2nd Steelhead Summit

October 27 & 28, 2016 in San Luis Obispo, CA
Session Overview

- Sponsors:
  - California Trout
  - City of San Luis Obispo
  - Sustainable Conservation
  - California Conservation Corps
  - Cachuma Operation and Maintenance Board
  - Wildnote

The year's Summit agenda highlighted adaptive genomic variation, steelhead recovery planning, coastal monitoring status reports, fish passage planning, and water conservation efforts.

The full-day symposium was followed by concurrent field tours to restoration sites that showcase fish passage improvements and water conservation projects.
Presentations

Prioritizing Steelhead Recovery Actions Presentations and Panel Discussion
Part 2

(Slide 4) *Accelerating Steelhead Recovery Projects with Programmatic Permits and Approvals*
*Erik Schmidt, Sustainable Conservation*

(Slide 30) *Breaking the Barriers to Large Dam Removal -- Matilija Dam, the Final Push*
*Paul Jenkin, Surfrider Foundation*
Accelerating Steelhead Recovery Projects with Programmatic Permits and Approvals

Erik Schmidt
Senior Conservation Strategist
OUTLINE

1. Sustainable Conservation’s Accelerating Restoration program
2. Efficient permitting supports steelhead recovery projects
3. Programmatic approvals and funding for restoration
4. Planning for successful permitting
5. Resources
Sustainable Conservation helps California thrive by uniting people to solve the toughest challenges facing our land, air, and water.
Working with restoration proponents and federal/state agencies to help:

- Restore streams and fish passage
- Rebuild riparian habitat
- Reduce erosion
- Improve streamflows
STEELHEAD RECOVERY PLANS

Priority Actions

- Fish passage improvements – small and large
- Restore natural channel features
- Estuary fill removal/tidal marsh restoration
- Invasive plant removal
- Manage livestock and restore riparian vegetation
PROP 1: More than $1.5B for restoration in coming years.
PROGRAMMATIC PERMITTING

A pre-approved regulatory process for qualifying projects:

- Clearly established criteria and requirements
- Burden on applicant to submit all needed information upfront
IMPORTANCE OF EFFICIENT PERMITTING

for Applicants and Agencies

- **Applicant**
  - Improves project’s competitive grant readiness
  - Saves permitting time and money

- **Agency**
  - Programmatic permits reduce staff workload
- Small-scale habitat restoration (5 ac. or less)
- Many types of projects eligible, including listed species habitat
- Requires no significant impacts after application of all protection measures

CEQA
Cat. Ex. 15333
General 401 Water Quality Certification

• Statewide General Order for small habitat restoration projects eligible for CEQA Cat Ex 15333

• Limit – 5 acres & 500 cumulative linear ft. of streambank
2014 HABITAT RESTORATION AND ENHANCEMENT ACT

Alternative Process for Secs. 1600 LSA + 2081 CESA for Voluntary Restoration Projects 5 Acres or Smaller
Habitat Restoration and Enhancement (HRE) Act

CDFW Review Process

✓ Timelines for two permitting tracks:

- **30-day** approval *w/* 401 WQ Cert for SHRPs (F&GC Sec. 1653)

- **60-day** approval *w/o* 401 Gen. Order for SHRPs (F&GC Sec. 1652)
NOAA Fisheries
Biological Opinions - Restoration

• Issued to NOAA RC and Army Corps
• Anadromous fish habitat
• Entire coastal region of California
• Eliminates need for individual project consultation
California Coastal Commission
Consistency Determination

- NOAA RC – funding or technical assistance
- Entire Calif. coast
- Eliminates need for Coastal Permit!
Biological Opinion - Calif. red-legged frog

- Issued to Corps for 404 permits
- Includes restoration
- Coastal counties where species is found
Biological Opinion - Calif. tiger salamander

- Issued to Corps for 404 permits
- Restoration projects in SF Bay Area counties
Biological Opinion - Partners Program

- FWS funded projects: wetlands, riparian, uplands restoration
- Endangered species habitat
- Central Valley and beyond
Clean Water Act Sec. 404

- RGP 41: Invasive plant removal
- RGP 70: Bioengineered streambank stabilization
- Nationwide permits 13, 27, 33
MEETING AGENCY EXPECTATIONS for Programmatic Permit Use

- Agencies want permits used – welcome restoration projects!
- Guidance available from staff/agency websites
- Ask for help from other restoration proponents if needed; consider partnering – CEQA lead?
- Experience is gained through process!
PROGREMMATIC PERMIT USE

The Fundamentals

- Conceptual plan: include permitting
- Ensure cooperating landowners
- Be clear – project purpose, methods, benefits
- Meets size and type requirements
Request pre-application meeting with agencies:

- Invite all agencies to coordinated meeting/site visit
- Hear requirements, deadlines
- Establish relationships - view staff as partners
- Provide prelim. info and photos to personalize project
Provide a clear project description with necessary detail and all environmental protection measures upfront.
Our team offers permitting technical assistance and much more:

www.suscon.org

restoration@suscon.org
Breaking the barriers to Large Dam Removal...

Paul Jenkin
Surfrider Foundation
Matilija Coalition
AN ARTSY SOLUTION FOR DAM'S ENIGMA
Matilija Dam as constructed 1948
Steelhead Habitat

Fish Passage:
Dam blocks access to 50% of historic habitat
Steelhead listed as endangered in 1997
Matilija Dam Modifications

- 1965: A 30' by 280' notch removed
- 1979: New 42 inch outlet
- 1979: Existing 36 inch outlet
- 1979: Existing 48 inch outlet
- 1979: Construct railing & ladders
- 5-28-1978: Central pillar blasted out
- 1979: Remove dam concrete and bridges

ELEVATION
Matilija Reservoir ~1960

Original storage capacity: 7000 af
Matilija Reservoir today

Current storage capacity: <400 af
Matilija Dam Studies
1999-2016
Why Remove Matilija Dam?

To Restore:

* Steelhead passage and habitat
* Riparian Habitat
* Natural Processes: Sand to the Beach
* Recreation
2004 Feasibility Study
Recommended Plan
Design Features:

- Wells
- Levees/Floodwalls
- Bridge Modifications
- Robles Diversion High Flow By Pass
- Robles Diversion Desilting Basin
- Fine sediment slurry and downstream disposal
- Coarse sediment stabilized on site
- Dam Removal
The Critical Line

by Steve Greenberg

Even though everyone agrees it should be done, why has there been no removal of Matilija Dam?
Stakeholder Consensus Project 2016

Example: Condit Dam Removal

- Technical feasibility of natural sediment transport
- Timely implementation
- Cost effectiveness (considerably cheaper than previously identified alternatives)
- Precedence of recent successful dam removal projects
Reservoir sediment erosion

Matilija Creek: predicted channel formed by natural erosion during and after dam removal

- Stillwater Sciences 2015
Reservoir sediment erosion

Fine sediment (silt and clay particles) will be flushed from reservoir and out to the ocean in one flood event. Based on experience at Marmot Dam and elsewhere, subsequent events (Phase II) will not result in turbidity levels significantly above baseline conditions.

- Stillwater Sciences 2015
Figure 5.2-1. The effects of very high TSS concentrations during Phase I erosion under DRC-1 (red cross, sized to approximate the range of uncertainty) and the subsequent effects of declining Phase II transport (red dashed line), superimposed on conditions expressed by the three storms with the most severe effects on steelhead health during the 12-year operational period of gage 11114495 (from Figure 4.4-4). The incremental effects of the dam-removal sediment load on storms of this magnitude will likely be indiscernable after a few days.
Example: Elwha River Restoration
Water deliveries range from
15,000 to 23,000 AFY
Hydrology Analysis for water supply
Cost of Dam Removal

ROM Construction Cost:
• Alt. 4B (2015) cost is approximately $113,000,000
  – not including downstream improvements
  – other costs (engineering, admin & legal, construction management, operations and maintenance, etc.)

Recent studies demonstrate that natural sediment transport saves $$ millions

Note: Total project cost estimated $60M+

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<th>DCR</th>
<th>Range of Magnitude Construction Cost (ROMCC)</th>
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<tr>
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<tr>
<td>DRC-1</td>
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(Corps of Engineers – Upstream stabilization with slurry disposal)

Temporary diversion To North Fork Matilija
"Low level outlets"
"Low level outlets" w optional gates
Upstream stabilization
Matilija Dam Ecosystem Restoration Project

Project Objectives:
- Improve Aquatic and Terrestrial Habitat Along Matilija Creek and Ventura River
- Restore Natural Processes to Support Beach Replenishment
- Enhance Recreational Opportunities
- Restore Fish Passage

Habitat Restoration
Over 270 acres of habitat Arcadia dune "giant red" have already been removed from the watershed to restore riparian habitat.

Live Oak Levee
Reconstruction will bring levee up to flood control standards.

Santa Ana Bridge
Replacement bridge will widen roadway to accommodate increased sediment flow.

Beach Replenishment
Sand and gravel from lake, river, shore, and local are used to support beach replenishment and protect coastal property.

Removal of Matilija Dam will first require modifications to the downstream infrastructure as shown. Then, removing sediment will be flushed through two 24-foot diameter tunnels so that the dam can be safely removed.

Camino Cielo Bridge
New bridge will accommodate increased sediment flow.

Robles Diversion Modification
High flow bypass will move natural transport of sand, gravel, and silt through the diversion and improve steelhead migration.

Meiners Oaks Protection
A new structure will protect riparian community from flooding.
Matilija Dam Project Funding*
1999-2016

State
Coastal Conservancy $8.6
SWRCB (Prop 40) $6.2
CDFW $1.2
$16 M

Federal
USACE $6.8
NFWF $0.5
$7.3 M

Local
Watershed Protection District
$3.9 M

Over $27 M

* Does not include over $10M in other related watershed programs such as floodplain/habitat acquisition and restoration primarily CDFW and Coastal Conservancy
### Final Project Description

#### 2016
- **Agreed on Alt 2**
  - $18.5/ $20.4M

#### 2017
- **Update Planning Cost**
  - Est. ~$30k
- **Feasibility**
  - Update Sediment Transport & Downstream Components
  - 500k/1yr
- **30% Design**
  - $1M
- **CEQA/NEPA Permitting**
  - 1.5 yrs

#### 2018
- **CDFW Prop 1 2016/17 - $3.2M**
  - NOAA Resiliency - $700k
  - NFWF - $75-200k
- **Timeline/Funding Plan**
  - Development + Day to day mgmt
  - $50-$80k

#### 2019
- **Apply for Grant Funding**
- **Final Project Description (65%)**
- **Final Project Design (100%)**
- **Ongoing match through staff time**

#### 2020
- **Santa Ana cntrx**
  - 9/18 - F: FRGP 2017
- **Camino Cielo 100% Design**
  - FRGP 2017
- **Camino Cielo cstrx**
  - F: FRGP 2018 - 9/19
- **Robles 100% design constrx start 9/19**
- **Live Oaks Levee**
- **Meiners Oaks levee**

- **Seek funding for downstream design ($800k - $1m) and construction**

- **RLF $50k (10/16-10/17?)**

- **Seek funding for dam deconstruction**
  - F: Prop 1 2020
  - Cstrx of orifices: 2021
  - Full dam removal: 2023-25

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= Shifts in timing based on when initiated (30, 65, or 100% design)

= Immediate funding needs
A Community at Work
Surfers’ Point
Managed Shoreline Retreat Project
Matilija Creek today
Matilija Creek after dam removal (future)