

STATE OF UTAH

MUNICIPAL WASTEWATER PLANNING PROGRAM

SELF-ASSESSMENT REPORT

FOR

PAYSON

2013



Resolution Number _____

MUNICIPAL WASTEWATER PLANNING PROGRAM RESOLUTION

RESOLVED that **PAYSON** informs the Water Quality Board the following actions were taken by the **CITY COUNCIL**

1. Reviewed the attached Municipal Wastewater Planning Program Report for 2013.
2. Have taken all appropriate actions necessary to maintain effluent requirements contained in the UPDES Permit (If Applicable).

Passed by a (majority) (unanimous) vote on

(date)

Mayor/Chairman

Attest:

Recorder/Clerk

Municipal Wastewater Planning Program (MWPP)

Financial Evaluation Section

Owner Name: *PAYSON*

Name and Title of Contact Person:

Jeff Hiatt

WWTP Superintendent

Phone:

801-465-5277

E-mail:

jeffh@payson.org

PLEASE SUBMIT TO STATE BY: March 1, 2014

Mail to: MWPP - Department of Environmental Quality
c/o Paul Krauth, P.E.
Division of Water Quality
195 North 1950 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
Phone : (801) 536-4346

NOTE: This questionnaire has been compiled for your benefit by a state sponsored task force comprised of representatives of local government and service districts. It is designed to assist you in making an evaluation of your wastewater system and financial planning. Please answer questions as accurately as possible to give you the best evaluation of your facility. If you need assistance please call, Emily Cantón. Utah Division of Water Quality: (801) 536-4342.

I. Definitions: The following terms and definitions may help you complete the worksheets and questionnaire:

User Charge (UC) - A fee established for one or more class(es) of users of the wastewater treatment facilities that generate revenues to pay for costs of the system.

Operation and Maintenance Expense - Expenditures incurred for materials, labor, utilities, and other items necessary for managing and maintaining the facility to achieve or maintain the capacity and performance for which it was designed and constructed.

Repair and Replacement Cost - Expenditures incurred during the useful life of the treatment works for obtaining and installing equipment, accessories, and/or appurtenances necessary to maintain the existing capacity and the performance for which the facility was designed and constructed.

Capital Needs - Cost to construct, upgrade or improve the facility.

Capital Improvement Reserve Account - A reserve established to accumulate funds for construction and/or replacement of treatment facilities, collection lines or other capital improvement needs.

Reserve for Debt Service - A reserve for bond repayment as may be defined in accordance with terms of a bond indenture.

Current Debt Service - Interest and principal costs for debt payable this year.

Repair and Replacement Sinking Fund - A fund to accumulate funds for repairs and maintenance to fixed assets not normally included in operation expenses and for replacement costs (defined above).

Part I: OPERATION AND MAINTENANCE

Complete the following table:

Question	Points Earned	Total
Are revenues sufficient to cover operation, maintenance, and repair & replacement (OM&R) costs <u>at this time?</u>	YES = 0 points NO = 25 points	0
Are the projected revenues sufficient to cover operation, maintenance, and repair & replacement (OM&R) costs for the <u>next five years?</u>	YES = 0 points NO = 25 points	0
Does the facility have sufficient staff to ensure proper O&M?	YES = 0 points NO = 25 points	25
Has a dedicated sinking fund been established to provide for repair & replacement costs?	YES = 0 points NO = 25 points	0
Is the repair & replacement sinking fund adequate to meet anticipated needs?	YES = 0 points NO = 25 points	0
TOTAL PART I =		25

Part II: CAPITAL IMPROVEMENTS

Complete the following table:

Question	Points Earned	Total
Are present revenues collected sufficient to cover all costs and provide funding for capital improvements?	YES = 0 points NO = 25 points	0
Are projected funding sources sufficient to cover all projected capital improvement costs for the <u>next five years?</u>	YES = 0 points NO = 25 points	0
Are projected funding sources sufficient to cover all projected capital improvement costs for the <u>next ten years?</u>	YES = 0 points NO = 25 points	25
Are projected funding sources sufficient to cover all projected capital improvement costs for the <u>next twenty years?</u>	YES = 0 points NO = 25 points	25
Has a dedicated sinking fund been established to provide for future capital improvements?	YES = 0 points NO = 25 points	0
TOTAL PART II =		50

Part III: GENERAL QUESTIONS

Complete the following table:

Question	Points Earned	Total
Is the wastewater treatment fund a separate enterprise fund/account or district?	YES = 0 points NO = 25 points	0
Are you collecting 95% or more of your sewer billings?	YES = 0 points NO = 25 points	0
Is there a review, at least annually, of user fees?	YES = 0 points NO = 25 points	0
Are bond reserve requirements being met if applicable?	YES = 0 points NO = 25 points	0
TOTAL PART III =		0

Part IV: PROJECTED NEEDS

Estimate as best you can the following:

Cost of projected capital improvements (in thousands)	2014	2015	2016	2017	2018
	100,000	100,000	100,000	100,000	100,000

Point Summation

Fill in the values from Parts I through III in the blanks provided in column 1. Add the numbers to determine the MWPP point total that reflects your present financial position for meeting your wastewater needs.

Part	Points
I	25
II	50
III	0
Total	75

Municipal Wastewater Planning Program (MWPP) Collection System Section

Owner Name: PAYSON

Name and Title of Contact Person:

Jeff Hiatt

WWTP Superintendent

Phone:

801-465-5277

E-mail:

jeffh@payson.org

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Salt Lake City, Utah 84114-4870
Phone : (801) 536-4346

Form completed by

Brent Arns

Part I: SYSTEM AGE

A. What year was your collection system first constructed (approximately)?

Year 1938

B. What is the oldest part of your present system?

Oldest part 75 years

Part II: BYPASSES

A. Please complete the following table:

Question	Number	Points Earned	Total Points
How many days last year was there a bypass, overflow or basement flooding by untreated wastewater in the system due to rain or snowmelt?	1	0 times = 0 points 1 time = 5 points 2 times = 10 points 3 times = 15 points 4 times = 20 points 5 or more = 25 points	5
How many days last year was there a bypass, overflow or basement flooding by untreated wastewater due to equipment failure? (except plugged laterals)	0	0 times = 0 points 1 time = 5 points 2 times = 10 points 3 times = 15 points 4 times = 20 points 5 or more = 25 points	0
TOTAL PART II =			5

B. The Utah Sewer Management Program defines sanitary sewer overflows into two classes:

Number of Class 1 SSOs in Calendar year 2013 1

Number of Class 2 SSOs in Calendar year 2013 0

Class 1- a Significant SSO means a SSO or backup that is not caused by a private lateral obstruction or problem that:

- (a) effects more than five private structures;
- (b) affects one or more public, commercial or industrial structure(s);
- (c) may result in a public health risk to the general public;
- (d) has a spill volume that exceeds 5,000 gallons, excluding those in single private structures; or
- (e) discharges to Waters of the state.

Class 2 – a Non-Significant SSO means a SSO or backup that is not caused by a private lateral obstruction or problem that does not meet the Class 1 SSO criteria.

Part II: BYPASSES (cont.)

- C. Please specify whether the bypass(es) was caused a contract or tributary communities, etc.

Possible inflow from trunkline extending to Elkridge & Woodland Hills

Part III: NEW DEVELOPMENT

- A. Please complete the following table:

Question	Points Earned	Total Points
Has an industry (or other development) moved into the community or expanded production in the past two years, such that either flow or wastewater loadings to the sewerage system were significantly increased (10 - 20%)?	No = 0 points Yes = 10 points	0
Are there any major new developments (industrial, commercial, or residential) anticipated in the next 2- 3 years, such that either flow or BOD ₅ loadings to the sewerage system could significantly increase (25%)?	No = 0 points Yes = 10 points	10
TOTAL PART III =		10

- B. Approximate number of new residential sewer connections in the last year

53 new residential connections

- C. Approximate number of new commercial/industrial connections in the last year

2 new commercial/industrial connections

- D. Approximate number of new population serviced in the last year

212 new people served

Part IV: OPERATOR CERTIFICATION

- A. How many collection system operators are currently employed by your facility?

3 collection system operators employed

- B. What is/are the name(s) of your DRC operator(s)?

Brent Arns

Jeff Hiatt

- C. You are required to have the collection DRC operator(s) certified at **Grade III**

What is the current grade of the DRC operator(s)? IV

- D. State of Utah Administrative Rules require all operators considered to be in DRC to be appropriately certified. List all the operators in your system by their certification class.

<i>Not Certified</i>	<u>1</u>
Small Lagoons	<u>0</u>
Collection I	<u>0</u>
Collection II	<u>1</u>
Collection III	<u>0</u>
Collection IV	<u>1</u>

- E. Please complete the following table:

Question	Points Earned	Total Points
Is/are your DRC operator(s) currently certified at the appropriate grade for this facility? (see C)	Yes = 0 points No = 50 points	0
How many continuing education units has each of the DRC operator(s) completed over the last 3 years?	3 or more = 0 points less than 3 = 10 points	0
TOTAL PART IV =		0

Part V: FACILITY MAINTENANCE

- A. Please complete the following table:

Question	Points Earned	Total Points
Do you follow an annual preventative maintenance program?	Yes = 0 points No = 30 points	0
Is it written?	Yes = 0 points No = 20 points	0
Do you have a written emergency response plan?	Yes = 0 points No = 20 points	0
Do you have an updated operations and maintenance manual	Yes = 0 points No = 20 points	0
Do you have a written safety plan?	Yes = 0 points No = 20 points	0
TOTAL PART V =		0

Part VI: SUBJECTIVE EVALUATION

This section should be with the system operators.

- A. Has your system completed it's the Utah Sewer Management Program.

Yes _____ NO _____

- B. Describe the physical condition of the sewer collection system: (lift stations, etc. included)

Average

- C. What sewerage system improvements does the community have under consideration for the next 10 years?

N/A

Part VI: SUBJECTIVE EVALUATION (cont.)

- D. Explain what problems, other than plugging have you experienced over the last year

None

- E. Is your community presently involved in formal planning for system expansion/upgrading? If so explain.

No

- F. Has your system completed it's *System Evaluation and Capacity Assurance Plan* As defined by the Utah Sewer Management Program.

Yes _____ NO _____

- G. Does the municipality/district pay for the continuing education expenses of operators?

ALWAYS X SOMETIMES _____ NO _____

If they do, what percentage is paid?

approximately 100 %

- H. Is there a written policy regarding continuing education and training for wastewater operators?

YES X NO _____

Part VI: SUBJECTIVE EVALUATION (cont.)

I. Any additional comments? (Attach additional sheets if necessary.)

N/A

POINT SUMMATION

Fill in the values from Parts II through V in the blanks provided in column 1. Add the numbers to determine the MWPP point total that your wastewater facility has generated for the past twelve months.

Part	Points
II	5
III	10
IV	0
V	0
Total	15

Municipal Wastewater Planning Program (MWPP)

Mechanical Plant Section

Owner Name: *PAYSON*

Name and Title of Contact Person:

Jeff Hiatt

WWTP Superintendent

Phone:

801-465-5277

E-mail:

jeffh@payson.org

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Form completed by

Brent Arns

Part I: INFLUENT INFORMATION

- A. Please update (if needed) the average design flow and average design BOD₅ and TSS loading for your facility.

	Average Design Flow (MGD)	Average Design BOD ₅ Loading (lbs/day)	Average Design TSS Loading (lbs/day)
Design Criteria	3.0 MGD	4,400	4,400
90% of the Design Criteria	2.7 MGD	3,960	3,960

- B. Please list the average monthly flows in millions of gallons per day (MGD) and BOD₅ and TSS loadings in milligrams per liter (mg/L) **received** at your facility during 2013. (Calculate the BOD₅ and TSS loadings in pounds per day (lbs/day)).

Month	(1) Average Monthly Flow (MGD)	(2) Average Monthly BOD ₅ Concentration (mg/L)	(3) Average BOD ₅ Loading (lbs/day) ¹	(4) Average Monthly TSS Concentration (mg/L)	(5) Average TSS Loading (lbs/day) ²
January	1.25	183.70	1915.07	104.40	1088.37
February	1.23	163.13	1673.42	75.00	769.37
March	1.22	149.13	1517.37	95.75	974.24
April	1.17	187.89	1833.39	75.33	735.06
May	1.32	133.00	1464.17	66.88	736.27
June	1.32	172.83	1902.65	48.67	535.80
July	1.32	162.44	1788.27	80.78	889.29
August	1.29	161.56	1738.16	87.33	939.55
September	1.22	130.75	1330.36	75.25	765.65
October	1.23	180.50	1851.61	61.40	629.85
November	1.24	179.50	1856.32	89.00	920.40
December	1.21	169.25	1707.97	70.75	713.97
Average	1.25	164.47	1714.90	77.55	808.15

¹ BOD₅ Loading (3) = Average Monthly Flow (1) x Average Monthly BOD₅ Concentration (2) x 8.34

² TSS Loading (5) = Average Monthly Flow (1) x Average Monthly TSS Concentration (4) x 8.34

Part I. INFLUENT INFORMATION (cont.)

- C. Refer to the information in A & B to determine a point value for your facility. Please enter the points for each question in the blank provided.

Question	Number	Points Earned	Total Points
How many times did the average monthly flow (Part B., Column 1) to the wastewater facility exceed 90% of design flow?	0	0 = 0 points 1 - 2 = 10 points 3 - 4 = 20 points 5 or more = 30 points	0
How many times did the average monthly flow (Part B., Column 1) to the wastewater facility exceed the design flow?	0	0 = 0 points 1 - 2 = 20 points 3 - 4 = 40 points 5 or more = 60 points	0
How many times did the average monthly BOD ₅ loading (Part B., Column 3) to the wastewater facility exceed 90% of the design loading?	0	0-1 = 0 points 1 - 2 = 10 points 3 - 4 = 20 points 5 or more = 30 points	0
How many times did the average monthly BOD ₅ loading (Part B., Column 3) to the wastewater facility exceed the design loading?	0	0 = 0 points 1 - 2 = 20 points 3 - 5 = 40 points 5 or more = 60 points	0
TOTAL PART I =			0

Part II: EFFLUENT INFORMATION

- A. Please list the average monthly BOD₅, TSS, Ammonia (NH₃), monthly maximum Cl₂, minimum monthly DO, and 30-day geometric averages for Fecal and Total Coliform, or E-Coli produced by your facility during 2013.

Month	(1) BOD ₅ (mg/L)	(2) TSS (mg/L)	(3) Fecal Coliform (#/100 mL)	(4) Total Coliform (#/100 mL)	(5) E-Coli	(6) Cl ₂ (mg/L)	(7) DO (mg/L)	(8) NH ₃ (mg/L)
	Whole Numbers Only					One Decimal Place Only		
January	14	4	-	-	2.0	2.0	6.6	0.7
February	6	4	-	-	1.6	2.2	7.2	0.7
March	13	6	-	-	1.0	0.8	6.7	0.7
April	5	4	-	-	3.4	0.3	6.3	0.6
May	5	4	-	-	1.6	0.3	6.6	0.6
June	5	4	-	-	1.3	0.2	6.7	0.6
July	5	4	-	-	1.8	0.2	6.7	0.6
August	5	7	-	-	3.4	0.2	7.4	0.6
September	8	8	-	-	3.4	10.8	6.6	0.6
October	7	8	-	-	1.7	2.4	6.0	0.6
November	5	8	-	-	2.8	0.4	6.5	0.6
December	5	7	-	-	2.3	2.9	6.4	0.6
Average	7	6	-	-	2.2	1.9	6.6	0.6

- B. Please list the monthly average permit limits for the facility in the blanks below.

	BOD ₅ (CBOD ₅) (mg/L)	maximum Cl ₂ (mg/L)	NH ₃ (mg/L)	minimum DO (mg/L)
Monthly Permit Limit	25	December - February 2.4 March - May 1.6 June - August 1.1 September - November 1.6	December - February 14.1 March - May 13.1 June - August 12.5 September - November 13.1	4.0
80% of the Permit Limit	20	December - February 1.92 March - May 1.28 June - August 0.88 September - November 1.28	December - February 11.28 March - May 10.48 June - August 10.0 September - November 10.48	3.2

Part II: EFFLUENT INFORMATION (cont.)

- C. Refer to the information in A & B and your operating reports to determine a point values for your facility.

Question	Number	Points Earned	Total Points
How many months did the effluent BOD ₅ (CBOD ₅) exceed 80% of monthly permit limit?	0	0 - 1 = 0 points 2 = 5 points 3 = 10 points 4 = 15 points 5 or more = 20 points	0
How many months did the effluent BOD ₅ (CBOD ₅) exceed the monthly permit limits?	0	0 = 0 points 1 - 2 = 10 points 3 or more = 20 points	0
How many months did the effluent TSS exceed 20 mg/L?	0	0 - 1 = 0 points 2 = 5 points 3 = 10 points 4 = 15 points 5 or more = 20 points	0
How many months did the effluent TSS exceed 25 mg/L?	0	0 = 0 points 1 - 2 = 10 points 3 or more = 20 points	0
How many times did the Cl ₂ exceed permit limit?	3	0 = 0 points 1 - 2 = 15 points 3 or more = 30 points	30
How many times did the NH ₃ exceed permit limits?	0	0 = 0 points 1 - 2 = 15 points 3 or more = 30 points	0
How many times did the DO not meet permit limit?	0	0 = 0 points 1 - 2 = 15 points 3 or more = 30 points	0
How many months did the 30-day fecal coliform exceed 200 #/100 mL?	-	0 = 0 points 1 - 2 = 10 points 3 or more = 20 points	-
How many months did the 30-day total coliform exceed 2,000 #/100 mL?	-	0 = 0 points 1 - 2 = 10 points 3 or more = 20 points	-
How many months did the 30-day E-coli exceed 126 #/100 mL?	0	0 = 0 points 1 - 2 = 20 points 3 or more = 40 points	0
TOTAL PART II =			30

Part III: FACILITY AGE

In what year were the following process units constructed or underwent a major upgrade?
To determine a point score subtract the construction or upgrade year from 2013.

Points = Age = Present Year - Construction or Upgrade Year.

Enter the calculated age below.

If the point total exceeds 20 points, enter only 20 points.

Unit Process	Current Year	Construction or Last Upgrade Year	Age = Points
Headworks	2013	2002	11
Primary Treatment	2013	2002	11
Secondary Treatment	2013	2002	11
Solids Handling	2013	2010	3
Disinfection	2013	2002	11
TOTAL PART III (not greater than 20) =			20

Part IV: BYPASSES

Please complete the following table:

Question	Number	Points Earned	Total Points
How many days in the past year was there a bypass or overflow of untreated wastewater due to high flows?	1	0 = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 or more = 25 points	5
How many days in the last year was there a bypass or overflow of untreated wastewater due to equipment failure?	0	0 = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 or more = 25 points	0
TOTAL PART IV =			5

Part V: SOLIDS HANDLING

A. Please complete the following table:

Current Disposal Method (check all that apply)	Points Earned	Total Points
Landfill	Class B = 0 points < Class B = 50 points	50
Land Application	Site Life 0 - 5 years = 20 points 5 - 10 years = 10 points 10+ years = 0 points	-
Give Away/Distribution and Marketing	Class A = 10 points Class B = 20 points	-
TOTAL PART V =		50

Part VI: NEW DEVELOPMENT

A. Please complete the following table:

Question	Points Earned	Total Points
Has an industry (or other development) moved into the community or expanded production in the past two years, such that either flow or wastewater loadings to the sewerage system were significantly increased (10 - 20%)?	No = 0 points Yes = 10 points	0
Are there any major new developments (industrial, commercial, or residential) anticipated in the next 2- 3 years, such that either flow or BOD ₅ loadings to the sewerage system could significantly increase (25%)?	No = 0 points Yes = 10 points	10
Have you experienced any upset due to septage haulers?	No = 0 points Yes = 10 points	0
TOTAL PART VI =		10

Part VI: NEW DEVELOPMENT (cont.)

- B. Approximate number of new residential sewer connections in the last year
53 new residential connections
- C. Approximate number of new commercial/industrial connections in the last year
2 new commercial/industrial connections
- D. Approximate number of new population serviced in the last year
212 new people served

Part VII: OPERATOR CERTIFICATION

- A. How many operators are currently employed by your facility?
6 operator(s) employed
- B. What is/are the name(s) of your DRC operator(s)?
Brent Arns
Jeff Hiatt
- C. You are required to have the treatment DRC operator(s) certified at GRADE IV.
What is the current grade of the DRC operator(s)? IV
- D. State of Utah Administrative Rules Require that all operators considered to be in DRC to be appropriately certified. List all the operators in your system by their certification class.
- | | |
|---------------|----------|
| Not Certified | <u>3</u> |
| Treatment I | <u></u> |
| Treatment II | <u>1</u> |
| Treatment III | <u></u> |
| Treatment IV | <u>2</u> |

Part VII: OPERATOR CERTIFICATION (cont.)

E. Please complete the following table:

Question	Points Earned	Total Points
Is/are your DRC operator(s) currently certified at the appropriate grade for this facility? (see C)	Yes = 0 points No = 50 points	0
How many continuing education units has each of the DRC operator(s) completed over the last 3 years?	3 or more = 0 points less than 3 = 10 points	0
TOTAL PART VII =		0

Part VIII: FACILITY MAINTENANCE

A. Please complete the following table:

Question	Points Earned	Total Points
Do you follow an annual preventative maintenance program?	Yes = 0 points No = 30 points	0
Is it written?	Yes = 0 points No = 20 points	0
Do you have a written emergency response plan?	Yes = 0 points No = 20 points	0
Do you have an updated operations and maintenance manual	Yes = 0 points No = 20 points	0
Do you have a written safety plan?	Yes = 0 points No = 20 points	0
TOTAL PART VIII =		0

Part IX: SUBJECTIVE EVALUATION

This section should be completed with the facility operators.

- A. Do you consider your wastewater facility to be in good physical and structural condition?

YES X NO

If NOT, why?

- B. What improvements do you think the plant will need in the next 5 years?

Rebuild Trickling Filter, Upgrade to remove nutrients

- C. Where there any backups into basements at any point in the collection system in 2013.

YES X NO

Why? (do not include backups due to clogged laterals)

Grease in sewer main leading to resident home back-up

- D. Does the municipality/district pay for the continuing education expenses of operators?

ALWAYS X SOMETIMES NO

If so, what percentage do they pay?

approximately 100 %

Part IX: SUBJECTIVE EVALUATION (cont.)

- E. Is there a written policy regarding continuing education and training for wastewater operators?

YES X NO

- F. Have you done any major repairs or mechanical equipment replacement in 2009?
(do not include construction or upgrade projects)

YES X NO

- G. What was the approximate cost for those repairs or replacements?

\$ 250,000

- H. Any additional comments? (Attach additional sheets if necessary.)

N/A

POINT SUMMATION

Fill in the values from Parts I through VIII in the blanks provided in column 1. Add the numbers to determine the MWPP point total that your wastewater facility has generated for the past twelve months.

Part	Points
I	0
II	30
III	20
IV	5
V	50
VI	10
VII	0
VIII	0
Total	115