Informative Digest

Finding of Emergency

California is currently recovering from a significant drought that included the driest three-month winter period on record (January-March 2022), the driest three consecutive water years on record (Water Years 2020-2022), and occurred on the heels of the record-setting drought of 2012-2016. While conditions have improved in many parts of the state, it will take communities and ecosystems across California many years to recover from the impacts of successive multi-year droughts. This need is particularly acute in the Clear Lake Watershed, where the Clear Lake hitch (hitch), a threatened species under the California Endangered Species Act,¹ is suffering from critically low populations with very low returns to key spawning creeks.

Therefore, the State Water Resources Control Board (State Water Board or Board) finds that an emergency exists due to the impacts of multi-year droughts and that adoption of the proposed Emergency Information Order Regulations for the Clear Lake Watershed (Emergency Regulations) are necessary to address the emergency. The Emergency Regulations are designed to allow the State Water Board to collect information from some or all water users, including groundwater pumpers, in the Clear Lake Watershed. The information collected would inform the Board's evaluation of how groundwater pumping and other water uses may influence creek flows that are critical for hitch spawning and migration and will assist the Board's efforts to protect the hitch.

Governor Newsom's Drought Emergency Proclamations

On April 21, 2021, Governor Newsom proclaimed a <u>State of Emergency</u> in response to drought conditions in the Russian River Watershed. On May 10, 2021, the Governor expanded the <u>drought emergency to cover 41 California counties</u>, including Lake County. On October 19, 2021, the Governor extended the <u>drought emergency to all of California</u>. On March 28, 2022, the Governor signed <u>Executive Order N-7-22</u>, which acknowledged continued drought conditions throughout the state and called for increased conservation.

On March 24, 2023, the Governor issued <u>Executive Order N-5-23</u>, which reaffirmed the need for continued action to address drought-related harm to native fish in the Clear Lake Watershed and directed the Board and Department of Fish and Wildlife to evaluate minimum instream flows and other actions needed to protect the hitch; work with water users, Native American Tribes, and other parties on voluntary actions; and consider emergency regulations to establish minimum instream flows to mitigate

¹ State and Federally Listed Endangered and Threatened Animals of California

the effects of drought. This order also suspended the environmental review by state agencies required by the California Environmental Quality Act in Public Resources Code, Division 13 (commencing with Section 21000) and regulations adopted pursuant to that Division to address the impacts of drought in the Clear Lake Watershed and ended the drought emergency for most of California.

Emergency Defined

Water Code section 1058.5 grants the State Water Board authority to adopt emergency regulations in order to "prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, of water, to promote water recycling or water conservation, to require curtailment of diversions when water is not available under the diverter's priority of right, or in furtherance of any of the foregoing, to require reporting of diversion or use or the preparation of monitoring reports." Section 1058.5 applies to regulations "adopted in response to conditions which exist, or are threatened, in a critically dry year immediately preceded by two or more consecutive below normal, dry, or critically dry years or during a period for which the Governor has issued a proclamation of a state of emergency under the California Emergency Services Act (chapter 7 (commencing with section 8550) of division 1 of title 2 of the Government Code) based on drought conditions." As described above, the May 2021 proclamation declared a state of emergency covering Lake County based on drought conditions, which continues to be in place in the Clear Lake Watershed specifically.

Emergency regulations adopted under Water Code section 1058.5 remain in effect for up to one year and may be renewed if the Board finds that drought conditions as defined remain in effect. Section 1058.5, subdivision (b) provides that, notwithstanding Government Code sections 11346.1 and 11349.6, the Board's finding of emergency in connection with emergency regulations promulgated under section 1058.5 is not subject to review by Office of Administrative Law (OAL).

Government Code section 11346.1, subdivision (a)(2), requires that, at least five working days prior to submission of the proposed emergency action to OAL, the adopting agency provide a notice of the proposed emergency action to every person who has filed a request for notice of regulatory action with the agency. After receiving the proposed emergency action, OAL must allow interested persons five calendar days to submit comments as set forth in Government Code section 11349.6.

The information contained within this finding of emergency provides information to support the State Water Board's emergency rulemaking under Water Code section 1058.5 and meets the applicable requirements of Government Code sections 11346.1 and 11346.5.

Evidence of Emergency

Clear Lake Watershed Overview

The Clear Lake Watershed (Watershed) is located in Lake County, California with land elevations ranging from 1,318 to 4,840 feet above sea level. Clear Lake, which resides in the center of the Watershed, is the largest natural freshwater lake located wholly in California. Water enters the lake through many tributaries, the largest of which are Scotts and Middle Creeks, which enter at Rodman Slough, and Kelsey Creek, which enters from the Big Valley area. Clear Lake drains to the east through Cache Creek and into the Sacramento River.

Over the past two centuries, the Watershed has undergone significant changes. European settlement since the mid-1800s led to widespread farming, grading, and logging, along with the damming, channelization, and diversion of water resources.² More than 85 percent of nutrient-absorbing wetlands have been lost, contributing to a rise in toxic cyanobacterial agal blooms.³ The introduction of non-native species, such as carp and bass, has altered native ecosystems, and the lingering impacts of historical mining activities, such as instream gravel mining and mercury contamination from mining operations like the Sulphur Bank Mercury Mine,⁴ persist throughout the Watershed. These challenges intensify during drought conditions, creating a complex landscape for water resource management.

Groundwater is the primary water source in the Watershed, accounting for about twothirds of the total supply. Most surface water diversions come directly from Clear Lake with a small amount diverted from tributary creeks.⁵ The Sustainable Groundwater Management Act identified several groundwater basins in the Watershed, but only one, the Big Valley Basin, is required to develop a groundwater sustainability plan (GSP). Because of this, groundwater information for the broader Watershed is limited.

According to the Big Valley GSP, over 90 percent of the basin's groundwater is used for agriculture, and groundwater wells (with depths from 42 to 421 feet) are concentrated around Kelsey Creek. However, there is not a comprehensive list of well locations and depths in Big Valley, and many may not be permitted.⁶ The GSP discusses seasonal or

² Gusti, 2009

³ Ibid

⁴ Suchanek et al., 2008

⁵ Clear Lake Integrated Watershed Management Plan

⁶ Verbal communications with Lake County staff

monthly groundwater elevations, but there is no long-term continuous monitoring that can help assess localized groundwater changes.

According to the Clear Lake Integrated Watershed Management Plan, while groundwater use may not exceed safe yield (or the amount of groundwater that may be extracted without causing long-term groundwater depletion), it can lead to earlier drying of streams, which could impact water quality and aquatic life.⁷ The extent of groundwater- surface water interactions throughout the Watershed is not well documented. The Big Valley GSP states that the two primary creeks within the basin, Kelsey and Adobe, may be interconnected with groundwater, but additional monitoring is needed to "better understand the nature and timing of hydraulic connectivity."⁸ The GSP goes on to identify hitch spawning habitat in Clear Lake creeks as potential Groundwater Dependent Ecosystems and explains, "*[t]he timing of the hitch life cycle and how it is possibly affected by interconnected surface water depletion requires both surface water and groundwater data that have sufficient temporal (daily or more frequent) and spatial resolution (multiple locations along each water body)."⁹*

Clear Lake Hitch Overview

The Clear Lake hitch, *Lavinia exilicauda chi*, is a medium-sized fish found only in Clear Lake and its tributaries. Each spring, adult hitch spawn in Clear Lake creeks before returning to the lake. Based on best available science, juvenile hitch need at least two to three weeks to hatch and migrate to the lake, but they can remain in creeks for several months if there is enough water, which increases their likelihood of survival.¹⁰ The hitch is an important species in the Watershed and is culturally and ecologically important to both the region's Pomo Tribes and the broader Clear Lake community.

The hitch population has been declining for some time, but recent record-setting droughts have exacerbated the decline. Historical accounts and oral histories describe large hitch spawning runs that crowded the creeks in the late 19th century, but more recent observations and scientific studies indicate drastically less hitch exist in Clear Lake and its tributaries. In 2012, the Center for Biological Diversity <u>petitioned to protect</u> the hitch under both the federal and state Endangered Species Acts. In response, California designated the hitch as a threatened species in 2014, and a response to the federal petition is expected by 2025.

- ⁸ Big Valley GSP (page ES 8), 2022
- ⁹ Big Valley GSP (page 2-114), 2022

⁷ CLIWMP, 2010

¹⁰ Freyer, 2019

In 2014, CDFW began visual spawning surveys throughout the Watershed. Three years later, the United States Geological Survey (USGS) began conducting gill net surveys regarding conditions in the lake. The results of these investigations indicated that (1) the hitch population has declined from historical levels, (2) lack of flow through creeks reduced the habitat available for hitch spawning in the drought years of 2021 and 2022, and (3) there was near complete failure of juvenile hitch recruitment after 2017.

In 2014, some of the local Native American Tribes began conducting hitch rescues in partnership with CDFW. The rescues involve capturing and collecting hitch from drying creeks or disconnected pools and relocating them to parts of the Watershed that can support their survival. While some Clear Lake creeks have been known to go dry at some point each year, the timing appears to have changed. Earlier drying and disconnections pose challenges to hitch survival and population recovery. Even with the very wet spring of 2023, when Lake County received approximately 151 percent of average annual precipitation (from January through May),¹¹ creek disconnections occurred, resulting in the need for more than 60 hitch rescues.

The collapse of the Clear Lake splittail (splittail) serves as a cautionary tale for hitch recovery. The once abundant splittail was also unique to Clear Lake. Despite having a later spawning season than the hitch, the splittail used to successfully spawn in creeks, but insufficient creek flows led to its extinction. Like the hitch, the splittail faced numerous stressors (including warming water temperatures, low dissolved oxygen from increased sedimentation, pollution, nutrient loading, and threats from nonnative fish) that were compounded by reduced water availability. A study concluded that low rainfall in the early 1940s, combined with creek diversions for agriculture, eliminated most remaining splittail habitat, leading to their ultimate extinction by 1969.¹² The Clear Lake splittail was the last species to go extinct in California.

Need for Emergency Regulations

In December 2022, a coalition of Native American Tribes including the Big Valley Band of Pomo Indians, Robinson Rancheria of Pomo Indians, Habematolel Pomo of Upper Lake, and Scotts Valley Band of Pomo Indians requested that state and federal agencies, including the State Water Board, help address the extinction risk faced by the hitch. In February 2023, the Lake County Board of Supervisors <u>proclaimed an</u> <u>emergency</u> due to persistent drought, habitat loss and potential extinction of the hitch and asked the Board to increase activities to stop illegal water diversions affecting Clear

¹¹ NOAA Climate at a Glance County Time Series Data

¹² Extinctions of North American Fishes During the past Century (umich.edu)

Lake and its tributaries and consider regulations to assure the continued viability of the hitch and other aquatic species.

In January 2023, the State Water Board's Division of Water Rights (Division) began engaging with representatives from the coalition of Native American Tribes, Lake County, state and federal agencies, the agricultural community, and other interested parties to better understand the problems facing the hitch, identify solutions, and encourage voluntary actions to protect the hitch in the near and long terms. The Division's work has been primarily focused on the following creeks where hitch spawn: Cole, Kelsey, Adobe, Manning, Scotts, and Middle.

The Division is meeting regularly with representatives from the agricultural community to discuss voluntary actions, explore ways to improve data quality and support longer-term data collection, understand concerns, identify interest in sharing information, and provide updates on the state's activities. The Division is also meeting regularly with representatives from the coalition of Tribes, Lake County, and state and federal agencies to share updates, coordinate field work and data collection, share information, connect other agencies to data resources, convey or refer findings that may not always be in the Division's jurisdiction, share funding opportunities, and present updates on the Division's enforcement activities.

The Division has been actively enforcing water rights rules and regulations throughout the Clear Lake Watershed. In September 2023, the Division issued 227 notices of violation, conducted 13 inspections, and issued one cease and desist order related to cannabis operations in Lake County. The Division also issued 18 notices of violation to surface water diverters in Lake County who failed to file their 2022 annual reports. This is in addition to the 46 notices of violation and 61 notices of potential violation issued in Lake County earlier this year. Additional investigations, outreach, and education are underway.

In June 2023, the Administration <u>authorized \$1 million to support the Board's hitch</u> <u>protection efforts</u>. This included \$500,000 to monitor creek flows, groundwater pumping, and water use and \$500,000 to investigate groundwater-surface water interactions in the Clear Lake region. With these funds, the Division has (1) engaged O'Connor Environmental to provide technical assistance through hydrologic monitoring, data analyses and model development, (2) contracted Zephyr Collaboration to provide facilitation and engagement services that help support voluntary actions to protect the hitch and compliance with regulatory requirements, and (3) started to obtain monitoring equipment and materials.

Since the beginning of 2023, the Division has been collecting and evaluating existing data to identify how surface water diversions and groundwater extractions in the

Watershed are impacting creek flows. The Division's preliminary analysis, which includes data from multiple sources described above, indicates that groundwater pumping may be impacting creek flows, but additional data is needed to understand the magnitude and timing of potential impacts. Based on analysis of available data, the Division has identified the need for additional information, such as well locations, well construction information, and the amounts of groundwater water pumped, as necessary.

The State Water Board has a duty to protect the state's public trust resources, including fisheries, whenever feasible. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419; *Environmental Law Foundation v. State Water Resources Control Board* (2018) 26 Cal.App.5th 844.) The Board requires additional data to better understand the factors that affect creek flows in the watershed and to protect fish populations, evaluate potential management actions and voluntary projects, and coordinate state-funded projects. A robust understanding of how groundwater and surface water interactions in the Clear Lake Watershed affect creek flows will assist State Water Board efforts to identify measures that will protect the hitch population as well as other reasonable and beneficial diversions and uses of water in the Watershed.

Through public meetings and a <u>voluntary actions letter</u> (sent to more than 2,600 property owners), the Division asked water users to share data, participate in monitoring programs, and reduce water use in February through June. As a result of this engagement, the Division received fourteen responses from water users who are interested in sharing information about their water use or allowing the state access to their lands for hitch monitoring and recovery efforts. Moreover, a small coalition of agricultural landowners formed a group called the Lake County Land Stewards with the purpose of developing a data collection and evaluation program to analyze contributors to creek dewatering. While there has been positive engagement and collaboration with local water users, the State Water Board requires additional information to evaluate how groundwater pumping and other water uses may influence creek flows that are critical for hitch spawning and migration and will assist the Board's efforts to protect the hitch.

The Board has determined that authority to issue information orders in the Watershed is necessary to collect this data and regulations are required to obtain that authority.

Proposed Emergency Regulations

On September 5, 2023, the Division released draft Emergency Regulations for a public comment period ending on October 31, 2023. The Division also held two public workshops on October 19, and 24, 2023, to accept comments and answer questions. The Emergency Regulations would allow the Board to collect water use information to inform the Board's evaluation of how groundwater pumping and other water uses may influence creek flows that are critical for hitch spawning and migration, assist the

Board's efforts to protect the hitch, and help address information gaps noted in local planning documents such as the Big Valley GSP.

The Emergency Regulations include an alternative compliance mechanism that has the potential to improve reporting compliance and support local collaborative solutions. The State Water Board recognizes that listening to interested parties, addressing concerns, and offering alternatives can sometimes help improve data quality, increase participation, and foster sustainable relationships. Furthermore, the Board values local knowledge and recognizes that providing for alternative compliance can potentially help establish standards for collaboration and demonstrate whether voluntary efforts can help prevent the extinction of a species.

The State Water Board is considering these Emergency Regulations due to the pressing threat to hitch populations resulting from conditions in the Clear Lake Watershed, the need for prompt information-gathering, and the unique attributes of the Watershed. Pursuant to Water Code section 7, the Board is authorized to delegate authority to the Executive Director and to the Deputy Director.

References

Big Valley Groundwater Sustainability Agency (2022). Groundwater Sustainability Plan for Big Valley Basin. Available at https://sgma.water.ca.gov/portal/gsp/preview/127

Beebe, B.A., Bentley, K.T., Buehrens, T.W., Perry, R.W. and Armstrong, J.B. (2021), Evaluating Fish Rescue as a Drought Adaptation Strategy Using a Life Cycle Modeling Approach for Imperiled Coho Salmon. North Am. J. Fish. Manage., 41: 3-18. <u>https://doi.org/10.1002/nafm.10532</u>

California Natural Resources Agency (2023). State and Federally Listed Endangered and Threatened Animals of California. Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109405&inline

Center for Biological Diversity (2012). Petition to List the Clear Lake Hitch (Lavinia exilicauda chi) As Threatened Under the California Endangered Species Act. <u>https://www.biologicaldiversity.org/species/fish/Clear_Lake_hitch/pdfs/ClearLakeHitchSt</u> <u>atePetition_09-25-2012.pdf</u>

County of Clear Lake (2010). Integrated Watershed Management Plan Executive Summary. Available at <u>https://www.lakecountyca.gov/DocumentCenter/View/4244/03-</u> <u>Clear-Lake-Integrated-Watershed-Management-Plan-Executive-Summary-PDF</u>

County of Clear Lake (2010). Integrated Watershed Management Plan. Available at <u>https://www.lakecountyca.gov/DocumentCenter/View/4245/04-Clear-Lake-Integrated-Watershed-Management-Plan-February-2010-PDF</u>

Feyrer, F. (2019). Observations of the spawning ecology of the imperiled Clear Lake Hitch Lavinia exilicauda chi. California Fish and Game. https://pubs.er.usgs.gov/publication/70206985

Gusti, Greg (2009). Human Influences to Clear Lake, California, A 20th Century History. Available at <u>https://ucanr.edu/sites/uclakecounty/files/164054.pdf</u>

Kimsey, J. B. (1960). Observations on the spawning of Sacramento hitch in a lacustrine environment. California Fish and Game 46:211–215.

Lake County (2023). Conservation Strategy for the Clear Lake Hitch (Lavinia exilicauda chi). Available at <u>https://library.lakecountyca.gov/DocumentCenter/View/5951/CLH-Draft-Conservation-Strategy-?bidId=</u>

Lake County Watershed Protection District (2019). Big Valley Alternative Groundwater Management Plan Annual Report 2018. Available at <u>https://www.lakecountyca.gov/DocumentCenter/View/4504/2019-Annual-Big-Valley-Report-PDF</u>

Miller, R.R.; Williams, J.D.; Williams, J.E (1989). Extinctions of North American fishes during the past century. Fisheries 1989, 14, 22–38. <u>https://doi.org/10.1577/1548-8446(1989)014%3C0022:EONAFD%3E2.0.CO;2</u>

NOAA Climate at a Glance County Time Series, Lake County Precipitation. Retrieved November 2023. Available at <u>https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/county/time-series/CA-033/pcp/12/9/1895-2023</u>

Steinke et al., 2018, (ver. 4.0, December 2022): U.S. Geological Survey data release, https://doi.org/10.5066/P9A03OI6.

Suchanek, T.H., P.J. Richerson, D.C. Nelson, C.A. Eagles-Smith, D.W. Anderson, J.J. Cech, Jr., G. Schladow, R. Zierenberg, J.F. Mount, S.C. McHatton, D.G. Slotton, L.B. Webber, A.L. Bern and B.J. Swisher (2002). Evaluating and managing a multiply-stressed ecosystem at Clear Lake, California: A holistic ecosystem approach. "Managing For Healthy Ecosystems: Case Studies", CRC/Lewis Press. pp. 1233-1265 (in press)

Suchanek, T.H., Eagles-Smith, C.A., Slotton, D.G., Harner, E.J. and Adam, D.P. (2008), Mercury in Abiotic Matrices of Clear Lake, California: Human Health and Ecotoxilogical Implications. Ecological Applications, 18: A128-A157. https://doi.org/10.1890/06-1477.1

Mandate on Local Agencies or School Districts

The emergency regulations do not impose a mandate on local agencies or school districts because they do not mandate a new program or a higher level of service of an existing program. The emergency regulations are generally applicable to public and private entities and are not unique to local government. No state reimbursement is required by part 7 (commencing with section 17500) of division 4 of the Government Code.

Suspension of California Environmental Quality Act

On April 21, 2021, Governor Newsom issued an Executive Order and Proclamation addressing the drought state of emergency, which, among other things, suspended the California Environmental Quality Act (CEQA) as applied to the State Water Board's adoption of emergency regulations to "prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water, to promote water recycling or water conservation, and to require curtailment of diversions when water is not available under the diverter's priority of right." CEQA is therefore suspended as to adoption of this regulation.

Fiscal Effect on Local and State Government

The fiscal effects resulting from the emergency regulations are the costs that state and local government agencies could incur in response to any requirements therein, pursuant to Government Code section 11346 et seq. The Fiscal Impact Statement has been prepared in accordance with State Administrative Manual 6600-6616.

Because these emergency regulations are solely authorizing the State Water Board to issue information orders, the only fiscal effect that state and local government agencies could incur would be the cost to submit water use reports. The Board estimates the maximum amount of staff time a government agency would require is one eight-hour day to complete all reporting obligations at an assumed pay rate of \$65 per hour, for a total cost of \$520 per report. Staff have determined that there are two local government agencies with surface water rights in the watershed, Lake County Watershed Protection District and the City of Lakeport Municipal Sewer District. Additionally, 16 cities, county water districts, county service areas, and other government entities may divert groundwater and therefore potentially be affected. Accordingly, the total estimated maximum cost to all local agencies combined is \$9,880.

Due to the limited timeframe that the emergency regulations will be in effect, there will be no fiscal impacts to any state, local, or federal agency beyond the expiration of the emergency regulations one year after adoption. Impacts are assumed to be limited to Fiscal Year 2023-2024.