

September 6, 1974



Memo to: Howard Buntin

From: Dan Glantz

Subject: Rockford Lagoon Survey

The survey was conducted on May 22, 1974, by Mike Harris. The weather was warm and clear. Mike contacted Mr. Carl Schmidt, the operator of the lagoon, and obtained access through the gate into the area of the ponds. Both ponds have large amounts of duck weed growing around the banks. There was hardly any flow coming out the effluent. During the summer, the receiving stream, Rock Creek, dries up completely.

Conductivity figures obtained from the lab report do not appear reliable and are in contrast to the field report. Total Kjeldahl was not run as the holding time for the sample had expired. Coliform is higher than it should be and it could be reduced with chlorination which is not being used at this time.

The field and laboratory reports are attached for your reference.

DG:jmh

STP Survey Report Form

Efficiency Study

City Rockford Plant Type Lagoon Pop. Served 130 Design ----
 Capacity -----
 Receiving Water Rock Creek Perennial ----- Intermittent X
 Date 5/22/74 Survey Period 1000-1300 Survey Personnel M. Harris
 Comp. Sampling Frequency 1/2 hour Sampling Alequot 500 ml
 Weather Conditions (24 hr) Hot - Sunny Are facilities provided for complete by-
 pass of raw sewage? X Yes ----- No/Frequency of bypass 0
 Reason for bypass ----- Is bypass chlorinated? ----- Yes X No
 Was DOE Notified? ----- Discharge - Intermittent ----- Continuous -----

Plant Operation

Total flow ----- How measured -----
 Maximum flow ----- Time of Max. -----
 Minimum flow ----- Time of Min. -----
 Pre Cl₂ 0 #/day Post Cl₂ 0 #/day

Field Results

Influent

Effluent

<u>7</u> Determinations	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
Temp °C	12.5	12.0		12.5	15.5	15.0		15.5
pH (Units)	8.8	8.0		8.3	8.0	7.4		7.5
Conductivity (µmhos/cm ²)	975	625		800	500	475		500
Settleable Solids (mls/l)	5	3	4	3	Tr	0	0	0

Laboratory Results on Composites

	<u>Influent</u>	<u>Effluent</u>	<u>% Reduction</u>
Laboratory No.	<u>74-1891</u>	<u>74-1892</u>	
5-Day BOD ppm	<u>125</u>	<u><16</u>	<u>87%</u>
COD ppm	<u>163</u>	<u>70</u>	<u>57%</u>
T.S. ppm	<u>517</u>	<u>336</u>	<u>35%</u>
T.N.V.S. ppm	<u>295</u>	<u>201</u>	<u>32%</u>
T.S.S. ppm	<u>108</u>	<u>23</u>	<u>79%</u>
N.V.S.S. ppm	<u>24</u>	<u>7</u>	<u>71%</u>
pH (Units)	<u>7.5</u>	<u>7.7</u>	
Conductivity (µmhos/cm ²)	<u>*7300</u>	<u>*4700</u>	
Turbidity (JTU's)	<u>48</u>	<u>14</u>	

*QUESTIONABLE, CONFLICTS WITH FIELD DATA.

Laboratory Bacteriological Results

Lab No.	Sampling Time	Colonies/100 ml (MF)			Cl ₂ Residual
		Total Coliform	Fecal Coliform	Fecal Strep	
74-1893	1000	6500	Est. 90		
1894	1100	6000	Est. 100		
1895	1200	7000	Est. 70		
1896	1300	8500	250		

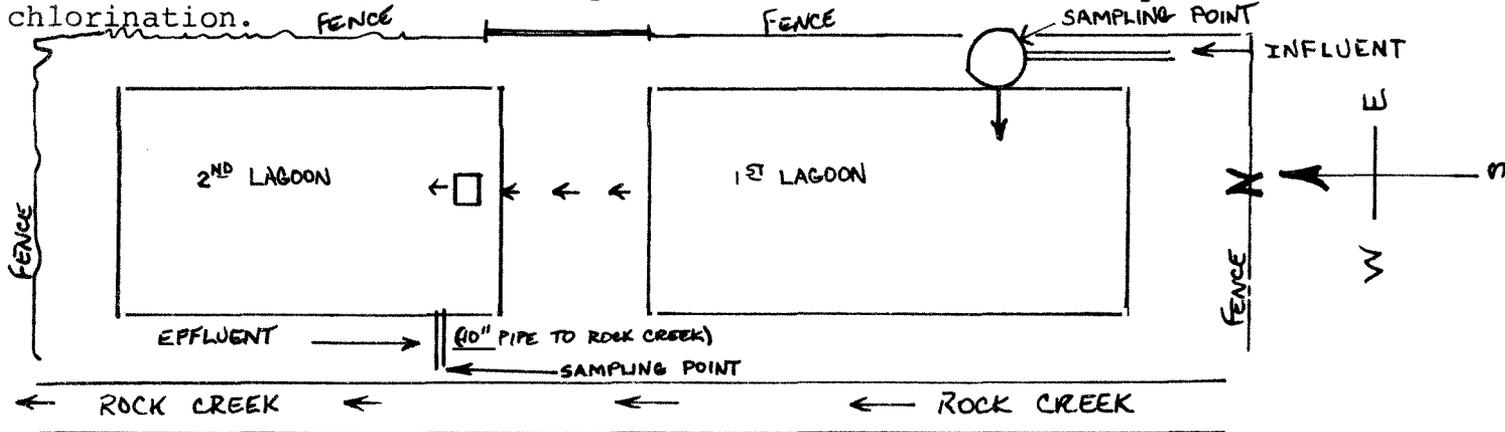
Additional Laboratory Results

NO ₃ -N ppm	-	.24	
NO ₂ -N ppm	-	N.D.	
NH ₃ -N ppm	-	---	(1)
T. Kjeldahl-N ppm	-	---	(1)
O-PO ₄ -P ppm	-	3.20	
T-PO ₄ -P ppm	-	5.0	

(1) Not analyzed - holding time expired.

Operator's Name Carl Schmidt Phone No. _____

Furnish a flow diagram with sequence and relative size and points of chlorination.



Type of Collection System

Combined Separate Both

Estimate flow contributed by surface or ground water (infiltration)

Nil MGD
(Storm sewer drains directly into Rock Cr.)

Plant Loading Information

Annual average daily flow rate (mgd)

Peak flow rate (mgd)

Dry _____

Dry _____

Wet _____

Wet _____

COMMENTS: _____