RESPONSE TO COMMENTS

Jug Mountain Ranch LLC
NPDES Permit ID0028029
June 25, 2019

On April 4, 2019, the U.S. Environmental Protection Agency (EPA) issued a public notice for the reissuance of the Jug Mountain Ranch LLC wastewater treatment plant National Pollutant Discharge Elimination System (NPDES) Permit No. ID0028029.

This Response to Comments document provides a summary of significant comments received and corresponding EPA responses.

The EPA received comments from:

- Amy Pemberton of Millemann Pemberton & Holm LLP, Attorneys at Law, on behalf of Jug Mountain Ranch LLC (Jug Mountain)
- Austin Walkins (Hopkins), Senior Conservation Associate, Idaho Conservation League (ICL)

The comments resulted in removing seasonal limits for ammonia and nitrite

The permit was been revised to reflect a realignment of the EPA. The name of the Office of Water and Watersheds has been changed to the Water Division and the NPDES Permits Manager contact has been changed to the NPDES Permitting Section Manager. The Office of Compliance and Enforcement is changed to the Enforcement and Compliance Assurance Division.

1. **Comment (Jug Mountain)** : The facility serves a resident population of 57 homes, not 150 homes. There are 4 additional connections for the golf clubhouse and maintenance area. There are currently 163 platted residential lots in Jug Mountain Ranch PUD, but only 57 homes have been constructed.

   There is no lodge or retail shops at this time. These are approved in the Planned Unit Development at build out, but do not exist at this time.

   A redline showing proposed changes to this summary is as follows:

   Jug Mountain Ranch, LLC, owns and operates a wastewater treatment plant with a current service population of 61 connections, made up of 57 residential homes and a golf course clubhouse and a maintenance building. The maximum population at build out pursuant to county approvals is ~~that serves a resident population of 150 homes with~~ 325 ~~approved~~ residential units (single and multi-family) plus mixed commercial for the golf course, club house, 5,000 square feet of restaurant space and 10,000 square feet of retail space~~, and 18-hole golf course with clubhouse and maintenance facility, a lodge, and 15,000 square feet of restaurants and retail shops~~.

   Response: Fact sheets are not changed based on public comments but the distinction between the approved build out and the existing facility is documented in the comment.

   The permit is not changed based on the comment.

2. **Comment (Jug Mountain):** Second, we request that the proposed weekly testing of ammonia and nitrite be reduced to monthly testing. Weekly testing on ammonia and nitrate is currently being done in-house with test strips. If testing shows any increase, then the appropriate adjustments are made to the system. We propose to add nitrite to this weekly in-house testing. A paragraph explaining the testing and appropriate adjustments to the SBR system will be added to the QAP and O&M manual. This will be submitted to EPA and IDEQ.

   Response: Weekly compliance monitoring is required to ensure compliance with the weekly ammonia and nitrite effluent limitations. Condition III.C. requires compliance monitoring conducted according to test procedures approved under 40 CFR Part 136. Test strips are not test procedures approved under 40 CFR Part 136.

   The permit is not changed based on the comment.

3. **Comment (Jug Mountain):** Third, while Jug Mountain Ranch is grateful for the proposed increase in the average monthly TSS concentration limit from 5 mg/L to 7.7 mg/L and from an average weekly limit of 7.5 mg/L to 15.8 mg/L, it would like to request a larger increase in these concentration limits. Specifically, Jug Mountain Ranch would like to request an increase in the average monthly TSS concentration limit to 15 mg/L and an increase in the average weekly limit to 22.5 mg/L, with a corresponding increase to the mass based limits.

   JMR LLC's existing NPDES Permit is excessively onerous due to inflated claims made by Raymond Shackleford, the person who sold the SBR system to JMR LLC, significantly overexaggerated the effluent limits for TSS and BOD that could be reasonably obtained. Unfortunately, the limits specified by him were included as the limits provided in the existing JMR NPDES Permit. Raymond Shackleford was charged, in 2014, with multiple counts of felony fraud and swindles, and multiple counts of felony mail fraud, and received a plea bargain deal for felony mail fraud. A copy of the Docket for this case, together with the Judgment, are attached. This all happened soon after Shackleford sold the SBR system to JMR LLC.

   In the anti-backsliding analysis done in Section V.E of the Fact Sheet, the analysis suggests that the permit writer for the existing permit based the stated limits on SBR manufacturer's data and the historic performance of similar systems in the state. However, we believe this data came from Mr. Shackleford, and was over inflated. Also, as stated in the Fact Sheet, JMR LLC has not been able to consistently achieve these limits. The increase proposed in the Draft NPDES Permit, to 7.7 mg/L for the average monthly TSS concentration limit and 15.8 mg/L for the average weekly limit, is based on JMR LLC levels actually achieved, as well as an exemption allowed under 402(o)(2) as follows:

   > "The Permittee has installed and properly operated and maintained required treatment facilities but still has been unable to meet the effluent limitations (relaxation may be allowed only to the treatment levels actually achieved)."

   We believe that another exemption allowed under 402(o)(2) would allow for an increase in the TSS concentration limits above the levels actually achieved. That exemption reads as follows:

   > "information is available which was not available at the time of permit issuance … and which would have justified the application of a less stringent effluent limitation at the time of permit issuance"

   Neither the original permit writer nor JMR LLC knew of Mr. Shackleford's inflated claims at the time the original permit was written. Since that time, Mr. Shackleford has been charged with fraud, and the SBR system, while very effective, cannot meet the claims made by Mr. Shackelford consistently, and even then, not without significant cost. The cost of operation of the system pursuant to the current NPDES permit, which is paid for by the Jug Mountain Ranch Association, is excessive. It is excessive both in terms of costs of testing, maintenance and supervision of the

plant to try to maintain the concentration limits it has achieved, and also in terms of the cost of attorney's fees to defend itself for violations and related EPA fines due to these unreasonable limits. Attorney's fees and fines alone have exceeded $74,000.00, and testing alone (including shipping) has exceeded $20,000 per year. The cost of supervision of the system by Craig Collins and his crew is also very expensive, due to the constant onsite management required.

And finally, the existing NPDES permit level for yearly average gallons per day is 50,000 gallons (which number has been reduced to 32,000 gallons with the new proposed permit). The actual yearly average of gallons per day for 2018 was only 4,960 gallons. This outflow level even further reduces any negative impact of the system.

JMR LLC is feeling like the purchase of its SBR system is analogous to the purchase of a VW Diesel. However, instead of having the company buy it back, they are required to figure out a way to make the emissions standards comply, even though the system they have is not what they were told, and even though relaxation of the emissions standards would be reasonable. JMR LLC has worked very hard to try to comply, but feel that a modification to the NPDES Permit is more than reasonable.

JMR LLC and JMR PUD are both well respected in Valley County. JMR LLC has earned a reputation as a steward of the environment, and continues to endeavor to improve the water sources and natural habitat in and around Jug Mountain Ranch. They have no intention of diminishing their environmental stewardship in the event of an increase in TSS concentration limits. They instead are looking for a more reasonable level of required compliance that can be satisfied at reasonable cost.

Response: As the Fact Sheet states,

> "As Table 3 shows Jug Mountain has not been able to achieve the TSS concentration limits by "properly operating and maintaining the installed treatment facilities. The 'treatment levels actually achieved' are found by using effluent monitoring data from June, 2012 to April, 2017 and procedures in the Technical Support Document for Water Quality-based Toxics Control (TSD) the levels achieved considering the variance of the discharge. These calculated levels actually achieved are a weekly average of 15.8 mg/L and a monthly average of 7.7 mg/L (See Appendix D)."

Therefore, Jug Mountain does not meet the requirements for an increase in the TSS concentration limits to an average monthly limit of 15 mg/L and to an average weekly limit of 22.5 mg/L or to the corresponding mass limits. These levels are higher than the levels actually achieved by the treatment system and therefore are not allowed.

As to the exemption allowing backsliding for which "information is available which was not available at the time of permit issuance … and which would have justified the application of a less stringent effluent limitation at the time of permit issuance" although this exemption to the prohibition against backsliding also applies to the TSS effluent monitoring data, the exemption does not apply for the reasons cited in the comment, nor do the reasons cited in the comment justify less stringent TSS limits. The TSS monitoring data were not available when the original permit was issued. As such, as presented in the Fact Sheet, in developing the draft permit limits, the EPA analyzed effluent data and proposed less stringent TSS limits in the draft permit.

The reasons cited in the comment do not justify the application of a less stringent effluent limitation at the time of issuance, including:

- Any legal actions taken against Raymond Shackleford.
- Costs of operation and maintenance.
- Penalties for violation of permit conditions and attorney's fees to defend Jug Mountain against penalties.

- Operating below the design flow.

The permit is not changed based on the comment.

4. **Comment (Jug Mountain):** I would also like to provide you with a general description of the property and the SBR system, in order to give you a better context for the reasonableness of the request for an increase in the TSS limits. Jug Mountain Ranch Planned Unit Development ("JMR PUD") is a project consisting of approximately 1,430 acres, 1,104 of which are approved for platted recreation / open space. Boulder Creek is the principal stream which courses through the JMR PUD. Cold Creek, which is a small tributary of Boulder Creek, also flows through the JMR PUD. Cattle grazing on 670 acres of the JMR PUD has been eliminated, and Forest Land Improvements have been implemented. 7600 linear feet of streambank stabilization has been done along Boulder Creek.

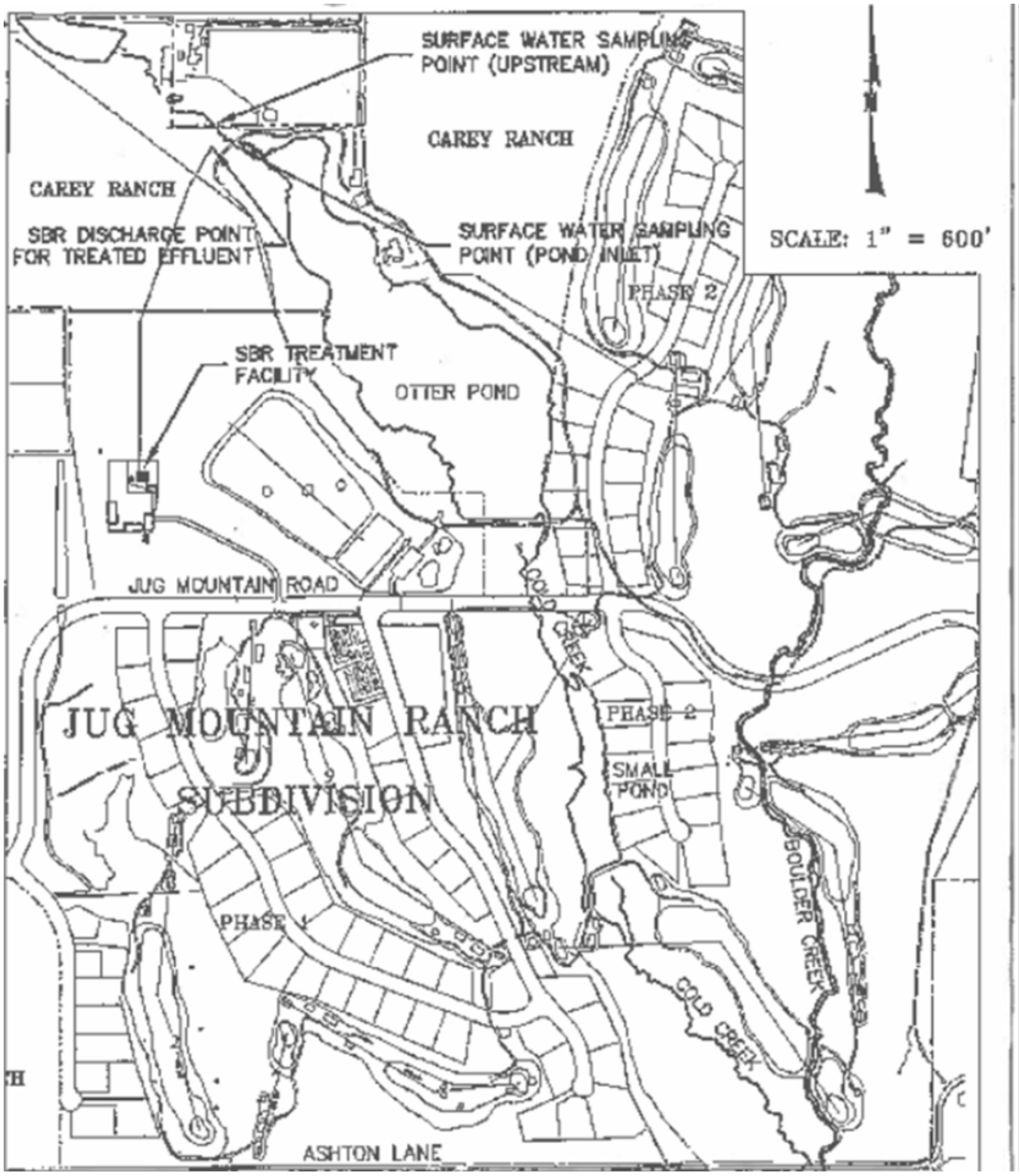
   The outflow from the SBR treatment facility is correctly stated in the Fact Sheet at Section III.A, Outfall Description. However, following is a description that includes a bit more detail regarding the outflow from the SBR treatment facility to Cold Creek: The outflow from the SBR treatment facility passes through a pipe approximately 400 yards long into the bottom of a manhole. The solids settle in the bottom. As the water level rises it flows out through a pipe into a gravel drainfield. Once the effluent passes through the gravel drainfield it enters a wetland.

   The effluent moves from the wetland into Cold Creek above Otter Pond, which then flows into Otter Pond itself. The upper end of Otter Pond is very shallow and is inundated with cattails. Otter Pond is a 25+ surface acre pond that is approximately 25 feet deep behind the dam. From the upper end of Otter Pond (aka Pond Inlet) it is 600+ yards to the top of the spillway at the bottom of Otter Pond, providing the solids ample opportunity to settle out prior to moving downstream. The water level rises and passes over a spillway entering a wetland thick with cattails and into the Small Pond that is 10+ acres in size and shallow. From the Small Pond the water re-enters the creek and flows 500 yards through another heavily vegetated narrow stream before leaving the property and connecting with Boulder Creek south of Ashton Road. Although JMR LLC is not required to test for TSS in the surface water monitoring, we believe (given the description above), that any suspended solids contained in the effluent discharge have settled/filtered out long before any discharge reaches Boulder Creek.

   Further mitigating any negative impact to Boulder Creek is the fact that, between the combination of summer usage and late fall draining of Otter Pond, water does not pass over the spillway for a majority of the year. Otter Pond is the source of irrigation for the golf course. During the growing season (late May through mid-October) JMR LLC can use up to 3 acre feet of water per day (326,000 gallons of water per acre-foot). During JMR LLC's peak irrigation season, water does not pass over the spillway at the bottom of Otter Pond. JMR LLC diverts water from the Carey Ranch Irrigation system into the pond to maintain adequate levels once spring runoff ceases. Also, during late fall, JMR LLC drops the level of Otter Pond well below the bottom of the spillway. This provides protection from an unexpected flush of water from runoff or a mid-winter thaw. In February of 2019, the Otter Pond level was in excess of 10 feet below the top of the spillway.

   Response: The point of compliance with the TSS effluent limitations is the wastewater in the dose tank after the treatment system and before it is pumped to outfall 001.

   Cold Creek is the receiving water for the discharges from Jug Mountain as shown below:



As the Fact Sheet states:

> "Cold Creek and Boulder Creek do not have specific use designations in the Idaho Water Quality Standards (IDAPA 58.01.02.110 through 160). The Water Quality Standards state that such "undesignated waterways" are to be protected for the uses of cold water aquatic life and primary contact recreation (IDAPA 58.01.02.101.01)."

Cold Creek at the point of discharge must be protected for its designated uses. The TSS limits are technology-based limits based on what the treatment system can achieve and must be achieved at the point of compliance to protect the designated uses of Cold Creek.

The effects of the manhole, wetland and instream treatment by Otter Pond are not relevant to the performance-based TSS limits established to protect Cold Creek.

Reductions in phosphorus discharges from cattle grazing areas, forest lands and streambanks are required to offset the discharges from the Jug Mountain treatment plant. These reductions are not relevant to the establishment of the TSS limits based on the level of control achieved by the Jug Mountain treatment plant.

The permit is not changed based on the comment.

5. **Comment (Jug Mountain):** An increase in the TSS concentration limits to 15 mg/L in the average monthly limit and an increase in the average weekly limit to 22.5 mg/L would still put JMR LLC at incredibly high testing limits compared to any other system. Other NPDES Permits for similar projects are significantly more relaxed than the JMR LLC permit. JMR LLC's current limits for TSS and BOD are 7.5 mg/liter for the week and 5.0 mg/liter for the month. Other comparable permits, such as the City of Elk River Wastewater Treatment Facility, NPDES Permit #ID0020362, are 45.0 mg/liter for the week and 30 mg/liter for the month. JMR LLC's prior TSS and BOD exceedances have come nowhere close to these more reasonable limits. And, JMR LLC's design flow of .032 mgd is significantly less than Elk River's design flow of .08, resulting in even less impact. JMR LLC is requesting an increase in TSS concentration limits of ½ of those given in the Elk River permit, which it believes is a more reasonable level.

   Response: Other NPDES Permits are not relevant to the site specific, case-by-case establishment of effluent limitations for Jug Mountain. NPDES permits must establish technology-based effluent limits and any more stringent water quality-based effluent limit. For Jug Moutain the EPA established performance-based technology limits that the monitoring data shows Jug Moutain can achieve. The basis for the limits in the Elk River permit are different than Jug Mountain.

   The permit is not changed based on the comment.

6. **Comment (ICL): Low-Flow Calculation**

   The EPA's method for calculating two different low-flow conditions for this permit seems inconsistent with Idaho's Water Quality Rules. IDAPA 58.01.02.210.03 prescriptively details the acceptable methodologies for calculating low-flow conditions in a receiving water body. For reference, Idaho's water quality rules on calculating low-flow conditions germane to aquatic life criteria allow the following:

   i. Where "1Q10" is the lowest one-day flow with an average recurrence frequency of once in ten (10) years determined hydrologically;

   ii. Where "1B3" is biologically based and indicates an allowable exceedance of once every three (3) years. It may be determined by EPA's computerized method (DFLOW model);

   iii. Where "7Q10" is the lowest average seven (7) consecutive day low flow with an average recurrence frequency of once in ten (10) years determined hydrologically;

   iv. Where "4B3" is biologically based and indicates an allowable exceedance for four (4) consecutive days once every three (3) years. It may be determined by EPA's computerized method (DFLOW model);

   Idaho's rules do not appear to allow for flow data to be segregated into two flow periods (e.g. spring months and non-spring months), nor do they allow the calculation of two separate low-flow conditions, such as is being proposed in this permit. The applicant has stated that there is no flow in Cold Creek during the summer, fall, and winter. Thus, 0 cfs would presumably be the appropriate low-flow condition for Cold Creek. Selecting an appropriate value has direct implications on reasonable potential analyses and compliance with water quality standards, therefore it is critical to accurately and appropriately define low-flow conditions.

Response: See response to Comment 7. Seasonal limits have been discontinued in the final permit making the comment moot.

The permit is not changed based on the comment.

7. Comment (ICL): Seasonal Limits Contingent on Flows

The EPA is proposing seasonal effluent limits for total ammonia and nitrite (as N) due to seasonal variations in the flow regime. Seasonal limits will be applied from July 1 – March 31 (i.e. – outside the spring quarter). We have concerns regarding the reliance on calendar dates for these seasonal limits rather than actual flow in the river. For example, we are concerned about a scenario in which Cold Creek is dry at the end of June, yet the non-spring limits are not yet in force. We encourage EPA and DEQ to add a component to these seasonal limits that make them contingent on non-zero flows in addition to the listed calendar dates, rather than just calendar dates as currently proposed.

Response: The draft permit calculated the reasonable potential for ammonia and nitrite using a mixing zone for the spring months of April 1st through June 30th as there is water available to dilute the discharge. According to Jug Mountain the period during which Cold Creek does not have spring flow, varies from year to year depending on the rate of snow melt contributing to the flow. The EPA determined that Cold Creek is dry during periods of the Spring, therefore seasonal limits for ammonia and nitrite and a mixing zone cannot be provided throughout the three-month period.

Following the close of the comment period in a conference call between IDEQ, the EPA and Jug Mountain, Jug Mountain agreed to meet the water quality standards for ammonia and nitrite at the end of pipe during the spring season as is required for the winter, summer and fall seasons. This is because of the difficulty of varying the operation of the sequential batch reactor with flow in the receiving water and Jug Mountain's ability to achieve the ammonia and nitrite water quality standards for Cold Creek at the end of pipe without a mixing zone. Once the mixing zone was eliminated, there was one limit that applied year round therefore IDEQ withdrew the mixing zone for the spring season and the seasonal effluent limitation for nitrite and ammonia have been replaced with limits that apply all year.

8. Comment (ICL): Sample Pre-Manhole

According to the EPA's Fact Sheet, treated wastewater is piped to a manhole, then into perforated pipes to infiltrate into the ground and eventually into Cold Creek via a direct hydrologic connection. It is unclear if any sampling occurs at, or just prior to the manhole, and we request that the EPA clarify the location of compliance sampling points used in this permit, particularly in relation to the manhole location.

Response: The December 1, 2014 Warning Letter to Jug Mountain Ranch, LLC stated:

> "Mr. McCarley responded by saying that the effluent sample is collected from the wastewater in the dose tank before it is pumped to outfall 001."

The dose tank is the last treatment prior to routing to the manhole.

This location is acceptable and for clarity must be documented in the Quality Assurance Plan required by Section II.B.3.b of the permit.

The permit is not changed based on the comment.