MEMORANDUM

Water Pollution Cor tio Con mission

P. O. Box 829

OLYMPIA VASHIN ' ON

98501

Publication No. 69-e01

WA-32-1060

TO: Don Provost, Tom Haggarty, Files

DATE: December 3, 1969

FROM: Bob Bishop

SUBJECT: Survey of Mill, Cold, and Doane Creeks

Olympia WWPCC personnel continued surveillance of Mill, Cold, and Doane Creeks near Walla Walla on December 3, 1969. The bacteria samples for total coliform sheen colonies per 100 ml were run at the Walla Walla STP using a field bacteria analysis kit. The previous memo was dated September 8, 1969. Sphaerotilus growth was much less than was previously noted. Data for the stations is given in Tables 1 and 2.

BB:lm
1/12/70
Attachment

Table 1. Temperature, pH, and DO data for Mill Creek and the Walla Walla River.

Station	Time Standard	Temp. °C	pH	DO in mg/l
1	0730	2.2	8.6	11.3
2	0745	5.8	7.5	9.6
3	0800	3.4	7.6	10.4
4	0815	7.4	7.7	10.3
5	0830	6.4	7.6	8.7
6	0845	5.6	7.6	9.9
7	0900	4.9	7.5	10.1
8	0915	7.2	7.4	11.9
9	0930	4.0	7.6	10.8

Table 2. Temperature, pH, DO, and total coliform data for Cold and Doane Creeks.

Station	Time Standard	Temp. °C.	pH	DO	Total Coliform Sheen Colonies per 100 ml.
Cold Creek					
7 (dried up)	1030				
6	1000	7.4	7.5	8.3	0 (technique error)
5	0900	5.3	7.8	9.6	5,000
Doane Creek					
2a	1045	6.4	7.5	9.9	14,000
3	1115	6.3	7.4	9.1	12,000
4	0845	1.4	7.6	12.3	54,000
8	0915	3.5	7.6	12.4	14,000
Blalock					
2b (dried up)	1100				

MEMORANDUM
Water Pollution Control Commission

P. O. Box 829
OLYMPIA, WASHINGTON
98501

	Check
Information	
For Action	
Permit	
Other	

TO: Tom Haggarty, and Don Provost

DATE: 5-5-70

FROM: Bob Bishop

SUBJECT: Survey of Mill, Cold, and Doane Creeks.

Olympia WWPCC personnel continued surveillance of Mill, Cold and Doane Creeks near Walla Walla and College Place, May 5, 1970. Two previous memos on the subject are dated September 8, 1969 and December 3, 1969.

Stream flow was much greater on May 5th, 1970 than on December 3, 1969. Sphaerotilus growth was nil at all stations. The bacteria samples for total coliform sheen colonies per 100 ml were run at the Walla Walla STP using the field bacteria analysis kit. Data for the stations is given in Tables 1 and 2.

In response to a letter to the WWPCC Spokane Office, dated February 19, 1970, I met Mr. A. Loren Johnson and Mr. Don Johnson at 0900 hours at the Walla Walla STP. We discussed pollution in general and problems in the local area. I suggested that they contact Mr. John Gainor at the Walla Walla County Health Department for further information.

Don Johnson suggested that I take a bacteria sample in Garison Creek, at a station .5 mile downstream from the College Place STP. The result is given in Table 2. I think it would be to the most benefit as far as public relations are involved, if personnel from the Spokane office inform Mr. Loren Johnson and Mr. Don Johnson about conditions in the streams in question.

Would you please contact me about when the survey should be run again and whether or not it should be expanded or more parameters measured.

BB
BB:ah

Table 1. Temperature, pH, and DO data for Mill Creek and the Walla Walla River.

Station	Time Standard	Temp. °C	pH	DO in mg/l
1	0800	9.5	7.2	11.0
2	0815	10.7	7.1	9.6
3	0830	10.1	7.3	10.6
4	0845	11.4	7.2	10.6
5	1020	11.8	7.1	10.3
6	1040	12.6	7.4	10.7
7	1150	14.0	7.4	10.5
8	1130	12.4	7.2	10.3
9	1200	13.5	7.3	10.4

Table 2. Temperature, pH, DO and total coliform data for Cold, Doane and Garison Creeks.

Station	Time Standard	Temp. °C	pH	DO	Total Coliform Sheen Colonies per 100 ml.
					Control 0
Cold Creek					
7	1230	16.0	7.2	9.6	200
6	1250	18.0	7.0	7.0	6,600
5	1050	17.0	7.1	6.2	17,000
Doane Creek					
2a	1240	15.8	7.1	8.6	3,400
3	1250	17.5	7.0	9.6	2,400
4	1055	17.4	8.0	11.0	9,800
8	1140	20.8	8.0	10.5	2,400
Blalock					
2b	1235	13.4	7.2	9.6	1,200
Garison Creek					
1 (.5 mile downstream from College Place STP)		0930			4,000

On June 29-30, 1970, I sampled stations on Pine and Dry Creeks for background water quality data. Cannery waste from Milton Freewater is piped to three settling ponds on a hill near Umapine, where it is used to spray irrigate fields. The city of Milton Freewater oversees the ponds and has recently installed the third one. One pond was recently cleaned by the city; the sludge was piled to further dike the pond.

The three farmers who use most the effluent are: Mr. Wallace, Mr. Paul Ransom and Mr. Art Carrie. In the summer of 1969, at peak cannery production, effluent was pumped into Dry Creek and flowed across the state line and into the Walla Walla River.

The canneries involved are:

1) Lynden Umatilla Food
   Div. Western Farmers Assoc.
   Main Office - 235 E Broadway
   Phone: (503)-938-3311

2) Smith Frozen Foods of Oregon
   335 Evans
   Phone 938-3326

3) Rogers Walla Walla Inc.
   1008 South Mill
   Phone: 938-7371

BB:ahh

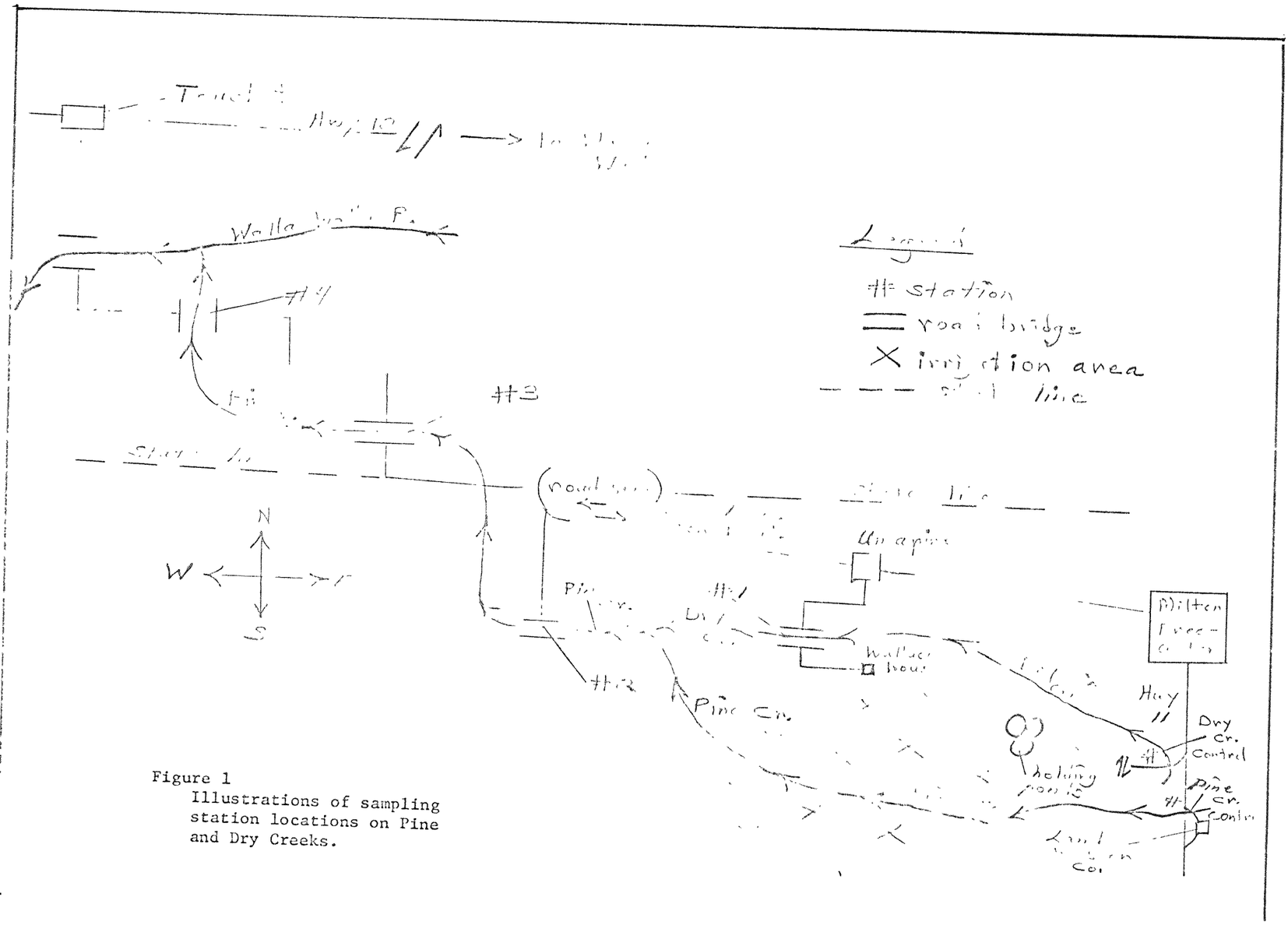


Figure 1
Illustrations of sampling station locations on Pine and Dry Creeks.

STATE O
WATER POLLUTIO
ANALYT

To: BOB BISHOP

The following are the analytic

PINE CREEK

LAB. NO.	STATION NO.	J.T.U. TURBIDITY
70-3286	Dry Cr. 54 #1	5.1
3287	Pine Cr. 443 #2	3.5
3288	Pine Cr. 47 #3	4.1
3289	Pine Cr. 492 #4	6.5
3290	Dry Cr. 12	2.0
3291	Pine Cr. 448	3.0

Notes:

STATE OF WASHINGTON
WATER POLLUTION CONTROL COMMISSION
ANALYTICAL REPORT SHEET

Routing
Original to LAB.
Copies to:
BOB BISHOP

To: BOB BISHOP

The following are the analytical results from survey conducted at:

PINE CREEK

Collected 6-30-70

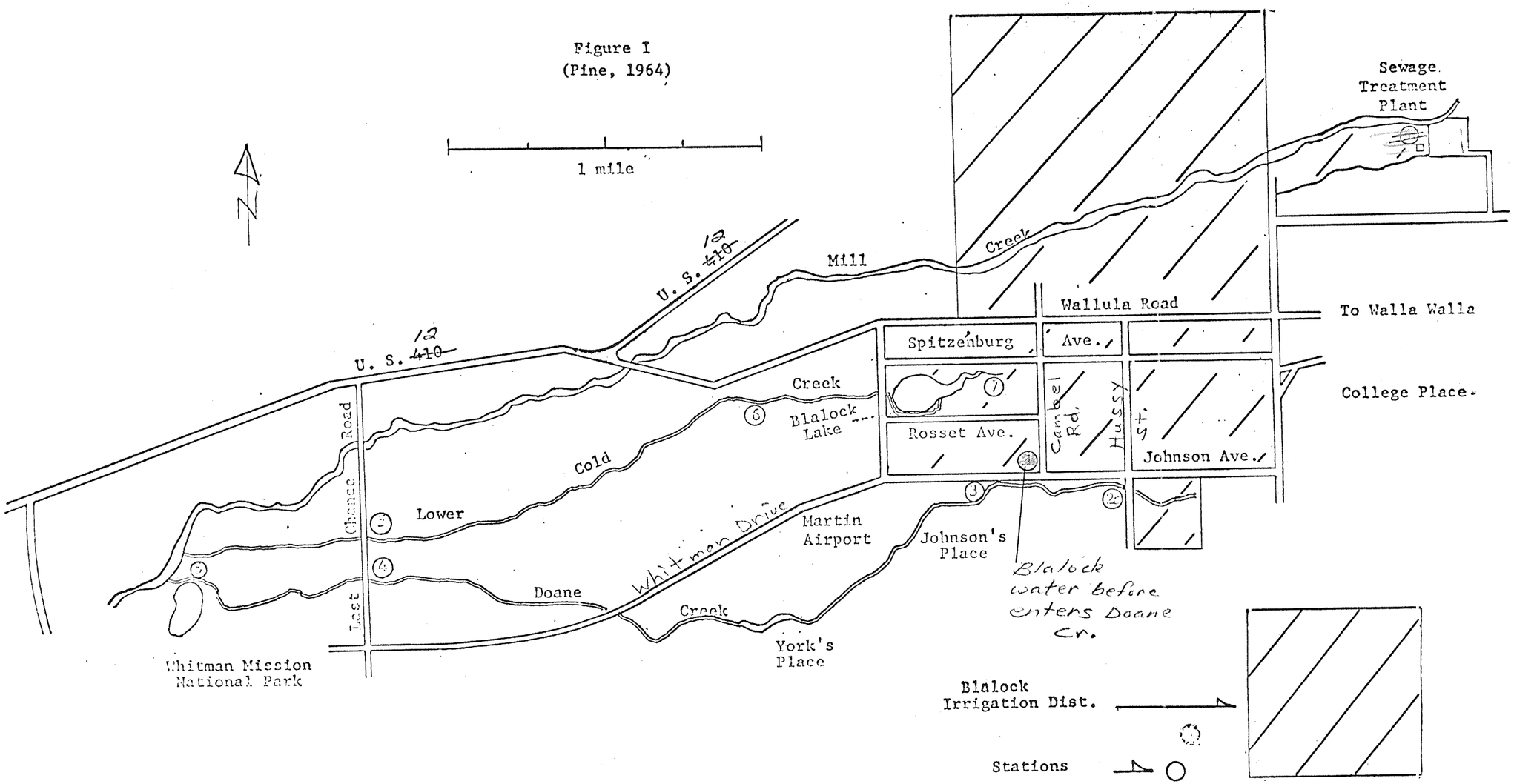
LAB. NO.	STATION NO.	mg/l. B.O.D.	mg/l. C.O.D.	J.T.U. TURBIDITY	pH	mg/l. NITRATE N.	mg/l. NITRITE N.	mg/l. AMMONIA N.
70-2977	DRY CREEK CONTROL	5	20	7.0	9.6	0.63	0	0.07
2978	DRY CR. #1	8	20	5.9	7.8	0.42	0.003	0.04
2979	PINE CREEK CONTROL	3	8	10	9.0	1.80	0	0.08
2980	PINE CREEK #2	3	16	8.2	8.2	0.26	0	0.11
2981	PINE CR. #3	1	16	10	8.2	1.18	0	0.12
2982	PINE CR. #4	<1	16	11	8.3	1.92	0	0.02

		mg/l. NITROGEN N.	mg/l. PHOSPHORUS P.	DO	Temp °F	Cond. micromhos/cm 25°C
70-2977	Dry Cr. Control	0.11	0.03	11.4	71°F	230
2978	Dry Cr. #1	0.17	0.10	8.8	54°F	500
2979	Pine Creek Control	0.29	0.04	11.0	66°F	250
2980	Pine Cr. #2	0.47	0.05	10.0	54°	640
2981	Pine Cr. #3	0.35	0.06	11.0	58°	470
2982	Pine Cr. #4	0.29	0.05	10.8	61°	470

Notes:

Summarized by EU. DENIKE
Date 7-27-70

Figure I
(Pine, 1964)



DOANE CREEK INVESTIGATION AREA

MEMORANDUM

Water Pollution Control Commission
P. O. Box 829
OLYMPIA, WASHINGTON
98501

	Check
Information	
For Action	
Permit	
Other	

TO: Don Provost, Tom Haggarty

DATE: September 8, 1969

FROM: Robert Bishop

SUBJECT: Survey of Mill, Cold, and Doane Creeks

WPCC of Spokane requested Olympia personnel to conduct a survey of Mill, Cold, and Doane Creeks, located in the vicinity of Walla Walla and College Place. The survey was conducted September 10-11, 1969, by Bob Bishop and Earl Anderson, superintendent of the Walla Walla sewage treatment district. Temperature, pH, and dissolved oxygen data were taken at each of the 17 stations shown in Figures 1 and 2. Dissolved oxygen concentrations were determined with a YSI DO meter and by the Winkler method. Sampling was conducted from sunrise to 1130 standard time to determine diurnal effects. Samples for total coliform bacterial analysis were taken at the eight stations on Cold and Doane Creeks. Observations for growth of Sphaerotilus and abundance of certain aquatic insect larvae were made at all stations.

Temperature, pH, and DO measurements for Mill Creek and the Walla Walla River are given in Table 1. Station 1, was upstream from the treatment plant. At Station 2, due to stream bed bulldozing the creek water and plant, Blalock diversion effluent were in separate channels; the effluent was sampled. For DO meter data corrections, the barometric pressure was 1014.4 millibars, Thursday morning.

Table 1.

Temperature, pH, and DO data for
Mill Creek and the Walla Walla River.

Station	Time Standard	Temp. °C	pH	d.o. in mg/l Meter	d.o. in mg/l Winkler
1	0600	16.9	7.4	7.5	7.36
2	0630	19.6	6.9	7.0	6.43
3	0645	18.4	7.0	4.6	4.28
4	0700	18.3	7.2	4.6	4.32
5	0715	17.1	7.0	4.5	5.04
6	0815	17.6	7.0	8.0	7.42
7	0930	19.6	7.1	9.2	9.50
8	0900	18.8	7.6	10.1	10.42
9	0945	20.0	8.0	10.4	10.90

Sphaerotilus abundance at the Mill Creek and Walla Walla River stations was as follows: Station No. 1, nil growth; No. 2, trace; No. 3, much growth with grey strands covering rocks the full width of the creek; No. 4, less than 3; greatly reduced at No. 5; very little growth at No. 6 and 7; and, nil growth in the Walla Walla River at No.'s 8 and 9. Green algae and moss covered the rocks and gravel at Station 6, and midge fly larvae, bloodworms, were very abundant, indicating heavy organic loading. At Station 7, the water was quite white in color, and foam was abundant; the reason is not known.

The temperature, pH, DO, and total coliform analyses for Cold and Doane Creeks are given in Table 2. The bacterial samples were logged in the lab from 69-3745 through 69-3752. Station 2b was Blalock irrigation water before it enters Doane Creek. Station 3 was about 1/4 mile downstream from the confluence of Doane Creek and the Blalock water. Cold Creek Station 7, was irrigation runoff feeding Blalock Lake; sample was taken from a cement stand box.

Table 2.

Temperature, pH, DO, and total coliform data for Cold and Doane Creeks.

Station	Time Standard	Temp. °C	pH	DO in mg/l Meter	DO in mg/l Winkler	Total Coliform sheen colonies per 100 ml.
Cold Creek						
7	1030	19.9	7.0	4.9	4.43	2,500,000
6	1000	16.8	7.4	5.9	6.30	48,000
5	0830	15.6	7.1	5.9	6.15	34,000
Doane Creek						
2a	1045	18.4	7.2	2.3	2.21	2,800,000
Blalock						
2b	1100	19.8	7.0	5.2	5.41	9,200,000
Doane Creek						
3	1115	20.3	7.1	5.6	5.65	1,400,000
4	0845	18.9	7.3	6.6	6.45	32,000
8	0915	19.4	7.4	8.6	8.90	29,000

Trace Sphaerotilus growth was noted at Stations 6 and 5 on Cold Creek. Nil growth was observed at Doane Station 2a; growth was noted at 2b (Blalock) and at No. 3, Doane Creek; Stations 4 and 8 showed nil growth.

RB:lm

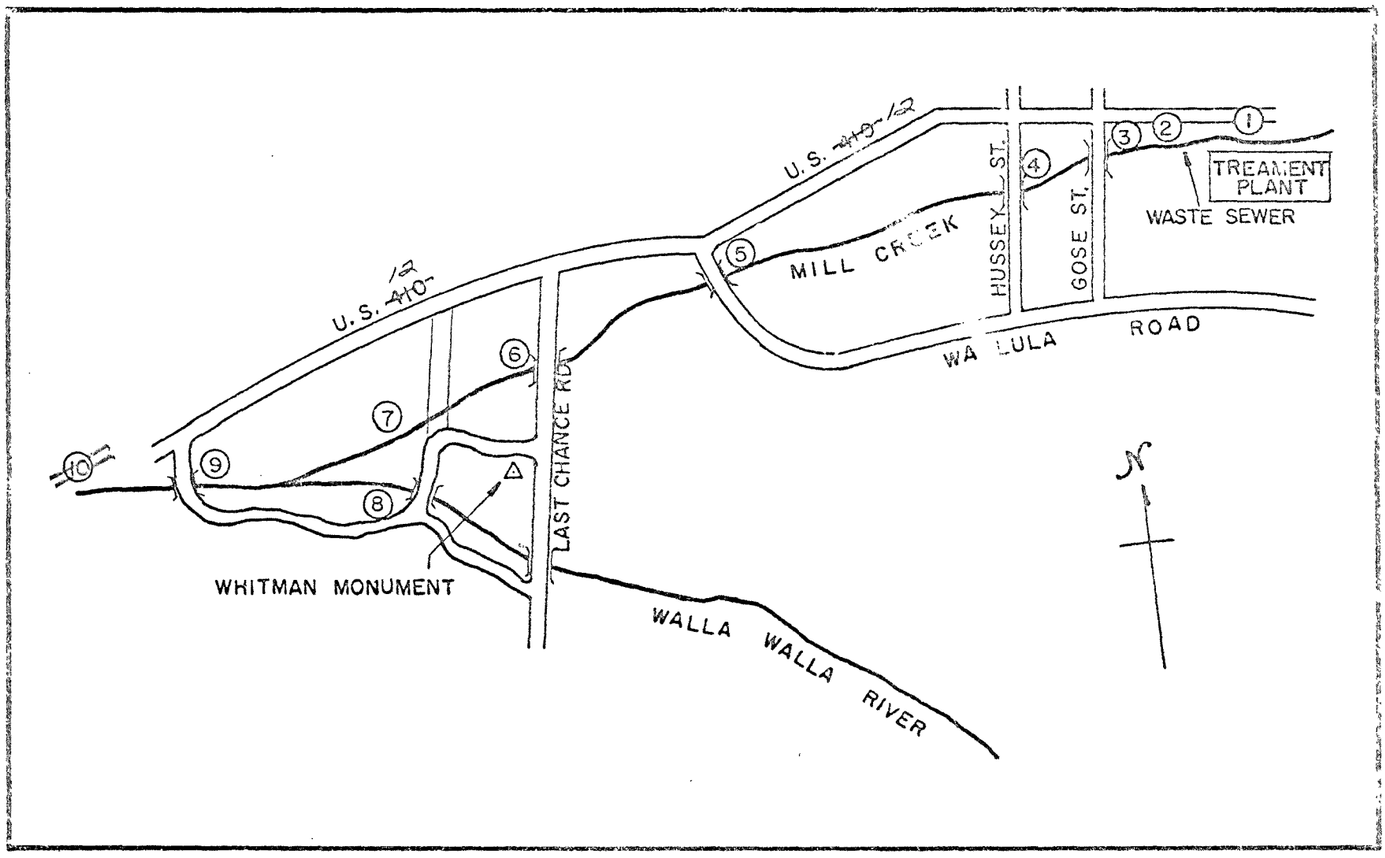
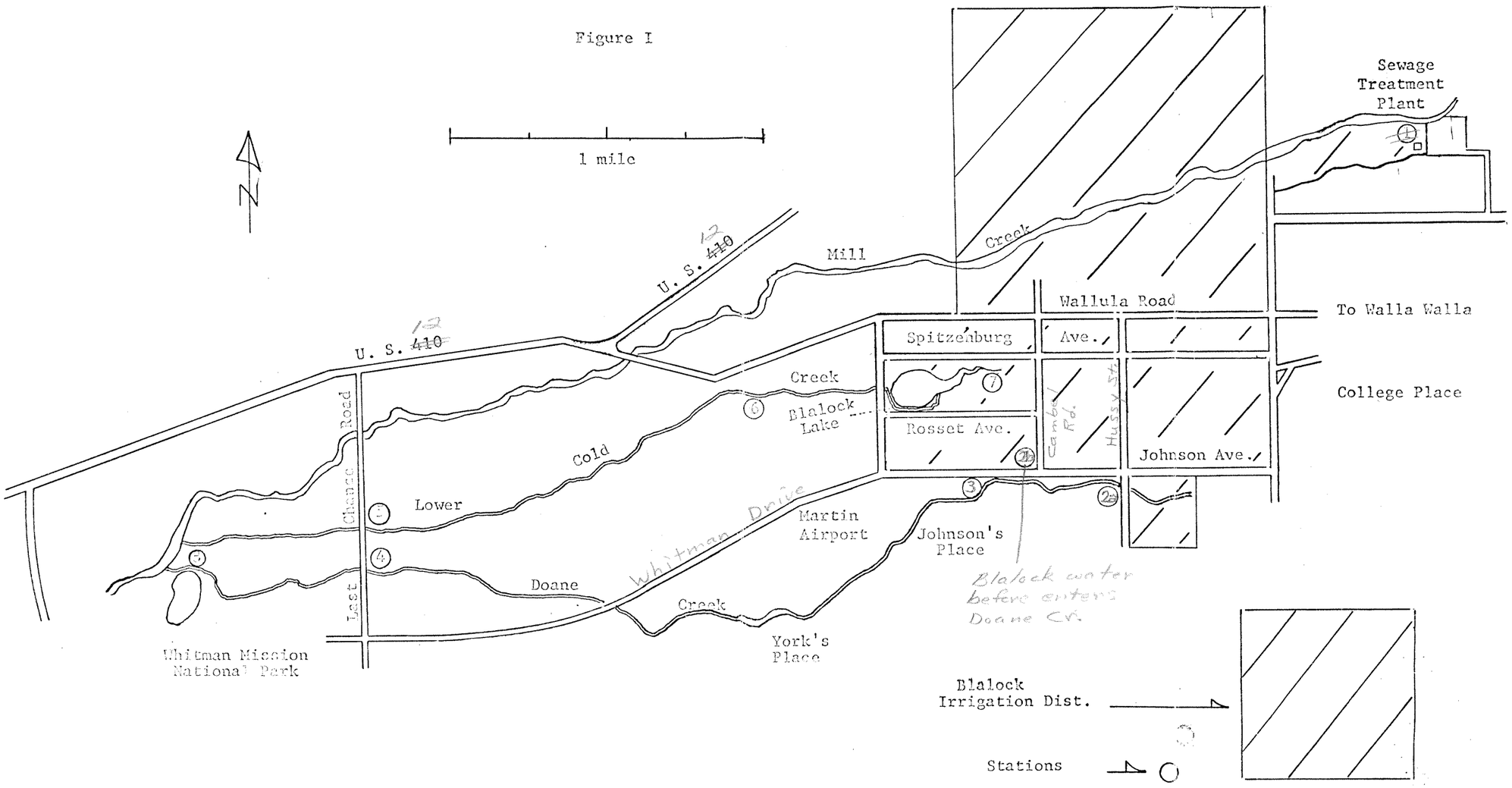


Figure 2

LOCATION OF SAMPLING POINTS ON MILL CREEK & WALLA WALLA R.

Figure I



DOANE CREEK INVESTIGATION AREA