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Via Electronic Mail

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SUBJECT: CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE COMMENTS ON THE SHASTA VALLEY BASIN DRAFT GROUNDWATER SUSTAINABLITY PLAN

Dear Matt Parker:

The California Department of Fish and Wildlife (Department) appreciates the opportunity to provide additional comments on the Draft Groundwater Sustainability Plan (GSP) for Shasta Valley Basin (Basin) prepared by Siskiyou County Flood Control and Water Conservation District, designated as the Groundwater Sustainability Agency (GSA).

Since the Basin is designated as medium priority under the Sustainable Groundwater Management Act (SGMA), it must be managed under a Groundwater Sustainability Plan (GSP) by January 31, 2022. In addition to the comments herein, the Department has provided other input into the proposed Draft GSP. On April 28, 2020, the Department provided comments in advance of the preparation of the Draft GSP which outlined general guidance, basin information, and recommended tools available to the GSA. The Department's April 28, 2020, comments focused on the Department's role as a trustee agency. In that role, the Department has an interest in the sustainable management of groundwater, as many sensitive ecosystems and species depend on groundwater and interconnected surface waters (ISWs). Specifically, the Department is concerned with the decline of salmonid populations due to the lack of quality aquatic habitat. The Department provided the Shasta River Canyon Instream Flow Needs Assessment (McBain and Trush 2014) as guidance when developing an interim target flow to avoid extirpation of salmonids. The Department recognizes a more thorough watershed wide study is required to

achieve the needs of all sensitive ecosystems and species dependent on groundwater and ISW in the Basin.

Background

The GSA appointed an Advisory Committee, composed of members of the Basin community, to work with a group of consultants to develop the Draft GSP. The Advisory Committee requested comments from any stakeholder as it developed the Draft GSP. The Department previously provided comments during Advisory Committee meetings, and on certain draft Chapters as they were made available. During Committee meetings, the Department provided comments on issues including the following: use of the best available science and information to develop the model; the water budget; identification and consideration of beneficial users and groundwater-dependent ecosystems (GDEs); well information as it relates to Department-owned and managed properties; and sustainable management criteria. The Draft GSP does not fully address all comments the Department provided during the Advisory Committee meetings. After its review of the Draft GSP, the Department also has additional comments that it had not raised previously. Therefore, the Department is commenting again at this point in time to ensure all of these comments are fully considered in the development of the Draft GSP.

Organization of Comments

The Department has organized its comments below into nine key areas of concern: (1) the Department's trustee agency role; (2) SGMA requirements relevant to beneficial users and GDEs; (3) SGMA hydrogeologic conceptual model requirements; (4) sustainable management criteria and water budget requirements; (5) monitoring network and well information; (6) data gaps and use of the best available science; (7) implementing projects and management actions (PMAs); (8) Public Trust Doctrine and California Endangered Species Act (CESA) requirements; and (9) SWRCB Emergency Regulations. This letter highlights key comments and is not inclusive of all comments provided to the Advisory Committee during meetings and/or communication with County staff. In addition, the model documentation, water budget information, water level sustainable management criteria, and interconnected surface water sustainable management criteria were not provided until September 13, 2021. Since the completed Draft GSP was not publicly available since the beginning of the public review period, limited time was available for review and comment of certain sections of the Draft GSP.

Department's Trustee Role

As the trustee agency for the State's fish and wildlife resources, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of such species. (Fish & G. Code §§ 711.7 & 1802.) The Shasta River watershed (included in the Klamath River watershed) provides aquatic habitat for four species of anadromous fish: Chinook Salmon, Southern Oregon/Northern California Coast (SONCC) Coho Salmon (CESA and Endangered Species Act (ESA) threatened), Steelhead Trout, and Pacific Lamprey (State species of special concern). The Shasta River watershed also supports populations of bank swallow (CESA threatened), western pond turtle (State species of special concern), foothill yellow-legged frog (State species of special concern), greater sandhill crane (CESA threatened), willow flycatcher (CESA and ESA endangered), black tailed deer, pronghorn and other fish and wildlife species that rely on habitats supported and supplemented by groundwater. In addition, the Shasta River watershed is one of five priority streams under the 2019 California Water Action Plan, which includes an objective for the Department to protect and restore important ecosystems through flow enhancement activities (Action 4).

The Department has significant concerns about potential impacts of groundwater pumping on GDEs and interconnected surface waters (ISWs), including ecosystems on Department-owned and managed lands within SGMA-regulated basins. The Department owns the Shasta Valley Wildlife Area, on Little Shasta River, and Big Springs Wildlife Area within the Big Springs complex of the headwaters of Shasta River. The Department urges the GSA to plan for and engage in responsible groundwater management that minimizes or avoids these impacts to the maximum extent feasible as required under applicable provisions of SGMA and the Public Trust Doctrine. CDFW-001

SGMA Requirements Relevant to Beneficial Users and GDEs

In addition to other requirements that will be discussed later in this letter, SGMA and its implementing regulations afford beneficial users and GDEs specific consideration, including the following as pertinent to GSPs.

Consideration of Beneficial Uses and Users

GSPs must consider the interests of all beneficial uses and users of groundwater, including environmental users of groundwater. (Water Code § 10723.2.) GSPs must also **identify and consider potential effects on all beneficial uses and users**

of groundwater. (23 CCR §§ 354.10(a), 354.26(b)(3), 354.28(b)(4), 354.34(b)(2), and 354.34(f)(3).) The Draft GSP does not adequately identify all the environmental users in the Basin, their locations, the groundwater dependent habitat they depend on at certain life stages, and how the Draft GSP will meet their needs. The Draft GSP identifies in Table 6 of Chapter 2, ESA or CESA species found in Siskiyou County. The Draft GSP identifies in Table 7 of Chapter 2, species prioritized for management in the first column, and other species that depend on the same ecosystems as the species prioritized for management in the second column. The Draft GSP species prioritized for management were identified as "riparian vegetation," which is a vegetation type, not an ecosystem or species. While this column identified salmonids as a species prioritized for management, the Draft GSP did not provide objectives that would be anticipated to support salmonids. Instead, the GSP provided objectives intended to minimize sediment erosion into streams where bank swallows exist that depend on erosion for their management. This choice of objectives suggests that the Draft GSP does not recognize the unique life histories of these species that may give rise to differences in management needs between salmonids and other species. In addition, many species, including special-status species, that are known to depend on or may be vulnerable to groundwater fluctuations were not identified in the first column. These include bank swallow, foothill yellow legged frog, western pond turtle, greater sandhill crane and willow flycatcher to name a few. The Draft GSP does not indicate where these species are found in the basin and how these individual species could be impacted by groundwater.

CDFW-002

CDFW-003

CDFW-004

Identification and Consideration of GDEs

GSPs must **consider impacts to GDEs**. (Water Code § 10727.4(l); *also see* 23 CCR § 354.16(g).) The Department is uncertain whether the Draft GSP accurately identifies all GDEs in the Basin. Specifically, the Draft GSP does not provide sufficient detail when describing the methods used for GDE classification and mapping included in the Draft GSP and rationale for the methods used. The Draft GSP mentions tabletop methods of using existing mapping tools, root depth to groundwater modeling and other tools for identifying GDEs. However, it also fails to include Advisory Committee input or field verification of the identified GDEs. Without these means of verification, the Department cannot evaluate or comment on the accuracy of the GSP's GDE classification or mapping. The Department recommends that GDE mapping is informed by science-based vegetation classification or similar methods, such as the Department's *Survey of California Vegetation Classification and Mapping*

CDFW-005

Standards.[1] The Draft GSP's classification and mapping should be revised if necessary after utilizing these methods. Classification and mapping methods should be thoroughly described so that GDE classification and mapping can be verified by stakeholders or repeated during future GSP updates and effectiveness monitoring.

CDFW-005 contd.

Hydrogeologic Conceptual Model Requirements

SGMA regulations require each GSP to include a descriptive hydrogeologic conceptual model (HCM) of the basin based on technical studies and qualified maps that characterizes the physical components and interaction of the surface water and groundwater systems in the basin. (23 CCR § 354.14.) The HCM must include a description of data gaps and uncertainty within the HCM. (*Id*. at § 354.14(b)(4)(5).)

While the Draft GSP includes an HCM, the Department is uncertain that the HCM accurately characterizes the physical components and surface water-groundwater interactions in the Basin. For example, the GSP does not properly identify and characterize the principal aquifers and aquitards within the Basin as required by applicable SGMA regulations. (23 CCR §354.14 (b)(4)(B) and (C).) The Draft GSP provides a regional description of the aquifer system(s) within the Basin without specifying the principal aquifer system is collectively within the basin. It would be helpful to identify the principal aquifer system within the Basin, and characterize the vertical and lateral extent of these assemblages in relation to one another. The Draft GSP should characterize associated aquifer parameters (i.e., hydraulic connectivity and specific yield/storativity) where each of the forementioned aquifer assemblages are located, and characterize or define the lateral and vertical extent of existing aquitards/confining layers within the Basin. In addition, the Department's understanding is that the Draft GSP does not clearly identify a definable bottom of the Basin as required by applicable SGMA regulations. (23 CCR §354.14 (b)(3).) The Draft GSP provides a discussion of the geologic units from oldest to youngest within the Basin but does not identify a definable base between the alluvial material and deeper hard rock material in the Basin.

CDFW-006

CDFW-007

The Draft GSP is required to provide a description of historic and current water level trends within the Basin. Pursuant to that requirement, the Draft GSP needs to provide groundwater level elevation contour maps depicting the

CDFW-008

[1] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=102342&inline

groundwater table or potentiometric surface associated with current seasonal highs and seasonal lows and hydraulic gradients between principal aquifers. Different sections of the Draft GSP provide varying yields for Pluto's Cave, ranging from 1,000-4,000 gallons per minute. The Draft GSP should be consistent in its description of yields. If a range is used for this location or other springs in the Basin, it should not have a large range of variation. In addition, the source of recharge for the springs should be identified if known. The Department suspects the source of the recharge for the springs is likely snowmelt. It would be beneficial if this could be confirmed and included in the Draft GSP. Similarly, for extractions, it would be helpful to describe the points of diversion of surface water in text and with a map, including extractions from water districts and municipalities. The Department was unable to locate groundwater elevation contour maps that complies with applicable SGMA regulations that require characterization of the current seasonal highs and lows of the principal aquifer within the Basin. (23 CCR §354.16 (a)(1).) The referenced appendices include a set of presentation slides. The Department recommends supplementing these slides with discussion of the model inputs and associated literature cited to provide a greater understanding of the model and facilitate evaluation of compliance with applicable SGMA requirements.

CDFW-008 contd.

CDFW-009

CDFW-010

CDFW-011

CDFW-012

Sustainable Management Criteria and Water Budget Requirements

GSPs must **establish sustainable management criteria that avoid undesirable results** within 20 years of the applicable statutory deadline, including **depletions of ISW that have significant and unreasonable adverse impacts on beneficial uses of the surface water.** (23 CCR § 354.22 et seq. and Water Code §§ 10721(x)(6) and 10727.2(b).) The Draft GSP concludes that sustainability will be achieved by 2042 and undesirable results will be avoided, but the Department has concerns about the analysis and data underlying these conclusions. The goal of sustainability cannot be achieved by 2042 without an accurate water budget and clearly-defined sustainable management criteria, including minimum thresholds and measurable objectives, that meet requirements including the following:

CDFW-013

Measurable Objectives and Minimum Thresholds for ISW Depletions
For each relevant sustainability indicator, the GSP must describe quantitative measurable objectives to achieve the sustainability goal for the basin by 2042 and maintain sustainable management thereafter. (23 CCR § 354.30(a).) SGMA regulations require the GSP to include numeric minimum thresholds to define and avoid undesirable results, which must be explained and justified based on basin-specific information and other data or models as appropriate, with

appropriate accounting for any uncertainty in the understanding of the basin setting. (*Id*. at § 354.28(a)-(b).) The GSP must explain the relationship between the minimum thresholds and the relevant sustainability indicator, how the minimum thresholds will avoid causing undesirable results, how the minimum thresholds may affect the interests of beneficial uses and users of groundwater, and how each minimum threshold will be quantitatively measured consistent with SGMA monitoring network requirements. (*Id*.)

SGMA regulations require minimum thresholds related to depletions of interconnected surface water to be "the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results." (23 CCR § 354.28(c)(6).) These minimum thresholds must be supported by the "location, quantity, and timing of depletions of interconnected surface water" and "a description of the groundwater and surface water model used to quantify surface water depletion." (*Id*. at § 354.28(c)(6).) If a numerical groundwater-surface water model is not used to quantify surface water depletion, the GSP must identify and describe an equally effective method, tool, or analytical model to be used for this purpose. The Draft GSP does not meet these requirements because it does not set minimum thresholds based on the rate or volume of surface water depletions caused by groundwater use, and it does not utilize a basin-wide groundwater-surface water model or equally effective method, tool, or model to quantify such depletions.

CDFW-014

In the Draft GSP, sustainable management criteria related to depletions of interconnected surface water have not been clearly defined. The GSP claims to have considered measured groundwater contributions and the protection of GDEs through equations and numbers identifying the minimum thresholds and measurable objectives. Based on the limited explanation and justification in the GSP, the Department does not understand how the equations and numbers will ensure adequate protection of fish and wildlife resources and habitat. These equations and general numbers do not clearly articulate how they will affect beneficial users' needs or how data gaps in the understanding of the basin have been addressed. The numbers and equations do not relate to flows needed to support species and habitat, and the equations do not appear to produce specific quantitative metrics protective of resource needs. While interim milestones are provided, it is unclear how they will provide a "reasonable path" to achieving sustainability because they are also framed in terms of equations and percentages without relation to a specific value to ensure sustainability. The Department is also concerned that the analysis omits Upper Little Shasta River and fails to account for the fact that the stream annually

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CDFW-017

disconnects. As required per SGMA regulations, the Department requests revisions to the draft GSP to clarify how the sustainable management criteria were developed, how these criteria relate to the relevant sustainability indicators and how the criteria may affect the interests of beneficial users. CDFW-017 contd. CDFW-018

The Draft GSP's sustainability criteria also fail to account for the fact that the State Water Resources Control Board (SWRCB) has declared Shasta River a fully appropriated stream system (FASS) during part of the year, meaning insufficient supply is available for new water right applications at this time (Water Right Order 98-08). The FASS determination was based on numerous water rights decisions and orders that determined that allocated water likely exceeds available supplies from May 1 to October 31 each year (i.e., supplies are likely over-allocated at this time). The Draft GSP anticipates that surface water users and the Scott Valley and Shasta Valley Watermaster District (SSWD) will be able to maintain sufficient flows instream. However, given likely over-allocation and potential surface water depletions from groundwater pumping, which the GSA has not analyzed adequately, this assumption may not be realistic. As explained more fully below, the Department recommends revisiting the Draft GSP to address data gaps, ensure compliance with applicable SGMA statutory requirements, and appropriately consider and address impacts to GDEs and all beneficial users. CDFW-019

Furthermore, the GSA should not wait for additional California Water Action Plan deliverables for the Shasta River before determining and implementing "sufficient flows for salmonid species within the Shasta River." The Department has provided best available science that can be used to answer this question now rather than referring to an "aspirational watershed goal." Please see the Department's previous April 28, 2020, letter for details on this best available science and the needs of other special-status species that require attention beyond salmonids. In sum, the Department recommends that the GSA establish sustainable management criteria based on the best available science that meets the needs of all beneficial users. CDFW-020

Water Budget

Per SGMA regulations, each GSP "shall rely on the best available information and best available science to quantify the water budget for the basin in order to provide an understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater and surface water interaction, and subsurface groundwater flow." (23 CCR § 354.18 (e).) The water budget is a product of the Shasta Valley Integrated Hydrologic Model (SVIHM). The Department acknowledges that

Department of Water Resources (DWR) allows the use of models to prepare Water Budget in Basins; however, DWR also stresses the importance of using reliable data sets when available to increase the accuracy of the models output. The Draft GSP indicates no extraction information was available for wells within the Basin at the time of preparing the model. The Draft GSP does not discuss the utilization of evapotranspiration (ET) estimates to determine rates of aquifer pumping specific to crop type to quantify groundwater extraction values for development of the water budget. The Department understands that this method may be the best available science at present but suggests that the GSA consider remedying the issues regarding lack of accurate well information and groundwater usage data sets needed to adequately characterize groundwater levels and groundwater in storage within the Basin. CDFW-021

The Draft GSP provides a discussion in Chapter 2 about estimating specific yield using the SVIHM. The Draft GSP states the Basin is not overdrafted and "while groundwater levels declined during the 2012-2015 drought, levels quickly rebounded back." Similarly, the Draft GSP discusses how irrigation efficiency improvement projects result in a reduction of groundwater pumping and recharge. The Department recommends revisiting the sections regarding specific yield and irrigation efficiency improvement projects to clearly identity how the SVIHM and water budget demonstrate a sustainable use of groundwater for all beneficial users. The Draft GSP needs to include a clearer explanation of the connection between groundwater that goes to surface water runoff and groundwater infiltration, or evaporation. Based on the information provided in the Draft GSP, it is difficult to understand these components of the SVIHM and water budget, the potential relationship with the surface water in GDEs, and how groundwater will impact species throughout the year. Once the GSA clarifies its understanding of these issues, the water budget should be adjusted accordingly and the Draft GSP should identify sustainable management criteria that prevent adverse impacts to beneficial users, such as dewatering of GDEs, and strive for long term groundwater sustainability with PMAs. The GSA should also consider developing PMAs that promote more efficient water use through water conservation where feasible. CDFW-022 CDFW-023

Monitoring Network and Well Information

GSPs must describe monitoring networks that can identify adverse impacts to beneficial uses of ISWs. (23 CCR § 354.34(c)(6)(D).) The Draft GSP should elaborate on the description the proposed monitoring network, which must be capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface water conditions as

required by SGMA regulations. The Draft GSP should clearly identify the wells used for monitoring, the locations of these wells, the aquifer unit, and specific well construction information (i.e., well completion depth) for the wells used. Chapter 3, Table 2 identifies wells designated for potential inclusion in the groundwater level monitoring and storage monitoring network as Representative Monitoring Points (RMPs); however, the map provided for these wells does not provide any designation (well identification) for the points shown on the map. The Draft GSP should include the well ID and associated information needed to assist in the evaluation of the proposed observation point for its potential to accurately characterize groundwater occurrence at that location. As reference, the data set should include the ground surface elevations for each well, reference point elevations for water level measurements, and important well construction information (i.e., well screen perforation intervals). CDFW-024

Data Gaps and Use of the Best Available Science

Per SGMA regulations, the Draft GSP must identify reasonable measures and schedules to eliminate data gaps. (23 CCR § 355.4(b)(2).) The Draft GSP does not contain a basin-wide groundwater-surface water model, analysis of the surface water depletion rate, or basin-wide groundwater monitoring, all of which are necessary to assess potential surface water depletions and impacts to beneficial surface water users, including Chinook Salmon, Coho Salmon, and Pacific Lamprey. The GSP also lacks quantitative criteria for instream flows (discussed more fully below), which are needed to assess compliance with SGMA and avoid significant and unreasonable depletions of ISW. The Department acknowledges data gaps may initially exist and may make development of certain criteria more challenging. However, the Draft GSP must set forth a reasonable pathway and timeline for addressing these data gaps and developing sustainable management criteria as required under SGMA, supplementing with models and other data if needed to address uncertainties in basin-specific data. CDFW-025 CDFW-026 CDFW-027

After conducting the necessary analysis and establishing appropriate criteria, the Draft GSP should be updated to consider and avoid any unreasonable adverse impacts to beneficial users anticipated to result from such depletions. GSP characterizes instream flows as "aspirational watershed goals" within sustainable management criteria. This characterization ignores the plain language of SGMA, which clearly indicates sustainable management criteria and objectives must be developed to avoid undesirable results within the planning and implementation horizon. (23 CCR §§ 354.24, 354.26, and 354.28.) CDFW-028

In addition, SGMA requires the assumptions, criteria, findings, and objectives of a GSP to be reasonable and supported by the best available information and best available science. (23 CCR § 355.4(b)(1).) The Department is aware of available information not being utilized to the fullest for the development of each sustainable management criteria and the water budget. Specifically, the GSP lacks consideration of current versus historic surface water extractions, agriculture ditch losses and gains, new or improved wells in the basin, and local springs that feed into Shasta River. In addition, the GSP fails to analyze data from Little Shasta River, a tributary of Shasta River, and may exclude smaller tributaries that regularly disconnect, including Willow and Whitney Creeks. These deficiencies in the analysis suggests the model may not be considering all relevant groundwater pumping and related impacts in the basin. Since SGMA requires sustainable management of the entire basin, the sustainable management criteria must take a basin-wide approach. The GSA should identify the data gaps, set basin-wide sustainable management criteria, and identify how the GSA will achieve a robust monitoring system to capture accurate information on these portions of the basin or use existing data to accurately model these portions and assess impacts.

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CDFW-031

Implementing Projects and Management Actions (PMAs)

GSPs must include projects and management actions that are feasible and likely to prevent undesirable results and ensure that the basin is operated within its sustainable yield. (23 CCR § 355.4(b)(5).) The Department encourages and will make best efforts to support PMAs anticipated to address both immediate and long-term fish and wildlife resource needs. Not recognizing the role of the GSA to ensure sustainable management and deferring nearly all PMAs through an "integrative and collaborative approach" will make it difficult to achieve sustainability even by 2042 as contemplated under SGMA. The Department encourages the GSA to start working on PMAs like the reservoirs sooner than described.

CDFW-032

Public Trust Doctrine and California Endangered Species Act

The Department urges the GSA to consider its duties under the Public Trust Doctrine while developing its Draft GSP. While the SGMA sustainability requirements must be met within the 20-year planning and implementation horizon, Public Trust Doctrine requirements apply independently of SGMA, are not preempted by SGMA, and are applicable at all times. Under the Public Trust Doctrine, the GSA has the responsibility to consider potential impacts of its

groundwater planning decisions on navigable interconnected surface waters and their tributaries, and ISWs that support fisheries and ecological uses, including the level of groundwater contribution to those waters.[2] The GSA has "an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible." (*National Audubon Society v. Alpine County Superior Court* (1983) 33 Cal. 3d 419, 446.)

It is not clear that the GSA has undertaken the analysis and consideration required under the Public Trust Doctrine to support its proposed PMAs and management criteria. Under *Audubon* and *Environmental Law Foundation*, the GSA must conduct a robust analysis that considers the needs of public trust resources and impacts to those resources due to the proposed groundwater management practices, and that clearly explains why protection of public trust resources is infeasible due to inconsistency with the public interest. As explained above, the GSA has yet to resolve significant data gaps relevant to the surface water depletion rate, basin-wide groundwater levels, and the presence and needs of GDEs and beneficial users of interconnected surface waters. These issues must be addressed to ensure appropriate consideration of the needs of public trust resources as required under the Public Trust Doctrine. CDFW-033

Based on an accurate understanding of public trust resource needs and impacts, the GSA will need to assess a range of potential protective measures to address impacts of groundwater extractions. These measures may need to go beyond the PMAs identified in the Draft GSP and may include pumping limits or alternative supply options to address existing, new, and expanded extractions. Given overallocation and ongoing drought, it is critical to plan for such eventualities in the Draft GSP. Before rejecting such measures, the GSA will need to engage in a balancing of competing interests that shows that protecting species and habitat though contingent pumping limits, use of supply alternatives, or equivalent protective measures would be infeasible. CDFW-034

Most critically, the GSA should consider the implications of its GSP development and implementation on species listed under the California Endangered Species Act (CESA). As previously identified in our April 28, 2020 letter, the highest priority recovery actions for protection of CESA threatened Coho Salmon include CDFW-035

[2] See, e.g., *People v. Truckee Lumber Co.* (1897) 116 Cal. 397, *National Audubon Society v. Alpine County Superior Court* (1983) 33 Cal. 3d 419, and *Environmental Law Foundation v. State Water Resources Control Board* (2018) 26 Cal. App. 5th 844.

increasing instream flows, increasing cold water input in the Upper Shasta basin, reducing overall water temperature, increasing dissolved oxygen, and reducing warm tailwater inputs to the stream. The current Draft GSP does not support all beneficial users including aquatic species like salmonids by not accounting for their needs in the sustainable management criteria and deferring the PMAs to a future date. In addition to the Department, the North Coast Regional Water Quality Control Board (Regional Water Board) provided a recommendation for an increase of 45 cubic feet per second (CFS) of cold water from the Big Springs Complex into the Shasta River. (Regional Water Board, 2006. Staff Report for the Action Plan for the Shasta River Watershed Temperature and Dissolved Oxygen Total Maximum Daily Loads. Chapter 6. Temperature TMDL.) According to their modeling analysis, this cold water is the most beneficial flow contribution in the Shasta River with respect to temperature and is critical for temperature TMDL compliance and support of the most sensitive beneficial uses the Regional Water Board identified in their analysis, which include cold freshwater habitat and spawning, reproduction, and/or early development of aquatic species. The Total Maximum Daily Load (TMDL) analysis provides clear evidence that these beneficial uses depend on supporting conditions provided by the recommended increase in cold groundwater, which in turn supports groundwater dependent ecosystems. These ecosystems may be currently threatened by unsustainable groundwater use. Additionally, the Temperature TMDL assigns load allocations for riparian shade and riparian areas are inherently groundwater dependent ecosystems. Actions may need to go beyond SGMA minimum requirements to meet Public Trust Doctrine requirements.

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CDFW-036

CDFW-037

The GSA has also suggested that it will defer PMAs for protection of Public Trust resources and CESA-listed species. Delaying these actions is not likely to ensure protection of public trust resources, particularly since ongoing groundwater pumping is causing significant adverse impacts to those resources. The GSA's proposal to spend the next 5 years increasing monitoring and fleshing out the outstanding sections of the GSP unduly delays tangible actions needed in the immediate term for protection of public trust resources.

CDFW-038

SWRCB Emergency Regulations

Per SGMA regulations, GSP minimum thresholds must be consistent with existing regulatory standards absent clear justification for differences. (23 CCR § 354.28(b)(5).) Emergency regulations approved by SWRCB on August 17, 2021, and effective on August 30, 2021, set forth minimum instream flows needed to avoid extirpation of certain fish species in the Scott and Shasta rivers during the

CDFW-039

current drought emergency. Per the SWRCB's Informative Digest, these emergency regulations are intended to preserve minimum instream flows for migration, rearing, and spawning of fall-run Chinook and SONCC coho salmon in the Scott and Shasta rivers during the current drought emergency. (pp. 21-22.) These regulations must be accounted for in the draft GSPs for the Scott and Shasta basins.

CDFW-039 contd.

However, the minimum instream flows set forth in the SWRCB emergency regulations are not intended to preserve all aquatic species in the Scott and Shasta rivers during all life stages, seasons, and water year types. The regulations merely set forth minimum instream flows that are needed to avoid extirpation of certain fish species during the current drought emergency. The Public Trust Doctrine requires the GSA to manage groundwater pumping in the basin to ensure instream flows in interconnected surface waters (e.g., the Scott and Shasta rivers) are maintained at levels that fully support all life stages of all fish species during all seasons and water year types when feasible. In certain seasons and water year types, this may require maintenance of additional flow beyond the minimum instream flows set forth in the SWRCB emergency regulations.

CDFW-040

The Department appreciates the opportunity to provide comments on the Draft GSP. If you have any questions, please contact Region 1 SGMA Coordinator, Brad Henderson, at Brad.Henderson@wildlife.ca.gov. Additionally, you can contact the Klamath Watershed Coordinator, Janae Scruggs, at Janae.Scruggs@wildlife.ca.gov .

Sincerely,

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