

# Climate-Smart Tools to Protect California's Bay-Delta

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Supported by the funders of the  
PPIC-CalTrout Ecosystem  
Fellowship

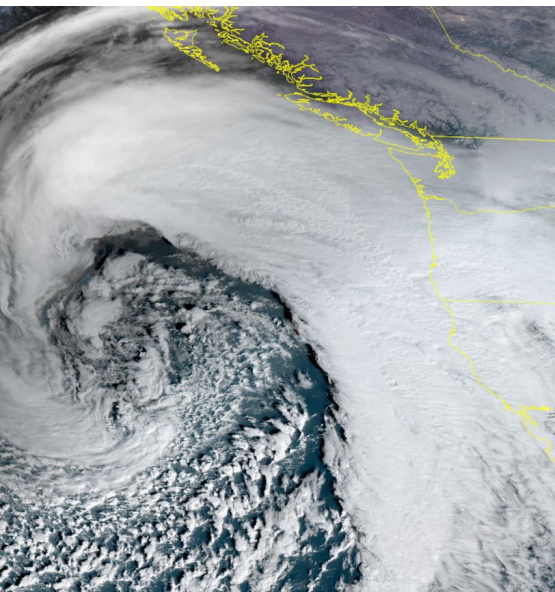


**PPIC**

PUBLIC POLICY  
INSTITUTE OF CALIFORNIA

**PPIC WATER POLICY CENTER**





**TIME  
HIGHS**

**Woodland Hills** **121°**  
Records since 1949 2020  
The 121° degrees today at W...  
highest all-time temperature...  
official site in L.A. County.

**Paso Robles** **117°**  
Records since 1948 2020  
The 117° degrees today at Pa...  
highest all-time temperature...  
official site in San Luis Obispo

**OTHER SERVICE**  
ERIC ADMINISTRATION  
ard CA

# Toolbox Framework



Habitat  
Support

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Species  
Support

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Contingency  
Actions





# Strategy 1: Habitat Support

Flow

Diversity

Increased Food

Temperature  
Management

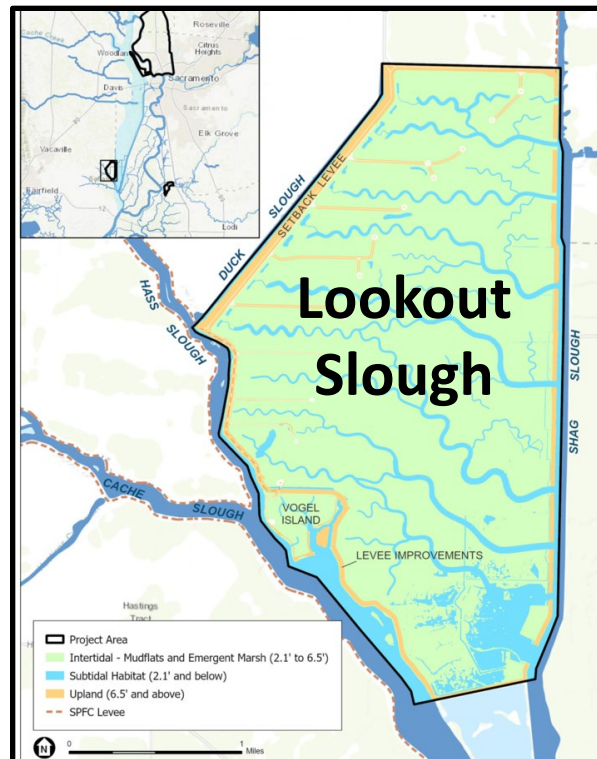
Focused  
Management  
Zones

Invasive Species  
Control

Substrate  
Improvements

# Yolo Bypass Floodplain

## Habitat Restoration



Flow

Habitat  
diversity

# Habitat Restoration



**Pixie Drone**

Invasive  
Species  
Control



# Strategy 2: Species Support



Distribution

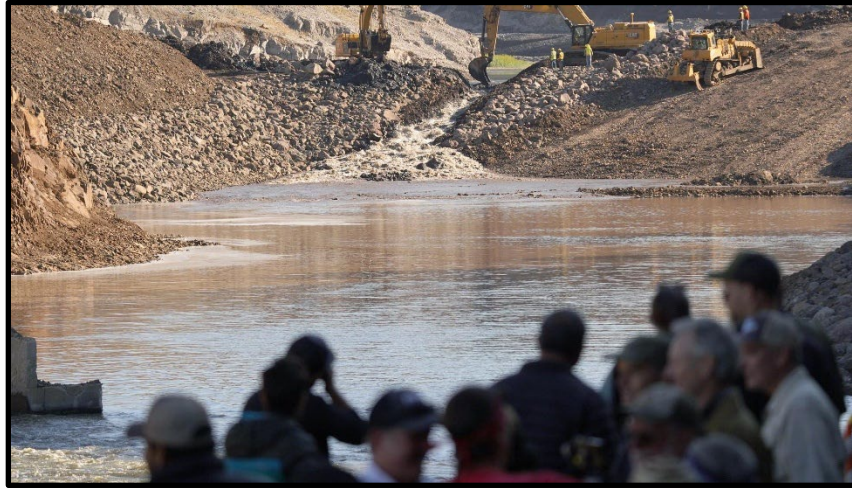
The diagram consists of three rectangular boxes arranged in a triangular pattern. The top-left box is red and contains the word 'Distribution'. The top-right box is green and contains the word 'Genetic'. The bottom-center box is black and contains the word 'Population'. All boxes have a thin blue border.

Genetic

Population



# Klamath River Dam Removal



Historical  
Habitat Access



Habitat  
support

Distribution  
Support



Population  
Support  
Example:  
Thiamine  
Injections



Remediate  
Diseases

# Shellfish Breeding

Genetics



Assisted  
Evolution





# Strategy 3: Contingency Actions

Historical  
Conservation

Seed Banks

Tissue Archives

Genetic Libraries

Plan for Novel  
Ecosystems and  
Species Loss



# Frozen Zoo

## Contingency Planning

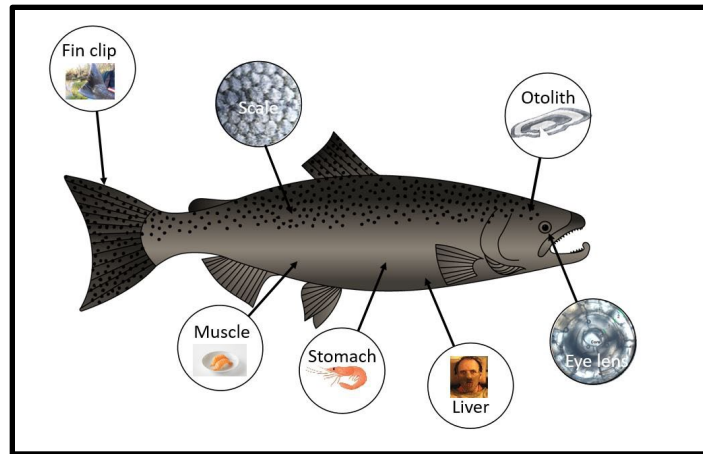


Seed Banks

Tissue  
Archives

Genetic  
Library

Contingency  
Planning  
Example:  
Salmon Tissue  
Archives and  
Genetic Library



Seed Banks

Tissue  
Archives

Genetic  
Library

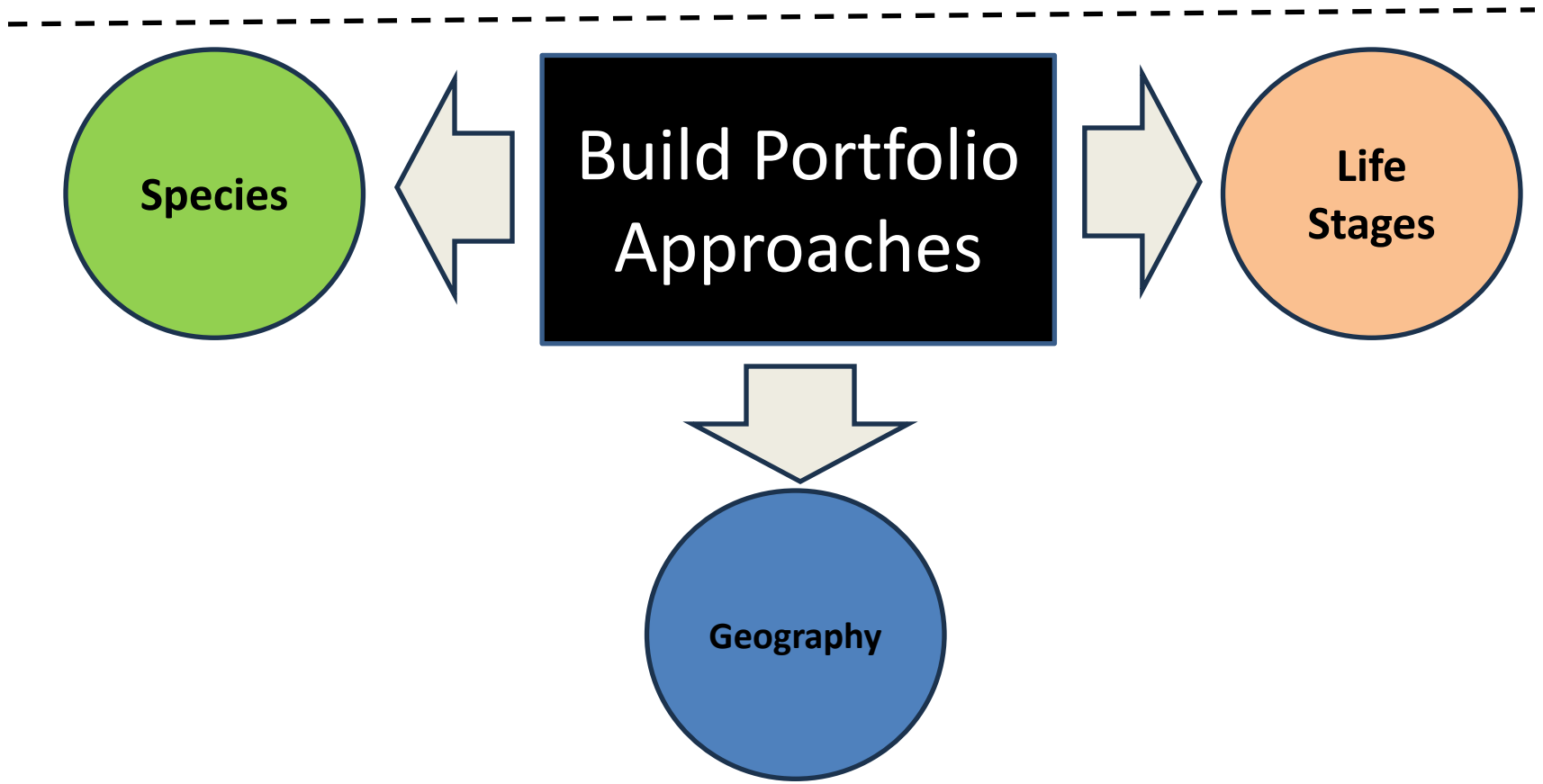
# Develop Climate Smart Conservation Plans





# Key Recommendations

Develop  
Climate Smart  
Conservation Plans



# Key Recommendations

Develop  
Climate Smart  
Conservation Plans

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Build Portfolio  
Approaches

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Contingency  
Actions



Start  
Many Actions  
Now



Pilot  
Projects