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FEATURE ARTICLE

WEED, WATERS AND WILDLIFE: THE ENVIRONMENTAL PERMITTING OF CANNABIS CULTIVATION IN CALIFORNIA—PART 2: STATE WATER RESOURCES CONTROL BOARD PERMITTING

By Clark Morrison and Morgan Gallagher

This article is the second of a two-part series describing California's environmental regulatory structure for cannabis cultivation as implemented by the California Department of Fish and Wildlife (Department) and the State Water Resources Control Board (SWRCB). Part 1 addressed the Department's permitting program for cannabis cultivation. This part addresses the requirements of the SWRCB.

Introduction

As discussed in Part I of this series, California's legalization measure, the Adult Use of Marijuana Act (AUMA), or Proposition 64, was passed in 2016. In 2017, the Legislature Passed Senate Bill (SB) 94, which integrated AUMA with the state's existing Medical Cannabis Regulation and Safety Act (MCRSA) to establish a single regulatory system to govern both medicinal and adult-use cannabis in California. These measures include a number of provisions calling on the state's environmental agencies, particularly the Department and the State Water Resources Control Board, to develop programs for the regulation of cannabis cultivation.

At a fundamental level, Business and Professions Code § 26060.1(b) requires the California Department of Food and Agriculture (CDFA) to include in any license for cultivation conditions requested by the Department or the SWRCB to:

- Ensure that the effects of diversion and discharge associated with cultivation do not affect the instream flows needed for fish spawning, migration and rearing, and the flows needed to maintain natural flow variability;
- Ensure that cultivation does not negatively impact springs, riparian habitat, wetlands or aquatic habitat; and
- Otherwise protect fish, wildlife, fish and wildlife habitat, and water quality.

With respect to the SWRCB specifically, § 13276 of the Water Code authorizes or directs the board, and the nine Regional Water Quality Control Boards (RWQCBs), to address discharges of waste from cultivation, including by adopting a general permit or establishing waste discharge requirements. In so doing, the boards must include conditions addressing a dozen different considerations including, for example, riparian and wetland protection, water storage and use, fertilizers, pesticides and herbicides, petroleum and other chemicals, cultivation-related waste and refuse and human waste. The boards' actions in response to this requirement are set forth below.

The State Water Resources Control Board's Cannabis Cultivation Policy and General Order

In October 2017, the SWRCB promulgated its Cannabis Cultivation Policy (Cannabis Policy or Policy) and Cannabis General Order 2019-0001-DWQ (General Order or Order). The Policy and Order were adopted in October 2017. The Policy covers a variety of areas, including requirements for cannabis cultivation, activities to protect water quality and instream flows, implementation, means of compliance, and enforcement. The General Order implements the requirements of the Cannabis Policy, specifically those that address waste discharges associated with

cannabis cultivation. The Cannabis Policy and the General Order were both updated and adopted by the SWRCB in February 2019, which updates became effective on April 16, 2019.

Originally, the Policy and General Order allowed the RWQCBs to adopt their own regional orders to regulate cannabis cultivation. Two RWQCBs, the North Coast Regional Water Board and the Central Valley Regional Water Board, adopted such regional orders. The 2019 Policy and General Order, however, were made to supersede all such regional orders. Therefore, enrollees previously covered by the North Coast Regional Order were required to either apply to transition their permit coverage to the Order or request termination of coverage under the Regional Cannabis Order by July 1, 2019.

The Central Valley Regional Cannabis General Order was rescinded in June 2019, and applicants have since been required to apply through the Statewide Cannabis General Order.

It should be noted that, although the new SWRCB's Order supersedes all regional orders, the General Order vests certain powers in the RWQCBs. For example, RWQCBs are allowed to issue site-specific waste discharge requirements for discharges from a cannabis cultivation site if the RWQCB determines that coverage under the General Order is not sufficiently protective of water quality.

The purpose of the Cannabis Policy is to ensure that the diversion of water and discharge of waste associated with cannabis cultivation do not negatively impact water quality, aquatic habitat, riparian habitat, wetlands, and springs. The Policy applies to the following cultivation activities: 1) Commercial Recreation, 2) Commercial Medical, and 3) Personal Use Medical. It does *not* apply to recreational cannabis cultivation for personal use (six or fewer plants in a contiguous cultivation area less than 1,000 square feet with no slopes over 20 percent), because personal use cultivation activities are not considered commercial activities and are therefore exempt from CDFA cultivation license requirements. Indoor commercial cultivation activities are conditionally exempt from the requirements, and outdoor commercial cultivation activities that disturb less than 2,000 square feet may be conditionally exempt under certain circumstances.

Tier and Risk Values

The General Order assigns tier and risk values to each cultivation site based on the site's threat to water quality. The threat to water quality for any site is based on three factors:

- Disturbed area: Threat levels are based in part on the area of disturbed soil, the amount of irrigation water used, the potential for storm water runoff, and the potential impacts to groundwater (*e.g.*, the use of fertilizers or soil amendments, the possible number of employees on site, *etc.*).

- Slope of disturbed areas: The General Order recognizes that increased slopes may be associated with decreased soil stability, especially when associated with vegetation removal. Storm water and excess irrigation water are more likely to runoff and discharge off-site from sloped surfaces.

- Proximity to surface water body: The General Order also recognizes that riparian setbacks from surface water bodies generally reduce impacts to water quality. Disturbed areas within the riparian setbacks are more likely to discharge waste constituents to surface water; therefore, sites that cannot meet riparian setback requirements are considered to be high risk sites.

Based on these factors, cultivation sites are characterized as either "Tier 1" or "Tier 2" sites, and the risk level of each site is characterized as low, moderate, or high. Tier 1 sites are characterized as sites with disturbed area between 2,000 square feet and one acre. Tier 2 sites are those equal to or greater than one acre. Low risk level sites are those with no slope greater than 30 percent that are not within a state riparian setback. Moderate risk level sites are those with slopes between 30 percent and 50 percent that are not within a state riparian setback. High risk sites are sites where any portion of disturbed area is within a state riparian setback. The assessment of the risk level of the cultivation site occurs through an online self-certification process established by the SWRCB, not unlike the self-certification process established by the Department under § 1600 of the Fish and Game Code (and described in Part 1 of this article).

Specific Substantive Requirements of the Policy

Consistent with its primary purpose of broadly protecting water quality, aquatic habitat, riparian habitat, wetlands, and springs, the Policy contains an exhaustive list of detailed performance measures specific to cultivation activities. Although they are too numerous to cover in detail here, examples of these measures include:

- General erosion control measures;
- Regulations for stream crossings and installations, culverts, and road development;
- Management of fertilizers, pesticides, and petroleum;
- Cleanup, restoration, and mitigation on existing sites;
- Proper soil, cultivation, and human waste disposal;
- Irrigation runoff control;
- Methods of water diversion and storage;
- Winterization.

Generally speaking, the performance standards contained in the Policy fall into the following three categories:

General Requirements and Prohibitions

The Policy's "General Requirements and Prohibitions" apply to all cannabis cultivators and include general measures to prevent discharges during construction and operation of cultivation activities, manage onsite pollutants, and protect on and off-site species. For example: The Policy requires cultivators to obtain coverage under the SWRCB's Construction Storm Water Program during construction of cannabis cultivation operations. Cannabis cultivators must apply for a Lake and Streambed Alteration Agreement or consult with CDFW to determine if a Lake and Streambed Alteration Agreement is needed prior to commencing any activity that may substantially:

- Divert or obstruct the natural flow of any river, stream, or lake;
- Change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit debris, waste, or other materials that could pass into any river stream or lake.

Cultivators cannot take any action that would result in the taking of Special-Status Plants, Full Protected species, or a threatened, endangered, or candidate species under the California Endangered Species Act.

During land disturbance activities, cultivators must review the daily weather forecast and maintain records of the weather forecast for each day of land disturbance activities. If there is a 50 percent or greater chance of precipitation greater than 0.5 inches per 24-hour period during any 24-hour forecast, cultivators cannot disturb land.

Cultivators are required to immediately report any significant hazardous material release or spill to the California Office of Emergency Services, their local Unified Program Agency, the Regional Water Board, and CDFW.

Requirements Related to Water Diversions and Waste Discharge

The Policy includes requirements that apply specifically to any water diversion or waste discharge related to cannabis cultivation. By way of example:

- Cannabis cultivators cannot conduct grading activities on slopes exceeding 50 percent grade.
- Cannabis cultivators cannot drive or operate vehicles or equipment within riparian setbacks or within waters of the state unless authorized under a § 404 or § 401 Clean Water Act Permit, a CDFW Lake and Streambed Alteration Agreement, coverage under the Order, or site-specific water discharge restrictions issued by a Regional Water Board.
- Cannabis cultivators must control all dust related to cannabis cultivation activities to ensure dust does not produce sediment-laden runoff. Erosion control measures must be used to minimize erosion

of disturbed areas, potting soil, and bulk soil to prevent waste discharges.

•Cannabis cultivators must comply with winterization requirements, which, among other things, prevent cultivators form operating heavy equipment during the winter period unless: 1) authorized by the RWQCB via a site management plan or 2) if emergency repairs are required and authorized by the SWRCB or another agency with jurisdiction over the cultivation activity.

Narrative and Numeric Instream Flow Requirements

Finally, the Policy contains narrative instream flow requirements that apply to all diversions of surface water and groundwater for cannabis cultivation. Within the umbrella of narrative instream flow requirements, there are requirements for surface water instream flow requirements, which apply to anyone diverting water for cannabis cultivation from a waterbody, as well as requirements specific to groundwater diversions and springs. An example of the Policy's narrative instream flow requirements follows:

> Cannabis cultivators cannot divert surface water between April 1 and October 31 unless the water diverted is delivered from storage and the cultivator has a permit/license and a claim of right to the stored water. From November 1 through March 31, cultivators can only divert surface water when water is available for diversion under the cultivator's priority of right.

Numeric instream flow requirements apply when a site discharges to a SWRCB compliance gauge. The compliance gauges have Numeric Flow Requirements and the SWRCB has an online mapping tool to assist cultivators in determining which compliance gage applies to them and whether they may divert water. For example, the following requirement applies:

> From November 1 through March 31, cultivators can divert water as long as the Numeric Flow Requirement is met at the compliance gauge assigned to the cannabis site. From November 1 through December 14 of each year, the surface water diversion period does not begin until after seven consecutive days in which the surface waterbody's real-time daily average flow is greater than the applicable Numeric Flow Requirement.

Updates to Policy and Order in 2019

The 2019 Policy and Order included four primary changes, addressed below.

Tribal Buffers

Prior to acting on a cultivator's request to cultivate cannabis within 600 feet of tribal lands, the water boards will notify any affected California Native American Tribe and if any affected tribe rejects the proposed cultivation within 45 days, the cultivator is prohibited from cultivating cannabis on or within 600 feet of the land.

Onstream Reservoirs

Cultivators with pre-existing onstream reservoirs can now obtain water rights for cannabis cultivation if the reservoir existed prior to October 1, 2016 and both the Deputy Director for the Division of Water Rights and CDFW determine that removal of the reservoir and installation of off-stream storage would cause more environmental damage than continuing to use the onstream reservoir for diversion and storage. Cultivators with onstream reservoirs must install and maintain a measuring device that is installed and calibrated and is capable of recording the volume of diverted water year-round. Onstream reservoirs that do not qualify for ongoing operation must either be removed or otherwise rendered incapable of storing water.

Requirements for Indoor Cultivation Sites

Regarding requirement for indoor cultivation, cultivators with a building permit and certificate of occupancy for indoor cultivation sites that discharge waste to a permitted wastewater collection system are exempt from the Policy's riparian setbacks and tribal buffer requirements.

Winterization Requirements

Prior to the 2019 updates to the Policy and Order, cultivators were prohibited from operating any heavy equipment during the winter period, except for emergency repairs. The 2019 change to winterization re-

quirements allows the RWQCB's Executive Officer or designee to approve a site management plan to permit the use of heavy equipment for routine cultivation soil preparation or planting during the winter period if both the following conditions are met: 1) all soil preparation and planting activities occur outside of the riparian setbacks; and 2) all soil preparation and planting activities are located on an average slope equal to or less than 5 percent.

State Water Resources Control Board Enforcement Mechanisms

Regarding any enforcement action taken by the SWRCB, the board has primary enforcement responsibility for the regulations in the Policy, and is required to notify CDFA of any enforcement action that is taken. The SWRCB has a variety of enforcement tools for correcting noncompliance with the Policy and Order. In particular, the board may initiate an informal enforcement action, including a Notice of Violation letter if a violation is observed or reported. For formal violations, the SWRCB can issue a Notice to Comply, Administrative Civil Liability to assess monetary penalties, a Cease and Desist Order, or a Cleanup and Abatement Order, among other enforcement mechanisms. (Administrative Civil Liability actions can be costly. For example, an Administrative Civil Liability action resulting from a discharge to waters of the United States can result in a penalty of $10,000 per day and $10 per gallon of discharge.) The SWRCB also has the authority to revoke any water right permit, license, or registration under the Water Code.

Conclusion and Implications

Compliance with the complex requirements of the Policy is a prerequisite for obtaining a CDFA Cannabis Cultivators license. Cultivators must provide evidence of compliance (or certification that a permit is not necessary) as part of their application for a CDFA cannabis cultivation license. As noted above, Business and Professions Code § 26052.5(b) requires the CDFA to consult with the State Water Resources Control Board on the source or sources of water the cultivator will use for cultivation, and Business and Professions Code § 26060.1(b) requires that CDFA include conditions requested by the SWRCB (including the principals and guidelines of the Policy) in any license.

The State Water Resources Control Board's Cannabis Cultivation General Order can be found at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2019/wqo2019_0001_dwq.pdf

The State Water Resources Control Board's Cannabis Cultivation Policy can be found at: https://www.waterboards.ca.gov/water_issues/programs/cannabis/docs/policy/final_cannabis_policy_with_attach_a.pdf

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CALIFORNIA WATER NEWS

BUTTE COUNTY AND LOCAL WATER SUPPLIERS CONSIDER PROJECT TO SEND WATER FROM PARADISE TO CHICO IN THE WAKE OF THE CAMP FIRE DISASTER

The County of Butte, the California Water Service and the Paradise Irrigation District (PID) have begun studying whether it is economically feasible to pipe water from Paradise, California, where water supplies are considered abundant, to Chico, California, a community that faces strained water resources and water sustainability challenges. All of this comes in the wake of the "Camp Fire" which decimated the town of Paradise.

Background

As a result of the deadliest and most destructive wildfire in California history, the Camp Fire has left the northern California town of Paradise with only 10 percent of its usual population. A retirement community home to 26,800, has, at recent count, dwindled to a mere 2,034 residents.

While the residential population of Paradise has seen a staggering decline, the community's water resources and water storage system generally remain intact. Reports indicate that the Camp Fire did not substantially damage the Paradise Irrigation District's water storage system, which includes Paradise Lake and Magalia Reservoir, or its water treatment plant.

As the Paradise community contemplates its immediate future, another community, just west, in Chico, is seeking long-term solutions to manage its groundwater basin, which has experienced reductions in groundwater levels due to increasing urban and agricultural customer demand.

Butte County Board of Supervisors Approve Groundwater Study

The Butte County Board of Supervisors recently approved a $143,800 study to the feasibility of building a water supply pipeline from Paradise to Chico. The study is anticipated to be completed in February 2020 and will address the pipeline's project design, costs and long-term plans for recharging the Chico basin aquifer.

A Creative Solution

Assuming the project is feasible, its proponents consider it to be a creative solution to establish a symbiotic relationship between the two cities. With Paradise losing 90 percent of its population, PID also lost 90 percent of its customer and revenue base, which it needs to help Paradise rebuild. Chico, which is located approximately 15 miles from Paradise, and has been recognized by the California Department of Finance as the fastest growing city in California, could provide a needed revenue supply for PID.

Likewise, PID water supplies could benefit Chico in its implementation of California's Sustainable Groundwater Management Act (SGMA), particularly as Chico remains 100 percent dependent on groundwater supplies. This project has the potential to solve Chico's long-term groundwater sustainability issues and at the same time assist with PID's financial and revenue-based issues. Considering that Paradise's ability to rebuild is also in part dependent on PID's survival, the pipeline project could facilitate Paradise's efforts at rebuilding its community, creating a win-win-win scenario for all three entities.

Opponents of the project, including one Butte County supervisor who voted against conducting the feasibility study, have expressed concerns that the project might invite unwanted growth and unneeded sprawl into Butte County, between Chico and Paradise. According to the supervisor, such sprawl would not be congruent with the county's General Plan in terms of growth.

Conclusion and Implications

California is increasingly exploring creative water projects and water management solutions at both the local and regional levels. As a result of the horrific and devastating Camp Fire, new challenges, questions and opportunities arise for future water management not only for the town of Paradise, but also for neighboring communities affected by the fire and other trends. Whether this project moves forward or not,

water and community leaders in Paradise, Chico and Butte County may be applauded for their efforts in considering thoughtful solutions to sensitive water management issues.
(Chris Carrillo, Michael Duane Davis)

PROPOSED LOWER BASIN PRIORITY RAISES QUESTIONS, OPTIONS FOR GROUNDWATER MANAGEMENT IN THE OWENS VALLEY

In response to a significant, potentially reduced designation of the Owens Valley Groundwater Basin from medium- to very-low priority, the Owens Valley Groundwater Authority (OVGA) is weighing its options for implementing the Sustainable Groundwater Management Act.

Background

The Sustainable Groundwater Management Act (SGMA) requires all high- and medium-priority groundwater basins to be managed by one or more Groundwater Sustainability Agencies (GSA) pursuant to one or several coordinated Groundwater Sustainability Plans (GSP). Low- and very-low priority basins are exempt, but may voluntarily comply with SGMA's mandates. Likewise, adjudicated groundwater basin areas are generally exempt from SGMA, but must comply with certain monitoring and reporting requirements to the California Department of Water Resources (DWR).

The OVGA is an 11-member Joint Powers Authority and serves as the exclusive GSA for the non-adjudicated areas of the Owens Valley Groundwater Basin (DWR Basin No. 6-12.01) (Basin). Pursuant to SGMA, any "portion of a groundwater basin in Inyo County managed pursuant to the terms of the stipulated judgment in *City of Los Angeles v. Board of Supervisors of Inyo County, et. al* (Inyo County Superior Court, Case No. 12908), shall be treated as an adjudicated area" and therefore exempt from SGMA's requirements to establish a GSA or develop a GSP. (Water Code § 10720.8.) A significant portion of the land overlying the Basin is owned by the Los Angeles Department of Water and Power, and much of the Basin is deemed adjudicated pursuant to the above-cited case, also known as the "Long-Term Water Agreement" (LTWA).

Prior Basin Priority Status

When SGMA took effect on January 1, 2015, it incorporated the 2014 California Statewide Groundwater Elevation Monitoring Program (CASGEM) basin prioritization designations. The Basin was designated medium-priority and required to be managed by a GSP by January 31, 2022.

SGMA and DWR regulations provide for regular basin boundary modification and prioritization reviews, and require regular updates to Bulletin 118. In 2018, DWR proposed elevating the Basin from medium- to high-priority. The OVGA submitted a detailed comment letter to DWR objecting to the evaluation methodology as applied to the Basin and the proposed designation, and requesting that DWR re-evaluate its determination. Principally, OVGA asserted that DWR should not have considered LADWP out-of-Basin transfers in the prioritization evaluation because those transfers are subject to the LTWA comprising the SGMA-exempt adjudicated area of the Basin. Absent the impact of including those transfers in the evaluation, OVGA contended, the Basin would be designated low-priority under DWR's scoring system.

The Basin Re-Prioritization Process

In January 2019, DWR released its SGMA 2019 Basin Prioritization Phase 1 Final report for 458 of the 515 basins that were not affected by the 2018 Basin Boundary Modifications. The Phase 2 Draft report was released in April 2019, which assigns a low-priority designation to the Basin. A DWR Phase 2 Final report was expected to be released in the Summer of 2019, but has not yet occurred. In the meantime, the non-adjudicated area of the Basin retains a "medium-priority" designation and remains subject to SGMA's requirements.

SGMA Implications

The tentative (but likely) change to the Basin's designation from medium- to low-priority raises many questions for the OVGA and Basin stakeholders to

consider—questions that other GSAs would also face if and when their basin designations are reduced to low- or very-low priority.

The OVGA has identified four primary—though preliminary—options in a recent staff report that it might consider if the Basin is reduced to low-priority in DWR's Phase 2 Final report as discussed below:

Option 1: Continue GSP Development
Although a GSP is not required for a low-priority Basin, the OVGA could continue to move forward with its GSP as if no priority change had been made. OVGA might also consider developing a GSP that remains dormant and become activated through performance-based standards or if the Basin is later elevated to medium- or high-priority status. Perceived benefits of this option include the ability to use already-awarded grant funding to develop the GSP and to have a GSP in place to monitor and address water management issues. Perceived downside impacts of developing a GSP include the potential groundwater pumping fees, metering, regulation and reporting requirements, and costs, that would accompany GSP development.

Option 2: Continue GSP Development, but Change OVGA Membership
This option would involve reducing the size and complexity of the current eleven-member OVGA, while continuing to develop the GSP. Perceived benefits are similar to Option 1, with added potential benefit of reduced costs and greater use of advisory committees. Perceived downside impacts are also similar to Option 1, and would additionally complicate the OVGA member agency funding obligations and opportunities, and voting.

Option 3: Discontinue GSP Development
This option is described as discontinuing GSP development but retaining the OVGA as the GSA for the Basin in the event that a GSP is later required or voluntarily developed. Perceived benefits of this option include eliminating legallyunnecessary regulation of groundwater users through a GSP, while maintaining flexibility to develop a GSP without repeating the GSA-formation process. Perceived downside impacts include potential loss of previously-awarded grant funding or greater challenges in qualifying for future grant funding for GSP development, projects and management actions. More substantively, groundwater management concerns regarding Owens Dry Lake and long-term water availability would not be addressed, as many of the statutory authorities granted to GSAs arise only following adoption of a GSP.

Option 4: Disband the OVGA
Since a low-priority basin is not required to have a GSA or develop a GSP, the OVGA could consider disbanding. Perceived benefits are similar to Option 3. Perceived downside impacts are also similar to Option 3, but additionally include the time and costs that would arise in reestablishing a GSA in the event the Basin were elevated in priority.
In the (unlikely) event that the DWR reverts to a medium-priority designation for the Basin in the 2019 Phase 2 Final Basin Prioritization report, the OVGA would, of course, be required to forge ahead in developing a GSP. In the meantime, the OVGA is considering its options as it awaits DWR's final determination.

Conclusion and Implications

OVGA's present circumstances highlight some of the challenges that arise in locally implementing SGMA's statewide mandates. Because SGMA requires regular basin prioritization evaluations, other basins could also be reduced or elevated in priority and face similar questions now confronting the OVGA. Though local agencies in basins already designated low- or very-low priority have generally not opted to manage groundwater pursuant to SGMA, the prospect of establishing GSAs and developing GSPs voluntarily may become attractive for long-term management, planning and coordination. Groundwater managers in those basins would probably be wise, however, to first observe the outcome of mandated GSPs, some of which are due by January 2020.
(Derek Hoffman, Michael Duane Davis)

CITY PROPOSES USE OF RECYCLED WATER FOR GOLF COURSE IRRIGATION TO MAKE GROUNDWATER AVAILABLE FOR NEW DEVELOPMENT IN ADJUDICATED BASIN

As Groundwater Sustainability Agencies (GSAs) across California consider whether to include production allocations in Groundwater Sustainability Plans (GSPs) to implement the Sustainable Groundwater Management Act (SGMA), there may be lessons to learn from allocation programs already being implemented in adjudicated groundwater basins.

On September 4, 2019, the City of Seaside (Seaside or City) filed a motion with Monterey County Superior Court seeking approval of an in lieu groundwater storage program under a judgment entered more than a decade ago in the Seaside Basin groundwater rights adjudication. (*See*, *California American Water v. City of Seaside et al.*, Case No. M66343 (Monterey County Super. Ct.), Amended Decision dated February 9, 2007.)

The judgment and a related statement of decision (Decision) created a production allocation program to implement a ramp-down to achieve safe yield. Under Seaside's proposed in lieu program, the City would purchase recycled water to irrigate City-owned golf courses in lieu of pumping water under an adjudicated groundwater right in the Seaside Groundwater Basin (Basin). The unused groundwater would be stored in the Basin and ultimately would provide a water supply that might be used to serve anticipated real estate development projects.

If the program were approved, it might serve as an example for managers of adjudicated or SGMA-regulated basins to support economic growth while furthering state policy goals (use of recycled water) and achieving groundwater sustainability. Seaside's proposal highlights the need for careful consideration in how production allocations and their transferability are defined in adjudication judgments and GSPs.

Background

The Basin underlies the Cities of Seaside, Sand City, Del Rey Oaks, Monterey, and portions of unincorporated northern Monterey County, including portions of former Fort Ord and the Laguna Seca area.The Basin was adjudicated in 2006, resulting in a judgment and related Decision establishing a Watermaster with continuing court jurisdiction to oversee implementation of a physical solution to achieve safe yield with minimal disruption to the overlying economy. The program proponent, Seaside, is a party to the adjudication judgment and Decision governing Basin groundwater rights.

As is common with basinwide groundwater rights adjudications, the Decision establishes a Watermaster board. Here, that board is comprised of 11 pumper representatives that oversee and administer the judgment and Decision, including providing annual reports to the court on basin status and efforts to prevent seawater intrusion.

The Decision establishes two classes of production rights: Standard Production Allocations (SPAs), more or less reflecting common law appropriative groundwater rights; and Alternative Production Allocations (APAs), more or less reflecting common law overlying groundwater rights. Seaside exercises an SPA to produce groundwater for public water service to residents and exercises an APA to produce groundwater for irrigating two City-owned golf courses that overlie the Basin.

Proposed Program Overview

Under the proposed program, Seaside would purchase recycled water from Marina Coast Water District to irrigate the City-owned golf courses in lieu of continuing to produce approximately 450 acre-feet per year (AFY) of groundwater for irrigation under the City's APA. The groundwater previously used for irrigation would be stored in the Basin to provide replenishment benefits until its recapture by the City to serve customers, potentially including anticipated new land development projects. Such projects could include infill as part of the re-use plan for the former Fort Ord military base that was shuttered decades ago. (*See*, Motion at p. 8.)

Watermaster Seeks Direction from the Court

Seaside submitted an application for approval of the proposed in lieu program for review by the Watermaster in August 2019. According to a letter from the

Watermaster to the court, the Watermaster:

> . . .appreciates the benefits of water stored in the [B]asin, and provided any technical issues that may arise are satisfactorily addressed, does not oppose the proposed City of Seaside program in concept.

However, the Watermaster concluded it was unclear whether it had authority to approve the program and instructed Seaside to bring a motion requesting judicial guidance on two points: 1) whether the Decision allows an SPA aquifer storage and recovery program using APA unpumped water in-lieu of recharge injection and later use beyond the overlying parcel, or 2) whether the Decision would require a party to convert its APA to an SPA to provide water service outside the golf courses. Under the Decision, converting an APA to an SPA triggers a rampdown on the APA production amount that could make less water available.

Seaside's Argument

Seaside's Motion explains that the proposed program would positively affect the City, its residents, and the environment and would further state policy of putting water to maximum beneficial use and preventing waste under article X, § 2 of the state Constitution. Seaside further explained that the program would be consistent with the Basin adjudication Decision because the City, as a public entity using water for the public welfare, has a right to store water in the Basin and to recapture it for future use. Finally, Seaside asserts that the Decision does not require the City to convert its APA to an SPA to undertake in lieu storage, because it intends to leave the APA appurtenant to the golf course properties and to substitute recycled water for the exercise of the APA. Seaside also explains that the program would be consistent with California's policies regarding conjunctive use of surface and groundwater resources, the use of recycled water for non-potable uses, and in lieu storage as a preferred method of groundwater replenishment. Finally, the motion concludes by pointing out less desirable alternatives to the proposed program and encourages the court to avoid an interpretation of the decision that yields "counterproductive" results.

Conclusion and Implications

Seaside's proposed program would use recycled water to meet non-potable golf course irrigation needs in lieu of continuing to use potable groundwater for irrigation under the City of Seaside's adjudicated golf course production allocation. Although the Basin's adjudication Decision creates transferrable production allocations as part of a framework for bringing the Basin into sustainability, its complex allocation rules create uncertainty for projects that would augment water availability to support local land-use priorities. A court hearing on the motion is scheduled for October 25, 2019. As GSAs across the state consider incorporating production allocations into their GSPs to implement SGMA, they should consider how their allocation rules would affect in-lieu storage and recapture projects like the one Seaside seeks to carry out.
(Kaitlin Harr, Dan O'Hanlon)

ILLEGAL MARIJUANA CULTIVATION IN CALIFORNIA IMPACTS WATERSHEDS, RIVERS, AND WILDLIFE

Although recreational use of marijuana was legalized last year in California, illegal growing operations still plague California's North Coast, Sierra Nevada and other regions of the state. The initial responses to these grow operations are generally associated with their criminal nature: That they involve trespassing on others' property to use as grow sites, with growers not uncommonly being armed. Often overlooked, however, are the impacts these grow operations have on the watersheds, rivers, and wildlife present in the nearby areas.

Forest-clearing, river and stream diversion, flow impediments, soil and water poisoning, and waste dumping are a few of the key harms brought by these grow operations, and while stating the obvious can only do so much good, such harms should not be put on the back burner of the enforcement battle in keeping our environment healthy and water supply secure

for safe, reliable supplies for municipal, agricultural and wildlife uses.

Water Diversions and Flow Impacts from Illegal Grows

Marijuana is a thirsty plant. On average, each plant at a given grow site requires an average of six gallons of water per day. Multiply this by the thousands of plants that can be found at just one site and it becomes obvious that this is no trivial amount.

Just last month, on August 19, 2019, law enforcement agents raided a grow operation containing over 7,000 marijuana plants in the Dutch Oven Creek area, east of Bass Lake. Given the age of the plants discovered, it was estimated that roughly 5.4 million gallons of water had been diverted from Dutch Oven Creek for the grow operation.

Earlier in the summer, on July 11, 2019, another arrest was made on the Cosumnes River Preserve, just outside of Sacramento. This bust, however, resulted in the confiscation of over 15,000 marijuana plants and an additional 3,000 pounds of processed and bagged marijuana. Do the math there and those 15,000 plants result in diversions of nearly 90,000 gallons per day—the equivalent of nearly 900 persons' daily water usage.

Water supply security from regulatory and natural conditions remains a constant concern in California, but in addition to this, the excessive diversions that take place because of these grow operations have serious implications on the health of the fish and other aquatic and riparian species downstream, as well as human consumption needs. The endangered coho salmon, for example, are one of the many species dependent on clean, cold water with adequate flow for survival.

Many northern California rivers are already at risk of setting historic lows for flow rates given the level of regulated users' water diversions and the added stress of the unregulated diversions by growers only heightens this concern. In addition to the harmful effects of low flow rates on salmonoids migration and predation, low flow rates are connected with higher water temperature and sediment levels.

The unregulated diversions of these grow operations not only threaten the water supply security of human needs downstream, they also have serious impacts on sensitive fish and aquatic species by adversely affecting the flow rates, water temperature, and sediment levels of fish-bearing rivers, and continued operation at this level will certainly lead to increased harm to such species and water supplies.

Carbofurans and Other Pesticides

The quantity of water downstream from these grow sites presents a major problem Californians must face, but downstream water *quality* is likewise adversely impacted. In the last year, of all raids and busts of illegal grow operations in California it was reported that roughly 90 percent of these operations employed the use Carbofuran or other organophosphates and carbamates as a pesticide.

Fatal in higher doses, Carbofuran was banned by the EPA from use on food crops for its neurotoxic character. Highly mobile in soils, Carbofuran has had historic problems of leaching into groundwater after application on crops and in turn entering surface water as run off.

Reported by the EPA, the symptoms of Carbofuran poisoning include "nausea, diarrhea, excessive salivation, vomiting, abdominal cramps, sweating, weakness, imbalance, blurred vision, breathing difficulty, increased blood pressure, and incontinence." High doses of Carbofuran can even result in coma or death from failure of the respiratory system.

It may be unlikely that poisoning of this type ever reaches human intake, but the damage to the fish and aquatic species of the surrounding watersheds is very real. One such event illustrating these impacts on wildlife occurred in San Joaquin County in November of 1991, where a severe Carbofuran poisoning incident from its use on vineyards which resulted in the deaths of over 3,000 fish, 4,000 crayfish, and 5,000 invertebrates.

Plant Eradications

Growers have tenaciously pursued operations in California despite major efforts by law enforcement agencies to staunch their growth and continuance. From 2008-2012, California accounted for 53-74 percent of all marijuana plant eradications in the nation. Even with these drastic numbers, however, the issue of scale still remains. There are simply too many operations in too vast an area and northern California's wondrous forests are abused as hiding grounds for many growers.

Conclusion and Implications

Most arrests on grow operations confiscated marijuana grown for domestic sales outside of the state. The key here being marijuana's criminal status in most other states in the US. Left with a vast market outside of the District of Colombia and the 11 states which have legalized recreational marijuana, the blight on California's forests and waters will likely persist with continued fervor until its ultimate regulation nationwide.

Although the theory has existed that legalization will collapse the underground market for marijuana, it has yet to occur in California. If and until that occurs, however, California law enforcement agencies will remain swamped dealing with the problem before them in protecting the waters and forests of the people of California.
(Wesley A. Miliband, Kristopher T. Strouse)

REPORT ADDRESSES GLOBAL WARMING AND THE ENDANGERMENT OF PACIFIC SALMON POPULATIONS

Pacific salmon, which spawn in western streams and rivers, have been struggling for decades to survive water diversions, dam construction, and logging. Yet global warming is pushing four important populations in California, Oregon, and Idaho towards the brink of extinction. A recent report indicates that temperature increases in rivers and streams risk populations of Chinook, coho and sockeye salmon populations.

Background

A federal study, published in July and entitled "Climate vulnerability assessment for Pacific salmon and steelhead in the California Current Large Marine Ecosystem," shows that several of the region's salmon populations are now bumping into temperature limits, with those that spawn far inland after lengthy summer stream migrations and those that spend much of their time in coastal habitats like river estuaries facing the highest risks. [*See,* Crozier LG, McClure MM, Beechie T, Bograd SJ, Boughton DA, Carr M, *et al.* (2019) Climate Vulnerability Assessment For Pacific Salmon And Steelhead In The California Current Large Marine Ecosystem] The at-risk populations include Chinook salmon in California's Central Valley and in the Columbia and Willamette River basins; coho salmon in parts of Northern California and Oregon; and sockeye salmon that reach the Snake River Basin in Idaho, all of which are already on the federal endangered species list.

Risk Factors Identified

The at-risk populations face warmer waters, more acidic oceans, and changed seasonal streamflow patterns caused by global warming and other human impacts. While the study identifies the resiliency of these species, it also estimates that several populations are hitting their temperature limits, above which populations are likely to dwindle, potentially into outright extinction. In addition to the salmon populations themselves, the fish serve as a key part of the food chain, providing sustenance to a variety of animals, including bears and whales, throughout their lifecycle. They also remain important to indigenous groups in the region, as well as to the United States' fishing industry.

Human infrastructure, including dams and other water diversion structures, have exacerbated issues for salmon populations for decades, reducing the flow of streams and limiting access to the coldest habitats, which can serve as a hiding place for salmon during heat waves or drought. Climate change is now intensifying those impacts. Salmon populations have adapted to some of the warming over recent decades, and their sensitivity to climate factors is built into many conservation plans in the region. Yet beyond 2 degrees Celsius of warming (3.6 degrees Fahrenheit), it is unknown whether salmon populations can adapt, and the significant changes expected in oceans at that level of warming could lead to the catastrophic failure of salmon populations.

The study spells out several ways global warming endangers salmon populations, including that young salmon die when water warms above certain thresholds, and droughts can leave salmon stranded or exposes to predators due to low water levels. Flooding can also flush eggs and young fish from their nests, which is an issue in an era of increased floods as a

result of climate change. Warmer stream temperatures also increase outbreaks of fish diseases that can affect salmon, including pathogenic parasites. Salmon are also affected by changes in ocean currents that can provide nutrients, as well as sea level rise, which affects the physical connection between ocean and stream ecosystems, including the coastal wetlands in California.

Timing Is Essential

Some salmon migrations coincide with spring runoff from melting mountain snows, while juvenile salmon return to the ocean in sync with seasonal plankton blooms on the coast. Yet global warming disrupts both sides of this cycle, reducing spring runoff and delaying plankton blooms. To spawn successfully, salmon need exactly the right combination of stream flows and temperatures at exactly the right time of year. But warmer temperatures shift the timing as well as the temperatures, making the spawning cycle much harder on the fish.

Conclusion and Implications

Maintaining any salmon populations will require sustained efforts to ensure they have large areas of sustainable habitat, according to the study. Other conservation strategies include releasing hatchery-spawned salmon, boosting streamflows at the right time with water releases from reservoirs, and even assisted migration, in which fish are trapped, transported, and then released on the other side of dams or other water diversion structures. Awareness of the issue and commitment to protection of endangered salmon populations are essential to ensure the survival of salmon and the ecosystem which they support and maintain. The report abstract is available online at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0217711
(Jordan Ferguson)

LEGISLATIVE DEVELOPMENTS

NEW CALIFORNIA LAW PROVIDES NEW NOTICE REQUIREMENTS FOR PFAS CHEMICALS IN THE STATE'S DRINKING WATER

California's Legislature and the State Water Resources Control Board (SWRCB) both acted recently to address concerns over PFAS chemicals detected in drinking water. A new statute enacted in July 2019, Assembly Bill 756, requires water systems to report any detected level of PFAS in their annual consumer confidence reports next year, and requires water systems to remove a water source from service or provide extensive public notifications where PFAS levels are detected above a Response Level established by the board. And in August, the State Water Resources Control Board issued Notification Levels that urge water systems to notify their customers when PFAS in drinking water sources exceeds 5.1 parts per trillion for Perfluorooctanic acid (PFOA) and 6.5 parts per trillion for Perfluorooctane Sulfonate (PFOS). These are the lowest notice levels for PFAS in the nation. The SWRCB also indicated that it plans to revise its Response Level this Fall. And it announced that it has begun the process of establishing regulatory requirements, or Maximum Contaminant Levels (MCLs), for PFOA and PFAS, and may add requirements for other PFAS substances in the future.

Background

PFAS is the abbreviation for a class of synthetic organic chemicals known as per- and poly-fluoroalkyl substances. The most common are PFOA and PFOS. They are known for their nonstick, waterproof, heat- and stain-resistant properties, and have been widely used in consumer and industrial products such as fabric and carpet coatings, firefighting foams, food packaging, and nonstick cookware. Groundwater contamination with PFAS has been detected near facilities where the chemicals were used, manufactured, or where products containing them are disposed. PFAS concentrations are often detected near airports and military bases that use it in firefighting foam for training exercises and emergency response.

Over the past several years, studies have found that excessive PFOA and PFOS exposure may result in certain types of cancer, liver damage, thyroid risks, and developmental risks to fetuses and breastfed infants. Other, less common PFAS substances have also raised concerns among health officials because of their similarities with PFOA or PFOS: primarily PFHxS, PFNA, PFHpA, and PFDA.

Growing concerns about these health risks from PFAS in water supplies have prompted myriad responses from federal and state lawmakers, regulators, and courts.

EPA Advisory

In 2016, the U.S. Environmental Protection Agency (EPA) issued an advisory recommending that water systems notify customers when PFOA and PFOS levels combined exceed 70 parts per trillion in water supplies. It is currently assessing whether to develop a National Primary Drinking Water Regulation for PFOA and PFOS. EPA has also begun the regulatory development process to list PFOA and PFOS as hazardous substances under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

CDC Draft Report

In June 2018, the Centers for Disease Control's Agency for Toxic Substances and Disease Registry (ATSDR) released a draft report that proposed Minimum Risk Levels for drinking water for children of 21 parts per trillion for PFOA, 14 parts per trillion for PFOS, 140 parts per trillion for PFHxS, and 21 parts per trillion for PFNA. Although these Minimum Risk Levels are not designed to support regulation, their lower levels have prompted criticism of EPA's 70 part per trillion advisory and encouraged some states to move ahead of the Federal government.

Congress, the National Defense Authorization Act, Clean Water Act and CERCLA

The U.S. House of Representatives and Senate have been working to reconcile different versions of

the 2020 National Defense Authorization Act, which contain several provisions concerning PFAS. The Senate bill would direct the U.S. EPA to issue a National Primary Drinking Water Regulation for PFAS within two years and require PFAS monitoring by water systems serving more than 10,000 people. The House bill would require the EPA to designate PFAS substances as toxic pollutants and establish effluent and pretreatment standards under the federal Clean Water Act. It would also require the EPA to designate all PFAS substances as hazardous substances regulated under CERCLA. In addition, several bills are pending in Congress that would require PFAS regulation, disclosures of contamination, or compensation for damages under various statutes.

State Standards

Lawmakers and regulators in at least ten states have moved ahead of EPA with PFAS standards or requirements. Of particular note: 1) New Jersey adopted an MCL for PFNA in 2018, and proposed MCLs and groundwater standards for PFOA and PFOS in April. 2) New Hampshire adopted, effective October 1st, the first MCLs for PFOA, PFOS, and PFHxS. 3) New York proposed MCLs for PFOA and PFOS in July.

Litigation in the U.S. District Courts

PFAS manufacturers and contamination sources have been the targets of a growing number of lawsuits across the nation. One of the first was filed in 2010 by the State of Minnesota against 3M Corporation for PFAS discharges into surface and groundwater; it settled in 2018 for $850 million. *See, Minnesota v. 3M Corp.*, Case No. 27-cv-10-28862 (D. Minn. *filed* Dec. 30, 2010). Since then, the most noteworthy litigation is *In re Aqueous Film-Forming Foams Products Liability Litigation*, MDL Case No. 2:18-mn-2873 (D. S.C. *consolidated* Dec. 7, 2018), multi-district litigation that consolidates more than one hundred suits by states, local governments, and other parties seeking damages for the use and dispersal of PFOA and PFOS in firefighting foam. In addition, a nationwide proposed class action in Ohio seeks damages from PFAS manufacturers on behalf of all U.S. residents who have a detectable level of PFAS in their blood serum. *See, Hardwick v. 3M Co.*, Case No. 2:18-cv-1185 (S.D. Ohio *filed* Oct. 4, 2018).

Events in California

Over the past two years, California has taken a series of actions to address PFAS contamination. In November 2017, California added PFOA and PFOS to its list of chemicals subject to the Proposition 65 requirements for substances known to cause reproductive toxicity. Starting in 2018, businesses were required to provide warnings before knowingly and intentionally exposing persons to PFOA or PFOS, and in 2019 businesses were prohibited from knowingly discharging or releasing them into a drinking water source or land that can contaminate a drinking water source.

In July 2018, the State Water Resources Control Board established interim Notification Levels of 14 parts per trillion for PFOA and 13 parts per trillion for PFOS. Notification Levels are non-regulatory advisory standards, but water systems that detect PFAS exceeding Notification Levels must provide notice to local governing boards and the SWRCB. The board also established an interim 70 part per trillion Response Level. Assembly Bill 756 now requires that water systems either remove a water source from service or provide extensive public notifications where PFAS levels are detected above a Response Level.

In April 2019, the SWRCB began ordering water systems to sample drinking water wells. The first phase of orders focused on 660 source wells in 209 water systems that previously detected high PFAS concentrations or are located near airports or landfills. The SWRCB has stated that this Fall it plans to issue more phases of monitoring orders that focus on wells near refineries, bulk terminals, non-airport fire training areas, recent urban wildfire areas, manufacturing sites that used PFAS, and wastewater treatment and pre-treatment plants.

Governor Newsom Signs into Law Assembly Bill 756

In July 2019, Governor Newsom signed Assembly Bill 756 into law. In addition to mandating that water agencies remove water sources exceeding PFAS Response levels or provide extensive public notifications, it requires water systems to report *any* detected level of PFAS in their consumer confidence reports beginning January 1, 2020, and it also expands the State Water Resources Control Board's authority to issue testing orders to multiple or all water districts.

In August, the SWRCB lowered its drinking water Notification Levels for PFOA to 5.1 parts per trillion and for PFOS to 6.5 parts per trillion. These are now the strictest notice levels for PFAS substances in the nation. The SWRCB also announced it has begun the process of establishing MCLs for PFOA and PFOS, and may add requirements for other PFAS substances in the future.

The State Water Resources Control Board's Notification Levels for PFOA and PFOS are based on California Environmental Protection Agency recommendations that they be set:

> . . .at the lowest levels at which PFOA and PFOS can be reliably detected in drinking water using available and appropriate technologies.

Water agencies in California are starting to prepare for the SWRCB to rely on this guidance and issue lower Response levels for PFAS that will impact more of their water sources and may be challenging to meet. Agencies and local governments should also be preparing to engage in the board's process of developing MCLs for PFAS.

Impacts to Water Agencies and Local Government

These state actions and proposed federal actions on PFAS present several potential issues for California water agencies, local governments, and their customers.

First is the prospect of tightening Response levels that lack a meaningful opportunity to raise questions or concerns with the regulatory agencies. The standard regulatory process for establishing an MCL allows water agencies and stakeholders to provide input on the science, health benefits, and economics of new requirements, but the process for establishing Response levels does not. The absence of opportunities for notice and comment on Response levels has been justified because they were advisory rather than regulatory. But with enactment of Assembly Bill 756, Response Levels for PFAS will bring removal or public notice requirements.

Second, where PFAS is detected above Response levels, water systems will be required to remove contaminated water sources or issue public notices. Removal will be challenging where water sources are scarce or expensive. Public notices will raise questions about the safety of local drinking water.

Third, the presence of PFAS may result in costly compliance requirements even though water agencies did not cause the contamination. State and Federal proposals may impose new monitoring requirements, discharge limitations, cleanup or responsibilities, or liability for wastewater and biosolids from the treatment process. Removal of PFAS from water requires advanced treatment methods that may be cost-prohibitive for the volume of water handled by water utilities, and that will take time and resources to put into place. Researchers are still working to develop validated methods for testing or removing PFAS in biosolids.

Finally, impacted agencies and communities will need to decide whether and how to pursue compensation or other remedies against companies and entities that generated or released the PFAS contamination.

Conclusion and Implications

After the State Water Resources Control Board followed recommendations to set Notification Levels for PFOA and PFOS at the lowest detectable levels in August, California's water agencies are facing the prospect of a new and lower Response Level for PFOA and PFOS in the near future. Under Assembly Bill 756, water systems will be required to remove any water sources with PFAS that exceeds that Response Level, or provide extensive public notifications of contamination. In areas where PFAS is present in groundwater, these developments will impact some combination of water supply, treatment costs, customers' water bills, and the public's confidence in its drinking water. The standard processes for developing regulatory standards for PFAS have begun at the Federal and state levels, and could have similar impacts. (Lowry Crook, Steve Anderson)

REGULATORY DEVELOPMENTS

TRUMP ADMINISTRATION ISSUES THREE FINAL RULES WHICH SUBSTANTIALLY REVISE REGULATIONS IMPLEMENTING THE FEDERAL ENDANGERED SPECIES ACT

In August 2019, the Trump administration issued three final rules that provide the most comprehensive revisions to the regulations implementing the federal Endangered Species Act in its 45-year history. The rules change several standards and procedures pertinent to water basins and systems in California that must comply with endangered or threatened species protections. For most water projects and operations, the most important revisions are to the standards governing consultations with the U.S. Fish and Wildlife Service (FWS), or the National Marine Fisheries Service (NMFS, collectively: The Services) over whether a proposed action is likely to jeopardize a species or harm its critical habitat. These revisions, which take effect on October 28, 2019 include changes to clarify what conditions the Services consider to be part of the "environmental baseline" for the species and what they consider "effects of the action" on a species or habitat that are reasonably certain to occur. Other changes allow the Services to consider the benefits of proposed conservation measures before they have become binding plans. In addition to changing standards for consulting with the Services, revisions that take effect on September 26th change standards for listing new species, designating their habitat as critical for protection, and delisting or downlisting species that are recovering. Environmental groups, 17 states, the District of Columbia, and New York City have filed challenges to the rules. [Endangered and Threatened Species, 84 Fed. Reg. 44976 (Aug. 27, 2019); Listing Species and Designating Critical Habitat, 84 Fed. Reg. 45020 (Aug. 27, 2019); Prohibitions to Threatened Wildlife and Plants, 84 Fed. Reg. 44753 (Aug. 27, 2019).]

Background

Protections for species listed as endangered or threatened under the Endangered Species Act impose significant requirements and complexities for water projects and operations in most California watersheds. If creating or modifying a water project or operation has potential to affect a threatened or endangered species, an agency that funds or permits that action must consult with one or both of the Services. In California, endangered or threatened fish species of salmon, steelhead, smelt, suckers, pupfish, trout, or chub require consultation in the majority of water basins, and those consultations are generally lengthy, complex, and resource-intensive.

In the consultation process, an agency begins with informal consultation with either the FWS or NMFS and prepares a Biological Assessment of whether its action is "likely to adversely affect" a listed species. If adverse effects are likely, the agency and the Service engage in formal consultation, and the Service prepares a Biological Opinion on whether a proposed activity will jeopardize a listed species' existence or destroy critical habitat, along with "reasonable and prudent measures" to avoid jeopardizing the species. When determining whether an action will jeopardize a species or destroy critical habitat, the Services begin by assessing the "environmental baseline," or the current status of the species given existing conditions. They then examine the likely effects of a proposed action and conservation measures, and the cumulative effects of state, tribal, local, or private actions that are reasonably certain to occur.

Changes to Consultation Standards

For water projects and operations that may affect species that are already listed, the rules' most impactful changes are to these key consultation standards.

Definition of Environmental Baseline versus 'Effects of the Action'

The distinction between "environmental baseline" and "effects of the action" is important, because impacts that are considered part of the environmental baseline do not give rise to "reasonable and prudent measures" required to protect the species. The rules

provide a new definition of "environmental baseline" that clarifies that consequences from ongoing agency activities or existing agency facilities are part of the environmental baseline, and thus not an "effect" of the Federal action, if they "are not within the agency's discretion to modify." This change helps clarify an issue that often arises in consultations involving the existence or operation of dams and reservoirs. The final rule's preamble explains that when an agency manages or operates an existing dam, but lacks discretion to remove or modify the physical structure of the dam, the consequences from the dam's presence are part of the environmental baseline and are not considered to be an "effect" subject to consultation. For ongoing operations, the key question will be whether the agency retains discretion to modify them. The preamble explains that when an agency's proposed action would modify some ongoing operations and keep other ongoing operations the same, the consultation will analyze all discretionary operations of the water project as "effects," even those operations that will be kept the same.

The final rules also simplify the definition of "effects of the action." The prior definition focused on the concepts of interdependent and interrelated activities, and direct and indirect effects. Under the new rules, those concepts are dropped, and an "effect of the action" is simply a consequence that: 1) would not occur but for the proposed action and 2) is reasonably certain to occur. Along with this change, the rules provide a relatively narrow definition of "reasonably certain to occur." They also provide a list of factors that would make a consequence *not* "reasonably certain to occur," including if it is: 1) remote in time, 2) geographically remote, or 3) through a lengthy causal chain with many steps. In addition, the new rules state that "a conclusion of reasonably certain to occur must be based on clear and substantial information." The preamble explains that "clear and substantial" means "there must be a firm basis" to conclude a consequence is reasonably certain to occur, "based on solid information," and it "must have a degree of certitude."

Rejection of 'Tipping Point' and "Baseline Jeopardy" Concepts

The proposed and final rule preambles included discussions rejecting the concepts of "baseline jeopardy" for a species or "tipping point" beyond which a species cannot recover from any adverse effects. This is a response to caselaw that used these concepts to determine that at some point a species has declined to the point that any measurable adverse impacts must be prohibited. The preamble explains that the jeopardy determination only applies prospectively to the effects of Federal actions, and "not to the pre-action status of the species."

Weighing Conservation Measures That Lack Binding Commitments

The new rules clarify the standard for the Services to credit the potential benefits of proposed conservation measures. Under the final rules, the Services will presume conservation measures will occur, and agencies are no longer required to demonstrate that they are backed up with binding plans or clear resource commitments. The conservation measures need only be described in sufficient detail for the Services to assess their beneficial effects. This position contradicts caselaw in the 9th Circuit on a significant issue in litigation over the Columbia and Snake River dams and their impact on salmon and steelhead.

Changes to Standards for Listing Species, Designating Critical Habitat, and Delisting or Downlisting Species

In addition to changing consultation standards, the new rules revise standards and practices for listing new species, designating their critical habitat, and delisting or downlisting species that are recovering. Although these changes have received the most media attention, they will generally be less important for California water basins that are already subject to endangered species requirements for species that are not near recovery. Major changes include:

- Removing the prohibition on referencing economic impacts in listing and reclassification decisions. The final rules remove language stating that listing and reclassification decisions must be made "without reference to possible economic or other impacts of such determination." Although the statute does not allow economic impacts to be considered in the listing decision, the presentation of economic data in listing decisions may provide a stronger basis for Congressional relief where the economic consequences are significant.

•Changes to standards for listing threatened species.

Species are listed as threatened if they are "likely to become endangered within the foreseeable future." The final rules narrow the definition of "foreseeable future" to the point where the Services can determine that future threats and species' responses to the threats are likely, which the preamble explains means "more likely than not." The standard since 2009 was "reliable," and the standard in the proposed rules was "probable." This revision may limit the number of species listed as threatened based on projected impacts of climate change.

•Removal of blanket protections for threatened animals.

The Fish and Wildlife Service also rescinded its blanket rule that gave threatened animals the full protections against takes that endangered animals have (a 4(d) rule). This brings them in line with the National Marine Fisheries Service, which never had such a blanket rule. Now threatened species will only get such protections if the Service issues them in a special rule. The impact of this change will depend on how often the Fish and Wildlife Service issues a special rule for a threatened species, and what the rule contains. For reference, the Obama administration issued special rules in about half of its threatened animal listings. The Services have never issued a special rule for threatened plants, which are not protected by the same "take" prohibition.

•Designating Critical Habitat

the final rules raise the bar for designating and protecting critical habitat in areas that are not occupied by a listed species. Unoccupied habitat can only be designated as critical if: 1) occupied habitat is inadequate to conserve a species, 2) it contains physical or biological features essential to conserving the species, and 3) there is reasonable certainty it will contribute to conserving the species. While these are significant changes to the standard, the impact will primarily be to constrain future protection of unoccupied habitat to prepare for predicted shifts due to climate change. Historically the Services have designated very little unoccupied critical habitat: less than 1 percent on land and around 3 percent in water. But in 2016 the National Marine Fisheries Service issued a directive stating that it would consider "proactive designation of unoccupied habitat" to account for the impacts of climate change.

The final rules also establish five new factors for the Services to use when making a determination that it is "not prudent" to designate critical habitat. These include whether habitat destruction is a threat to a species, and the ability of consultation measures to address threats to the habitat. One catch-all allows the Services to conclude critical habitat is not prudent based on the "best available scientific data." This is a significant change to the standard, though these "not prudent" determinations have been rare to date.

•Standard for Delisting or Reclassifying.

The new rules clarify that the standard for delisting or downlisting a species is the same as the standard for listing a species, and that the Services "shall" delist when the standard is met, even if it has not met criteria in a Recovery Plan. This revision generally reflects the Services' existing authority, and their practice in some, but not all, cases. The change may speed up some delisting recommendations and will likely reduce the time between a delisting recommendation and the issuance of a rule to carry out the delisting. The prior regulation's use of the term "recovery" and the Endangered Species Act's general precautionary approach have prompted some to argue there was a different and higher standard for delisting, such as meeting all Recovery Plan criteria. The new regulatory text drops the word "recovery," a move that has drawn criticism from environmental groups because it implies the Services will delist a species before it has met recovery criteria. But the DC Circuit held in 2012 that the Services have authority to delist before all recovery criteria are met. *See Friends of Blackwater v. Salazar*, 691 F.3d 428 (D.C. Cir. 2012). And the Services have done so a handful of times.

Challenges to the Final Rules

Shortly after the final rules were issued, a coalition of environmental groups filed suit in the U.S. District Court for the Northern District of California to block them. *See, Center for Biological Diversity v. Bernhardt*, Case No. 4:19-cv-5206 (N.D. Cal. *filed* Aug. 21,

2019). The complaint claims that the Services:

1) violated the National Environmental Policy Act and the Administrative Procedure Act by failing to prepare an Environmental Assessment or Environmental Impact Statement for the rules;

2) violated the Administrative Procedure Act by failing to give adequate notice of changes to the definitions of "environmental baseline," "consequences caused by the proposed action," and the new restrictions on designating unoccupied critical habitat; and

3) acted arbitrarily and capriciously in relying on conservation promises to avoid jeopardy determinations, redefining the environmental baseline, changing the definition of "destruction or adverse modification" of critical habitat, and limiting the effects and activities considered during consultation. The complaint seeks to vacate the rules, and an injunction against relying on them.

And on September 25, 2019, California, 16 other states, the District of Columbia, and New York City filed similar challenges to most of the rules' revisions. *See, California v. Bernhardt*, Case No. 4:19-cv-6013 (N.D. Cal. *filed* Sept. 25, 2019). Although the courts will likely give the Services deference on the merits of many of the new rules, their failure to prepare an Environmental Assessment surprised many observers, and may create their largest vulnerability.

Conclusion and Implications

If these revisions to the federal Endangered Species Act Regulations withstand legal challenge, they will clarify the "environmental baseline," "effects of the action," and conservation plans that the Services consider in consultations on water projects or operations that may affect endangered species. The revisions also adjust the standards for listing threatened species, designating and protecting their critical habitat, and delisting or downlisting species that are recovering. Although the impacts of most of these changes will depend on how the Services implement them, several appear to push back against Ninth Circuit caselaw or to constrain listing decisions and critical habitat designations that would be primarily driven by climate change.
(Lowry Crook, Steve Anderson)

LAWSUITS FILED OR PENDING

FISHING GROUPS AND TRIBES CHALLENGE BIOLOGICAL OPINION ON KLAMATH PROJECT OPERATIONS

On July 31, 2019 a coalition of environmental, fishing, and Native American groups (collectively: plaintiffs) filed suit against the U.S. Bureau of Reclamation (Bureau) and the National Marine Fisheries Services (NMFS). The plaintiffs challenged a recent Biological Opinion that governs how the Bureau manages Klamath River flows, including irrigation water and water for the protection of species including coho salmon. The lawsuit was filed by the Yurok Tribe, the Pacific Coast Federation of Fishermen's Associations and the Institute for Fisheries Resource, and generally claims the Biological Opinion is improper because it found no jeopardy to protected species and fails to require dilution flows in the event of disease outbreak among salmonids. [*Yurok Tribe, et. al. v. U.S. Bureau of Reclamation et. al.*, Case No. 3:19-cv-04405 (N.D. Cal.).]

Background

Congress authorized construction and development of the Klamath Project (Project) in 1905, and the Project includes over 185 miles of various diversions, canals, and pumping stations. The Project provides irrigation water to approximately 200,000 acres of agricultural land each year, as well as to four national wildlife refuges within its boundaries.

In 1997, NMFS listed the Southern Oregon Northern California coho (coho) as threatened under the federal Endangered Species Act (ESA). According to plaintiffs, the Bureau subsequently established a real-time program that could produce flows, including dilution flows, for species' benefits when infection rates for the parasite Ceratonova Shasta (C. shasta) were observed above certain thresholds. Water was made available for the flows from an Environmental Water Account (EWA), which is an amount of Klamath River water set aside to meet the needs of coho between March 1 and September 30.

In NMFS' subsequent May 2013 Biological Opinion (BiOp), it determined that a Project operations plan that would have covered the period of 2013-2023 would not jeopardize the species because it found that the plan would improve conditions for coho. The related 2013 Incidental Take Statement—the part of the BiOp that specifies the extent to which a proposed action may result in the incidental taking of a threatened or endangered species—set a take limit of 49 percent of annual juvenile coho outmigrating from the Shasta River, based on incidence of previously observed C. shasta infections. According to plaintiffs, C. shasta infection rates spiked in 2014 and 2015, and the District Court in response required water flows, including dilution flows, for disease management until formal reinitiated consultation completed.

On March 29, 2019, the Bureau and NMFS completed consultation, and issued a new BiOp (2019 BiOp) and Incidental Take Statement for the Bureau's Project operations for the 2019-2024 period (Plan). The 2019 BiOp concluded the Plan is not likely to jeopardize coho and established a take limit of the same 49 percent.

Plaintiffs' Allegations

By their action plaintiffs seek declaratory and injunctive relief under both the federal Endangered Species Act and the National Environmental Policy Act (NEPA).

Flawed No Jeopardy Conclusion

Specifically, the plaintiffs argue that NMFS' no-jeopardy conclusion for coho is flawed because it is improperly based on whether impacts will be reduced by the Project's operations instead of whether impacts will impede species' survival or recovery. Plaintiffs claim that minimum flows and surface flushing flows designed to reduce disease risks would not eliminate elevated risks from C. shasta observed during 2014 and 2015, or otherwise bring them into acceptable levels. Plaintiffs also claim NMFS did not assess whether the prior elevated infection rates will impede coho recovery.

Discretionary Dilution Flows

According to plaintiffs, the Plan also improperly makes dilution flows discretionary and is contrary to NMFS's past findings and the best available science. Plaintiffs complain the Plan does not require dilution flows when C. shasta infection rates spike and that no water is set aside for such dilution flows. Plaintiffs further object that both the irrigation allocation and EWA allocation are locked in on April 1 of each year, without regard to whether hydrologic conditions later show that more EWA water is needed.

2019 Biological Opinion's Take Limit

Plaintiffs also assert the 2019 BiOp's limit on take is invalid. NMFS set the take limit at a maximum prevalence of mortality of 49 percent, which NMFS estimated would have been the highest on record. Plaintiffs assert that setting the take limit at the highest estimated C. shasta mortalities allows an unacceptably high level of take which could cause adverse population effects.

The Environmental Assessment

Under NEPA, plaintiffs claim the Bureau's Environmental Assessment failed to compare the Plan to the prior court-ordered dilution flows. According to plaintiffs, the court ordered flows in 2014 and 2015 are a viable alternative to the Plan that should be analyzed.

The Finding of No Significant Impacts

Plaintiffs also assert that the EA's Finding of No Significant Impact is unlawfully based on a belief that conditions will improve under the Plan, as opposed to whether impacts will be insignificant. Plaintiffs claim that because the Bureau's 2019-2024 Plan may have significant adverse environmental impacts, an environmental impact statement must be prepared.

Remedies Sought

By its action plaintiffs seek a declaration that the 2019 BiOp and the limits NMFS set for allowable take are arbitrary and capricious, and contrary to the ESA. Plaintiffs also seek a declaration that the Bureau's EA be set aside as arbitrary, capricious, and contrary to NEPA. Plaintiffs thus request the court vacate the 2019 BiOp and take limits, and instruct NMFS to reopen and complete reinitiated consultation. During the reinitiated consultation, plaintiffs seek to enjoin the Bureau to provide sufficient flows to prevent irreparable harm to species.

Conclusion and Implications

As it stands, the current 2019 Biological Opinion will cover the Bureau operations on the Klamath River through 2024. However, conditions on the Klamath River could significantly change during this time period under a plan by the Klamath River Renewal Corp to remove four dams on the river. Such action requires its own Endangered Species Act and National Environmental Policy Act compliance and is pending approval by federal and state energy regulators. It remains to be seen how the court will evaluate the Bureau's 2019-2024 Plan in light of the potential for significant physical change on the river. (David E. Cameron, Meredith Nikkel)

DELTA COUNTIES SUE CALIFORNIA DEPARTMENT OF WATER RESOURCES FOR NEW DELTA CONVEYANCE DRILLING ACTIVITY

The Counties of Sacramento and San Joaquin filed separate lawsuits against the California Department of Water Resources (DWR) and its contractor for exploratory drilling in the Sacramento-San Joaquin River Delta (Delta) in connection with an undefined water conveyance project. The actions assert that DWR failed to obtain local permits prior to conducting the drilling and its activities threaten Delta groundwater and species habitat. Despite the state's rescission of the California WaterFix Project earlier this year, DWR contends its field studies and data collection are necessary for the development of a project in line with Governor Gavin Newsom's direction on Delta conveyance and, in any case, legitimate exercise of its eminent domain powers as recognized by a 2017 court order. [*Sacramento County v. Department of Water Resources*, Case No. 34-2019-00258739 (Sac. County Super. Ct.); *San Joaquin County v. Department*

of Water Resources, Case No. CV-2019-0009452 (San Joaquin County Super. Ct.); Coordinated into: *In Re DWR Coordinated Cases JCCP 4594*, (San Joaquin County Super. Ct.).]

Background

The litigation comes after Governor Newsom declared his intent in February 2019 to abandon the California WaterFix Project—which involved the transport of Sacramento River water via two underground tunnels for export to southern California—and overhaul the State's planned conveyance infrastructure to incorporate a broader water supply "portfolio." DWR formally rescinded its approval of the WaterFix Project and certification of the Final Environmental Impact Report (EIR) on May 2, 2019. Later that month, DWR approved a 2019 addendum to its 2010 Initial Study/Mitigated Negative Declaration for the Engineering Geotechnical Studies for a Delta Conveyance Program (2010 MND) under the California Environmental Quality Act (CEQA) in order to conduct further exploratory bore-hole drilling and cone penetration tests on properties located in San Joaquin, Sacramento, and Contra Costa counties.

The 2010 MND was part of DWR's preliminary planning for WaterFix's predecessor, the Bay Delta Conservation Plan. DWR filed petitions in 2008 and 2009 under California's Eminent Domain Law for pre-condemnation authorization to enter private lands in the Delta and drill bore holes up to depths of 250 to 500 feet for soil and geologic studies. The petitions were eventually coordinated in San Joaquin County Superior Court (Case No. JCCP 4594) and an order recognizing DWR's authority to enter properties was issued in June of 2017 (2017 Order). DWR adopted its 2019 addendum in light of the State's shift in support and direction for a Delta conveyance project, the need to survey for new potential project alternatives, and changes to the environment.

State and Local Laws Implicated

The California Legislature has determined that groundwater contamination "poses serious public health and economic problems for many areas of the state" and thus empowers cities and counties to adopt well standards to protect groundwater quality. (Wat. Code, § 13701, 13755.)

The Sacramento County Code states that:

> . . .[n]o person shall dig, bore, drill, deepen, modify, repair, inactivate, or destroy a well. . . without first applying for and receiving a permit as provided in this ordinance unless exempted by law. (Sac. County Code, § 6.28.030.)

Similarly, San Joaquin County Development Code provides that a well permit must be approved:

> . . .prior to digging, drilling, boring, driving, repairing, or destroying any well. . .whether the well is to be used for domestic, irrigation, testing, geophysical, seismic, subsurface boring, monitoring, injection, extraction, vapor probe, cathodic protection, or other purposes. (SJC Development Code, § 9-1115.3.)

With respect to water well standards, "every person shall comply" with any such local ordinance," concerning water wells, including the state. (Wat. Code, §§ 13755, 13050(c).)

However, rather than obtain permits for its drilling activity, DWR acted pursuant to the 2017 Order that allowed it to enter certain properties and investigate the feasibility and best alternative conveyance alignments and corridor locations for a conveyance project.

Litigation and Motions

Sacramento County filed its complaint for damages and injunctive relief in Sacramento County Superior Court on June 18, 2019, after a supervisor for the County Environmental Management Department spotted workers for DWR and its contractor, Gregg Drilling, LLC, drilling bore holes on private property in Courtland without a well-drilling permit. On July 20, 2019, the court granted a three-week Temporary Restraining Order to cease drilling activity while the parties prepared their arguments on the merits.

San Joaquin County filed its complaint and petition for writ of mandate in San Joaquin County Superior Court on July 23, 2019, after staff from the County Environmental Health Department responded to a landowner's nuisance complaint of unpermitted drilling in the unincorporated community of Holt. Like Sacramento County, San Joaquin

County sought to compel DWR to cease all exploratory drilling in the Delta for failure to comply with its ordinance, though its action relied on the county's inherent ability to abate nuisances. It further argued that DWR violated CEQA by failing to comply with applicable pre-construction mitigation measures to protect nearby wildlife and endangering protected bird nesting habitat.

Motion to Coordinate and Ruling on Motion for Preliminary Injunction

On June 28, 2019, DWR moved *ex parte* to coordinate Sacramento County's action with the coordinated eminent domain petitions (JCCP 4594) in San Joaquin County Superior Court and request clarification that the 2017 Order authorizing entry applies, insulating DWR from Sacramento County's local permit requirements. The court coordinated the action and, on August 20, denied Sacramento County's motion for preliminary injunction on the grounds that it failed to establish the likelihood of prevailing on the merits. The court granted DWR's request for clarification on the 2017 Order, finding DWR enjoys state sovereign immunity from local regulation of its bore-hole drilling because the local standards embraced by the Water Code apply only to water wells. (*In Re DWR Coordinated Cases JCCP 4594*, August 20, 2019 Ruling, pp. 3, 6.)

DWR also submitted a petition to coordinate San Joaquin County's action with JCCP 4594 on August 13, 2019, equating it to Sacramento County's attempt to block the state's development of Delta conveyance through local ordinance. In its September 19, 2019 opposition to DWR's coordination petition, San Joaquin County argued that its action does not share significant common questions of fact or law with JCCP 4594, particularly in light of the additional CEQA cause of action it raises.

Conclusion and Implications

As set forth in the August 20, 2019 Ruling, DWR may file a reply brief to San Joaquin County's opposition by October 4, 2019, after which a coordination hearing will be held on October 25, 2019. Meanwhile on August 27, 2019, DWR publicly released a Delta Conveyance Update (August Update) on its website, committing that "[a]ny new field surveys, soil sampling or other data collection [for its new Delta conveyance project] will be conducted in compliance with state regulations and in coordination with local county officials." The August Update further states that such drilling and geotechnical exploration "work would only be conducted after proper notification and coordination with landowners." In addition to these commitments from DWR, court rulings in the Sacramento County and San Joaquin County actions will impact the involvement that local public agencies and landowners have in DWR's planning and environmental review.
(Austin Cho, Meredith Nikkel)

MARINA COAST WATER DISTRICT CONTINUES LITIGATION DESIGNED TO THWART CALIFORNIA AMERICAN'S PROPOSED WATER DESALINATION PROJECT

On August 15, 2019, the Marina Coast Water District (District) filed a petition for writ of mandate and injunctive relief in Monterey County Superior Court to prevent California American Water (Cal Am) from moving forward with the construction of a desalination plant project (Desal Project). The petition claims that the approval of a permit for the Desal Project by the County of Monterey (County) on July 15 violated the California Environmental Quality Act (CEQA), the Water Code and California Planning and Zoning Law. The lawsuit is part of an ongoing effort by the District to derail the Desal Project, fearing its potential impact on key District water supplies. [*Marina Coast Water District v. California American Water,* Case No. 19CV003305(Monterey County Super. Ct.).]

The California American Desalination Project

Cal Am, a private investor-owned utility that provides water and wastewater services to over 600,000

customers in the Monterey area, considers the $329 million Desal Project necessary for securing adequate future supply, due to a State Water Resources Control Board cease and desist order limiting Cal Am's pumping from the Carmel River and other supply challenges facing the company. The Desal Project is one of three primary components included in the broader Cal Am initiative known as the Monterey Peninsula Water Supply Project (Water Supply Project). According to Cal Am, the Desal Project involves drawing seawater through the ocean floor using subsurface slant wells constructed near the tide line north of the City of Marina. Water would then be piped to the new 6.4 million gpd desalination plant Cal Am intends to build near the Monterey One Water Regional Treatment Plant.

The District believes that instead of seawater, the slant wells for the Desal Project will draw freshwater from a nearby aquifer that is recharging the Salinas Valley Groundwater Basin (Basin) and protecting the Basin against seawater intrusion, jeopardizing a critical source of groundwater supply for the District and Marina and Ord communities served by the District. The District has argued that Cal Am will effectively be taking 16,000 acre-feet of Basin water to which it has no rights, when the Basin has already been deemed to be in a state of critical overdraft by the California Department of Water Resources.

The District's Lawsuit

The District's August 2019 petition alleges the county board of supervisors approved a use permit for the Desal Project without adequate review of environmental impacts under CEQA, in light of new data suggesting that groundwater impacts of the Desal Project would be more substantial than assumed by the Environmental Impact Report (EIR) previously approved by the California Public Utilities Commission (CPUC) and relied upon by the County for purposes of issuing the disputed permit. The District further claims that the EIR fails to consider alternatives to the extent required by CEQA, such as an expansion of the Pure Water Monterey purchase program, another part of the Cal Am Water Supply Project. The District's petition also alleges violations of the Water Code and zoning laws resulting from the County's approval of the permit prior to a showing by Cal Am that it had secured the requisite water rights for the Desal Project.

The Ongoing Legal Battle

The District's ongoing legal battle against the Desal Project has been waged on multiple fronts and formally began in October 2018, when the District and the City of Marina petitioned the California Supreme Court for review of CPUC's approval of the EIR, citing the same deficiencies referenced in the new superior court suit. The Supreme Court denied the District's petition for review on August 28, 2019 without addressing the merits of the claim. According to a Cal Am spokesperson, the District has now brought five separate lawsuits to stop the Desal Project, three of which have been unsuccessful. Thus far, the District's claims have largely been based on similar arguments involving the sufficiency of environmental review and water rights.

Conclusion and Implications

The District's August 2019 lawsuit shows that it remains committed to contesting the Cal Am Desal Project despite previous setbacks, reflecting the severity of the perceived threat to District water supplies. Though similar CEQA and water rights claims have been unsuccessful in other contexts, the District appears willing to exhaust its opportunities to make those arguments. As the legal battle over the Desal Project continues, the District will likely consider future challenges which may not presently be available. Cal Am still needs to secure approvals for parts of the Desal Project from the State Water Resources Control Board, the Regional Water Quality Control Board, and the California Coastal Commission. (Wesley A. Miliband, Andrew D. Foley)

RECENT FEDERAL DECISIONS

FOURTH CIRCUIT VACATES SECOND INCIDENTAL TAKE PERMIT FOR ATLANTIC COAST PIPELINE

Defenders of Wildlife v. Wildlife Services, ___F.3d___, Case No. 18-2090 (4th Cir. July 26, 2019).

On July 26, 2019, the Fourth Circuit Court of Appeals ruled that the U.S. Fish and Wildlife Service's (FWS) determination that the Atlantic Coast Pipeline (Pipeline) project would not harm endangered species was arbitrary and capricious. This ruling invalidated the FWS' 2018 Biological Opinion and Incidental Take Statement that encompassed these findings and requires the FWS to rewrite the documents.

Factual and Procedural Background

The Pipeline is a proposed 600-mile pipeline project to transport natural gas from West Virginia to Virginia and North Carolina. The location of the proposed Pipeline is in the habitat of four endangered species: the rusty patched bumble bee, clubshell, Indiana bat, and the Madison Cave isopod. As a result, the federal Endangered Species Act (ESA) requires the FWS to issue a Biological Opinion determining whether the endangered species will be impacted by the Pipeline project. In its 2017 Biological Opinion, the FWS determined that the species would not be jeopardized despite the incidental taking of these species and their habitat. To contend with the taking issue, the FWS issued the 2017 Incidental Take Statement that set limits on how many of each species could be taken by the project. Petitioners challenged these initial take limits and the court determined that these limits were arbitrary and thus, vacated the Incidental Take Statement.

Nineteen days after the 2017 Biological Opinion and Incidental Take Statement were vacated and formal consultation with the Federal Energy Regulatory Commission (FERC) resumed, the FWS issued a 2018 Biological Opinion and 2018 Incidental Take Statement. The 2018 Biological Opinion and Incidental Take Statement again placed limits on the number of species that could be taken during the project. Petitioners again challenged the findings in the Biological Opinion and Incidental Take Statement. Petitioners argued the determination that the construction will not harm the rusty patched bumble bee or the clubshell was improperly determined and that the limits placed on the Indiana bat and Madison Cave isopod were invalid.

The Fourth Circuit's Decision

Patched Bumble Bee

With regard to the rusty patched bumble bee, the court ruled that the FWS determination that the species would not be jeopardized by the project was arbitrary and capricious. The rusty patched bumble bee reproduces in a cyclically: the queens produce new queens and then die every year. As a result, each queen is theoretically able to produce multiple new hives the following year. The FWS action was arbitrary because it did not explain how the nest density number (*i.e.* the means to calculate the number of bees to be impacted by the project) was selected and determined that the project would not "negatively impact the fitness or survival of the population" despite the assertion that the project would reduce reproductive success. The court also concluded that the FWS did not take into account FWS' own determination, only one year earlier, that even without external stressors, the species is "so imperiled that every remaining population is important for its continued existence." Finally, the court concluded the FWS only considered the species survival and did not consider the recovery in the determination of no harm while failing to explain their reasoning. As a result of these unexplained FWS determinations, the court concluded the "no harm" determination was arbitrary and capricious in consideration of all of the facts related to the species.

Clubshell

With regard to the clubshell, the court ruled that the FWS' determination the clubshell would not be harmed by project construction was arbitrary and capricious. The clubshell is a type of freshwater mussel that lives buried in sand. The work of digging would clog the clubshell's feeding and breathing tubes, causing the clubshell to die. As a result, the FWS moved some of the mussels to a different stream following the 2017 Biological Opinion and issued the 2018 Biological Opinion. The movement of the species led to a colony of mussels that were alive, but unable to reproduce. FWS determined that this action was permissible because the clubshell population was not a reproducing population, therefore the number of the species would not be diminished by the work; they did not consider the fact that the recovery of the species was reduced because of the creation of a colony that was unable to reproduce. Since this action would push the species into likely extinction and the FWS's analysis improperly focused on reproduction as the sole recovery criteria, using out of date information, the court determined that the decision of no harm was arbitrary and capricious.

Indiana Bat

The court determined FWS' Indiana Bat taking requirements failed to satisfy the criteria for a proper surrogate habitat. The Indiana Bat is an endangered, migratory species and requires trees to roost and rest while migrating. The 2018 Biological Opinion established a numeric take limit of two bats and an acreage limit, as a habitat surrogate. For a habitat surrogate to be proper, three elements must be met: 1) FWS must describe the causal link between the surrogate and the take; 2) FWS must explain why it is not practical to express the amount or extent of anticipated take or to monitor take-related impacts in terms of individuals of the listed species; and 3) FWS must set a clear standard for determining when the level of anticipated take has been exceeded. Petitioners challenged the acreage limit. The court concluded FWS failed to satisfy these elements, in part, because the evidence showed two primary factors influencing the bat's status were habitat loss and degradation and forest fragmentation; nevertheless, FWS concluded that clearing forest habitation "regardless of the amount of acres being cleared" would have no impact on the species. The court concluded that no possible explanation was provided to support use of the habitat surrogate. As a result, the court determined that the decision was arbitrary.

Madison Cave Isopod

Finally, the FWS' determination regarding the take limits of the Madison Cave isopod was determined to be arbitrary and capricious. The Madison Cave isopod is a threatened subterranean freshwater crustacean. The FWS determined that 1,974 acres of habitat would be potentially impacted by the project. Despite this determination, FWS found that only 896.7 acres would be directly impacted by construction and only 896.7 acres would impact the species. The court concluded FWS did not consider indirect impacts that would harm the species in the other 1000 acres. Because the FWS did not explain why indirect impacts would be permissible, the court determined that the decision was arbitrary and capricious.

Conclusion and Implications

This case highlights the Fourth Circuit Court of Appeal's suspicion of the U.S. Fish and Wildlife Service's mere 19-day turnaround on reissuance of the 2018 Biological Opinion and Incidental Take Statement. Sometimes, agency deference can go only so far. It also suggests where an agency action is vacated as arbitrary and capricious, additional time and substantive evidence are needed to support the agency before it can take the same action. The court's decision is available online at: http://www.ca4.uscourts.gov/Opinions/182090.P.pdf
(Anya Kwan, Rebecca Andrews)

RECENT CALIFORNIA DECISIONS

SIXTH DISTRICT COURT AFFIRMS COUNTY'S APPROVAL OF SUBDIVISION IDENTIFIED IN RECIRCULATED EIR IN PROJECT WITH CUMULATIVE GROUNDWATER IMPACTS

Highway 68 Coalition v. County of Monterey, Case No. H045253, *unpub.* (6th Dist. July 26, 2019).

In a unanimous, yet *unpublished* opinion, the Sixth District Court of Appeal affirmed the 142-page decision of the trial court denying the petition for a writ of mandate by petitioners Highway 68 Coalition (Highway 68) and Landwatch Monterey County (Landwatch). The petitions sought to set aside Monterey County's (County's) approval of an 870-acre residential development consisting of residential units, agricultural industrial uses, roadway improvements, and several hundred acres of open space, known as the Ferrini Ranch project (Project). In a point-by-point analysis, the Court of Appeal determined that the Environmental Impact Report (EIR) complied with the California Environmental Quality Act (CEQA) and the County made no prejudicial errors in its analysis. The court also held that the County was not required to recirculate the document because no post-EIR significant new information arose. The County's approval of the Project as the environmentally preferred alternative (Alternative 5) was appropriate because CEQA requires agencies to approve environmentally superior alternatives, if they are feasible.

Factual and Procedural Background

In 2005, the County Planning Commission deemed complete the application for approval submitted by Domain (formerly Bollenbacher & Kelton, Inc.) (Applicant) for 212 lot residential development project on 870 acres in Monterey County. The original Project consisted of 212 total residential lots comprised of 146 clustered single-family residential lots on 178 acres with another 23 clustered single-family lots and 43 inclusionary housing units on 13 acres. The Project also included 35 acres of agricultural industrial uses, 43 acres of roadway improvements, and 600 acres of open space all fronting Highway 68 to the south and split by Toro Regional Park. The draft EIR (DEIR) was circulated for public review in 2012 with a recirculated draft EIR (DEIR) released in 2014 that identified a new Alternative 5 as the environmentally superior alternative because it reduced residential lots to 185 and increased open space to 700 acres from the original Project. Subsequently, the County prepared a final EIR (FEIR) and responded to comments received on the DEIR and recirculated DEIR.

The planning commission held several public hearings in 2014 on the Project and ultimately recommended that the board of supervisors (Board) certify the EIR and approve the Project as described in Alternative 5, which it did. The Board adopted findings and a statement of overriding considerations for each potentially significant environmental effect and found the benefits of the project outweighed its unavoidable impacts. The board simultaneously approved a combined development permit for Alternative 5 including use permits for tree removal and for development on slopes exceeding 30 percent.

Highway 68—a "social welfare organization" comprised of property owners and tenants living near the Project site—filed a petition for writ of mandate to set aside the County's certification and approval due to CEQA violations. Highway 68 alleged, among other things, that the County violated CEQA because the EIR inadequately analyzed environmental impacts to traffic, water, air quality, and project alternatives, and presented an unstable project description. Landwatch filed a similar petition also alleging the County had failed to comply with CEQA. After four days of hearing, denied the writ petitions in full. Petitioners appealed from the judgment on select issues.

The Court of Appeal's Decision

Highway 68 Issues on Appeal

Highway 68 asserted that the EIR did not comply with CEQA or was otherwise legally inadequate re-

garding the project description, alternatives analysis, and visual resources impacts analysis.

First, the court rejected Highway 68's claim that the project description was "unstable" because it had undergone substantial changes between the DEIR and the project that was approved. The court acknowledged that the Project had changed but concluded that the changes did not alter the "basic characteristics of the project"—as it remained a residential subdivision on 870 acres. The court further explained that any changes made in Alternative 5 were to "reduce or avoid environmental impacts," and were therefore allowable as a "key" purpose of CEQA.

With respect to alternatives, the court concluded that Highway 68 did not meet their burden of showing that the analysis was inadequate because information provided in the EIR allowed for "informed decision making." Highway 68 argued that the EIR no longer evaluated a reasonable range of alternatives because the Project's original access point through Toro Regional Park was rendered infeasible due to a nearby conservation easement. The court disagreed on the ground that the "basic objectives of the project" could still be accomplished even assuming, for the sake of argument, that the conservation easement rendered the original access point infeasible. Furthermore, the DEIR and RDEIR sufficiently discussed the impacts of the approved alternative access point. The court noted that Alternative 5's access point presented significantly fewer impacts overall, as a signalized intersection on a highway that already hosts several similar intersections, in contrast to the original access point through a public park that would require more tree cutting and habitat disturbance.

Lastly, Highway 68 claimed that the EIR's visual impacts analysis did not comply with County policies requiring visually sensitive properties to be "staked and flagged." The court found that even if the County was required to comply with this policy prior to certification of the EIR, it was not prejudicial because the EIR's extensive analysis of the visual impacts of the Project adequately and properly informed public involvement and decision-making. The court similarly rejected Highway 68's claim that the County had improperly deferred mitigation because the County made permits "contingent upon compliance" with this mitigation measure and others—which is allowable under CEQA.

Water Issues on Appeal

Landwatch claimed that the EIR's cumulative groundwater impact analysis was inadequate for two reasons: 1) the EIR relied on unreviewed or unconstructed groundwater management projects to determine no cumulative impacts; and 2) the EIR failed to disclose that existing overdraft and seawater intrusion will continue with Project implementation without full development of those projects. The court disagreed. The court found that the EIR adequately disclosed that overdraft and seawater intrusion problems will remain post-Project—but would not be further exacerbated.

Landwatch also claimed that the EIR improperly used the "ratio theory" when it determined that the Project's impact on water supply was not cumulatively considerable. The ratio theory is the disallowed notion that a project's impact can be relatively measured against the existing environmental impact to determine if it is cumulatively considerable. The court found, however, that the EIR did not use the ratio theory.

With respect to recirculation, the court rejected Landwatch's claim that new information regarding ongoing overdraft and seawater intrusion triggered recirculation. The court reiterated that CEQA does not require a project to resolve an existing problem.

Conclusion and Implications

Although the decision is *unpublished*, the decision provides helpful guidance to CEQA practitioners regarding modifying a project in response to environmental concerns and evaluating cumulative groundwater impacts. The case makes clear that an agency does not violate CEQA by approving an environmentally superior alternative analyzed in an EIR. Further, CEQA does not require individual development projects to solve regionwide groundwater problems.

The unpublished opinion is available at: https://www.courts.ca.gov/opinions/nonpub/H045253.PDF (Casey Shorrock, Laura Harris, and Christina Berglund)

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