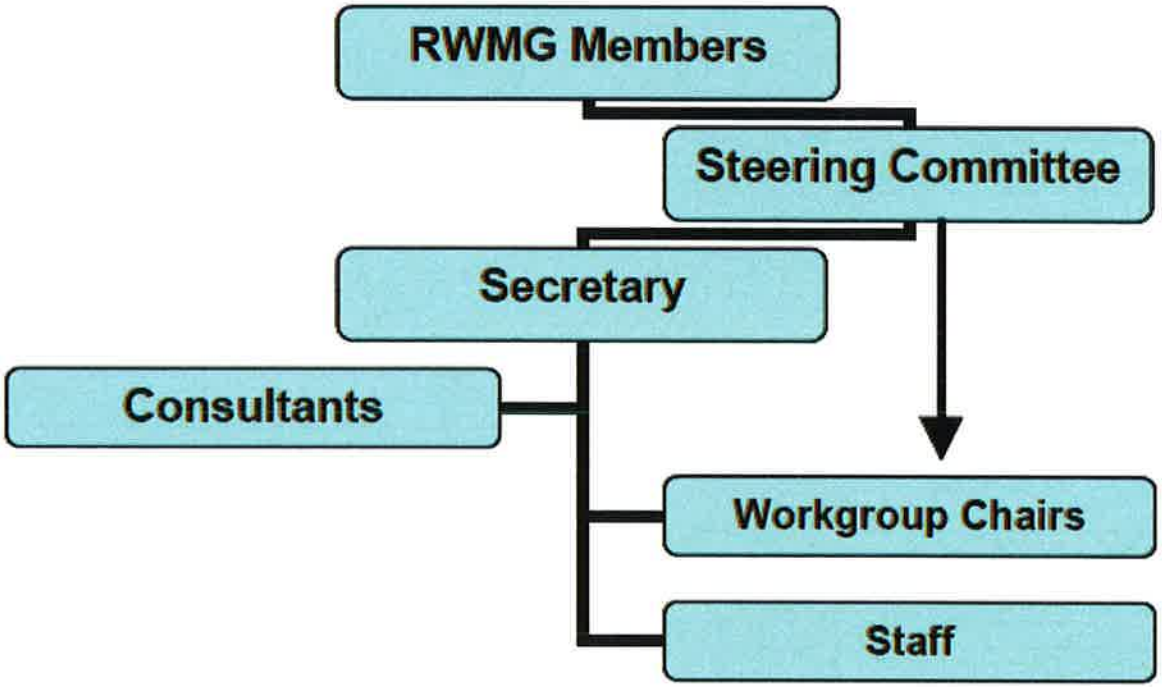
Upper Feather River Watershed IRWM

Feather River Regional Water Management Group

Organizational Chart



Organizations

- Audubon Society
- City of Portola
- County of Plumas
- County of Sierra
- Feather River Coordinated Resource Management
- Feather River Land Trust
- Feather River Resource Conservation District
- Gold Mountain Community Services District
- Greenhorn Creek Community Services District
- Greenville Rancheria
- Grizzly Lake Resort Improvement District
- Grizzly Ranch Community Services District
- Honey Lake Resource Conservation District
- Indian Valley Community Services District
- Maidu Summit Consortium
- Mountain Meadows Conservancy
- Plumas Corporation
- Plumas County Community Development Commission
- Plumas County Fire Safe Council
- Plumas County Flood Control and Conservation District
- Quincy Community Services District
- Sierra County Fire Safe and Watershed Council
- Sierra Institute for Community and Environment
- Sierra Valley Groundwater Management District
- Sierra Valley Mutual Water Company
- Sierra Valley Resource Conservation District
- University of California Cooperative Extension
- Upper Feather River Watershed Group
- USDA Forest Service Plumas National Forest
- USDA Natural Resources Conservation Service
- Walker Ranch Community Services District
- Feather River Watershed Coordinators
- W.M. Beaty & Associates, Inc.

1985 to Present

Feather River Coordinated Resource Management Group

21 agencies and other members
(DWR, CDF, DFG, USFS, NRCS, PG&E, Local Gov't)

Formed to address:

- **Loss of Floodplain Connection**
- **Loss of Vegetative Structure**
- **Loss of Biological Processes**
- **Loss of Physical Inputs**
- **Loss of Chemical Processes**

2005 to Present Regional Priorities

Prop. 50/84 IRWM Planning and Implementation

Improving Water Supply and Water Quality for all designated beneficial uses through a focus on "Watershed Management" and "Disadvantaged Communities"

- Integrating land use and water use across jurisdictions, land ownerships, and beneficial uses of water.

- A consistent strategy to restore hydrologic function and biological connectivity across urban and rural landscapes and land uses.

IWRM Projects must advance integrated watershed resource goals:

1. **Restore 250,000 acres of degraded alluvial valleys**

   1985 to 2010 - 3,900 acres and 44 miles of stream channel by Feather River CRM

   1998 to 2010 - 4,300 acres of riparian restoration by Forest Service/Quincy Library Group

   3% of the targeted landscape in 25 years

2. **Forest management to enhance upland recharge on 2 million acres while sequestering carbon and reducing threat of catastrophic wildfire**

   > 100,000 acres (private lands)

   > 187,000 acres (National Forest)

   14% of the targeted landscape in 12 years

Restoring of Natural Function

Pre-Project Last Chance Creek, Alkali Flat, 2003

Restoring Natural Function

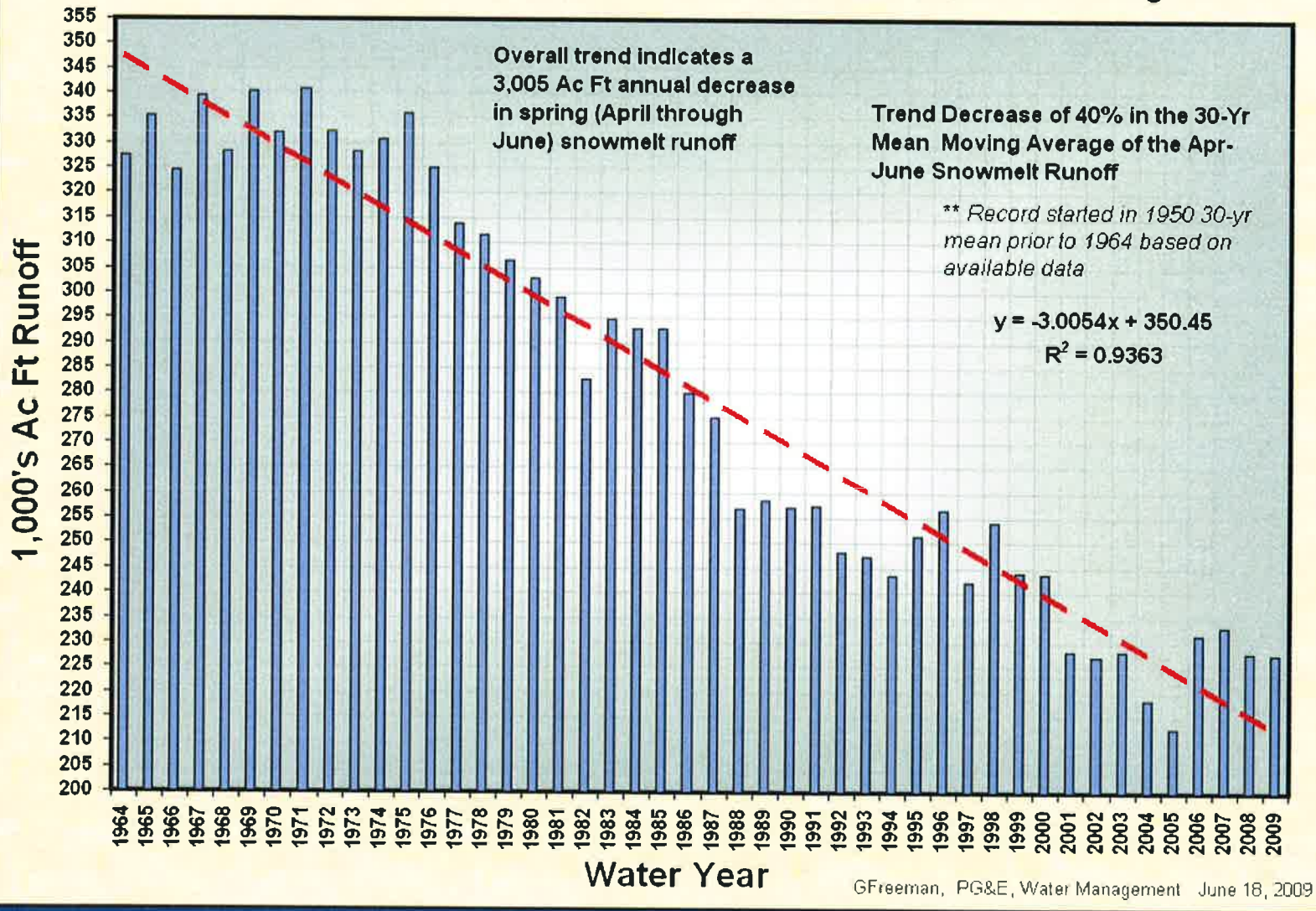
Post-Project Last Chance Creek, Alkali Flat, May 2005

Declining Runoff

Pacific Gas and Electric Company

East Branch of No Fk Feather River, CA FNF

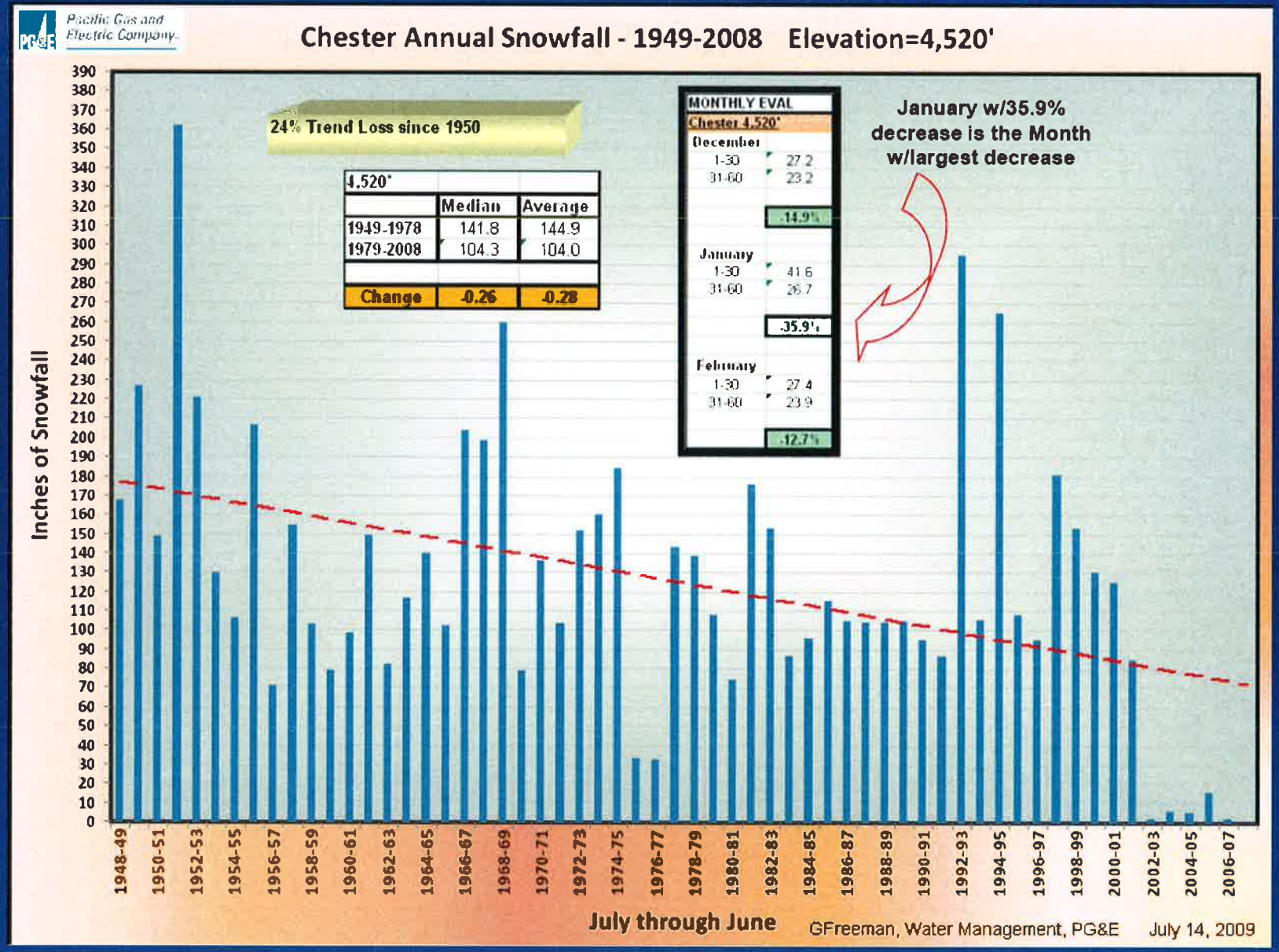
1935-2009 moving average of 30-yr** April-June mean Roff starting 1964



GFreeman, PG&E, Water Management June 18, 2009

New Regional Challenges

Reduced Snowpack Storage



Regional Challenges – Collapse of Delta Fisheries

Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta
DRAFT
California Department of Fish and Game
September 21, 2010

Category	Function	Flow (cfs) (Total 15000)	Year Type	Months												Citation
				O	N	D	J	F	M	A	M	J	J	A	S	
Sacramento River	Increase juvenile salmon outmigration survival and abundance for fall-run Chinook salmon. Increases juvenile salmon outmigration survival	At Wilkins Slough: pulse flow: 20,000 cfs for 7 days[8]	All		1	1	1									SWRCB (2010)
	Increase juvenile salmon outmigration survival by reducing diversion into Georgiana Slough and the central Delta	At Freeport: 13,000 - 17,000[9]	All		1	1	1	1	1	1	1	1				SWRCB (2010)
	Promote juvenile salmon outmigration	At Rio Vista: 20000 – 30000								1	1	1				DFG (2010a)

Headwaters solutions to regional and statewide natural resource challenges

Meadow water storage to augment spring pulse flows and summer baseflows for water quality and fisheries

Forest fuels management to mitigate the fire/flood/mud/mercury cycle and to enhance spring and fall pulse flows and winter flood attenuation for downstream water quality and fisheries

U.S. Forest Service

Enhance coordination between federal and state resource agencies to address interconnected forest, water, ecosystem, and human health problems.

"We propose that the 2011 Planning Rule guide management of NFS lands with a goal of maintaining and restoring healthy, resilient watersheds in order to protect and enhance America's water resources for humans and the environment."

"Water is a resource that epitomizes the need for a collaborative all-lands approach: in order to accomplish this goal, managers will need to work closely with neighbors, partners and stakeholders, within the context of the broader landscape."

"Maintaining healthy watersheds and restoring damaged or degraded watersheds will help them be more resilient to climate change and other stressors, and will optimize their potential to continue to supply clean water and critical aquatic and terrestrial habitat, along with cultural services, recreation opportunities, and other benefits, far into the future."

http://planningrule.blogs.usda.gov/

Water Yield Opportunities From National Forests

- **Water Yield Capability Estimates**

  Runoff water in California totals about 71 million acre feet per year. During Forest Plan preparation, analyses were performed to determine each National Forest's potential water yield:

Forest	per yr. MAF	yield/acre AF
Six Rivers	5.169	5.2
Mendocino	3.404	3.8
Tahoe	2.010	2.4
Shasta-Trinity	5.303	2.4
Klamath	3.950	2.3
Stanislaus	1.970	2.1
Eldorado	1.444	2.1
Plumas	2.470	2.1
Sierra	2.565	1.9
Lassen	1.310	1.2
Sequoia	0.734	.6
Inyo	1.093	.6
Los Padres	0.715	.4
Modoc	0.566	.3
Angeles	0.226	.3
San Bernardino	0.195	.3
Cleveland	0.095	.2
Total	33.536	

- USDA Forest Service
  Pacific Southwest Region
  630 Sansome Street
  San Francisco, CA 94111

2003 to 2009 – Plumas Watershed Forum

Plumas County ~ Department of Water Resources ~ SWP Contractors

Formed for watershed investment and management for local and downstream benefit

2008 Jones & Stokes Review:

1. **Positive cost/benefit if new "useable" water valued at only $150/af**
2. **One-time construction cost for meadow/aquifer storage = $550/af**

What have we learned in 25 years?

Some things have endured; some things have evolved.

Endured:

- Progress on the ground is the teacher and the driver of more progress. (adaptive management)
- On-the-ground knowledge is as important as state-of-the-art science for a continuous commitment to positive change. (civic science)
- Stewardship ethic permeates the community decade after decade and inspires outside support.
- Local institutional memory offsets agency turnover and shifting politics, policies, and priorities. (institutional continuity with change)
- Restoring the natural functions and hydrology of healthy watersheds solves old problems and new ones. (working with nature for aggregated benefits)

What have we learned in 25 years?

Some things have endured; some things have evolved.

Evolved:

- **Interagency and NGO connections evolve to address emerging regional issues – snowpack change; Delta species crash; watershed health and human health connection (e.g. mercury, air quality)**
- **Examples:**
  - **DACs and tribal issues and entities span regions**
  - **Increased connections between rural and urban watershed communities on energy, water, and forests.**
  - **Problems grow larger and more connected, while local, state, and federal agency resources and budgets shrink.**

New Directions

- Increased attention to needs of Disadvantaged Communities (DACs) for community water and wastewater systems upgrades and a new focus on assessing the vulnerability of domestic wells to non point source pollution.

New Directions

- Continued refinement of Tribal consultation and engagement protocols with particular emphasis on mercury pollution and reduction and exposure minimization strategies.

- Continued work with other entities (IRWMs, Mountain Counties Water Association, Sierra Water Workgroup, etc.) on forest-water interactions and water quality and supply reliability at the Mountain Counties scale through a federal-state partnership approach.

New Directions

- In upcoming Upper Feather River IRWM Plan update, a commitment to develop "findings" and a "determination of consistency" between the new Upper Feather River IRWM Plan and the USFS Forest Plan(s), the Water Board Basin Plan, the California Water Plan, and the local General Plan through mechanisms such as the Plumas County Coordinating Council, the Maidu Summit Consortium, the Plumas County General Plan Community Plan Committees, and the IRWM Regional Water Management Group.