



**ANTIDegradation REVIEW SUMMARY**  
**PATH C: TIER 2 – SIGNIFICANT DEGRADATION**

**1. FACILITY**

NAME	COUNTY
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**2. SUMMARY OF THE POLLUTANTS OF CONCERN**

Pollutants of Concern to be considered include those pollutants reasonably expected to be present in the discharge per the Antidegradation Implementation Procedure Section II.A. and assumed or demonstrated to cause significant degradation. The tier protection levels are specified and defined in rule at 10 CSR 20-7.031(2).

What are the proposed pollutants of concern and their respective effluent limits that the selected treatment option will comply with:

Pollutants of Concern*	Concentration*		Base Case Limit	Basis (WQS, WLA, ELG, Other)**
	mg/L	µg/L		
BOD <sub>5</sub>	X			
TSS	X			
Ammonia (Summer)	X			
Ammonia (Winter)	X			
Total Nitrogen	X			
Total Phosphorus	X			

\* Place an X in appropriate box for the concentration units for each Pollutant of Concern  
\*\* Provide the Basis for the Base Case Limit: WQS – Water Quality Standard, WLA – Wasteload Allocation, ELG – Effluent Limit Guideline, or describe other.

**3. IDENTIFYING ALTERNATIVES**

Supply a summary of the non-discharging alternatives considered. "For Discharges likely to cause significant degradation, an analysis of non-degrading and less-degrading alternatives must be provided," as stated in the Antidegradation Implementation Procedure Section II.B.1. These alternatives include no-discharge. Attach all supportive documentation in the Antidegradation Review report.

**Feasibility of non-discharging alternatives** (regionalization, land application, subsurface irrigation, and recycling or reuse):

Minimum of three (preferably five or more) discharging alternatives\* ranging from less-degrading to degrading including Preferred Alternative (All treatment levels for POCs must at a minimum meet water quality standards):

Discharging Alternative #	Treatment Type	Description
1		
2		
3		
4		
5		
6		

\* Same technology may be multiple alternatives as you have the base unit and add to it with more capacity to provide additional treatment.

**4. DETERMINATION OF THE REASONABLE ALTERNATIVE**

Per the Antidegradation Implementation Procedure Section II.B.2, “a reasonable alternative is one that is practicable, economically efficient and affordable.” Provide basis and supporting documentation in the Antidegradation Review report. **Please do not write “See Report” for any box below.**

**Practicability Summary:**  
 “The practicability of an alternative is considered by evaluating the effectiveness, reliability, and potential environmental impacts,” according to the Antidegradation Implementation Procedure Section II.B.2.a. Examples of factors to consider, including secondary environmental impacts, are given in the Antidegradation Implementation Procedure Section II.B.2.a.

**Economic Efficiency Basis:**  
 What is the design life cycle for the comparison?  
 What interest rate was used in the present worth calculations?

**Economic Efficiency Summary:**  
 Alternatives that are deemed practicable must undergo a direct cost comparison in order to determine economic efficiency. Means to determine economic efficiency are provided in the Antidegradation Implementation Procedure Section II.B.2.b.

**TABLE OF THE ALTERNATIVES EVALUATION (Attach additional page if necessary)**

PARAMETERS	Alternatives #					
	1	2	3	4	5	6
BOD <sub>5</sub> – mg/L						
TSS – mg/L						
Ammonia (Summer) – mg/L						
Ammonia (Winter) – mg/L						
E. Coli – #/100 mL						
Total Nitrogen – mg/L						
Total Phosphorus – mg/L						
Construction Cost – \$						
Operating Cost – \$						
Present Worth – \$						
Ratio present worth to base case						

**Affordability Summary:**  
 Alternatives identified as most practicable and economically efficient are considered affordable if the applicant does not supply an affordability analysis. An affordability analysis per the Antidegradation Implementation Procedure Section II.B.2.c, “may be used to determine if the alternative is too expensive to reasonably implement.”

**Justification for Preferred Alternative:**

**Reasons for Rejecting the other Evaluated Alternatives:**

**Comments/Discussion:**

**5. SOCIAL AND ECONOMIC IMPORTANCE OF THE PREFERRED ALTERNATIVE**

If the preferred alternative will result in significant degradation, then it must be demonstrated that it will allow important economic and social development in accordance to the Antidegradation Implementation Procedure Section II.E. Social and Economic Importance is defined as the social and economic benefits to the community that will occur from any activity involving a new or expanding discharge.

**Identify the affected community:**

The affected community is defined in 10 CSR 20-7.031(2)(B) as the community “in the geographical area in which the waters are located. Per the Antidegradation Implementation Procedure Section II.E.1, “the affected community should include those living near the site of the proposed project as well as those in the community that are expected to directly or indirectly benefit from the project.”

**Identify relevant factors that characterize the social and economic conditions of the affected community:**

Examples of social and economic factors are provided in the Antidegradation Implementation Procedure Section II.E.1., but specific community examples are encouraged.

**Describe the important social and economic development associated with the project:**

Determining benefits for the community and the environment should be site specific and in accordance with the Antidegradation Implementation Procedure Section II.E.1.

**PROPOSED PROJECT SUMMARY:**

Attach the Antidegradation Review report and all supporting documentation. This is a technical document, which must be signed, sealed and dated by a registered professional engineer of Missouri.