Forest Planning Watershed Pilot Projects Concept Paper

Public Review Draft

Timber Regulation and Forest Restoration Program

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Introduction

This concept paper describes potential approaches to conducting planning-watershed-based pilot projects to identify opportunities to increase efficiencies for timber harvest planning and permitting processes. We stress that this is a concept paper and that we solicit public input on its suggested approaches.

The specific substantive areas to be addressed by the pilot projects include data collection and characterization, identification of information and methods used for cumulative environmental impacts assessment, and the identification of restoration opportunities in forested landscapes. These pilot projects would be collaborative, multi-disciplinary efforts that provide opportunity for public participation. Pilot projects for these purposes have been reflected in past Assembly bills considered by the California Legislature (e.g., AB 2575, AB 380, AB 875), but none of these bills ultimately became law.

The Timber Regulation and Forest Restoration (TRFR) Program will lead the pilot project effort. The results of the pilot project have the potential to be beneficial for consistent harvest plan preparation and review, as well as for identifying opportunities for restoration. Products resulting from the pilot project will support the development of improved, standardized information for conducting cumulative impact evaluations at the planning watershed scale. The products produced also will allow restoration practitioners and landowners in the pilot watersheds to make progress in selecting and implementing recovery actions such as those from the National Marine Fisheries Service (NMFS) (2012) Central California Coast coho recovery plan and from the state Recovery Strategy for California Coho Salmon (California Department of Fish and Wildlife, 2004). The pilot project products will also include information from which restoration opportunities for terrestrial wildlife habitat can be identified.

Funding and staffing for these pilot projects was provided as a part of the State's Fiscal Year 2015-16 budget. Up to four pilot projects are anticipated. An initial pilot project will be conducted to develop the approach, followed by the completion of up to three additional pilots in order to refine the approach and test its application in several, differing planning watersheds. The number of pilot projects eventually completed is dependent upon the ability to answer the critical questions identified in this concept paper, the likelihood that the answers to these questions would be enhanced by implementing the pilot project in a different planning watershed, and the cost and resource commitment associated with conducting the projects.

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Substantive Elements

Basic approaches for the conduct of these pilot projects include developing a common scope of work for the pilot projects, including the types of information to be collected and the products to be produced; assigning interagency interdisciplinary teams to gather existing information sources; establishing a minimum standard for information to describe existing watershed conditions (i.e., producing consistent information); using the teams to ground truth preliminary office results and determine if there are significant gaps in existing information; and establishing a collaborative "pilot project working group" (PPWG), composed of stakeholders and natural resource professionals, to guide the work of each pilot project.

A set of proposed critical questions has been developed to help frame the focus of the pilot projects. If needed, scientific experts may be brought into the process.

Proposed Critical Questions

Six potential critical questions are proposed for the pilot projects:

- What criteria should and can be employed, at the planning watershed scale, to identify restoration needs and priorities for watershed and biological resources based on available information in THPs and other readily available sources?

- Do past THPs, collated on a planning watershed basis, contain the information needed to guide restoration at the planning watershed scale?

- What are the qualitative and quantitative methods presented in THPs to analyze the potential for THPs to create or add to adverse cumulative effects on watershed and biological resources?

- Are there major gaps in available information, on a planning watershed scale, that would be useful for THP preparation and review, and assessment of cumulative impacts?

- If there are gaps, what additional information is needed and what data are available?

- What restoration needs can be identified from the planning watershed scale versus needing a larger spatial context?

Data Collection and Characterization

Data will be collected and collated in standard spatial format for each of the pilot projects. Information sources include past timber harvesting plans (THPs) and other available permitting documents (e.g., habitat conservation plans, watershed- or ownership-wide waste discharge requirements, master agreements for timber operations, erosion control plans), the Department of Forestry and Fire Protection's

(CAL FIRE) Forest Practice Watershed Mapper and CalMAPPER geographic information systems (GIS), and other data sources identified in the course of each pilot project. The intent is to bring together and evaluate ***existing*** available data. There is no intent to collect ***new*** data in the field. The spatial information is to be organized by CalWater 2.2 planning watersheds.

With guidance from the PPWGs, one or more interagency teams made up of the Review Team agencies (i.e., CAL FIRE, California Geological Survey, Department of Fish and Wildlife, and the Water Boards) will assemble and organize existing data in a logical and useful manner and ground truth preliminary office results to identify significant gaps in existing information. The interagency teams and PPWGs will evaluate information sources and data covering topics such as geology, fisheries, aquatic and terrestrial habitat, hydrology, and the locations of existing restoration projects, but will they will not conduct watershed assessments or cumulative effects analyses.

As part of the process, standardized data symbols will be developed for mapping spatial features. The intent is to produce a standardized symbology that could be used in all THPs, related permitting or planning documents, or other harvesting and forest restoration related maps. This standardization could create efficiency for both harvesting plan preparers and reviewers.

The availability of spatial data and methods of utilizing it (viewing or analyzing) are critical for the landowners and the forestry professionals who work with them, the review team agencies, and interested stakeholders or members of the public. Thus, as a part of the pilot projects, we intend to experiment with an open, online, collaborative GIS such as DataBasin (http://databasin.org/).

Cumulative Impacts Assessment Information and Assessment Approaches Used

Following an explicit cumulative impacts assessment process can provide the information necessary to identify potential mitigation measures, improve longer term planning, and to help set priorities for restoration (MacDonald, 2000). Improvements in cumulative impacts assessment methodologies have occurred over the past 25 years (MacDonald et al. 2004; Benda et al. 2007). However, the ability to accurately assess cumulative impact is often limited by the lack of data for characterizing the resources of concern (e.g., listed species; TMDL listings), identifying the key cause-and-effect mechanisms affecting these resources, and data on past disturbances that might be driving these impacts (MacDonald, 2000).

Given these considerations, the information developed in the data collection and characterization phase will be reviewed for its utility for filling these types of data gaps. Since many of the problems associated with cumulative impacts assessment also come from poorly defining the spatial scale of analysis (MacDonald, 2000), assessing the appropriateness of the planning watershed scale for restoration needs analysis also will be a focus of the pilot projects.

Pilot projects would inform processes for the assessment of cumulative impacts, and may result in long-term efficiencies and cost savings to landowners and reviewing

agencies, provide meaningful information to the public, and help to ensure the protection and restoration of soil, water, wildlife, timber, and forest values and resources. The pilot projects would focus on specific information necessary for evaluating cumulative impacts, developing and recommending standardized requirements for the information, ensuring the information is developed at relevant spatial scales (with consideration of CalWater planning watersheds in particular), and exploring ways to provide electronic public access to the documents and spatial information that assist CAL FIRE, other review team agencies, and public stakeholders in the cumulative impacts assessment.

As THPs are reviewed, the interagency teams will work with the PPWGs to catalog the cumulative effects assessment approaches that are used.

Identification of Restoration Opportunities

As with cumulative impact assessment, effective restoration planning benefits from following an explicit process that focuses on the causes rather than symptoms of resource degradation (Beechie and Bolton, 1999; Beechie et al., 2008). Effectively implementing this kind of approach to restoration can be data intensive (Beechie and Bolton, 1999), and oftentimes data can be a limiting factor during restoration prioritization (Beechie et al., 2008; Palmer et al., 2007).

Since a fundamental principle of restoration is to "match the scale of restoration to the scale of the problem" (Beechie et al., 2010), the pilot projects will also assess whether or when the planning watershed is an appropriate scale of analysis for informing restoration planning and prioritization. This information can then be used to inform the development of projects for restoration grant programs and/or for incorporation into future THPs. Restoration grant programs that may be able to provide assistance include the Department of Fish and Wildlife's Fisheries Restoration Grant Program, the State Water Board's 319h grant program, and CAL FIRE's California Forest Improvement Program. All of these programs receive funding from the Timber Regulation and Forest Restoration Fund and other sources.

The information developed in the first two substantive phases of the pilot projects (data assembly and data characterization, and cumulative impacts assessment) will be used in conjunction with resources such as the federal and state recovery plans for listed fish and wildlife, California Salmon Snapshots, State Wildlife Action Plan, knowledgeable agency staff, and restorationists to identify specific, appropriate restoration actions for a given planning watershed.

When identifying appropriate restoration actions, it is important to make the distinction between restoration and mitigation. This is particularly important given that Assembly Bill 1492 specified that Timber Regulation and Forest Restoration Funds may not be uses to pay or reimburse requirements, including mitigation, as a condition of any permit [Public Resources Code § 4629.8(b)]. With respect to salmonid and steelhead trout restoration the state policy has been to encourage public participation in publically funded mitigation, restoration, and enhancement programs [Fish and Game Code § 6902 (b)] (Flosi, G. et al, 2010). In addition, when a person with a working forest

management plan or a nonindustrial timber management plan applies for state restoration grant funding for a restoration project that has a significant public benefit, the application shall not be summarily denied on the basis that the project is a required condition of the harvesting plan (Public Resource Code § 4597.19).

Process and Collaborative Elements

This concept paper is intended to be an initial step in the process of developing and implementing the pilot projects. Public participation/input will be accomplished during the pilot project process through collaboration with landowners and relevant stakeholders, including environmental organizations, NGOs, federal agencies, timber industry representatives, and restoration practitioners. This public input will guide the development of the specific objectives of each pilot project, guide their implementation, help interpret the results, and develop the recommendations that come out of the process. Overall guidance of the process will be provided by the soon-to-be-established TRFR Program Advisory Committee.

The attached Figure 1 shows a flow chart for major steps in the overall pilot project process. The first major step is for the TRFR Program to invite forest landowners and the public to attend a public meeting on the pilot project concept. We will seek input on the overall pilot project concept, development of an objective process for selection of the pilot projects, and what the composition should be of the Pilot Project Working Group (PPWG) that will be formed for each pilot project. Following this initial public workshop, the TRFR Program will develop a draft report describing the process and the scope for the pilot projects. This draft will be vetted at a public workshop, leading to the TRFR Program developing the final pilot project description document, with final guidance from the TRFR Program Advisory Committee.

The TRFR Program will then conduct the process for the selection of the initial pilot project planning watershed and the establishment of the PPWG. At this juncture, implementation of the initial pilot will begin. Some period into the implementation of the pilot projects, the TRFR Program will hold a mid-implementation public workshop, at which the PPWGs will report out and take public comment on their progress to date. When each PPWG completes its work, it will prepare a draft report of findings, conclusions, and recommendations, including information regarding needed restoration projects on the planning watershed. These draft reports will be discussed at a public workshop, comments will be collected, and final reports prepared by each of the PPWGs.

The TRFR Program will then be responsible for taking the reports of each of the pilot projects and integrating their lessons on efficiencies in data, analysis, restoration, and adaptive management. The Program, with the review and advice of the TRFR Program Advisory Committee, will then take steps to implement these lessons.

While no pilot project watersheds have been selected, nor has a selection process been developed, we provide a hypothetical example in the appendix.

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Implementing Lessons from the Pilot Projects

The organized datasets developed as a part of the pilot projects will be made available to stakeholders to (1) improve cumulative impacts assessment for harvesting plans developed in a given planning watershed, (2) inform limiting factors analysis for listed anadromous salmonids and terrestrial wildlife species, (3) quickly and efficiently identify needs and opportunities for restoration, (4) provide a common base set of information for use in future THPs within a given planning watershed, and (5) promote cost-effective and meaningful monitoring strategies. Collaborative approaches have a higher likelihood of success, since several interagency team efforts have proven successful in the past, including the 208 BMP assessment (SWRCB 1987), the Interagency Mitigation Monitoring Project (IMMP) (Longstreth et al. 2008), and the Battle Creek rapid assessment (Battle Creek Task Force 2011).

Project Reporting

Information from the initial pilot project will be summarized in a comprehensive report and compared to future pilot projects in other areas of the State. Summary reports will be expected to include GIS-based spatial information, tables, spreadsheets, plots, figures, maps, etc., possibly using DataBasin as a mapping and analysis platform for recording standardized information. The findings from the pilot projects will provide further information on the types and robustness of existing available information in forested watersheds, and will be used to develop recommendations to the Board of Forestry and Fire Protection for approaches to standardizing THP data characterization and changes to the cumulative impacts assessment informational requirements. These changes are intended to improve efficiencies in plan preparation and review, reduce future costs for landowners and reviewing agencies, provide improved transparency in the plan review process, and further refine methods of data/information presentation and cumulative impacts assessment in forested watersheds.

We will report to the Legislature on the pilot projects through our regular annual reporting process for the AB 1492 Program.

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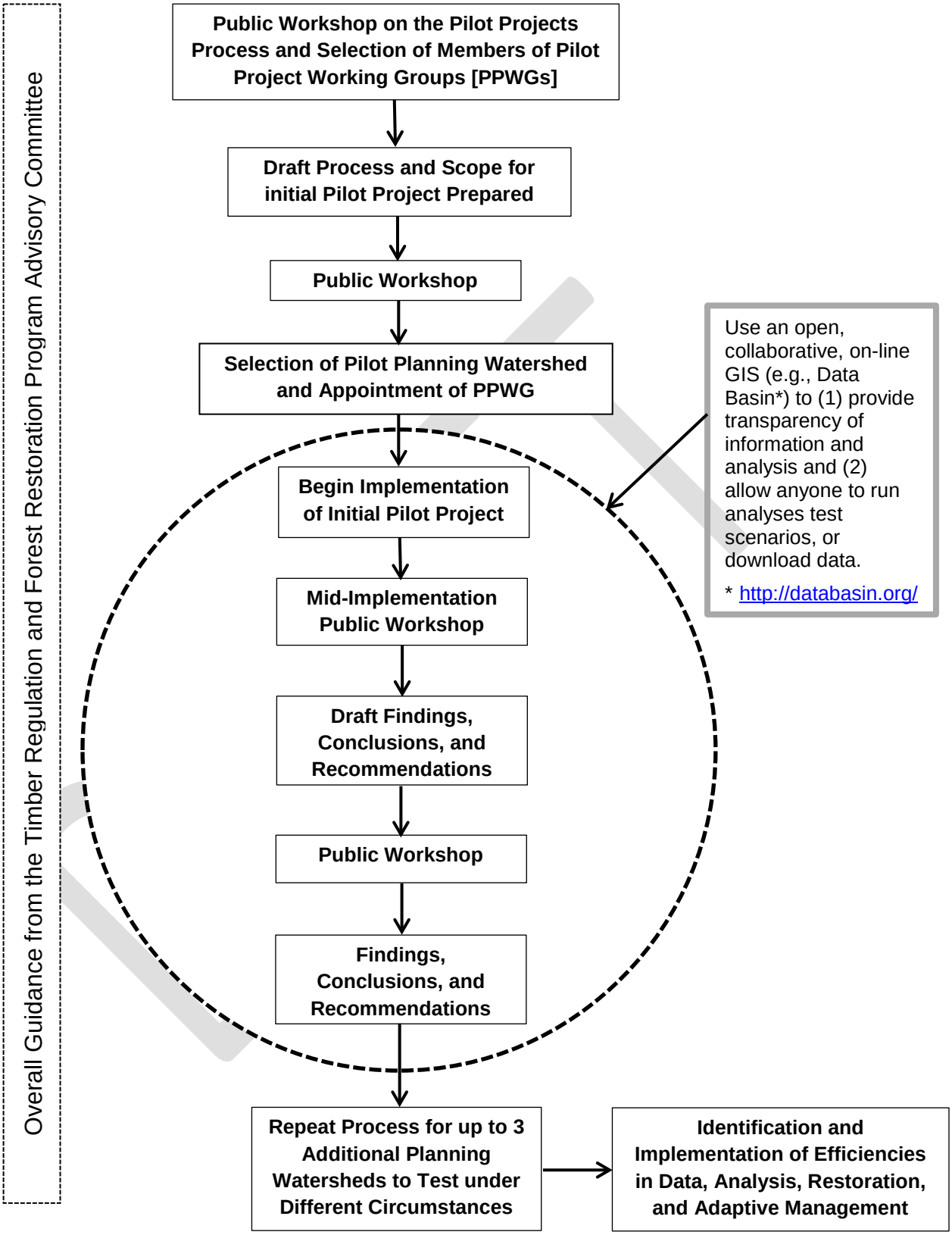

Figure 1. Flow Chart for Pilot Projects Process.

Appendix

Potential Pilot Project Example

While no pilot project watersheds have been selected, nor has a selection process been developed, we provide a hypothetical example here. Of course, for any pilot project, landowner support and participation is critical. We illustrate how a pilot project could be beneficial to a landowner with a hypothetical pilot project in either the Upper or Lower Usal Creek planning watersheds, located along the Mendocino Coast (Figures A-1 and A-2). We suggest that this type of pilot project can be beneficial to the Redwood Forest Foundation, Inc. (RFFI) in preparing future harvesting plans in these planning watersheds, in submitting grant applications for restoration work (e.g., to the Department of Fish and Wildlife's Fisheries Restoration Grant Program), and for submitting site-specific riparian management proposals (such as was done as part of the recent Campbell Global Mill-Smith THP).

While the Usal Creek planning watersheds are used as an example, it is envisioned that up to four pilot projects will be undertaken—two in the Coast Ranges (Coast Forest Practice District), one in the Northern Sierra Nevada/Cascade Range (Northern Forest Practice District), and one in the central or southern Sierra Nevada (Southern Forest Practice District). At least some of these pilot projects will be in mixed (primarily private) ownership planning watersheds, and all will have had at least a moderate amount of timber harvesting conducted in the past 10-15 years.

Several existing sources of information are available for the Usal Creek planning watersheds, including (1) NMFS (2012) CCC Coho Recovery Plan Volume II, Usal Creek, (2) Campbell Global's North Fork Usal Creek Instream Habitat Enhancement Project Grant Proposal, (3) TNC's California Salmon Snapshots website for Usal Creek, (4) DFW's 2006 Stream Inventory Report for Usal Creek, (5) CAL FIRE's Watershed Mapper timber harvesting plan information (Figure A-3), (6) CAL FIRE's digital THP library available on the internet, (7) existing sets of aerial photographs and Google Earth imagery, (8) NetMap coverage, (9) THP 1-14-140 MEN and the CGS Engineering Geology Report for this plan, (10) Kelly 1984 Geology and Geomorphic Features Related to Landsliding, Hales Grove 7/5' Quadrangle, Kelly 1984 Geology and Geomorphic Features Related to Landsliding, Piercy 7/5' Quadrangle, (11) RFFI's Forest Management Template, (12) information included in past THPs for the requirements of 14 CCR § 916.4(a)(1), and (13) historic photos (Figures A-4 and A-5). Also, publicly available LiDAR covers the upper portions of the Upper Usal Creek Planning watershed (headwaters of Bear Creek and Chimney Rock Creek).Similar types of information and data are expected to be available for numerous planning watersheds located in the northern California Coast Ranges, but areas outside this area will generally have less information available. The PPWG will supply the organized datasets to the landowner/manager (Campbell Global in this case) to evaluate its usefulness to facilitate restoration work and improve cumulative impacts assessment in future plans.

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Figure A-1. Map of the Usal Redwood Forest, located in coastal Mendocino County.

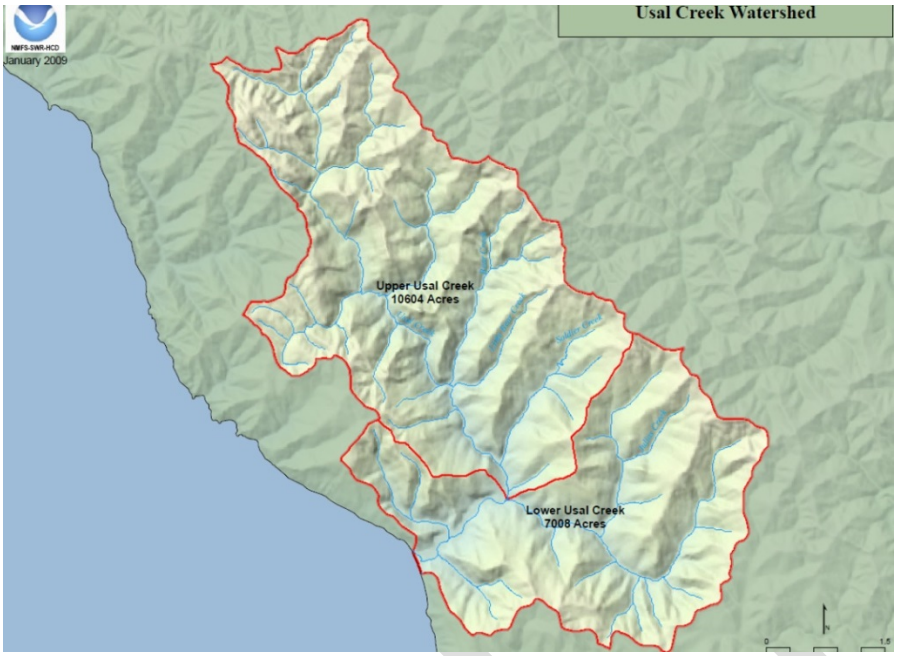

Figure A-2. Map of the Upper Usal Creek and Lower Usal Creek planning watersheds.

Figure A-3. Map of the two planning watershed with harvest history from CAL FIRE's Watershed Mapper.

Figure A-4. The Usal Creek watershed in 1977 (R. Gienger photo).

Figure A-5. The Usal Creek watershed in 1980 (R. Gienger/DFW photo).