

Yuba River Watershed Assessment A Citizen-Powered Stewardship Program

A 21st century assessment of the **Yuba** RIVER
WATERSHED

Summary

Outline:

1. Scope
2. Information Management
3. Impacts on Watershed Health
4. Restoration Priorities
5. Toward a Regenerative Future



A Report by the
South Yuba River Citizens League

2nd Edition: JANUARY 2011

The CALFED Bay-Delta Watershed Program/
California Department of Water Resources
Watershed Program

Supported by a grant from

SYRCL's Mission:

To protect and restore
the Yuba River
and the
“Greater” Yuba
Watershed



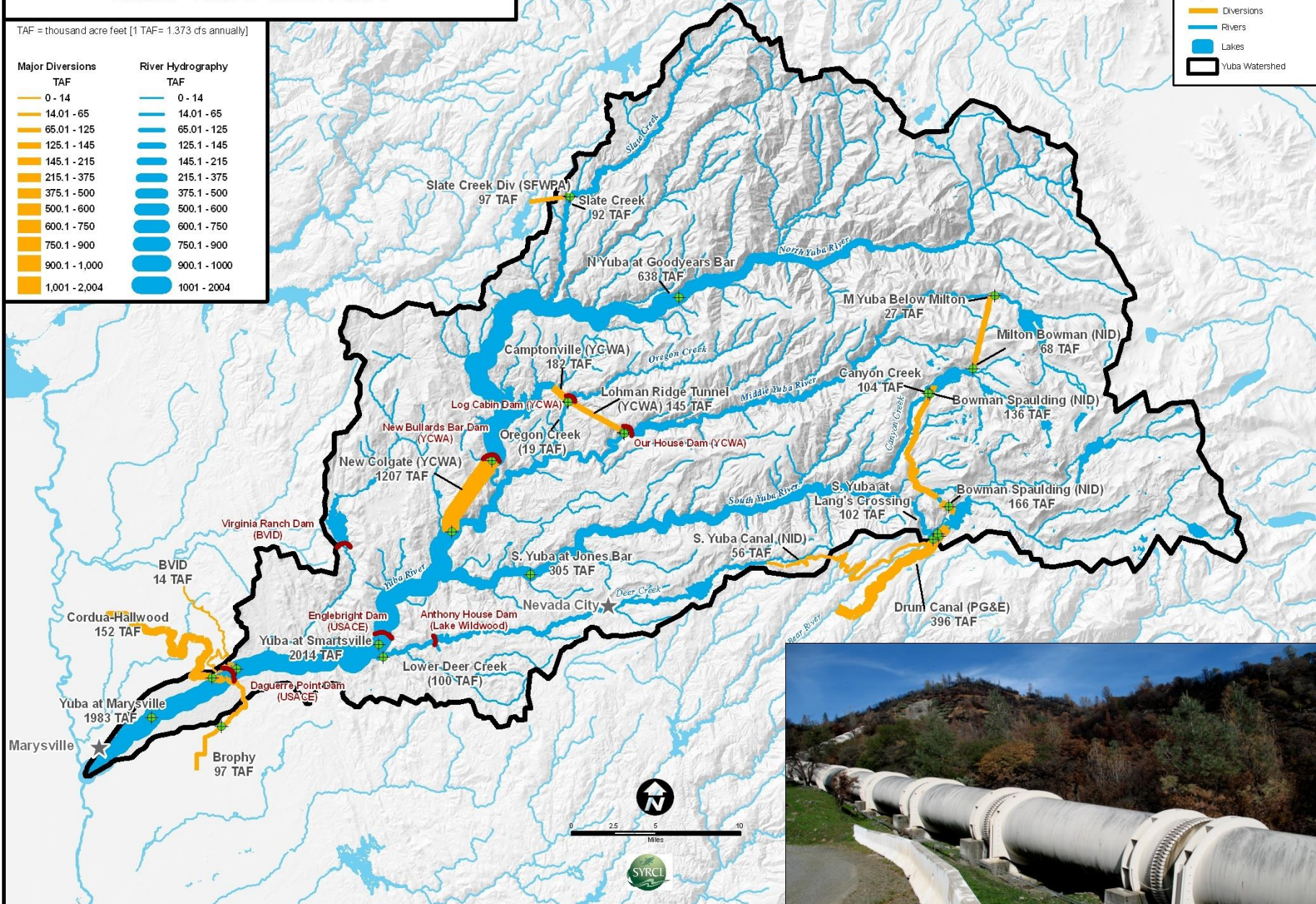
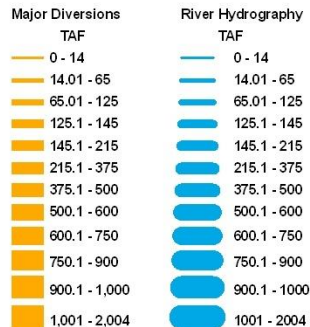
The Yuba Watershed, defined



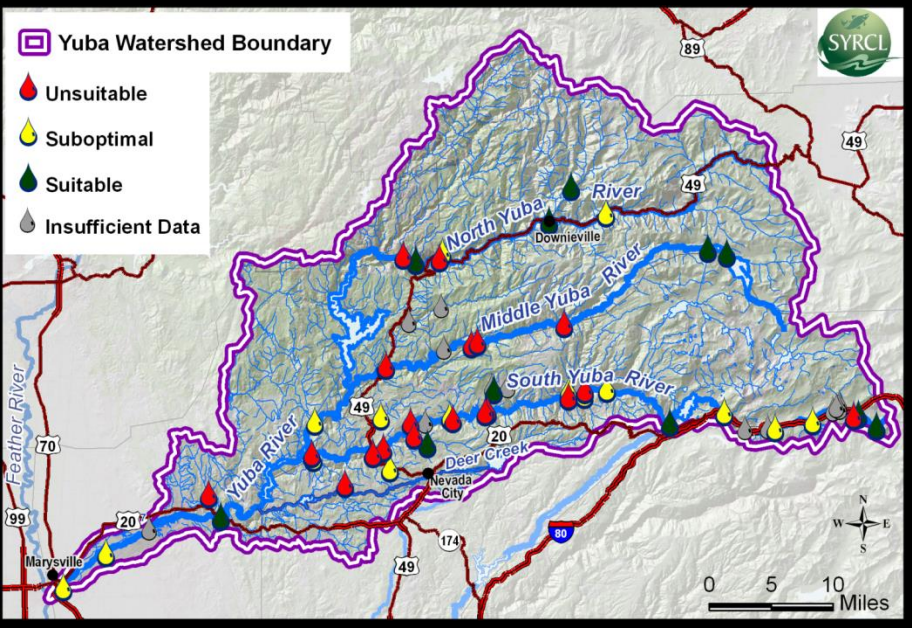
“a network of communities—human and ecological—drawn together by the commonality of a shared waterway”

Yuba River Watershed Average Annual Flow Volumes Water Years 1995-2004

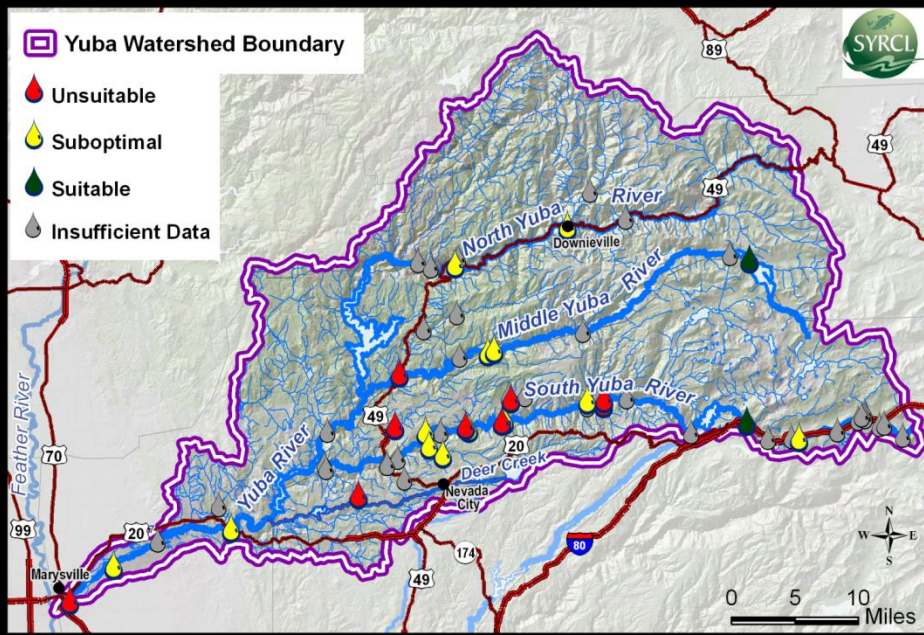
TAF = thousand acre feet [1 TAF= 1.373 cfs annually]



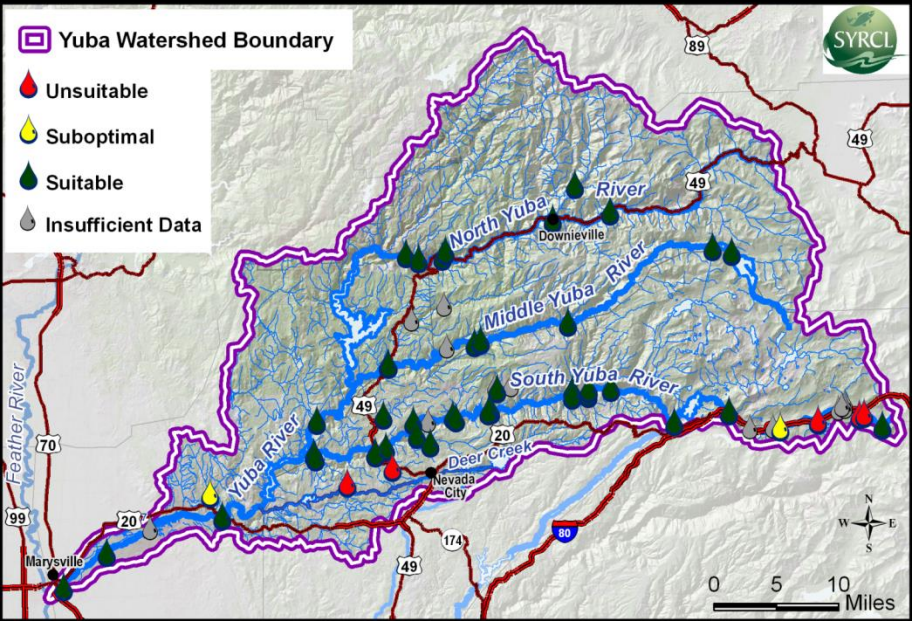
Temperature: Suitable where 95% msrmnts <18.3 deg. C



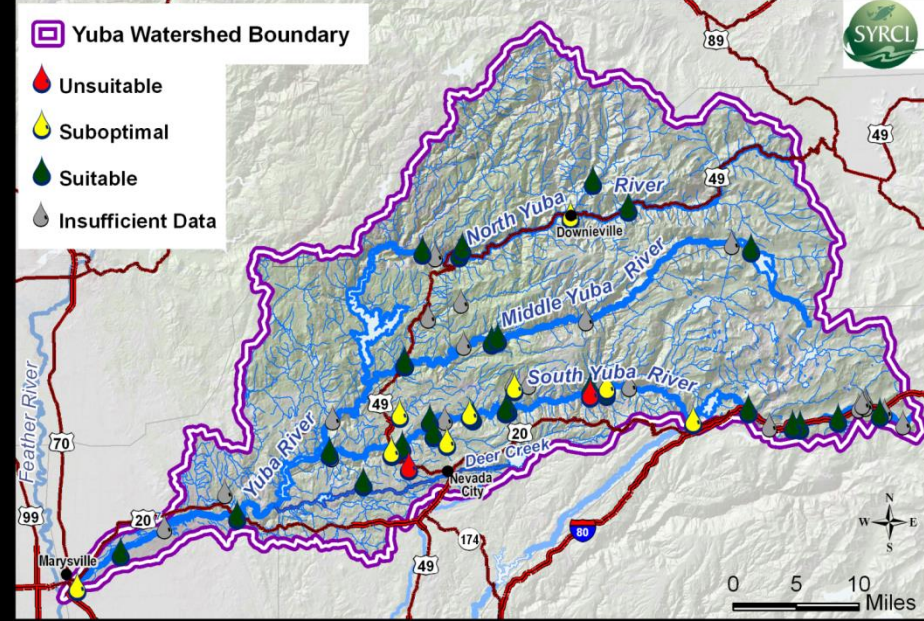
Iron: Suboptimal where median >300 ppb, <1000 ppb




Dissolved Oxygen: Suitable where 95% msrmnts > 7.0 mg/L



E Coli Bacteria: Suitable where all < 200 MPN



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The Yuba River Watershed Information System

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This information system provides data, documents, photos, maps and tools for people interested in the condition of the Yuba River and its many tributaries. Yuba Shed has been designed to facilitate collaborative work among organizations, and to promote a science-based understanding of the Yuba River and the entire Yuba River watershed.



This first version of Yuba Shed contains data collected by the South Yuba River Citizens League (SYRCL). Future updates to Yuba Shed will include information from other organizations, an expanded bibliography, and additional links to relevant resources.

Yuba Shed has been funded by the Department of Water Resources Watershed Program, and the Sierra Nevada Conservancy.


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- Captioned charts
- Data tables
- Organized by sub-basin and subject

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•100 + documents in pdf

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Captioned photo tours:

- Watershed conditions
- Monitoring stations
- Restoration sites

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Google map of monitoring stations with links to data and photos

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The Yuba River
Watershed Information System

Future Updates:

- Expanded bibliography
- Interactive maps via ArcGIS.com
- Alternative data displays
- Information from cooperators

21st Century Assessment of the Yuba River Watershed

Impacts on Watershed Health

- Mining Impacts
 - Mercury Contamination
 - Acid Mine Drainage
 - Arsenic, Lead and Asbestos Contamination
- Water Control
 - Build barriers (dams)
 - Water diversions
- Biodiversity Decline



21st Century Assessment of the Yuba River Watershed

Impacts on Watershed Health (cont.)



- Land Use Practices
 - Timber Extraction
 - Grazing
 - Fire Suppression
 - Invasive Species
 - Road Densities
 - Cumulative Effects

21st Century Assessment of the Yuba River Watershed

Restoration Priorities

1. Remediation of Legacy Mining Effects

- Minimizing physical and chemical hazards on abandoned mine lands (AMLs)
- Removal of mercury from sediment trapped behind in-stream barriers
- Rehabilitation of the radically altered Lower Yuba River



21st Century Assessment of the Yuba River Watershed

Restoration Priorities

2. Reforming Water Management

- Improve Timing and amount of in-stream flows in regulated rivers and streams
- Remove barriers where appropriate and most beneficial



21st Century Assessment of the Yuba River Watershed

Restoration Priorities

3. Restoring Ecosystem *Function*

- Forest Management to support soil rehabilitation
- Meadows Restoration to support water “storage” and water quality
- Floodplain Restoration, supporting groundwater recharge and salmon habitat in the Lower Yuba River



Lower Yuba, with artists concept of floodplain restoration



21st Century Assessment of the Yuba River Watershed Toward A Regenerative Future

1. The Yuba River as a Solution to California's Salmon Crisis

- Threatened salmon will go extinct without passage above foothill “rim dams”.
- Salmon passage at Englebright may provide the greatest increase in new salmon habitat with the least cost to the public than any other barrier in the San Francisco Bay Watershed.



21st Century Assessment of the Yuba River Watershed Toward A Regenerative Future

2. Culture and Indigenous Identity; Becoming Native to the Greater Yuba Watershed.

“We are unlikely to achieve anything close to **sustainability** in any area unless we work for the broader goal of **becoming native** in the modern world, and that means becoming native to our **places** in a coherent **community** that is in turn **embedded** in the ecological realities of its surrounding **landscape**.”

-Wes Jackson

21st Century Assessment of the Yuba River Watershed Toward A Regenerative Future

3. Organizing Watershed Democracy

- Thinking (and planning) Like a Watershed
 - Integrated, comprehensive ecosystem management must take place at the localized, watershed scale.
- Re-purposing Watershed Councils
 - Advancing from informal information sharing to coordinated and collaborative planning and implementation of priority restoration actions.
- Establishing and Organizing “Watershed Guilds”

Watershed Guilds

- Tributary-scale association of landowners, public agencies and interested parties voluntarily sharing resources, local ecological knowledge, skills, and definitions of “watershed health” that bring immediacy and shared purpose to land and water stewardship.
- Examples in the Yuba include the groups who produced the ‘Inimim Forest Management Plan, and the Round Mountain Firesafe Plan.
- Emerging examples in Rush Creek and Owl Creek

*“Guild –noun: An organization of persons with related interests or goals, especially one formed for mutual aid or protection
.... sometimes constitutes a local governing body”*

-Random House Dictionary