

**MEMO
SPANISH FORK CITY
PUBLIC WORKS DEPARTMENT**

DATE: March 11, 2008

TO: Mayor Thomas and City Council

FROM: Richard J. Nielson, Assistant Public Works Director

RE: Municipal Wastewater Planning Program

Each year the State of Utah asks the City to complete the attached report. As part of the request, the State would like to have the City Council adopt the attached resolution indicating that you have reviewed the report and that the City is taking appropriate actions to meet our UPDES permit. The City is currently meeting all of the requirements of the permit. I would request that the City Council approve the resolution for the Municipal Wastewater Planning Program.

STATE OF UTAH

MUNICIPAL WASTEWATER PLANNING PROGRAM

SELF-ASSESSMENT REPORT

FOR

SPANISH FORK CITY

2007



Resolution Number 08-08

MUNICIPAL WASTEWATER PLANNING PROGRAM RESOLUTION

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

1. Reviewed the attached Municipal Wastewater Planning Program Report for 2007.
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

April 1, 2008
(date)

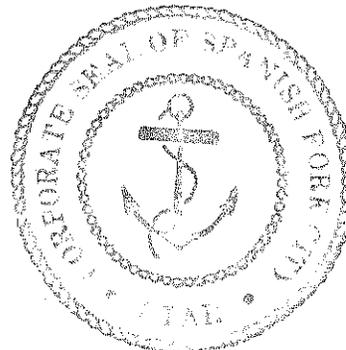


Mayor/Chairman



Attest:

Recorder/Clerk



Municipal Wastewater Planning Program (MWPP) Financial Evaluation Section

Owner Name: *SPANISH FORK CITY*

Name and Title of Contact Person:

Richard Nielson
Assistant Public Works Director

Phone: *(801) 798-5082*

PLEASE SUBMIT TO STATE BY: APRIL 1, 2008

Mail to: MWPP - Department of Environmental Quality
c/o Paul Krauth, P.E.
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
Phone : 538-6146

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) 538-6070.

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 <i>at this time</i> ?	YES = 0 points NO = 25 points	0
Are the projected revenues sufficient to cover operation, maintenance, and repair & replacement (OM&R) costs for the <i>next five years</i> ?	YES = 0 points NO = 25 points	0
Does the facility have sufficient staff to ensure proper O&M?	YES = 0 points NO = 25 points	0
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 =		0

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 <i>next five years</i> ?	YES = 0 points NO = 25 points	0
Are projected funding sources sufficient to cover all projected capital improvement costs for the <i>next ten years</i> ?	YES = 0 points NO = 25 points	0
Are projected funding sources sufficient to cover all projected capital improvement costs for the <i>next twenty years</i> ?	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 =		25

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)	2008	2009	2010	2011	2012
	911	2967	646	666	686

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	0
II	25
III	0
Total	25

Municipal Wastewater Planning Program (MWPP) Collection System Section

Owner Name: *SPANISH FORK CITY*
Name and Title of Contact Person:

Richard Nielson

Assistant Public Works Director

Phone: *(801) 798-5082*

PLEASE SUBMIT TO STATE BY: APRIL 1, 2008

Mail to: Department of Environmental Quality
c/o Paul Krauth, P.E.
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
Phone : 538-6146

Form completed by

Richard Nielson

Part I: SYSTEM AGE

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

Year 1935

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

Oldest part 72 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?	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
How many days last year was there a bypass, overflow or basement flooding by untreated wastewater due to equipment failure? (except plugged laterals)	3	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	15
TOTAL PART II =			15

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

N/A

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	0
TOTAL PART III =		0

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

390 new residential connections

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

40 new commercial/industrial connections

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

1420 new people served

Part IV: OPERATOR CERTIFICATION

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

5 collection system operators employed

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

Marvin Banks

C. You are required to have the 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.

Not Certified _____
 Small Lagoons _____
 Collection I _____
 Collection II 3
 Collection III _____
 Collection IV 2

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	20
TOTAL PART V =		20

Part VI: SUBJECTIVE EVALUATION

This section should be with the system operators.

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

Generally good condition, some infiltration, pipes are structurally sound, lift stations in good condition w/ back-up power + SCADA

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

Replacement of old mains, reduce I + I

Part VI: SUBJECTIVE EVALUATION (cont.)

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

none

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

yes we have a 10 yr plan for replacement/
rehabilitation of sewer mains, working w/ SUMWA
on regional WWTP

E. How many times in the last year were there sewage in basements at any point in the collection system for any reason, except plugging of the lateral connections?

3 times sewage was in basements

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

ALWAYS SOMETIMES _____ NO _____

If they do, what percentage is paid?

approximately 100 %

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

YES _____ NO

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	
III	
IV	
V	
Total	

Municipal Wastewater Planning Program (MWPP) Mechanical Plant Section

Owner Name: *SPANISH FORK CITY*

Name and Title of Contact Person:

Dennis Sorensen

WWTP Manager

Phone: *(801) 798-5051*

PLEASE SUBMIT TO STATE BY: APRIL 1, 2008

Mail to: Department of Environmental Quality
Division of Water Quality
c/o Paul Krauth, P.E.
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
Phone : 538-6146

Form completed by

Dennis R. Sorensen

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	6 MGD	9007	9007
90% of the Design Criteria	5.4	8106	8106

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 2007. (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	3.3	225	6192	176	4844
February	2.7	189	4256	173	3896
March	3	159	3978	174	4353
April	3	202	5054	167	4178
May	2.5	180	3753	161.6	3369
June	3.8	177	5609	188	5958
July	4.1	277	9610	233	8084
August	4.2	151	5289	165	5780
September	4.1	206	7044	155	5300
October	3.5	185	5400	172	5021
November	3.5	229	6685	183	5342
December	3.8	222	7036	157	4976
Average	3.5	200	5826	175.4	5092

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?	1	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?	1	0 = 0 points 1 - 2 = 20 points 3 - 5 = 40 points 5 or more = 60 points	20
TOTAL PART I =			20

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 2007.

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	10	8			7.4	1.2	5	21
February	13	10			1	1.8	4.5	23
March	7	5			3	1	5	12.7
April	17	7			3	1.1	4.5	4.5
May	19	8			2	1	5	10.5
June	22	17			6	1.4	4	17.6
July	14	13			5	1.5	4.5	16.5
August	7	6			3	1.7	4	12
September	6	8			2	1.5	4.5	20.1
October	9	6			1	1.8	4.5	17.3
November	9	6			1	1.7	5	17.4
December	10	6			7	1.5	4.3	17.4
Average	11	8			3	1.4	4.6	15.8

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	2	18	4
80% of the Permit Limit	20	1.6	14.4	4.8

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?	0	0 = 0 points 1 - 2 = 15 points 3 or more = 30 points	0
How many times did the NH ₃ exceed permit limits?	3	0 = 0 points 1 - 2 = 15 points 3 or more = 30 points	20
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 =			20

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 2007.

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	2007	2007	0
Primary Treatment	2007	2007	0
Secondary Treatment	2007	2004	3
Solids Handling	2007	2001	6
Disinfection	2007	1998	9
TOTAL PART III (not greater than 20) =			18

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?	0	0 = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 or more = 25 points	0
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 =			0

Part VI: NEW DEVELOPMENT (cont.)

- B. Approximate number of new residential sewer connections in the last year
396 new residential connections
- C. Approximate number of new commercial/industrial connections in the last year
40 new commercial/industrial connections
- D. Approximate number of new population serviced in the last year
1420 new people served

Part VII: OPERATOR CERTIFICATION

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

3 operator(s) employed

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

Dennis R. Sorenson
Terry Hadlock

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

What is the current grade of the DRC operator(s)? 4/9 III

- 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	_____
Treatment I	_____
Treatment II	_____
Treatment III	<u>1</u>
Treatment IV	<u>1</u>

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	
Land Application	Site Life 0 - 5 years = 20 points 5 - 10 years = 10 points 10+ years = 0 points	0
Give Away/Distribution and Marketing	Class A = 10 points Class B = 20 points	
TOTAL PART V =		0

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	0
Have you experienced any upset due to septage haulers?	No = 0 points Yes = 10 points	0
TOTAL PART VI =		

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 NO

If NOT, why?

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

New digester & mixing system

- C. Where there any backups into basements at any point in the collection system in 2007.

YES NO

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

Construction debris in main line, back up in main line

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

ALWAYS SOMETIMES NO

If so, what percentage do they pay?

approximately *100* %

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	20
II	50
III	18
IV	0
V	0
VI	
VII	0
VIII	0
Total	

Part IX: SUBJECTIVE EVALUATION (cont.)

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

YES NO

F. Have you done any major repairs or mechanical equipment replacement in 2007? (do not include construction or upgrade projects)

YES NO

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

\$35,000.

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

High Ammonia was due to frozen
trickling filter and trickling filter
pumps break downs All are fixed
NH₃ now are in the 1/3 to 6 mg/l range.