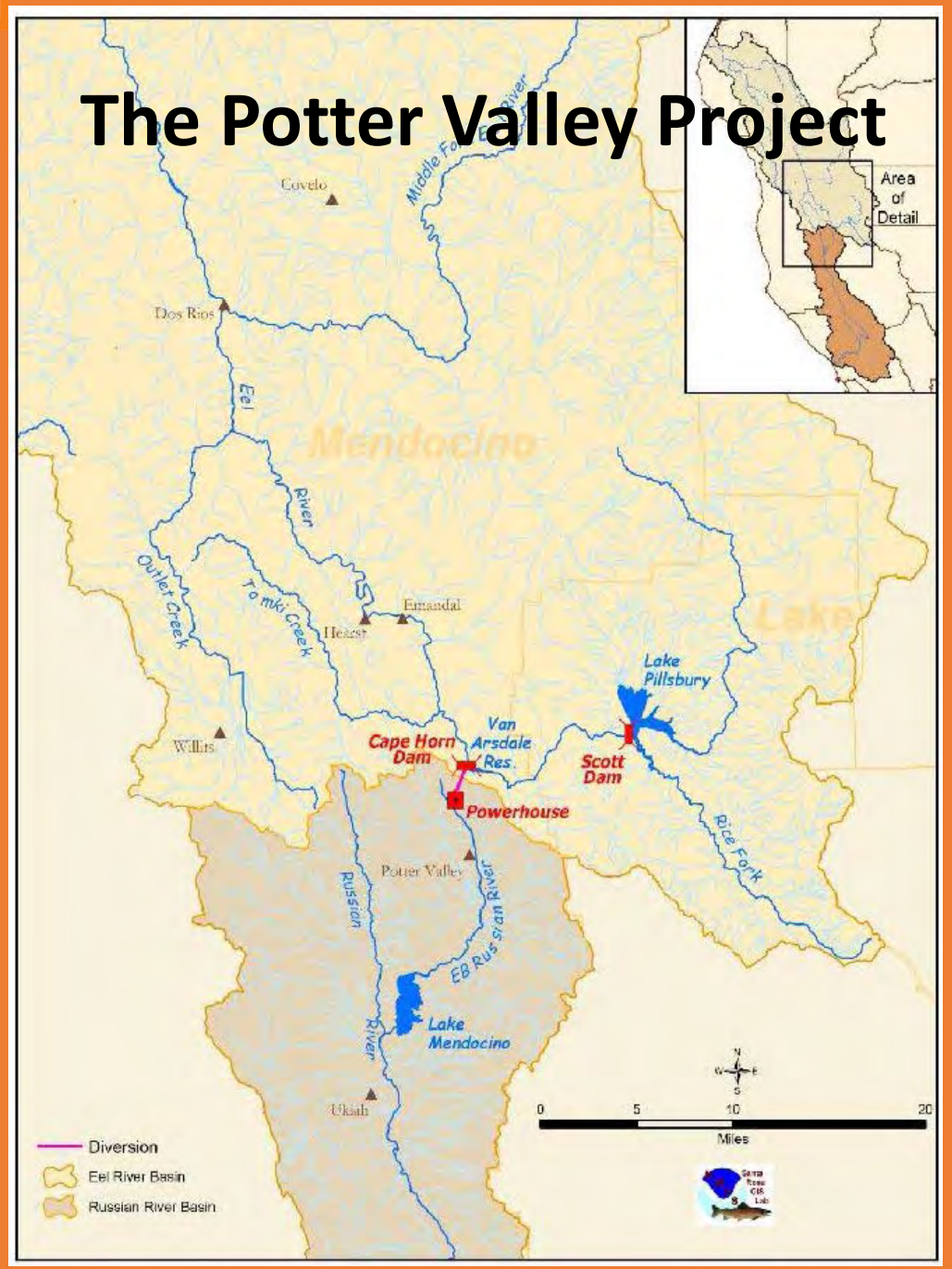
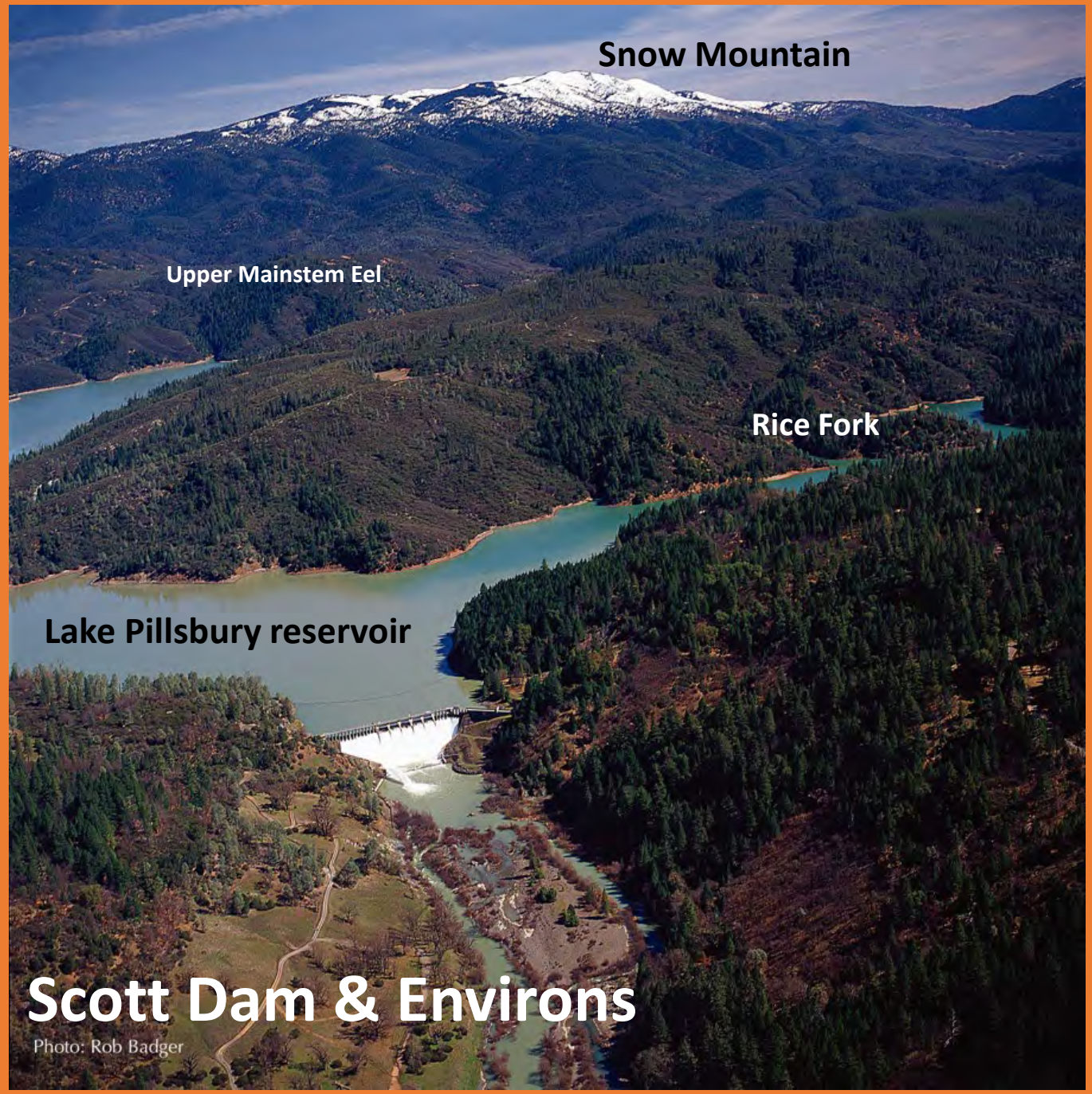
Scott Greacen
Conservation Director
Friends of the Eel River

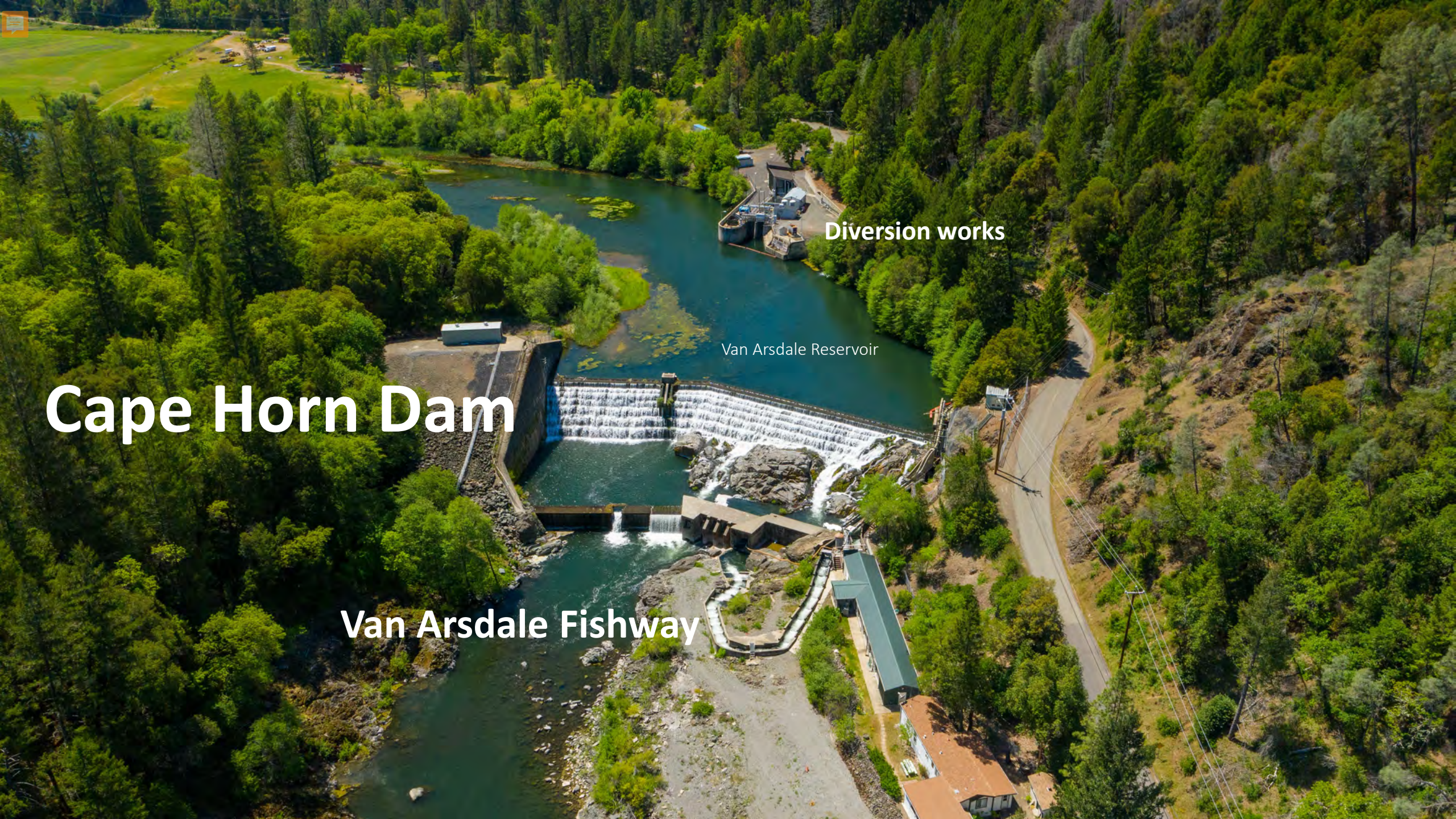
ESA Advocacy on the Eel

Citizen Enforcement of the Endangered Species Act and Removing Barriers to Salmonid Recovery


The Potter Valley Project
Area of Detail
Covelo
Dos Rios
Middle Fork Eel River
Eel River
Mendocino
Lake
Outlet Creek
Tomki Creek
Hearst
Ernandal
Willits
Lake Pillsbury
Cape Horn Dam
Van Arsdale Res.
Scott Dam
Powerhouse
Rice Fork
Potter Valley
Russian River
EB Russian River
Lake Mendocino
Ukiah
0 5 10 20
Miles
Diversion
Eel River Basin
Russian River Basin


Snow Mountain
Upper Mainstem Eel
Rice Fork
Lake Pillsbury reservoir
Scott Dam & Environs
Photo: Rob Badger


Scott Dam
More Gates
Gates
Gates
The Knocker
The Only Low-Elevation Outlet


Diversion works
Van Arsdale Reservoir
Cape Horn Dam
Van Arsdale Fishway

Take (and its consequences) under the ESA

Take

The ESA defines "*take*" as:

"*harass*, *harm*, **pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."**

- Department of Commerce regulations define "*harm*" as "An act which actually kills or injures fish or wildlife," including "significant habitat modification or degradation which actually kills or injures fish or wildlife by *significantly impairing essential behavioral patterns*, including breeding, spawning, rearing, migrating, feeding or sheltering."
- DoC guidance defines "*harass*" as "Creat[ing] the likelihood of injury to wildlife by annoying it to such an extent as to *significantly disrupt normal behavioral patterns* which include, but are not limited to, breeding, feeding, or sheltering."

ESA Section 7

Requires federal agencies to:

- Aid in the conservation of listed species, and
- Ensure their activities are *not likely to jeopardize* the continued existence of listed species or destroy or adversely modify designated critical habitats.
- Consult with NMFS/FWS where actions "*may affect*" listed species or their habitat.

ESA Section 9

(and Dept of Commerce regs) make it *unlawful* for any person to "take" federally listed fish species within the United States without a permit from NMFS/USFWS.

FERC Licensing

- All hydropower dams must have a license from the Federal Energy Regulatory Commission (FERC)
- Long-term licenses (25-50 years)
- Compliance with all other laws (ESA, CWA, etc.) wrapped into relicensing
- Potter Valley Project was relicensed in 1977
- Chinook and steelhead listed under ESA (1999, 2000)
- 2003 NMFS Biological Opinion finds PG&E operations of Potter Valley Project under FERC license *jeopardize* ESA listed Eel River Chinook and steelhead

Jeopardy and its consequences

NMFS' 2003 Biological Opinion (BiOP)

- **Jeopardy determination**

  Jeopardize the continued existence of = engaging in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR 402.02)

- **Running the PVP for maximum power production risks driving Eel River salmon and steelhead extinct in the Upper Mainstem**
- **Reasonable and Prudent Alternative (RPA)** = alternative methods of project implementation to avoid jeopardy
- Jeopardy finding forces FERC to amend the PVP license to adopt the RPA, changing PG&E's instructions

PG&E has operated PVP under RPA since 2003

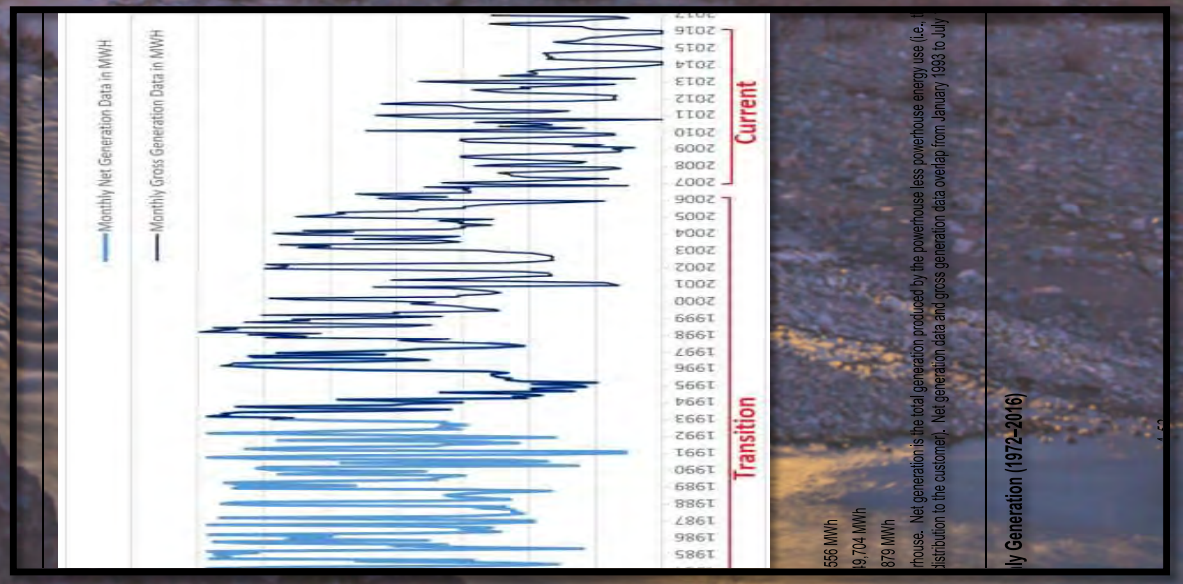
RPA flow schedule approximates natural flow regime

Changes utility of PVP as hydropower asset

- PVP was tiny to begin with – 9.2 MW nominal capacity
- Unspecified flows stay in the Eel – PG&E and PVID can't just take any excess as they did before

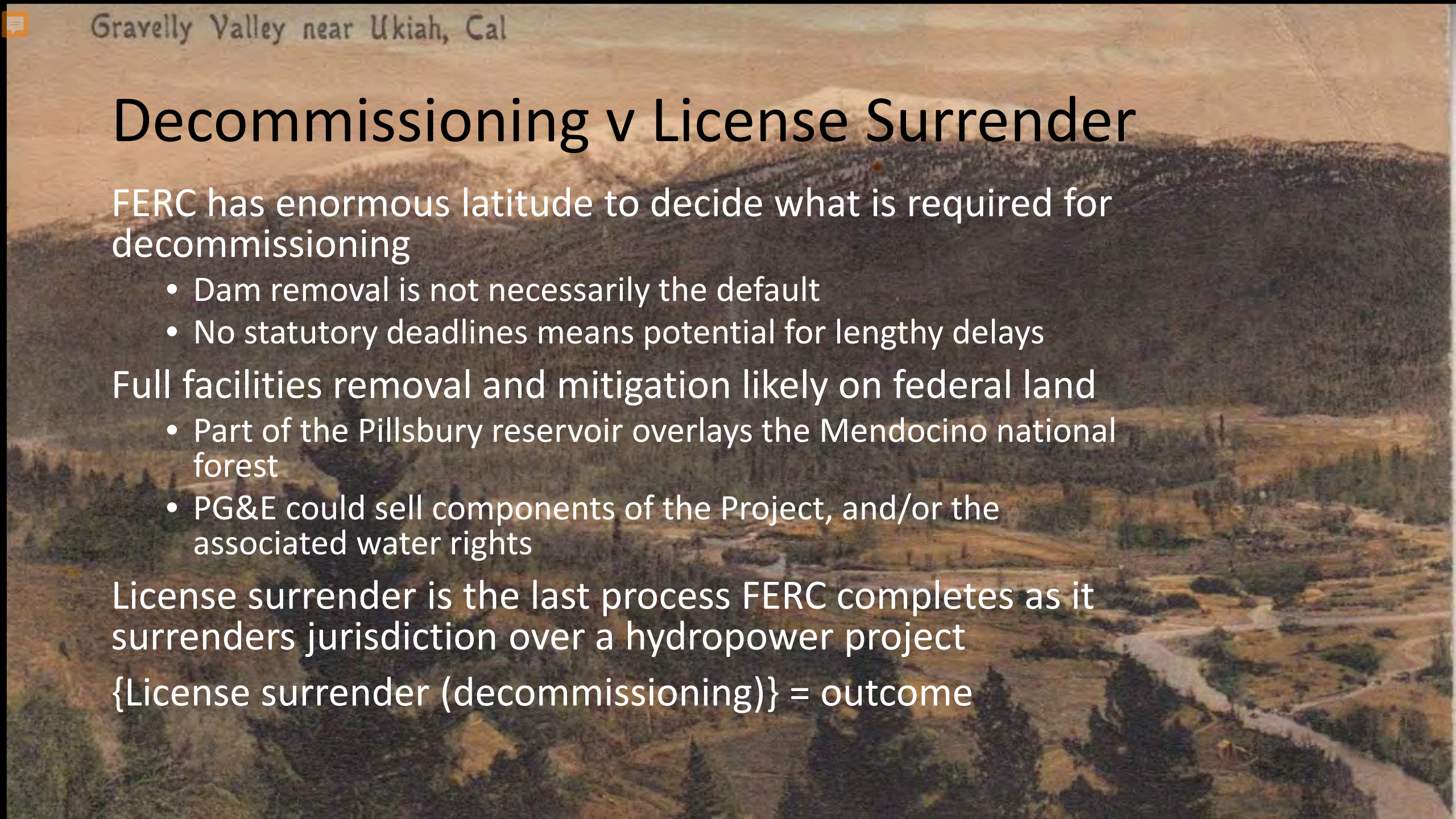
RPA has broken down over 20 years of implementation.

Variances more common than not.



From relicensing to decommissioning

- **2017 PG&E proposes to relicense the Potter Valley Project**
- **2018 offers to auction PVP during relicensing**
  - Auction spiked after Camp Fire
  - PG&E retreat to bankruptcy to protect shareholder$ from fire victims
- **January 2019 PG&E withdraws relicensing application**
  - Cannot license PVP again
- **June 2019 Two Basin Solution group formed to attempt relicensing**
  - 2022 relicensing effort fails
  - Because PG&E refused to fund it
  - Closes the door to any future relicensing of PVP as a hydroelectric facility
- **April 15, 2022 PVP license expired**
- **April 21, 2022 FERC issues Annual License to PG&E**
  - Will remain in effect through decommissioning, until license surrender
  - Same terms as previous license, including RPA
- **PG&E decommissioning plan now due late 2023**



Decommissioning v License Surrender

FERC has enormous latitude to decide what is required for decommissioning

- Dam removal is not necessarily the default
- No statutory deadlines means potential for lengthy delays

Full facilities removal and mitigation likely on federal land

- Part of the Pillsbury reservoir overlays the Mendocino national forest
- PG&E could sell components of the Project, and/or the associated water rights

License surrender is the last process FERC completes as it surrenders jurisdiction over a hydropower project

{License surrender (decommissioning)} = outcome

Meanwhile, take continues at PVP

NMFS to FERC: *March 17, 2022*

The 20-year duration of the proposed action is a central component of the Opinion. We relied upon this set duration to: (1) assess the effects of the proposed action; (2) develop the RPAs necessary to avoid jeopardy and the destruction or adverse modification of critical habitat; and (3) evaluate the effectiveness of the RPAs over the expected life of the proposed action.

Based on information currently available, we conclude that the Project is causing take of ESA-listed salmonids in a manner not anticipated in the Opinion and from activities not described in the Opinion.

- BiOp expires with PVP license April 15, 2022
- Incidental Take Statement (ITS) exceeded
- Cape Horn Dam and fishway never covered by ITS
- RPA is failing to provide for Chinook and steelhead production & recovery
- Interim Protective Measures required pending decommissioning

Causes of take include:

At Cape Horn

- Closures & blockages in higher flows
- Predation in the ladder
- Predation on downstream migrants above the ladder
- Downstream migrants killed & injured passing down the dam

Interdam reach

- Pikeminnow
- Temperature

Below Cape Horn

- Predation on upstream migrants
- Temperature

FERC's ESA liability for allowing take at PVP

Section 7(a)(1)

- failing to ensure operation of the Project is consistent with the conservation of listed species

Section 7(a)(2)

- failing to ensure operation of the Project is not likely to jeopardize the continued existence of these listed species or destroy or adversely modify their critical habitat.
- issuing the Annual License without initiating or reinitiating consultation with the National Marine Fisheries Service ("NMFS") regarding the Project's effects on the listed species and their designated critical habitat

Section 9(a)(1)(B)

- authorizing an activity that harms, kills, and otherwise causes take of the listed species

Addressing FERC's role in take at the PVP

May 20, 2022 filing with FERC challenging issuance of an "annual license" to PG&E:

MOTION TO INTERVENE AND REQUEST AND PETITION FOR REHEARING, RECONSIDERATION, AND/OR DISCRETIONARY ACTION

- Seeking FERC move to amend PVP Annual License to comply with ESA
- Denied by operation of law

Ninth Circuit petition for review filed August 15, 2022

- Plaintiffs: PCFFA/IFR, Trout Unlimited, CalTrout & FOER
- Now under abeyance

FERC now considering whether to open a proceeding to amend the PVP license to impose the Interim Protective Measures NMFS has specified.

PG&E's potential liability for take at the PVP

Our November 14, 2022 60-day notice letter

PG&E is committing illegal, ongoing take of Chinook salmon and steelhead, in violation of ESA section 9, by continually harming and harassing these fish.

Elevated temperatures harm steelhead, reduce production, increase pikeminnow predation

- **In *nine of the last eleven years*, Scott Dam releases have exceeded 20.0°C; temperatures have exceeded the "intolerable" and "potentially lethal" level of 23.0°C in five of those years.**

Cape Horn Dam harms downmigrating juveniles & kelts, subjects adults and juveniles to predation in fishway

- **Predators observed feeding in or from the fishway include Sacramento Pikeminnow, Smallmouth Bass, Otter, Bald Eagle, Raccoon, and Black Bear.**

Blocking habitat & impeding migration

- **Scott Dam has no fish passage**
- **Cape Horn impairs migration**

Per NMFS, *none of this take is permitted*

- **BiOp & ITS are expired**
- **ITS exceeded**
- **Cape Horn never covered**

Dam Safety questions loom over the PVP

Physical structure of PVP is not sustainable

- Sediment buildup risks only low water outlet
- Reservoir can't be lowered too fast or too far

PG&E's March 16 statement on seismic issues

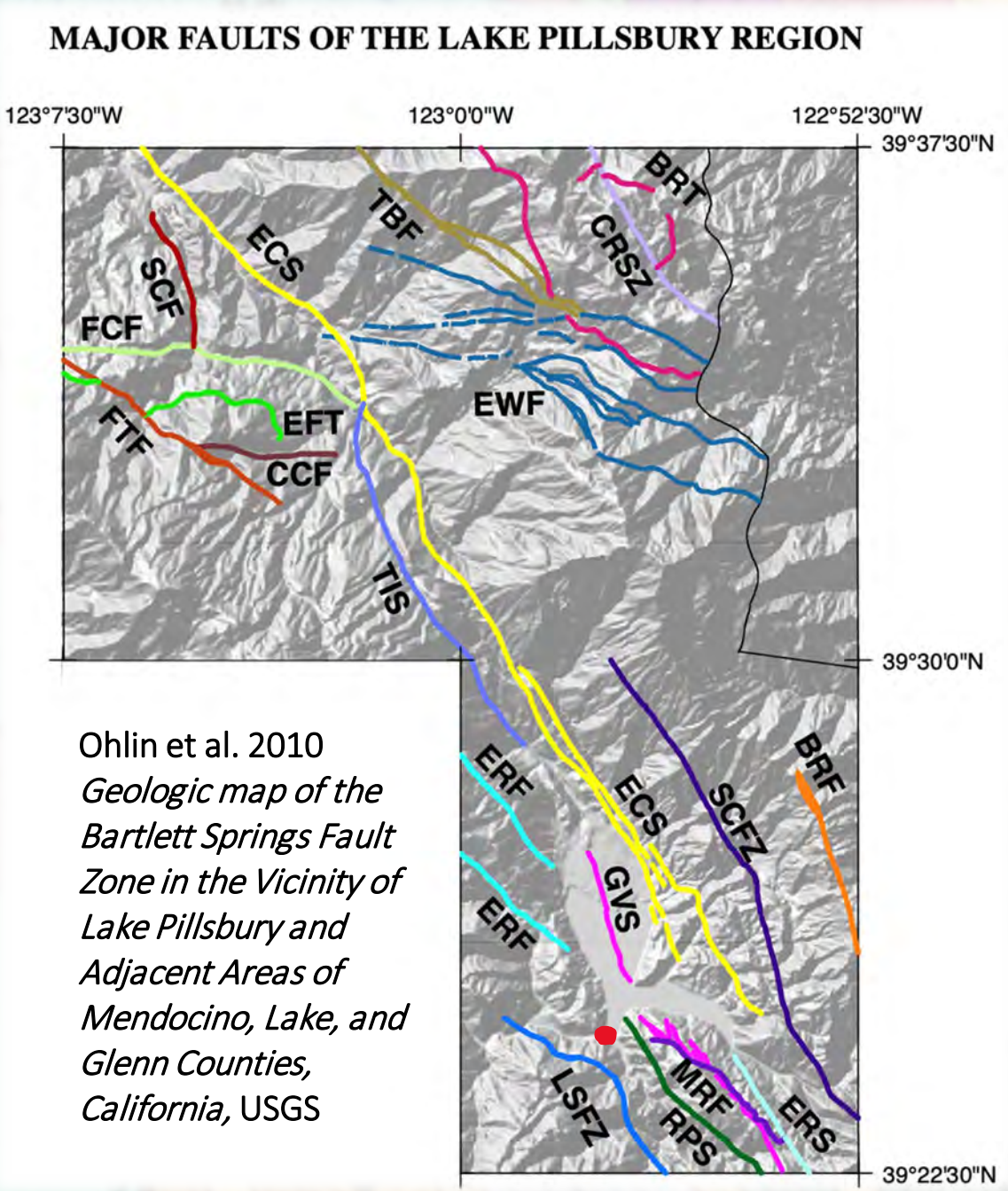
- Raises prospect of 'expedited dam removal'
- Meanwhile Scott Dam's gates will not be raised again
- Capacity of reservoir reduced by about 20K AF

A surprise?

- FERC doesn't consider dam safety an issue for relicensing.
- Lozos et al 2015 **Dynamic rupture models of earthquakes on the Bartlett Springs Fault, Northern California:** *"… ground motions generated by a BSF earthquake may be sizeable… Our models produce a wide magnitude range: from M6.32 to M7.24."*

A Game Changer?

- Dam safety could move the PVP from FERC's free form decommissioning process to a more rapid exercise of the Commission's broad authority to protect public safety.



Ohlin et al. 2010 *Geologic map of the Bartlett Springs Fault Zone in the Vicinity of Lake Pillsbury and Adjacent Areas of Mendocino, Lake, and Glenn Counties, California,* USGS

Oh and no more electricity.
So not so much water to divert either.

PG&E will not replace failed transformer at PVP powerhouse.

- So no more hydropower.
- No more “abandoned” water in East Branch Russian River or Lake Mendocino reservoir.
- Only diversions to Potter Valley Irrigation District under their contract with PG&E will continue.

Decommissioning is not without risks

- Decommissioning ultimately means whatever FERC says it does
- FERC doesn't have statutory deadlines to complete decommissioning
- Potential for decommissioning to be stalled

HOWEVER …


PG&E will propose full facilities removal in its Decommissioning Plan for the Potter Valley Project.
M. Wier

The current is with us

Removal of the Potter Valley Project dams will be a key step toward salmonid recovery in the Eel River.

What are the barriers?

- **Scott and Cape Horn Dams**
- **PG&E**
- **FERC**
- **Dam removal opponents**