

Memorandum

Date: February 13, 2017

To: Amanda Montgomery, Environmental Program Manager
Permitting and Licensing Section
Division of Water Rights
State Water Resources Control Board

From: Curt Babcock, Environmental Program Manager
Northern Region
Department of Fish and Wildlife

Subject: **Request for Comment Regarding Water Right Application A032557 of Humboldt Resort Improvement District No. 1 (District) to Appropriate Water from Humboldt Creek in Humboldt County**

On January 5, 2017, the California Department of Fish and Wildlife (CDFW) received a request from the Division of Water Rights (Division) to comment on the subject water right application. In its water right application, the District is requesting an exception to the Policy for Maintaining Instream Flows in Northern California Coastal Stream (Policy) for constructing an on-stream dam on an anadromous fish stream (a Class I stream under the Policy). The Policy focuses on measures that protect native fish populations, with a particular focus on anadromous salmonids (e.g., steelhead trout, Coho Salmon, and Chinook Salmon) and their habitat. The Policy outlines five principles including: *“Construction or permitting of new on-stream dams shall be restricted. When allowed, on-stream dams shall be constructed and permitted in a manner that does not adversely affect fish and their habitat.”*

This District is requesting the Division consider a case by case exception to Policy Section 2.4.1, which precludes acceptance of new water applications or petitions that involve the addition or movement of an on-stream dam on a Class I stream. The District is requesting to construct an on-stream dam to appropriate 30 acre-feet of water per annum from Humboldt Creek, tributary to the Pacific Ocean. The District currently holds water right Permit No. 016407, which authorizes a direct diversion from Telegraph Creek of 0.77 cubic feet per second (cfs) and a face value of 419 acre-feet per annum. A review of the District's 2015 report of water use to the Division indicates that approximately 63.6 acre-feet of water of the 419 acre-feet were used. Approximately, 335.4 acre-feet of the face value of the existing permit was not put to beneficial use in 2015. CDFW is unclear why the unused portion of the existing permit could not be modified to allow for water storage off stream during high-flow periods for use during low-flow periods. Creating off stream storage would serve the public interest of having an adequate water supply consistent with the Policy.

CDFW reviewed the attachments and biological assessment provided by the District in its application. In Attachment 1 of the water right application, the District states that there are no current beneficial uses of water in Humboldt Creek. However, CDFW

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identifies Humboldt Creek as an anadromous salmonid stream with beneficial uses identified in the Basin Plan including Cold Freshwater Habitat; Migration of Aquatic Organisms; Rare, Threatened, or Endangered; Spawning, Reproduction, and/or Early Development; and Wildlife Habitat. Additionally, Attachment 1 indicates that an on-stream storage on Humboldt Creek would improve conditions in Telegraph Creek and would provide drought resiliency. However, no evidence is offered that any potential mitigation on Telegraph Creek would offset the impacts to fish and wildlife in Humboldt Creek. CDFW does not support mitigations that are out of place and out of kind for new projects where impacts can be avoided. CDFW recommends that if construction of the dam is permitted, then all mitigations must be in kind and in Humboldt Creek because of its value as an anadromous fish stream.

Attachment 2 of the District's application shows during sampling of Humboldt Creek, "coastal rainbow trout" were present. The consultant did not determine if the fish were steelhead trout or resident rainbow trout. Regardless, fish are present upstream of the proposed dam site. CDFW's Fish Passage Assessment Database does not show a permanent barrier to anadromy on the lower portion of Humboldt Creek in question. Based on the lack of a permanent barrier, the presence of North California (NC) steelhead trout in Telegraph Creek, and the presence of "coastal rainbow trout" in Humboldt, CDFW has determined that Humboldt Creek is an anadromous fish stream. NC steelhead trout are listed by the National Marine Fisheries Service (NMFS) as threatened under the federal Endangered Species Act (ESA). CDFW recommends the exception to the Policy be denied because of the impacts on listed salmonids, construction of a new on-stream dam is inconsistent with the Policy, and because of the potential for take under ESA.

Because Telegraph and Humboldt creeks are covered by NMFS' Coastal Multispecies Final Recovery Plan: Northern California Steelhead DPS and Central California Coast Steelhead DPS (Recovery Plan)(2016), CDFW consulted with NMFS on the proposed project. ESA threatened species and designated critical habitats in Humboldt Creek include: Northern California (NC) steelhead (*O. mykiss*) Distinct Population Segment (DPS; January 5, 2006, 71 FR 834); and critical habitat for NC steelhead (September 2, 2005, 70 FR 52488). New construction of on-stream dams appears to be inconsistent with NMFS Recovery Plan actions. Recovery Plan actions include:

- Ensure all water diversions and impoundments are compliant with AB2121 or other appropriate protective measures;
- Prevent or minimize alterations to sediment transport (road condition/density, dams, etc.); and
- Prevent or minimize impairment to stream hydrology (stream flow).

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An on-stream dam on Humboldt Creek would not be compliant with the Policy's Principles, would alter sediment transport, and would impair the stream's hydrology. NMFS' Recovery Plan actions are consistent with CDFW recommendations regarding the proposed reservoir and diversion on Humboldt Creek. Because Humboldt Creek provides critical habitat for listed salmonids and the project would "adversely affect" listed salmonids and their critical habitat, the proposed project is not consistent with the Policy nor with NMFS Recovery Actions. CDFW recommends the District consult with NMFS regarding the project if it is accepted as an exemption under the Policy. The purpose of the consultation would be to avoid take of listed salmonids and to ensure that the project is consistent with NMFS' Recovery Plan.

In Attachment 2 of the application, it is stated that at certain flows events anadromy "may" be prevented through the "triple culverts" in Humboldt Creek. No evidence is offered to support this conclusion that anadromy is possibly impeded by the three side by side culverts. Regardless, CDFW considers the culverts to be considered at most temporary barriers to anadromy. If these three culverts are blocking fish passage, then they should be replaced with a crossing that provides passing for all life stages of fish, once the culverts require replacement.

In its application, the District states that it has developed 13 groundwater wells from which they used approximately 6.2 acre-feet of water. Based on the groundwater use provided by the District in its reporting to the Division, it appears that the District has found an alternative water supply to Telegraph Creek for use during low-flow periods. CDFW is unclear how the alternative groundwater wells are not sufficient water supply in addition to the 419 acre-feet of water permitted from Telegraph Creek.

The District states in its water use reporting that its only water conservation measure in the drought year of 2015 was to limit outside watering to specified days. However, it is unclear if further water conservation measures could be employed as alternatives to developing a new water source that could obstruct fish passage on Humboldt Creek. It is also unclear if the District has a Water Supply Contingency Plan with more stringent water conservation measures to reduce demand during low-flow periods.

Shelter Cove and Humboldt Creek are identified by the California Geologic Survey (CGS) under Alquist-Priolo Earthquake Fault Zoning Act as being in a state identified Seismic Hazard Zone (see enclosed map). From CGS mapping, it appears that the proposed dam is located on or near a potential "fault rupture." CDFW recommends that the Division consult with CGS and the Division of Safety of Dams for a determination of whether the structure can be built in this Seismic Hazard Zone, if an exception were to be given.

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Conclusions

CDFW recommends denying the District's application for an exception to the Policy because of the potential for impacts to listed species. The Policy Principles do not support new dams on anadromous fish streams. Thus, the proposed dam is not consistent with the Principles in the Policy and with NMFS' Recovery Plan, and for the following specific reasons:

1. CDFW believes the construction of a dam on Humboldt Creek is not consistent with the Policy Principles. Specifically, CDFW recommends that the Division find the proposed dam would "adversely affect" listed steelhead trout and their habitat. Additionally, it would impair beneficial uses of water related to fishery resources in Humboldt Creek.
2. CDFW recommends that if construction of the dam is permitted, then all mitigations must be in kind and in Humboldt Creek because of its value as an anadromous fish stream.
3. The District must clarify why off stream storage could not be developed. Their existing permit could not be modified to provide for off stream storage in a geologically stable location. Finding and developing off stream storage sites would meet the District's goals for water supply. Off stream storage would also preclude the need to construction of an on-stream dam on a Class I anadromous fish stream.
4. The construction and operation of the dam may result in take pursuant to ESA.
5. Culverts in Humboldt Creek are not permanent barriers to anadromy. Humboldt Creek is an anadromous fish stream with culverts that are partial fish barriers. Replacing these culverts with crossings that allow for fish passage would improve the habitat value of Humboldt Creek.
6. CDFW recommends the District clarify its need for additional water beyond what is derived from groundwater wells and permitted from Telegraph Creek under water right Permit No. 016407.
7. CDFW recommends that the District provides a Water Supply Contingency Plan with more stringent water conservation measures than merely altering outdoor watering days to reduce water demand during low-flow periods.
8. CDFW recommends that the Division consult with CGS and the Division of Safety of Dams for a determination of whether the proposed structure would be stable in this Seismic Hazard Zone, if an exception were to be given.

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If you have any questions, please contact Senior Environmental Scientist (Specialist) Jane Arnold at (707) 441-5671 or jane.arnold@wildlife.ca.gov.

Attachments

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MAP EXPLANATION

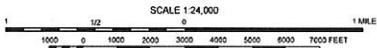
Active Faults

Faults considered to have been active during Holocene time and to have potential for surface rupture; solid line where accurately located, long dash where approximately located, short dash where inferred, dotted where concealed; query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by fault creep.

Earthquake Fault Zone Boundaries

These are delineated as straight-line segments that connect encircled turning points so as to define Earthquake Fault Zone segments.

Seward projection of zone boundary.



**STATE OF CALIFORNIA
 EARTHQUAKE FAULT ZONES**

Delineated in compliance with
 Chapter 7.5, Division 2 of the California Public Resources Code
 (Alquist Priolo Earthquake Fault Zoning Act)

SHELTER COVE QUADRANGLE

REVISED OFFICIAL MAP
 Effective: May 1, 1998

James F. Davis State Geologist

REFERENCES USED TO COMPILE FAULT DATA

- Shelter Cove Quadrangle
- Brown, R.D., 1966. 1:50,000 surface faulting on the San Andreas Fault near Pine Point, California. Bulletin of the Seismological Society of America, 56, 1: 109-110.
 - Hart, E.W., 1968. San Andreas Fault, Shelter Cove area, Humboldt County. Division of Mines and Geology Fault Evaluation Report (DMGAL 50), 84 (unpublished).
 - Lanyon, A.C., Clapper, 1928. The California earthquakes of April 18, 1906. Report of the State Earthquake Investigation Commission. Publication U.S. Geological Survey, Publication 11, 1: 1-13, 106.
 - Muir, J.R., 1906. Faulting and deformation at the northern terminus of the San Andreas Fault. Unpublished Senior Thesis, Furber and Marshall College, Lancaster, PA, 53 p., appendix 1 p.

For additional information on faults in this map, see the original used for copying, and additional references contained, under the appropriate Fault Evaluation Report on file in the office of DMG.

IMPORTANT - PLEASE NOTE

- 1) This map may not show all faults that have the potential for surface fault rupture, either within the Earthquake Fault Zones or outside their boundaries.
- 2) Faults shown are the basis for establishing the boundaries of the Earthquake Fault Zones.
- 3) The identification and location of these faults are based on the best available data. However, the quality of data used is varied. Traces have been drawn as accurately as possible at this map scale.
- 4) Fault information on this map is not sufficient to serve as a substitute for the geologic site investigations required under Chapter 7.5 of Division 2 of the California Public Resources Code.

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