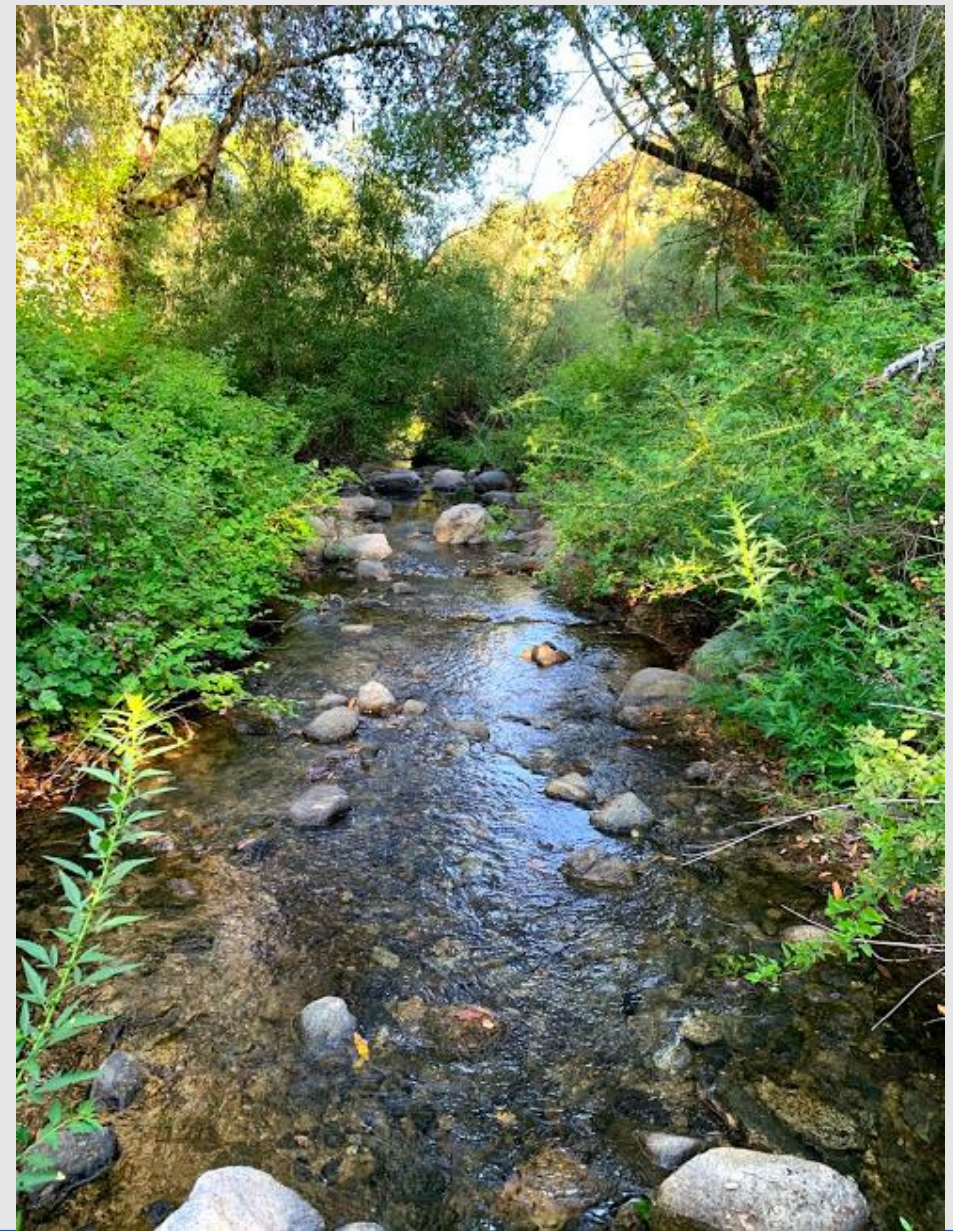


Hastings Natural History Reservation: Ford Replacement Project

Jen Hunter

**Museum of Vertebrate Zoology
University of California Berkeley**



Hastings Natural History Reservation





UCNRS Mission Statement:

to contribute to the understanding and wise stewardship of the earth and its natural systems by supporting university-level teaching, research, and public service at protected natural areas throughout California.



Hastings Natural History Reservation



UC Natural Reserve
System (est. 1970)

9 Campuses

41 Reserves

756,000 acres

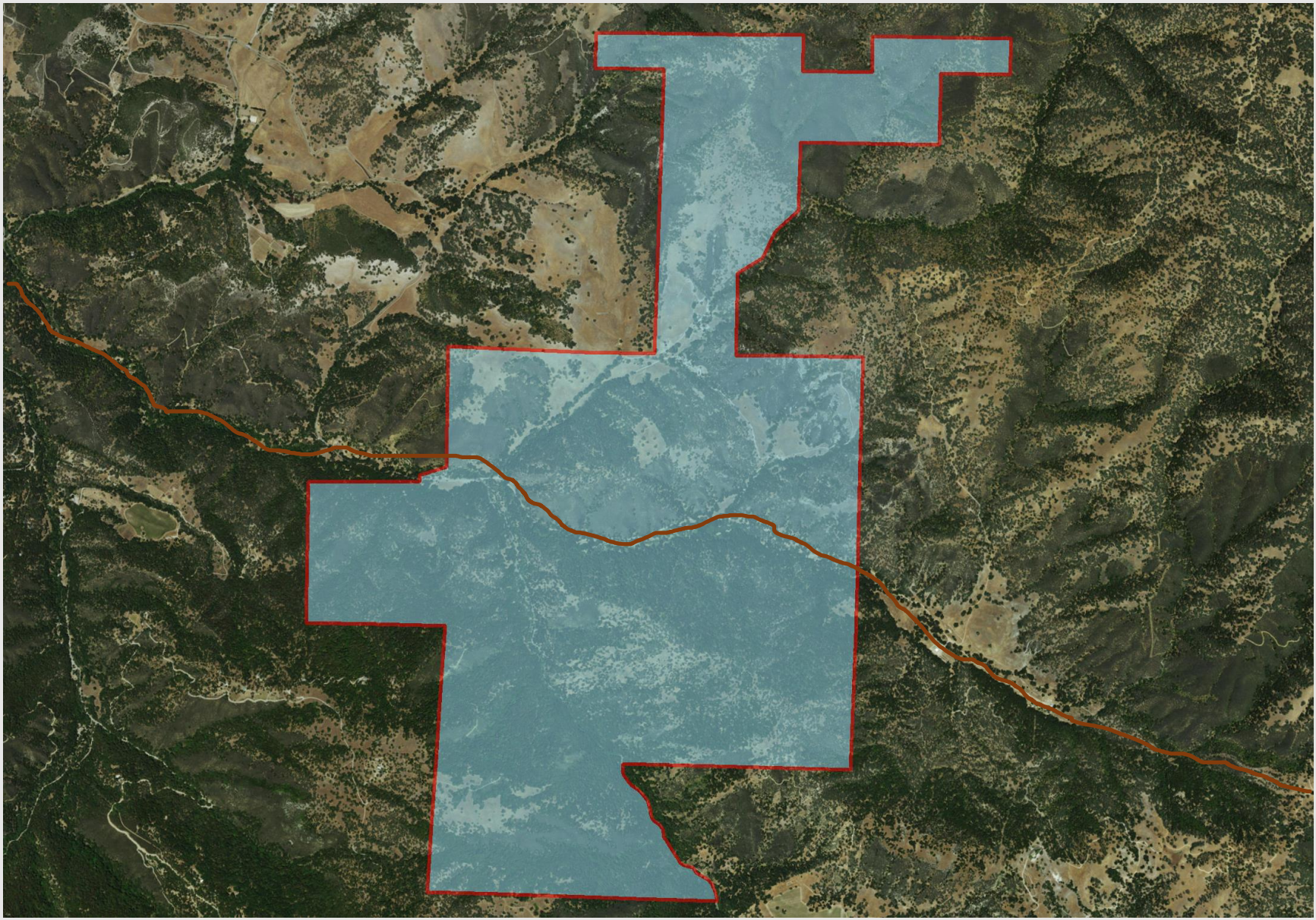
Oldest: Hastings Nat.
History Res. (1937)

Newest: Lassen Field
Station (2019)



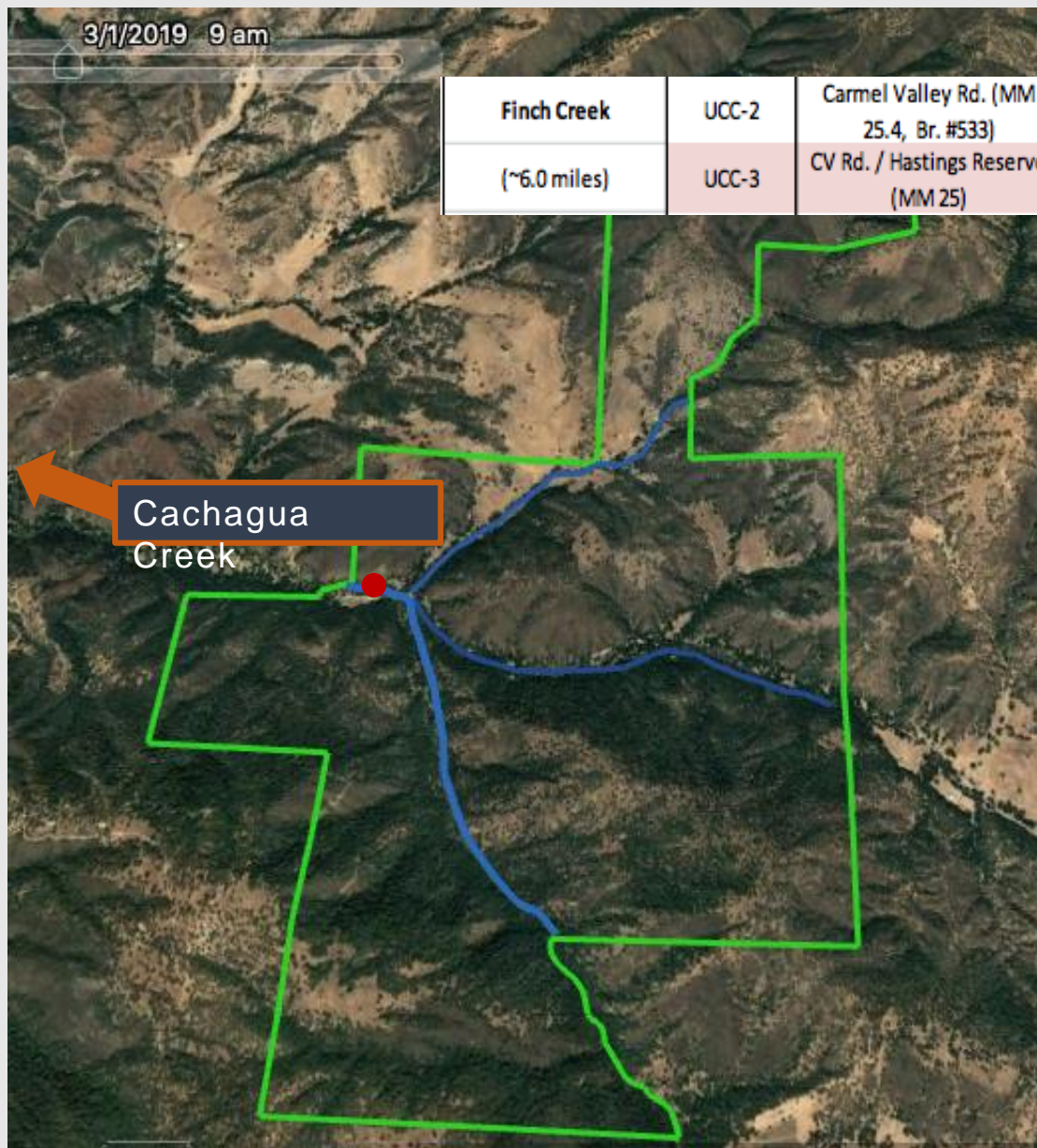
Hastings Natural History Reservation





Hastings Natural History Reservation





Finch Creek	UCC-2	Carmel Valley Rd. (MM 25.4, Br. #533)	Bridge	G	No	No	4.3	
(~6.0 miles)	UCC-3	CV Rd. / Hastings Reserve (MM 25)	Ford	R/Y	Yes	No	3.8	Replace with bridge. Severe barrier.

Fish Passage Barrier Removal/Improvement Rankings - Four Carmel River Tributaries					
Ranking #*	Location	Site	# Miles Additional Stream Access	Recommendation	Notes
1	San Clemente Cr.	Trout Lake Dam, Ladder, and Spillway	6.8	At minimum, ladder and spillway must be brought up to modern standards.	Largest manmade fish barrier on tribs. Blocks or delays access to two productive upper tributaries. Unclear how structure operates in the winter.
2	Cachagua Cr.	Ford near Boronda Cr.	8.3	Replace with small bridge	Depth and velocity barrier. Has caused a large scour hole d/s and sediment trap upstream
3	Cachagua Cr.	Ringer's Ford	8.1	Replace with small bridge	Depth and velocity barrier. Has caused a large scour hole d/s and sediment trap upstream
4	San Clemente Cr.	No Name Rd. Ford	3.0	Replace with small bridge	Ford is in very poor condition. Complete barrier at low flows.
5	San Clemente Cr.	Summer Dam near clubhouse	6.3	Remove	This structure is a total fish barrier at low flows and a sediment trap.
6	Cachagua Cr. (Finch)	Hastings Reserve Ford	3.8	Replace with small bridge	Depth and velocity barrier. Has caused a large scour hole d/s and sediment trap upstream
7	Potrero Cr.	CVAC parking lot Culvert	2.8	Replace with small bridge	Complete velocity and depth barrier. Very poor design.
8	Potrero Cr.	CVAC access road Culverts	2.7	Replace with small bridge	Double culverts in poor condition. Velocity barriers.
9	Potrero Cr.	Quail Lodge Golf Course	3.2	Reconfigure reach between confluence and VG Rd.	Too steep for fish passage and no has habitat value.
10	Cachagua Cr.	Jensen's Camp Ford and Culverts	10.4	Replace with small bridge or larger culverts	Likely velocity barriers in high flows.
11	Mainstem C.R.	Flavin's Crossing (Ford)	9	Remove	Low flow fish passage barrier and sediment trap.
12	San Clemente Cr.	Summer Dam on Dormody Rd.	3.2	Remove	This illegal structure is a fish barrier and sediment trap.

* Rankings are based on a combination of the severity of the barrier, the length of additional stream that would become assessable if the barrier were removed, and the general "value" of the creek for steelhead spawning and rearing.

Hastings Natural History Reservation

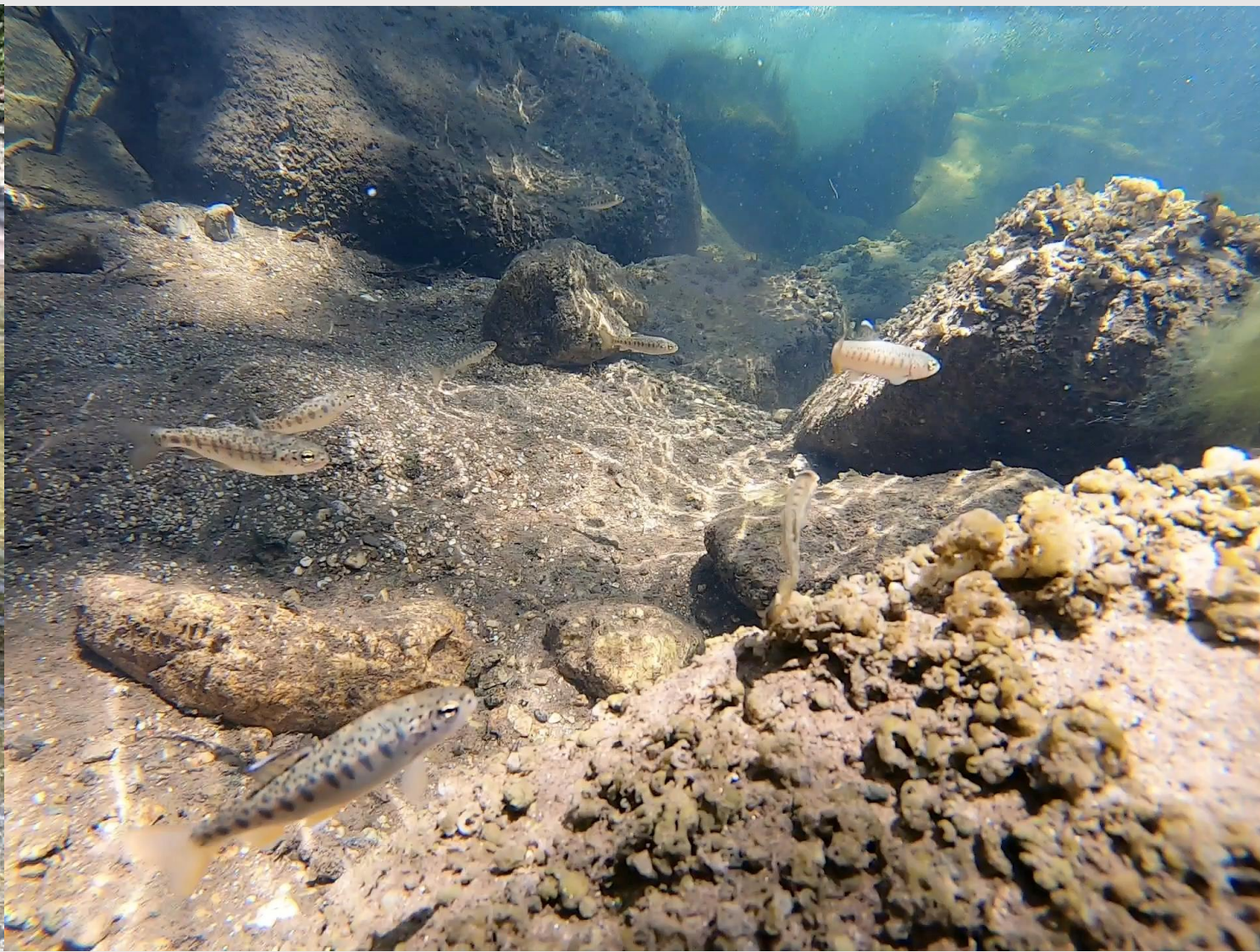


Restoration and monitoring



Hastings Natural History Reservation





Hastings Natural History Reservation

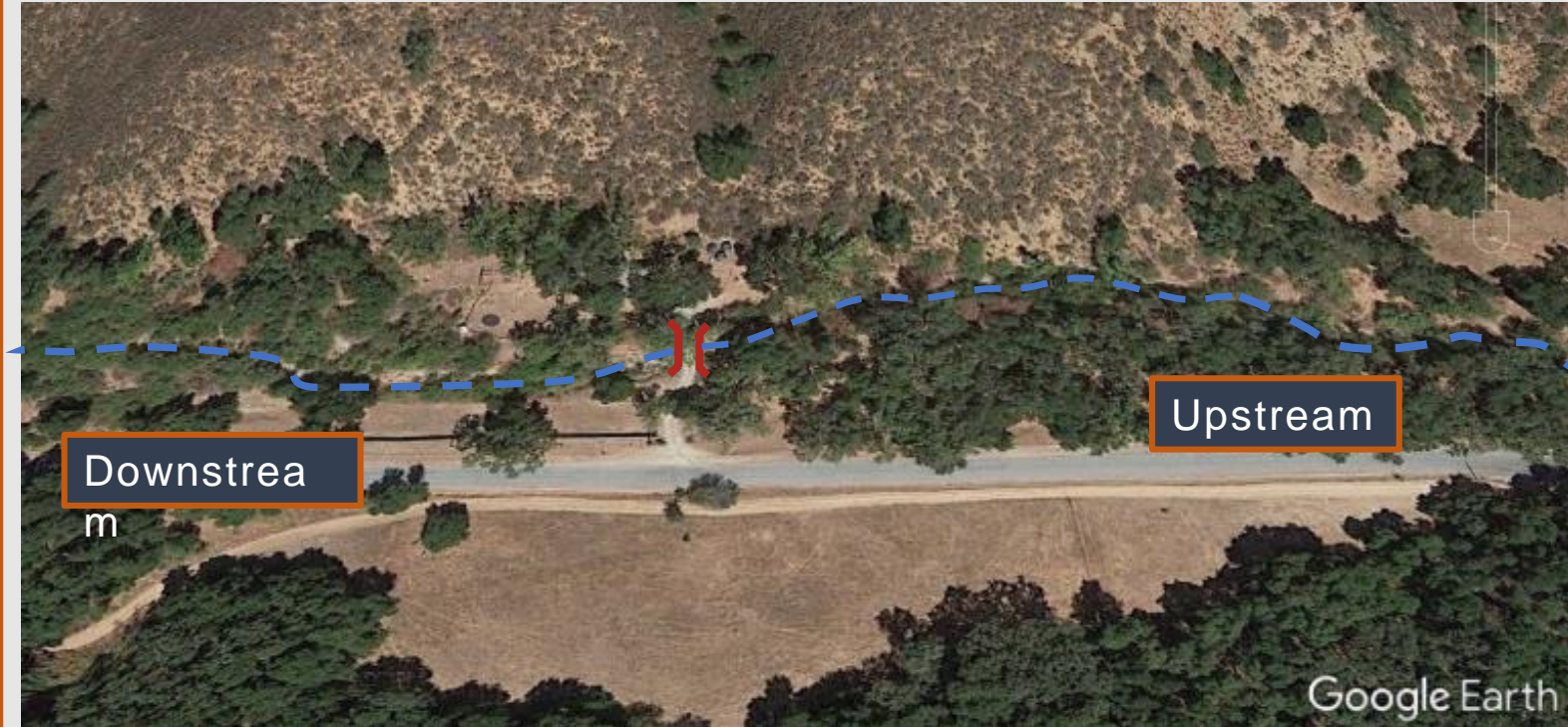




Metrics to monitor

1. Channel geometry
2. Sediment characteristics
3. Large woody debris
4. Benthic macroinvertebrate community
5. Juvenile steelhead
6. Invasive species
7. Riparian vegetation

Pre- & Post- removal effects



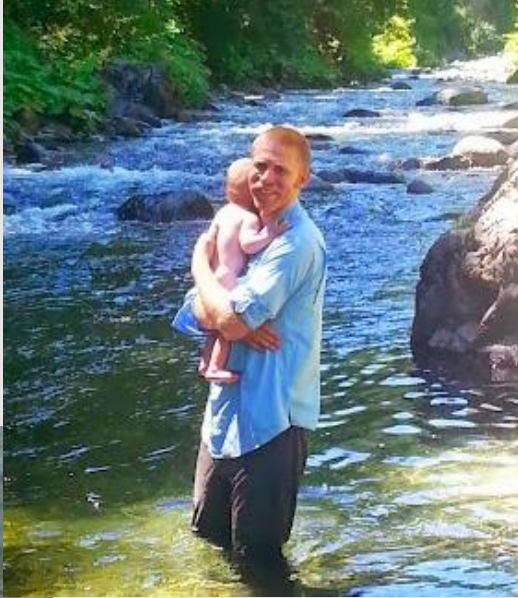
Fish passage monitoring



Hastings Natural History Reservation



UC Berkeley students/faculty



Visiting students/faculty



Project Costs

EXHIBIT B - ESTIMATED BUDGET FOR CONSULTING SERVICES

2/18/2019

Client: UC Berkeley

Project Name: Hastings Natural History Reservation

Waterways Job No.: 19-003

#	Task Description	Waterways Consulting				CMAG Engineering			Streater Group		Budget Allocation
		Principal Engineer	Senior Engineer	Staff Engineer	Survey Crew	Principal Geotechnical Engineer	Geotechnical Senior Engineer	Geotechnical Staff Engineer	Principal Structural Engineer	Structural Project Engineer	
		(Weld)	(Zacharia)	(Baker)	(2 person)	(Gamer)	(Chome)	(Buringa)	(Streater)	(Taylor)	
		\$175	\$140	\$115	\$265	\$185	\$175	\$145	\$175	\$160	
1	Project Administration and Coordination of subcontractors	10	10			3			2		\$4,055
2	Topographic Mapping	1		8	10						\$3,860
3	Hydrologic and Hydraulic Modeling	4	12	14							\$3,990
4	Concept Level Design Alternatives (2 options) & Summary Memorandum	10	20	14					4		\$8,860
5	Geotechnical Report					6	20	8			\$5,770
6	65% Design Drawings and Cost Estimate	14	30	24					4	24	\$13,960
7	Permit Support	4	6							4	\$2,180
8	100% Designs, Specifications, and Cost Estimate	8	14	12					2	8	\$6,370
Sub Total											\$47,035.00

Direct Expenses

	7660	Allocation
Office Expenses		\$100.00
Field Supplies (disposable)		\$60.00
Per Diem		
Geotechnical Laboratory Testing - \$1705		\$1,705.00
Geotechnical Drill Rig or Backhoe - \$2500		\$2,500.00
Mileage (@: \$.58/mile)		\$298.98
10% service charge on direct expenses		\$465.20
Subtotal		\$5,117.18
Total		\$52,152.16

Hastings Natural History Reservation



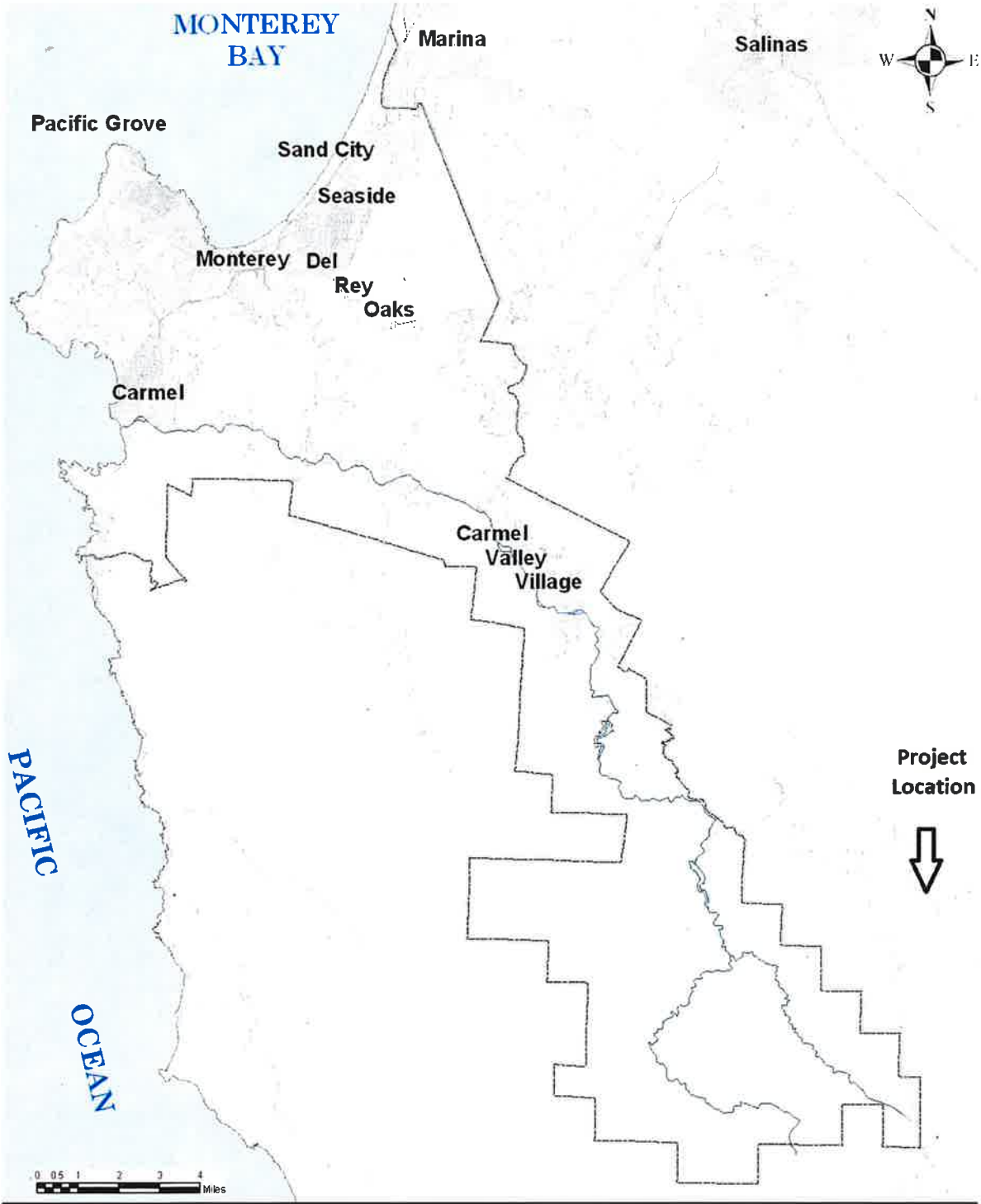
Project Costs

Sponsor	Amount	Type
UC Berkeley	\$9,000	In-Kind
UC Berkeley	\$81,000	Foregone IDC
MPWMD	\$100,000	Grant
State Coastal Conservancy (CalAm Settlement Funds)	\$500,000	Grant



EXHIBIT 6-B

Hastings Ford Project Location
Relative to MPWMD Boundary



STATUS OF MPWMD ELECTRONIC PERMITTING WITH COUNTY

February 13, 2020

- MPWMD has developed electronic stamps for plan approvals (90% complete)
- MPWMD has communicated an email for the County to send to the permit applicant when the project is ready for MPWMD review.
- MPWMD staff need Adobe Acrobat Pro DC to stamp plans electronically (DeVeera). Two staff persons have access at this time.
- MPWMD needs legal determination on use of DocuSign for permit signatures. Staff does not believe this will be a problem.
 - DocuSign contact has been made (Megan Chien)
- Deed restrictions may be emailed out and back unless the notary uses a raised seal
- MPWMD Accela's public portal will allow applicant to apply online for rebates, hydrant meters, meter splits, etc.

County Workflow

1. Applicant submits Water Release Form and Water Permit Application to County for their sign-off (may be emailed) when application and construction plans are submitted
2. County approval process moves forward with MPWMD approval as one of last requirements
3. When approved for MPWMD review, County sends email to both applicant and MPWMD
 - a. Applicant must contact MPWMD to pay application fee – MPWMD takes credit cards over the phone or at the counter
 - b. FUTURE: Applicant pays fee(s) online through MPWMD Accela public interface (FY 20-21)
 - c. FUTURE: County may collect fee and forward to MPWMD (Suresh)
 - d. If property is in complex ownership (i.e., trust, corporation, etc.) applicant is notified to provide proper documents for deed restriction preparation (this information is in the email the County sends to applicant)
4. Fee received/processed
5. MPWMD accesses County's Accela Document Section to review plans and input permit information in MPWMD's Accela database
 - a. FUTURE: County Accela and MPWMD Accela "talk" to each other. Electronic application information automatically populates to MPWMD Accela (requires programming and sharing of data)
6. MPWMD notifies applicant that deed restrictions are ready. Deed restrictions can be transmitted by email to applicant who signs with their own notary or applicant can use FREE notary services at District. Signed documents can be returned to MPWMD by email unless raised seal.
7. MPWMD records deed restrictions and notifies applicant to sign Water Permit
8. Water Permit signed by applicant
9. MPWMD electronically stamps plans and transmits Water Permit to County either by email or by Accela upload.
10. County finishes its process and issues building permit

DRAFT Text for MC RMA Accela Automated email for MPWMD plan review for Electronic Submittals

Dear Applicant:

The permit application referenced below is ready for review by the Monterey Peninsula Water Management District (MPWMD). The RMA-approved plans and the Water Release Form and Water Permit Application have been routed to MPWMD for review.

A Water Permit processing fee is due to MPWMD before they will begin the review process. The fee is \$225 for Residential applications and \$450 for Non-Residential applications. Please call 831-658-5601 to make a payment by credit card or visit the MPWMD office in Ryan Ranch at 5 Harris Ct, Building G, Monterey, California.

Please note that MPWMD may require additional documents, applications, and fees that you must submit to them directly. Some examples include:

- Landscape plans compliant with MPWMD Rule 142.1;
- Proof of purchase of a Water Entitlement (e.g., recorded Assignment Document), Water Use Permit Application, along with \$270 fee;
- Operating Agreement if the ownership is held under a Limited Liability Company;
- Partnership Agreement if the ownership is held by a Partnership;
- Articles of Incorporation if the ownership is held under a Corporation;
- Certificate of Good Standing with the Secretary of State;
- Recorded Grant Deed for newly transferred properties;
- New APN numbers and parcel map with legal description.

If your plans require corrections, you will be contacted by MPWMD staff.

MPWMD Deed Restriction(s) must be notarized by the property owner and will be recorded on the property title by the MPWMD prior to issuance of Water Permit. MPWMD will contact the applicant by email to provide the document for signature(s).

Upon completion of the review process, additional fees are typically due. Cash, check and credit cards are accepted. The County will be notified upon approval and issuance of the Water Permit.

If you have questions about the process, please contact MPWMD at 831-658-5601.