

## Response to Written Comments

### on draft Waste Discharge Requirements Order No. R1-2018-0003 National Pollutant Discharge Elimination System (NPDES) for Sonoma West Holdings, Inc

#### Regional Water Quality Control Board, North Coast Region

#### Comment Letter Received

The deadline for submission of public comments regarding draft Waste Discharge Requirements Order No. R1-2018-0003, National Pollutant Discharge Elimination System Permit (Draft Permit) for Sonoma West Holdings, Inc. was December 4, 2017. Upon request from the Permittee, Regional Board staff granted a two-week extension to the public comment period by extending the deadline to December 21, 2017. Sonoma West Holdings Inc. (Permittee) provided timely comments, which have been paraphrased and are followed by the Regional Water Board staff response. The term “Draft Permit” refers to the draft that was sent out for public comment. The term “Proposed Order” refers to the version of the permit that has been modified in response to comments and is being presented to the Regional Water Board for consideration.

#### Permittee Comments

**Comment 1:** *Throughout the permit multiple terms are used to refer to land application; the two main terms being “land application” and “land discharge”. The use of multiple terms and the use of the term “discharge” to refer to both land application and surface water discharge is confusing. For clarity, all discussion of land application should be referred to as such and the word “discharge” should reference only surface water discharge.*

**Response 1:** The terms “land application” and “land discharge” are used for distinctive purposes within the permit. “Land application” is used to refer to the Permittee’s preferred method of treating process wastewater through overland flow application. “Land Discharge”, on the other hand, is used more specifically to refer to monitoring specifications and requirements as well as permit limits associated with the land application of process wastewater. Staff did not make changes to the Draft Permit in response to comment 1.

**Comment 2:** *The discharge rates cited on table 1, Facility Design Flow - “0.026 and 0.048 million gallons per day (mgd) – average monthly and maximum daily discharge rates (for the disposal of industrial process wastewater to surface water) at Discharge Point 001 are not a “Facility Design Flow”, but are actually a discharge limitation. Additionally, these are not the flow limits of discharge listed elsewhere in the permit. The surface water discharge flow limit states that it “shall not exceed one percent of the flow of Barlow Creek, as measured at*

*Monitoring Location RSW-001U.” (Section III, Part H, Pg. 5). Please remove this language from Table 1. Permittee Information.*

**Response 2:** The surface water discharge flow limits within table 1 of 0.026 and 0.048 million gallons per day (mgd) – average monthly and maximum daily rates at discharge point 001 - were carried over from the previous permit and are based on the Permittee’s Annual Reports. Data from Annual Reports between 2003 and 2009 showed an average monthly flow of approximately 0.026 mgd, and a peak flow of approximately 0.048 mgd. In accordance with NPDES regulations at 40 CFR 122.45 (b), these limitations and conditions, which address discharges to surface waters at Discharge Point 001, were based on these actual flow figures. More recent data of process wastewater produced between October 2011 and September 30, 2017, show an average monthly flow of 0.016 mgd and a peak flow of approximately 0.184 mgd. However, consistent with Order No. R1-2010-0019, this Draft Permit does not include a limitation on the rate of discharge at Discharge Point EFF-001. Discharge to surface waters however is prohibited until effluent limits based on national Effluent Limit Guidelines (ELGs) have been developed and implemented for process wastewater being discharged to Barlow Creek. Staff did not make changes to the Draft Permit in response to comment 2.

**Comment 3:** *The new draft permit (Order No. R1-2018-0003) sets limits for TDS for all land application monitoring locations (STG-001, LND-001 and REC-001). This draft permit also includes a requirement to submit a Groundwater Salinity Assessment work plan which must include a salinity source assessment. TDS limits should not be set for any land application monitoring location prior to the completion of the Groundwater Salinity Assessment work plan and implementation of source control measures.*

**Response 3:** The Secondary MCL for total dissolved solids, established by the State Water Board (Department of Drinking Water or DDW) for the protection of public drinking water supplies at title 22 of the California Code of Regulations, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), is 500 mg/L. Total dissolved solids concentrations at Monitoring Locations LND-001 and STG-001 ranged from 250 mg/L to 1,100 mg/L, and frequently exceeded the Secondary MCL, based on samples collected from January 2011 through February 2015, which is representative of treated process wastewater discharged to Bench Nos. 1-7 at Discharge Point 002.

During the period of March 2011 to March 2016, the Permittee conducted groundwater monitoring up gradient of Bench Nos. 1-4 at Monitoring Location RGW-001 on five sample dates and conducted down gradient groundwater monitoring at Monitoring Location RGW-002 on 11 sample dates. The average concentration of total dissolved solids at the up gradient well was 190 mg/L, whereas the average concentration at the down gradient well was 283 mg/L. Similarly, for groundwater samples collected from March 2011 through March 2016 at Bench No. 7, the average up gradient total dissolved solids concentration at Monitoring Location RGW-003 was 366 mg/L (based on 11 samples), whereas the average down gradient concentration at Monitoring Location RGW-004 was 465 mg/L (based on eight samples).

In addition, domestic wastewater effluent discharged to Bench No. 1 exhibited total dissolved solids concentrations ranging from 340 mg/L to 15,000 mg/L based on samples collected from January 2011 through February 2015. The Permittee conducted groundwater monitoring up gradient and down gradient of Bench No. 1 on five sample dates from March 2011 to March 2016. The average concentration of total dissolved solids at the up gradient well was 190 mg/L, whereas the average downgradient concentration was 372 mg/L.

These results provide compelling evidence that total dissolved solids (TDS) concentrations in groundwater are increasing from up gradient to down gradient, below Bench Nos. 1-4 and Bench No. 7. To limit further groundwater degradation, this Draft Permit implements the secondary MCL for TDS of 500 mg/L as an average monthly limitation at Discharge Point 002. The Regional Board acknowledges that SWHs may need time to determine if it can reasonably comply with these TDS limits; a compliance schedule may therefore be established in-order to give SWHs time to come into compliance.

**Comment 4:** *SWH's process wastewater treatment and disposal system is an overland flow treatment system that requires land application for treatment; applying final effluent limits to LND-001 and STG-001 does not recognize this fact. Additionally, the limitations set in Table 5 for LND-001 and STG-001 are based on General Waste Discharge Requirements for Discharges of Winery Waste to Land (Order No. R1-2002-0012), which is now superseded by Order No. R1-2016-0002 General Waste Discharge Requirements for Discharges of Wine, Beverage and Food Processor Waste to Land (General WBF WDRs). For both of these reasons the effluent limitations set for land application are not appropriate. The new General WBF WDRs are significantly different than the requirements in Order No. R1-2002-0012. SWH would prefer their permit be consistent with the General WBF WDRs for BOD, TSS, settleable solids and TDS limitations. The loading-based BOD limit in the General WBF WDRs is 100 pounds/acre/day, instead of a concentration-based limit of 80 mg/L. Also, the General WBF WDRs do not impose limitations for TSS, settleable solids and TDS. The General WBF WDRs set limitations for several nutrient and salt species. SWH should be allowed to complete their source assessment before limitations are imposed for these species.*

**Response 4:** During the term of the previous permit (Order No. R1-2010-0019) the point of compliance for process wastewater discharged to land has been Lake Davis (STG-001). In addition, through the development process of this Draft Permit, the Regional Board has been clear in informing the Permittee that in accordance with section 301(b) of the CWA, and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44, technology based effluent limits shall remain at the Permittee's designated point of compliance location. Furthermore, during the course of the previous permit (Order No. R1-2010-0019), technology based effluent limits for BOD, TSS, pH, and settleable solids were exceeded on multiple occasions at the Permittees designated point of compliance, monitoring location STG-001. Since the Permittee has the ability to discharge to the irrigation benches Nos. 1-7 directly from the treatment system without prior aeration/storage in Lake Davis, this Draft Permit establishes effluent limits and monitoring requirements for these pollutants (BOD,

TSS, pH, and settleable solids) at Monitoring Location LND-001 to determine compliance with land discharge specifications.

Effluent limitations within Order No. R1-2016-0002 (*General Waste Discharge Requirements for Discharges of Wine, Beverage and Food Processor Waste to Land, ("WBF general permit")*) are specific to industrial facilities covered under the WBF general permit, and that discharge their process wastewater to land only. Furthermore, the effluent limits within the WBF general permit are not consistent with section 301(b) of the CWA or implementing regulations at 40 C.F.R. section 122.44 that require, at a minimum, NPDES permits to include conditions meeting applicable technology-based requirements.

The Draft Permit incorrectly stated that the TSS limits were consistent with the WBF general permit when in fact those limits are consistent with CWA technology-based limits. As a result, references to the General Waste Discharge Requirements for Discharges of Winery Waste to Land (Order No. R1-2002-0012) have been removed from this Draft Permit.

**Comment 5:** *For the calculation of the Average Monthly Effluent Limit (AMEL) using an average based on number of days discharge occurred may be appropriate for surface water discharge, but not for land application (process and domestic). Land application capacity is based on a monthly application rate, and drying periods will be interspersed with application periods. AMEL defined in this way only applies to surface water discharges; the definition should be clarified to provide a definition more suitable to an overland flow treatment system. AMEL should be referred to only when discussing surface water discharges. An average monthly effluent limitation calculated for land application rates should be an average based on the total number of days in that month.*

**Response 5:** Staff agrees that the AMEL calculation applies only to surface water discharges. The definition for the AMEL within attachment A of the Draft Permit has been updated to read, "The highest allowable average of daily discharges to surface waters over a calendar month shall be calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month."

**Comment 6:** *SWH's domestic wastewater system has a maximum daily influent flow of 6,000 gpd. By comparison, Order No. 2014-0153-DWQ – General WDRs for Small Domestic Wastewater Treatment Systems which covers systems up to 100,000 gpd, does not set monitoring requirements for TDS. Additionally, the WDRs only require nitrate effluent limits for systems with flows greater than 20,000 gpd. The water recycling specifications in Table 6 and the monitoring requirements in Table E-7 for a 6,000 gpd system are excessive and do not align with the General WDRs for Small Domestic Wastewater Treatment Systems. Therefore, TDS and nitrate limits should be removed to better align with the General WDRs. SWH is willing to monitor for TDS in the domestic waste applied to land for comparison to groundwater, but limits should not be set prior to understanding the impact to groundwater.*

*If TDS limits are not removed, a compliance schedule would need to be established to provide SWH sufficient time to determine whether it can reasonably comply with the new limits.*

**Response 6:** The Secondary MCL for total dissolved solids (TDS), established by DDW for the protection of public water supplies at title 22 of the California Code of Regulations, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), is 500 mg/L. In contrast, domestic wastewater effluent discharged to Bench No. 1 has exhibited total dissolved solids concentrations ranging from 340 mg/L to 15,000 mg/L based on samples collected from January 2011 through October 2016 at REC-001. Furthermore, more than 90% of the samples collected at Bench No. 1 show a total dissolved solids concentration exceeding 1000 mg/L, which is twice the secondary MCL established by DDW.

As noted in Response 3 above, the Permittee conducted groundwater monitoring up gradient and down gradient of Bench No. 1 on five sample dates from March 2011 to March 2016. The average concentration of TDS at the up gradient well was 190 mg/L, whereas the average downgradient concentration was 372 mg/L. These results provide evidence that TDS concentrations in groundwater are increasing down gradient, relative to up gradient, of the Bench No. 1, indicating that the discharge of domestic and process wastewater to Bench No. 1 is having an impact on TDS concentrations in groundwater. To limit further increases in the concentration of TDS within the ground water, this Draft Permit establishes an average monthly limitation at Discharge Point 003 of 500 mg/L based on the Secondary MCL. The Regional Board acknowledges that SWHs may need time to determine if it can reasonably comply with these TDS limits; a compliance schedule may therefore be established in-order to give SWHs time to come into compliance.

Similarly, for nitrate, the Basin Plan adopts the MCLs established by DDW for the protection of public water supplies at title 22 of the California Code of Regulations, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), as applicable water quality criteria. The Permittee conducted monthly monitoring of its domestic wastewater discharge from January 2011 through January 2015. Monitoring results ranged from 5.6 mg/L to 120 mg/L based on 49 samples. Because nitrate levels in the effluent at REC-001 have been measured at concentrations higher than 10 mg/L N, the Regional Water Board concludes that discharges from the Facility exhibit reasonable potential to cause or contribute to exceedances of applicable water quality objective for nitrate within the groundwater. Therefore, this Draft Permit includes a new average monthly limitation for nitrate at Discharge Point REC-001 equal to 10 mg/L.

**Comment 7:** *Footnote 4 within table E-7 states "If two consecutive weekly test results exceed an effluent limitation, the Permittee shall take two samples each of the two weeks following receipt of the second sample result."*

*SWH does not apply domestic waste every week. As this is written, SWH would be forced to apply wastewater to the fields to sample even if they would not otherwise be applying. Language should be added to take this in account; suggested language is as follows: "If two consecutive weekly test results exceed an effluent limitation, the Permittee shall take two*

*samples each of the next two weeks of application following receipt of the second sample result.”*

**Response 7:** Footnote 4 within table E-7 has been revised to state “if two consecutive weekly test results exceed an effluent limitation *and discharge continues*, the Permittee shall take two more samples, one within 7 days and one within 14 days following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps to return to compliance. If discharge ceases, the Permittee does not need to begin accelerated monitoring until discharge resumes. Once discharge resumes, the sample of effluent shall be collected for accelerated monitoring at the onset of discharge.”

**Comment 8:** *Monitoring Location LND-001 should be excluded from these compliance limitations. Process Wastewater as measured from LND-001 is applied to the over-land treatment system and relies on that system for the majority of the treatment. SWHs has never tested for constituents that are proposed to be limited (BOD, pH, TSS, settleable solids and TDS); therefore, based on this fact and based on discussions with Regional Water Quality Control Board staff, SWH believes that the inclusion of LND-001 as a compliance point was an oversight and should be excluded from the final permit. If this request is not granted please see comment 4 and 14 as to how compliance should be determined for land application of process wastewater.*

**Response 8:** As stated previously, (see response to comment no. 4) monitoring data collected over the term of the previous permit (Order No. R1-2010-0019) at LND-001 show technology based effluent limits for BOD, TSS, pH, and settleable solids were exceeded on multiple occasions at monitoring location STG-001. Land discharge and groundwater monitoring data also indicate that discharge of process wastewater to land are contributing to increased concentrations of total dissolved solids and electrical conductivity in the underlying groundwater. Therefore, this Draft Permit establishes land discharge specifications for total dissolved solids, and technology based effluent limits as well as monitoring requirements for BOD, TSS, pH, and settleable solids at Monitoring Location LND-001, to determine compliance with land discharge specifications.

**Comment 9:** *Within attachment E, item VI.A.1 “The Permittee shall monitor treated process wastewater effluent from Lake Davis, to be land applied (Discharge Point 002) at Monitoring location STG-001, as follows.”*

*The wording “to be land applied” should be changed to “while land applying” to more accurately define when sampling must occur.*

**Response 9:** Staff agrees. The Draft Permit language has been revised to state “The Permittee shall monitor partially treated process wastewater effluent from Lake Davis (STG-001) while land applying process wastewater from Lake Davis to land (LND-001), as follows:”

**Comment 10:** *Within attachment E, item VI.B.1 “The Permittee shall monitor treated process wastewater effluent from the process wastewater treatment system to be land applied (Discharge Point 002) at Monitoring location LND-001, as follows.”*

*The wording “to be land applied” should be changed to “while land applying” to more accurately define when sampling must occur.*

**Response 10:** Staff agrees. The Draft Permit language has been revised to state “The Permittee shall monitor process wastewater effluent from the third sump that’s land applied (Discharge Point 002) at Monitoring Location LND-001 ...”

**Comment 11:** *Within the Monitoring and Reporting Program section, attachment E, table E-5, footnote 4 states “Accelerated monitoring (monthly monitoring frequency). If a test result exceeds an effluent limitation the Permittee shall take two more samples, one within 7 days and one within 14 days following receipt of the initial sample result.”*

*SWH does not apply process waste every week. As this is written, SWH may be forced to apply wastewater to the fields to sample even if they would not otherwise be applying. Language should be added to take this into account; suggested language is as follows: “If a test result exceeds an effluent limitation, the Permittee shall take two more samples, one each of the next two application events following receipt of the initial sample result.”*

**Response 11:** Staff agrees. The Draft Permit language has been revised to state: “If a test result exceeds an effluent limitation and discharge continues, the Permittee shall take two more samples, one within 7 days and one within 14 days following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps to return to compliance. If discharge ceases after the initial discharge event, the permittee does not need to begin accelerated monitoring until discharge resumes again. Once discharge resumes, the sample of effluent shall be collected for accelerated monitoring at the onset of discharge.”

**Comment 12:** *Footnote 6 within table E-6 is not applicable because there should be no effluent limits on LND-001 to trigger accelerated monitoring. If the request in Comment 8 is not granted, Comment 11 applies to footnote 6 within Table E-6.*

**Response 12:** As noted in Responses 4 and 8, land discharge specifications are applicable to discharge point LND-001.. Futhermore, table E-6 does not contain effluent limits but rather contains effluent monitoring and reporting requirements for discharges to land.

Staff agrees that revisions to the accelerated monitoring language are appropriate. Thus, footnote 6 has been revised to state the following:

“If a test result exceeds an effluent limitation and discharge continues, the Permittee shall take two more samples, one within 7 days and one within 14 days following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance. If

discharge ceases after the initial discharge event, the permittee does not need to begin accelerated monitoring until discharge resumes again. Once discharge resumes, the sample of effluent shall be collected for accelerated monitoring at the onset of discharge, and once more within 7 days of the resumed discharge date.”

**Comment 13:** *Footnote 5 within table E-6 states, “If no discharge occurs at Discharge Point 001 during the permit term, the Permittee shall monitor the effluent at Monitoring Location EFF-002...”*

*There is no “Monitoring Location EFF-002”. The permit text should reference “Discharge’ (Land Application) Point 002””*

**Response 13:** Table E-1 within the Monitoring and Reporting Program defines discharge point EFF-002 as inclusive of both, process wastewater stored in Lake Davis prior to land application (STG-001) and process wastewater that does not get stored in Lake Davis prior to land application (LND-001). No changes have been made.

**Comment 14:** *The Fact Sheet states that BOD5, TSS and Settleable Solids limitations in this permit are “consistent with the limitations contained in the General Waste Discharge Requirements for Discharges of Winery Waste to Land (Order No. R1-2016-002).” (Pg F-39) Order No. R1-2016-0002 is the General Waste Discharge Requirements for Discharges of Wine, Beverage and Food Processor Waste to Land (WBF WDR) which replaced Order No. R1-2002-0012 General Waste Discharge Requirements for Discharges of Winery Waste to Land. The limitation on TSS was completely removed in this new general WDR and the BOD limits changed from concentration-based to loading-based.*

*The order title referenced in the permit should be corrected to match the order number. SWH’s NPDES permit sets a concentration based maximum daily limit for BOD5 of 80 mg/L for land application of process wastewater from Lake Davis (STG-001). This effluent limit is consistent with Order No. R1-2010-0019, SWH’s current NPDES permit. However, these limits were set based on the General Waste Discharge Requirements for Winery Waste to Land (Order No. R1-2002-0012). Because these general WDR limits are superseded by Order No. R1-2016-0002, which sets an Average Monthly BOD Effluent Limit of 100 pounds/acre/day, it is now more appropriate to regulate SWH’s overland flow treatment system in the same way. SWH’s overland flow treatment system, where BOD reduction by soil microbes and nutrient uptake by plants, is the main biological treatment process. Recognition of the treatment mechanisms of this system further supports the argument for loading based limits. If the request in Comment 8 is not granted, BOD at STG-001 and LND-001 should be regulated on a loading basis at the same 100 pounds/acre/day that is allowed in the WBF General WDRs.*

**Response 14:** Response to this comment has already been provided above. Please see response no. 4.



**Comment 15:** *Within the fact sheet, language in section IV.C.3.b, on Priority Pollutants, states “Therefore, the RPA is based on sample data for treated process wastewater that was discharged to land via Discharge Point 002 (Monitoring Location LND-001) or data from samples of treated process wastewater stored in Lake Davis prior to discharge through Discharge Point 002 (Monitoring Location STG-001). Monitoring data from these locations is representative of the treated process wastewater that may be discharged at Discharge Point 001.”*

*SWH’s system is designed such that only water stored in Lake Davis could be discharged to surface water; water that is applied through LND-001 does not have a direct connection to the surface discharge location. Process wastewater at LND- 001 receives minimal treatment prior to application, as overland flow is the main treatment mechanism. It is for these reasons that LND-001 sample results are not representative of the treated process wastewater that may be discharged at Discharge Point 001 and this data should not be included in the RPA.*

*“To ensure adequate data is available to conduct an RPA for the next permit renewal, if no discharge occurs during the permit term, this Order requires sampling at Monitoring Location LND-001 during the discharge season (i.e. October 1 through May 14) in the fourth year of the permit term for priority pollutant metals.”*

*Certain monitoring for LND-001, listed in Table E-6 and explained in this language on pg. F-51, is required at LND-001 to ensure adequate data to perform an RPA. Monitoring required for Discharge Point 001 for use in the RPA should be monitored at STG-001 only, not LND-001 for an accurate representation of process wastewater that could potentially be discharged to surface waters.*

*Table E-5 and Table E-6 should be amended to reflect this and language should be added to ensure that data from samples taken at LND-001 is not used to perform the RPA during the next permit renewal cycle.*

**Response 15:** The State Implementation Policy (SIP) establishes procedures to implement water quality criteria from the National Toxics Rule (NTR) and the California Toxics Rule (CTR) and for priority toxic pollutant objectives established in the Basin Plan. Implementation procedures of the SIP include methods to determine reasonable potential and to establish numeric effluent limitations, if necessary, for pollutants showing reasonable potential. Section 1.3 of the SIP requires that the Regional Water Board use all available, valid, relevant, and representative receiving water and effluent data and information to conduct an RPA. Results from the Reasonable Potential Analysis demonstrated reasonable potential for heavy metals such as lead and mercury, as well as copper, thallium, zinc, and cyanide from the facility’s effluent at STG-001 and LND-001 to cause or contribute to exceedances of applicable water quality criteria. With the exception of additional treatment through aeration in Lake Davis, at STG-001, there isn’t a significant difference in treatment between effluent that’s stored in Lake Davis and effluent that’s discharged directly to land from sump three. Furthermore, most of the parameters that

showed Reasonable Potential exceeded water quality objectives based on samples collected at both STG-001 and LND-001. It is also unlikely that heavy metals and other contaminants such as thallium, cyanide, and zinc that showed reasonable potential would otherwise be treated to concentrations below water quality objectives if the effluent had undergone additional treatment in Lake Davis prior to discharge. Based on the reasons provided above, LND-001 and STG-001 sample results are representative of the treated process wastewater that may be discharged at Discharge Point 001. Staff did not make changes to the Draft Permit in response to comment 15.

**Comment 16:** *Within section IV.F.1 of the factsheet, language in the “Land Discharge Specifications and Requirements” section states “In addition, discharge prohibitions were included to prohibit the land discharge of untreated or partially treated waste, in order to protect public health and prevent nuisance.”*

*SWH’s system is an overland flow treatment system, in which BOD reduction by soil microbes and nutrient uptake by plants is the main biological treatment process. This language should be removed from the permit so that the concept of overland flow treatment is not contradicted.*

**Response 16:** Staff agrees. The Draft Permit language within section IV.F.1 of the factsheet has been revised to state the following:

“In addition, discharge prohibitions were included to prohibit the land discharge of untreated or partially treated waste (receiving a lower level of treatment than described in section II.A of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems (except as provided for in Attachment D, Standard Provisions G (Bypass) and H (Upset)) to protect public health and prevent nuisance.”

**Comment 17:** *Language on page 14 of the draft permit within the section on “Best Management Practices and Pollution Prevention” states “The Permittee shall, as required by the Executive Officer, develop and conduct a PMP as further described below” It is not clear if the Executive officer is currently requiring the Pollutant Minimization Program and if this is only required for surface water discharges. These items should be clarified.*

*Language on page 15 of the draft permit within the section on “Pollution Prevention Plan” states “The Permittee shall prepare and implement a pollution prevention plan for aluminum, ammonia, iron, manganese, MBAS, electrical conductivity, total dissolved solids, copper, lead, mercury, thallium, zinc and cyanide in accordance with Water Code section 13263.3(d)(2).” It is not clear if the Pollution Prevention Plan is only required for surface water discharges. This should be clarified.*

*Also, item F on page E-2 of the monitoring and reporting program states “The Permittee shall ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board.”*

*It is not clear if the Discharge Monitoring Report Quality Assurance (DMR-QA) Study is only required for surface water discharges. This should be clarified.*

**Response 17:** A Pollutant Minimization Program (PMP) is not required at this time but the Executive Officer may require the Permittee to develop and conduct a PMP depending on discharge quality and pertinent Facility and water quality conditions. The language on page 14 of the draft permit, pertaining to PMP, is standard language and was included in the previous permit (Order No. R1-2010-0019).

The requirement for the preparation and implementation of a pollution prevention plan (page 15 of the Draft Permit) for aluminum, ammonia, iron, manganese, MBAS, electrical conductivity, total dissolved solids, copper, lead, mercury, thallium, zinc, and cyanide is specific to discharges to surface waters. Staff has added language to this section to clarify this point.

Lastly, the requirement for a DMR-QA study, item F under “General Monitoring Provisions”, is a federal requirement for surface water discharges only. Staff has added language to clarify this point.

**Comment 18:** *Within the Monitoring and Reporting Program, language in section IV.A.1, states “The Permittee shall monitor treated process wastewater to be discharged from Lake Davis to Barlow Creek at Monitoring Location EFF-001 as follows:”*

*The wording “to be discharged” should be changed to “while discharging” to more accurately define when sampling must occur. Sampling only during periods of surface water discharge is consistent with other Region 1 NPDES permits.*

**Response 18:** Staff agrees. The Draft Permit language has been revised to state “The Permittee shall monitor treated process wastewater while discharging from Lake Davis to Barlow Creek, at Monitoring Location EFF-001, as follows:”

**Comment 19:** *Table E-4 requires an annual minimum sampling frequency for CTR Priority Pollutants. CTR Priority Pollutants have traditionally been tested only once during permitting cycle. This suite of testing is very expensive and on the unlikely chance SWH discharges more than one year during the permit term, this testing would cause undue financial stress. The sampling frequency for CTR Priority Pollutants for EFF-001 should be reduced to “Once per permit term.”*

**Response 19:** The Permittee is not currently permitted to discharge process wastewater to surface waters at EFF-001 until ELGs have been established. Nevertheless, the sampling frequency for CTR Priority Pollutants at EFF-001 has been revised from annually to once per permit term.

**Comment 20:** *The EPA has set Water Quality Objectives for cyanide for freshwater aquatic life; the applicable chronic criterion (maximum 4-day average concentration) is 5.2 µg/L and*

*the applicable acute criterion (maximum 1-hr average concentration) is 22 µg/L. These water quality objectives were used in the RPA. However, these water quality objectives are in units of free CN, yet the permit sets effluent limits based on these water quality objectives in units of total CN. Using total cyanide as the compliance point for a free cyanide water quality objective disregards the basis of the objective and sets an excessively high bar for compliance.*

**Response 20:** Staff agrees. Effluent limits for cyanide at EFF-001 have been changed from total cyanide to free cyanide.

**Comment 21:** *Footnote 4 within table E-4 states “Accelerated Monitoring (daily monitoring frequency). If two daily test results exceed an effluent limitation, the Permittee shall increase monitoring frequency to a minimum of twice a day for a week to evaluate whether an exceedance is persisting.”*

*SWH may not discharge to surface water daily for an entire week. As this is written, SWH may be forced to discharge to surface water to sample even if they would not otherwise be discharging. Language should be added to take this into account; suggested language is as follows: “If two consecutive daily test results exceed an effluent limitation, the Permittee shall increase monitoring frequency to a minimum of twice a day while discharging for up to a week to evaluate whether an exceedance is persisting.”*

**Response 21:** Similar to comment 7 above, language in footnote 4 of table E-4 has been modified to state...

“If two daily test results exceed an effluent limitation and discharge continues, the Permittee shall increase monitoring frequency to a minimum of twice a day for a week to evaluate whether an exceedance is persisting. If the exceedance is persisting, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance. If discharge ceases after the initial discharge event, the permittee does not need to begin accelerated monitoring until discharge resumes again. Once discharge resumes, the sample of effluent shall be collected for accelerated monitoring at the onset of the discharge following the method described above.”

**Comment 22:** *Item IV.A.8.f within attachment F states “The Permittee completed the study and submitted Summary Report: Surface Receiving Water Study, Sonoma West Holdings North Site (Receiving Water Study) on October 1, 2014. Results of the study indicate that a 40% discharge rate in Barlow Creek is equivalent to the 1% rate in Atascadero Creek. Discharge rates in Barlow Creek of 40% and 1% correspond to an average daily flow capacity of 80,000 gpd and 43,000 gpd, respectively.”*

*This section needs to be written to more clearly to summarize the 2014 Surface Receiving Water Study. Revise the statement to read: “Based on a water balance developed for this study, discharge rates to Barlow Creek of 40% and 1% correspond to an average daily flow capacity of 80,000 gpd and 43,000 gpd, respectively if current land application operations are*

*maintained. SWH may in the future apply for an increase in the permitted rate of discharge to Barlow Creek.”*

**Response 22:** Regional Water Board staff agrees that this section needs to more clearly summarize the 2014 Receiving Water Study. The section has been rewritten to state: “Order No. R1-2010-0019 required compliance with the one percent flow prohibition in Atascadero Creek, to which Barlow Creek is tributary. However, following the adoption of Order No. R1-2010-0019, Regional Board staff informed the Permittee of its intent to stop permitting discharge to Barlow Creek based on the one percent flow prohibition in Atascadero Creek. This Proposed Order changes the point of compliance for the one percent flow prohibition from Atascadero Creek to Barlow Creek since Barlow Creek is the designated location for surface water discharges.

Under Special Provision VI.C.2.c of Order No. R1-2010-0019, the Permittee conducted a study to determine, among other things, whether discharges to Barlow Creek would be viable under anticipated regulations, and whether an exemption to the one percent flow prohibition at Barlow Creek would still be protective of the beneficial uses of the Barlow Creek. The Permittee completed the study and submitted *Summary Report: Surface Receiving Water Study, Sonoma West Holdings North Site* (Receiving Water Study) on October 1, 2014. Results of the study indicate that a 40% discharge rate in Barlow Creek (equivalent to the 1% rate in Atascadero Creek) would result in the exceedances of specific conductance and total dissolved solids (TDS) Basin Plan objectives. Results of the study also indicate that a 40% discharge rate in Barlow Creek would result in increased nutrient loading to Barlow Creek based on nitrogen and phosphorus samples collected from Lake Davis on three separate sampling events between April 2013 and March 2014. Additionally, concentrations of copper, zinc, and cyanide measured in effluent samples exhibited reasonable potential to cause or contribute to an exceedance of California Toxics Rule (CTR) criteria or Basin Plan objectives (see Fact Sheet section IV.C.3) and thus could potentially cause impairments to Barlow Creek.

Given the findings from the 2014 Receiving Water Study, any allowance for higher discharge flows would further increase the risk of impairment of beneficial uses within Barlow Creek. For this reason, the Regional Water Board staff has determined that an exception to the one percent flow restriction in Barlow Creek is not appropriate at this time.

**Comment 23:** *“Using the methodology described in the SIP for determining reasonable potential, because manganese levels at Monitoring Location LND-001 have been measured at concentrations greater than 50 µg/L, the Regional Water Board concluded that discharges from the Facility have a reasonable potential to cause or contribute to exceedances of applicable water quality objective for the receiving water.” Based on the RPA cited, potential for manganese levels were established for surface water discharge. Monitoring Location LND-001 is for land application, not surface water discharge.*

**Response 23:** See Response 15 above.

**Comment 24:** *Section VIII.B.1 within the Monitoring and Reporting Program (attachment E states “The Permittee shall monitor groundwater at Monitoring Locations “RGW-001, RGW-002, RGW-003, RGW-004, RGW-005, RGW-006 and RGW-007 ...”*

*RGW-006 and RGW-007 are both drinking water wells. Although RGW-007 was listed as a monitoring location in the current permit (Order No. R1-2010-0019, Regional Board staff agreed it was not appropriate and approved exclusion of RGW-007 from sampling. The use of deep sanitary drinking water wells for monitoring the potential impact of the land application of wastewater on shallow ground water is not appropriate. Comparing wells 100+ feet deep to wells that are only 10 to 20 feet deeps is not a valid comparison as these wells could be sampling completely different aquifers. Monitoring requirements for RGW-006 and RGW-007 should be removed.*

**Response 24:** The Regional Water Board concurs with the proposal to remove groundwater monitoring requirements for drinking water wells RGW-006 and RGW-007 for the Proposed Order term. However, results from the Permittee’s groundwater monitoring program may lead to additional monitoring requirements within these two supply wells, or nearby domestic wells to ensure no contaminants of concern from discharges to land are impacting groundwater quality or adversely affecting beneficial uses.

**Comment 25:** *Section VIII.B.4 within the Monitoring and Reporting Program (attachment E) Groundwater Salinity Assessment.*

*The bermed portion of Bench 1 receives only domestic waste. It should be removed from the Salinity Assessment. There is no cost effective means to remove salts from human waste at this scale.*

**Response 25:** Existing groundwater monitoring data on TDS and electrical conductivity show a degradation in groundwater quality between up-gradient and down-gradient monitoring wells. For example, from March 2011 to March 2016, results from groundwater monitoring at the upgradient monitoring well (well no. 1) showed an average TDS concentration of 190mg/L. Average TDS concentrations in the down gradient monitoring well (well no. 5) were 372mg/L. Furthermore, preliminary groundwater monitoring data for nitrate may indicate up-gradient concentrations are potentially from off-site sources. Given these reasons, bench 1 should remain in the salinity assessment to better characterize all potential sources of degradation.

**Comment 26:** *Section IV.F.3.d within the Factsheet (attachment F)*

*Well casing rim elevations have not yet been determined through a site survey, it is currently impossible to determine groundwater elevations even in instances where the depth to*

*groundwater measurements were taken. Therefore, it cannot be determined with any certainty the direction of the groundwater gradient. The discussion in this section should just be limited to "elevated TDS concentrations were detected". Without gradient information, the source cannot be accurately determined. Therefore, the TDS effluent limit should be removed from the current permit as discussed in Comment 3.*

**Response 26:** In accordance with Order No. R1-2010-0019, the Permittee is required to monitor groundwater elevation to determine gradient. Additionally, the Permittee has suggested off-site sources of salts and nutrients based on an inference of gradient. Measuring well elevations to determine gradient is a common and routine task in assessing impacts to groundwater and must be included in future monitoring, in accordance with section VIII.B.3 of the monitoring and reporting program within the Draft Permit. Staff does not agree to remove TDS effluent limitations, see Response 3.

**Comment 27:** *The discussion of the conclusions from the groundwater monitoring varies significantly from the conclusions presented in the technical memorandum "Wastewater Discharge to Land" submitted to the Regional Water Board in December, 2013. Because the gradient of the groundwater is still unknown (see discussion in Comment 26) any conclusions about SWH's influence on groundwater should be withheld until further investigation is completed.*

**Response 27:** As stated in comment 26 above, the Permittee suggested off-site sources of salts and nutrients based on an inference of gradient. Claiming well no. 1 up-gradient, well no. 5 as down-gradient, and well no. 4 as the most down-gradient. The Regional Water Board acknowledges that measuring well elevations to determine gradient is common and routine task in assessing impacts to groundwater and must be included in future monitoring.

**Comment 28:** *Language within section II.A of the factsheet (attachment F) states "the primary treatment pond (transfer pond), or the aerated storage pond (Lake Davis)." The transfer pond is not a treatment pond. This language should be removed and the transfer pond only be referred to as such.*

**Response 28:** Staff has revised the Draft Permit language to state "Process wastewaters flow by gravity from the third sump to an irrigation sump and are pumped either to overland flow treatment fields, the transfer pond, or the aerated storage pond (Lake Davis)."

**Comment 29:** *Language within section II.D.2. of the factsheet states "During the term of Order No. R1-2010-0019, the Permittee's discharge of treated industrial process wastewater to land had 16 effluent limitation violations: 6 BOD5, 8 TSS, 1 pH and 1 settleable solids." This is not correct. The current permit's Monitoring and Reporting Program requires that wastewater stored in Lake Davis be sampled whether land application is occurring or not. These results were from samples of stored wastewater not being applied to land at the time*

*sampling occurred. The language should be removed completely or at least changed to remove the reference of these as violations. Suggested wording is as follows: "During the term of Order No. R1-2010-0019, the Permittee's process wastewater stored in Lake Davis exceeded the effluent limitations in 16 samples: 6 BOD5, 8 TSS, 1pH and 1 settleable solids. All of these limitation exceedances occurred while the permittee was not applying to land." This is another reason to clarify the wording as requesting in Comments 9, 10, and 18 because then sampling will be required only when SWH is discharging or applying to land.*

**Response 29:** The current permit (Order No. R1-2010-0019) has Lake Davis (STG-001) as the point of compliance for process wastewater that is discharged to land and similarly, the domestic aeration pond (REC-001) is the point of compliance for domestic wastewater discharged to land. Staff agrees and has revised the Draft Permit language to state, "During the term of Order No. R1-2010-0019, the Permittee's process wastewater stored in Lake Davis exceeded the effluent limitations in 16 samples: 6 BOD5, 8 TSS, 1 pH and 1 settleable solids." The Permittee was not discharging or applying wastewater to land when all of these limitation exceedances occurred therefore these exceedances were not violations.