

Aquatic Habitat Impacts from Marijuana Cultivation: Trends and Cumulative Effects

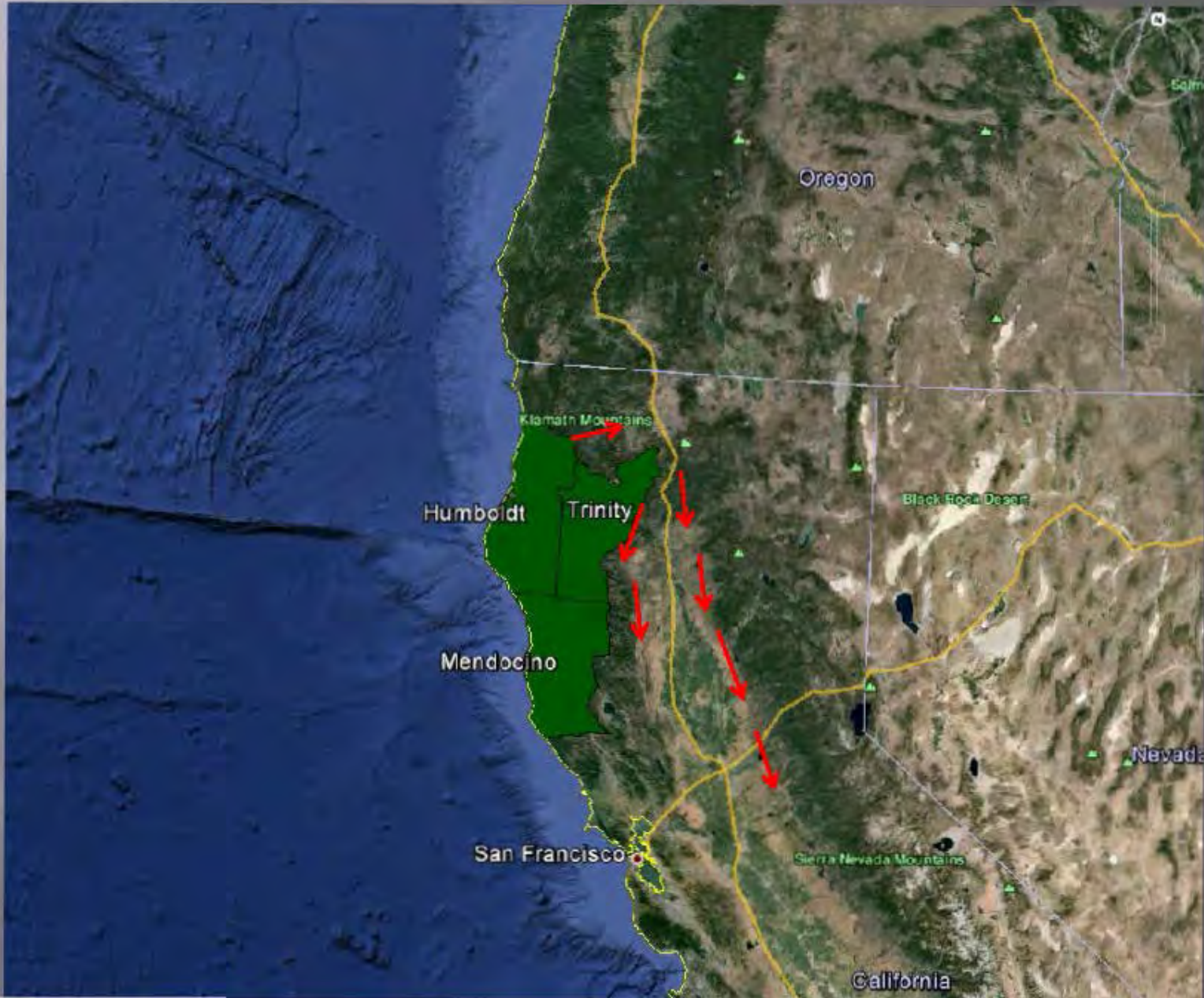


**CDFW
Watershed
Enforcement
Team**

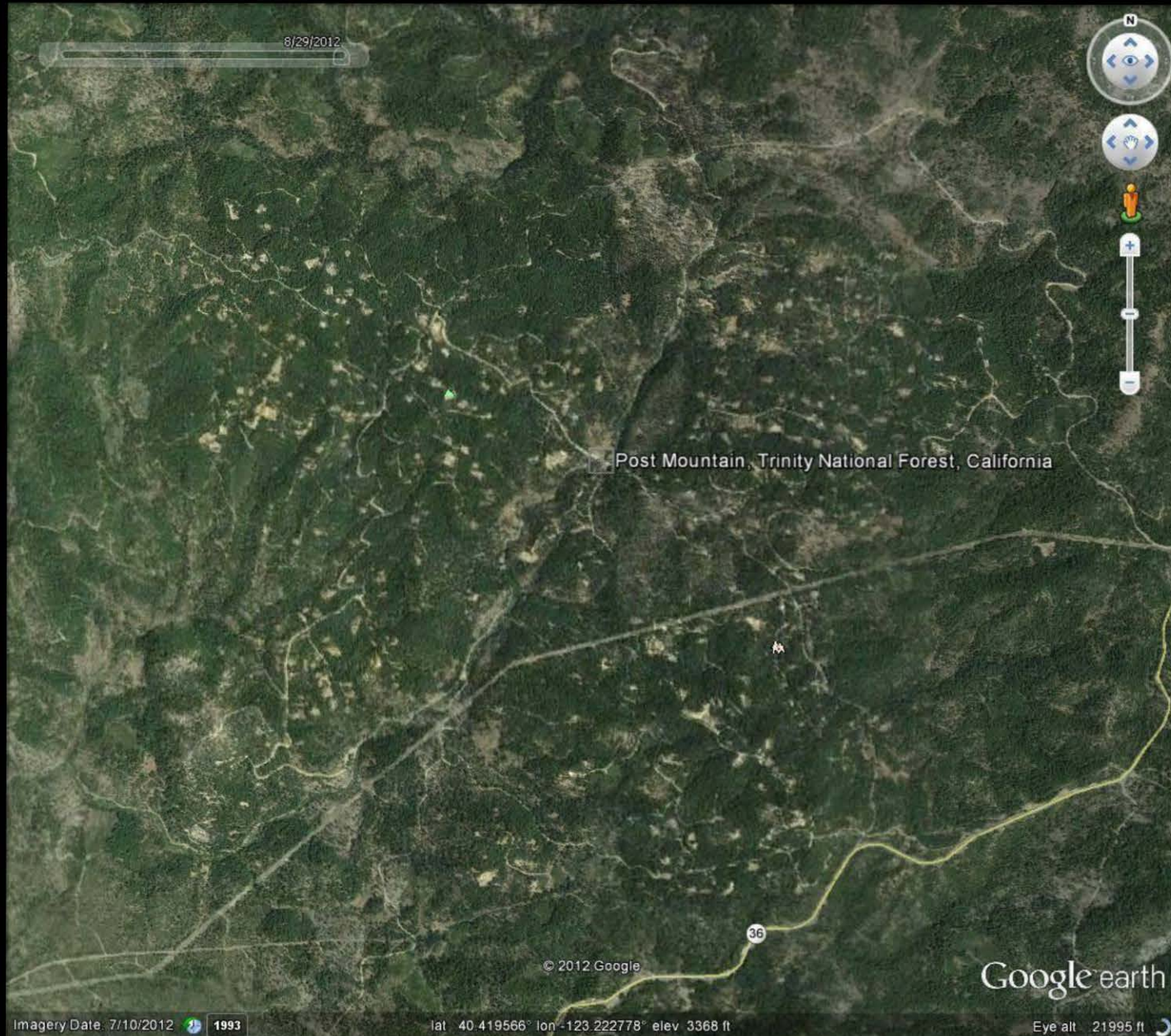


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The Emerald Triangle



Post Mountain –South Fork Trinity



Explosive Growth: Post Mountain 2005-2012



Explosive Growth: Post Mountain 2005-2012



Natural Resource Impacts

- Water Diversion: During low-flow periods, no screening, oversized pumps
- Pollutants: Sediment, petroleum products, fertilizers, pesticides
- No BMPS: No Riparian & Stream Protection Areas
- Conversion/Fragmentation of lands

Sensitive fish and amphibian species



Southern torrent salamander,
Rhyacotriton variegatus



Coho salmon, *Oncorhynchus kisutch*



Coastal Cutthroat Trout,
Oncorhynchus clarki clarki



Coastal tailed frog, *Ascaphus truei*



Steelhead trout, *Oncorhynchus mykiss*



Chinook salmon,
Oncorhynchus tshawytscha

What we saw in 2014

July



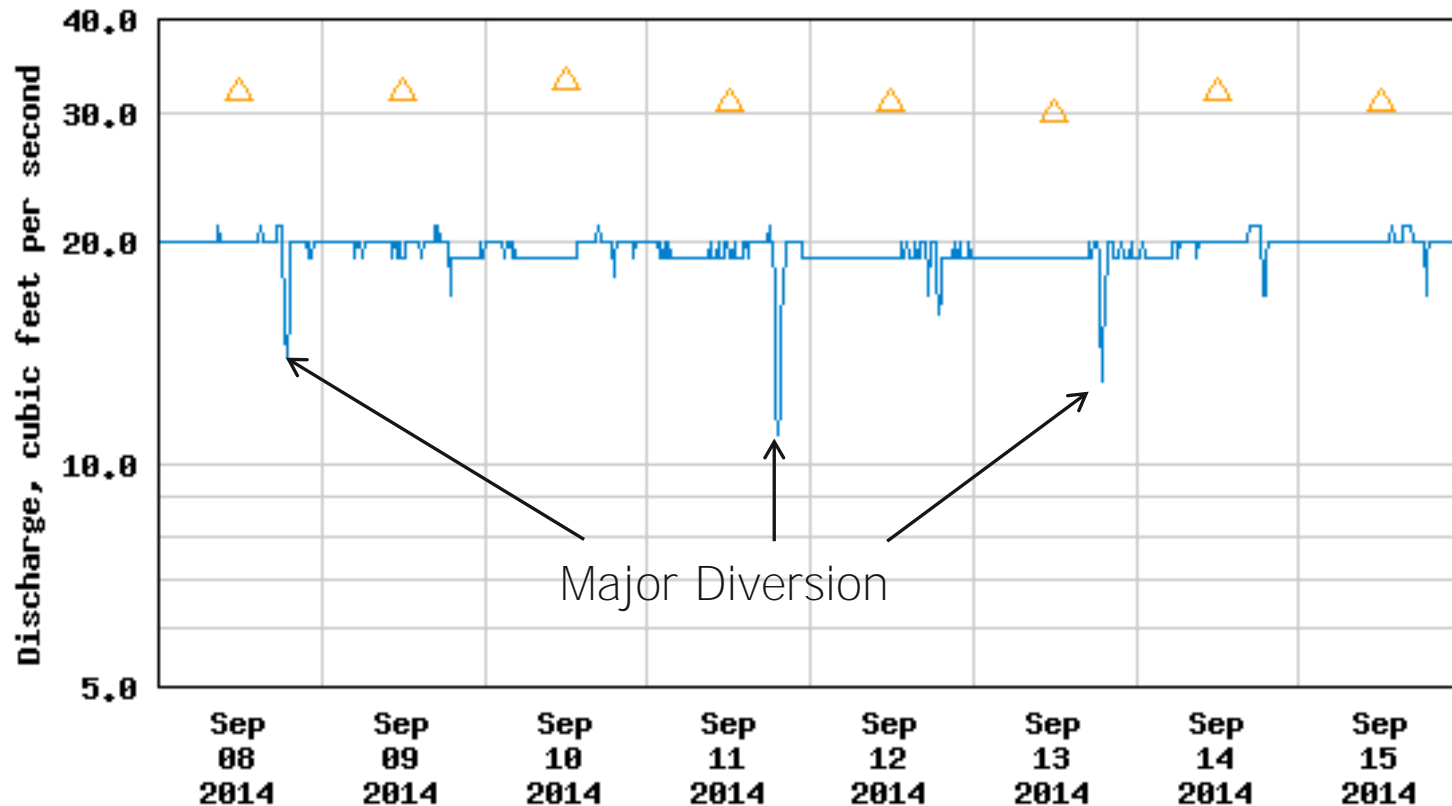
August



Water Withdrawals



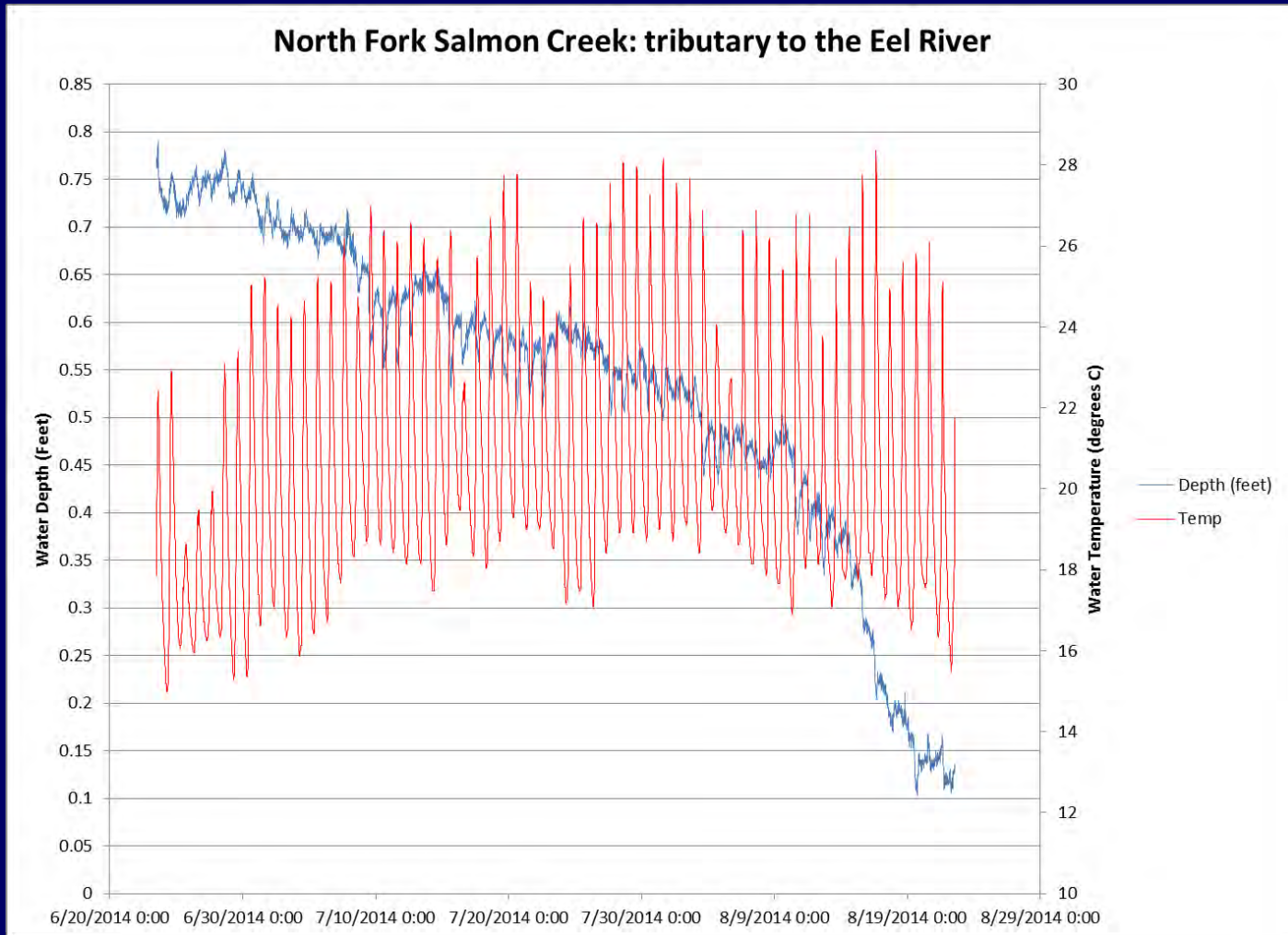
USGS 11475000 EEL R A FORT SEWARD CA



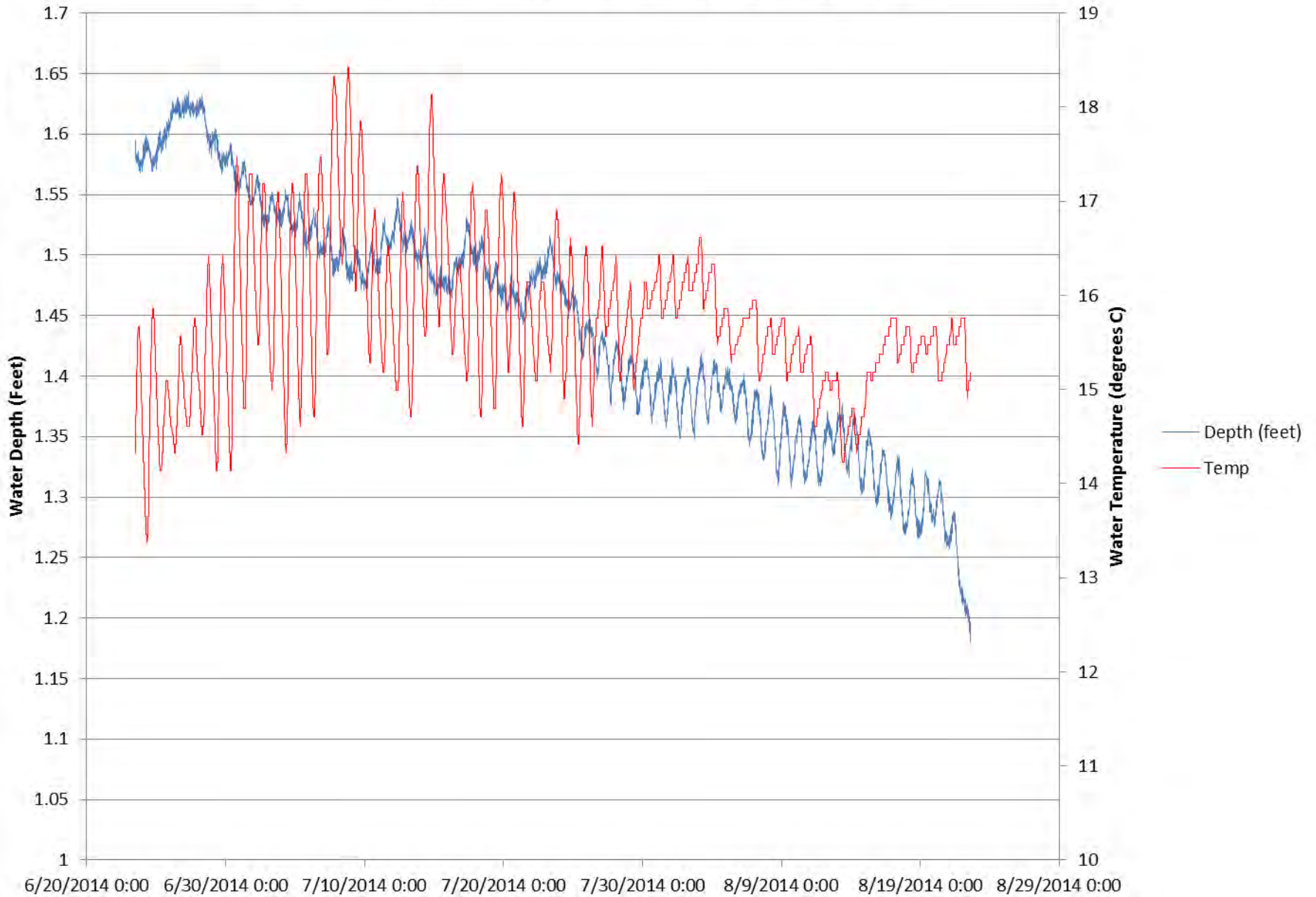
----- Provisional Data Subject to Revision -----

△ Median daily statistic (59 years) — Discharge

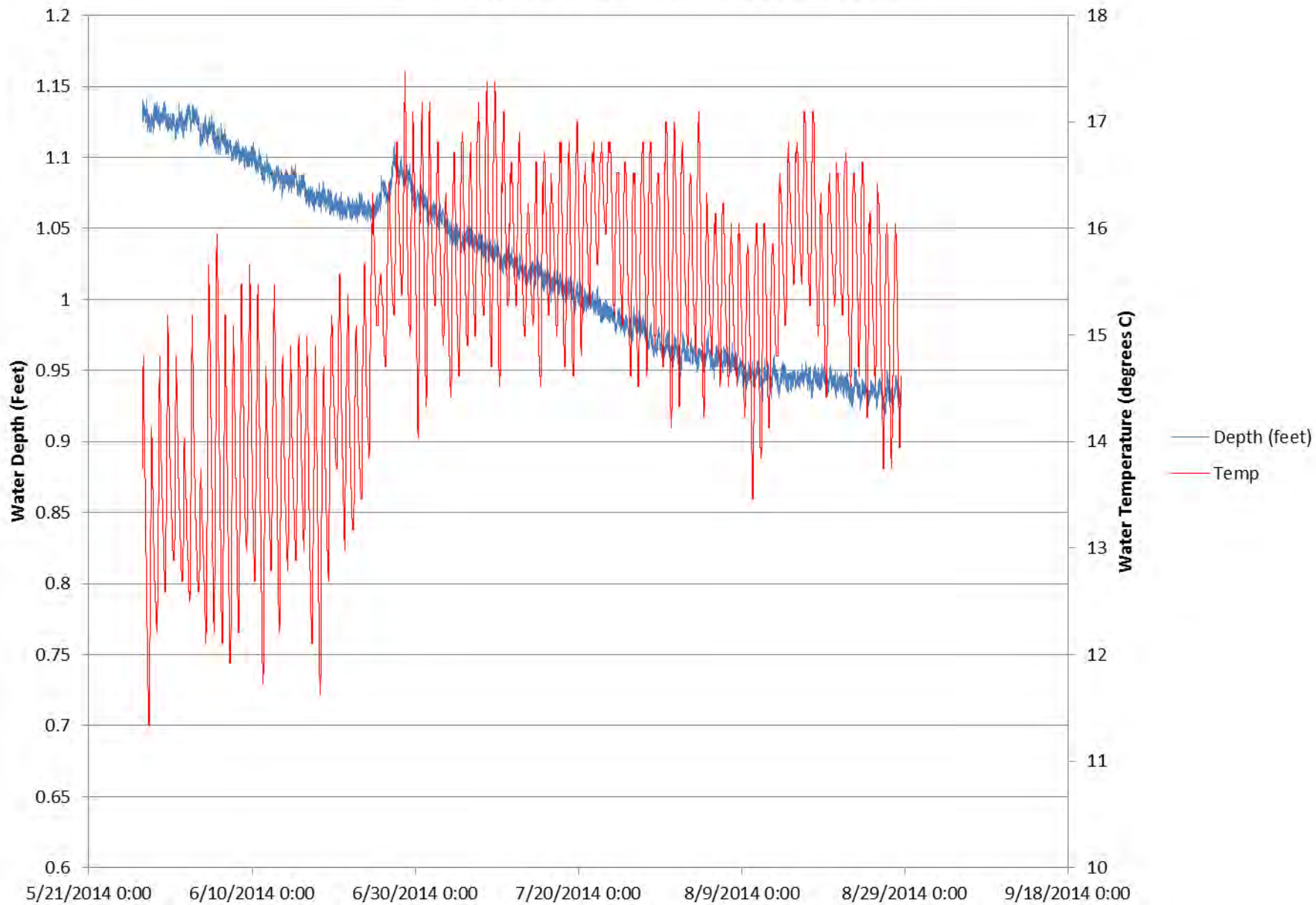
2014 Flow Monitoring Efforts



Mainstem Sproul Creek above the East Fork



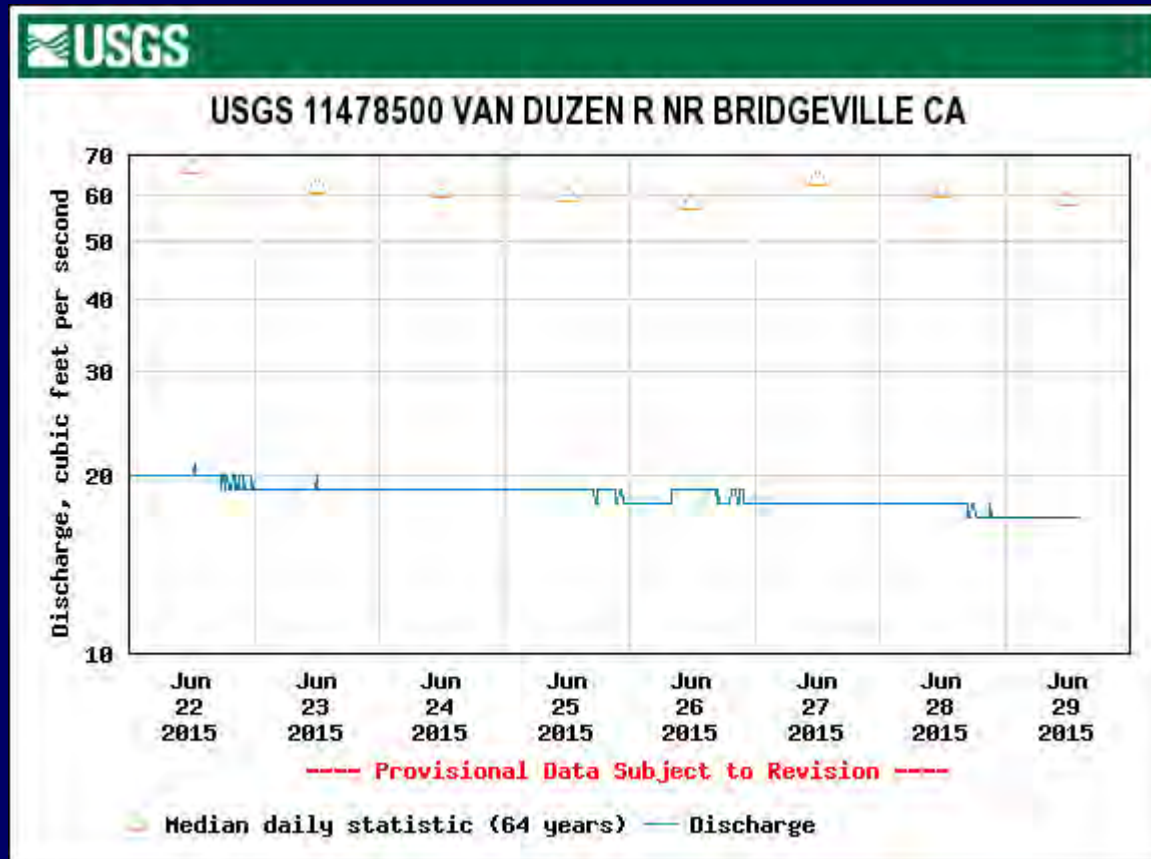
Grizzly Creek above Stevens Creek



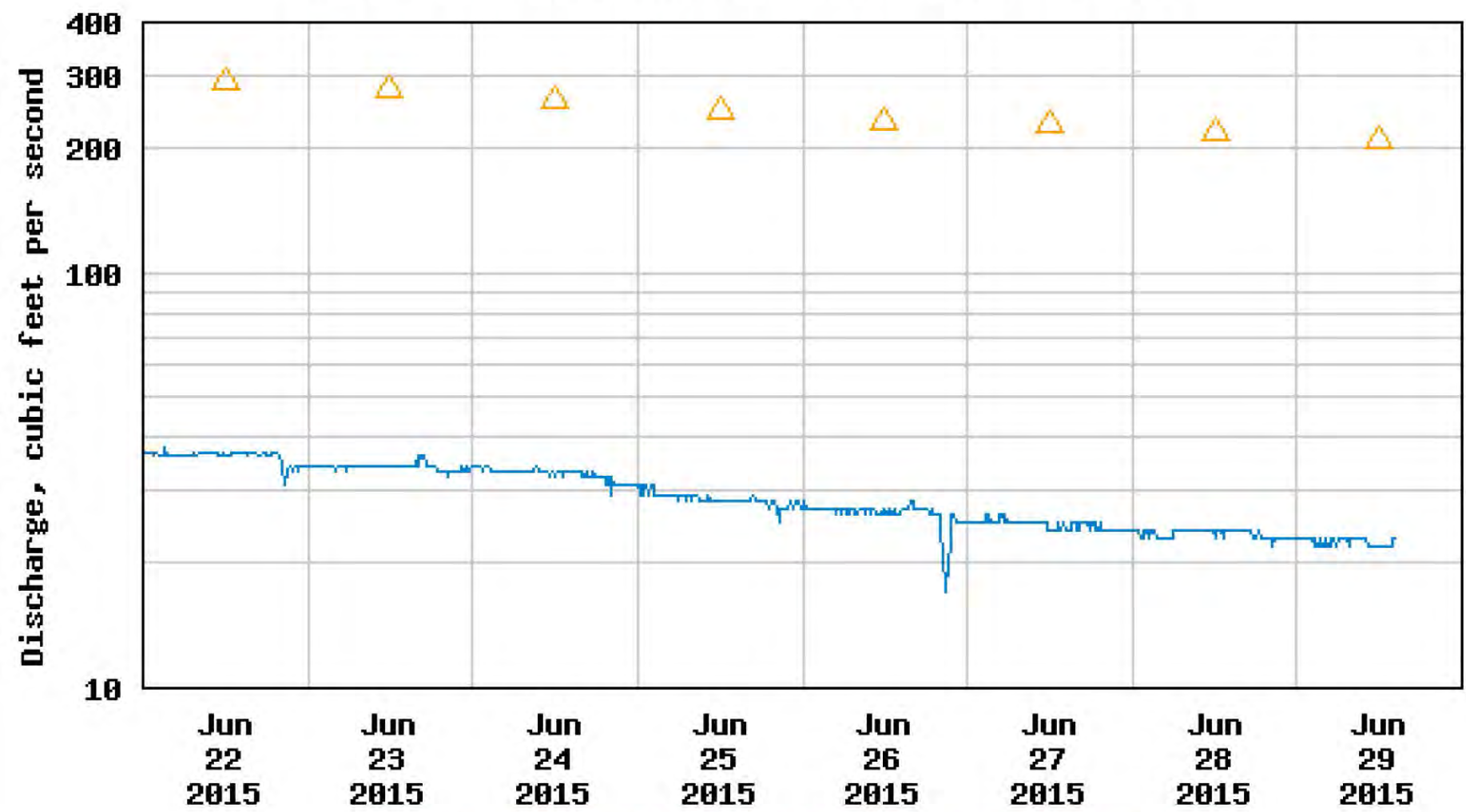
2015 Habitat Conditions and Cultivation Trends



Major Rivers Are At Or Near Historic Lows



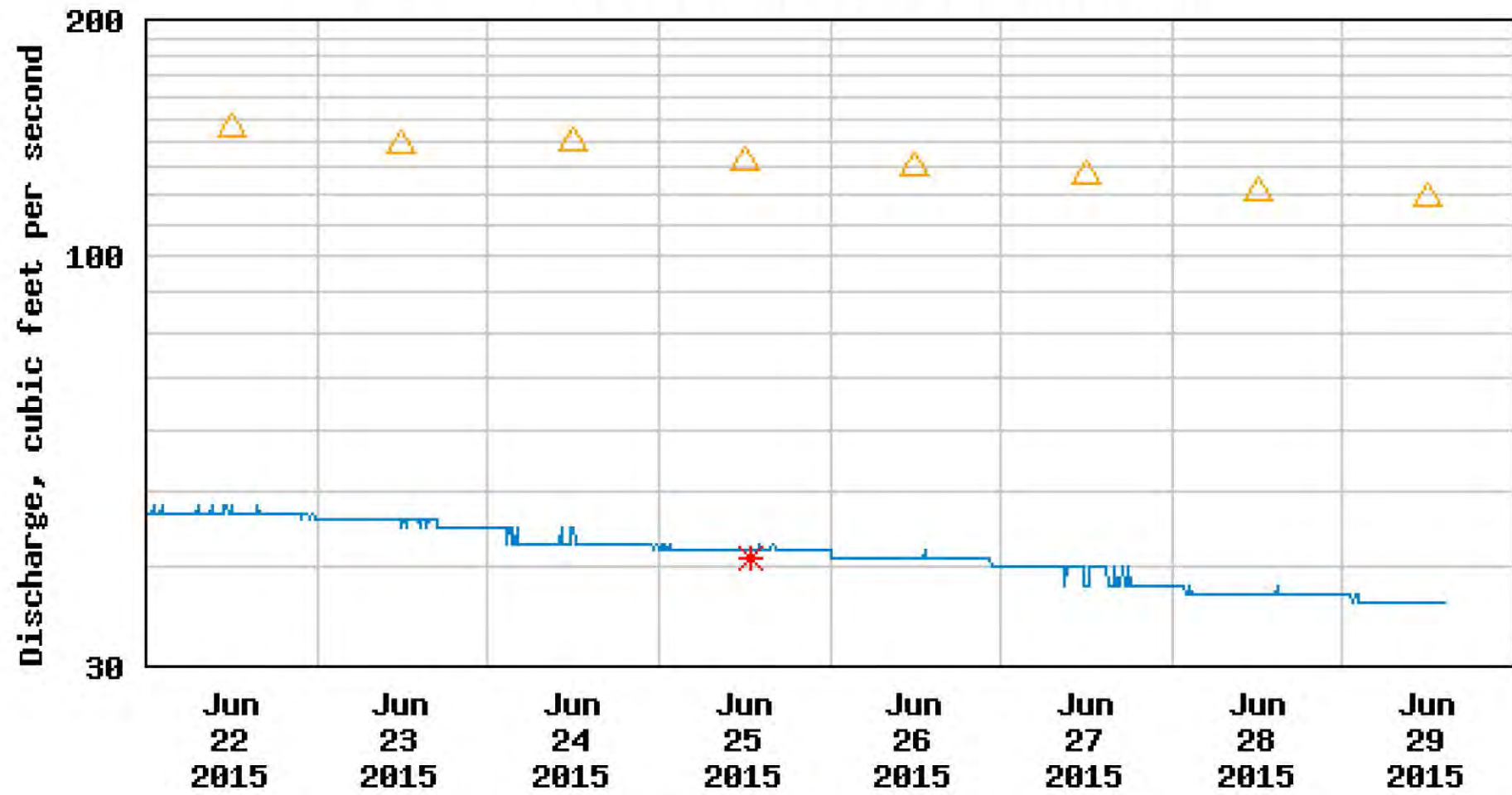
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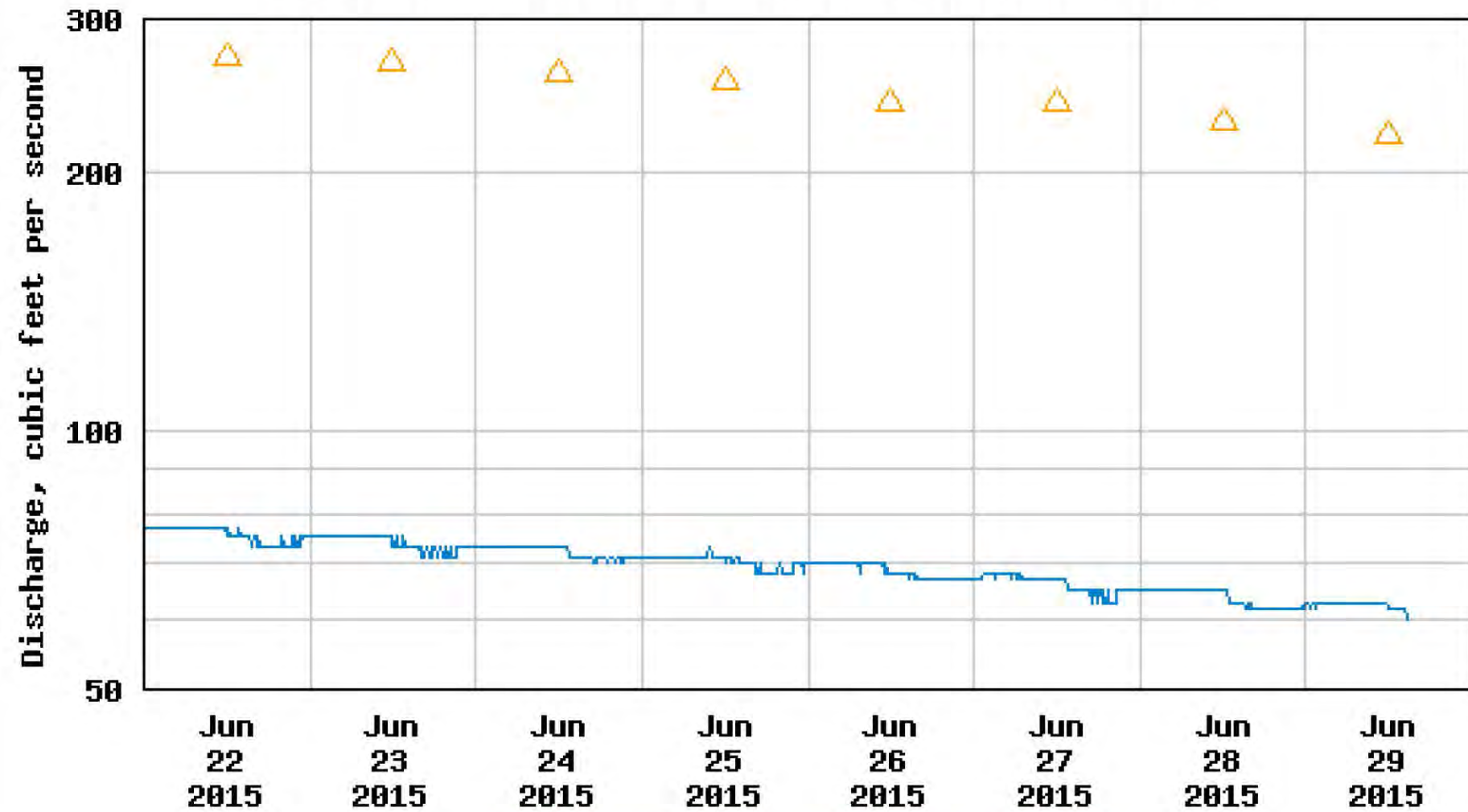
USGS 11482500 REDWOOD C A ORICK CA



---- Provisional Data Subject to Revision ----

- △ Median daily statistic (63 years)
- * Measured discharge
- Discharge

USGS 11528700 SF TRINITY R BL HYAMPOM CA



----- Provisional Data Subject to Revision -----

△ Median daily statistic (49 years) — Discharge

Grows Are Getting Larger



Diversions and Dry Streams





New Pond Construction



Poorly Constructed Pond



ON-STREAM POND



Grow Site Development



Improper Road Construction



FUTURE ROAD CROSSING FAILURE



Buried Stream Channel



Stream Channel



50,000+

06.14.2012 08:58

CDFW WET Program Activities



WET Efforts to Date

- 99 properties inspected for Fish @ Game Code violations
- Inspections in six counties: Shasta, Tehama, Butte, Humboldt, Trinity, and Mendocino
- 21+ Notice of Violations filed
- 6+ Administrative Actions pending

Compliance

- Approximately 90% compliance on inspected properties (when NOV filed)
- LSA applications submitted daily by landowners desiring compliance
- Water storage supply business booming

Future Efforts

- Continue Inspections (consent and warrant) in important salmon and steelhead trout watersheds
- Continue outreach efforts
- Permit cultivation sites in compliance with Fish & Game Code



Thank you!

Questions?

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