

**PART A – See Attached Antidegradation Review Form****PART B – See Attached Antidegradation Review Form****PART C**

**Is the degradation from this project socially and economically necessary to accommodate important social or economic development in the area in which the waters are located?**

**C1. Describe the social and economic benefits that would be realized through the proposed project, including the number and nature of jobs created and anticipated.**

The Blue Sky Ranch and Resort will be a conference center resort that includes overnight lodging, restaurant, conference and reception rooms, spa and other facilities. The project will be a travel destination which will result in economic benefits to the Wasatch and the surrounding areas. A majority of the jobs created by this development will be in the service industry (i.e. restaurant, lodging, etc). It is estimated that up to 100 full and part-time jobs will be created by this development at full build-out.

**C2. Describe any environmental benefits to be realized through implementation of the proposed project.**

Implementation of the proposed project will result in a majority of the property being preserved as open space. Only a minimal portion of the 3,000 acres will be developed thus maintaining the natural environment of the area.

**C3. Describe any social and economic losses that may result from the project, including impacts to recreation or commercial development.**

None.

**C4. Summarize any supporting information from the affected communities on preserving assimilative capacity to support future growth and development.**

The Blue Sky Ranch and Resort has been reviewed and approved by the Wasatch County Planning Commission. During the approval process the County held open public hearings to receive and address any public comments on the project. The county issued a Low Impact Conditional Use Permit.

It should also be noted that the State of Utah Department of Environmental Quality (UDEQ) is currently preparing a TMDL for the Echo Reservoir Drainage Basin. Blue Sky Ranch & Resort

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has been working with UDEQ to include allocations for the new WRF. The current TMDL evaluation has included allocations for the proposed flows of 39,000 gpd.

**C5. Please describe any structures or equipment associated with the project that will be placed within or adjacent to the receiving waters.**

The BSRR WRF will be located near Alexander Creek. The WRF will include several below ground concrete basins. These basins will include overflow protection. The WRF will also include a small building (approximately 25'x25') to enclose electrical equipment, disinfection equipment, dewatering equipment, and other miscellaneous equipment. A small concrete structure will be constructed adjacent to Alexander Creek to allow the treated water to be discharged in to the creek.

**PART D**

**Identify and rank (from increasing to decreasing potential threat to designated uses) the parameters of concern.**

This modification to the existing UPDES is only requesting an increase to the flow. Therefore, this application requests that the remaining effluent parameters and requirements remain as identified in the existing permits. Included in Appendix A is a copy of the current UPDES permit along with Waste Load Analysis that was completed in 2008.

**PART E**

**E2.1. Provide a description of the treatment process including construction costs and continued operation and maintenance expenses.**

See Appendix B for a summary of the treatment process evaluation.

**E2.2. Provide the mass and concentration of discharge constituents.**

It is requested that the concentration of the discharge constituents be as identified in the current UPDES permit. The mass of the identified constituents will slightly increase based upon the requested flows. UDEQ is currently completing a TMDL Study including the increased flow based upon the requested flow.

**E2.3. Provide a description of the reliability of the system, including the frequency where recurring operation and maintenance may lead to temporary increases in discharged pollutants.**

The proposed WRF will meet and exceed all UDEQ requirements including redundancy on all critical process equipment. The proposed treatment process includes two treatment trains allows for continued operation will maintaining equipment. It is not estimated that any operational or maintenance practices will lead to temporary increases in discharge pollutants.

**E.3. Describe the proposed method and cost of the baseline treatment alternative. The baseline treatment alternative is the minimum required to meet water quality based effluent limits (WQBEL) as determined by the preliminary or final wasteload analysis (WLA) and secondary or categorical effluent limits.**

The proposed treatment process includes a Sequencing Batch Reactor (SBR) which is based upon the activated sludge principals for wastewater treatment. The SBR treatment process is based upon a fill and draw activated sludge system for wastewater treatment. The process utilizes a single reactor (tank) for the fill and draw process with complete mixing during the batch reaction step with subsequent steps of aeration and clarification. All SBR systems have five steps in common (1) fill, (2) react (aeration), (3) settle (sedimentation/clarification), (4) draw (decant), and (5) idle. The advantage of SBR's is that each of these 5 steps can occur in the same tank. For continuous influent flow applications, at least two SBR tanks must be provided so that one tank receives flow while the other completes its treatment cycle. Additional process modifications can be made to enhance nutrient removal. Also, several manufacturers provide a modified version that allows continuous flow into a single batch reactor. Each of these variations are slight modifications to the original SBR process.

In addition to the biological treatment process, the proposed system will include tertiary filtration and UV disinfection. These complete treatment process will ensure that the effluent requirements are met and exceeded.

**E.4 – See Attached Antidegradation Review Form**

**E.5. – See Attached Antidegradation Review Form**

**E.6. – See Attached Antidegradation Review Form**

**PART F – See Attached Antidegradation Review Form**

**PART G – See Attached Antidegradation Review Form**

# ANTIDegradation REVIEW FORM

## UTAH DIVISION OF WATER QUALITY

### Instructions

The objective of antidegradation rules and policies is to protect existing high quality waters and set forth a process for determining where and how much degradation is allowable for socially and/or economically important reasons. In accordance with Utah Administrative Code (UAC R317-2-3), an antidegradation review (ADR) is a permit requirement for any project that will increase the level of pollutants in waters of the state. The rule outlines requirements for both Level I and Level II ADRs, as well as public comment procedures. This review form is intended to assist the applicant and Division of Water Quality (DWQ) staff in complying with the rule but is not a substitute for the complete rule in R317-2-3.5. Additional details can be found in the *Utah Antidegradation Implementation Guidance* and relevant sections of the guidance are cited in this review form.

ADRs should be among the first steps of an application for a UPDES permit because the review helps establish treatment expectations. The level of effort and amount of information required for the ADR depends on the nature of the project and the characteristics of the receiving water. To avoid unnecessary delays in permit issuance, the Division of Water Quality (DWQ) recommends that the process be initiated at least one year prior to the date a final approved permit is required.

DWQ will determine if the project will impair beneficial uses (Level I ADR) using information provided by the applicant and whether a Level II ADR is required. The applicant is responsible for conducting the Level II ADR. For the permit to be approved, the Level II ADR must document that all feasible measures have been undertaken to minimize pollution for socially, environmentally or economically beneficial projects resulting in an increase in pollution to waters of the state.

For permits requiring a Level II ADR, this antidegradation form must be completed and approved by DWQ before any UPDES permit can be issued. Typically, the ADR form is completed in an iterative manner in consultation with DWQ. The applicant should first complete the statement of social, environmental and economic importance (SEEI) in Part C and determine the parameters of concern (POC) in Part D. Once the POCs are agreed upon by DWQ, the alternatives analysis and selection of preferred alternative in Part E can be conducted based on minimizing degradation resulting from discharge of the POCs. Once the applicant and DWQ agree upon the preferred alternative, the review is considered complete, and the form must be signed, dated, and submitted to DWQ.

For additional clarification on the antidegradation review process and procedures, please contact Nicholas von Stackelberg (801-536-4374) or Jeff Ostermiller (801-536-4370).

## Antidegradation Review Form

### Part A: Applicant Information

**Facility Name:** Blue Sky Ranch Wastewater Reclamation Facility

**Facility Owner:** Blue Sky Ranch and Resort

**Facility Location:** 2071 SR32, Wanship UT, 84017

**Form Prepared By:** Bowen Collins & Associates

**Outfall Number:** 001

**Receiving Water:** Alexander Creek

**What Are the Designated Uses of the Receiving Water (R317-2-6)?**

Domestic Water Supply: 1C  
Recreation: 2B - Secondary Contact  
Aquatic Life: 3A - Cold Water Aquatic Life  
Agricultural Water Supply: 4  
Great Salt Lake: None

**Category of Receiving Water (R317-2-3.2, -3.3, and -3.4):** Category 1

**UPDES Permit Number (if applicable):** UT0025763

**Effluent Flow Reviewed:**

Typically, this should be the maximum daily discharge at the design capacity of the facility. Exceptions should be noted.

**What is the application for? (check all that apply)**

- A UPDES permit for a new facility, project, or outfall.
- A UPDES permit renewal with an expansion or modification of an existing wastewater treatment works.
- A UPDES permit renewal requiring limits for a pollutant not covered by the previous permit and/or an increase to existing permit limits.
- A UPDES permit renewal with no changes in facility operations.

**Part B. Is a Level II ADR required?**

*This section of the form is intended to help applicants determine if a Level II ADR is required for specific permitted activities. In addition, the Executive Secretary may require a Level II ADR for an activity with the potential for major impact on the quality of waters of the state (R317-2-3.5a.1).*

**B1. The receiving water or downstream water is a Class 1C drinking water source.**

**Yes** A Level II ADR is required (Proceed to Part C of the Form)

**No** (Proceed to Part B2 of the Form)

**B2. The UPDES permit is new or is being renewed and the proposed effluent concentration and loading limits are higher than the concentration and loading limits in the previous permit and any previous antidegradation review(s).**

**Yes** (Proceed to Part B3 of the Form)

**No** No Level II ADR is required and there is no need to proceed further with review questions.

**B3. Will any pollutants use assimilative capacity of the receiving water, i.e. do the pollutant concentrations in the effluent exceed those in the receiving waters at critical conditions? For most pollutants, effluent concentrations that are higher than the ambient concentrations require an antidegradation review? For a few pollutants such as dissolved oxygen, an antidegradation review is required if the effluent concentrations are less than the ambient concentrations in the receiving water. (Section 3.3.3 of Implementation Guidance)**

**Yes** (Proceed to Part B4 of the Form)

**No** No Level II ADR is required and there is no need to proceed further with review questions.

**B4. Are water quality impacts of the proposed project temporary and limited (Section 3.3.4 of Implementation Guidance)?** Proposed projects that will have temporary and limited effects on water quality can be exempted from a Level II ADR.

- Yes** Identify the reasons used to justify this determination in Part B4.1 and proceed to Part G. No Level II ADR is required.
- No** A Level II ADR is required (Proceed to Part C)

**B4.1 Complete this question only if the applicant is requesting a Level II review exclusion for temporary and limited projects (see R317-2-3.5(b)(3) and R317-2-3.5(b)(4)). For projects requesting a temporary and limited exclusion please indicate the factor(s) used to justify this determination (check all that apply and provide details as appropriate) (Section 3.3.4 of Implementation Guidance):**

- Water quality impacts will be temporary and related exclusively to sediment or turbidity and fish spawning will not be impaired.

**Factors to be considered in determining whether water quality impacts will be temporary and limited:**

- a) The length of time during which water quality will be lowered:
- b) The percent change in ambient concentrations of pollutants:
- c) Pollutants affected:
- d) Likelihood for long-term water quality benefits:
- e) Potential for any residual long-term influences on existing uses:
- f) Impairment of fish spawning, survival and development of aquatic fauna excluding fish removal efforts:

Additional justification, as needed:

**Level II ADR**

*Part C, D, E, and F of the form constitute the Level II ADR Review. The applicant must provide as much detail as necessary for DWQ to perform the antidegradation review. Questions are provided for the convenience of applicants; however, for more complex permits it may be more effective to provide the required information in a separate report. Applicants that prefer a separate report should record the report name here and proceed to Part G of the form.*

**Optional Report Name:** Blue Sky Ranch and Resort Antidegradation Application  
Support Information.

**Part C. Is the degradation from the project socially and economically necessary to accommodate important social or economic development in the area in which the waters are located?** *The applicant must provide as much detail as necessary for DWQ to concur that the project is socially and economically necessary when answering the questions in this section. More information is available in Section 6.2 of the Implementation Guidance.*

**C1. Describe the social and economic benefits that would be realized through the proposed project, including the number and nature of jobs created and anticipated tax revenues.**

**C2. Describe any environmental benefits to be realized through implementation of the proposed project.**

**C3. Describe any social and economic losses that may result from the project, including impacts to recreation or commercial development.**

**C4. Summarize any supporting information from the affected communities on preserving assimilative capacity to support future growth and development.**

**C5. Please describe any structures or equipment associated with the project that will be placed within or adjacent to the receiving water.**

**Part D. Identify and rank (from increasing to decreasing potential threat to designated uses) the parameters of concern.** *Parameters of concern are parameters in the effluent at concentrations greater than ambient concentrations in the receiving water. The applicant is responsible for identifying parameter concentrations in the effluent and DWQ will provide parameter concentrations for the receiving water. More information is available in Section 3.3.3 of the Implementation Guidance.*

**Parameters of Concern:**

Rank	Pollutant	Ambient Concentration	Effluent Concentration
1			
2			
3			
4			
5			

**Pollutants Evaluated that are not Considered Parameters of Concern:**

Pollutant	Ambient Concentration	Effluent Concentration	Justification

**Part E. Alternative Analysis Requirements of a Level II**

**Antidegradation Review.** *Level II ADRs require the applicant to determine whether there are feasible less-degrading alternatives to the proposed project. More information is available in Section 5.5 and 5.6 of the Implementation Guidance.*

**E1. The UPDES permit is being renewed without any changes to flow or concentrations. Alternative treatment and discharge options including changes to operations and maintenance were considered and compared to the current processes. No economically feasible treatment or discharge alternatives were identified that were not previously considered for any previous antidegradation review(s).**

Yes (Proceed to Part F)

No or Does Not Apply (Proceed to E2)

**E2. Attach as an appendix to this form a report that describes the following factors for all alternative treatment options (see 1) a technical description of the treatment process, including construction costs and continued operation and maintenance expenses, 2) the mass and concentration of discharge constituents, and 3) a description of the reliability of the system, including the frequency where recurring operation and maintenance may lead to temporary increases in discharged pollutants. Most of this information is typically available from a Facility Plan, if available.**

**Report Name:** See attached supporting information.

**E3. Describe the proposed method and cost of the baseline treatment alternative. The baseline treatment alternative is the minimum treatment required to meet water quality based effluent limits (WQBEL) as determined by the preliminary or final wasteload analysis (WLA) and any secondary or categorical effluent limits.**

**E4. Were any of the following alternatives feasible and affordable?**

<b>Alternative</b>	<b>Feasible</b>	<b>Reason Not Feasible/Affordable</b>
Pollutant Trading	Yes	In nessary phosphorus trading could occur. This would occur by reduction in grazing cattle within the watershed.
Water Recycling/Reuse	No	Cost prohibitive
Land Application	No	Cost prohibitive
Connection to Other Facilities	No	Cost prohibitive, the nearest WWTP is SBWRD which is over 8 miles away, which require significant piping and pumping costs.
Upgrade to Existing Facility	No	
Total Containment	No	
Improved O&M of Existing Systems	No	
Seasonal or Controlled Discharge	No	
New Construction	Yes	
No Discharge	No	

**E5. From the applicant's perspective, what is the preferred treatment option?**

**The best treatemtn option includes an activated sludge wastewater treatment plant. An SBR treatment process meets the requirements for existing effluent requirements.**

**E6. Is the preferred option also the least polluting feasible alternative?**

Yes

No

If no, what were less degrading feasible alternative(s)?

If no, provide a summary of the justification for not selecting the least polluting feasible alternative and if appropriate, provide a more detailed justification as an attachment.

**Part F. Optional Information**

**F1. Does the applicant want to conduct optional public review(s) in addition to the mandatory public review? Level II ADRs are public noticed for a thirty day comment period. More information is available in Section 3.7.1 of the Implementation Guidance.**

No

Yes

**F2. Does the project include an optional mitigation plan to compensate for the proposed water quality degradation?**

No

Yes

**Report Name:**

**Part G. Certification of Antidegradation Review**

**G1. Applicant Certification**

*The form should be signed by the same responsible person who signed the accompanying permit application or certification.*

Based on my inquiry of the person(s) who manage the system or those persons directly responsible for gathering the information, the information in this form and associated documents is, to the best of my knowledge and belief, true, accurate, and complete.

Print Name: DANIEL L. WEATHERS

Signature: [Handwritten Signature]

Date: APRIL 29, 2013

**G2. DWO Approval**

To the best of my knowledge, the ADR was conducted in accordance with the rules and regulations outlined in UAC R-317-2-3.

Water Quality Management Section

Print Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

