

**STATE OF MISSOURI**  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**CONSTRUCTION PERMIT**

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

City of Rolla  
PO Box 979  
Rolla, MO 65402

for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

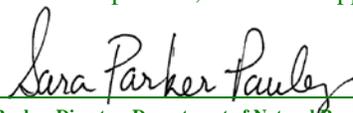
Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department).

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.

September 26, 2014  
Effective Date

  
Sara Parker Pauley, Director, Department of Natural Resources

September 25, 2016  
Expiration Date

  
John Madras, Director, Water Protection Program

## **CONSTRUCTION PERMIT**

### **I. CONSTRUCTION DESCRIPTION**

The proposed wastewater system will consist of a collection system and a no-discharge irrigation treatment system.

The collection system has conventional gravity sewer lines, lift stations and force mains. Construction and installation of the collection system include an approximately 4830 linear feet (lf) of 10-inch (10") polyvinyl chloride (PVC) Standard Dimension Ratio (SDR)-35 gravity sewer with 11 manholes, double (2) 70 lf of 4-inch (4") PVC SDR-21 parallel force mains with cleanouts and air release valves, a duplex influent submersible buried lift stations with each pump capable of operating at 120 gallons per minute (GPM) at 22 feet of total dynamic head (TDH) in a pre-cast concrete wet well, and an irrigation lift station with one (1) submersible non-clog wastewater pump capable of operating at 300 GPM at 145 feet TDH. The irrigation pump station pushes effluent into buried force mains which are connected to multiple large volume impact sprinkler heads. The system also contains an automatic filter and a flow meter.

The no-discharge irrigation treatment system consists of a storage pond and a land application field. The facility proposed to construct a three acre storage pond which would serve as initial treatment and storage for winter months up to 90 days. A surface area of the pond is 160,650 square feet at 7.5 feet above the bottom of the pond and the bottom area of the pond is 123,750 square feet. The pond provides 572,280 cube feet storage volume at its operation depth which is from 2 feet to 6 feet.

Construction and installation of a land application field include an approximately 1,270 linear feet of six-inch pressure PVC SDR-21 pipe, 2,630 linear feet of four-inch pressure PVC SDR-21 pipe, 1,710 linear feet of three-inch PVC SDR-21 pressure pipe; six irrigation zones – each zone with six – 150 foot diameter sprinkler heads – each head designed for 50 gallons per minute at 45 psi; 15.5 acres of grass will be irrigated. The irrigation application rate will be less than 1" per day, 3" per week, or 24" per year.

The above installations and all the necessary appurtenances make the facility complete and usable. The wastewater treatment facility is able to treat an average daily dry weather flow of 30,500 gallons per day and serve a population equivalent (PE) of 407. The total storage capacity of the lagoon is approximately 90 days at the 1 in 10 year rainfall-evaporation flow.

### **II. FINDING OF AFFORDABILITY**

An Affordability Determination and Finding was waived as requested by the City of Rolla in accordance with RSMO §644.145. A permit applicant in a community with three thousand and three hundred (3,300) or more residents may voluntarily certify that the applicable requirements are affordable to implement or may waive the requirement for an affordability finding.

### **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 submitted by Jack Mentink, PE of Integrity Engineering, Inc. on June 5, 2014.
3. 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(8).
4. 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 Southeast Regional Office per 10 CSR 20-7.015(9)(E)2.
5. This Construction Permit is invalid for projects required to comply with the requirements contained in 10 CSR 20-4, "Grants and Loans"
6. Protection of drinking water supplies shall be in accordance with 10 CSR 20-8.120(10). "There shall be no physical connections between a public or private potable water supply system and a sewer, or appurtenance thereto which would permit the passage of any wastewater or polluted water into the potable supply. No water pipe shall pass through or come in contact with any part of a sewer manhole."
7. Sewers in relation to water works structures shall meet the requirements of 10 CSR 23-3.010 with respect to minimum distances from public water supply wells or other water supply sources and structures.
  - A. Sewer mains shall be laid at least ten feet horizontally from any existing or proposed water main. The distances shall be measured edge-to-edge. In cases where it is not practical to maintain a ten foot separation, the Department may allow a deviation on a case-by-case basis, if supported by data from the design engineer. Such a deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on either side of the sewer and at an elevation so the bottom of the water main is at least 18 inches above the top of the sewer. If it is impossible to obtain proper horizontal and vertical separation as described above for sewers, the sewer must be constructed of slip-on or mechanical joint pipe or continuously encased and be pressure tested to 150 pounds per square inch to assure water tightness.
  - B. Manholes should be located at least ten feet horizontally from any existing or proposed water main.

- C. Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. When it is impossible to obtain proper vertical separation as stipulated above, one of the following methods must be specified:
  - a. The sewer shall be designed and constructed equal to the water pipe and shall be pressure tested to assure water tightness prior to backfilling; or
  - b. Either the water main or sewer line may be continuously encased or enclosed in a watertight carrier pipe which extends ten feet on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be of materials approved by the Department for use in water main construction.
8. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of one 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 [www.dnr.mo.gov/env/wpp/epermit/help.htm](http://www.dnr.mo.gov/env/wpp/epermit/help.htm). See [www.dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm](http://www.dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm) for more information.
9. A United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) issued by the Department or permit waiver 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 be required. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Water Protection Program at 573-751-1300 for more information. See [www.dnr.mo.gov/env/wpp/401/](http://www.dnr.mo.gov/env/wpp/401/) for more information.
10. Upon completion of construction;
  - A. The City of Rolla will become the continuing authority for operation, maintenance, and modernization of these facilities;
  - B. Submit the enclosed form Statement of Work Completed (SOWC) to the Department in accordance with 10 CSR 20-6.010(5)(D);
  - C. Submit an electronic copy of the as builts if the project was not constructed in accordance with previously submitted plans and specifications; and
  - D. Upon construction completion and a SOWC form is received by the Department, an operating permit MO-0137693 will be issued to the facility as the facility's operating permit.

## **IV. REVIEW SUMMARY**

### **1. CONSTRUCTION PURPOSE**

The City of Rolla has owned the airport for over 50 years and has not been able to maximize the value of this aviation related site. The main difficulty that the City has had in promoting the property has been the lack of proper municipal style infrastructure, like proper wastewater collection and treatment systems that can receive and process domestic wastewater and dispose of it in accordance with current Department of Natural Resources wastewater regulations. The City proposes to build a new sewer infrastructure to meet needs of the airport operations and commercial clients.

### **2. FACILITY DESCRIPTION**

The facility is a no-discharge system.

The proposed new collection system will include 10" PVC SDR-35 gravity line, duplex submersible buried lift station and 4" PVC SDR-21 force mains.

The proposed wastewater treatment system will include a three-acre storage pond and 15.5 acres land application field.

### **3. COMPLIANCE PARAMETERS**

For the storage basin operation, the facility must to monitor Storage Basin Freeboard in feet once per month and Precipitation in inches on daily base.

For irrigated wastewater, the facility must to monitor Total Kjeldahl Nitrogen as N in mg/L once per quarter and Nitrate Nitrogen as N in mg/L once per year.

For land application operation, the facility must to monitor Irrigation Period in hours, Volume Irrigated in gallons, Application Area in acres, and Application Rate in inches on daily base.

### **4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA**

The lift station on this project will be a duplex submersible buried lift stations. Two solids passing pumps which pump the wastewater will be installed on a slide rail system and be placed in a pre-cast concrete wet-well.

A three acre storage pond would serve as initial treatment and 90 days storage for winter months when land application was not feasible.

The irrigation application rate will be limited to no more than 1" per day, 3" per week, and 24" per year. The most of the area of the proposed irrigation field has slopes of 3 to 8%. The land application site soils are described as moderately well drained and will be able to accommodate the 30,500 GPD design flow when the total applied area is 15.5 acres.

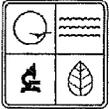
## **5. OPERATING PERMIT MODIFICATION**

Upon construction completion and a SOWC form is received by the Department, an operating permit MO-0137693 will be issued to the facility as the facility's operating permit.

Lei Hou, PE  
Engineering Section  
[Lei.hou@dnr.mo.gov](mailto:Lei.hou@dnr.mo.gov)

RECEIVED

6/6/14 (P)



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

JUN 5 2014  
WATER PROTECTION PROGRAM

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$150.00	CHECK NO. 43403
DATE RECEIVED 6/5/14	

8R

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: EDA Project #: 05-01-05328
- 1.2 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?  
 YES Date of Approval: \_\_\_\_\_  
 Attached is the No Degradation Evaluation Conclusion of Antidegradation Review form
- 1.3 Has the department approved the proposed project's facility plan\*?  
 YES Date of Approval: 9/13  NO  N/A (If Not Applicable, complete No. 1.4.)
- 1.4 [Complete only if answered Not Applicable on No. 1.3.] Is a copy of the engineering report\* for wastewater treatment facilities with a design flow less than 22,500 gpd included with this application?  
 YES  NO
- 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: 6/14  
 Enclosed is the appropriate operating permit application submittal. Denote which form:  A  B  B2  
 N/A Please explain: \_\_\_\_\_
- 1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency?  YES  NO
- 1.9 Is the appropriate fee included with this application?  YES  NO (See instructions for appropriate fee.)

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

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT

Rolla National Airport Wastewater Irrigation

2.2 PROJECT DESCRIPTION

4475 LF of 10" Gravity Sewer line with a duplex lift station, into a 3 acre storage pond. The wastewater is pumped into 6 solid set irrigation fields which cover 18.60 acres.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

Sludge is stored in the storage pond and is expected to have at least 30 years worth of storage before it impacts the pond.

2.4 DESIGN INFORMATION

- A. Current population: 30; Design population: 400
- B. Actual Flow: 3500 gpd; Design Average Flow: 30500 gpd;  
Actual Peak Daily Flow: 35000 gpd; Design Maximum Daily Flow: 60000 gpd

2.5 ADDITIONAL INFORMATION

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

3.0 WASTEWATER TREATMENT FACILITY				
NAME RNA Wastewater irrigation facility		TELEPHONE NUMBER WITH AREA CODE 5733648659		E-MAIL ADDRESS shargis@rollacity.org
ADDRESS (PHYSICAL) Hwy 28 & Hwy 63		CITY Vichy	STATE MO	ZIP CODE 65580
COUNTY Maries				
Wastewater Treatment Facility: Mo- (Outfall 1 Of 1 )				
3.1 Legal Description: _____ ¼, SW _____ ¼, NE _____ ¼, Sec. 1 _____, T 39N _____, R 8W (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): <u>608645.75</u> Northing (Y): <u>4222559.67</u> For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: <u>Tab. to Dr. #1</u>				
4.0 PROJECT OWNER				
NAME City of Rolla		TELEPHONE NUMBER WITH AREA CODE (573) 364-8659		E-MAIL ADDRESS shargis@rollacity.org
ADDRESS P O Box 979		CITY Rolla	STATE MO	ZIP CODE 65402
5.0 CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.				
NAME City of Rolla		TELEPHONE NUMBER WITH AREA CODE (573) 364-8659		E-MAIL ADDRESS shargis@rollacity.org
ADDRESS PO Box 979		CITY Rolla	STATE MO	ZIP CODE 65402
5.1 A letter from the continuing authority, if different than the owner, is included with this application. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> NO				
D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
6.0 ENGINEER				
ENGINEER NAME / COMPANY NAME Jack Mentink, PE Integrity Engineering, Inc		TELEPHONE NUMBER WITH AREA CODE (573) 341-2100		E-MAIL ADDRESS jack@integrityeng.com
ADDRESS 1714 east tenth street		CITY Rolla	STATE MO	ZIP CODE 65401
7.0 PROJECT OWNER: I hereby certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete, and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders, and decisions, subject to any legitimate appeal available to applicant under Missouri Clean Water Law. I also understand the issuance of the construction permit does not guarantee the proposed wastewater treatment will meet the required effluent limitations of the issued Missouri State Operating Permit for this facility.				
PROJECT OWNER SIGNATURE				
PRINTED NAME Steve Hargis, PE			DATE 6/4/14	
TITLE OR CORPORATE POSITION Public Works Director		TELEPHONE NUMBER WITH AREA CODE (573) 364-8659		E-MAIL ADDRESS shargis@rollacity.org
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: 1 (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>580</u>	Width <u>250</u>	Depth <u>6</u>	Freeboard <u>2.0</u>	Berm Width <u>10</u>	% Slope <u>33</u>
Basin #2:	Length _____	Width _____	Depth _____	Freeboard _____	Berm Width _____	% Slope _____
Basin #3:	Length _____	Width _____	Depth _____	Freeboard _____	Berm Width _____	% Slope _____

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

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

9.5 Design depth of sludge in storage basins.

Basin #1: .10 ft Basin #2: \_\_\_\_\_ ft Basin #3: \_\_\_\_\_ ft

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

Basin #1: n/a ft Basin #2: \_\_\_\_\_ ft Basin #3: \_\_\_\_\_ ft

9.7 Total design sludge storage: 10 dry tons and \_\_\_\_\_ cubic feet

**10.0 LAND APPLICATION SYSTEM**

10.1 Number of irrigation sites 1 Total Acres 18.6 Maximum % field slopes 6  
Location: \_\_\_\_\_ ¼, SW ¼, NE ¼, 1 Sec. 39N T 8W R MARIES County 18.6 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 30.5K Seasonal 30.5K Off-season 30.5K

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

Design:	<u>22</u> inches/year	<u>.214</u> inches/hour	<u>.75</u> inches/day	<u>2.0</u> inches/week
Actual:	<u>5.5</u> inches/year	<u>.214</u> inches/hour	<u>.50</u> inches/day	<u>.75</u> inches/week

10.5 Total irrigation per year (gallons): Design: 11.1 MG gal Actual: 1.3 MG gal

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

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

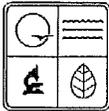
10.7 Land application rate is based on:

Hydraulic Loading  Other (describe) \_\_\_\_\_  
 Nutrient Management Plan (N&P) If N&P is selected, is the plan included?  YES  NO

RECEIVED CP0001655

APR 580 C13373

JUN 5 2014



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
FORM B: APPLICATION FOR AN OPERATING PERMIT FOR DOMESTIC OR  
MUNICIPAL WASTEWATER (≤100,000 gallons per day)

FOR AGENCY USE ONLY	
CHECK NUMBER	43403
DATE RECEIVED	6/5/14
FEE SUBMITTED	\$150.00

**PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM**

**1. THIS APPLICATION IS FOR:**

- An operating permit for a new (including antidegradation review) or unpermitted facility. Construction Permit # CPSE-00763
- An operating permit renewal: Permit #MO- \_\_\_\_\_ Expiration Date \_\_\_\_\_
- An operating permit modification: Permit #MO- \_\_\_\_\_ Reason: \_\_\_\_\_
- 1.1 Is the appropriate fee included with the application (see instructions for appropriate fee)?  YES  NO
- 1.2 Is a facility description included with this application (see 7.1)?  YES  NO

**2. FACILITY**

NAME Rolla National Airport Wastewater irrigation system		TELEPHONE NUMBER WITH AREA CODE (573) 364-8659	
ADDRESS (PHYSICAL) Hwy 63 & HWY 28	CITY Vichy	STATE MO	ZIP CODE 65580
OUTFALL NUMBER For multiple outfalls, this is number 1 of 1			
Estimated (actual) flow: 3000 gpd, Design Average Flow: 30,500 gpd, Design Peak Hourly Flow: 5000 gph			
2.1 Legal description: ¼, sw ¼, ne ¼, Sec. 1, T 39, R 8W County Maries			
2.2 UTM Coordinates Easting (X): 608645.75 Northing (Y): 4222559.67 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)			
2.3 Name of receiving stream: Trib. to Dry Fork			

**3. OWNER**

NAME City of Rolla Public Works		E-MAIL ADDRESS SHARGIS@ROLLACITY.ORG	TELEPHONE NUMBER WITH AREA CODE (573) 364-8659
ADDRESS P O Box 979	CITY Rolla	STATE Mo	ZIP CODE 65402
3.1 Request review of draft permit prior to public notice? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			

**4. CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the facility.**

NAME City of Rolla Public Works		E-MAIL ADDRESS Shargis@rollacity.org	TELEPHONE NUMBER WITH AREA CODE (573) 364-8659
ADDRESS P O Box 979	CITY Rolla	STATE MO	ZIP CODE 65402

**5. OPERATOR**

NAME Phillip Rosenburg		CERTIFICATE NUMBER 1190
E-MAIL ADDRESS Wastewater@rollacity.org	TELEPHONE NUMBER WITH AREA CODE 5732018664	

**6. FACILITY CONTACT**

NAME Steve Hargis		TITLE Public Works Director
E-MAIL ADDRESS shargis@rollacity.org	TELEPHONE NUMBER WITH AREA CODE 5733648659	

**7. DESCRIPTION OF FACILITY**

7.1 Describe the facility (attach additional sheet if required) and attach a flow chart showing the influents, treatment facilities and outfalls.  
4475 LF of 10" gravity sewer line with a duplex lift station into a 3 acre storage pond. The wastewater is pumped onto 6 solid set irrigation fields which cover 18.6 acres.

7.2 Attach an aerial photograph or USGS topographic map showing the location of the facility and outfall.

7.3 Design flow for this outfall: 0 Total design flow for the facility: 3050 Actual flow for this outfall: 0

7.4 Number of people presently connected or population equivalent (P.E.): 30 Design P.E.: 400

7.5 Does the facility accept or process leachate from landfills?  Yes  No

**8. ADDITIONAL FACILITY INFORMATION**8.1 Facility SIC code: 4952; Discharge SIC code: 1629.

8.2 Milestone dates:

Date of completion of construction of facility: 12/2014

Dates of any construction modifications to the facility (along with description of modification): \_\_\_\_\_

8.3 Connections to the facility:

Number of units presently connected: Homes \_\_\_\_\_ Trailers 1 Apartments \_\_\_\_\_

Other (including industrial) \_\_\_\_\_ (If industrial, see instructions 8.1)

Number of commercial establishments: 5Daily number of employees working (total estimate): 30 Daily number of customers/guests (total estimate): 208.4 Length of pipe in the sewer collection system? \_\_\_\_\_ feet or 2.5 miles (either unit is appropriate.)8.5 Does any bypassing occur in the collection system or at the treatment facility?  Yes  No (If yes, explain.)8.6 Does significant infiltration occur in the collection system?  Yes  No (If yes, explain and attach proposed repair.)**9. DISCHARGE INFORMATION**9.1 Will the discharge be continuous throughout the year?  Yes  No9.2 Discharge will occur during the following months: none9.3 How many days of the week will the discharge occur? none9.4 Is wastewater land-applied?  Yes  No (If yes, attach Form I.)9.5 Will chlorine be added to the effluent?  Yes  NoIf chlorine is added, what is the resulting residual? \_\_\_\_\_  $\mu\text{g/l}$  (micrograms per liter)9.6 Does this facility discharge to a losing stream or sinkhole?  Yes  No9.7 Has a waste load allocation study been completed for this facility?  Yes  No

10. List all permit violations, including effluent limit exceedances, in the last five years. Attach a separate sheet if necessary. If none, write none.

None

**11. SLUDGE HANDLING, USE AND DISPOSAL**

11.1 Is the sludge a hazardous waste as defined by 10 CSR 25?  Yes  No  
 Sludge production, including sludge received from others: .75 Design Dry Tons/Year .25 Actual Dry Tons/Year

11.3 Capacity of sludge holding structures:  
 Sludge storage provided: \_\_\_\_\_ cubic feet; <sup>30 Years</sup> \_\_\_\_\_ days of storage; 5 average percent solids of sludge;  
 No sludge storage is provided.

- Type of Storage:  Holding tank  Building  
 Basin  Other (Please describe) IN POND  
 Concrete Pad
- Sludge Treatment: N/A  
 Anaerobic Digester  Lagoon  Composting  
 Storage Tank  Aerobic Digester  Other (Attach description)  
 Lime Stabilization  Air or Heat Drying
- Sludge Use or Disposal: N/A  
 Land Application  Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years)  
 Contract Hauler  Incineration  
 Hauled to Another  Sludge Retained in Wastewater treatment lagoon  
 Treatment Facility  Other \_\_\_\_\_ Attach explanation sheet.  
 Solid Waste Landfill
- Person responsible for hauling sludge to disposal facility  
 By Applicant  By Others (complete below)

NAME \_\_\_\_\_ E-MAIL ADDRESS \_\_\_\_\_

ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

CONTACT PERSON \_\_\_\_\_ TELEPHONE NUMBER WITH AREA CODE \_\_\_\_\_ PERMIT NO. MO- \_\_\_\_\_

Sludge use or disposal facility  
 By applicant  By others (Please complete below.)

NAME \_\_\_\_\_ E-MAIL ADDRESS \_\_\_\_\_

ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

CONTACT PERSON \_\_\_\_\_ TELEPHONE NUMBER WITH AREA CODE \_\_\_\_\_ PERMIT NO. MO- \_\_\_\_\_

Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503?  
 Yes  No (Please explain)  
N/A

**12. DOWNSTREAM LANDOWNERS - ATTACH ADDITIONAL SHEETS AS NECESSARY. SEE INSTRUCTIONS.**

NAME RUSSEL ADAMS

ADDRESS 13810 CR 448 CITY ST JAMES STATE MO ZIP CODE 65559

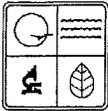
**13. CERTIFICATION**

I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Steve Hargis, Public works Director TELEPHONE NUMBER WITH AREA CODE (573) 364-8659

SIGNATURE  DATE SIGNED 6/4/14

RECEIVED



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
JUN 5 2014  
APPLICATION FOR CONSTRUCTION PERMIT -  
WASTEWATER TREATMENT FACILITY  
WATER PROTECTION PROGRAM

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEES RECEIVED \$150.00	CHECK NO. 43403
DATE RECEIVED 6/5/14	

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: EDA Project #: 05-01-05328
- 1.2 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?  
 YES Date of Approval: \_\_\_\_\_  
 Attached is the No Degradation Evaluation Conclusion of Antidegradation Review form
- 1.3 Has the department approved the proposed project's facility plan\*?  
 YES Date of Approval: 9/13  NO  N/A (If Not Applicable, complete No. 1.4.)
- 1.4 [Complete only if answered Not Applicable on No. 1.3.] Is a copy of the engineering report\* for wastewater treatment facilities with a design flow less than 22,500 gpd included with this application?  
 YES  NO
- 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: 6/14  
 Enclosed is the appropriate operating permit application submittal. Denote which form:  A  B  B2  
 N/A Please explain: \_\_\_\_\_
- 1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency?  YES  NO
- 1.9 Is the appropriate fee included with this application?  YES  NO (See instructions for appropriate fee.)

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

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT

CITY OF ROLLA  
P.O. BOX 979  
ROLLA, MO 65402  
PH: 573-426-6982

VOID AFTER 90 DAYS

43403



DATE 6/04/2014 80-1059-815  
043403

AMOUNT 750.00

SEVEN HUNDRED FIFTY & 00/100 DOLLARS

PAY TO THE ORDER OF

MO. DEPT OF NATURAL RESOURCES  
PO. BOX 477  
JEFFERSON CITY, MO 65102

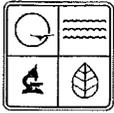
TWO SIGNATURES REQUIRED  
AUTHORIZED SIGNATURE



*Stephan D Rogus*  
*John Bedy*

Details on back.

JUN 5 2014



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
(SEE MAP FOR APPROPRIATE REGIONAL OFFICE)  
**FORM I - PERMIT APPLICATION FOR CONSTRUCTION AND  
OPERATION OF WASTEWATER IRRIGATION SYSTEMS**

<b>FOR AGENCY USE ONLY</b>
PERMIT NUMBER MO -
DATE RECEIVED

**INSTRUCTIONS:** The following forms must be submitted with Form I: FORM B for domestic wastewater. Submit FORMS E and G for land disturbance permit if construction areas total one acre or more.

**1.00 FACILITY INFORMATION**

1.10 Facility Name  
Rolla National Airport Wastewater Irrigation system

1.20 Application for:  Construction Permit (attach Engineering report, Plans and Specifications per 10 CSR 20-8)  
 Operating Permit (if no construction permit, attach engineering documents)  
Date Irrigation System Began Operation: \_\_\_\_\_  
 Operating Permit Renewal

1.30 Type of wastewater to be irrigated:  Domestic  Municipal  State/National Park  Seasonal business  
 Municipal with Pretreatment Program or Significant Industrial Users  Other (explain) \_\_\_\_\_  
SIC Codes (list all that apply, in order of importance) \_\_\_\_\_

1.40 Months when the business or enterprise will operate or generate wastewater:  
 12 months per year  Part of year (list Months): \_\_\_\_\_

1.50 This system is designed for:  
 No-discharge  Partial irrigation when feasible and discharge rest of time.  
 Irrigation during recreation season (April - October) and discharge during November - March.  
 Other (explain) \_\_\_\_\_

1.60 List the Facility outfalls which will be applicable to the irrigation system from outfalls listed on Form B.  
Outfall Nos. 1 \_\_\_\_\_

**2.00 STORAGE BASINS**

2.10 Number of storage basins: 1 Type of basin:  Steel  Concrete  Fiberglass  Earthen  
 Earthen with membrane liner

2.20 Storage basin dimensions at inside top of berm (feet): Report freeboard as feet from top of berm to emergency spillway or overflow pipe.  
(Complete Attachment A: Profile Sketch)  
Basin #1: Length 580 Width 250 Depth 8 Freeboard 2 Berm Width 10 % Slope 33  
Basin #2: Length \_\_\_\_\_ Width \_\_\_\_\_ Depth \_\_\_\_\_ Freeboard \_\_\_\_\_ Berm Width \_\_\_\_\_ % Slope \_\_\_\_\_

2.30 Storage Basin operating levels (report as feet below emergency overflow level)  
Basin #1: Maximum water level 1 ft. Minimum operating water level 5 ft.  
Basin #2: Maximum water level \_\_\_\_\_ ft. Minimum operating water level \_\_\_\_\_ ft.

2.40 Depth of sludge in lagoons and storage basins 0.1 ft.  
Total sludge stored 10 dry tons \_\_\_\_\_ cu. ft.

**3.00 LAND APPLICATION SYSTEM**

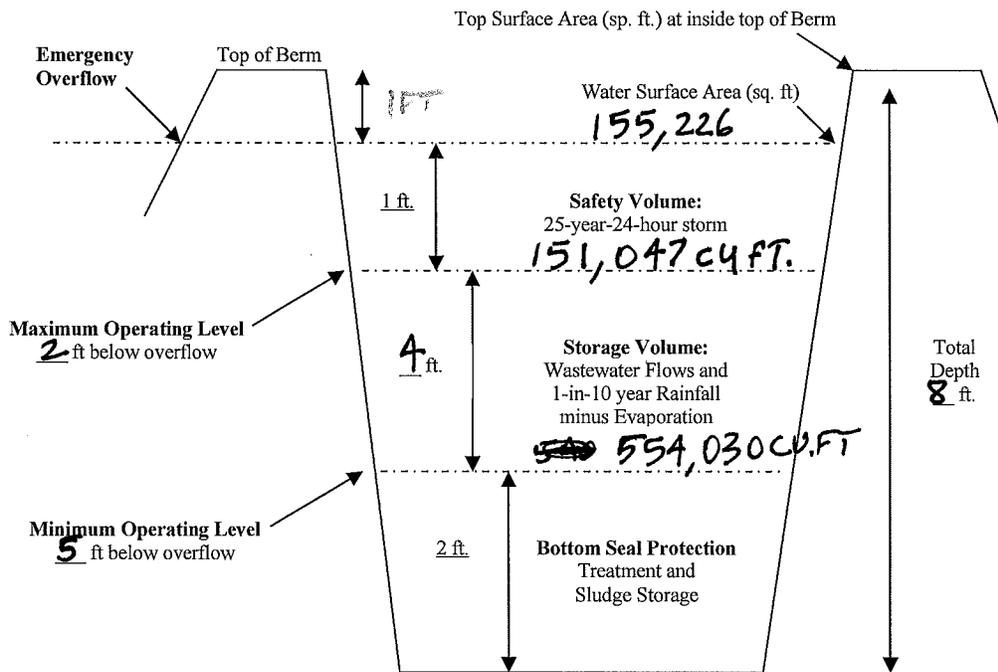
3.10 Number of irrigation sites 1 Total Acres \_\_\_\_\_ Maximum % field slopes 6  
Location: \_\_\_\_\_ 1/4, sw \_\_\_\_\_ 1/4, ne \_\_\_\_\_ 1/4, 1 \_\_\_\_\_ Sec. 39N T 8W R Maries County 18.6 Acres  
Location: \_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4, \_\_\_\_\_ Sec. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ County \_\_\_\_\_ Acres



**ATTACHMENT A**

(To be included with Form I)

**Lagoon or Storage Basin  
PROFILE SKETCH**



**DEFINITION OF TERMS (REFER TO THE PROFILE SKETCH ABOVE).**

- a. Freeboard is depth from top of berm to emergency spillway (minimum 1 foot);
- b. Safety Volume is depth for 25-year, 24-hour storm (minimum of 1 foot);
- c. Maximum Operating Level is at bottom of the safety volume (minimum of 2 feet below top of berm).
- d. Minimum Operating Level is 2 feet above bottom of lagoon for seal protection per 10 CSR 20-8.  
The minimum operating level may be greater than 2 feet when additional treatment volume is included.
- e. Storage Volume and days storage are based on the volume between Minimum and Maximum Operating Levels.
- f. Total Depth is from top of berm to bottom of basin including freeboard.