

Balancing the Russian River on the Back of the Eel River

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How would you manage the Russian River for sustainable water supplies and restored fisheries with no water taken from the Eel River?

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The people and agencies who manage the Russian River have been using water diverted from the Eel River to mask problems in the Russian River for decades. The Russian River is over-appropriated, meaning that during the dry season the amount of water used from the Russian River exceeds the natural inflows of its tributaries and watershed. As a result, both rivers suffer real damages, which are hampering survival of Chinook, coho and steelhead. Our work is to end the abuse of the Eel River as the bandage for the Russian, and to get both rivers on the path to sustainability, recovery, abundance and restoration. Agricultural, municipal and recreational users of the Russian River watershed have come to rely on the century-old plumbing that transfers Eel River water into the Russian River's East Branch, at PG&E's Potter Valley Project ("PVP").

California's State Water Resources Control Board (SWRCB), the agency that regulates surface water rights, has set minimum dry season flows for the Russian River through an order called Decision 1610 since 1986. [\[See figure one: Russian River Water System, for the existing and future proposed flow requirements.\]](#) The flows were intended to prevent dewatering of the Russian River, improve habitat, flows, water quality and temperatures for salmon and steelhead. Significantly, the flows were calculated to use Eel River water diverted to, stored in, and then released from, Lake Mendocino – the Army Corps of Engineers' flood control reservoir on the Russian River just northeast of Ukiah. After salmon in both the Russian and Eel watersheds were listed under the federal Endangered Species Act, it became clear that the flows set by D.1610 were a factor in the species' decline.

The problems with D.1610 flows were disclosed in two Biological Opinions ("BiOp") issued under the Endangered Species Act: [one for the upper Eel River](#) and [one for the Russian River](#). Both were produced by the federal National Marine Fisheries Service (NMFS). Both BiOps mandate changes in seasonal minimum flows previously required under D.1610. The Eel River BiOp increased flows in the Eel downstream of the PVP diversion to improve fishery and water conditions, and significantly reduced flows diverted to the Russian River.

The Russian River BiOp found that existing minimum flow requirements were too high, and so "negatively affect the ability of salmon and steelhead populations to survive and recover in the Russian River watershed." The BiOp states that, "high water velocities associated with the project's artificially elevated summer flows and stream channelization greatly limit the quantity and quality of juvenile salmon and steelhead rearing habitat in Dry Creek [the location of Warm Springs Dam and Lake Sonoma] and the upper Russian River," and disrupt the formation of the lagoon at the mouth of the Russian River estuary. (NMFS, RR Biological Opinion, Sept. 24, 2008, p 243)

The Sonoma County Water Agency (SCWA) is charged with implementing D.1610 as conditions of their Russian River water rights. To reduce impacts on Russian River fisheries, SCWA is required to apply to SWRCB to revise D.1610. SCWA has started the multi-year preparation of several Environmental Impact Reports (EIRs) describing the proposed changes to Russian River flows, alternatives, their environmental impacts and proposed mitigations. The most complex of the documents will be part of SCWA's application to SWRCB for revisions to D.1610. SCWA's ["Fish Habitat Flows and Water Rights Project"](#) and Draft EIR, now expected in early 2014, will go through public hearings and result in a Final EIR. The SWRCB will then hold more than a dozen public hearings over the next several years before issuing a new final order for minimum flows in the Russian River.

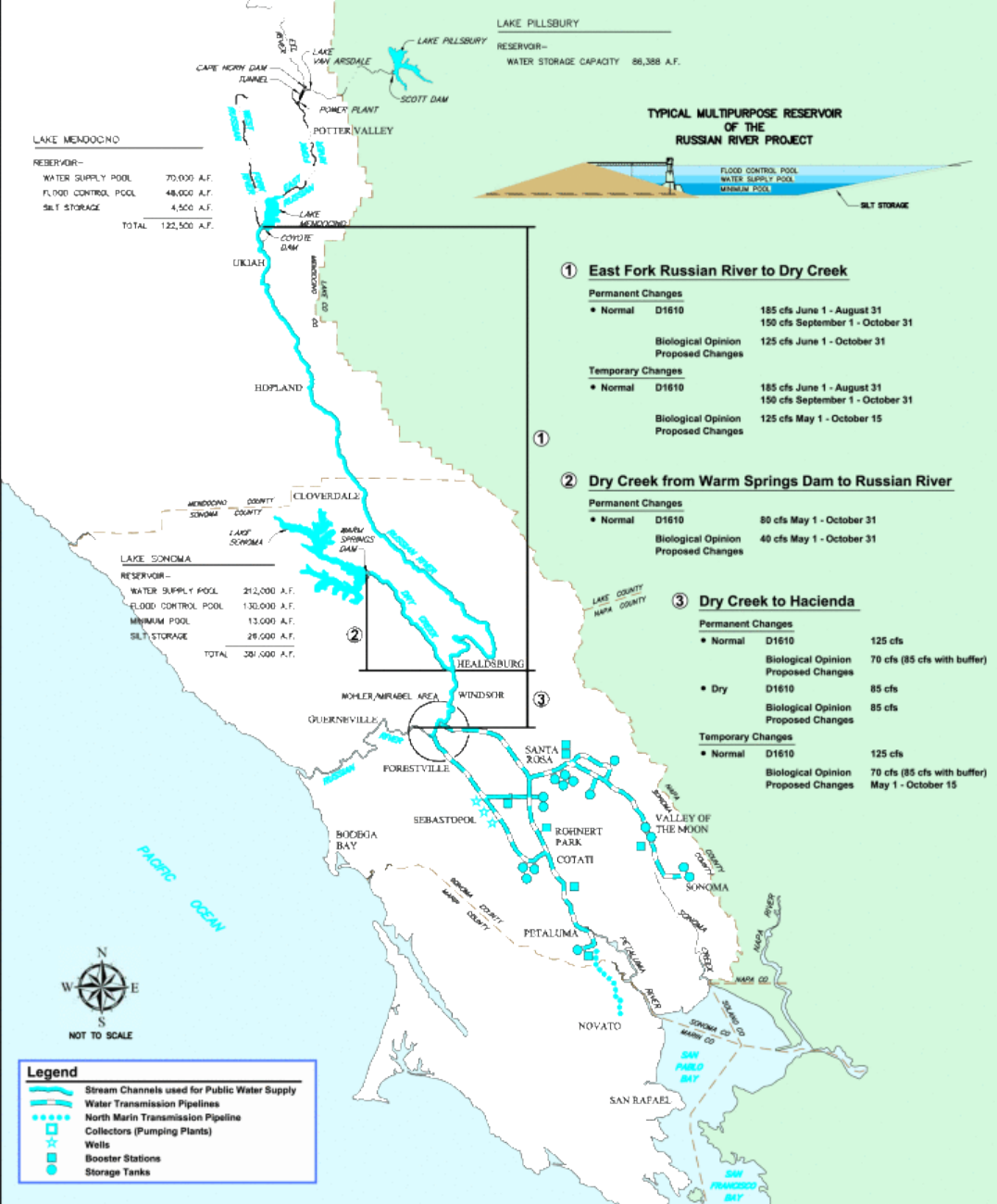
In the meantime, FOER is researching and developing new concepts and scientific modeling of storage and flows in the Russian River. The Russian River must be made whole without taking water from the Eel River. We are working on hydrologic models to manage the Russian River without Eel River transfers. We are looking at improvements to fish habitat in the Russian River and tributaries, as well as significantly reducing water demands during the dry seasons. During low flow periods for the Russian River, Eel River water (released from storage in Lake Mendocino) should not be used to dilute waters of the lower Russian River polluted by leaky septic systems; sources of pollution

must be corrected instead. Nor can the Eel River's flows be used to supply expanding vineyard, marijuana and development water demands.

We are supporting grape growing practices to reduce or eliminate the impacts of large frost control pumping and spraying, which have dewatered streams and been documented to strand and kill many juvenile steelhead. We are pressing regulators to identify and eliminate the hundreds of illegal and unpermitted water diversions in the Russian River watershed, which cumulatively lead to yet more demands for Eel water to be transferred and later released from Lake Mendocino. The water taken from the Eel River and transferred to the Russian River at PG&E's Potter Valley Project is used to generate a maximum of 9.2 MW of electricity. During the current extreme drought, any transfer of water through the PVP further threatens the threatened Chinook, coho and steelhead of the Eel River. While PG&E can provide electric power from other more reliable sources, Eel River fish have no alternate source of the flows that will allow their next generations to survive. All PVP water transfers should cease.

Ultimately, the Russian River cannot be managed solely to optimize water supply and storage for agricultural and municipal users, while depending on the Eel River to bail out the fishery, water quality and public trust disasters resulting from its mismanagement. Revisions to D.1610 are a significant and important opportunity to reshape the next 150 years of river management to one of health, sustainability, restoration and abundance.

Russian River Water System



LAKE MENDOCINO

| | |
|--------------------|---------------------|
| RESERVOIR- | |
| WATER SUPPLY POOL | 70,000 A.F. |
| FLOOD CONTROL POOL | 48,000 A.F. |
| SILT STORAGE | 4,500 A.F. |
| TOTAL | 122,500 A.F. |

LAKE SONOMA

| | |
|--------------------|---------------------|
| RESERVOIR- | |
| WATER SUPPLY POOL | 212,000 A.F. |
| FLOOD CONTROL POOL | 130,000 A.F. |
| MINIMUM POOL | 13,000 A.F. |
| SILT STORAGE | 28,000 A.F. |
| TOTAL | 383,000 A.F. |

LAKE PILLSBURY

RESERVOIR-

WATER STORAGE CAPACITY 86,388 A.F.



① East Fork Russian River to Dry Creek

| | |
|-------------------------------------|--|
| Permanent Changes | |
| • Normal D1610 | 185 cfs June 1 - August 31 150 cfs September 1 - October 31 |
| Biological Opinion Proposed Changes | 125 cfs June 1 - October 31 |
| Temporary Changes | |
| • Normal D1610 | 185 cfs June 1 - August 31 150 cfs September 1 - October 31 |
| Biological Opinion Proposed Changes | 125 cfs May 1 - October 15 |

② Dry Creek from Warm Springs Dam to Russian River

| | |
|-------------------------------------|---------------------------|
| Permanent Changes | |
| • Normal D1610 | 80 cfs May 1 - October 31 |
| Biological Opinion Proposed Changes | 40 cfs May 1 - October 31 |

③ Dry Creek to Hacienda

| | |
|-------------------------------------|--|
| Permanent Changes | |
| • Normal D1610 | 125 cfs |
| Biological Opinion Proposed Changes | 70 cfs (85 cfs with buffer) |
| • Dry D1610 | 85 cfs |
| Biological Opinion Proposed Changes | 85 cfs |
| Temporary Changes | |
| • Normal D1610 | 125 cfs |
| Biological Opinion Proposed Changes | 70 cfs (85 cfs with buffer) May 1 - October 15 |

Legend

- Stream Channels used for Public Water Supply
- Water Transmission Pipelines
- North Marin Transmission Pipeline
- Collectors (Pumping Plants)
- Wells
- Booster Stations
- Storage Tanks



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Water Supply, Transmission, and Reliability Project Biological Opinion Flow Changes

Figure U-A