

Klamath Fish Monitoring Activity Matrix

Area	Location	Spawner/Redd/ Carcass Survey	Adult Weir Video/Trap	Adult Snorkel/Dive Survey	Adult Sonar	Adult dam Passage	Adult Hatchery Trap	Telemetry	Juvenile Migrant Trap	Juvenile Collection misc.	Juvenile Snorkel Survey	PIT Tag Array	Juvenile Hatchery Releases
Lower-Mid Klamath	Mainstem	USFWS			Cal Trout				USFWS (2) KTDNR (2) YTFP				
	L. Klamath tributaries			YTFP					YTFP		SRRC	YTFP	
	Salmon R.	CDFW		SRRC					KTDR	KTDNR	SRWC		
	Scott R.	CDFW	CDFW						CDFW	SRWC	CDFW	SRWC	
	Shasta R.	CDFW	CDFW						CDFW		YTFP	SRWC	
	Mid. Klamath tributaries	CDFW		USFS								KTDNR	
	Bogus Cr.	CDFW	CDFW						CDFW			SRWC	
	Iron Gate Hatchery						CDFW						CDFW
Upper Klamath	Mainstem CA	USFWS			CDFW			Cal Trout	CDFW		CDFW		
	Mainstem OR												
	Scotch/Camp Cr.	CDFW							CDFW		CDFW		
	Jenny Cr.	CDFW	CDFW						CDFW		CDFW		
	Fall Cr.	CDFW					CDFW		CDFW		CDFW		CDFW
	Shovel Cr.	CDFW	CDFW						CDFW		CDFW	CDFW	
	Spencer Cr.												
	Other tributaries	CDFW									CDFW		
Trinity	Mainstem Lower	USFWS	CDFW						USFWS				
	Mainstem Upper		CDFW						HVTF				
	Lower Tributaries								HVTF				
	Upper Tributaries	YTFP											
	Trinity Hatchery						CDFW						CDFW
Klamath Headwaters	Keno Dam												
	Lake Ewauna											USGS	
	Mainstem Keno-Link R.							USGS					
	Link River Dam											USGS	
	Upper Klamath Lake							USGS					USFWS
	Williamson R.											USGS	ODFW
	Sprague R.											USGS	ODFW
	Wood R.											USGS	ODFW
	Other tributaries												

Ongoing



Proposed/In progress



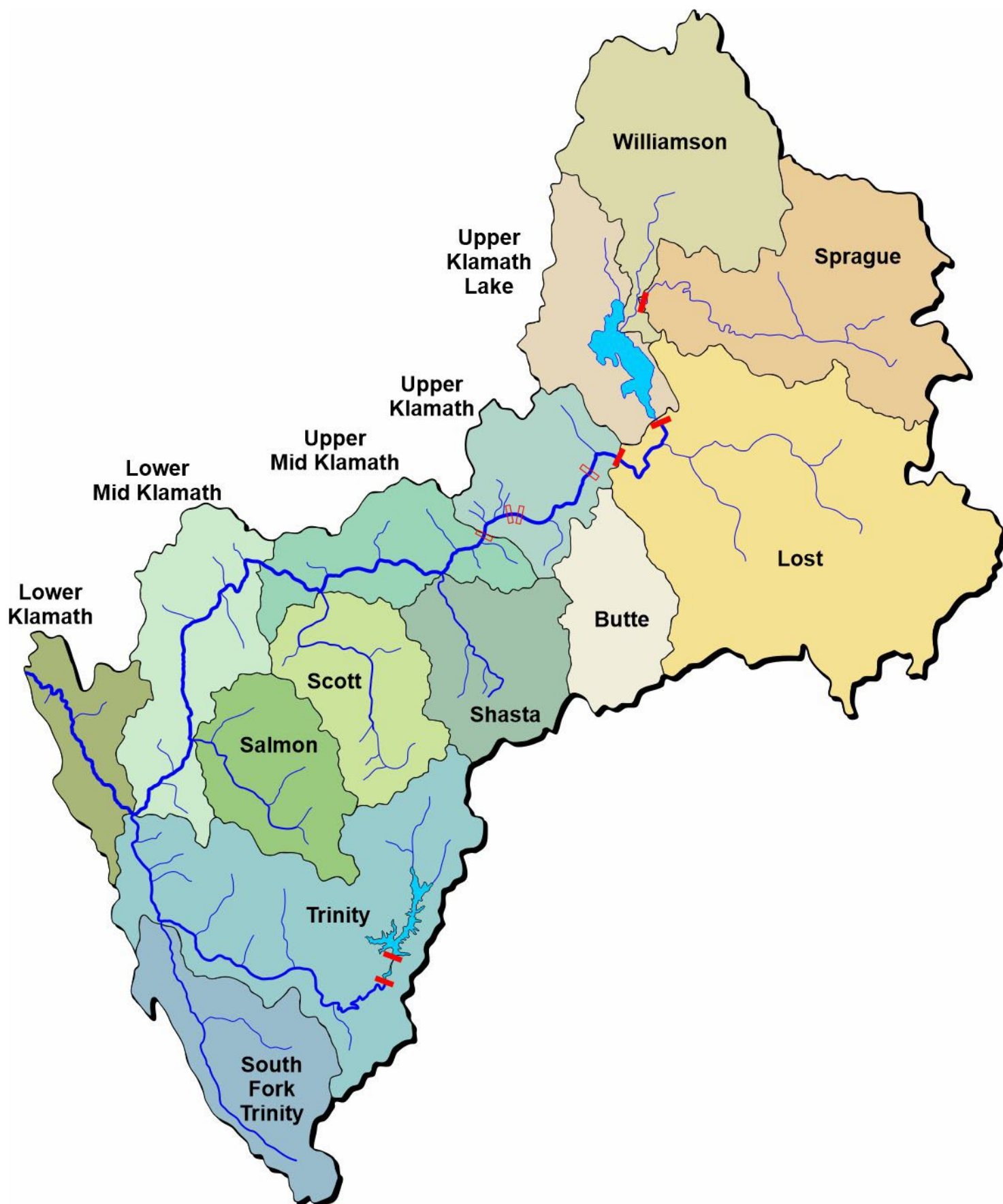


Table 5. Spawner, redd and/or carcass survey locations for monitoring of anadromous salmonids in the Klamath Basin.

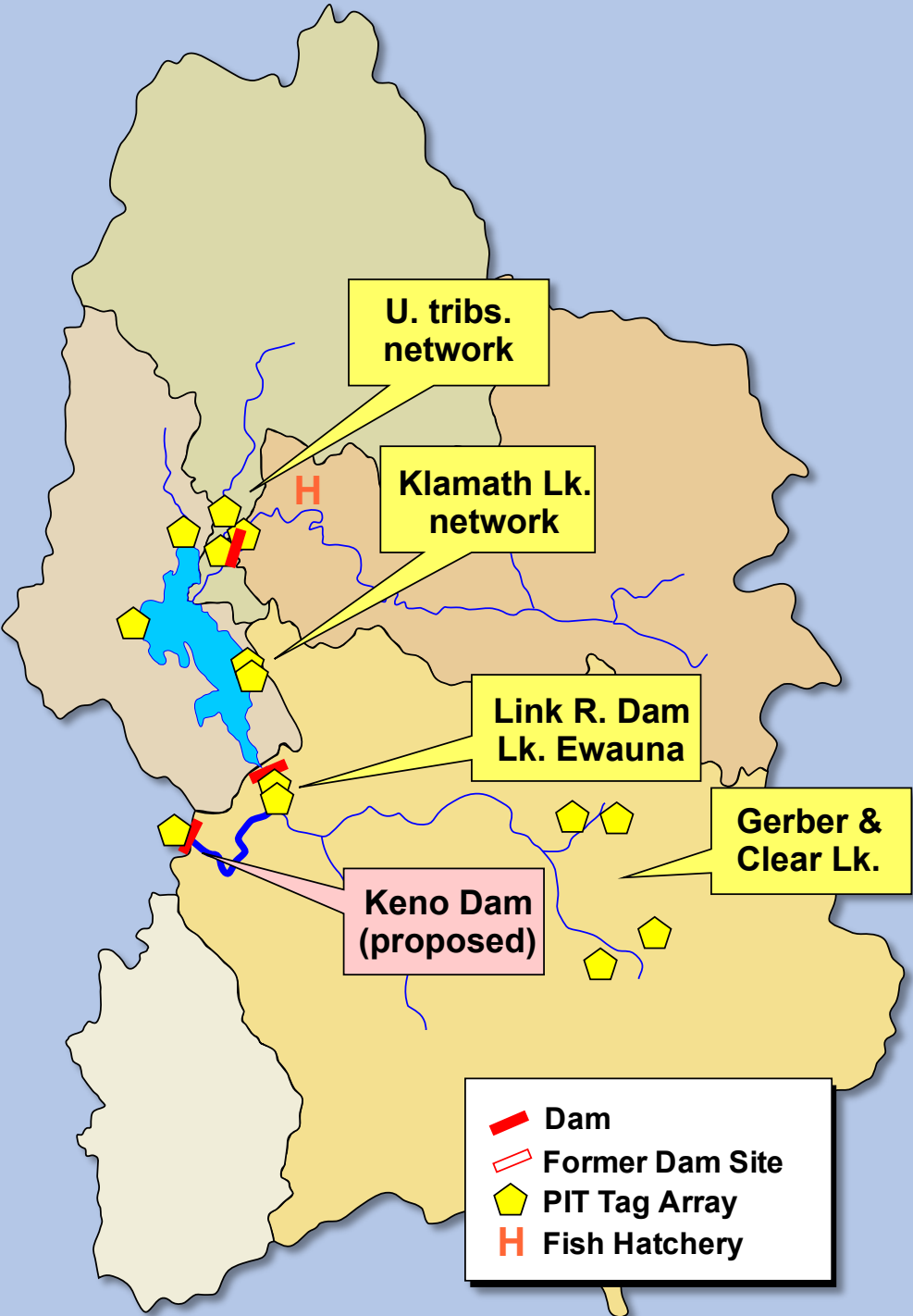
	Location	Species	Years		Months	Lead	Funding
Lower-Mid Klamath	Mainstem Wingate Bar to Shasta R	CHF	1993	Pres.	Oct-Nov	USFWS	?
	Mainstem Shasta R to Iron Gate	CHF	1993	Pres.	Oct-Nov	USFWS	?
	Salmon River	CHF, COH	1978	Pres.	Oct-Dec	CDFW	?
	Salmon River	CHS, STH	2000	Pres.	?	?	?
	Scott River	CHF, COH	1978	Pres.	Oct-Dec	CDFW	?
	Shasta River	CHF, COH	1978	Pres.	Oct-Dec	CDFW	?
	Tributaries other	CHF, COH	1978	Pres.	Oct-Nov	CDFW	?
	Bogus Creek	CHF, COH	1978	Pres.	Oct-Jan	CDFW	?
Upper Klamath ¹	Mainstem Iron Gate to OR border	CHF, COH	2024	Pres.	Oct-Dec	USFWS	?
	Scotch/Camp Creeks	CHF, COH, STH	2024	Pres.	Oct-Apr	CDFW	?
	Jenny Creek	CHF, COH, STH	2024	Pres.	Oct-Apr	CDFW	?
	Fall Creek	CHF, COH, STH	2024	Pres.	Oct-Apr	CDFW	?
	Shovel Creek	CHF, COH, STH	2024	Pres.	Oct-Apr	CDFW	?
	Other tributaries	CHF, COH, STH	2024	Pres.	Oct-Apr	CDFW	?
	Mainstem OR border to Keno Dam	CHF, COH	Proposed		TBD	TBD	TBD
	Spencer Creek	CHF, COH, STH	Proposed		TBD	TBD	TBD
Trinity	Mainstem Mouth to Lewiston Dam	CHF	1978	Pres.	Aug-Dec	USFWS	?
	Tributaries	COH	2014	Pres.	?	YTFP?	?
	Tributaries	STH	2000	Pres.	Mar-May	YTFP?	?
	South Fork Hyampton Reach	CHF	?	Pres.	?	?	?
	Hayfork Creek (South Fork)	STH	?	Pres.	?	?	?

¹ Dam removal reach between Iron Gate Dam site and Keno Dam.

² CHF = Fall Chinook, CHS = Spring Chinook, COH = Coho, STH = Steelhead



PIT Tagging



Adult Weirs



State of California
Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE

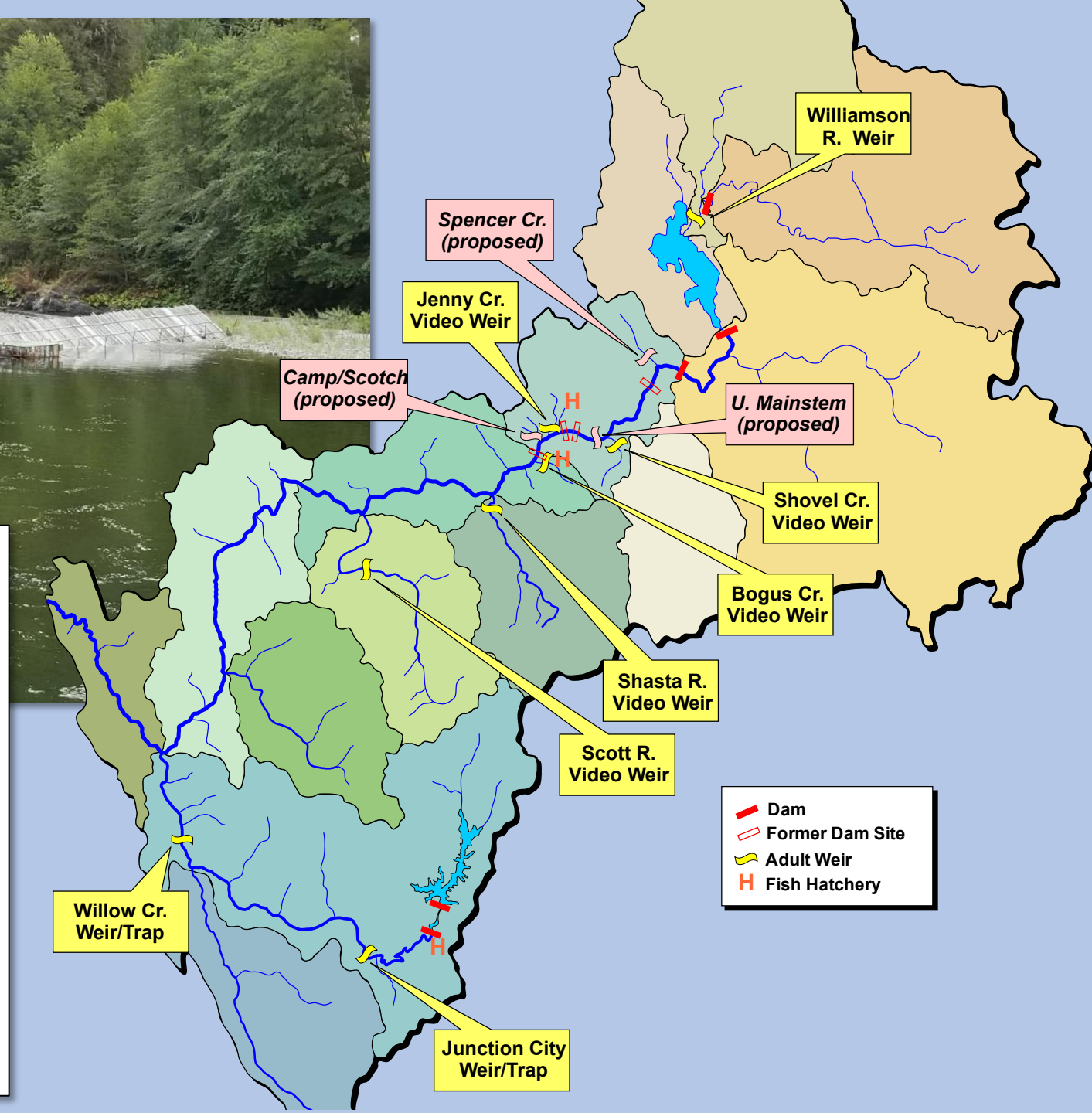
ANNUAL REPORT
TRINITY RIVER BASIN SALMON AND STEELHEAD MONITORING PROJECT:
CHINOOK AND COHO SALMON AND FALL STEELHEAD RUN SIZE ESTIMATES
USING MARK-RECAPTURE METHODS
2022-23 SEASON

2024 SHASTA RIVER JUVENILE SALMONID OUTMIGRANT STUDY

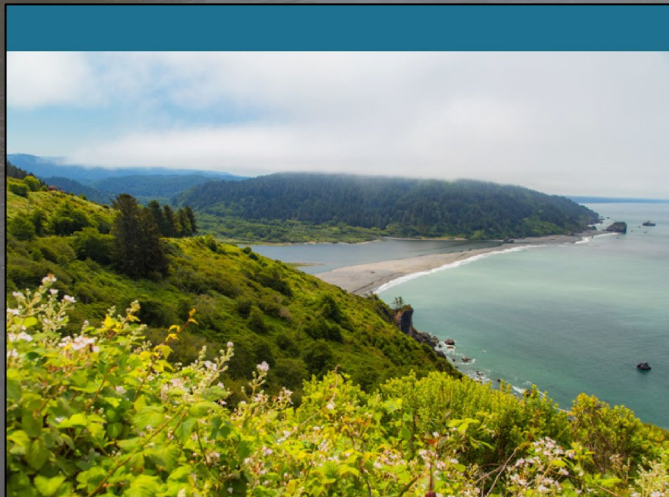
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Adult Sonar



Klamath River Anadromous Fishery Reintroduction and Restoration Monitoring Plan

for California Natural Resources Agency
and California Department of Fish and Wildlife

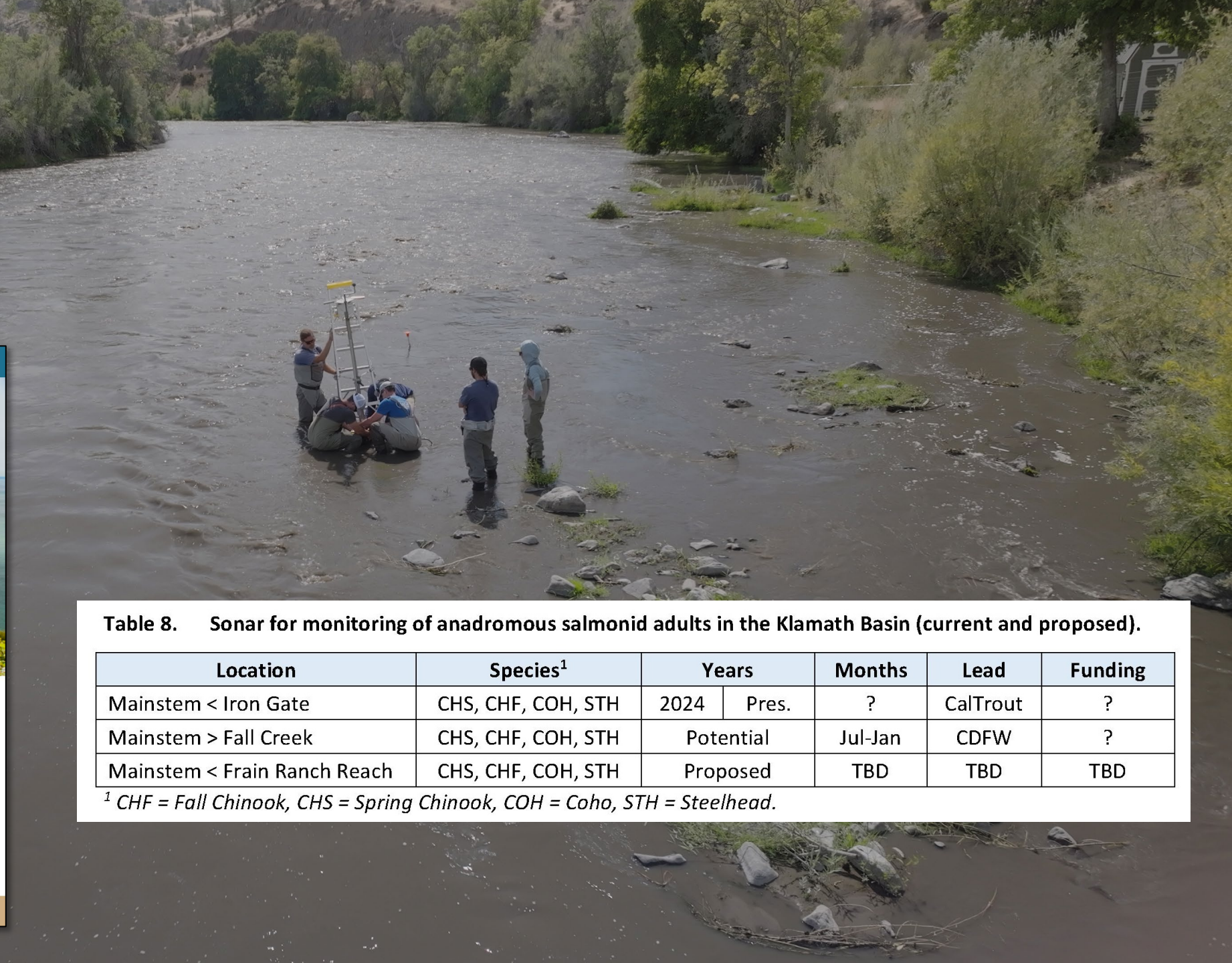


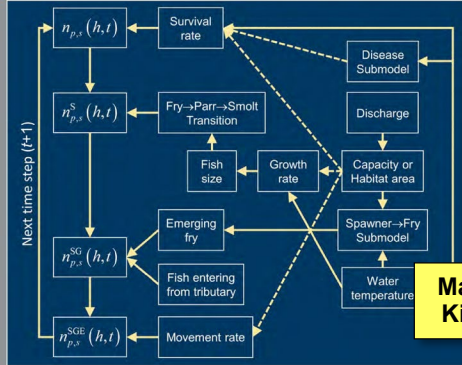
Table 8. Sonar for monitoring of anadromous salmonid adults in the Klamath Basin (current and proposed).

Location	Species ¹	Years		Months	Lead	Funding
Mainstem < Iron Gate	CHS, CHF, COH, STH	2024	Pres.	?	CalTrout	?
Mainstem > Fall Creek	CHS, CHF, COH, STH	Potential		Jul-Jan	CDFW	?
Mainstem < Frain Ranch Reach	CHS, CHF, COH, STH	Proposed		TBD	TBD	TBD

¹ CHF = Fall Chinook, CHS = Spring Chinook, COH = Coho, STH = Steelhead.

Prepared in cooperation with the U.S. Fish and Wildlife Service

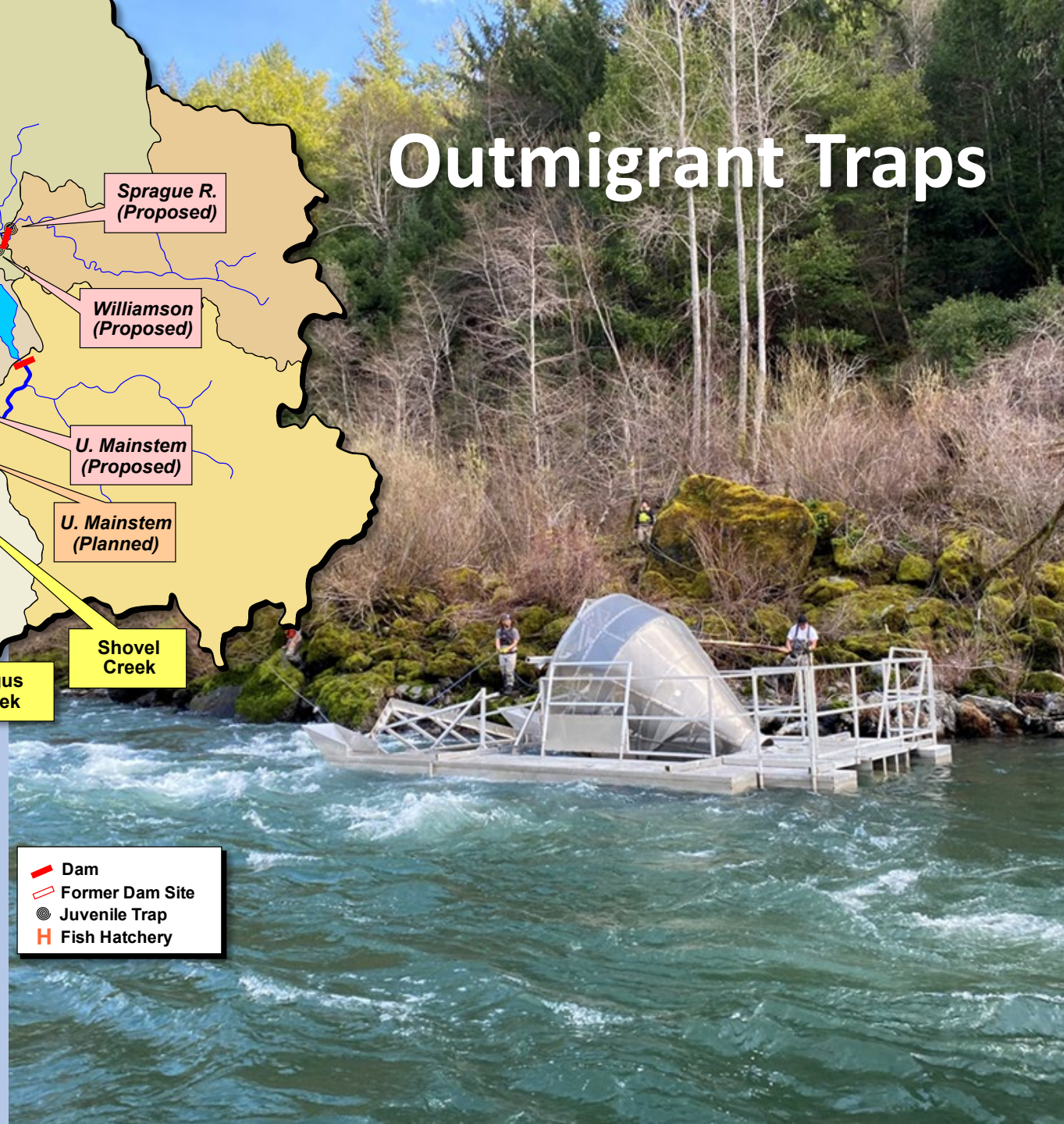
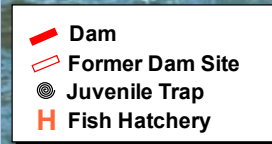
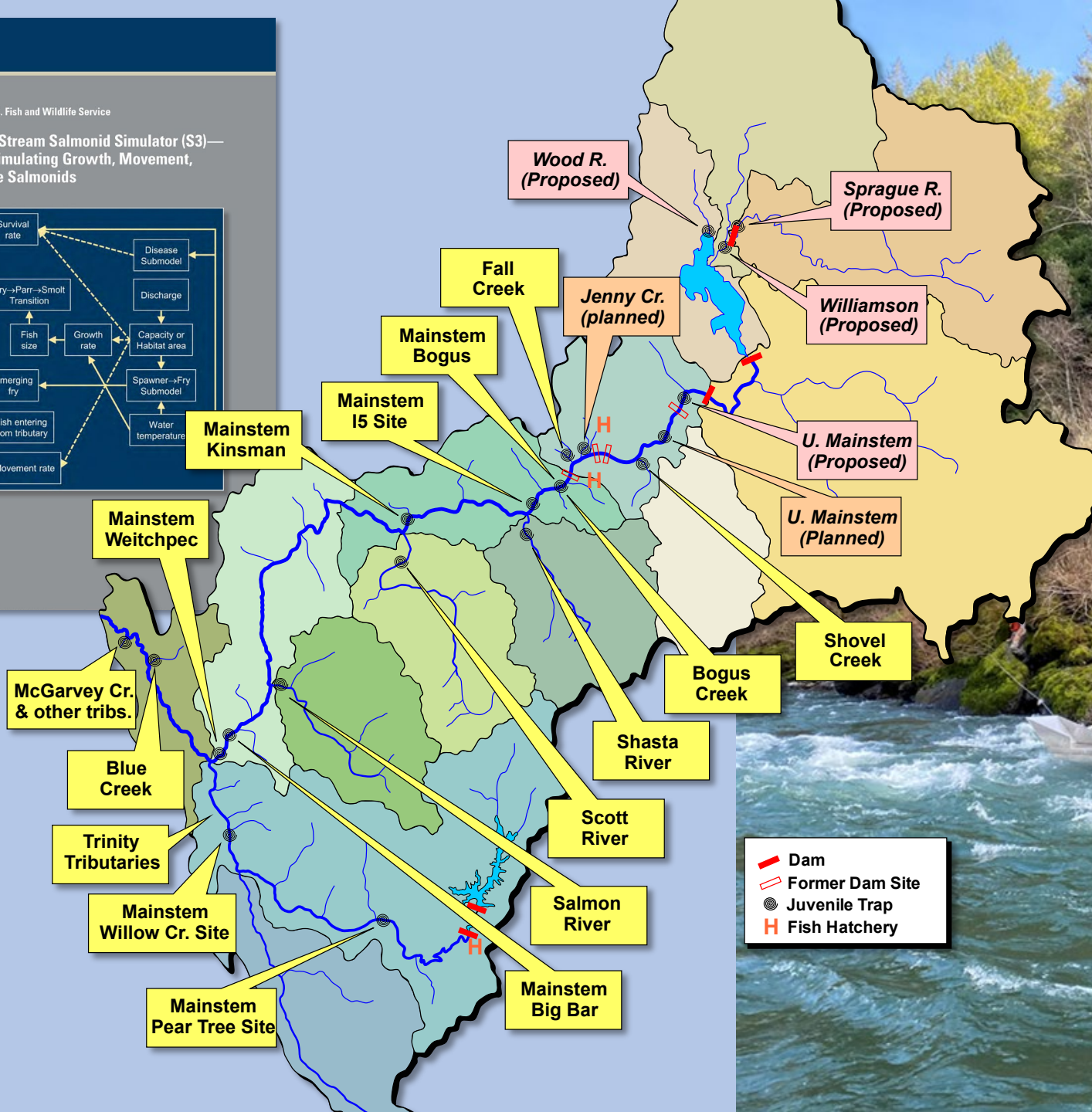
**Model Structure of the Stream Salmonid Simulator (S3)—
A Dynamic Model for Simulating Growth, Movement,
and Survival of Juvenile Salmonids**



Open-File Report 2018-1056

U.S. Department of the Interior
U.S. Geological Survey

Outmigrant Traps



Snorkel Surveys

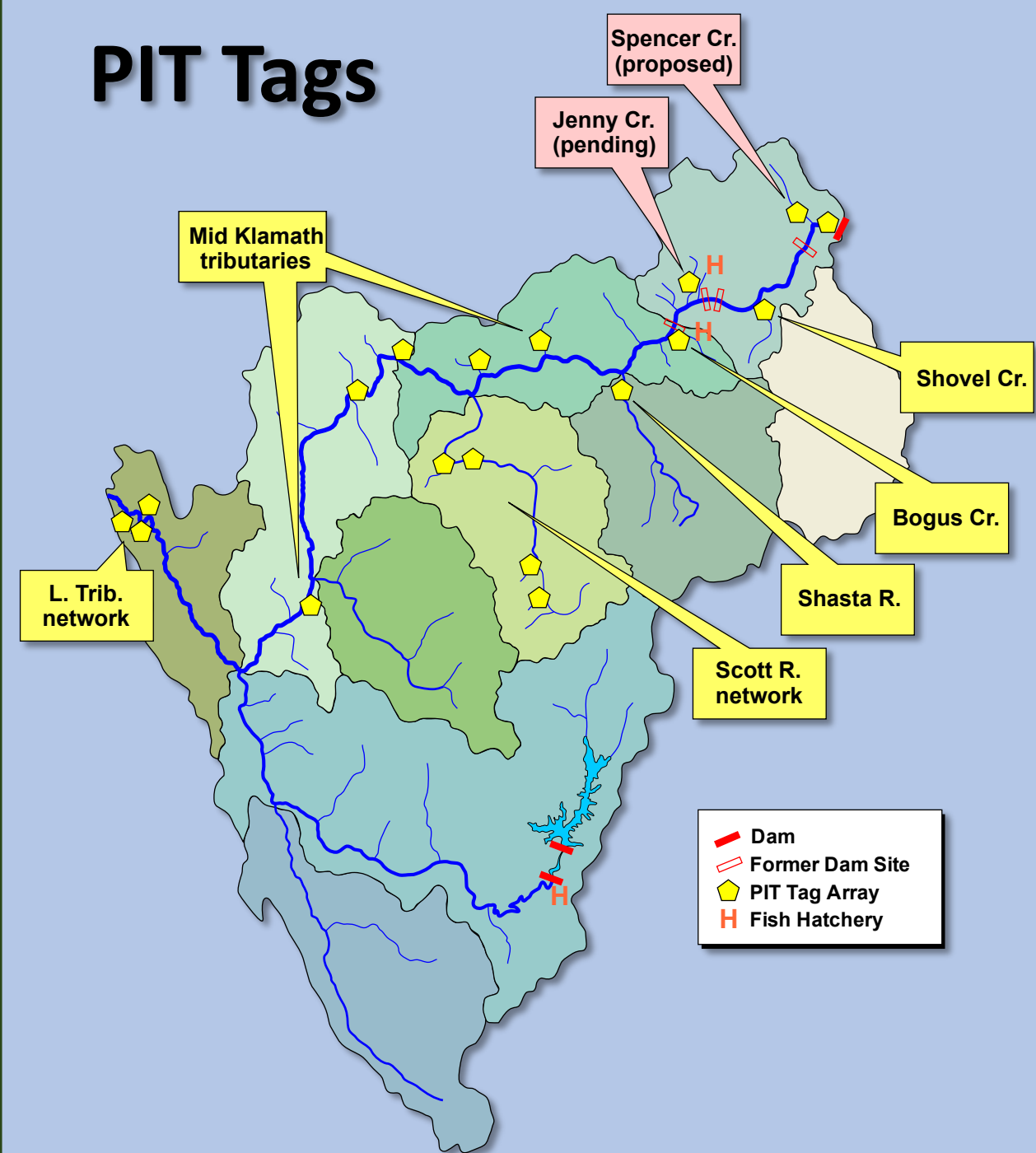


CDFW in-river snorkel surveys. CDFW Photo.

Table 10. Juvenile snorkel survey locations for monitoring of anadromous salmonids in the Klamath Basin.

	Location	Species	Years		Months	Lead	Funding
Lower-Mid Klamath	Salmon River	CHS, CHF, COH, STH	?	?	?	SRRC	?
	Scott River	CHF, COH, STH	2024	?	Jun-Sep	SRWC	CDFW
	Shasta River	CHF, COH, STH	?		May-Aug	CDFW	Various
	Mid. Klamath Tribs.	COH	2011	Pres.	Mar-Dec	YTFP	?
Upper Klamath¹	Mainstem	CHF, COH, STH	Planned		Jul-Sep	CDFW	CDFW
	Scotch/Camp Creeks	CHF, COH, STH	Planned		Jul-Sep	CDFW	CDFW
	Fall Creek	CHF, COH, STH	2024	Pres.	Jul-Sep	CDFW	CDFW
	Jenny Creek	CHF, COH, STH	2024	Pres.	Jul-Sep	CDFW	CDFW
	Shovel Creek	CHF, COH, STH	2024	Pres.	Jul-Sep	CDFW	CDFW
	Other tributaries	CHF, COH, STH	Planned		Jul-Sep	CDFW	CDFW
Trinity	Upper tributaries	COH	?	?	?	YTFP	?
	South Fork tributaries	COH	?	?	?	WCHC	?

PIT Tags



FISH MONITORING & EVALUATION PRIORITIZATION -POTENTIAL CONSIDERATIONS

Subject

1. **Target Species:** What fish species are we most concerned about?
2. **Purpose:** Does the information primarily address status/trends, action effectiveness or critical uncertainties of target fish species?
3. **Relevance:** How critical is the information to key decisions or management applications?
4. **Applicability:** Is the information directly or indirectly applicable to key decisions or management applications?
5. **Scale:** Does the information address broad basin-wide or more narrow local questions?
6. **Responsiveness/Proactivity:** Does the information address new or emerging developments, opportunities or innovations?
7. **Data Gaps:** Does the information address a key question that is not otherwise being addressed?

Approach

8. **Methodology:** Is the monitoring approach appropriate, effective and robust for the application?
9. **Confidence:** Does the methodology produce information with low, medium or high levels of confidence?
10. **Infrastructure:** Does the methodology utilize existing, expanded or new infrastructure or technology?
11. **Data/Reporting:** Is there an effective system in place for regular reporting and sharing of related information, documentation and data?
12. **Evaluations:** Is the information subject to evaluations using structured analysis and/or decision tools?

Programmatic

13. **Cost/ Cost Effectiveness:** Is the cost low, medium or high in total and in relation to the value of the information?
14. **Funding Security:** Is the activity fully, partially or not funded for the future?
15. **Continuity:** Does the information contribute to a long-term evaluation or dataset?
16. **Collaboration:** Is the activity a collaborative effort among organizations?
17. **Program Integrity:** Is the work integral to the engagement/involvement/sustainability of the participating entity?
18. **Weighting:** What is the relative weight of each of the above questions?

Applications of Klamath Fish Monitoring & Research Activities

**General Fish
Status & Trends**

**ESA Listing &
Recovery**

**Fishery
Management**

**Hatchery
Effectiveness**

**Dam Removal
Response**

**Dam Passage
Effectiveness**

**Water
Management &
Mitigation**

**Habitat
Restoration
Effectiveness**

**Factors &
Processes**