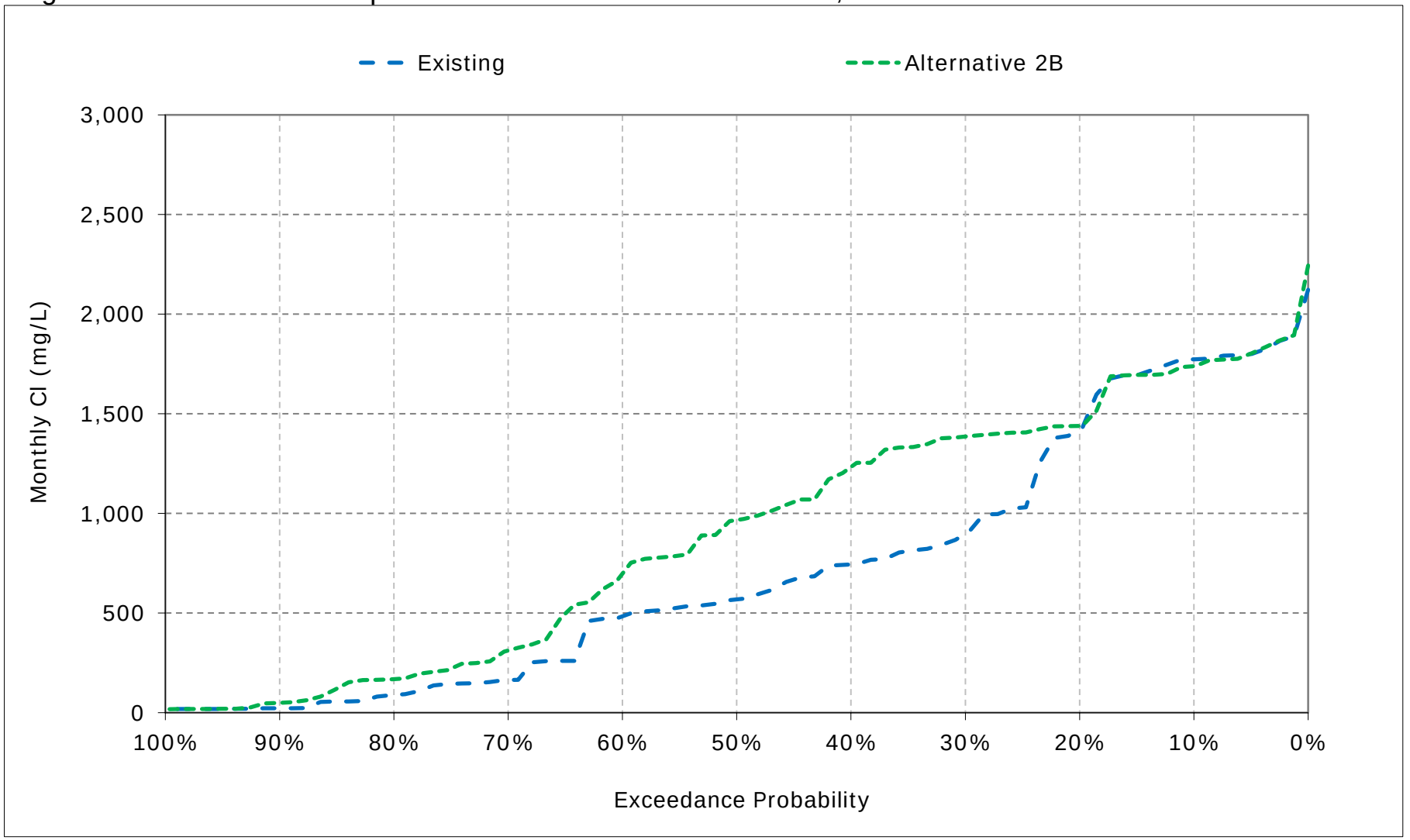


Figure 10-18. San Joaquin River at Antioch Chloride, December Cl



## Table 11-1. Banks Pumping Plant South Delta Exports Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 140 | 141 | 157 | 169 | 127 | 98 | 83 | 84 | 73 | 64 | 102 | 119 |
| 20% | 133 | 122 | 145 | 157 | 112 | 79 | 73 | 76 | 59 | 55 | 74 | 111 |
| 30% | 128 | 119 | 138 | 122 | 98 | 73 | 66 | 72 | 55 | 42 | 62 | 105 |
| 40% | 121 | 113 | 122 | 110 | 93 | 67 | 61 | 68 | 54 | 40 | 58 | 101 |
| 50% | 113 | 107 | 76 | 97 | 81 | 62 | 58 | 63 | 51 | 38 | 50 | 91 |
| 60% | 52 | 46 | 56 | 90 | 76 | 58 | 52 | 60 | 49 | 35 | 43 | 84 |
| 70% | 46 | 39 | 44 | 80 | 69 | 53 | 49 | 53 | 47 | 30 | 39 | 80 |
| 80% | 39 | 36 | 37 | 69 | 64 | 46 | 38 | 45 | 43 | 29 | 37 | 72 |
| 90% | 34 | 34 | 34 | 60 | 49 | 39 | 28 | 23 | 34 | 28 | 34 | 64 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 89 | 84 | 92 | 108 | 86 | 64 | 57 | 60 | 52 | 43 | 57 | 90 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 74 | 66 | 67 | 74 | 63 | 47 | 38 | 40 | 40 | 32 | 37 | 75 |
| Above Normal (15%) | 101 | 92 | 93 | 108 | 91 | 63 | 53 | 57 | 49 | 32 | 38 | 68 |
| Below Normal (17%) | 92 | 86 | 102 | 126 | 88 | 65 | 59 | 64 | 51 | 35 | 59 | 111 |
| Dry (22%) | 88 | 89 | 104 | 116 | 95 | 74 | 70 | 74 | 57 | 47 | 77 | 98 |
| Critical (15%) | 106 | 105 | 118 | 151 | 117 | 89 | 80 | 82 | 77 | 78 | 89 | 108 |

### Alternative 2B

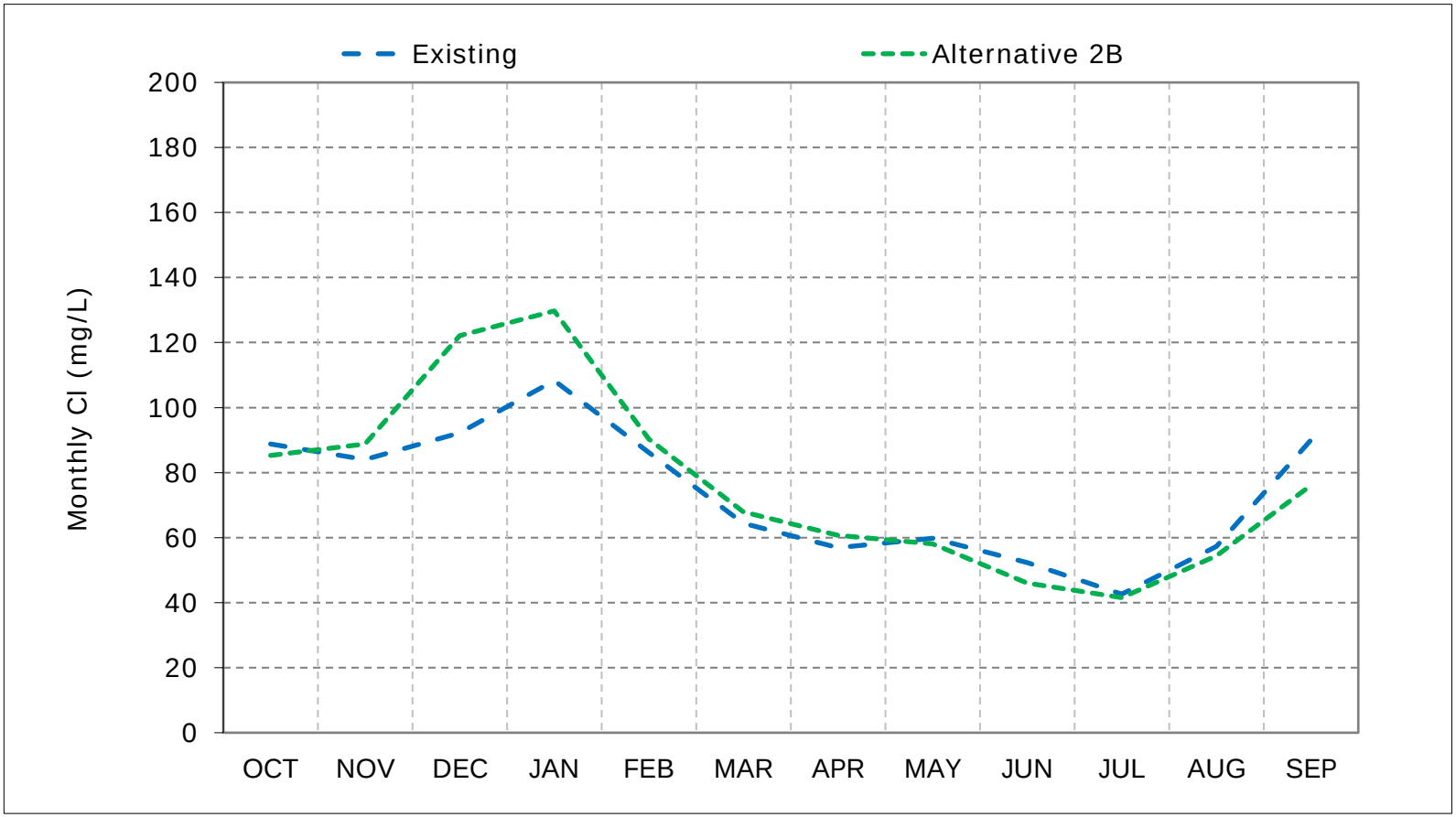
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 150 | 137 | 160 | 205 | 143 | 99 | 87 | 81 | 66 | 66 | 103 | 130 |
| 20% | 139 | 126 | 151 | 192 | 126 | 89 | 78 | 74 | 51 | 52 | 73 | 117 |
| 30% | 133 | 119 | 147 | 167 | 110 | 80 | 74 | 69 | 46 | 42 | 62 | 106 |
| 40% | 122 | 115 | 141 | 155 | 97 | 72 | 67 | 65 | 45 | 38 | 55 | 92 |
| 50% | 116 | 107 | 134 | 121 | 90 | 65 | 63 | 62 | 43 | 36 | 51 | 82 |
| 60% | 30 | 60 | 127 | 103 | 76 | 61 | 56 | 55 | 41 | 33 | 36 | 43 |
| 70% | 29 | 55 | 116 | 89 | 69 | 55 | 48 | 49 | 39 | 30 | 31 | 40 |
| 80% | 28 | 46 | 91 | 73 | 61 | 45 | 40 | 42 | 37 | 28 | 30 | 37 |
| 90% | 27 | 38 | 48 | 64 | 46 | 42 | 29 | 26 | 32 | 27 | 29 | 34 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 85 | 89 | 122 | 130 | 90 | 68 | 61 | 58 | 46 | 42 | 54 | 76 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 69 | 73 | 96 | 84 | 62 | 48 | 39 | 38 | 36 | 32 | 31 | 35 |
| Above Normal (15%) | 97 | 99 | 127 | 136 | 96 | 69 | 57 | 53 | 41 | 31 | 32 | 40 |
| Below Normal (17%) | 88 | 92 | 130 | 150 | 91 | 68 | 65 | 61 | 42 | 32 | 60 | 124 |
| Dry (22%) | 83 | 91 | 137 | 150 | 106 | 81 | 77 | 73 | 48 | 46 | 75 | 100 |
| Critical (15%) | 109 | 107 | 143 | 168 | 123 | 91 | 82 | 81 | 73 | 78 | 90 | 110 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 10 | -4 | 3 | 36 | 16 | 2 | 4 | -3 | -7 | 1 | 1 | 11 |
| 20% | 6 | 4 | 6 | 35 | 14 | 9 | 5 | -2 | -8 | -2 | -1 | 6 |
| 30% | 5 | 0 | 9 | 45 | 12 | 7 | 8 | -3 | -9 | 0 | 0 | 1 |
| 40% | 2 | 3 | 19 | 45 | 4 | 5 | 6 | -3 | -9 | -1 | -3 | -9 |
| 50% | 2 | 0 | 58 | 24 | 9 | 4 | 6 | -1 | -8 | -3 | 1 | -10 |
| 60% | -22 | 15 | 71 | 13 | 0 | 3 | 4 | -5 | -8 | -2 | -8 | -41 |
| 70% | -17 | 16 | 73 | 9 | 0 | 2 | -1 | -3 | -8 | 0 | -7 | -40 |
| 80% | -11 | 11 | 54 | 4 | -3 | 0 | 2 | -4 | -5 | -1 | -6 | -35 |
| 90% | -7 | 4 | 15 | 4 | -3 | 3 | 1 | 4 | -1 | -1 | -4 | -31 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -4 | 5 | 30 | 21 | 4 | 4 | 4 | -2 | -6 | -1 | -3 | -14 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | -5 | 7 | 29 | 10 | -1 | 1 | 1 | -2 | -4 | 0 | -6 | -40 |
| Above Normal (15%) | -4 | 6 | 34 | 28 | 5 | 6 | 4 | -4 | -8 | -1 | -6 | -27 |
| Below Normal (17%) | -5 | 6 | 28 | 24 | 3 | 3 | 5 | -2 | -9 | -3 | 1 | 13 |
| Dry (22%) | -5 | 2 | 34 | 34 | 10 | 7 | 8 | -1 | -9 | -1 | -2 | 2 |
| Critical (15%) | 3 | 1 | 25 | 16 | 7 | 2 | 2 | 0 | -4 | -1 | 1 | 1 |

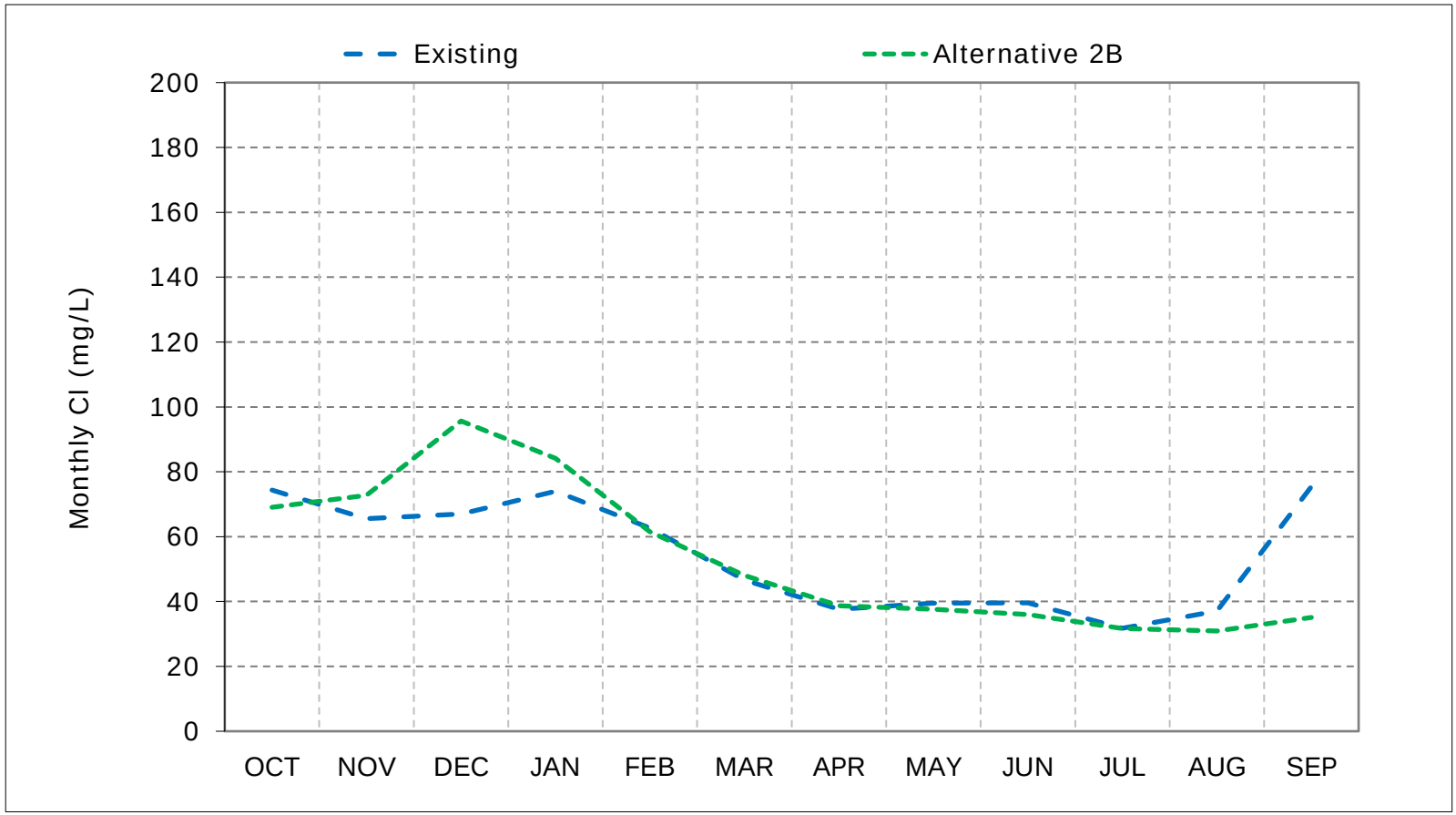
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 11-1. Banks Pumping Plant South Delta Exports Chloride, Long-Term Average C



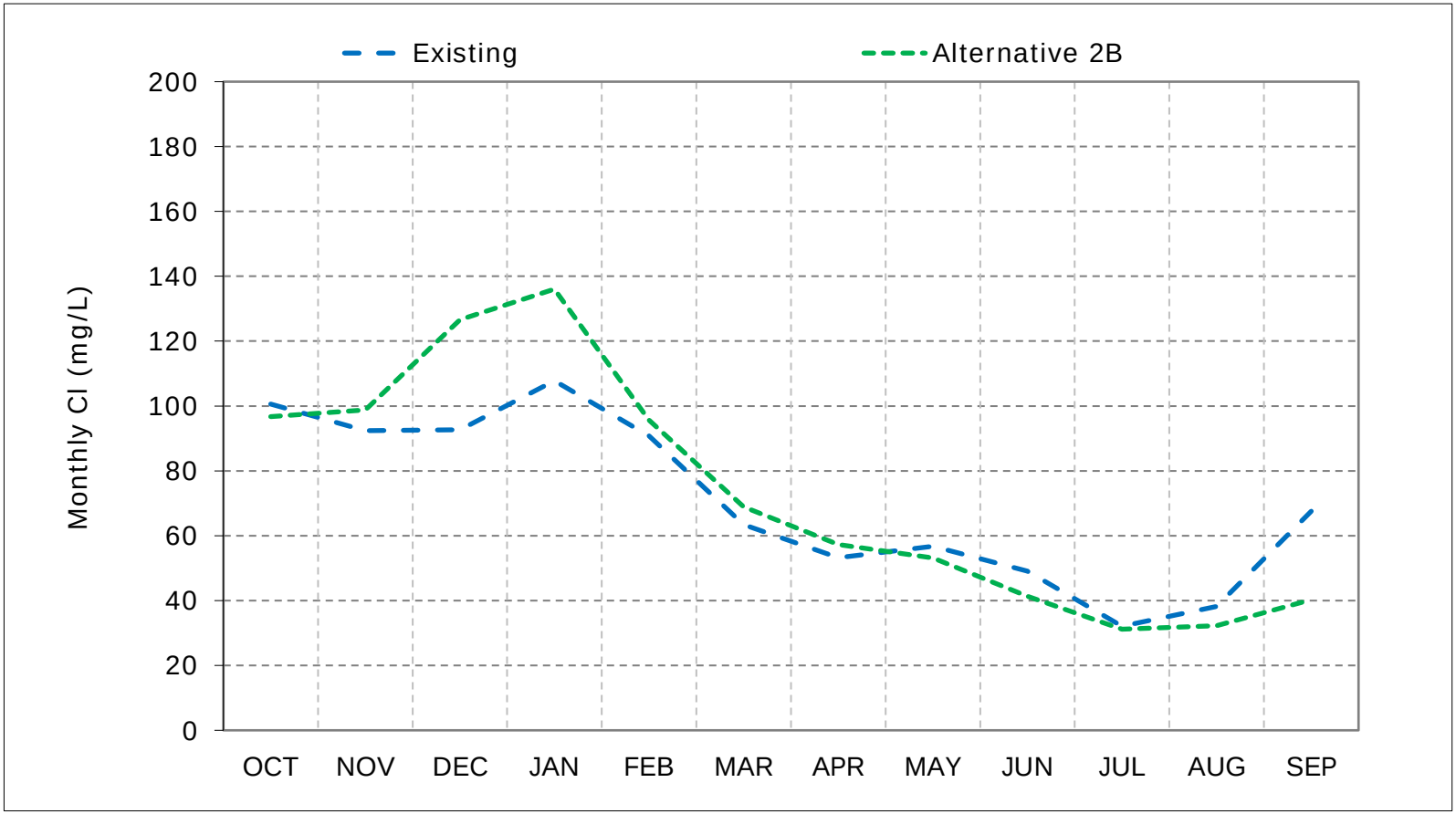

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-2. Banks Pumping Plant South Delta Exports Chloride, Wet Year Average C



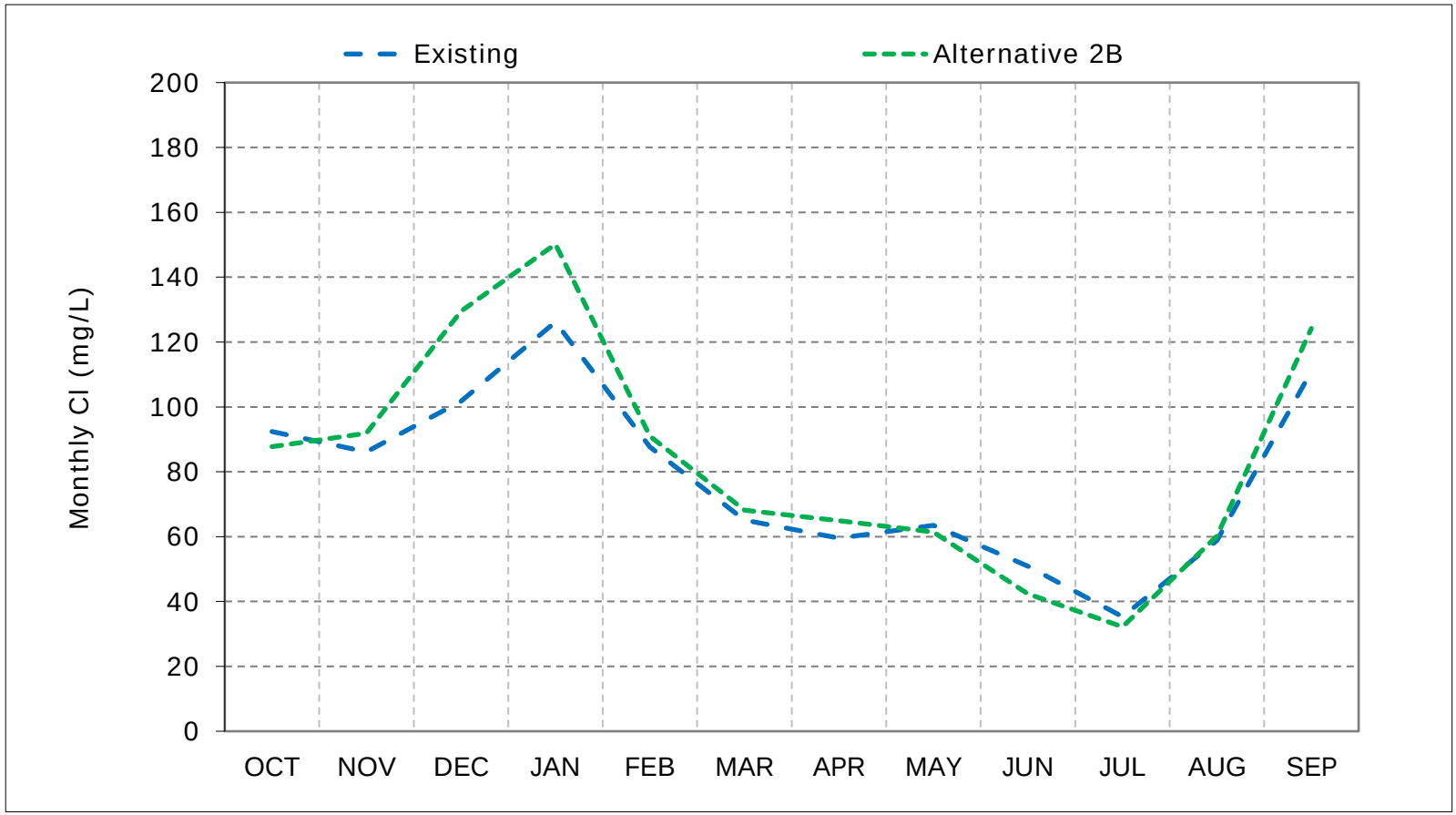

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-3. Banks Pumping Plant South Delta Exports Chloride, Above Normal Year



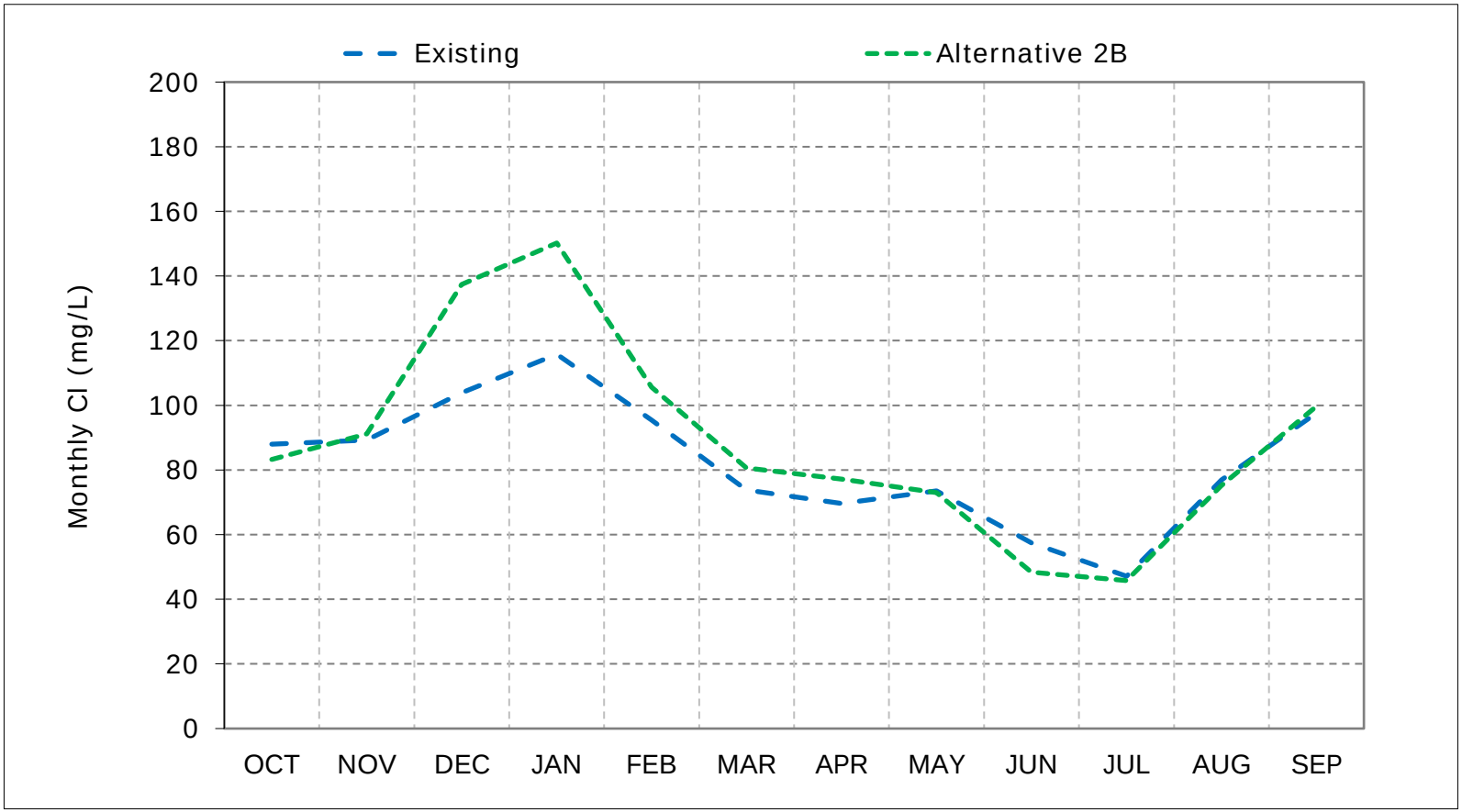

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-4. Banks Pumping Plant South Delta Exports Chloride, Below Normal Year



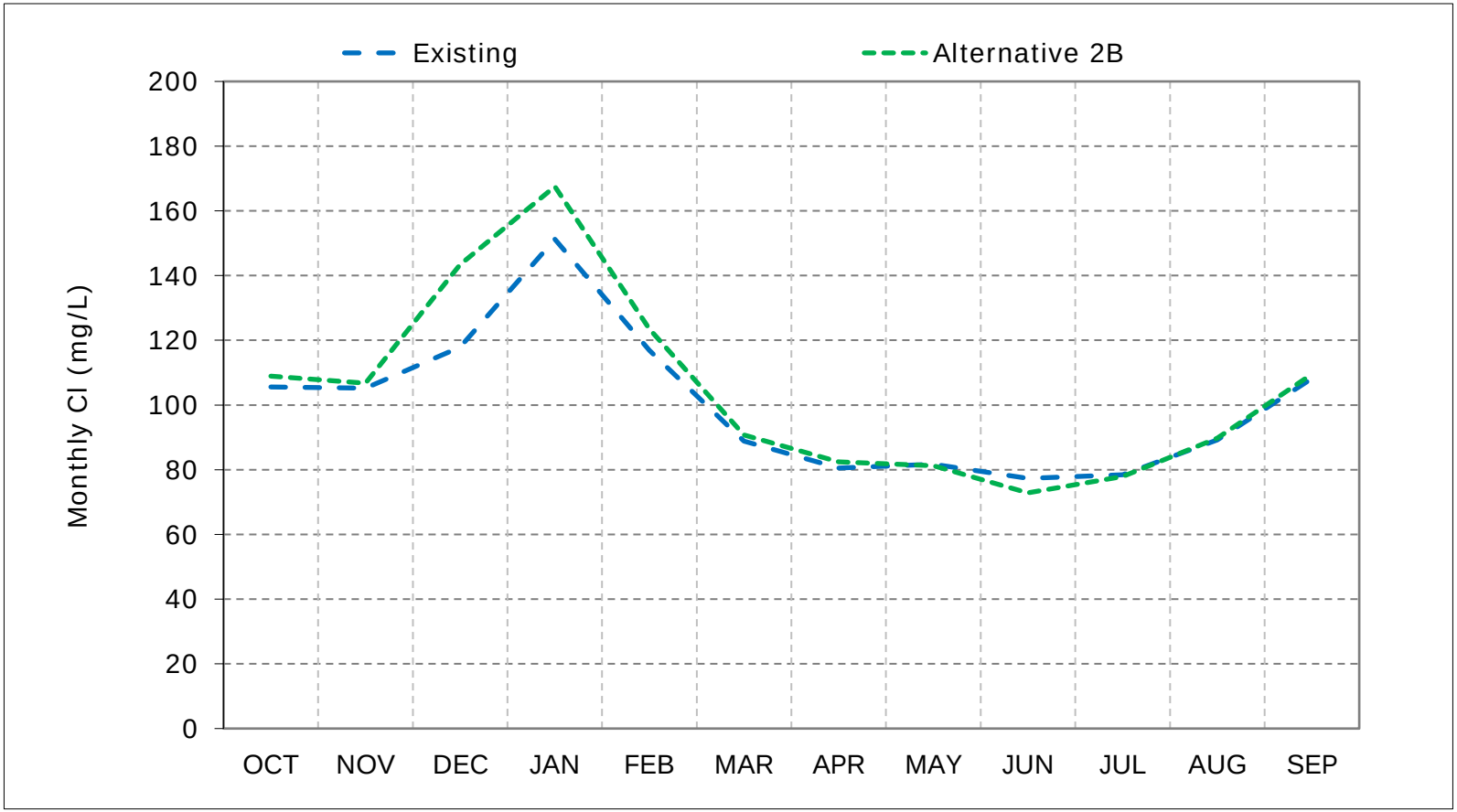

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-5. Banks Pumping Plant South Delta Exports Chloride, Dry Year Average C




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-6. Banks Pumping Plant South Delta Exports Chloride, Critical Year Average




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-7. Banks Pumping Plant South Delta Exports Chloride, January Cl

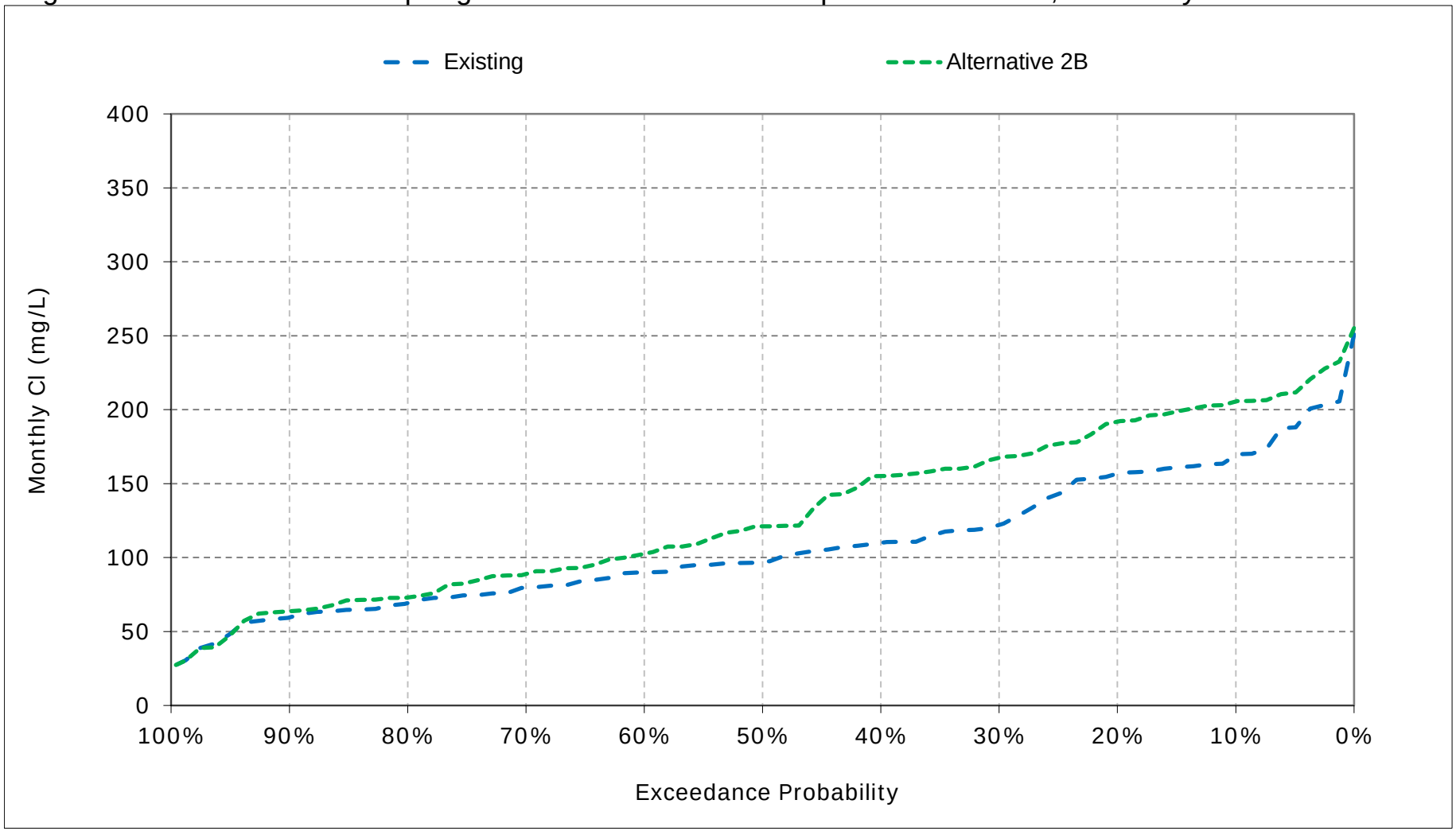


Figure 11-8. Banks Pumping Plant South Delta Exports Chloride, February Cl

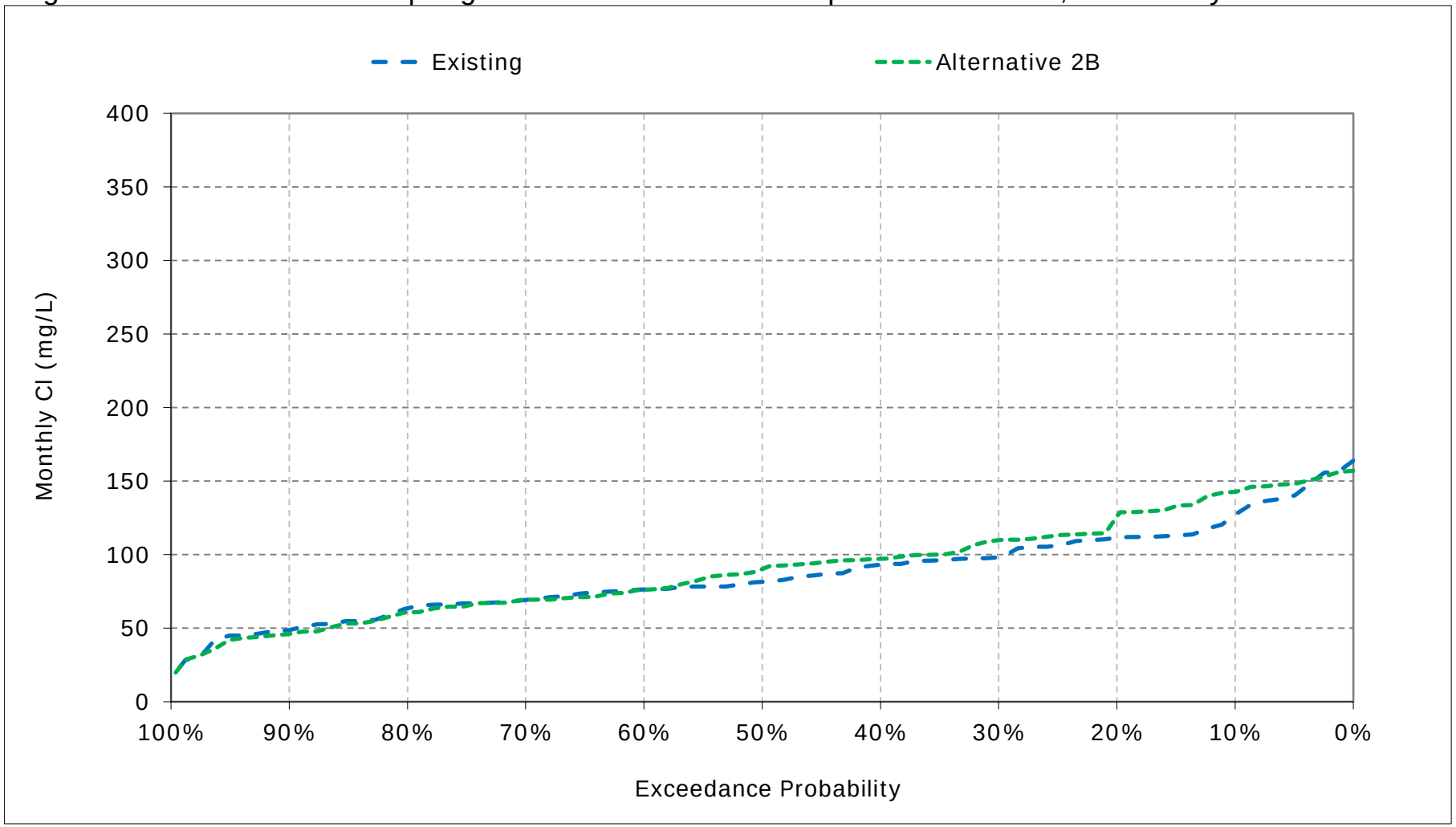


Figure 11-9. Banks Pumping Plant South Delta Exports Chloride, March Cl

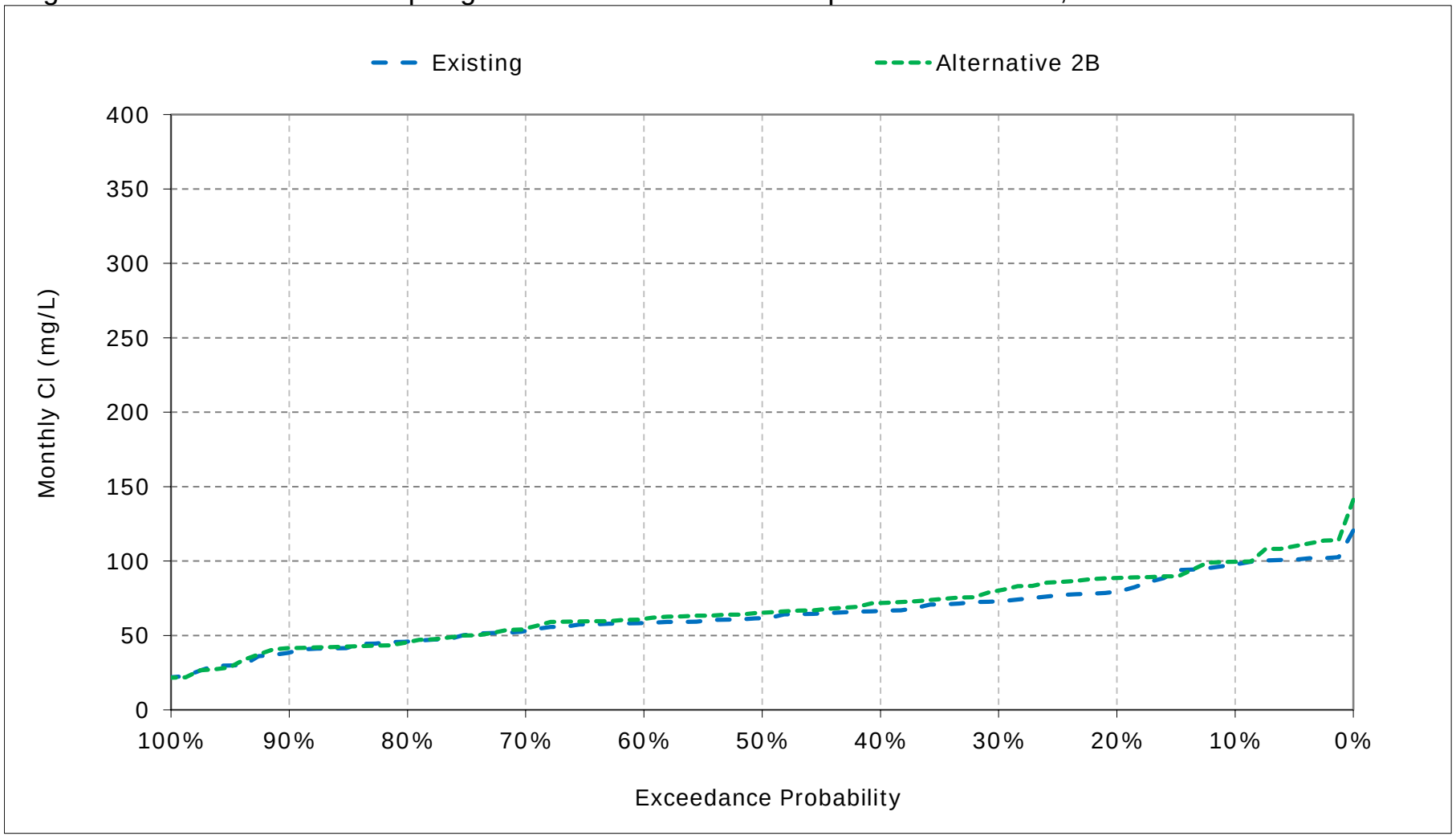


Figure 11-10. Banks Pumping Plant South Delta Exports Chloride, April Cl

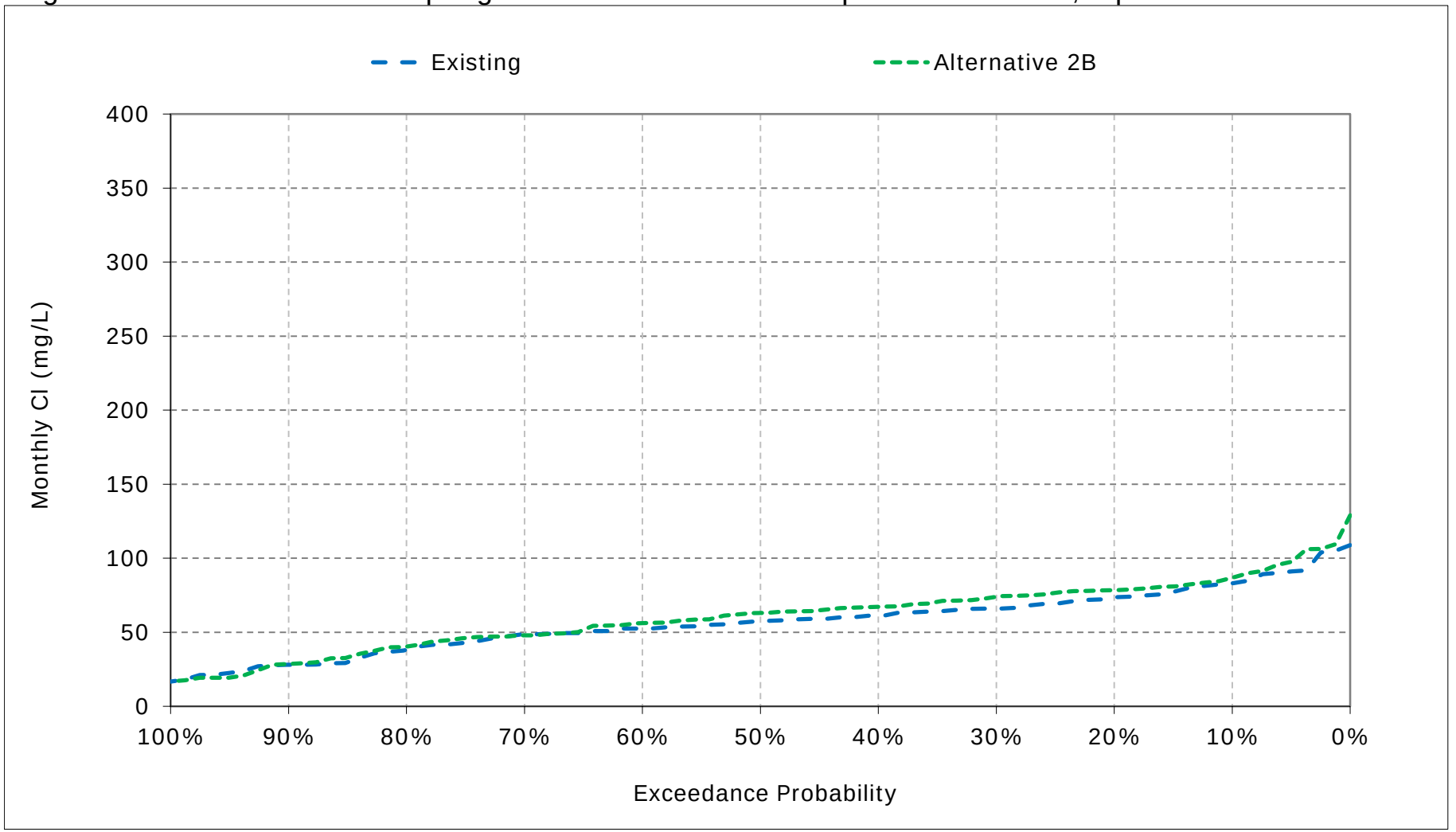


Figure 11-11. Banks Pumping Plant South Delta Exports Chloride, May Cl

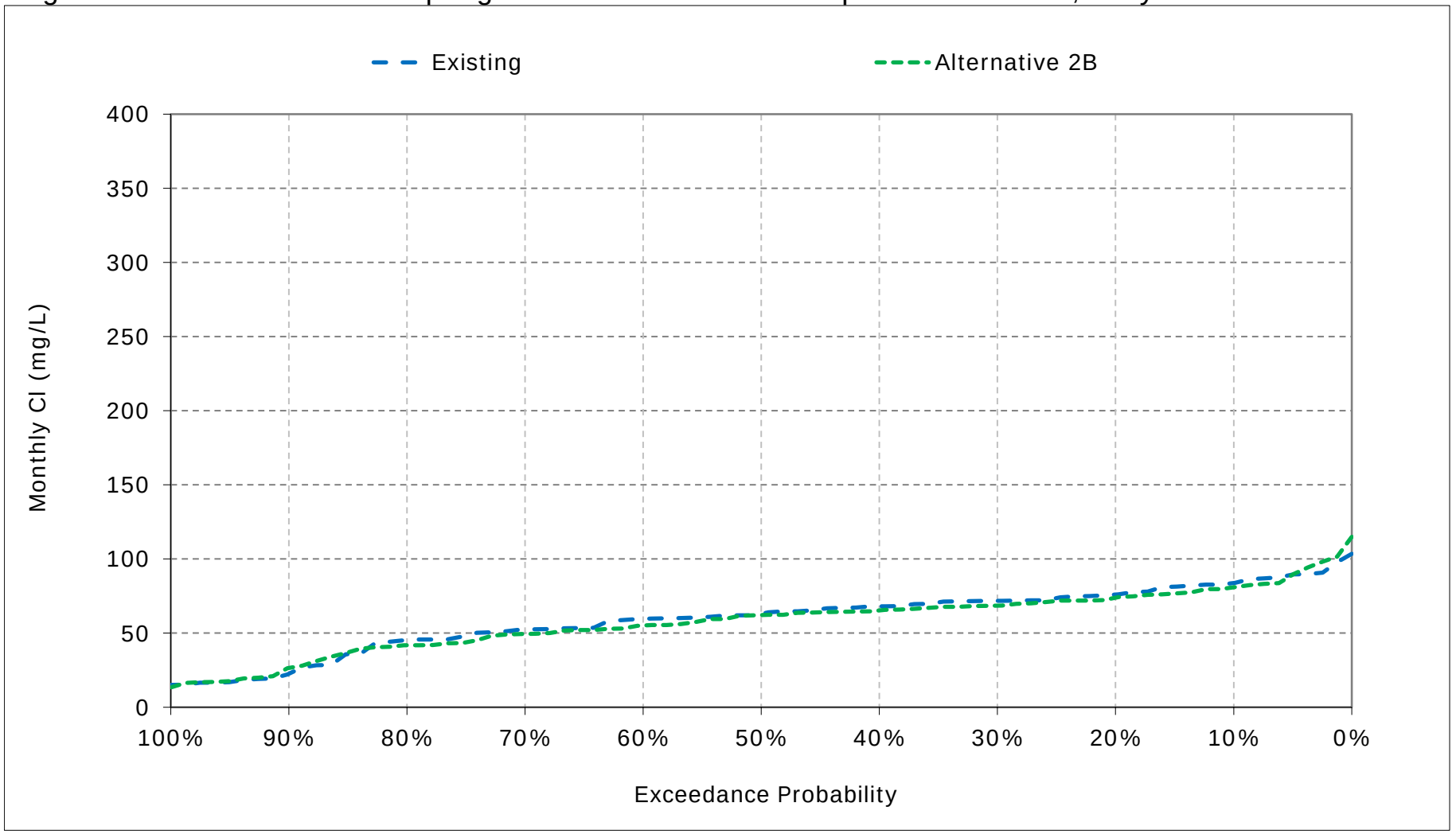


Figure 11-12. Banks Pumping Plant South Delta Exports Chloride, June Cl

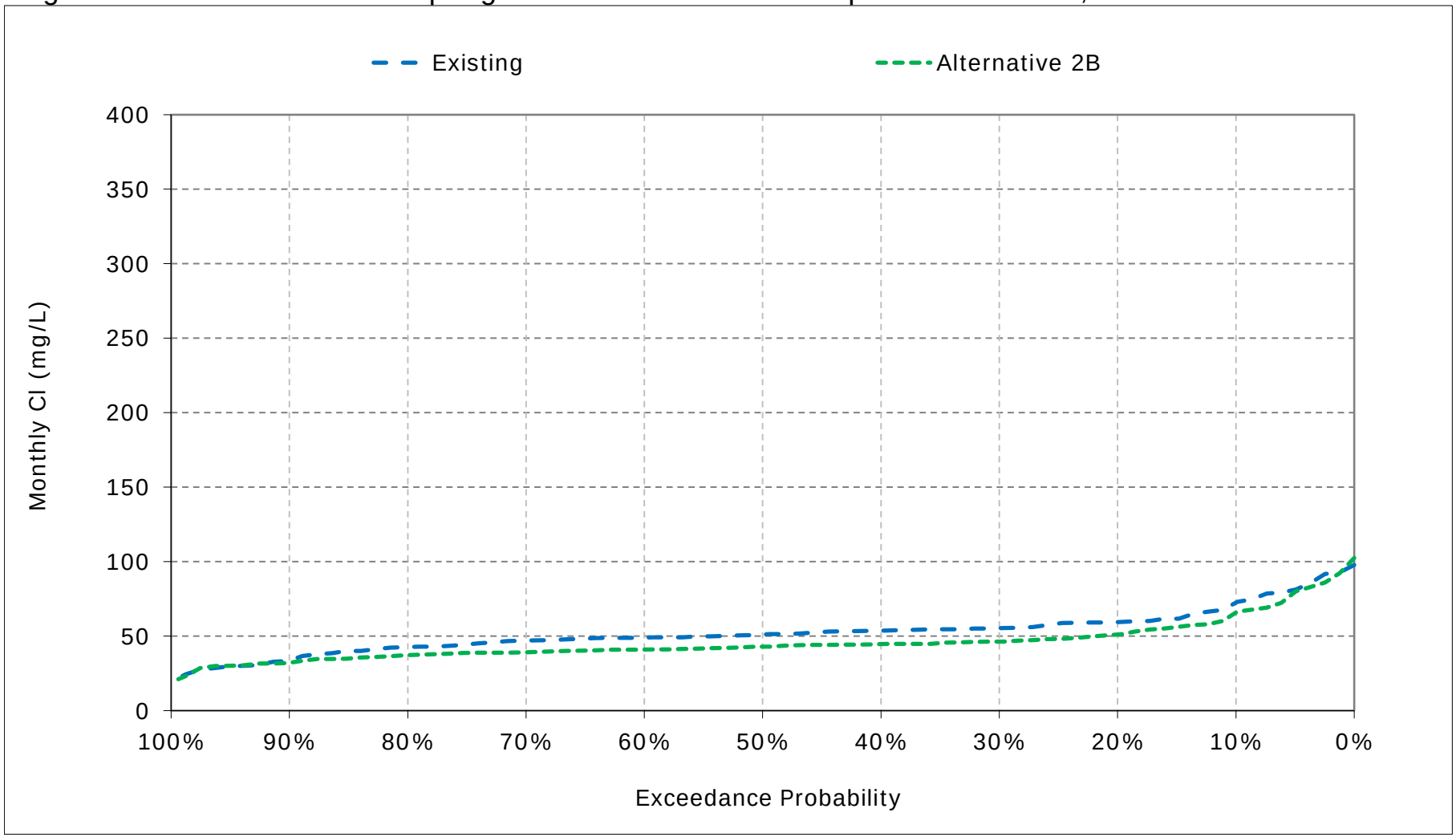


Figure 11-13. Banks Pumping Plant South Delta Exports Chloride, July Cl

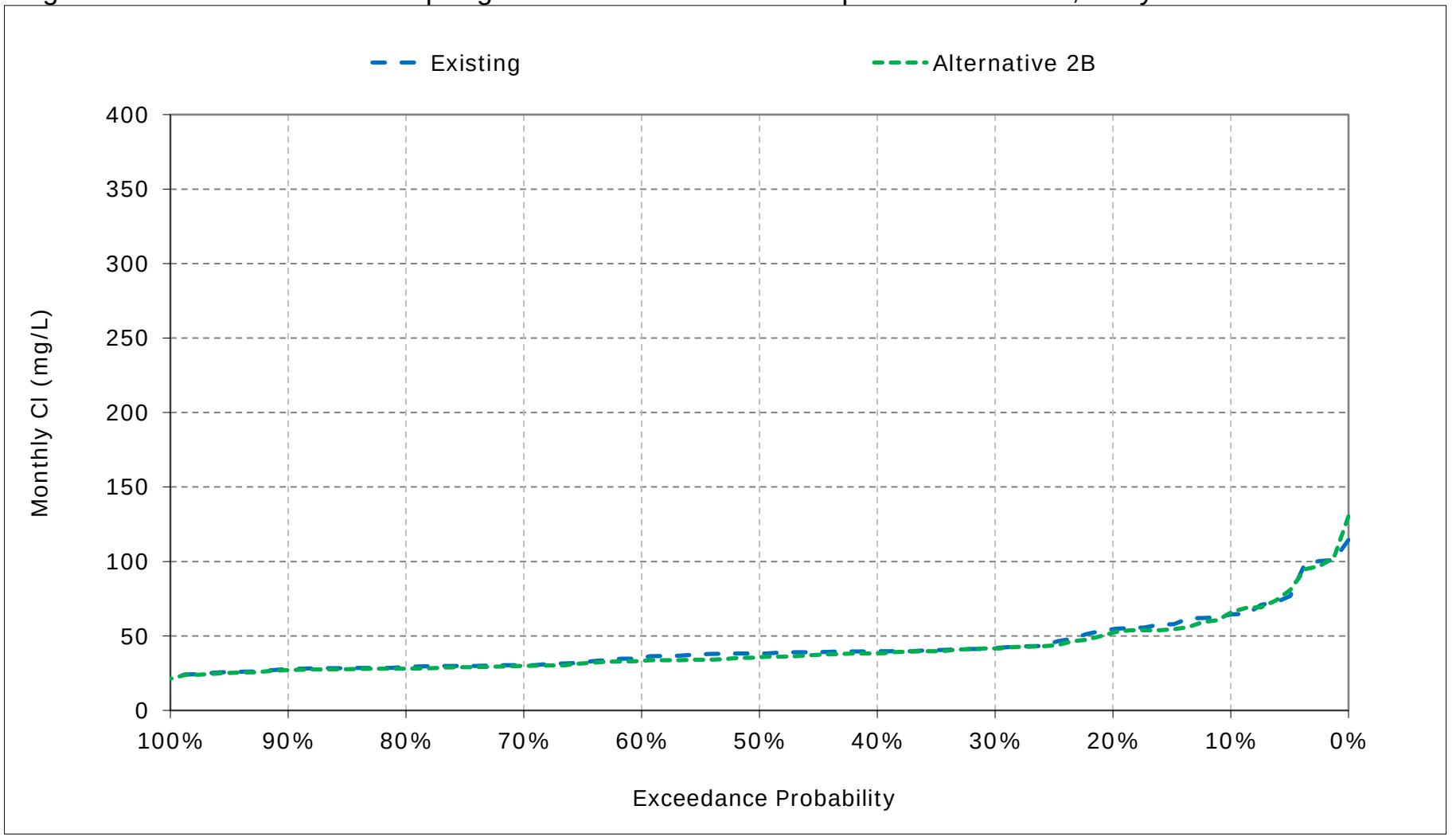


Figure 11-14. Banks Pumping Plant South Delta Exports Chloride, August Cl

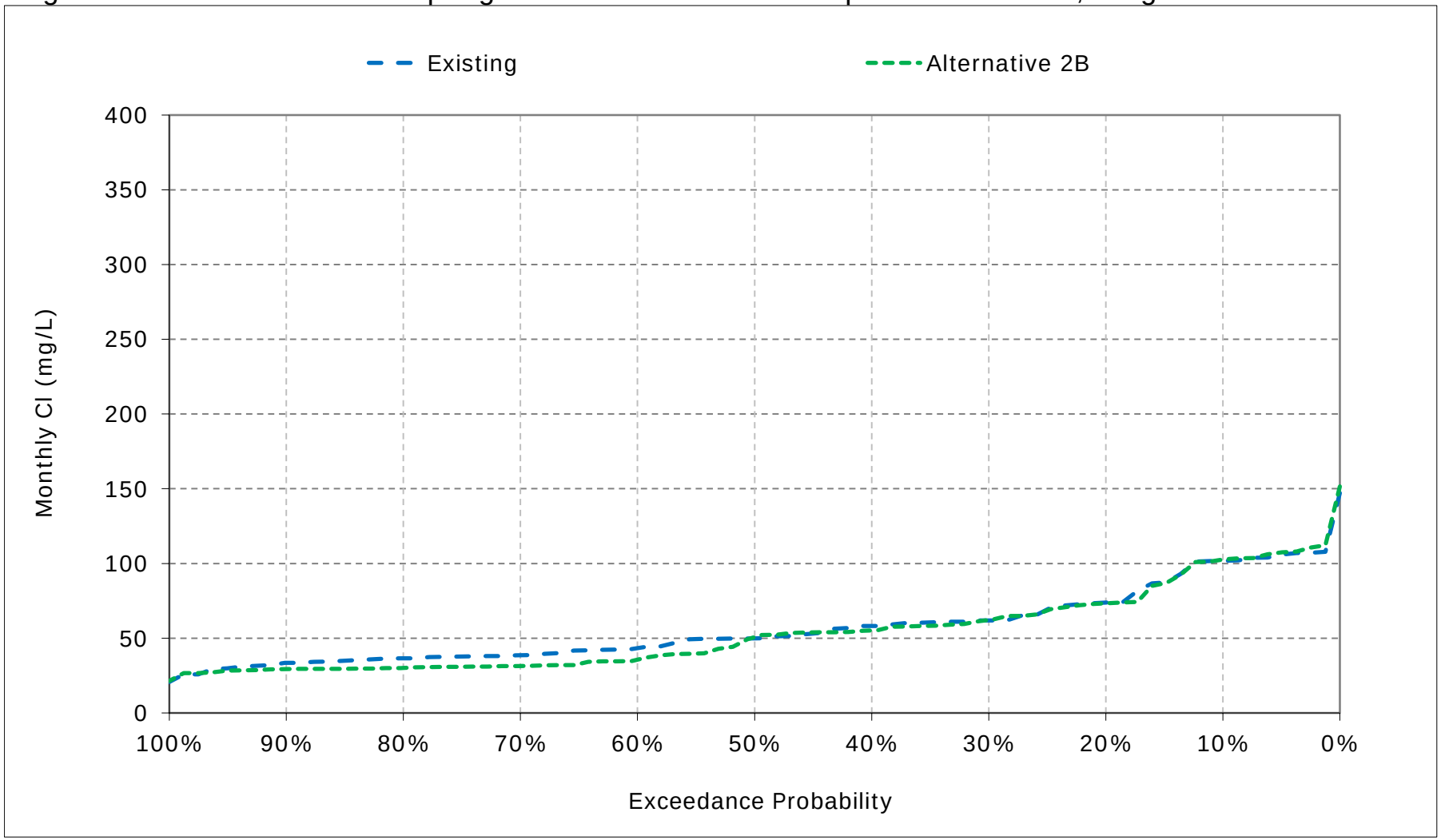


Figure 11-15. Banks Pumping Plant South Delta Exports Chloride, September Cl

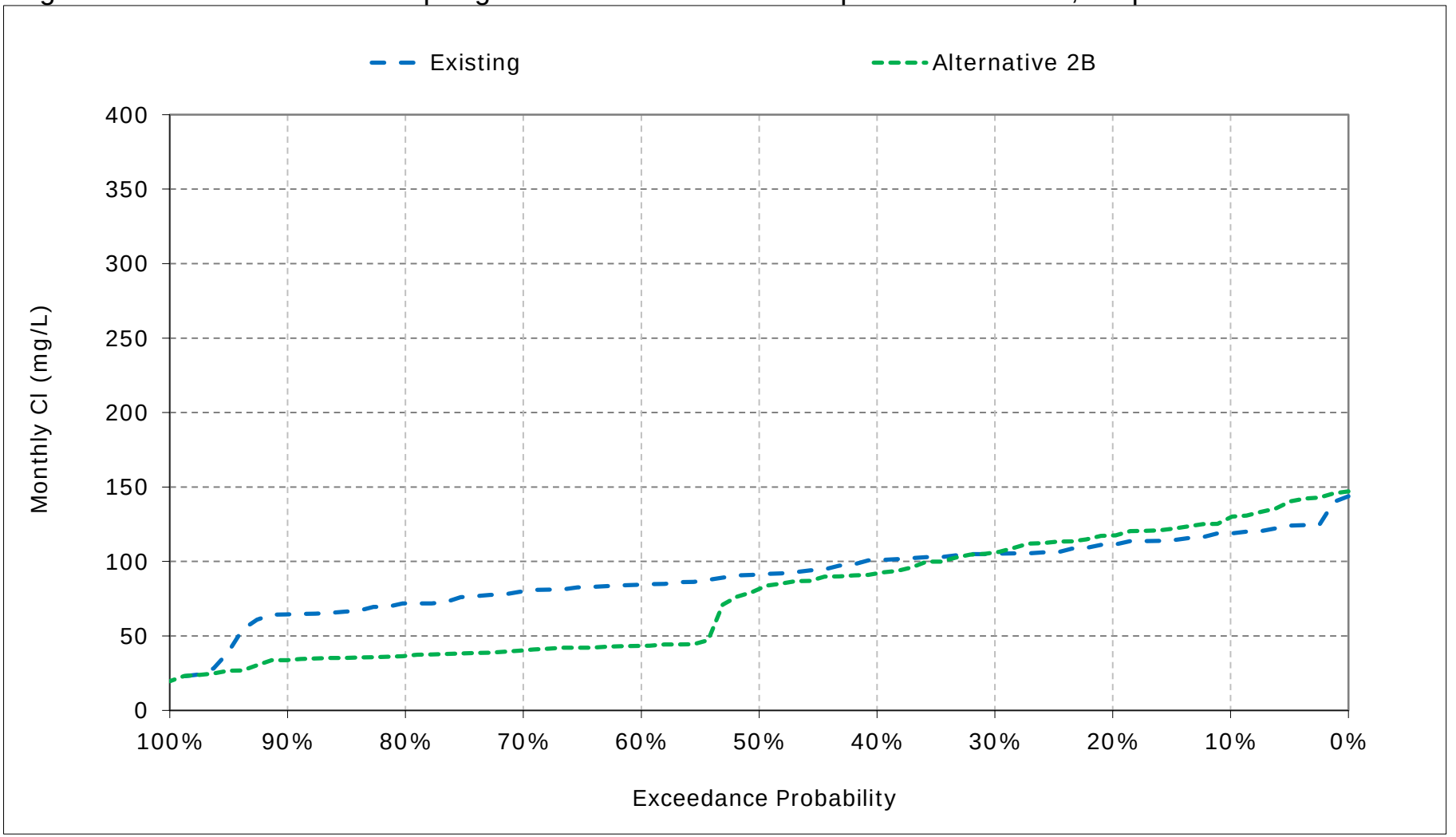


Figure 11-16. Banks Pumping Plant South Delta Exports Chloride, October Cl

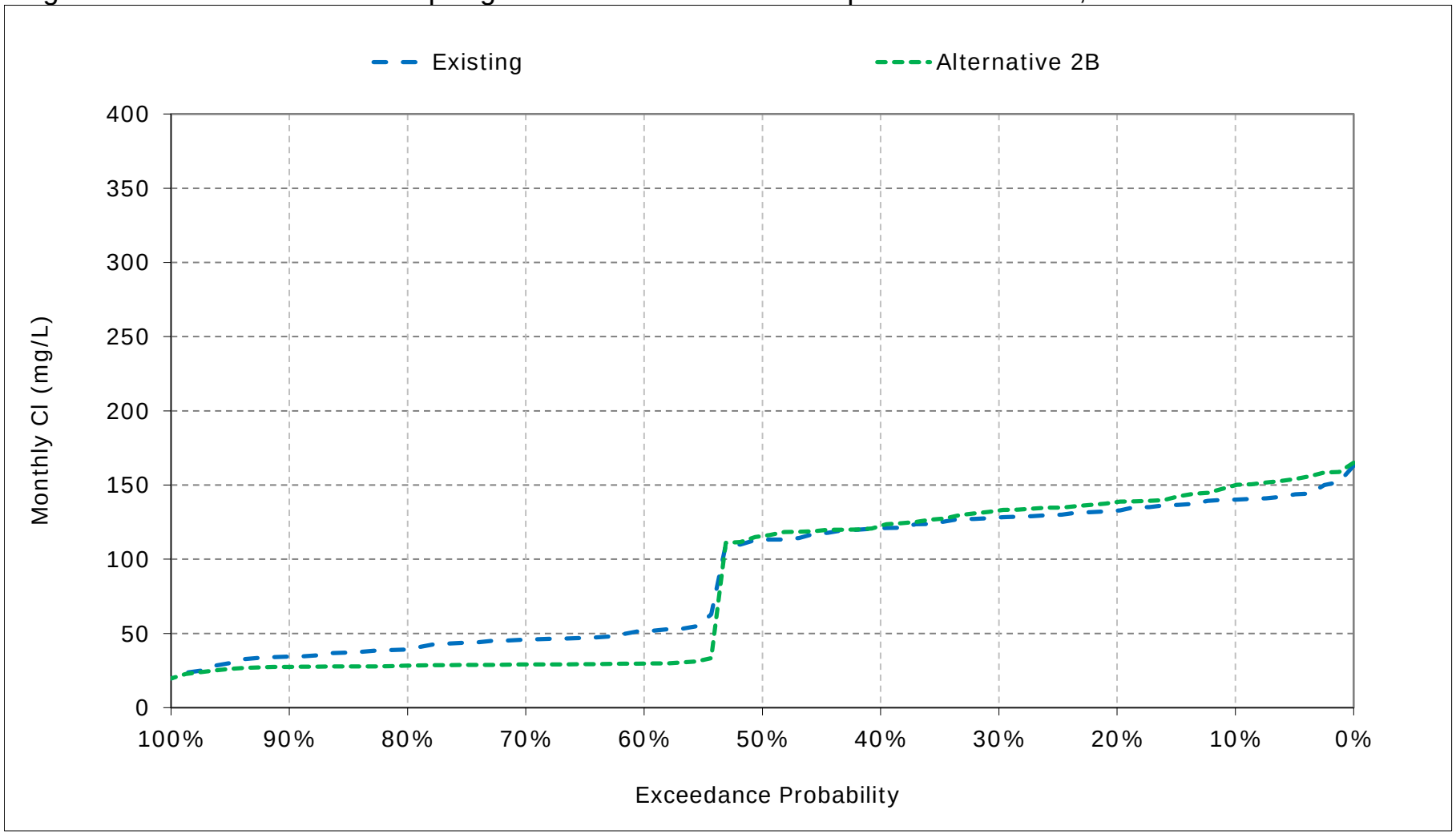


Figure 11-17. Banks Pumping Plant South Delta Exports Chloride, November Cl

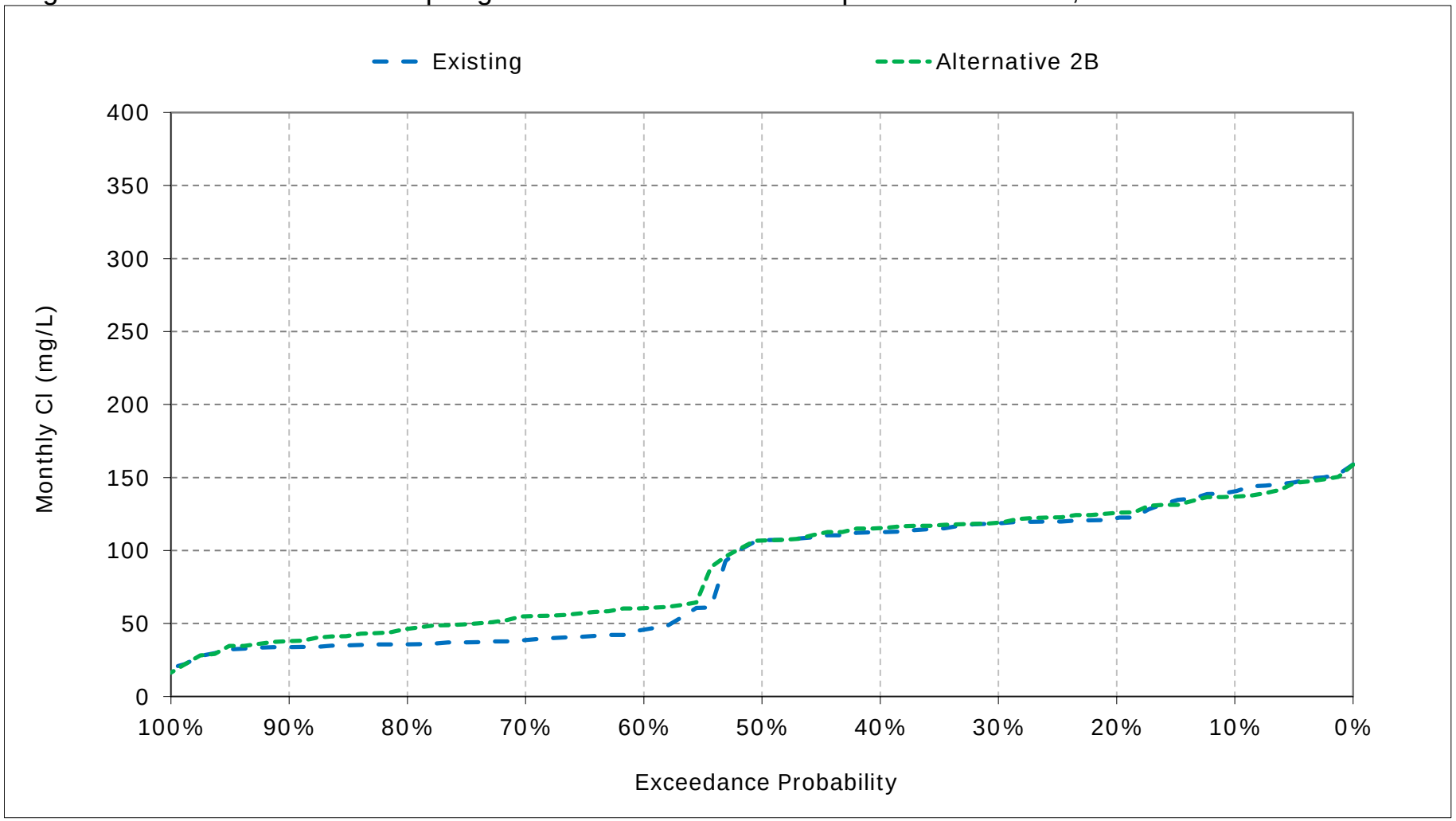
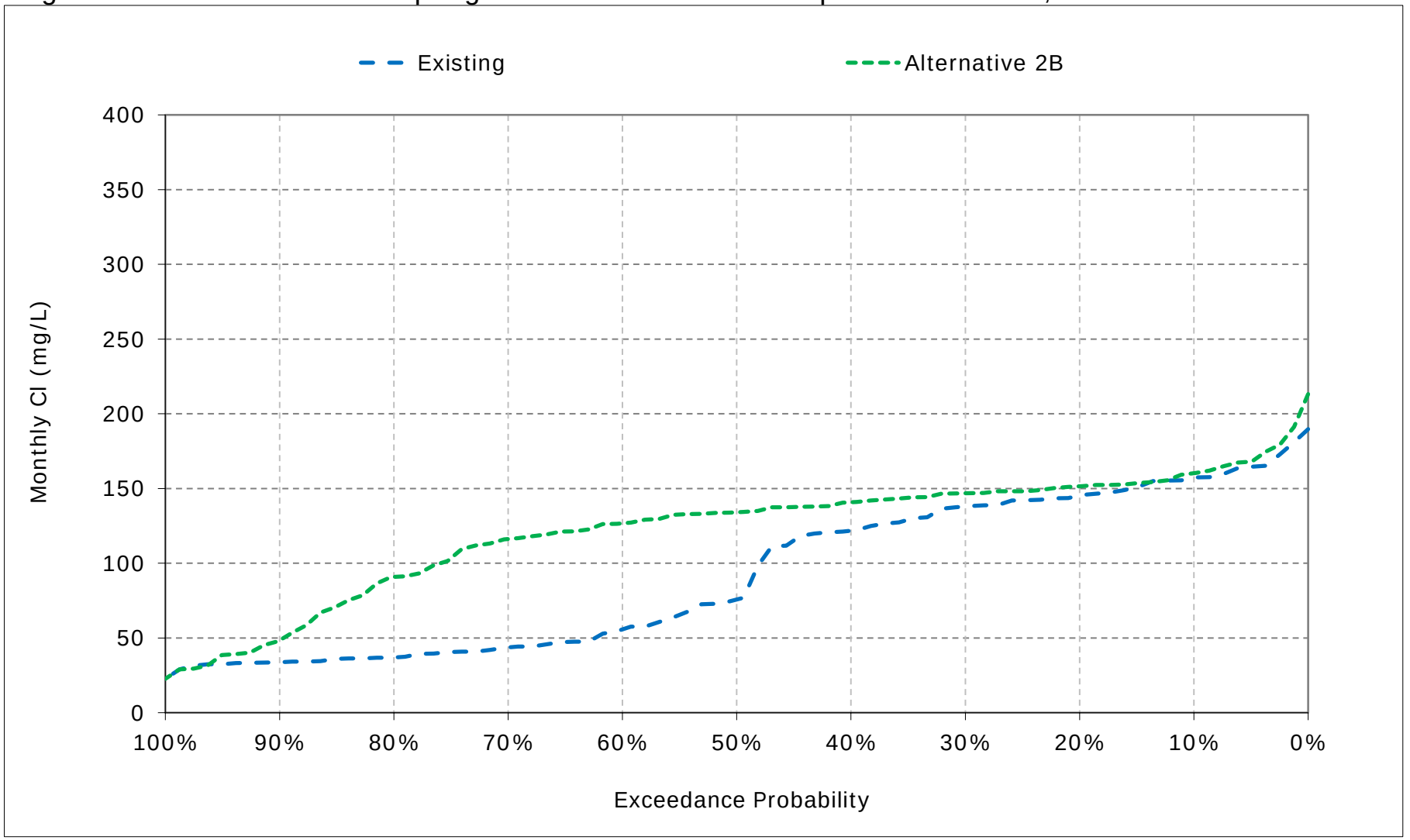


Figure 11-18. Banks Pumping Plant South Delta Exports Chloride, December Cl



## Table 12-1. Jones Pumping Plant South Delta Exports Chloride, Monthly Cl

### Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 136 | 138 | 168 | 171 | 144 | 126 | 96 | 82 | 67 | 68 | 103 | 120 |
| 20% | 131 | 122 | 157 | 164 | 138 | 118 | 89 | 77 | 59 | 60 | 82 | 115 |
| 30% | 126 | 119 | 149 | 142 | 126 | 107 | 81 | 73 | 57 | 57 | 71 | 108 |
| 40% | 120 | 113 | 137 | 133 | 119 | 101 | 74 | 70 | 55 | 54 | 68 | 106 |
| 50% | 111 | 106 | 105 | 125 | 112 | 90 | 65 | 62 | 54 | 48 | 62 | 97 |
| 60% | 56 | 65 | 92 | 115 | 99 | 68 | 57 | 57 | 52 | 46 | 55 | 88 |
| 70% | 52 | 52 | 79 | 106 | 84 | 53 | 47 | 53 | 51 | 42 | 49 | 80 |
| 80% | 48 | 47 | 73 | 99 | 64 | 42 | 37 | 45 | 48 | 38 | 46 | 74 |
| 90% | 44 | 44 | 71 | 72 | 44 | 35 | 26 | 22 | 44 | 33 | 44 | 65 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 90 | 90 | 114 | 125 | 103 | 85 | 63 | 60 | 55 | 52 | 65 | 93 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 76 | 73 | 93 | 93 | 67 | 48 | 38 | 39 | 48 | 43 | 45 | 75 |
| Above Normal (15%) | 101 | 95 | 114 | 125 | 105 | 69 | 57 | 57 | 54 | 44 | 49 | 70 |
| Below Normal (17%) | 93 | 93 | 121 | 136 | 99 | 82 | 67 | 64 | 53 | 47 | 69 | 113 |
| Dry (22%) | 91 | 95 | 124 | 136 | 129 | 111 | 81 | 73 | 54 | 55 | 84 | 103 |
| Critical (15%) | 106 | 108 | 139 | 164 | 143 | 144 | 94 | 81 | 73 | 77 | 94 | 117 |

### Alternative 2B

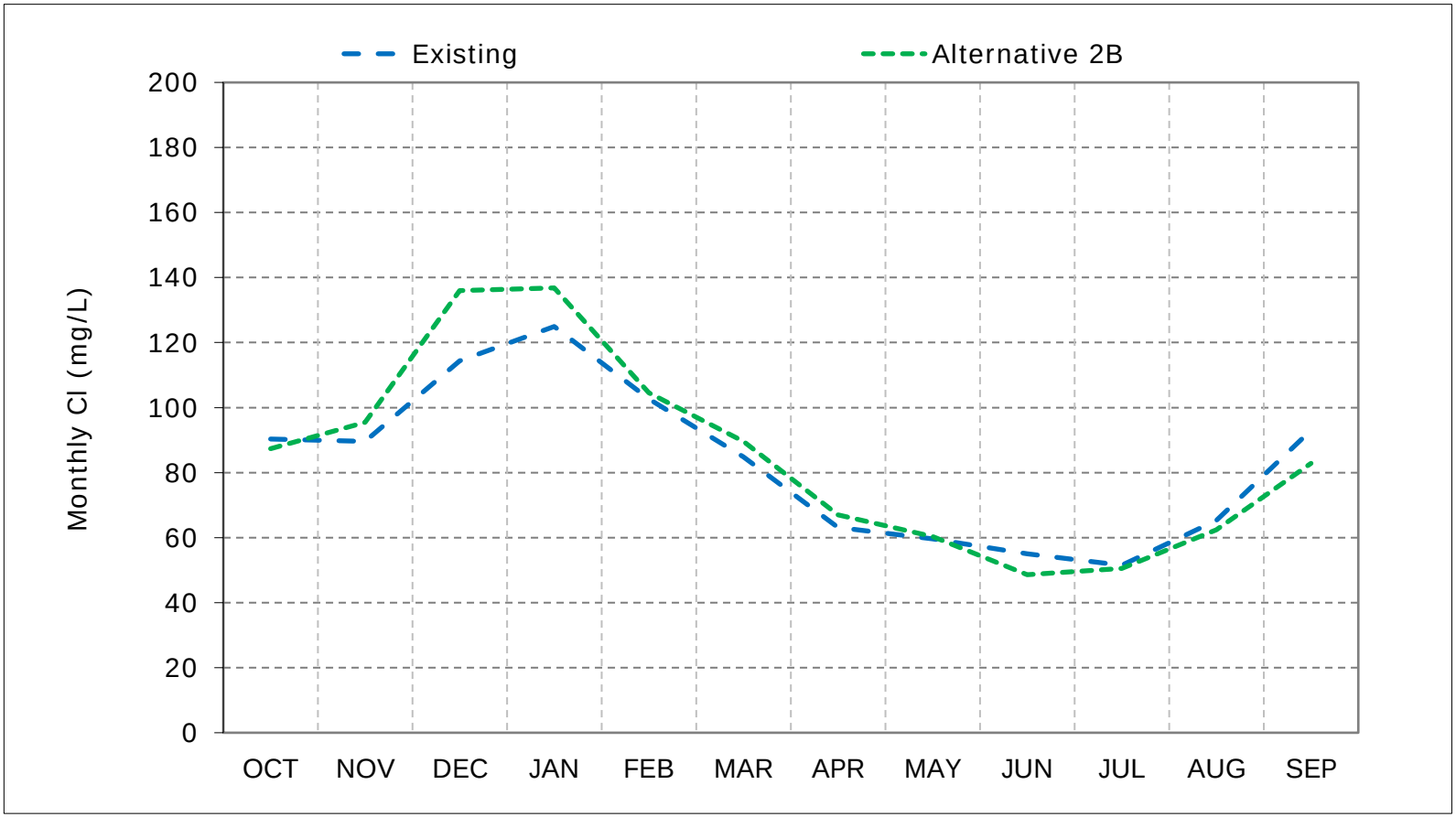
| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 137 | 136 | 169 | 191 | 159 | 138 | 116 | 94 | 61 | 67 | 104 | 130 |
| 20% | 128 | 126 | 161 | 182 | 144 | 123 | 99 | 86 | 55 | 59 | 80 | 121 |
| 30% | 123 | 120 | 157 | 167 | 131 | 115 | 87 | 76 | 50 | 57 | 72 | 111 |
| 40% | 118 | 116 | 151 | 158 | 122 | 104 | 70 | 62 | 49 | 51 | 68 | 102 |
| 50% | 113 | 109 | 148 | 138 | 111 | 95 | 61 | 56 | 46 | 46 | 62 | 93 |
| 60% | 48 | 75 | 143 | 125 | 99 | 76 | 52 | 52 | 46 | 43 | 46 | 54 |
| 70% | 44 | 69 | 130 | 108 | 81 | 54 | 47 | 50 | 43 | 40 | 41 | 52 |
| 80% | 42 | 62 | 106 | 99 | 63 | 43 | 37 | 42 | 41 | 37 | 40 | 47 |
| 90% | 41 | 52 | 83 | 72 | 46 | 34 | 25 | 21 | 37 | 32 | 35 | 43 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 87 | 95 | 136 | 137 | 105 | 90 | 67 | 60 | 49 | 51 | 62 | 83 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 73 | 82 | 112 | 98 | 65 | 50 | 35 | 36 | 45 | 43 | 38 | 44 |
| Above Normal (15%) | 97 | 103 | 140 | 141 | 106 | 69 | 51 | 50 | 47 | 43 | 42 | 51 |
| Below Normal (17%) | 88 | 98 | 142 | 149 | 99 | 88 | 64 | 58 | 46 | 45 | 70 | 123 |
| Dry (22%) | 88 | 98 | 149 | 156 | 134 | 121 | 88 | 79 | 45 | 53 | 83 | 105 |
| Critical (15%) | 106 | 110 | 158 | 173 | 150 | 150 | 123 | 97 | 66 | 78 | 95 | 118 |

### Alternative 2B minus Existing

| Statistic | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 2 | -3 | 1 | 19 | 15 | 12 | 21 | 12 | -6 | -1 | 1 | 10 |
| 20% | -2 | 4 | 4 | 17 | 6 | 5 | 10 | 9 | -5 | -1 | -2 | 6 |
| 30% | -3 | 1 | 8 | 25 | 5 | 8 | 6 | 3 | -7 | 0 | 1 | 3 |
| 40% | -2 | 3 | 14 | 25 | 4 | 3 | -4 | -8 | -7 | -3 | 0 | -4 |
| 50% | 2 | 2 | 44 | 14 | -2 | 5 | -4 | -6 | -8 | -2 | 1 | -4 |
| 60% | -8 | 10 | 52 | 10 | 0 | 8 | -5 | -6 | -7 | -3 | -9 | -34 |
| 70% | -8 | 17 | 50 | 2 | -3 | 1 | -1 | -3 | -8 | -2 | -7 | -28 |
| 80% | -5 | 16 | 33 | 0 | 0 | 1 | 0 | -3 | -7 | -1 | -6 | -26 |
| 90% | -3 | 9 | 11 | 0 | 1 | -1 | -1 | -1 | -7 | -1 | -8 | -22 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | -3 | 6 | 22 | 12 | 2 | 5 | 4 | 1 | -6 | -1 | -3 | -10 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | -3 | 9 | 18 | 4 | -1 | 2 | -2 | -3 | -3 | 0 | -7 | -31 |
| Above Normal (15%) | -4 | 8 | 27 | 16 | 1 | 1 | -6 | -7 | -7 | -1 | -7 | -19 |
| Below Normal (17%) | -5 | 5 | 21 | 13 | 0 | 6 | -3 | -6 | -8 | -2 | 1 | 10 |
| Dry (22%) | -2 | 3 | 25 | 21 | 5 | 10 | 8 | 6 | -9 | -2 | -1 | 2 |
| Critical (15%) | 0 | 2 | 19 | 9 | 6 | 6 | 29 | 17 | -7 | 1 | 2 | 2 |

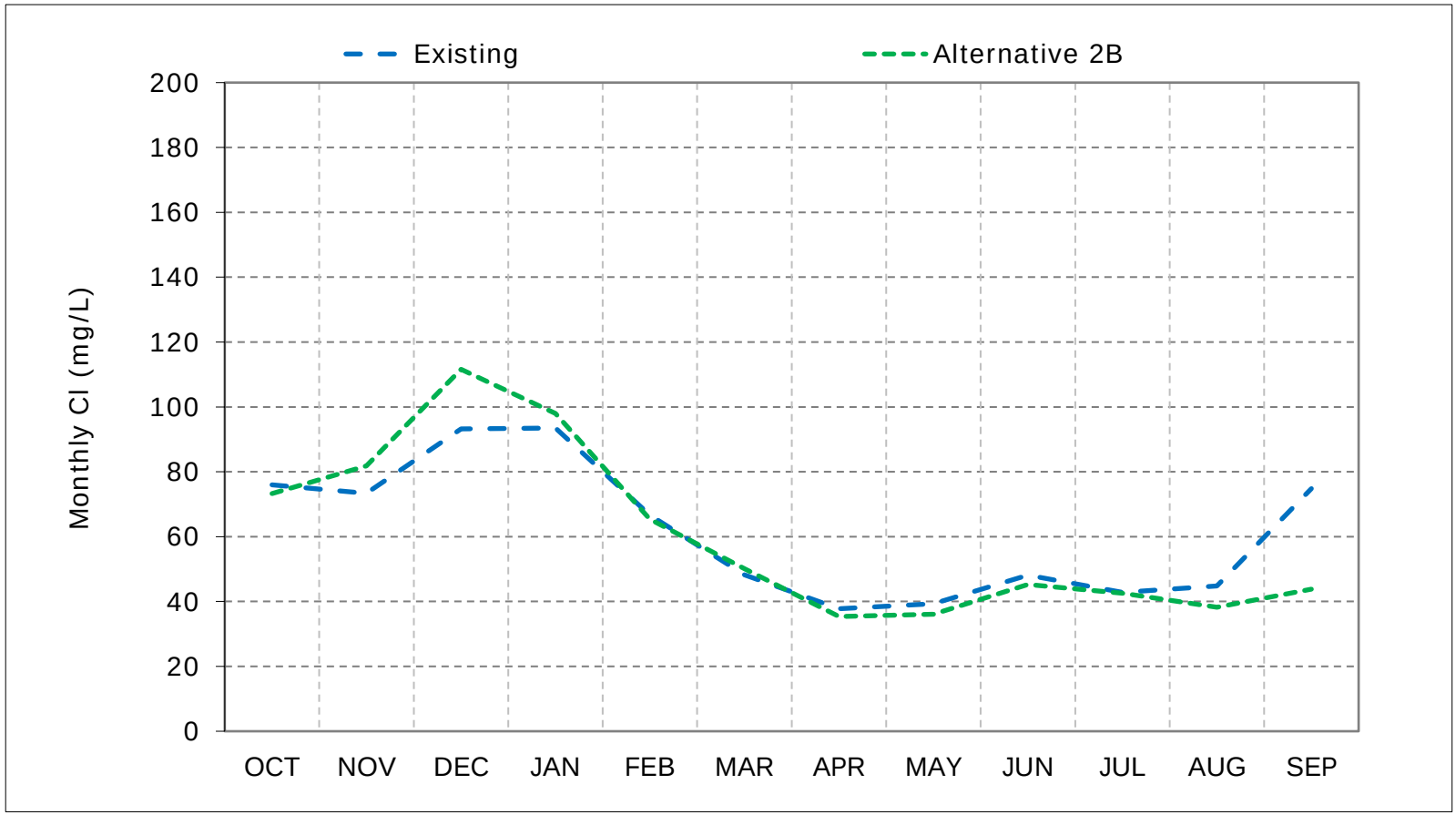
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 12-1. Jones Pumping Plant South Delta Exports Chloride, Long-Term Average C



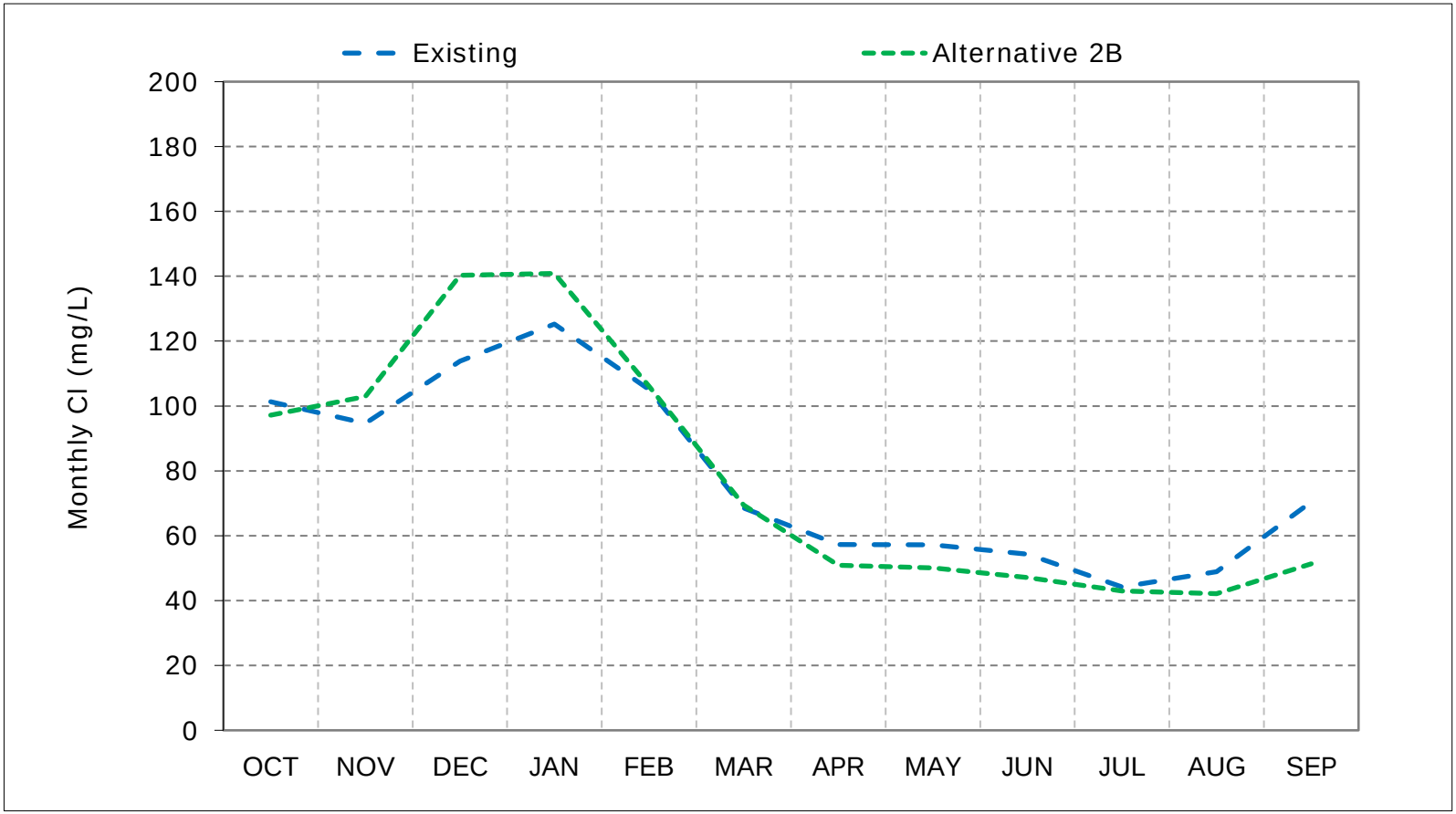

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-2. Jones Pumping Plant South Delta Exports Chloride, Wet Year Average C



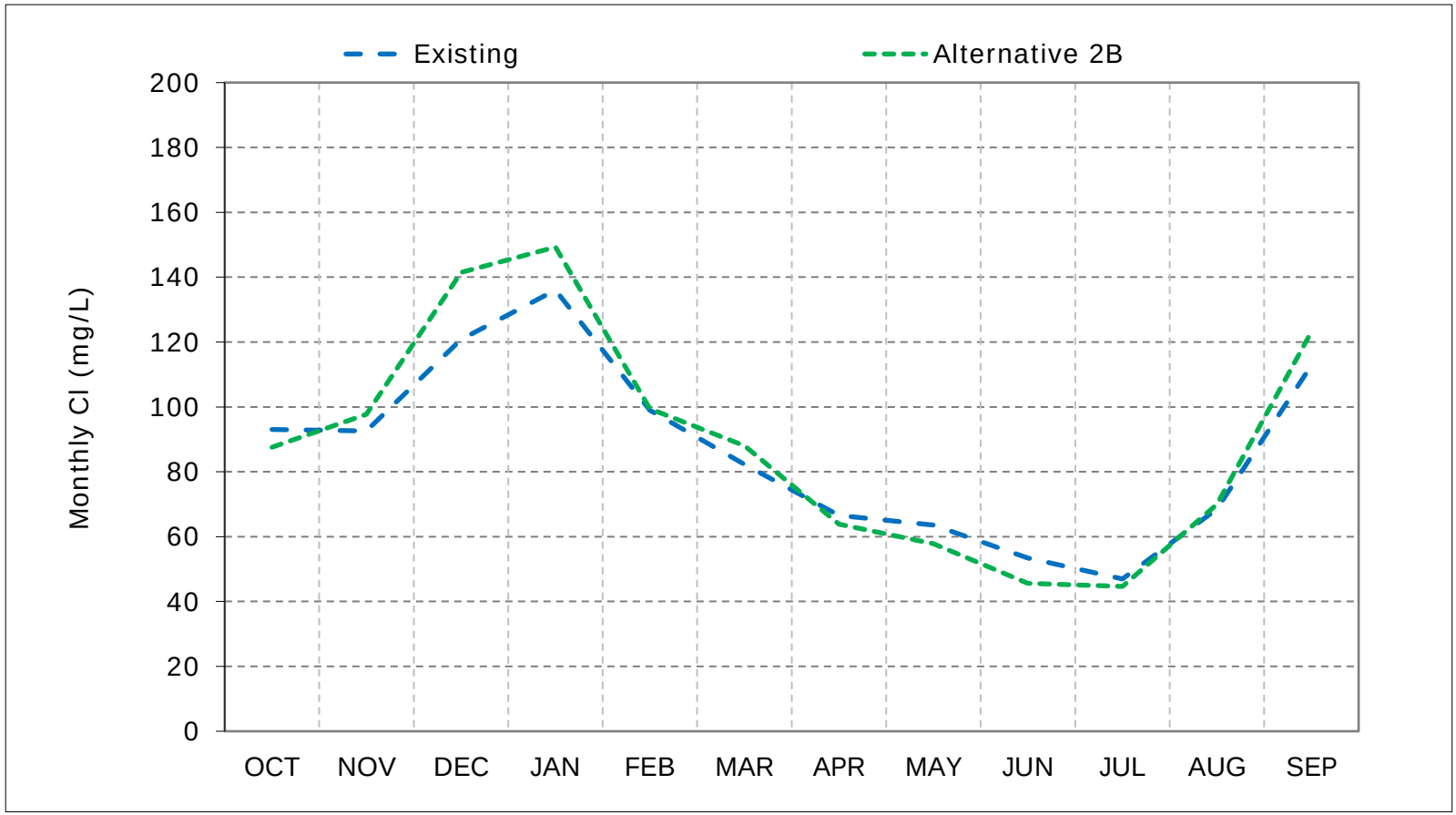

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-3. Jones Pumping Plant South Delta Exports Chloride, Above Normal Year



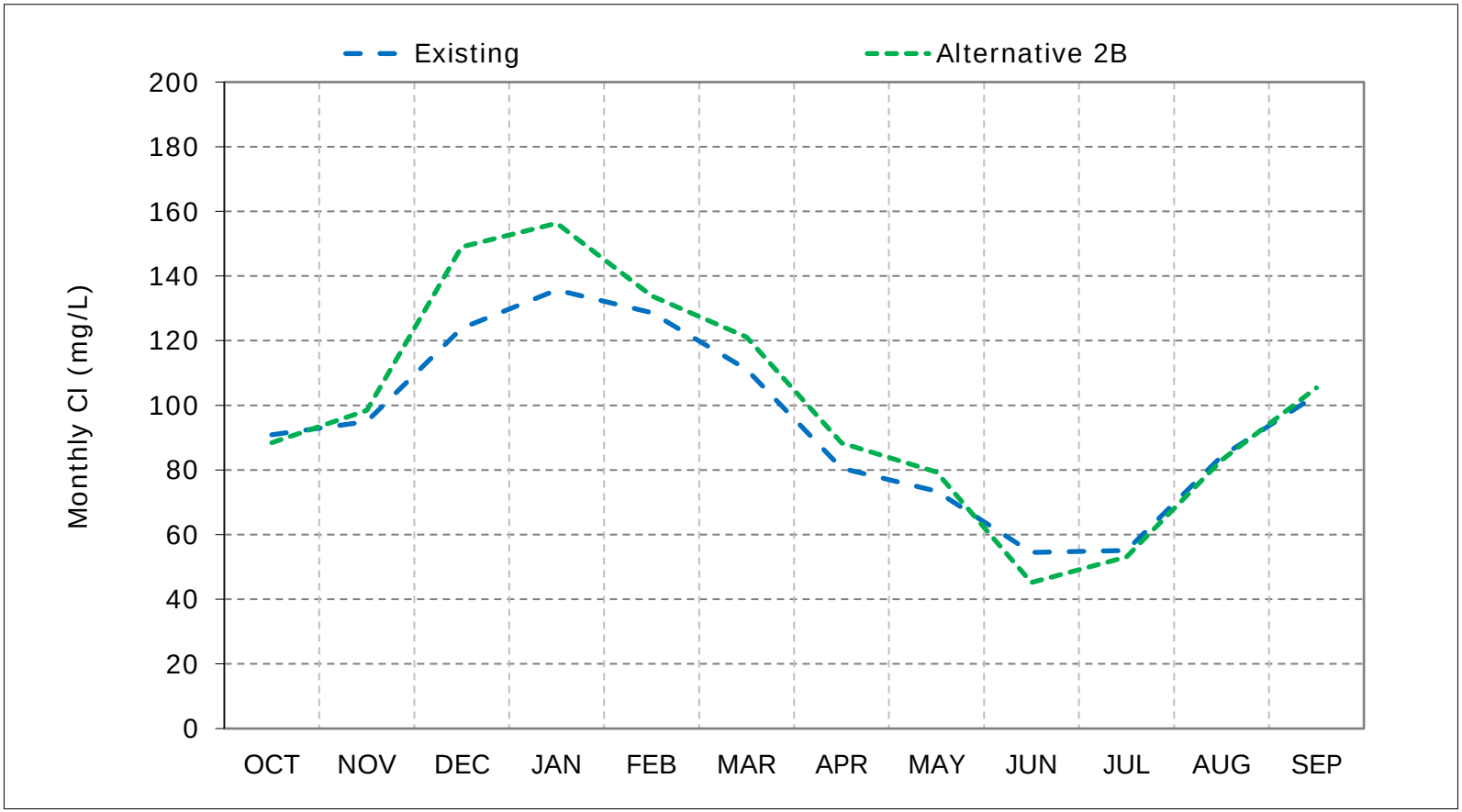

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-4. Jones Pumping Plant South Delta Exports Chloride, Below Normal Year



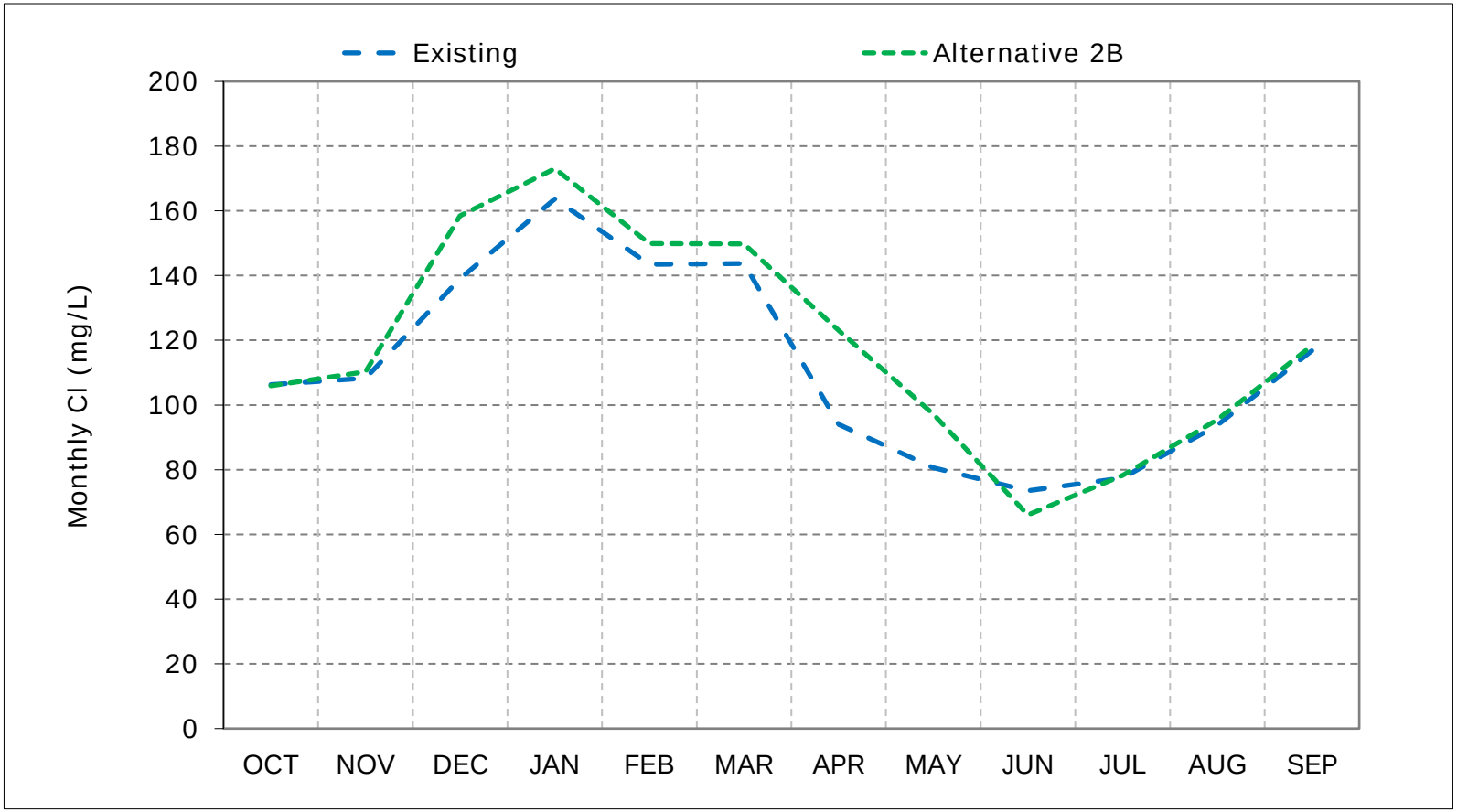

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-5. Jones Pumping Plant South Delta Exports Chloride, Dry Year Average C




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-6. Jones Pumping Plant South Delta Exports Chloride, Critical Year Average




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-7. Jones Pumping Plant South Delta Exports Chloride, January Cl

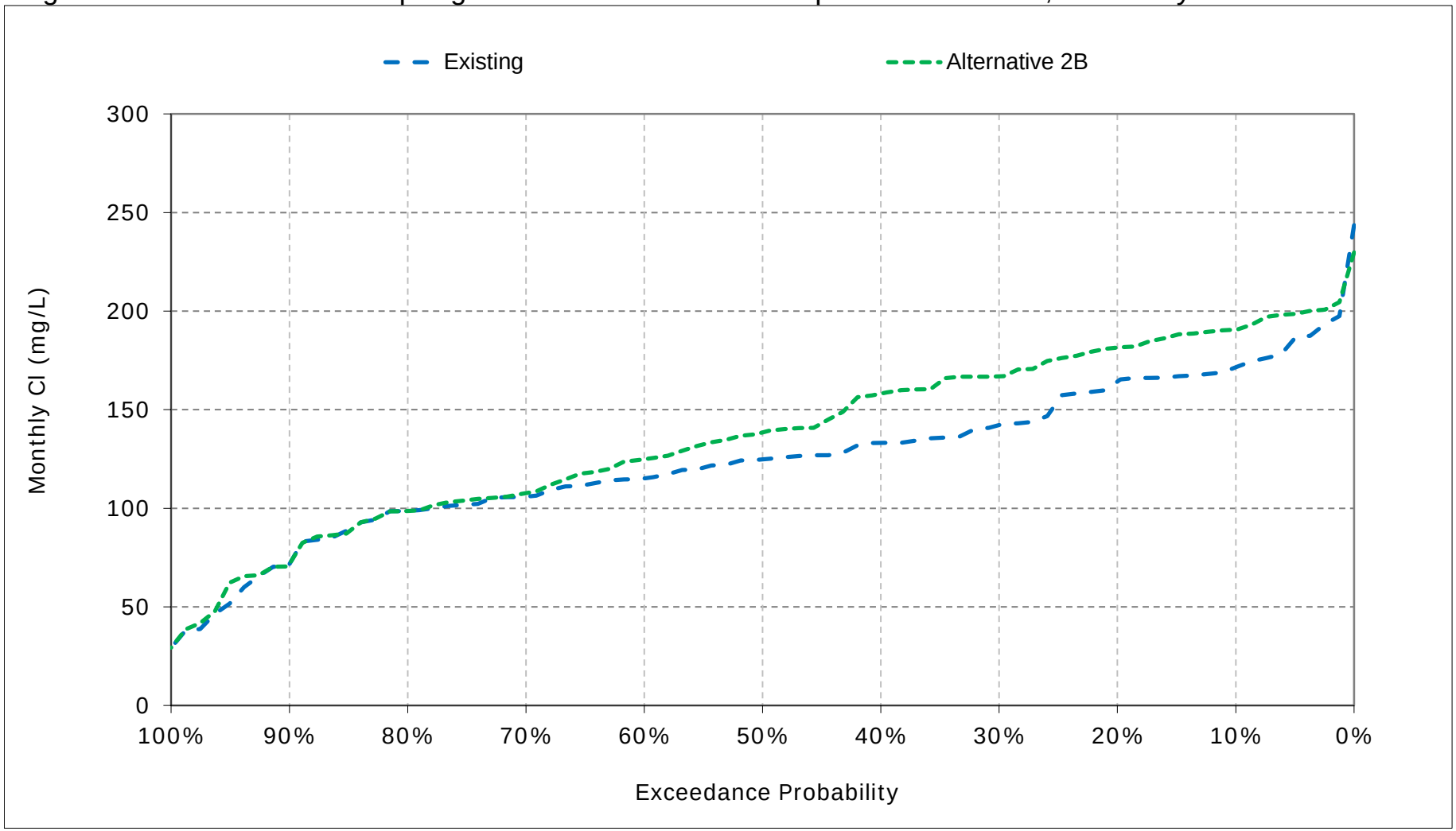


Figure 12-8. Jones Pumping Plant South Delta Exports Chloride, February Cl

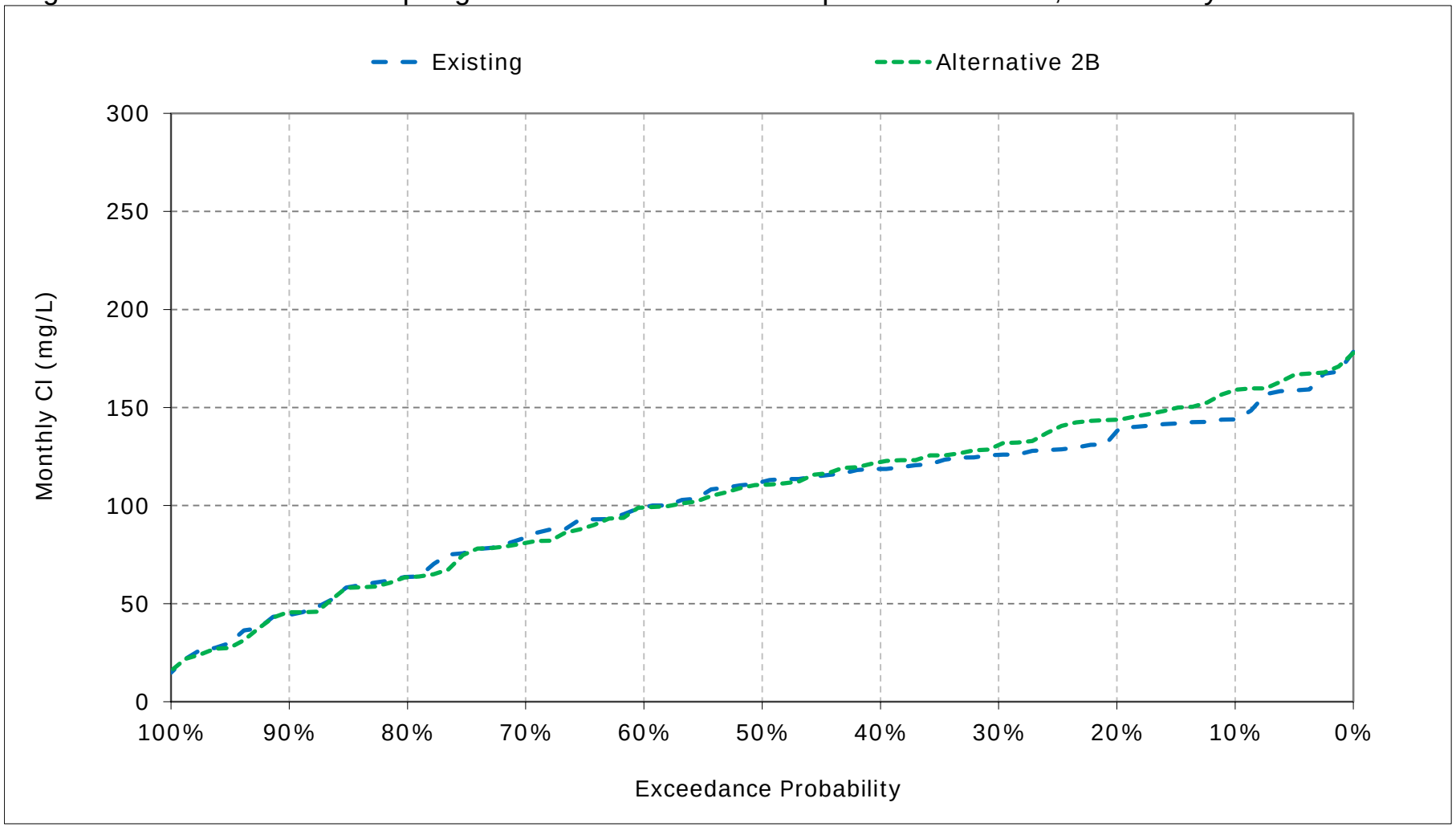


Figure 12-9. Jones Pumping Plant South Delta Exports Chloride, March Cl

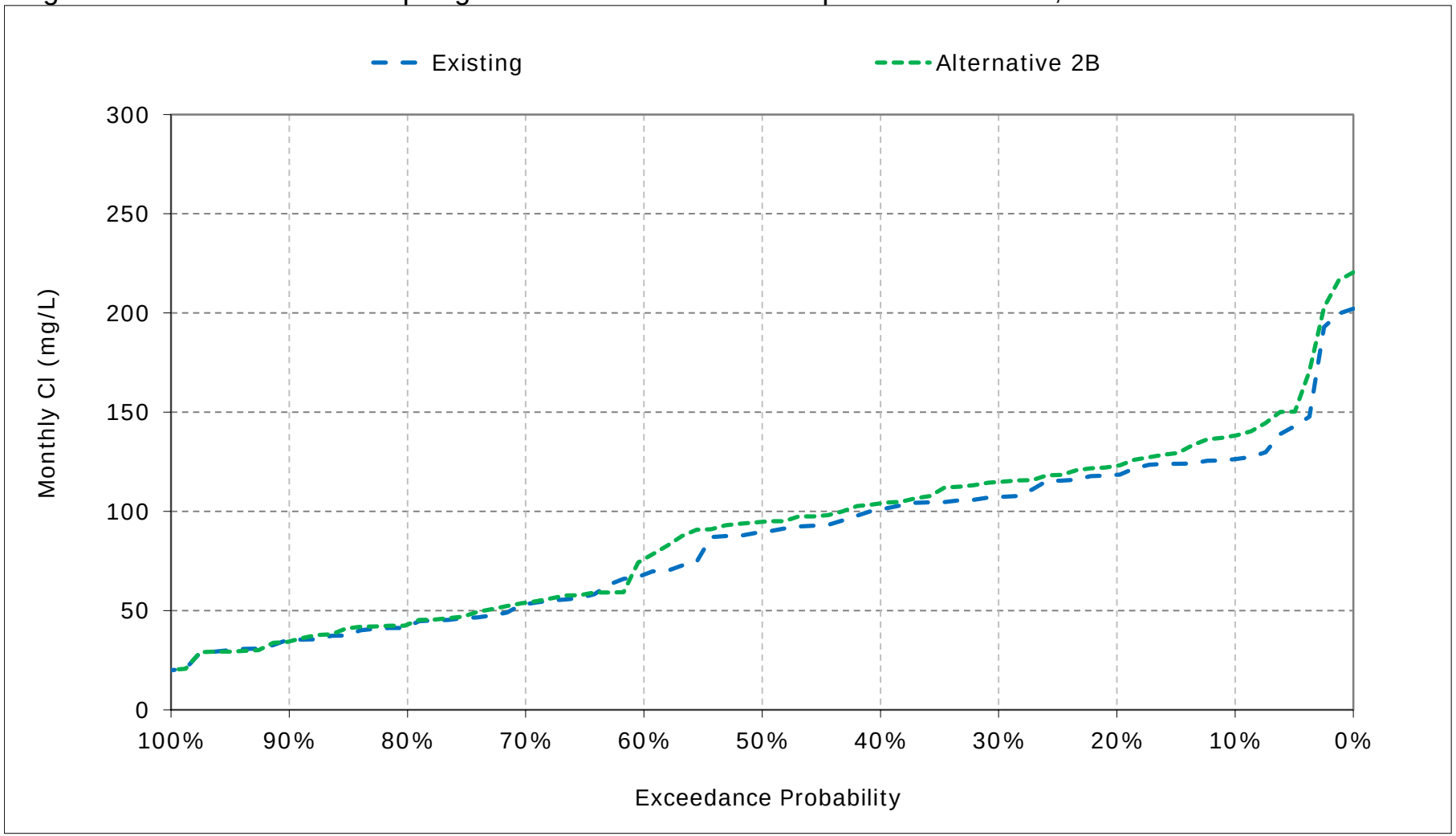


Figure 12-10. Jones Pumping Plant South Delta Exports Chloride, April Cl

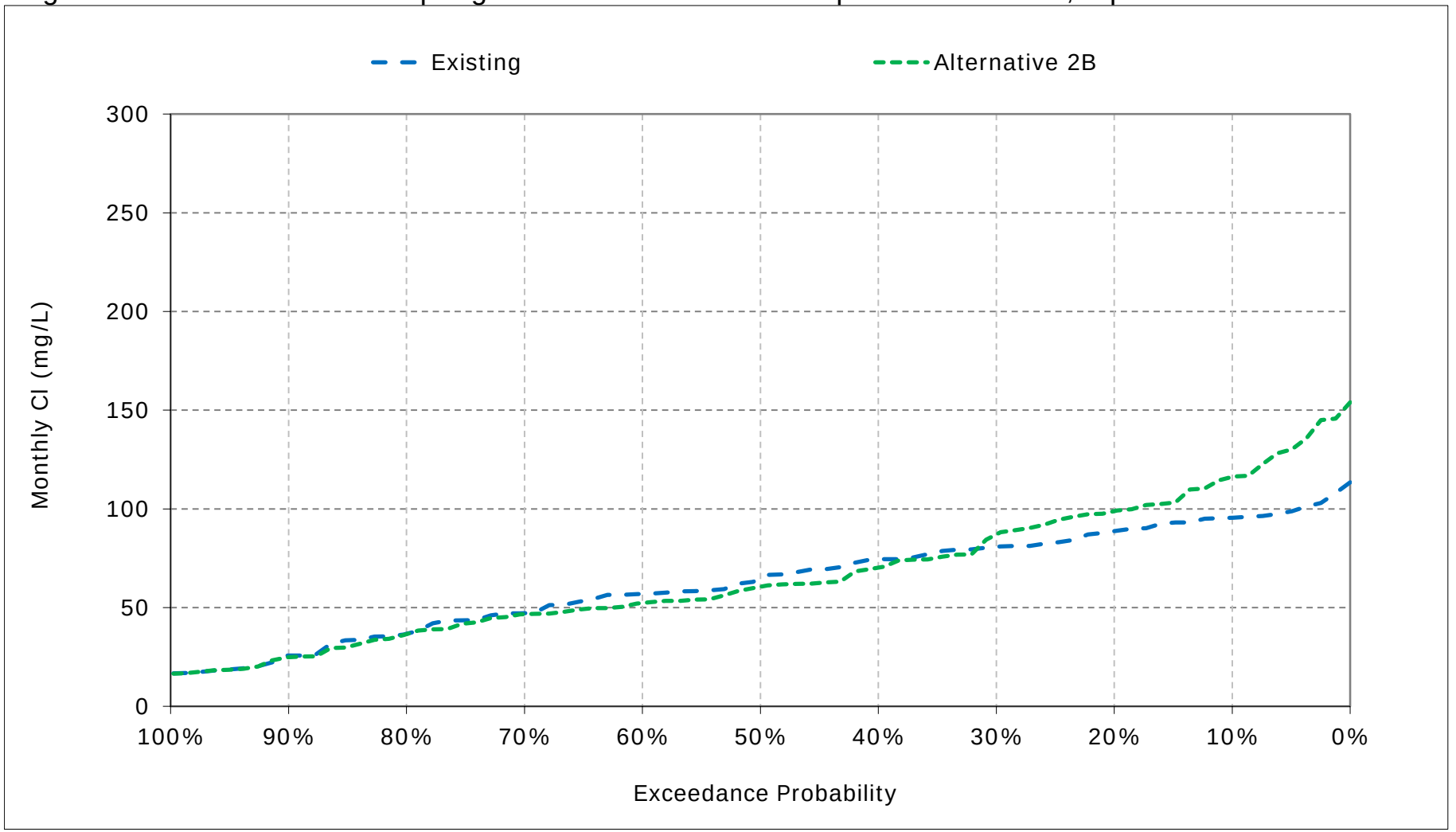


Figure 12-11. Jones Pumping Plant South Delta Exports Chloride, May Cl

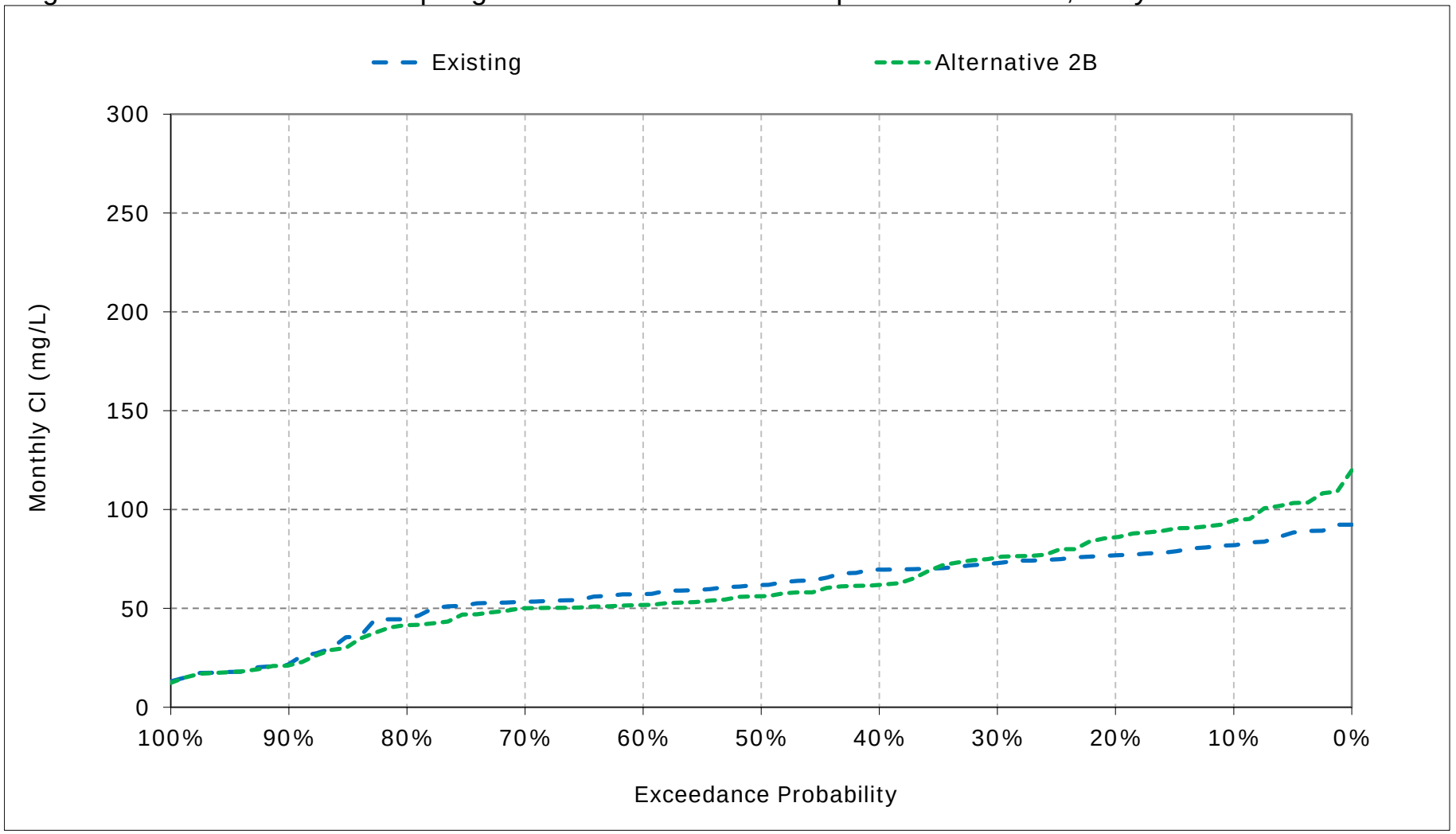


Figure 12-12. Jones Pumping Plant South Delta Exports Chloride, June Cl

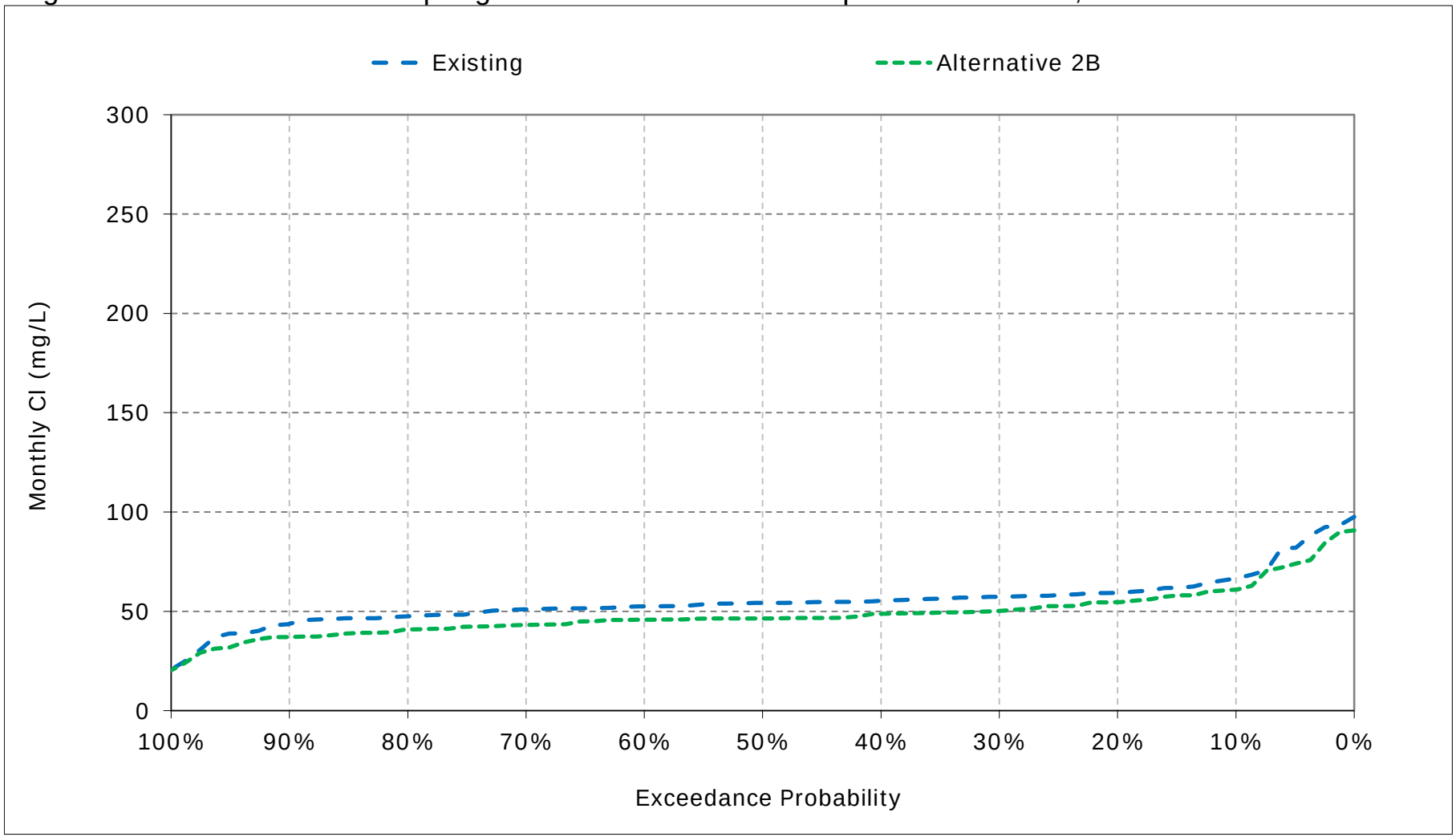


Figure 12-13. Jones Pumping Plant South Delta Exports Chloride, July Cl

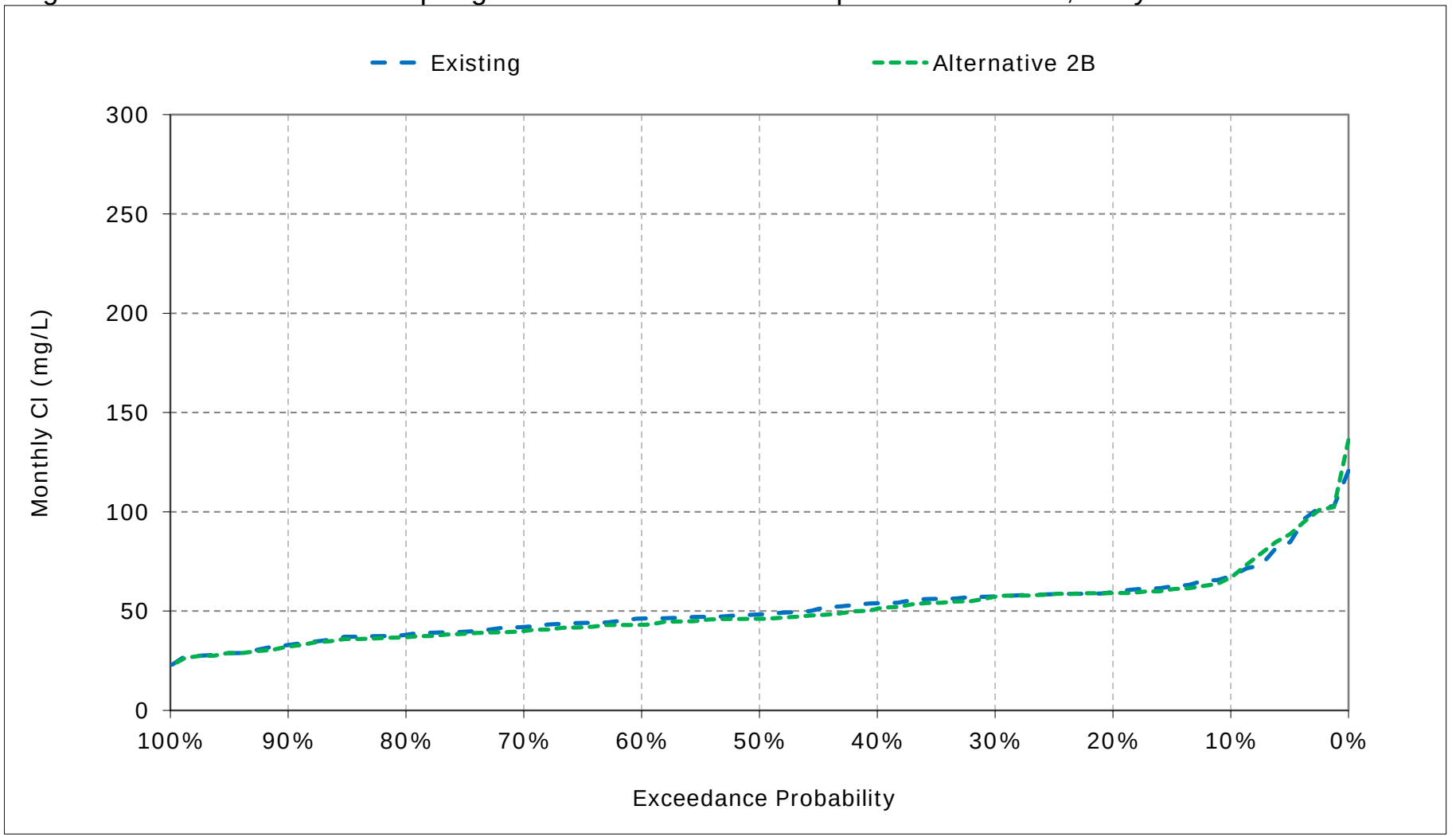


Figure 12-14. Jones Pumping Plant South Delta Exports Chloride, August Cl

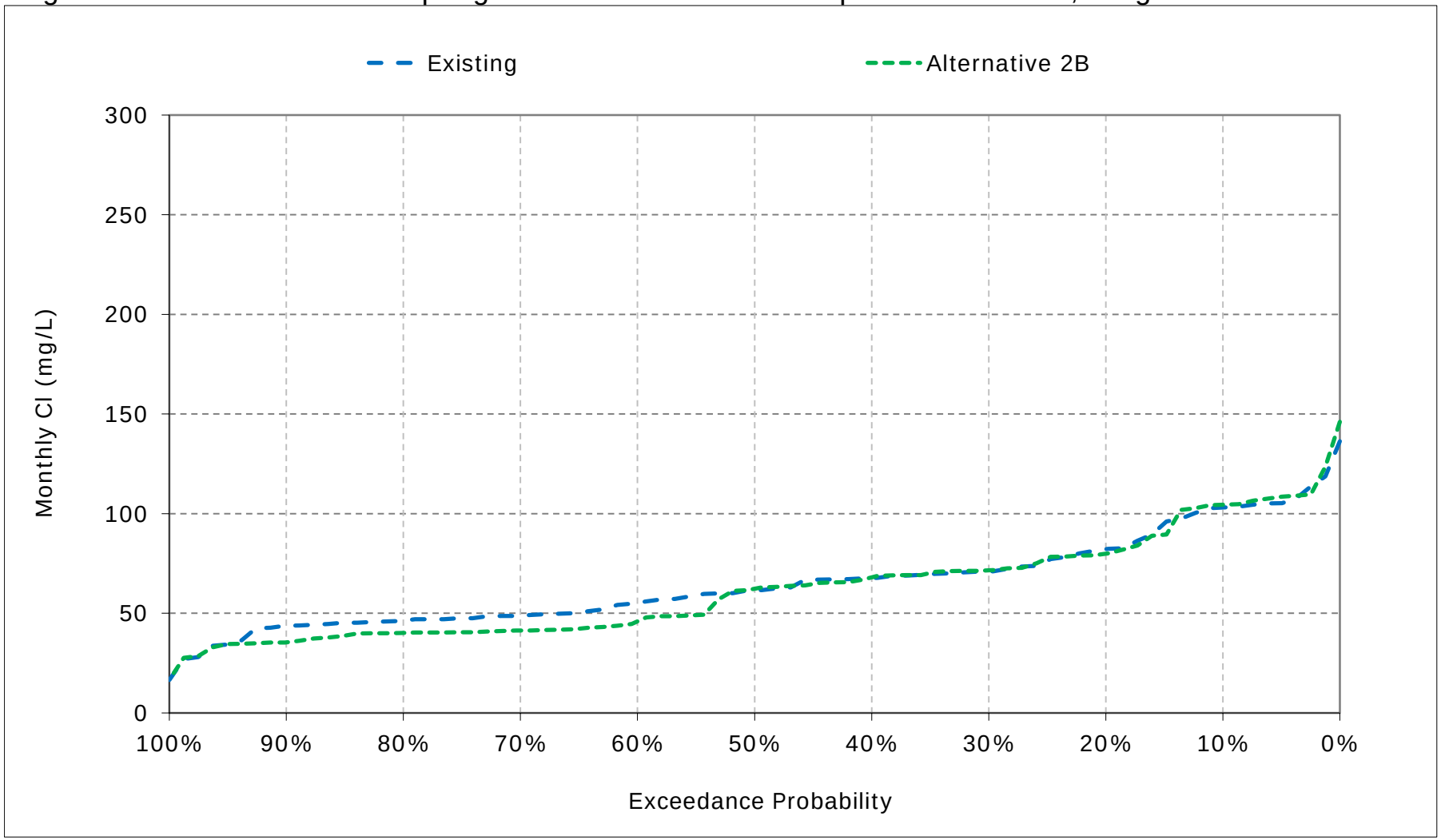


Figure 12-15. Jones Pumping Plant South Delta Exports Chloride, September Cl

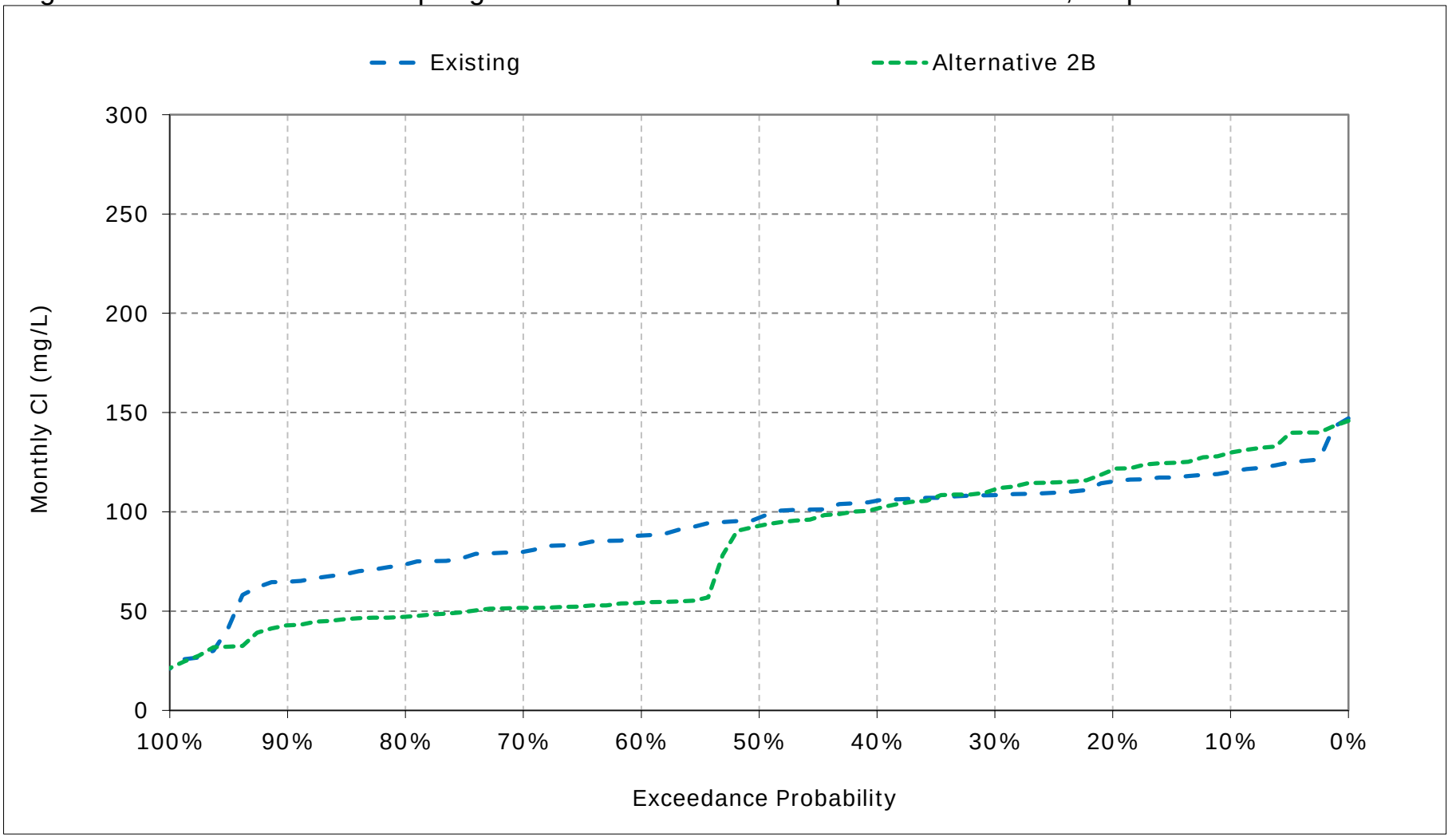


Figure 12-16. Jones Pumping Plant South Delta Exports Chloride, October Cl

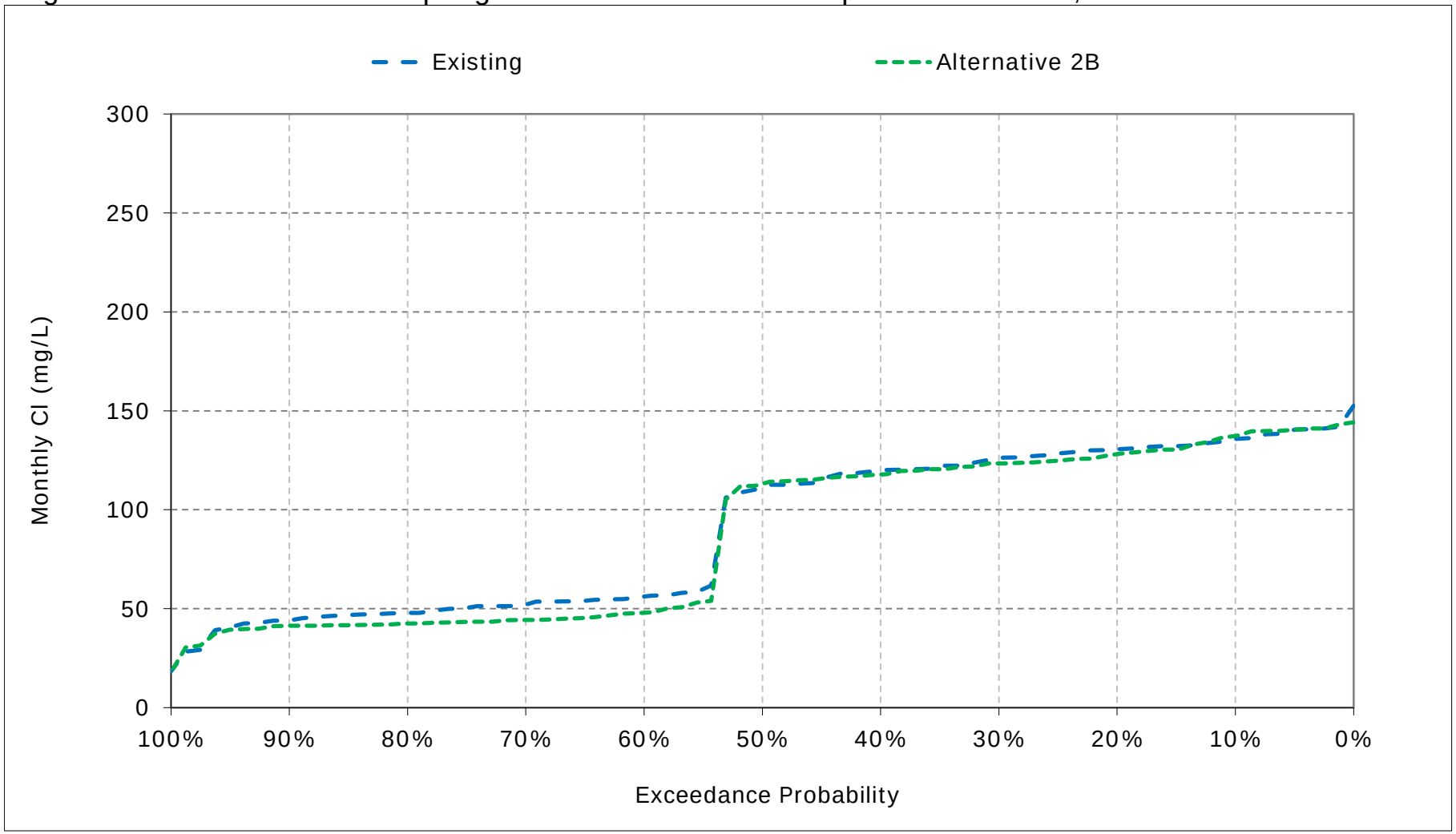


Figure 12-17. Jones Pumping Plant South Delta Exports Chloride, November Cl

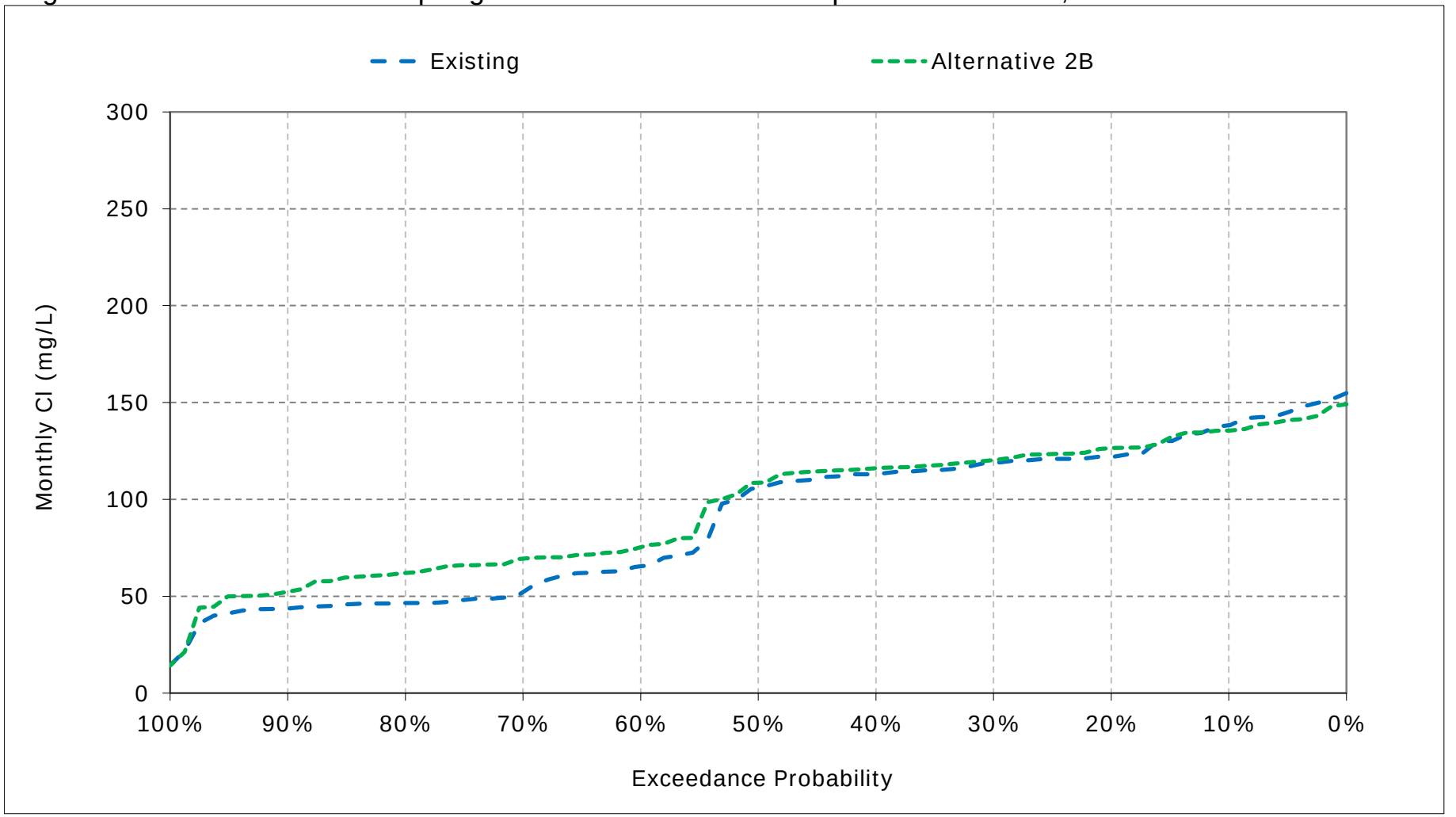
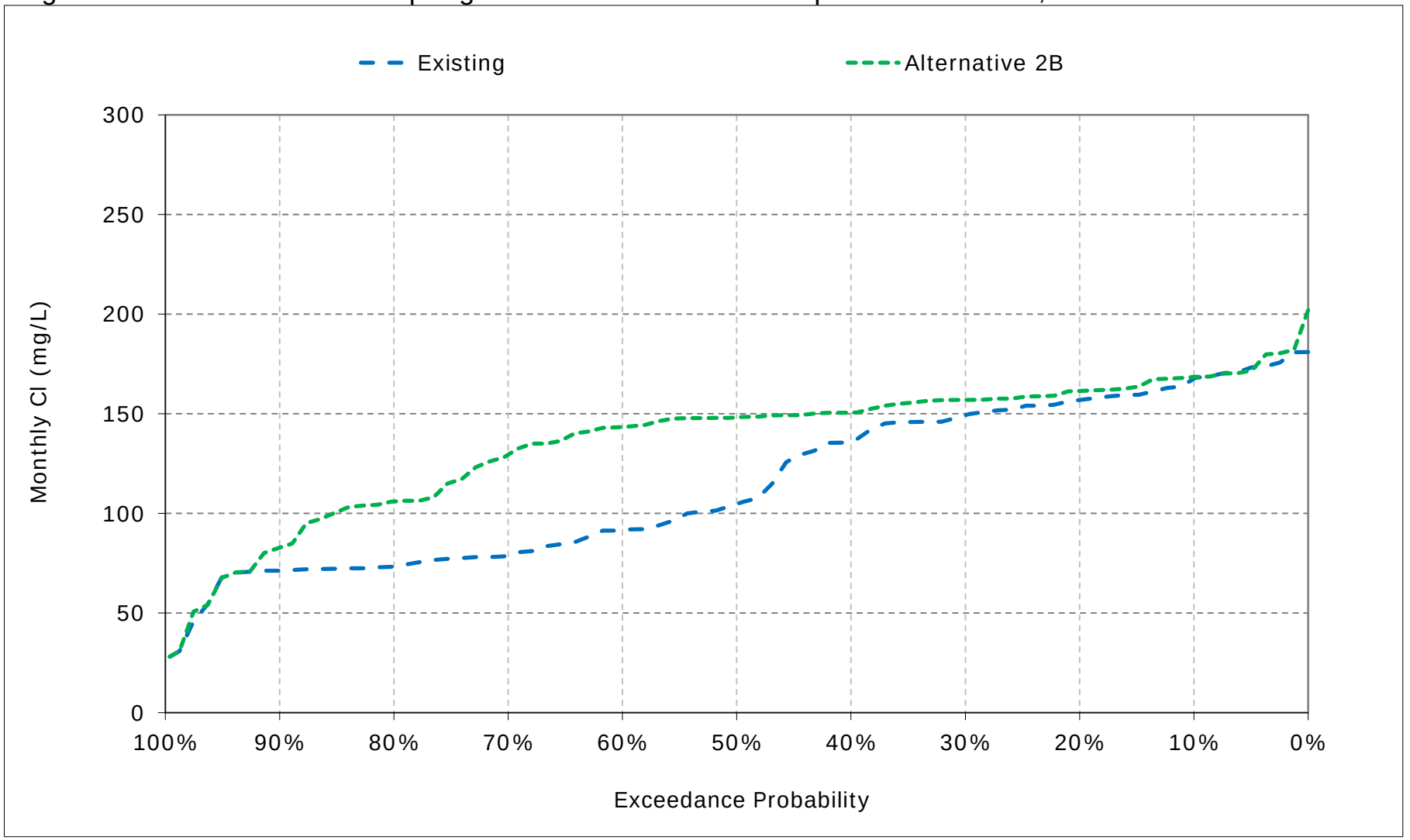


Figure 12-18. Jones Pumping Plant South Delta Exports Chloride, December Cl



## Table 13-1. Barker Slough at NBA Intake Chloride, Monthly Cl

### Existing

| | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 18 | 18 | 19 | 23 | 25 | 23 | 21 | 19 | 18 | 18 | 18 | 18 |
| 20% | 17 | 18 | 18 | 22 | 24 | 22 | 20 | 18 | 17 | 17 | 17 | 17 |
| 30% | 17 | 17 | 18 | 21 | 23 | 21 | 19 | 18 | 17 | 17 | 16 | 17 |
| 40% | 17 | 17 | 18 | 20 | 22 | 21 | 19 | 18 | 17 | 16 | 16 | 16 |
| 50% | 16 | 17 | 17 | 19 | 21 | 20 | 19 | 17 | 17 | 16 | 16 | 16 |
| 60% | 16 | 17 | 17 | 19 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 16 |
| 70% | 16 | 16 | 17 | 18 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 16 |
| 80% | 16 | 16 | 17 | 18 | 19 | 18 | 17 | 17 | 16 | 16 | 16 | 16 |
| 90% | 16 | 16 | 16 | 18 | 19 | 18 | 17 | 16 | 16 | 16 | 16 | 16 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 17 | 17 | 18 | 20 | 22 | 20 | 19 | 18 | 17 | 17 | 16 | 17 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 16 | 17 | 18 | 21 | 22 | 20 | 18 | 17 | 16 | 16 | 16 | 16 |
| Above Normal (15%) | 17 | 17 | 18 | 21 | 22 | 20 | 18 | 17 | 17 | 16 | 16 | 16 |
| Below Normal (17%) | 17 | 17 | 18 | 20 | 22 | 21 | 19 | 17 | 17 | 16 | 16 | 16 |
| Dry (22%) | 17 | 17 | 18 | 20 | 22 | 21 | 20 | 18 | 17 | 17 | 16 | 17 |
| Critical (15%) | 17 | 17 | 17 | 19 | 21 | 21 | 21 | 21 | 20 | 18 | 18 | 18 |

### Alternative 2B

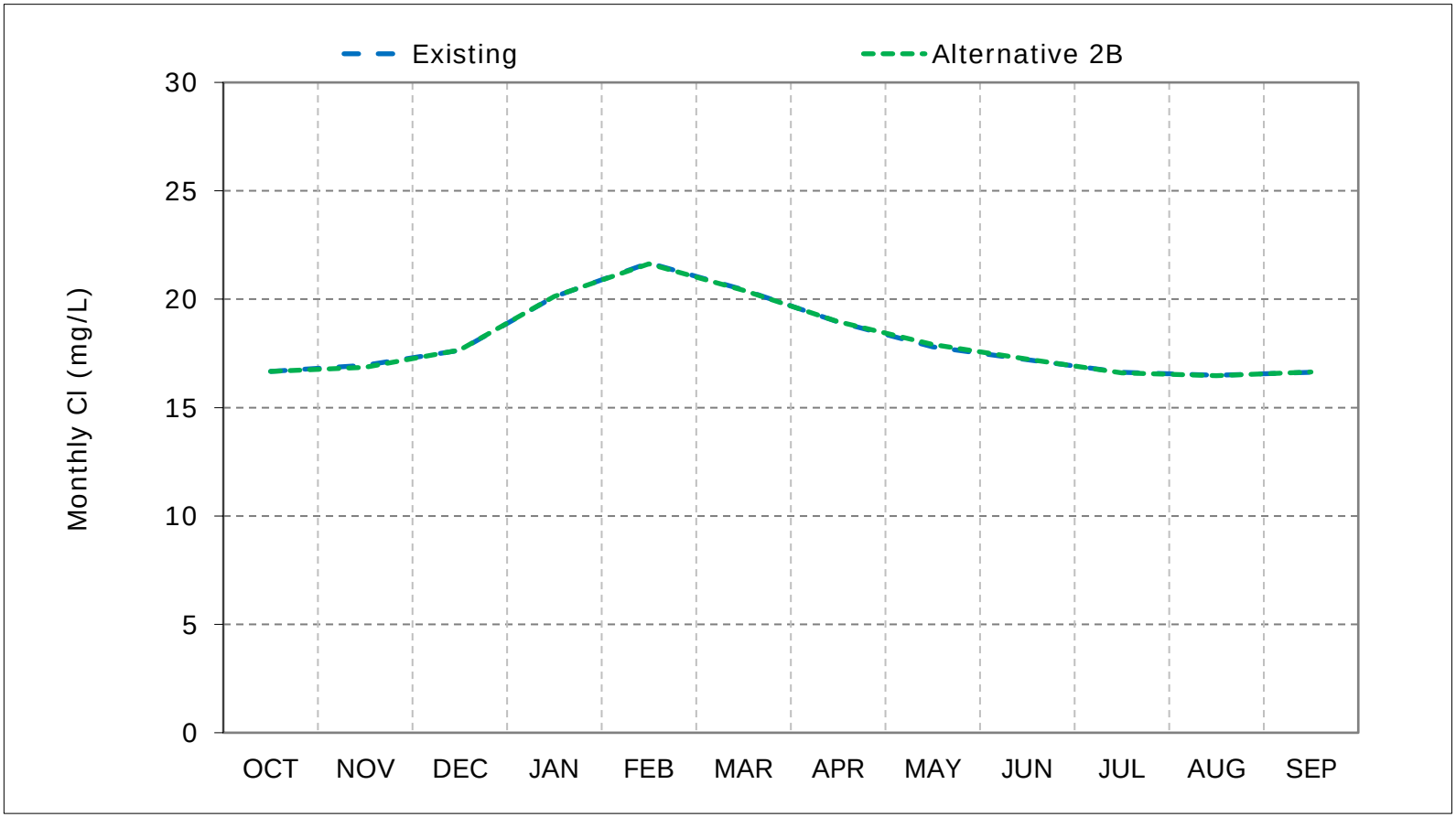
| | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 18 | 18 | 19 | 23 | 25 | 23 | 22 | 20 | 19 | 18 | 18 | 18 |
| 20% | 17 | 18 | 18 | 22 | 24 | 23 | 20 | 19 | 17 | 17 | 17 | 17 |
| 30% | 17 | 17 | 18 | 21 | 23 | 21 | 19 | 18 | 17 | 17 | 16 | 17 |
| 40% | 17 | 17 | 18 | 20 | 22 | 20 | 19 | 18 | 17 | 16 | 16 | 17 |
| 50% | 16 | 17 | 17 | 19 | 21 | 20 | 19 | 17 | 17 | 16 | 16 | 16 |
| 60% | 16 | 16 | 17 | 19 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 16 |
| 70% | 16 | 16 | 17 | 18 | 20 | 19 | 18 | 17 | 17 | 16 | 16 | 16 |
| 80% | 16 | 16 | 16 | 18 | 19 | 18 | 17 | 17 | 16 | 16 | 16 | 16 |
| 90% | 16 | 16 | 16 | 18 | 19 | 18 | 17 | 16 | 16 | 16 | 16 | 16 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 17 | 17 | 18 | 20 | 22 | 20 | 19 | 18 | 17 | 17 | 16 | 17 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 16 | 17 | 18 | 21 | 22 | 20 | 18 | 17 | 16 | 16 | 16 | 16 |
| Above Normal (15%) | 16 | 17 | 18 | 21 | 22 | 20 | 18 | 17 | 17 | 16 | 16 | 16 |
| Below Normal (17%) | 17 | 17 | 18 | 20 | 22 | 20 | 19 | 17 | 17 | 16 | 16 | 16 |
| Dry (22%) | 17 | 17 | 18 | 20 | 22 | 21 | 20 | 18 | 17 | 17 | 16 | 17 |
| Critical (15%) | 17 | 17 | 17 | 19 | 21 | 21 | 21 | 21 | 20 | 18 | 18 | 18 |

### Alternative 2B minus Existing

| | Monthly Cl (mg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Statistic | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| Probability of Exceedance | | | | | | | | | | | | |
| 10% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 20% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Long Term | | | | | | | | | | | | |
| Full Simulation Period[a] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Water Year Types[b] | | | | | | | | | | | | |
| Wet (32%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Above Normal (15%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Below Normal (17%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dry (22%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical (15%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |

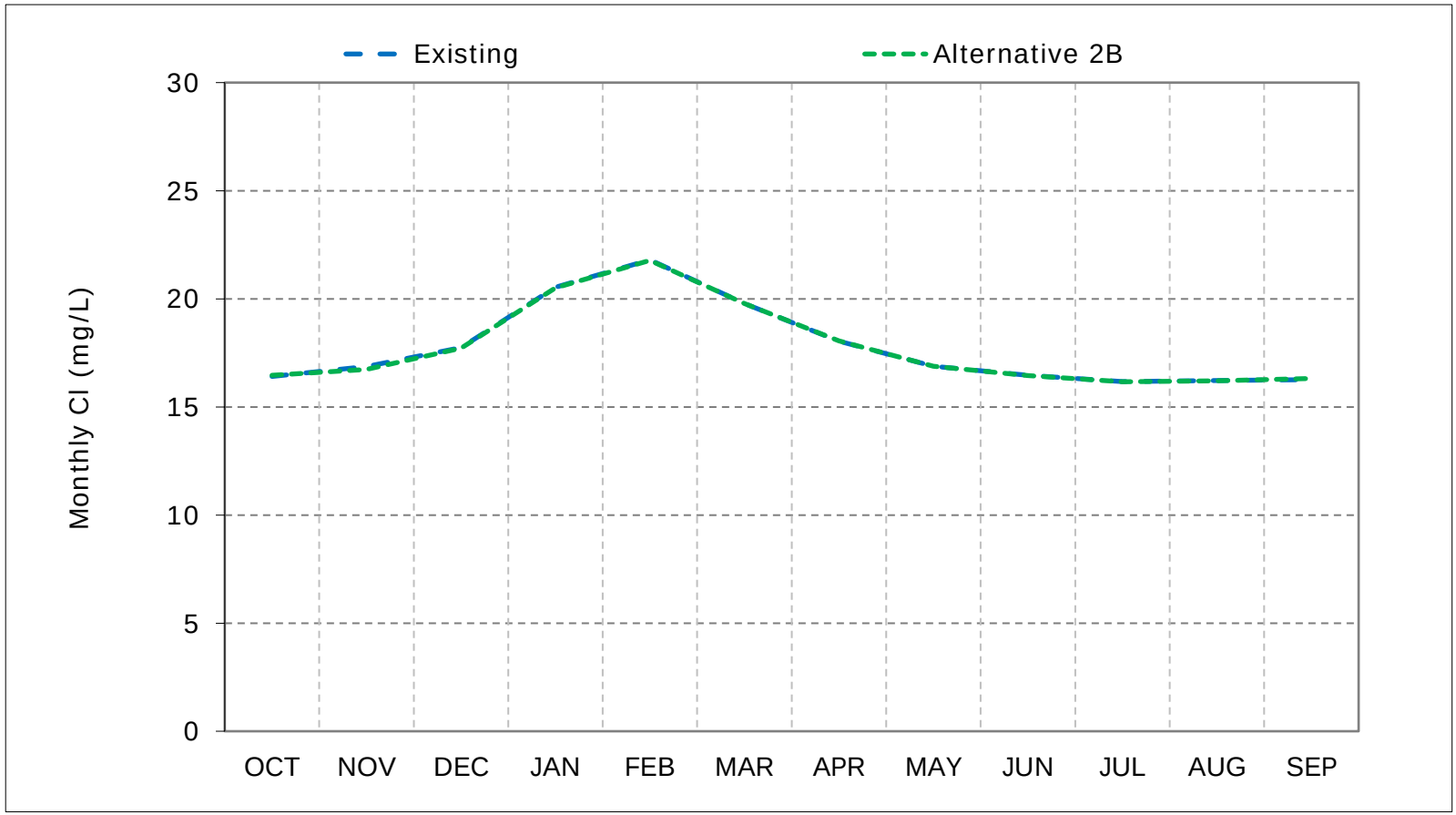
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Chloride (Cl).

Figure 13-1. Barker Slough at NBA Intake Chloride, Long-Term Average Cl



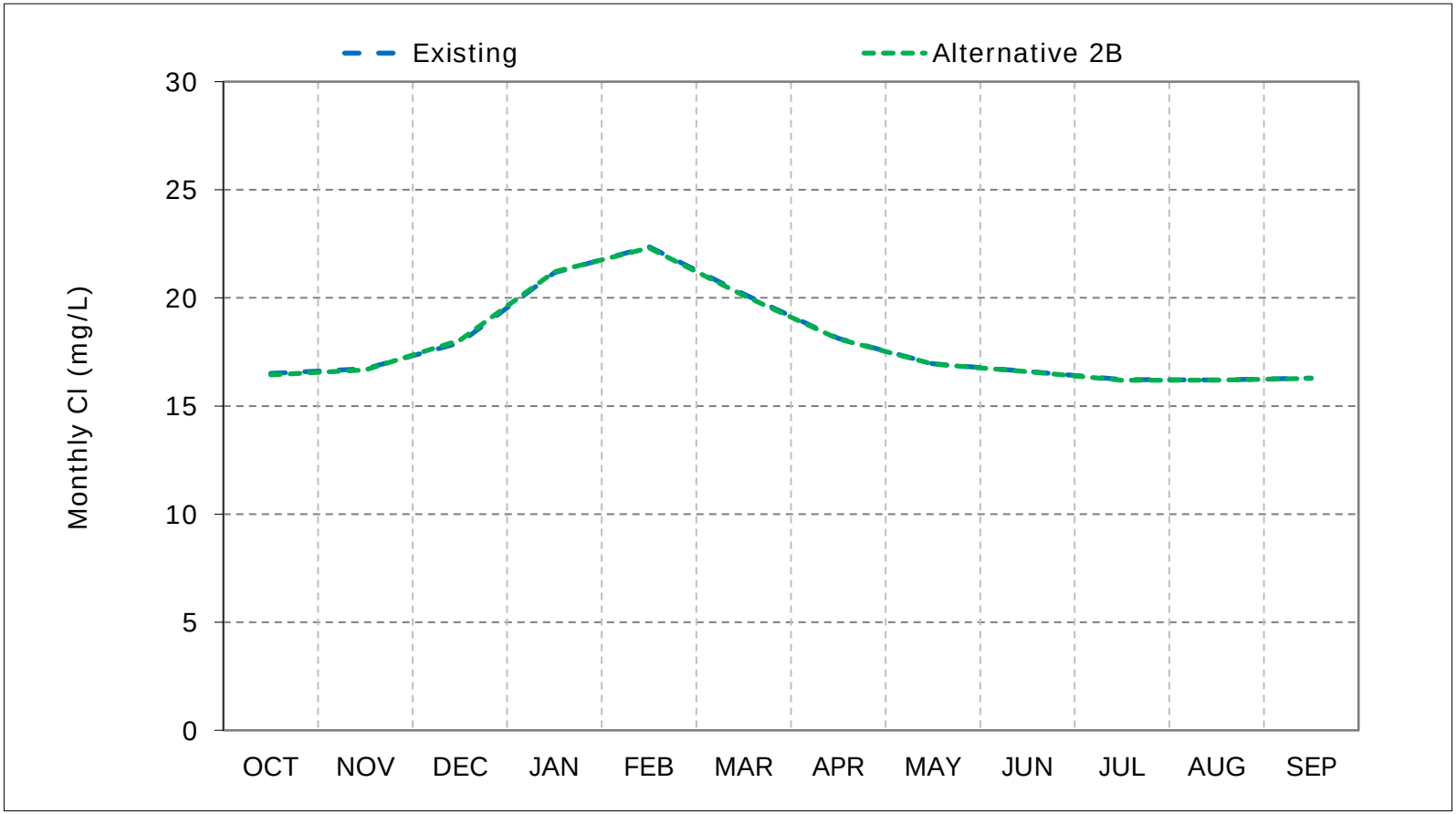

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-2. Barker Slough at NBA Intake Chloride, Wet Year Average Cl



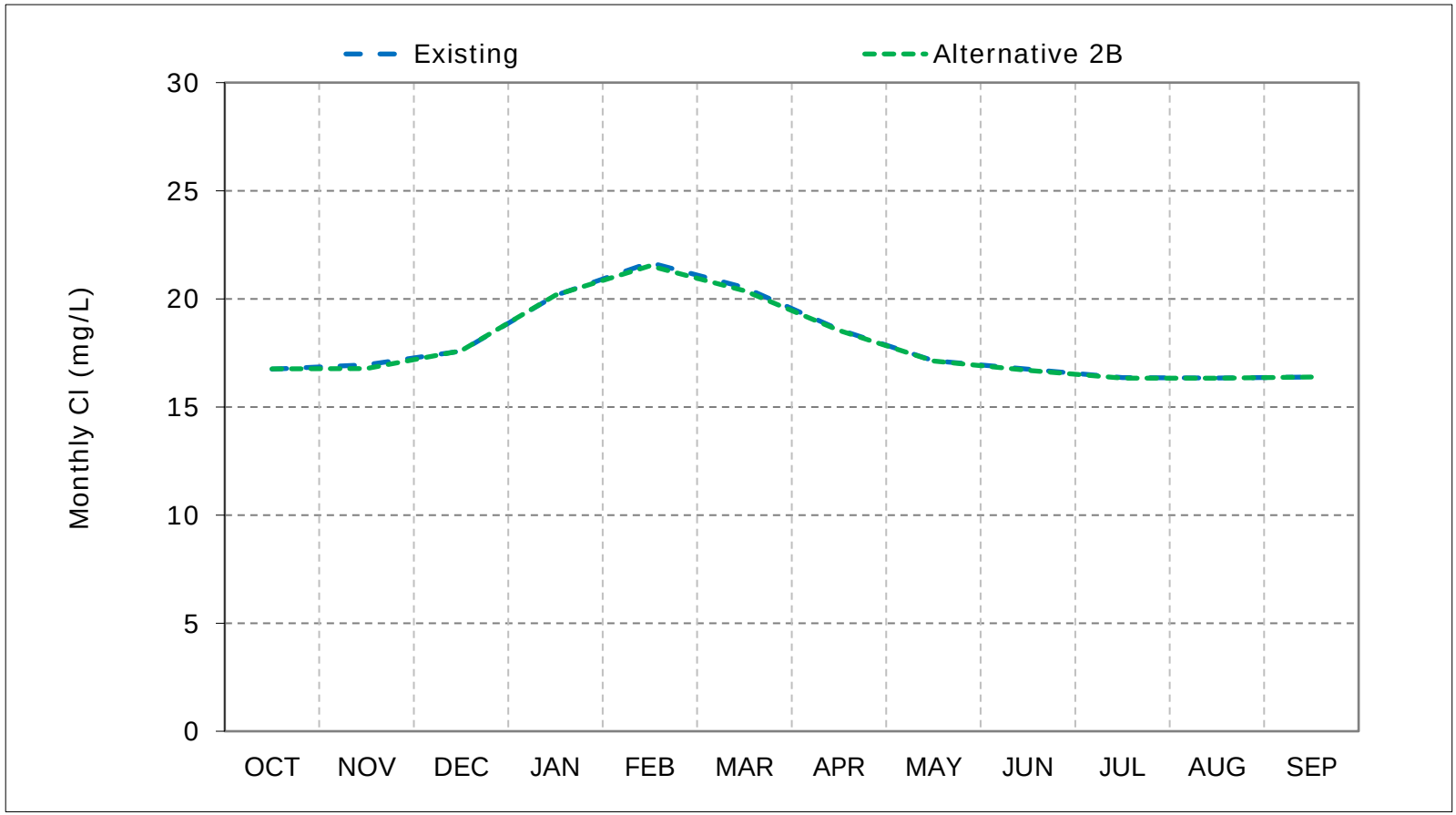

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-3. Barker Slough at NBA Intake Chloride, Above Normal Year Average Cl



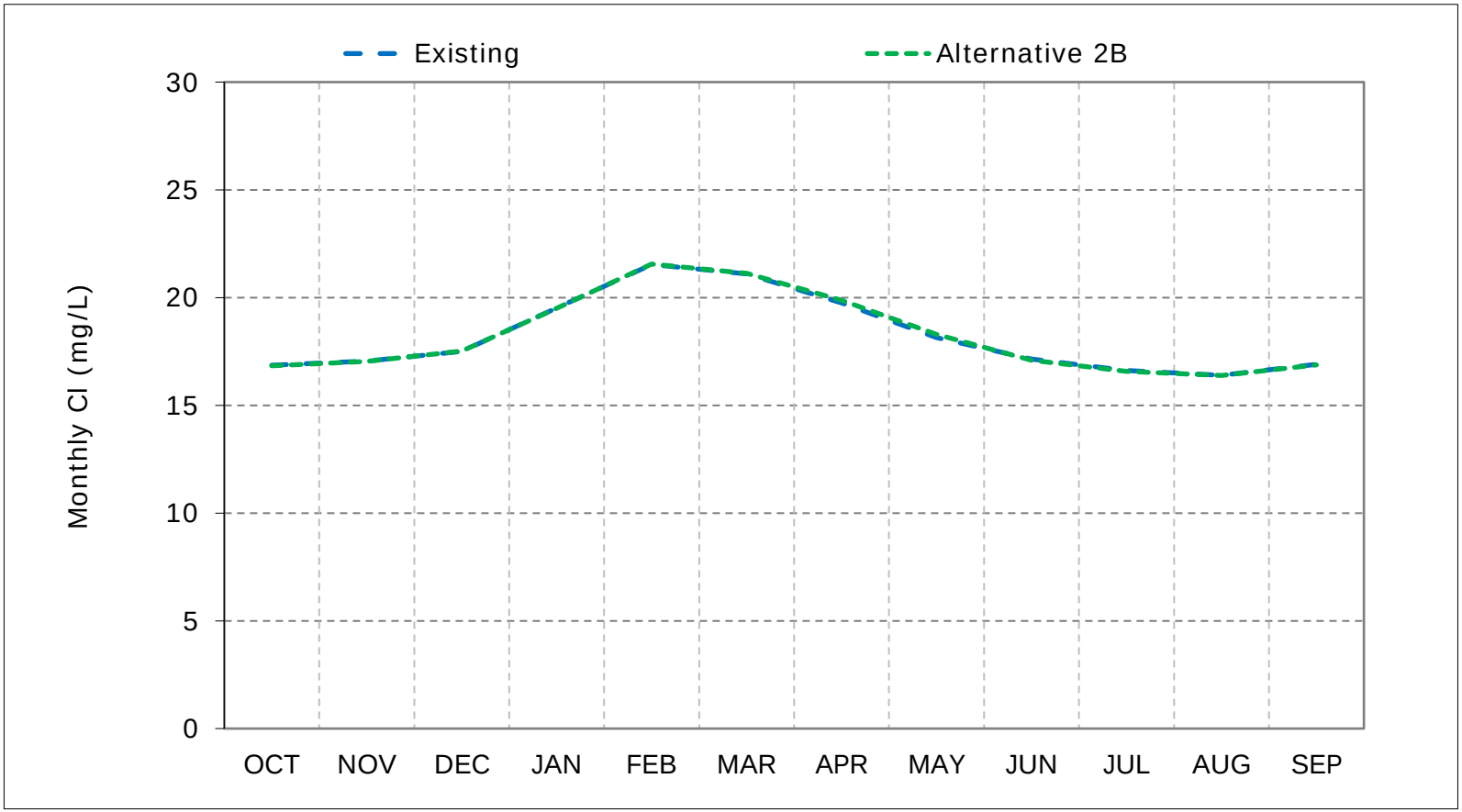

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-4. Barker Slough at NBA Intake Chloride, Below Normal Year Average Cl



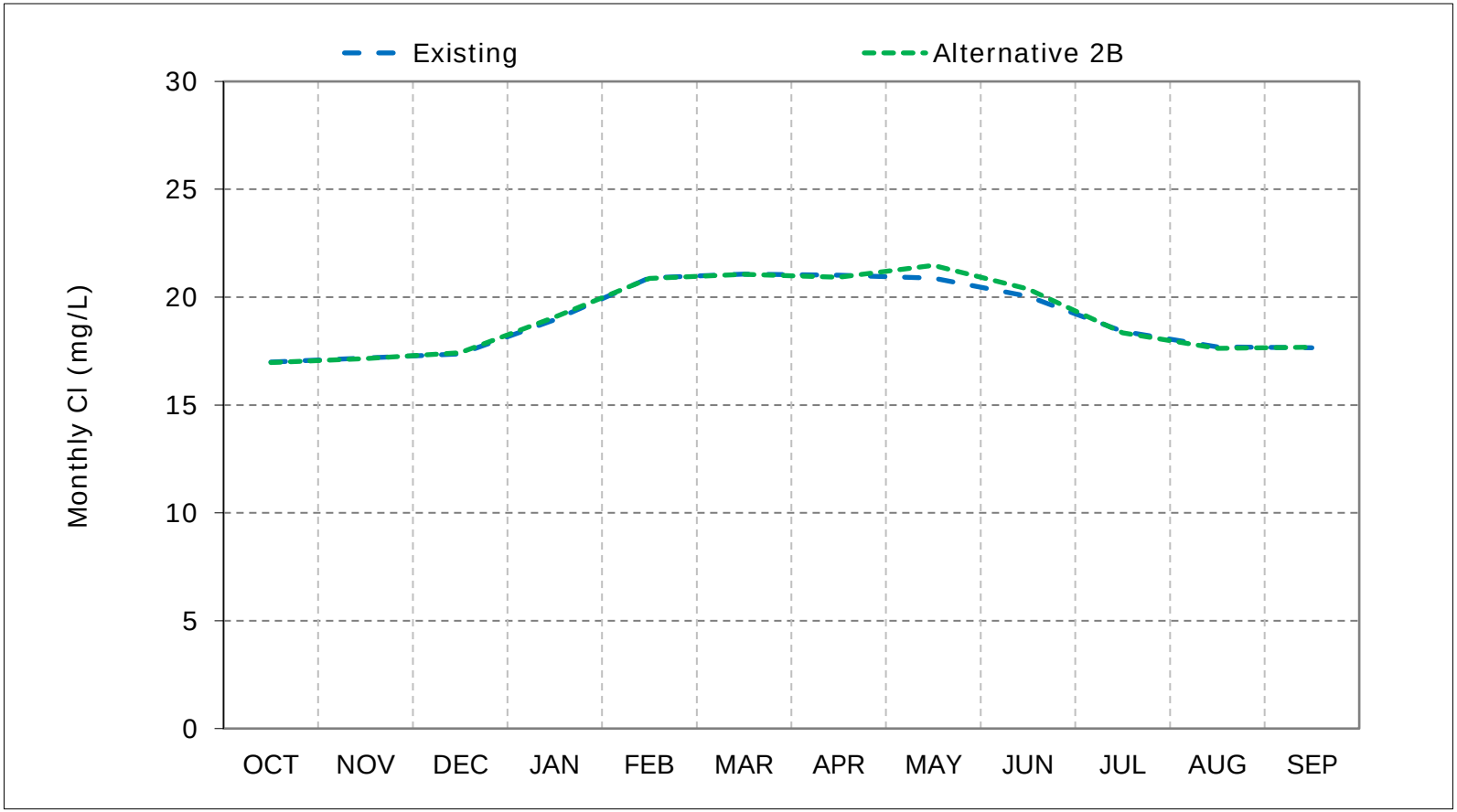

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-5. Barker Slough at NBA Intake Chloride, Dry Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-6. Barker Slough at NBA Intake Chloride, Critical Year Average Cl




*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-7. Barker Slough at NBA Intake Chloride, January Cl

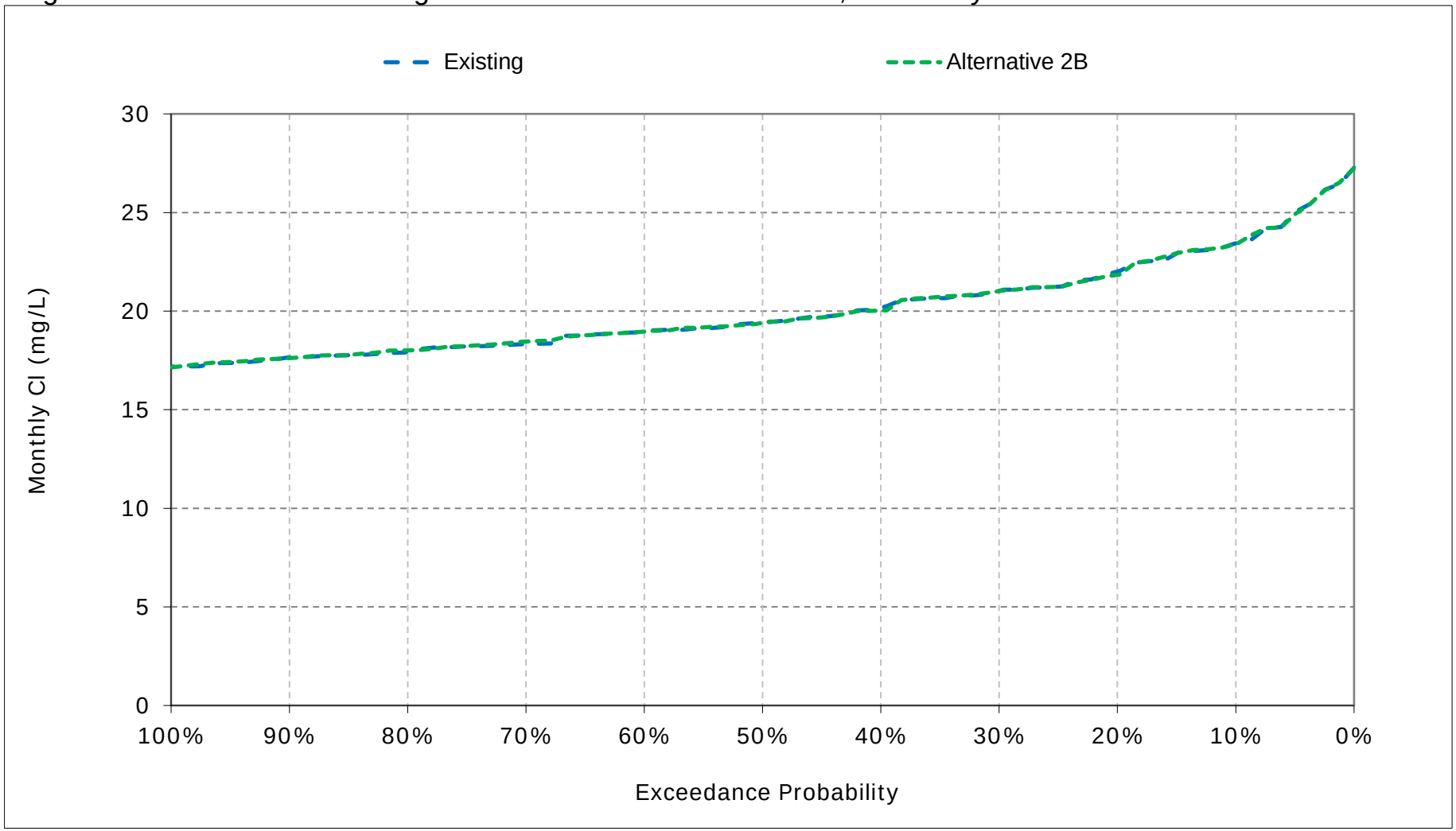


Figure 13-8. Barker Slough at NBA Intake Chloride, February Cl

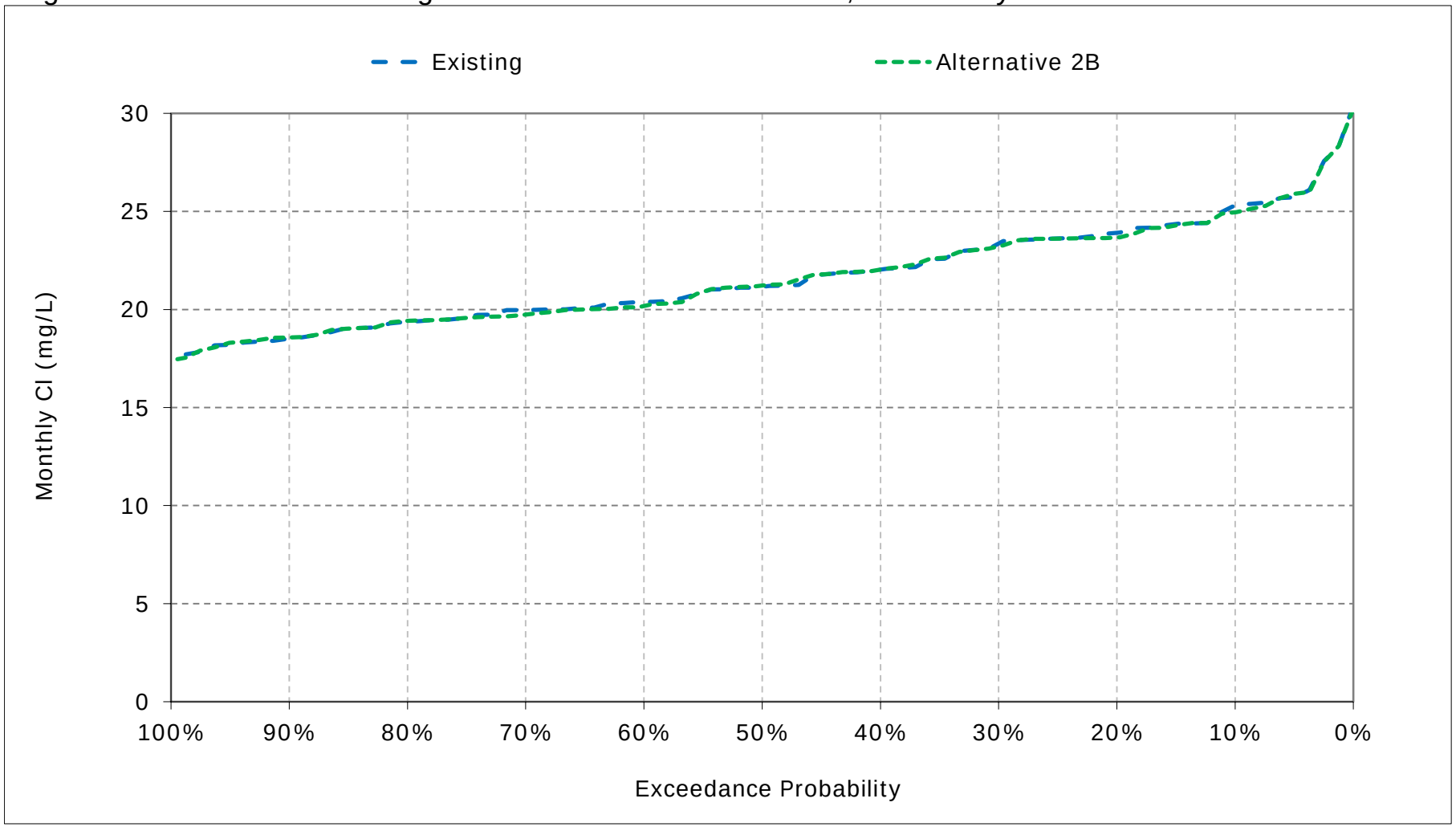


Figure 13-9. Barker Slough at NBA Intake Chloride, March Cl

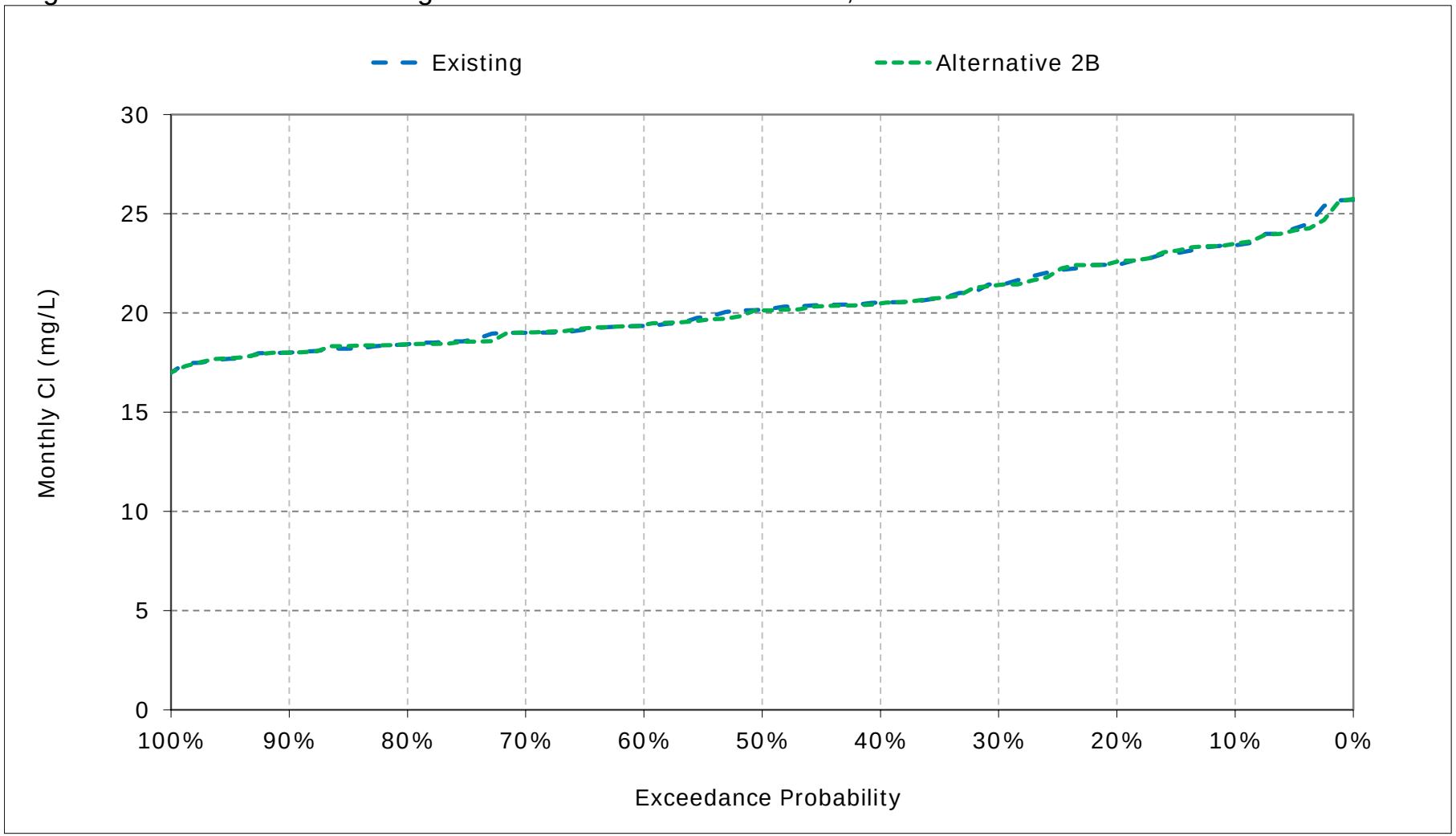


Figure 13-10. Barker Slough at NBA Intake Chloride, April Cl

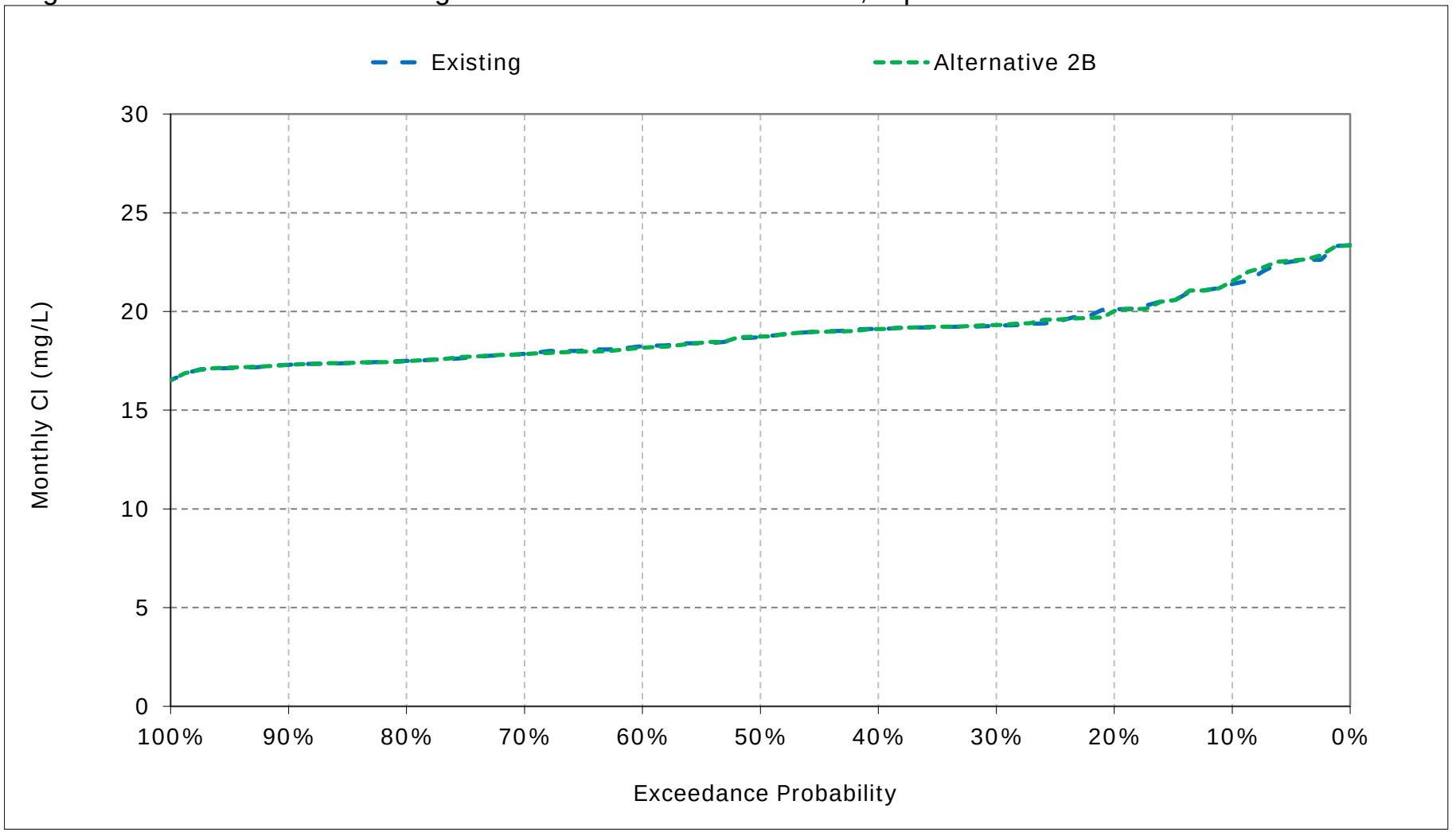


Figure 13-11. Barker Slough at NBA Intake Chloride, May Cl

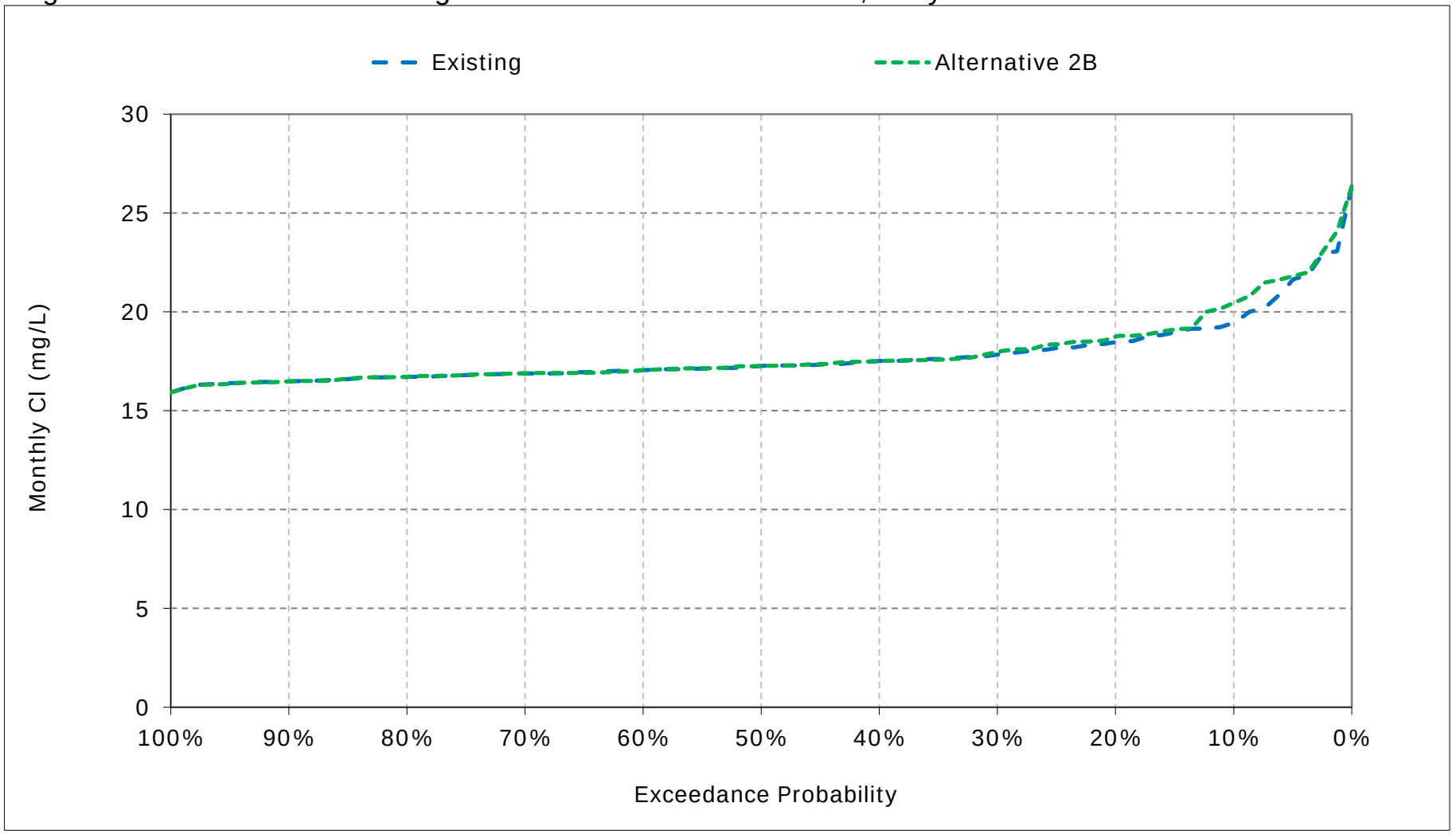


Figure 13-12. Barker Slough at NBA Intake Chloride, June Cl

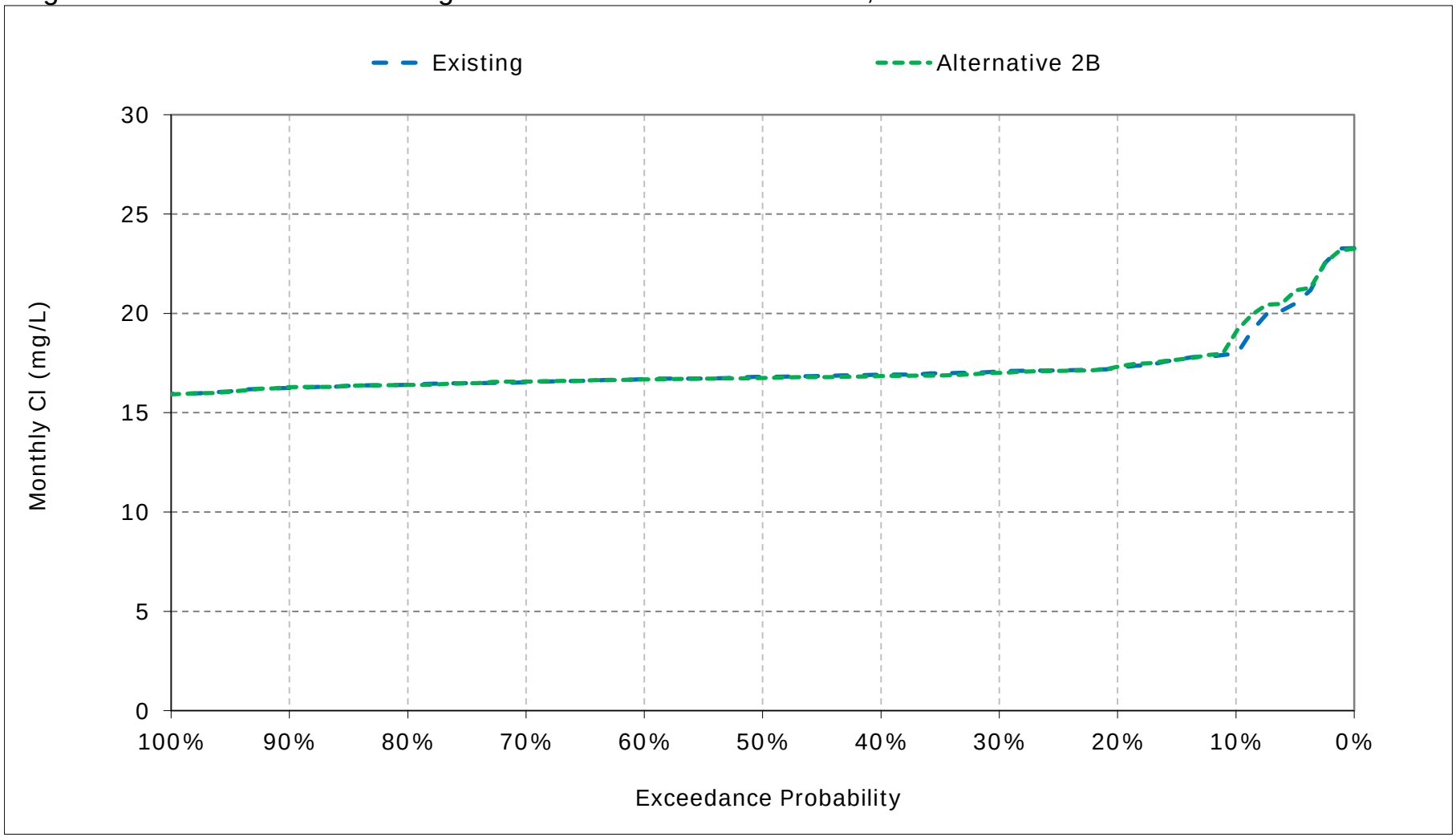


Figure 13-13. Barker Slough at NBA Intake Chloride, July Cl

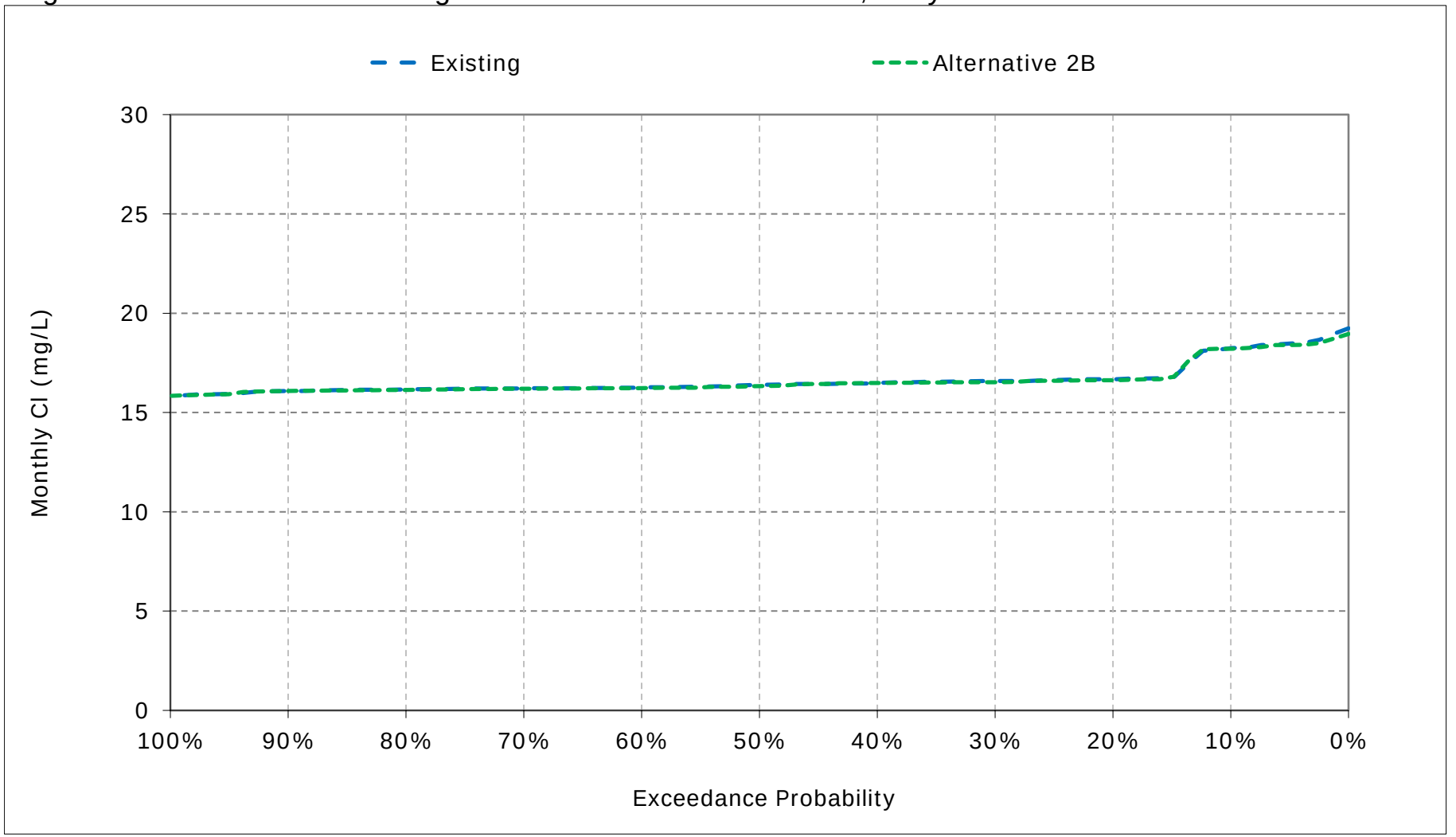


Figure 13-14. Barker Slough at NBA Intake Chloride, August Cl

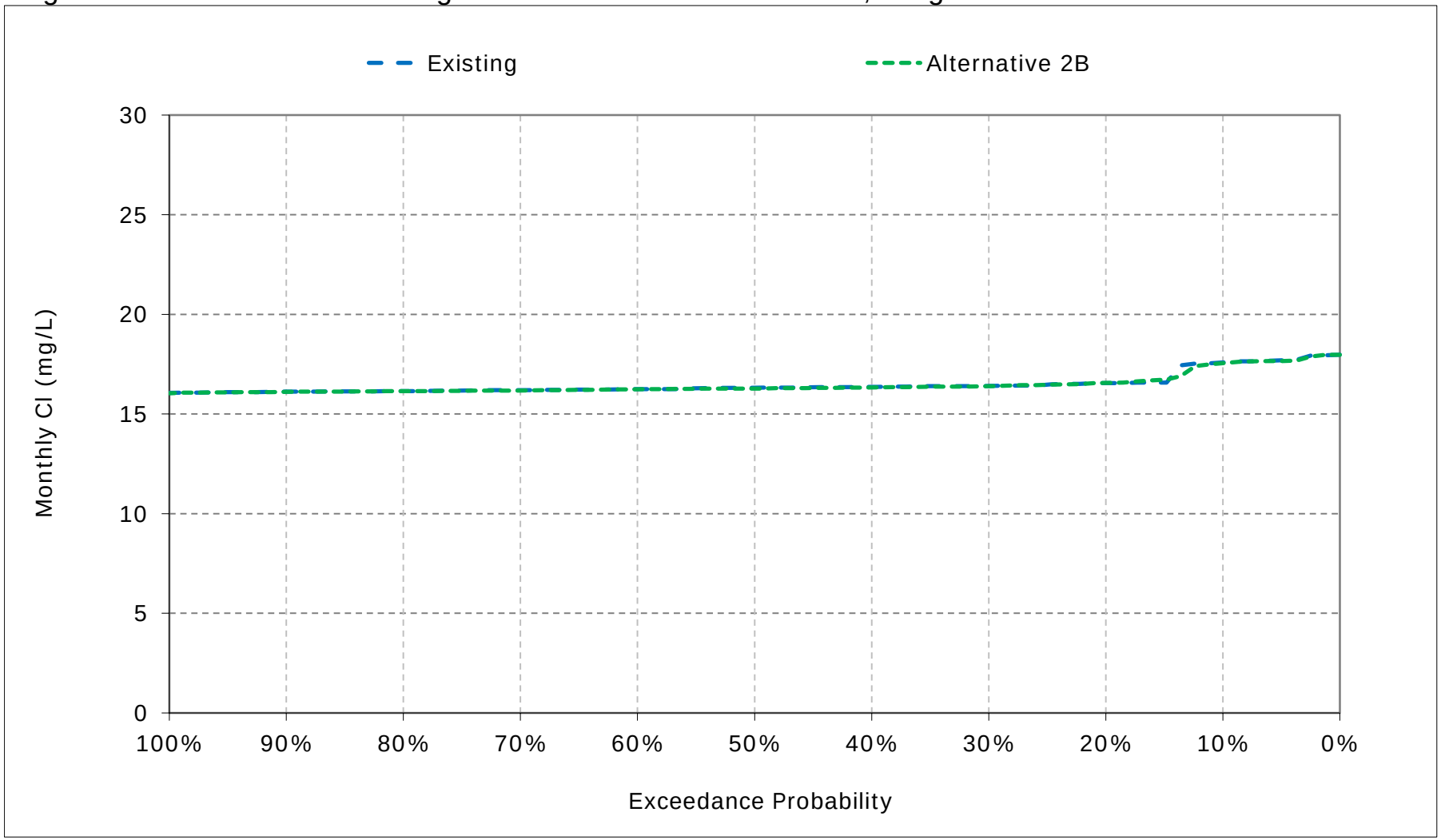


Figure 13-15. Barker Slough at NBA Intake Chloride, September Cl

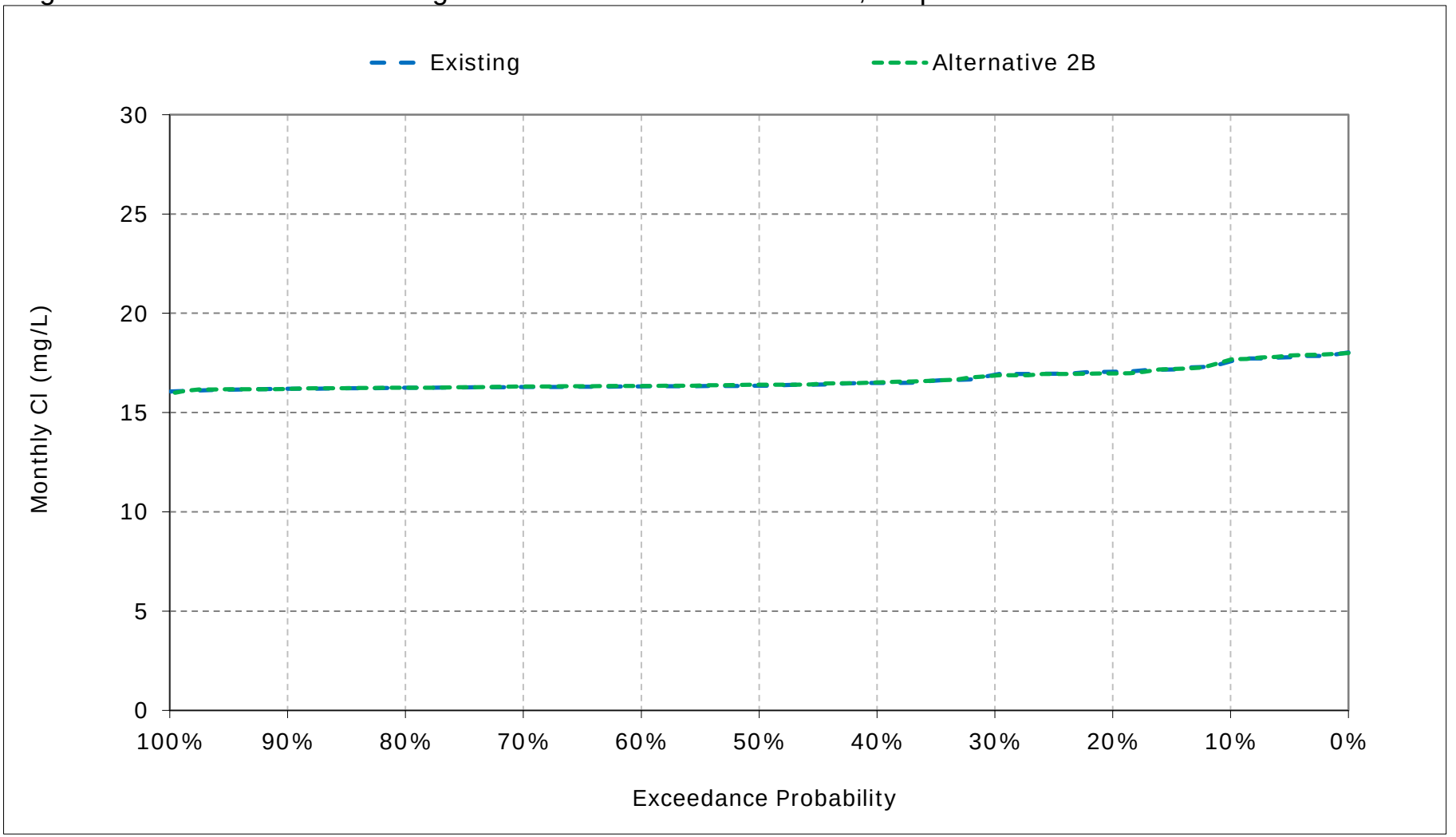


Figure 13-16. Barker Slough at NBA Intake Chloride, October Cl

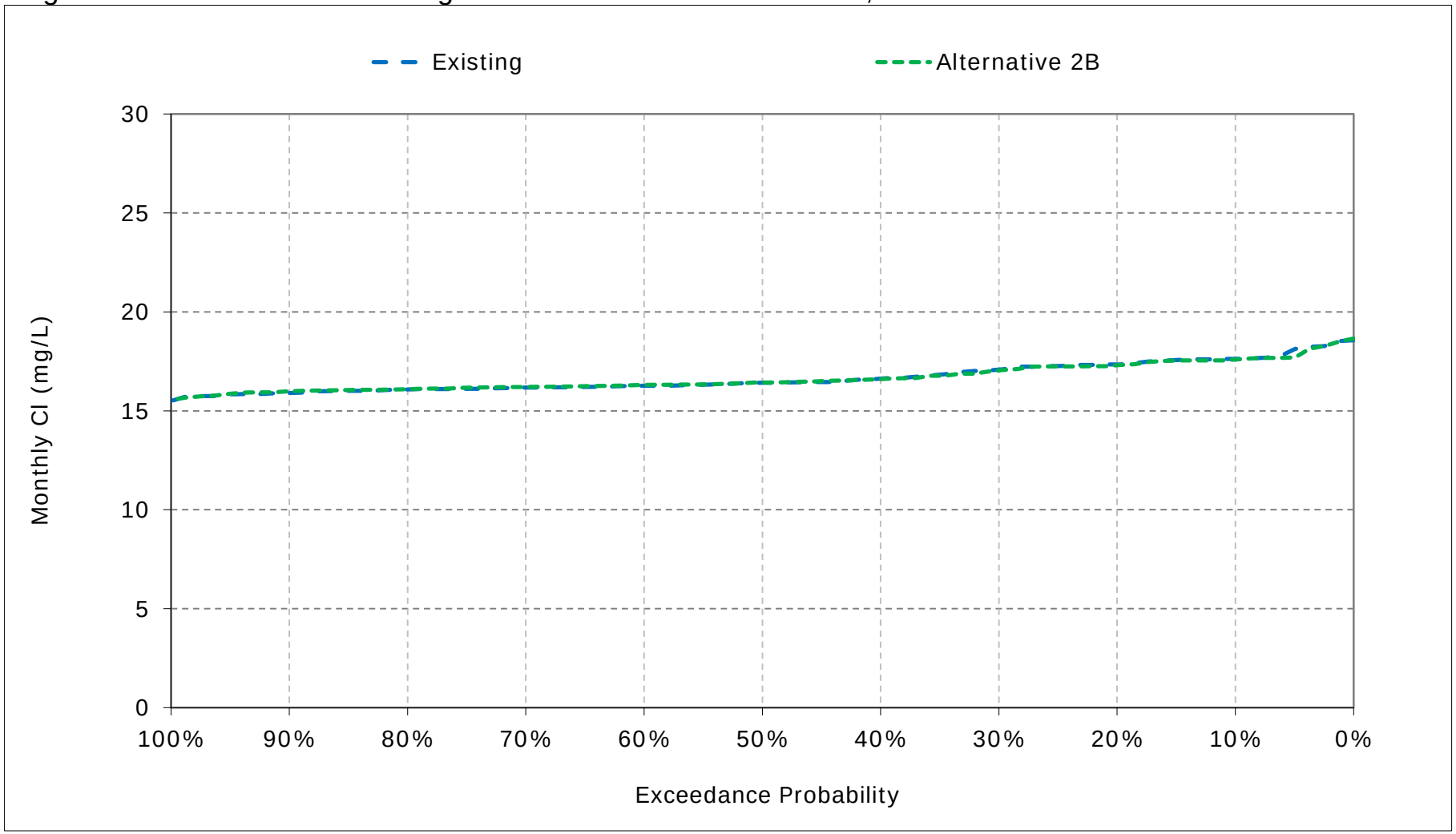


Figure 13-17. Barker Slough at NBA Intake Chloride, November Cl

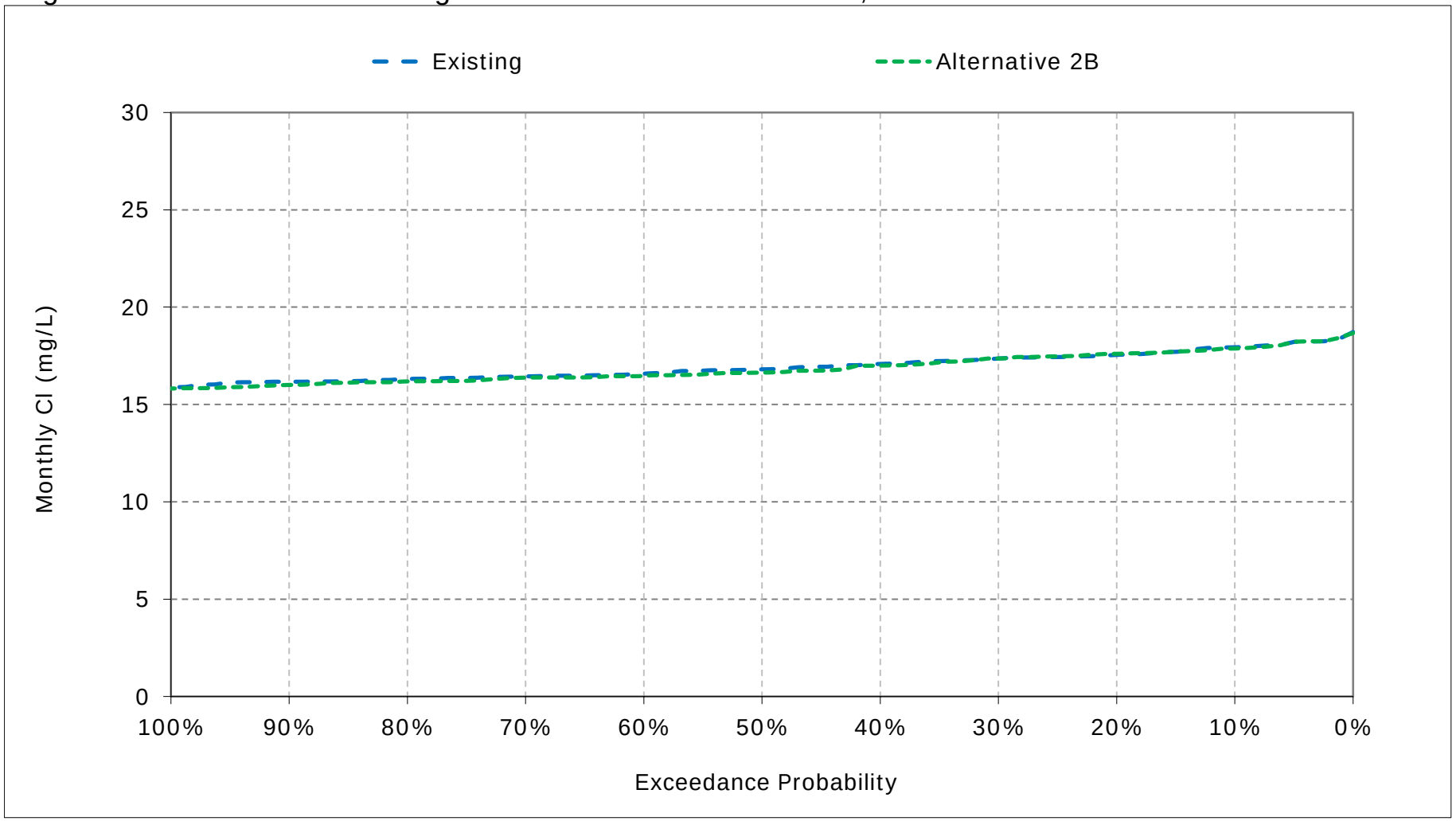
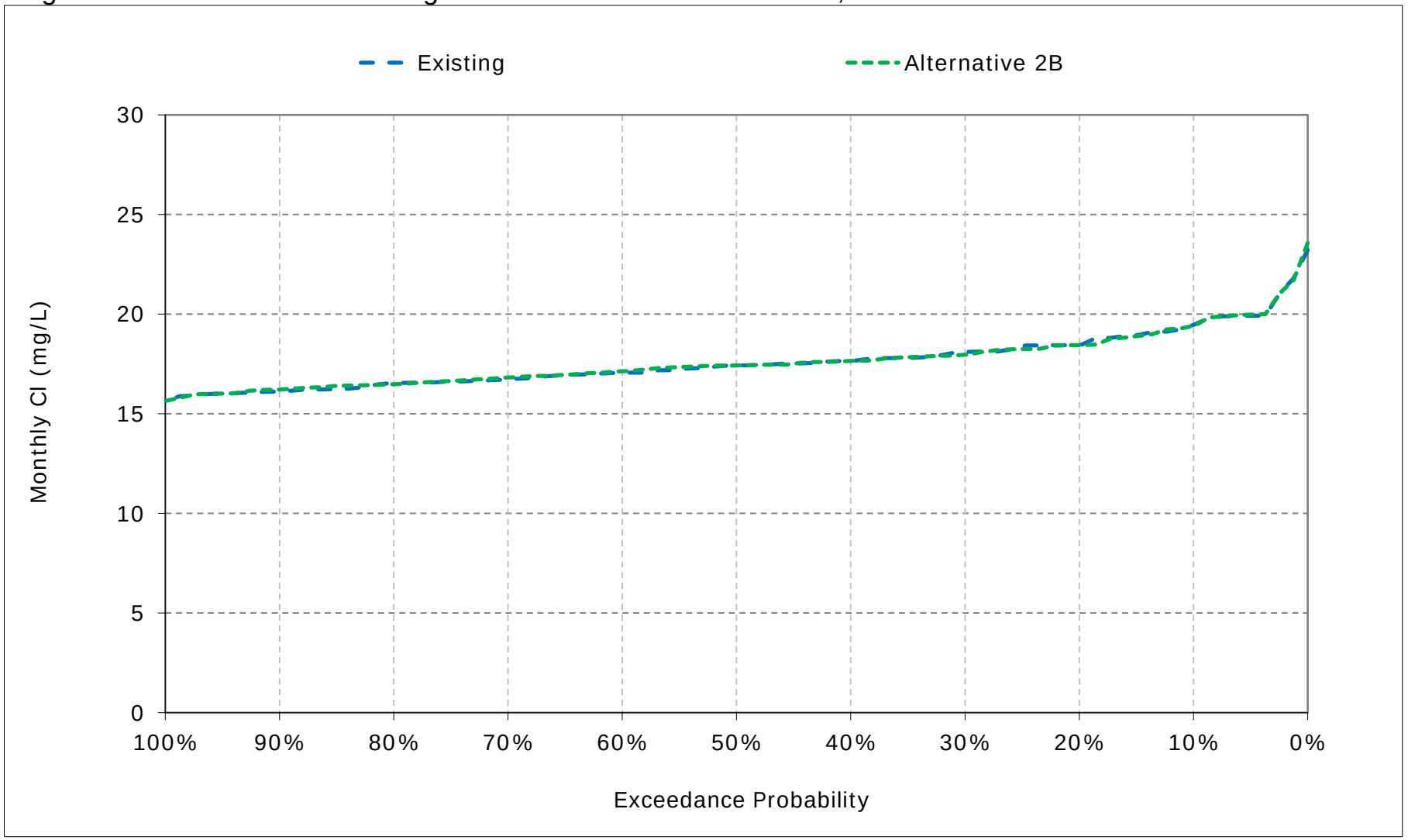


Figure 13-18. Barker Slough at NBA Intake Chloride, December Cl



# Appendix C – Modeling

## Attachment 3-9 – D1641 Compliance Results (DSM2-QUAL)

***NOTE: Attachment 3-9 is a new attachment that has been added to the DEIR since initial publication, as part of the FEIR process. The additional attachment is not shown in underline for ease of reading.***

The following results of the DSM2-QUAL model are included for Delta compliance conditions for the following alternatives:

- Existing Conditions
- Refined Alternative 2b

| Title | Model Parameter | Table Numbers | Figure Numbers |
|---|---|---|---|
| D1641 AG West Canal at mouth of Clifton Court Forebay | CHWST000 | NA | 1-1 |
| D1641 AG South Fork Mokelumne River at Terminus | RSMKL008 | NA | 2-1 |
| D1641 AG Sacramento River at Emmaton | RSAC092 | NA | 3-1 |
| D1641 AG San Joaquin River at Jersey Point | RSAN018 | NA | 4-1 |
| D1641 AG San Joaquin River at San Andreas Landing | RSAN032 | NA | 5-1 |
| D1641 AG Delta-Mendota Canal at Tracy Pumping Plant | CHDMC004 | NA | 6-1 |
| D1641 FWS Chadbourne Slough at Sunrise Duck Club | SLCBN002 | NA | 7-1 |
| D1641 FWS Montezuma Slough near Beldon Landing | SLMZU011 | NA | 8-1 |
| D1641 FWS Montezuma Slough at National Steel | SLMZU025 | NA | 9-1 |
| D1641 FWS Sacramento River at Collinsville | RSAC081 | NA | 10-1 |
| D1641 FWS San Joaquin River at Jersey Point | RSAN018 | NA | 11-1 |
| D1641 FWS San Joaquin River at Prisoners Point | RSAN037 | NA | 12-1 |
| D1641 FWS Suisun Slough 300 ft south of Volanti Slough | SLSUS012 | NA | 13-1 |
| D1641 MI Cache Slough at City of Vallejo Intake | SLCCH016 | NA | 14-1 |
| D1641 MI West Canal at mouth of Clifton Court Forebay | CHWST000 | NA | 15-1 |
| D1641 MI Contra Costa Canal at Pumping Plant #1 | ROLD024 | NA | 16-1 |
| D1641 MI Delta-Mendota Canal at Tracy Pumping Plant | CHDMC004 | NA | 17-1 |
| D1641 MI Barker Slough at North Bay Aqueduct Intake | SLBAR002 | NA | 18-1 |

| | | | |
|---|---|---|---|
| D1641 AG Old River at Tracy Road Bridge | ROLD059 | NA | 19-1 |
| D1641 AG Old River near Middle River | OLDR | NA | 20-1 |
| D1641 AG San Joaquin River at Airport Way Bridge Vernalis | RSAN112 | NA | 21-1 |
| D1641 AG San Joaquin River at Brandt Bridge Site | RSAN072 | NA | 22-1 |
| D1641 MI Contra Costa Canal at Pumping Plant #1 | ROLD024 | NA | 23-1 |
| D1641 MI San Joaquin River at Antioch Water Works | RSAN007 | NA | 24-1 |

Report formats

- Compliance exceedance charts including all scenarios

**Figure 1 D1641 AG West Canal at mouth of Clifton Court Forebay Compliance Exceedance Plot**

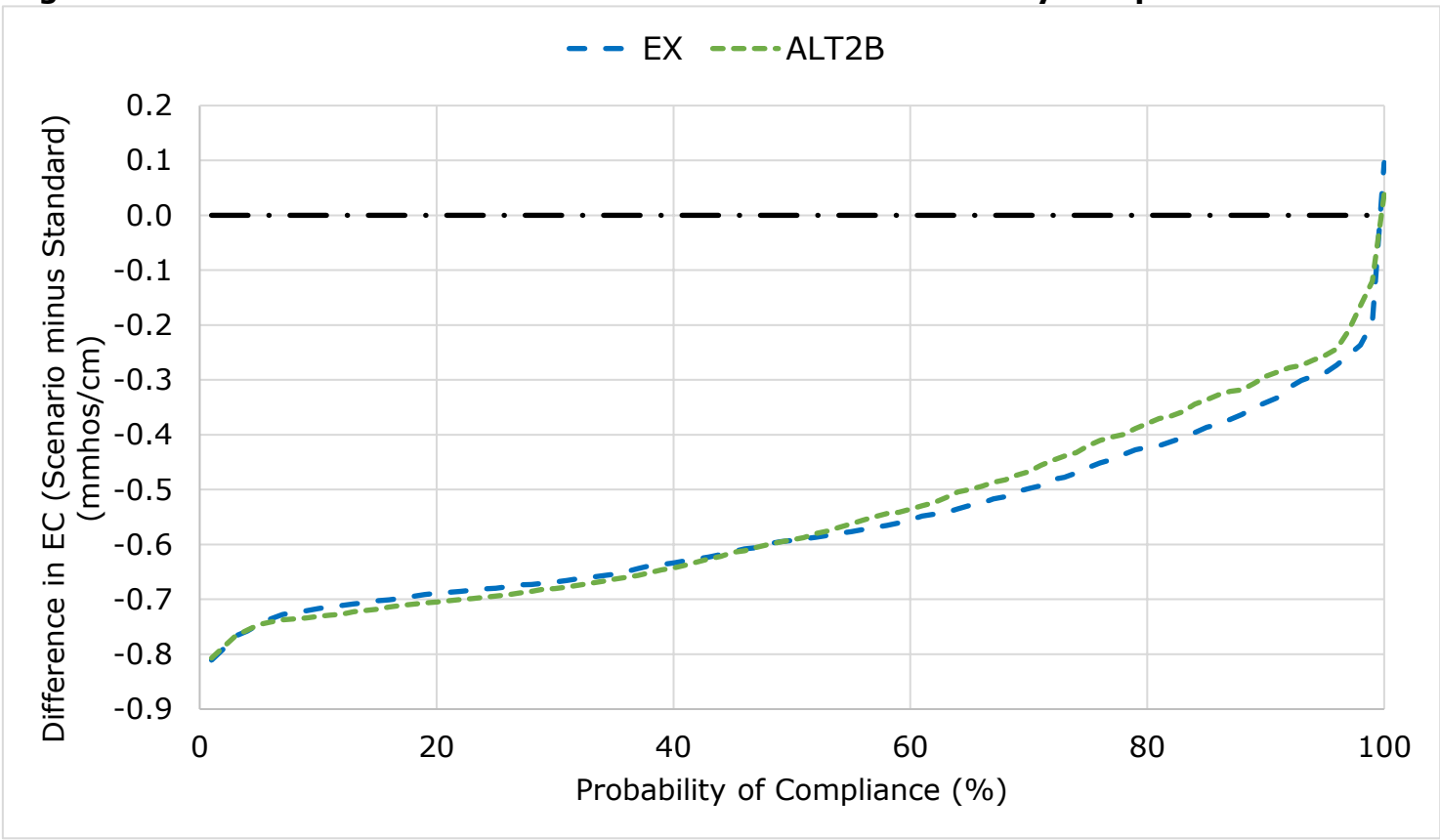


**Figure 2 D1641 AG South Fork Mokelumne River at Terminus Compliance Exceedance Plot**

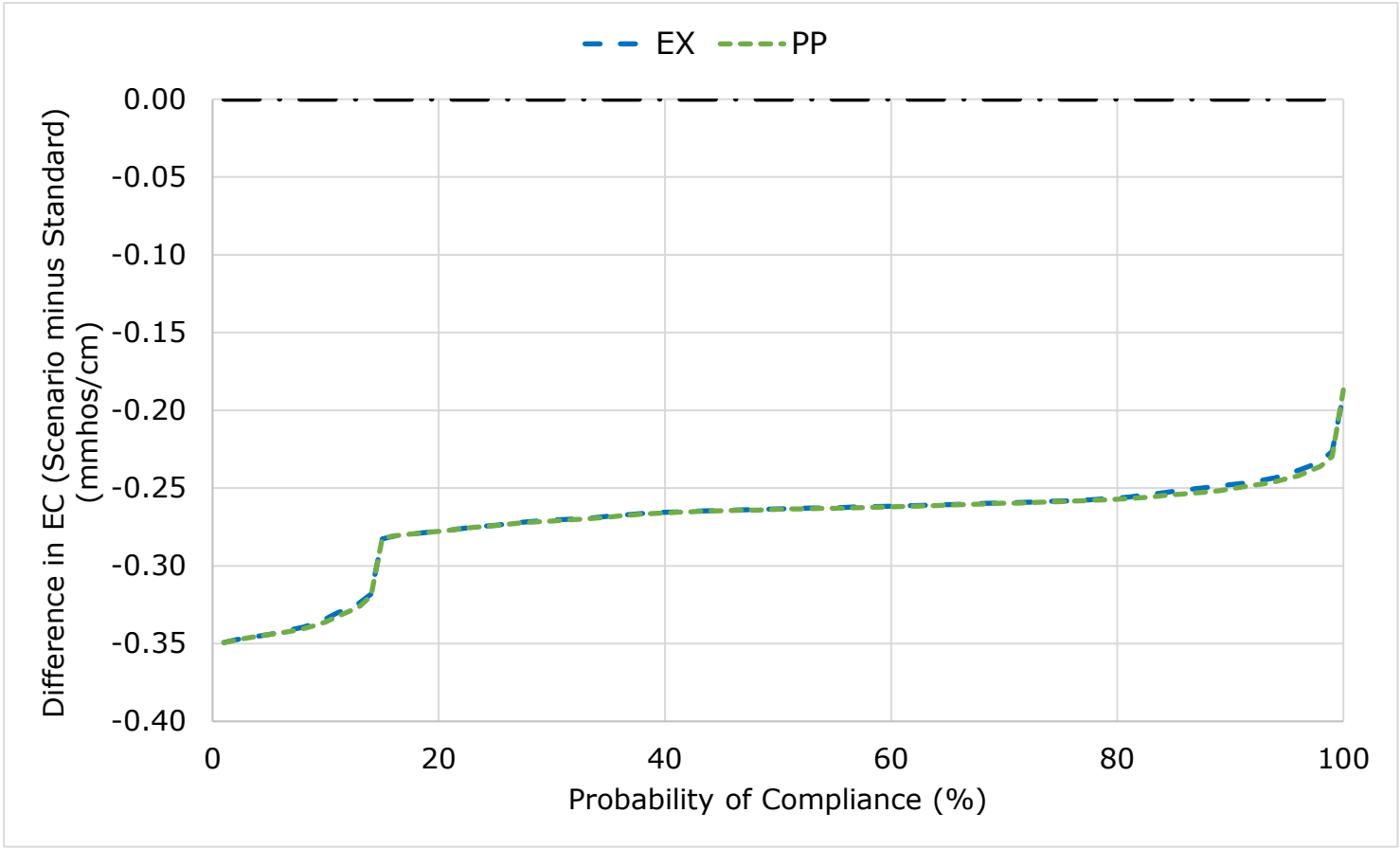


**Figure 3 D1641 AG Sacramento River at Emmaton Compliance Exceedance Plot**

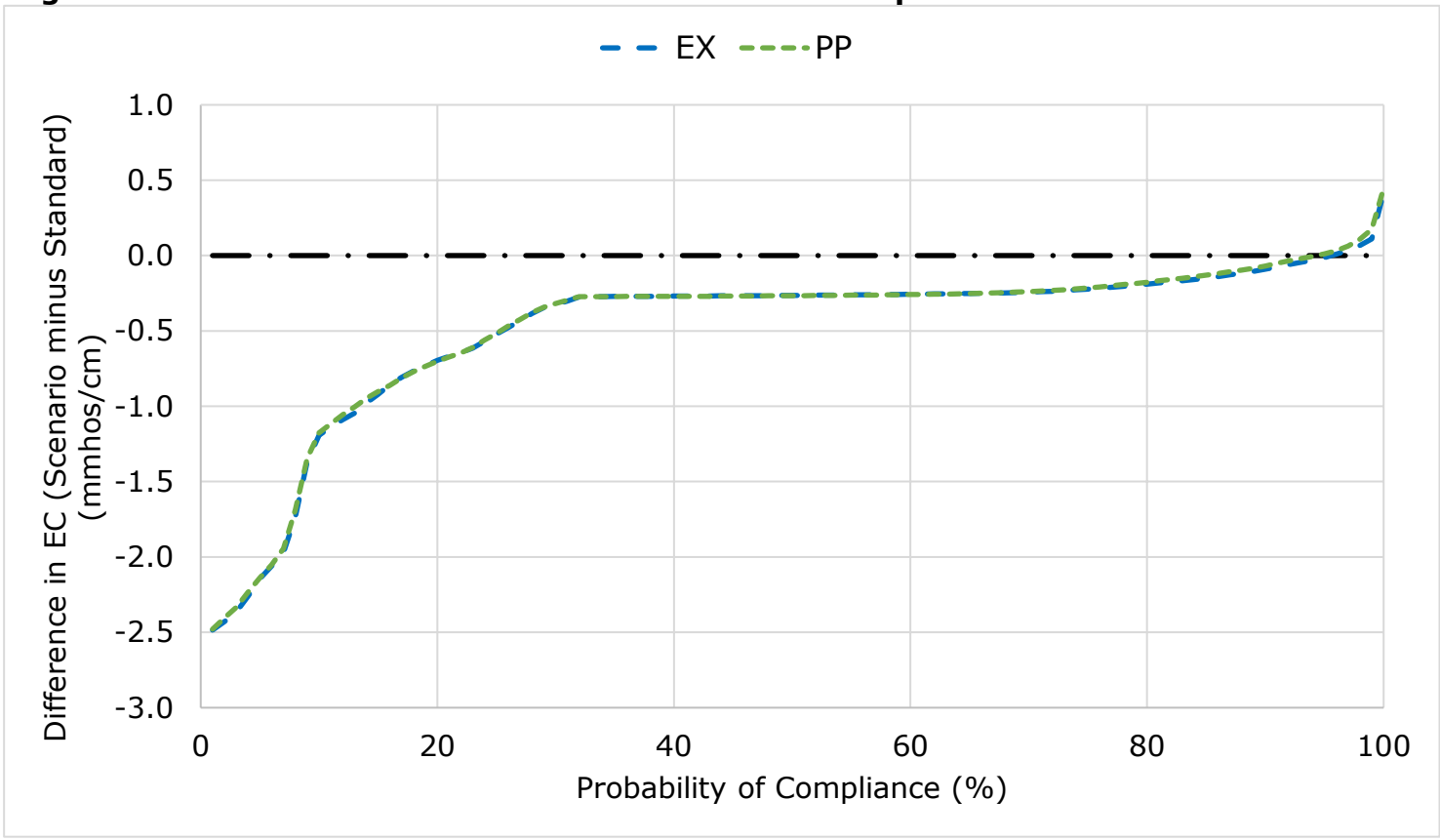


**Figure 4 D1641 AG San Joaquin River at Jersey Point Compliance Exceedance Plot**

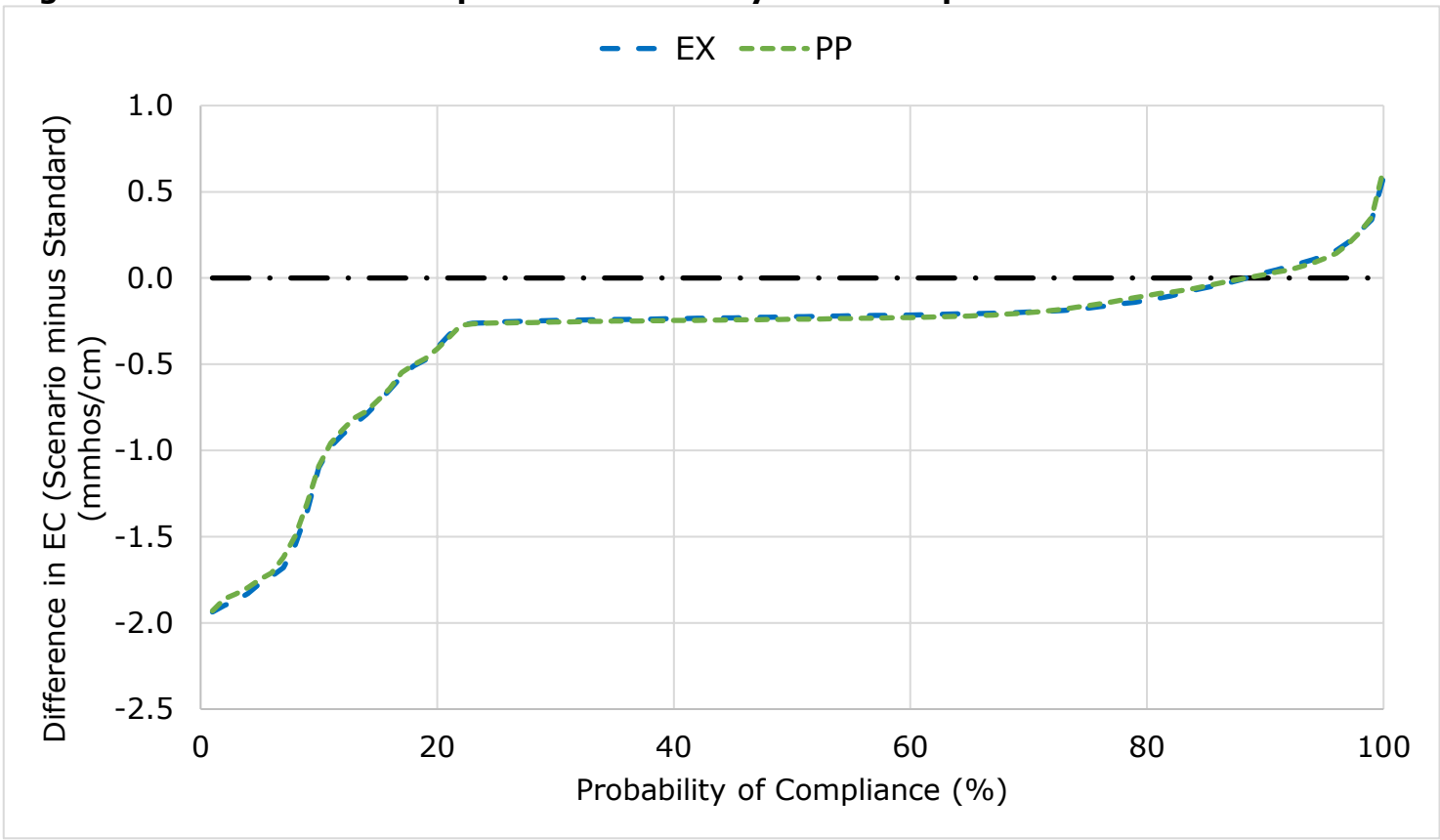


**Figure 5 D1641 AG San Joaquin River at San Andreas Landing Compliance Exceedance Plot**

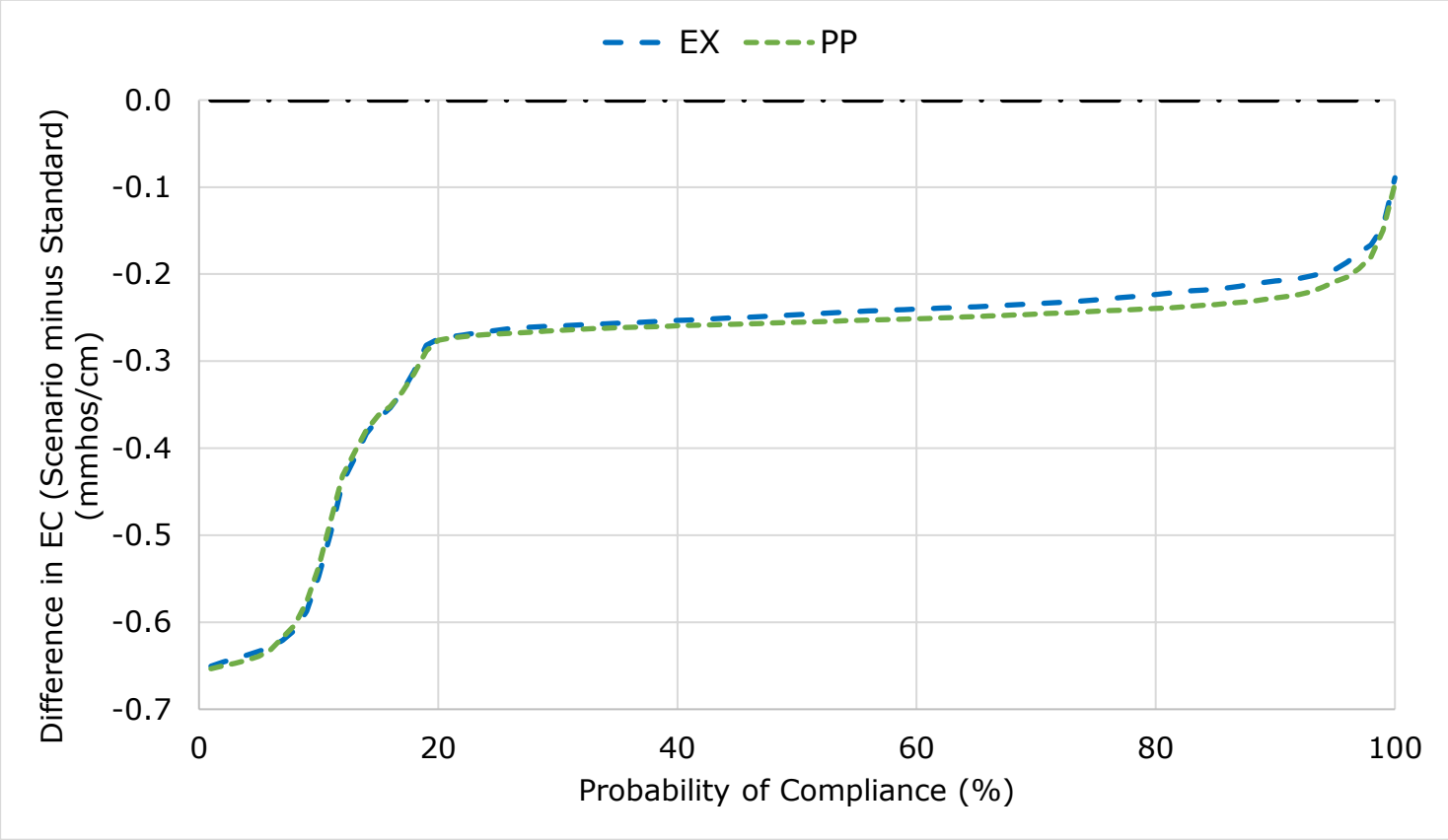


**Figure 6 D1641 AG Delta-Mendota Canal at Tracy Pumping Plant Compliance Exceedance Plot**

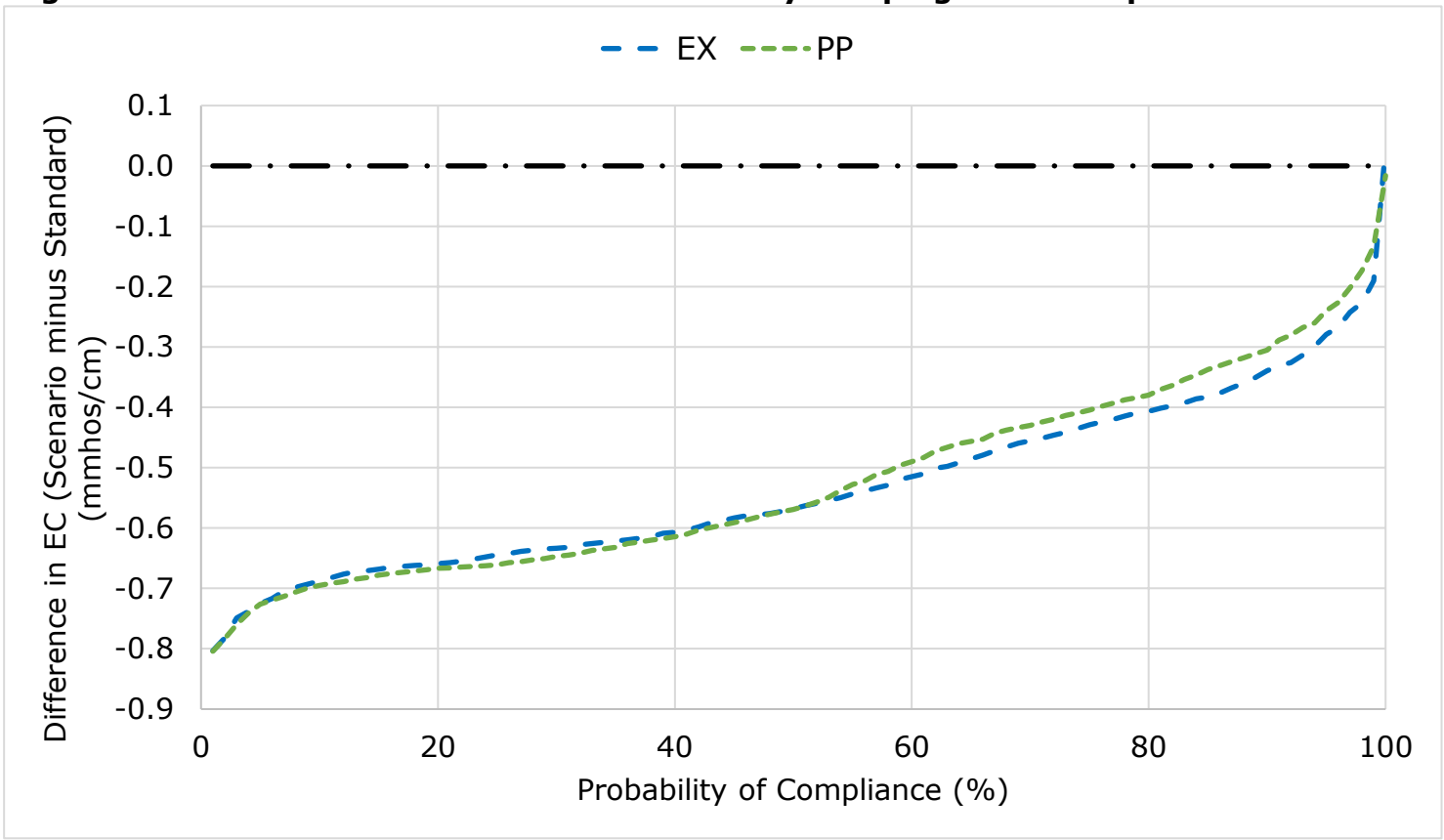


**Figure 7 D1641 FWS Chadbourne Slough at Sunrise Duck Club Compliance Exceedance Plot**

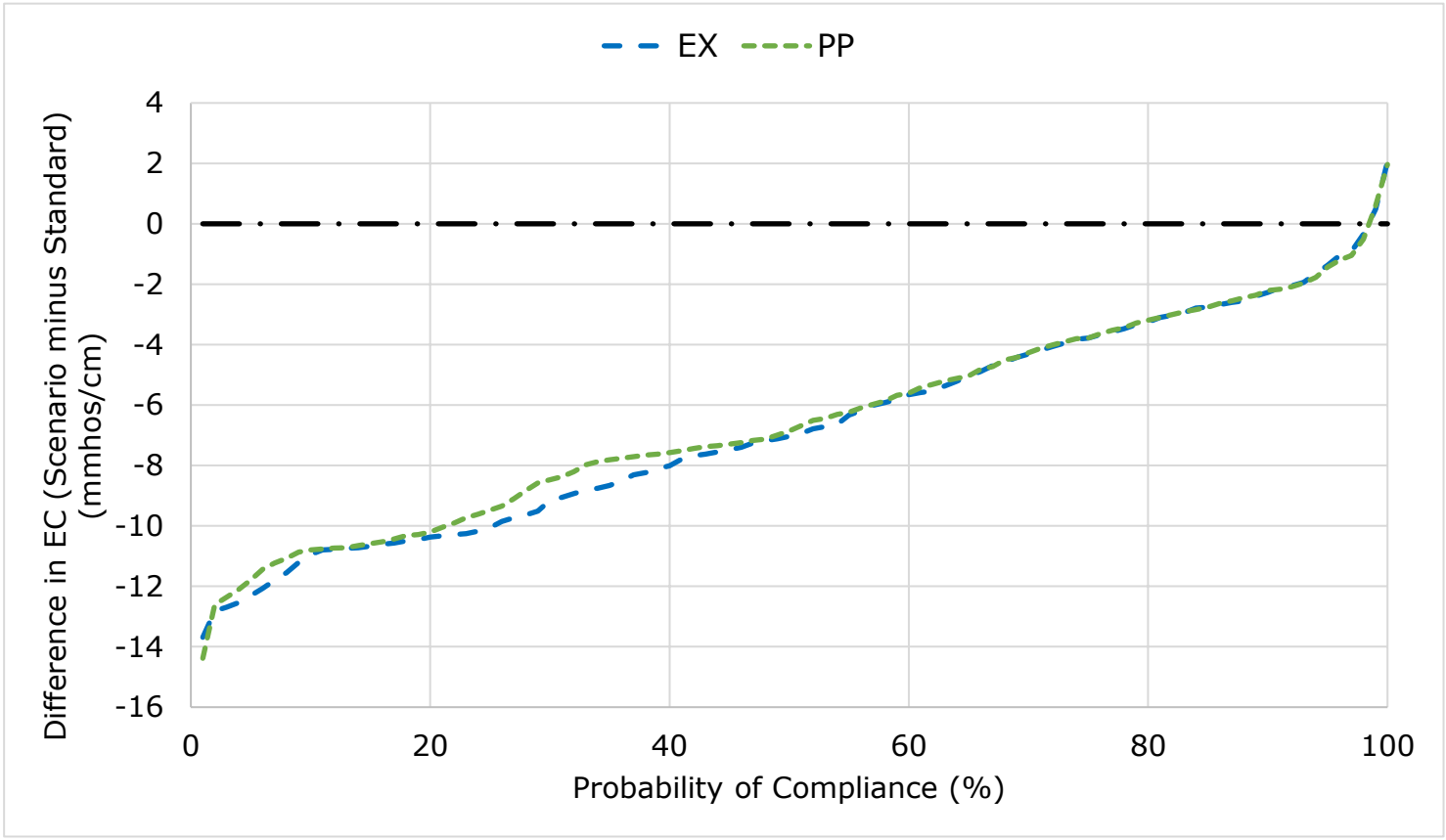


**Figure 8 D1641 FWS Montezuma Slough near Beldons Landing Compliance Exceedance Plot**

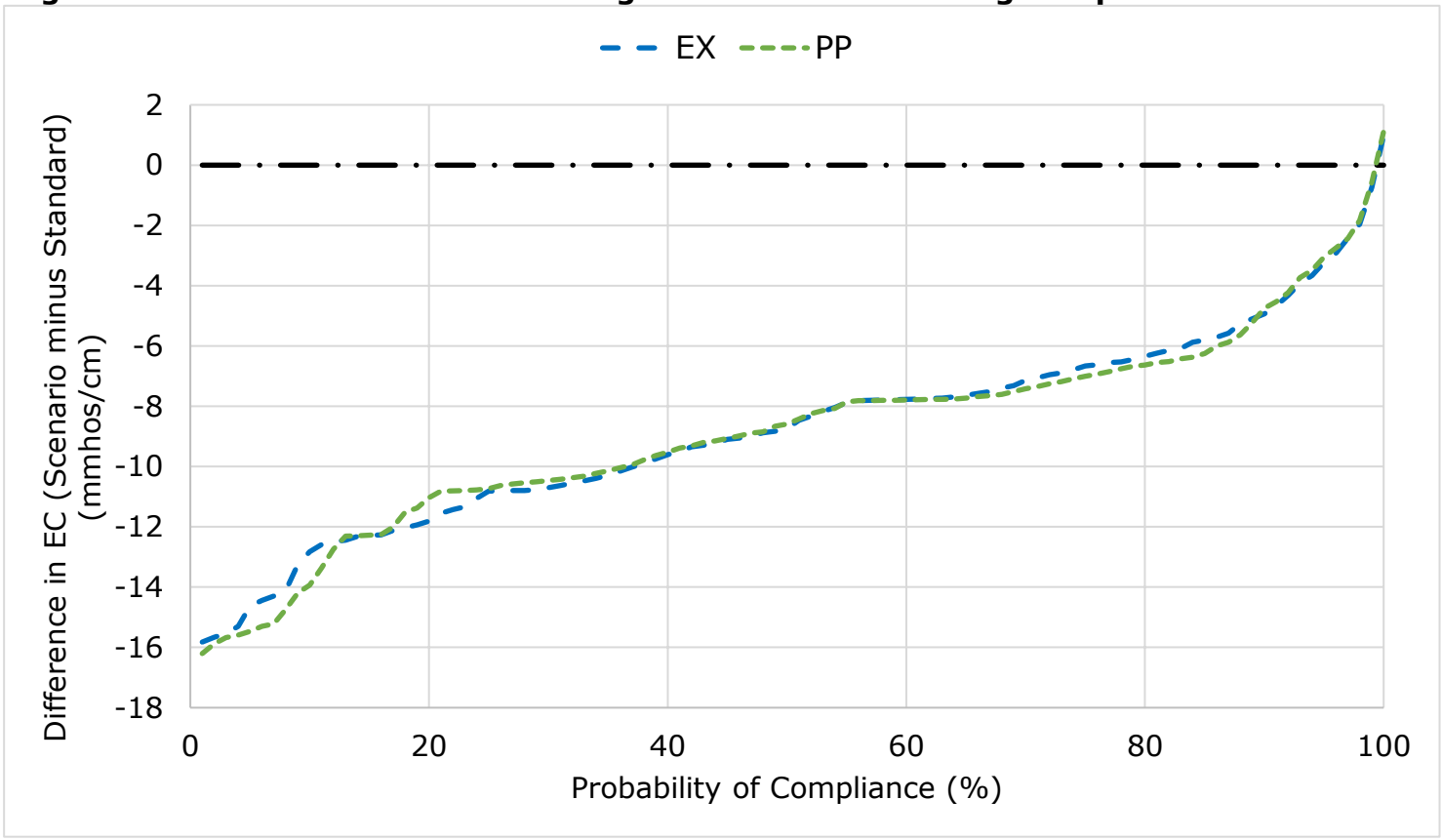


**Figure 9 D1641 FWS Montezuma Slough at National Steel Compliance Exceedance Plot**

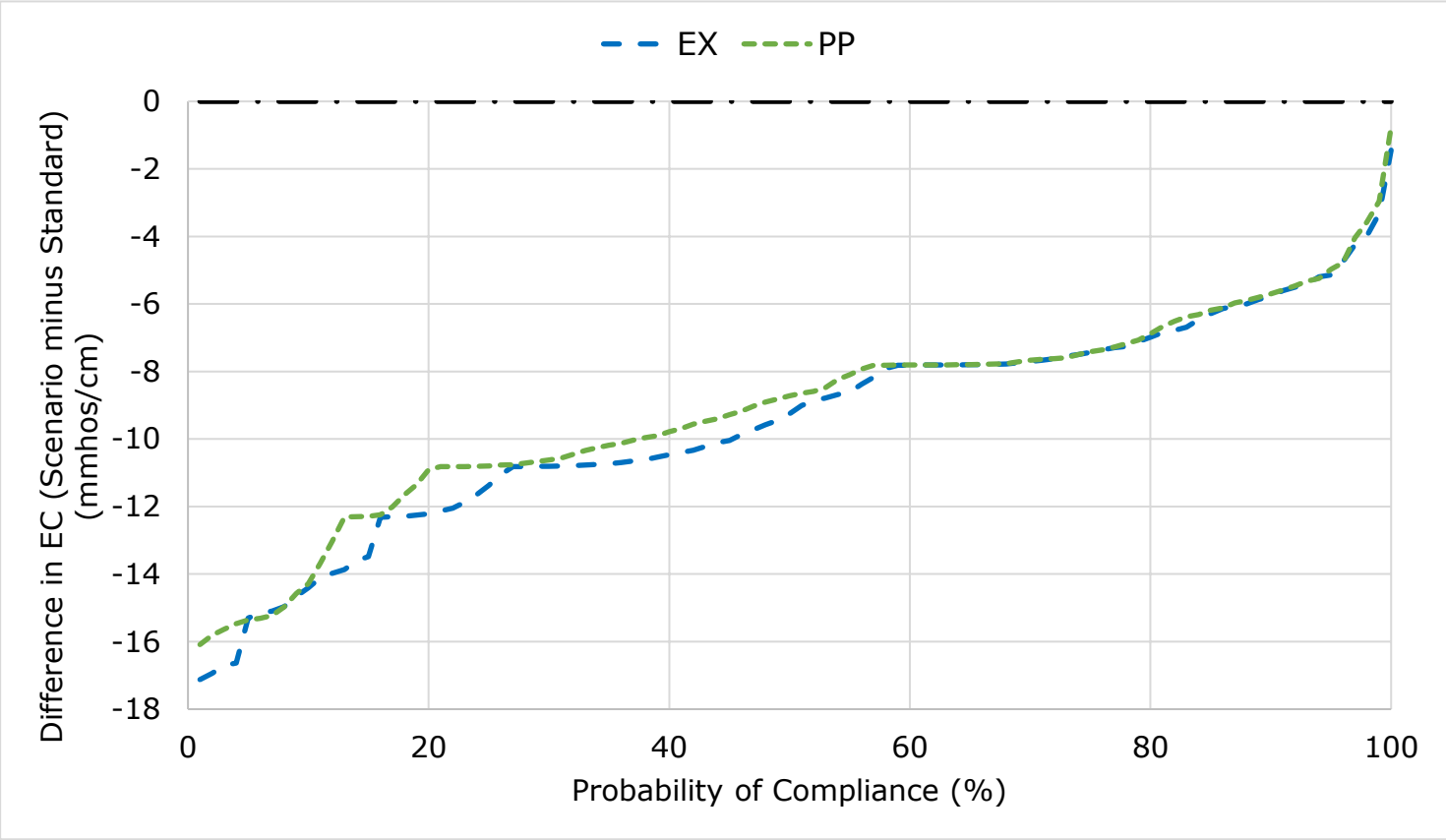


**Figure 10 D1641 FWS Sacramento River at Collinsville Compliance Exceedance Plot**

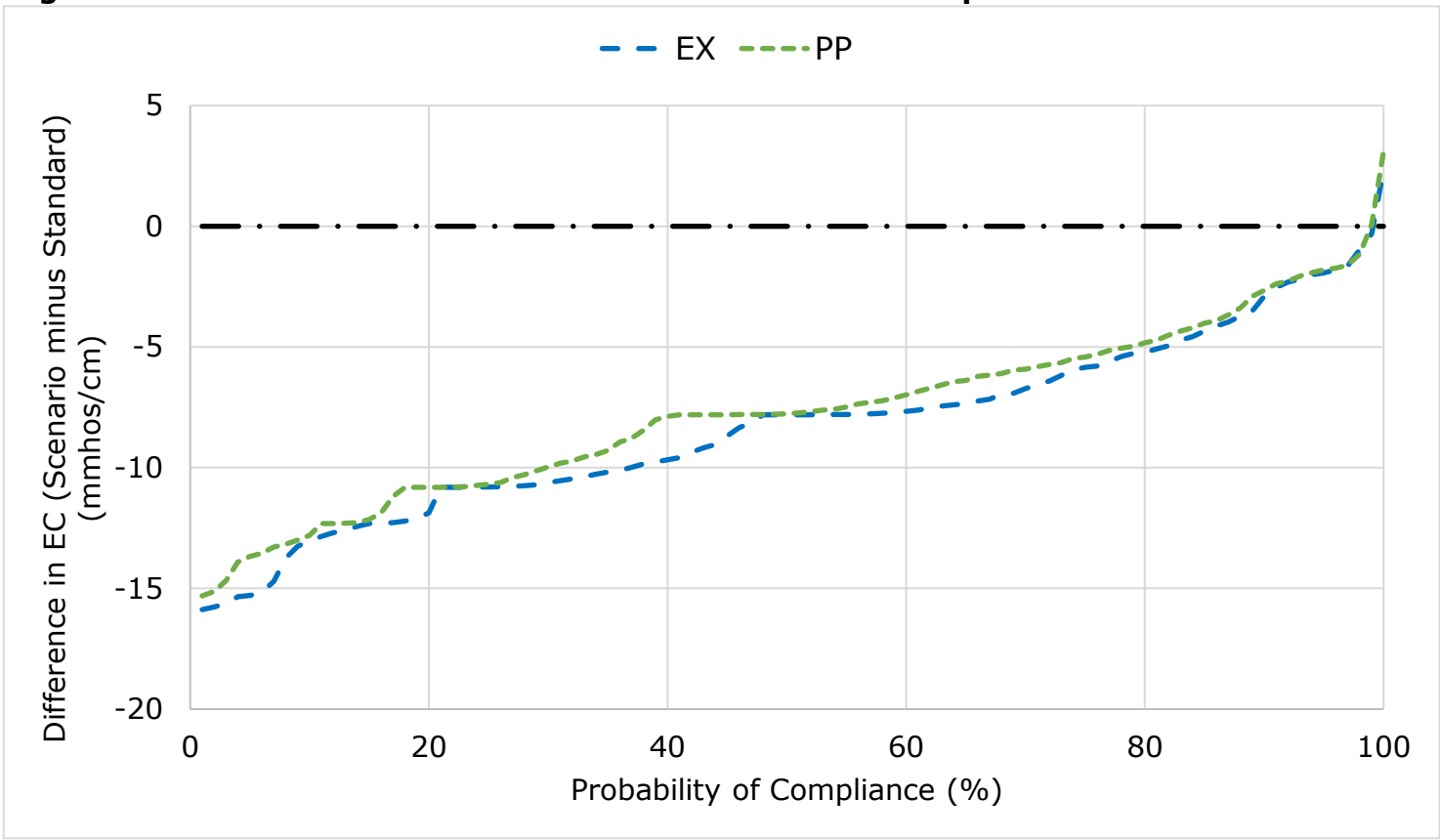


**Figure 11 D1641 FWS San Joaquin River at Jersey Point Compliance Exceedance Plot**

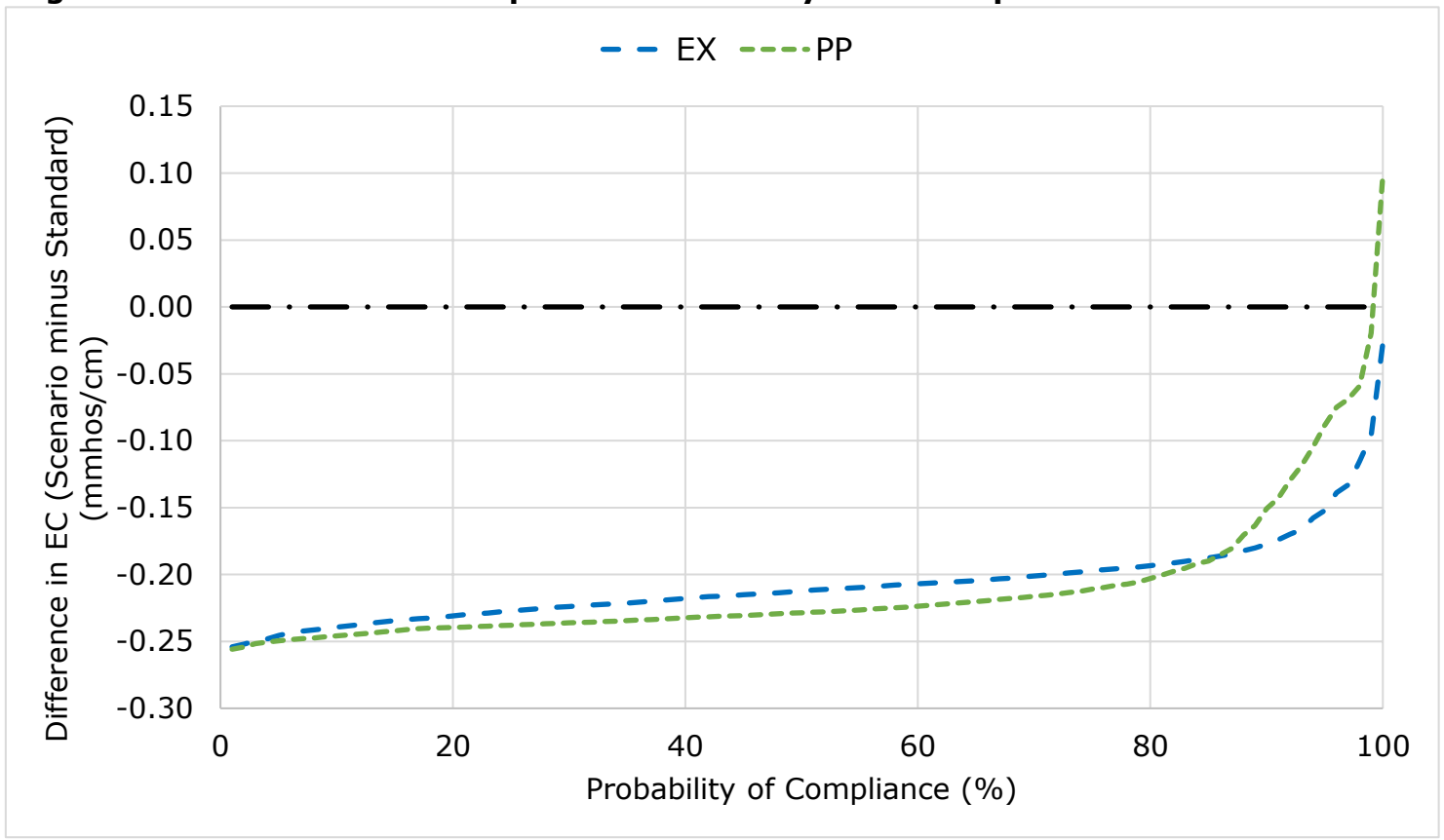


**Figure 12 D1641 FWS San Joaquin River at Prisoners Point Compliance Exceedance Plot**

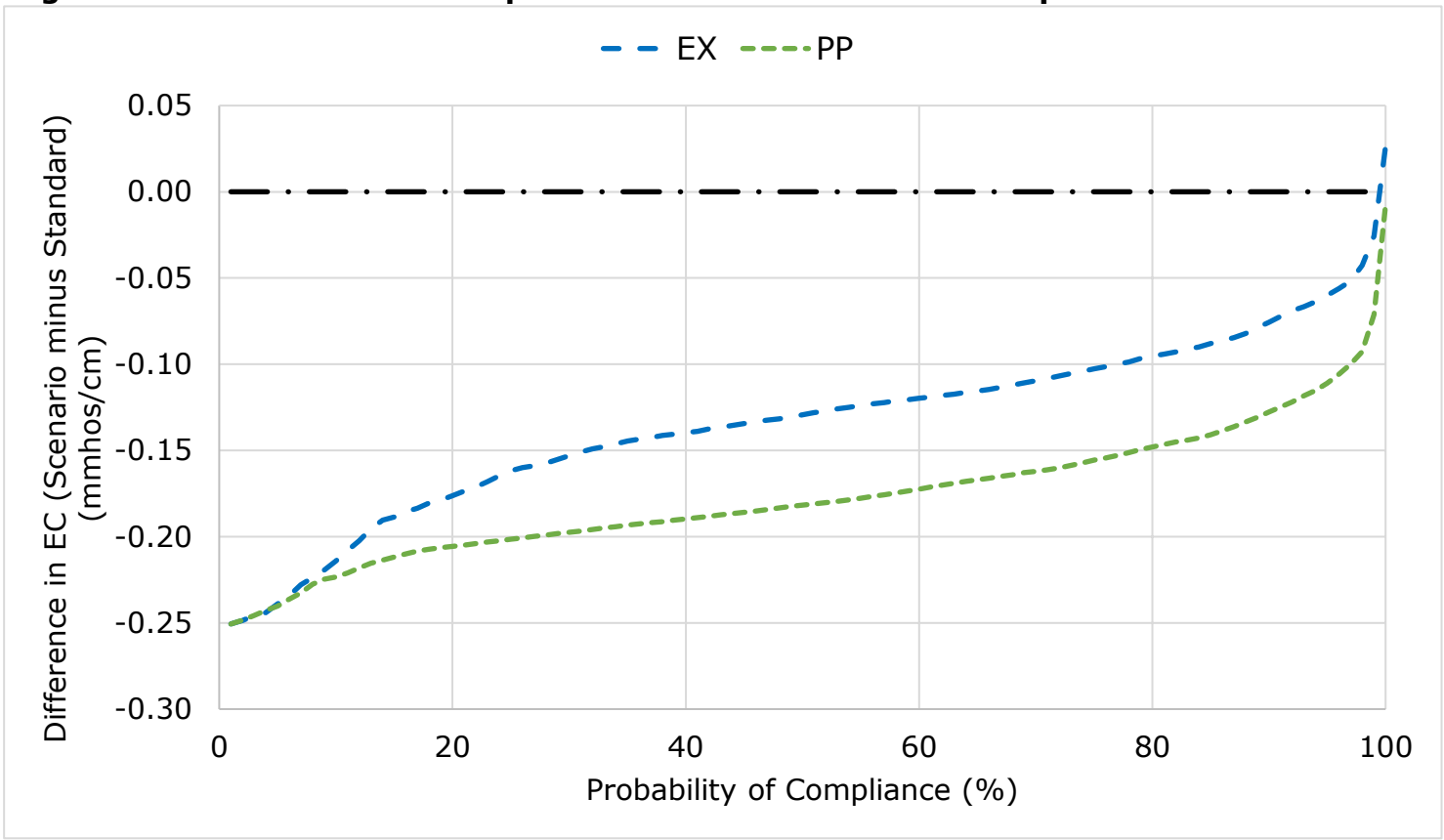


**Figure 13 D1641 FWS Suisun Slough 300 ft south of Volanti Slough Compliance Exceedance Plot**

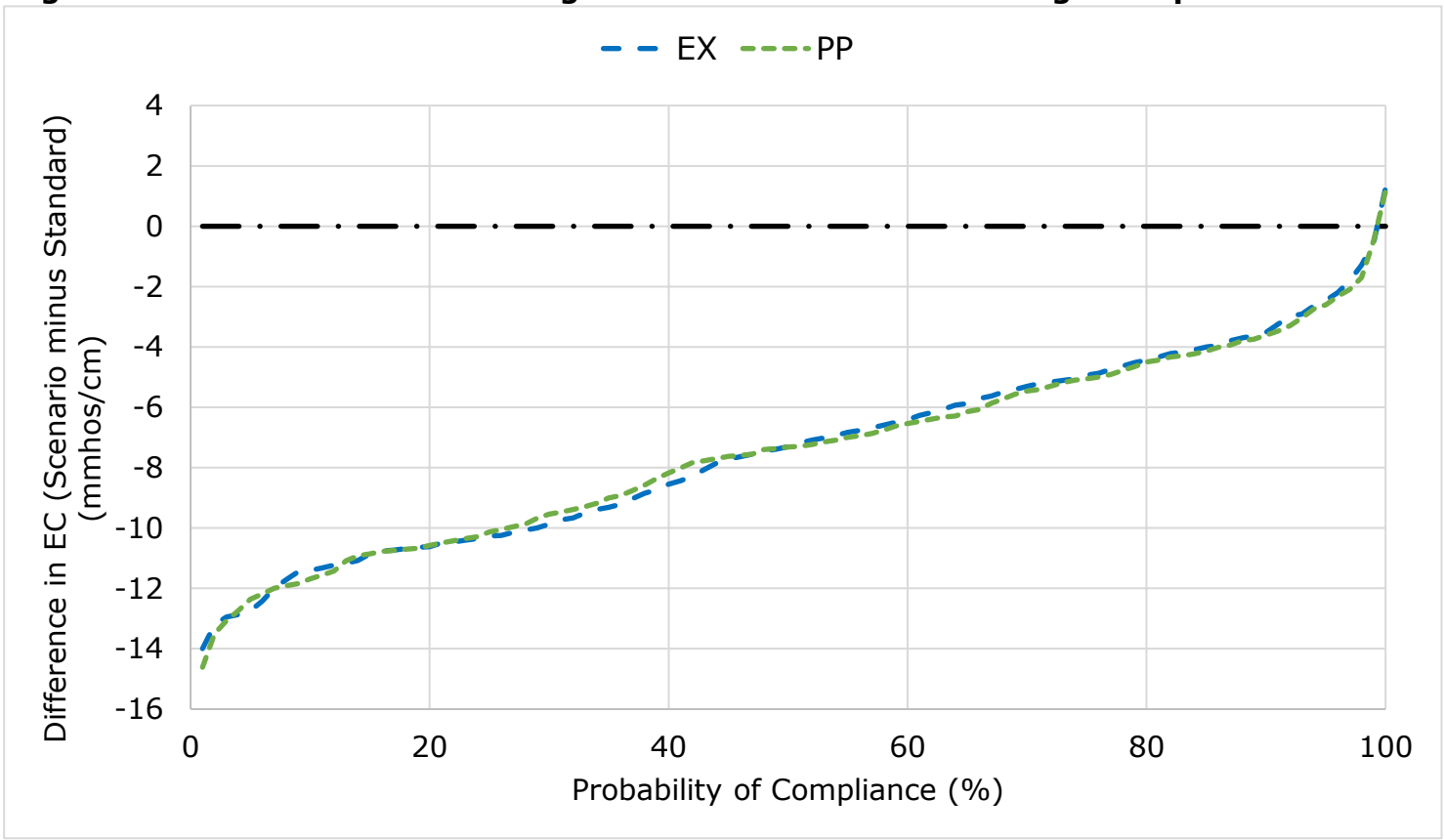


**Figure 14 D1641 MI Cache Slough at City of Vallejo Intake Compliance Exceedance Plot**

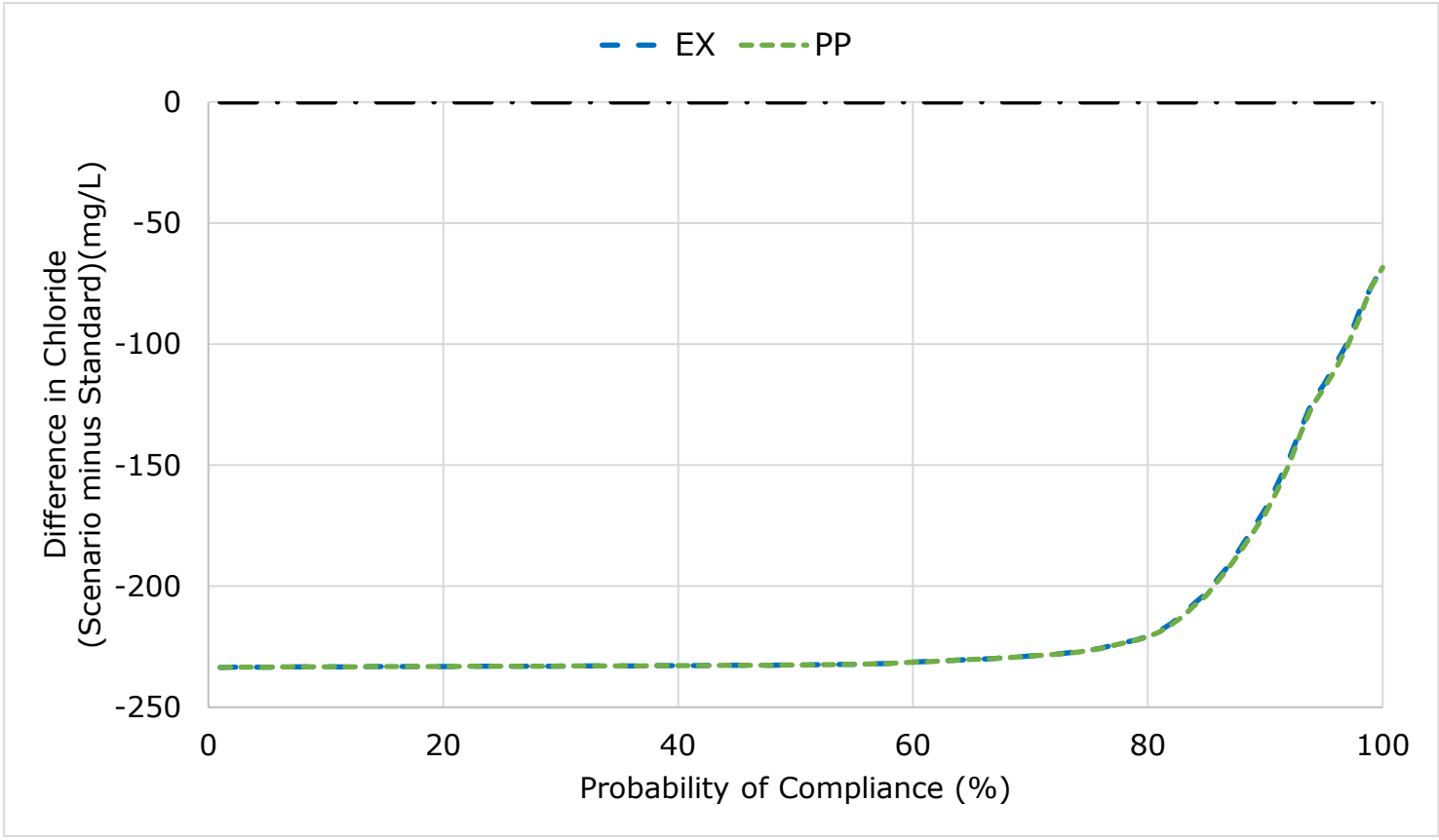


**Figure 15 D1641 MI West Canal at mouth of Clifton Court Forebay Compliance Exceedance Plot**

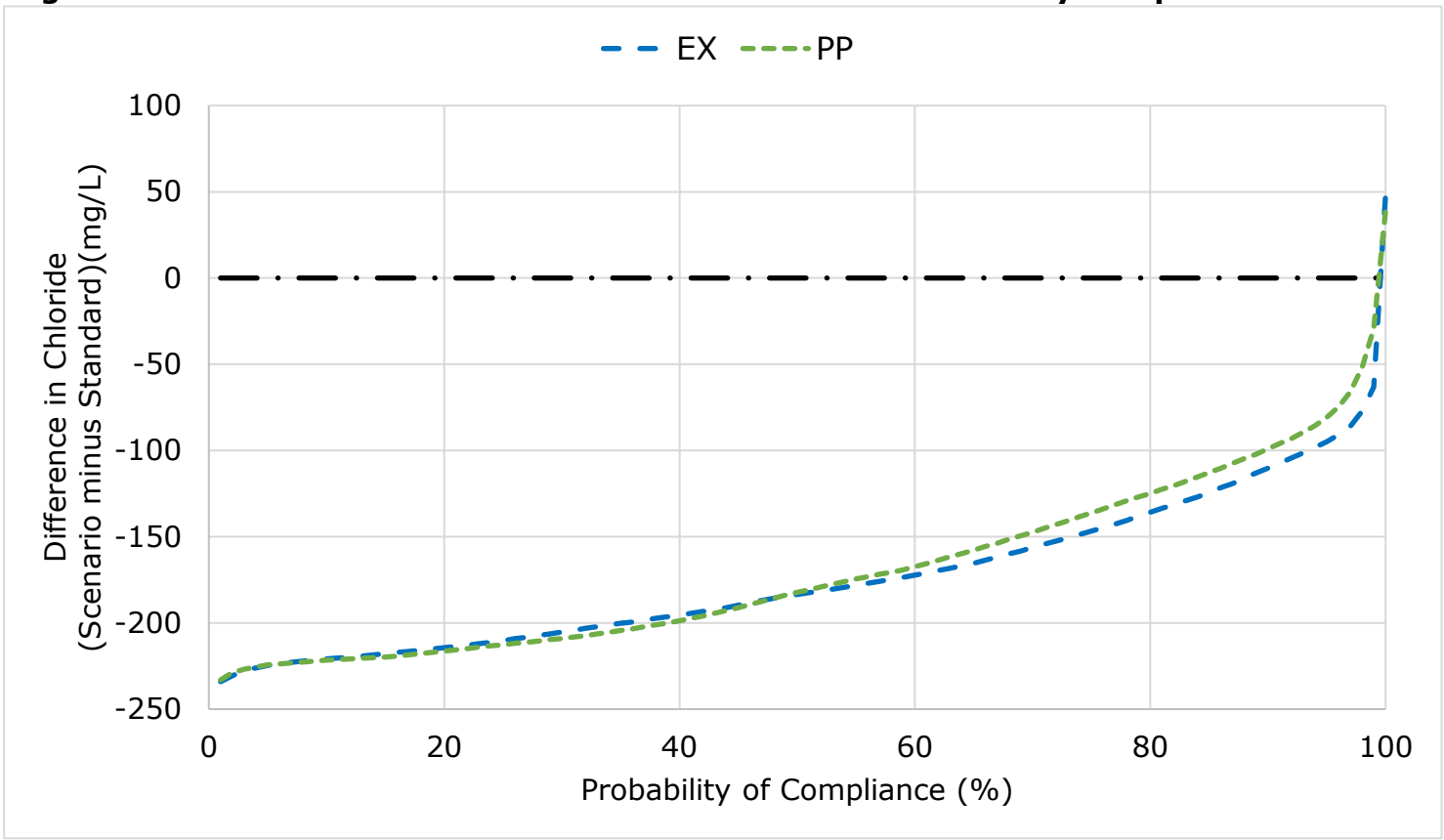


**Figure 16 D1641 MI Contra Costa Canal at Pumping Plant #1 Compliance Exceedance Plot**

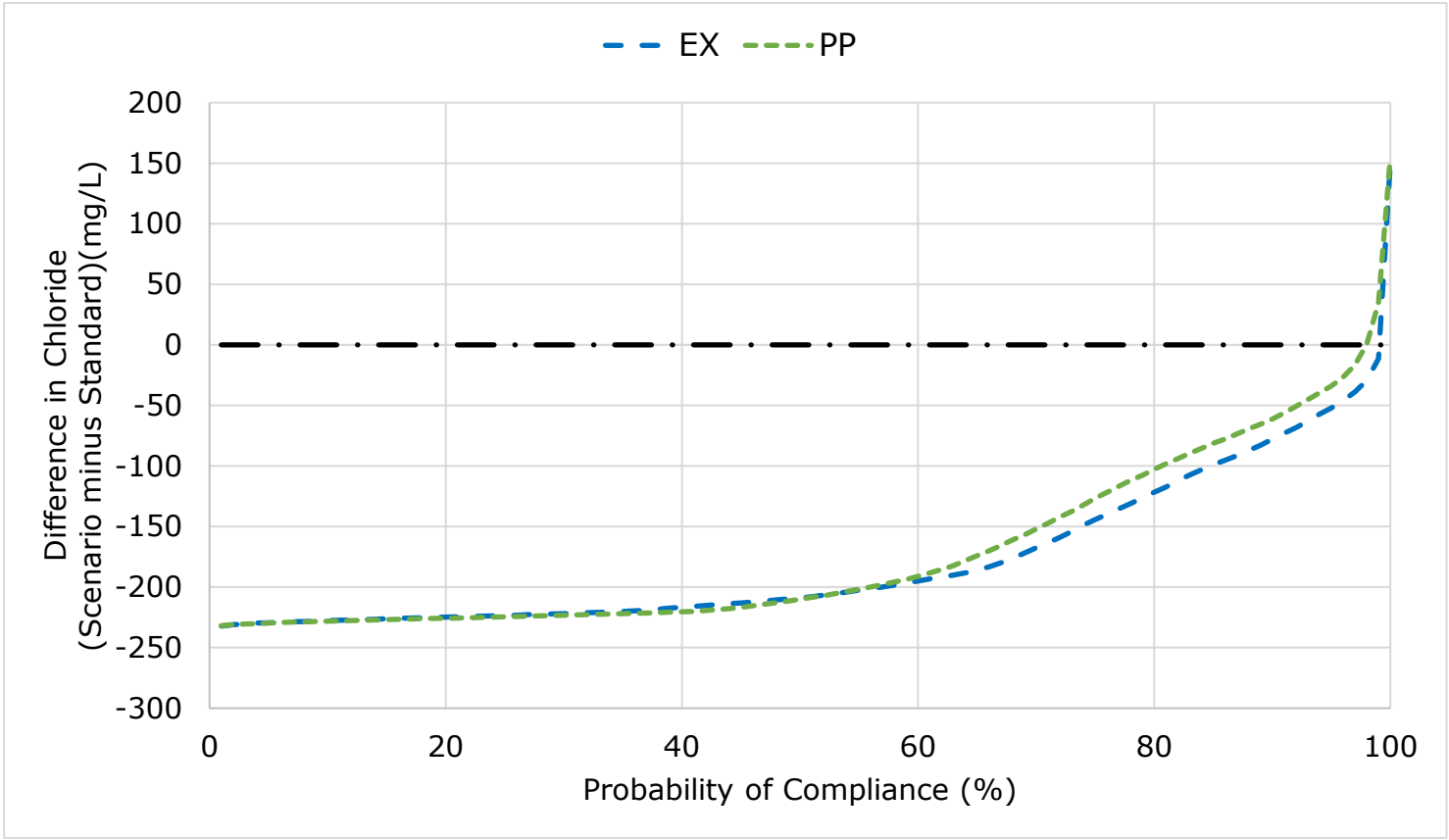


**Figure 17 D1641 MI Delta-Mendota Canal at Tracy Pumping Plant Compliance Exceedance Plot**

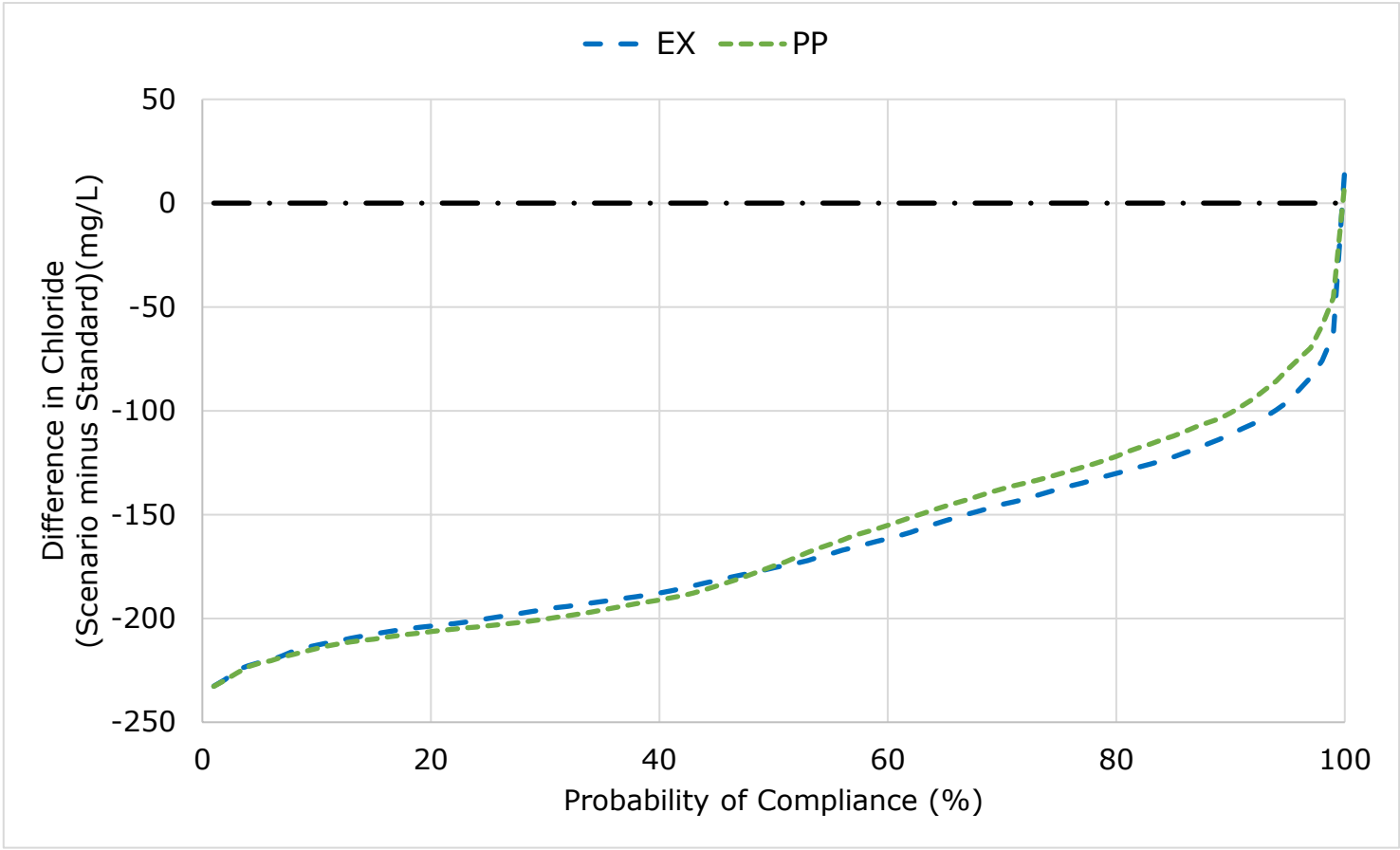


**Figure 18 D1641 MI Barker Slough at North Bay Aqueduct Intake Compliance Exceedance Plot**

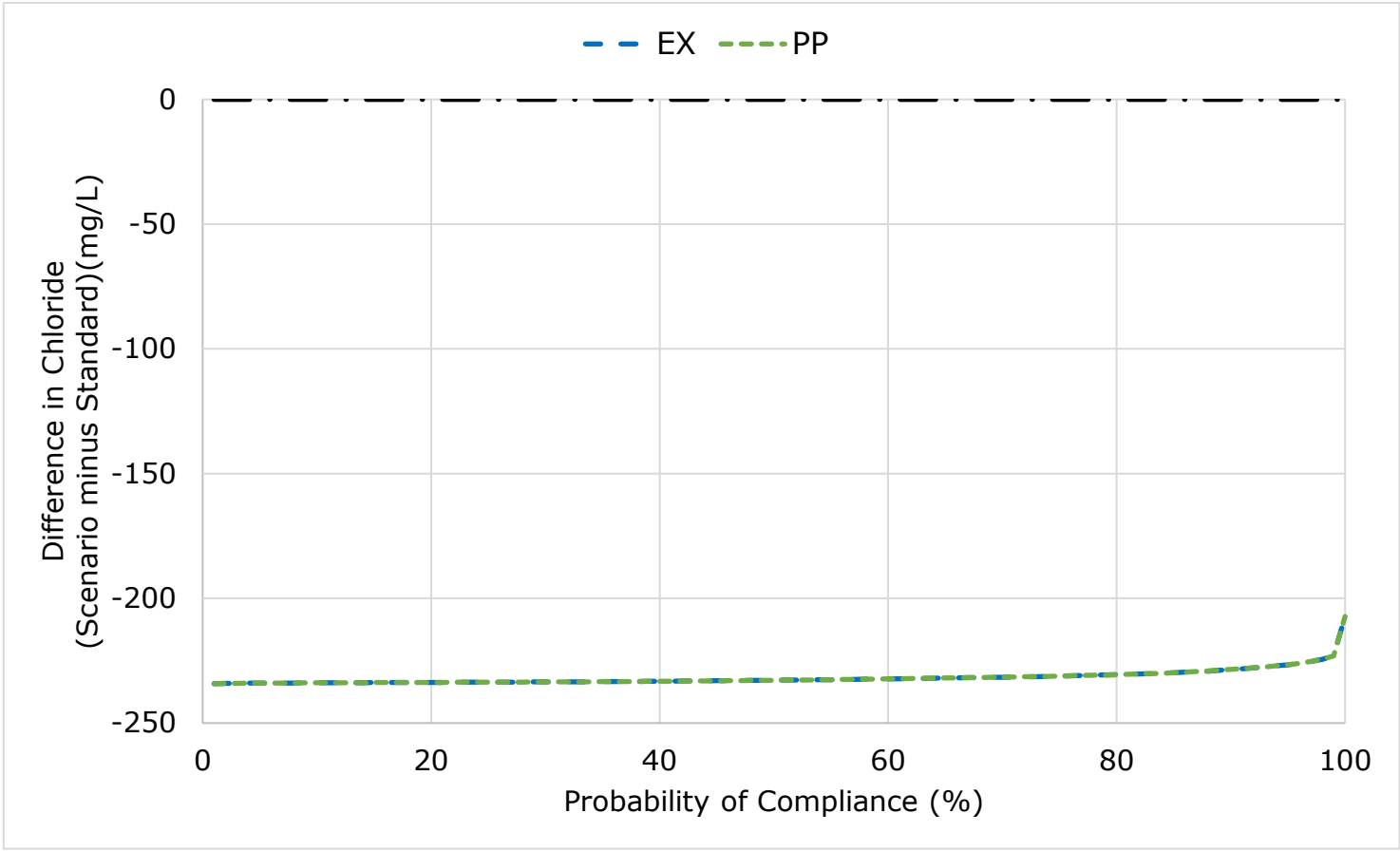


**Figure 19 D1641 AG Old River at Tracy Road Bridge Compliance Exceedance Plot**

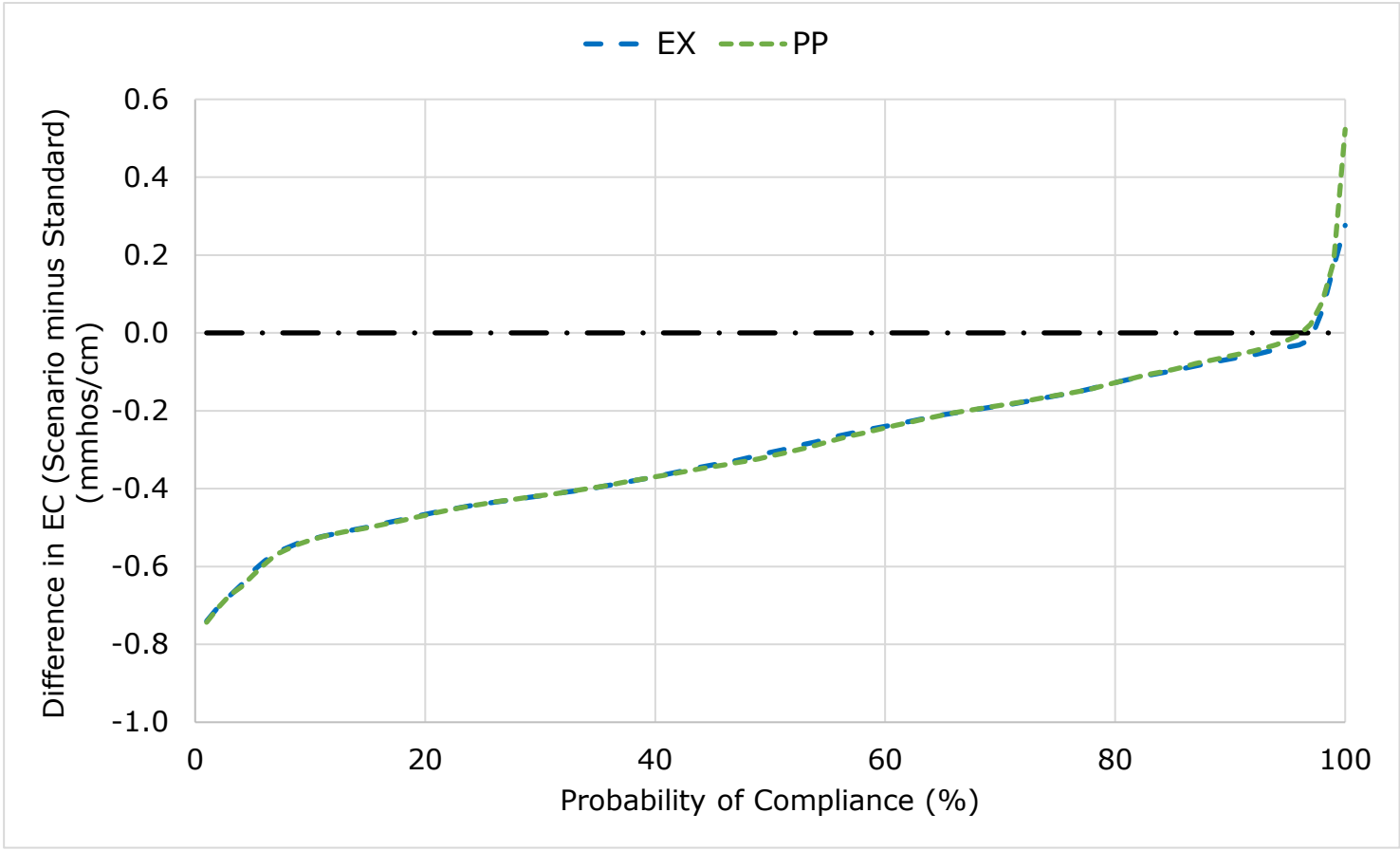


**Figure 20 D1641 AG Old River near Middle River Compliance Exceedance Plot**

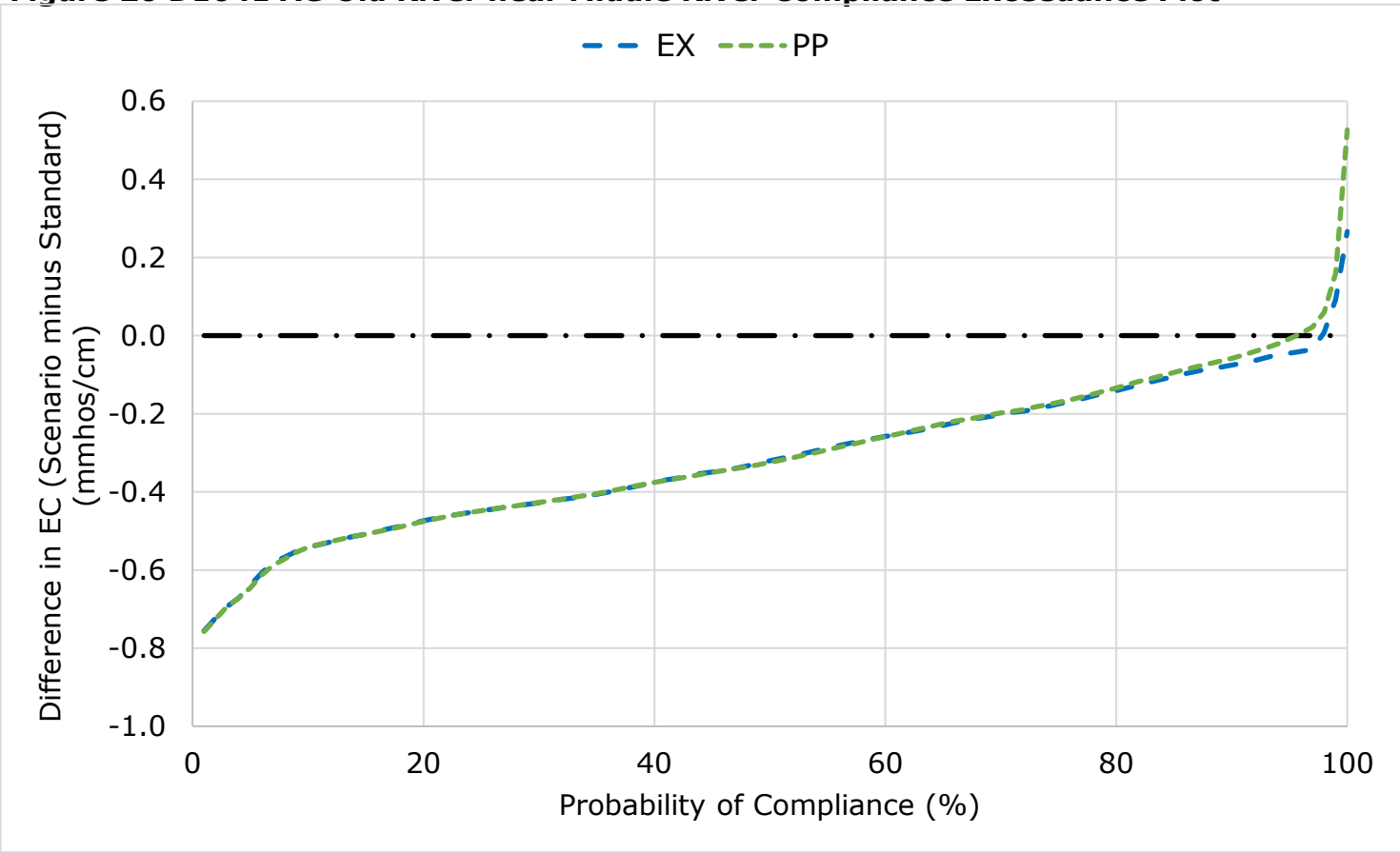


**Figure 21 D1641 AG San Joaquin River at Airport Way Bridge Vernalis Compliance Exceedance Plot**

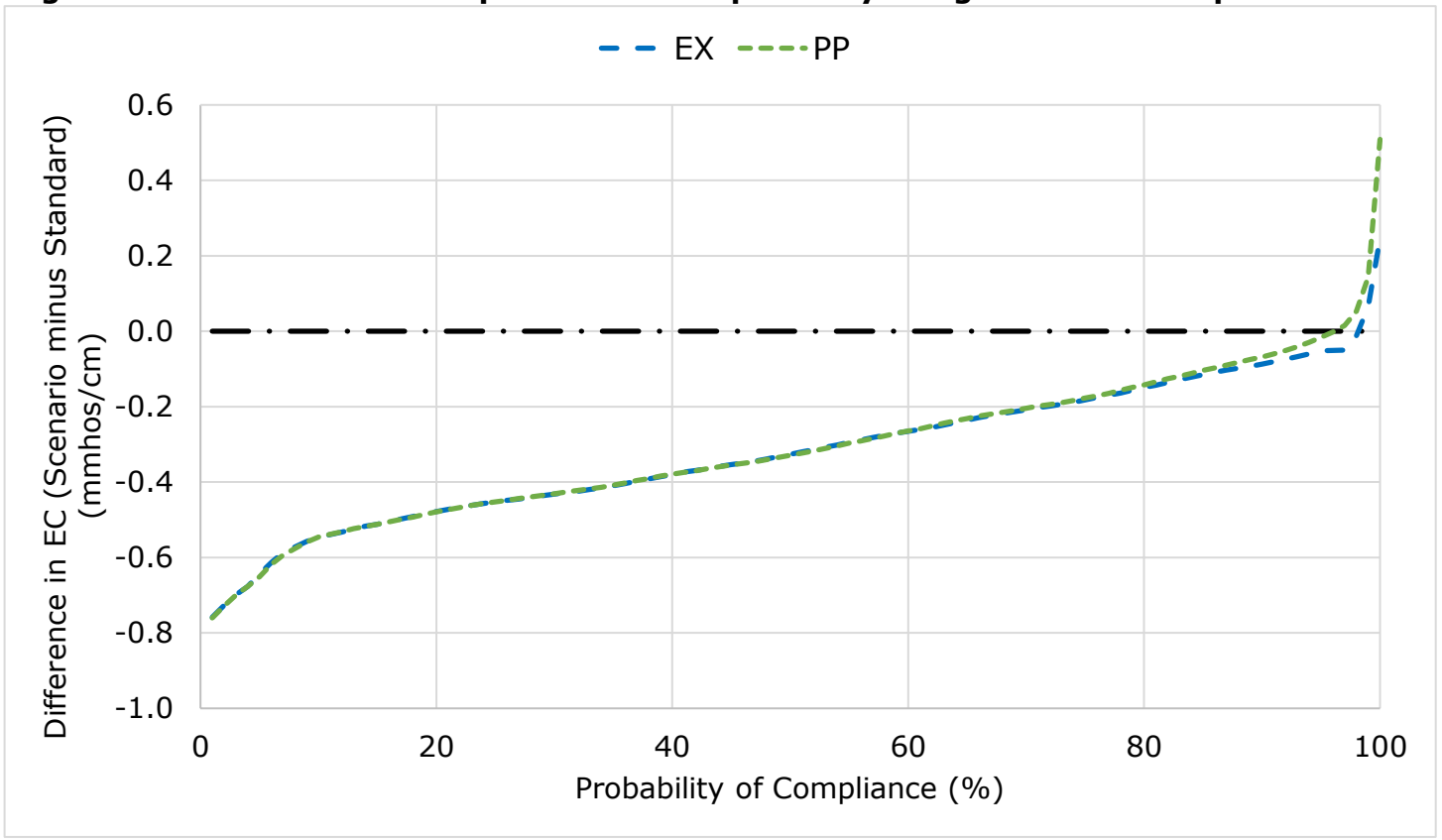


**Figure 22 D1641 AG San Joaquin River at Brandt Bridge site Compliance Exceedance Plot**

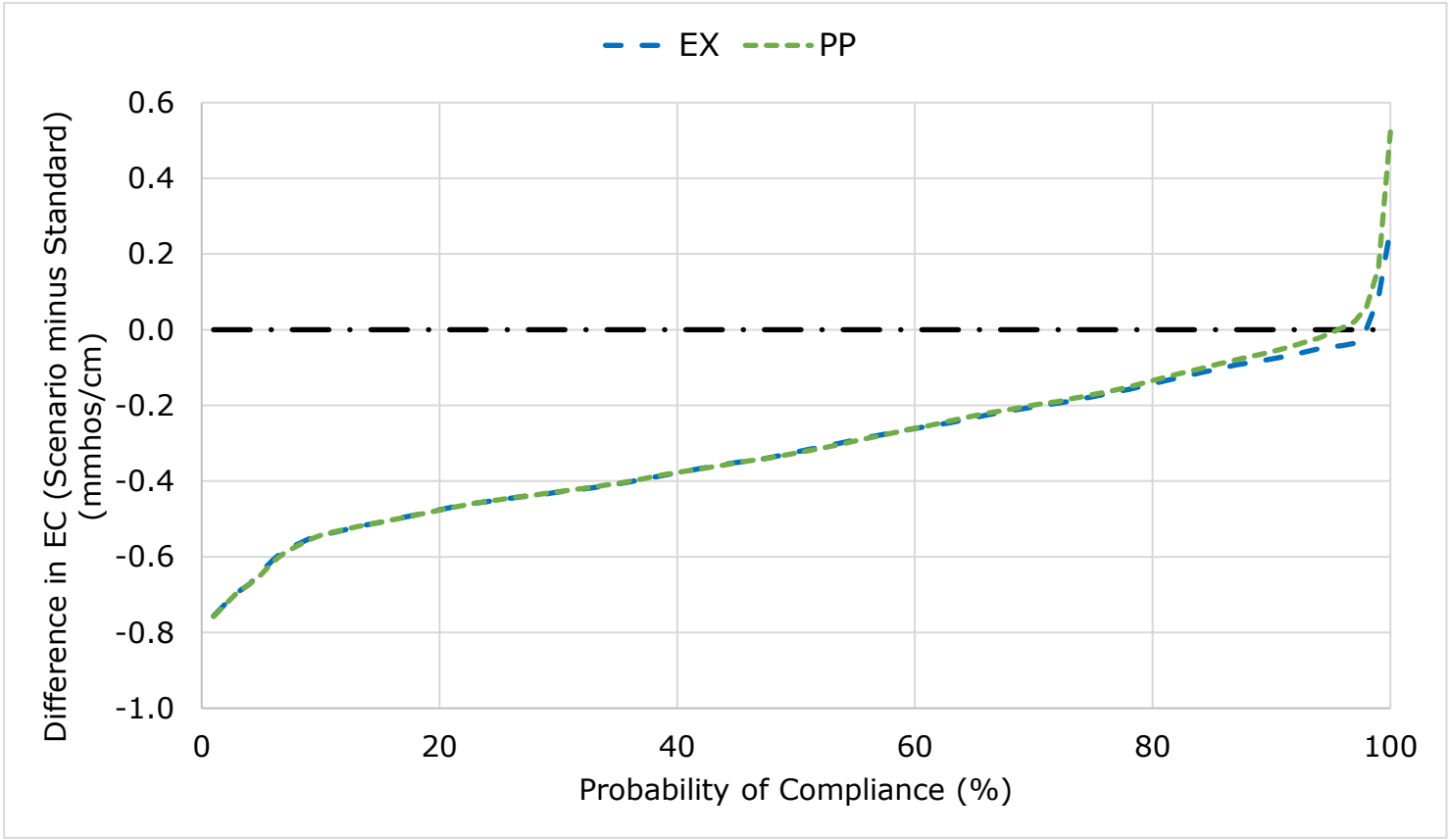


**Figure 23 D1641 MI Contra Costa Canal at Pumping Plant #1 Compliance Exceedance Plot**

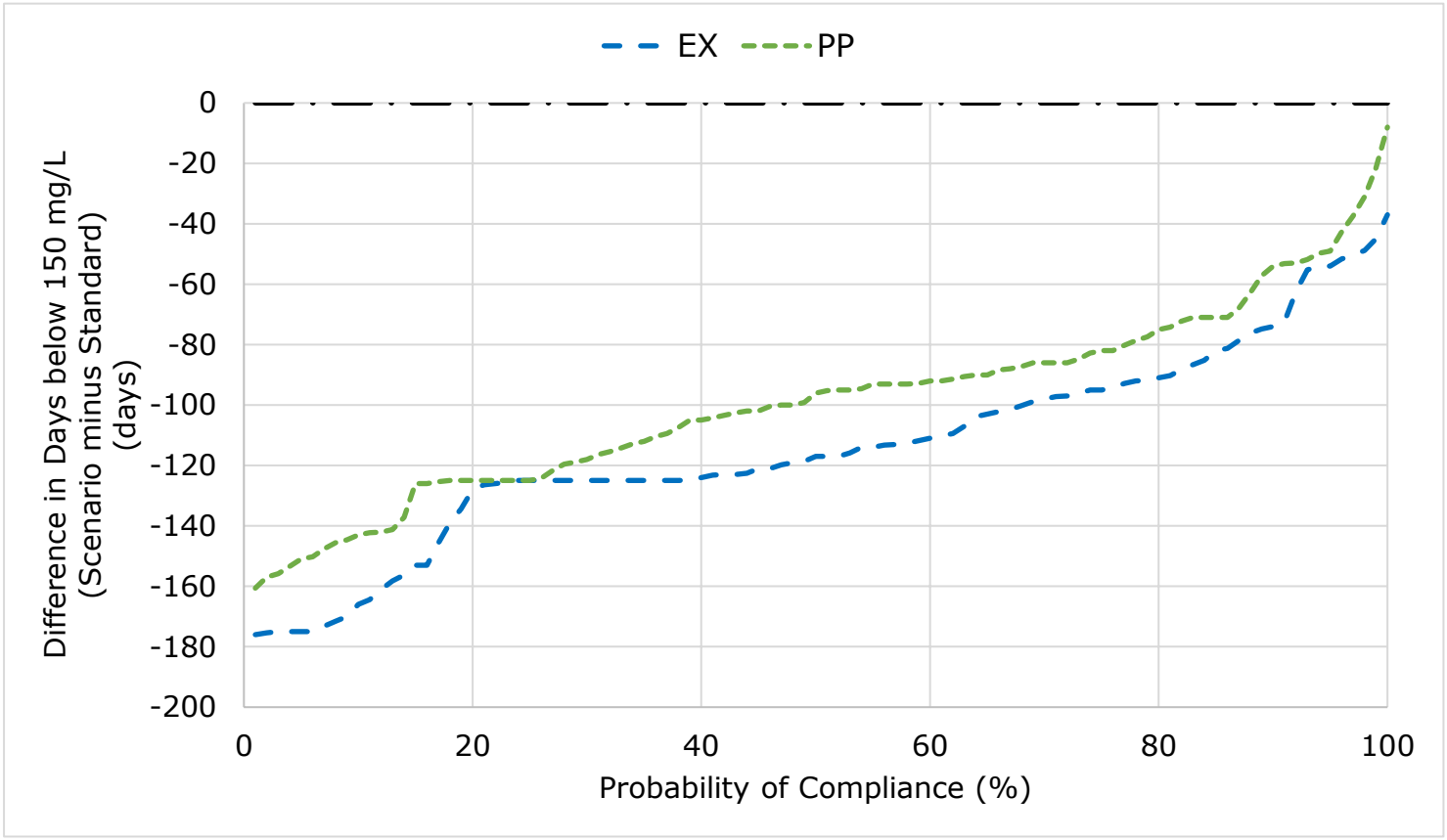
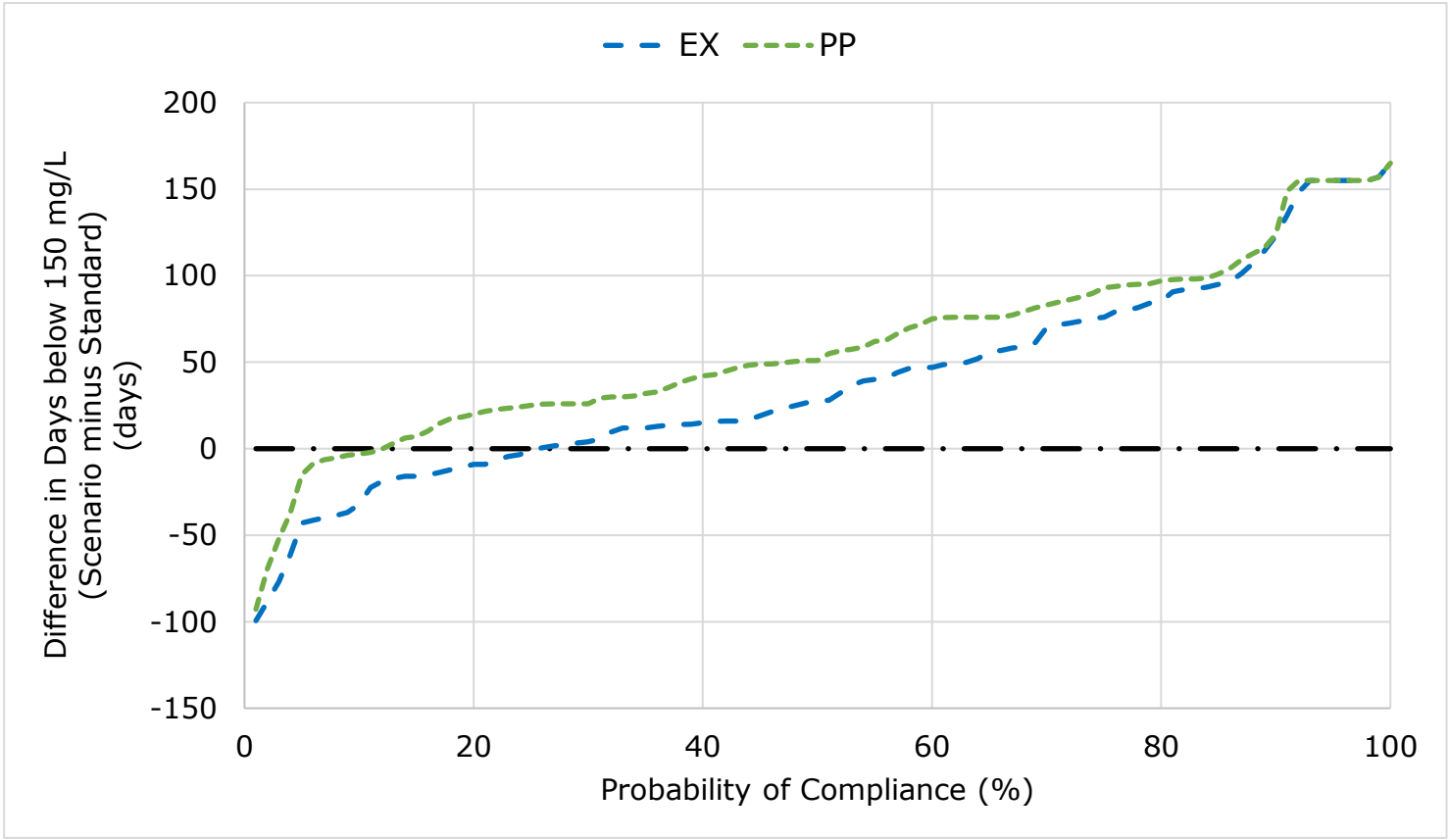


**Figure 24 D1641 MI San Joaquin River at Antioch Water Works Compliance Exceedance Plot**



# Appendix C – Modeling

## Attachment 3-10 – D1641 Compliance Results (CalSim II)

***NOTE: Attachment 3-8 is a new attachment that has been added to the DEIR since initial publication, as part of the FEIR process. The additional attachment is not shown in underline for ease of reading.***

The following results of the CalSim II model are included for Delta compliance conditions for the following alternatives:

- Existing Conditions
- Refined Alternative 2b

| Title | Model Parameter | Table Numbers | Figure Numbers |
|---|---|---|---|
| D1641 MI Contra Costa Canal at Pumping Plant #1 | NA | NA | 1 |
| D1641 AG San Joaquin River at Jersey Point | NA | NA | 2 |
| D1641 AG Sacramento River at Emmaton | NA | NA | 3 |
| D1641 FWS Spring X2 | NA | NA | 4 |

Report formats

- Compliance exceedance charts including all scenarios

**Figure 1 D1641 MI Contra Costa Canal at Pumping Plant #1 Compliance Exceedance Plot**

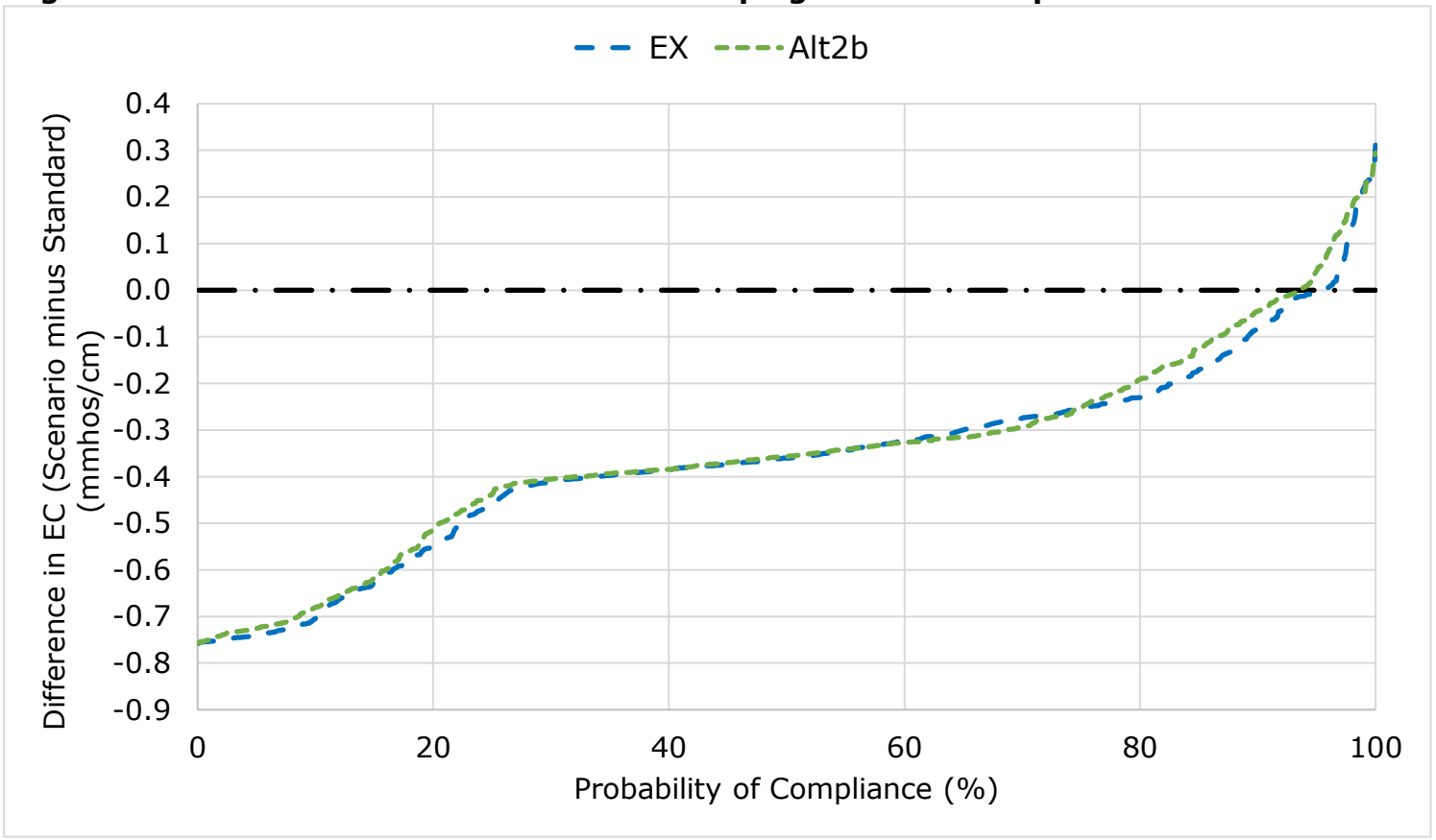


**Figure 2 D1641 AG San Joaquin River at Jersey Point Compliance Exceedance Plot**

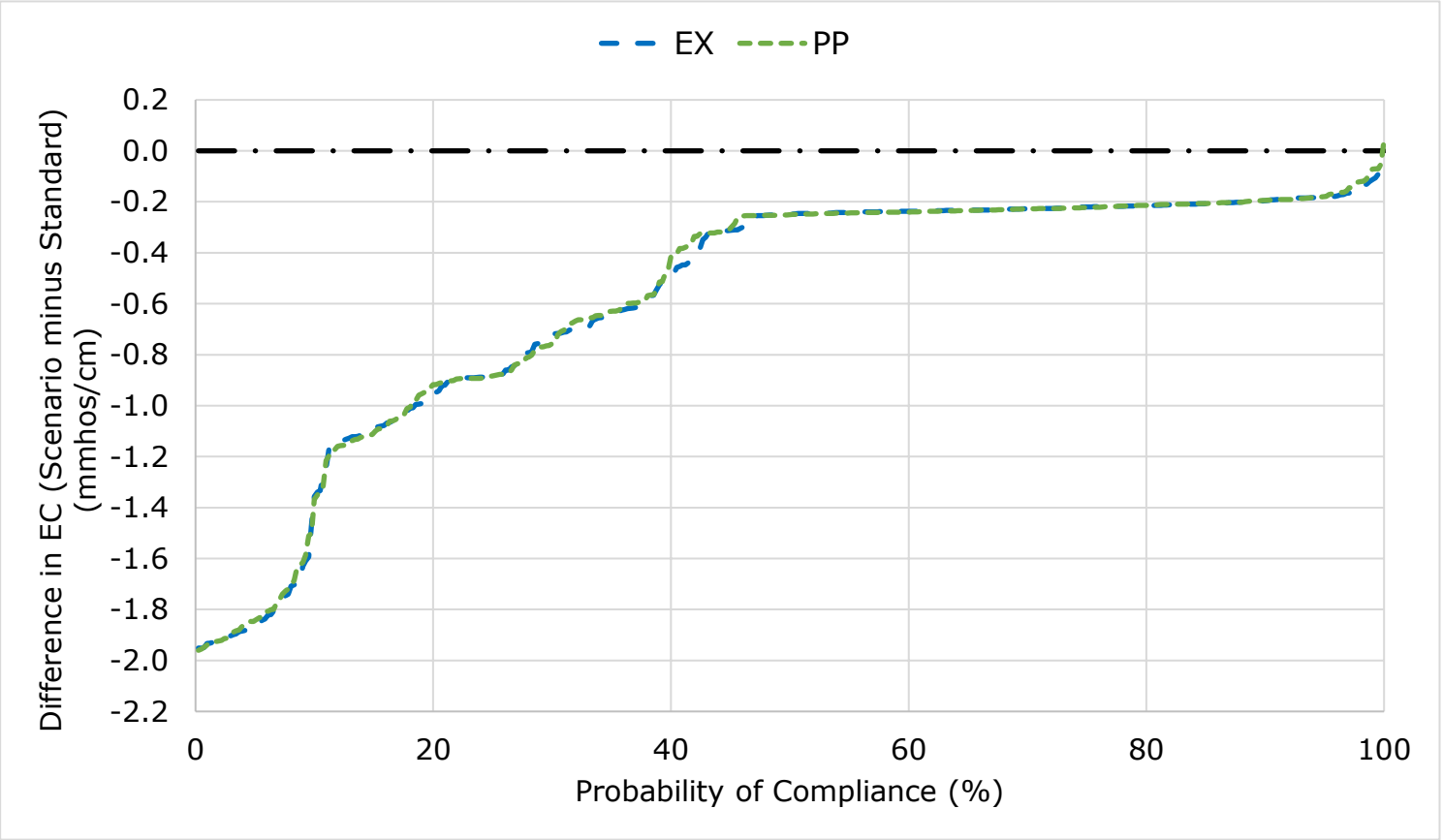


**Figure 3 D1641 AG Sacramento River at Emmaton Compliance Exceedance Plot**

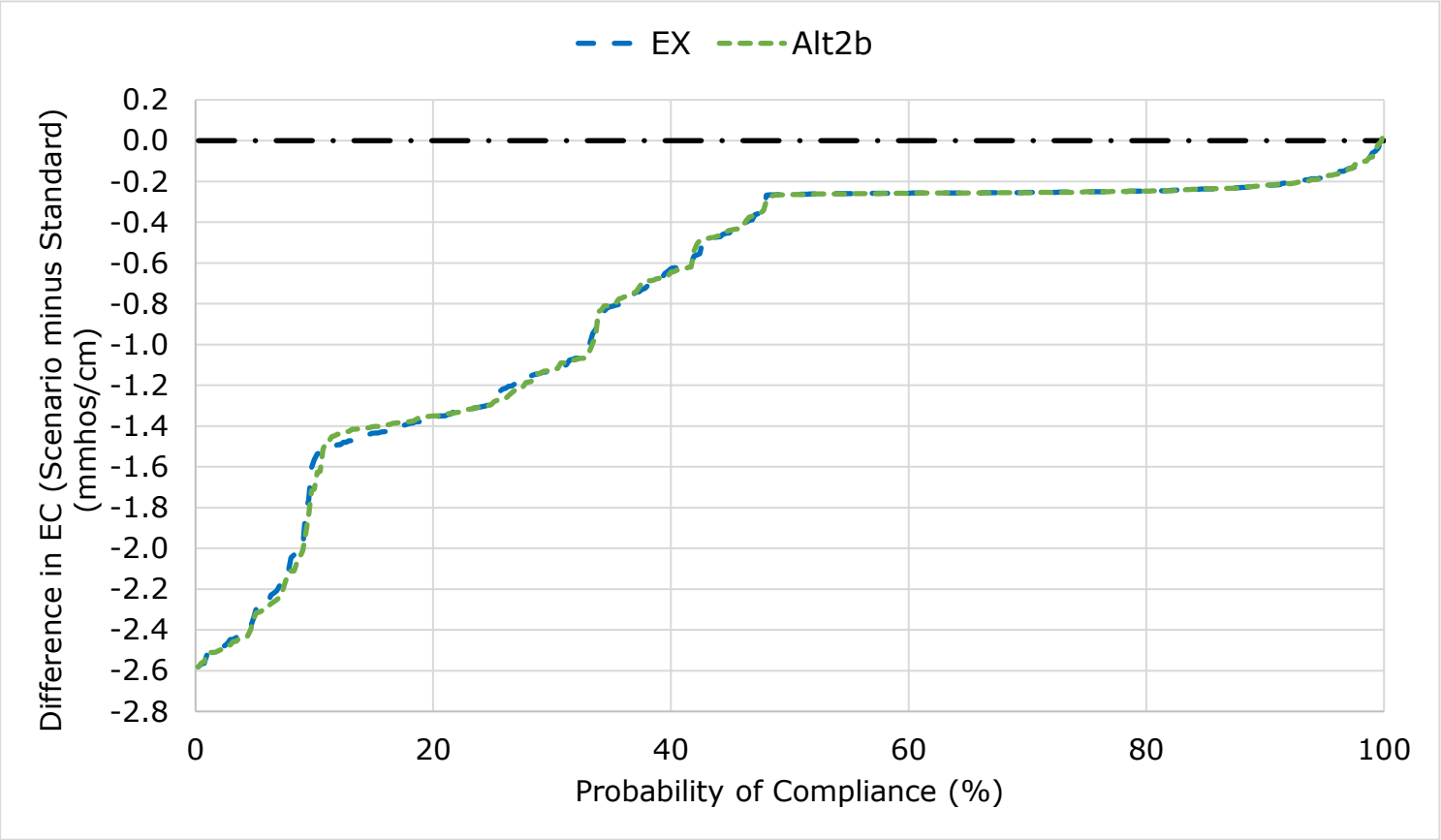


**Figure 4 D1641 FWS Spring X2 Compliance Exceedance Plot**