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MEMORANDUM

February 28, 1975

State of
Washington
Department
of Ecology



TO: JOHN GLYNN
FROM: HANS CREGG *HJ*
SUBJECT: Poulsbo STP

On January 7, 1975, an efficiency study was conducted at the Poulsbo wastewater treatment plant.

The plant and its facilities are hopelessly outdated and inadequate; raw sewage is overflowing and finding its way to the beach on a regular and consistent basis. Seasonal conditions cause flooding of the entire compound, leaving a residue of sewage debris throughout the area.

Maintenance and plant operations are minimal and consist of pumping chlorine to the effluent.

Lab results show high coliform counts and low BOD and solids reductions.

HJC:bj

STP Survey Report Form

Efficiency Study

City Poulsbo Plant Type Primary Pop. Served 2,100 Design Capacity _____
 Receiving Water Puget Sound Perennial _____ Intermittent _____
 Date 1/7/75 Survey Period 8 hours Survey Personnel H. J. Cregg
 Comp. Sampling Frequency hourly Sampling Alequot 1000 mls
 Weather Conditions (24 hr) rain Are facilities provided for complete by-pass of raw sewage? _____
 Yes No/Frequency of bypass _____
 Reason for bypass _____ Is bypass chlorinated? _____ Yes _____ 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 _____ #/day Post Cl₂ 25 #/day

* Due to pH meter failure only one pH reading for influent and effluent could be taken.

Field Results

Influent

Effluent

Determinations	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
Temp °C	11	11		11				
pH (Units)	*	*		*	6.8	*	*	*
Conductivity (µmhos/cm ²)	--	--		--		--	--	--
Settleable Solids (mls/l)	12	10	11	12	2	1	2	2

Laboratory Results on Composites

	Influent	Effluent	% Reduction
Laboratory No.	<u>75-0092</u>	<u>75-0093</u>	
5-Day BOD ppm	<u>108</u>	<u>96</u>	<u>12</u>
COD ppm	<u>189</u>	<u>118</u>	<u>38</u>
T.S. ppm	<u>327</u>	<u>284</u>	<u>14</u>
T.N.V.S. ppm	<u>172</u>	<u>159</u>	<u>8</u>
T.S.S. ppm	<u>102</u>	<u>53</u>	<u>49</u>
N.V.S.S. ppm	<u>21</u>	<u>10</u>	<u>53</u>
pH (Units)	<u>7.4</u>	<u>7.3</u>	
Conductivity (µmhos/cm ²)	<u>370</u>	<u>370</u>	
Turbidity (JTU's)	<u>40</u>	<u>30</u>	

Laboratory No.

5-Day BOD ppm

COD ppm

T.S. ppm

T.N.V.S. ppm

T.S.S. ppm

N.V.S.S. ppm

pH (Units)

Conductivity

(µmhos/cm²)

Turbidity (JTU's)

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

ORIGINAL TO:
H. J. Crell
 COPIES TO:

 LAB FILES

DATA SUMMARY

Source POULSBRO STP

Collected By H. J. Crell

Date Collected 1-7-75

Goal, Pro./Obj. _____

Log Number:	75-0092	93	94	95	96	97	98				STORET
Station:	INF	ect	0900	1000	1200	1300	overflow hole 1300				
pH	7.4	7.3									00403
Turbidity (JTU)	40.	30.									00070
Conductivity (umhos/cm)@25°C	370.	370.									00095
COD	189	118									00340
BOD (5 day)	108	96									00310
Total Coliform (Col./100ml)	-	-	2.9x10 ⁴	3.2x10 ⁴	3.2x10 ⁴	4.6x10 ⁴	2.9x10 ⁴				31504
Fecal Coliform (Col./100ml)	-	-	400	440	470	1000	230				31616
NO3-N (Filtered)	-	15.0									00620
NO2-N (Filtered)	-	ND									00615
NH3-N (Unfiltered)	-	12.4									00610
T. Kjeldahl-N (Unfiltered)	-	14.6									00625
O-PO4-P (Filtered)	-	2.10									00671
Total Phos.-P (Unfiltered)	-	4.20									00665
Total Solids	327	284									00500
Total Non Vol. Solids	172	159									
Total Suspended Solids	102	53									00530
Total Sus. Non Vol. Solids	21	10									

Note: All results are in PPM unless otherwise specified. ND is "None Detected"
 Convert those marked with a * to PPB (PPM X 10³) prior to entry into STORET

Summary By Stephen D. Roll Date 1-27-75