

EXHIBIT 1-A

Project 3 Implementation Plan

Project 3 Assessment of Steelhead Passage Barriers in Portions of Four Tributaries to the Carmel River Main Stem

Background

The decline of steelhead in the Carmel River Basin between the 1960s and 1990s prompted its listing as a threatened species under the protection of the federal Endangered Species Act (ESA). In normal and above water years, adult steelhead can spawn in a total of 60.5 miles of stream, including 24.5 miles of the Carmel River main stem, 30 miles of primary tributaries, and 6 miles of secondary tributaries. A thorough, detailed survey needs to be completed of all potential barriers to steelhead migration. This scope of work includes an analysis of barriers in tributary streams that are judged to be the most important in terms of potential steelhead habitat (Figure 1). The District selected four major tributaries for this assessment: Potrero Creek, Cachagua Creek, Pine Creek and San Clemente Creek, and added one potential barrier known as Flavin's Ford. Forty-four reconnaissance sites and a maximum of 40 sites with detailed measurements are proposed for this barrier assessment. Of the total reconnaissance sites, 31 are on private property and 13 are on public property.

The priorities for this assessment will be to 1) provide a description of existing passage barriers; 2) document and confirm the amount of stream channel accessible to steelhead in selected tributaries under natural conditions; 3) locate, delineate, survey and rank manmade barriers; 4) develop a prioritized list of actions/modifications at each barrier that will ultimately maximize production of juvenile steelhead from each tributary; and 5) recommend modifications to eliminate temporal migration delays and any partial blockages in selected tributaries.

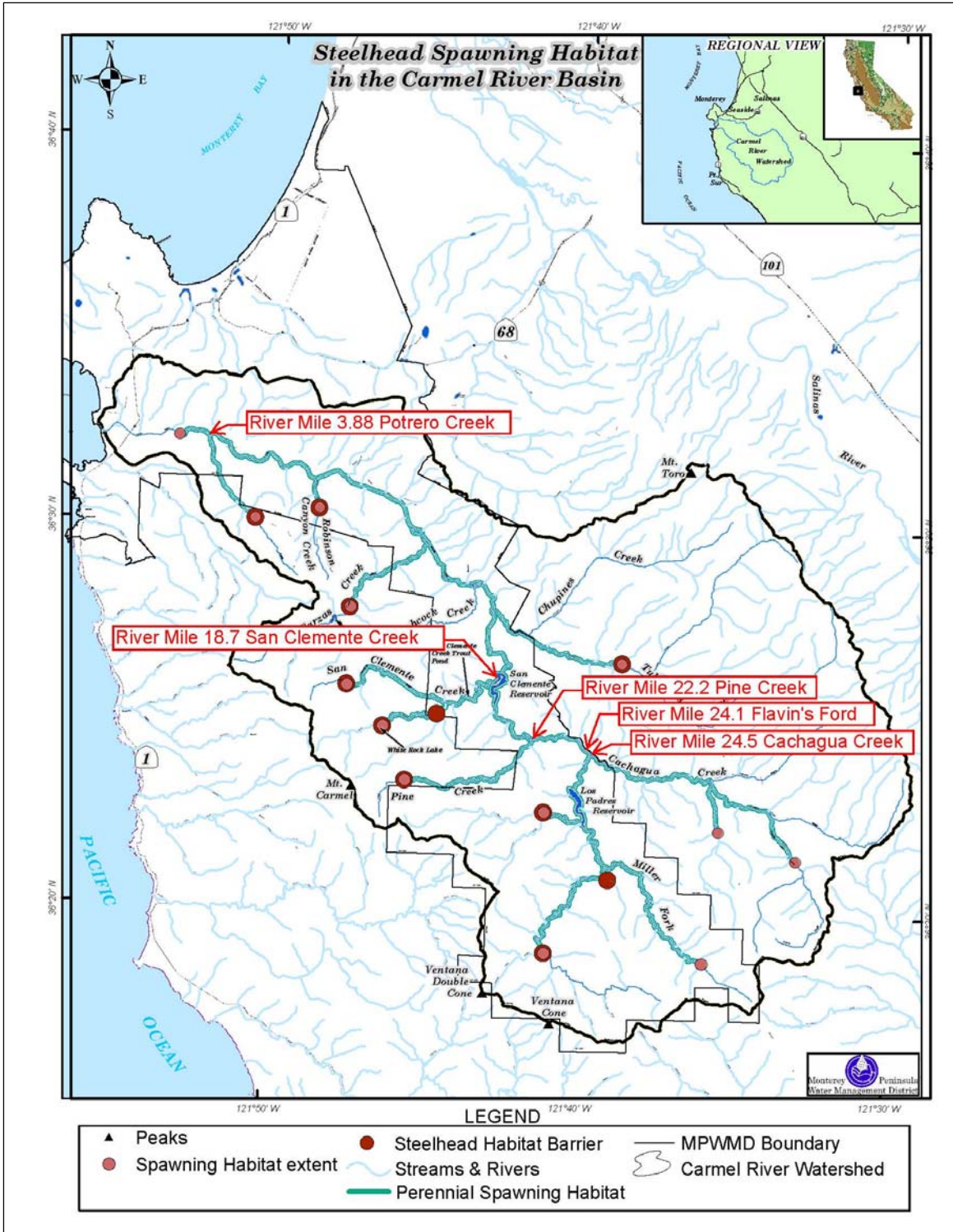


Figure 1. Carmel River Basin showing principle tributaries and extent of stream habitat accessible to adult steelhead. (MPWMD 2005)

WORK PLAN

Task 1: Obtain Access & Permission for Work

- Subtask 1.1** Develop parcel list and contact information of property owners along each tributary and the main stem between San Clemente Reservoir and Los Padres Dam, and contact each landowner for permission to conduct the assessments.
- Subtask 1.2** Hold a workshop for property owners. MPWMD will provide a parcel list and contact information of private property owners along each tributary and the main stem between San Clemente Reservoir and Los Padres Dam. The Consultant is to contact each landowner and invite them to a workshop to discuss the barrier assessments. The Consultant will arrange for a meeting place, date, and time. MPWMD will send representatives to the workshop to describe the project and to request that owners grant access to MPWMD for barrier assessments.
- Subtask 1.3** Negotiate agreements for access to cover the study period. If necessary, after conducting a workshop, the Consultant will follow up with individual property owners to obtain access permission to conduct assessments.

Task 1 Deliverables: List of property owners contacted; copies of access agreements obtained.

Task 2: Conduct Reconnaissance Surveys and Update Existing Information

Barrier assessment will be initiated by conducting a reconnaissance survey of each study stream to verify previously described barriers and identify new potential barriers. Information collected will include: barrier type (road crossing, steep riffle, seasonal dam, bedrock chute, waterfall, log jam, etc.), location by Latitude/Longitude coordinates, overall gradient upstream and downstream of barrier, initial determination of migration constraints such as water velocity, jump height or both, and representative photos above and below the potential barrier. To supplement previous work on the selected tributaries, the uppermost natural barrier to fish migration will be located and described.

- Subtask 2.1** Potrero Creek: 3 miles, one day, two surveyors
Subtask 2.2 San Clemente Creek Basin: 8 miles, 4 days, two surveyors
Subtask 2.3 Pine Creek: 5.5 miles, 3 days, two surveyors
Subtask 2.4 Flavin's Ford: one site, 0.25 days, two surveyors
Subtask 2.5 Cachagua Creek Basin: 16 miles, six days, two surveyors
Subtask 2.6 Update Barrier Maps and prepare Preliminary Report
Subtask 2.7 Select Sites for Detailed Assessments

Task 2 Deliverables: Geographic location data and characterization of potential barriers.

Task 3: Detailed Barrier Assessments

This task will employ a two-staged approach based on techniques developed by the United States Forest Service (2005 and 2008) and the California Department of Fish and Game (CDFG) (2010). This approach will incorporate a screening process, using site specific geomorphic and hydrologic data of barriers in each stream, which will then be compared to a set of criteria to rank the barriers. The protocol includes measurements of channel profile, x-sections, substrate composition, the size and shape of culverts or channel obstructions, flow characteristics,

sketches, and photo documentation of potential barriers. The goal of this two-staged approach is to inventory, evaluate and rank the sites according to the general framework recommended by the CDFG's California Salmonid Stream Habitat Restoration Manual. The results of the evaluation will provide guidance on the priority for treating sites with the goal of eventually providing unimpeded fish access to the uppermost natural total barrier in each tributary.

- Subtask 3.1** Potrero Creek Surveys: (7 road crossings, one steep riffle; 4 hours each; 2 two surveyors per site)
- Subtask 3.2** San Clemente Creek Survey: (4 road crossings, one summer dam, two permanent dams, one delta; 4 hours each for roads and summer dam, 8 hours each for permanent dams and delta; 2 two surveyors per site)
- Subtask 3.3** Pine Creek Survey: (bedrock chute at confluence; one day; two surveyors)
- Subtask 3.4** Flavin's Ford Survey: (one concrete road crossing; one day; two surveyors)
- Subtask 3.5** Cachagua Creek, Lower Reach Survey: (4 County Road Bridges, 8 private road crossing; 2 hours each for County road bridges and 4 hours each for private road crossings)
- Subtask 3.6** Cachagua Creek Basin, Upper Reach, Finch, James and Martin Creeks Upper Reach Survey: (4 County road crossings, 8 private road crossing; 4 hours per crossing)
- Subtask 3.7** Data Entry: 37 sites x 1 hour per site
- Subtask 3.8** Data Analysis: 37 sites x 2 hours per site
- Subtask 3.9** Summary Report and Site Ranking

Task 3 Deliverables: Geomorphic and hydrologic data of barriers in each stream; inventory, evaluation, and rank for each site evaluated.

Task 4: Collect and provide streamflow data for WY 2009, 2010, 2011

Task 4 Deliverables: Summary of annual streamflow data for each tributary (mean daily flow).

PROJECT SCHEDULE

| | Task Name | Duration | Start | Finish | Milestone |
|--------|--|----------|-----------|-----------|-----------|
| P3 | Project 3 - Assessment of Steelhead Passage Barriers: Four Tributaries to Carmel River Main Stem | 1492 | 10/1/2008 | 11/1/2012 | |
| Task 1 | Obtain Access & Permission for Work | | | | 6/1/2012 |
| Task 2 | Conduct Reconnaissance Surveys and Update Existing Information | | | | 7/1/2012 |
| Task 3 | Detailed Barrier Assessments | | | | 11/1/2012 |
| Task 4 | Collect and Provide Streamflow Data for WY 2009, 2010, 2011 | | | | ongoing |

PROJECT BUDGET

| Budget Description | Funding Match | Grant Funding | Other State Funds Used | Estimated DAC Costs from DWR Grant | Total | % Match |
|---|---|-----------------|------------------------|------------------------------------|------------------|------------|
| Project 3 - Assessment of Steelhead Passage Barriers in the Carmel River Watershed | \$59,450 (MPWMD in-kind services for tributary streamflow gauging) | \$65,000 | \$0 | \$0 | \$124,450 | 48% |
| Task 1: Obtain Access & Permission for Work | \$0 | \$8,000 | \$0 | \$0 | \$8,000 | |
| 1.1 Develop parcel list and contact information | | \$2,000 | | | | |
| 1.2 Hold meeting/workshop for property owners | | \$2,000 | | | | |
| 1.3 Negotiate agreements for access | | \$4,000 | | | | |
| Task 2: Conduct Reconnaissance Surveys and Update Existing Information | \$0 | \$22,000 | \$0 | \$0 | \$22,000 | |
| 2.1 Portrero Creek | | \$1,200 | | | | |
| 2.2 San Clemente Creek Basin | | \$4,800 | | | | |
| 2.3 Pine Creek | | \$3,500 | | | | |
| 2.4 Flavin's Ford | | \$300 | | | | |
| 2.5 Cachagua Creek Basin | | \$7,200 | | | | |
| 2.6 Update Barrier Maps & Preliminary Report | | \$4,000 | | | | |
| 2.7 Select Sites for Detailed Assessments | | \$1,000 | | | | |
| Task 3: Detailed Barrier Assessments | \$0 | \$35,000 | \$0 | \$0 | \$35,000 | |
| 3.1 Portrero Creek Surveys | | \$3,600 | | | \$3,600 | |
| 3.2 San Clemente Creek Survey | | \$6,000 | | | \$6,000 | |
| 3.3 Pine Creek Survey | | \$1,200 | | | \$1,200 | |
| 3.4 Flavin's Ford Survey | | \$1,200 | | | \$1,200 | |

| Budget Description | Funding Match | Grant Funding | Other State Funds Used | Estimated DAC Costs from DWR Grant | Total | % Match |
|--|-----------------|---------------|------------------------|------------------------------------|-----------------|------------|
| 3.5 Cachagua Creek, Lower Reach Survey | | \$6,000 | | | \$6,000 | |
| 3.6 Cachagua Creek Basin, Upper Reach, Finch, James and Martin Creeks Upper Reach Survey | | \$6,000 | | | \$6,000 | |
| 3.7 Data Entry | | \$1,000 | | | \$1,000 | |
| 3.8 Data Analysis | | \$6,000 | | | \$6,000 | |
| 3.9 Summary Report & Site Ranking | | \$4,000 | | | \$4,000 | |
| Task 4: Collect and Provide Streamflow Data (WY 2009, 2010, 2011) | \$59,450 | \$0 | \$0 | \$0 | \$59,450 | 48% |