



## Big Valley Band of Pomo Indians

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### CHI PROTECTION AND RESTORATION WORK: **Water quality, water quantity, habitat restoration**

- **Ongoing water quality studies and programs to support Lake water improvement**
  - Clear Lake Cyanotoxin Monitoring Program [www.bvrancheria.com/clearlakecyanotoxins](http://www.bvrancheria.com/clearlakecyanotoxins) since 2014
  - Creek benthic cyanobacteria and monitoring in 20 county creeks since 2021
  - Stormwater mitigation program with associated monitoring in Big Valley area since 2009
  - Private tap water monitoring (CDC grant for drinking water quality impairments) [www.cal-watch.org](http://www.cal-watch.org) and <https://awwa.onlinelibrary.wiley.com/doi/full/10.1002/aws2.1337> since 2020
  - Continuous water quality monitoring in Oaks and Lower arms of Clear Lake (since 2021)
- **Water Quantity Studies**
  - 2020 and 2023 reports of 1 and 2D modelling identifying minimum flow requirements for the chi **34.5 cfs** [www.bvrancheria.com/epa](http://www.bvrancheria.com/epa)
    - 5 pressure transducers measuring water depth in Adobe creek
    - 5 gw elevation monitoring in participating community members' private wells
  - Big Valley Groundwater Sustainability Plan Advisory Committee and development of GSP
    - Found indications of impairment of creek flows due to groundwater usage
- **Barrier Removal Projects**
  - Kelsey Creek Main Street Bridge
  - Vegetation removal projects with CCC and Lake County in Big Valley area
  - Support of sediment removal and streambank projects on Cole Creek and Land Trust projects on Manning Creek
- **Funded Restoration Projects**
  - Groundwater Dependent Ecosystem Study and Restoration (pending Blue Ribbon Committee contract)
  - HABs and Stream Bank Erosion Study and Restoration (pending BRC)
  - Adobe Creek Hydrology Monitoring (pending BRC)
  - Tule Replanting and Restoration (pending BRC)
- **Ongoing restoration work**
  - Tule replanting and manual aquatic weed removal on Big Valley shoreline since 2011
  - Aeration of shoreline to improve water quality since 2015
- **Fish Population Observations**
  - 5 Big Valley Tribs since 2011: fish observations, water chemistry, nutrient monitoring
  - Collaborative support of other observation projects: CDFW Big Valley tributary observations, Robinson Rancheria Carp Eradication Project, USFWS fish studies
  - Maintain fish mortality community science mapping <https://flowwest.shinyapps.io/bvr-wq-live/>
- **Observations led to Fish Rescues**
  - In 2023, Big Valley staff rescued 26,090 Chi from Big Valley tributaries (see flyer)
  - Disconnected pools and strandings observations

**FUTURE RESTORATION AND CHI PROTECTION GOALS:**

- **Tribal land back, stewardship, and co-management is the priority**
- Complete restoration at Main Street bridge (additional **\$1M** needed)
- Reconnect floodplain on Big Valley creeks, Manning, Adobe and Hill (**\$2.5M** for feasibility studies and pilot restorations)
- Science informed management of the groundwater in the Big Valley area through Big Valley GSA
- Restore tule marshlands at Cole and Kelsey creek especially at the mouths which have been channelized – habitat protection during spawning periods (**\$750K**)
- Ongoing Groundwater dependent ecosystem studies and restoration through Tribal Ecological Knowledge and work with Nature Conservancy (**\$5M**)
- Water quality improvements to meet the Clean Water Act (dissolved oxygen, pH, nutrients, temperature, bacteria)



Big Valley EPA

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