

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

The Missouri Department of Natural Resources hereby issues a permit to:

Village of Benton City
Benton City WWTF
0.5 miles SW of Co Rd 716 and Co Rd 709 intersection
Benton City, MO 65232

for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources.

As the department does not examine structural features of design or the efficiency of mechanical equipment, the issuance of this permit does not include approval of these features.

A representative of the department may inspect the work covered by this permit during construction. Issuance of a permit to operate by the department will be contingent on the work substantially adhering to the approved plans and specifications.

This permit applies only to the construction of water pollution control components; it does not apply to other environmentally regulated areas.

June 15, 2026

Effective Date

June 14, 2028

Expiration Date

A handwritten signature in black ink, appearing to read "Heather S. Peters", is written over a horizontal line.

Heather S. Peters, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Construction activities include modifying the existing 3-cell lagoon into essentially 1 storage lagoon, including the removal of 3 vertical feet of Cell 1 to Cell 2 inner berm from 804.5 to 801.5 and the removal of 3 vertical feet (ft) of Cell 2 to Cell 3 inner berm from 804.5 to 801.5.

The storage lagoon meets or exceeds the required 105 days of storage at the wet weather design flow. A new floating pump station will be used to pump the wastewater to the land application site, which is adjacent to the storage lagoon. There are 13.26 acres available for land application of wastewater. A center pivot irrigator and end gun system will be used to land apply the wastewater at an application rate of 24 inches/acre/year.

Other aspects of the project include approximately 465 linear ft of 6-inch diameter polyvinyl chloride (PVC) Standard Dimension Ratio (SDR)-21 pipe; electrical and controls; air release valve and vault; a manhole; effluent control structure modifications; and gravel access road improvements.

This project will also include general site work appropriate to the scope and purpose of the project and all necessary appurtenances to make a complete and usable wastewater treatment facility.

II. COST ANALYSIS FOR COMPLIANCE

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or publicly owned treatment works, the department shall make a “finding of affordability” on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

The department is not required to determine cost analysis for compliance because the permit contains no new conditions or requirements that convey a new cost to the facility.

III. CONSTRUCTION PERMIT CONDITIONS

The permittee is authorized to construct subject to the following conditions:

1. This construction permit does not authorize discharge.

2. All construction shall be in accordance with the plans and specifications prepared by Klingner & Associates, P.C., and signed and sealed by the following:
 - Mark C. Bross, P.E. 08/15/2024 Project Manual/Specifications
 - Joshua D. Hartsock, P.E. 08/23/2023 Dwgs: Cover, G101, C100, C101, C501, C502
 - Dallas L. Haerr, P.E. 08/25/2023 Dwgs: E101, E501

Front end documents were updated in April 2026. This set of plans and specifications is approved by the department on June 15, 2026.

3. Regulation 10 CSR 20-4.040(18)(B)1 requires that projects be publicly advertised, allowing sufficient time for bids to be prepared and submitted. Projects should be advertised at least 30 days prior to bid opening.
4. The department must be contacted in writing prior to making any changes to the approved plans and specifications that would directly or indirectly have an impact on the capacity, flow, system layout, or reliability of the proposed wastewater treatment facilities or any design parameter that is addressed by 10 CSR 20-8, in accordance with 10 CSR 20-8.110(11).
5. As per 10 CSR 20-4.040, all changes in contract price or time within the approved scope of work must be by change order in accordance with Section 19 of this rule.
6. State and federal law does not permit bypassing of raw wastewater; therefore, steps must be taken to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the department's electronic Sanitary Sewer Overflow/Bypass Reporting system at <https://dnr.mo.gov/mogem/> or Northeast Regional Office per 10 CSR 20-7.015(9)(G).
7. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of 1 acre or more to obtain a Missouri State Operating Permit to discharge stormwater. The permit requires best management practices sufficient to control runoff and sedimentation to protect waters of the state. Land disturbance permits will only be obtained by means of the department's ePermitting system available online at <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>. See <https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting> for more information.
8. A United States Army Corps of Engineers (USACE) Section 404 Department of Army permit (§404) along with the department's Section 401 Water Quality Certification or waiver (§401) may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied. If construction activity will disturb any land below the ordinary high-water mark of jurisdictional waters of the U.S., then a §404/§401 will likely be required. Since the USACE makes determinations on what is jurisdictional, you must contact the USACE to determine permitting requirements.

See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality> for more information or you may contact the department's Water Protection Program at 573-522-4502 or wpsc401cert@dnr.mo.gov.

9. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements, including, but not limited to, those items listed below.
- Flood protection shall apply to new construction and to existing facilities undergoing major modification. The wastewater facility structures, electrical equipment, and mechanical equipment shall be protected from physical damage by not less than the 100-year flood elevation. 10 CSR 20-8.140(2)(B)
 - Unless another distance is determined by the Missouri Geological Survey or by the department's Public Drinking Water Branch, the minimum distance between wastewater treatment facilities and all potable water sources shall be at least 300 feet. 10 CSR 20-8.140(2)(C)1.
 - No treatment unit with a capacity of 22,500 gallons per day (gpd) or less shall be located closer than the minimum distance of 200 feet to a neighboring residence and 50 ft to property line for lagoons. See 10 CSR 20-2.010(68) for the definition of a residence. 10 CSR 20-8.140(2)(C)2.
 - Facilities shall be readily accessible by authorized personnel from a public right-of-way at all times. 10 CSR 20-8.140(2)(D)
 - Where a separate non-potable water supply is to be provided, a break tank will not be necessary, but all system outlets shall be posted with a permanent sign indicating the water is not safe for drinking. 10 CSR 20-8.140(7)(D)4.
 - A means of flow measurement shall be provided at all wastewater treatment facilities. 10 CSR 20-8.140(7)(E)
 - Adequate provisions shall be made to effectively protect facility personnel and visitors from hazards [including relevant subsections]. 10 CSR 20-8.140(8)
 - The minimum berm width shall be 8 ft to permit access of maintenance vehicles. 10 CSR 20-8.200(4)(A)2.
 - Minimum freeboard shall be 2 feet. 10 CSR 20-8.200(4)(A)3.
 - An emergency spillway shall be provided. 10 CSR 20-8.200(4)(A)4.
 - An emergency spillway must have the ability for a representative sample to be collected if a discharge occurs. 10 CSR 20-8.200(4)(A)4.C.
 - Soil shall be compacted with the moisture content between 2 percent below and 4 percent above the optimum water content and compacted to at least 95 percent maximum dry density test method. 10 CSR 20-8.200(4)(B)
 - Unlined corrugated metal pipe shall not be used for influent lines due to corrosion problems. 10 CSR 20-8.200(4)(D)1.
 - The influent line(s) shall be located along the bottom of the lagoon so that the top of the pipe is just below the average elevation of the lagoon seal; however, there shall be an adequate seal below the pipe. 10 CSR 20-8.200(4)(D)3.

- The wetted application area of a surface irrigation system must be located:
 - Outside of flood-prone areas having a flood frequency greater than once every 10 years; 10 CSR 20-8.200(6)(B)1.
 - At least 150 ft from existing dwellings or public use areas, excluding roads or highways; 10 CSR 20-8.200(6)(B)2.A.
 - At least 50 ft inside the property line; 10 CSR 20-8.200(6)(B)2.B.
 - At least 300 ft from any sinkhole, losing stream, or other structure or physiographic feature that may provide direct connection between the ground water table and the surface; 10 CSR 20-8.200(6)(B)2.C.
 - At least 300 ft from any existing potable water supply well not located on the property. Adequate protection shall be provided for wells located on the application site; 10 CSR 20-8.200(6)(B)2.D.
 - One hundred ft to wetlands, ponds, gaining streams (classified or unclassified; perennial or intermittent); 10 CSR 20-8.200(6)(B)2.E. and
 - If an established vegetated buffer or the wastewater is disinfected, the setbacks established in subsections (A)–(E) above may be decreased if the applicant demonstrates the risk is mitigated. 10 CSR 20-8.200(6)(B)2.F.
- The wetted application area of a surface irrigation system must be fenced, or if not fenced, provide in the construction permit application or the facility plan, the
 - Method of disinfection being utilized; 10 CSR 20-8.200(6)(B)3.A.
 - Suitable barriers in place, 10 CSR 20-8.200(6)(B)3.B. or
 - Details on how public access is limited and not expected to be present. 10 CSR 20-8.200(6)(B)3.C.
- At a minimum, treatment prior to irrigation shall provide performance equivalent to that obtained from a primary wastewater lagoon cell and include 105 days wastewater storage in addition to the primary volume. 10 CSR 20-8.200(6)(C)
- The public shall not be allowed into an area when irrigation is being conducted; 10 CSR 20-8.200(6)(F)2.

10. Upon completion of construction:

- A. The Village of Benton City will become the continuing authority for operation and maintenance of this facility.
- B. Submit an electronic copy of the as-builts if the project was not constructed in accordance with previously submitted plans and specifications; and
- C. Submit the Statement of Work Completed form ([Wastewater Construction Statement of Work Completed MO 780-2155 | Missouri Department of Natural Resources](#)) to the department in accordance with 10 CSR 20-6.010(5)(N) and request the operating permit modification be issued.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

This No-Discharge Land Application system addresses new effluent limits that went into effect August 1, 2025, while reducing the financial burden of the citizens of the Village of Benton City.

2. FACILITY DESCRIPTION

The Village of Benton City currently has a 3-cell lagoon for wastewater treatment. Effluent limits for ammonia and *E. coli* went into effect August 1, 2025. Modifications to the treatment process would meet the effluent limitations and consist of altering the existing lagoon cells for the required wastewater storage and establishing a nearby field for land application of the wastewater as surface irrigation, using a center pivot irrigator.

The Village of Benton City WWTF is located 0.5 miles southwest of County Road 716 and County Road 709 intersection, in Audrain County. The facility has a design average flow of 20,000 gpd and serves a population equivalent of approximately 200. The design is based on a peak flow of 166,500 gpd and the wet weather design flow (including 1 in 10-year, 24 hour return frequency) is calculated to be 25,414 gpd.

3. COMPLIANCE PARAMETERS

The proposed project is required to meet the requirements of MO-0103021 Table A-1 and A-2. While there are no effluent limits required with land application, flow dispersal shall be monitored and in the event of an emergency bypass effluent concentrations will be monitored consistent with Special Condition 1.

4. REVIEW OF MAJOR TREATMENT DESIGN CRITERIA

- Storage Lagoon – Lagoon cells will be modified by reducing the height of the inner berms and sealed with a 12-in clay liner. The basin is maintained at 3:1 side slopes, a maximum depth from the top of the berm to the lagoon floor of 15 ft, with 2 ft for sludge depth, and 2 ft of freeboard plus 1 ft above the emergency spillway. The operating depth is 9 ft. The total surface area of the basin at the center top of the berm is 107,288 ft (2.5 acres). The total available storage volume between the maximum operating depth and the minimum operating depth is approximately 4,866,612 gallons at elevation of 801. This provides approximately 243 days of retention at the design flow of 20,000 gpd. The minimum required storage of 105 days for Audrain County is met when including the 1-in-10 year rainfall minus evaporation. The berm width will be 10 ft. This lagoon site is going to be fenced.
- Land Application Site –The land application site is adjacent to the Benton City WWTF in Audrian County. The available land application site is approximately 13.2 acres.

- Wastewater Irrigation – Wastewater irrigation will be center pivot irrigator with an end gun served by a 20 horsepower pump rated at 442 gallons per minute. The irrigation line from the storage basin to the center pivot is approximately 394 linear feet of 6-inch PVC force main with a Dimension Ratio (DR) of 21. The main spray and end gun areas are 11.2 and 1.38 acres, respectively. The end gun spray distance is 75 ft. Proposed application rates are 0.2 inches/hour, 0.5 inch/day, 1.0 inches/week, and 24 inches/year.

5. OPERATING PERMIT

Missouri State Operating Permit No. MO-0103021 will require a modification to reflect the construction activities. The modified Village of Benton City WWTF, MO-0103021, was successfully public noticed from August 30, 2024, to September 30, 2024, with no comments received. When construction reaches substantial completion, submit the Statement of Work Completed to the department in accordance with 10 CSR 20-6.010(5)(N) and request that the operating permit modification be issued.

Refaat Mefrakis, P.E.
On behalf of Financial Assistance Center
Clean Water Engineering Unit

APPENDIX

1. Lagoon Layout

APPENDIX 1 – Lagoon Layout





MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
**APPLICATION FOR CONSTRUCTION PERMIT –
WASTEWATER TREATMENT FACILITY**

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$1000.00	CHECK NO. 6185
DATE RECEIVED 11/30/23	

APPLICATION OVERVIEW

The Application for Construction Permit – Wastewater Treatment Facility form has been developed in a modular format and consists of Part A and B. **All applicants must complete Part A.** Part B should be completed for applicants who currently land-apply wastewater or propose land application for wastewater treatment. **Please read the accompanying instructions before completing this form. Submittal of an incomplete application may result in the application being returned.**

PART A – BASIC INFORMATION

1.0 APPLICATION INFORMATION (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 1.1 Is this a Federal/State funded project? ☒ YES ☐ N/A Funding Agency: SRF Project #: 19-1113.000
- 1.2 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?
☐ YES Date of Approval: _____ ☒ N/A
- 1.3 Has the department approved the proposed project's facility plan*?
☒ YES Date of Approval: 3-10-22 ☐ NO (If No, complete No. 1.4.)
- 1.4 [Complete only if answered No on No. 1.3.] Is a copy of the facility plan* for wastewater treatment facilities included with this application?
☐ YES ☒ NO ☐ Exempt because _____
- 1.5 Is a copy of the appropriate plans* and specifications* included with this application?
☒ YES Denote which form is submitted: ☐ Hard copy ☒ Electronic copy (See instructions.) ☐ NO
- 1.6 Is a summary of design* included with this application? ☒ YES ☐ NO
- 1.7 Has the appropriate operating permit application (A, B, or B2) been submitted to the department?
☐ YES Date of submittal: _____
☐ Enclosed is the appropriate operating permit application and fee submittal. Denote which form: ☐ A ☐ B ☐ B2
☒ N/A: However, In the event the department believes that my operating permit requires revision to permit limitation such as changing equivalent to secondary limits to secondary limits or adding total residual chlorine limits, please share a draft copy prior to public notice? ☐ YES ☐ NO
- 1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency? ☒ YES ☐ NO
- 1.9 Is the appropriate fee or JetPay confirmation included with this application? ☒ YES ☐ NO
See Section 7.0

* Must be affixed with a Missouri registered professional engineer's seal, signature and date.

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT BENTON CITY WASTEWATER TREATMENT FACILITY IMPROVEMENTS	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 612,356.00
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2.3 PROJECT DESCRIPTION

Project consists of converting the discharging 3 cell lagoon into a no-discharge system utilizing a floating pump station, forcemain, and center pivot irrigator to a tract of land attached to the site.

2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

Sludge to be retained in lagoon.

2.5 DESIGN INFORMATION

A. Current population: 104; Design population: 104

B. Actual Flow: 19,200 gpd; Design Average Flow: 20,000 gpd;
Actual Peak Daily Flow: 63,936 gpd; Design Maximum Daily Flow: 66,600 gpd; Design Wet Weather Event: _____

2.6 ADDITIONAL INFORMATION

- A. Is a topographic map attached? ☐ YES ☒ NO
- B. Is a process flow diagram attached? ☐ YES ☒ NO

RECEIVED

NOV 20 2023

Water Protection Program

3.0 WASTEWATER TREATMENT FACILITY					
NAME BENTON CITY WTTF		TELEPHONE NUMBER WITH AREA CODE 5735812498		E-MAIL ADDRESS hayslc@hotmail.com	
ADDRESS (PHYSICAL) 0.5 mi SW of CR716 & CR709 intersection		CITY Benton City	STATE MO	ZIP CODE 65232	COUNTY Audrain
Wastewater Treatment Facility: Mo- 0103021 (Outfall 1 Of 1)					
3.1 Legal Description: _____ ¼, _____ ¼, _____ ¼, Sec. 12, T 50N, R 8W (Use additional pages if construction of more than one outfall is proposed.)					
3.2 UTM Coordinates Easting (X): 607983 Northing (Y): 4332043 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)					
3.3 Name of receiving streams: West Fork Cuivre River (C)					
4.0 PROJECT OWNER					
NAME Village of Benton City		TELEPHONE NUMBER WITH AREA CODE 573-581-2498		E-MAIL ADDRESS hayslc@hotmail.com	
ADDRESS P.O. Box 28		CITY Benton City	STATE MO	ZIP CODE 65232	
5.0 CONTINUING AUTHORITY: 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.					
NAME Village of Benton City		TELEPHONE NUMBER WITH AREA CODE 573-581-2498		E-MAIL ADDRESS hayslc@hotmail.com	
ADDRESS P.O. Box 28		CITY Benton City	STATE MO	ZIP CODE 65232	
5.1 A letter from the continuing authority, if different than the owner, is included with this application. ☐ YES ☐ NO ☒ N/A					
5.2 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A MISSOURI PUBLIC SERVICE COMMISSION REGULATED ENTITY.					
A. Is a copy of the certificate of convenience and necessity included with this application? ☐ YES ☐ NO					
5.3 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A PROPERTY OWNERS ASSOCIATION.					
A. Is a copy of the as-filed restrictions and covenants included with this application? ☐ YES ☐ NO					
B. Is a copy of the as-filed warranty deed, quitclaim deed or other legal instrument which transfers ownership of the land for the wastewater treatment facility to the association included with this application? ☐ YES ☐ NO					
C. Is a copy of the as-filed legal instrument (typically the plat) that provides the association with valid easements for all sewers included with this application? ☐ YES ☐ NO					
D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? ☐ YES ☐ NO					
6.0 ENGINEER					
ENGINEER NAME / COMPANY NAME Mark Bross, Klingner & Associates P.C.		TELEPHONE NUMBER WITH AREA CODE 573-221-0020		E-MAIL ADDRESS mcb@klingner.com	
ADDRESS 4510 Paris Gravel Road		CITY Hannibal	STATE MO	ZIP CODE 63401	
7.0 APPLICATION FEE					
☐ CHECK NUMBER ☐ JETPAY CONFIRMATION NUMBER					
8.0 PROJECT OWNER: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.					
PROJECT OWNER SIGNATURE 					
PRINTED NAME Lois Hays				DATE 1-24-23	
TITLE OR CORPORATE POSITION Mayor		TELEPHONE NUMBER WITH AREA CODE 573-581-2498		E-MAIL ADDRESS hayslc@hotmail.com	
Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM P.O. BOX 176 JEFFERSON CITY, MO 65102-0176					
END OF PART A.					
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHETHER PART B NEEDS TO BE COMPLETE.					

PART B – LAND APPLICATION ONLY

(Submit only if the proposed construction project includes land application of wastewater.)

8.0 FACILITY INFORMATION

8.1 Type of wastewater to be irrigated: ☐ Domestic ☐ State/National Park ☐ Seasonal business
☒ Municipal ☐ Municipal with a pretreatment program or significant industrial users
☐ Other (explain) _____

8.2 Months when the business or enterprise will operate or generate wastewater:

☒ 12 months per year ☐ Part of the year (list months): _____

8.3 This system is designed for:

- ☒ No-discharge.
☐ Partial irrigation when feasible and discharge rest of time.
☐ Irrigation during recreational season, April – October, and discharge during November – March.
☐ Other (explain) _____.

9.0 STORAGE BASINS

9.1 Number of storage basins: 3 (Use additional pages if greater than three basins.)

9.2 Type of basins: ☐ Steel ☐ Concrete ☐ Fiberglass ☒ Earthen ☐ Earthen with membrane liner

9.3 Storage basin dimensions at inside top of berm (feet). Report freeboard as feet from top of berm to emergency spillway or overflow pipe.

Basin #1:	Length <u>302</u>	Width <u>203</u>	Depth <u>5</u>	Freeboard <u>2</u>	Depth _____	Safety _____	% Slope <u>3</u>
Basin #2:	Length <u>140</u>	Width <u>110</u>	Depth <u>5</u>	Freeboard <u>2</u>	Depth _____	Safety _____	% Slope <u>3</u>
Basin #3:	Length <u>100</u>	Width <u>140</u>	Depth <u>8</u>	Freeboard <u>2</u>	Depth _____	Safety _____	% Slope _____

9.4 Storage Basin operating levels (report as feet below emergency overflow level).

Basin #1:	Maximum operating water level <u>5</u> ft	Minimum operating water level <u>3</u> ft
Basin #2:	Maximum operating water level <u>5</u> ft	Minimum operating water level <u>3</u> ft
Basin #3:	Maximum operating water level <u>8</u> ft	Minimum operating water level <u>3</u> ft

9.5 Design depth of sludge in storage basins.

Basin #1: 3 ft Basin #2: 3 ft Basin #3: 3 ft

9.6 Existing sludge depth, if the basins are currently in operation.

Basin #1: 2 ft Basin #2: 2 ft Basin #3: 2 ft

9.7 Total design sludge storage: 3 dry tons and _____ cubic feet

10.0 LAND APPLICATION SYSTEM

10.1 Number of irrigation sites 1 Total Acres 13.78 Maximum % field slopes <5
Location: _____ ¼, _____ ¼, _____ ¼, 12 Sec. 50N T 8W R Audr. County 13.78 Acres
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
(Use additional pages if greater than three irrigation sites.)

10.2 Type of vegetation: ☒ Grass hay ☐ Pasture ☐ Timber ☒ Row crops
☐ Other (describe) _____

10.3 Wastewater flow (dry weather) gallons per day: Average annual 19.2K Seasonal _____ Off-season _____

10.4 Land application rate (design flow including 1-in-10 year storm water flows):

Design: 24 inches/year .06 inches/hour 0.5 inches/day 3 inches/week
Actual: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week

10.5 Total irrigation per year (gallons): Design: 152K gal Actual: 130K gal

10.6 Actual months used for irrigation (check all that apply):

☐ Jan ☐ Feb ☐ Mar ☒ Apr ☒ May ☒ Jun ☒ Jul ☒ Aug ☒ Sep ☐ Oct ☐ Nov ☐ Dec

10.7 Land application rate is based on:

- ☒ Hydraulic Loading ☐ Other (describe) _____
☐ Nutrient Management Plan (N&P) If N&P is selected, is the plan included? ☐ YES ☐ NO