

## Sueño Azul Restoration Plan

NCTC CSP 3133 Restoration Policy, Planning and Partnering

Al Rizzo: National Oceanic and Atmospheric Administration

G.I. Jane: US Army Core of Engineers

Dudeberry South: Bluegrass Valley City Planner

Monarch Sunset: Riverburg Blue River Stewards

Davis Russell: Happy Cow Organic Beef Farm Owner

### Trust resources and trust responsibilities:

Trust resources: All salmonids, Big blue sea lion, waterbirds, neotropical migrants, tree babbler, painted plover, blue monarch butterfly, fisher.

Trust responsibilities: the Big Blue Mountain Tribe (resource Big Blue Oak)

### List applicable authorities supporting restoration actions:

ESA, MBTA, CWA, NEPA, NHPA, FWCA, NRDA, OPA, DSL (Dept of State Lands), USACE

### Conservation problem identification (e.g., purpose and need for restoration):

Poor water quality and quantity (Impassable waters for anadromous fish species)

- Enable anadromous fish to return to spawning grounds.
- Increase health of estuary ecosystem.
- Low dissolved Oxygen and pollutants in the water stressing wildlife

Degraded estuary

- Improved ecological value of estuary to a suite of species
- Increasing foraging opportunities and values for Babblers
- Rearing habitat for salmonids
- Improved habitat for sea lion

## Degraded forest health

- Lower fuel loads and returning historic fire return intervals
- Improve water quality, with subsequent values to fish and community
- Improved habitat for Babblers and Monarch's

## Restoration goals and objectives for the proposed action (e.g., based on conservation plans such as recovery plans, regional bird conservation plans, watershed-based plans):

\*Restore the Big Blue River ecosystem to benefit associated wildlife species and provide services to the community.

1. Restore 1,000 acres of degraded estuarine habitat....
2. Restore 100 miles of riparian habitat to include 70% of native species known in the area.
3. Increase irrigation efficiency to allow sufficient flows for salmonid passage.
4. Return uplands to proper oak density and herbaceous understory vegetation. Conifers below 20% canopy cover. 70% native herbaceous plant community.
5. Remove irrigation diversion structure and move tide gates and levee.

## Public outreach/community involvement (e.g., design outreach strategy):

After developing a coalesced plan with partners we will....

- Public meeting addressing ecological concerns, presenting options for restoration, and listening to local concerns and input. Outreach materials provided.
- Second meeting following to allow landowners time to review the restoration options and provide feedback. Offer field trip to connect the community with local public lands.

## Identify project partners and their role in your partnership:

USFWS- Lead facilitator

NOAA – Authorized NRDAR official

USFS – Forestry practices, prescribed fire

NRCS- work with agriculture, technical and funding

ACOE - Wetlands engineering and permits

EPA- Water quality, permitting

NMFS- Salmonid technical assistance

Blue River Stewards – Community outreach, organizing events

Happy Cow – Technical assistance re: cattle operations and agriculture

State DNR- monitoring

Big Blue Mountain Tribe of Indians – Cultural and traditional knowledge, project implementation

State Department of Fish and Game- Contaminants Biologist

Irrigation district- knowledge of infrastructure and needs

Describe tools (e.g., conservation easements, prescribed fire) in the toolbox:

NRCS Incentive Programs – Farm bill \$

USFWS – Refuge staff, equipment, and technical experience

Tribe - Traditional knowledge

Local contractors, community to grow butterfly host plants

MOU

Bluegrass Technical Institute for technology and engineering

Prescribed fire

List restoration alternatives that meet the goals and objectives:

\*Restore the Big Blue River ecosystem to benefit associated wildlife species and provide services to the community.

Options	Alt A	Alt B	Alt C	Alt D	Alt E
move gates				x	
remove gates		x	x		x
move levee to farm border				x	
remove invasives		x		x	x
return flow pattern			x	x	x
remediate oil spill		x	x	x	x
remove levees					x
erosion control				x	x
irrigation efficiency			x	x	x
Recreation infrastructure		x	x	x	x
riparian restoration			x	x	x
conifer removal/replant oaks				x	x
storm drain control			x	x	x
fuels reduction			x	x	x

List and discuss affected environment, consequences, and their significance (e.g., biological, cultural, and socioeconomic):

No Action:

- Continued degradation of watershed and estuary. Community problems persist and worsen.

Alternative B:

- Flood potential and salinity encroachment increases, at least in the short term.
- Potential impacts to Organic beef farm.
- Estuary improvement.

Alternative C:

- Improves sinuosity, floodplain connectiveness, and overall health of fresh water system.
- Flood potential and salinity encroachment increases, at least in the short term.
- Improved health of estuary.

#### Alternative D:

- Improved overall health of the Big Blue River Watershed ecosystem and associated species.
- Benefits to community, including water quality/quantity, recreation, and ecosystem services.
- Potential for removal of levees and tidegates pending successful establishment of estuarine vegetation.
- Major economic incentives to communities.

#### Alternative E:

- Flood potential and salinity encroachment increases, at least in the short term.
- Improved overall health of the Big Blue River Watershed ecosystem and associated species.
- Benefits to community, including water quality/quantity, recreation, and ecosystem services.
- Potential for removal of levees and tidegates pending successful establishment of estuarine vegetation.
- Major economic incentives to communities.

List barriers/challenges to restoration, to any of the restoration alternatives (e.g., social, cultural, technical, financial): How might you address the barriers /challenges in your plan?

- Very large in scope, logistical difficulties
- Funding
- Incidental take of Endangered Species
- Establishment of native species
- Climate change
- Sensitivity to cultural resources
- Opposing landowners

Compare alternatives and select alternative best meeting the objectives:

NEPA comparison of alternatives:

- Environmental consequences to waters
- Project purpose
- Logistics
- Cost
- Technology

	Env Cons H2O of US	Purpose	Logistics	Cost	Tech	Sum
Alt A	?	?	?	?	?	?
Alt B	?	?	?	?	?	?
Alt C	?	?	?	?	?	?
Alt D	?	?	?	?	?	?
Alt E	?	?	?	?	?	?

**Selected: D**

**Reasoning- Maximum ecological and community benefits with minimal likelihood of negative consequences to the community.**

Describe monitoring and success criteria (e.g., SMART), describe adaptive management strategy (e.g., climate change):

- River/Water monitoring:
  - o DO: Annual increase until maximum capacity
  - o Suspended solids: Reduce by 30% over 10 years
  - o Nitrogen load: Reduce by 30% over 10 years
  - o LIDAR used to assess dynamic river changes , i.e. sinuosity, floodplain connectivity, deposition
- Wildlife:
  - o Vegetation surveys: Decrease invasives by 70% within 5 years, increase riparian habitat by 20 miles over the 100 mile stretch of river restoration
  - o T&E Surveys:
    - Trend of increasing salmonid redds over following 10 years, or until capacity is met.
- Recreation:
  - o Seasonal recreation use surveys over 5 year period.

List anticipated permits and compliance (e.g., Section 106 Cultural Resources ):

Clean water act : 401 and 404 because of dredge material

ESA Section 7

NHPA: Section 106

USACE

DSL

....Literally, every permit that would ever be needed for restoration purposes

Identify funding sources (e.g., matching, in-kind):

Oil Spill funding (OPA)

Forest Service Health Initiative

Farm Bill Funding

WaterSMART (BoR, irrigation) funding for irrigation improvement

Wildlife grants

Watershed enhancement board

USFS

BIA and local tribes

NRDAR