



## Reclaimed Water Treatment, Distribution, Pumping and Storage Engineering Report Form

The \_\_\_\_\_ proposes the construction of a Reclaimed Water Treatment, Pumping, Storage, and Distribution in the manner indicated by the information contained herein and by the plans, profiles, specifications, and other data attached hereto. The plans and specifications have been approved and signed by the proper city officials or owner and an application for a permit properly executed by the Mayor, Chairman of the Board or owner accompanies this report.

### I. General Information

1. Name of Facility: \_\_\_\_\_

2. Facility Number: S- \_\_\_\_\_ R \_\_\_\_\_

3. Legal Description: \_\_\_/4, \_\_\_/4, \_\_\_/4, of Section \_\_\_\_\_, T- \_\_\_\_\_ - \_\_\_\_\_, R- \_\_\_\_\_ - \_\_\_\_\_, I.M./C.M., \_\_\_\_\_ County

4. Technical specifications for the reclaimed water distribution line(s), pump station(s), and/or storage tank(s) are provided?	<b>Yes</b>	<b>No</b>
	<input type="checkbox"/>	<input type="checkbox"/>

If No, the most current City Ordinances or Standards are referred to?

If Yes, the Ordinances/Standards are included or on file with the Construction Permit Section, Water Quality Division, Oklahoma Department of Environmental Quality.

5. The area of the proposed development: \_\_\_\_\_ .

If area of development is 1 acre or more, has the developer/builder obtained a DEQ Storm Water Construction Permit?	<input type="checkbox"/>	<input type="checkbox"/>
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Developers/builders are required to obtain a DEQ Storm Water Construction Permit for a construction site that will disturb one (1) acre or more in accordance with OPDES, 27A O.S. § 2-6-201 et seq.

6. End user contract with supplier attached?	<input type="checkbox"/>	<input type="checkbox"/>
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7. How will the reclaimed water be used? (refer OAC 252:656-27-1)  
 \_\_\_\_\_

### II. Distribution Line and System Technical Information

1. A minimum of 30 inches of earth cover is provided?	<input type="checkbox"/>	<input type="checkbox"/>
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If No, explain: \_\_\_\_\_

- |  | <b>Yes</b>               | <b>No</b>                |
|--|--------------------------|--------------------------|
| 2. Leakage tests are specified in accordance with OAC 252:656-5-5(b)?                                    | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Allowable leakage does not exceed 10 gallons per inch diameter per mile per day?                      | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Deflection tests are specified for all flexible pipe in accordance with OAC 252:656-5-5(a)?           | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Bedding and backfill in accordance with OAC 252:656-5-3 is specified?                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Portion(s) of the proposed reclaimed water line system will be at or below normal ground water level? | <input type="checkbox"/> | <input type="checkbox"/> |

If yes, describe the portion(s): \_\_\_\_\_  
 \_\_\_\_\_

- |  |                          |                          |
|--|--------------------------|--------------------------|
| 7. Are there any possible cross connections between the reclaimed water line and any public water supply?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. A minimum of two (2) feet of vertical separation and ten (10) feet of horizontal separation between reclaimed water line and potable water lines is maintained? | <input type="checkbox"/> | <input type="checkbox"/> |
| If No, the special provisions of OAC 252:656-5-4(c)(3) are met?  | <input type="checkbox"/> | <input type="checkbox"/> |

- |   |                          |                          |
|---|--------------------------|--------------------------|
| 9. Are there any existing or proposed public water wells within 300 feet of the reclaimed water line? | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|

- |   |                          |                          |
|---|--------------------------|--------------------------|
| 10. Are there any existing or private water wells within 50 feet of the reclaimed water line? | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|

- |   |                          |                          |
|---|--------------------------|--------------------------|
| 11. Are there any petroleum storage tanks within 50 feet of the reclaimed water line? | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|

- |  |                          |                          |
|--|--------------------------|--------------------------|
| 12. Are there any stream crossings?  | <input type="checkbox"/> | <input type="checkbox"/> |
| If Yes, do the plans and/or specifications contain all the requirements of OAC 252:656-5-4(e)? | <input type="checkbox"/> | <input type="checkbox"/> |

If no, explain: \_\_\_\_\_  
 \_\_\_\_\_

- |  |                          |                          |
|--|--------------------------|--------------------------|
| 13. Are there any aerial crossings?  | <input type="checkbox"/> | <input type="checkbox"/> |
| If Yes, do the plans and/or specifications contain all the requirements of OAC 252:656-5-4(d)? | <input type="checkbox"/> | <input type="checkbox"/> |

If no, explain: \_\_\_\_\_  
 \_\_\_\_\_

14. Reclaimed water line materials:

Line Segment	Diameter (inches)	Length (feet)	Material

Yes No

15. Detailed specifications list ASTM standards for all pipe, material, and construction methods in accordance with OAC 252:656-5-3(a)?

16. Piping:

i. All reclaimed water piping, valves, outlets, and appurtenances in distribution systems are colored purple (Pantone 522)?

ii. All reclaimed water piping, valves, outlets, and appurtenances in distribution systems are stamped with warning that includes the words "CAUTION: CATEGORY#X RECLAIMED WATER- DO NOT DRINK?"

17. Force main(s):

Diameter (inches)	Length (feet)	Material	Calculated Velocity (feet/second)

18. Air relief valves are positioned at the high points in the force main?

19. Force main reaction blocking is provided?

### III. Disinfection Facilities

1. Design flow of reclaimed water to be treated: \_\_\_\_\_ gpd.

Yes No

2. A flow meter is provided in order to measure water flow to determine chemical application rate?

3. Disinfection chemicals specified: \_\_\_\_\_

4. Type of chlorinator specified: \_\_\_\_\_

5. Maximum feed range: \_\_\_\_\_

Minimum feed range: \_\_\_\_\_

6. Capacity of chlorinator can meet chlorine demands at maximum flow?

7. Provisions are provided for measuring the quantities of chemicals used?

8. Standby equipment is provided?

9. Residual chlorine of 0.2 mg/l at distant points is provided for?

10. Chlorine residual test equipment is provided?

	Yes	No
11. Use of chlorine gas is proposed?, If Yes:	<input type="checkbox"/>	<input type="checkbox"/>
a. A separate room is provided?	<input type="checkbox"/>	<input type="checkbox"/>
b. A shatter resistant, clear glass inspection window is installed in an exterior door or interior wall to permit the chlorinator to be viewed without entering the room is provided?	<input type="checkbox"/>	<input type="checkbox"/>
c. The chlorine room is constructed in such a manner that all openings between the chlorine room and the remainder of the plant are sealed?	<input type="checkbox"/>	<input type="checkbox"/>
d. Scales are provided for weighing cylinders?	<input type="checkbox"/>	<input type="checkbox"/>
e. The chlorine room is equipped with a ventilating fan with a capacity which provides one complete air change per minute in the room?	<input type="checkbox"/>	<input type="checkbox"/>
f. Exhaust fans take suction near the floor?	<input type="checkbox"/>	<input type="checkbox"/>
g. Switches for fans and lights are located outside of the room, at the entrance, with a signal light indicating when the fan is in operation?	<input type="checkbox"/>	<input type="checkbox"/>
h. A heater is provided which has the capability of heating the chlorine room to 60° F?	<input type="checkbox"/>	<input type="checkbox"/>
i. Chlorine gas lines that extend beyond the chlorine gas room are fed under vacuum?	<input type="checkbox"/>	<input type="checkbox"/>

### I.V. Storage and Impoundments

1. One hundred year flood plain elevation: _____		
2. Type of storage tank(s): _____		
Does it meet NSF or ASTM standard?	<input type="checkbox"/>	<input type="checkbox"/>
3. A vent is provided?	<input type="checkbox"/>	<input type="checkbox"/>
4. Tank is equipped with an overflow which is brought down to an elevation between 12 and 24 inches above the ground surface?	<input type="checkbox"/>	<input type="checkbox"/>
<b>Note:</b> Any overflow is a discharge without a permit, per Title 27A.		
5. Convenient access to the interior of the tank for cleaning and maintenance is provided?	<input type="checkbox"/>	<input type="checkbox"/>
6. Does lagoons meet 252:656-27-5-(a)(3)?	<input type="checkbox"/>	<input type="checkbox"/>
7. Is there rechlorination for Category 2 reclaimed water after storage?	<input type="checkbox"/>	<input type="checkbox"/>
8. Fencing is provided for protection from trespass?	<input type="checkbox"/>	<input type="checkbox"/>

## V. Pump Stations

	Yes	No
1. One hundred year flood elevation: _____	<input type="checkbox"/>	<input type="checkbox"/>
2. Site is accessible at all times, regardless of floods?	<input type="checkbox"/>	<input type="checkbox"/>
3. Site will be graded so as to lead surface drainage away from the station so water will not enter or pool against the building?	<input type="checkbox"/>	<input type="checkbox"/>
4. Building has outward-opening doors of adequate size?	<input type="checkbox"/>	<input type="checkbox"/>
5. All floors slope 0.3 inch per foot to a suitable drain?	<input type="checkbox"/>	<input type="checkbox"/>
6. All construction shall be in accordance with state and local safety, building, electrical, plumbing, and sanitary codes?	<input type="checkbox"/>	<input type="checkbox"/>
7. Provisions are provided for adequate heating?	<input type="checkbox"/>	<input type="checkbox"/>
8. Pump house is adequately lighted throughout and all electrical work conforms with requirements of National Electrical Code?	<input type="checkbox"/>	<input type="checkbox"/>
9. A means of bypassing the pumping station is provided?	<input type="checkbox"/>	<input type="checkbox"/>
10. Pumping station is equipped with a flow meter?	<input type="checkbox"/>	<input type="checkbox"/>
11. Type of pump(s): _____		
12. A check valve of the non-slam type is located at each pump casing?	<input type="checkbox"/>	<input type="checkbox"/>
13. A positive closing valve is located on the discharge line after the check valve?	<input type="checkbox"/>	<input type="checkbox"/>
14. Piping is protected against freezing?	<input type="checkbox"/>	<input type="checkbox"/>
15. Shut-off valves are provided on the suction line to each pump?	<input type="checkbox"/>	<input type="checkbox"/>
16. Each pump has a standard pressure gauge on its discharge line?		

### Professional Engineer's Certification:

I certify that, to the best of my knowledge, all the information provided in this engineering report form is correct and no significant information necessary for a proper evaluation of the project has been omitted:

Signature of Professional Engineer: \_\_\_\_\_ Date: \_\_\_\_\_, 20 \_\_\_\_

Name of Professional Engineer: \_\_\_\_\_

State of Oklahoma Professional Engineer No: \_\_\_\_\_

Phone No: ( \_\_\_\_\_ ) \_\_\_\_\_



Seal