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February 24, 2022

Robert Hingtgen  
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Subject: Comments on the Cottonwood Sand Mine Project Draft Environmental Impact Report, PDS2018-MPA-18-004  
SWA File: (Gen) Land Use and Environmental – Watershed Review – Cottonwood Sand Mining

Dear Mr. Hingtgen:

Thank you for providing Sweetwater Authority (Authority) with a Notice of Availability of a Draft Environmental Impact Report (DEIR) for the proposed Cottonwood Sand Mining Project (Project). The Project, if approved, would convert two golf courses located within the floodplain of the Sweetwater River to sand mining operations that would impact approximately 214 acres of land over a period of 10 years.

The Authority provided comments on the Project to the County of San Diego (County) in an Initial Concerns Letter dated December 13, 2018, which was prepared in response to a draft project description. Additional comments were provided in a second letter, dated September 27, 2019, which was prepared in response to the Initial Study (IS) and Notice of Preparation (NOP) of the Environmental Impact Report (EIR). In these two letters, the Authority outlined a variety of environmental, water quality, water rights, and engineering concerns for the County and the project proponent's consideration. The Authority letters referred herein are provided as part of Appendix A of the DEIR.

At the time of the NOP and IS circulation, it was concerning to the Authority that the NOP, IS, and associated engineering drawings failed to address many of the comments provided by the Authority in its Initial Concerns Letter, which was provided months before the circulation of the IS and NOP. Examples of concerns not addressed in the 2019 IS include the following:

- Description of the Authority's periodic water transfers between Loveland Reservoir and Sweetwater Reservoir
- Impacts to water transfers resulting from mining operations and widening of the floodplain
- Consideration of water transfers in the initial hydrology and water quality analysis



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- Potential for pollution at Sweetwater Reservoir, a source of drinking water for 200,000 people
- Request for identification of pollutants of concern at the mining site
- Consideration of atmospheric river events that may not be properly mitigated with only the implementation of standard construction and/or industrial BMPs, and how atmospheric river events may result in additional risk of pollution at Sweetwater Reservoir if the Cottonwood sand mining operation is approved
- Sources of fill for mined areas
- Potential impacts to water quality from proposed conveyor belt
- Potential additional water treatment expenses at the Robert A. Perdue Water Treatment Plant (Perdue Plant) resulting from potential exacerbated water quality issues at Sweetwater Reservoir, resulting from the proposed mining site

Similar to the 2019 IS, the circulated DEIR and associated documents have not addressed many of the Authority's concerns with the proposed mining Project, including many of the matters listed above and other concerns described in the Authority's second letter.

The Authority owns and operates Loveland Reservoir, Sweetwater Reservoir, and the Perdue Plant. The Authority is a water district that depends on the health of the Sweetwater River watershed, and serves and provides drinking water to approximately 200,000 people living in western Chula Vista, National City, and Bonita, and has more than 33,000 service connections in its service area. To the Authority, the concerns with the proposed mining operation and impacts to water quality, hydrology, and to the Authority's ability to transfer water, are a serious matter that need to be properly addressed in the DEIR and completely mitigated where needed. The Authority requests that the County and the project proponent spend the necessary time and resources in order to provide a complete analysis and appropriate mitigation measures, even if this means preparing major revisions to the proposed project components, their technical appendices, engineering drawings, or having to recirculate the DEIR.

The Authority comments on the DEIR and associated documents are as follow:

### **1.0 Impacts to Hydrology, Water Quality, and Utilities – Lack of Mitigation Measures**

The 2019 IS identified three areas of concern where the proposed project could result in potentially significant impacts to hydrology and water quality, and would need to be fully analyzed in the DEIR, resulting in the development of enforceable mitigation measures. The three areas of concern are the following:

- E & F) substantial alterations to the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner

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which would result in substantial erosion or siltation on or off-site (Pages 28-29, 2019 Initial Study);

- J) Placement of structures within a 100-year flood hazard area which would impede or redirect flood flows (Page 30, 2019 Initial Study); and
- K) Exposing people or structures to a significant risk of loss, injury or death involving flooding (Pages 30-31, 2019 Initial Study).

Instead of developing the needed mitigation measures to address the initially identified potential impacts to hydrology and water quality, the DEIR failed to identify or develop any enforceable mitigation measures to address potential impacts to these areas of concern, and has concluded that the significance of the . impacts for these three areas of concern listed above is “less than significant.”

The DEIR does include certain “project design components” in the updated project description (Pages 1-21 and 1-22), and it includes the same language as part of the discussion in the hydrology and water quality analysis. These project design components, which are discussed below, seem to be an attempt to alleviate some of the Authority’s concerns, but none of these project design components are presented in the DEIR as mitigation measures or are fully analyzed to ensure their effectiveness. Some of these project design components, if further analyzed, could be considered mitigation measures, as their sole purpose seems to be mitigating impacts related to 1) flooding at the mining site, 2) serious water quality and water resources impacts associated with mining operations in the floodplain, and 3) impacts to the Authority’s water transfers, which are considered an essential function of the Authority.

A project of this magnitude needs well-developed and properly analyzed enforceable mitigation measures to prevent impacts to hydrology, water quality, and public utilities. The DEIR does not provide adequate analysis on these topics. Examples of these project design components that should be further developed and analyzed in the DEIR, and very likely recategorized as enforceable mitigation measures, are discussed below.

### **1.1 Installation of berms during sand mining operations**

The DEIR’s Project Description and the Hydrology and Water Quality analysis briefly mention, as a project design component, that if mining would occur within ten feet of the river’s low flow channel, the project proponent would construct berms approximately five feet in height to separate operation areas from the low flow channel, as needed. The berm locations would be adjusted as mining progresses and would be set back from mining activities (DEIR Page 1-21). This project design component is presumably an effort to avoid the capture of water being transferred, and while the installation of berms may be well intended, this action should be completely analyzed by the County and the project proponent, in order to prove its effectiveness.

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As currently written, the DEIR does not require the installation of berms. Instead, it gives the project proponent the option and full discretion to install berms if they think berms are necessary. If the mining operator chooses not to install the berms in the future, who would be responsible for enforcing this measure?

None of the technical appendices provided in the DEIR, including the drainage study or the engineering drawings, properly analyzed the construction and installation of berms during mining activities. While the construction of “short berms” is briefly mentioned in the drainage study and in the hydrology and water quality section of the DEIR as an optional solution to ensure no significant mining impacts occur on water transfers, the drainage study and engineering drawings do not provide any meaningful analysis on the construction and installation of these berms. This lack of technical information is not trivial, especially since it seems that the “berms” project component is being proposed by the County and the project proponent in lieu of an enforceable mitigation measure.

As currently presented, the County and project proponent appear to be considering, without any securities, that the mine operator is fully capable of constructing and installing two berms (one on each side of the river channel) that may need to be hundreds of linear feet long, at a given moment’s notice, in order to mitigate impacts to hydrology, water quality, flooding at the site, and impacts to the Authority’s water transfers. Construction and installation of berms is not a trivial engineering matter, and a proper analysis with a well-developed protocol needs to be prepared and reviewed by the County, the Authority, and applicable regulatory agencies, in order to ensure the berms function as intended.

The drainage study and project description seem to indicate that the proposed berms would be built, if needed, to accommodate for water transfers only, which is an incorrect assumption. In addition to the flows created by water transfers, these berms (or whatever mitigation measure that is ultimately developed) would also need to accommodate for flows resulting from multiple upstream tributaries in the watershed (i.e. water transfers + watershed flows resulting from significant storm events at the same time).

Given that a proper engineering analysis regarding the use of berms during mining operations is not provided, reviewers of the DEIR and appendices have not been able to comment on the effectiveness of the berms project component, and therefore the DEIR analysis is flawed and incomplete. Before continuing to move forward with the CEQA process, the County and project proponent should properly analyze the berms project component and reconsider this optional component as a mitigation measure that needs to be fully analyzed for its effectiveness. The drainage study – hydraulic analysis needs to consider the berms and if placement of the berms within 10 feet of the river’s low flow channel is the appropriate distance based on the maximum anticipated flow through the

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project site, inclusive of water transfers from Loveland Reservoir and large storms, such as a 100-year storm event.

## **1.2 Installation of permanent berms during the reclamation of the mining site**

The DEIR mentions that berms could be incorporated as part of the final reclamation plan, where needed, to prevent significant impacts on the Authority's operations (i.e. water transfers). The Authority has commented in the past regarding long-term water losses due to the proposed widening of the river channel and, although the County and project proponent did not develop an enforceable mitigation measure in the DEIR to prevent potential water losses from happening, the Authority appreciates the concern the County and the project proponent have shown in trying to mitigate this long-term impact. However, these permanent berms must be properly analyzed under CEQA and must be included in the reclamation plan.

If the permanent berms are indeed intended to prevent or minimize water losses to the Authority, these permanent berms need to be analyzed in the DEIR, the technical appendices, and be included in the reclamation plan. Without proper analysis of these permanent berms, project reviewers cannot comment on the effectiveness of these berms, and therefore the DEIR's analysis and reclamation plan, as presented, are flawed and incomplete.

The installation of permanent berms should have been presented in the DEIR as a mitigation measure in the hydrology and water quality section or in the public utilities section, as the sole purpose of these permanent berms is to mitigate impacts related to the Authority's operations and water transfers. A proper engineering analysis needs to be conducted by the project proponent and reviewed by the County in close consultation with the Authority and applicable regulatory agencies, in order to ensure the berms function as intended.

As "accommodating water transfers" between the two reservoirs is one of the project objectives (DEIR, Page 1-1), these permanent berms should have been depicted in the engineering drawings provided as part of the reclamation plan.

The DEIR does not answer the following questions regarding the permanent berms:

1. Who would be responsible for the permanent berms' maintenance, repairs, or adaptive management?
2. What would happen if these permanent berms fail during a water transfer, after the project proponent is no longer involved?
3. Who is liable if people get injured or die, or property damage occurs, due to berm failure during a water transfer?

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4. Who would compensate the Authority for water losses if the berms fail during a water transfer?

Similarly, neither the County nor the project proponent have approached the Authority to discuss any of these matters. As such, the Authority requests that the County do not provide project approvals until these questions and other questions of a similar nature are answered to the satisfaction of the Authority.

The Authority also requests that additional engineering analysis be performed to demonstrate that the proposed permanent berm will fully mitigate water losses. Additionally, the DEIR impact analysis and Reclamation Plan should be updated to reflect that. It is important to note that water losses associated with the proposed mining activities will not be acceptable to the Authority, a public water utility operating continually under drought conditions and with senior water rights in the Sweetwater River watershed. The County and the project proponent should properly analyze a long-term solution (permanent berms or otherwise) before moving forward with the approval of the DEIR or Reclamation Plan. Before granting any permits, the County should ensure that water losses to the Authority resulting from the proposed mining operation, or its reclamation plan, will be fully avoided or mitigated.

### **1.3 Mining during the rainy season**

The project description indicates, as a project component, that *“to ensure that excavation activities would not substantially affect Sweetwater Authority water transfers between the Loveland and Sweetwater Reservoirs, mining activities during the rainy season (generally November through March) would be located away from the river channel, to the extent feasible (DEIR, 1-21)”*.

- Who is responsible for the implementation of this project design component? The DEIR does not identify who is responsible for implementing this project design component, or who is responsible for enforcing that this project component is implemented.
- What are the repercussions if the mining operator decides not to implement this project component?
- The language provided says that this project component would be implemented “to the extent feasible”. The Authority would like to know in which instances it would be appropriate for the project proponent to conduct mining operations within or near the river channel area during the rainy season. Have these instances where mining operations would occur within or near the river channel during the rainy season been identified and discussed in the DEIR, and will they be mitigated as necessary?

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- Why is this “project design component” not presented in the DEIR as a mitigation measure, if its entire purpose is mitigating an impact to hydrology, water quality, and the Authority’s operations? By presenting this measure as a project component and not as a mitigation measure, the DEIR fails to identify what the real impacts of the project are on hydrology, water quality, and to the Authority’s operations.
- The DEIR does not provide information on how impacts to water transfers are being analyzed. To further develop on this, the DEIR has language such as “*excavation activities would not substantially affect Sweetwater Authority water transfers*”, but the DEIR lacks a complete discussion or analysis on thresholds of significance regarding this impact to a public utility’s vital operation. As noted above, there are references to installation of short-term berms and permanent berms, but no real analysis. In order to properly quantify this impact to the Authority’s operations, this important impact information needs to be properly analyzed, either under the hydrology and water quality section of the DEIR, or the utilities and services systems section.

#### **1.4 Need of a bypass channel – Impacts to Utilities and Service Systems**

By adding the measures described in Sections 1.1, 1.2, and 1.3 of this letter as project components and not as mitigation measures, the Hydrology and Water Quality section of the DEIR is inadequate as it doesn’t reflect the real potential impacts of this project. The same can be said for the Utilities and Service Systems section, as any impact to a water transfer from the proposed mining operation is not only an impact on the quality of the water being transferred, but also an impact on the Authority’s ability to continue one of its main operations, which is the transfer of water between two reservoirs for treatment and distribution.

The following comment was provided to the County in the Authority’s second letter dated September 27, 2019, which addressed the information provided in the NOP and 2019 IS. This comment addresses the potential need to build new facilities in order to mitigate impacts to the Authority’s operations (i.e. water transfers).

*“The Utilities and Service Systems Section of the IS Environmental Checklist includes the following question:*

*“Would the project require or result in the relocation or construction of new or expanded water, wastewater, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?”*

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*The County and project proponent must consider the need of constructing new facilities, including a bypass channel that may be necessary to satisfy the Authority's needs to transfer water between its two drinking water reservoirs. **Proposed sand mining operations cannot interfere nor have a negative effect on the river's ability to convey water to Sweetwater Reservoir.***"

While water being transferred between two reservoirs may not be the typical scenario that the County or project proponent has analyzed in other projects, and while the river channel may not be commonly associated as an asset of a water district, any impact to the river channel has a potential impact on the periodic water transfers. Transferring water between reservoirs using the river channel is a major water operation, and mining within the river channel could be considered an impact to the Authority's operations, therefore it should be properly analyzed in the DEIR.

The Authority and its predecessors have worked very hard for more than a century in order to secure properties and agreements in the Sweetwater River watershed in order to have the ability to build dams and reservoirs, transfer water between those reservoirs, and ultimately treat and distribute that water in National City, western Chula Vista, and the unincorporated community of Bonita. The middle basin of the Sweetwater River has historically been an essential part of the Authority's operations, and should continue to provide this service for many years to come. The County and the project proponent have briefly described the use of berms to potentially address the need for protecting water transfers, but have failed to recognize that the project could have a significant impact on utilities, which needs to be fully mitigated.

### **1.5 Additional concerns with the County's hydrology and water quality determinations**

While the Hydrology and Water Quality section of the DEIR discusses compliance with applicable regulations, implementation of Best Management Practices (BMPs) and a Storm Water Pollution Prevention Plan (SWPPP), the analysis does not describe implementation of stormwater prevention plans as mitigation measures. The Authority recommends that the County reconsider the approach of presenting BMPs, SWPPP implementation, and other mitigating actions that minimize impacts to water quality as conditions or components of the project, as this approach may not be appropriate for the proposed mining operation. The Authority understands that, in some cases, small development projects that are subject to stormwater regulations and that have to comply with multiple regulations and ordinances, having a potential impact on water quality is low or nonexistent. However, this is not the case for the proposed mining operation. For the subject project – a 214.4-acre mining site located upstream of a



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drinking water reservoir with the potential to disturb and significantly reshape the river floodplain – stormwater pollution control measures should be considered mitigation measures, given that their main goal would not only be reaching compliance with stormwater regulations, but implementation of these plans and BMPs would be mitigating, to the greatest extent possible, impacts to hydrology and water quality. The DEIR fails to identify measures to mitigate potential impacts associated with stormwater pollution.

Similarly, the County has adopted guidelines for Determining Significance for Surface Water Quality (Surface Water Guidelines). These Surface Water Guidelines, which can be found on the County website<sup>1</sup>, require consideration of the following three matters in order to appropriately respond to the questions in the Environmental Checklist:

- 1. The project is a development project listed in County of San Diego, Code of Regulatory Ordinances (Regulatory Ordinances), Section 67.804(g), as amended and does not comply with the standards set forth in the County Stormwater Standards Manual, Regulatory Ordinances Section 67.813, as amended, or the Additional Requirements for Land Disturbance Activities set forth in Regulatory Ordinances, Section 67.*
- 2. The project would drain to a tributary of an impaired water body listed on the Clean Water Act Section 303(d) list, and will contribute substantial additional pollutant(s) for which the receiving water body is already impaired.*
- 3. The project would drain to a tributary of a drinking water reservoir and will contribute substantially more pollutant(s) than would normally runoff from the project site under natural conditions.*

Per Item 2 above of the Surface Water Guidelines, the subject project would drain to the Sweetwater River, which is a tributary to Sweetwater Reservoir. The Sweetwater Reservoir is a water body listed on the Clean Water Act Section 303(d) list for Dissolved Oxygen. The Authority requests that mitigation measures be developed to ensure project activities do not contribute additional pollutants to the reservoir. For additional information on the potential impacts that need to be fully mitigated, see comments below (Section 6 and Section 7).

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<sup>1</sup> Link to Surface Water Guidelines:

[https://www.sandiegocounty.gov/content/dam/sdc/pds/docs/water\\_quality\\_guidelines.pdf](https://www.sandiegocounty.gov/content/dam/sdc/pds/docs/water_quality_guidelines.pdf)

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Per Item 3 above of the Surface Water Guidelines, the subject project would drain to a tributary of a drinking water reservoir. Per the DEIR analysis (Appendices S and T of the DEIR), the subject project would contribute more pollutants than would normally runoff from the project site under natural conditions. As such, the Authority requests that the Hydrology and Water Quality section be revised and mitigation measures for such impacts or potential impacts be developed. For additional information on the impacts or potential impacts that should be fully mitigated, see comments below (Section 6 and Section 7).

Page 3.1.5-3 includes a statement indicating that *“surface water sampling indicated that water chemistry between the upstream and downstream monitoring locations is generally consistent, while several results were elevated for the midstream monitoring point”*. This statement is a misrepresentation of the water quality data presented in Table 3 of the Water Quality Evaluation Report, which clearly shows the presence of high levels of pollutants in the stormwater at the midstream sample location. This raises many questions, including the ability of the BMPs proposed at the project site to contain and treat as necessary these high levels of pollutants being discharged on the site during storm events, and to prevent for further potential water quality impacts downstream. Note that the downstream sample was taken on April 14, 2020, a day with no rain and no runoff versus the midstream sample, which was taken on April 10, 2020 – a day with heavy rain and higher volumes of watershed runoff. The data provided demonstrates the need to verify that BMPs, structural or otherwise, would need to provide effective mitigation to water quality impacts, and continual stormwater and non-stormwater monitoring should be necessary.

Page 3.1.5-21 indicates that *“because the project would have less than significant impacts on water quality standards and waste discharge requirement violations, when combined with cumulative projects, impacts would not be cumulatively considerable”*. For a project of this magnitude and given all the concerns provided by the Authority, a water district that depends on its ability to treat water originating in the Sweetwater River watershed, the Authority believes that a comprehensive water quality monitoring plan should be a requirement of this project, to indeed ensure that the mining operations do not negatively impact water quality.

Section 3.1.5-23 indicates that *“based on the analysis... no significant Project-specific or cumulative impacts related to hydrology and water quality would result from implementation of the Project”*. The Authority is in disagreement with the conclusions of the analysis provided in the Hydrology and Water Quality section.

- Given the information provided in the DEIR, Drainage Study (Appendix O), and the information discussed above regarding the proposed berms, the project would result in project-specific impacts to hydrology, and potential cumulative impacts as this project could have an impact on the downstream areas and the

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Sweetwater Reservoir. See Section 5 below for additional comments on impacts, the Drainage Study, and needed revisions to the DEIR.

- Given the information provided in the DEIR, Sediment Load Analysis (Appendix S) and Water Quality Evaluation (Appendix T), the project would result in project-specific impacts and could result in potentially cumulative impacts to water quality, including additional sedimentation and pollutant loads at Sweetwater Reservoir. For additional information on this, refer to Section 6 and Section 7 of this letter.
- the Authority believes that the proposed project could result in significant impacts to hydrology and water quality, and requests that mitigation measures be developed by the County and project proponent, and a Water Quality Mitigation and Monitoring Program be implemented throughout the duration of this project.

## **2.0 Hazards and Hazardous Materials Section**

The Authority requests that further clarification as to the persistence of AggreBind in the environment is added to the DEIR. The information provided for AggreBind is vague, including the information provided in the safety data sheet (SDS).

If the AggreBind is stored in a 25-gallon drum, would there be any additional secondary containments provided to ensure spills that impact the environment do not occur?

The Authority requests that a Hazardous Materials Business Plan (HMBP), or similar document, be prepared and reviewed by the applicable regulatory agencies before any permits are granted to the project proponent by the County. Given the potential from the mining operation to impact the Authority's operations and water quality at Sweetwater Reservoir, the Authority requests being added as a reviewer of such plan, to ensure that emergency responses related to hazards being released from the project site fully mitigate impacts to water resources and the Authority's operations.

## **3.0 Project Description**

### **3.1 Project Objectives**

As noted in Section 1.1 of the DEIR's project description, the project has the two following objectives:

Objective #4: maintain the existing low-flow channel of the Sweetwater River to accommodate water transfers from Loveland Reservoir to Sweetwater Reservoir, and

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Objective # 5: Widen the existing flood channel of the Sweetwater River to more closely mimic conditions prior to golf course construction.

The Authority appreciates the inclusion of objective #4 to the project's environmental review. Given the importance of Sweetwater Reservoir and the Authority's water transfers to the entire region, the Authority believes that the channel in the middle Sweetwater River watershed is to be protected at all costs from additional sources of potential pollution or from hydrologic modifications that could result in short-term or long-term water losses to the Authority.

As mentioned before in this letter, maintaining the existing low flow channel may not be enough to accommodate the flows created by water transfers and additional watershed runoff, as these water flows make their way through the proposed project site to Sweetwater Reservoir. The Authority and the County are aware that water transfers are just a portion of the water flowing through the site and ending at Sweetwater Reservoir for future treatment and distribution. The DEIR refers to flows of 358 cubic feet per second (cfs) that need to be accommodated (i.e. water transfer flows). However, this should be considered a major flaw of this project's environmental review that needs to be corrected and properly addressed, as significant additional flows from the upper areas in the Sweetwater River middle watershed typically occur at the same time when water transfers are being conducted. To add to the complexity of this issue, natural flows resulting from heavy storm events, such as atmospheric rivers, have clearly exceeded 358 cfs multiple times in the past, including significant flow events that did not include water transfers. The Authority suggests that the County and project proponent review historical flow data available from the Dehesa stream gauge located in the middle watershed of the Sweetwater River, upstream of the proposed project site. Flow data for the Dehesa stream gauge can be found at <https://waterdata.usgs.gov/usa/nwis/uv?11016200>. Historical flow data can provide some insights to the County and project proponent, with respect to flows that can be expected through the project site. This stream gauge is operated and maintained by the United States Geological Survey (USGS) and the Authority makes financial contributions to USGS to ensure its continued operation and maintenance. In addition to historical flow information available through the aforementioned website, the County and project proponent should consider 100-year storm events to properly analyze maximum flows that could pass through the project site, that may not be captured in the historical flow data available through the aforementioned website.

If this project moves forward, the protected channel must accommodate water transfers and significant storm events at any given time, and must not result in water losses to the Authority associated with the mining activities, or flooding of the mining site or reclaimed areas. The County and project proponent should revise this objective to ensure all runoff and flows reaching the mining site, including water transfers and runoff from other upstream locations, are protected by an engineered channel at all times. In addition, the

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County and the project proponent should revise the technical analysis, as well as grading and reclamation plans to reflect this. As such, the following language is recommended to replace the existing language of objective #4:

Objective #4: “maintain during and after mining operations a protected channel through the project site, to accommodate for water transfers from Loveland Reservoir to Sweetwater Reservoir, and any additional Sweetwater River middle watershed water flows resulting from significant storm events or natural watershed processes”.

Objective #5 mentions the widening of the channel to mimic historic conditions of the river. Per the DEIR, it appears that this means flattening and widening the existing channel up to 300 feet wide in some areas; however, the engineering drawings appear to show that certain areas of the river would be widened to approximately 800 feet. While this objective may be well intended, it may also be in direct conflict with Objective #4, which requires a protected channel to prevent the impacts to the Authority’s water transfers. As such, the County and project proponent should reconsider the feasibility of Objective #5, prioritize minimizing impacts to the Authority’s operation and its water rights, and ensure that watershed runoff and water transfers reaching the site do not end up being diverted and flooding the mining site, resulting in significant hazards, water losses, and water quality issues.

### **3.2 Project design components**

Page 1-2 of the DEIR indicates that the reclaimed river channel is expected to average approximately 250 to 300 feet in width and would be slightly higher in elevation than the existing low-flow channel. However, sheet 5 of Attachment A – Plot Plan shows that the river channel would be widened to approximately 800 feet in some locations. The text within the DEIR needs to be updated to match the proposed widening shown on the plot plan, or the scale shown on the plot plan should be corrected as necessary if the intent is to widen the river channel by no more than 300 feet.

Please refer to comments outlined in Sections 1.1, 1.2, and 1.3 of this letter regarding the Authority’s additional comments on certain project design components.

### **4.0 Project Alternatives**

The DEIR includes multiple project alternatives that claim to attain many of the project objectives, while minimizing the project’s environmental impacts. The Biological Resources Avoidance Alternative (Alternative 2) is far superior to what the County and project proponent are presenting for certification as the preferred alternative. Alternative 2 includes a 50-foot mining setback from the river channel, which would greatly minimize potential impacts to hydrology, water quality, and the Authority’s operations.

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Additionally, the 500-foot mining setback included to protect the endangered least Bell's vireo not only benefits this protected migratory species, but it also creates additional distance between the Sweetwater Reservoir and the project site, which is desirable. Finally, Alternative 2 also reduces the time during which sand mining operations would be conducted to 6 years, instead of the proposed 10-12 years. With applicable revisions to the technical studies, grading plans, and the reclamation plan as indicated throughout this letter, and with the development of enforceable mitigation measures to fully protect water quality and the Authority's operations, this project may actually be able to minimize impacts if Alternative 2 is adopted.

The Authority is not against or in favor of mining operations upstream of Sweetwater Reservoir, as long as these operations do not result in impacts to water quality or the Authority's operations. Therefore, the Authority is extremely concerned with the proposed Cottonwood sand mining operation as currently presented in the DEIR, which does not provide the necessary mitigation measures and the appropriate engineering analysis to protect the Authority's water transfers. The Authority requests that the County and the project proponent revise the DEIR, technical documents, and the reclamation plan, in order to address the significant impacts or potential significant impacts to hydrology, water quality, and the Authority's operations identified in this letter. In addition, the Authority strongly encourages the County and the project proponent to reconsider Alternative 2 as the only feasible alternative for a mining site in the Sweetwater River floodplain, once the technical documents and reclamation plan are modified to incorporate the Authority's comments.

## **5.0 Drainage Study-Hydraulic Study (Appendix O)**

The following comments address specific issues with the drainage study for the project. Comments herein would also need to be addressed in the applicable sections of the DEIR, including the Hydrology and water Quality section.

Page 2, Paragraph 2, indicates that "*a hydraulic goal is that the excavation will dominate over revegetation/restoration resulting in no increased 100-year water elevations on off-site areas, i.e., no-rise on off-site properties along the Sweetwater River*". If this "hydraulic goal" is not properly mitigated, this could potentially result in long-term water losses to Sweetwater Authority due to the creation of new ponding areas, evaporation, and infiltration. As currently described, the river channel would ultimately be widened up to 300 feet in some areas, although engineering drawings appear to show that some areas would be widened to approximately 800 feet. The amount of water being transferred between reservoirs, and additional watershed flows that would otherwise flow through the site with potential to be stored at Sweetwater Reservoir and treated for distribution, would be significantly lost to ponding and percolation. As noted in comments above, brief mention of construction of berms occur throughout the DEIR project description, Hydrology and Water Quality section, and this

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drainage study, but there are no related engineering documents provided for the reviewers of this DEIR. Widening of the channel could result in a significant impact to the Authority's water supply, its operations, and ultimately, to the customers located in the Authority's service area. The drainage study and other project associated documents need to provide viable alternatives and mitigation measures to address this potential water loss issue.

Page 2, Paragraph 4 reads *"To ensure no significant mining impacts on water transfers during extraction activities, short berms can be constructed to separate the operations areas from the channel, as needed. The berm locations can be adjusted as mining progresses and should be set back from the mining so that they are not impacted by ongoing operations. Berms can also be incorporated upon final reclamation, where needed, to prevent significant impacts on water transfers. The project design and berming are intended to preserve the Authority's ability to transfer water from Loveland Reservoir to Sweetwater Reservoir."* To reiterate, this study does not analyze or recognize the common eventuality of the Authority's water transfer flows being combined with natural watershed runoff flows that could exceed the suggested berm heights. The Authority is requesting that a revision be made to the document to address this concern. As noted in Sections 1.1 and 1.2 of this letter, the use of berms during and after mining operations to protect water transfers and water quality needs to be completely evaluated in the Drainage Study and the Reclamation Plan to ensure their effectiveness, and would need to prevent any water losses from occurring.

Page 3, paragraph 1; reads *"the conveyors shall also be anchored, as needed, during scheduled water transfers."* Anchors shall not alter, divert, or impede water transfers or natural flows.

Page 3, paragraph 3; reads *"In fact, the extraction areas will provide detention and retention benefits during mining that will reduce off-site flow rates."* The mining operations should not impact the Authority's water supply or operations. Any water detained at the site may be considered a potential water loss to the Authority, which is an impact to a public utility.

Page 4, paragraph 3; indicates *"Material stockpiles will be present during the mining phases."* Sediment stockpiles from mining could flow into Sweetwater River and end up in Sweetwater Reservoir if proper BMPs are not implemented. The Authority requests that BMPs be implemented around the sediment stockpiles, in accordance with an approved SWPPP, to prevent the sediments from the stockpiles from flowing into Sweetwater River.

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Other matters that need to be addressed in the Drainage Study (or the reclamation plan) include the following:

- The analysis needs to explain how removal of alluvium from the mining site would affect groundwater infiltration and water transfers in the future.
- The analysis needs to incorporate hydraulic infiltration capacity of the site for future, proposed conditions.
- The analysis needs to calculate water losses to the Authority resulting from the widening of the channel and excavation of mining pits.

As discussed throughout this letter, further analysis will be required to quantify proposed final basin capture of transfers or natural flows with regard to the construction of berms, but also to quantify for potential water losses to the Authority resulting from the mining operations or reclamation of the area. The Authority would seek a reimbursement agreement for transferred and naturally occurring flows detained and retained during mining or water loss during the reclamation phase of the project. The Authority requests that the County does not approve this project until such agreement between the Authority and the mine owner has been executed.

For additional comments on the Drainage Study, please refer to the comments provided above regarding Alternative 2 and the “project design components” that need to fully mitigate impacts to water quality, hydrology, and the Authority’s operations.

## **6.0 Sediment Load Analysis (Appendix S)**

The Authority has the following comments regarding the Sediment Load Analysis:

The Sediment Load Analysis does not have an introduction or a background section, and does not include what the main purpose of this sediment load analysis is. For background, the Authority commented during the circulation of the IS and NOP that

*“A list of substances and materials (“pollutants of concerns”) that are proposed to be used as part of the Project that have the potential to pollute soils, waterways, groundwater, and the Sweetwater Reservoir. Impacts from pollutants of concern should also be analyzed as part of the Project’s environmental review. Furthermore, the Authority requests that a pollutant load analysis be conducted as part of the environmental review process to better understand the potential impacts to water quality (Authority, 2019).”*



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EnviroMINE Inc., the consulting firm representing the project proponent, shared with the Authority an initial draft of the Water Quality Evaluation (draft WQE) and Work Plan prepared by Geo-Logic, dated January 2020. This document included the following language:

*“a pollutant load analysis and report is proposed to address a comment from the Authority to better understand the potential impacts to water quality from the project. GLA proposes to conduct a Pollutant Load Analysis to estimate potential impacts of sediment erosion to the Sweetwater Reservoir for three scenarios: (1) temporary lack of BMP maintenance; (2) major storm events and resulting river flows, and (3) routine Loveland reservoir releases.*

*For each scenario, standard analytical surface-water modelling methodologies will be used to estimate sediment and sediment-bound pollutant loading to the river channel, distribution of sediments and pollutants within the river downstream, and potential settling in Sweetwater Reservoir. Sediment loading will be estimated based on predicted stormwater flow rates, exposed soil surface area, and Site soil properties (e.g., methods of Banzai and Hayase, 1993). Distribution of sediments in the river (i.e., including silt, clays, and organic materials) downstream will be estimated based on river flow rates, soil properties, sediment loading rates and sediment settling. If sediments are predicted to reach Sweetwater Reservoir (e.g., under major storm events), sediment settling and pass-through will be evaluated based on reservoir properties (e.g., area, depth) and flow rates (Chapra, 1997). Concentration of pollutants in eroded sediments will be based on soil sampling described above. The results of this analysis will be summarized and presented in a technical report (Geo-Logic 2020, unpublished draft).”*

The Authority appreciates coordination with the County during the preparation of the scope of this document. The Authority has the following comments:

It appears that the ponds located upstream of Sweetwater Reservoir, as shown in Figure 2, are considered throughout the study as a place where sediments would deposit and thus not reach the reservoir and not result in an impact to water quality at the reservoir. This is a false assumption as these ponds are not upstream of the reservoir, but located within the highwater mark of the reservoir, and thus part of the reservoir. The sediment load analysis needs be reassessed in order to re-evaluate its estimates and conclusions. In addition to this, the Authority objects to the term “sedimentation pond”, as it pre-supposes the use of this pond as some type of BMP. These areas are managed both for habitat and for water resources purposes, and cannot be considered sedimentation ponds or

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a mitigation measure for a mining project located upstream of the drinking water reservoir.

Per Table 5, if 33% of fine clays and silt erode from the site and end up at the reservoir, that could result in approximately 8.3 tons per year of suspended sediments (not including sands) reaching Sweetwater Reservoir during Phase 1 only. This is a serious water quality concern and could significantly increase turbidity, suspended solids, and sedimentation in Sweetwater Reservoir. The Authority requests that the County and other regulatory agencies do not provide permits for the Project until the Project implements appropriate mitigation measures and a mitigation and monitoring reporting program.

Similarly, current conditions at Cottonwood yield approximately 2.2 tons per year of sediment loading into the Sweetwater River. For Phase 1 alone, sedimentation is expected to increase from 0.71 tons per year to 25 tons per year. This is a water quality concern to the Authority that would increase turbidity and sedimentation in the Sweetwater River, making water more difficult and expensive to treat, and this potential erosion and sedimentation issue needs to be properly mitigated at the source.

Sediment and suspended fines entering the Sweetwater River and Sweetwater Reservoir contain chemical pollutants. Table 6 in the Report provides pollutant loading estimates associated with the Cottonwood Sand Mining Project, as analyzed in the Sediment Load Analysis Report. Per the report, under severe storm runoff conditions, converting to kilograms, the most impactful pollutants entering Sweetwater Reservoir would be as follows:

Total Organic Carbon (TOC) = 21.7 kg/year

Total Phosphorus = 2.3 kg/year

Total Nitrogen = 1.45 kg/year

Iron = 75 kg/year

Any additional loading of nutrients such as total nitrogen and total phosphorus into Sweetwater Reservoir would further increase the potential for nuisance algae blooms, which could increase the cost of mitigating for taste and odor and cyanotoxins in the reservoir and at the Perdue Water Treatment Plant. Increases in loading of TOC into Sweetwater Reservoir could cause increases in the use of coagulant chemicals at the Perdue Plant, which could also increase the cost of treating water. Any increase in the concentration of iron in Sweetwater Reservoir or in the sediment in the reservoir, could potentially contribute, during certain times of the year, to an exceedance of the Title 22 secondary standard for iron.

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The document does not include metals data provided for manganese, which is a major concern in the sediment in Sweetwater Reservoir. If available, predicted loading rates for manganese should be included in the Report. Increases in manganese could also contribute to incremental increases in chemical oxidant usage at the Perdue Plant.

The last column of “Table 6 – Pollutant Loading Estimate” should be reformatted, and instead of showing estimated quantities in scientific notation, it should show them in decimal notation to better display to all document reviewers of all backgrounds the amount of incremental pollution estimated at Sweetwater Reservoir as a result of the proposed project, if unmitigated.

## **7.0 Water Quality Evaluation (Appendix T)**

Table 3 of Appendix T does not include analysis results for Oil & Grease, although it is listed in Table 1 of the same document.

The Total Dissolved Solids (TDS) data for the upstream (350 mg/L) and midstream (280 mg/L) sites appear to be incongruent with their respective conductivity values of 3.71 mS and 4.64 mS, respectively. The Authority requests that the County and project proponent revisit this data and provide revised data as necessary.

The midstream sampling event occurred on April 10, 2020 during a major storm runoff event (0.72 inches of rain). Many pollutants were detected above their regulatory standards (refer to the table below). This water quality data demonstrates the vulnerability of the Cottonwood project site to high levels of pollutants during major storm events, with a large contribution of stormwater runoff from Mexican Canyon.

The Authority recommends that the County and the project proponent develop a more comprehensive monitoring plan to properly evaluate potentially significant water quality impacts to the Sweetwater River and Sweetwater Reservoir (for the constituents listed below that have exceeded their regulatory benchmarks). Currently, the Industrial General Permit (IGP) only requires stormwater analysis of pH, TSS, Oil & Grease, and nitrate and nitrite.

In addition to the contaminant monitoring required by IGP, the Authority recommends the County and project proponent develop a mitigation measure that requires quarterly monitoring at the upstream, midstream, and downstream Cottonwood Project site sampling locations, to adequately capture both stormwater events and dry weather flows for the duration of the Cottonwood Sand Mining Project.

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Implementing a more robust monitoring regime is the only scientific way that would support the effectiveness of any of the BMPs proposed by the project proponent. BMPs on the proposed project shall be effective in preventing pollutants, sediment, and clay fines from impacting the Sweetwater River and Sweetwater Reservoir.

As a check on potential impacts to groundwater quality, the Authority recommends annual monitoring for the analytes and sites listed in Table 4 of the Water Quality Evaluation Report (Nov 2021 Rev).

#### Midstream Pollutants Exceeding Regulatory Benchmarks

Parameter	Concentration	Regulatory Standard	Exceedance Factor/Comments
Turbidity (NTU)	>800	20 (San Diego Basin Plan (BP))	40X
Total Nitrogen-N (mg/L)	5.1	1.0 (BP); assuming a 10:1 N:P ratio	5X
Total Organic Carbon (mg/L)	33	Not Available	Approximately 3X normal Sweetwater Reservoir Concentration
Total Phosphorous-P (mg/L)	1.0	0.1 (BP)	10X
Total Suspended Solids (TSS) (mg/L)	2400	Not Available	Approximately 120X normal Lower Sweetwater River Concentration
Lead (mg/L)	0.023	0.015 (CA Primary MCL)	1.5X
Manganese (mg/L)	0.91	0.05 (CA Secondary MCL)	18X
Iron (mg/L)	21	0.3 (CA Secondary MCL)	70X
Vanadium (mg/L)	0.12	0.05 (CA Notification Level)	2.4X

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Conductivity (mS/cm)	4.64	1.6 Secondary MCL)	(CA 2.9X
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### **8.0 Comments on Reclamation Plan**

The proposed grading shown on cross-section A-A' on sheet 7 of the plot plans appears to impede the flow of water towards Sweetwater Reservoir. The proposed mining activities shall not interfere with water flows to Sweetwater Reservoir. Also, the final configuration of the riverbed will be much wider than the existing riverbed channel. This will most likely result in more water being infiltrated into the ground and less water reaching Sweetwater Reservoir. The proposed riverbed final configuration cannot have a negative effect on the river's ability to convey water to Sweetwater Reservoir. The plot plans or project specifications need to indicate what types of materials and gradation will be used to fill the over excavated areas in the river. Indicate what grading practices will be implemented to key in the proposed reclamation areas onto the existing slopes. If reclamation areas are not keyed in properly onto the existing slopes, backfill materials could erode or get washed away by flowing water and impact water quality in Sweetwater Reservoir.

Also, the reclamation plan/plot plan does not show the proposed temporary berms during construction and the permanent berms after reclamation discussed in the DEIR. Please refer to Sections 1.1, 1.2, and 5.0 above regarding additional comments on this matter.

In addition, the Reclamation Plan circulated with the DEIR includes an operating procedure that would be followed by the mine operator and the Authority, whenever a water transfer is to occur (Attachment D of the Reclamation Plan). Authority staff indicated on an email dated March 4, 2020 to EnviroMINE staff that the Authority would not provide comments on the Operating Procedure until mitigation measures were reviewed by Authority staff, as part of the environmental review process. Once appropriate mitigation measures are developed for the mining site as described throughout this letter, and agreements are being processed between the project proponent and the Authority, the Authority will continue to discuss this Standard Operating Procedure with the County and the project proponent.

### **9.0 Permit Type / Action – Sweetwater Reservoir Urban Runoff Diversion System Fee**

If this project moves forward, the Authority requests that a condition be placed on the subject project to require the owner to submit satisfactory evidence to the County, stating that the owner has complied with *Resolution 84-8 As Amended*. Complying with

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this condition should be required prior to issuance of any permit pursuant to a Major Use Permit. On May 8, 1985, the County Board of Supervisors took action that required the County to place conditions on development proposals within a designated area of the Sweetwater River Watershed to the satisfaction of the Authority, as provided in *Resolution 84-8*. Since the Board of Supervisors 1985 action, discretionary Project approvals within the designated watershed area have complied with this condition. The resolution provides for the collection of urban runoff protection fees from all developments within the Sweetwater Reservoir drainage basin to pay for a portion of the Sweetwater Reservoir Urban Runoff Diversion System.

### **10.0 Conclusion**

The Authority appreciates the opportunity to review and comment on the DEIR and is willing to continue to work with the County and the project proponent to ensure that the Sweetwater Reservoir is not impacted by, and that water losses to the Authority do not occur, as a result of this project. Authority staff look forward to the discussion and development of solutions that will fully mitigate impacts or potential impacts to water quality and the Authority's operations.

If you have any questions, do not hesitate to contact Erick Del Bosque, Interim Director of Engineering, at 619-409-6752 or [edelbosque@sweetwater.org](mailto:edelbosque@sweetwater.org), or Israel Marquez, Environmental Project Manager, at 619-409-6759 or [imarquez@sweetwater.org](mailto:imarquez@sweetwater.org).

Sincerely,



Carlos Quintero, P.E.  
General Manager

CQ:IM:ah

cc: Mr. David Gibson, California Regional Water Quality Control Board  
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Mr. Sean Sterchi, Water Resources Control Board, Division of Drinking Water  
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Mr. Kyle Dahl, U.S. Army Corps of Engineers

County of San Diego, Clerk of the Board of Supervisors

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Ms. Jennifer Sabine, Sweetwater Authority  
Mr. Erick Del Bosque, Sweetwater Authority  
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