

Native American Resource Use In the Putah Creek Watershed

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- Archaeology can provide a long view for specialists and managers
- Review of archaeological record for Putah Creek and adjacent areas
- Nature of Native American land and resource use
- Native Americans had an impact on the landscape



Plate 22



The Emperor's Representative, 1911

Photograph by G. S. ...

A. WAPPO





Archaeological Sequence

- Early sites (older than 6,000 years) are deeply buried or eroded away.
- 5,000-2,500 years ago—stemmed or notched spear points.
- 2,500-1,000 years ago—leaf-shaped spear points, circular shell beads.
- 1,000-200 years ago—serrated or corner-notched arrow points, square shell beads, then clam shell disk beads and refuse.



219



531



Mendocino Contracting-stem Projectile Points.



685



654



463



532



592



539



Excelsior Projectile Points.



0



5 cm



4



53



641



591

Serrated



643

Rattlesnake Corner-notched



533

Rattlesnake Triangular



244

Rattlesnake Side-notched



381



Arrow-sized Projectile Points.



0 5 cm



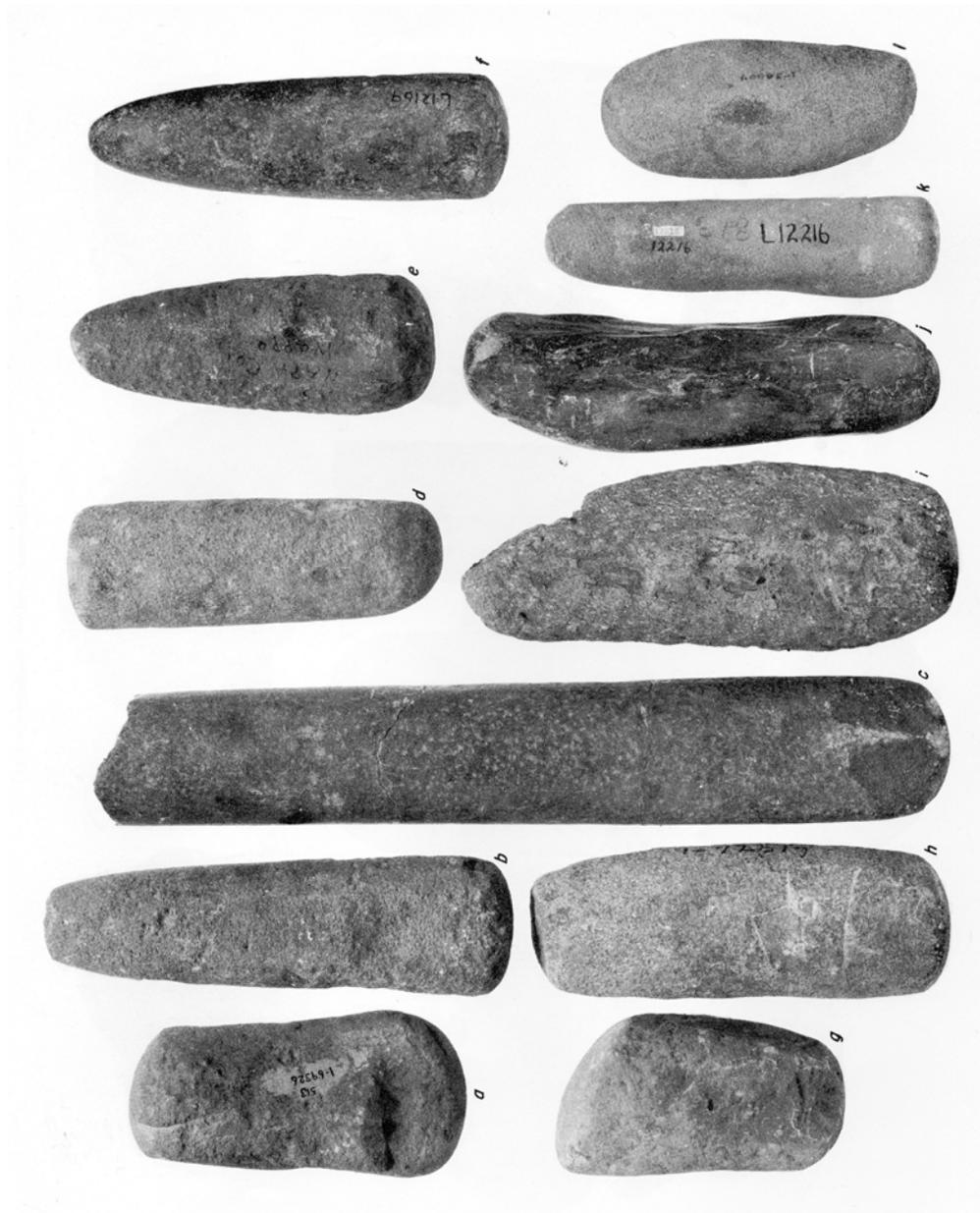


Plate 34. Stone pestles

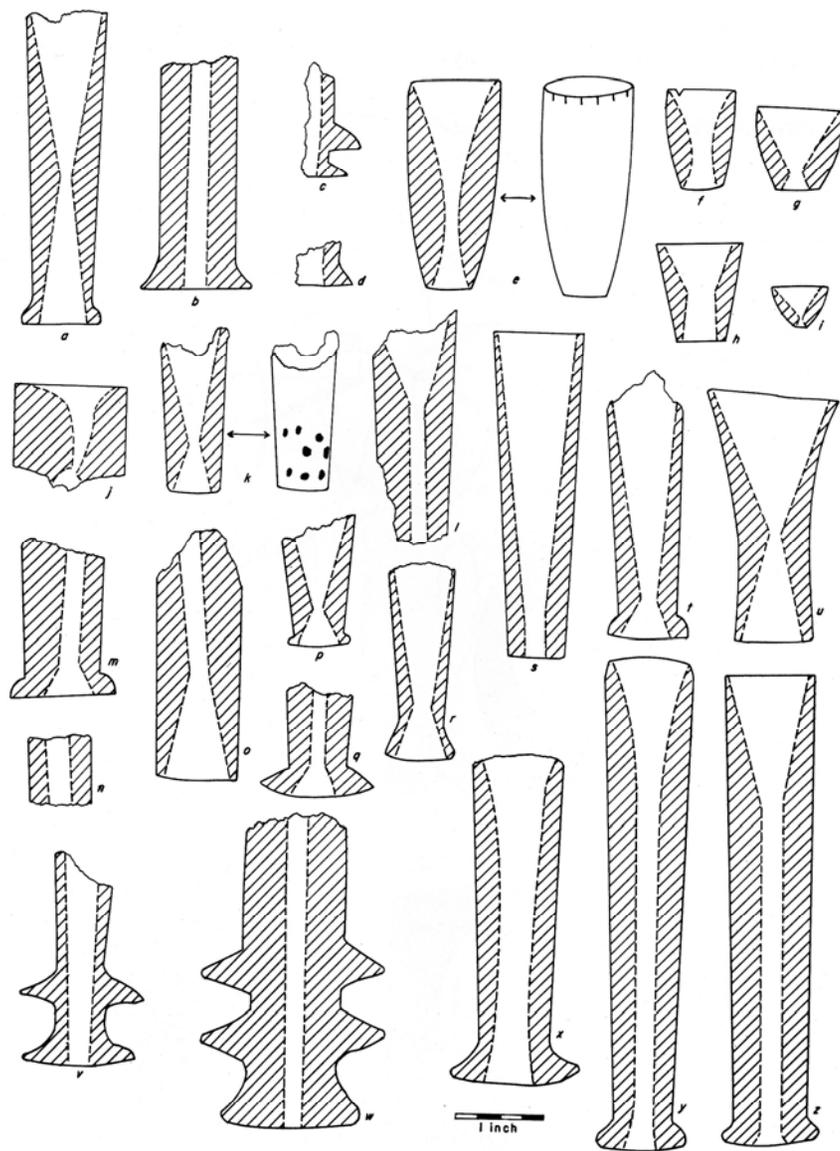


Fig. 4. Stone pipes

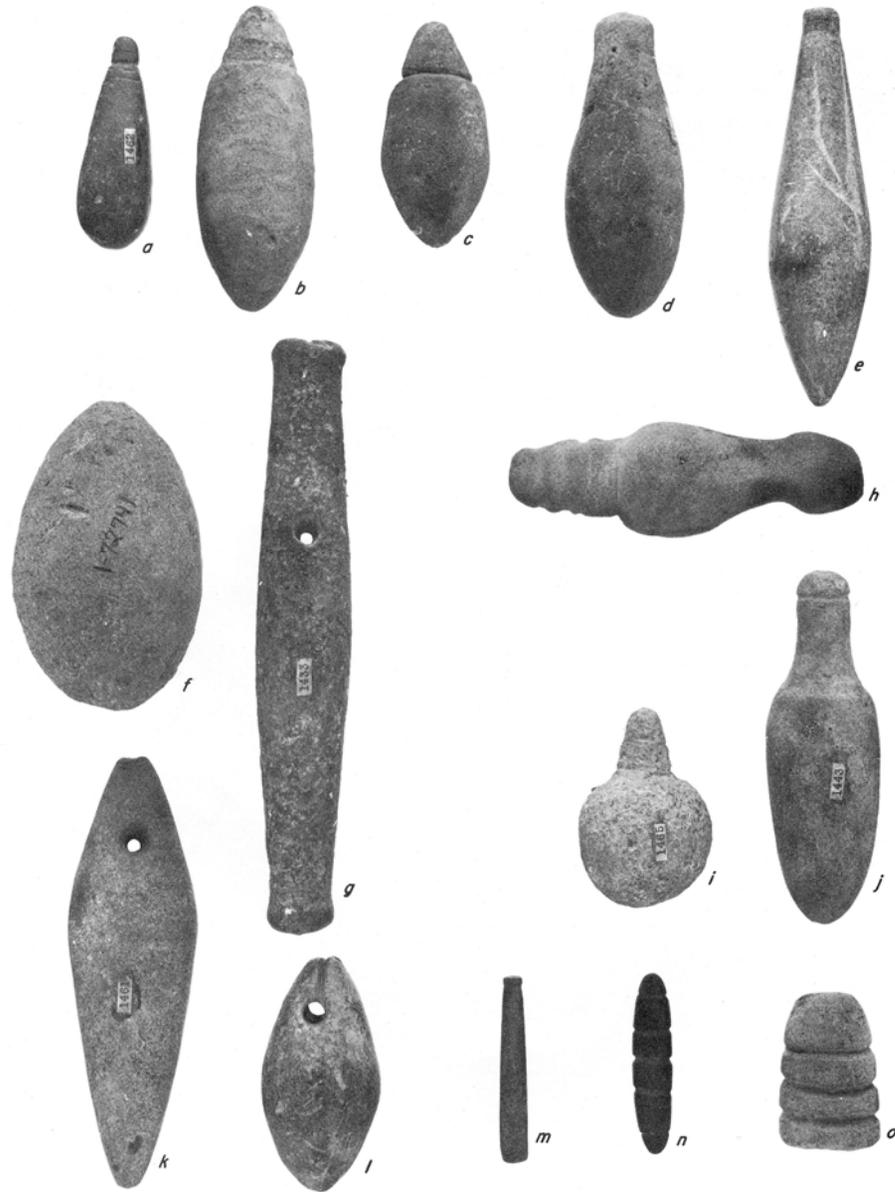


Plate 33. Charmstones from the Napa region

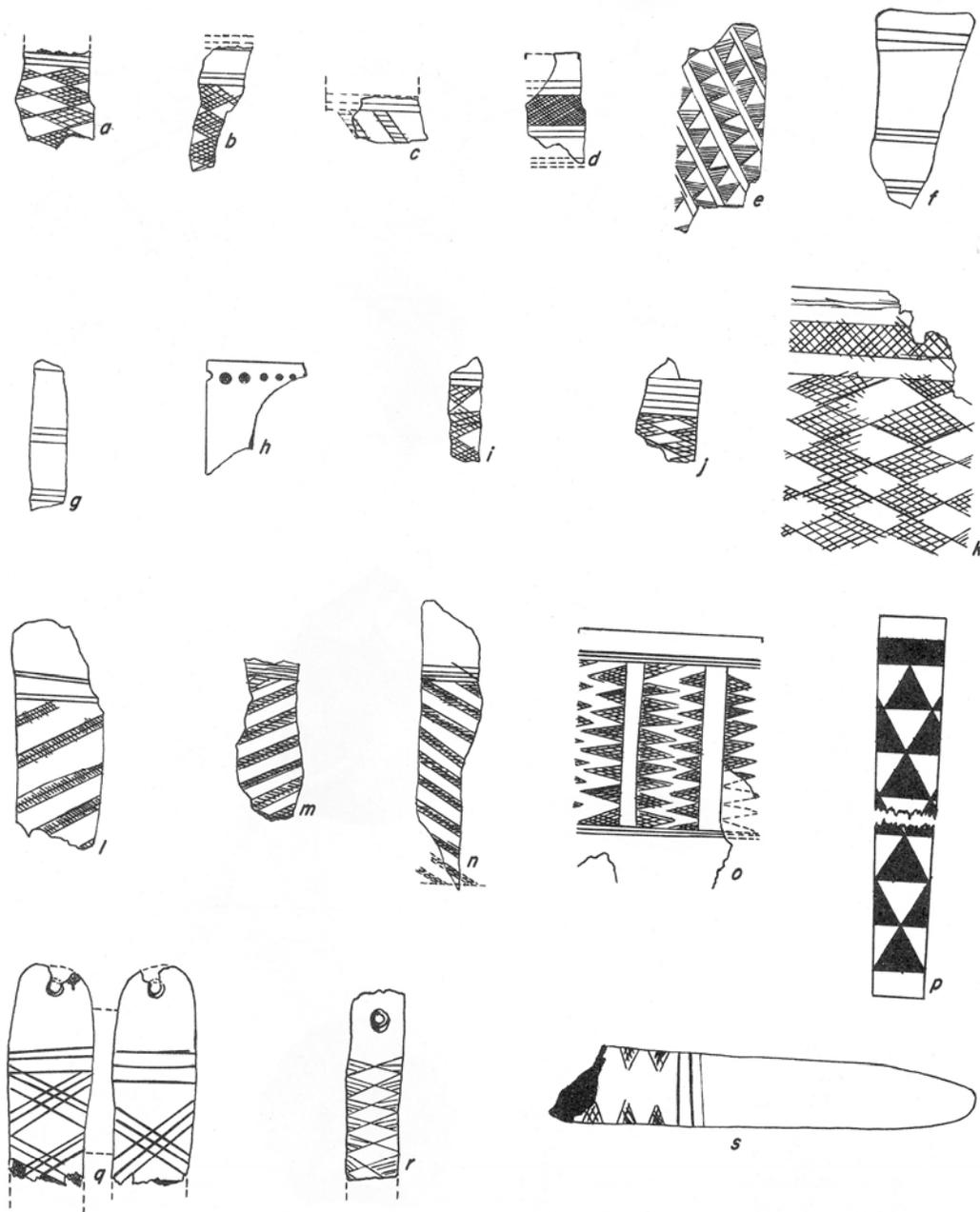


Fig. 11. Incised bone artifacts

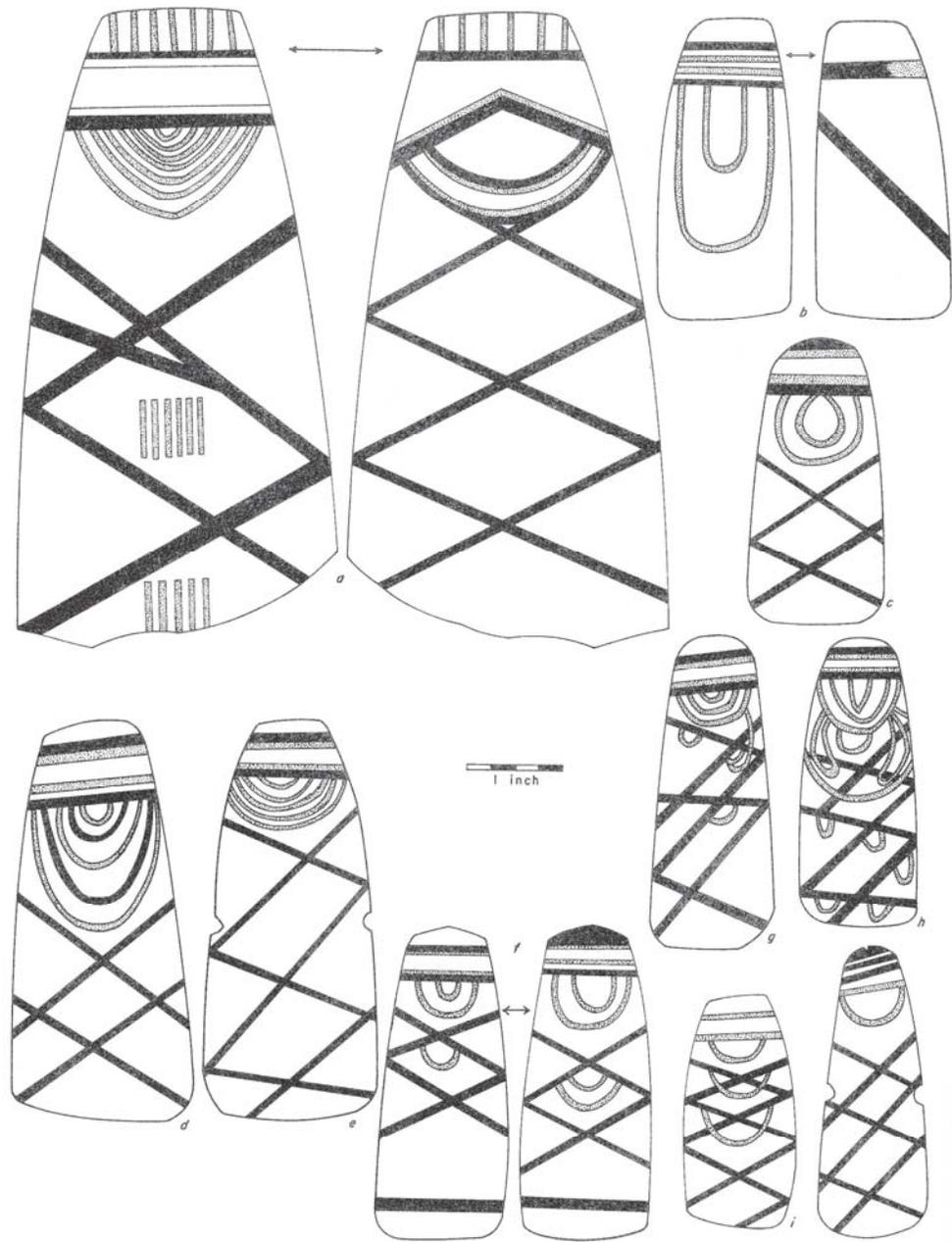
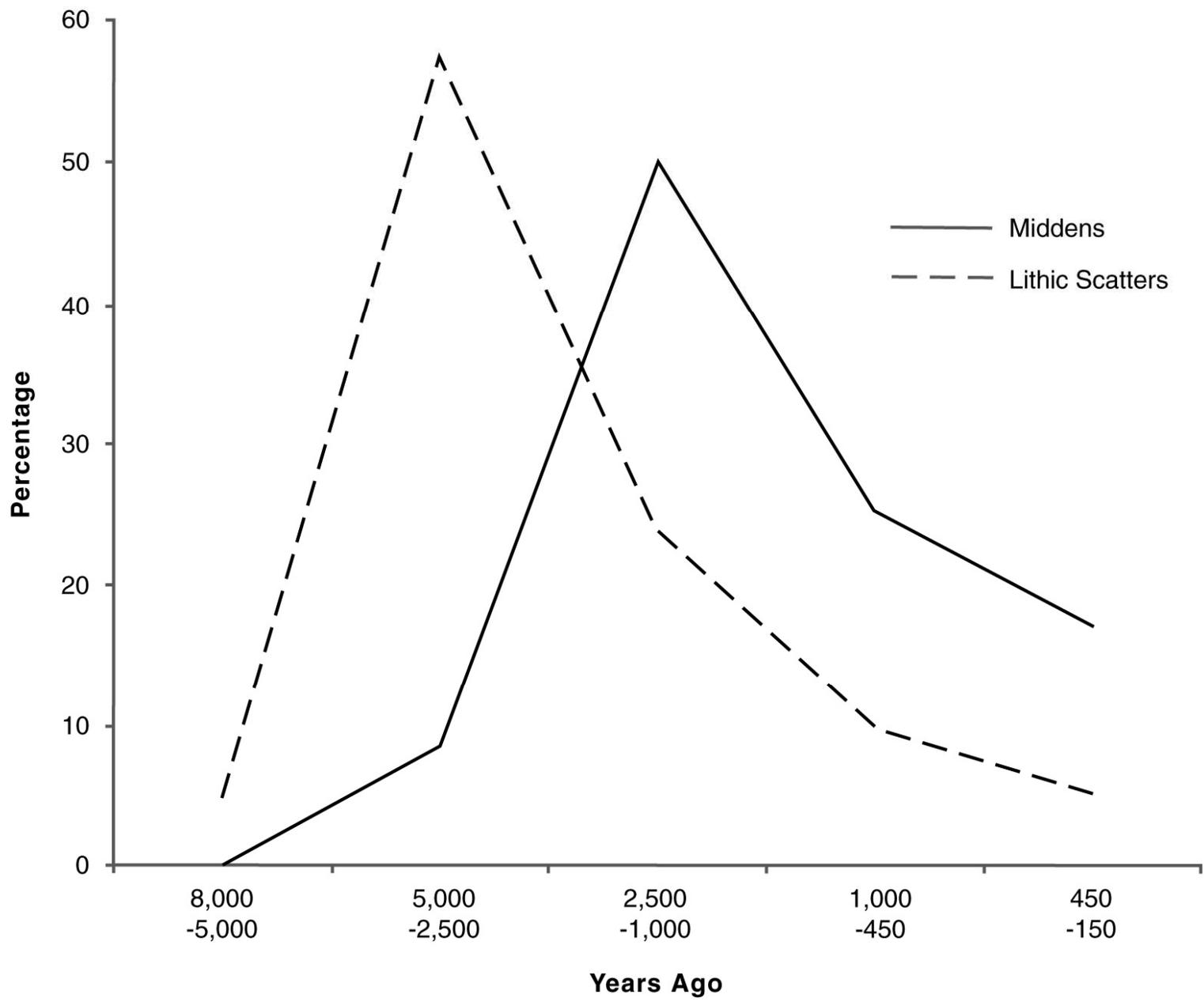


Fig. 3. Painted stone tablets from Peripoli site, site Nap-57

CHANGES IN LAND USE IN NAPA VALLEY

- 5000-2500 years ago:
 - mobile family bands
 - small campsites with few artifacts
- 2500-1000 years ago:
 - beginnings of sedentary life, with acorns as the staple food
 - major villages with abundant artifacts
- 1000-200 years ago
 - mix of large villages and small hamlets



Spear points by site type

	Stem or Notched	Leaf
Village	2	63
Small camp	17	37

Changes in Obsidian Use

5,000-2,500 years ago:

artifact production for domestic use

2,500-1,000 years ago

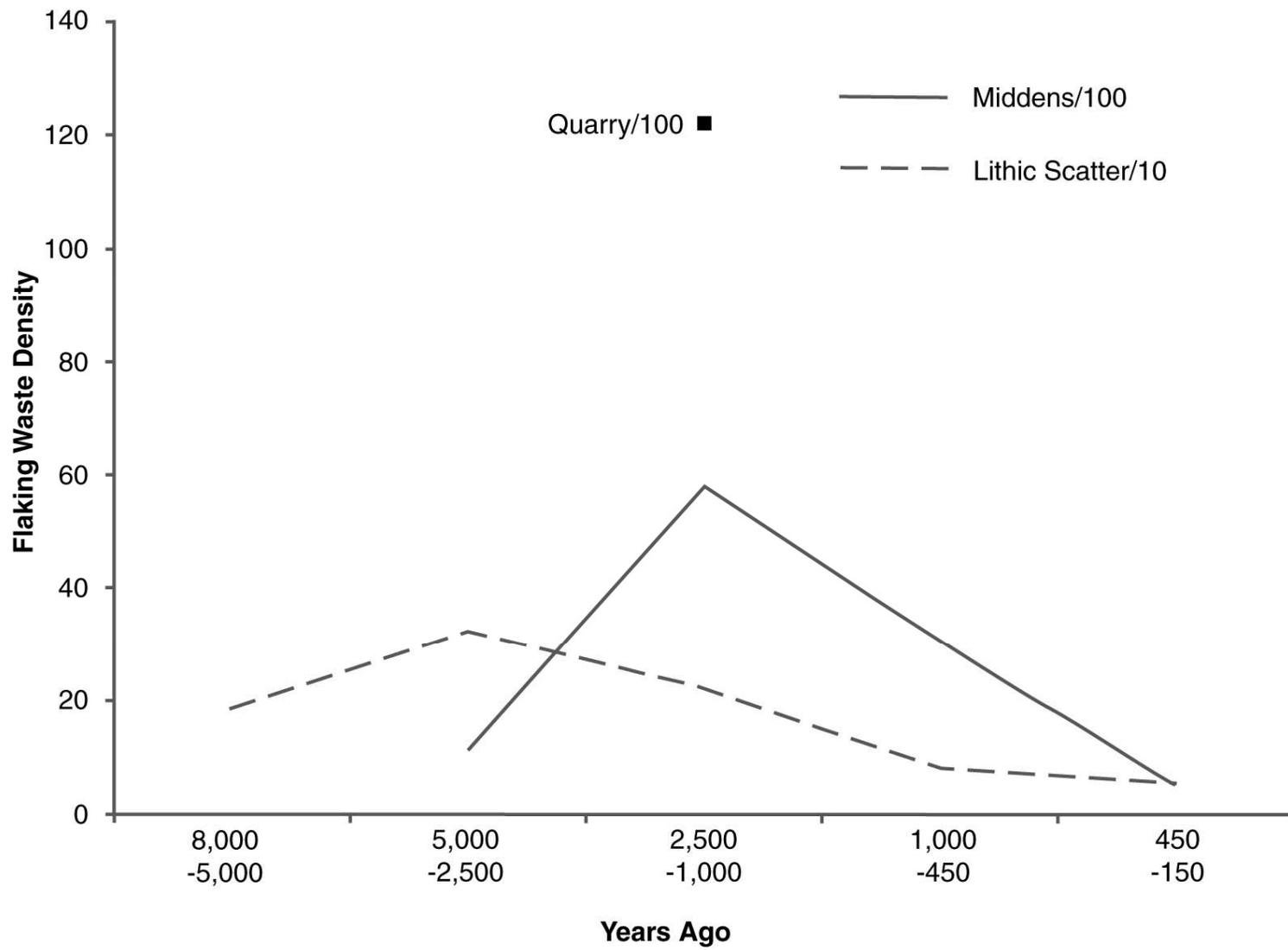
peak use of obsidian quarry

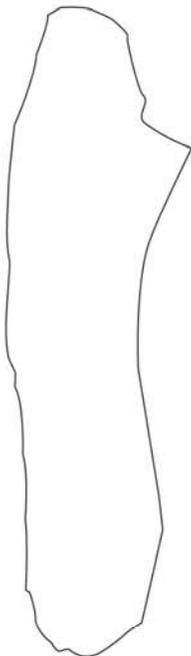
production of standardized preforms for trade

1,000-200 years ago

trading raw cobbles and slightly-worked cores

making finished artifacts in Yolo County, East Bay





a. 2001-4-126
6.9μ



b. 2001-4-199



c. 2001-4-103



Stage-1 (a,c) and -2 (b) Whole Bifaces.



0 5 cm





CHANGES IN DIET

- Acorns = staple after ~2,500 years ago.
- Major shifts around 1,000 years ago:
 - Use of small seeds spikes
 - Use of small fish spikes
 - Deer hunting stays constant despite greater use of more expensive resources
- There is TENTATIVE evidence for larger seeds of two grasses—incipient horticulture??

Counts/Liter
or Percentage

150

100

50

0

Small Fish Bone
Frequency



Small Seed
Frequency



Freshwater
Mussel Proportion



Large Mammal
Proportion



Bay Mussel
Proportion



CA-NAP-261
Upper Archaic (ca. 2000-1000 BP)

CA-NAP-14
Upper Emergent (ca. 450-150 BP)

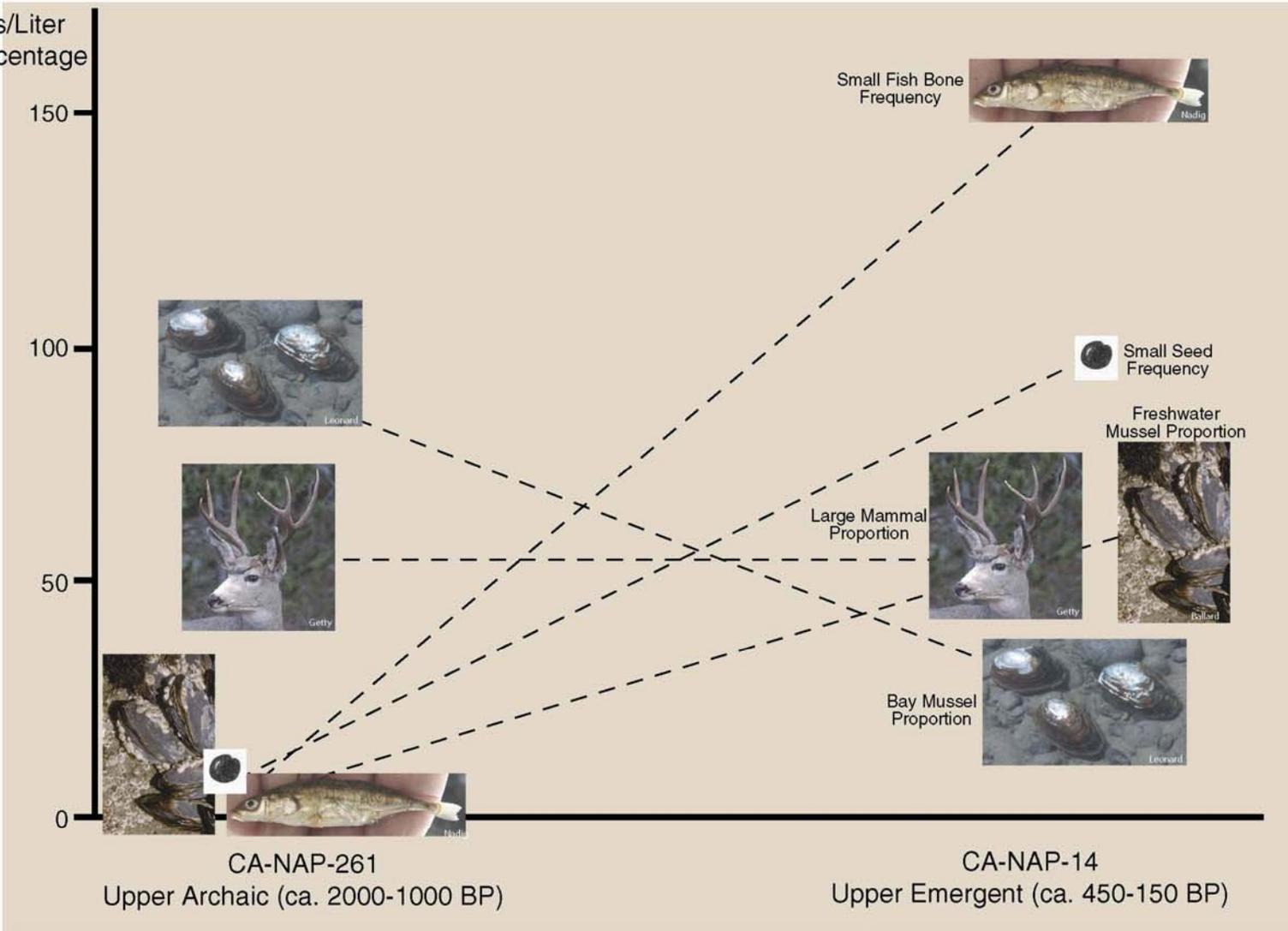
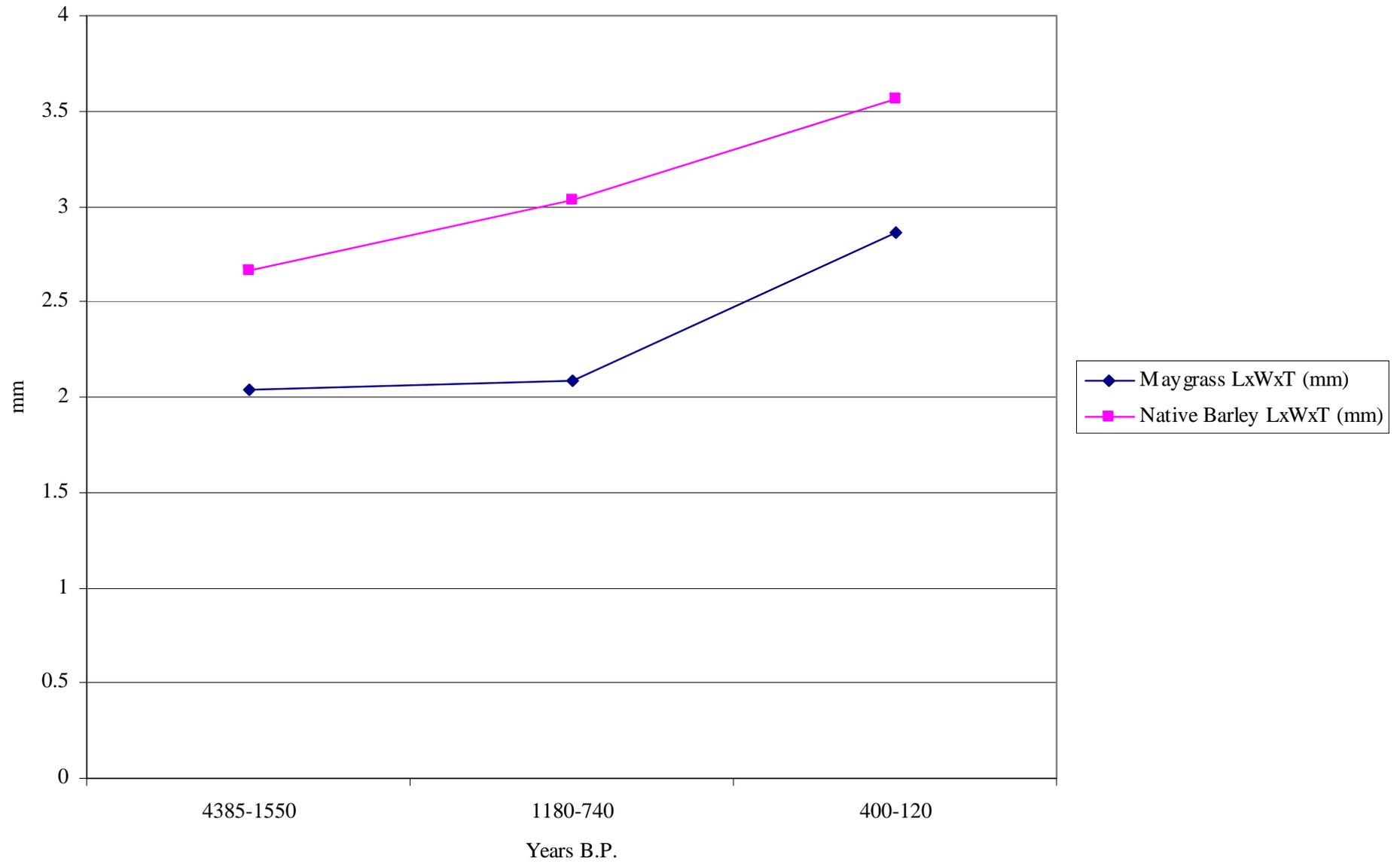
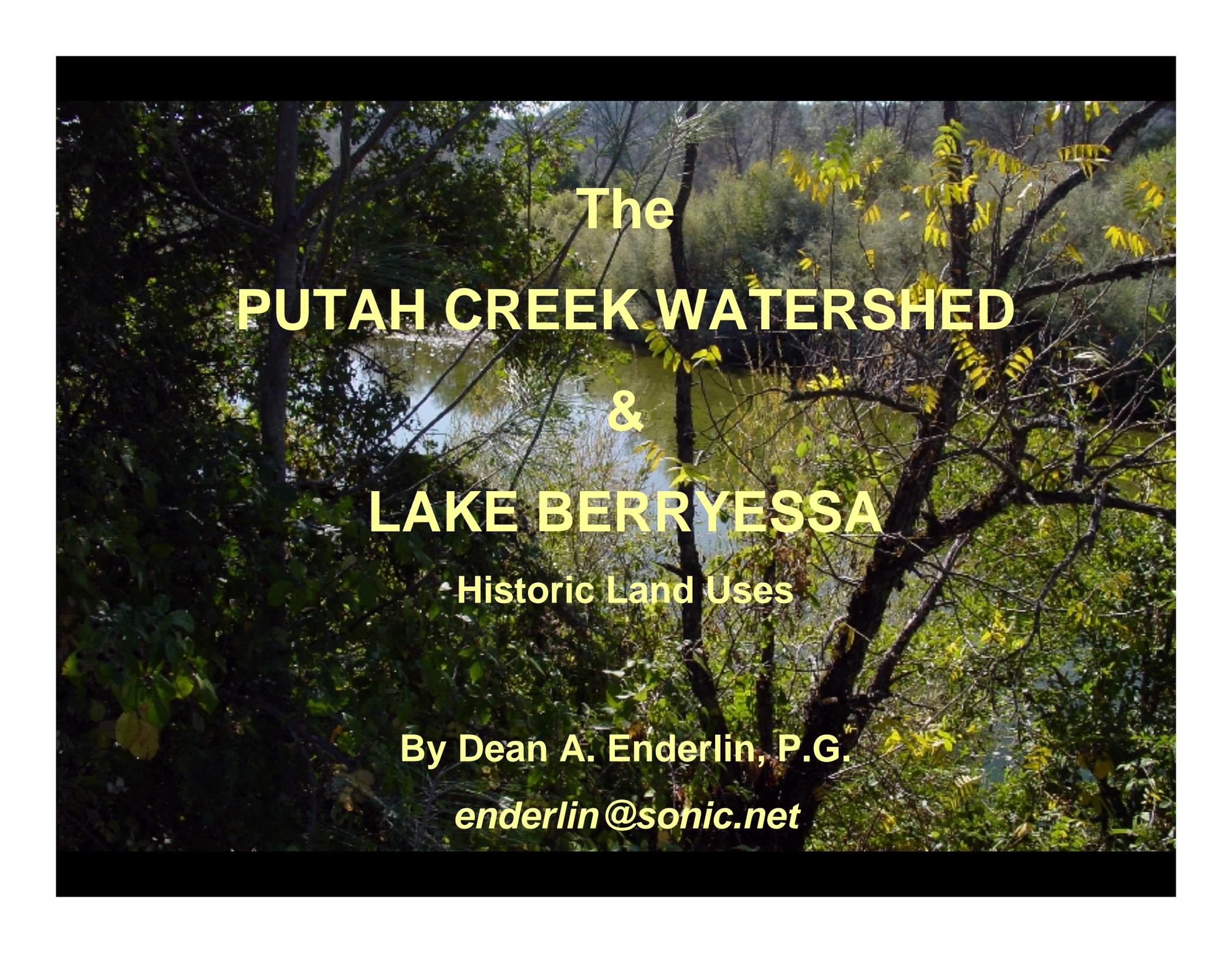


Figure 4.11. Sacramento Valley Maygrass and Native Barley Caryopsis Volume by Phase



Conclusion

- How people distributed themselves on the landscape, used obsidian, and gathered and processed food changed markedly at least twice.
- What drove these changes is still uncertain, but population increases were clearly important.
- At least after 2,500 years ago, Native Americans had a significant impact on the landscape.



The
PUTAH CREEK WATERSHED
&
LAKE BERRYESSA

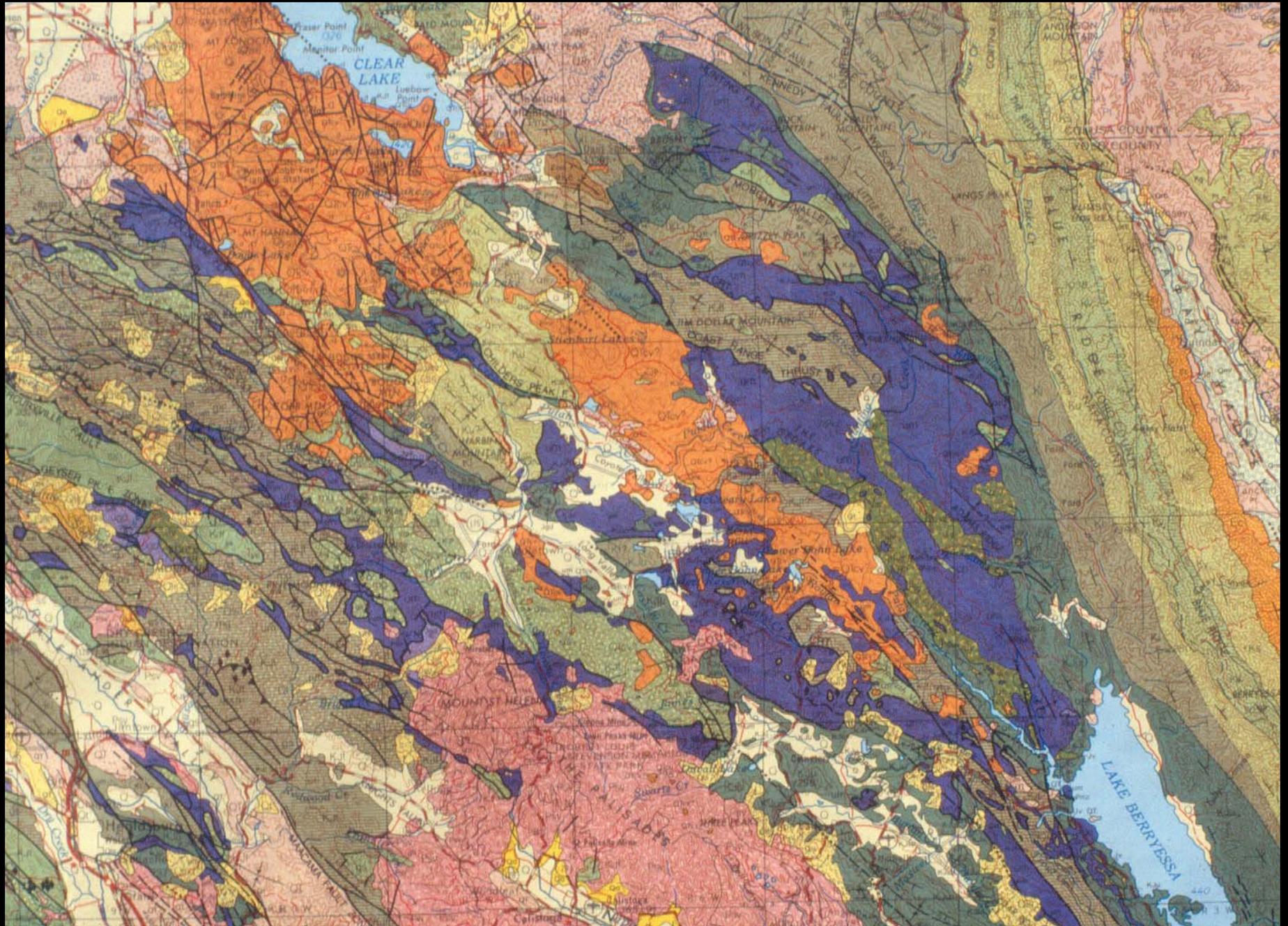
Historic Land Uses

By Dean A. Enderlin, P.G.

enderlin@sonic.net



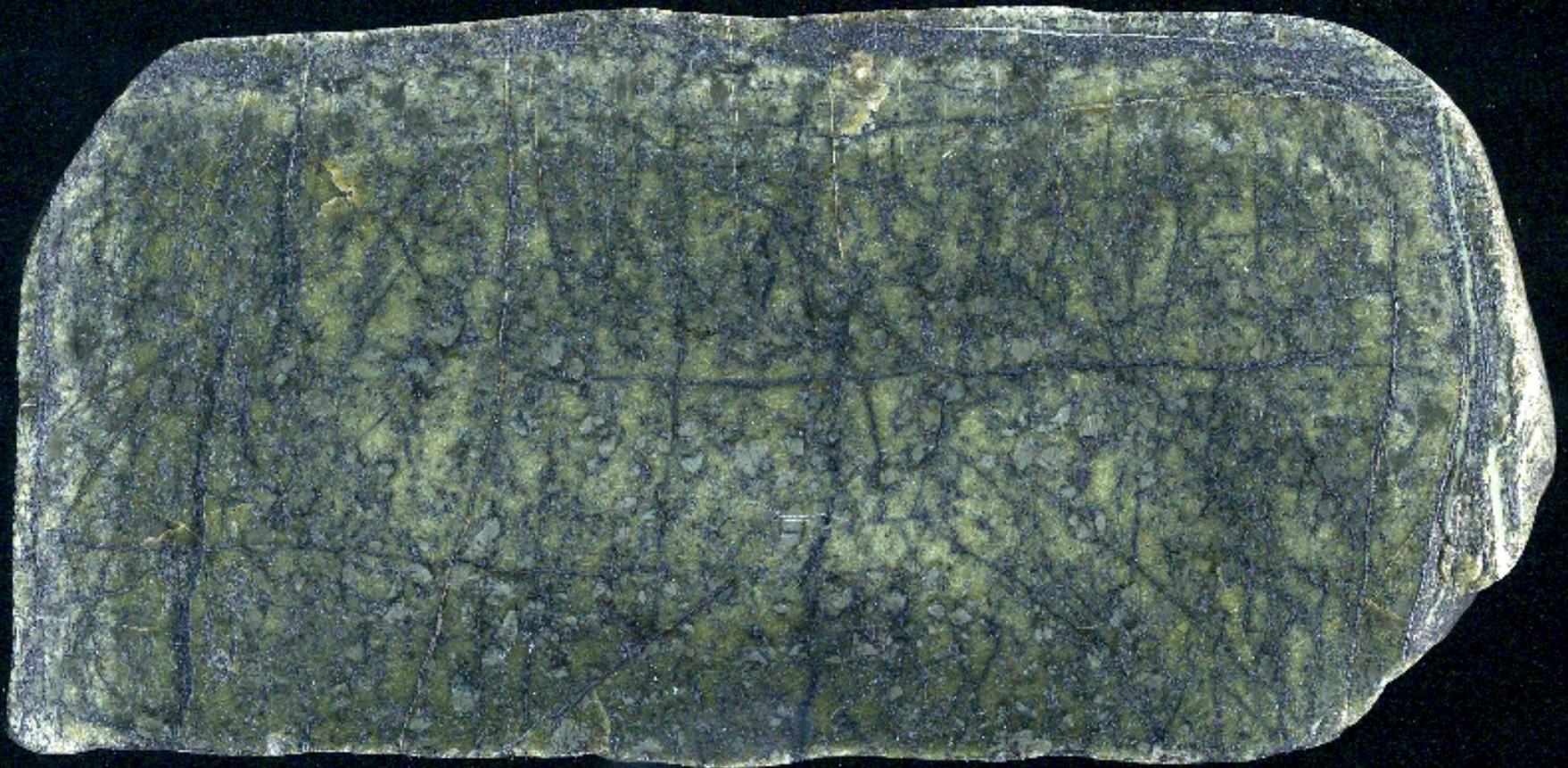
North of San Francisco Bay 1855





Rancho Las Putas - Plat of 1859





Springs & Resorts

Anderson Springs

Lake County
Cal.







L-R: Samuels, Napa Rock (Priest), Walters, Priest, Aetna soda waters

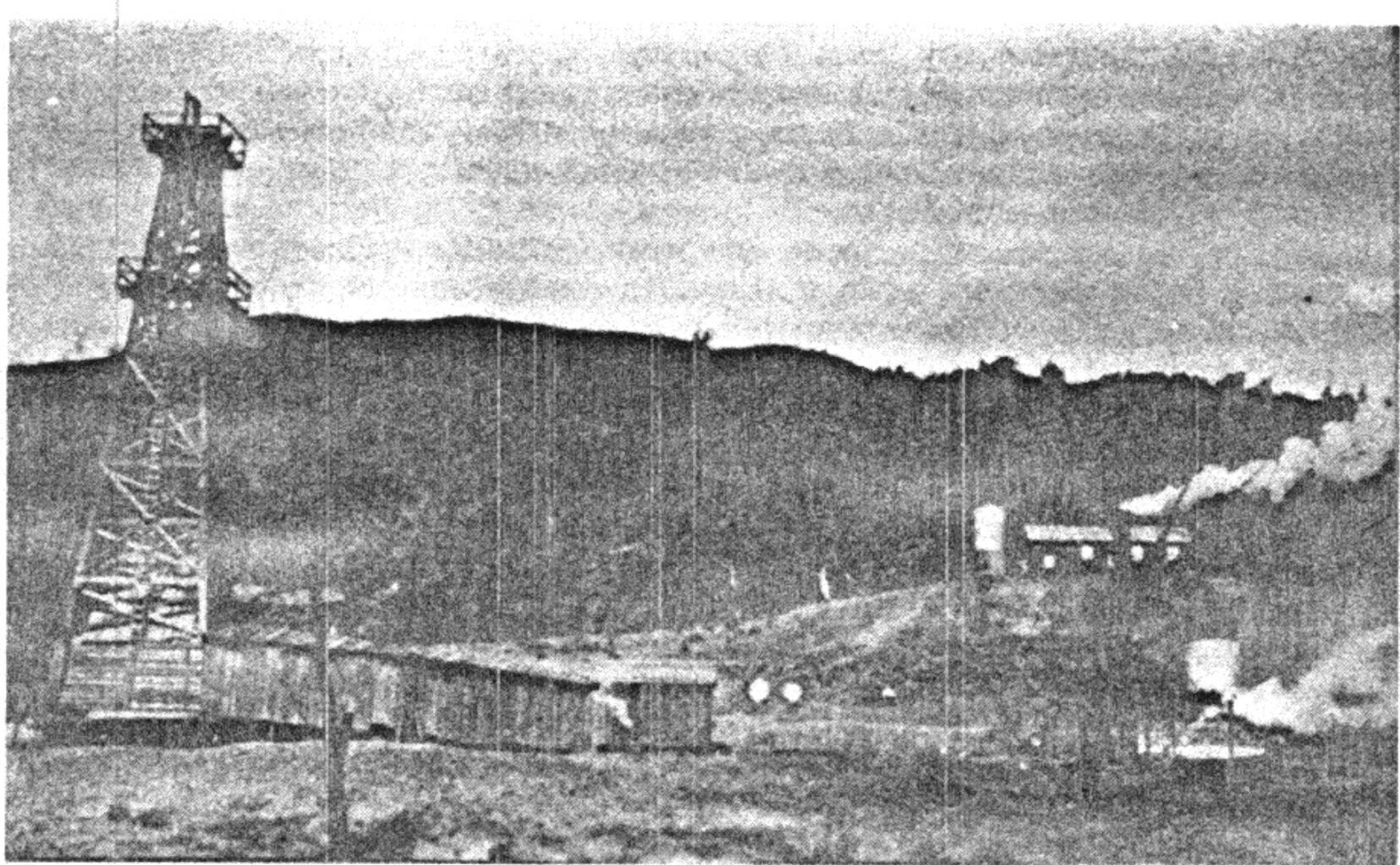
Quarries & Gravel Mining







Mining & Oil



**Standard 120-foot derrick of Well No. 5
Headquarters of Griffiths Oil Company in middle distance
was on site of present Lake Berryessa Park Headquarters.
The Park Headquarters pump house
stands on the site of the oil well.**



Chromite - Knoxville Area

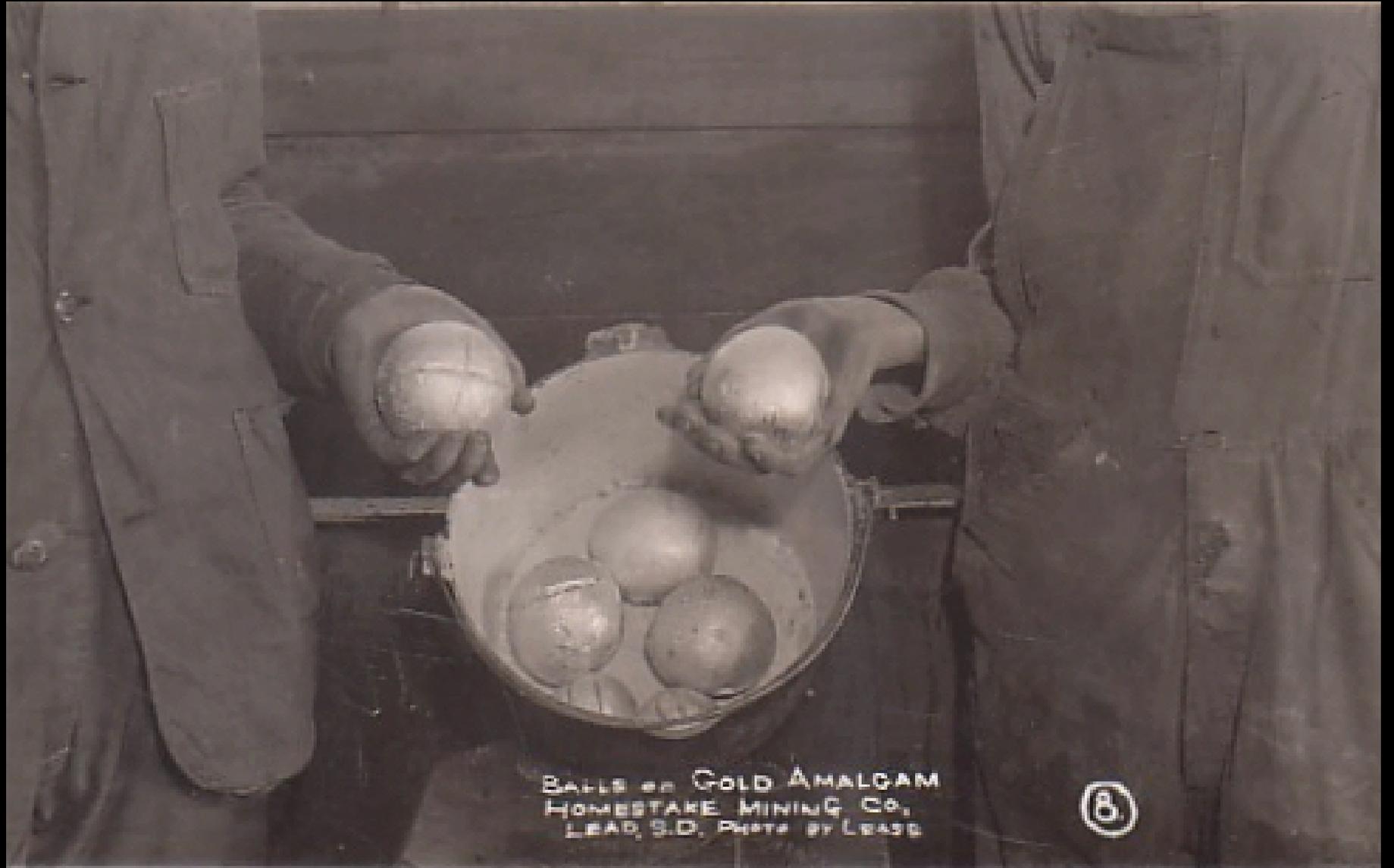


Magnesite - Lower Chiles Valley









BALLS OF GOLD AMALGAM
HOMESTAKE MINING CO.,
LEAD, S.D. PHOTO BY LEASE

8





Helen Mine

Copper

Manganese

Iron

Lake Berryessa





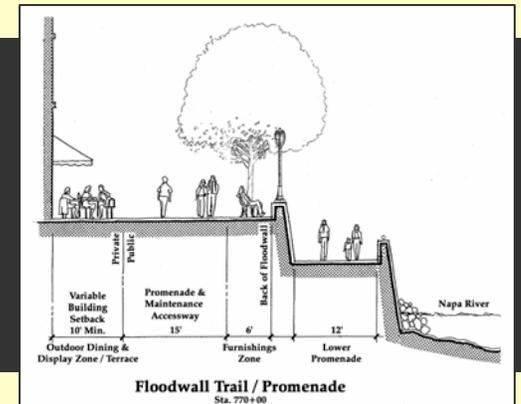
A wide-angle landscape photograph showing a vast valley filled with a dense forest of evergreen trees. The forest extends to the horizon, with rolling hills visible in the distance under a clear blue sky. In the foreground, there is a rocky, grassy slope with some sparse vegetation and a few dead trees. The text "The End" is overlaid in the center of the image in a bright yellow, sans-serif font.

The End

Lessons from the Past - A Bridge to the Future ...



The Napa River Flood Protection Project Update at 50% Construction Complete

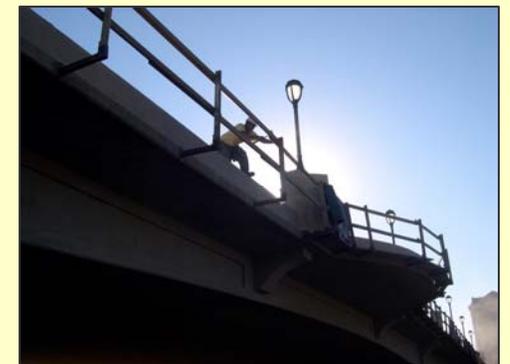
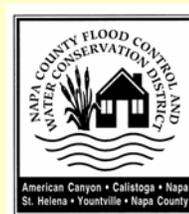


Napa County Watershed Symposium

May 22, 2008



US Army Corps
of Engineers®



Napa River Watershed

150 Years of Development Pressure

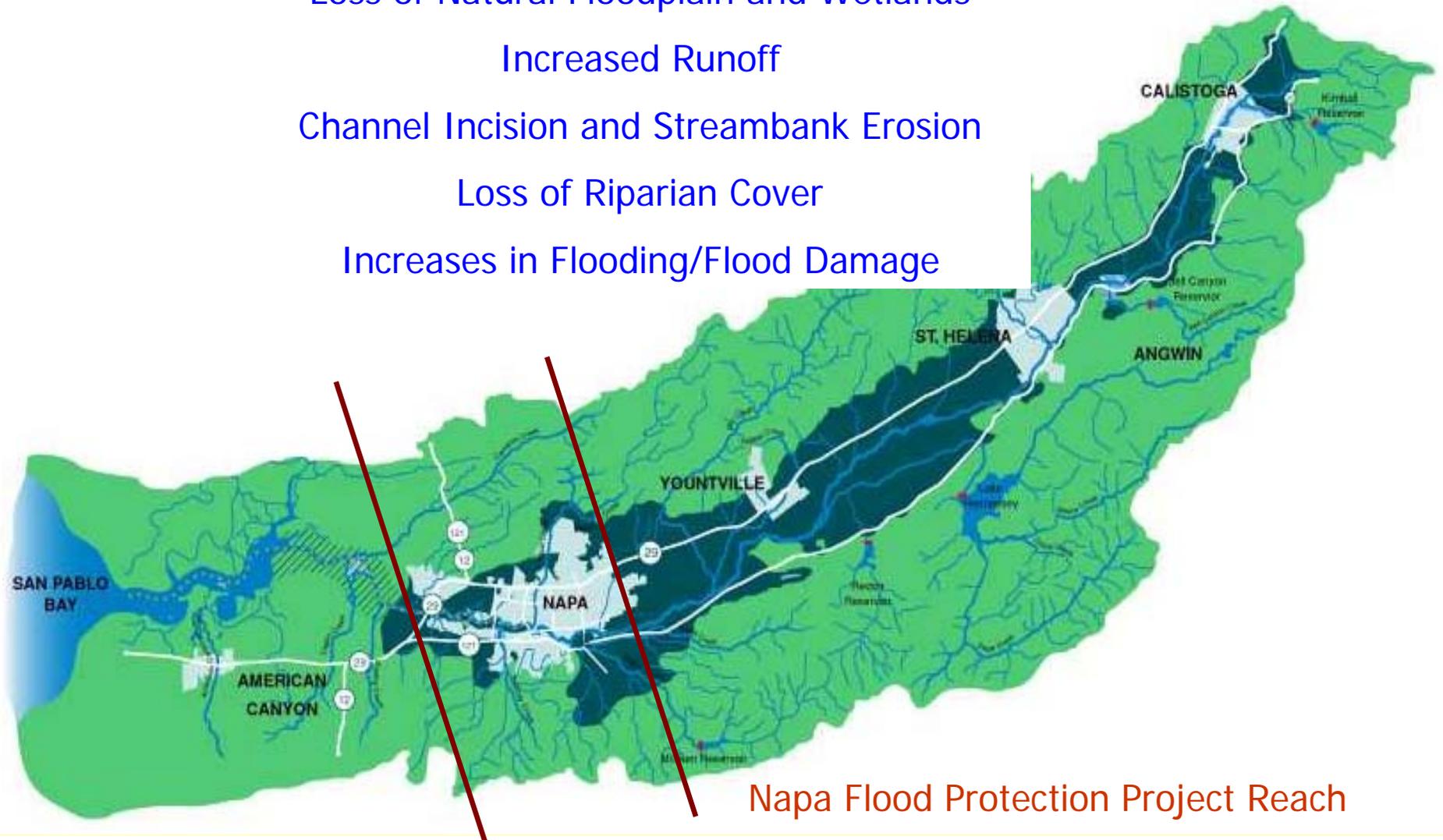
Loss of Natural Floodplain and Wetlands

Increased Runoff

Channel Incision and Streambank Erosion

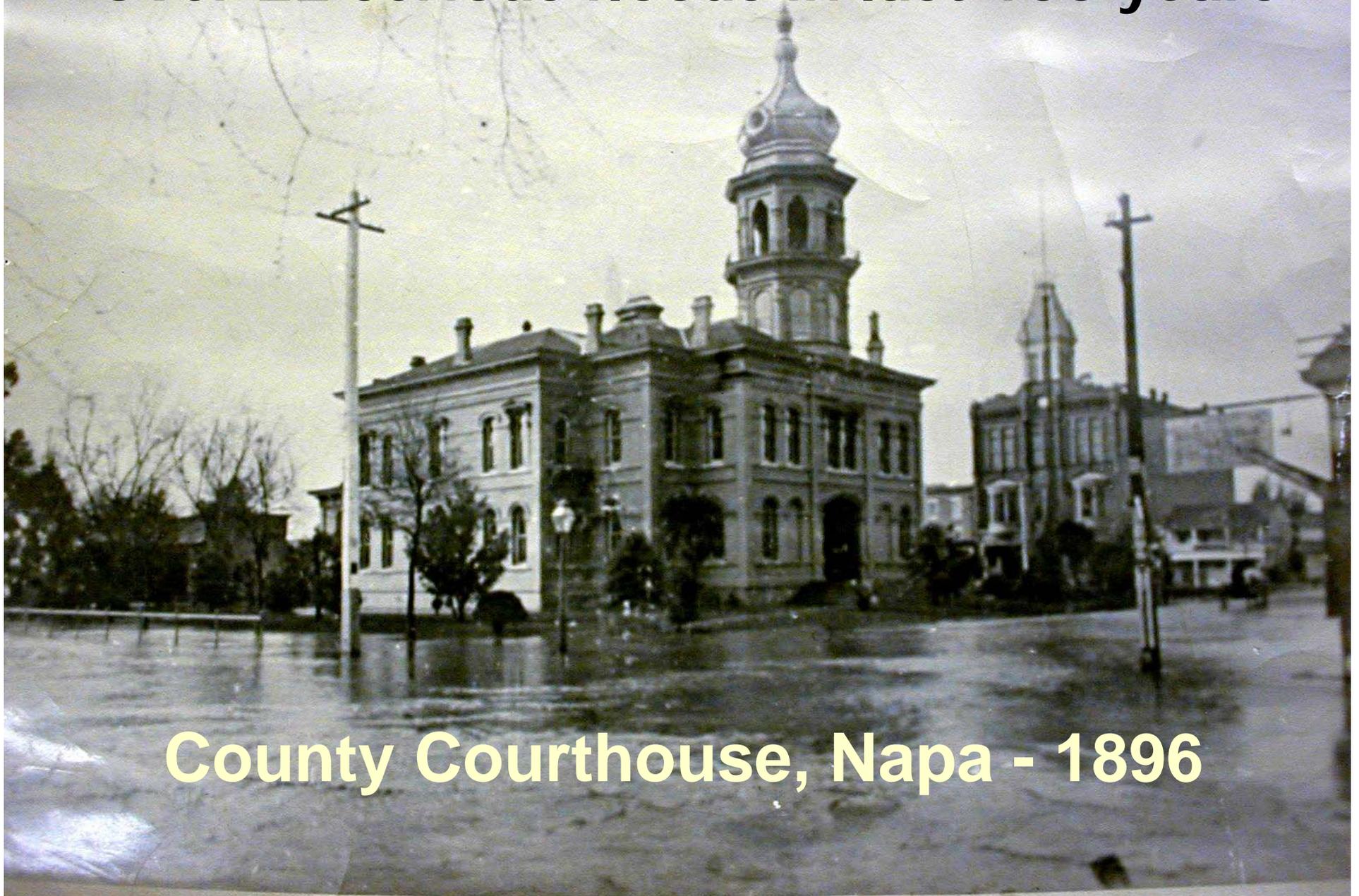
Loss of Riparian Cover

Increases in Flooding/Flood Damage



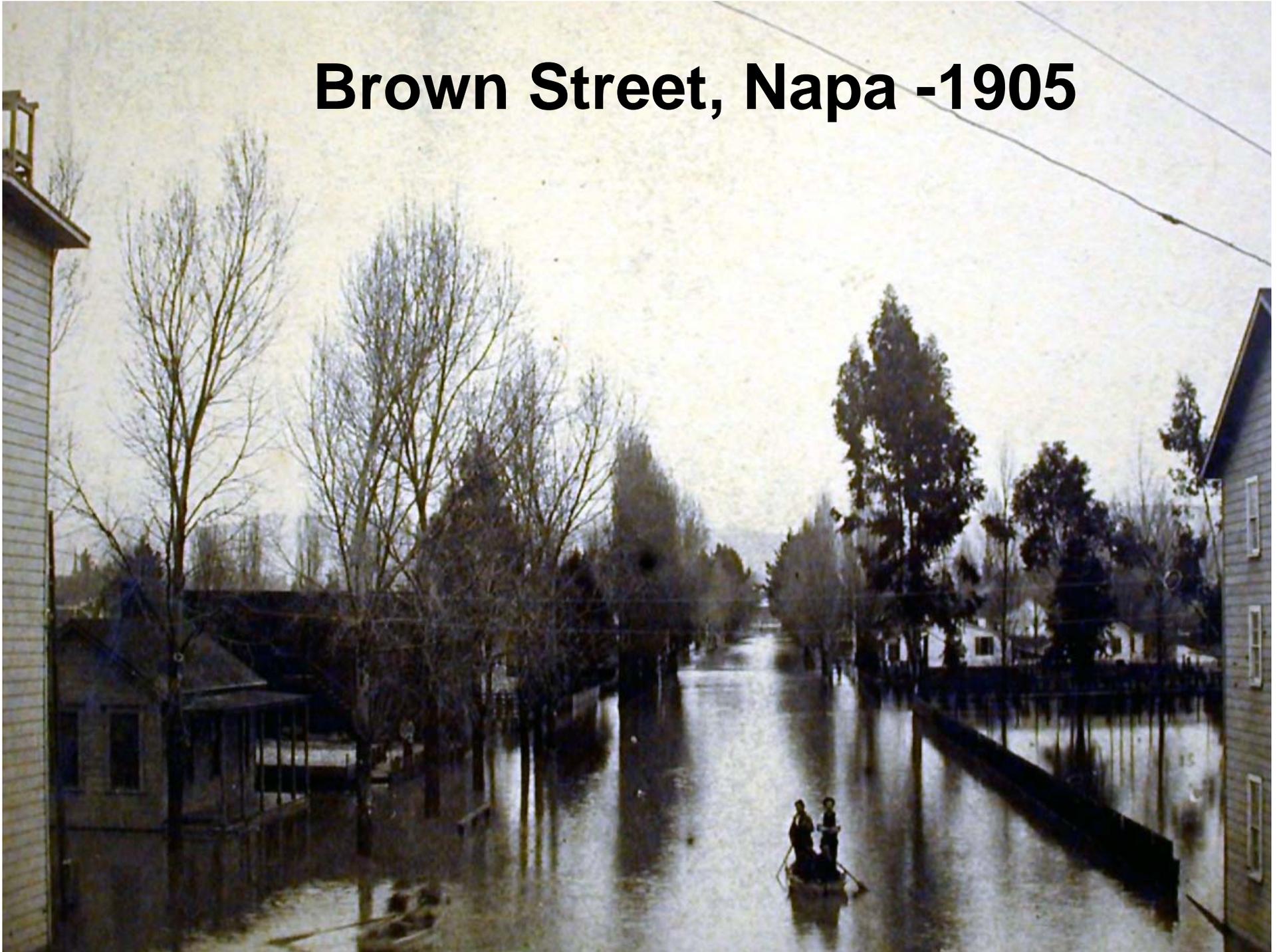
Napa Flood Protection Project Reach

Over 22 serious floods in last 100 years



County Courthouse, Napa - 1896

Brown Street, Napa -1905





Main Street, Napa -1940



First Street, Napa - 1955



Water Street, Napa - 1986

1986



2005



Corps of Engineers Flood Protection Plans

1965-1995

**Widen, deepen and straighten the river channel -
create trapezoidal channel**



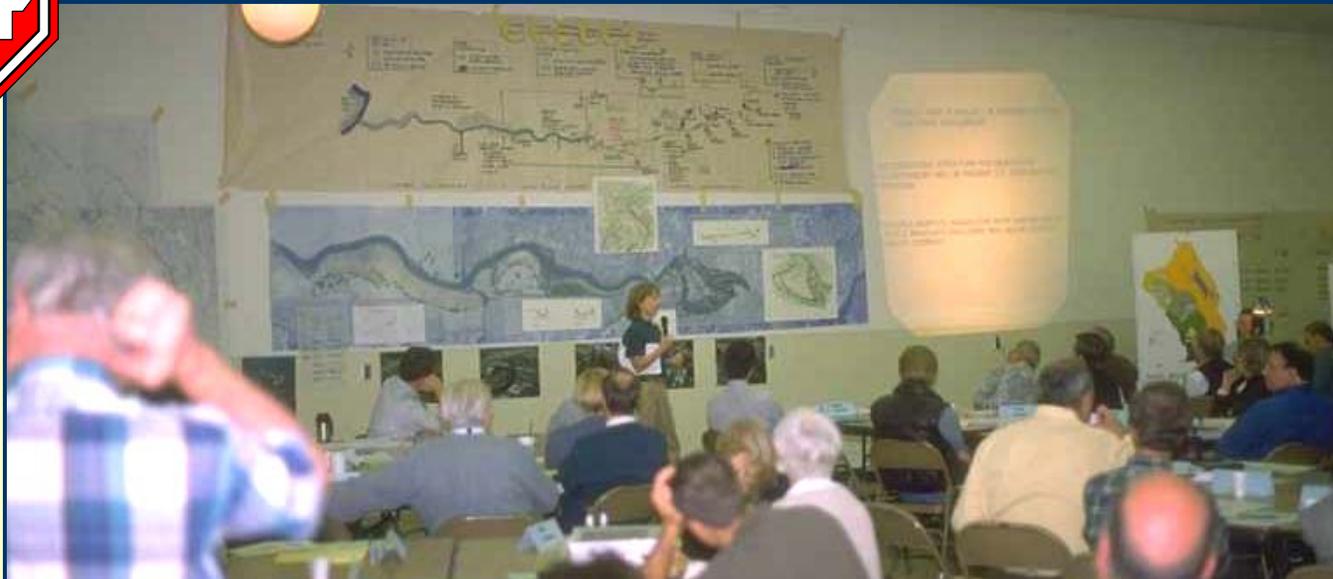
**Leave existing bridges, deepen river
instead of raising bridges**

**Avoid contamination – construct sheet pile walls
to isolate contamination in place**

Community and Stakeholders

“Something needs to be done about flooding in Napa”

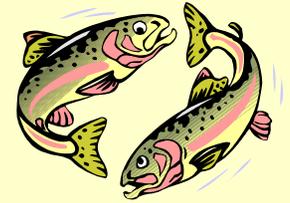
After the 1986 flood, with 3 prior flood plans having been rejected over 20 years as environmentally damaging and financially infeasible, a 1995 Corps of Engineers Plan was also deemed unacceptable to resource agencies



We need an “environmental solution”



Living River Principles



Maintain the natural slope, width, and width/depth ratio of the river

Maintain or restore the connection of the river to its flood plain

Allow the river to meander as much as possible

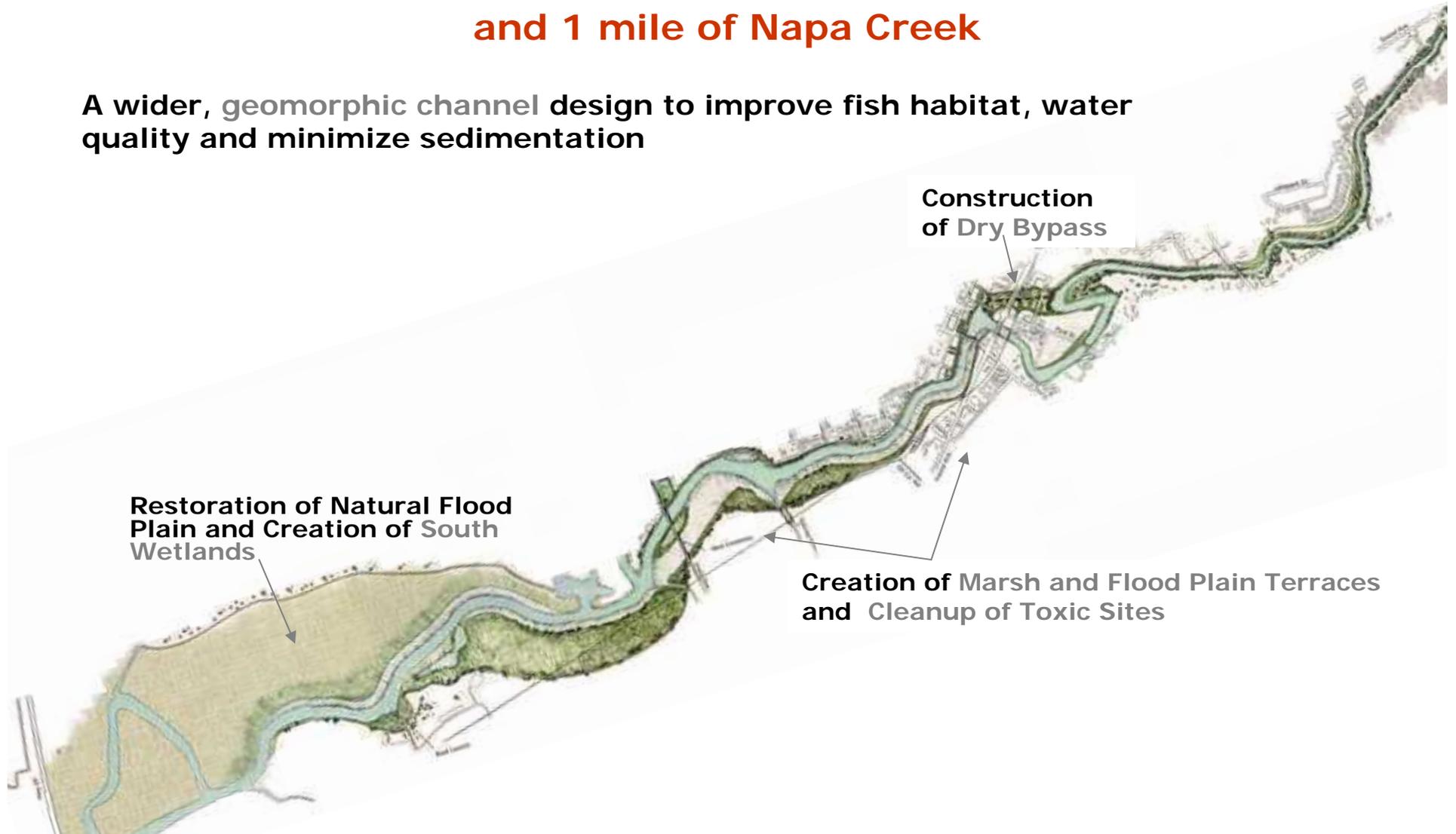
Maintain channel features such as mudflats, shallows, sandbars, and a naturally uneven bottom

Maintain a continuous fish and riparian corridor along the river

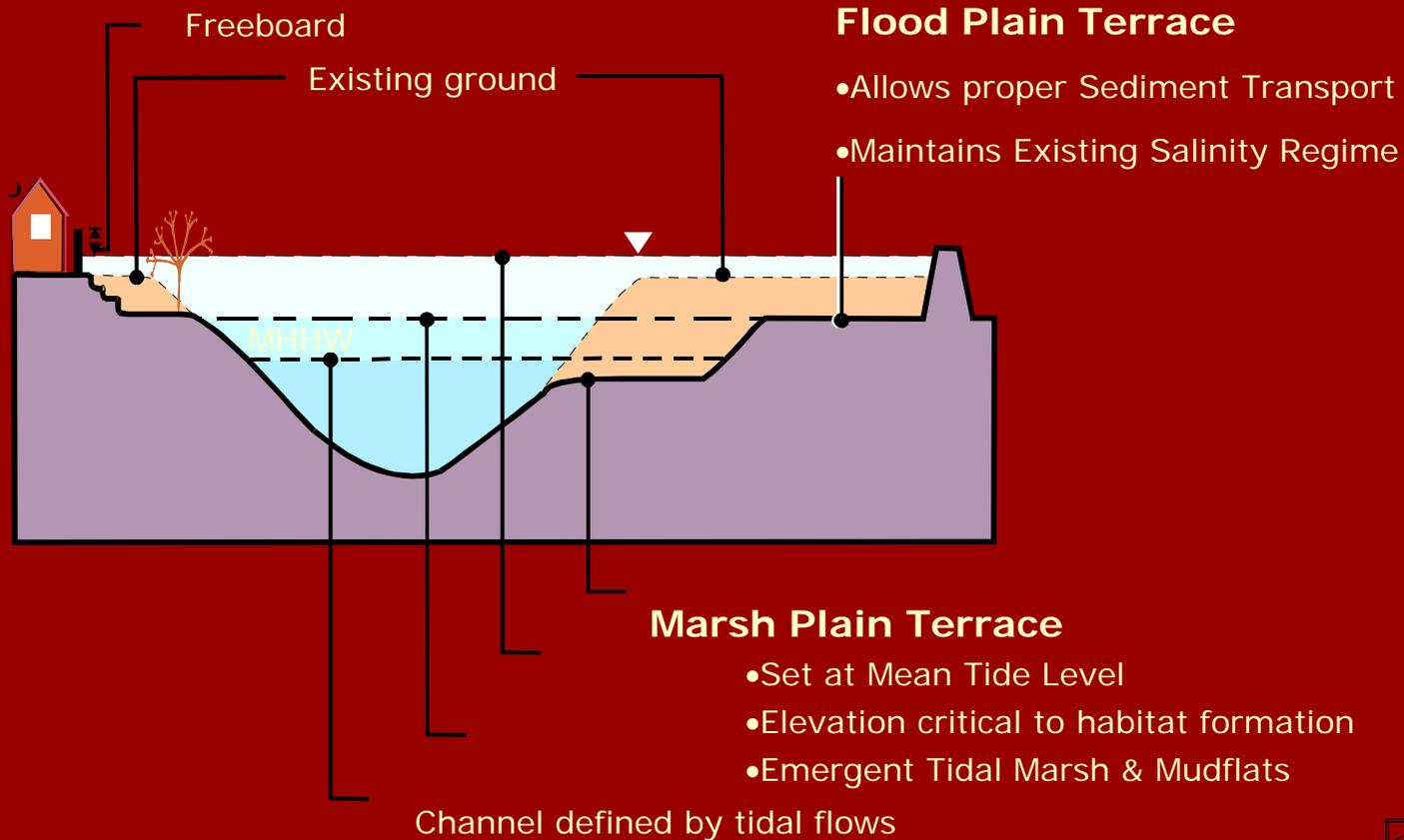
The Living River Design

Improvements to 7 miles of the Napa River and 1 mile of Napa Creek

A wider, geomorphic channel design to improve fish habitat, water quality and minimize sedimentation



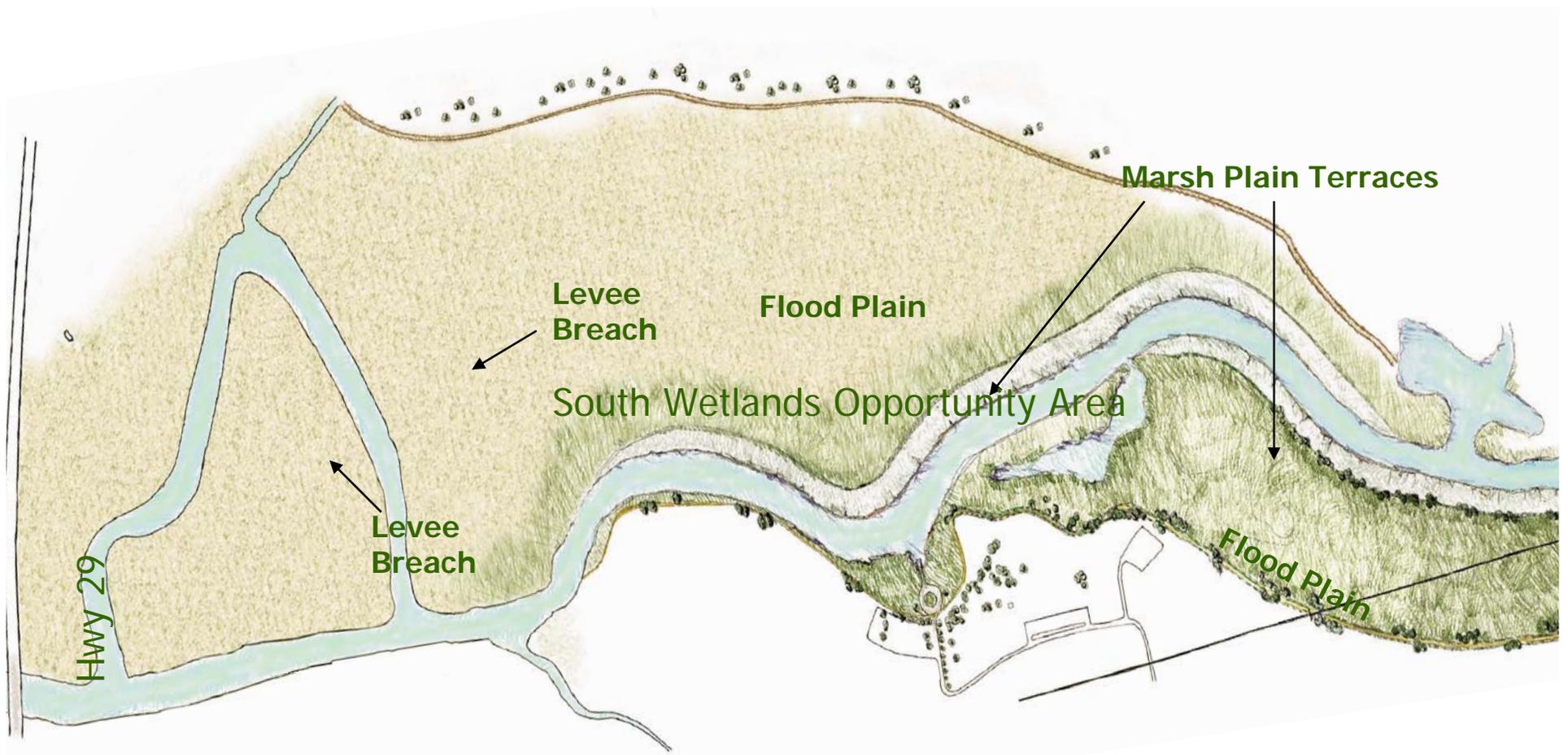
Geomorphic Channel Design



Project Groundbreaking

July 31, 2000





Wetlands Restoration (2000-2002)

Butler Bridge to Imola

South Wetlands Opportunity Area

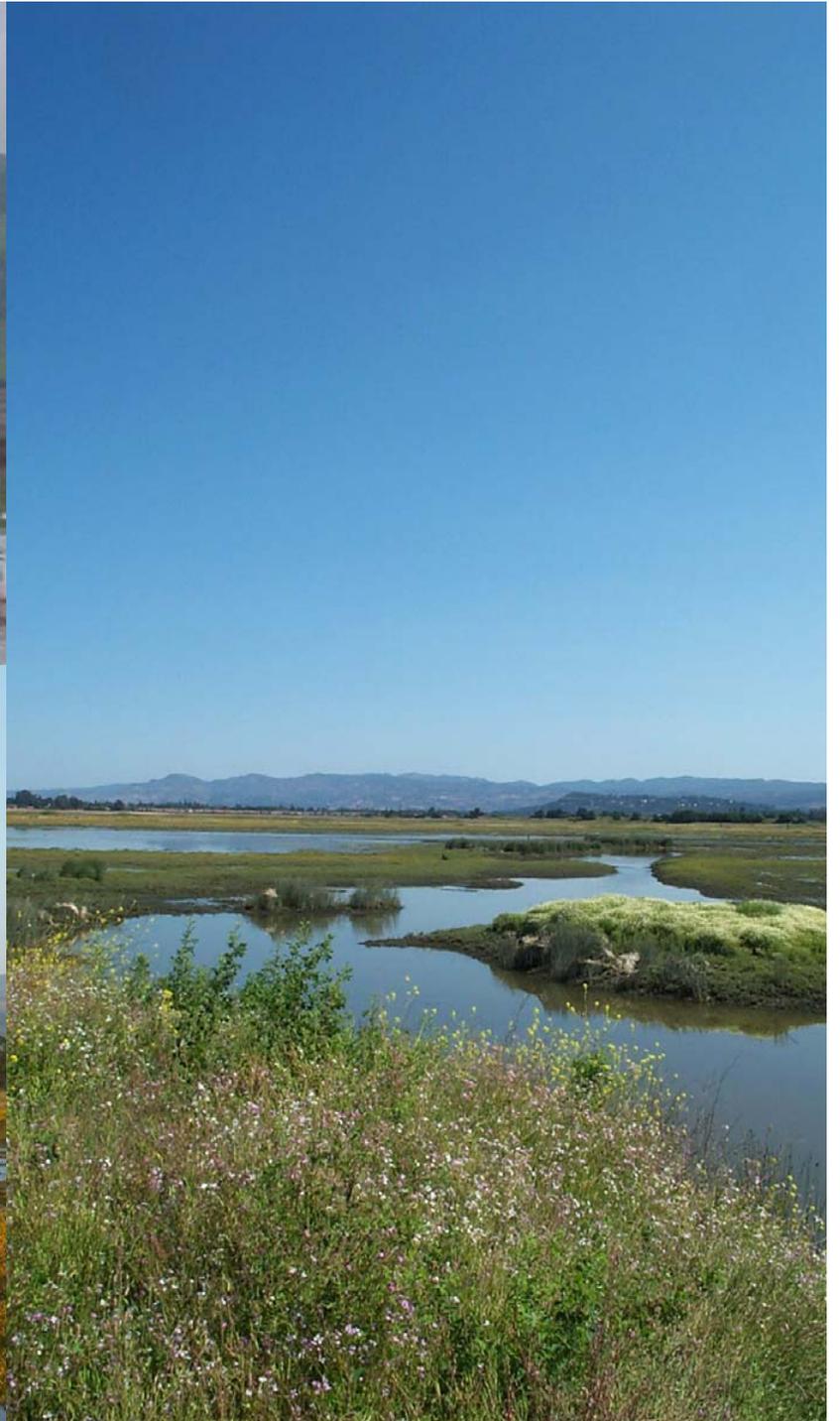
After



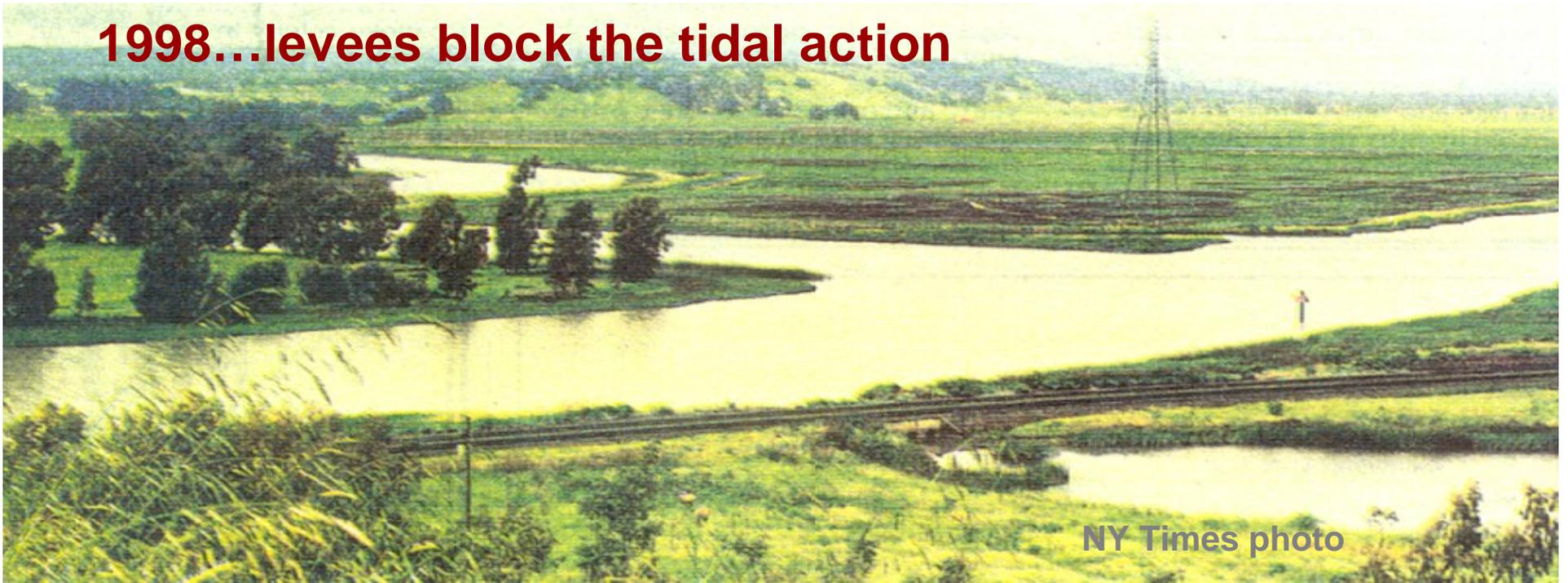




Improved Habitat

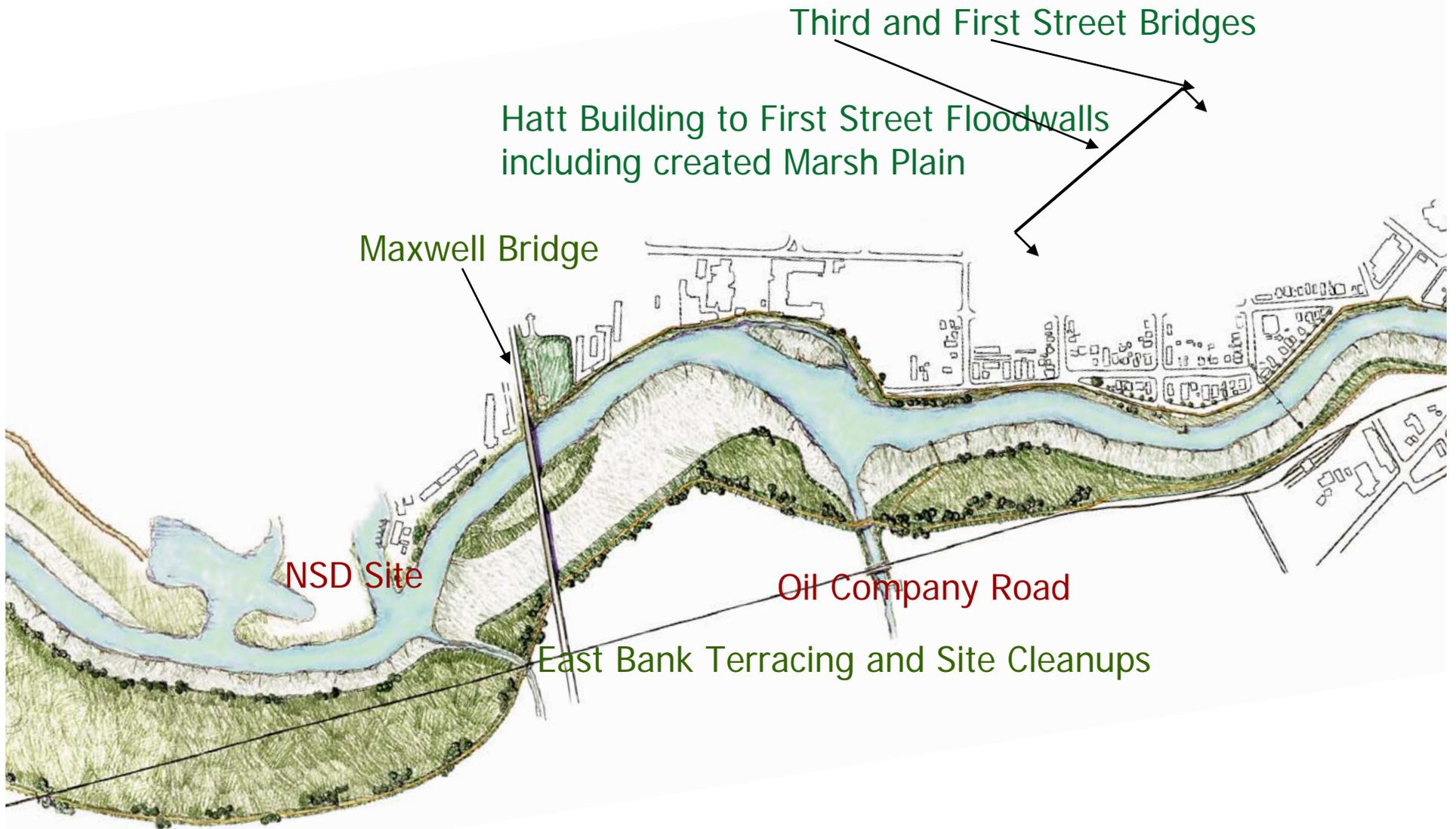


1998...levees block the tidal action



2002...wetlands reborn





Imola to Downtown Reach (2002-2007)

Maxwell Bridge Replacement



New Structure Spans Created Terraces



Third Street Bridge 2002



Oil Company Road Area – Pre-Project



Created Marsh and Flood Plain - 2003



**First St. Bridge
over Napa Creek and Future Bypass 2006**



Marsh and Flood Plain Upstream of Third Street Bridge
Sandbar after 2005 Flood



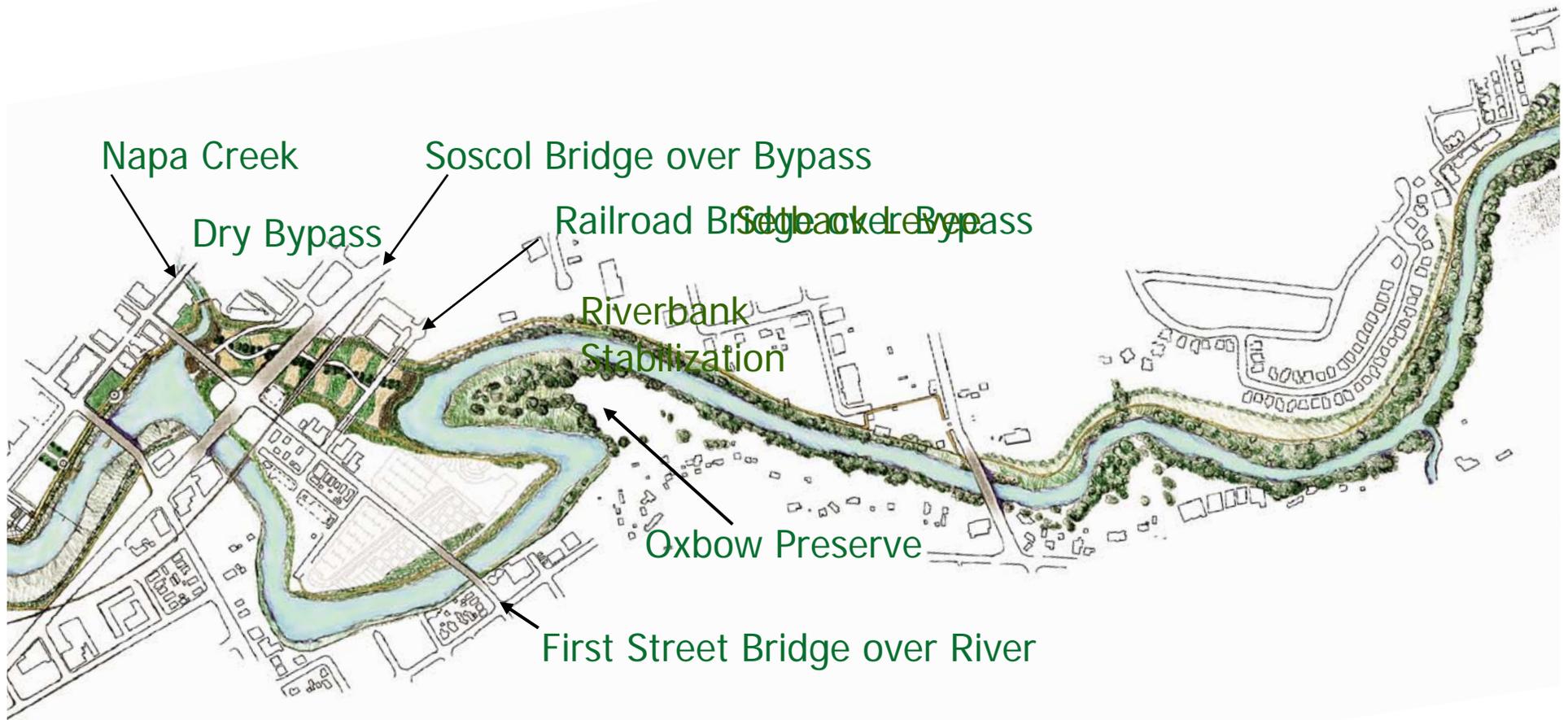
Hatt to First Floodwall Under Construction
July 2006



Created Marsh Plain May 2008 – High Tide

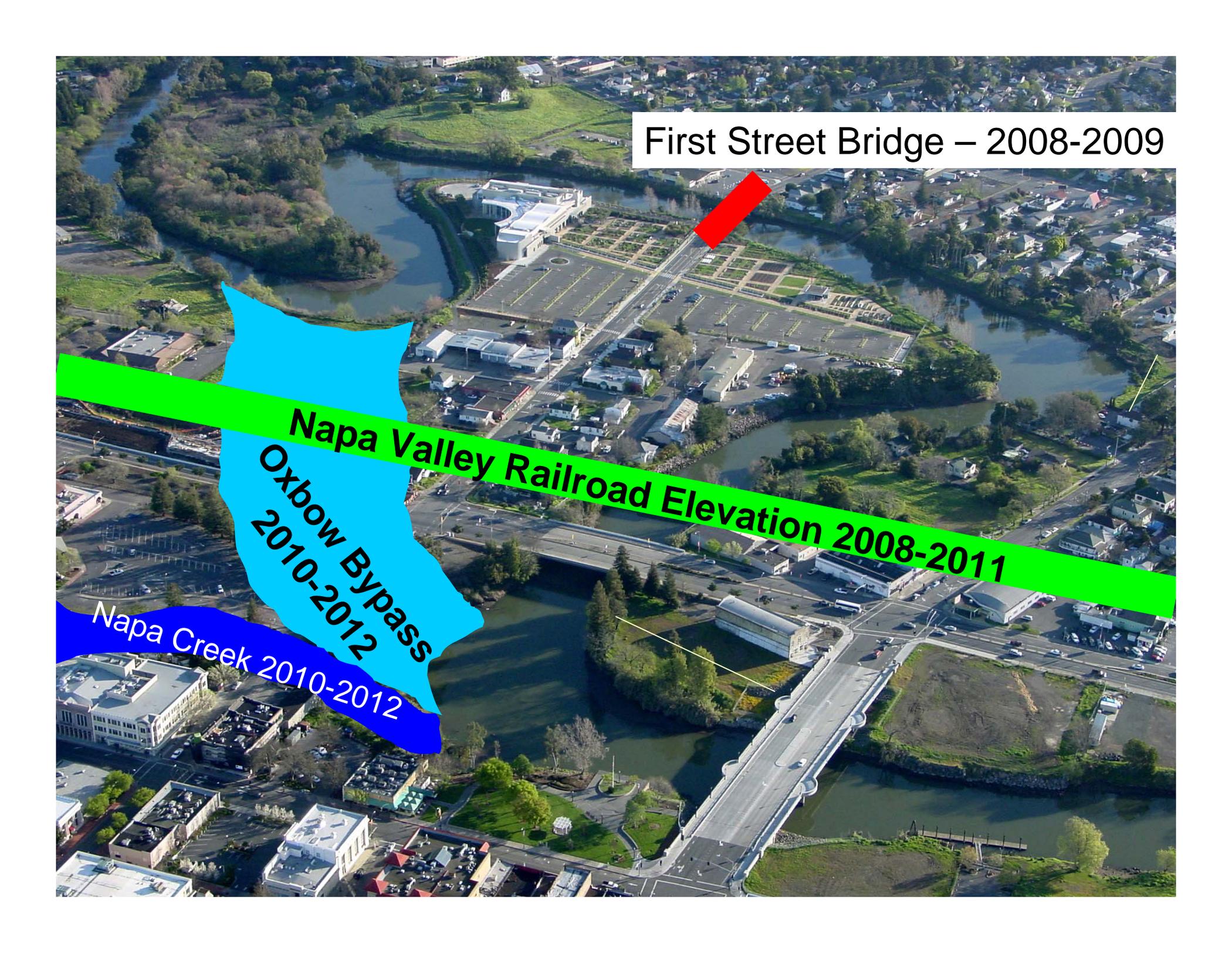


Created Marsh Plain May 2008 – Low Tide



Setback
Floodwalls

Oxbow and north to Trancas (2008-2016)

An aerial photograph of Napa, California, showing the Napa River winding through the city. A red arrow points to the First Street Bridge. A green banner across the middle of the image highlights the Napa Valley Railroad Elevation project. A blue banner in the lower-left corner highlights the Oxbow Bypass and Napa Creek projects. The background shows a mix of urban buildings, parking lots, and green spaces.

First Street Bridge – 2008-2009

Napa Valley Railroad Elevation 2008-2011

Oxbow Bypass
2010-2012
Napa Creek 2010-2012



End of the Trail...and the slides
Questions?