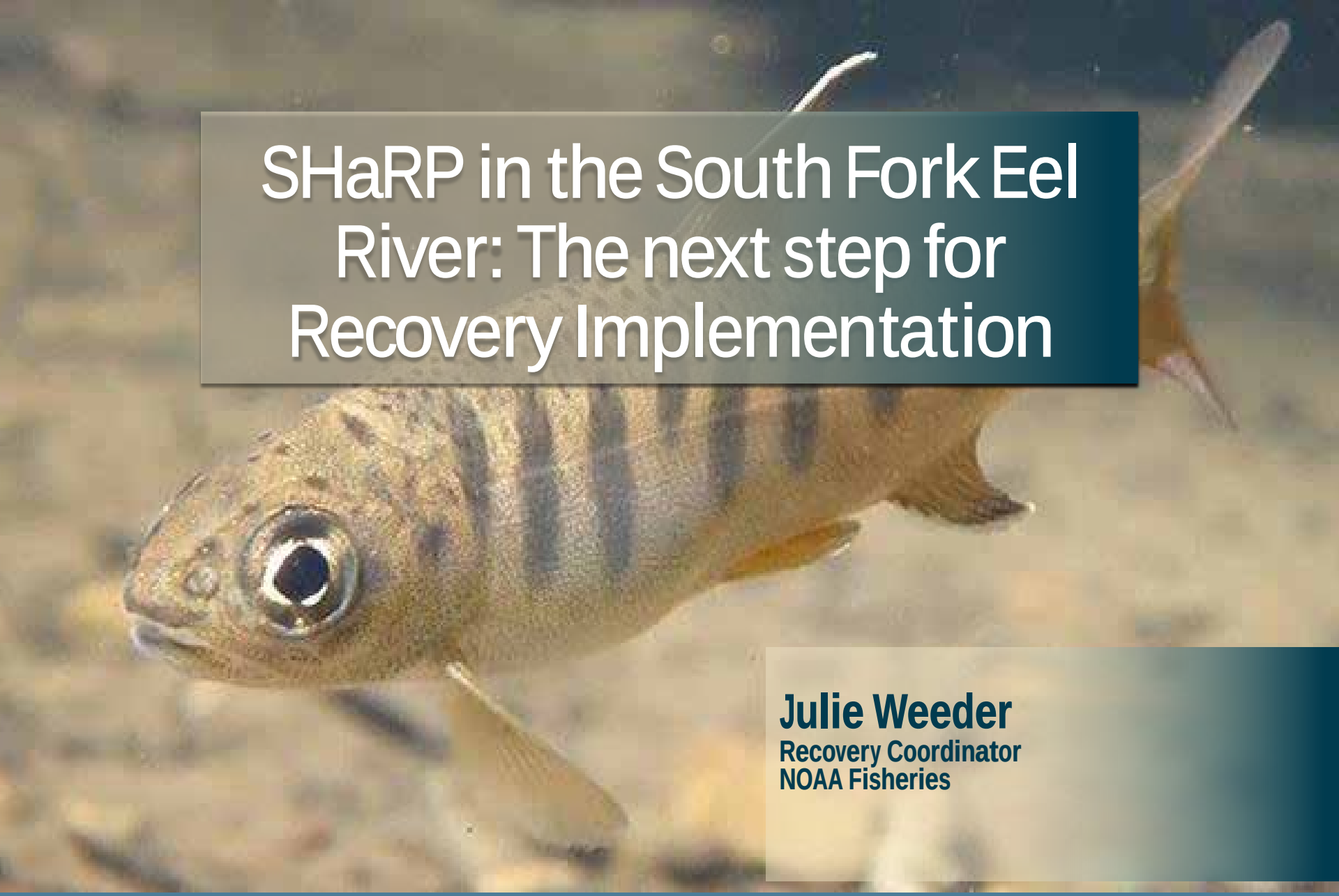

SHaRP in the South Fork Eel River: The next step for Recovery Implementation

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8/31/2017

NOAA NATIONAL MARINE FISHERIES SERVICE

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

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8/31/2017

Salmon Habitat Restoration Priorities

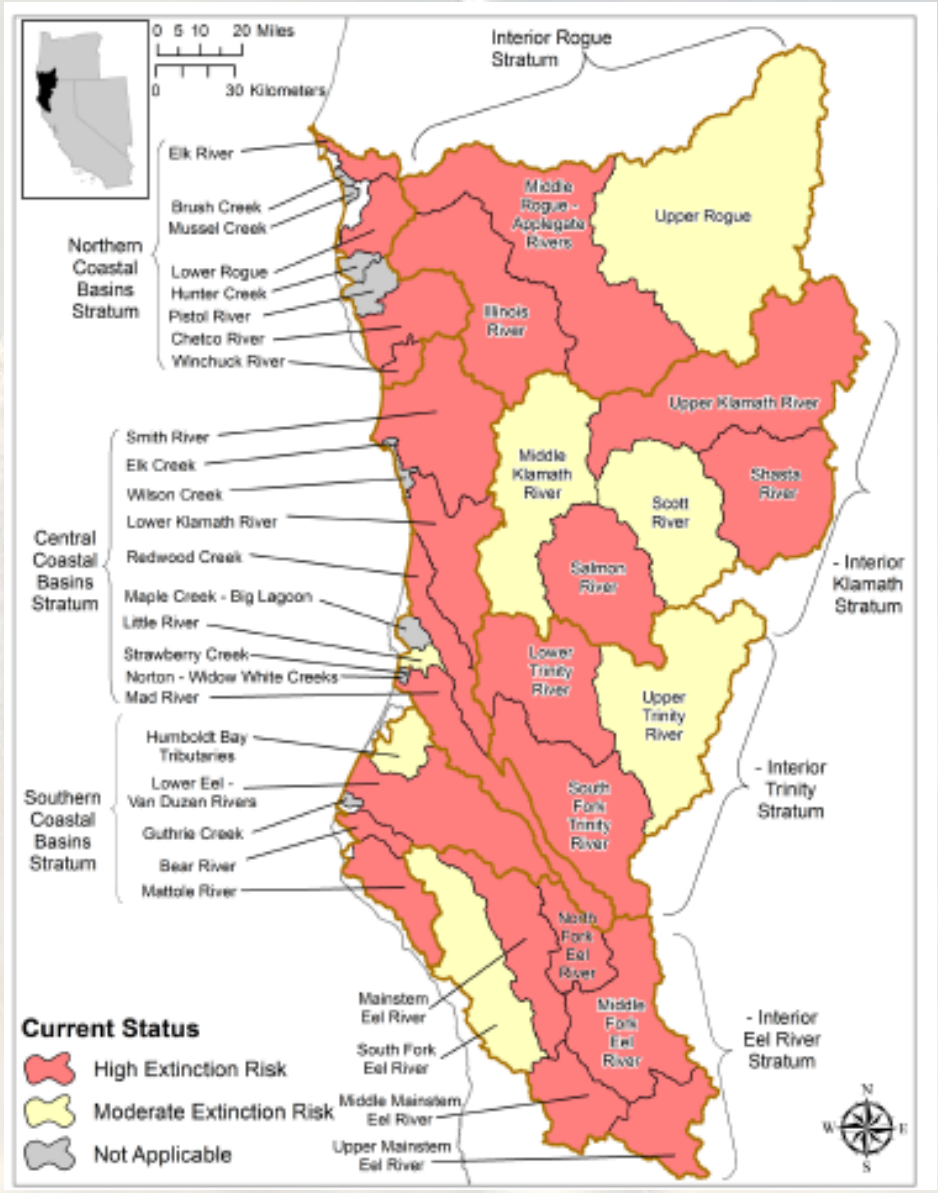
- A process to identify effective restoration within priority areas of salmon strongholds
- Opportunistic versus focused site selection
- Focus on certain creeks within a stronghold so resources will do the most good

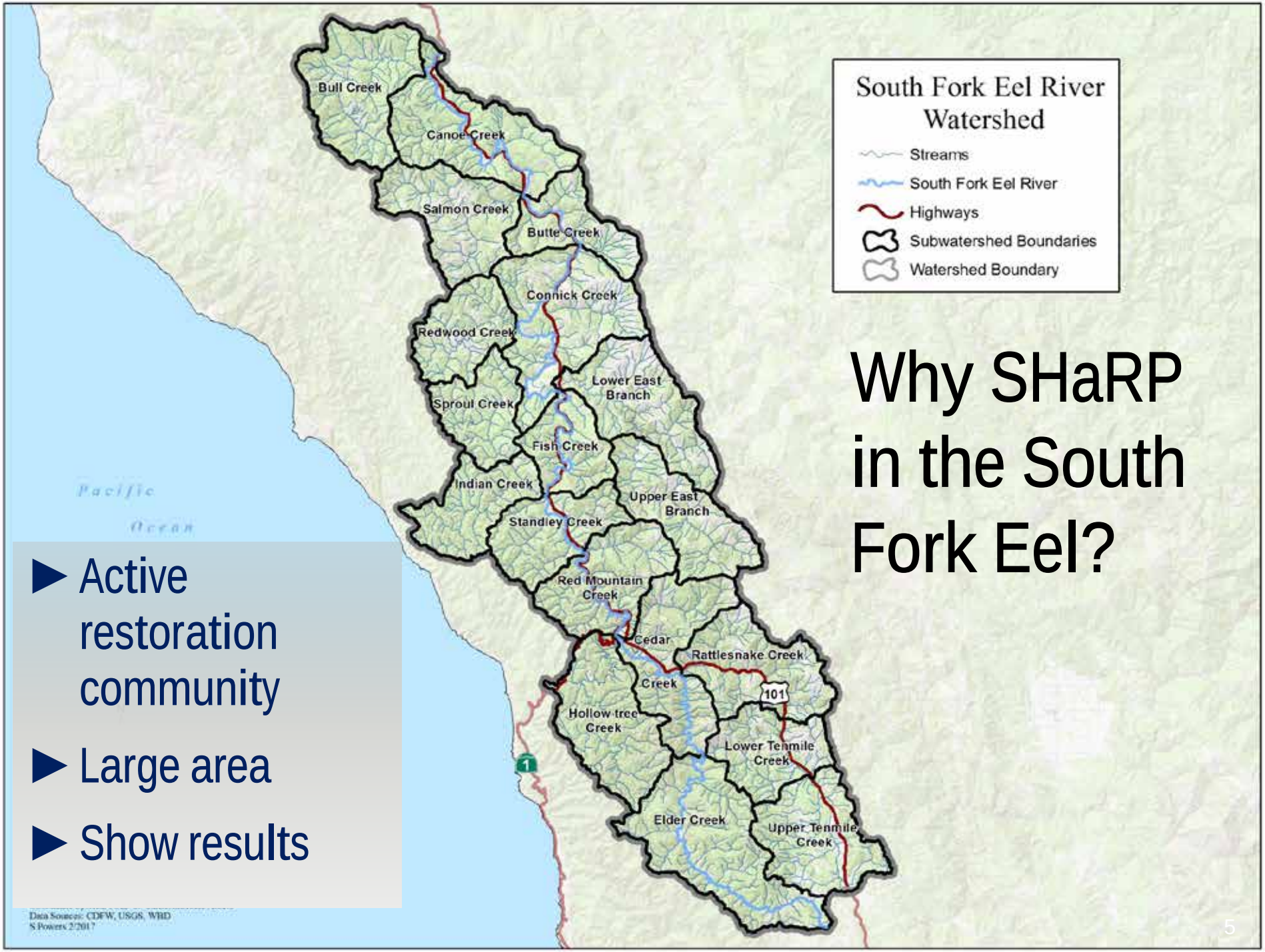
Existing Recovery Plans

- Recovery Plans for the area were released in 2014 and 2016.
- Different scale –watershed scale vs. tributary level
- Both short- and long-term actions vs. actions that will benefit immediately
- Single-species focus vs. all three species
- This effort builds on existing recovery plans.

Why the South Fork Eel River?

- Highest numbers of salmon in Eel River
- Most intact salmon and steelhead populations





Why SHaRP in the South Fork Eel?

- Active restoration community
- Large area
- Show results

Steering Committee

- NOAA Fisheries and CDFW
- Develop tool to assess merits of 19 tributary groups based on available data and the experience of resource agencies
- Determine set of tributary groups with the highest chance for successful salmonid and habitat recovery

Framework used for assessment of tributary groups

- Bradbury 1995: Handbook for prioritizing watershed protection and restoration to aid recovery of native salmon
- Oregon state senator Bill Bradbury
- Used in ESA recovery plans for salmonids
- Originally three categories of considerations – we added one (Habitat Conditions)

Task: Assess Tributary Groups

- Score tributary groups
  - biological importance
  - habitat condition
  - optimism and potential
  - integrity and risk
- 18 month effort to find data relevant to these factors

South Fork Eel River Tributary Groups

Biological Importance
Information Considered

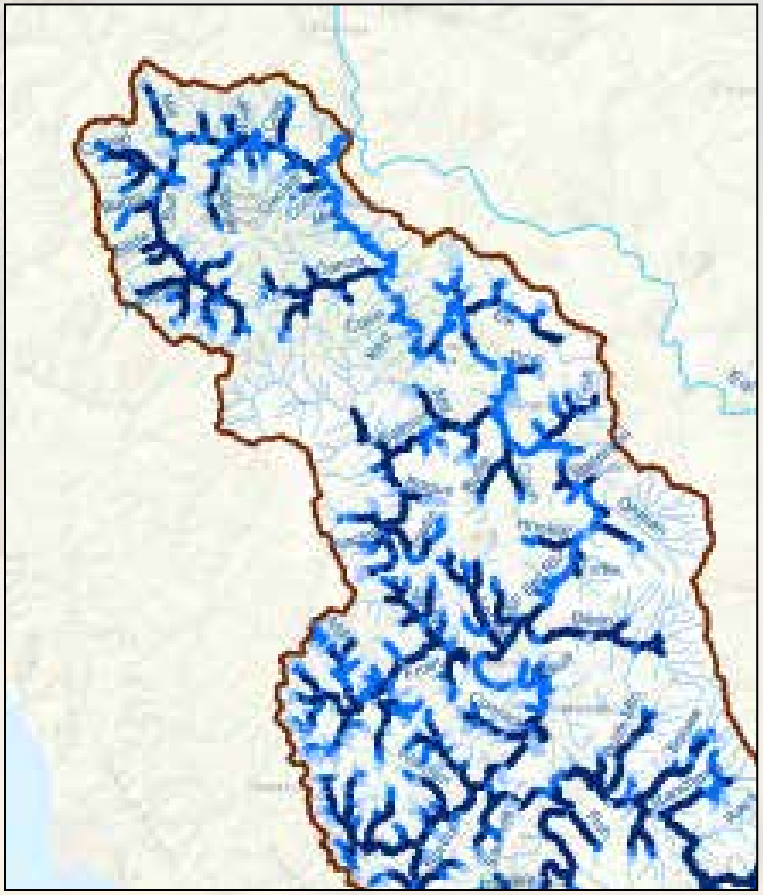
- Salmonid species distribution from observation data - BIOS
- Salmonid spawning abundance from redd density.

Habitat Condition
Information Considered

- CDFW Reach-scale habitat suitability index
  - Canopy, Pool Depth and Shelter, Embeddedness
- CDFW Refugia
- CDFW Large Wood Survey
- Professional Judgement

Optimism and Potential
Information Considered

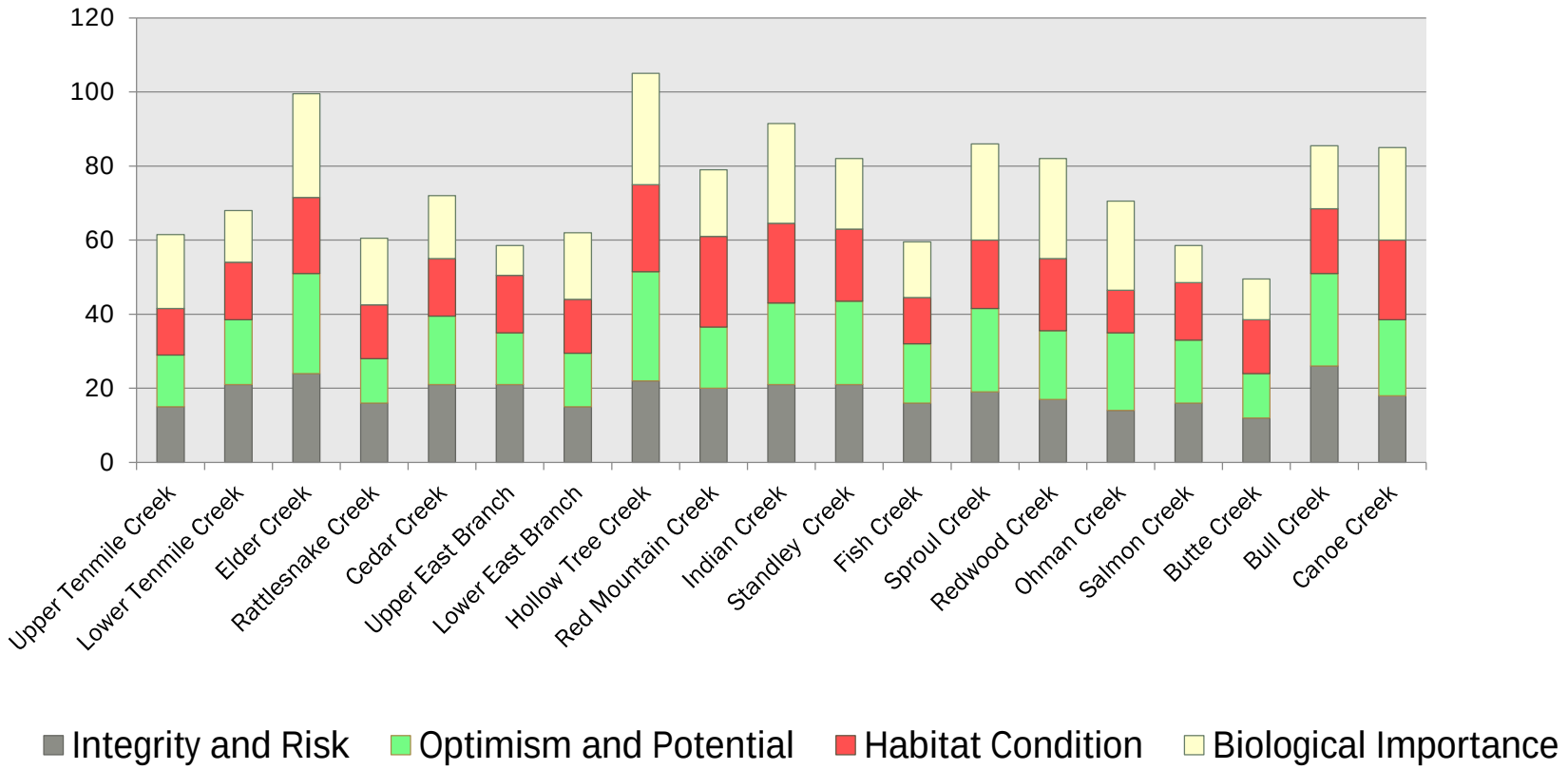
- Species-specific Intrinsic Potential
- Geology
- Land ownership
  - Public/Private
  - Average parcel size
- Professional judgement – previous support for restoration



Integrity and Risk
Information Considered

- Water Temperature
  - Eel River Recovery Project Temperature Compilation
  - NorWeST modeled mean August stream temps
- Road Density
- Population Density
- Diversions - PJ

Tributary Group Scores



Phase	Tributary Group	Score
1	Hollow Tree Creek	136.5
	Elder Creek	126.3
	Indian Creek	122.8
	Sproul Creek	120.6
	Bull Creek	113.2
	Redwood Creek	113.1
	Standley Creek	106.5
2	Canoe Creek	91.6
	Red Mountain Creek	84.9
	Upper Tenmile Creek	81.7
	Lower Tenmile Creek	80.0
	Cedar Creek	77.5
	Connick Creek	71.2
3	Rattlesnake Creek	67.0
	Lower East Branch	66.3
	Fish Creek	66.0
	Salmon Creek	57.1
	Butte Creek	52.0
	Upper East Branch	49.5

Results

- Green Tributary Groups are Phase I: First priority for identifying issues and actions and implementing Actions

Phase	Tributary Group	Score
1	Hollow Tree Creek	136.5
	Elder Creek	126.3
	Indian Creek	122.8
	Sproul Creek	120.6
	Bull Creek	113.2
	Redwood Creek	113.1
	Standley Creek	106.5

Next Steps

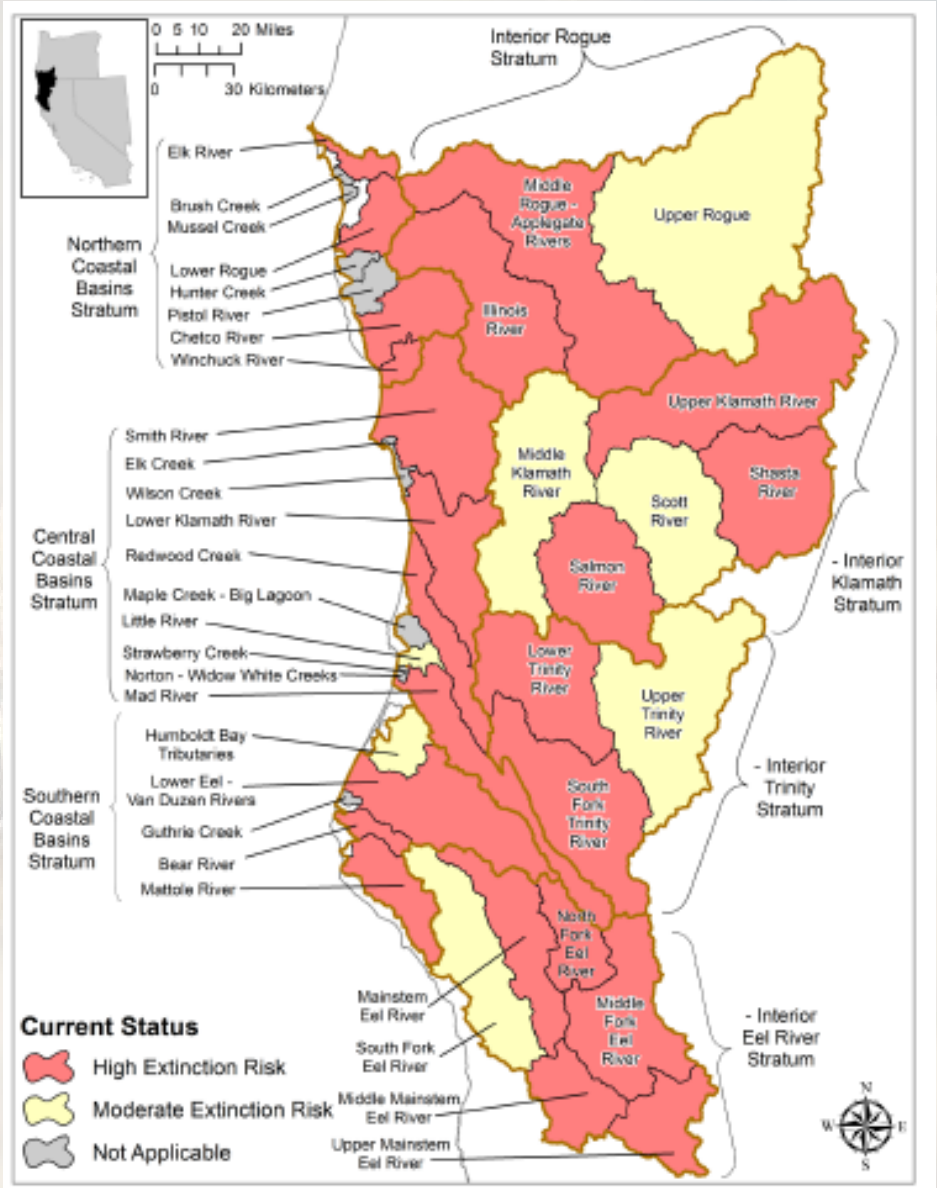
- Gather input on draft tributary groups
- Finalize tributary group scores
- Identify types of restoration needed, actions, and locations for each Phase 1 tributary group
- Bring back to community for input

Future Task– Implement

- Seek resources for Phase 1 tributary groups
- Implement identified actions

Future Task – Expand to Other Strongholds

- Learn from pilot effort
- Consistent methodology, purpose
- Use to describe needs of broader region (e.g., Eel River watershed) once other SHaRPs are completed.


0 5 10 20 Miles
0 30 Kilometers
Interior Rogue Stratum
Elk River
Brush Creek
Mussel Creek
Lower Rogue
Hunter Creek
Pistol River
Chetco River
Winchuck River
Northern Coastal Basins Stratum
Middle Rogue - Applegate Rivers
Upper Rogue
Illinois River
Upper Klamath River
Middle Klamath River
Shasta River
Scott River
Salmon River
- Interior Klamath Stratum
Smith River
Elk Creek
Wilson Creek
Lower Klamath River
Redwood Creek
Maple Creek - Big Lagoon
Little River
Strawberry Creek
Norton - Widow White Creeks
Mad River
Central Coastal Basins Stratum
Lower Trinity River
Upper Trinity River
South Fork Trinity River
- Interior Trinity Stratum
Humboldt Bay Tributaries
Lower Eel - Van Duzen Rivers
Guthrie Creek
Bear River
Mattole River
Southern Coastal Basins Stratum
North Fork Eel River
Middle Fork Eel River
- Interior Eel River Stratum
Mainstem Eel River
South Fork Eel River
Middle Mainstem Eel River
Upper Mainstem Eel River
Current Status
High Extinction Risk
Moderate Extinction Risk
Not Applicable
N
W
E
S