



Central Valley Habitat Exchange

**Creating Voluntary Environmental Markets and Science-based solutions for
People and the Environment**

**ACES Conference
December 10, 2014**

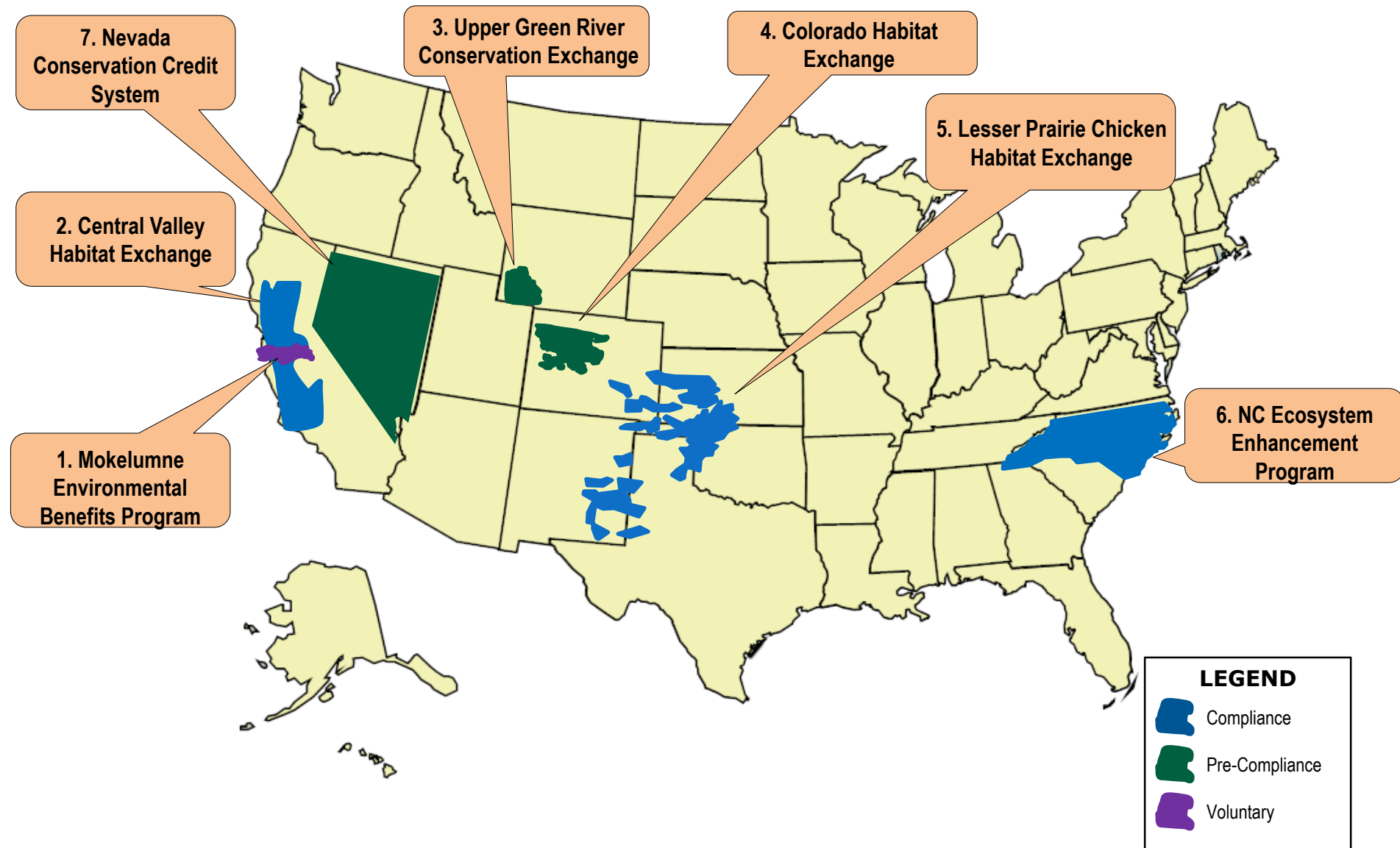
EDF's Vision



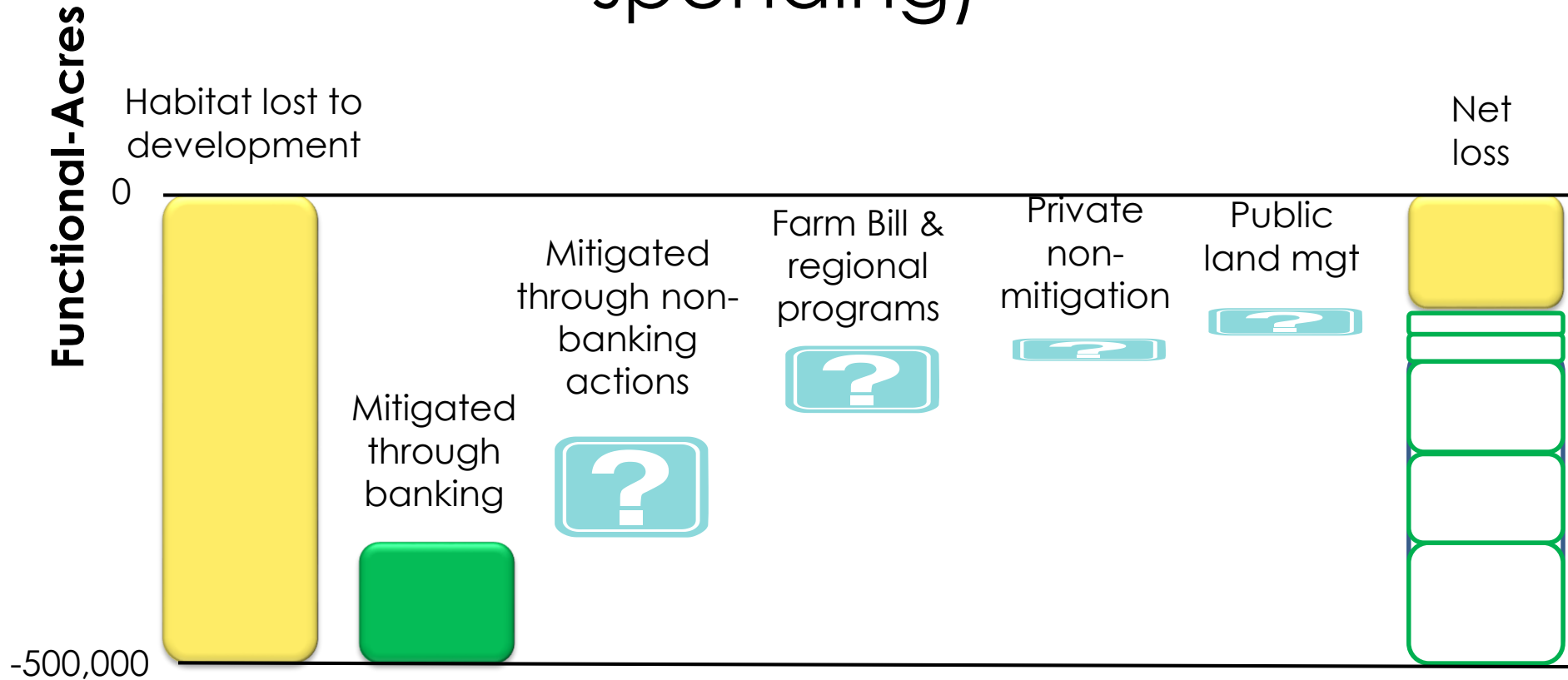
Reverse habitat loss

- Incentivize outcomes/create profit
- Increase amount and effectiveness of restoration
- Better EROI

Habitat Exchanges in Development

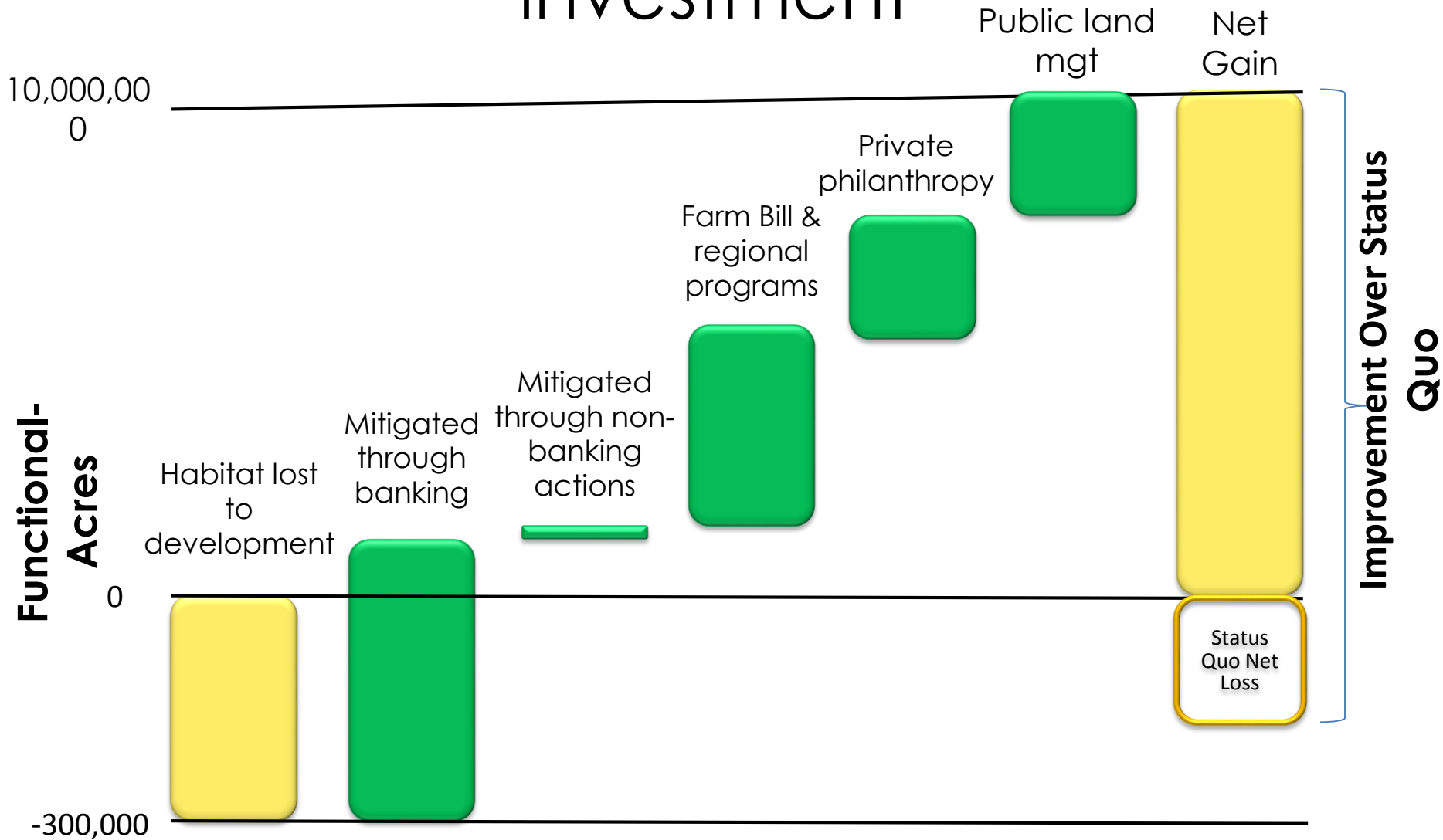


Problem: Net loss of habitat annually (despite \$20 billion in spending)



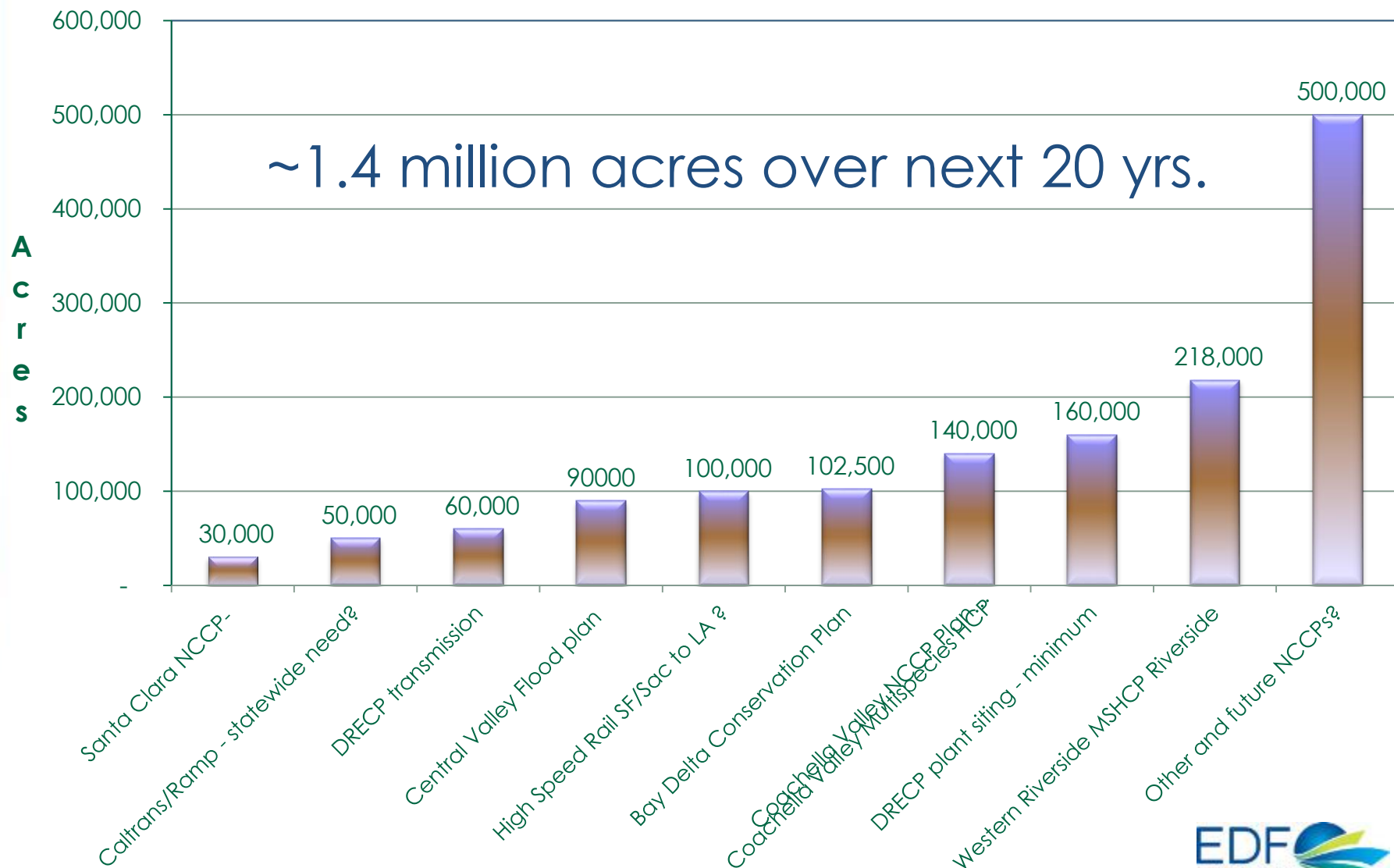
Numeric values are rough estimates for illustration only

Vision: Performance based investment



Numeric values are rough estimates for illustration only

Need: Significant Conservation & Mitigation Demand Projected in CA



Exchange Goal

Framework for effective habitat conservation in the Central Valley that:

- Actively engages farmers and ranchers, on a voluntary basis
- Contributes to fulfillment of state conservation goals and mitigation obligations
- Improves ecosystem function.



Photo: Matthew Grimm

CVHE VISION

- Public/private sectors engage in accountable and transparent investments in sustainable resource management.
- Landowners compensated for management/restoration that results in measurable improvements.
- Healthier habitat (streams, floodplains and riparian corridors) - resulting in jobs, cost savings, and other societal benefits.



American Rivers
Rivers Connect Us®



Point Blue
Conservation
Science



Audubon CALIFORNIA



CALIFORNIA



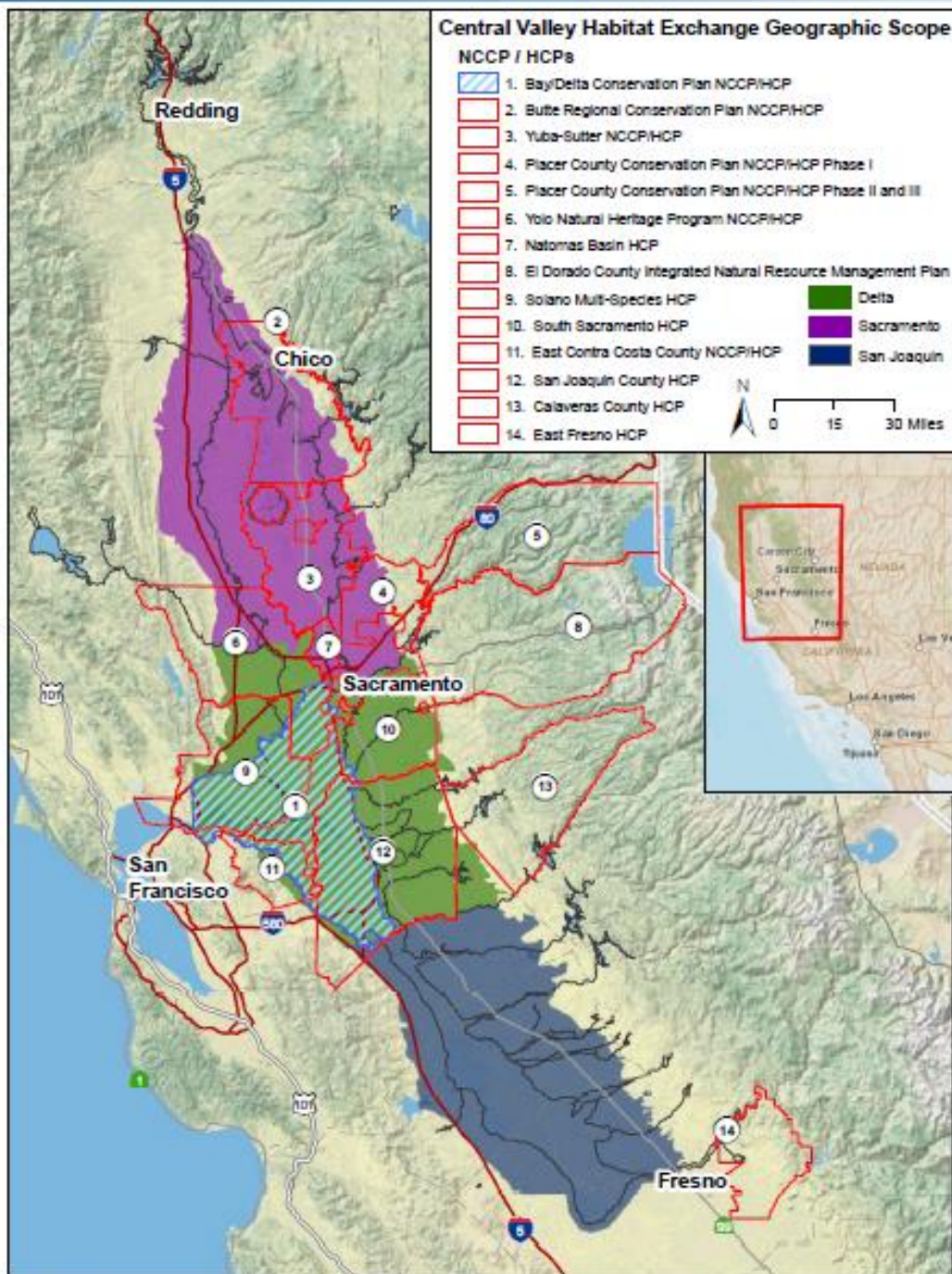
FARM BUREAU
FEDERATION



SACRAMENTO - SAN JOAQUIN

DELTA CONSERVANCY

A California State Agency



Exchange Program Area

Current Needs

- Publicizing habitat mitigation and conservation needs of the HCP/NCCPs to potential willing sellers to secure sufficient habitat supply at an appropriate time.
- Ability to consistently prioritize habitat projects and available funding.
- Comprehensive understanding of mitigation and conservation activities across the Central Valley.

Exchange Value

Tool in the toolbox to help meet goals and objectives of current and future HCP/NCCPs:

- Expanding market for conservation delivery to HCPs (i.e., the Exchange as a conservation broker).
- Systematic and consistent metrics to help evaluate cost benefits for HCPs.
- Third party tracking to coordinate mitigation and conservation activities across the Central Valley.

Consistent Metrics

Multi-Benefit Habitat Quantification Tool

Landscape Attributes & Processes



Habitat Benefits

Water
Quality



Frequency,
duration of
inundation



Landform &
structure



Riparian
songbird
Habitat



Waterbird
Habitat



Salmon
Habitat



Tracking, Reporting & Coordination

The Exchange Registry & Annual Reports

TEMPLATE

2014 MOKELUMNE PROGRAM PERFORMANCE REPORT



MOKELUMNE WATERSHED ENVIRONMENTAL BENEFITS PROGRAM

Featured Project: Heritage Oak Winery Riparian Restoration & Streambank Stabilization

PROJECT AT A GLANCE

Project Objectives: 1) Prevent sedimentation into the Lower Mokelumne River and maintain cold instream water by increasing shading to improve habitat for salmonids and 2) Enhance riparian corridors with native plant communities that will maximize the recovery of listed threatened, endangered and sensitive bird species.

Restoration Activities: 1) Streambank stabilization at two severely eroded locations, 2) Invasive species removal along the riparian corridor, 3) Construction of a setback levee, and 4) Native riparian vegetation planting.

Expected Benefit Units: 22

Project Size: 7 acres

Project Location: Lower Mokelumne Watershed, San Joaquin County, 10112 E Woodbridge Rd, Acampo, CA 95220

Land Ownership: Heritage Oak Winery

Project Funding: LFRFB Partners for Fish and Wildlife Program, NRCS CA Environmental Quality Incentives Program, EBF/ALD Partnership Fund

Estimated Project Cost: \$77,240.00

Implementation Timeline: Winter 2013 – Spring 2015

Background

The objectives of the Heritage Oak Winery Riparian Restoration and Streambank Protection Project are to restore and enhance the riparian ecosystem on seven

acres of private fallow and marginal land in the Lower Mokelumne watershed in order to sedimentation into the Lower Mokelumne maintain cold instream water by increasing improve habitat for salmonids and 2) erode corridors with native plant communities maximize the recovery of listed threatened, and sensitive bird species. In addition, improvement of ecosystem services, the project benefit the economic viability of the farm through the improvement of new recreational agglomeration. Furthermore, this effort will be the measurement of environmental outcomes restoration practices which could result in payments for farmers through the Watershed Environmental Benefits Program.

Project Development

Project development is organized in two phases. One, invasive Himalayan Blackberry removed from four riparian acres on the river farm. This vegetation will be replaced by native plant species which will enhance it consider and stabilize the streambank. In the second streambank, one on the western side and the other on the southern side of the farm biotechnically stabilized and restored.



MOKELUMNE PROGRAM PROJECT SUMMARY TABLE

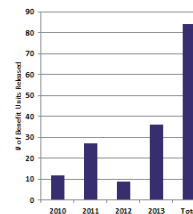
The following table includes all active projects participating in the Mokelumne Program as of September 2014. New projects approved by the Mokelumne Program are included in the first three rows of the table. All benefit unit numbers were calculated using Version 1.0 of the MQE. All project information included in this section, with the exception of the Heritage Oak Winery, is false and included for demonstration purposes only.

| | DATE PROJECT APPROVED | PROJECT END DATE | PROJECT SIZE | BENEFIT UNITS RELEASED | EXPECTED BENEFIT UNITS | ECOSYSTEM SERVICE BREAKDOWN |
|-------------------------|--|---|---|--|---|--|
| | One project was approved without releasing benefit units | One project is scheduled to begin producing benefit units | Total number of acres of the project site | Total number of benefit units released to date | Total number of benefit units expected to be developed over the lifetime of the project | Percentage of each benefit unit that benefits each of the following ecosystem services |
| | | | | | | BIRD FISH FLOOD SHADE |
| Vino Farms | June 2013 | March 2013 | 9 acres | 14 | 40 | 30% 30% 0% 0% |
| Lodi Oak Ranch | March 2013 | July 2013 | 19 acres | 14 | 35 | 12% 35% 20% 13% |
| Heritage Oak Winery | Feb. 2013 | Oct. 2013 | 7 acres | 8 | 22 | 42% 30% 5% 20% |
| Applegate River Ranch 4 | Sept. 2011 | Dec. 2011 | 7 acres | 3 | 20 | 10% 62% 3% 25% |
| Lover Park Drive | July 2011 | July 2014 | 5 acres | 2 | 11 | 37% 12% 30% 21% |
| McCane Mountain Farm | July 2011 | July 2011 | 29 acres | 9 | 37 | 25% 42% 11% 21% |

BENEFIT UNITS RELEASED

Restoration projects may be awarded benefit units based on the completion of actions outlined in that project's approved Customized Management Plan. Once a project has been fully implemented on the project site is being maintained to the expected level of function, the Mokelumne Program may release all remaining benefit units for which the project site is anticipated to generate over its life. Benefit units may also be released at set intervals during the project's life upon verification that habitat quality is meeting defined performance criteria. Benefit units released are valid for the duration of the project's life.

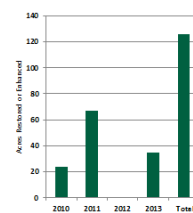
36 benefit units were released in 2013 for the eight active projects participating in the Mokelumne Program. This is greater number of benefit units to be released in a single year since the Mokelumne Program was adopted. This increase can be attributed to 1) projects being implemented as planned by Landowners, and 2) riparian habitat function responding positively to the restoration actions.




ACRES RESTORED OR ENHANCED

While Benefit Units are a direct measure of functional acres, each project often includes a much larger project area on which restoration and enhancement activities take place. This measure of total acres of project implementation is helpful for understanding the geographic scope of the Mokelumne Program and can be used to develop a ratio of benefit unit release to project size to get a better understanding of project effectiveness.

36 acres of projects were added to the Mokelumne Program in 2013 bringing total project acreage for the Mokelumne Program to 126 acres. Of these 36 acres, 21 acres are part of the Hoffman Project which was approved to start generating benefit units in 2013. Total annual project acreage has shown a steady, consistent increase since 2010.



A Swainson's Hawk is shown in flight against a clear blue sky. The hawk's wings are spread wide, showing a pattern of brown and white feathers. The bird is positioned diagonally across the frame, with its head turned slightly to the right. The background is a solid, light blue sky.

Exchange Pilot Project

- Timeline: One year (Mar 2014 to Mar 2015)
- Target species: Swainson's Hawk
- Project site: Yolo County
- Major goal: Demonstration of concept



'Storymapping'

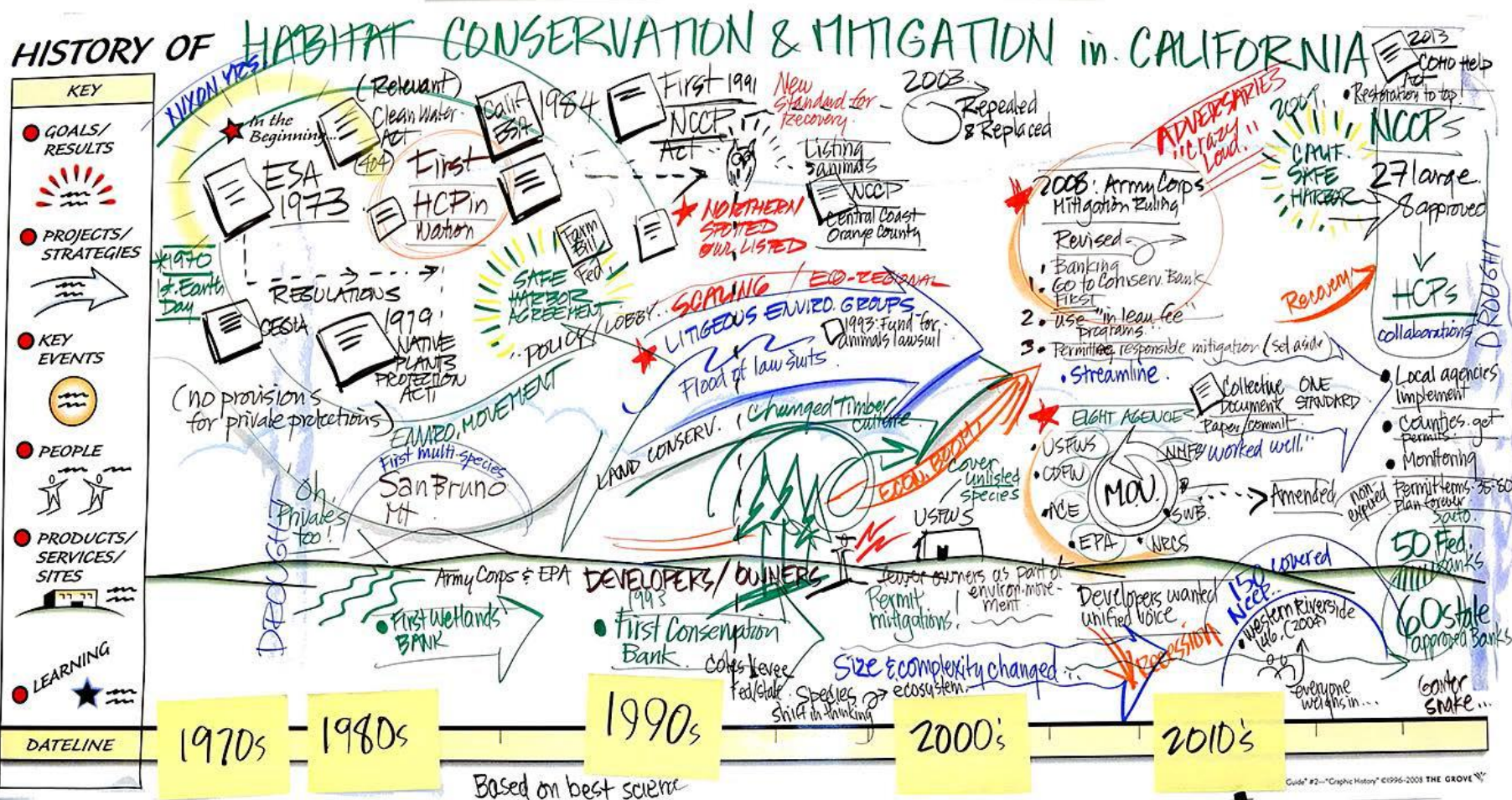
CVHE Storymap Workshop Notes 11-18-14

*Gisela Wendling
Facilitator*

*American River Parkway Foundation
PDF report from The Grove Consultants Int'l*



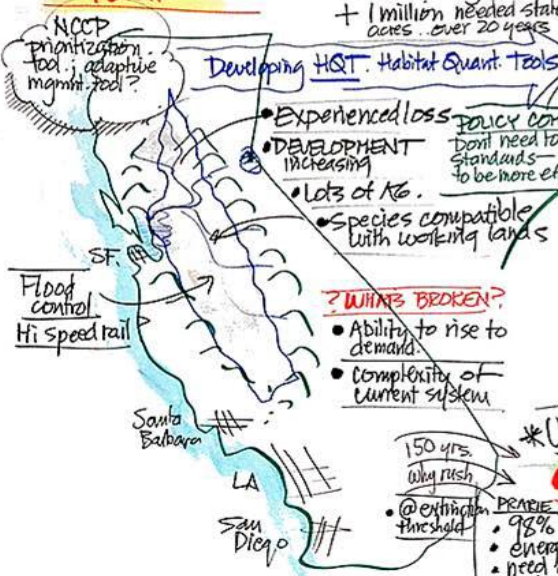
'Storymapping'



CENTRAL VALLEY HABITAT EXCHANGE IDEA

(scope could change)

STARTING POINT



DEVELOPING HQT. HABITAT QUANT. TOOLS

- Experienced loss
- DEVELOPMENT increasing
- Lots of AG
- Species compatible with working lands

WHAT'S BROKEN?

- Ability to rise to demand
- Complexity of current system

150 yrs. why rush
@ extinction threshold

CHALLENGES

- PRAGMATIC CHALLENGES (Conserv. needs)
- 98% private
- energy dev. exploding
- need 12-14k landowners
- order of magnitude increase

PROCESS IDEAS (How to implement)

- NCCP prioritization
- Talking to needs of HCP/NCCP... neutral fiscal role e. 3rd party??
- Talking to N. County... automate HQT tools
- Establish baseline & track
- want to meet any source of demand

POTENTIAL SUPPORTERS

SOLAR DEVELOPERS
Standardized mitigation

*USFWS has NO staff. 1600-6000

- Timing
- Scale
- Most Plans are "too be approved"

Dialogue for UNDERSTANDING

Assume "room for evolving STATUTES"

In Perpetuity now →

PILOT/ Bond Funding on working land... Purify Conservation.

(compliance separate from)

COLLABORATIVE PROBLEM SOLVING

- Perpetuity falls under regs.
- Fully mitigate" falls on developer

Term eventually

Need Central Valley Conservation Strategy
Find places where it might mesh

Re dynamic / permanent needs to be species specific

Rental rates Acquisition

Think REGIONAL context

SAN DIEGO COUNTY 172,000 acres Reserve networks

State funding is very focused. BOND. Endowment. - not so much monitoring.

- How to mitigate NOW & in future
- Don't know what happens after permit

- Easements w/ monitoring don't always work
- Current approach isn't producing outcomes

- Scary to have outside group interpret Statutes
- Reluctance to let go "we are in"

No case law for FULL mitigation

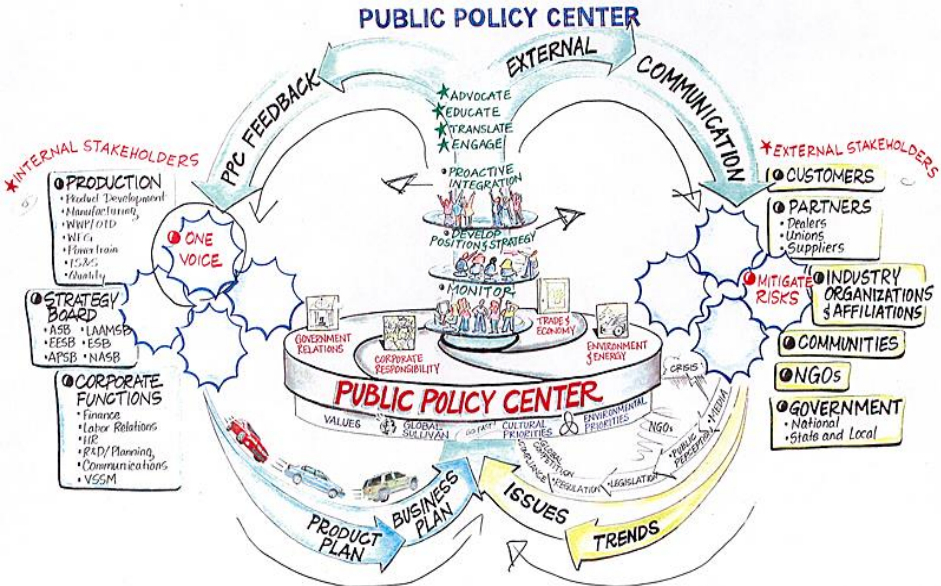
LARGE SITES

TIME to collaborate.

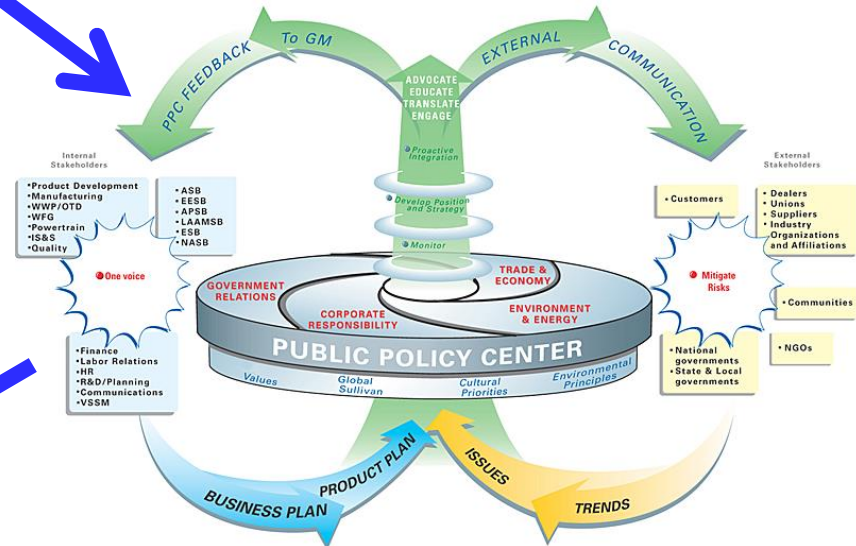
Dialogue for understanding the CVHE



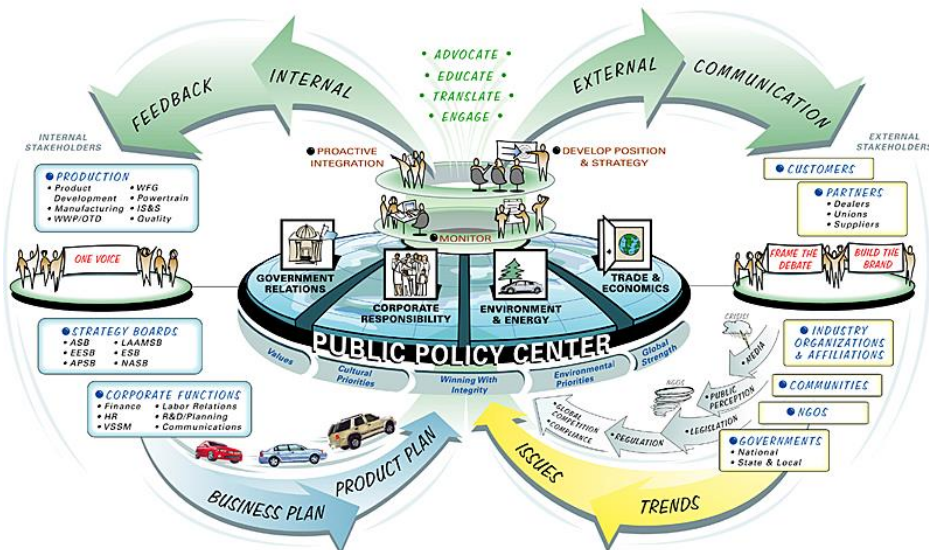
PUBLIC POLICY CENTER



PUBLIC POLICY CENTER



PUBLIC POLICY CENTER



Next Steps

- Take concepts and prove out on the ground
- Expand investment in conservation
- Build out multi-benefit tool
- Pursue partnerships with conservation bankers, HCP/NCCCP's, ag associations, and agencies
- Continue to build support

A man and a woman are standing in a field of tall, dry grass. The man is on the left, wearing a green shirt and a cap, and the woman is on the right, wearing a black top and a light-colored cardigan. They are both looking towards the right. The background is a clear blue sky.

Questions?

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**[https://www.enviroaccounting.com/cvhe/
Program/Home](https://www.enviroaccounting.com/cvhe/Program/Home)**