



— BUREAU OF —
RECLAMATION

LTO WIIN Act Meeting

28 July 2026

Agenda

- Real-Time Operations
 - Governance & Operation Groups
 - Green Sturgeon Consultation
- Winter-run Chinook Salmon Structured Decision Making
- Trinity River Division Updates



Prior 2025 WIIN Act Quarterly Meeting

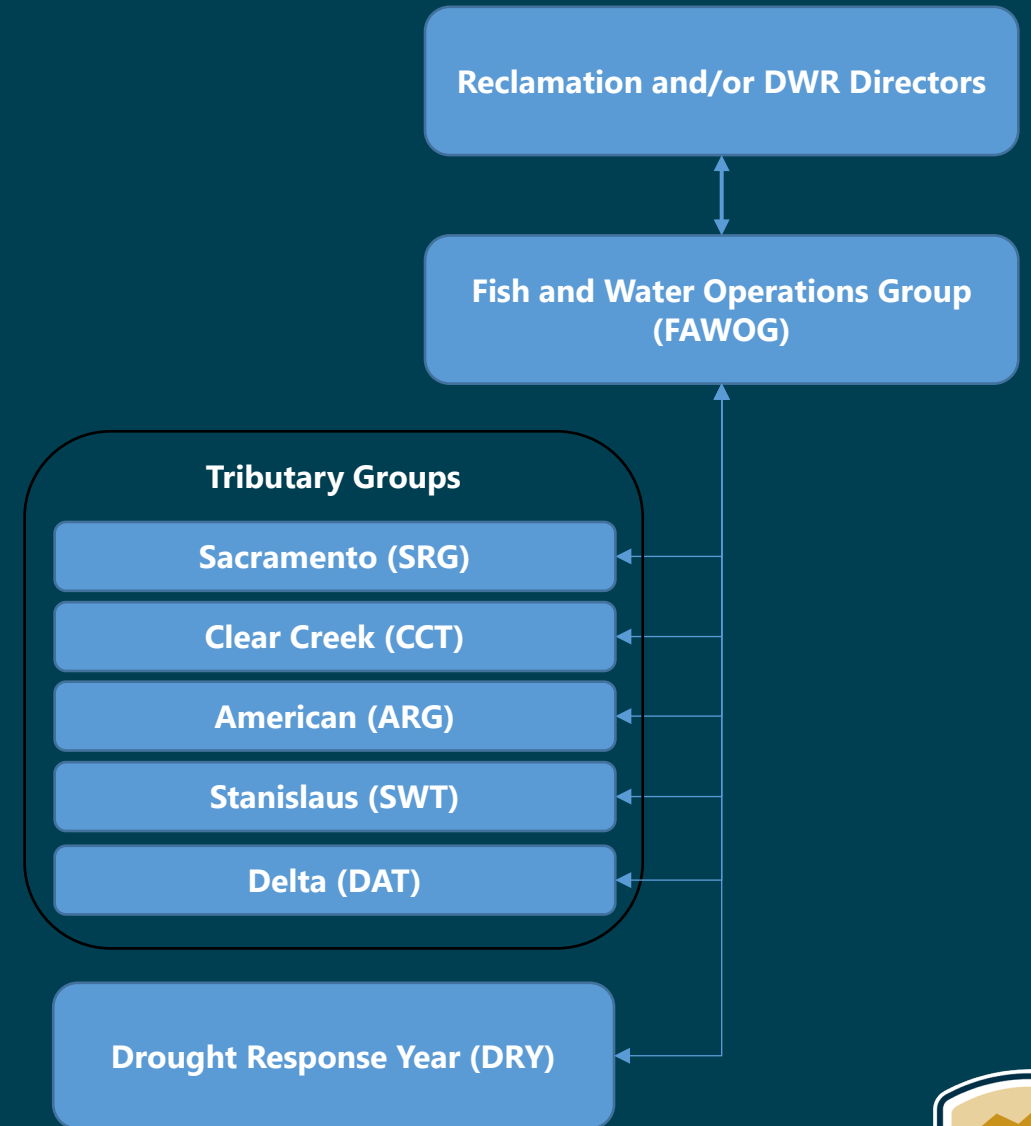
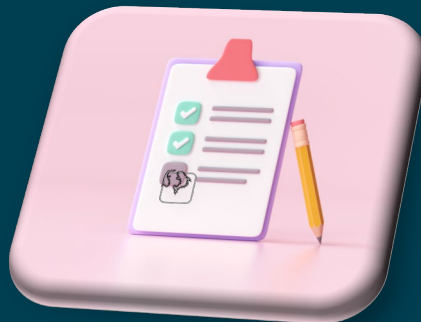
- June 2025 – Executive Orders and Trinity Updates
- September 2025 – Regulatory updates, Executive Orders, and Project Updates
- December 2025 – Executive Order, Real Time Ops, and Trinity Updates
- April 2026 – BDO Open House



LTO Governance

- Comprised of Agency and interested party technical participants

- Operational Status
- Regulatory Conditions
- Biological Distribution
- Evaluations of Species
- Scientific Standards



Sacramento River Group (SRG)

- Monthly Operational Forecast
- Min-Instream Flow Adjustments above SAC Gage
- TCCA Frost Protection and Early Season Diversions
- Wilkins Slough Minimum & Oct Max Flows
- Ramping Rates
- Rice Decomposition Scheduling
- Fall Release Ramp Down
- Fall & Winter Base Flow
- Water Temperature Management Plan
- Water Temperature Management Seasonal Report
- Reservoir Refill & Spring Pulse Seasonal Report



SRG WY 2026 Activities

- April 8 to 11 Spring Pulse Flow selected due to outmigration survival of Spring-run Chinook
- Temperature Management Plan drafted in May and revised in April
- Observed fishery effect
- Observed change in Shasta volume –(35 TAF)



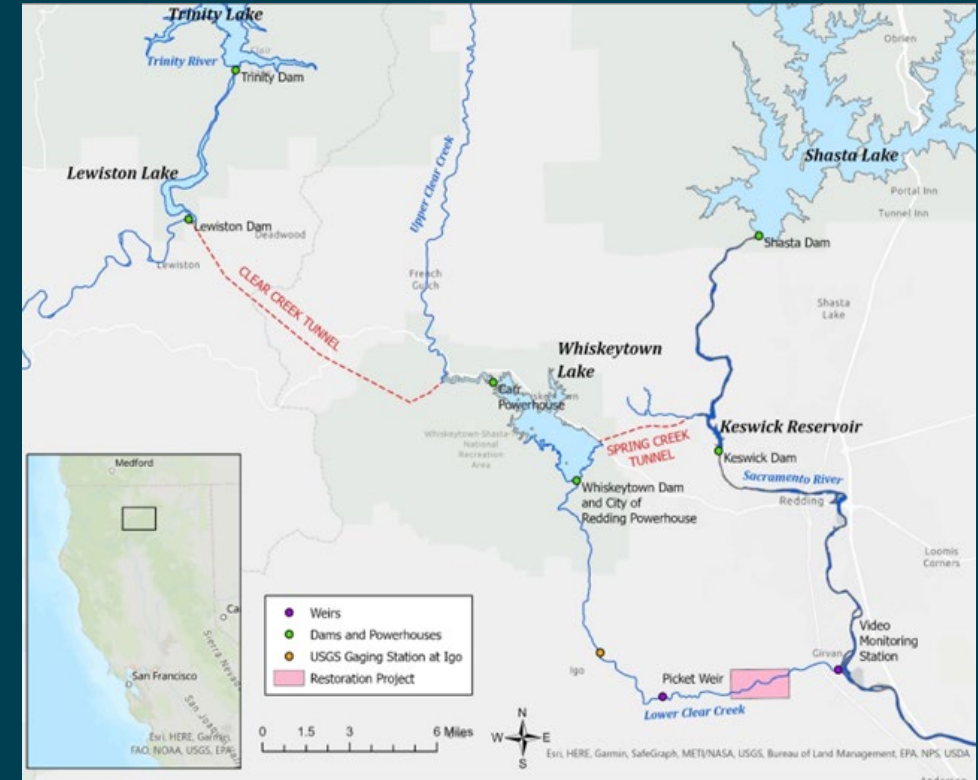
SRG Deliverables

- 2026 Winter-run Broodyear Assessment – (February)
- 2026 Sacramento River Temperature Management Plan – (May)
- SRG Guidance Document - draft
- Water Temperature Management Seasonal Report – to be drafted
- Reservoir Refill and Spring Pulse Seasonal Report - to be drafted



Clear Creek Technical Team (CCTT)

- Ramping Rate Deviations
- Seasonally Variable Hydrograph
 - Minimum Instream Flows
- Pulse Flows
- Segregation Weir



CCTT WY 2026 Activities

- Reviewed draft WY25 Seasonal Operations Report (December 11)
- Flow and Temp Management Proposal drafted (March 2)
 - May Spring Pulse Flow (~750 CFS)
 - June Spring Pulse Flow (~ 550 CFS)
 - Baseflow 100 CFS July 17
- Weir install site identification (June 18)
- Habitat Project Recommendations



CCTT Deliverables

- Flow and Temp Management Proposal
- Clear Creek Seasonal Operations Report



Photo by Eric Wiseman (Yurok Tribe)

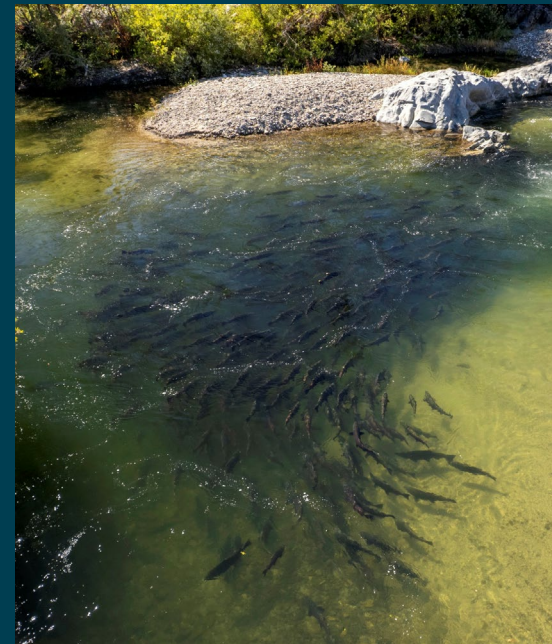


Photo by Eric Wiseman (Yurok Tribe)



Photo by Derek Rupert (USBR)



American River Group (ARG)

- Monthly Operations Forecasts
- Down-ramping for monitoring and maintenance needs
- Spring Pulse Scheduling
- Modifications to the Automatic Temperature Selection Procedure (ATSP) Schedule
 - Coldwater Power Bypass



ARG WY 2026 Activities

- Spring Pulse Flow – Apr. 11
- Temperature Management Plan
- June 15



ARG Deliverables

- American River Temperature Management Plan – Jun. 15
 - Automated Temperature Selection Procedure Schedule 41
- Summary of Activities Seasonal Report



Month	Schedule 55	Schedule 43	Schedule 41
May	70° F	68° F	68° F
June	70 °F	68° F	68° F
July	70 ° F	69° F	68° F
August	70 ° F	69° F	68° F
September	70 ° F	68° F	68° F
October	70 ° F	68° F	68° F
November	61° F	59° F	59° F



Stanislaus Watershed Team (SWT)

- Monthly Operations Forecasts
- Ramping rate
- Spring Pulse Flows
- Fall Pulse Flows
- Winter Instability Flows



SWT WY 2026 Activities

- Fall Pulse Flow October 15–November 5, 2025
- Winter Instability Flows Feb 19-25, 2026
- Spring Pulse Flow May 1-9, 2026



SWT Deliverables

- Summary of Activities Seasonal Report



Delta Actions Team (DAT)

- Delta Operations and Weekly Assessments
- Suisun Marsh Salinity Control Gate
- Delta Cross Channel Gate
- Delta Smelt Supplementation
- Population Estimating
- Take and Salvage Monitoring



DAT WY 2026 Activities

- DCC Gate Closure 10/30/2025
- First flush implemented 12/25/25
- Adult Delta smelt off-ramped 02/12/2026
- DCC gate opened 05/22/2026
- SMSCG Ops 07/01/2026



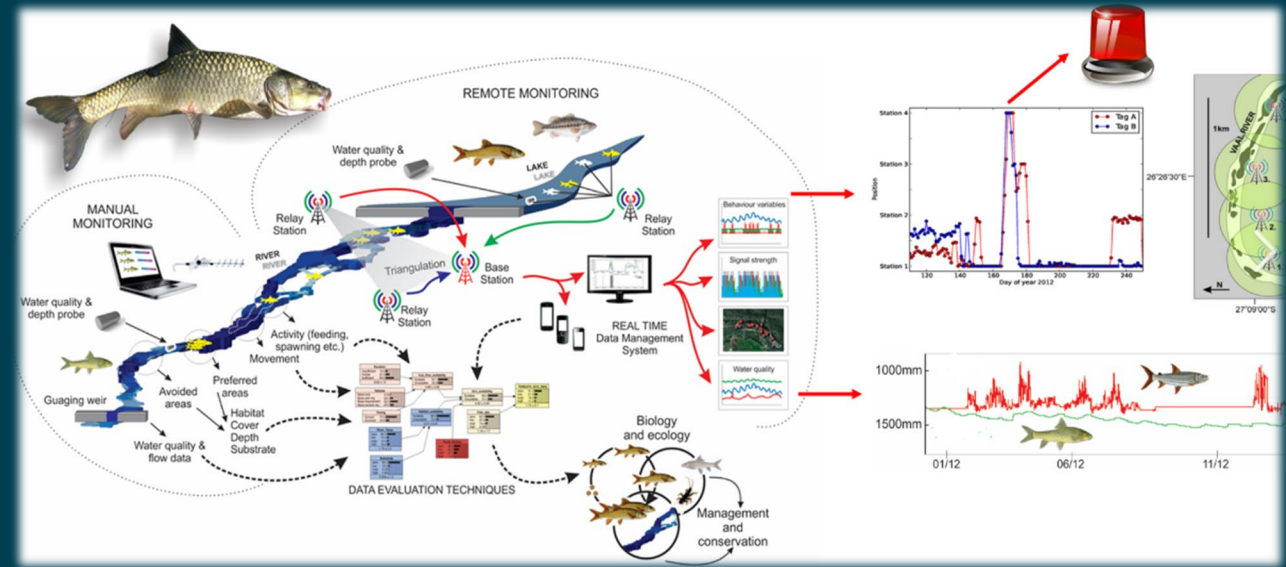
DAT Deliverables

- DAT Guidance Document
- Weekly Biological Assessments
- Drafting OMR Flow Management Seasonal Report



Fish and Water Operations Group (FAWOG)

- Comprised of agency and interested party management representatives
- Provide comprehensive look across CVP and SWP conditions.
- Provide input on weekly assessments and monitoring programs
- Review and ensure input seasonal and annual reports



FAWOG WY 2026

- Sacramento Pulse Flow
- American River Pulse Flow
- Delta Stormflex Ops
- Shasta Bin Year Determination
- Temperature Management Plans
 - Sacramento River
 - American River



Notes & Reports

<https://www.usbr.gov/mp/bdo/water-operations.html>

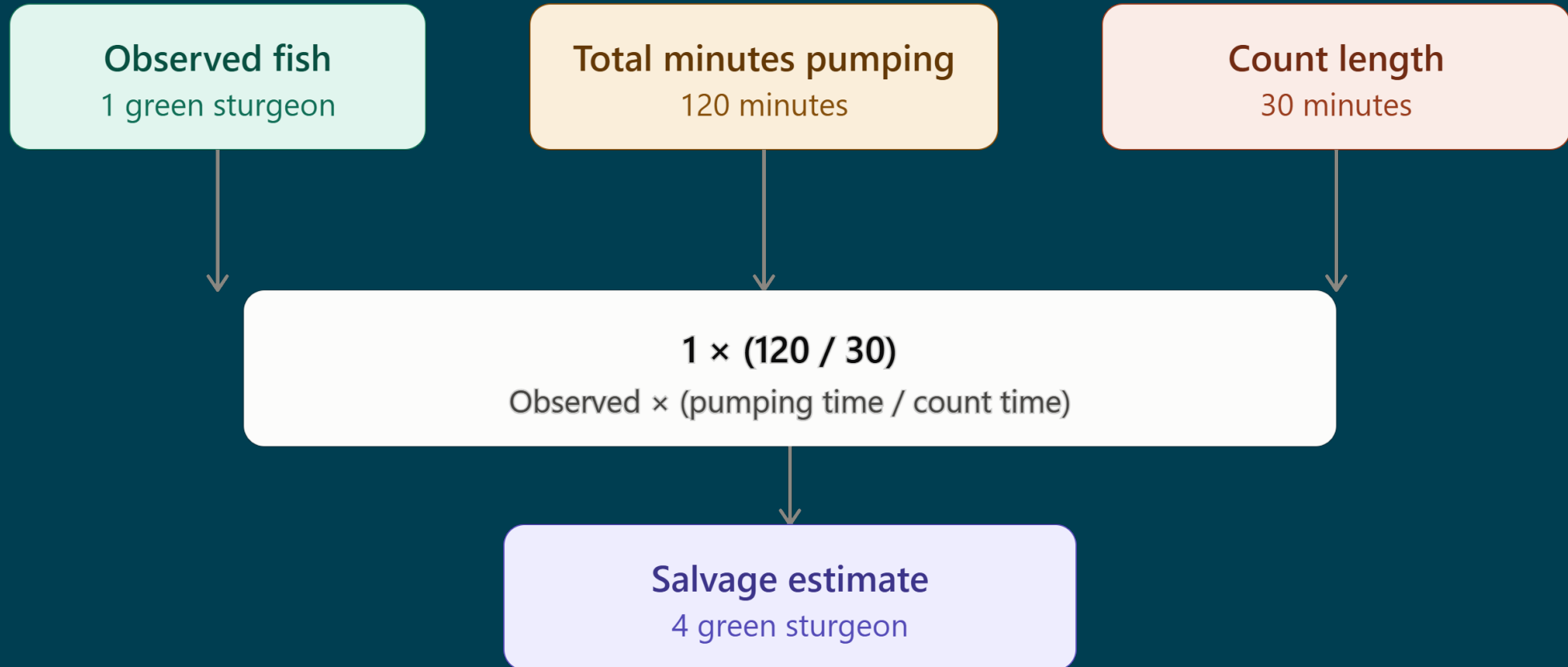


Green Sturgeon Reinitiation

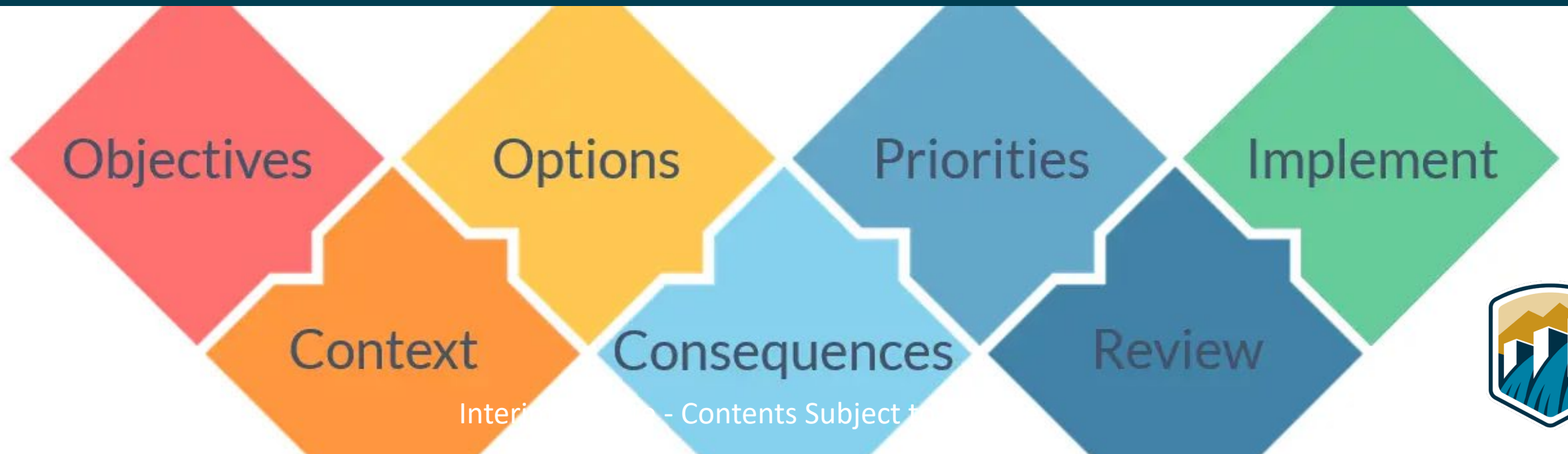
- Reinitiated consultation - May 18, 2026
- WY25 cumulative salvage was 20
- WY26 cumulative salvage was 15
- 2024 NMFS Biological Opinion – 14 per year
- Assessment provided through DAT to FAWOG



Example Green Sturgeon Salvage Calculation



Sacramento River Winter-Run Chinook Salmon Habitat and Facilities Structured Decision Making



Background: Winter-Run & Shasta Constraints



Shasta temperature management relies on coldwater pool withdrawals.



Limited coldwater in dry/hot years constrains CVP operations.



Reclamation is exploring strategies to support winter-run Chinook without relying solely on Shasta operations.

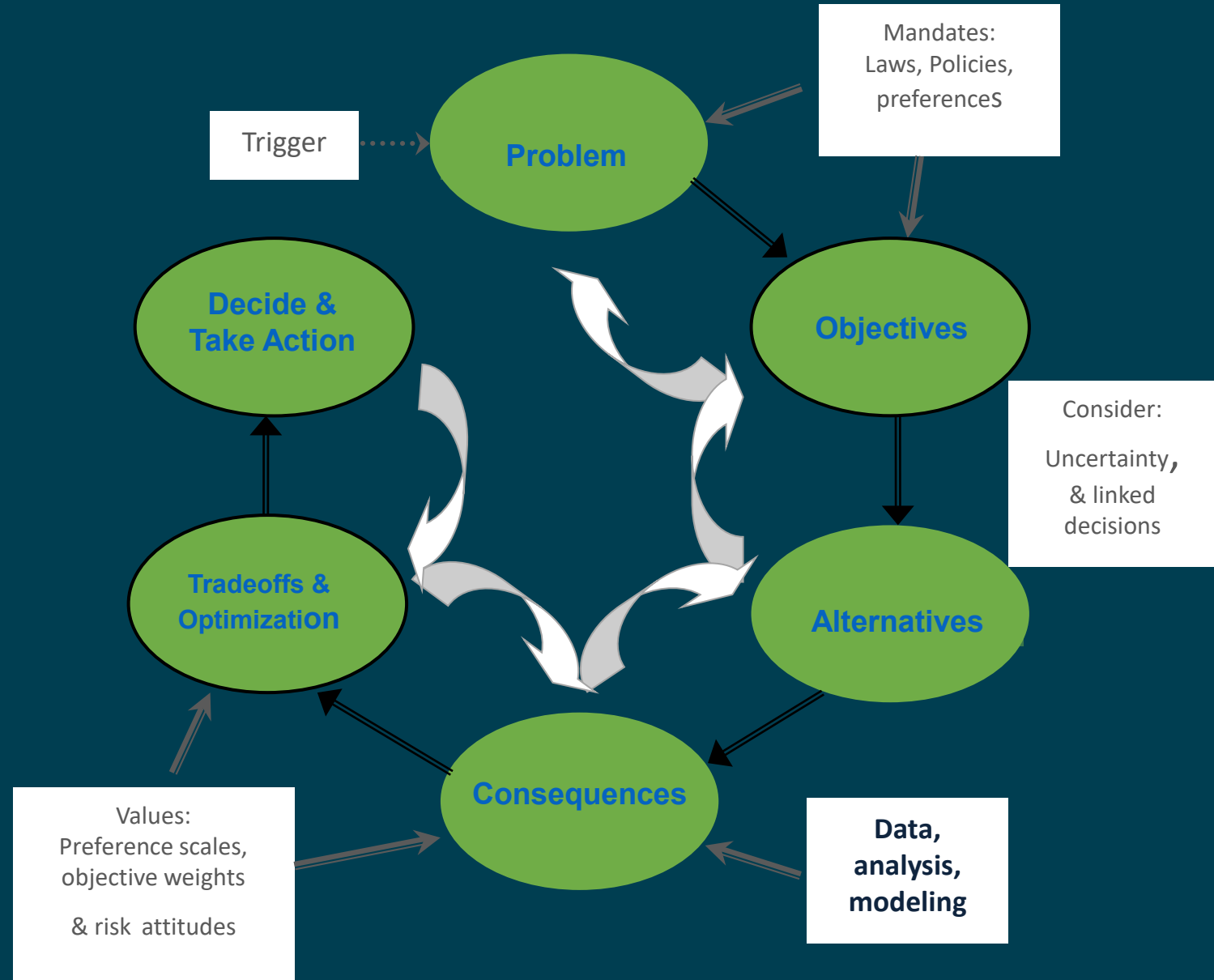
Winter-Run Chinook Salmon SDM Process

- Rapid Prototyping over ~ 3 months
- Focus on 4 types of actions without changing operations
- Acknowledge limits of analysis
- Participant input appreciated
- Participation $\neq$ agreement



PrOACT Cycle

- But also: Monitor, re-evaluate, and adapt



Interim Update - Contents Subject to Change



Objectives & Metrics

01

Increase abundance – annual returns, pHOS, decline incidents

02

Increase productivity – outmigration, smolts, CRR

03

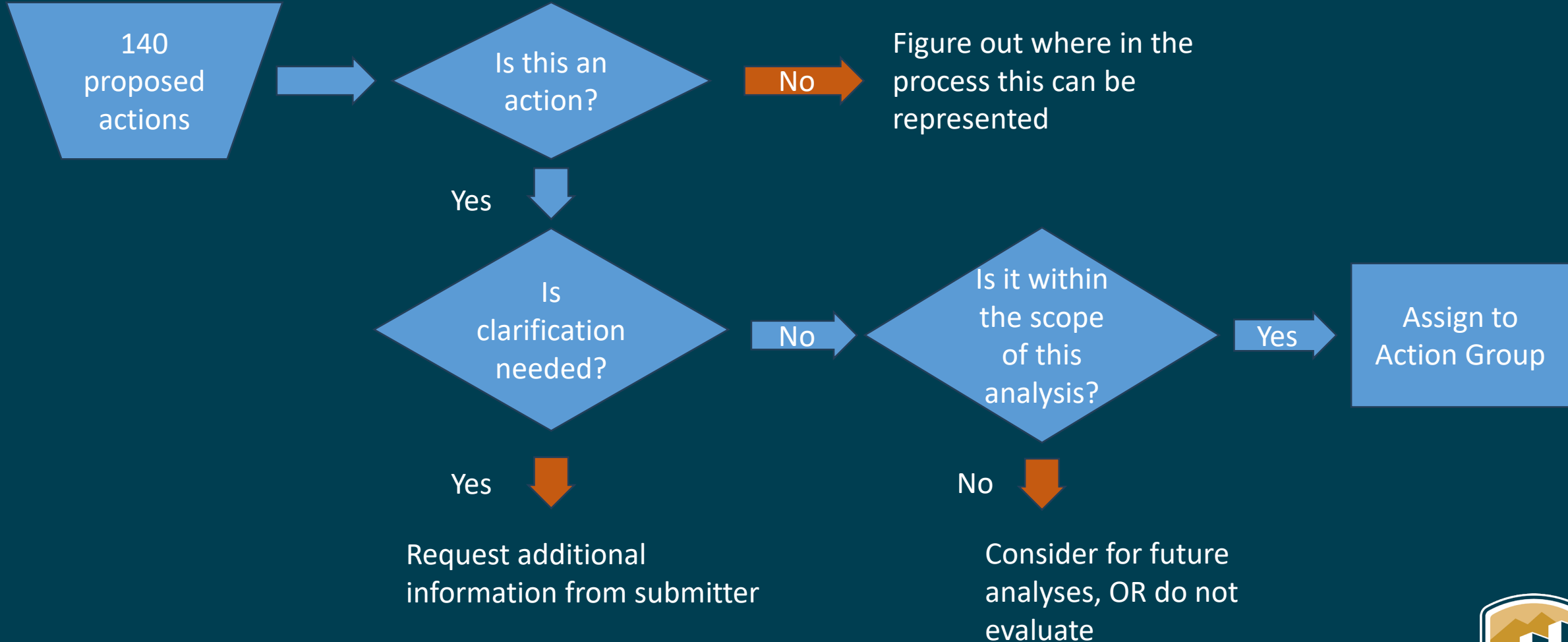
Increase life history diversity – pHOS, size diversity

04

Increase tributary support – habitat access, independent populations



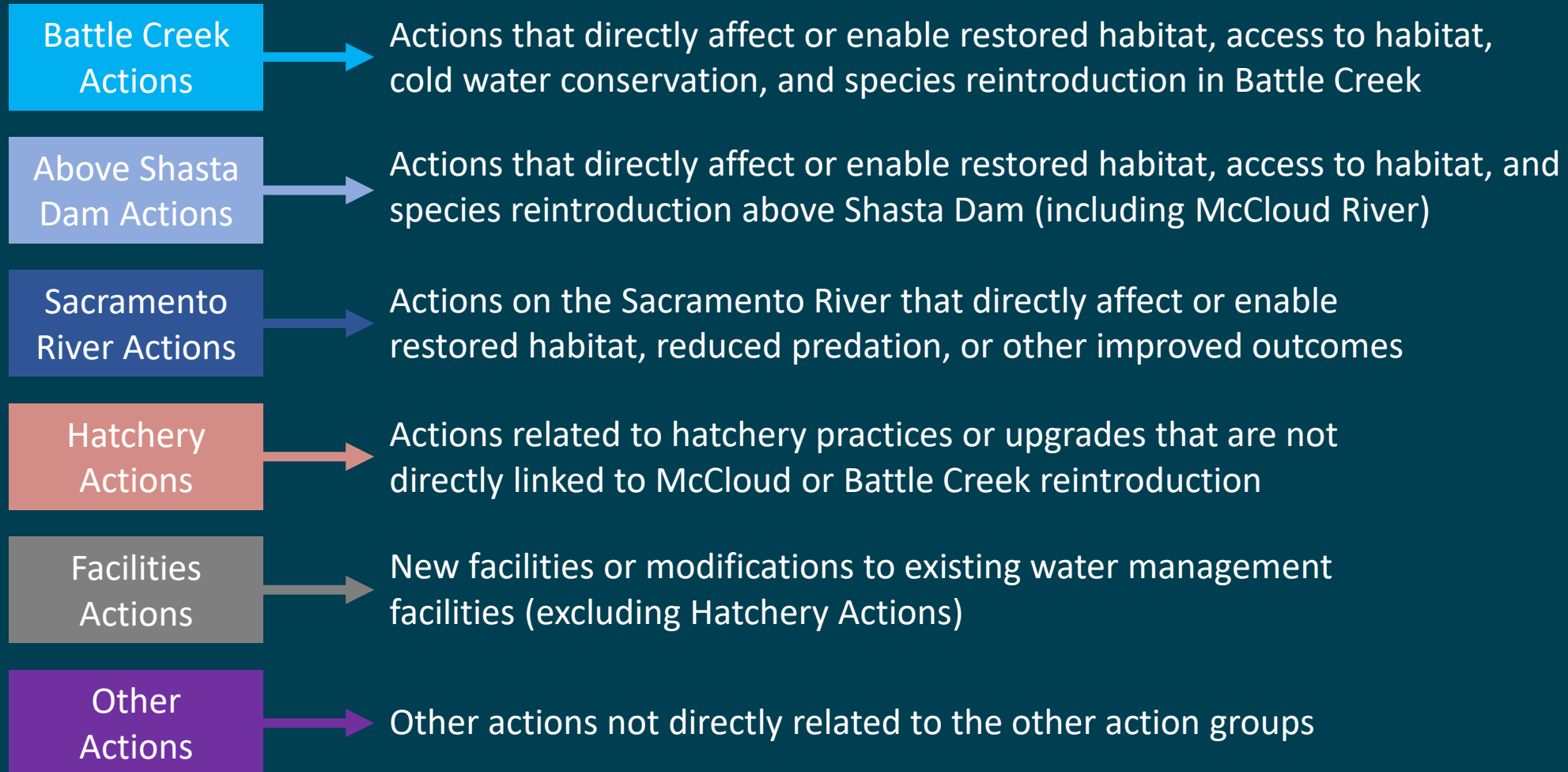
Development & Screening of Actions



Interim Update - Contents Subject to Change



Six Action Groups



Interim Update - Contents Subject to Change



Portfolios of Actions

		Proposed by SDM Team								Prop. 1	Prop. 1	Prop. 1	Prop. 2	Prop. 2	Prop. 2
Identifier	Description	All Actions with Trap and Haul for All Tributaries	All Actions with Trap and Haul for McCloud River	All Actions with Shasta Volitional Passage	Population Enhancement Below Shasta	Battle Creek + Hatchery Actions	Mainstem + Hatchery Actions	Implementable Within 5 years	All Actions with estimated costs < \$10M	Near term, low hanging fruit (NTLHF); #1 priority	Battle Creek Actions Only; #2 priority	NTLHF (with TWT&H and ACID); #3 priority	Drought Mitigation	Hatchery Influence and Production	Habitat Enhancement and Restoration
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
H-1	LSNFH modified release practices	X	X	X	X	X	X	X	X					X	
H-2a	LSNFH facility upgrades	X	X	X	X	X	X	X		X		X		X	
H-2b	Upgrades to Keswick Dam adult collection system	X	X	X	X	X	X	X						X	
H-2c	New broodfish collection facility in Upper Sacramento River	X	X	X	X	X	X	X	X	X		X		X	
H-3	CNFH trapping and sorting improvements	X	X	X	X	X	X	X			X			X	
SR-1	Restore floodplain access for rearing habitat in upper and upper-mid Sacramento	X	X	X	X		X	X							X
SR-2a	Physically build and maintain new instream perennial juvenile rearing habitat	X	X	X	X		X	X							X
SR-2b	Artificially enhance existing instream juvenile rearing habitat	X	X	X	X		X	X	X	X		X			X
SR-2c	Restore access to instream rearing habitat in ephemeral non-natal tributaries of the Sacramento River	X	X	X	X		X	X							X
SR-3	Build or enhance in-channel spawning habitat	X	X	X	X		X	X					X		X
SR-4a	Reduce predation contact points on Sacramento River	X	X	X	X		X			X		X	X		
SR-4b	Develop regulations to support a striped bass trophy fishery	X	X	X	X		X	X	X						
SR-5	Reduce entrainment at Sacramento River diversions	X	X	X	X		X	X							
SR-6	Georgiana Slough bubble curtain	X	X	X	X		X	X							
SR-8	Night time light reduction on Sundial Bridge and other sources	X	X	X	X		X	X	X						
SR-9	Provide volitional upstream and downstream fish passage at Keswick Dam	X	X	X	X		X								
SR-10	Construct Anderson Cottonwood Irrigation District Water Supply & Fisheries Resiliency Project	X	X	X	X		X	X				X	X		X
SR-11	Captive rearing and assisted migration of juveniles in drought years	X	X	X	X		X	X	X	X		X	X	X	
SR-12	Purchase water rights/leases	X	X	X	X		X	X							
F-1	Shasta TCD Upgrade/Cold water outlet to access colder water	X	X	X	X		X								
O-1	Improve WR Salvage at Tracy & State Fish Collection Facilities	X	X	X	X		X								
O-2	Increase distance from shoreline to "International" designation	X	X	X	X		X	X	X						
O-3	Modify ocean harvest	X	X	X	X		X	X	X	X		X			
BC-1	Control illegal harvest and/or poaching in Battle Creek	X	X	X	X	X		X	X		X				
BC-2	Battle Creek habitat improvements	X	X	X	X	X		X			X				X
BC-3	CNFH water supply intake improvements on Battle Creek	X	X	X	X	X		X	X		X				
BC-5	Remove boulder barrier on North Fork Battle Creek downstream of Eagle Canyon Dam	X	X	X	X	X		X	X		X				X
BC-6	Complete PG&E decommissioning and restore unimpaired flows on North Fork Battle Creek	X	X	X	X	X					X				X
BC-7	Limit cold water diversions	X	X	X	X	X		X			X		X		X
BC-8	Battle Creek egg incubation	X	X	X	X	X		X	X		X		X	X	
BC-9	Implement Battle Creek Reintroduction Plan	X	X	X	X	X		X			X				
ASD-1	Excess hatchery eggs placed in-river or in streamside egg incubators	X	X					X	X				X	X	
ASD-2	Control illegal harvest and/or poaching in McCloud River	X	X	X				X	X						
ASD-3	Release hatchery fry into upper McCloud	X	X						X	X		X	X		
ASD-4	Release hatchery fry into lower McCloud	X	X						X	X		X	X		
ASD-5	Two way trap and haul (adult spawners above Shasta Dam, juveniles downstream of Shasta Dam)	X	X									X	X		X
ASD-6	Volitional passage above Shasta Dam into McCloud River			X											
ASD-7	Remove McCloud Dam			X											
ASD-8	Return historic salmon strain from NZ			X											



Consequence Assessment and Swing Weighting

How Portfolios Were Evaluated

- Modeled Metrics: Adult returns, pHOS, outmigrants, smolts, tributary spawners, independent populations
- Expert Judgment Metrics: Human intervention, impacts on other fish, time to implement, cost

Swing Weighting

- Each participant assigned weights to objectives (“swing weighting”) to reflect what mattered most (e.g., abundance, cost, timeliness)
- Portfolio scores combined consequence estimates with these weights, showing how different values change “best” choices

Key Results

Portfolio Name	Adult Returns	pHOS (Hatchery %)	Tributary Spawners	Cost Estimate	Human Intervention	Time to Implement	Score (Swing Weighted)
Baseline	1,235	25%	0	—	—	—	—
All Actions w/ Trap & Haul (P1)	2,961	53%	1,344	>\$1B	↓ ≥50%	1–5 yrs	0.50
Shasta Volitional Passage (P3)	4,457	52%	1,399	>\$1B	↓ ≥50%	1–5 yrs	0.51
NTLHF + Enhanced Habitat (P11)	1,543	27%	286	\$100–500M	↓ ≥10%	1–5 yrs	0.52
Hatchery Influence & Production (P13)	1,922	55%	773	\$100–500M	↓ ≥10%	1–5 yrs	0.41



Takeaways

- Most portfolios improved abundance, productivity, and tributary support vs. baseline
- All portfolios increased pHOS (more hatchery fish), none achieved independent populations
- Portfolios with above-Shasta actions scored generally scored highest
- Swing weighting showed the that “top” portfolio depended on stakeholder values
- Costs ranged from <\$10M to >\$1B; higher cost ≠ better outcome



Outcomes of the SDM



Does not conclude with a decision by Reclamation.



SDM Report that includes all components of the SDM process, including input received from participating parties. A consequence table describes the estimated performance of actions or sets of actions against objectives and modeling results.



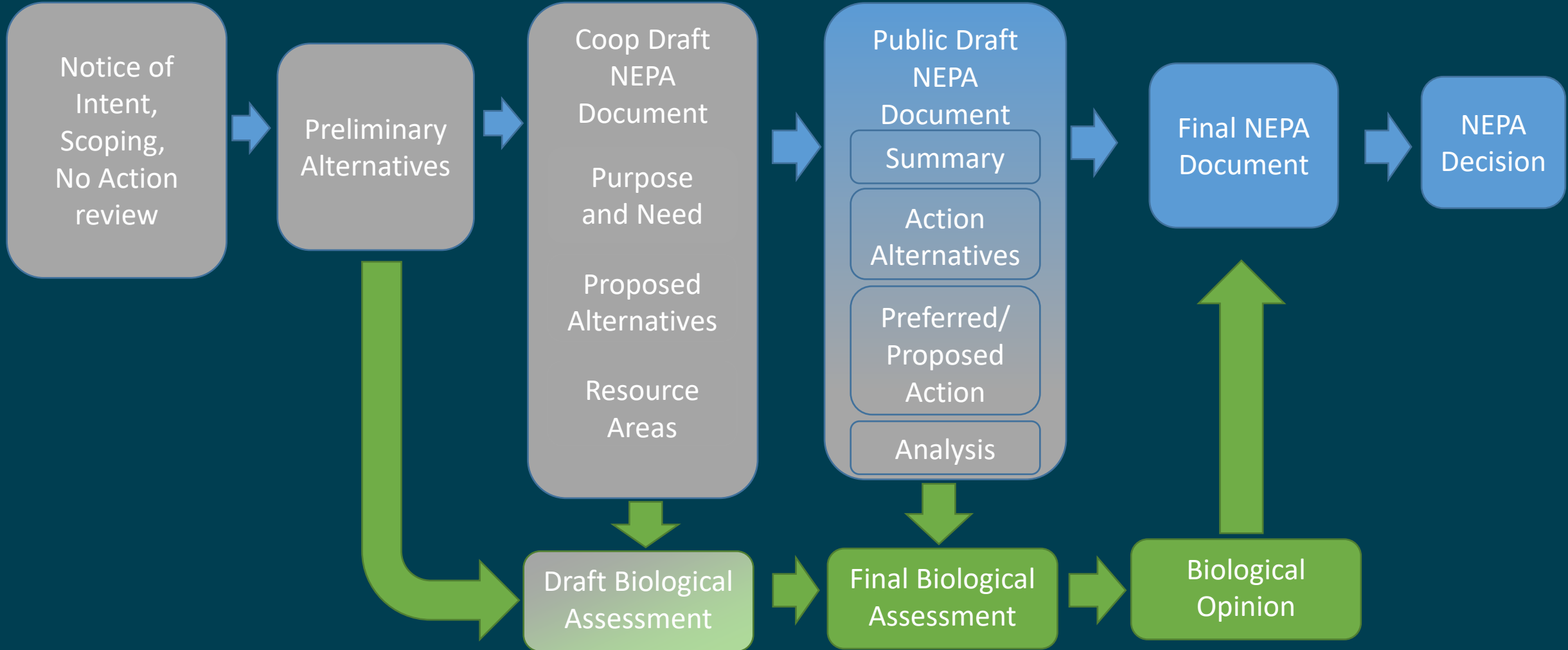
SDM Report



— BUREAU OF —
RECLAMATION

Trinity River Division Update

TRD NEPA and ESA Process



Trinity River Division (TRD) Cooperating Agency Draft SEIS



Released June 5, 2026



30-day review period – Closed
July 8, 2026



137 comments received



Interim Update - Contents Subject to Change



Preliminary Comment Themes

- Alignment with EO 14181
- Conduct impact analysis of Central Valley water supply and other impacts
- Conduct additional or different modeling or analyses
- Conduct different assumptions and water temperature objectives
- Include additional governance
- Analyze effects to Whiskeytown Recreation Area
- Improve alternatives description
- Use an updated No Action Alternative
- Revise preferred alternative selection criteria
- Discuss water supply concerns



Trinity River Division (TRD) Public Draft SEIS



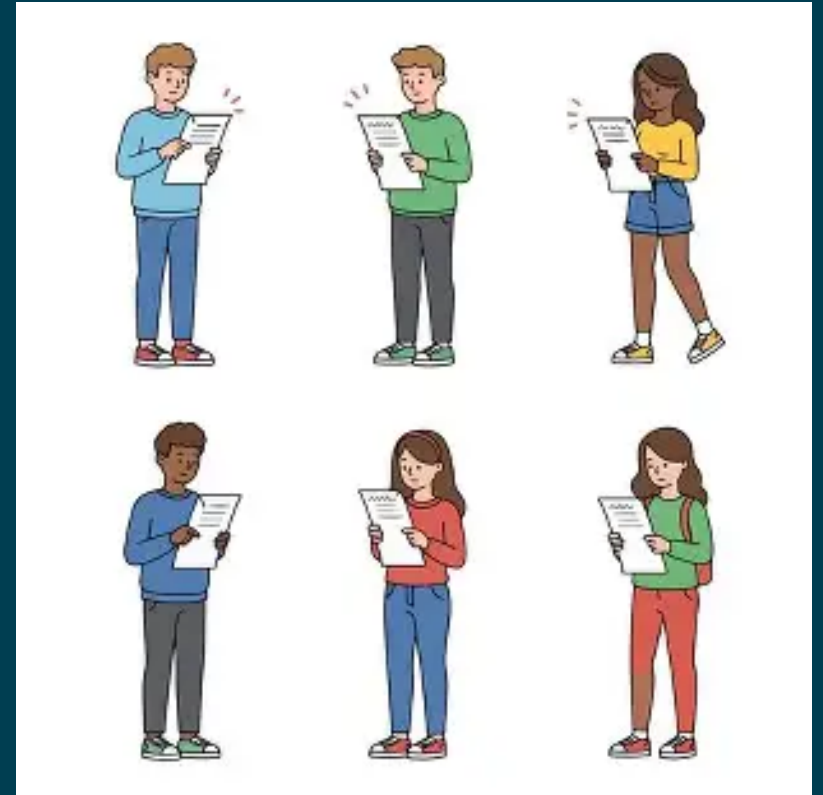
PUBLIC DRAFT
PREPARATION



PENDING
ANALYSIS



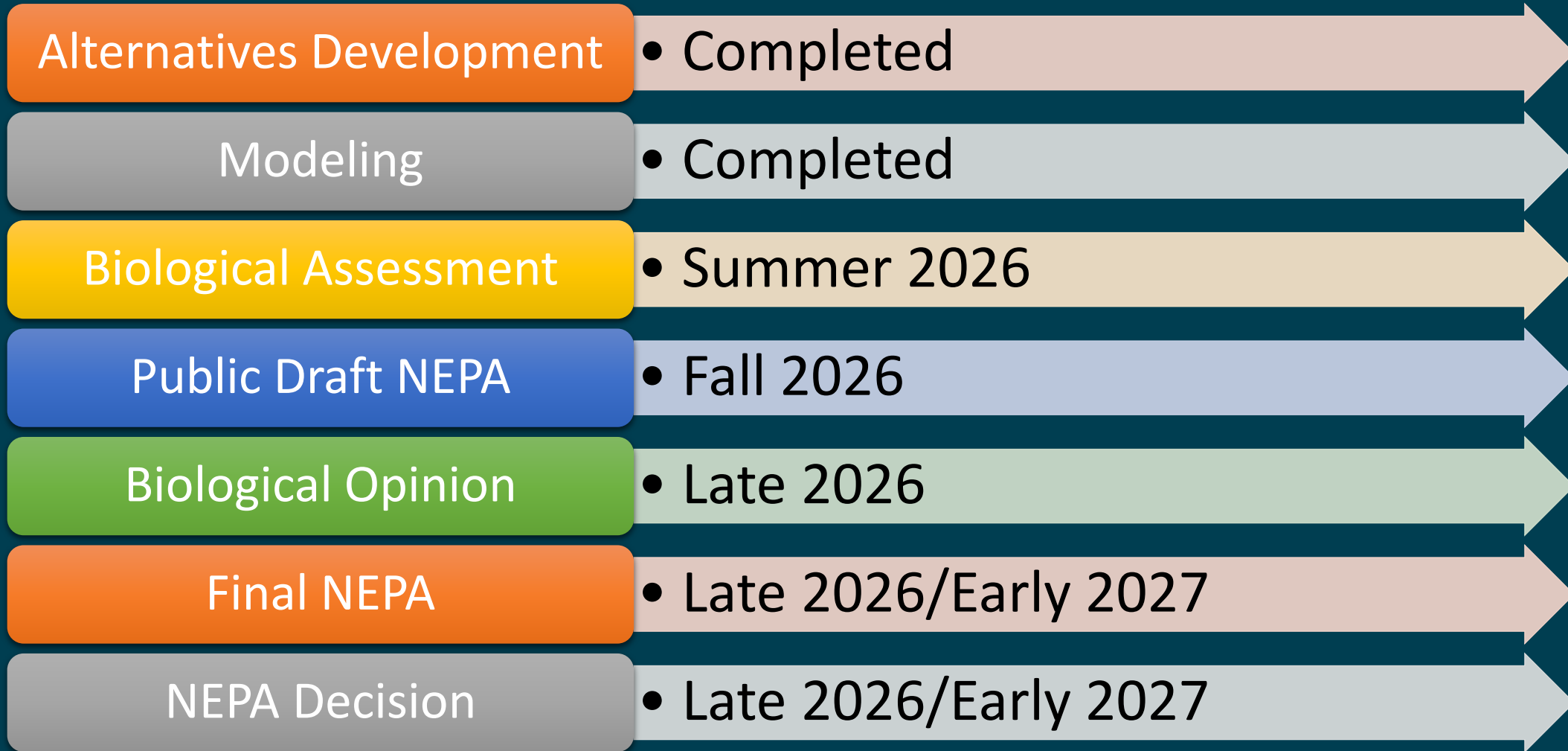
PUBLIC
INVOLVEMENT



Interim Update - Contents Subject to Change



Trinity Consultation Schedule



Interim Update - Contents Subject to Change



Upcoming

- Next coordination meeting Fall 2026
- Trinity Public Draft SEIS
- Trinity Biological Assessment
- Green Sturgeon consultation





— BUREAU OF —
RECLAMATION

Thank You