

Appendix 3, Cumulative Impacts Assessment Workbook

Spreadsheet number	Spreadsheet subject (taken from table of contents from the most recent THPs)	Notes
2	Introduction to Cumulative Impact Analysis section of the THP	Simply states that the Cumulative Impacts Assessment section of the plan is designed to meet requirements of 14 CCR 898 and 1034. Only in the four most recent plans. Only in the four most recent plans.
3	Background: Requirements under the Forest Practice Rules	Explains that the Cumulative Impacts Assessment follows the checklist format consistent with Technical Rule Addendum No. 2. There is no standardized method for conducting the analysis, a rational approach has been used. The proposed project has been designed to avoid or substantially lessen significant adverse effects. Only in the four most recent plans.
4	Analysis Methodology	Describes strategies (avoidance, minimization and mitigation) and practices (Best Management Practices, site specific, on-site and off-site) in general. Only in the four most recent plans.
5	Cumulative Watershed Effects Assessment	Watershed Assessment Areas for most recent plans are not confined to the Pilot Project (Campbell Creek) Planning Watershed. A map is provided of the assessment area in Section IV (spatial). Findings: "In Summary, watershed conditions today are improving and over time continued improvement of stream conditions with the watershed is anticipated." (text found in both of the 2015 harvest plans) Some formatting changed between 2010 and 2013, landuse history was included in the Cumulative Watershed Effects Analysis in older plans, from 2013 forward this information was moved to the Erosion Control Plan found in Section V of the THP.
6	Cumulative Soil Productivity Impacts Assessment	Assessment areas confined to the soils within the timber harvesting area. No spatial or quantitative information provided, discussion is qualitative.
7	Cumulative Biological Resource Impacts Assessment	Biological Assessment Areas for most recent plans are not confined to the Pilot Project (Campbell Creek) Planning Watershed. A map is provided of the assessment area in Section IV (spatial). Land use activities have been occurring for 150 years or more in the assessment area. "There are no known recent trends which have produced significant cumulative impacts upon biological resources within the assessment area." (THPs 1-15-107 MEN, 1-15-094 MEN, 1-14-126 MEN, 1-13-031 MEN, 1-10-033 MEN, 1-09-022 MEN, 1-08-015 MEN and 1-07-036 MEN). Formatting change between 2010 and 2013, as well as between 2008 and 2010.
8	Cumulative Recreation Resource Impact Assessment	The assessment area is generally the area that includes the logging area plus 300 feet (per Technical Rule Addendum #2). No spatial or quantitative information provided, discussion is qualitative.
9	Cumulative Visual Resource Impacts Assessment	This assessment is specific to what large concentrations of the public within three miles of the plan area might see (per Technical Rules Addendum #2). Given that Lyme Redwood Timberlands, LLC owns most of the watershed and adjacent watersheds, there are no large concentrations of people. No spatial or quantitative information provided , discussion is qualitative . It should be noted that where part of a plan is within the Coastal Commission Special Treatment Area (CCSTA) or adjacent to "non-federal lands not zoned TPZ" (code section 14 CCR 913.1(a)(7), such as neighboring private ownerships) are there vegetation removal considerations for visual quality.
10	Cumulative Vehicular Traffic Impacts Assessment	This assessment is specific to traffic on public roads outside of the plan area on which logging traffic must travel and roads commonly used by logging traffic. No spatial or quantitative information provided , the discussion is based on observation of public roads that have been used for decades by timber harvest related traffic - qualitative information.
11	Cumulative Climate Change Impacts Assessment	The first plan with a discussion of climate change and greenhouse gas emissions was in 2010. That plan was approved in 2011 (and therefore required to conform to all regulations in effect in 2011). 2011 was the first year that a change in the Forest Practice Act (not the Rules) included sequestration of carbon dioxide as a resource to be managed (PRC 4512(c) and 4512.5). Harvest plans must also conform to the Forest Practice Act even if no specific rule has been written spelling out how to treat the subject. It is unlikely you will find discussion of carbon sequestration and/or greenhouse gasses in any plans approved before 2011.
		In one plan (1-07-036 MEN) an extra category was added due to proposed use of helicopters for yarding. Since helicopters are unlikely to be used for restoration work due to cost. I chose not to make a separate spreadsheet. It is primarily qualitative , and if there is any spatial information it is on the operations maps (i.e. location of helicopter landings and flight routes. Some quantitative information was provided, derived from other sources, i.e. noise levels in decibels for trucks, cars, helicopters. Other than this note it hasn't been captured in the spreadsheets.
		For the years 2007-2015 in all but one case the Cumulative Impact Assessment section ended with maps of past projects covering a roughly 10 year period and a map of reasonably foreseeable future projects per the Forest Practice Rules (Table 1, Technical Rule Addendum No.2 associated with 14 CCR 912.9 - a new requirement in 2005). The one plan that was an exception had the maps but they were placed near the front of Section IV. These maps are provided to comply with AB47 and it should be noted that they only show THPs on the plan submitter's ownership. (not a big problem for the Pilot Project since about 90% of the watershed is owned by Lyme Redwood Timberlands LLC, but the NTMPs are not captured on these maps. There is no required standard for where in the plan these maps are placed. This information is spatial and may already have been captured by GIS. The maps reference past plan numbers and acreage values by silvicultural type are provided near the beginning of Section IV for those plan numbers providing quantitative information.
		Either directly before or directly after the maps, at the end of Section IV is the list of references consulted in the preparation of Section IV. This information is neither qualitative, quantitative or spatial. In addition to expected references to aerial photography, literature on fisheries, wildlife, sedimentation, greenhouse gas, etc. there can be such plan specific references as "Helicopter Noise Reduction." Nothing in this section is qualitative, quantitative or spatial in nature.
		Change in formatting of the Cumulative Impacts Assessment part of the plans occurred between the plan submitted in 2010 and the one submitted in 2013. Less detail in some subject areas in the older plans, some headers not included at all (i.e., "Introduction," "Background," "Analysis Methodology," "Rate of Harvest" in the CWE section). And plans approved prior to 2011 do not have the greenhouse gas section, see above, spreadsheet 11.

Introduction to Cumulative Impact Analysis section of the THP

Plan Number	<u>Qualitative?</u>	<u>Quantitative?</u>	<u>Spatial?</u>	Notes
1-15-107 MEN	Yes	No	No	The Cumulative Impacts Assessment section of the plan is designed to meet requirements of 14 CCR 898 and 1034.
1-15-094 MEN	Yes	No	No	The Cumulative Impacts Assessment section of the plan is designed to meet requirements of 14 CCR 898 and 1034.
1-14-126 MEN	Yes	No	No	The Cumulative Impacts Assessment section of the plan is designed to meet requirements of 14 CCR 898 and 1034.
1-13-031 MEN	Yes	No	No	The Cumulative Impacts Assessment section of the plan is designed to meet requirements of 14 CCR 898 and 1034.
1-10-033 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. There is no introduction or table of contents provided in this plan.
1-09-022 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. There is no introduction or table of contents provided in this plan.
1-08-015 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. There is no introduction or table of contents provided in this plan.
1-07-036 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. There is no introduction or table of contents provided in this plan.

Background: Requirements under the Forest Practice Rules				
Plan Number	<u>Qualitative?</u>	<u>Quantitative?</u>	<u>Spatial?</u>	Notes
1-15-107 MEN	Yes	No	No	The Cumulative Impacts Assessment section of the plan follows the checklist format consistent with Technical Rule Addendum No. 2. There is no standardized method for conducting the analysis, a rational approach has been used. The proposed project has been designed to avoid or substantially lessen significant adverse effects.
1-15-094 MEN	Yes	No	No	The Cumulative Impacts Assessment section of the plan follows the checklist format consistent with Technical Rule Addendum No. 2. There is no standardized method for conducting the analysis, a rational approach has been used. The proposed project has been designed to avoid or substantially lessen significant adverse effects.
1-14-126 MEN	Yes	No	No	The Cumulative Impacts Assessment section of the plan follows the checklist format consistent with Technical Rule Addendum No. 2. There is no standardized method for conducting the analysis, a rational approach has been used. The proposed project has been designed to avoid or substantially lessen significant adverse effects.
1-13-031 MEN	Yes	No	No	The Cumulative Impacts Assessment section of the plan follows the checklist format consistent with Technical Rule Addendum No. 2. There is no standardized method for conducting the analysis, a rational approach has been used. The proposed project has been designed to avoid or substantially lessen significant adverse effects.
1-10-033 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. Not found in this plan.
1-09-022 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. Not found in this plan.
1-08-015 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. Not found in this plan.
1-07-036 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. Not found in this plan.

Analysis Methodology				
Plan Number	Qualitative?	Quantitative?	Spatial?	Notes
1-15-107 MEN	Yes	No	No	Strategies (avoidance, minimization and mitigation) and practices (Best Management Practices, site specific, on-site and off-site) are described in general. Plan preparation is iterative with "The end goal ... to achieve the initial project objectives and not only prevent adverse cumulative environmental effects but achieve a positive cumulative environmental outcome." Analysis methods are both qualitative and quantitative. Level of information depends on availability and level of perceived risk. Analysis is an imperfect science.
1-15-094 MEN	Yes	No	No	Strategies (avoidance, minimization and mitigation) and practices (Best Management Practices, site specific, on-site and off-site) are described in general. Plan preparation is iterative with "The end goal ... to achieve the initial project objectives and not only prevent adverse cumulative environmental effects but achieve a positive cumulative environmental outcome." Analysis methods are both qualitative and quantitative. Level of information depends on availability and level of perceived risk. Analysis is an imperfect science.
1-14-126 MEN	Yes	No	No	Strategies (avoidance, minimization and mitigation) and practices (Best Management Practices, site specific, on-site and off-site) are described in general. Plan preparation is iterative with "The end goal ... to achieve the initial project objectives and not only prevent adverse cumulative environmental effects but achieve a positive cumulative environmental outcome." Analysis methods are both qualitative and quantitative. Level of information depends on availability and level of perceived risk. Analysis is an imperfect science.
1-13-031 MEN	Yes	No	No	Strategies (avoidance, minimization and mitigation) and practices (Best Management Practices, site specific, on-site and off-site) are described in general. Plan preparation is iterative with "The end goal ... to achieve the initial project objectives and not only prevent adverse cumulative environmental effects but achieve a positive cumulative environmental outcome." Analysis methods are both qualitative and quantitative. Level of information depends on availability and level of perceived risk. Analysis is an imperfect science.
1-10-033 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. Not found in this plan.
1-09-022 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. Not found in this plan.
1-08-015 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. Not found in this plan.
1-07-036 MEN	N/A	N/A	N/A	Format changed sometime after 2010 that added this section to the Cumulative Impacts Assessment discussion. Not found in this plan.

Cumulative Watershed Effects Assessment

Plan Number	Beneficial Uses			Current Stream Channel Conditions				Past Projects			Other Past Impacts			Potential On-Site Effect	
	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?
1-15-107 MEN	Watershed Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell AND Churchman Creek Planning Watersheds.	Yes, list taken from the NCRWQCB Basin Plan, each category designated as existing or potential use.	No	No	Table with rankings of None, Minimal, Moderate and Heavy (High) for Channel Type, Class, Gravel Embeddedness, Pool Filling Aggradation, Bank Cutting, Bank Mass Wasting, Down Cutting, Scouring LWD Accumulation, Canopy Reduction and Recent Flooding for two watercourse segments, Smith Creek and an unnamed tributary. Refers reader to Stream Inventory Report in THP Section V for details. Acknowledges anthropogenic and geologic features outside of the plan area but within the assessment area, and outside of the assessment area, that have an impact on beneficial uses of water. Stream clearance activities occurred in some drainages post 1970 (?).	1925-1940, railroad/steam donkey/tractor logging, 1940-1970 tractor logging. Refers reader to Stream Inventory Report in THP Section V for details. Quantitative information may be provided there.	Refers reader to Stream Inventory Report in THP Section V for details. Maps provided there.	Refers reader to the Erosion Control Plan in Section V for a discussion of the history of the South Fork Ten Mile River and the Campbell Creek Watershed.	Past harvest plans for the period 2005-2015 are listed by owner, silviculture, yarding and acreage with the legal description provided for each. There was one table for Campbell Creek and another one for Churchman Creek Planning Watershed.	Maps are found at end of Section IV, but they only show the plans that are on the Plan Submitter's ownership (per AB47).	Seven characteristics listed, boxes checked "Yes" or "No" followed by comments. Four items regarding sediment, erosion, water temperature and unstable organic debris were associated with railroad and early tractor logging. Item 5 regarding removal of large organic debris and loss of pool habitat attributed to historic CDF&G practices, no chemical or other past impacts identified as resulting from past projects.	No	No	List of 15 characteristics ranked High, Medium or Low for the potential for the proposed project, as mitigated, to cause and increase in stream or lake sediment. All were ranked "Low"	No
1-15-094 MEN	Watershed Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell Creek, Little Valley Creek AND Inglenook Creek Planning Watersheds.	Yes, list taken from the NCRWQCB Basin Plan, each category designated as existing or potential use.	No	No	Table with rankings of None, Minimal and Moderate for Channel Type, Class, Gravel Embeddedness, Pool Filling Aggradation, Bank Cutting, Bank Mass Wasting, Down Cutting, Scouring LWD Accumulation, Canopy Reduction and Recent Flooding for South Fork Ten Mile River. Refers reader to Stream Inventory Report in THP Section V for details. Acknowledges anthropogenic and geologic features outside of the plan area but within the assessment area, and outside of the assessment area, that have an impact on beneficial uses of water. Stream clearance activities occurred in some drainages post 1970 (?).	1915-1930, railroad/steam donkey/tractor logging, 1940-1970 tractor logging. Refers reader to Stream Inventory Report in THP Section V for details. Quantitative information may be provided there. Caution: This report includes stream segments in other Planning Watersheds, discussion and conclusions may not be specific to the Campbell Creek Planning Watershed.	Refers reader to Stream Inventory Report in THP Section V for details. Maps provided there.	Refers reader to the Erosion Control Plan in Section V for a discussion of the history of the planning watersheds, only one of which is Campbell Creek.	Past harvest plans for the period 2005-2015 are listed by owner, silviculture, yarding and acreage with the legal description provided for each. There was one table for Campbell Creek, one for Little Valley Creek and one for Inglenook Creek Planning Watersheds.	Maps are found at end of Section IV, but they only show the plans that are on the Plan Submitter's ownership (per AB47).	Seven characteristics listed, boxes checked "Yes" or "No" followed by comments. Four items regarding sediment, erosion, water temperature and unstable organic debris were associated with railroad and early tractor logging. Item 5 regarding removal of large organic debris and loss of pool habitat attributed to historic CDF&G practices, no chemical or other past impacts identified as resulting from past projects.	No	No	List of 15 characteristics ranked High, Medium or Low for the potential for the proposed project, as mitigated, to cause and increase in stream or lake sediment. All were ranked "Low"	No
1-14-126 MEN	Watershed Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell AND Churchman Creek Planning Watersheds.	Yes, list taken from the NCRWQCB Basin Plan, each category designated as existing or potential use.	No	No	Table with rankings of None, Minimal and Moderate for Channel Type, Class, Gravel Embeddedness, Pool Filling Aggradation, Bank Cutting, Bank Mass Wasting, Down Cutting, Scouring LWD Accumulation, Canopy Reduction and Recent Flooding for two channel types in Campbell Creek and one on the South Fork Ten Mile River. Refers reader to Stream Inventory Report in THP Section V for details. Acknowledges anthropogenic and geologic features outside of the plan area but within the assessment area, and outside of the assessment area, that have an impact on beneficial uses of water.	Early railroad/steam donkey/tractor logging. Refers reader to Stream Inventory Report in THP Section V for details. Quantitative information may be provided there.	Refers reader to Stream Inventory Report in THP Section V for details. Maps provided there.	Refers reader to the Erosion Control Plan in Section V for a discussion of the history of the planning watersheds, only one of which is Campbell Creek.	Past harvest plans for the period 2004-2014 are listed by owner, silviculture, yarding and acreage with the legal description provided for each. There was one table for Churchman Creek and another one for Campbell Creek Planning Watershed.	Maps are found at end of Section IV, but they only show the plans that are on the Plan Submitter's ownership (per AB47).	Seven characteristics listed, boxes checked "Yes" or "No" followed by comments. Four items regarding sediment, erosion, water temperature and unstable organic debris were associated with railroad and early tractor logging. Item 5 regarding removal of large organic debris and loss of pool habitat attributed to historic CDF&G practices, no chemical or other past impacts identified as resulting from past projects.	No	No	List of 15 characteristics ranked High, Medium or Low for the potential for the proposed project, as mitigated, to cause and increase in stream or lake sediment. All were ranked "Low"	No

1-13-031 MEN	Watershed Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell Creek, Mill Valley Creek AND Bear Haven Creek Planning Watersheds.	Yes, list taken from the NCRWQCB Basin Plan, each category designated as existing or potential use.	No	No	Table with rankings of None, Minimal and Moderate for Channel Type, Class, Gravel Embeddedness, Pool Filling Aggradation, Bank Cutting, Bank Mass Wasting, Down Cutting, Scouring LWD Accumulation, Canopy Reduction and Recent Flooding for two channel types in Mill Creek and two channel types on Smith Creek. Refers reader to Stream Inventory Report in THP Section V for details. Acknowledges anthropogenic and geologic features outside of the plan area but within the assessment area, and outside of the assessment area, that have an impact on beneficial uses of water.	Prior to 1900 logging with bull teams, hauled by railroad, late 1890s yarding with steam donkey began. The logged area was burned prior to felling, after felling, and at completion of operations during this period. Refers reader to Stream Inventory Report in THP Section V for details. Quantitative information may be provided there. Caution: This report includes stream segments in other Planning Watersheds, discussion and conclusions may not be specific to the Campbell Creek Planning Watershed.	Refers reader to Stream Inventory Report in THP Section V for details. Maps provided there.	Refers reader to the Erosion Control Plan in Section V for a discussion of the history of the Mill, Campbell and Bearhaven Creek Watersheds.	Past harvest plans for the period 2003-2013 are listed by owner, silviculture, yarding and acreage with the legal description provided for each. One table for Mill Creek, one for Campbell Creek and one for Bear Haven Creek Planning Watershed.	Maps are found at end of Section IV, but they only show the plans that are on the Plan Submitter's ownership (per AB47).	Narrative regarding woody debris removal from streams between 1950 and the 1980s. Landowner actively replacing wood - see "Notes" column.	31 pieces of LWD added per mile over 13 miles of North Fork Ten Mile River, a few other figures given for other watercourses.	There may be a map in the Aquatic Habitat Assessment report in Section V of the plan.	List of 15 characteristics ranked High, Medium or Low for the potential for the proposed project, as mitigated, to cause and increase in stream or lake sediment. All were ranked "Low"	No
1-10-033 MEN	Watershed Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell Creek AND Little Valley Creek Planning Watersheds.	Yes, list taken from the NCRWQCB Basin Plan, each category designated as existing or potential use.	No	No	Table with rankings of Minimal and Moderate for Gravel Embeddedness, Pool Filling Aggradation, Bank Cutting, Bank Mass Wasting, Down Cutting, Scouring, LWD Accumulation, Canopy Reduction and Recent Flooding for two watercourse segments, South Fork Ten Mile River (channel type E5, class I) and Little Valley Creek (not in pilot project). Acknowledges anthropogenic and geologic features that may have an impact.	Harvest history is included in a previous section "Section C: Past, Present and Future Projects within the Assessment Areas" includes some current conditions, none contributing to a reduction in the beneficial uses of water.	No	Seven characteristics listed, boxes checked "Yes" or "No" followed by comments. Four items regarding sediment, erosion, water temperature and unstable organic debris were associated with railroad and early tractor logging. Item 5 regarding removal of large organic debris and loss of pool habitat attributed to historic CDF&G practices, no chemical or other past impacts identified as resulting from past projects. Harvest history is included in a previous section "Section C: Past, Present and Future Projects within the Assessment Areas."	Past harvest plans for the period 2000-2010 are listed by owner, silviculture, yarding and acreage with the legal description provided for each. One table Campbell Creek and one for Little Valley Creek Planning Watersheds.	Maps are found at end of Section IV, but they only show the plans that are on the Plan Submitter's ownership (per AB47).	N/A - older form didn't have this category	N/A - older form didn't have this category	N/A - older form didn't have this category	List of 15 characteristics ranked High, Medium or Low for the potential for the proposed project, as mitigated, to cause and increase in stream or lake sediment. All were ranked "Low"	No
1-09-022 MEN	Watershed Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell AND Churchman Creek Planning Watersheds.	Yes, list taken from the NCRWQCB Basin Plan, each category designated as existing or potential use.	No	No	Table with rankings of Minimal, Moderate and Heavy for Gravel Embeddedness, Pool Filling Aggradation, Bank Cutting, Bank Mass Wasting, Down Cutting, Scouring, Debris Clearing, Debris Jamming, Canopy Reduction and Recent Flooding for two watercourse segments, South Fork Ten Mile River (channel type F3, class I) and Campbell Creek (channel type B4, class I). Acknowledges anthropogenic and geologic features that may have an impact.	1925-1940, railroad/steam donkey/tractor logging, 1940-1970 tractor logging.	No	Very little narrative.	Past harvest plans for the period 1999-2008 are listed by owner, silviculture, yarding and acreage. One table for Churchman Creek and one for Campbell Creek Planning Watersheds.	Maps included, but they only show the plans that are on the Plan Submitter's ownership (per AB47).	Not a separate heading as in newer plans. Seven characteristics listed, boxes checked "Yes" or "No" followed by comments. Four items regarding sediment, erosion, water temperature and unstable organic debris were associated with railroad and early tractor logging. Item 5 regarding removal of large organic debris and loss of pool habitat attributed to historic CDF&G practices, no chemical or other past impacts identified as resulting from past projects.	No	No	List of 15 characteristics ranked High, Medium or Low for the potential for the proposed project, as mitigated, to cause and increase in stream or lake sediment. All were ranked "Low"	No

1-08-015 MEN	Watershed Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell Creek Planning Watershed.	Yes, list taken from the NCRWQCB Basin Plan, each category designated as existing or potential use.	No	No	Table with rankings of Minimal, Moderate and Heavy for Gravel Embeddedness, Pool Filling, Aggradation, Bank Cutting, Bank Mass Wasting, Down Cutting, Scouring, Debris Clearing, Debris Jamming, Canopy Reduction and Recent Flooding for Campbell Creek (channel type B4, class I). Acknowledges anthropogenic and geologic features that may have an impact.	Prior to 1900 logging with bull teams, hauled by railroad, late 1890s yarding with steam donkey began. Detailed harvest history is included in a previous section "Past, Present and Future Projects within the Assessment Areas" includes some current conditions, none contributing to a reduction in the beneficial uses of water.	No	Seven characteristics listed, boxes checked "Yes" or "No" followed by comments. Four items regarding sediment, erosion, water temperature and unstable organic debris were associated with railroad and early tractor logging. Item 5 regarding removal of large organic debris and loss of pool habitat attributed to historic stream clearance practices, no chemical or other past impacts identified as resulting from past projects. Detailed harvest history (over 100 years worth) is included in a previous section "Past, Present and Future Projects within the Assessment Areas."	Past harvest plans for the period 1997-2007 are listed by owner, silviculture, yarding and acreage.	A map is included, but it only shows the plans that are on the Plan Submitter's ownership (per AB47).	In a previous section "Past, Present and Future Projects within the Assessment Areas" there is discussion of non-timber operations - stream clearance, grazing, mining, etc.	No	No	List of 15 characteristics ranked High, Medium or Low for the potential for the proposed project, as mitigated, to cause and increase in stream or lake sediment. All except one about debris flows/torrents were ranked "Low," that one was "Moderate."	No
1-07-036 MEN	Watershed Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell Creek AND Mill Valley Creek Planning Watersheds.	Yes, list taken from the NCRWQCB Basin Plan, each category designated as existing or potential use.	No	No	Table with rankings of Slight, Minimal, Moderate and Heavy for Gravel Embeddedness, Pool Filling, Aggradation, Bank Cutting, Bank Mass Wasting, Down Cutting, Scouring, Debris Clearing, Debris Jamming, Canopy Reduction and Recent Flooding for Mill Creek (channel type B4, class I) and Smith Creek (Channel type F3, class I). Acknowledges anthropogenic and geologic features that may have an impact.	Harvest history is included in a previous section "Section C: Past, Present and Future Projects within the Assessment Areas" includes some discussion of current conditions.	No	Seven characteristics listed, boxes checked "Yes" or "No" followed by comments. Three items regarding sediment, erosion, water temperature were associated with railroad and early tractor logging. Item 4, unstable organic debris inputs had insufficient basis to affirm adverse effects. Item 5 regarding removal of large organic debris and loss of pool habitat attributed to historic stream clearing practices, no chemical or other past impacts identified as resulting from past projects. Harvest history is included in a previous section "Section C: Past, Present and Future Projects within the Assessment Areas."	Past harvest plans for the period 1997-2007 are listed by owner, silviculture, yarding and acreage. One table for Churchman Creek and one for Campbell Creek Planning Watersheds. One table for Mill Creek and one for Campbell Creek Planning Watersheds.	A map is included, but it only shows the plans that are on the Plan Submitter's ownership (per AB47).	In a previous section "Past, Present and Future Projects within the Assessment Areas" there is discussion of non-timber operations - stream clearance, grazing, mining, etc.	No	No	List of 15 characteristics ranked High, Medium or Low for the potential for the proposed project, as mitigated, to cause and increase in stream or lake sediment. All were ranked "Low"	No

Sediment Effects		Rate of Harvest			Water Temperature			Organic Debris Effects			Chemical Contamination			Peak Flow Effects			
Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?
No	Over five pages of discussion referencing TMDL documents as an information source. Bulk of sediment production appears to have originated in the pre-Forest Practice Act era. Rate of harvest taken into consideration. Current rules are adequate to ensure the recruitment of large woody debris. Significant rehabilitation of erosion sites and roads has occurred for more than a decade. Enhancement projects over the past ten years listed. Conclusion: "... [U]se of an accelerated restoration schedule in these watersheds over the past 10-15 years combined with use of modern road and harvest practices have resulted in a current situation where opportunities for additional large scale proactive sediment saving corrective actions are not available. ... [W]atershed conditions today are improving and over time continued improvement of stream conditions within the watershed is anticipated." Based on 20 years of observation by RPF.	Over the past 10+ years thousands of yards of sediment savings have accrued by rehabilitating high risk roads and watercourse crossings, decommissioning legacy roads, hydrologically disconnecting roads ... Provided a graphic titled "Relative Contribution and Overall Trends for Sediment Inputs into the Ten Mile River Watershed" from TMDL data, showing a downward trend in sediment inputs per decade from the 1930s to the 1990s. Historic sediment delivery rates listed, taken from the TMDL.	References maps found elsewhere in the plan and the Aquatic Habitat Assessment Report in Section V.	Described type and quality of harvest, offsetting corrective action and results of direct observations.	Values for Campbell Creek Planning Watershed alone not given, for the whole Watershed Assessment Area (Campbell and Churchman Creeks) 4,352 acres or 30% of the 14,582 acre assessment area covered by THPs. Clearcut harvesting occurred on 9%, broadcast burning rare. Past 10 years cable yarding 67%, tractor yarding 31%, helicopter yarding 2%.	No	Near stream shade canopy levels continue to improve, water temperatures likely to decrease over time.	Referenced the Aquatic Habitat Assessment Report in Section V of the plan.	Referenced the Aquatic Habitat Assessment Report in Section V of the plan.	"... All evaluated watercourses have a significant supply of wood both instream or within the bankfull stage that are functioning to form 'steps' or grade controls in the channel longitudinal profile." There is a North Fork and a South Fork Ten Mile Accelerated Recruitment project, adding wood to streams.	A few figures about large wood recruitment from a study by Lee Benda and Associates. I.e. : "... This study also found that 90% of LWD inputs were recruited from within first 46 feet of the stream in the Ten Mile study area." North Fork Ten Mile River Accelerated Recruitment Project has treated 13 miles of stream, approx. 30 pieces of LWD added per mile, 260 felled riparian trees recruited into river.	No	Two pages of discussion, herbicides may not be used. Nutrient input from fire possible, Strong Mountain Fire burned the headwaters of the North Fork Ten Mile River in 1950.	No, other than listing typical herbicide application rates.	No	Largely a literature review.	Some references to past research.
No	Over five pages of discussion referencing TMDL documents as an information source. Bulk of sediment production appears to have originated in the pre-Forest Practice Act era. Rate of harvest taken into consideration. Current rules are adequate to ensure the recruitment of large woody debris. Enhancement projects over the past ten years listed. Significant rehabilitation of erosion sites and roads has occurred for more than a decade and opportunities for proactive sediment reducing mitigation measures were searched for during the road assessment. Conclusion: "... [U]se of an accelerated restoration schedule in these watersheds over the past 10 to 15 years combined with use of modern road and harvest practices have resulted in a current situation where opportunities for additional large scale proactive sediment saving corrective actions are increasingly less available. ... [W]atershed conditions today are improving and over time continued improvement of stream conditions within the watershed is anticipated."	Provided a graphic titled "Relative Contribution and Overall Trends for Sediment Inputs into the Ten Mile River Watershed" from TMDL data, showing a downward trend in sediment inputs per decade from the 1930s to the 1990s. Historic sediment delivery rates listed, taken from the TMDL.	References maps found elsewhere in the plan and the Aquatic Habitat Assessment Report in Section V.	Described type and quality of harvest, offsetting corrective action and results of direct observations.	Values for Campbell Creek Planning Watershed alone not given, for the whole Watershed Assessment Area (Campbell, Inglenook and Little Valley Creeks) 2,971 acres or 20% of the 12,647 acre assessment area covered by THPs. Clearcut harvesting occurred on 4%, broadcast burning rare.	No	Near stream shade canopy levels continue to improve, water temperatures likely to decrease over time.	Referenced the Aquatic Habitat Assessment Report in Section V of the plan.	Referenced the Aquatic Habitat Assessment Report in Section V of the plan.	"... All evaluated watercourses have a significant supply of wood both instream or within the bankfull stage that are functioning to form 'steps' or grade controls in the channel longitudinal profile." There is a North Fork and a South Fork Ten Mile Accelerated Recruitment project, adding wood to streams.	A few figures about large wood recruitment from a study by Lee Benda and Associates. I.e. : "... This study also found that 90% of LWD inputs were recruited from within first 46 feet of the stream in the Ten Mile study area." North Fork Ten Mile River Accelerated Recruitment Project has treated 13 miles of stream, approx. 30 pieces of LWD added per mile, 260 felled riparian trees recruited into river.	No	Short discussion, low hardwood component so no need to treat. Nutrient input from fire possible, Strong Mountain Fire burned the headwaters of the North Fork Ten Mile River in 1950.	No	No	Largely a literature review.	Some references to past research.
No	Over five pages of discussion referencing TMDL documents as an information source. Bulk of sediment production appears to have originated in the pre-Forest Practice Act era. Rate of harvest taken into consideration. Current rules are adequate to ensure the recruitment of large woody debris. Enhancement projects over the past ten years listed. Significant rehabilitation of erosion sites and roads has occurred for more than a decade and opportunities for proactive sediment reducing mitigation measures were searched for during the road assessment. Conclusion: "... [U]se of an accelerated restoration schedule in these watersheds over the past 10 to 15 years combined with use of modern road and harvest practices have resulted in a current situation where opportunities for additional large scale proactive sediment saving corrective actions are increasingly less available. ... [W]atershed conditions are recovering for historic land management impacts and ... conditions observed in this drainage are improving rather than deteriorating."	Provided a graphic titled "Relative Contribution and Overall Trends for Sediment Inputs into the Ten Mile River Watershed" from TMDL data, showing a downward trend in sediment inputs per decade from the 1930s to the 1990s. Historic sediment delivery rates listed, taken from the TMDL.	References maps found elsewhere in the plan and the Aquatic Habitat Assessment Report in Section V.	Described type and quality of harvest, offsetting corrective action and results of direct observations.	Values for Campbell Creek Planning Watershed alone not given, for the whole Watershed Assessment Area (Campbell and Churchman Creeks) 4,352 acres or 30% of the 14,582 acre assessment area covered by THPs. Clearcut harvesting occurred on 9%, broadcast burning rare.	No	Near stream shade canopy levels continue to improve, water temperatures likely to decrease over time.	Referenced the Aquatic Habitat Assessment Report in Section V of the plan.	Referenced the Aquatic Habitat Assessment Report in Section V of the plan.	"... All evaluated watercourses have a significant supply of wood both instream or within the bankfull stage that are functioning to form 'steps' or grade controls in the channel longitudinal profile." There is a North Fork and a South Fork Ten Mile Accelerated Recruitment project, adding wood to streams.	A few figures about large wood recruitment from a study by Lee Benda and Associates. I.e. : "... This study also found that 90% of LWD inputs were recruited from within first 46 feet of the stream in the Ten Mile study area." North Fork Ten Mile River Accelerated Recruitment Project has treated 13 miles of stream, approx. 30 pieces of LWD added per mile, 260 felled riparian trees recruited into river.	No	Two pages of discussion, herbicides may not be used. Nutrient input from fire possible, Strong Mountain Fire burned the headwaters of the North Fork Ten Mile River in 1950.	No, other than listing typical herbicide application rates.	No	Largely a literature review.	Some references to past research.

No	Over five pages of discussion referencing TMDL documents as an information source. Bulk of sediment production appears to have originated in the pre-Forest Practice Act era. Rate of harvest taken into consideration. Current rules are adequate to ensure the recruitment of large woody debris. Enhancement projects over the past ten years listed. Significant rehabilitation of erosion sites and roads has occurred for more than a decade and opportunities for proactive sediment reducing mitigation measures were searched for during the road assessment. "..., Many positive projects occur on the company timberlands that are not well documented in THPs. For instance, nearly all of the bridges on company logging roads have been replaced over the last fifteen years, replacing the old dirt/log stringer bridges of the past with steel structures. culvert replacement is a continuous project where old and sometimes undersized culverts are replaced with larger culverts utilizing modern design standards." logging roads have been upgraded, locked gates installed to prevent trespass and damage, ...	Values given for Mill Creek and for Smith Creek, not for Campbell Creek Planning Watershed. Smith Creek had 97% value 2 for embeddedness, then referenced the Aquatic Habitat Assessment in Section V. Over the past 10+ years thousands of yards of sediment savings have accrued by rehabilitating high risk roads and watercourse crossings, decommissioning legacy roads, hydrologically disconnecting roads ... Provided a graphic titled "Relative Contribution and Overall Trends for Sediment Inputs into the Ten Mile River Watershed" from TMDL data, showing a downward trend in sediment inputs per decade from the 1930s to the 1990s. Historic sediment delivery rates listed, taken from the TMDL.	References maps found elsewhere in the plan and the Aquatic Habitat Assessment Report in Section V.	Described type and quality of harvest, offsetting corrective action and results of direct observations.	Values for Campbell Creek Planning Watershed alone not given, for the whole Watershed Assessment Area (Campbell, Mill and Bearhaven Creeks) 4,902.5 acres or 25.8% of the 18,975 acre assessment area covered by THPs. Clearcut harvesting occurred on 10%, broadcast burning rare.	No	Within acceptable range for salmonid species utilizing this watershed.	Temperature (MWAT) and canopy (93.4%) data collected - including upper and lower Smith Creek. Some figures given, greater detail and maybe a map of the recording sites may be in the Aquatic Habitat Assessment in Section V.	There is a 120 page Aquatic Habitat Assessment document in Section V, likely maps can be found there.	"... All evaluated watercourses have a significant supply of wood both instream or within the bankfull stage that are functioning to form 'steps' or grade controls in the channel longitudinal profile." There is a North Fork and a South Fork Ten Mile Accelerated Recruitment project, adding wood to streams.	Quoted from the Aquatic Habitat Assessment: "The CDFW survey identified approximately 4 pieces of LWD per 100 feet in lower Smith Creek and 7 pieces of LWD per 100 feet in upper Smith Creek."	No	Two pages of discussion, herbicides may not be used. Nutrient input from fire possible, Strong Mountain Fire burned the headwaters of the North Fork Ten Mile River in 1950.	No, other than listing typical application rates.	No	Largely a literature review.	Some references to past research.
No	Three pages of discussion referencing TMDL documents as an information source. Bulk of sediment production appears to have originated in the pre-Forest Practice Act era.	No	No	N/A - older form didn't have this category	N/A - older form didn't have this category	N/A - older form didn't have this category	303(d) listed for temperature	No	No	"Large woody debris was placed in the South Fork of the Ten Mile river in conjunction with an adjacent 2005 THP." LWD presence in the larger tributaries considered to be low.	A few figures about large wood recruitment from a study by Lee Benda and Associates. I.e. : "... This sourcing also meant that 90% of LWD inputs were found to be recruited from within first 46' in the Ten Mile basin."	No	Nutrient input from fire possible, Strong Mountain Fire burned the headwaters of the North Fork Ten Mile River in 1950.	No	No	Largely a literature review.	No
No	Three and a half pages of discussion referencing TMDL documents as an information source. Bulk of sediment production appears to have originated in the pre-Forest Practice Act era. Sediment reduction has accrued by road and crossing repair and replacement.	South Fork Ten Mile River and Campbell Creek Planning Watershed had 0%, 53%, 41%, and 0% for the former and 3%, 55%,39% and 0% for values 1-4 for embeddedness - referencing the Aquatic Habitat Assessment in Section V. Provided a graphic titled "Relative Contribution and Overall Trends for Sediment Inputs into the Ten Mile River Watershed" from TMDL data, showing a downward trend in sediment inputs per decade from the 1930s to the 1990s. Historic sediment delivery rates listed, taken from the TMDL.	No	N/A - older form didn't have this category	N/A - older form didn't have this category	N/A - older form didn't have this category	Within acceptable range for salmonid species utilizing this watershed.	Temperature (MWAT), LWD and canopy data summarized from the Aquatic Habitat Assessment in Section V.	Aquatic Habitat Assessment document in Section V, likely maps can be found there.	Campbell Creek has favorable levels of LWD. South Fork Ten Mile River considered low in LWD due to past stream cleaning practices and high level of stream power.	A few figures about large wood recruitment from a study by Lee Benda and Associates. I.e. : "... This study also found that 90% of LWD inputs were recruited from within first 46 feet of the stream in the Ten Mile study area."	No	Nutrient input from fire possible, Strong Mountain Fire burned the headwaters of the North Fork Ten Mile River in 1950.	No, other than listing typical herbicide application rates.	No	Short literature review.	Some references to past research.

No	Two pages of discussion referencing TMDL documents as an information source. Bulk of sediment production appears to have originated in the pre-Forest Practice Act era. Sediment reduction has accrued by road and crossing repair and replacement.	A graphic titled "Relative Contribution and Overall Trends for Sediment Inputs into the Ten Mile River Watershed" from TMDL data, showing a downward trend in sediment inputs per decade from the 1930s to the 1990s. Historic sediment delivery rates listed, taken from the TMDL.	No	N/A - older form didn't have this category	N/A - older form didn't have this category	N/A - older form didn't have this category	"Temperature monitoring efforts document that instream temperatures in Campbell Creek are favorable for both steelhead and coho."	"Current streamside canopy along Campbell Creek is estimated to be 86% immediately adjacent to the stream."	No	"...[T]he LWD presence in Campbell Creek is considered to be favorable."	A few figures about large wood recruitment from a study by Lee Benda and Associates. I.e. : "... This report found that 90% of the LWD inputs were found to be recruited from within 46 feet of the stream in the Ten Mile basin."	No	Two pages of discussion. Nutrient input from fire possible, Strong Mountain Fire burned the headwaters of the North Fork Ten Mile River in 1950.	No, other than listing typical herbicide application rates.	No	Largely a literature review.	Some references to past research.
No	Two pages of discussion referencing TMDL documents as an information source. Bulk of sediment production appears to have originated in the pre-Forest Practice Act era. Sediment reduction has accrued by road and crossing repair and replacement.	A graphic titled "Relative Contribution and Overall Trends for Sediment Inputs into the Ten Mile River Watershed" from TMDL data, showing a downward trend in sediment inputs per decade from the 1930s to the 1990s. Historic sediment delivery rates listed, taken from the TMDL.	No	N/A - older form didn't have this category	N/A - older form didn't have this category	N/A - older form didn't have this category	"Temperature monitoring efforts document that instream temperatures in both Mill Creek and Smith Creek are optimal for both steelhead and coho."	"Current streamside canopy levels in and adjacent to the plan area exceed 96% immediately adjacent to the stream."	No	Only the LWD in Mill Creek was specifically mentioned.	A few figures about large wood recruitment from a study by Lee Benda and Associates. I.e. : "... This sourcing also meant that 90% of LWD inputs were found to be recruited from within first 46' in the Ten Mile basin."	No	Two pages of discussion. Nutrient input from fire possible, Strong Mountain Fire burned the headwaters of the North Fork Ten Mile River in 1950.	No, other than listing typical herbicide application rates.	No	Largely a literature review.	Some references to past research.

Future Projects				
Spatial?	Qualitative?	Quantitative?	Spatial?	Notes
No	Same seven characteristics listed under "Other Past Impacts" with boxes checked "Yes" or "No" regarding whether future projects are likely to result in impacts. All seven boxes are marked "No."	Estimates of probable future harvest plans.	Mapped elsewhere in Section IV.	Part of one harvest unit is in Churchman Creek Planning Watershed. The Sediment Effects section discloses: "The landowner has completed an inventory of active erosion sites within the Planning Watershed. This task was completed through Campbell's voluntary efforts, largely in partnership with Trout Unlimited, Pacific Watershed Associates and grant funding available from the Department of Fish and Wildlife. After completing the initial inventory it became readily apparent that the historic riparian truck roads parallel to the main fish-bearing channels posed the greatest challenge to the continuing recovery of aquatic resources. not only did these roads have eroding features their upgrade and/or continued use could reduce the potential for further improvement of riparian conditions. To address identified sediment production concerns, the landowner has systematically invested substantial resources in watershed improvement projects since 2000. Much of the road abandonment work has required 1600 permits and therefore was completed as part of active timber harvest plans with full agency interaction and review. In 1993, the previous landowner initiated the transformation of the road network to facilitate cable yarding. The Aquatic Habitat Assessment reports that watercourse conditions are recovering from historic land management impacts and that conditions observed in this drainage are improving rather than deteriorating."
No	Same seven characteristics listed under "Other Past Impacts" with boxes checked "Yes" or "No" regarding whether future projects are likely to result in impacts. All seven boxes are marked "No."	Estimates of probable future harvest plans.	Mapped elsewhere in Section IV.	Only two harvest units of seven are in the Campbell Creek Planning Watershed (two are in Little Valley Creek and three in Inglenook Creek). The "Offsetting Corrective Actions" section discloses: "The landowner has completed an inventory of active erosion sites within the Planning Watershed. This task was completed through Campbell's voluntary efforts, largely in partnership with Trout Unlimited, Pacific Watershed Associates and grant funding available from the Department of Fish and Wildlife. After completing the initial inventory it became readily apparent that the historic riparian truck roads parallel to the main fish-bearing channels posed the greatest challenge to the continuing recovery of aquatic resources. Not only did these roads have eroding features their upgrade and/or continued use could reduce the potential for further improvement of riparian conditions. To address identified sediment production concerns, the landowner has systematically invested substantial resources in watershed improvement projects since 2000. Much of the road abandonment work has required 1600 permits and therefore was completed as part of active timber harvest plans with full agency interaction and review. In 1993, the previous landowner initiated the transformation of the road network to facilitate cable yarding. The Aquatic Habitat Assessment reports that watercourse conditions are recovering from historic land management impacts and that conditions observed in this drainage are improving rather than deteriorating."
No	Same seven characteristics listed under "Other Past Impacts" with boxes checked "Yes" or "No" regarding whether future projects are likely to result in impacts. All seven boxes are marked "No."	Estimates of probable future harvest plans.	Mapped elsewhere in Section IV.	Two harvest units and a part of a third one are in Churchman Creek Planning Watershed. The "Offsetting Corrective Actions" section discloses: "The landowner has completed an inventory of active erosion sites within the Planning Watershed. This task was completed through Campbell's voluntary efforts, largely in partnership with Trout Unlimited, Pacific Watershed Associates and grant funding available from the Department of Fish and Wildlife. After completing the initial inventory it became readily apparent that the historic riparian truck roads parallel to the main fish-bearing channels posed the greatest challenge to the continuing recovery of aquatic resources. Not only did these roads have eroding features their upgrade and/or continued use could reduce the potential for further improvement of riparian conditions. To address identified sediment production concerns, the landowner has systematically invested substantial resources in watershed improvement projects since 2000. Much of the road abandonment work has required 1600 permits and therefore was completed as part of active timber harvest plans with full agency interaction and review. In 1993, the previous landowner initiated the transformation of the road network to facilitate cable yarding. The Aquatic Habitat Assessment report that watercourse conditions are recovering from historic land management impacts and that conditions observed in this drainage are improving rather than deteriorating."

No	Seven watershed condition characteristics with boxes checked "Yes" or "No" regarding whether future projects are likely to result in impacts. All seven boxes are marked "No."	Estimates of probable future harvest plans.	Mapped elsewhere in Section IV.	Six harvest units are in in Mill Creek Planning Watershed, and a sliver of another unit is in Bear Haven Creek Planning Watershed. The "Offsetting Corrective Actions" section discloses: "The landowner has completed an inventory of active erosion sites within the Planning Watershed. This task was completed through Campbell's voluntary efforts, largely in partnership with Trout Unlimited, Pacific Watershed Associates and grant funding available from the Department of Fish and Wildlife. After completing the initial inventory it became readily apparent that the historic riparian truck roads parallel to the main fish-bearing channels posed the greatest challenge to the continuing recovery of aquatic resources. Not only did these roads have eroding features their upgrade and/or continued use could reduce the potential for further improvement of riparian conditions. To address identified sediment production concerns, the landowner has systematically invested substantial resources in watershed improvement projects since 2000. Much of the road abandonment work has required 1600 permits and therefore was completed as part of active timber harvest plans with full agency interaction and review. In 1993, the previous landowner initiated the transformation of the road network to facilitate cable yarding. ... The Aquatic Habitat Assessment Report for the Mill Smith THP report that watercourse conditions are recovering from historic land management impacts and that conditions observed in this drainage are improving rather than deteriorating."
No	Same seven characteristics listed under "Other Past Impacts" with boxes checked "Yes" or "No" regarding whether future projects are likely to result in impacts. All seven boxes are marked "No."	No	No	One harvest unit is in Campbell Creek Planning Watershed, the other harvest unit is in the Little Valley Creek Planning Watershed.
No	Same seven characteristics listed under "Other Past Impacts" with boxes checked "Yes" or "No" regarding whether future projects are likely to result in impacts. All seven boxes are marked "No."	Estimates of probable future harvest plans.	Mapped elsewhere in Section IV.	More than two-thirds of the harvest units are in the Churchman Creek Planning Watershed. "... (I)mprovemens in forest practices have allowed time for the area to recover significantly from earlier practices. The stream conditions reported in the Aquatic Habitat Assessment (THP Section V) support the conclusion that recovery to more natural conditions is occurring within streams located in the watershed assessment areas. [The Plan Submitter] is constantly maintaining and upgrading its road system. ... These activities combined with annual inspections and general maintenance, will substantially lessen the potential for significant adverse effects."

No	Same seven characteristics listed under "Other Past Impacts" with boxes checked "Yes" or "No" regarding whether future projects are likely to result in impacts. All seven boxes are marked "No."	No	No	This is the only recent (within 10 years) plan that has all of its harvest units within Campbell Creek Planning Watershed. Analysis area described 7,904 acres with [Lyme] the major landowner, the Smith and Gray/Wisdom ranches occupy the lower watershed with 50%± utilized for livestock grazing - in addition to timber production [NTMPs] and residential use. The entire assessment area is lands zoned TPZ and Agriculture.
No	Same seven characteristics listed under "Other Past Impacts" with boxes checked "Yes" or "No" regarding whether future projects are likely to result in impacts. All seven boxes are marked "No."	Estimates of probable future harvest plans.	Mapped elsewhere in Section IV.	More than half of the harvest units are in the Mill Creek Planning Watershed. "Based upon these observations and monitoring studies, I conclude that recovery is occurring within the assessment areas. This plan as proposed, with continuing implementation of current best management practices and the mitigations of the proposed project, continued progress towards recovery should not be impeded."

Cumulative Soil Productivity Impacts Assessment													
	Organic Matter Loss			Surface Soil Loss			Soil Compaction			Growing Space Loss			
Plan Number	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Notes
1-15-107 MEN	Yes, logging slash to remain. Increases as stand regenerates.	No	No	Yes, erosion control, rapid revegetation on similar past harvest areas	No	No	Yes, reuse of existing skid trails, no tractor operations on saturated soils (per FPRs), cable yarding	No	No	Yes, new road/skid trail construction limited, cable yarding previously tractor yarded areas will put old skid trails back into production	No	No	The soil assessment areas are confined to the soils within the timber harvesting area.
1-15-094 MEN	Yes, logging slash to remain. Increases as stand regenerates.	No	No	Yes, erosion control, rapid revegetation on similar past harvest areas	No	No	Yes, reuse of existing skid trails, no tractor operations on saturated soils (per FPRs), cable yarding	No	No	Yes, new road/skid trail construction limited, cable yarding previously tractor yarded areas will put old skid trails back into production	No	No	The soil assessment areas are confined to the soils within the timber harvesting area.
1-14-126 MEN	Yes, logging slash to remain. Increases as stand regenerates.	No	No	Yes, erosion control, rapid revegetation on similar past harvest areas	No	No	Yes, reuse of existing skid trails, no tractor operations on saturated soils (per FPRs), cable yarding	No	No	Yes, new road/skid trail construction limited, cable yarding previously tractor yarded areas will put old skid trails back into production	No	No	The soil assessment areas are confined to the soils within the timber harvesting area.
1-13-031 MEN	Yes, logging slash to remain. Increases as stand regenerates.	No	No	Yes, erosion control, rapid revegetation on similar past harvest areas	No	No	Yes, reuse of existing skid trails, no tractor operations on saturated soils (per FPRs), cable yarding	No	No	Yes, new road/skid trail construction limited, cable yarding previously tractor yarded areas will put old skid trails back into production	No	No	The soil assessment areas are confined to the soils within the timber harvesting area.
1-10-033 MEN	Yes, logging slash to remain. Increases as stand regenerates.	No	No	Yes, erosion control, rapid revegetation on similar past harvest areas. Proposed piling and burning limited in scope.	No	No	Yes, reuse of existing skid trails, no tractor operations on saturated soils (per FPRs), cable yarding. Pile and burn in restricted areas.	No	No	Yes, new road/skid trail construction limited, cable yarding previously tractor yarded areas will put old skid trails back into production	No	No	The soil assessment areas are confined to the soils within the timber harvesting area.
1-09-022 MEN	Yes, logging slash to remain. Increases as stand regenerates.	No	No	Yes, erosion control, rapid revegetation on similar past harvest areas	No	No	Yes, reuse of existing skid trails, no tractor operations on saturated soils (per FPRs), cable yarding	No	No	Yes, new road/skid trail construction limited, cable yarding previously tractor yarded areas will put old skid trails back into production	No	No	The soil assessment areas are confined to the soils within the timber harvesting area.
1-08-015 MEN	Yes, logging slash to remain. Increases as stand regenerates. No broadcast burning proposed.	No	No	Yes, erosion control, no broadcast burning proposed.	No	No	Yes, reuse of existing skid trails, no tractor operations on saturated soils (per FPRs), cable yarding	No	No	Yes, new road/skid trail construction limited, cable yarding previously tractor yarded areas will put old skid trails back into production	No	No	The soil assessment areas are confined to the soils within the timber harvesting area.
1-07-036 MEN	Yes, logging slash to remain. Increases as stand regenerates. Pile burning limited, no broadcast burning.	No	No	Yes, erosion control, pile and burn restricted to skid trails, rapid revegetation on similar past harvest areas	No	No	Yes, reuse of existing skid trails, no tractor operations on saturated soils (per FPRs), cable yarding	No	No	Yes, new road/skid trail construction limited, cable yarding previously tractor yarded areas will put old skid trails back into production	No	No	The soil assessment areas are confined to the soils within the timber harvesting area.

Cumulative Biological Resource Impacts Assessment

Plan Number	Biological Resource Inventory			Habitat Conditions			Presence of Significant Wildlife Areas			Other Projects			Notes	
	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?	Spatial?	Qualitative?	Quantitative?		Spatial?
1-15-107 MEN	Biologic Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell AND Churchman Creek Planning Watersheds plus some additional acres.	Yes, listing of all rare, threatened, endangered and sensitive (BoF) species, and Species of Special Concern (CDFG) that have a reasonable potential to occur in or near the Biological Assessment Area in table format. This is followed by a paragraph to a page of narrative about each (a total of 67 species), concluding with a statement about whether significant impacts to the species are likely from the proposed harvest operations. None are.	Minimal. The discussion of Chinook Salmon references a 1955 CDF&G memo regarding a mark and release in Big River between 1949 and 1952 in which only about 72 fish returned from the ocean. Track plate and camera surveys failed to detect Pacific Fisher. Some species habitat requirements have quantitative elements.	No	Yes, Ranking of "high," "medium," "low" or "none" in three categories ("Pre-Project On-Site," "Off-site" and "Post-Project On-site") for the following resource values: Presence of snags/dens/nest trees; Amount of downed large woody debris; Presence of multistory canopy; road density; Presence of hardwoods; Presence of late seral forest characteristics; and Continuity of late seral stage forest. (all listed in Technical Rule Addendum #2) Same rankings pre- and post-harvest, on- and off-site.	No	No	Yes, "Yes" or "No" response for "On-site" and "Off-site" occurrence of deer fawning areas; deer migration corridors; deer winter range; deer summer range; wetlands; riparian areas and other. Same rankings on- and off-site.	No	No	Yes, the past 150 years of harvest and grazing converted oldgrowth to second and third growth. Species currently in residence appear to be doing well. In the long term WLPZ management practices should result in positive recruitment of later seral stages near streams. Also refers reader to more detailed discussion of harvest history and potential future harvest found earlier in Section IV.	No	No	Part of one harvest unit is in Churchman Creek Planning Watershed. Land use activities have been occurring for 150 years or more in the assessment area. "... There are no known recent trends which have produced significant cumulative impacts upon biological resources within the assessment area."
1-15-094 MEN	Biologic Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell Creek, Little Valley Creek AND Inglenook Creek Planning Watersheds plus some additional acres.	Yes, listing of all rare, threatened, endangered and sensitive (BoF) species, and Species of Special Concern (CDFG) that have a reasonable potential to occur in or near the Biological Assessment Area in table format. This is followed by a paragraph to a page of narrative about each (a total of 67 species), concluding with a statement about whether significant impacts to the species are likely from the proposed harvest operations. None are.	Minimal. The discussion of Chinook Salmon references a 1955 CDF&G memo regarding a mark and release in Big River between 1949 and 1952 in which only about 72 fish returned from the ocean. Track plate and camera surveys failed to detect Pacific Fisher. Some species habitat requirements have quantitative elements.	No	Yes, Ranking of "high," "medium," "low" or "none" in three categories ("Pre-Project On-Site," "Off-site" and "Post-Project On-site") for the following resource values: Presence of snags/dens/nest trees; Amount of downed large woody debris; Presence of multistory canopy; road density; Presence of hardwoods; Presence of late seral forest characteristics; and Continuity of late seral stage forest. (all listed in Technical Rule Addendum #2) Same rankings pre- and post-harvest, on- and off-site.	No	No	Yes, "Yes" or "No" response for "On-site" and "Off-site" occurrence of deer fawning areas; deer migration corridors; deer winter range; deer summer range; wetlands; riparian areas and other. Same rankings on- and off-site.	No	No	Yes, the past 150 years of harvest and grazing converted oldgrowth to young growth. Species currently in residence appear to be doing well. In the long term WLPZ management practices should result in positive recruitment of later seral stages near streams. Also refers reader to more detailed discussion of harvest history and potential future harvest found earlier in Section IV.	No	No	Only two harvest units of seven are in the Campbell Creek Planning Watershed (two are in Little Valley Creek and three in Inglenook Creek). Land use activities have been occurring for 150 years or more in the assessment area. "... There are no known recent trends which have produced significant cumulative impacts upon biological resources within the assessment area."
1-14-126 MEN	Biologic Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell AND Churchman Creek Planning Watersheds plus some additional acres.	Yes, listing of all rare, threatened, endangered and sensitive (BoF) species, and Species of Special Concern (CDFG) that have a reasonable potential to occur in or near the Biological Assessment Area in table format. This is followed by a paragraph to a page of narrative about each (a total of 63 species), concluding with a statement about whether significant impacts to the species are likely from the proposed harvest operations. None are.	Minimal. The discussion of Chinook Salmon references a 1955 CDF&G memo regarding a mark and release in Big River between 1949 and 1952 in which only about 72 fish returned from the ocean. Track plate and camera surveys failed to detect Pacific Fisher. Some species habitat requirements have quantitative elements.	No	Yes, Ranking of "high," "medium," "low" or "none" in three categories ("Pre-Project On-Site," "Off-site" and "Post-Project On-site") for the following resource values: Presence of snags/dens/nest trees; Amount of downed large woody debris; Presence of multistory canopy; road density; Presence of hardwoods; Presence of late seral forest characteristics; and Continuity of late seral stage forest. (all listed in Technical Rule Addendum #2) Same rankings pre- and post-harvest, on- and off-site.	No	No	Yes, "Yes" or "No" response for "On-site" and "Off-site" occurrence of deer fawning areas; deer migration corridors; deer winter range; deer summer range; wetlands; riparian areas and other. Same rankings on- and off-site.	No	No	Yes, the past 150 years of harvest and grazing converted oldgrowth to young growth. Species currently in residence appear to be doing well. In the long term WLPZ management practices should result in positive recruitment of later seral stages near streams. Also refers reader to more detailed discussion of harvest history and potential future harvest found earlier in Section IV.	No	No	Two harvest units and a part of a third one are in Churchman Creek Planning Watershed. Land use activities have been occurring for 150 years or more in the assessment area. "... There are no known recent trends which have produced significant cumulative impacts upon biological resources within the assessment area."

1-13-031 MEN	Biologic Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell Creek, Mill Valley Creek AND Bear Haven Creek Planning Watersheds plus some additional acres.	Yes, listing of all rare, threatened, endangered and sensitive (BoF) species, and Species of Special Concern (CDFG) that have a reasonable potential to occur in or near the Biological Assessment Area in table format. This is followed by a paragraph to a page of narrative about each (a total of 63 species), concluding with a statement about whether significant impacts to the species are likely from the proposed harvest operations. None are. Townsend's big-eared bat discussion shorter than in more recent plans, it wasn't a candidate for listing in 2013 when this plan was written.	Minimal. The discussion of Chinook Salmon references a 1955 CDF&G memo regarding a mark and release in Big River between 1949 and 1952 in which only about 72 fish returned from the ocean. Track plate and camera surveys failed to detect Pacific Fisher. Some species habitat requirements have quantitative elements.	No	Yes, Ranking of "high," "medium," "low" or "none" in three categories ("Pre-Project On-Site," "Off-site" and "Post-Project On-site") for the following resource values: Presence of snags/dens/nest trees; Amount of downed large woody debris; Presence of multistory canopy; road density; Presence of hardwoods; Presence of late seral forest characteristics; and Continuity of late seral stage forest. (all listed in Technical Rule Addendum #2) Same rankings pre- and post-harvest, but some differences between on- and off-site rankings.	No	No	Yes, "Yes" or "No" response for "On-site" and "Off-site" occurrence of deer fawning areas; deer migration corridors; deer winter range; deer summer range; wetlands; riparian areas and other. Same rankings on- and off-site.	No	No	Yes, the past 150 years of harvest and grazing converted oldgrowth to young growth. Species currently in residence appear to be doing well. In the long term WLPZ management practices should result in positive recruitment of later seral stages near streams. Also refers reader to more detailed discussion of harvest history and potential future harvest found earlier in Section IV.	No	No	Six harvest units are in in Mill Creek Planning Watershed, and a sliver of another unit is in Bear Haven Creek Planning Watershed. Land use activities have been occurring for 150 years or more in the assessment area. "... There are no known recent trends which have produced significant cumulative impacts upon biological resources within the assessment area." This plan included a discussion of "rate of harvest" not found in the "Biological Resource Impacts Assessment" part of more recent plans, it may have something to do with part of the plan being in the Bear Haven Creek Planning Watershed and not be specific to Campbell Creek.
1-10-033 MEN	Biologic Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell Creek AND Little Valley Creek Planning Watersheds plus some additional acres.	Yes, listing of all rare, threatened, endangered and sensitive (BoF) species, and Species of Special Concern (CDFG) that have a reasonable potential to occur in or near the Biological Assessment Area in table format. This is followed by a paragraph to a page of narrative about each (a total of 60 species), concluding with a statement about whether significant impacts to the species are likely from the proposed harvest operations. None are.	Minimal. The discussion of Chinook Salmon references a 1955 CDF&G memo regarding a mark and release in Big River between 1949 and 1952 in which only about 72 fish returned from the ocean. Some species habitat requirements have quantitative elements.	No	Yes, Ranking of "high," "medium," "low" or "none" in three categories ("Pre-Project On-Site," "Off-site" and "Post-Project On-site") for the following resource values: Presence of snags/dens/nest trees; Amount of downed large woody debris; Presence of multistory canopy; road density; Presence of hardwoods; and Continuity of late seral stage forest. (all listed in Technical Rule Addendum #2) Same rankings pre- and post-harvest, on- and off-site except for "Presence of Hardwoods" which went from "Moderate" to "Low."	NSO reserve exceeds 10% of area	No	Yes, "Yes" or "No" response for "On-site" and "Off-site" occurrence of wetlands; riparian areas and other. Same rankings on- and off-site.	No	No	All of forested assessment area has been harvested in past 80 years. Beneficial to some species. Current restrictions on management practices near NSO and in WLPZ areas will result, over time, in eventual reclamation of lost values.	No	No	One harvest unit is in Campbell Creek Planning Watershed, the other harvest unit is in the Little Valley Creek Planning Watershed. Land use activities have been occurring for 150 years or more in the assessment area. "... There are no known recent trends which have produced significant cumulative impacts upon biological resources within the assessment area." "... Current restrictions, both imposed and voluntary, on management practices near owl activity centers and in WLPZ areas will result, over time, in eventual reclamation of much of these lost values." (referencing old growth characteristics)
1-09-022 MEN	Biologic Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell AND Churchman Creek Planning Watersheds plus some additional acres.	Yes, listing of all rare, threatened, endangered and sensitive (BoF) species, and Species of Special Concern (CDFG) that have a reasonable potential to occur in or near the Biological Assessment Area in table format. This is followed by a paragraph to a page of narrative about each (a total of 60 species), concluding with a statement about whether significant impacts to the species are likely from the proposed harvest operations. None are.	Minimal. The discussion of Chinook Salmon references a 1955 CDF&G memo regarding a mark and release in Big River between 1949 and 1952 in which only about 72 fish returned from the ocean. Some species habitat requirements have quantitative elements.	No	Yes, Ranking of "high," "medium," "low" or "none" in three categories ("Pre-Project On-Site," "Off-site" and "Post-Project On-site") for the following resource values: Presence of snags/dens/nest trees; Amount of downed large woody debris; Presence of multistory canopy; road density; Presence of hardwoods; Presence of late seral forest characteristics; and Continuity of late seral stage forest. (all listed in Technical Rule Addendum #2) Same rankings pre- and post-harvest, but some differences between on- and off-site rankings.	No	No	Yes, "Yes" or "No" response for "On-site" and "Off-site" occurrence of deer fawning areas; deer migration corridors; deer winter range; deer summer range; wetlands; riparian areas and other. Same rankings on- and off-site.	No	No	Yes, the past 150 years of harvest and grazing converted oldgrowth to second and third growth. Species currently in residence appear to be doing well. In the long term WLPZ management practices should result in positive recruitment of later seral stages near streams. Also refers reader to more detailed discussion of harvest history and potential future harvest found earlier in Section IV.	No	No	More than two-thirds of the harvest units are in the Churchman Creek Planning Watershed. Land use activities have been occurring for 150 years or more in the assessment area. "... There are no known recent trends which have produced significant cumulative impacts upon biological resources within the assessment area."

1-08-015 MEN	Biologic Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell Creek Planning Watershed plus some additional acres (within 0.7 miles of harvest units for NSO).	Yes, listing of all rare, threatened, endangered and sensitive (BoF) species, and Species of Special Concern (CDFG) that have a reasonable potential to occur in or near the Biological Assessment Area in table format. This is followed by a paragraph to a page of narrative about each (a total of 59 species), concluding with a statement about whether significant impacts to the species are likely from the proposed harvest operations. None are.	Minimal. The discussion of Chinook Salmon references a 1955 CDF&G memo regarding a mark and release in Big River between 1949 and 1952 in which only about 72 fish returned from the ocean. Some species habitat requirements have quantitative elements.	No	Yes, Ranking of "high," "medium," "low" or "none" in three categories ("Pre-Project On-Site," "Off-site" and "Post-Project On-site") for the following resource values: Presence of snags/dens/nest trees; Amount of downed large woody debris; Presence of multistory canopy; road density; Presence of hardwoods; and Continuity of late seral stage forest. (all listed in Technical Rule Addendum #2) Same rankings pre- and post-harvest, on- and off-site .	No	No	Yes, "Yes" or "No" response for "On-site" and "Off-site" occurrence of wetlands; riparian areas and other. No wetlands on-site, some off-site.	No	No	No	No	No	This is the only recent (within 10 years) plan that has all of its harvest units within Campbell Creek Planning Watershed. Land use activities have been occurring for 150 years or more in the assessment area. "... There are no known recent trends which have produced significant cumulative impacts upon biological resources within the assessment area."
1-07-036 MEN	Biologic Assessment Area is mapped, map included near front of Section IV. - Note: Assessment Area is the Campbell Creek AND Mill Valley Creek Planning Watersheds plus some additional acres.	Yes, listing of all rare, threatened, endangered and sensitive (BoF) species, and Species of Special Concern (CDFG) that have a reasonable potential to occur in or near the Biological Assessment Area in table format. This is followed by a paragraph to a page of narrative about each (a total of 58 species), concluding with a statement about whether significant impacts to the species are likely from the proposed harvest operations. None are.	Minimal. The discussion of Chinook Salmon references a 1955 CDF&G memo regarding a mark and release in Big River between 1949 and 1952 in which only about 72 fish returned from the ocean. Some species habitat requirements have quantitative elements.	No	Yes, Ranking of "high," "medium," "low" or "none" in three categories ("Pre-Project On-Site," "Off-site" and "Post-Project On-site") for the following resource values: Presence of snags/dens/nest trees; Amount of downed large woody debris; Presence of multistory canopy; road density; Presence of hardwoods; and Continuity of late seral stage forest. (all listed in Technical Rule Addendum #2) Same rankings pre- and post-harvest, on- and off-site .	No	No	Yes, "Yes" or "No" response for "On-site" and "Off-site" occurrence of wetlands; riparian areas and other. No wetlands on-site, some off-site.	No	No	No	No	More than half of the harvest units are in the Mill Creek Planning Watershed. Land use activities have been occurring for 150 years or more in the assessment area. "... There are no known recent trends which have produced significant cumulative impacts upon biological resources within the assessment area."	

Cumulative Recreation Resource Impact Assessment			
Plan Number	<u>Qualitative?</u>	<u>Quantitative?</u>	<u>Spatial?</u>
1-15-107 MEN	Yes, access gated, permit required, use limited so impact unlikely.	No	No
1-15-094 MEN	Yes, access gated, permit required, use limited so impact unlikely.	No	No
1-14-126 MEN	Yes, access gated, permit required, use limited so impact unlikely.	No	No
1-13-031 MEN	Yes, access gated, permit required, use limited so impact unlikely. Same is true for adjacent Parker Forest and Smith Ranch, which both have NTMPs in place.	No	No
1-10-033 MEN	Yes, access gated, permit required, use limited so impact unlikely.	No	No
1-09-022 MEN	Yes, access gated, permit required, use limited so impact unlikely.	No	No
1-08-015 MEN	Yes, access gated, permit required, use limited so impact unlikely.	No	No
1-07-036 MEN	Yes, access gated, permit required, use limited so impact unlikely.	No	No

Notes
The assessment area is generally the area that includes the logging area plus 300 feet (per Technical Rule Addendum #2).
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A portion of the plan area is within the Coastal Commission Special Treatment Area, but no developed recreation is associated with the CCSTA. The assessment area is generally the area that includes the logging area plus 300 feet (per Technical Rule Addendum #2).
A portion of the plan area is within the Coastal Commission Special Treatment Area, but no developed recreation is associated with the CCSTA. The assessment area is generally the area that includes the logging area plus 300 feet (per Technical Rule Addendum #2).
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Cumulative Visual Resource Impacts Assessment

Plan Number	<u>Qualitative?</u>	<u>Quantitative?</u>	<u>Spatial?</u>	Notes
1-15-107 MEN	Yes	No	No	No part of the plan area visible from public viewing point within 3 miles. Technical Rule Addendum #2 suggests an assessment area that is generally the logging area that is readily visible to significant numbers of people who are no further than three miles from timber operations.
1-15-094 MEN	Yes	No	No	Little Valley Road and neighboring properties within three miles are largely screened from plan area by topography and partial harvest will minimize change in view.
1-14-126 MEN	Yes	No	No	No part of the plan area visible from public viewing point within 3 miles.
1-13-031 MEN	Yes	No	No	No part of the plan area visible from public viewing point within 3 miles, even though part of a CCSTA (Coastal Commission Special Treatment Area) is within three miles. Landowners within 3 miles screened by a ridge.
1-10-033 MEN	Yes	No	No, but a nearby house and selection harvest buffer for that house should be mapped elsewhere in the plan.	No part of the plan area visible from public viewing point within 3 miles, even though part of a CCSTA (Coastal Commission Special Treatment Area) is within three miles. Landowners within 3 miles are few in number. Selection harvest will be used where there is a nearby residence.
1-09-022 MEN	Yes	No	No	No part of the plan area visible from public viewing point within 3 miles.
1-08-015 MEN	Yes	No	No	No part of the plan area visible from public viewing point within 3 miles, even though part of a CCSTA (Coastal Commission Special Treatment Area) is within three miles. Landowners within 3 miles are few in number. CCSTA prescriptions to be used within the special treatment area.
1-07-036 MEN	Yes	No	No	No part of the plan area visible from public viewing point within 3 miles.

Cumulative Vehicular Traffic Impacts Assessment				
Plan Number	Qualitative?	Quantitative?	Spatial?	Notes
1-15-107 MEN	Highway 1 and Little Valley Road assessed.	No	No, but these roads may be mapped elsewhere in the plan.	This assessment is specific to traffic on public roads outside of the plan area on which logging traffic must travel and roads commonly used by logging traffic (per Technical Rule Addendum #2). No existing traffic or maintenance problems identified.
1-15-094 MEN	Highway 1 and Little Valley Road assessed.	No	No, but these roads may be mapped elsewhere in the plan.	This assessment is specific to traffic on public roads outside of the plan area on which logging traffic must travel and roads commonly used by logging traffic (per Technical Rule Addendum #2). No existing traffic or maintenance problems identified.
1-14-126 MEN	Highway 1 and Little Valley Road assessed.	No	No, but these roads may be mapped elsewhere in the plan.	This assessment is specific to traffic on public roads outside of the plan area on which logging traffic must travel and roads commonly used by logging traffic (per Technical Rule Addendum #2). No existing traffic or maintenance problems identified.
1-13-031 MEN	Highway 1, Little Valley Road and Sherwood Road.	No	No, but these roads may be mapped elsewhere in the plan.	This assessment is specific to traffic on public roads outside of the plan area on which logging traffic must travel and roads commonly used by logging traffic (per Technical Rule Addendum #2). No existing traffic or maintenance problems identified.
1-10-033 MEN	Highway 1 and Little Valley Road assessed.	No	No, but these roads may be mapped elsewhere in the plan.	This assessment is specific to traffic on public roads outside of the plan area on which logging traffic must travel and roads commonly used by logging traffic (per Technical Rule Addendum #2). No existing traffic or maintenance problems identified.
1-09-022 MEN	Highway 1, Little Valley Road and Sherwood Road assessed.	No	No, but these roads may be mapped elsewhere in the plan.	This assessment is specific to traffic on public roads outside of the plan area on which logging traffic must travel and roads commonly used by logging traffic (per Technical Rule Addendum #2). No existing traffic or maintenance problems identified.
1-08-015 MEN	Highway 1, Little Valley Road and Sherwood Road assessed.	No	No, but these roads may be mapped elsewhere in the plan.	This assessment is specific to traffic on public roads outside of the plan area on which logging traffic must travel and roads commonly used by logging traffic (per Technical Rule Addendum #2). No existing traffic or maintenance problems identified.
1-07-036 MEN	Highway 1, and Branscomb Road assessed.	No	No, but these roads may be mapped elsewhere in the plan.	This assessment is specific to traffic on public roads outside of the plan area on which logging traffic must travel and roads commonly used by logging traffic (per Technical Rule Addendum #2). No existing traffic or maintenance problems identified.

Cumulative Climate Change Impacts Assessment					
Plan Number	Assessment in plan? Carbon calculation worksheets?	<u>Qualitative?</u>	<u>Quantitative?</u> (other than carbon calculation worksheets)	<u>Spatial?</u>	Notes
1-15-107 MEN	Yes, Yes	5 page discussion and literature review	9,980 tonnes CO2 in Live Trees 20,697 tonnes CO2 in Wood Products - 222 tonnes Non-Bio Harvest Emissions -85 tonnes Non-Bio Milling Emissions Total Sequestration 10,911 tonnes 14 years to recoup	Not really	Used most of the same text as in the earlier plans - some differences in the discussion of input details. The carbon calculation worksheets are specific and limited to the proposed harvest operations.
1-15-094 MEN	Yes, Yes	5 page discussion and literature review	13,425 tonnes CO2 in Live Trees 9,778 tonnes CO2 in Wood Products - 86 tonnes Non-Bio Harvest Emissions 9 tonnes Non-Bio Milling Emissions Total Sequestration 5,742 tonnes 12 years to recoup	Not really	Used most of the same text as in the earlier plans - some differences in the discussion of input details. The carbon calculation worksheets are specific and limited to the proposed harvest operations.
1-14-126 MEN	Yes, Yes	5 page discussion and literature review	2,745 tonnes CO2 in Live Trees 13,887 tonnes CO2 in Wood Products - 156 tonnes Site Prep Emissions - 1031 tonnes Non-Bio Harvest Emissions - 285 tonnes Non-Bio Milling Emissions Total Sequestration 9,670 tonnes 16 years to recoup	Not really	Used most of the same text as in the earlier plans - some differences in the discussion of input details. The carbon calculation worksheets are specific and limited to the proposed harvest operations.
1-13-031 MEN	Yes, Yes	5 page discussion and literature review	45,755 tonnes CO2 in Wood Products - 209 tonnes Site Prep Emissions - 2543 tonnes Non-Bio Harvest Emissions - 596 tonnes Non-Bio Milling Emissions Total Sequestration 50,396 tonnes 11 years to recoup	Not really	Used most of the same text as in the earlier plans - some differences in the discussion of input details. The carbon calculation worksheets are specific and limited to the proposed harvest operations.
1-10-033 MEN	Yes, Yes	5 page discussion and literature review	12,910 tonnes CO2 in Live Trees 8,451 tonnes CO2 in Wood Products - 44 tonnes Site Prep Emissions - 400 tonnes Non-Bio Harvest Emissions - 118 tonnes Non-Bio Milling Emissions Total Sequestration 20799 tonnes 20 years to recoup	Not really	The first plan with a discussion of climate change and greenhouse gas emissions. This plan was approved in 2011 (and therefore required to conform to all regulations in effect in 2011). <u>2011 was the first year that a change in the Forest Practice Act (not the Rules) included sequestration of carbon dioxide as a resource to be managed (PRC 4512(c) and 4512.5). Harvest plans must also conform to the Forest Practice Act even if no specific rule has been written spelling out how to treat the subject.</u> It is unlikely you will find discussion of carbon sequestration and/or greenhouse gasses prior to 2011. The carbon calculation worksheets are specific and limited to the proposed harvest operations.
1-09-022 MEN	No, No	N/A	N/A	N/A	Not required prior to 2010 - added to Forest Practice Act (PRC 4512.5) in 2011.
1-08-015 MEN	No, No	N/A	N/A	N/A	Not required prior to 2010 - added to Forest Practice Act (PRC 4512.5) in 2011.
1-07-036 MEN	No, No	N/A	N/A	N/A	Not required prior to 2010 - added to Forest Practice Act (PRC 4512.5) in 2011.