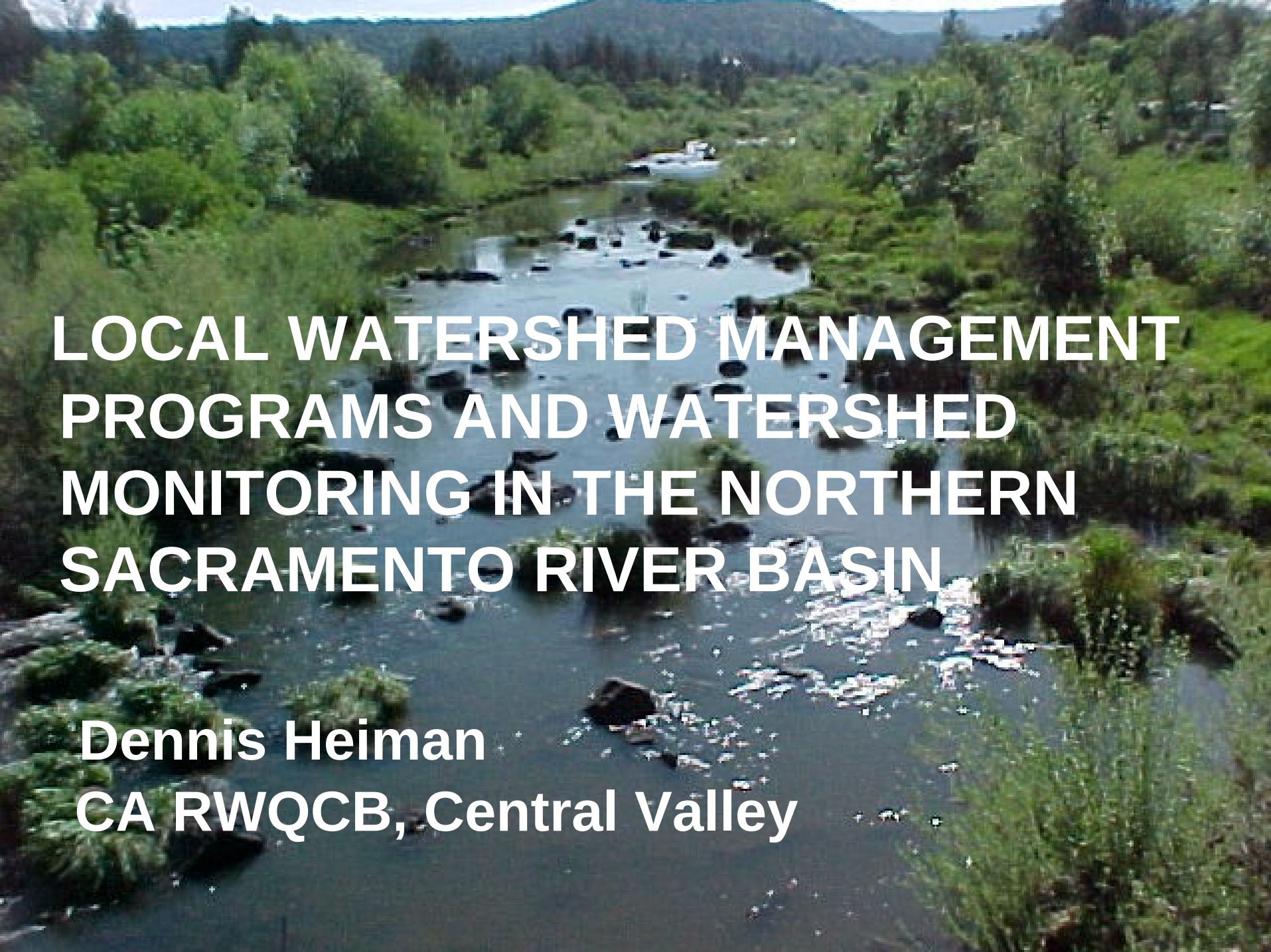


LOCAL WATERSHED MANAGEMENT PROGRAMS AND WATERSHED MONITORING IN THE NORTHERN SACRAMENTO RIVER BASIN

Dennis Heiman
CA RWQCB, Central Valley

WHY DO YOU NEED A WATERSHED MONITORING PROGRAM?

- establish existing (or baseline) watershed condition
- determine if conditions (or parameters) are at ‘problem’ levels
- provide focus to the watershed management program

CONTINUED:

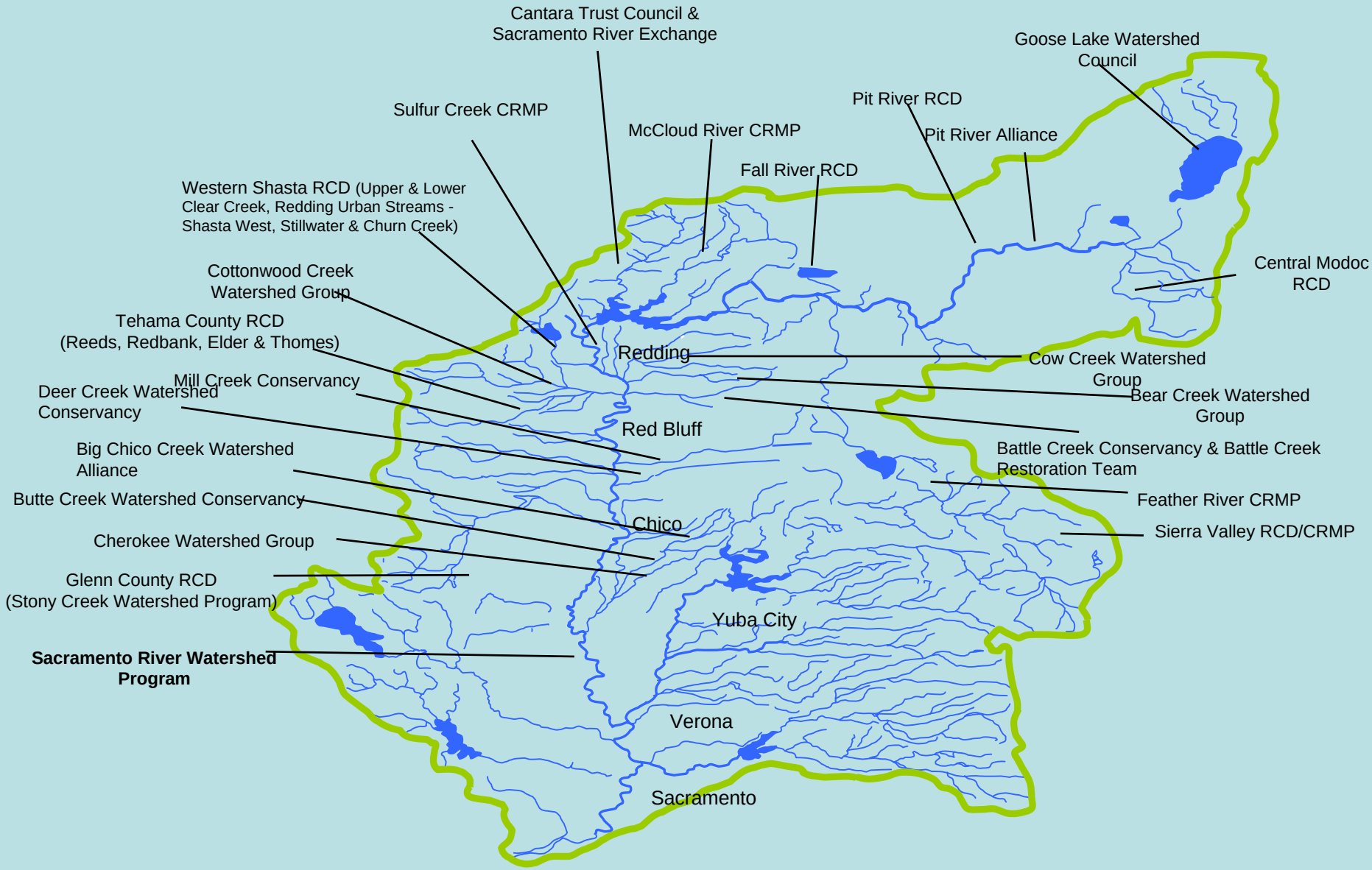
- involve and educate the watershed community (includes agencies)
- evaluate long term trends
- validate improvements resulting from projects, better practices, and education

CONSIDERATIONS IN ESTABLISHING A WATERSHED MONITORING PROGRAM

- focus on the issues and parameters of concern
- involve an interdisciplinary TAC
- select parameters that are information rich, feasible to measure, and repeatable

- consider all options for implementation (volunteers, watershed program staff, resource agencies/academia, contract consultants)
- design and implement monitoring program consistent with available funding

Watershed Groups and Programs in the Upper Sacramento River Watershed



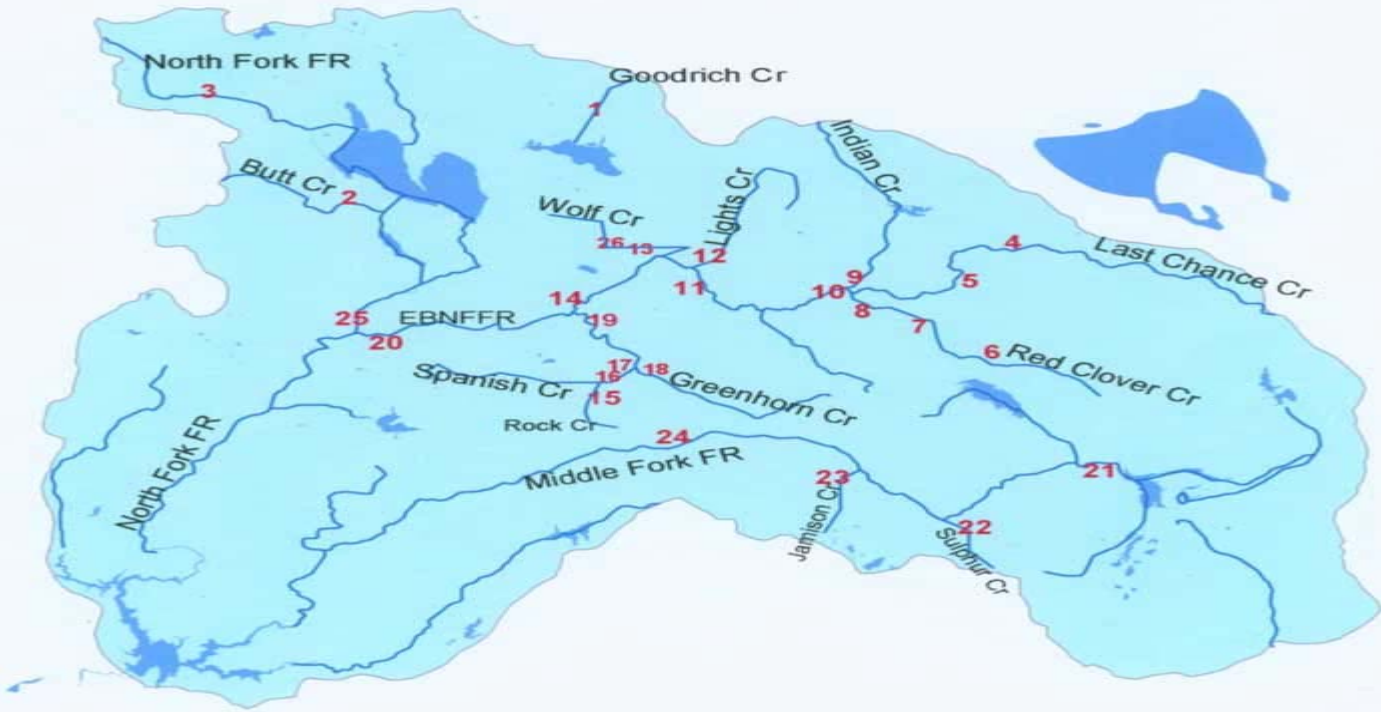
UPPER FEATHER RIVER WATERSHED MONITORING

- implementing entity – Feather River CRM and Plumas Corporation
- underway since 1999
- 26 fixed monitoring stations
- monitoring parameters (next slide)
- Reports: Feather River CRM Watershed Monitoring Report 2000-2003 (www.feather-river-crm.org)

MONITORING PARAMETERS:

- Flow
- Geomorphology and Habitat
  - bank full W/D
  - entrenchment
  - % fines and particle size dist.
  - pool/riffle ratio
- Water Quality
  - temperature
  - turbidity/SS
  - limited chemistry – nutrients, bacteria, metals, etc.
- Biological
  - macro invertebrates & fish

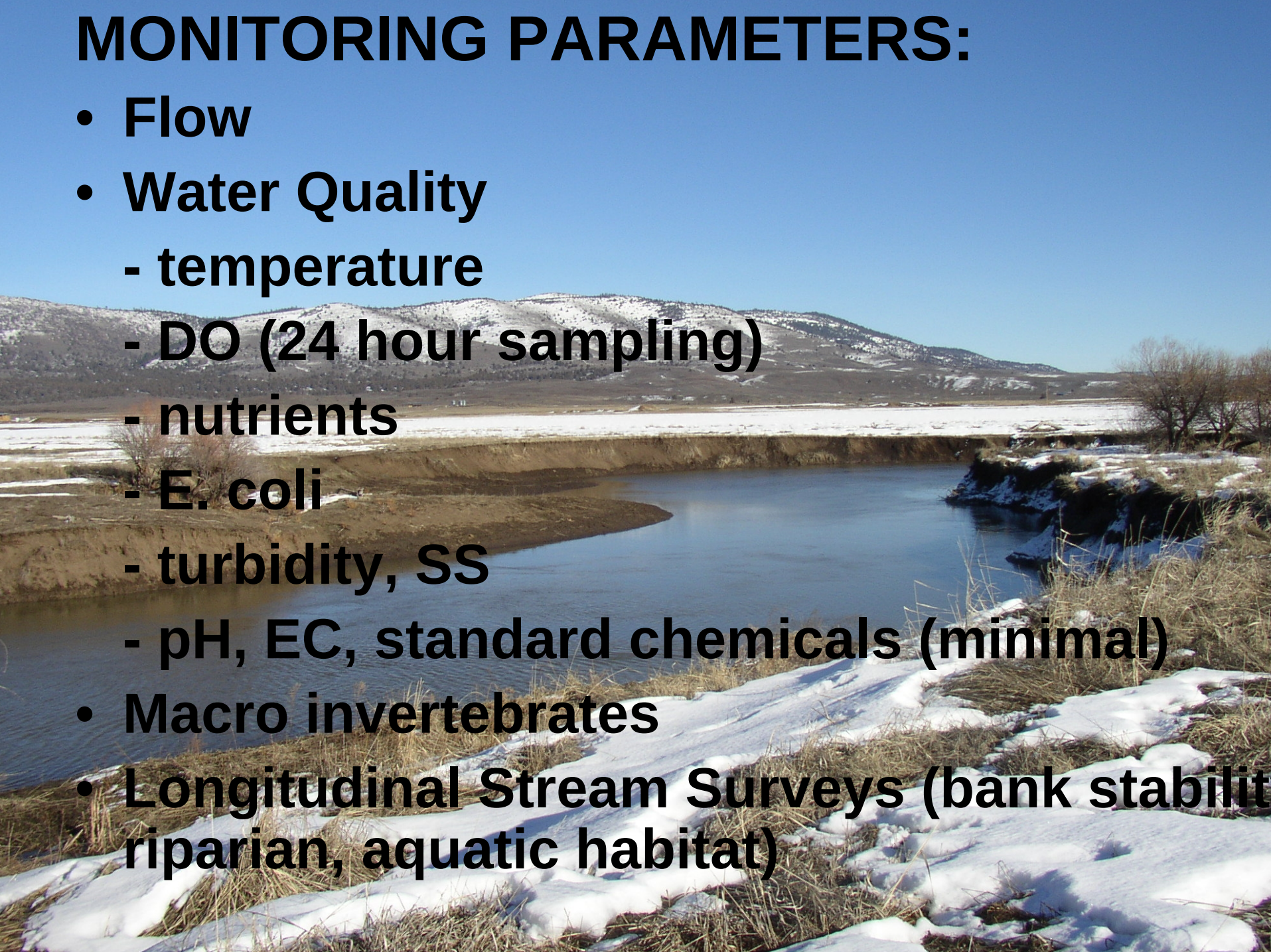
Upper Feather River Watershed Monitoring Locations



1. Goodrich Cr
2. Butt Cr
3. NFFR abv Lake Almanor
4. Last Chance Cr @ Doyle Crossing (CRS)
5. Last Chance Cr blw Murdock Crossing
6. Red Clover Cr blw Chase Bridge
7. Red Clover Cr at Notson Bridge (CRS)
8. Red Clover Cr blw Drum Bridge
9. Indian Cr abv Red Clover (DWR weir)
10. Indian Cr blw Red Clover (Flournoy)
11. Indian Cr at Taylorsville
12. Lights Cr
13. Wolf Cr near Town Park
14. Indian Cr abv Spanish Cr
15. Rock Cr
16. Spanish Cr at Hwy 70 (Gansner Park)
17. Spanish Cr abv Greenhorn
18. Greenhorn Cr
19. Spanish Cr abv Indian
20. East Branch North Fork Feather abv NFFR
21. Middle Fork Feather @ Beckwourth
22. Sulphur Cr
23. Jamison Cr
24. Middle Fork Feather abv Nelson Cr
25. North Fork Feather
26. Wolf Cr @ Main St Bridge

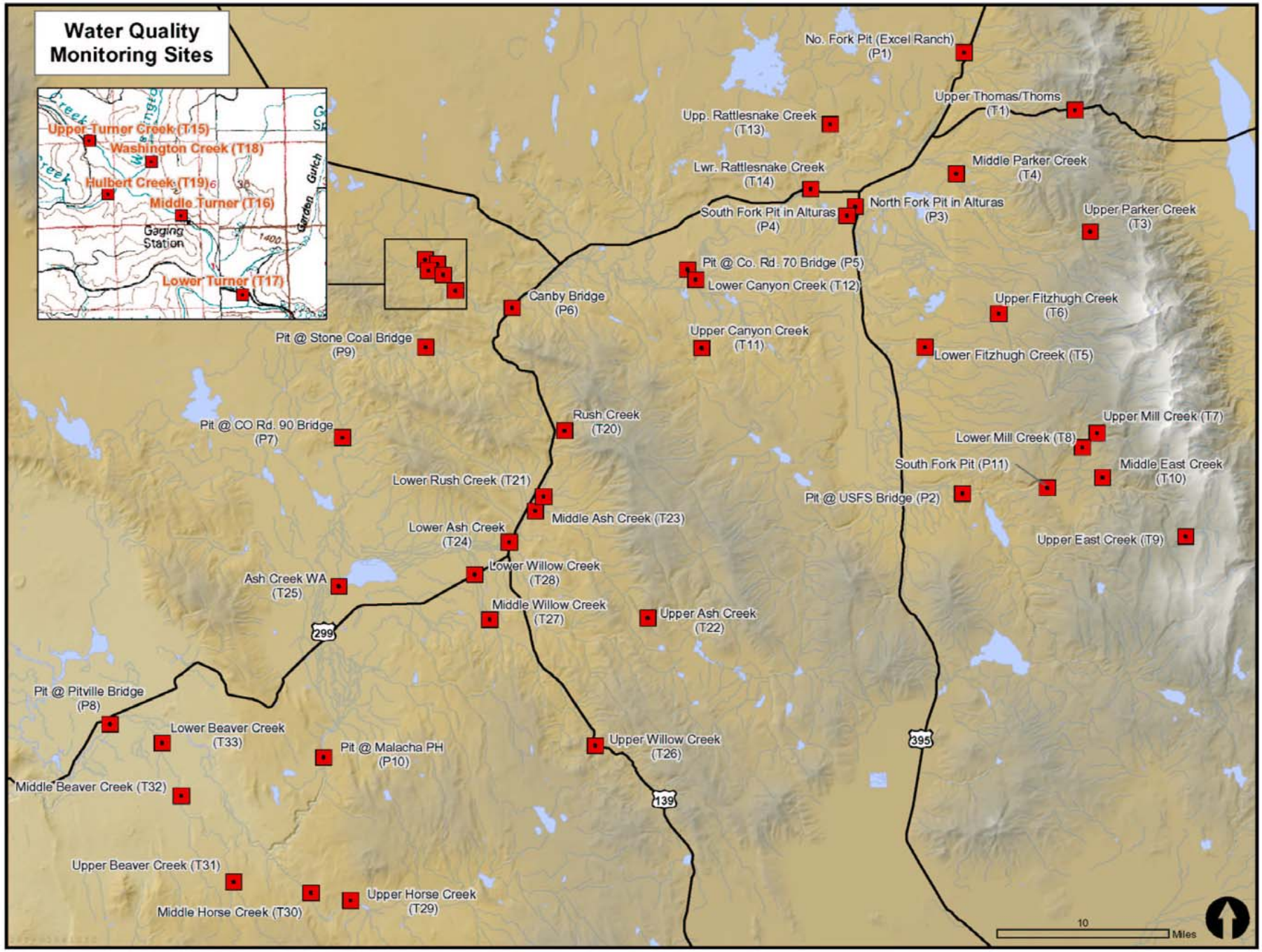
PIT RIVER WATERSHED MONITORING PROGRAM:

- implementing entity – Pit River Alliance (4 RCD's, USFS, BLM, RWQCB, DWR)
- underway since 2000
- 52 fixed monitoring sites
- monitoring parameters (next slide)
- Pit River Water Quality Study 2001-2002 (www.pitalliance.com)



MONITORING PARAMETERS:

- Flow
- Water Quality
  - temperature
  - DO (24 hour sampling)
  - nutrients
  - E. coli
  - turbidity, SS
  - pH, EC, standard chemicals (minimal)
- Macro invertebrates
- Longitudinal Stream Surveys (bank stabilit riparian, aquatic habitat)


Water Quality Monitoring Sites
Upper Turner Creek (T15)
Washington Creek (T18)
Hulbert Creek (T19)
Middle Turner (T16)
Lower Turner (T17)
Gaging Station
Garden Gulch
No. Fork Pit (Excel Ranch) (P1)
Upper Thomas/Thoms (T1)
Upp. Rattlesnake Creek (T13)
Lwr. Rattlesnake Creek (T14)
Middle Parker Creek (T4)
South Fork Pit in Alturas (P4)
North Fork Pit in Alturas (P3)
Upper Parker Creek (T3)
Pit @ Co. Rd. 70 Bridge (P5)
Lower Canyon Creek (T12)
Canby Bridge (P6)
Upper Fitzhugh Creek (T6)
Upper Canyon Creek (T11)
Pit @ Stone Coal Bridge (P9)
Lower Fitzhugh Creek (T5)
Pit @ CO Rd. 90 Bridge (P7)
Rush Creek (T20)
Upper Mill Creek (T7)
Lower Mill Creek (T8)
South Fork Pit (P11)
Middle East Creek (T10)
Lower Rush Creek (T21)
Pit @ USFS Bridge (P2)
Middle Ash Creek (T23)
Lower Ash Creek (T24)
Upper East Creek (T9)
Lower Willow Creek (T28)
Ash Creek WA (T25)
Middle Willow Creek (T27)
Upper Ash Creek (T22)
299
Pit @ Pitville Bridge (P8)
Lower Beaver Creek (T33)
Pit @ Malacha PH (P10)
Upper Willow Creek (T26)
395
Middle Beaver Creek (T32)
139
Upper Beaver Creek (T31)
Upper Horse Creek (T29)
Middle Horse Creek (T30)
10
Miles