

**Water Diversion Agreement  
associated with PG&E's decommissioning  
of the Potter Valley Project on the Eel River  
and a New Eel-Russian Diversion Facility**

**Humboldt County Board of Supervisors**

July 22, 2025



*Hank Seemann, Public Works Deputy-Director (Environmental Services)*

*Joel Campbell-Blair, Deputy County Counsel*

*Destinee Valeska, Deputy County Counsel*

# Overview

1. PG&E is preparing to decommission the Potter Valley Hydroelectric Project on the upper Eel River
  - PG&E will submit the license surrender application and decommissioning plan to the Federal Energy Regulatory Commission by July 29, 2025.
  - Detailed studies and plans still need to be developed, and dam removal won't start for several years.
  
2. The project has diverted water from the Eel River to the Russian River for over 100 years
  - Impacts to the Eel River include blocking important headwaters habitat, reducing flows, disrupting sediment transport processes, altering water temperatures, and creating conditions supporting the invasive Sacramento pikeminnow.
  - Since 2007, the volume of diverted water was significantly reduced compared to historical levels.
  - Water diversions are an important component of the water supply in the Russian River basin.



Eel River Watershed

**PG&E's Potter Valley Hydroelectric Project**



# Lake Pillsbury



# Scott Dam / Lake Pillsbury



# Cape Horn Dam / Van Arsdale Reservoir



# PG&E's Potter Valley Hydroelectric Project



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



**Russian River Watershed**

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



**Eel River Watershed**

**Russian River Watershed**

# Overview

1. PG&E is preparing to decommission the Potter Valley Hydroelectric Project on the upper Eel River
  - PG&E will submit the license surrender application and decommissioning plan to the Federal Energy Regulatory Commission by July 29, 2025.
  - Detailed studies and plans still need to be developed, and dam removal won't start for several years.
2. The project has diverted water from the Eel River to the Russian River for over 100 years
  - Impacts to the Eel River include blocking important headwaters habitat, reducing flows, disrupting sediment transport processes, altering water temperatures, and creating conditions supporting the invasive Sacramento pikeminnow.
  - Since 2007, the volume of diverted water was significantly reduced compared to historical levels.
  - Water diversions are an important component of the water supply in the Russian River basin.

# Overview

3. Mendocino Inland Water and Power Commission (Mendocino IWPC), Sonoma County, and Sonoma Water propose to continue water diversions through the tunnel of the Potter Valley Project in a way that is compatible with protection of the Eel River and recovery of fisheries
4. Since 2023, California Department of Fish & Wildlife, California Trout, Humboldt County, Mendocino IWPC, Round Valley Indian Tribes, Sonoma County, Sonoma Water, and Trout Unlimited have negotiated the terms of a Water Diversion Agreement for the New Eel-Russian Facility (NERF) that would represent a “Two Basin Solution” for the Eel River and Russian River Basins
5. In February 2025, the parties signed a Memorandum of Understanding (MOU) regarding the key provisions of the Water Diversion Agreement
6. Last week and this week, boards and councils are considering approval of the full Water Diversion Agreement
7. The key provisions of the MOU from February 2025 have not changed

# Key Elements of the Water Diversion Agreement

# Key Elements of Water Diversion Agreement

## Section 2 – Two Basin Solution

### 2.1 Co-equal goals of the Agreement:

- Improving fish migration, habitat, and water quality within the Eel River with the objective of achieving natural reproducing, self-sustaining, and harvestable native anadromous fish populations; and
- Maintaining material and continued water diversion from the Eel River through the existing Van Arsdale Diversion tunnel to the Russian River to support water supply reliability, fisheries, and water quality in the Russian River Basin.

# Key Elements of Water Diversion Agreement

## Section 2 – Two Basin Solution

### 2.2 Intentions of the Agreement:

- Advance the timely removal of Scott Dam and Cape Horn Dam through a cooperative approach with PG&E and interested entities from the Eel River and Russian River Basins;
- Implement criteria for water diversions based on the best available scientific information to ensure that such diversions will be consistent with the recovery of Eel River fisheries, including, but not limited to, Chinook salmon, coho salmon, steelhead, and lamprey, and a functioning ecosystem;
- Secure equitable state and federal funding for substantial investments in water infrastructure for the Russian River Basin and ecosystem restoration within the Eel River Basin;
- Take a significant step toward restorative justice for Round Valley Indian Tribes and reconciliation with the history of adverse impacts on Eel River communities associated with out-of-basin diversions; and
- Establish a durable and mutually supportive relationship between the Eel and Russian Rivers Basins and provide a strong foundation for continued regional collaboration based on incentives and mutual benefits.

# Key Elements of Water Diversion Agreement

## Section 3 – Purpose of Agreement

- The Agreement state mutually agreeable terms for the permitting, construction, operation, and maintenance of the New Eel-Russian Facility (NERF), along with related activities to implement the Two Basin Solution.
- The Eel-Russian Project Authority (ERPA) is a joint powers authority that would construction, operate, and maintain NERF.
- PG&E is not a signatory to the Agreement.
- The terms in the Agreement related to PG&E's water rights and property represent the parties' joint proposal to PG&E – PG&E has not agreed to any aspect of the proposal.

# Key Elements of Water Diversion Agreement

Sections 5 through 9 – Commitments related to PG&E's license surrender application for dam removal and ERPA's actions related to NERF

- Support PG&E implementing dam removal and the associated regulatory approvals
- Support PG&E undertaking dam removal as expeditiously as possible
- Support the Federal Regulatory Energy Commission authorizing construction of NERF on lands and facilities associated with the Potter Valley Project
- Support ERPA's construction, operation, and maintenance of NERF and the associated regulatory approvals

# Key Elements of Water Diversion Agreement

## Section 10 – Disposition of PG&E’s water rights

- Support the transfer of all PG&E’s water rights to Round Valley Indian Tribes, which would lease them to ERPA
- Various protective measures would be taken by ERPA if PG&E does not transfer all its water rights associated with the Potter Valley Project
- Under no circumstances will water diversion through NERF exceed the agreed-upon diversion rules (described in Section 16)

## Section 11 – Disposition of PG&E’s project lands and facilities

- Support the transfer of PG&E’s lands and facilities that are necessary for construction and operation of NERF to ERPA.

## Section 12 – Design of new diversion facility

- Pumping system with grade control structure (“run-of-the-river” system with no dam and limited in-stream features)

# EXISTING CONDITIONS AT CAPE HORN DAM

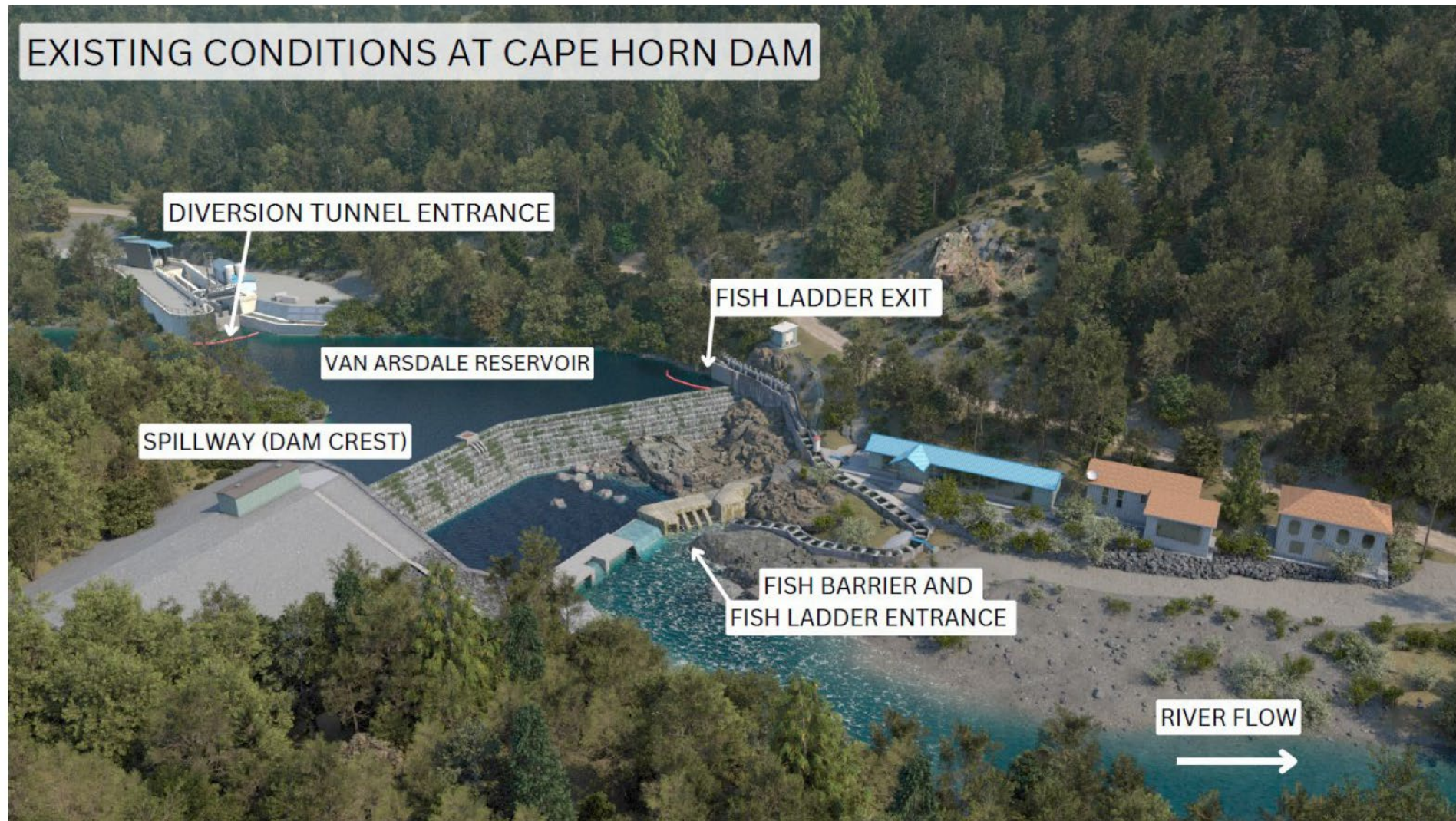


Figure 2-8. Existing conditions at Cape Horn Dam (artist rendering).



# NEW EEL-RUSSIAN FACILITY PRELIMINARY DESIGN



- Cape Horn Dam removed
- Fish barrier removed
- Unimpeded fish passage
- Van Arsdale Reservoir drained
- Free-flowing Eel River
- New fish screen
- Reconfigured diversion tunnel entrance

Figure 2-9. NERF preliminary design upstream of deconstructed Cape Horn Dam (artist rendering).

# Key Elements of Water Diversion Agreement

## Section 15 – Water right lease and associated payments

- ERPA will pay Round Valley Indian Tribes a use charge of \$1,000,000 per year to lease the water rights for operation of the diversion facility.
- ERPA will pay Round Valley Indian Tribes a restoration payment of \$750,000 in recognition of the Tribes' forbearing to assert their federally reserved water and fishing rights during the term of the lease.
- Round Valley Indian Tribes will transfer the restoration payment to an Eel River Restoration Fund that would be administered by the Eel River parties to the Agreement and potentially other parties.
- If thresholds for public funding to support NERF construction are achieved, the \$750,000 payment would increase.
- Payment amounts will be adjusted over time based on the consumer price index.
- At Year 31, both payments will increase by at least 15%.

# Key Elements of Water Diversion Agreement

## Eel River Restoration Fund

- For the first time in history, Russian River water users would pay for diverting Eel River water
- An MOU is in preparation to establish a non-profit corporation (the Eel River Restoration Corporation) which would administer the Fund
- These funds are expected to be used for:
  - Match funding to leverage state, federal, and philanthropic funding sources to implement large-scale restoration and conservation projects in the Eel River watershed
  - Monitoring and assessment
  - Maintenance and adaptive management of restoration projects (e.g., Salt River project near Ferndale)
  - Tribal capacity building for restoration work

# Key Elements of Water Diversion Agreement

## Section 16 – Operation and Maintenance

### 16.1 Diversion schedule (rules and criteria)

- Approach starts with determining what flows are needed for key river processes to recover Eel River fisheries
- Protective minimum flows (“floors”)
- Limits on the percent-of-flow modifications
- Criteria vary by season
- Ramping rates
- Criteria would result in reduction of annual volume; bulk of water diversions would occur in winter and early spring

### 16.3 Monitoring and performance metrics

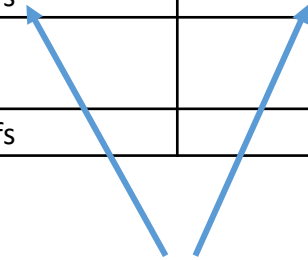
### 16.4 Adaptive management

- Diversion schedule will be changed if performance metrics are not met

# Summary of Floors and Percent-of-flow Limits

Source: Appendix 3 of the  
Water Diversion Agreement

|   | <b>Fall Flows</b>                         | <b>Winter Flows</b>                  | <b>Spring Flows</b>  | <b>Summer Flows</b>                |
|---|---|--------------------------------------|--|------------------------------------|
| <b>Life history purpose:</b>                            | Adult Chinook Salmon Passage and Spawning | Adult Steelhead Passage and Spawning | Juvenile Salmonid Rearing and Outmigration, Adult Steelhead Migration, kelt outmigration | Ecosystem and Food Web Maintenance |
| <b>Date Range:</b>                                      | Oct 1 - Dec 31                            | Jan 1 - Feb 29                       | March 1 – May 31   | June 1 - Sept 30                   |
| <b>Floor:</b>   | 300 cfs                                   | 250 cfs                              | 125 cfs  | 35 cfs                             |
| <b>Maximum Diversion Rate (% of flow @ Pioneer Br):</b> | 20%                                       | 30%                                  | 20%  | 20%                                |
| <b>Maximum Diversion:</b>                               | 300 cfs                                   | 300 cfs                              | 300 cfs  | 300 cfs                            |



Diversions would end in late spring to early summer depending on the water year type (wetter versus drier years)

# Example Hydrograph with Diversion Rules

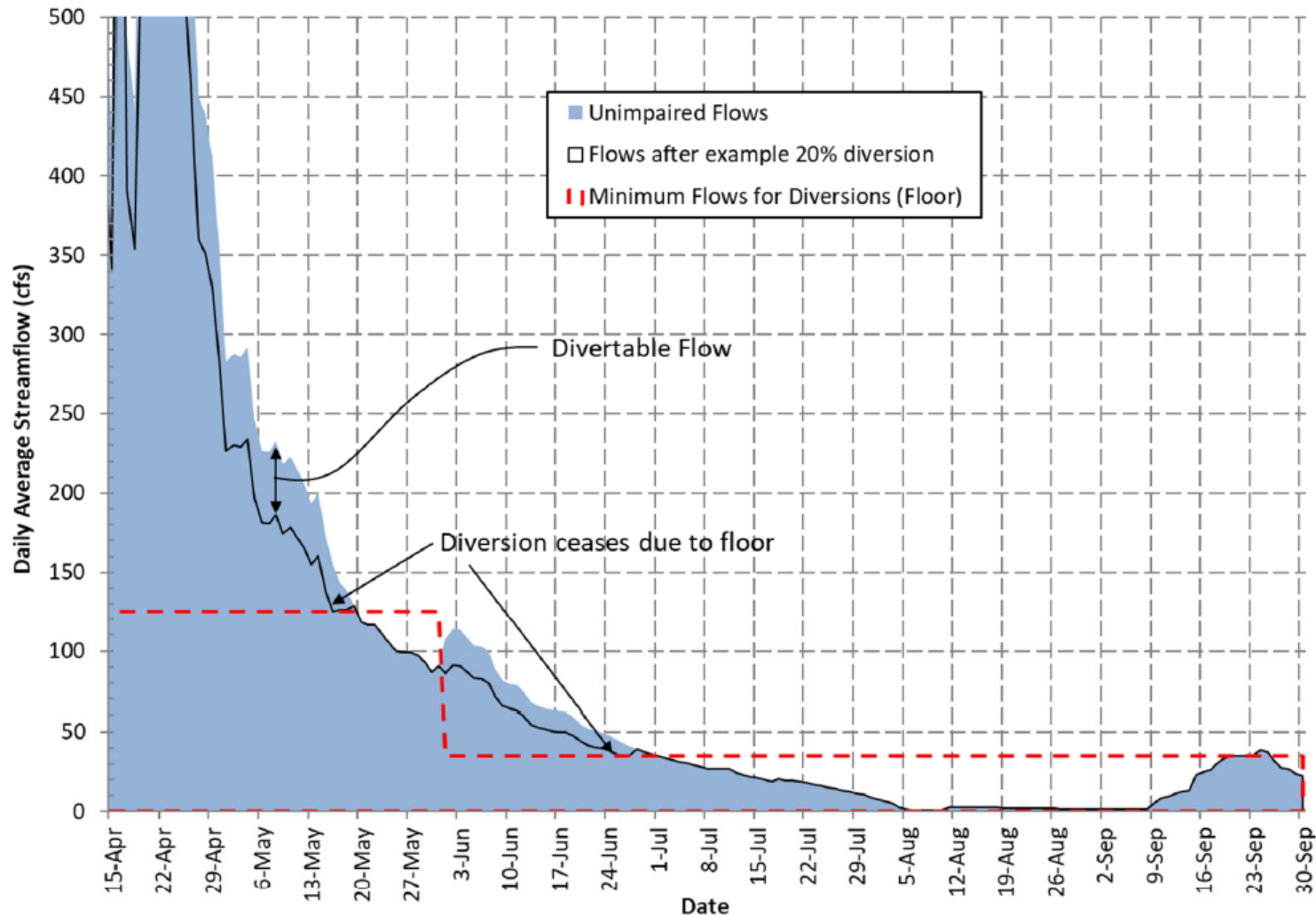


Figure 1. Example of hydrograph in the Eel River downstream of the NERF that would result from implementing the Diversion Rules in Water Year 2022, a drier water year, assuming no diversion constraints on the Russian River.

# Modeled Effects of Future Eel River Diversions

## Assuming no Russian River constraints

| Mean % diversion of downstream unimpaired flows |        |      |        |        |        |
|---|--------|------|--------|--------|--------|
| Location  | Annual | Fall | Winter | Spring | Summer |
| below E-11                                      | 9.4%   | 2.9% | 15.3%  | 16.2%  | 3.2%   |
| below Tomki Creek                               | 7.9%   | 2.3% | 12.2%  | 13.9%  | 2.9%   |
| below Outlet Creek                              | 5.4%   | 1.2% | 7.2%   | 9.8%   | 2.5%   |
| below MF Eel                                    | 2.3%   | 0.6% | 3.6%   | 3.8%   | 1.3%   |
| at Scotia, CA                                   | 1.0%   | 0.2% | 1.4%   | 1.7%   | 0.5%   |

## Assuming reduced Russian River constraints

| Mean % diversion (upper limit) of downstream unimpaired flows |        |      |        |        |        |
|---|--------|------|--------|--------|--------|
| Location  | Annual | Fall | Winter | Spring | Summer |
| below E-11  | 7.2%   | 2.6% | 7.5%   | 13.3%  | 3.3%   |
| below Tomki Creek   | 6.1%   | 2.0% | 5.9%   | 11.5%  | 3.1%   |
| below Outlet Creek  | 4.9%   | 1.2% | 3.8%   | 9.5%   | 3.1%   |
| below MF Eel  | 1.9%   | 0.6% | 1.7%   | 3.3%   | 1.5%   |
| at Scotia, CA   | 0.8%   | 0.2% | 0.6%   | 1.4%   | 0.5%   |

Source: Presentation (2/11/2025) by Scott McBain, consultant for Round Valley Indian Tribes

\*All percentages computed from 1968-2017 daily average time series.

# Key Elements of Water Diversion Agreement

## Section 17 – Term of diversion

- Initial term of 30 years
- After the initial term, conditional renewal of 20 years, if:
  1. Eel River Restoration Fund receives \$25 million (not including the annual restoration payments)
  2. ERPA substantially complies with payment and water diversion provisions of the Agreement
  3. ERPA demonstrates that continued diversion is not expected to adversely affect recovery of Eel River fisheries
  4. ERPA demonstrates continued need for Eel River diversion
  5. ERPA demonstrates progress toward self-reliance
- After 50 years (if conditional renewal is exercised), the parties to the Agreement may consider a discretionary renewal, or operations will terminate and diversion facilities will be removed.

# Key Elements of Water Diversion Agreement

## Section 19 – Goals for additional fundraising

- Work together, to the greatest extent feasible, for funding awards that are split equally between the basins

## Sections 21-23 – Provisions for dispute resolution and enforceability

## Section 24-33 – Other legal provisions

# Summary

- Key protections for the Eel River in the Water Diversion Agreement:
  - PG&E's water rights owned by an entity based in the Eel River watershed
  - Limited water diversions based on needs of Eel River fisheries
  - Design for diversion facility allows free-flowing river
  - Performance metrics and adaptive management
  - Initial 30-year term with conditional 20-year term, then discretionary renewal or shut-down/removal
- Key benefits for the Eel River in the Water Diversion Agreement:
  - Major Russian River water users commit to support PG&E's dam removal
  - Strong defense against efforts to pursue alternative vision of retaining dams
  - Annual payment (\$750,000) dedicated to Eel River restoration
  - Catalyst for new federal, state, and philanthropic funding to support restoration
  - Humboldt County would maintain ability to represent County interests and influence future operations and decision-making
  - Demonstration of regional collaboration to resolve a century-long conflict

# Final Notes

- The Wiyot Tribe sent a support letter to the Board of Supervisors
- California Department of Fish & Wildlife has allocated a total of \$18 million to the Two Basin Solution for 2025 that would be divided equally between the basins
- If Agreement is approved, what would come next:
  - Develop an MOU with the Agreement partners regarding the proposed Eel River Restoration Corporation
  - Develop an MOU with the Agreement partners and PG&E regarding decommissioning
  - Other activities to advance the Agreement

# Staff recommendation:

- Initial questions from the Board of Supervisors
- Receive comments from representatives of California Trout, Trout Unlimited, and Friends of the Eel River
- Receive comments from the public
- Approve the Water Diversion Agreement and authorize the chair to sign
- Authorize staff to approve the County's public statements regarding the Agreement and joint statements or letters by the Agreement parties
- Direct staff to continue working with the Agreement parties, PG&E, and other stakeholders to advance the Two Basin Solution and decommissioning of PG&E's Potter Valley Project