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***GAVIN NEWSOM, Governor***
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September 23, 2021

Via Electronic Mail

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**SUBJECT: CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE COMMENTS ON THE SCOTT RIVER 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 Scott River Valley Basin (Basin) prepared by the 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 March 26, 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 March 26, 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 its Interim Instream Flow Criteria for the Protection of Fishery Resources in the Scott River Watershed, Siskiyou County (2017) 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); 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 several 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) SGMA considerations requiring basin-wide planning and management; (6) monitoring network and well information; (7) data gaps and use of the best available science; (8) implementing projects and management actions (PMAs); (9) Public Trust Doctrine and California Endangered Species Act (CESA) requirements; and (10) 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, model documentation was 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 Scott 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 Scott 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), Roosevelt elk, black-tailed deer, and other fish and wildlife species that rely on habitats supported and supplemented by groundwater.

The Draft GSP raises significant concerns about potential impacts of groundwater pumping on GDEs, ISWs, and species within its jurisdiction. 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:

Considerations 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. In Table 11 of Chapter 2, the Draft GSP identifies 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 CDFW-002 CDFW-003

column. However, the Draft GSP does not indicate where these species are found in the Basin and how these individual species could be impacted by groundwater. The Draft GSP also does not include consideration of other special status species (such as fully protected raptor species) or species of greatest conservation need found within the Basin and how they might be dependent upon or impacted by groundwater.

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Identification and Consideration of GDEs

GSPs must **consider impacts to GDEs**. (Water Code § 10727.4(l); *see also* 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 the rationale for the methods used. The Draft GSP mentions an evaluation, inventory, and mapping exercise (Section 2.2.1.8, lines 2136-2137) but does not provide any information on methods, types of remote sensing used, field data collection, field verification, or quality assurance/quality control measures employed. Without these means of verification, the Department cannot evaluate or comment on the accuracy of the GSP's GDE classification or mapping. However, the Department recommends that GDE mapping be informed by science-based vegetation classification or similar methods, such as the Department's *Survey of California Vegetation Classification and Mapping 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.

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Table 8 of the Draft GSP illustrates another significant concern with the GDE inventory. Fremont cottonwood (*Populus fremontii*) is characterized as occurring in the Basin. However, a review of available location and herbarium information indicates that Fremont cottonwood is likely to be rare or possibly non-native to the Basin. (Fremont cottonwood is a popular landscaping tree around ranches and homesteads). The Draft GSP cites the restoration analysis for Scott River riparian vegetation (Siskiyou RCD, 2009) as an information source. However, the RCD analysis does not include Fremont cottonwood and instead lists a very different species, black cottonwood (*Populus trichocarpa*). Although Calflora.org lists a single record of Fremont cottonwood in the Scott River

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

Watershed (Moffett Creek), the Department recommends that the Draft GSP use more commonly occurring groundwater dependent species for its analysis, such as black cottonwood, western (water) birch, white alder, or other species known to occur in the basin. Valley oak (*Quercus lobata*) also appears in Table 8. According to Calflora.org, there are zero occurrences of valley oak in the Basin and none in Siskiyou County. This species should be removed from the GDE discussion and replaced with a native species in the Basin. The GSA should also note that vegetation types are not listed pursuant to CESA (Section 2.2.1.8, line 2121), but sensitive natural communities are classified by the Department.[2] The Department recommends removing the reference to CESA in the context of vegetation communities.

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CDFW-006

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**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).)

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While the Draft GSP includes an HCM, it is not clear that the HCM accurately characterizes the physical components and surface water-groundwater interactions in the Basin. For example, the HCM in the Draft 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. The Draft GSP indicates, "The predominant water-bearing strata units in Scott Valley are the Quaternary stream channel, floodplain, and alluvial deposits…" but does not classify them as the principal aquifer system within the Basin and does not characterize the vertical and lateral extent of these assemblages in relation to one another. Additionally, the Draft GSP does not adequately characterize associated aquifer parameters (i.e., hydraulic connectivity, specific yield and storativity of the unconfined aquifer system) of each of the forementioned aquifer assemblages. The Draft GSP should characterize or define the lateral and vertical extent of existing

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[2] https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities

aquitards/confining layers within the basin. In Figures 12 and 13 in Chapter 2 of the Draft GSP it provides two geologic cross sections that only show a generalized visualization of the aquifer system within the basin but does not clearly indicate the depths and lateral extents at which the aforementioned aquifer assemblages are located. Additionally, the included cross sections do not clearly identify the depths and lateral extents of the other geologic assemblages listed within the HCM (i.e., older alluvial deposits). In addition, 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.

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CDFW-011

SGMA requires that the Draft GSP describe 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 groundwater table or potentiometric surface associated with current seasonal highs and seasonal lows and hydraulic gradients between principal aquifers. The Draft GSP only provides groundwater elevation contour maps for the spring and fall of 2015 but does not provide any additional groundwater contour maps in compliance with SGMA regulations requiring characterization of current seasonal highs and lows of the principal aquifer within the Basin. (23 CCR §354.16 (a)(1).)

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**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 underlying analysis and data do not fully support 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, measurable objectives, and interim milestones that meet requirements including the following.

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Interim Milestones

The GSP must describe "a reasonable path to achieve and maintain the sustainability goal", including a description of interim milestones for each

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relevant sustainability indicator, which must be provided at increments of five years (i.e., at 5, 10, 15, and 20 years from GSP adoption). (23 CCR § 354.30(e).) While the Draft GSP provides interim milestones are provided, it is unclear how these milestones will provide a "reasonable path" to achieving sustainability because they are framed in terms of equations and percentages without relation to a specific value to ensure sustainability.

CDFW-014, Cont'd

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 also 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*.)

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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. Instead, the Draft GSP states that its analysis has considered measured groundwater contributions and the protection of GDEs through equations and numbers identifying the minimum thresholds and measurable objectives. The Draft GSP's limited explanation and justification do not demonstrate how the equations and numbers will ensure

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adequate protection of fish and wildlife resources and habitat. More specifically, these equations and general numbers do not clearly articulate how they will affect beneficial users' needs. 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.

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In addition, the GSA's assumptions regarding surface flows may be unrealistic. The State Water Resources Control Board (SWRCB) has declared Scott 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 April 1 to November 30 each year (i.e., supplies are likely over-allocated at this time). SWRCB's determination was made based on multiple judgments of the Siskiyou County Superior Court, including Decree No. 13775 for Shackleford Creek and its tributaries (1950), Judgment No. 14478 for French Creek (1958), and Decree No. 30662 for the Scott River Stream System (1980) related to surface water rights. Scott River Decree No. 30662 also included provisions governing rights to certain groundwater recognized to be interconnected with the mainstem Scott River as delineated in that Decree. The Draft GSP anticipates that surface water users, the Scott Valley and Shasta Valley Watermaster District (SSWD), and SWRCB will be able to maintain sufficient flows instream. Thus, the GSA does not analyze issues regarding likely over-allocation of supplies and potential surface water depletions from groundwater pumping.

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Furthermore, the Draft GSP fails to incorporate best available science that could be used to inform appropriate criteria for instream flows. In Chapter 2, the draft GSP states that the interim instream flow recommendations presented by the Department "have not been reviewed and adopted by the State Water Resources Control Board and do not constitute a regulatory instream flow requirement at the time when this Plan was adopted." The Draft GSP provides an equation to describe the sustainable management criteria for interconnected surface waters. The equation without the context of instream flow values at a location like the Fort Jones gage makes it difficult to assess if aquatic resources needs are being met by the minimum thresholds. During Advisory Committee meetings, the Department's interim flow recommendations have been categorized as an "aspirational watershed goal" provided in Chapter 5. The GSA should utilize the best available science in determining and implementing sufficient instream flows. The Department has provided best

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available science that should be used to answer this question now rather than referring to an "aspirational watershed goal." Please see the Department's previous March 26, 2020, letter for details on this best available science and the needs of other special-status species that require attention beyond salmonids. On August 17, 2021, SWRCB also adopted emergency instream flow requirements (discussed more fully below) that inform the minimum flow needs for survival of Chinook Salmon and Coho Salmon in the present drought emergency. This information and any further information that becomes available regarding the needs of beneficial users should be considered when developing and implementing the Draft GSP. The Department recommends that the GSA establish sustainable management criteria based on the best available science that meets the needs of all beneficial users.

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Water Budget Requirements

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 Scott Valley Integrated Hydrologic Model (SVIHM). CDFW 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 GSP identifies no extraction information was available for wells within the Basin at the time of preparing the model. As a result, the Draft GSP provides a discussion on utilizing evapotranspiration (ET) estimates to determine rates of aquifer pumping specific to crop type to quantify groundwater extraction values for development of the water budget. CDFW understands that this method may be the best available science at present but suggests the GSA considers 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

Chapter 2 of the Draft GSP discusses the estimated specific yield and storativity of the unconfined aquifer system using the SVIHM. The Draft GSP additionally states that seasonal changes in observed water levels were used to calibrate specific yield and storativity in the Basin. This statement raises some concerns with regard to specific yield and storativity estimates of the unconfined aquifer system and wells used to calibrate these values within the Basin. Specific yield is generally defined as the volume of water released from storage by the

unconfined aquifer per unit surface area of aquifer per unit decline of the water table. The storativity of a confined aquifer is defined as the volume of water released from storage per unit surface of the aquifer or aquitard per unit decline in hydraulic head. The geologic descriptions presented within the HCM section of the Draft GSP, and information presented within the SVIHM description and Appendix 2C indicates that there is no regional definable confining layer within the Basin. However, as previously mentioned it does indicate that there may be local clay layers or clay lenses that are relatively broad in extent. In areas within the model domain, where suspected confinement exist, correct calculations should be considered to estimate the storativity of the confined assemblages described within the geologic facies analysis. The locations and vertical extents of these confining units need to be described and characterized within the HCM section of the document and if applicable, should be used to refine storativity estimates in areas where confined aquifer assemblages are present. Additionally, discussions related to the observed seasonal water levels used to calibrate specific yield and storativity estimates modeled by the SVIHM would be helpful to the Reader and should be included in the Draft GSP. Potentially this information might be found in well logs that contain lithologic data sets that indicate the occurrence of these confining units. If well data exists that indicates the presence of confining layers in the Basin, or well construction information exists that validates groundwater level information specific to these zones under confinement, this information should be added to the HCM section of the Draft GSP. The GSA should also conduct more detailed investigations to more accurately describe the hydrogeologic setting within the Basin. 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 consider developing PMAs that promote more efficient water use through water conservation where feasible.

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**SGMA Considerations Requiring Basin-Wide Planning and Management**

The Draft GSP improperly excludes the adjudicated areas of the Basin in the Scott River Stream System (Adjudicated Zone) from its water budget and definition of undesirable results. The Draft GSP states that Water Code section 10720.8 provides that the Adjudicated Zone is exempt from SGMA. Section 10720.8(a) merely states that the adjudicated basins set forth in this subdivision (including the Adjudicated Zone) are not subject to Part 2.74 of SGMA, which includes requirements to develop a GSP. These adjudicated basins are still

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subject to other requirements under SGMA, including annual reporting requirements under Water Code section 10720.8(f).

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Furthermore, SGMA's exemption of adjudicated basins from GSP requirements does not override other SGMA provisions indicating that where a GSP is required, it must account for the *entire basin*, including impacts to adjudicated areas. For purposes of SGMA, "basins" are defined as basins or subbasins identified in DWR's Bulletin 118. (23 CCR § 341(g).) In Bulletin 118, DWR defines the Scott Valley basin to include the Adjudicated Zone. (*see* Scott River Valley Groundwater Basin Description, DWR 2003.)

SGMA statutes require a GSP to be developed and implemented for each DWR-designated medium- and high-priority basin, and requires those GSPs to be either "a single plan covering the *entire basin*" or "multiple plans...coordinated pursuant to a single coordination agreement that covers the *entire basin*." (Water Code § 10727.) In addition, SGMA statutes and regulations are clear that a GSP's water budget and sustainability criteria must be developed to account for the *entire basin*:

- **Water Budgets**: SGMA regulations require each GSP to include a water budget that accounts for "the total annual volume of groundwater and surface water entering and leaving the *basin*, including historical, current and projected water budget conditions, and the change in the volume of water stored." (23 CCR § 354.18(a), emphasis added.) The water budget must also include "[a]n estimate of sustainable yield for the *basin*." (*Id*. at (b)(7), emphasis added.)
- **Sustainability Criteria**: SGMA regulations indicate that sustainable management criteria are "criteria by which [a GSA] defines conditions in its [GSP] that constitute sustainable groundwater management for the *basin*." (23 CCR § 354.22.) GSPs must establish "a sustainability goal for the *basin* that culminates in the absence of undesirable results within 20 years of the applicable statutory deadline", including measures that will be implemented to "ensure that the *basin* will be operated within its sustainable yield." (*Id*. at § 354.24, emphasis added.)
- **Undesirable Results**: Undesirable results are defined as effects "caused by groundwater conditions *throughout the basin*." (Water Code § 10721, subd. (x), emphasis added; *see also* 23 CCR § 354.26(a).)

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**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 GSA should clarify how it plans to develop a monitoring network 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. (23 CCR §354.34.) The Draft GSP references Appendix 3A, Table 1, which includes a list of wells that were reviewed for potential use in the Basin's evaluation. However, the Draft GSP does not clearly identify the wells used for monitoring, the locations of these wells, or specific well construction information for the wells used. Within Appendix 2, the Draft GSP provides Hydrographs for 85 wells but only provides a small map of the well location at the top of the hydrograph, which is illegible and uninformative. These hydrographs do not indicate or clarify what aquifer unit is being monitored. The Draft GSP only provides minimal well construction information (i.e., well completion depth) for a few wells. In 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 evaluating the proposed observation point for its potential to accurately characterize groundwater occurrence at that location. The data set should include the ground surface elevations for each well, reference point elevations for water level measurements, or important well construction information (i.e., well screen perforation intervals).

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**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 Draft 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

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CDFW-032

and developing sustainable management criteria as required under SGMA, supplementing with models and other data if needed to address uncertainties in basin-specific data.

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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 ISW depletions. The Draft 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.) 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 in the Draft GSP. Specifically, the GSP lacks consideration of current versus historic surface water extractions, agriculture ditch losses and gains, agricultural use of stockwater, new or improved wells in the interconnected zone, and the stream annually disconnecting. 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 must identify reasonable measures and schedules to address these data gaps and set or revise basin-wide sustainable management criteria as its understanding of the Basin improves.

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CDFW-034

**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 high mountain lake storage sooner than described.

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**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.[3] 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.) CDFW-036

Chapter 3 of the Draft GSP states that Public Trust Doctrine case law allows the GSA to balance public trust resource needs against public interest concerns. The GSA also states that appropriate protections for public trust resources depend on many factors, including public interest concerns about PMAs. 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-037 CDFW-038

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 CDFW-039

[3] 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.

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-039, Cont'd

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 March 26, 2020, letter, the highest priority recovery actions for protection of CESA threatened Coho Salmon include increasing instream flows and reducing overall water temperatures. It is unclear whether the current Draft GSP will support all beneficial users including aquatic species like salmonids since its sustainable management criteria do not appear to account for the needs of these species and its PMAs are deferred to a future date. In addition to the Department, the North Coast Regional Water Quality Control Board (Regional Water Board) identified groundwater inflows as a primary driver of stream temperatures in the Scott River. The Total Maximum Daily Load (TMDL) indicates groundwater drives temperature through the direct contribution of cold groundwater to surface flows, changing stream volume, and changing transit time. (Regional Water Board, 2005. Staff Report for the Action Plan for the Scott River Watershed Sediment and Temperature Total maximum Daily Loads. Chapter 4. Temperature.) Additionally, the TMDL indicates that groundwater elevation affects the ability of riparian tree species to thrive and reproduce, which indirectly affects stream temperatures by impacting exposure of surface water to solar radiation. Both of these groundwater-supported processes are critical for temperature TMDL compliance and for supporting the most sensitive beneficial uses the Regional Water Board identified in their analysis, which include cold freshwater habitat, reproduction, and/or early development of aquatic species. The TMDL analysis provides clear evidence that these beneficial uses depend on supporting conditions provided by groundwater dependent ecosystems which are currently threatened by unsustainable groundwater use. Actions may need to go beyond SGMA minimum requirements to meet Public Trust Doctrine requirements.

CDFW-040

CDFW-041

The GSA suggests that implementation of PMAs to protect public trust resources can be deferred, "developed as part of program implementation", in the future. (Chapter 3, p. 57.) For example, the GSP sets a first milestone for minimum thresholds for surface water depletions in 2027, targeting only a 5% reversal of

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stream water depletions by this date. Without further analysis as described above, it is not clear that this proposal would be consistent with the Public Trust Doctrine. The GSA has an obligation to consider the impacts of groundwater pumping on public trust resources and ensure adequate protections in the immediate term. Deferring implementation of PMAs for five years after GSP adoption is not likely to be an effective way 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-042, Cont'd

**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 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.

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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 to survive 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.

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The Department appreciates the opportunity to provide initial comments on the Draft GSP. For questions, please contact Region 1 SGMA Coordinator, Brad

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Sincerely,

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