

WATER QUALITY EVALUATION OF
CEDAR SPRINGS, WAUSHARA COUNTY WISCONSIN

By Michael D. Reif

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Field Survey Conducted: July 1982

OBJECTIVE

The objective of this study was to conduct a general water quality survey of Cedar Springs.

INTRODUCTION

Cedar Springs is a 1.8 acre hard water spring pond which feeds Cedar Creek. It is located in the SW $\frac{1}{4}$ of Section 2, T19N, R12E, Leon Township, Waushara County. It is primarily a brook trout spring pond. It was dredged in the summer of 1978 and is located within a tamarack bog. It is long and narrow and is surrounded primarily by tamarack trees (see photographs).

SURVEY PROCEDURE

Chemical samples were collected on July 20, 1984, from the surface of Cedar Springs near the north shore at the center point and from Cedar Creek immediately above Hwy Q. These site descriptions are in Table 1. Samples were iced and sent to the State Laboratory of Hygiene for biochemical oxygen demand, 5-day (BOD_5), lab pH, suspended solids, total phosphorus (T-P) ortho-phosphorus (ortho-P), total kjeldahl nitrogen (TKN), ammonia nitrogen (NH_3-N), nitrite plus nitrate nitrogen (NO_2+NO_3-N), total alkalinity (T-Alk), conductivity, and total hardness. In addition, chlorophyll, fecal coliform (FC), and fecal streptococcus (FS) were conducted on the Cedar Springs sample. Dissolved oxygen (D.O.) and temperature were conducted on-site.

RESULTS AND DISCUSSION

The results from this study are in Table 2. Data indicate Cedar Springs to be a hard water spring pond of excellent water quality. All nutrients were below detectable limits except NO_2+NO_3-N .

Table 1. Sample site descriptions.

Site	Description
1	Cedar Springs surface at center.
2	Cedar Springs outlet 25 feet above Hwy Q.

Table 2. Chemical data from the July 20, 1982, sampling.

Parameter	Site	
	1	2
Water Temp (°C)	11.9	13.8
D.O. (mg/l)	7.3	9.8
Chlorophyll (ug/l)	9	-
BOD ₅ (mg/l)	0.8	0.8
Lab pH (s.u.)	7.9	7.9
SS (mg/l)	<2	<2
T-P (mg/l)	<0.02	<0.02
Ortho-P (mg/l)	<0.004	<0.004
TKN (mg/l)	0.2	< 0.2
NH ₃ -N (mg/l)	<0.02	<0.02
NO ₂ +NO ₃ -N (mg/l)	1.38	1.06
T-Alk (mg/l)	186	184
Cond. at 25°C (umhos/cm)	360	350
T-Hard (mg/l)	192	192
FC (M-FCAGAR/100ml)	<10	-
FS (MF M-ENT/100ml)	20	-



Cedar Springs outlet looking north from HWY "Q"
(July 20, 1982).



Cedar Springs looking
west from the landing
(July 20, 1982).



Cedar Springs looking
east from a point near
the west end of the
dredged area (July 20, 1982).



Cedar Springs looking SW
from the west end of the
dredged area (July 20, 1982).



Cedar Springs dredge spoil
area (July 20, 1982).