Redding Timber Harvesting Review Pilot Project

June 2014 Supplemental Report

Report prepared at the request of:

The California Natural Resources Agency (CNRA)

and

The California Environmental Protection Agency (CAL/EPA)

by staff from

The California Department of Forestry and Fire Protection (CAL FIRE)

SUPPLEMENTAL EXECUTIVE SUMMARY

In March 2012, The California Natural Resources Agency (CNRA) and the California Environmental Protection Agency (CAL/EPA) directed the Redding review team agencies comprised of the Department of Forestry and Fire Protection (CAL FIRE), the Central Valley Regional Water Quality Control Board (Region 5), the Department of Fish and Wildlife (Region 1), and the Department of Conservation's California Geological Survey (DOC/CGS) to initiate a Pilot Project that would test cross-agency coordination, program management, and review strategies with the intent to bring efficiencies to the State review and permitting of timber harvesting on non-federal lands. The Pilot Project was conducted from March 22, 2012, to March 21, 2013, and covered all harvest Plans[1] submitted in the area of the State that share common jurisdictions between the Redding review team agencies, including all of Shasta and Tehama Counties, and portions of Siskiyou, Modoc and Lassen Counties (Figure 1); Plans submitted from the Pilot Project area were only a subset of the total number of Plans submitted to the Redding review team during the Pilot Project and the preceding year. Results of the Pilot Project were summarized in a report titled "Redding Timber Harvesting Review Pilot Project - July 2013".

As noted in the July 2013 report, the effectiveness of the Pilot Project could not be completely determined because many of the Plans included in the Pilot Project were submitted in the latter half of the one-year project period, and thus had not gone through the entire review process. Consequently, the following supplemental study was performed; this study continued to track the Pilot Project Plans until all Plans were approved, withdrawn by the plan submitter, or denied in accordance with the State's Forest Practice Rules. Additionally, the timelines of these Pilot Project Plans were compared to the pertinent timelines of Plans submitted during the previous year (March 22, 2011 to March 21, 2012) within the same geographic area, but not subject to the Pilot Project.

This supplemental study was intended to evaluate the effectiveness of the review process improvements implemented under the Pilot Project and identify areas where improvements could be made to expedite the Plan review process while maintaining a rigorous level of environmental protection. The results of the supplemental study are listed below and are organized by key steps within the Plan Review Process (Figure 2).

Plan submittal and First Review, Steps 1-3

1. Timing of plan submittal for both the Pilot Project and the Previous Year Plans appears similar, with both years showing a general trend towards more Plans being submitted in the late summer to early fall.
2. This year to year comparison shows the percentage of Plans that required a PHI as part of the Plan review process decreased from 76% to 62% (a difference of 14%) during the Pilot Project.

Pre-harvest Inspection (PHI), Step 4

3. The number of PHIs performed under the Pilot Project and the Previous Year Plans were similar with values of 41 and 42, respectively.

[1] The term "Plan" refers to a Timber Harvesting Plan (THP), Non- industrial Timber Management Plan (NTMP), Programmatic Timber Harvesting Plan (PTHP), or Substantial Deviations to a THP, NTMP or PTHP, as described in the California Forest Practice Rules (14 CCR §§ 1037.3-1037.5 or 1090.17-1090.19).

4. Box-and-whisker plots (figure 6) showing the number of days from Plan Filing to the PHI date suggest the Pilot Project had a lower spread (spacing between the lower and upper quartiles) with a median value of 11 days compared to the Previous Year's data which had a higher spread with a higher median value of 15 days. Although both plots indicate that over 50% of the Plans did not have PHIs within the mandated 10-day timeframe.
5. Departures were recorded when PHIs were not conducted within 10 days of Plan filing. In total there were 21 departures reported for the Pilot Project Plans and 25 departures reported for the Previous Year Plans. These departures were mostly attributed to scheduling conflicts that stem from the increased review team workload during the summer and fall field seasons when most Plans are typically submitted and demands on the RPF and agency staff time are high. In addition, Plans submitted in late summer to early fall are more likely of having a departure occur due to limited access caused by the onset of winter conditions.

PHI Reports Generated, Step 5

6. Although not reflected in the data, it is believed the single PHI report benefited the plan review process by: eliminating the need for the RPF or the review team to search for and respond to PHI questions found in multiple documents (e.g. reports and emails); resolving differences in recommendations from multiple agencies that addressed the same issue; and allowing agency staff to defer, or altogether eliminate, the time spent writing PHI reports and instead use the time saved more efficiently to attend PHIs and conduct other related duties.

Post PHI to Director's Determination, Steps 6-10

7. Based on box-and-whisker plots (figure 8) showing the time (in calendar days) from the end of the PHI to the Director's Determination (Plan approval), it appears Plans reviewed under the Pilot Study generally took longer and had a larger spread and a higher median value of 148 days, compared to the Previous Year's data which had a lower spread and a lower median value of 94 days.
8. The larger spread and the higher median values reported for the Pilot Project Plans compared to those for the Previous Year Plans is largely due to an increased number of Plans in the Pilot Project having to be significantly revised and recirculated for an additional 30 days compared to the Previous Year Plans. Moreover, there are other factors that could account for the larger spread and higher median, and include delays resulting from long response times throughout the Plan review process caused by the RPF and by CAL FIRE/Agency review staff. By reducing these response times, the review of Plans may occur close to the minimum timeframe allowed under the Forest Practice Rules.

Plan filling to Director's Determination, Steps 3-10

9. Based on box-and-whisker plots (figure 9) showing the total (Gross) time from the date of Plan Filing to the date of Director's Determination (approval), Plans reviewed under the Pilot Project generally took longer with a larger spread and a higher median value of 168 days compared to the Previous Years data which had a lower spread and a lower median value of 125 days. Although significantly influenced by the upper extreme (outliers), the average (mean) time spent to review and approve the Pilot Project Plans is about 182 days, which is about 38 days more than the average time spent to review and approve the Previous Year Plans.
10. The larger spread and the higher median and mean values reported for the Pilot Project Plans compared to those for the Previous Year Plans can partially be explained due to Plans having to be revised to include information regarding the Pacific Fisher's

candidate status for potential listing under the California Endangered Species Act (CESA) during the Pilot Project. There were delays associated with determining what mitigations were needed to be included in the Plans in order to comply with the relisting. Then letters need to be sent out by the Review Team Chair to the RPFs with Plans in review, notifying them of the need to include mitigations to avoid take of Pacific fisher. The RPFs then had to respond to the Review Team with the changes to the plan to address take avoidance, and then the Plans had to be recirculated an additional 30 days (or 45-days in the case of a NTMP). Moreover, there are other factors that could account for the larger spread and higher median, and include delays resulting from long response times throughout the Plan review process caused by the RPF and by CAL FIRE. By reducing these response times, the review of Plans may occur close to the minimum timeframe allowed under the Forest Practice Rules.

11. No attempt to speculate on ways in which RPFs can expedite their response times is provided. However, one way in which to expedite CAL FIRE's response times would be to better control the workload carried by Plan review staff.

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1.0 INTRODUCTION

In March 2012, the California Natural Resources Agency (CNRA) and the California Environmental Protection Agency (CAL/EPA) directed State agencies tasked to review timber harvest plans (Plans) on non-federal timberlands to conduct a Pilot Project for a period of one year to test interagency coordination, program management, and review strategies with the intent to bring efficiencies to the State review and permitting of Plans. The Pilot Project was implemented from March 22, 2012, to March 21, 2013, and was conducted by agencies that comprise the Redding review team, including: the Department of Forestry and Fire Protection (CAL FIRE), the Central Valley Regional Water Quality Control Board (CVRWQCB), the Department of Fish and Wildlife – Region 1 (CDFW), and the Department of Conservation's California Geological Survey (DOC/CGS). Since each Redding review team agency has different jurisdictional boundaries, the Pilot Project covered the area of the state that is common to all review agencies and included all of Shasta and Tehama Counties, and portions of Siskiyou, Modoc and Lassen Counties (see Figure 1); Plans submitted from the Pilot Project area were only a subset of the total number of Plans submitted to the Redding review team during the Pilot Project and the preceding year.

A report titled "Redding Timber Harvesting Review Pilot Project - July 2013" was compiled and submitted to the CNRA and the CAL/EPA that summarized the work performed, the results obtained, and included 11 recommendations focusing largely on the early stages of the Plan review process (see Appendix A). As identified in the July 2013 report, many of the Plans included in the Pilot Project were submitted in the latter half of the one year project period, and thus had not gone through the entire review process by the end of the Pilot Project. Consequently, key process steps leading to the Director's final decision on all Plans could not be evaluated as part of the Pilot Project. For this reason, the Redding review team agencies proposed to continue to track Plans submitted under the Pilot Project until all Plans had either been approved or denied in accordance with the State's Forest Practice Rules (Steps 1-10, as shown on Figure 2). Furthermore, the Redding review team agencies proposed to compare the data generated from Plans reviewed during the Pilot Project period to data compiled from Plans submitted within the same geographic area during the previous year. The results of these efforts would be summarized and presented in a Supplemental Report.

This Supplemental Report provides the additional analysis of the effectiveness of the Plan review process improvements implemented under the Pilot Project, and identifies additional areas where improvements can be made to expedite the Plan review process while maintaining a rigorous level of environmental protection.

2.0 STUDY APPROACH

The Plan review process under the California Forest Practice Rules[2] (14 CCR §§ 1037.3-1037.5; 1090.17-1090.19) involves several steps that range from Plan submittal to Plan

[2] California Forest Practice Rules (CFPR), 2014, available at: http://calfire.ca.gov/resource_mgt/downloads/2014_FP_Rulebook_w_TRA_No.1.pdf

approval (Figure 2). Many of these steps have mandated timelines to ensure Plans are processed in a timely manner and to provide for public comment.

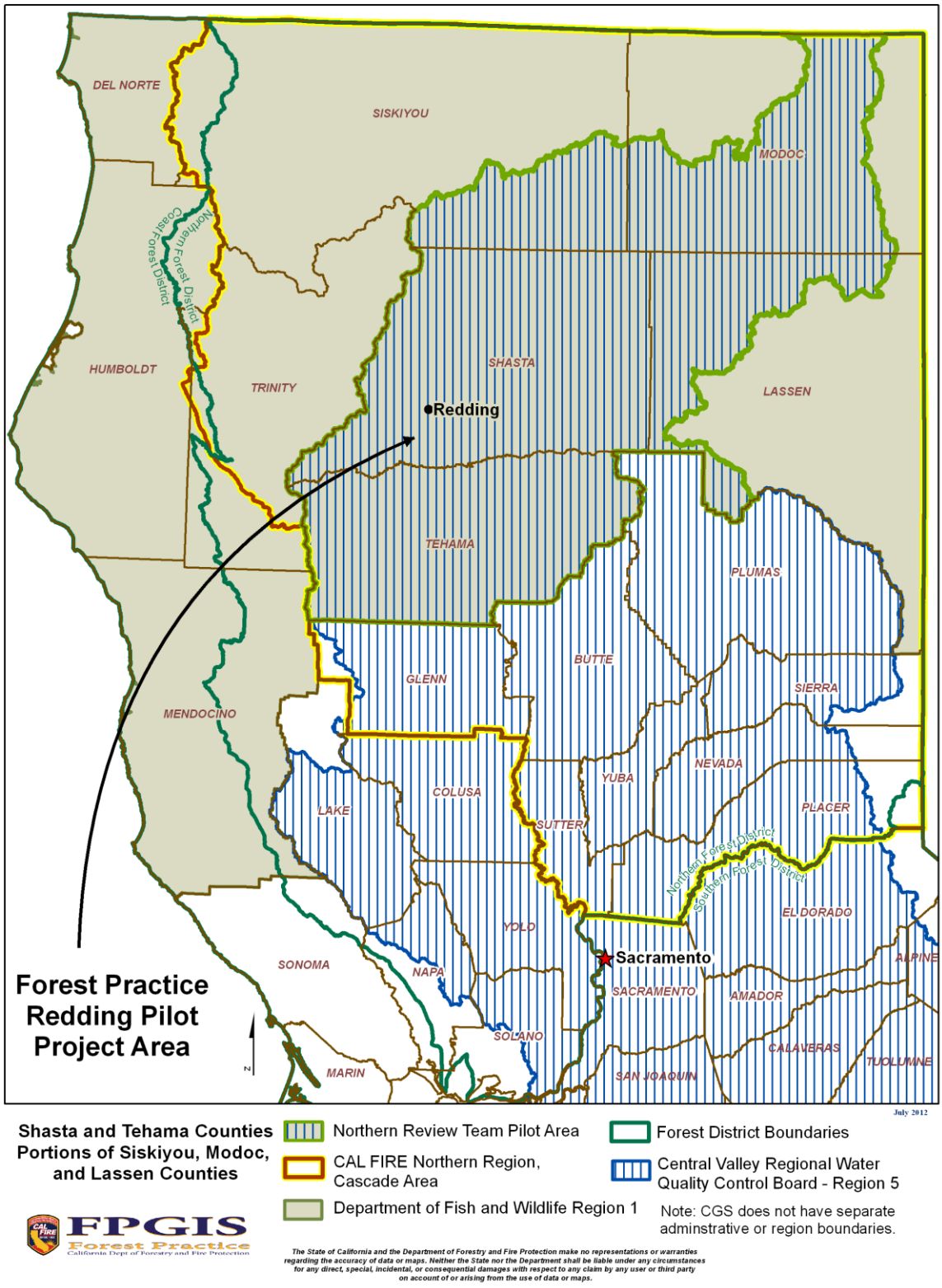


Figure 1 - Pilot Project Area

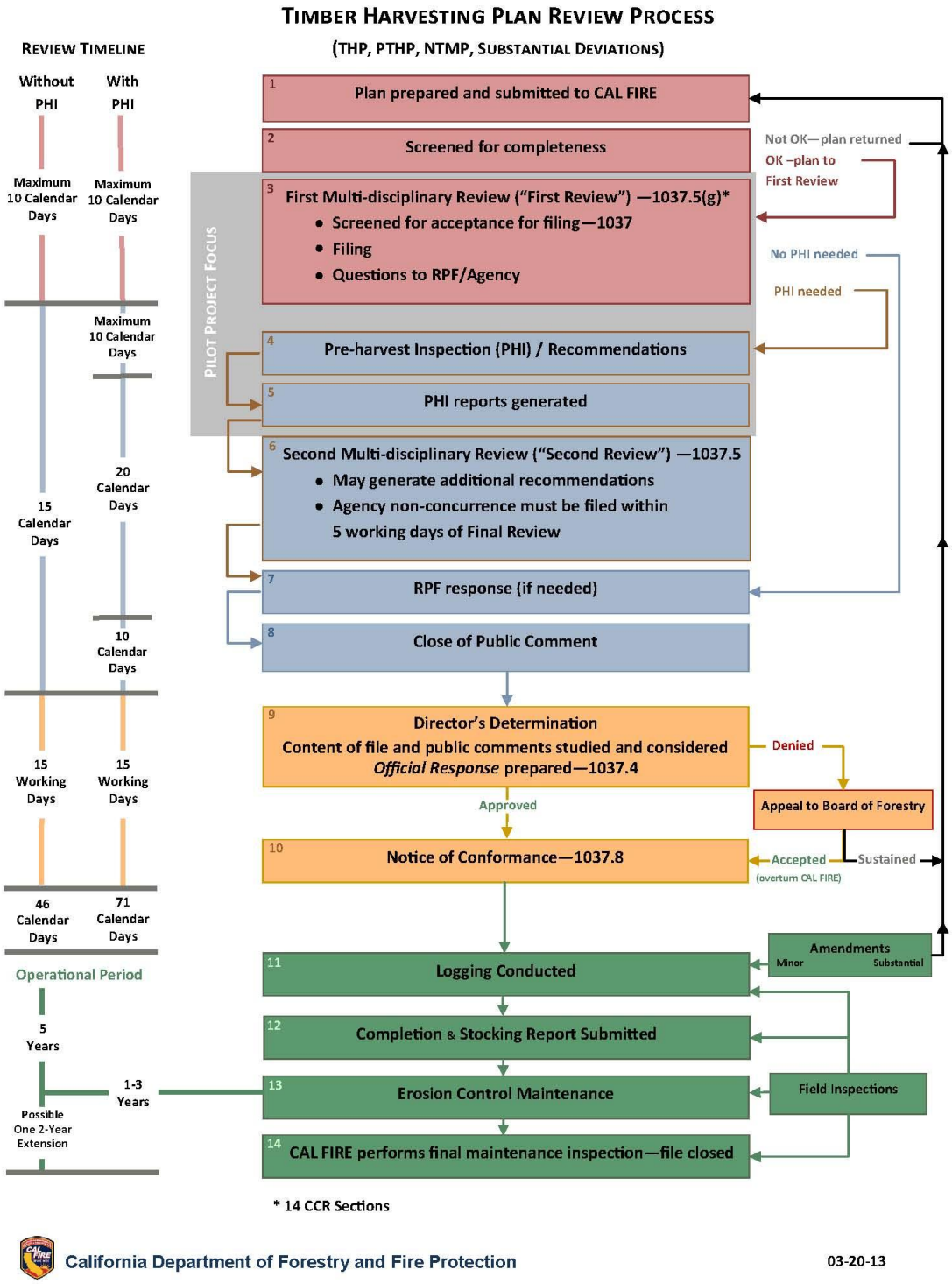


Figure 2 - Flowchart of the Plan Review Process showing the Focus of the Pilot Project

As reported in the July 2013 Pilot Project Report, and as shown in Figure 2, the Pilot Project included the initial multi-agency Plan review (First Review), the Pre-harvest Inspection (PHI), and the PHI report generation (Steps 3-5). However, the Pilot Project did not focus on the subsequent steps leading to Plan approval or Plan denial that include Second Review or Director's determination (Steps 6-10). Consequently, Plans submitted under the Pilot Project (March 22, 2012, to March 21, 2013) were monitored throughout the remaining steps leading up to Plan approval, or withdrawal of the plan by the plan submitter; no Plans were denied under the Pilot Project. Plans submitted during the pilot project are referred herein as "Pilot Project" Plans.

To help evaluate the effectiveness of process improvements tested under the Pilot Project, Plans submitted the previous year (March 22, 2011, to March 21, 2012) within the same geographic area (Figure 1) were evaluated by CAL FIRE and data similar to those recorded under the Pilot Project were obtained for comparison. Plans submitted the year prior to the Pilot Project are referred herein as "Previous Year" Plans.

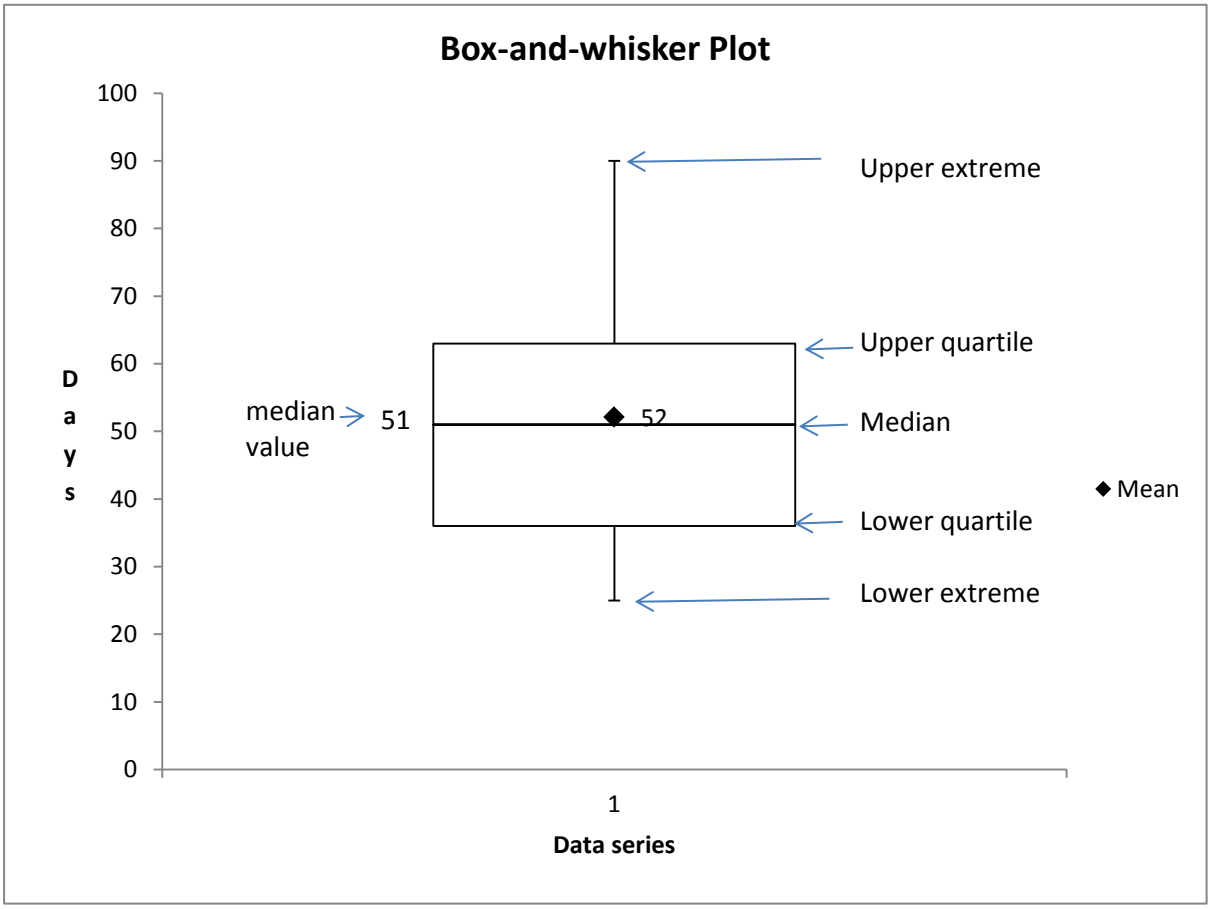
The types of data recorded for both the Pilot Project Plans and the Previous Year Plans generally consist of the number of calendar days to accomplish key steps within the Plan review process, and partially includes:

- calendar days from Plan filing to date of PHI (Figure 2, Steps 3-5);
- calendar days the PHI was delayed due to factors such as weather and scheduling conflicts;
- calendar days the RPF used to respond to Review Team questions and/or PHI recommendations(Figure 2, Steps 3-7);
- calendar days CAL FIRE used to respond to RPF comments (Figure 2, Step 6);
- calendar days from the close of the PHI to second review (Figure 2, Steps 4-6);
- calendar days from second review to last date of interagency review (Figure 2, Steps 6-8);
- additional calendar days, if required, for public review after the Plan was recirculated (Figure 2, Step 8); and
- calendar days from Plan filing to Plan approval (Figure 2, Steps 3-10).

To display and compare data, bar and line charts and box-and-whisker plots were used. Figure 3 shows an example box-and-whisker plot where the "box" shows the first, second (median), and third quartiles and the "whiskers" show the minimum and maximum values. From these graphic representations of the data, the median, the spread and skewness (spacing between the upper and lower quartiles), and the range (difference between minimum and maximum value) can be obtained. These basic statistical parameters were qualitatively assessed to compare between the Pilot Project and Previous Year Plans; rigorous statistical tests were not performed to determine the statistical significance of the comparisons.

Only Plans submitted within the Pilot Project that required a PHI (see Review Timeline on Figure 2), and that were not later withdrawn or downgraded (as in the case of amendments), were included in the assessment.

Figure 3 - Example Box-and-whisker Plot



3.0 RESULTS AND DISCUSSION

Data from Plans submitted and tracked under the Pilot Project and in the Previous Year are tabulated and presented in Appendix B and Appendix C, respectively.

The following evaluates the data compiled for the Pilot Project Plans and the Previous Year Plans by major step in the Plan review process (Figure 2). Where possible, the two data sets are compared and/or discussed to illustrate key aspects of the plan review process and to identify potential plan review efficiencies.

Plan submittal and First Review (Figure 2, Steps 1-3)

For the Redding review team, a total of 153 Plans were received for review during the Pilot Project time period. The subset of Plans submitted and reviewed by the Redding review team within the Pilot Project included a total of 66 Plans: 35 Timber Harvest Plans (THPs), 5 Programmatic Timber Harvest Plans (PTHPs), 2 Nonindustrial Timber Management Plans

(NTMPs), and 24 Substantial Deviations[3]. Of the 35 THPs, 4 were withdrawn by the Plan Submitter or RPF during the review process. Of the 24 Substantial Deviations, 11 were downgraded[4] to Minor Amendments at First Review, and 4 were withdrawn by the Plan Submitter or RPF during the review process.

For the Redding review team, a total of 150 Plans were received for review during the preceding year from March 21, 2011 to March 21, 2012. The subset of Plans submitted and reviewed by the Redding review team within the Pilot Project area in the Preceding Year included a total of 55 Plans: 38 THPs, 5 PTHPs, and 13 Substantial Deviations; no NTMPs were submitted during the time period. Of the 38 THPs, 2 were withdrawn by the Plan Submitter or RPF during the review process. Of the 13 Substantial Deviations, 7 were downgraded to Minor Amendments at First Review and one was returned.

As shown on Figures 4A and 4B, the timing of plan submittal to the Redding Review Team as a whole, and for both the Pilot Project Plans and the Previous Year Plans appears similar with both years showing a general trend towards more Plans being submitted in the late summer to early fall. For the Pilot Project area, Plans submitted in the Previous Year, were mostly concentrated between mid-September to mid-November, as shown in Figure 4B with an abrupt spike in the rolling average trend line compared to the more subdued spike shown for the Pilot Project Plans. The implications of having a higher number of Plans submitted over a short timeframe, rather than being more evenly dispersed throughout the year are discussed in detail in later sections.

[3] A Substantial Deviation to a Plan is the equivalent of a supplement to an EIR, and requires agency review and full public comment period equivalent to a Plan for the issues contained in the amendment.

[4] Downgrading of a substantial deviation to a minor amendment means that the amendment can be accepted as a minor change to the approved Plan and does not require additional CEQA evaluation or public comment period; a minor amendment should be viewed as a notification to the Department of a legally permissible action not requiring an approval by the Director.

All Plans Submitted to Redding Review Team, Over the Year from March 22 to March 21

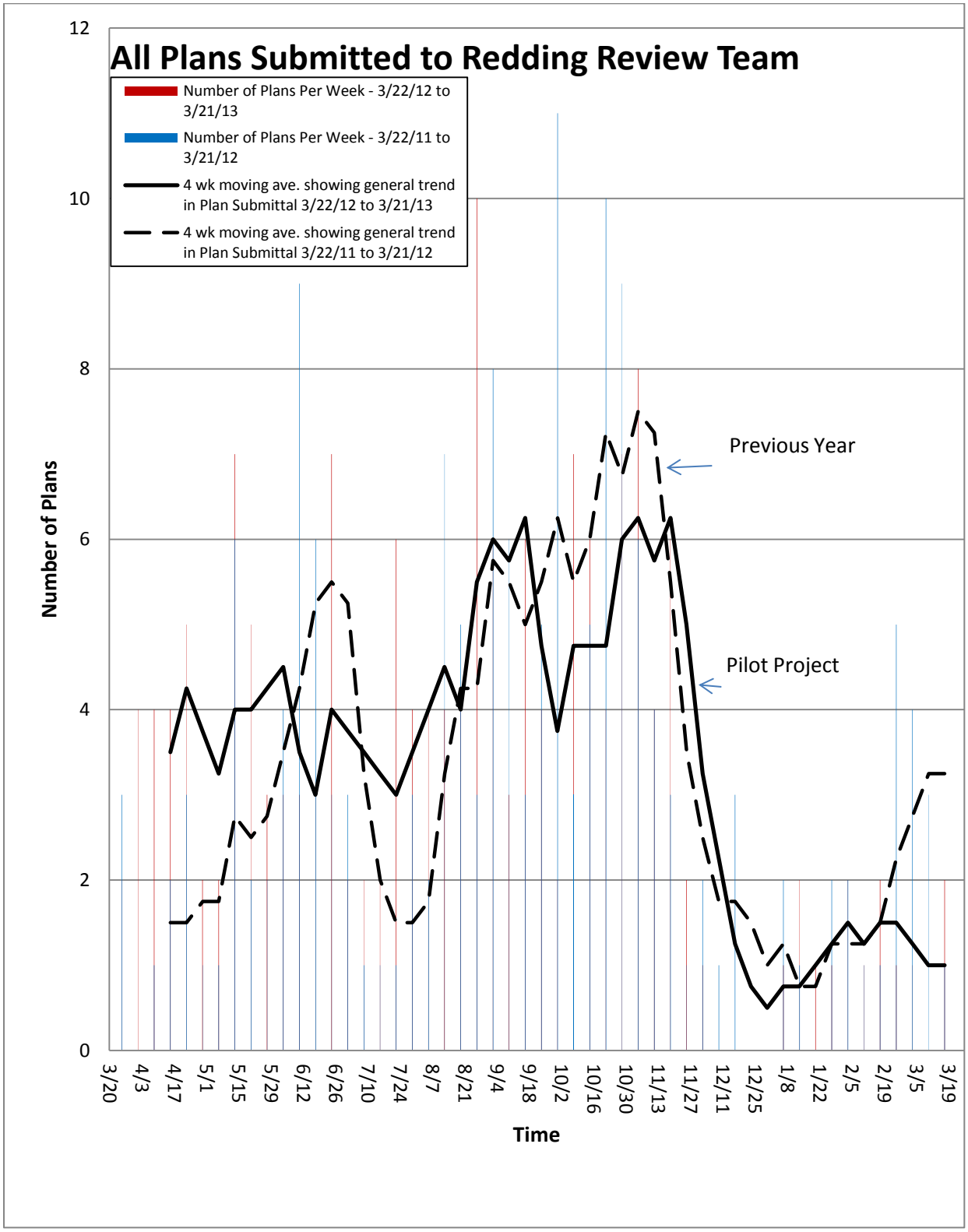


Figure 4A Graph showing Number of Plans accepted into Redding Review Team per week.

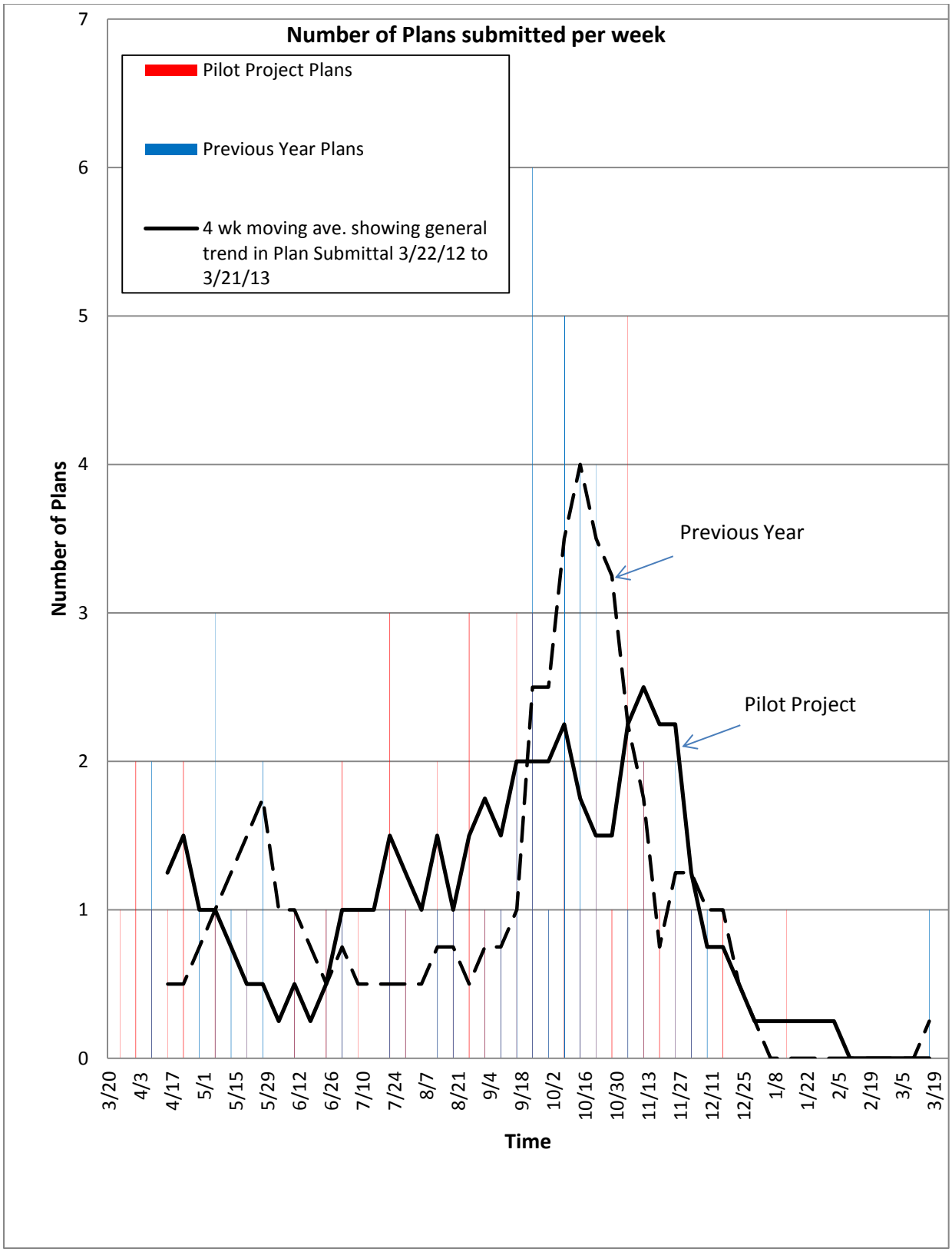


Figure 4B - Graph showing general trend in Pilot Project area Plan Submittal

Out of the 66 Plans accepted for filing during the Pilot Project, a total of 41 PHIs (29 THPs, 4 PTHPs, 2 NTMPs, and 6 Substantial Deviations) were requested by one or more of the review team agencies as part of the First Review process. Out of the 55 Plans accepted for filing in the Previous Year, a total of 42 PHIs, (34 THPs, 4 PTHPs, and 4 Substantial Deviations) were requested by one or more of the review team agencies as part of the First Review process (Figure 5).

This year-to-year comparison shows that the percentage of Plans requiring a PHI as part of the Plan review process decreased from 76% to 62% (a difference of 14 percentage points) during the Pilot Project.

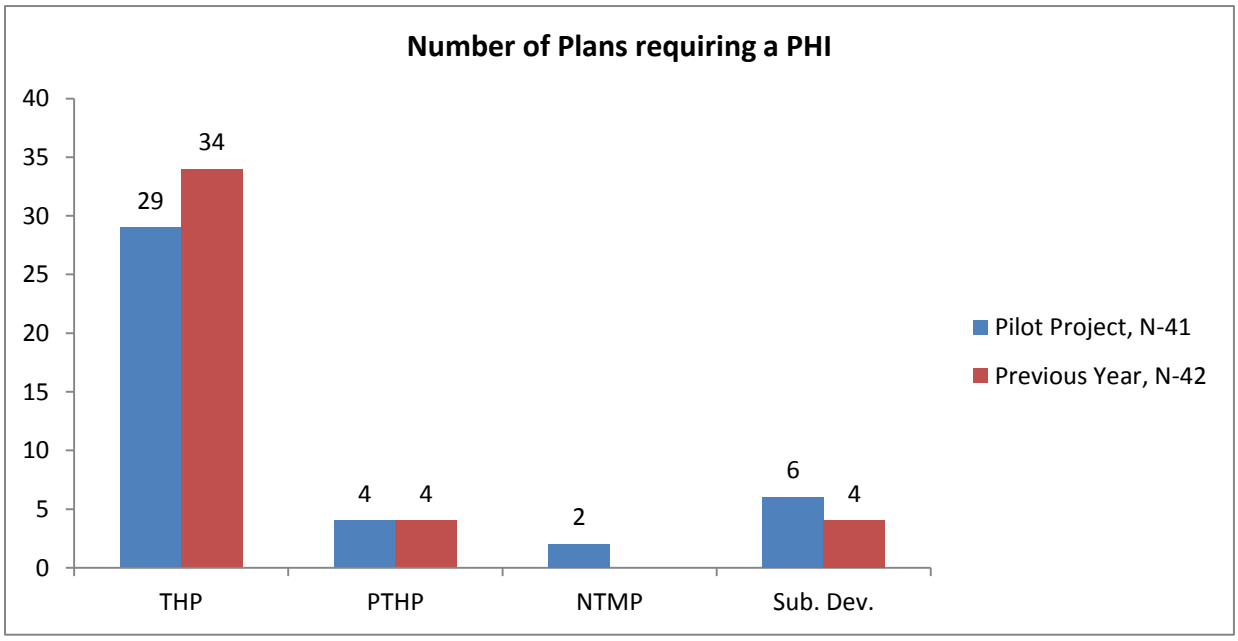


Figure 5 - Bar graph showing distribution of Plans requiring PHIs

Pre-Harvest Inspection (PHI) (Figure 2, Step 4)

In accordance with the Forest Practice Rules (14 CCR§§ 1037), the PHI is mandated to be initiated within 10 calendar days from the date of Plan filing. However, for reasons related to availability of the RPF, agency staff limitations (e.g. other workload, scheduled training or other leave time, and staff vacancies), timing of Plan submittals, and natural influences such as weather and wildfires, there were times when the PHI was not initiated within the 10 calendar day timeframe. When a PHI was not conducted within 10 calendar days from Plan filing, a "departure" from the mandated timeframe was said to occur and was documented.

Figure 6 shows the number of days from the date of filing to the date of the PHI for both the Pilot Study Plans and the Previous Year Plans. Based on the graphical representation of the data, it appears the Pilot Study had a lower spread (spacing between the lower and upper quartiles) with a median value of 11 days compared to the Previous Year's data which had a higher spread with a higher median value of 15 days. Although both plots indicate that over 50% of the Plans failed to have PHIs within the mandated 10-day timeframe, the Pilot Project Plans had a reduced spread and a median value close to 10 days.

Of the 41 PHIs performed as part of the Pilot Project, there were a total of 21 departures (18 THPs, 1 PTHP, 1 NTMP and 1 substantial deviation) that occurred; 12 were due to weather-related causes (e.g. snow limiting access or high winds creating a hazard of falling debris) and 9 were due to scheduling conflicts by either the Plan-submitting RPF or the CAL FIRE inspector. As an example of weather-related delay, many Plans submitted in November and December did not get a PHI scheduled until the following May or June resulting in as much as a 120 day or more delay in the review process because of snow cover or impeded access to the plan area. Of the 42 PHIs performed as part of the Previous Year Plans, there were a total of 25 departures (20 THPs, 3 PTHPs, and 2 substantial deviations) that occurred; 8 were due to weather-related causes, 6 were due to scheduling conflicts by either the Plan-submitting RPF or Review Team Agency staff, and 11 were unknown since a clear determination of the cause resulting in the departure could not be ascertained from information given in the Plan file. These projects were not initially intended to be tracked/included in the Pilot Project, thus the data was rebuilt from the existing file where possible rather than tracked from the onset. Figure 7 presents a bar chart illustrating the distribution in percent between the main causes leading to the departure for both the Pilot Project and Previous Year Plans.

As concluded in the Pilot Study Report, departures occur largely as a function of scheduling conflicts that stem from the increased review team workload during the summer and fall field seasons when most Plans are typically submitted (See Figure 4 showing the timing of Plan submittal) and demands on the RPF and agency staff time are high. In addition, because much of the timbered ground within the study area is located at elevations that are influenced by snow or are less accessible during wet winter months, Plans submitted in late summer to early fall are more likely of having a departure occur due to poor access.

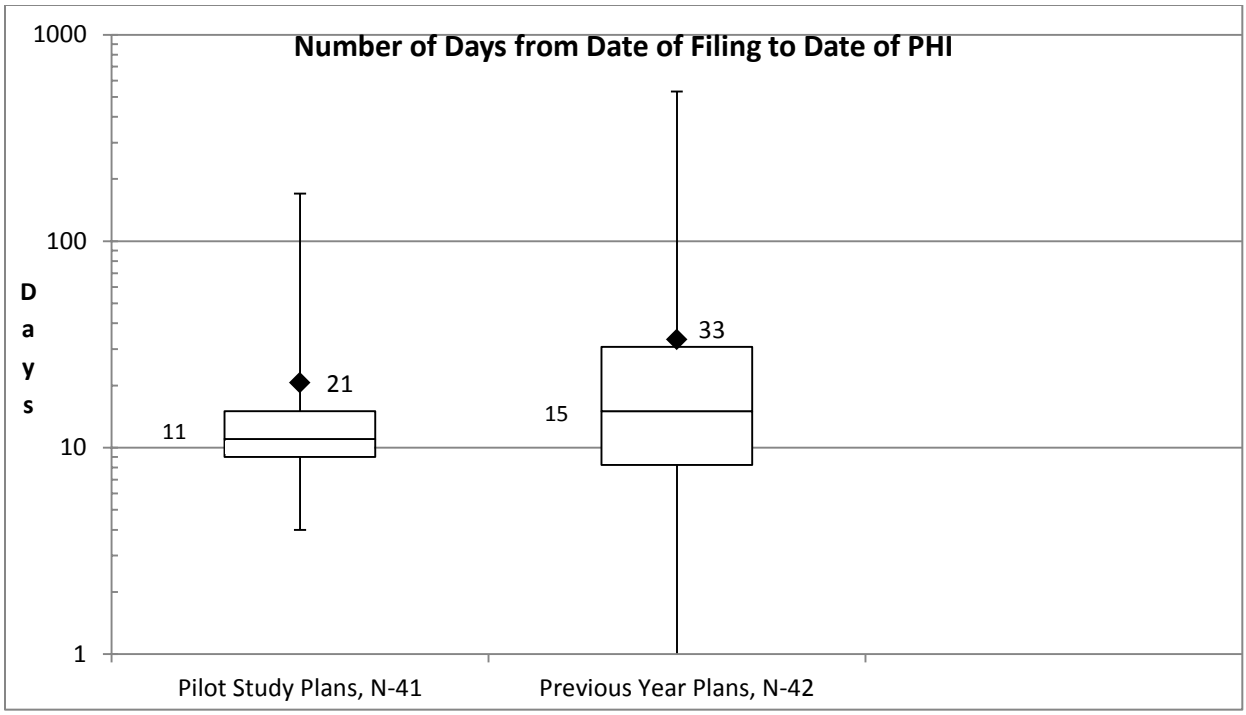


Figure 6 - Box-and-whisker plot showing the number of days from Date of Filing to Date of PHI. Note: to reasonably present the large range in the data caused by some extreme values (outliers) and spread about the median, the y-axis is in log scale.

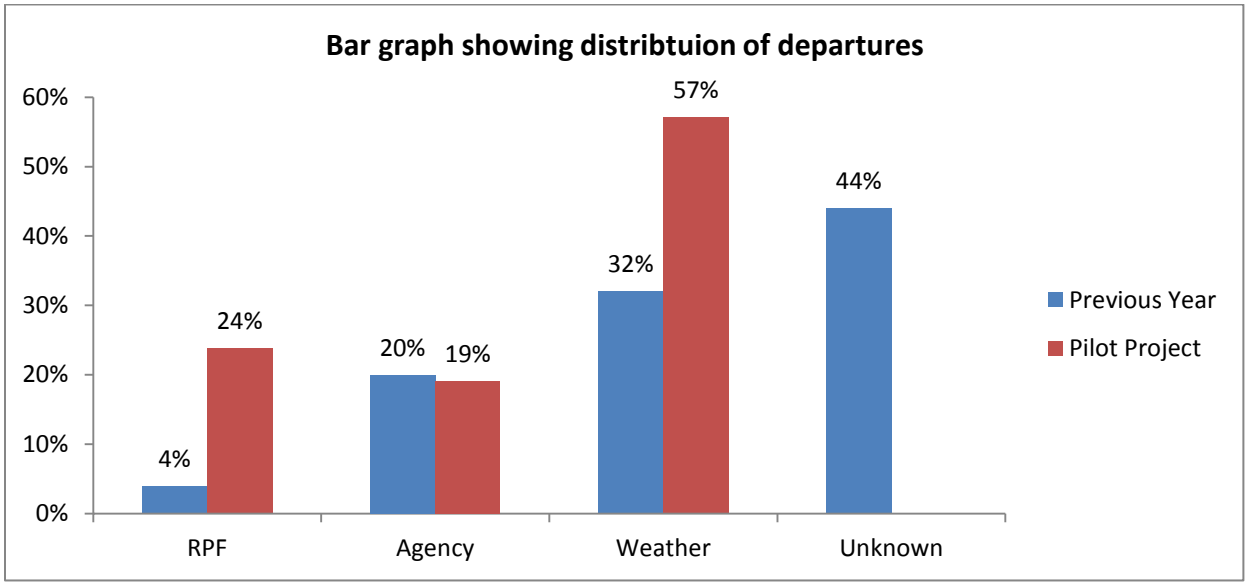


Figure 7 - Bar graph showing distribution of PHI departures.

PHI Reports Generated (Figure 2, Step 5)

Typically, upon completion of each PHI, each review team agency would prepare an agency-specific PHI report/memorandum that would include the agency's findings and recommendations. These individual PHI reports are then forwarded to the Plan submitting RPF, entered into CAL FIRE's administrative record, and posted on the department's ftp website. Of the 42 Previous Year Plans that had PHIs conducted, a total of 59 agency-specific PHI reports were submitted, including 42 from CAL FIRE, 1 from CVRWQCB, 6 from CDFW, and 10 from DOC/CGS.

Through the process of having separate agency-specific PHI reports/memoranda, it was recognized that there were occasions where inconsistent and duplicative PHI recommendations were developed by one or more of the agencies, and tracking and addressing each agency's recommendations was cumbersome for the RPF and the CAL FIRE Review Team Chair. Consequently, under the Pilot Project, staff from all agencies included recommendations in a single PHI report that was submitted by the CAL FIRE inspector. The CAL FIRE inspector's report was intended to document the major issues and recommendations shared by all agency staff attending the PHI. When additional information or documentation was deemed necessary to support agency-specific recommendations in the CAL FIRE inspector's report, individual agency PHI reports/memoranda were submitted to the Review Team Chair to provide added documentation for the record. Consequently, of the 41 Pilot Project Plans that had PHIs conducted, a total of 57 PHI reports were submitted, including 41 from CAL FIRE and 16 from DOC/CGS.

It is believed by the review team agencies Pilot Project staff that the single PHI report benefited the plan review process by: eliminating the need for the RPF or the review team Chair to search for and respond to PHI questions found in multiple documents (e.g. reports and review team Chair letters); resolving differences in recommendations from multiple agencies that addressed

the same issue; and allowing agency staff to defer, or altogether eliminate, the time spent writing PHI reports and instead use the time saved more efficiently to attend PHIs.
The review teem agencies have discussed the use of a flexible PHI report process that uses a single PHI report only where that approach works for a given THP. For example, where there are issues that relate to authorities specific to the Department of Fish and Wildlife or the Water Board, it may be appropriate for those matters to be addressed in the agency's own PHI report. Also, if there are delays in an agency getting an inspector's recommendations reviewed and approved by their chain of supervision, that agency's recommendations could again be provided in an additional PHI report.

Further, where substantial technical information needs to be presented to support a PHI report recommendation, it also may be appropriate for that to be in a separate, agency-specific PHI report. For example, within the process used in the Redding Pilot Project, CGS regularly provided a separate PHI report with the technical basis of their recommendations. CGS could complete this report later in the process so that the length of time needed to prepare this supporting information did not have to slow down the completion of the combined PHI report and its presentation to the RPF/landowner

Post PHI to Director's Determination (Figure 2, Steps 6-10)

Upon completion of the PHI, the review team Chair has a minimum of 30 days of public comment period (ten of those days must occur after second review) to consider all written comments regarding the Plan, and complete second review (review and consider the recommendations made on each Plan by the interdisciplinary review team, and determine if the Plan is in conformance with the Forest Practice Act, Forest Practice Rules and CEQA). Work completed in this process often requires the review team Chair to resolve numerous complexities/issues that arise regarding the Plan and includes, but is not limited to:

- Receiving and evaluating RPF responses to questions/mitigations;
- Reviewing written public comments;
- Addressing any new information submitted as part of the Plan subsequent to Plan submittal. If significant changes to the Plan occur, the Director is required to issue a Letter of Recirculation summarizing the changes made to all review team agencies; any agency, person, or organization that commented on the Plan; and all landowners who received a Notice of Intent (or Preparation); and
- Recommend the plan for approval or denial based on the Plan's conformance with the Forest Practice Act, Forest Practice Rules and CEQA.

Following the Review Team Chair's Recommendation, the CAL FIRE Director's Representative (Director) has up to 15 working days to complete final review of the plan. During this period the Official Response (OR) to any public comments is written. When the OR is completed, and the plan and OR are reviewed, the Director signs Plans found to be in conformance with the Forest Practice Act, Forest Practice Rules and CEQA. Plans that are denied must be returned in compliance with 14 CCR 1054, although no Plans in the Pilot Project or the Preceding Year were denied.

Due to the volume and complexities of the work involved, this process often takes more than the minimum 30 days allowed. This is illustrated in Figure 8 that presents the time (in calendar days) from the end of the PHI to the Director's Determination for both the Pilot Project and the Previous Year Plans. Based on the graphical representation of the data, it appears Plans reviewed under the Pilot Project generally took longer with a larger spread (spacing between the

lower and upper quartiles) and a higher median value of 148 days compared to the Previous Years data which had a lower spread and a lower median value of 94 days. The average (mean) time between the end of the PHI and the Director's Determination was 162 days for the Pilot Project Plans and 112 days for the Previous Year Plans; the range for both years is similar and is between about 30 days (the minimum allowed) to about 562 days.

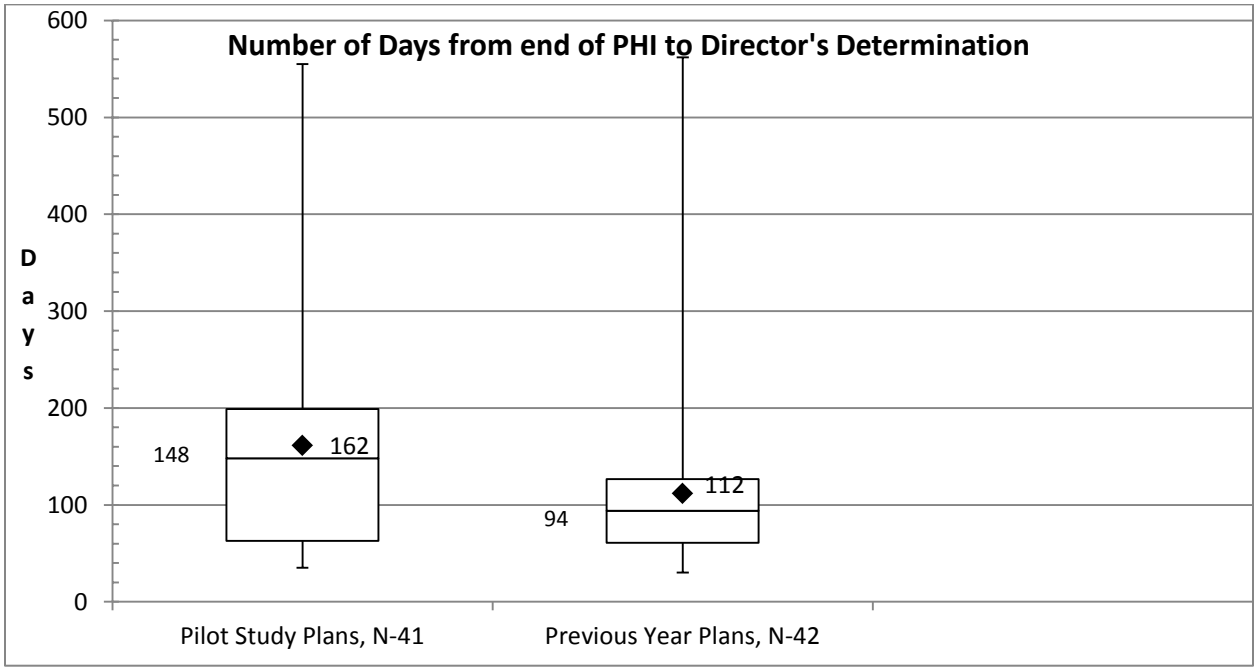


Figure 8 - Box-and-whisker plot showing the Number of Days from end of PHI to Director's Determination

The larger spread and the higher median and mean values reported for the Pilot Project Plans compared to those for the Previous Year Plans can partially be explained due to Plans having to include information regarding the Pacific Fisher's status change from unlisted under CESA to Candidate for potential listing under the California Endangered Species Act (CESA) during the Pilot Project. There were delays associated with determining what mitigations were needed to be included in the plans in order to comply with the relisting. Then letters need to be sent out by the review team Chair to the RPFs with Plans in review, notifying them of the need to include mitigations to avoid take of Pacific fisher. The RPFs then had to respond to the review team Chair with the changes to the Plan to address take avoidance, and then the Plans had to be recirculated an additional 30 days (or 45-days in the case of a NTMP) due to the Pacific Fisher's Candidate status for potential listing under the California Endangered Species Act (CESA) . In all, 20 out of the 41 Pilot Project Plans were required to be recirculated (one THP was recirculated twice, for a total of 60 days), compared to 3 out of the 42 Previous Year Plans. As stated above, the most significant cause for the large discrepancy in Plan recirculation between the Pilot Project to the Previous Year is due to the Pacific Fisher's candidate status for potential listing under the California Endangered Species Act (CESA). Less common causes for recirculation include significant changes to the Plan due to wildfire (1 Plan) and botanical issues (e.g. Klamath manzanita, 1 Plan).

Additional factors that delay the review of Plans post PHI includes time used by the RPF to respond to PHI recommendations (and other issues that arise through the review process), and by CAL FIRE to complete review of Plan information received and to provide written response. These factors are discussed further in the following section.

Plans requiring the longest time to review and approve (i.e. the upper outliers in Figure 8) were largely due to factors that included addition of significant new information to Plans that triggered the need for Plan revision and recirculation due to the Pacific Fisher's candidate status, significant changes to the Plan resulting from wildfire, and to RPF response times to address Review Team agency recommendations.

Plan Filing to Director's Determination (Figure 2, Steps 3-10)

In the preceding sections, the major steps of the Plan review process were evaluated and the results compared. In this section, the time spanning from the initial Plan Filing to the Director's Determination is summarized and discussed to address the overall time required for Plan review.

The total (Gross) time from the date of Plan Filing to the date of Director's Determination for both the Pilot Project and Previous Year Plans is presented in Figure 9. Based on the graphical representation of the data, it appears Plans reviewed under the Pilot Project generally took longer with a larger spread and a higher median value of 168 days compared to the Previous Year Plans that had a lower spread and a lower median value of 125 days. Although significantly influenced by the upper extreme (outliers), the average (mean) time spent to review and approve the Pilot Project Plans is about 182 days, which is about 38 days more than the average time spent to review and approve the Previous Year Plans. The range for both years is similar and is between about 39 days to about 643 days.

Again, the larger spread and the higher median and mean values reported for the Pilot Project Plans compared to those for the Previous Year Plans can partially be explained due to Plans having to include information regarding the change in the Pacific Fisher's candidate status for potential listing under the California Endangered Species Act (CESA) during the Pilot Project. There were delays associated with determining what mitigations were needed to be included in the Plans in order to comply with the relisting. Then letters needed to be sent out by the Review Team Chair to the RPFs with Plans in review, notifying them of the need to include mitigations to avoid take of Pacific fisher. The RPFs then had to respond to the review team Chair with the changes to the plan to address take avoidance, and then the Plans had to be recirculated an additional 30 days (or 45-days in the case of a NTMP) due to the Pacific Fisher's candidate status for potential listing under the California Endangered Species Act (CESA). However, there are other factors that have not been discussed that can also account for the large spread and high median and mean values represented in Figure 9. These factors include delays caused by weather that can impact the timing of the PHI and delays resulting from long response times throughout the Plan review process caused by the RPF and by CAL FIRE. Delays due to weather are uncontrollable. As an example of weather-related delay, many Plans submitted during the Pilot Project and the Previous Year in the November to December timeframe did not get a PHI scheduled until the following May or June resulting in as much as a 120 day or more delay in the review process because of snow cover or impeded access to the plan area. However, because delays in response times by the RPF and CAL FIRE can be influenced and potentially improved, they are discussed further.

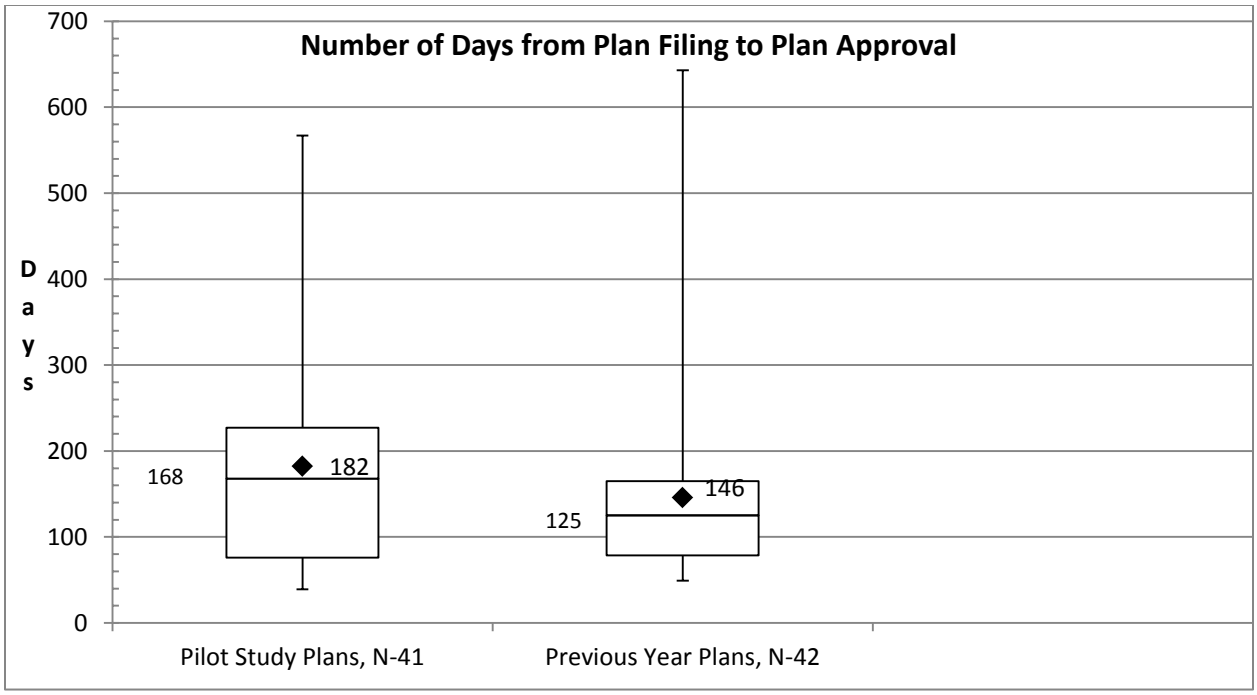


Figure 9 - Box-and-whisker plot showing the number of days from Plan Filing to Plan Approval

RPF response times: The RPF is required to respond to review team questions in First Review as well as to any PHI recommendations, additionally initial RPF responses may be incomplete or inadequate resulting in additional rounds of review team questions and RPF responses. In many cases, the RPF can delay final review of the Plan by not presenting written responses in a timely manner. Figure 10 presents a graphical representation of the days it took for the RPF to provide written responses. As illustrated, the response time of the RPF for Pilot Project Plans had a large spread with a median score of about 61 days, which is much more compared to the spread and median score of about 14 days for the Previous Year Plans. The large median score for the Pilot Project Plans indicate that delays on behalf of the RPF may have significantly slowed the Plan review process. For example, because over 50% of the Plans submitted required 61 days or more for the RPF to respond, then 50% of the Plans were delayed by a factor of 2 or more times the minimum 30-day time period allowed by the Forest Practice Rules for post PHI review to occur.

Review Team Response times: Figure 11 plots the range, spread, and median scores representing the time required for the review team agencies, with the CAL FIRE Review Team Chair in the lead (14 CCR §1037.5(b)[5], to provide written responses during the review period.

[5] 14 CCR §1037.5 (b) Review Team Function: The function of the review team shall be to assist the Director in determining if Plans are in conformance with Board rules and to evaluate the potential environmental impacts of timber operations. Review criteria employed by a team shall be consistent with this function. The Board's regulations provide direction for those situations noted during the review which are not addressed by specific rules (14 CCR 898.1(f), 901- 903.2, 1655 & PRC 4555). In evaluating a plan, the review team shall review any discussion of feasible alternatives or additional mitigation to the proposed timber operation as prescribed in 14 CCR 898. Plan reviewers must consider the economic as well as the environmental benefits of feasible alternatives. The review team shall serve in an advisory capacity to the Director in making recommendations on Plans.
In the event that any member of the review team concludes that the plan as filed would have a significant adverse effect on the environment, that member shall explain and justify this conclusion in writing as specifically as

The graph depicts a larger spread in the number of days for the Pilot Project Plans with a median value of about 28 days and a mean value of about 36 days. Both the spread, median, and mean values for the Pilot Project are larger compared to the values shown for the Previous Year Plans. In many cases, the CAL FIRE lag in providing written comment is due to excessive workload resulting from the natural spike in Plan submittal that occurs in late summer and early fall (Figure 4). Although generally not has high as the response times reported for the RPFs, the extended lag reported for the CAL FIRE response times delayed Plan approval.

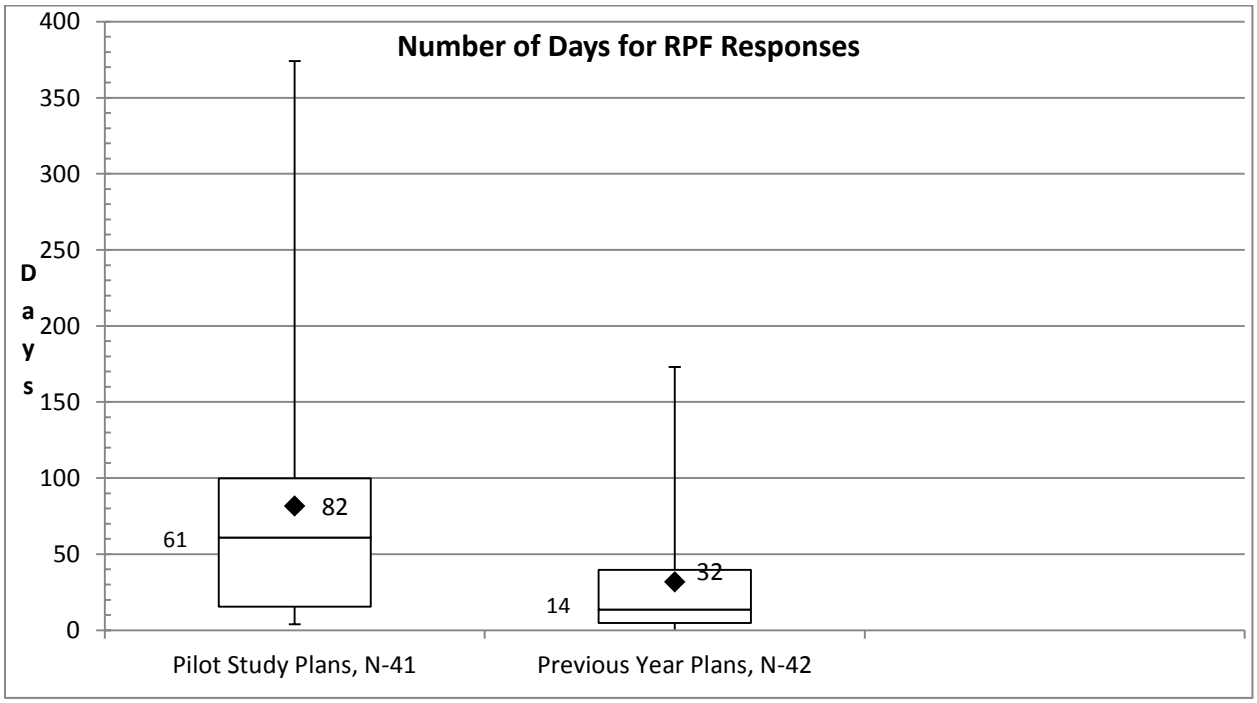


Figure 10 - Box-and-whisker plot showing the number of days required to receive RPF responses to First Review/PHI recommendations

possible. The member shall provide in writing suggested site-specific mitigation measures, if any, that will substantially lessen the impacts.

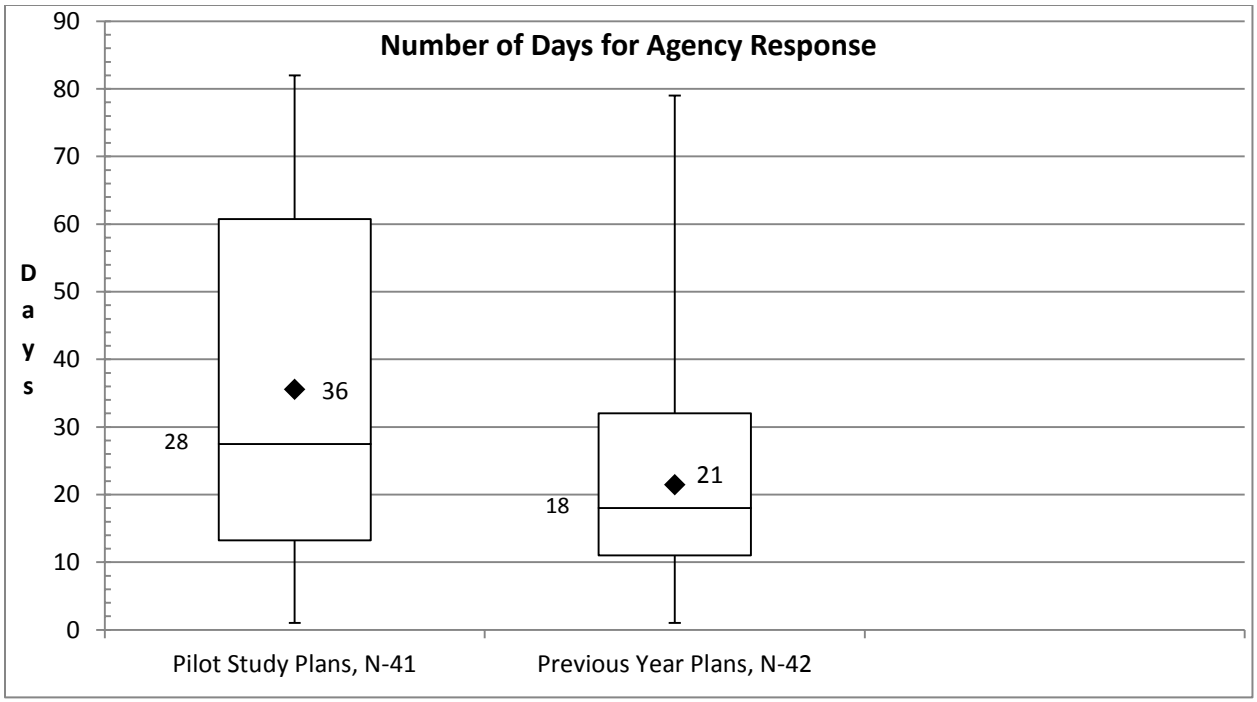


Figure 11 - Box-and-whisker plot showing the number of days for CAL FIRE responses.

To illustrate the potential effects that weather delays, revisions leading to recirculation delays, and delays due to RPF and Agency response times have on slowing the Plan review process, the total (Gross) time required to perform the review of both the Pilot Project and Previous Year Plans, as shown in Figure 9, was corrected for time reported as being contributable to these delays and plots were generated showing the number of "Net" days from Plan Filing to Plan Approval (Figure 12). As can be seen in Figure 12, under the most ideal conditions, the "Net" number of days from Plan Filing to Plan approval for both the Pilot Project and the Previous Year Plans is similar with nearly identical spreads and close median scores of 49 and 56, respectively (again the means are significantly influenced by the extreme upper values (outliers), thus, although similar, do not provide for a good comparison). These median scores are close to the minimum 40 day timeframe allowed under the Forest Practice Rules, which provides no more than 10 days to conduct the PHI followed by a minimum of 30 days to provide for public comment and complete Plan review.

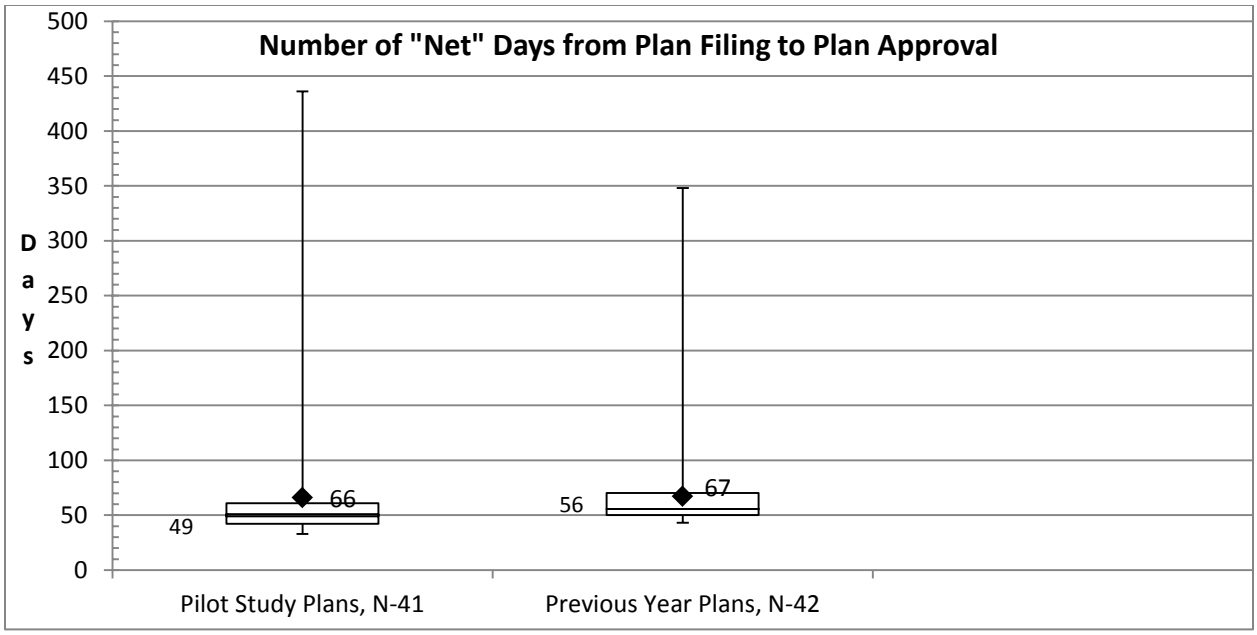


Figure 12 - Box-and-whisker plot showing the "Net" number of days from Plan Filing to Plan Approval

Although overly idealized, the plots shown in Figure 12 illustrate that the Plan review process could be better streamlined by making improvements to those factors that cause delays, excluding weather. Consequently, the two most plausible areas to focus future resources on include evaluating ways to expedite the written response times from the RPF and CAL FIRE. By reducing these response times, the overall time of Plan review could be reduced.

No attempt to speculate on ways in which RPFs can expedite their response times is provided. However, one way in which to expedite review team's response times would be to improve control of the workload by Plan review staff. This may be done by either addressing Plan submittal rates, which would effectively buffer the workload currently handled by CAL FIRE and other review agency staff, or disperse the workload to other or additional CAL FIRE staff during peak times.

4.0 SUMMARY

In order to comply with the goals set under the Pilot Project, a study was conducted comparing data generated under the Pilot Project Plans against data generated under the Previous Year Plans. Through this study, the effectiveness of the review process improvements implemented under the Pilot Project were evaluated and areas where improvements could be made to expedite the Plan review process while maintaining a rigorous level of environmental protection were identified. The following, listed by key step in the Plan Review Process (Figure 2), summarize the study results.

Plan submittal and First Review, Steps 1-3

1. Timing of plan submittal for both the Pilot Project and the Previous Year Plans appears similar with both years showing a general trend towards having more Plans being submitted in the late summer to early fall.
2. This one year comparison shows that the percentage of Plans that required a PHI as part of the Plan review process decreased from 76% to 62% (a difference of 14%) during the Pilot Project.

Pre-harvest Inspection (PHI), Step 4

3. The number of PHIs performed under the Pilot Project and the Previous Year Plans were similar with values of 41 and 42, respectively.
4. Box-and-whisker plots showing the number of days from Plan Filing to the PHI date suggest the Pilot Project had a lower spread (spacing between the lower and upper quartiles) with a median value of 11 days compared to the Previous Year's data which had a higher spread with a higher median value of 15 days. Although both plots indicate that over 50% of the Plans did not have PHIs within the mandated 10-calendar day timeframe, the Plans under the Pilot Project did a better job of meeting the timeframe based on the reduced spread and a median score close to the mandated 10-calendar day timeframe.
5. Departures were recorded when PHIs were not conducted within 10 days of Plan filing. In total there were 21 departures reported under the Pilot Project Plans and 25 departures reported under the Previous Year Plans. These departures were mostly attributed to scheduling conflicts that stem from the increased review team workload during the summer and fall field seasons when most Plans are typically submitted and demands on the RPF and agency staff time are high. In addition, Plans submitted in late summer to early fall are more likely of having a departure occur due to limited access caused by the onset of winter conditions.

PHI Reports Generated, Step 5

6. Although not reflected in the data, it is believed the single PHI report benefited the plan review process by: eliminating the need for the RPF or the review team to search for and respond to PHI questions found in multiple documents (e.g. reports and emails); resolving differences in recommendations from multiple agencies that addressed the same issue; and allowing agency staff to defer, or altogether eliminate, the time spent writing PHI reports and instead use the time saved more efficiently to attend PHIs and conduct other related duties.

Post PHI to Director's Determination, Steps 6-10

7. Based on box-and-whisker plots showing the time (in calendar days) from the end of the PHI to the Director's Determination (Plan approval), it appears Plans reviewed under the Pilot Project generally took longer and had a larger spread and a higher median value of 148 days compared to the Previous Years data which had a lower spread and a lower median value of 94 days.
8. The larger spread and the higher median values reported for the Pilot Project Plans compared to those for the Previous Year Plans is largely due to an increased number of plans in the Pilot Project having to be revised and recirculated for an additional 30 days compared to the Previous Year Plans (e.g. additional issues, significant plan changes, and recirculated due to the CESA listing of Pacific Fisher during the Pilot Project timeframe).

Plan filling to Director's Determination, Steps 3-10

9. Based on box-and-whisker plots showing the total (Gross) time from the date of Plan Filing to the date of Director's Determination, Plans reviewed under the Pilot Project generally took longer and had a larger spread and a higher median value of 168 days compared to the Previous Years data which had a lower spread and a lower median value of 125 days. Although significantly influenced by the upper extreme (outliers), the average (mean) time spent to review and approve the Pilot Project Plans is about 182 days, which is about 38 days more than the average time spent to review and approve the Previous Year Plans.
10. The larger spread and the higher median and mean values reported for the Pilot Project Plans compared to those for the Previous Year Plans can partially be explained due to Plans having to be revised and recirculated for an additional 30 days (or 45-days in the case of a NTMP) due to the Pacific Fisher's candidate status for potential listing under the California Endangered Species Act (CESA). Moreover, there are other factors that could account for the larger spread and higher median, and include delays resulting from long response times throughout the Plan review process caused by the RPF and by CAL FIRE. By reducing these response times, the review of Plans may occur close to the minimum timeframe allowed under the Forest Practice Rules.
11. No attempt to speculate on ways in which RPFs can expedite their response times is provided. However, one way in which to expedite CAL FIRE's response times would be to better control the workload as identified in the Pilot Project report (recommendation #3).