HISTORICAL BASIS
FOR RESTORING TO STAGE 0

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RRNW
February 6, 2018
Historical Ecology Studies by SFEI and partners

- Sacramento/San Joaquin Delta
- Napa River
- Laguna de Santa Rosa
- Petaluma River
- Novato Creek
- Mark West Creek
- Marsh Creek
- Walnut Creek
- Alameda Creek
- Peninsula creeks
- Penitencia Creek
- Coyote Creek
- Guadalupe River
- Uvas Creek
- Llagas Creek
- Pajaro River
- San Joaquin River
- Salinas River
- Ventura River
- Santa Clara River
- Ballona Creek
- San Gabriel River
- Tijuana River
- South Coast estuaries
- SF Baylands
- North San Diego lagoons
Thomas Doughty, ca. 1825 – 1830
*View on the Brandywine River: Gilpin's Paper Mill*
Brandywine River Museum
0 gfkgttcpgcp#e1k0 cvg#guu#y gv
Pqv#qgtuvgf#cmg{u#qcm#uxcppcu# gcfay u
Nko kvgf# k#qpf#jkvqt{#guu#y cvgt#pf#ko dgt#cvgt#fgxgmrpo gprv#
Conceptual model of channel type diversity: CA streams (Alameda Creek HE Study, Stanford et al. 2013)
Napa River
Anastomosing channels through wetlands where valley widens
early 1800s
Leave swamp and tule

Section corner marked on a willow tree on bank of a brook.

Cross Napa creek

Enter swamp

Enter willow thicket at foot of low hills

Cross slough

Cross Napa Creek

Cross slough

Cross fence, leave willow thicket

Enter willow thicket

Cross slough

Leave willow thicket
“What is the character of the channel of the Napa River at the place marked ‘Tule’?”

“The branch seems to sink and form a marsh and the Napa spreads”

“Has the Napa River a distinct channel at that point or any channel at all?”

“I examined the place and could not find a channel at that point similar to the channel above or below.”
Early 1800s
Channel Incision

Napa Valley Historical Ecology Atlas
(UC Press 2012)
Alameda Creek - Pleasanton Marsh

*Wetland complex at geologic constriction*
Alameda Creek Watershed early 1800s
San Joaquin River
Anabrancheing sloughs through tule-dominated flood basins
1827: “The river had been divided into many small Slous [sic] and channels the banks low and the current sluggish” (Jedediah Smith 1827)
1853: The lower part of the San Joaquin river is bordered by numerous sloughs, and winds about through marshy ground, covered with rushes and willows (Blake 1853)

1887: Over half of the course of the river in Merced is bordered by tule land several miles wide. This region is full of sloughs, ponds, lagoons and willow patches... Water fowl of every description are abundant in the tules every winter” (Merced Express 1887)

ca. 1876: “There were great quantities of perch in the slough... there were also shiners, chubs and suckers and of course in season there were salmon.” (Smith 1925)
Llagas Creek, Santa Clara County

Persistence and potential recovery
Summary

- Stage 0 part of diversity of California stream types
- Occupy particular low-gradient, high-groundwater settings
- Ecological oases; rare perennial wetland-slough mosaics; salmonid rearing, red-legged frog, neotropical migrants, waterfowl
- Rapid conversion and homogenization to confined, single thread
- Not generally recognized as stream restoration opportunity and target
Thank You

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