



# ENVIRONMENTAL LAW FOUNDATION

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**Via E-mail**

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**Re: Environmental Law Foundation Comments on Scott Valley Groundwater Sustainability Plan**

Dear Ms. Foglia and Ms. Duncan:

Thank you for the opportunity to comment on three chapters of the draft GSP for the Scott Valley. We acknowledge the work and care that went into producing these documents.

Environmental Law Foundation (ELF) has significant concerns that the chapters, as presented, rely on insufficient analysis to avoid undesirable results in the Scott Valley, particularly with respect to impacts to interconnected surface waters and groundwater dependent ecosystems. In particular, the Groundwater Sustainability Agency (GSA) must (1) quantify undesirable results for interconnected surface water by setting a streamflow target, (2) define measurable objectives and minimum thresholds with respect to measured values at monitoring sites, and (3) consider impacts to surface water quality. Lastly, we urge the County to take further action now to address damage to the public trust resources in the Scott, as it clear that the GSP will not sufficiently protect those

resources.<sup>1</sup>

### **Low Flows Caused by Overpumping Are Having Disastrous Effects on Fish Populations**

It is undisputed that groundwater pumping and intensive agriculture have significantly impacted the Scott River. The Scott is one of the most important rivers on the Pacific Coast for threatened Coho and Chinook salmon, as well as a host of other species. The majority of Southern Oregon/Northern California Coast Coho use the Scott or the Shasta at some point in their life cycles. And it is also undisputed that populations of these species are in free-fall.<sup>2</sup>

At the same time, flows in the Scott have been decreasing as a direct result of increased groundwater and surface water extraction and diversion. In its Interim Streamflow Recommendation, California Department of Fish and Wildlife found that “late summer baseflows in the Scott River were 40.3% lower in the recent past (1977 to 2005) than in the historic period (1942 to 1976).<sup>3</sup> Sixty one percent of this drop in discharge is caused by factors other than regional-scale climate change.” Further, “valley-wide agricultural water diversions, groundwater extraction, and drought have all combined to cause surface flow disconnection along the mainstem Scott River.”<sup>4</sup> And in most summers, “large portions of the mainstem Scott River become completely dry, leaving only a series of stagnant isolated pools inhospitable to salmonids.”<sup>5</sup> At the same time, there is increased pumping in dry years, leading to further dewatering.<sup>6</sup>

The dewatering of the mainstem Scott is of particular concern as ESA-threatened Coho salmon need to spend their first 18 months of life in cold freshwater streams.<sup>7</sup> Recent years’ elevated temperatures and insufficient flows have been devastating to salmon. The GSP acknowledges that flows do not meet the requirements for salmonids.<sup>8</sup>

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<sup>1</sup> The Siskiyou County Flood Control and Water Conservation District acts as the GSA for the Scott Valley. Its members are identical to the members of the County Board of Supervisors.

<sup>2</sup> CDFW, Interim Instream Flow Criteria for the Protection of Fishery Resources in the Scott River Watershed, Siskiyou County, 2017 (Flow Criteria), at pp. 8-13.

<sup>3</sup> *Id.* at p. 6.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> GSP, Chapter 2, at p. 108, 118, 120.

<sup>7</sup> *Id.* at p. 80.

<sup>8</sup> *Id.* at pp. 67-68, *ll.* 1726-40.

It also acknowledges that spring-run Chinook have been extirpated in the Scott.<sup>9</sup>

### **The GSP Must Quantify the Undesirable Result for Depletions of Interconnected Surface Water**

Despite the known impacts of low flows on protected species, the GSP avoids a key question that SGMA requires it answer: what is the minimum flow required to avoid the continued destruction of salmonids in the Scott? The GSP defines “undesirable results” for interconnected surface waters in a way that deliberately and unlawfully skirts this crucial question. The GSP distinguishes between a “SGMA undesirable result” and an “aspirational ‘watershed goal.’”<sup>10</sup> The former is defined as “significant and unreasonable streamflow depletion due to groundwater extraction from wells subject to SGMA (i.e., outside of the Adjudicated Zone).” This definition is legally inadequate.

As part of achieving a basin’s “sustainability goal,” a GSP must “identify” “undesirable result[s].” (Wat. Code §§ 10721 subds. (u)-(x); 10727.2, subd. (b).) An “undesirable result” means an “effect[] caused by groundwater conditions throughout the basin.” (*Id.* § 10721, subd. (x).) Undesirable results include “[d]epletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.” (*Id.* § 10721, subd. (x)(6).)

The GSP is inconsistent with SGMA by limiting its definition of undesirable results only to the proportion of depletion attributable to extraction outside the adjudication zone. An undesirable result is an “effect[] caused by groundwater conditions throughout the basin.” (Wat. Code § 10721, subd. (x); see also Cal. Code Regs., tit. 23, § 354.26, subd. (a) [“Undesirable results occur when significant and unreasonable effects for any of the sustainability indicators are caused by groundwater conditions occurring throughout the basin.”].) The “basin,” as defined by Bulletin 118, includes the entire Scott Valley basin, including the adjudicated area.<sup>11</sup> And pumping throughout the basin has negative “effects” on surface flows.

Nothing in SGMA permits the GSP to ignore the effects of pumping within the adjudicated zone when defining the undesirable result. While the GSP does not have direct regulatory control over the adjudicated zone, the GSP should, when defining an undesirable result, to look at the effect on flows caused by groundwater conditions in the entire basin. Limiting the definition of the undesirable result to depletions caused by pumping in the nonadjudicated zone therefore violates the statute.

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<sup>9</sup> *Id.* at p. 82.

<sup>10</sup> GSP, Chapter 3, at p. 52.

<sup>11</sup> GSP, Chapter 2, at p. 5.

The SGMA regulations place further requirements on a GSP when defining undesirable results. Importantly, the GSP must include:

The criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each applicable sustainability indicator. The criteria shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.

(Cal. Code Regs., tit. 23, § 354.26, subd. (b)(2).)

The description in the GSP is inadequate because it is not a “quantitative description.” The regulations are clear that the result must be in the form of numbers tying minimum threshold exceedances to the significant and unreasonable effects. The GSP’s description is entirely qualitative. This violates the regulations.

The GSP must also define these “significant” and “unreasonable” effects. And any consideration of reasonableness must include analysis not only of the costs of compliance but of the costs to the public, tribes, and commercial fisheries of the loss of fish populations—loss which may include the incalculable consequences of extinction or extirpation.

The description of the of undesirable result also fails to quantify the minimum threshold exceedances that cause the significant and unreasonable impacts. (Cal. Code Regs., tit. 23, § 354.26, subd. (b)(2).) As discussed below, the “minimum thresholds” must “quantify groundwater conditions for each applicable sustainability indicator *at each monitoring site or representative monitoring site.*” (Cal. Code Regs., tit. 23, § 354.28, subd. (a), emphasis added.) Therefore, the definition of the undesirable result must be “quantitative” and must be tied to minimum threshold exceedances at *particular monitoring sites*.<sup>12</sup> In other words, the SGMA regulations require a GSP to express an undesirable result in terms of a real-world impact to a directly measured value, in this case, streamflow.<sup>13</sup>

The Scott Valley GSP fails in part because it does not quantify the undesirable result *at a monitoring site*. Rather it relies on a modeling approach to estimate the proportion of stream depletion attributable to groundwater pumping outside the

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<sup>12</sup> Section 352.4 of the regulations makes clear that a monitoring site is a physical location, not a model output. (Cal. Code Regs., tit. 23, § 352.4.)

<sup>13</sup> The GSP concludes that monitoring groundwater levels alone is not a sufficient proxy for overpumping’s contributions to surface water depletions. (GSP, Chapter 3, at p. 28.)

adjudication zone. While the SVIHM model will doubtless be a useful tool, it is not a “monitoring site.” The GSP’s approach fails to adequately describe the result of excessive groundwater pumping: the dewatering of the Scott and the resulting devastation of salmonid populations.

The GSP treats sufficient in-stream flows as merely “aspirational,” but this falls short of the requirements imposed by SGMA and its regulations. The GSP must be revised to accurately describe and quantify the undesirable result in terms of measurements of interconnected surface water flow at a physical monitoring site (or sites), as well as to accurately describe the minimum flows necessary to support healthy fish populations. (Cal. Code Regs., tit. 23, § 354.26.)

Fortunately, the California Department of Fish and Wildlife (CDFW) has already done the work of scientifically supporting such a number, which the GSP cites.<sup>14</sup> The GSP should simply adopt the CDFW interim flow criteria, including the minimum late-summer flow of 62 cfs, as the lowest acceptable streamflow limit.<sup>15</sup>

Finally, the GSP is confusing and contradictory on the point of whether it actually includes a streamflow target (which it does not actually do). The GSP gestures towards quantifying a streamflow target by stating, “The aspirational watershed goal is included in the quantification of the MO for the ISW sustainability indicator.”<sup>16</sup> But the measurable objective section does not include a quantification of the targeted streamflow. At the same time, the GSP states that the “aspirational watershed goal is not a specific quantitative metric at this time, as neither the TMDL regulations nor the Public Trust Doctrine have numeric targets.”<sup>17</sup> It is unclear how this statement comports with the statement that the quantification of the measurable objective includes the aspirational goal. This conclusion also ignores the CDFW interim flow criteria, which is a scientifically defensible flow figure that could and should be incorporated into the GSP.

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<sup>14</sup> E.g., GSP, Chapter 2, at p. 21.

<sup>15</sup> The adjudication reserves a minimum instream flow right for the U.S. Service, including 30 cfs in late summer, to provide “minimum subsistence-level fishery conditions including spawning, egg incubation, rearing, downstream migration, and summer survival of anadromous fish, and can be experienced only in critically dry years without resulting in depletion of the fishery resource.” (Scott River Decree, ¶ 45.) But 30 cfs is too low to represent the upper bound of an undesirable result, as the court found that it may be experienced only in critically dry years without harm to the fishery.

<sup>16</sup> GSP, Chapter 3, at p. 52.

<sup>17</sup> GSP, Chapter 3, at p. 58, *ll.* 2030-32.

The GSP cannot have it both ways: it must quantify a streamflow target as part of the definition of the undesirable result for interconnected surface waters.

### **The GSP's Minimum Thresholds and Measurable Objectives Are Not Properly Specified**

The GSP's discussion of measurable objectives and minimum thresholds relies on circular logic and provides an insufficient justification for the GSP's failure to set proper targets. The GSP starts from the premise that it can never achieve the one thing that SGMA requires: sustainable groundwater management. It then works backwards from this premise via a series of strained readings of the regulations to arrive at the conclusion that not only can it not solve flow problems in the Scott, it cannot even state coherent objectives and thresholds for them.

A minimum threshold must “quantify groundwater conditions for each applicable sustainability indicator at each monitoring site or representative monitoring site established pursuant to Section 354.36. The numeric value used to define minimum thresholds shall represent a point in the basin that, if exceeded, may cause undesirable results as described in Section 354.26.” (Cal. Code Regs., tit. 23, § 354.28, subd. (a).) With regard to depletions of interconnected surface water, the regulations require that the minimum threshold be defined as 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.” (*Id.* § 354.28, subd. (c)(6).)

The GSP's approach violates these requirements. Rather than defining the minimum threshold as “conditions . . . at each monitoring site,” the GSP defines the minimum threshold as a “portfolio” of projects and management actions that

achieves an individual monthly relative streamflow depletion reversal similar to, but not necessarily identical to, the relative stream depletion reversal achieved by the specific MAR-ILR scenario presented to the AC. The average relative stream depletion reversal of the implemented PMAs during September–November must exceed 15% of the depletion caused by groundwater pumping from outside the adjudicated zone in 2042 and thereafter. The average remaining stream depletion during September–November therefore must not exceed 85% of that achieved under the BAU scenario.<sup>18</sup>

This is insufficient. While project and management actions are necessary to solve the problem of depleted surface water, defining the minimum threshold as project

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<sup>18</sup> GSP, Chapter 3, at p. 54, *ll.* 1915-22.

implementation puts the cart before the horse. The SGMA regulations are clear that the minimum threshold must be defined in terms of actual water flow at a monitoring site: the “rate or volume” of depletions. (Cal. Code Regs., tit. 23, § 354.28, subds. (a), (c)(6).) The minimum threshold should be expressed in terms of units such as acre feet or cubic feet per second—measures of rate or volume.

The GSP attempts to avoid the requirement to define the minimum threshold and measurable objective in terms of stream flow by referring to section 354.30, subdivision (b) of the regulations. The GSP states, “Choosing the aspirational watershed goal itself as MO would not meet the requirement that quantification/measurement of streamflow depletion that is used to establish the minimum threshold, Section 3.3.5.1, must also [be] used to quantify the MO.”<sup>19</sup> But this is precisely backwards. As discussed above, the minimum threshold must be defined with reference to a measured value at a monitoring site. And there is no requirement that the measured value be identical, only that the metrics and monitoring sites be the same. Again, SGMA is clear that measurable objectives, like minimum thresholds and undesirable results, be defined in terms of measurable stream flow, not as a portfolio of PMAs or solely as a model output.

The GSP appears to believe that because it does not have regulatory authority over the entire basin, it can’t set a measurable objective for streamflow because factors outside its control affect flows. But that would be true of any measurable objective: factors outside control of a GSA, whether they be precipitation, neighboring GSAs, or surface water rights could possibly prevent achievement of an objective. Nothing in the regulations prevents a GSP from setting a clear streamflow goal, even if the GSA does not have the authority to directly regulate the entire basin. Indeed, SGMA has full force within the nonadjudicated portions of the Scott River basin. (Wat. Code § 10720.8, subd. (e).) The GSA’s obligations under SGMA in the portions of the basin within its jurisdiction are not diminished—and those portions should not be placed at a disadvantage—simply because the remaining part of the basin is outside of the GSA’s direct control.

### **Additional Issues with the GSP**

Some statements in Chapter 3 are simply incorrect and contradict other statements in the GSP. For instance, the GSP states that “[l]ow streamflow conditions are similar in dry years since the 1970s” and that “[t]here exists no long-term trend in streamflow minima, but the frequency of low precipitation years has been higher over the past years

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<sup>19</sup> GSP, Chapter 3, at p. 53. The cited regulation states: “measurable objectives shall be established for each sustainability indicator, based on quantitative values using the same metrics and monitoring sites as are used to define the minimum thresholds.” (Cal. Code Regs., tit. 23, § 354.30, subd. (b).)

than in the second part of the 20th century.”<sup>20</sup> This misstates the situation: the number of years in which the Scott has flowed at less than 15 cfs at the Ft. Jones gage has increased radically since the 90s, coincident with dramatically increased groundwater extractions.<sup>21</sup> Focusing on minima elides the frequency with which such minima are experienced while also eliding that the minima frequently approach zero.

And elsewhere the GSP acknowledges that in the average year there is not enough water in the river to meet either the U.S. Forest Service’s minimum 30 cfs flow right or the CDFW interim 62 cfs criteria.<sup>22</sup> Chapter 3 of the GSP must acknowledge what Chapter 2 does—that not only is pumping increasing, but that flows are decreasing as a direct result.

The GSP also lacks a robust analysis of the number of wells and rates of extractions in the nonadjudicated area of the Scott. The regulations require a “quantification” of the current, historical, and projected water budget. (Cal. Code Regs., tit. 23, § 354.18.) The water budget must be presented in graphic and tabular form. (*Ibid.*)

While we acknowledge that the water budget in Chapter 2 is preliminary, we have significant concerns about the numbers that are shown. The water budget does not distinguish between the adjudicated and nonadjudicated zones.<sup>23</sup> Without hard numbers of the amount of groundwater extraction from the nonadjudicated zone and in the adjudicated zone, it is impossible to evaluate the GSP’s conclusions and its analyses in Chapter 3.

### **The GSP Must Analyze Impacts to Surface Water Quality**

The GSP’s identification of undesirable results for water quality is insufficient because it fails to consider groundwater extraction’s impacts to surface water quality. SGMA provides that “[s]ignificant and unreasonable degraded water quality” is an undesirable effect required to be avoided (Wat. Code § 10721, subd. (x)(4), and SGMA does not limit this definition to degraded *groundwater* quality. But the GSP limits its discussion of the water quality undesirable result to groundwater quality.<sup>24</sup> This limitation violates SGMA because it does not consider the significant effects that groundwater conditions have on surface water quality, namely, temperature. The GSP acknowledges that the Scott is listed as impaired for temperature under section 303(d) of the Clean

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<sup>20</sup> GSP, Chapter 3, at p. 49, *ll.* 1695-99.

<sup>21</sup> Flow Criteria, at p. 7.

<sup>22</sup> GSP, Chapter 2, at pp. 67-68.

<sup>23</sup> GSP Chapter 2, at pp. 106-109.

<sup>24</sup> GSP Chapter 3, at p. 37-47.



Water Act.<sup>25</sup> And extractions of groundwater affect flows and therefore temperature in the Scott.<sup>26</sup>

The GSP must be revised to describe impacts to surface water temperature as an undesirable result and to develop minimum thresholds, measurable objectives, and projects and management actions to remedy the undesirable result.

### **The GSP Alone Does Not Fulfill the County's Public Trust Duties**

This GSP reveals that the SGMA process will not, at least as envisioned by the GSP, fulfill the County's obligations under the public trust doctrine to mitigate impacts to trust resources. But the County has the ability and the duty to take further steps to prevent the extinction of salmonids—for example, by petitioning the State Water Resources Control Board or the court to reopen the adjudication, or by taking some other affirmative action that will lead to the prevention of harm to the public trust.

The public trust doctrine places a two-step requirement on the County. First, it must “consider” the effects of any permitted extractions on trust uses. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d. 419, 426.) Second, it must “attempt, so far as feasible, to avoid or minimize any harm to those interests.” (*Ibid.*) None of the County's public trust duties were supplanted by SGMA. (*Environmental Law Foundation v. State Water Resources Control Board* (2018) 26 Cal.App.5th 844, 865-66 (*ELF*.)

ELF welcomes the GSA's adoption of the goal of restoring flows in the Scott to a level that will allow for recovery of salmonid populations. But we dispute that such a goal is only “aspirational.” Rather, the County has a nondischargeable duty under the public trust doctrine to evaluate and mitigate as far as feasible impacts to public trust resources. (*National Audubon, supra*, 33 Cal.3d. at 426.). This duty extends to groundwater extractions that affect surface flows. (*ELF, supra*, 26 Cal.App.5th at 859.)

It is possible, if the GSP is revised to include a scientifically supported streamflow target, properly analyze minimum thresholds and measurable objectives, and include a full analysis of current extractions and their effects on trust uses, that the SGMA process could fulfill the County's duty of consideration.<sup>27</sup>

But for several reasons, it is clear that the SGMA process alone is not sufficient

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<sup>25</sup> GSP, Chapter 2, at p. 23.

<sup>26</sup> GSP, Chapter 2, at p. 84.

<sup>27</sup> The GSP erroneously refers to the County as an “an extension of the SWRCB.” (GSP, Chapter 3, at p. 51, *l.* 1775.) More accurately, the *ELF* court held that the County is a subdivision of the state and “shares responsibility for administering the public trust.” (*ELF, supra*, 26 Cal.App.5th at 868.)

for the second duty, to mitigate the harms to trust uses. First, SGMA has a 50-year planning horizon, and the GSP anticipates its requirements regarding interconnected surface flows to become enforceable only in 2042.<sup>28</sup> But the public trust doctrine places a continuing duty on the County to analyze and mitigate harms to trust resources.

Secondly, the GSA only has regulatory control over the portion of the basin that is not adjudicated. In response to this conundrum, the GSA simply throws up its hands and declares that restoring flows in the Scott is merely an “aspiration.” Protecting the public trust requires more than simply aspiring to action—it requires either action or a reasoned finding that action is infeasible.

We urge the County to consider and adopt further, immediate actions to protect trust resources and prevent the extirpation of threatened species.

Thank you again for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Nathaniel H. Kane". The signature is fluid and cursive, written over a light blue horizontal line.

Nathaniel Kane  
Executive Director  
Environmental Law Foundation

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<sup>28</sup> GSP, Chapter 3, at p. 55; Wat. Code § 10721, subd. (r); see also *ELF*, *supra*, 26 Cal.App.5th at 865-66.