



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH  
**ANTIDegradation REVIEW SUBMITTAL**  
**VOLUNTARY TIER 2 – SIGNIFICANT DEGRADATION FOR DOMESTIC**  
**WASTEWATER FACILITIES WITH DESIGN FLOW LESS THAN 50,000**  
**GALLONS PER DAY**

FOR DEPARTMENT USE ONLY	
APP NO.	
CHECK NO.	CHECK NO.
DATE RECEIVED	

**1. APPLICABILITY**

If you answer "Yes" to any of the below questions, a site-specific alternatives analysis may be required.  
 The Missouri Department of Natural Resources' alternatives analysis is *not* applicable to facilities that have a Total Maximum Daily Load (TMDL) or are 303(d) or 305(b) listed for the pollutants of concern addressed in this alternatives analysis, with an exception for *E. coli* since disinfection will be required.

Facilities currently under enforcement will need to coordinate with the Water Protection Program's compliance and enforcement section to determine applicability for the department's alternatives analysis.

- 1.1 Does the receiving waterbody or downstream waterbody have a Total Maximum Daily Load (TMDL)?  Yes  No
- 1.2 Is the receiving waterbody or downstream waterbody 303(d) or 305(b) listed as impaired or potentially impaired?  Yes  No
- 1.3 Is the facility currently under enforcement with the department or the U.S. Environmental Protection Agency?  Yes  No
- 1.4 Is the design flow 50,000 gallons per day or more?  Yes  No
- 1.5 Is a non-discharging system a viable option?  Yes  No

**Submit the following with this form:**

- Regionalization and No Discharge Evaluation Form – Available on the department's website
- Copy of the Geohydrologic Evaluation – Submit request through the Missouri Geological Survey website
- Copy of the Missouri Natural Heritage Review from the Missouri Department of Conservation website

**2. FACILITY**

NAME		COUNTY	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE

**3. OWNER**

NAME			
ADDRESS	CITY	STATE	ZIP CODE
EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE		

**4. CONTINUING AUTHORITY** The regulatory requirement regarding continuing authority is found in 10 CSR 20-6.010(2).

NAME		SECRETARY OF STATE CHARTER NUMBER	
ADDRESS	CITY	STATE	ZIP CODE
EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE		

**5. RECEIVING WATER BODY SEGMENT #1**

NAME \_\_\_\_\_

5.1 Upper end of segment – Location of discharge  
 UTM: X= \_\_\_\_\_, Y= \_\_\_\_\_ OR Lat \_\_\_\_\_, Long \_\_\_\_\_

5.2 Lower end of segment –  
 UTM: X= \_\_\_\_\_, Y= \_\_\_\_\_ OR Lat \_\_\_\_\_, Long \_\_\_\_\_  
 Per the Missouri Antidegradation Implementation Procedure (AIP), the definition of a segment is: “A section of water that is bound, at a minimum, by significant existing sources and confluences with other significant water bodies.”

**6. WATER BODY SEGMENT #2 (If Necessary)**

NAME \_\_\_\_\_

6.1 Upper end of segment – End of Segment #1  
 UTM: X= \_\_\_\_\_, Y= \_\_\_\_\_ OR Lat \_\_\_\_\_, Long \_\_\_\_\_

6.2 Lower end of segment –  
 UTM: X= \_\_\_\_\_, Y= \_\_\_\_\_ OR Lat \_\_\_\_\_, Long \_\_\_\_\_

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

This section must be completed with adequate and thorough descriptions of the social and economic importance associated with the proposed project in accordance with the Antidegradation Implementation Procedure Section II.E. for discharge to be allowed. 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.

**7.1 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.”)

**7.2 Identify the important social and economic development associated with the project:**

**Will the proposed discharging activity:**

Create or expand employment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know	<input type="checkbox"/> N/A
Increase median family income?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know	<input type="checkbox"/> N/A
Reduce the number of households below the poverty line?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know	<input type="checkbox"/> N/A
Increase the community tax base?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know	<input type="checkbox"/> N/A
Increase needed housing supply?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know	<input type="checkbox"/> N/A
Provide necessary public services (e.g., school, infrastructure, fire department, etc.)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know	<input type="checkbox"/> N/A
Correct a public health, safety, or environmental problem?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't know	<input type="checkbox"/> N/A
Other:				

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

The applicant must describe the expected changes in the factors identified in question 7.2 that are associated with the project and provide information on any additional items demonstrating important social and economic development. The applicant should first describe the existing condition of the affected community. This base condition should then be compared to the predicted change (benefit) in social and economic condition after the discharge is allowed. The social and economic measures identified above do not constitute a comprehensive list. Each situation and community is different and will require an analysis of unique social and economic factors in accordance with the Antidegradation Implementation Procedure Section II.E.1.

**7.4 Is any other written correspondence or documentation included with this application to provide further evidence of social and economic importance:**

- No
- Yes
  - Letter(s) from the mayor or community in support of the proposed project
  - Rezoning approval
  - Other:

**8. NO DISCHARGE ALTERNATIVES EVALUATION**

According to the Antidegradation Implementation Procedure Sections I.B. and II.B.1., the feasibility of no-discharge alternatives must be considered. No-discharge alternatives may include connection to a regional treatment facility, surface land application, subsurface land application, and recycle or reuse.

**You must submit the *Regionalization and No-Discharge Evaluation Form (780-2805)* to demonstrate that a non-discharging alternative is not feasible.** If sufficient information is not provided on the *No-Discharge Evaluation Form* to demonstrate that a non-discharging facility is not feasible, a more detailed evaluation of no discharge options must be submitted.

**9. IDENTIFY PREFERRED TREATMENT ALTERNATIVE**

Describe your preferred treatment alternative that has been recommended or approved by a registered professional engineer licensed to practice in Missouri. The preferred treatment alternative must be capable of meeting the effluent limits in the table under item 10 of this form.

Applicants choosing to use a new wastewater technology considered an "unproven technology" in Missouri must comply with the requirements set forth in the Innovative Technology factsheet found on the department's website.

ENGINEERING CONSULTANT NAME		COMPANY NAME	
ADDRESS	STATE	ZIP CODE	TELEPHONE NUMBER WITH AREA CODE
SIGNATURE		EMAIL ADDRESS	

**10. SUMMARY OF THE POLLUTANTS OF CONCERN AND EFFLUENT LIMITS**

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). All POCs in this alternatives analysis were considered to be Tier 2 and significantly degrading in the absence of existing water quality.

As a result of this alternatives analysis review, the department has determined, depending on site specific conditions, there are treatment technologies available that may be economically efficient and practicable, which are capable of meeting the effluent limitations below. If the facility owners do not believe there is a treatment technology that is economically efficient, affordable, or practicable for their facility to meet these limits, a site-specific alternatives analysis will be required.

**The chosen alternative must be capable of meeting the following effluent limitations:**

**EFFLUENT LIMITS – OUTFALLS TO LAKES**

Pollutant of Concern*	Units	Daily Maximum	Weekly Average	Monthly Average
BOD <sub>5</sub>	MG/L		15	10
TSS	MG/L		20	15
pH	SU	6.5– 9.0		6.5 – 9.0
Ammonia as N Summer	MG/L	3.6		1.4
Ammonia as N Winter	MG/L	7.5		2.9
Total Phosphorus****	MG/L	*		0.5
<i>Escherichia coli (E. coli)</i>	#/100ML	630***		126

**EFFLUENT LIMITS – ALL OTHER OUTFALLS**

BOD <sub>5</sub>	mg/L		15	10
TSS	mg/L		15	10
pH	SU	6.5– 9.0		6.5 – 9.0
Ammonia as N Summer	mg/L	1.7		0.6
Ammonia as N Winter	mg/L	5.6		2.1
Total Phosphorus****	mg/L	*		0.5
<i>Escherichia coli (E. coli)</i>	WBC(A) AND WBC (B)	#/100 ML	630***	
	Losing Stream**	#/100 ML	126***	Monitoring only

\* Permit limits for other parameters, including oil and grease, total residual chlorine and nitrates, will be included in the operating permit based on applicable water quality standards and criteria.

Total residual chlorine (TRC) effluent limits of 0.017 mg/L daily maximum, 0.008 mg/L monthly average are recommended if chlorine is used as a disinfectant. Standard compliance language for TRC, including the minimum level (ML), may be included in the operating permit.

\*\* For any facility that will discharge to a waterbody designated as a losing stream or within two miles flow distance upstream of a losing stream.

\*\*\* Publicly owned treatment works will receive a weekly average limit and private facilities will receive a daily maximum limit.

\*\*\*\* Total Phosphorus limits are only applicable to discharges to a lake or watershed of a lake that is a water of the state and has an area of at least 10 acres during normal pool conditions

If any Tier 1 Pollutants of Concern not addressed in this alternatives analysis will be discharged, the applicant must submit *Attachment D: Tier 1 Review* for those pollutants.

**11. APPLICATION FEE** CHECK NUMBER JETPAY CONFIRMATION NUMBER**12. SIGNATURE**

I am authorized and hereby certify that I am familiar with the information contained in this document and to the best of my knowledge and belief such information is true, complete and accurate.

SIGNATURE

DATE

PRINT NAME

TITLE

**PLEASE IDENTIFY YOUR STATUS FOR THIS PROJECT:**  OWNER  CONTINUING AUTHORITY  CONSULTANT

**INSTRUCTIONS FOR COMPLETING  
VOLUNTARY TIER 2 – SIGNIFICANT DEGRADATION FOR DOMESTIC WASTEWATER FACILITIES  
WITH DESIGN FLOW LESS THAN 50,000 GALLONS PER DAY**

All blanks must be filled in when the application is submitted to the Missouri Department of Natural Resources. This includes the **required signatures**.

**Application Information**

1. Check appropriate boxes and complete the required documentation.
2. Provide Facility Name and Physical Location Information.
3. Provide the legal name, mailing address, phone number and email address of the owner. The owner identified in this section and subsequently reflected on the certificate page of the operating permit, is the owner of the regulated activity/discharge being applied for and is not necessarily the owner of the real property on which the activity or discharge is occurring.
4. Complete Continuing Authority contact information. In accordance with 10 CSR 20-6.010(2), a continuing authority is a company, business, entity or person(s) that will be operating the facility and/or ensuring compliance with the permit requirements. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. A continuing authority's name and charter number must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage, unless the continuing authority is an individual(s), government, or otherwise not required to register with the SoS.
5. Provide the project's receiving stream information. The department's mapping system is available on the department's website.
6. Same as 5 if applicable.
- 7.1 Summarize.
- 7.2 Mark appropriate boxes.
- 7.3 Summarize.
- 7.4 Mark appropriate box(es).
8. Complete and include required **Regionalization and No-Discharge Evaluation Form** with the submittal.
9. Summarize.
10. Informational.
11. Check the appropriate box and include check or confirmation number. Applicants can pay fees online by credit card or eCheck through a system called JetPay.
  - Per Section 37.001, RSMo, a transaction fee will be included. The transaction fee is paid to the third party vendor JetPay, not the Department of Natural Resources.
  - Be sure to select the correct fee type and corresponding URL to ensure your payment is applied appropriately. If you are unsure what type of fee to pay, please contact the Water Protection Program's Budget, Fees and Grants Management Unit by phone at 573-522-1485 for assistance.
  - Upon successful completion of your payment, JetPay provides a payment confirmation. Submit this form with a copy of the payment confirmation if requesting a new permit or a permit modification. For permit renewals of active permits, the department will invoice fees annually in a separate request.
  - If you are unable to make your payment online, but want to pay with credit card, you may email your name, phone number, and invoice number, if applicable, to [WPPFEES@dnr.mo.gov](mailto:WPPFEES@dnr.mo.gov). The Budget, Fees and Grants Management Unit will contact you to assist with the credit card payment. **Do not include your credit card information in the email.**
  - Applicants can find fee rates in 10 CSR 20-6.011 ([dnr.mo.gov/pubs/pub2564.htm](http://dnr.mo.gov/pubs/pub2564.htm)).
- Antidegradation: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/769/>
12. All applications must be signed in accordance with 10 CSR 20-6.010(2). Signature for continuing authority needs to be completed only if Section 3 is not same as owner. If a consultant was used for preparation of this submittal, then the form should be signed by the consultant.

If there are any questions concerning this form, contact the Department of Natural Resources, Water Protection Program at 800-361-4827 or 573-751-1300 or visit [dnr.mo.gov/env/wpp](http://dnr.mo.gov/env/wpp).