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An Addendum to the Assessment of Wetland Effects White Pine Springs Evart, Michigan

Nestle Waters North America

November 2017

ECT No. 160745-0700

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Document Review

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This document has been authored and reviewed by the following employees:

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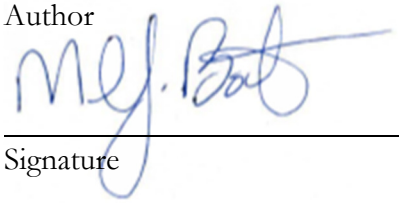	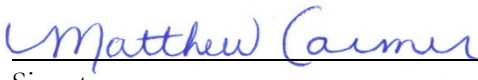
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Date	Date

1.0 Introduction and Background

1.1 Additional Information Request

This report is an addendum to the report "Assessment of Wetland Effects, White Pine Springs, Evart, Michigan" (ECT, 2016) submitted to the Michigan Department of Environmental Quality (MDEQ)[1]. This addendum was prepared to provide information requested in MDEQ's request for additional information (RAI) dated June 21, 2017 (referred to hereafter as RAI #2). This addendum report updates and supplements the information presented in the July 2016 report. An electronic copy of this report and supporting files are provided on the enclosed USB DRIVE. RAI #2 contained information requests labeled Item #5 and Item #6 that pertain directly to wetlands.

Item #5 requests the following information:

- Detailed water budget analyses during normal, wet, and dry years that includes each non-perched wetland and areas of springs (seeps, vents, and flows)
- Groundwater gradients between PW-101 and each non-perched wetland, including changes to that gradient resulting from pumping scenarios of 150 gpm, 250 gpm, and 400 gpm;
- Cross-sections illustrating groundwater gradients;
- Trends and fluctuations in wetlands and springs based on data already collected as a representation of baseline conditions;
- A table presenting the baseline water level data; and
- A map showing the location of monitoring wells where baseline data have been collected.

Item #6 requests the following information:

- Map of all wetlands with wetland identification labels and
- A table listing all wetlands with wetland identification labels shown on the map
- Distance between the groundwater table and the wetland;
- Source of the groundwater table elevation;
- Determination of whether the wetland is perched; and
- Analysis of regulatory status under Part 303 of NREPA.

Sections 2, 3, and 4 of this addendum meet the RAI #2 information requests above as follows.

- Section 2: Item #6; wetland mapping, regulatory analysis, and analysis of perched wetland hydrology
- Section 3: Item #5; water level data collected at monitoring wells located within or immediately adjacent to wetlands

[1] This report was submitted as Attachment E to the Michigan Safe Drinking Water Act, Section 17 Application Information Package for Production Well PW-101, White Pine Springs Site, Osceola Township, Osceola County, Michigan.

- Section 4: Item #5; wetland water budgets

1.2 Groundwater Model

Preparing the information requested in RAI #2, Items 5 and 6, relied upon the groundwater model for defining the area of investigation and providing data for the wetland water budgets. In this addendum, all references to the "groundwater model" refer to the model documented: An Addendum to the Evaluation of Groundwater and Surface Water Conditions in the Vicinity of Well PW-101, Osceola County, Michigan[2].

The groundwater model was used to define the area of investigation for wetland mapping. See Section 2.1 of this addendum for definition of the area of investigation.

Groundwater table elevations calculated by the groundwater model under the no-pumping scenario and ground surface elevations were used to analyze perched wetland conditions. See Section 2.2 for details on how the groundwater model output was used for analyzing perched wetland conditions.

The groundwater model output was used to provide water inputs and outputs to wetlands for the wetland water budgets. See Section 4.4 of this addendum for details on how output from the groundwater model was used in the water budgets.

[2] An addendum to the original report submitted as Attachment C to the Michigan Safe Drinking Water Act, Section 17 Application Information Package for Production Well PW-101, White Pine Springs Site, Osceola Township, Osceola County, Michigan.

2.0 Wetland Mapping and Assessment

2.1 Wetland Mapping

The Area of Investigation (AOI) was defined as the 0.05-foot groundwater table drawdown contour predicted by the groundwater model for the 20-year, 400 gpm pumping scenario. Hereafter, the land area encompassed by this groundwater table drawdown contour is referred to as the AOI. Wetland mapping requested in RAI #2 was done within this AOI. The AOI incorporated 52.5 square miles of land. Mapping to the AOI extents resulted in mapping of 1,291 wetlands using the data sources and methods described below (Table 2-1). Further analysis of perched wetland conditions and wetland regulatory status are provided in Sections 2.2 and 2.3 of this Addendum.

Maps 1 through 6 (Appendix A) address the wetland mapping request. Due to the large map format required to display and label wetlands over a large land area and the number of wetlands, six maps have been created. Map 1 is an overview map showing the entire groundwater model domain and index boxes for Maps 2 through 6. Mapped wetlands are also shown on Map 1, but without wetland identifiers because they could not be read at the map scale required. Map 2 is based on the extents of the AOI; it also does not contain wetland identifier labels. Maps 1 and 2 are provided for context. Maps 3 through 6 are detailed tile maps based on the extents of Map 2. Maps 3 through 6 provide legible wetland identifier labels for every mapped wetland.

Three wetland mapping efforts have been conducted throughout the history of the project:

1) the original wetland mapping conducted by Tilton & Associates, Inc. (TAI) as reported in the 2004 report previously submitted to MDEQ;
2) supplemental aerial interpretation near PW-101 by ECT in 2017; and
3) geospatial mapping by ECT in 2017 within the model predicted 0.05-foot groundwater table drawdown contour using the MDEQ Final Wetland Inventory data and the National Wetland Inventory (NWI) spatial data. The MDEQ spatial data used was the "SYM 7" wetland polygons, which is the most refined mapping of wetlands as derived from the intersection of three datasets by MDEQ: SSURGO hydric soils, NWI, and MIRIS Land Use/Land Cover. The MDEQ Final Wetland Inventory excludes NWI wetlands in some cases. Therefore, NWI wetlands were added where the MDEQ Final Wetland Inventory excludes them. Mapped wetlands include only those polygons from the sources above categorized as wetland. Freshwater ponds and lakes were excluded. Utilizing geoprocessing tools, ECT removed overlapping wetland polygons using the hierarchy of TAI and ECT original wetland mapping, MDEQ Final Wetland Inventory, and NWI.

The wetland identifier attribute in Table 2-1 uses the original wetland labels assigned in TAI, 2004. Identifiers beginning with "ZZZ" are those mapped by ECT using aerial interpretation in the vicinity of PW-101. Identifiers beginning with "DEQ" are those mapped by ECT using the MDEQ Final Wetland Inventory as described above. Identifiers beginning with "NWI" are NWI mapped wetlands not included in the MDEQ Final Wetland Inventory. Sequential numbers are attached to these identifier pre-fixes to assign a unique identifier to each mapped wetland. All wetland identifiers were

assigned by ECT using GIS and do not reflect any numbering or naming conventions from the original data sources referenced above. The sources of wetland spatial data used in mapping are listed below:

- MDEQ Final Wetland Inventory
  - https://www.mcgi.state.mi.us/mgdl/?rel=thext&action=thmname&cid=3&cat=Final_Wetland_Inventory
  - The Osceola County shapefile was used
- National Wetland Inventory
  - https://www.fws.gov/wetlands/data/mapper.html
  - The NWI shapefile for the State of Michigan available for download through the NWI Wetlands Mapper provided NWI data.

Wetland mapping reported in TAI, 2004 (alpha identifiers) and aerial interpretation by ECT in 2017 (ZZZ identifier pre-fix) were conducted near PW-101. Wetlands with identifiers starting with the MDEQ and NWI prefixes are the result of wetland mapping to the AOI extents.

2.2 Evaluation of Perched Wetland Conditions

To evaluate perched wetland conditions at wetlands mapped within the AOI, the unsaturated zone thickness under mapped wetlands was estimated by subtracting the average groundwater table elevation under the wetlands from the average ground elevation at the wetlands. Resulting estimates of the unsaturated zone thickness at wetlands mapped within the AOI are provided in Table 2-2. This analysis resulted in 1,244 perched and 47 non-perched wetlands in the AOI (Table 2-1).

"Perched" as used herein refers to the presence of an unsaturated soil zone between the groundwater table and wetland. The term "perched" is used for this type of wetland because water contained within the wetland is hydraulically separated from the groundwater table. Wetlands that are perched above the groundwater table do not receive water from the groundwater as part of their water budget.

For this analysis, a threshold unsaturated zone thickness of five feet was used to assess if a wetland may be perched. Wetlands with an underlying unsaturated zone thickness of greater than five feet were identified as perched. Five feet was selected for this addendum as a more conservative threshold that accounts for uncertainties in ground elevation estimates and modeled groundwater table elevations.

The average ground elevation at the wetlands was determined by intersecting the wetland polygons with the 1:24,000 U.S. Geological Survey (USGS) Digital Elevation Model (DEM, grid data) using GIS software. USGS 1:24,000 DEMs have a 30m x 30m grid resolution. The minimum, maximum, and average ground elevation for each wetland are reported in Table 3-2. Ground surface elevations have been surveyed in some of the wetlands. In those wetlands, the surveyed elevation was used as the minimum ground elevation and compared to the average groundwater table elevation predicted by the groundwater model. Wetlands with surveyed ground elevations are noted in Table 2-2.

The average groundwater table elevations under wetlands were calculated by the groundwater model for the no-pumping scenario. The minimum, maximum, and average groundwater table elevations under the wetland polygons are reported in Table 2-2.

2.3 Wetland Regulatory Analysis

A regulatory analysis was conducted for wetlands mapped in the AOI based on Part 303 (Wetlands Protection) of the Natural Resources and Environmental Protection Act of 1994 (NREPA), as amended (Act). The results of ECT's wetland regulatory analysis are provided in a column of Table 2-1. The analysis results in 363 regulated and 928 non-regulated wetlands in the AOI. Forty-seven (47) of the regulated wetlands are non-perched wetlands, while 316 are perched.

Part 303 of NREPA defines a wetland, as regulated under the Act, as follows [324.30301(1)(m)]:

> "(m) "Wetland" means land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life, and is commonly referred to as a bog, swamp, or marsh, and which is any of the following:
>
> (i) Contiguous to the Great Lakes or Lake St. Clair, an inland lake or pond, or a river or stream.
>
> (ii) Not contiguous to the Great Lakes, an inland lake or pond, or a river or stream; and more than 5 acres in size.
>
> (iii) Not contiguous to the Great Lakes, an inland lake or pond, or a river or stream; and 5 acres or less in size if the department determines that protection of the area is essential to the preservation of the natural resources of the state from pollution, impairment, or destruction and the department has so notified the owner."

The word "contiguous" is defined in the Part 303 Administrative Rules as follows [R281.921(1)(b)]:

> "(i) A permanent surface water connection or other direct physical contact with an inland lake or pond, a river or stream, one of the Great Lakes, or Lake St. Clair.
> (ii) A seasonal or intermittent direct surface water connection to an inland lake or pond, a river or stream, one of the Great Lakes, or Lake St. Clair.
> (iii) A wetland is partially or entirely located within 500 feet of the ordinary high watermark of an inland lake or pond or a river or stream or is within 1,000 feet of the ordinary high watermark of one of the Great Lakes or Lake St. Clair, unless it is determined by the department, pursuant to R 281.924(5), that there is no surface water or groundwater connection to these waters."

Therefore, the two criteria used in the regulatory analysis to identify a wetland regulated by the State of Michigan under the Act are 1) a wetland is 5 acres or greater in size and 2) a wetland is located within 500 feet of a regulated lake (permanent open water over 5 acres), pond (permanent open water between 1 and 5 acres), or stream (definite banks, a bed, and visible evidence of a continued flow or continued occurrence of water). Subpart (m)(iii) of Part 303 was not considered in this regulatory analysis. It is not known if the MDEQ has previously notified any land owners on whose property mapped wetlands are located that it intends to regulate a wetland not otherwise regulated by the Act because protection of the wetland is essential to preservation of natural resources.

Table 2-1. Wetlands mapped within the model-predicted 0.05-foot aquifer drawdown contour (400 gpm) associated with Nestle Water's White Pine Springs production well PW-101, indicating regulatory status pursuant to Part 303 (Wetland Protection) of the Natural Resource and Environmental Protection Act of 1994 (NREPA, as amended), and whether the wetland is perched above the source aquifer.

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
A	7.45	TAI, 2004	Yes	
B	0.13	TAI, 2004	Yes	
C	0.25	TAI, 2004	Yes	
D	0.16	TAI, 2004	Yes	
E	2.25	TAI, 2004	No	
F	0.63	TAI, 2004	No	Perched
G	0.34	TAI, 2004	Yes	
H	0.25	TAI, 2004	Yes	
I	0.17	TAI, 2004	No	Perched
J	0.06	TAI, 2004	No	Perched
K	0.42	TAI, 2004	No	Perched
L	0.83	TAI, 2004	Yes	Perched
M	0.03	TAI, 2004	No	Perched
N	0.02	TAI, 2004	No	Perched
O	0.00	TAI, 2004	No	Perched
P	0.10	TAI, 2004	No	Perched
Q	3.15	TAI, 2004	Yes	
R	174.44	TAI, 2004	Yes	
S	0.39	TAI, 2004	No	Perched
T	1.74	TAI, 2004	No	Perched
U	0.41	TAI, 2004	Yes	Perched
V	0.05	TAI, 2004	No	Perched
W	0.02	TAI, 2004	No	Perched
X	0.44	TAI, 2004	No	Perched
Y	0.12	TAI, 2004	Yes	
Z	0.40	TAI, 2004	No	Perched
AA	0.13	TAI, 2004	No	Perched
CC	1.17	TAI, 2004	Yes	
DD	0.10	TAI, 2004	Yes	Perched
EE	0.16	TAI, 2004	Yes	Perched
FF	0.59	TAI, 2004	Yes	
GG	0.21	TAI, 2004	No	Perched
HH	0.07	TAI, 2004	No	Perched
II	0.11	TAI, 2004	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
JJ	0.05	TAI, 2004	No	Perched
KK	0.09	TAI, 2004	Yes	Perched
LL	0.87	TAI, 2004	Yes	Perched
MM	0.16	TAI, 2004	No	Perched
NA	11.89	TAI, 2004	Yes	Perched
NB	0.13	TAI, 2004	No	Perched
NC	0.14	TAI, 2004	No	Perched
ND	0.11	TAI, 2004	No	Perched
NE	0.52	TAI, 2004	No	Perched
NF	0.15	TAI, 2004	No	Perched
NG	0.09	TAI, 2004	No	Perched
NH	0.30	TAI, 2004	No	Perched
NI	0.09	TAI, 2004	No	Perched
NJ	0.39	TAI, 2004	No	Perched
NK	0.04	TAI, 2004	No	Perched
NL	0.03	TAI, 2004	No	Perched
NM	0.03	TAI, 2004	No	Perched
NN	0.33	TAI, 2004	No	Perched
OO	0.50	TAI, 2004	Yes	
PP	0.26	TAI, 2004	No	
QQ	0.44	TAI, 2004	No	Perched
RR	0.15	TAI, 2004	No	Perched
SS	0.38	TAI, 2004	No	Perched
TT	0.06	TAI, 2004	No	Perched
UU	0.27	TAI, 2004	No	Perched
VV	0.05	TAI, 2004	No	Perched
WW	1.03	TAI, 2004	No	Perched
XX	0.04	TAI, 2004	No	Perched
YY	0.22	TAI, 2004	No	Perched
ZZ	0.59	TAI, 2004	No	Perched
AAA	0.30	TAI, 2004	No	Perched
BBB	0.07	TAI, 2004	No	Perched
CCC	9.58	TAI, 2004	Yes	Perched
DDD	0.33	TAI, 2004	No	Perched
EEE	3.17	TAI, 2004	No	Perched
FFF	1.02	TAI, 2004	No	Perched
ZZZ1	3.83	ECT, Aerial	No	Perched
ZZZ2	0.59	ECT, Aerial	No	Perched
ZZZ3	0.28	ECT, Aerial	No	Perched
ZZZ4	0.39	ECT, Aerial	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
ZZZ5	0.49	ECT, Aerial	No	Perched
ZZZ6	0.81	ECT, Aerial	No	Perched
ZZZ7	8.08	ECT, Aerial	No	Perched
ZZZ8	0.51	ECT, Aerial	No	Perched
ZZZ9	0.50	ECT, Aerial	No	Perched
ZZZ10	2.53	ECT, Aerial	No	Perched
ZZZ11	2.42	ECT, Aerial	No	Perched
ZZZ12	0.19	ECT, Aerial	No	Perched
ZZZ13	0.40	ECT, Aerial	No	Perched
ZZZ14	0.70	ECT, Aerial	Yes	
ZZZ15	0.36	ECT, Aerial	No	Perched
ZZZ16	0.14	ECT, Aerial	Yes	Perched
ZZZ17	0.65	ECT, Aerial	No	Perched
DEQ_1	2.95	ECT, DEQ	Yes	
DEQ_2	0.09	ECT, DEQ	Yes	
DEQ_3	0.88	ECT, DEQ	Yes	
DEQ_4	0.17	ECT, DEQ	Yes	Perched
DEQ_5	3.26	ECT, DEQ	Yes	Perched
DEQ_6	0.29	ECT, DEQ	No	Perched
DEQ_7	0.68	ECT, DEQ	No	Perched
DEQ_8	2.22	ECT, DEQ	Yes	Perched
DEQ_9	24.64	ECT, DEQ	Yes	Perched
DEQ_10	14.37	ECT, DEQ	Yes	Perched
DEQ_11	1.75	ECT, DEQ	Yes	Perched
DEQ_12	0.08	ECT, DEQ	No	Perched
DEQ_13	7.06	ECT, DEQ	Yes	Perched
DEQ_14	1.14	ECT, DEQ	Yes	Perched
DEQ_15	0.86	ECT, DEQ	No	Perched
DEQ_16	0.01	ECT, DEQ	No	Perched
DEQ_17	1.13	ECT, DEQ	No	Perched
DEQ_18	5.40	ECT, DEQ	Yes	Perched
DEQ_19	1.98	ECT, DEQ	Yes	Perched
DEQ_20	0.72	ECT, DEQ	No	Perched
DEQ_21	1.81	ECT, DEQ	No	Perched
DEQ_22	9.83	ECT, DEQ	Yes	Perched
DEQ_23	0.12	ECT, DEQ	Yes	Perched
DEQ_24	4.73	ECT, DEQ	Yes	Perched
DEQ_25	0.42	ECT, DEQ	No	Perched
DEQ_26	0.80	ECT, DEQ	No	Perched
DEQ_27	3.67	ECT, DEQ	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_28	33.50	ECT, DEQ	Yes	Perched
DEQ_29	0.84	ECT, DEQ	No	Perched
DEQ_30	1.95	ECT, DEQ	No	Perched
DEQ_31	0.95	ECT, DEQ	No	Perched
DEQ_32	0.92	ECT, DEQ	No	Perched
DEQ_33	1.06	ECT, DEQ	No	Perched
DEQ_34	20.85	ECT, DEQ	Yes	Perched
DEQ_35	16.76	ECT, DEQ	Yes	Perched
DEQ_36	1.13	ECT, DEQ	No	Perched
DEQ_37	10.90	ECT, DEQ	Yes	Perched
DEQ_38	21.98	ECT, DEQ	Yes	Perched
DEQ_39	1.24	ECT, DEQ	No	Perched
DEQ_40	2.51	ECT, DEQ	Yes	Perched
DEQ_41	0.00	ECT, DEQ	Yes	Perched
DEQ_42	7.56	ECT, DEQ	Yes	Perched
DEQ_43	1.49	ECT, DEQ	No	Perched
DEQ_44	0.87	ECT, DEQ	No	Perched
DEQ_45	7.22	ECT, DEQ	Yes	Perched
DEQ_46	1.05	ECT, DEQ	No	Perched
DEQ_47	1.76	ECT, DEQ	No	Perched
DEQ_48	0.95	ECT, DEQ	No	Perched
DEQ_49	1.91	ECT, DEQ	No	Perched
DEQ_50	1.17	ECT, DEQ	No	Perched
DEQ_51	1.30	ECT, DEQ	No	Perched
DEQ_52	0.16	ECT, DEQ	No	Perched
DEQ_53	0.67	ECT, DEQ	No	Perched
DEQ_54	0.56	ECT, DEQ	No	Perched
DEQ_55	0.01	ECT, DEQ	Yes	Perched
DEQ_56	0.08	ECT, DEQ	Yes	Perched
DEQ_57	2.03	ECT, DEQ	Yes	Perched
DEQ_58	0.99	ECT, DEQ	Yes	Perched
DEQ_59	1.63	ECT, DEQ	No	Perched
DEQ_60	1.56	ECT, DEQ	No	Perched
DEQ_61	0.86	ECT, DEQ	No	Perched
DEQ_62	16.89	ECT, DEQ	Yes	Perched
DEQ_63	0.93	ECT, DEQ	No	Perched
DEQ_64	2.07	ECT, DEQ	No	Perched
DEQ_65	0.04	ECT, DEQ	No	Perched
DEQ_66	9.19	ECT, DEQ	Yes	Perched
DEQ_67	4.46	ECT, DEQ	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_68	0.00	ECT, DEQ	No	Perched
DEQ_69	1.66	ECT, DEQ	No	Perched
DEQ_70	5.47	ECT, DEQ	Yes	Perched
DEQ_71	0.47	ECT, DEQ	No	Perched
DEQ_72	0.78	ECT, DEQ	No	Perched
DEQ_73	4.84	ECT, DEQ	No	Perched
DEQ_74	0.62	ECT, DEQ	No	Perched
DEQ_75	0.00	ECT, DEQ	Yes	Perched
DEQ_76	0.72	ECT, DEQ	No	Perched
DEQ_77	0.04	ECT, DEQ	No	Perched
DEQ_78	0.01	ECT, DEQ	No	Perched
DEQ_79	0.05	ECT, DEQ	No	Perched
DEQ_80	0.90	ECT, DEQ	No	Perched
DEQ_81	0.80	ECT, DEQ	Yes	Perched
DEQ_82	2.11	ECT, DEQ	Yes	Perched
DEQ_83	0.94	ECT, DEQ	No	Perched
DEQ_84	0.16	ECT, DEQ	No	Perched
DEQ_85	9.24	ECT, DEQ	Yes	Perched
DEQ_86	1.53	ECT, DEQ	No	Perched
DEQ_87	0.91	ECT, DEQ	No	Perched
DEQ_88	1.29	ECT, DEQ	No	Perched
DEQ_89	2.03	ECT, DEQ	No	Perched
DEQ_90	0.75	ECT, DEQ	Yes	Perched
DEQ_91	1.37	ECT, DEQ	No	Perched
DEQ_92	1.44	ECT, DEQ	Yes	Perched
DEQ_93	0.92	ECT, DEQ	No	Perched
DEQ_94	0.05	ECT, DEQ	Yes	Perched
DEQ_95	1.60	ECT, DEQ	Yes	Perched
DEQ_96	0.44	ECT, DEQ	No	Perched
DEQ_97	0.61	ECT, DEQ	No	Perched
DEQ_98	0.10	ECT, DEQ	Yes	Perched
DEQ_99	0.19	ECT, DEQ	No	Perched
DEQ_100	0.34	ECT, DEQ	No	Perched
DEQ_101	2.11	ECT, DEQ	Yes	Perched
DEQ_102	2.02	ECT, DEQ	No	Perched
DEQ_103	0.00	ECT, DEQ	Yes	Perched
DEQ_104	0.02	ECT, DEQ	Yes	Perched
DEQ_105	1.11	ECT, DEQ	Yes	Perched
DEQ_106	19.49	ECT, DEQ	Yes	Perched
DEQ_107	44.39	ECT, DEQ	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_108	2.40	ECT, DEQ	Yes	Perched
DEQ_109	6.97	ECT, DEQ	Yes	Perched
DEQ_110	8.09	ECT, DEQ	Yes	Perched
DEQ_111	16.10	ECT, DEQ	Yes	Perched
DEQ_112	43.86	ECT, DEQ	Yes	
DEQ_113	0.69	ECT, DEQ	No	Perched
DEQ_114	0.83	ECT, DEQ	Yes	Perched
DEQ_115	0.17	ECT, DEQ	No	Perched
DEQ_116	0.18	ECT, DEQ	Yes	Perched
DEQ_117	0.18	ECT, DEQ	Yes	Perched
DEQ_118	0.22	ECT, DEQ	Yes	Perched
DEQ_119	1.32	ECT, DEQ	Yes	Perched
DEQ_120	0.10	ECT, DEQ	Yes	Perched
DEQ_121	0.12	ECT, DEQ	No	Perched
DEQ_122	4.61	ECT, DEQ	Yes	Perched
DEQ_123	0.43	ECT, DEQ	Yes	Perched
DEQ_124	0.33	ECT, DEQ	No	Perched
DEQ_125	0.11	ECT, DEQ	Yes	Perched
DEQ_126	0.58	ECT, DEQ	Yes	Perched
DEQ_127	1.22	ECT, DEQ	Yes	Perched
DEQ_128	0.59	ECT, DEQ	No	Perched
DEQ_129	0.11	ECT, DEQ	No	Perched
DEQ_130	0.85	ECT, DEQ	Yes	Perched
DEQ_131	1.55	ECT, DEQ	No	Perched
DEQ_132	0.07	ECT, DEQ	No	Perched
DEQ_133	0.17	ECT, DEQ	No	Perched
DEQ_134	0.19	ECT, DEQ	No	Perched
DEQ_135	0.14	ECT, DEQ	No	Perched
DEQ_136	0.31	ECT, DEQ	No	Perched
DEQ_137	0.66	ECT, DEQ	No	Perched
DEQ_138	0.20	ECT, DEQ	No	Perched
DEQ_139	0.14	ECT, DEQ	Yes	Perched
DEQ_140	0.59	ECT, DEQ	No	Perched
DEQ_141	5.95	ECT, DEQ	Yes	Perched
DEQ_142	0.65	ECT, DEQ	No	Perched
DEQ_143	0.20	ECT, DEQ	Yes	Perched
DEQ_144	0.19	ECT, DEQ	No	Perched
DEQ_145	2.55	ECT, DEQ	No	Perched
DEQ_146	0.50	ECT, DEQ	No	Perched
DEQ_147	0.33	ECT, DEQ	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_148	0.96	ECT, DEQ	Yes	Perched
DEQ_149	0.38	ECT, DEQ	Yes	Perched
DEQ_150	0.35	ECT, DEQ	Yes	Perched
DEQ_151	0.91	ECT, DEQ	Yes	
DEQ_152	4.30	ECT, DEQ	No	Perched
DEQ_153	0.32	ECT, DEQ	No	Perched
DEQ_154	77.05	ECT, DEQ	Yes	
DEQ_155	0.32	ECT, DEQ	No	Perched
DEQ_156	1.10	ECT, DEQ	Yes	Perched
DEQ_157	0.42	ECT, DEQ	No	Perched
DEQ_158	0.35	ECT, DEQ	Yes	Perched
DEQ_159	1.68	ECT, DEQ	No	
DEQ_160	0.35	ECT, DEQ	No	Perched
DEQ_161	74.79	ECT, DEQ	Yes	
DEQ_162	0.23	ECT, DEQ	No	Perched
DEQ_163	0.52	ECT, DEQ	Yes	
DEQ_164	0.65	ECT, DEQ	Yes	
DEQ_165	0.27	ECT, DEQ	Yes	
DEQ_166	0.60	ECT, DEQ	Yes	
DEQ_167	0.08	ECT, DEQ	Yes	Perched
DEQ_168	1.97	ECT, DEQ	Yes	
DEQ_169	0.31	ECT, DEQ	No	Perched
DEQ_170	0.40	ECT, DEQ	Yes	Perched
DEQ_171	0.40	ECT, DEQ	No	Perched
DEQ_172	0.09	ECT, DEQ	Yes	Perched
DEQ_173	0.24	ECT, DEQ	Yes	Perched
DEQ_174	6.00	ECT, DEQ	Yes	
DEQ_175	155.66	ECT, DEQ	Yes	
DEQ_176	1.06	ECT, DEQ	No	Perched
DEQ_177	0.56	ECT, DEQ	Yes	
DEQ_178	0.12	ECT, DEQ	Yes	Perched
DEQ_179	0.21	ECT, DEQ	No	Perched
DEQ_180	0.31	ECT, DEQ	Yes	
DEQ_181	1.31	ECT, DEQ	No	Perched
DEQ_182	0.22	ECT, DEQ	Yes	
DEQ_183	0.77	ECT, DEQ	Yes	Perched
DEQ_184	0.25	ECT, DEQ	Yes	
DEQ_185	1.02	ECT, DEQ	No	Perched
DEQ_186	1.11	ECT, DEQ	No	Perched
DEQ_187	0.65	ECT, DEQ	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_188	1.24	ECT, DEQ	Yes	
DEQ_189	0.44	ECT, DEQ	No	Perched
DEQ_190	0.36	ECT, DEQ	No	Perched
DEQ_191	0.29	ECT, DEQ	No	Perched
DEQ_192	0.18	ECT, DEQ	No	
DEQ_193	0.47	ECT, DEQ	Yes	Perched
DEQ_194	7.98	ECT, DEQ	Yes	
DEQ_195	0.31	ECT, DEQ	No	Perched
DEQ_196	0.07	ECT, DEQ	No	Perched
DEQ_197	2.16	ECT, DEQ	No	Perched
DEQ_198	0.08	ECT, DEQ	No	Perched
DEQ_199	0.17	ECT, DEQ	No	Perched
DEQ_200	0.68	ECT, DEQ	No	Perched
DEQ_201	0.43	ECT, DEQ	No	Perched
DEQ_202	0.47	ECT, DEQ	No	Perched
DEQ_203	1.33	ECT, DEQ	No	Perched
DEQ_204	0.34	ECT, DEQ	No	Perched
DEQ_205	0.99	ECT, DEQ	No	Perched
DEQ_206	0.19	ECT, DEQ	Yes	Perched
DEQ_207	0.14	ECT, DEQ	Yes	Perched
DEQ_208	0.47	ECT, DEQ	No	Perched
DEQ_209	3.18	ECT, DEQ	Yes	
DEQ_210	0.14	ECT, DEQ	No	Perched
DEQ_211	0.18	ECT, DEQ	Yes	Perched
DEQ_212	0.57	ECT, DEQ	No	Perched
DEQ_213	0.28	ECT, DEQ	No	
DEQ_214	0.13	ECT, DEQ	No	
DEQ_215	0.24	ECT, DEQ	No	Perched
DEQ_216	0.53	ECT, DEQ	Yes	Perched
DEQ_217	0.92	ECT, DEQ	Yes	Perched
DEQ_218	0.55	ECT, DEQ	Yes	
DEQ_219	0.49	ECT, DEQ	Yes	
DEQ_220	0.73	ECT, DEQ	Yes	Perched
DEQ_221	0.24	ECT, DEQ	Yes	
DEQ_222	1.14	ECT, DEQ	Yes	Perched
DEQ_223	2.27	ECT, DEQ	Yes	Perched
DEQ_224	0.18	ECT, DEQ	Yes	Perched
DEQ_225	2.12	ECT, DEQ	No	Perched
DEQ_226	0.16	ECT, DEQ	No	Perched
DEQ_227	0.82	ECT, DEQ	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_228	0.35	ECT, DEQ	No	Perched
DEQ_229	0.19	ECT, DEQ	Yes	Perched
DEQ_230	1.34	ECT, DEQ	No	Perched
DEQ_231	0.47	ECT, DEQ	Yes	Perched
DEQ_232	0.53	ECT, DEQ	Yes	
DEQ_233	0.25	ECT, DEQ	No	Perched
DEQ_234	0.23	ECT, DEQ	No	Perched
DEQ_235	0.26	ECT, DEQ	No	Perched
DEQ_236	0.31	ECT, DEQ	Yes	Perched
DEQ_237	0.73	ECT, DEQ	No	Perched
DEQ_238	0.13	ECT, DEQ	No	Perched
DEQ_239	0.09	ECT, DEQ	No	Perched
DEQ_240	0.19	ECT, DEQ	No	Perched
DEQ_241	0.23	ECT, DEQ	No	Perched
DEQ_242	103.71	ECT, DEQ	Yes	Perched
DEQ_243	0.42	ECT, DEQ	Yes	Perched
DEQ_244	0.22	ECT, DEQ	Yes	Perched
DEQ_245	0.77	ECT, DEQ	Yes	Perched
DEQ_246	0.33	ECT, DEQ	Yes	Perched
DEQ_247	0.15	ECT, DEQ	Yes	
DEQ_248	0.08	ECT, DEQ	Yes	Perched
DEQ_249	0.26	ECT, DEQ	Yes	Perched
DEQ_250	0.24	ECT, DEQ	Yes	Perched
DEQ_251	0.55	ECT, DEQ	No	Perched
DEQ_252	0.26	ECT, DEQ	No	Perched
DEQ_253	0.18	ECT, DEQ	No	Perched
DEQ_254	0.34	ECT, DEQ	No	Perched
DEQ_255	0.14	ECT, DEQ	No	Perched
DEQ_256	0.16	ECT, DEQ	No	Perched
DEQ_257	0.21	ECT, DEQ	No	Perched
DEQ_258	0.32	ECT, DEQ	Yes	Perched
DEQ_259	0.35	ECT, DEQ	No	Perched
DEQ_260	0.31	ECT, DEQ	No	Perched
DEQ_261	0.42	ECT, DEQ	No	Perched
DEQ_262	1.07	ECT, DEQ	No	Perched
DEQ_263	0.52	ECT, DEQ	No	Perched
DEQ_264	0.54	ECT, DEQ	Yes	Perched
DEQ_265	0.92	ECT, DEQ	No	Perched
DEQ_266	0.85	ECT, DEQ	No	Perched
DEQ_267	0.20	ECT, DEQ	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_268	0.81	ECT, DEQ	No	Perched
DEQ_269	0.11	ECT, DEQ	No	Perched
DEQ_270	3.66	ECT, DEQ	No	Perched
DEQ_271	0.19	ECT, DEQ	No	Perched
DEQ_272	2.46	ECT, DEQ	No	Perched
DEQ_273	0.47	ECT, DEQ	No	Perched
DEQ_274	1.32	ECT, DEQ	No	Perched
DEQ_275	0.09	ECT, DEQ	No	Perched
DEQ_276	0.40	ECT, DEQ	Yes	Perched
DEQ_277	0.18	ECT, DEQ	No	Perched
DEQ_278	101.93	ECT, DEQ	Yes	
DEQ_279	13.56	ECT, DEQ	Yes	
DEQ_280	0.10	ECT, DEQ	No	Perched
DEQ_281	0.13	ECT, DEQ	No	Perched
DEQ_282	0.16	ECT, DEQ	No	Perched
DEQ_283	0.16	ECT, DEQ	Yes	Perched
DEQ_284	0.22	ECT, DEQ	No	Perched
DEQ_285	0.49	ECT, DEQ	No	Perched
DEQ_286	0.14	ECT, DEQ	No	Perched
DEQ_287	4.87	ECT, DEQ	No	
DEQ_288	0.14	ECT, DEQ	Yes	Perched
DEQ_289	0.36	ECT, DEQ	No	Perched
DEQ_290	0.13	ECT, DEQ	Yes	Perched
DEQ_291	1.93	ECT, DEQ	No	Perched
DEQ_292	0.17	ECT, DEQ	No	Perched
DEQ_293	1.42	ECT, DEQ	Yes	Perched
DEQ_294	0.40	ECT, DEQ	No	Perched
DEQ_295	0.41	ECT, DEQ	No	Perched
DEQ_296	0.17	ECT, DEQ	No	Perched
DEQ_297	0.53	ECT, DEQ	No	Perched
DEQ_298	0.26	ECT, DEQ	No	Perched
DEQ_299	0.17	ECT, DEQ	No	Perched
DEQ_300	0.46	ECT, DEQ	No	Perched
DEQ_301	2.59	ECT, DEQ	No	Perched
DEQ_302	0.41	ECT, DEQ	No	Perched
DEQ_303	0.30	ECT, DEQ	No	Perched
DEQ_304	0.22	ECT, DEQ	No	Perched
DEQ_305	2.11	ECT, DEQ	Yes	Perched
DEQ_306	0.26	ECT, DEQ	No	Perched
DEQ_307	0.19	ECT, DEQ	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_308	1.18	ECT, DEQ	No	Perched
DEQ_309	1.01	ECT, DEQ	No	Perched
DEQ_310	0.58	ECT, DEQ	No	Perched
DEQ_311	0.64	ECT, DEQ	No	Perched
DEQ_312	0.49	ECT, DEQ	No	Perched
DEQ_313	1.20	ECT, DEQ	Yes	Perched
DEQ_314	0.23	ECT, DEQ	No	Perched
DEQ_315	0.32	ECT, DEQ	No	Perched
DEQ_316	0.34	ECT, DEQ	No	Perched
DEQ_317	0.75	ECT, DEQ	No	Perched
DEQ_318	2.17	ECT, DEQ	No	Perched
DEQ_319	0.37	ECT, DEQ	Yes	Perched
DEQ_320	0.20	ECT, DEQ	No	
DEQ_321	0.14	ECT, DEQ	Yes	Perched
DEQ_322	1.41	ECT, DEQ	No	Perched
DEQ_323	0.36	ECT, DEQ	Yes	Perched
DEQ_324	0.56	ECT, DEQ	No	Perched
DEQ_325	4.80	ECT, DEQ	No	Perched
DEQ_326	1.07	ECT, DEQ	No	Perched
DEQ_327	0.82	ECT, DEQ	Yes	Perched
DEQ_328	0.69	ECT, DEQ	Yes	Perched
DEQ_329	0.38	ECT, DEQ	No	Perched
DEQ_330	0.23	ECT, DEQ	No	Perched
DEQ_331	0.43	ECT, DEQ	Yes	Perched
DEQ_332	1.68	ECT, DEQ	No	Perched
DEQ_333	0.41	ECT, DEQ	No	Perched
DEQ_334	0.56	ECT, DEQ	Yes	Perched
DEQ_335	0.09	ECT, DEQ	No	Perched
DEQ_336	0.40	ECT, DEQ	No	Perched
DEQ_337	0.27	ECT, DEQ	Yes	Perched
DEQ_338	2.63	ECT, DEQ	No	
DEQ_339	2.27	ECT, DEQ	No	Perched
DEQ_340	6.82	ECT, DEQ	Yes	Perched
DEQ_341	0.71	ECT, DEQ	Yes	Perched
DEQ_342	0.76	ECT, DEQ	No	Perched
DEQ_343	1.31	ECT, DEQ	Yes	Perched
DEQ_344	2.59	ECT, DEQ	Yes	Perched
DEQ_345	0.35	ECT, DEQ	Yes	Perched
DEQ_346	0.57	ECT, DEQ	No	Perched
DEQ_347	0.23	ECT, DEQ	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_348	0.53	ECT, DEQ	No	Perched
DEQ_349	0.24	ECT, DEQ	No	Perched
DEQ_350	0.29	ECT, DEQ	No	Perched
DEQ_351	0.33	ECT, DEQ	Yes	Perched
DEQ_352	0.35	ECT, DEQ	No	Perched
DEQ_353	0.19	ECT, DEQ	No	Perched
DEQ_354	0.15	ECT, DEQ	No	Perched
DEQ_355	0.10	ECT, DEQ	No	Perched
DEQ_356	0.40	ECT, DEQ	No	Perched
DEQ_357	0.12	ECT, DEQ	No	Perched
DEQ_358	2.49	ECT, DEQ	No	Perched
DEQ_359	0.12	ECT, DEQ	No	Perched
DEQ_360	0.30	ECT, DEQ	No	Perched
DEQ_361	0.28	ECT, DEQ	No	Perched
DEQ_362	0.32	ECT, DEQ	No	Perched
DEQ_363	0.17	ECT, DEQ	No	Perched
DEQ_364	0.25	ECT, DEQ	No	Perched
DEQ_365	22.27	ECT, DEQ	Yes	Perched
DEQ_366	1.42	ECT, DEQ	Yes	Perched
DEQ_367	1.27	ECT, DEQ	No	Perched
DEQ_368	2.09	ECT, DEQ	Yes	Perched
DEQ_369	0.14	ECT, DEQ	No	Perched
DEQ_370	0.34	ECT, DEQ	No	Perched
DEQ_371	1.02	ECT, DEQ	No	Perched
DEQ_372	0.94	ECT, DEQ	No	Perched
DEQ_373	0.22	ECT, DEQ	Yes	Perched
DEQ_374	0.25	ECT, DEQ	No	Perched
DEQ_375	0.53	ECT, DEQ	No	Perched
DEQ_376	0.10	ECT, DEQ	No	Perched
DEQ_377	0.65	ECT, DEQ	No	Perched
DEQ_378	0.28	ECT, DEQ	No	Perched
DEQ_379	0.83	ECT, DEQ	No	Perched
DEQ_380	0.24	ECT, DEQ	No	Perched
DEQ_381	0.42	ECT, DEQ	No	Perched
DEQ_382	0.21	ECT, DEQ	No	Perched
DEQ_383	0.24	ECT, DEQ	No	Perched
DEQ_384	0.43	ECT, DEQ	No	Perched
DEQ_385	0.19	ECT, DEQ	No	Perched
DEQ_386	2.54	ECT, DEQ	No	Perched
DEQ_387	0.56	ECT, DEQ	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_388	1.59	ECT, DEQ	No	Perched
DEQ_389	0.31	ECT, DEQ	Yes	Perched
DEQ_390	2.98	ECT, DEQ	No	Perched
DEQ_391	1.75	ECT, DEQ	Yes	Perched
DEQ_392	0.08	ECT, DEQ	No	Perched
DEQ_393	0.31	ECT, DEQ	No	Perched
DEQ_394	0.30	ECT, DEQ	No	Perched
DEQ_395	0.37	ECT, DEQ	No	Perched
DEQ_396	0.15	ECT, DEQ	No	Perched
DEQ_397	0.78	ECT, DEQ	No	Perched
DEQ_398	0.25	ECT, DEQ	No	Perched
DEQ_399	0.29	ECT, DEQ	Yes	Perched
DEQ_400	0.15	ECT, DEQ	No	Perched
DEQ_401	0.18	ECT, DEQ	No	Perched
DEQ_402	1.84	ECT, DEQ	Yes	Perched
DEQ_403	0.32	ECT, DEQ	No	Perched
DEQ_404	0.26	ECT, DEQ	No	Perched
DEQ_405	0.76	ECT, DEQ	No	Perched
DEQ_406	0.96	ECT, DEQ	No	Perched
DEQ_407	0.19	ECT, DEQ	No	Perched
DEQ_408	0.73	ECT, DEQ	No	Perched
DEQ_409	0.92	ECT, DEQ	Yes	Perched
DEQ_410	0.22	ECT, DEQ	No	Perched
DEQ_411	0.74	ECT, DEQ	No	Perched
DEQ_412	0.13	ECT, DEQ	No	Perched
DEQ_413	0.13	ECT, DEQ	Yes	Perched
DEQ_414	0.46	ECT, DEQ	No	Perched
DEQ_415	0.15	ECT, DEQ	No	Perched
DEQ_416	0.25	ECT, DEQ	No	Perched
DEQ_417	0.80	ECT, DEQ	Yes	Perched
DEQ_418	0.16	ECT, DEQ	No	Perched
DEQ_419	0.39	ECT, DEQ	Yes	Perched
DEQ_420	0.71	ECT, DEQ	No	Perched
DEQ_421	0.40	ECT, DEQ	No	Perched
DEQ_422	0.09	ECT, DEQ	No	Perched
DEQ_423	0.23	ECT, DEQ	Yes	Perched
DEQ_424	0.32	ECT, DEQ	No	Perched
DEQ_425	0.47	ECT, DEQ	No	Perched
DEQ_426	0.13	ECT, DEQ	No	Perched
DEQ_427	0.19	ECT, DEQ	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_428	0.33	ECT, DEQ	Yes	Perched
DEQ_429	0.19	ECT, DEQ	No	Perched
DEQ_430	0.13	ECT, DEQ	No	Perched
DEQ_431	0.75	ECT, DEQ	No	Perched
DEQ_432	0.11	ECT, DEQ	No	Perched
DEQ_433	0.20	ECT, DEQ	No	Perched
DEQ_434	0.16	ECT, DEQ	No	Perched
DEQ_435	1.12	ECT, DEQ	No	Perched
DEQ_436	0.17	ECT, DEQ	No	Perched
DEQ_437	0.20	ECT, DEQ	No	Perched
DEQ_438	0.51	ECT, DEQ	No	Perched
DEQ_439	0.14	ECT, DEQ	No	Perched
DEQ_440	0.25	ECT, DEQ	No	Perched
DEQ_441	0.36	ECT, DEQ	No	Perched
DEQ_442	0.42	ECT, DEQ	No	Perched
DEQ_443	0.18	ECT, DEQ	No	Perched
DEQ_444	3.32	ECT, DEQ	No	Perched
DEQ_445	0.61	ECT, DEQ	Yes	Perched
DEQ_446	1.48	ECT, DEQ	Yes	Perched
DEQ_447	0.21	ECT, DEQ	No	Perched
DEQ_448	0.17	ECT, DEQ	Yes	Perched
DEQ_449	0.56	ECT, DEQ	No	Perched
DEQ_450	0.15	ECT, DEQ	No	Perched
DEQ_451	0.09	ECT, DEQ	No	Perched
DEQ_452	0.12	ECT, DEQ	No	Perched
DEQ_453	0.63	ECT, DEQ	No	Perched
DEQ_454	1.08	ECT, DEQ	No	Perched
DEQ_455	0.27	ECT, DEQ	No	Perched
DEQ_456	0.34	ECT, DEQ	No	Perched
DEQ_457	0.11	ECT, DEQ	No	Perched
DEQ_458	1.64	ECT, DEQ	No	Perched
DEQ_459	0.22	ECT, DEQ	No	Perched
DEQ_460	2.71	ECT, DEQ	No	Perched
DEQ_461	0.30	ECT, DEQ	No	Perched
DEQ_462	0.64	ECT, DEQ	No	Perched
DEQ_463	0.10	ECT, DEQ	No	Perched
DEQ_464	0.23	ECT, DEQ	No	Perched
DEQ_465	0.17	ECT, DEQ	No	Perched
DEQ_466	0.62	ECT, DEQ	No	Perched
DEQ_467	0.38	ECT, DEQ	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_468	0.15	ECT, DEQ	No	Perched
DEQ_469	0.17	ECT, DEQ	No	Perched
DEQ_470	4.29	ECT, DEQ	No	Perched
DEQ_471	0.31	ECT, DEQ	No	Perched
DEQ_472	2.51	ECT, DEQ	No	Perched
DEQ_473	0.17	ECT, DEQ	No	Perched
DEQ_474	3.83	ECT, DEQ	No	Perched
DEQ_475	29.46	ECT, DEQ	Yes	
DEQ_476	2.62	ECT, DEQ	No	Perched
DEQ_477	0.25	ECT, DEQ	No	Perched
DEQ_478	37.91	ECT, DEQ	Yes	
DEQ_479	0.20	ECT, DEQ	Yes	Perched
DEQ_480	0.11	ECT, DEQ	Yes	Perched
DEQ_481	0.17	ECT, DEQ	No	
DEQ_482	0.31	ECT, DEQ	No	
DEQ_483	0.97	ECT, DEQ	No	Perched
DEQ_484	0.14	ECT, DEQ	Yes	Perched
DEQ_485	0.45	ECT, DEQ	Yes	Perched
DEQ_486	1.31	ECT, DEQ	No	Perched
DEQ_487	0.45	ECT, DEQ	No	Perched
DEQ_488	6.10	ECT, DEQ	Yes	Perched
DEQ_489	0.91	ECT, DEQ	No	Perched
DEQ_490	0.13	ECT, DEQ	No	Perched
DEQ_491	0.76	ECT, DEQ	Yes	
DEQ_492	0.44	ECT, DEQ	No	Perched
DEQ_493	0.18	ECT, DEQ	Yes	
DEQ_494	0.91	ECT, DEQ	Yes	
DEQ_495	0.11	ECT, DEQ	Yes	Perched
DEQ_496	1.16	ECT, DEQ	Yes	Perched
DEQ_497	1.35	ECT, DEQ	No	
DEQ_498	0.09	ECT, DEQ	No	Perched
DEQ_499	1.43	ECT, DEQ	No	
DEQ_500	0.99	ECT, DEQ	No	Perched
DEQ_501	0.22	ECT, DEQ	No	Perched
DEQ_502	1.07	ECT, DEQ	No	Perched
DEQ_503	0.44	ECT, DEQ	No	Perched
DEQ_504	8.07	ECT, DEQ	Yes	Perched
DEQ_505	1.64	ECT, DEQ	Yes	Perched
DEQ_506	0.30	ECT, DEQ	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
DEQ_507	2.73	ECT, DEQ	Yes	Perched
DEQ_508	1.06	ECT, DEQ	Yes	Perched
DEQ_509	6.23	ECT, DEQ	Yes	Perched
DEQ_510	0.13	ECT, DEQ	No	Perched
DEQ_511	13.14	ECT, DEQ	Yes	Perched
DEQ_512	2.49	ECT, DEQ	Yes	
NWI_1	0.76	ECT, NWI	No	Perched
NWI_2	0.22	ECT, NWI	No	Perched
NWI_3	0.23	ECT, NWI	Yes	Perched
NWI_4	0.25	ECT, NWI	No	Perched
NWI_5	0.33	ECT, NWI	No	Perched
NWI_6	0.61	ECT, NWI	No	Perched
NWI_7	0.45	ECT, NWI	No	Perched
NWI_8	0.62	ECT, NWI	Yes	Perched
NWI_9	1.02	ECT, NWI	No	Perched
NWI_10	1.01	ECT, NWI	Yes	Perched
NWI_11	4.46	ECT, NWI	No	Perched
NWI_12	0.98	ECT, NWI	No	Perched
NWI_13	0.33	ECT, NWI	Yes	Perched
NWI_14	0.54	ECT, NWI	Yes	Perched
NWI_15	0.17	ECT, NWI	Yes	Perched
NWI_16	1.72	ECT, NWI	Yes	Perched
NWI_17	0.28	ECT, NWI	Yes	Perched
NWI_18	1.01	ECT, NWI	No	Perched
NWI_19	0.21	ECT, NWI	No	Perched
NWI_20	3.68	ECT, NWI	Yes	Perched
NWI_21	1.07	ECT, NWI	Yes	Perched
NWI_22	0.92	ECT, NWI	No	Perched
NWI_23	0.70	ECT, NWI	No	Perched
NWI_24	0.45	ECT, NWI	No	Perched
NWI_25	0.09	ECT, NWI	No	Perched
NWI_26	0.17	ECT, NWI	Yes	Perched
NWI_27	0.70	ECT, NWI	No	Perched
NWI_28	0.25	ECT, NWI	No	Perched
NWI_29	0.56	ECT, NWI	No	Perched
NWI_30	0.35	ECT, NWI	No	Perched
NWI_31	1.21	ECT, NWI	No	Perched
NWI_32	0.30	ECT, NWI	Yes	Perched
NWI_33	0.62	ECT, NWI	No	Perched
NWI_34	0.81	ECT, NWI	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_35	1.63	ECT, NWI	No	Perched
NWI_36	0.41	ECT, NWI	Yes	Perched
NWI_37	1.69	ECT, NWI	No	Perched
NWI_38	1.24	ECT, NWI	Yes	Perched
NWI_39	0.33	ECT, NWI	Yes	Perched
NWI_40	0.12	ECT, NWI	No	Perched
NWI_41	0.60	ECT, NWI	No	Perched
NWI_42	0.52	ECT, NWI	No	Perched
NWI_43	0.17	ECT, NWI	Yes	Perched
NWI_44	0.37	ECT, NWI	No	Perched
NWI_45	2.77	ECT, NWI	Yes	Perched
NWI_46	0.55	ECT, NWI	No	Perched
NWI_47	0.67	ECT, NWI	Yes	Perched
NWI_48	0.21	ECT, NWI	Yes	Perched
NWI_49	0.33	ECT, NWI	No	Perched
NWI_50	0.30	ECT, NWI	No	Perched
NWI_51	2.00	ECT, NWI	No	Perched
NWI_52	0.40	ECT, NWI	Yes	Perched
NWI_53	0.83	ECT, NWI	Yes	Perched
NWI_54	1.57	ECT, NWI	Yes	Perched
NWI_55	0.25	ECT, NWI	Yes	Perched
NWI_56	0.92	ECT, NWI	Yes	Perched
NWI_57	0.34	ECT, NWI	No	Perched
NWI_58	0.29	ECT, NWI	No	Perched
NWI_59	0.23	ECT, NWI	No	Perched
NWI_60	0.67	ECT, NWI	No	Perched
NWI_61	2.63	ECT, NWI	No	Perched
NWI_62	0.32	ECT, NWI	Yes	Perched
NWI_63	1.02	ECT, NWI	No	Perched
NWI_64	0.17	ECT, NWI	Yes	Perched
NWI_65	0.72	ECT, NWI	No	Perched
NWI_66	0.67	ECT, NWI	No	Perched
NWI_67	0.47	ECT, NWI	No	Perched
NWI_68	1.69	ECT, NWI	Yes	Perched
NWI_69	0.49	ECT, NWI	Yes	Perched
NWI_70	0.23	ECT, NWI	No	Perched
NWI_71	1.04	ECT, NWI	Yes	Perched
NWI_72	0.46	ECT, NWI	No	Perched
NWI_73	1.32	ECT, NWI	No	Perched
NWI_74	0.33	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_75	0.39	ECT, NWI	No	Perched
NWI_76	0.32	ECT, NWI	No	Perched
NWI_77	0.96	ECT, NWI	Yes	Perched
NWI_78	2.55	ECT, NWI	Yes	Perched
NWI_79	0.30	ECT, NWI	Yes	Perched
NWI_80	0.48	ECT, NWI	No	Perched
NWI_81	0.64	ECT, NWI	No	Perched
NWI_82	0.54	ECT, NWI	No	Perched
NWI_83	0.21	ECT, NWI	No	Perched
NWI_84	0.36	ECT, NWI	Yes	Perched
NWI_85	0.83	ECT, NWI	No	Perched
NWI_86	2.90	ECT, NWI	Yes	Perched
NWI_87	0.50	ECT, NWI	No	Perched
NWI_88	0.49	ECT, NWI	No	Perched
NWI_89	0.99	ECT, NWI	Yes	Perched
NWI_90	0.23	ECT, NWI	Yes	Perched
NWI_91	0.17	ECT, NWI	No	Perched
NWI_92	0.89	ECT, NWI	No	Perched
NWI_93	0.39	ECT, NWI	Yes	Perched
NWI_94	0.62	ECT, NWI	No	Perched
NWI_95	0.24	ECT, NWI	No	Perched
NWI_96	1.05	ECT, NWI	No	Perched
NWI_97	0.10	ECT, NWI	No	Perched
NWI_98	0.50	ECT, NWI	No	Perched
NWI_99	0.37	ECT, NWI	Yes	Perched
NWI_100	0.65	ECT, NWI	Yes	Perched
NWI_101	0.29	ECT, NWI	No	Perched
NWI_102	0.10	ECT, NWI	No	Perched
NWI_103	0.31	ECT, NWI	No	Perched
NWI_104	0.57	ECT, NWI	Yes	Perched
NWI_105	0.08	ECT, NWI	No	Perched
NWI_106	0.12	ECT, NWI	No	Perched
NWI_107	0.33	ECT, NWI	No	Perched
NWI_108	0.69	ECT, NWI	Yes	Perched
NWI_109	1.42	ECT, NWI	Yes	Perched
NWI_110	0.24	ECT, NWI	Yes	Perched
NWI_111	0.10	ECT, NWI	Yes	Perched
NWI_112	1.00	ECT, NWI	No	Perched
NWI_113	2.32	ECT, NWI	No	Perched
NWI_114	0.24	ECT, NWI	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_115	0.36	ECT, NWI	No	Perched
NWI_116	0.18	ECT, NWI	No	Perched
NWI_117	0.31	ECT, NWI	No	Perched
NWI_118	0.58	ECT, NWI	No	Perched
NWI_119	0.42	ECT, NWI	No	Perched
NWI_120	0.16	ECT, NWI	No	Perched
NWI_121	1.53	ECT, NWI	Yes	Perched
NWI_122	3.42	ECT, NWI	No	Perched
NWI_123	0.42	ECT, NWI	No	Perched
NWI_124	0.23	ECT, NWI	No	Perched
NWI_125	0.50	ECT, NWI	Yes	Perched
NWI_126	0.44	ECT, NWI	No	Perched
NWI_127	0.21	ECT, NWI	No	Perched
NWI_128	0.14	ECT, NWI	No	Perched
NWI_129	0.11	ECT, NWI	No	Perched
NWI_130	0.14	ECT, NWI	Yes	Perched
NWI_131	0.13	ECT, NWI	No	Perched
NWI_132	0.62	ECT, NWI	No	Perched
NWI_133	1.01	ECT, NWI	Yes	Perched
NWI_134	0.41	ECT, NWI	No	Perched
NWI_135	0.39	ECT, NWI	No	Perched
NWI_136	0.20	ECT, NWI	No	Perched
NWI_137	0.11	ECT, NWI	Yes	Perched
NWI_138	0.36	ECT, NWI	No	Perched
NWI_139	7.05	ECT, NWI	Yes	Perched
NWI_140	0.38	ECT, NWI	No	Perched
NWI_141	1.14	ECT, NWI	No	Perched
NWI_142	0.49	ECT, NWI	No	Perched
NWI_143	1.28	ECT, NWI	No	Perched
NWI_144	1.50	ECT, NWI	No	Perched
NWI_145	0.20	ECT, NWI	Yes	Perched
NWI_146	0.23	ECT, NWI	No	Perched
NWI_147	0.19	ECT, NWI	No	Perched
NWI_148	0.22	ECT, NWI	No	Perched
NWI_149	0.61	ECT, NWI	No	Perched
NWI_150	0.30	ECT, NWI	No	Perched
NWI_151	1.16	ECT, NWI	No	Perched
NWI_152	0.46	ECT, NWI	Yes	Perched
NWI_153	0.43	ECT, NWI	Yes	Perched
NWI_154	2.50	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_155	1.15	ECT, NWI	Yes	Perched
NWI_156	1.16	ECT, NWI	No	Perched
NWI_157	0.64	ECT, NWI	No	Perched
NWI_158	1.96	ECT, NWI	No	Perched
NWI_159	0.36	ECT, NWI	No	Perched
NWI_160	0.27	ECT, NWI	No	Perched
NWI_161	1.36	ECT, NWI	Yes	Perched
NWI_162	0.15	ECT, NWI	No	Perched
NWI_163	0.26	ECT, NWI	No	Perched
NWI_164	0.59	ECT, NWI	No	Perched
NWI_165	0.37	ECT, NWI	No	Perched
NWI_166	0.30	ECT, NWI	No	Perched
NWI_167	0.58	ECT, NWI	No	Perched
NWI_168	2.60	ECT, NWI	Yes	Perched
NWI_169	0.24	ECT, NWI	No	Perched
NWI_170	0.37	ECT, NWI	No	Perched
NWI_171	0.23	ECT, NWI	No	Perched
NWI_172	0.29	ECT, NWI	No	Perched
NWI_173	0.61	ECT, NWI	No	Perched
NWI_174	0.26	ECT, NWI	No	Perched
NWI_175	0.31	ECT, NWI	No	Perched
NWI_176	0.21	ECT, NWI	Yes	Perched
NWI_177	0.20	ECT, NWI	No	Perched
NWI_178	0.38	ECT, NWI	No	Perched
NWI_179	0.29	ECT, NWI	No	Perched
NWI_180	0.11	ECT, NWI	No	Perched
NWI_181	0.20	ECT, NWI	No	Perched
NWI_182	0.15	ECT, NWI	No	Perched
NWI_183	1.03	ECT, NWI	No	Perched
NWI_184	0.23	ECT, NWI	No	Perched
NWI_185	0.32	ECT, NWI	No	Perched
NWI_186	0.21	ECT, NWI	No	Perched
NWI_187	0.18	ECT, NWI	No	Perched
NWI_188	1.11	ECT, NWI	Yes	Perched
NWI_189	0.33	ECT, NWI	Yes	Perched
NWI_190	0.47	ECT, NWI	No	Perched
NWI_191	0.85	ECT, NWI	Yes	Perched
NWI_192	0.31	ECT, NWI	No	Perched
NWI_193	0.16	ECT, NWI	No	Perched
NWI_194	1.81	ECT, NWI	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_195	2.59	ECT, NWI	Yes	Perched
NWI_196	0.22	ECT, NWI	No	Perched
NWI_197	0.17	ECT, NWI	No	Perched
NWI_198	0.55	ECT, NWI	No	Perched
NWI_199	0.16	ECT, NWI	No	Perched
NWI_200	0.22	ECT, NWI	No	Perched
NWI_201	0.75	ECT, NWI	No	Perched
NWI_202	1.97	ECT, NWI	No	Perched
NWI_203	1.08	ECT, NWI	No	Perched
NWI_204	1.08	ECT, NWI	Yes	Perched
NWI_205	0.18	ECT, NWI	Yes	Perched
NWI_206	0.28	ECT, NWI	Yes	Perched
NWI_207	1.22	ECT, NWI	No	Perched
NWI_208	0.70	ECT, NWI	No	Perched
NWI_209	0.41	ECT, NWI	No	Perched
NWI_210	0.18	ECT, NWI	No	Perched
NWI_211	0.83	ECT, NWI	Yes	Perched
NWI_212	0.37	ECT, NWI	No	Perched
NWI_213	0.47	ECT, NWI	No	Perched
NWI_214	0.22	ECT, NWI	No	Perched
NWI_215	0.20	ECT, NWI	Yes	Perched
NWI_216	0.15	ECT, NWI	No	Perched
NWI_217	0.10	ECT, NWI	No	Perched
NWI_218	0.80	ECT, NWI	No	Perched
NWI_219	1.19	ECT, NWI	No	Perched
NWI_220	0.98	ECT, NWI	No	Perched
NWI_221	0.42	ECT, NWI	No	Perched
NWI_222	0.86	ECT, NWI	No	Perched
NWI_223	0.19	ECT, NWI	No	Perched
NWI_224	0.31	ECT, NWI	No	Perched
NWI_225	0.19	ECT, NWI	No	Perched
NWI_226	0.81	ECT, NWI	No	Perched
NWI_227	0.33	ECT, NWI	Yes	Perched
NWI_228	0.20	ECT, NWI	No	Perched
NWI_229	0.22	ECT, NWI	No	Perched
NWI_230	0.48	ECT, NWI	No	Perched
NWI_231	0.27	ECT, NWI	No	Perched
NWI_232	0.75	ECT, NWI	No	Perched
NWI_233	0.15	ECT, NWI	No	Perched
NWI_234	0.37	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_235	2.73	ECT, NWI	No	Perched
NWI_236	0.26	ECT, NWI	No	Perched
NWI_237	1.30	ECT, NWI	No	Perched
NWI_238	3.02	ECT, NWI	No	Perched
NWI_239	0.15	ECT, NWI	No	Perched
NWI_240	0.24	ECT, NWI	No	Perched
NWI_241	0.62	ECT, NWI	No	Perched
NWI_242	1.26	ECT, NWI	No	Perched
NWI_243	0.13	ECT, NWI	No	Perched
NWI_244	2.05	ECT, NWI	No	Perched
NWI_245	1.73	ECT, NWI	Yes	Perched
NWI_246	0.23	ECT, NWI	No	Perched
NWI_247	0.34	ECT, NWI	No	Perched
NWI_248	0.09	ECT, NWI	No	Perched
NWI_249	0.55	ECT, NWI	No	Perched
NWI_250	0.46	ECT, NWI	No	Perched
NWI_251	0.14	ECT, NWI	No	Perched
NWI_252	1.07	ECT, NWI	No	Perched
NWI_253	1.41	ECT, NWI	No	Perched
NWI_254	0.51	ECT, NWI	No	Perched
NWI_255	1.76	ECT, NWI	No	Perched
NWI_256	0.87	ECT, NWI	No	Perched
NWI_257	1.20	ECT, NWI	No	Perched
NWI_258	1.29	ECT, NWI	No	Perched
NWI_259	3.07	ECT, NWI	No	Perched
NWI_260	1.79	ECT, NWI	Yes	Perched
NWI_261	0.28	ECT, NWI	No	Perched
NWI_262	0.26	ECT, NWI	No	Perched
NWI_263	0.30	ECT, NWI	No	Perched
NWI_264	0.48	ECT, NWI	No	Perched
NWI_265	0.15	ECT, NWI	No	Perched
NWI_266	0.62	ECT, NWI	No	Perched
NWI_267	0.42	ECT, NWI	No	Perched
NWI_268	1.10	ECT, NWI	No	Perched
NWI_269	0.24	ECT, NWI	No	Perched
NWI_270	0.77	ECT, NWI	Yes	Perched
NWI_271	0.25	ECT, NWI	No	Perched
NWI_272	0.46	ECT, NWI	No	Perched
NWI_273	0.66	ECT, NWI	No	Perched
NWI_274	0.35	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_275	0.43	ECT, NWI	No	Perched
NWI_276	0.25	ECT, NWI	No	Perched
NWI_277	0.25	ECT, NWI	No	Perched
NWI_278	1.35	ECT, NWI	No	Perched
NWI_279	0.48	ECT, NWI	No	Perched
NWI_280	0.18	ECT, NWI	No	Perched
NWI_281	1.48	ECT, NWI	No	Perched
NWI_282	0.61	ECT, NWI	Yes	Perched
NWI_283	0.82	ECT, NWI	No	Perched
NWI_284	0.25	ECT, NWI	No	Perched
NWI_285	0.33	ECT, NWI	No	Perched
NWI_286	0.26	ECT, NWI	No	Perched
NWI_287	0.99	ECT, NWI	No	Perched
NWI_288	0.12	ECT, NWI	No	Perched
NWI_289	1.99	ECT, NWI	No	Perched
NWI_290	0.14	ECT, NWI	No	Perched
NWI_291	2.92	ECT, NWI	No	Perched
NWI_292	0.30	ECT, NWI	No	Perched
NWI_293	0.85	ECT, NWI	No	Perched
NWI_294	0.78	ECT, NWI	Yes	Perched
NWI_295	0.22	ECT, NWI	No	Perched
NWI_296	0.18	ECT, NWI	No	Perched
NWI_297	0.42	ECT, NWI	No	Perched
NWI_298	0.86	ECT, NWI	No	Perched
NWI_299	0.18	ECT, NWI	Yes	Perched
NWI_300	0.16	ECT, NWI	No	Perched
NWI_301	0.66	ECT, NWI	No	Perched
NWI_302	0.32	ECT, NWI	No	Perched
NWI_303	0.46	ECT, NWI	No	Perched
NWI_304	1.88	ECT, NWI	No	Perched
NWI_305	0.52	ECT, NWI	No	Perched
NWI_306	0.15	ECT, NWI	No	Perched
NWI_307	0.18	ECT, NWI	Yes	Perched
NWI_308	0.43	ECT, NWI	No	Perched
NWI_309	0.39	ECT, NWI	No	Perched
NWI_310	0.07	ECT, NWI	No	Perched
NWI_311	1.03	ECT, NWI	No	Perched
NWI_312	0.19	ECT, NWI	No	Perched
NWI_313	1.79	ECT, NWI	No	Perched
NWI_314	2.00	ECT, NWI	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_315	0.17	ECT, NWI	No	Perched
NWI_316	0.15	ECT, NWI	No	Perched
NWI_317	3.32	ECT, NWI	No	Perched
NWI_318	0.22	ECT, NWI	No	Perched
NWI_319	0.23	ECT, NWI	No	Perched
NWI_320	0.27	ECT, NWI	No	Perched
NWI_321	0.84	ECT, NWI	Yes	Perched
NWI_322	0.16	ECT, NWI	No	Perched
NWI_323	0.16	ECT, NWI	No	Perched
NWI_324	0.18	ECT, NWI	Yes	Perched
NWI_325	1.81	ECT, NWI	No	Perched
NWI_326	0.21	ECT, NWI	No	Perched
NWI_327	1.27	ECT, NWI	No	Perched
NWI_328	2.00	ECT, NWI	No	Perched
NWI_329	5.26	ECT, NWI	Yes	Perched
NWI_330	0.09	ECT, NWI	No	Perched
NWI_331	0.24	ECT, NWI	No	Perched
NWI_332	0.11	ECT, NWI	No	Perched
NWI_333	0.33	ECT, NWI	No	Perched
NWI_334	0.94	ECT, NWI	No	Perched
NWI_335	0.73	ECT, NWI	Yes	Perched
NWI_336	0.41	ECT, NWI	No	Perched
NWI_337	0.51	ECT, NWI	No	Perched
NWI_338	0.21	ECT, NWI	No	Perched
NWI_339	0.61	ECT, NWI	No	Perched
NWI_340	0.36	ECT, NWI	No	Perched
NWI_341	0.20	ECT, NWI	Yes	Perched
NWI_342	0.47	ECT, NWI	No	Perched
NWI_343	0.24	ECT, NWI	No	Perched
NWI_344	1.52	ECT, NWI	Yes	Perched
NWI_345	0.35	ECT, NWI	Yes	Perched
NWI_346	0.41	ECT, NWI	No	Perched
NWI_347	0.13	ECT, NWI	No	Perched
NWI_348	0.58	ECT, NWI	No	Perched
NWI_349	0.27	ECT, NWI	No	Perched
NWI_350	0.22	ECT, NWI	No	Perched
NWI_351	0.28	ECT, NWI	No	Perched
NWI_352	2.49	ECT, NWI	No	Perched
NWI_353	0.23	ECT, NWI	No	Perched
NWI_354	0.64	ECT, NWI	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_355	0.63	ECT, NWI	No	Perched
NWI_356	0.32	ECT, NWI	No	Perched
NWI_357	0.22	ECT, NWI	No	Perched
NWI_358	0.98	ECT, NWI	Yes	Perched
NWI_359	0.20	ECT, NWI	No	Perched
NWI_360	1.31	ECT, NWI	No	Perched
NWI_361	0.15	ECT, NWI	No	Perched
NWI_362	0.17	ECT, NWI	Yes	Perched
NWI_363	0.73	ECT, NWI	No	Perched
NWI_364	0.35	ECT, NWI	Yes	Perched
NWI_365	1.11	ECT, NWI	Yes	Perched
NWI_366	5.22	ECT, NWI	Yes	Perched
NWI_367	0.23	ECT, NWI	Yes	Perched
NWI_368	0.39	ECT, NWI	No	Perched
NWI_369	0.16	ECT, NWI	No	Perched
NWI_370	1.08	ECT, NWI	Yes	Perched
NWI_371	0.25	ECT, NWI	No	Perched
NWI_372	0.14	ECT, NWI	No	Perched
NWI_373	3.25	ECT, NWI	No	Perched
NWI_374	0.51	ECT, NWI	No	Perched
NWI_375	0.97	ECT, NWI	No	Perched
NWI_376	0.10	ECT, NWI	No	Perched
NWI_377	1.13	ECT, NWI	No	Perched
NWI_378	1.70	ECT, NWI	No	Perched
NWI_379	1.03	ECT, NWI	No	Perched
NWI_380	0.61	ECT, NWI	Yes	Perched
NWI_381	0.59	ECT, NWI	No	Perched
NWI_382	0.83	ECT, NWI	Yes	Perched
NWI_383	0.20	ECT, NWI	No	Perched
NWI_384	0.51	ECT, NWI	No	Perched
NWI_385	0.14	ECT, NWI	No	Perched
NWI_386	0.62	ECT, NWI	No	Perched
NWI_387	0.43	ECT, NWI	No	Perched
NWI_388	0.20	ECT, NWI	No	Perched
NWI_389	0.47	ECT, NWI	No	Perched
NWI_390	0.52	ECT, NWI	No	Perched
NWI_391	0.24	ECT, NWI	No	Perched
NWI_392	0.80	ECT, NWI	No	Perched
NWI_393	0.37	ECT, NWI	No	Perched
NWI_394	1.18	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_395	0.19	ECT, NWI	No	Perched
NWI_396	0.13	ECT, NWI	No	Perched
NWI_397	0.32	ECT, NWI	No	Perched
NWI_398	0.18	ECT, NWI	Yes	Perched
NWI_399	0.24	ECT, NWI	No	Perched
NWI_400	0.16	ECT, NWI	Yes	Perched
NWI_401	1.49	ECT, NWI	No	Perched
NWI_402	0.15	ECT, NWI	No	Perched
NWI_403	1.32	ECT, NWI	No	Perched
NWI_404	0.78	ECT, NWI	Yes	Perched
NWI_405	0.27	ECT, NWI	No	Perched
NWI_406	0.47	ECT, NWI	No	Perched
NWI_407	0.10	ECT, NWI	No	Perched
NWI_408	0.26	ECT, NWI	No	Perched
NWI_409	2.30	ECT, NWI	Yes	Perched
NWI_410	0.32	ECT, NWI	No	Perched
NWI_411	2.19	ECT, NWI	Yes	Perched
NWI_412	0.13	ECT, NWI	No	Perched
NWI_413	0.15	ECT, NWI	Yes	Perched
NWI_414	0.48	ECT, NWI	No	Perched
NWI_415	1.24	ECT, NWI	No	Perched
NWI_416	0.26	ECT, NWI	No	Perched
NWI_417	0.13	ECT, NWI	No	Perched
NWI_418	0.17	ECT, NWI	Yes	Perched
NWI_419	0.26	ECT, NWI	No	Perched
NWI_420	0.63	ECT, NWI	No	Perched
NWI_421	0.15	ECT, NWI	No	Perched
NWI_422	0.19	ECT, NWI	No	Perched
NWI_423	1.03	ECT, NWI	No	Perched
NWI_424	0.19	ECT, NWI	No	Perched
NWI_425	0.29	ECT, NWI	No	Perched
NWI_426	0.39	ECT, NWI	No	Perched
NWI_427	0.38	ECT, NWI	No	Perched
NWI_428	1.62	ECT, NWI	No	Perched
NWI_429	1.65	ECT, NWI	No	Perched
NWI_430	1.06	ECT, NWI	Yes	Perched
NWI_431	0.65	ECT, NWI	Yes	Perched
NWI_432	0.14	ECT, NWI	No	Perched
NWI_433	0.29	ECT, NWI	No	Perched
NWI_434	0.87	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_435	0.26	ECT, NWI	No	Perched
NWI_436	0.35	ECT, NWI	No	Perched
NWI_437	0.31	ECT, NWI	No	Perched
NWI_438	0.57	ECT, NWI	No	Perched
NWI_439	0.27	ECT, NWI	Yes	Perched
NWI_440	0.21	ECT, NWI	No	Perched
NWI_441	0.36	ECT, NWI	No	Perched
NWI_442	0.36	ECT, NWI	No	Perched
NWI_443	0.65	ECT, NWI	No	Perched
NWI_444	0.15	ECT, NWI	No	Perched
NWI_445	0.23	ECT, NWI	No	Perched
NWI_446	0.95	ECT, NWI	Yes	Perched
NWI_447	0.13	ECT, NWI	No	Perched
NWI_448	0.16	ECT, NWI	No	Perched
NWI_449	0.84	ECT, NWI	No	Perched
NWI_450	0.52	ECT, NWI	No	Perched
NWI_451	0.57	ECT, NWI	No	Perched
NWI_452	3.47	ECT, NWI	No	Perched
NWI_453	0.21	ECT, NWI	No	Perched
NWI_454	0.66	ECT, NWI	No	Perched
NWI_455	0.47	ECT, NWI	No	Perched
NWI_456	0.83	ECT, NWI	No	Perched
NWI_457	0.15	ECT, NWI	No	Perched
NWI_458	0.18	ECT, NWI	No	Perched
NWI_459	2.03	ECT, NWI	No	Perched
NWI_460	0.15	ECT, NWI	No	Perched
NWI_461	0.12	ECT, NWI	No	Perched
NWI_462	0.19	ECT, NWI	Yes	Perched
NWI_463	0.28	ECT, NWI	No	Perched
NWI_464	0.27	ECT, NWI	Yes	Perched
NWI_465	0.27	ECT, NWI	No	Perched
NWI_466	0.22	ECT, NWI	No	Perched
NWI_467	0.25	ECT, NWI	Yes	Perched
NWI_468	1.07	ECT, NWI	No	Perched
NWI_469	0.27	ECT, NWI	No	Perched
NWI_470	1.13	ECT, NWI	No	Perched
NWI_471	1.11	ECT, NWI	No	Perched
NWI_472	0.84	ECT, NWI	Yes	Perched
NWI_473	0.66	ECT, NWI	No	Perched
NWI_474	1.11	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_475	0.12	ECT, NWI	No	Perched
NWI_476	0.61	ECT, NWI	No	Perched
NWI_477	0.97	ECT, NWI	Yes	Perched
NWI_478	0.56	ECT, NWI	No	Perched
NWI_479	0.34	ECT, NWI	No	Perched
NWI_480	0.18	ECT, NWI	No	Perched
NWI_481	1.12	ECT, NWI	No	Perched
NWI_482	0.30	ECT, NWI	No	Perched
NWI_483	0.43	ECT, NWI	Yes	Perched
NWI_484	0.24	ECT, NWI	No	Perched
NWI_485	0.21	ECT, NWI	No	Perched
NWI_486	0.69	ECT, NWI	No	Perched
NWI_487	0.67	ECT, NWI	No	Perched
NWI_488	0.36	ECT, NWI	No	Perched
NWI_489	0.30	ECT, NWI	No	Perched
NWI_490	0.18	ECT, NWI	No	Perched
NWI_491	0.66	ECT, NWI	Yes	Perched
NWI_492	0.60	ECT, NWI	No	Perched
NWI_493	0.23	ECT, NWI	Yes	Perched
NWI_494	0.62	ECT, NWI	No	Perched
NWI_495	0.99	ECT, NWI	No	Perched
NWI_496	0.17	ECT, NWI	No	Perched
NWI_497	0.19	ECT, NWI	No	Perched
NWI_498	0.40	ECT, NWI	No	Perched
NWI_499	0.11	ECT, NWI	Yes	Perched
NWI_500	0.73	ECT, NWI	Yes	Perched
NWI_501	0.14	ECT, NWI	No	Perched
NWI_502	0.22	ECT, NWI	No	Perched
NWI_503	4.66	ECT, NWI	No	Perched
NWI_504	0.90	ECT, NWI	No	Perched
NWI_505	0.69	ECT, NWI	Yes	Perched
NWI_506	0.49	ECT, NWI	No	Perched
NWI_507	1.20	ECT, NWI	No	Perched
NWI_508	0.52	ECT, NWI	No	Perched
NWI_509	1.68	ECT, NWI	No	
NWI_510	0.26	ECT, NWI	No	Perched
NWI_511	1.24	ECT, NWI	No	Perched
NWI_512	0.11	ECT, NWI	No	Perched
NWI_513	0.62	ECT, NWI	No	Perched
NWI_514	1.08	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_515	0.24	ECT, NWI	Yes	Perched
NWI_516	2.39	ECT, NWI	No	Perched
NWI_517	0.21	ECT, NWI	No	Perched
NWI_518	0.23	ECT, NWI	No	Perched
NWI_519	0.16	ECT, NWI	No	Perched
NWI_520	0.19	ECT, NWI	No	Perched
NWI_521	0.17	ECT, NWI	No	Perched
NWI_522	0.32	ECT, NWI	Yes	Perched
NWI_523	0.07	ECT, NWI	No	Perched
NWI_524	0.15	ECT, NWI	No	Perched
NWI_525	1.15	ECT, NWI	No	Perched
NWI_526	0.29	ECT, NWI	No	Perched
NWI_527	0.39	ECT, NWI	No	Perched
NWI_528	0.53	ECT, NWI	No	Perched
NWI_529	0.16	ECT, NWI	No	Perched
NWI_530	3.51	ECT, NWI	Yes	Perched
NWI_531	0.47	ECT, NWI	No	Perched
NWI_532	2.45	ECT, NWI	Yes	Perched
NWI_533	0.14	ECT, NWI	No	Perched
NWI_534	0.37	ECT, NWI	Yes	Perched
NWI_535	0.18	ECT, NWI	No	Perched
NWI_536	1.97	ECT, NWI	No	Perched
NWI_537	1.14	ECT, NWI	Yes	Perched
NWI_538	0.64	ECT, NWI	No	Perched
NWI_539	0.41	ECT, NWI	No	Perched
NWI_540	0.31	ECT, NWI	No	Perched
NWI_541	0.98	ECT, NWI	No	Perched
NWI_542	1.89	ECT, NWI	No	Perched
NWI_543	0.19	ECT, NWI	Yes	Perched
NWI_544	1.00	ECT, NWI	No	Perched
NWI_545	0.31	ECT, NWI	No	Perched
NWI_546	0.24	ECT, NWI	No	Perched
NWI_547	0.29	ECT, NWI	No	Perched
NWI_548	1.20	ECT, NWI	No	Perched
NWI_549	0.24	ECT, NWI	Yes	Perched
NWI_550	0.65	ECT, NWI	No	Perched
NWI_551	0.68	ECT, NWI	No	Perched
NWI_552	0.18	ECT, NWI	No	Perched
NWI_553	0.14	ECT, NWI	No	Perched
NWI_554	0.32	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_555	0.26	ECT, NWI	No	Perched
NWI_556	0.22	ECT, NWI	No	Perched
NWI_557	0.34	ECT, NWI	No	Perched
NWI_558	0.38	ECT, NWI	No	Perched
NWI_559	0.13	ECT, NWI	No	Perched
NWI_560	0.09	ECT, NWI	No	Perched
NWI_561	0.25	ECT, NWI	No	Perched
NWI_562	0.08	ECT, NWI	No	Perched
NWI_563	0.22	ECT, NWI	No	Perched
NWI_564	0.75	ECT, NWI	No	Perched
NWI_565	0.17	ECT, NWI	No	Perched
NWI_566	0.23	ECT, NWI	No	Perched
NWI_567	0.17	ECT, NWI	Yes	Perched
NWI_568	0.21	ECT, NWI	No	Perched
NWI_569	0.21	ECT, NWI	No	Perched
NWI_570	0.23	ECT, NWI	No	Perched
NWI_571	0.66	ECT, NWI	No	Perched
NWI_572	0.14	ECT, NWI	No	Perched
NWI_573	0.13	ECT, NWI	No	Perched
NWI_574	0.44	ECT, NWI	No	Perched
NWI_575	0.37	ECT, NWI	No	Perched
NWI_576	0.42	ECT, NWI	Yes	Perched
NWI_577	10.51	ECT, NWI	Yes	Perched
NWI_578	0.19	ECT, NWI	No	Perched
NWI_579	3.53	ECT, NWI	No	Perched
NWI_580	0.33	ECT, NWI	No	Perched
NWI_581	0.98	ECT, NWI	Yes	Perched
NWI_582	0.41	ECT, NWI	No	Perched
NWI_583	0.21	ECT, NWI	No	Perched
NWI_584	0.14	ECT, NWI	No	Perched
NWI_585	0.78	ECT, NWI	No	Perched
NWI_586	0.48	ECT, NWI	No	Perched
NWI_587	1.23	ECT, NWI	Yes	Perched
NWI_588	0.18	ECT, NWI	No	Perched
NWI_589	0.33	ECT, NWI	No	Perched
NWI_590	0.23	ECT, NWI	No	Perched
NWI_591	0.58	ECT, NWI	Yes	Perched
NWI_592	1.21	ECT, NWI	No	Perched
NWI_593	0.42	ECT, NWI	No	Perched
NWI_594	0.86	ECT, NWI	Yes	Perched

Table 2-1. (cont'd)

Wetland Identifier		Mapping Source	NREPA Part 303 Regulated	Perched
NWI_595	0.14	ECT, NWI	No	Perched
NWI_596	1.77	ECT, NWI	No	Perched
NWI_597	0.64	ECT, NWI	Yes	Perched
NWI_598	0.19	ECT, NWI	No	Perched
NWI_599	0.42	ECT, NWI	Yes	Perched
NWI_600	0.97	ECT, NWI	Yes	Perched
NWI_601	0.41	ECT, NWI	No	Perched
NWI_602	0.08	ECT, NWI	No	Perched
NWI_603	0.45	ECT, NWI	No	Perched
NWI_604	0.19	ECT, NWI	No	Perched
NWI_605	0.40	ECT, NWI	No	Perched
NWI_606	0.60	ECT, NWI	No	Perched
NWI_607	1.50	ECT, NWI	Yes	Perched
NWI_608	0.20	ECT, NWI	No	Perched
NWI_609	0.12	ECT, NWI	No	Perched
NWI_610	0.59	ECT, NWI	No	Perched
NWI_611	0.08	ECT, NWI	No	Perched
NWI_612	0.17	ECT, NWI	No	Perched
NWI_613	0.20	ECT, NWI	No	Perched
NWI_614	1.62	ECT, NWI	Yes	Perched
NWI_615	0.24	ECT, NWI	No	Perched
NWI_616	0.23	ECT, NWI	Yes	Perched
NWI_617	1.49	ECT, NWI	No	Perched
NWI_618	0.12	ECT, NWI	No	Perched
NWI_619	0.30	ECT, NWI	No	Perched
NWI_620	0.32	ECT, NWI	No	Perched
NWI_621	0.11	ECT, NWI	No	Perched
NWI_622	0.10	ECT, NWI	No	Perched
NWI_623	0.07	ECT, NWI	No	Perched
NWI_624	0.12	ECT, NWI	No	Perched
NWI_625	2.01	ECT, NWI	No	Perched
NWI_626	1.34	ECT, NWI	No	Perched
NWI_627	0.18	ECT, NWI	No	Perched
NWI_628	0.45	ECT, NWI	Yes	Perched
NWI_629	0.12	ECT, NWI	No	Perched
NWI_630	0.09	ECT, NWI	No	Perched
NWI_631	0.39	ECT, NWI	No	Perched
NWI_632	0.39	ECT, NWI	No	Perched
NWI_633	0.62	ECT, NWI	No	Perched
NWI_634	0.43	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_635	0.24	ECT, NWI	No	Perched
NWI_636	0.36	ECT, NWI	No	Perched
NWI_637	0.36	ECT, NWI	No	Perched
NWI_638	0.19	ECT, NWI	No	Perched
NWI_639	1.68	ECT, NWI	Yes	Perched
NWI_640	0.12	ECT, NWI	No	Perched
NWI_641	0.22	ECT, NWI	No	Perched
NWI_642	0.54	ECT, NWI	No	Perched
NWI_643	0.44	ECT, NWI	No	Perched
NWI_644	0.44	ECT, NWI	No	Perched
NWI_645	0.16	ECT, NWI	No	Perched
NWI_646	0.14	ECT, NWI	No	Perched
NWI_647	0.20	ECT, NWI	No	Perched
NWI_648	0.36	ECT, NWI	Yes	Perched
NWI_649	1.96	ECT, NWI	No	Perched
NWI_650	0.35	ECT, NWI	No	Perched
NWI_651	0.11	ECT, NWI	No	Perched
NWI_652	0.16	ECT, NWI	Yes	Perched
NWI_653	1.91	ECT, NWI	No	Perched
NWI_654	0.26	ECT, NWI	No	Perched
NWI_655	0.08	ECT, NWI	No	Perched
NWI_656	0.86	ECT, NWI	Yes	Perched
NWI_657	0.12	ECT, NWI	No	Perched
NWI_658	0.23	ECT, NWI	No	Perched
NWI_659	0.17	ECT, NWI	No	Perched
NWI_660	0.19	ECT, NWI	No	Perched
NWI_661	1.48	ECT, NWI	Yes	Perched
NWI_662	0.16	ECT, NWI	No	Perched
NWI_663	0.13	ECT, NWI	Yes	Perched
NWI_664	0.65	ECT, NWI	No	Perched
NWI_665	0.30	ECT, NWI	No	Perched
NWI_666	0.33	ECT, NWI	No	Perched
NWI_667	0.41	ECT, NWI	No	Perched
NWI_668	0.28	ECT, NWI	No	Perched
NWI_669	1.03	ECT, NWI	No	Perched
NWI_670	0.30	ECT, NWI	No	Perched
NWI_671	0.38	ECT, NWI	No	Perched
NWI_672	0.59	ECT, NWI	No	Perched
NWI_673	1.53	ECT, NWI	Yes	Perched
NWI_674	0.15	ECT, NWI	No	Perched

Table 2-1. (cont'd)

Wetland Identifier	Area (acres)	Mapping Source	NREPA Part 303 Regulated	Perched
NWI_675	0.36	ECT, NWI	Yes	Perched
NWI_676	0.20	ECT, NWI	Yes	Perched
NWI_677	0.68	ECT, NWI	Yes	Perched
NWI_678	0.22	ECT, NWI	No	Perched
NWI_679	0.21	ECT, NWI	No	Perched
NWI_680	0.20	ECT, NWI	No	Perched
NWI_681	1.05	ECT, NWI	Yes	Perched
NWI_682	0.15	ECT, NWI	No	Perched
NWI_683	1.07	ECT, NWI	No	Perched
NWI_684	0.21	ECT, NWI	Yes	Perched
NWI_685	1.25	ECT, NWI	No	Perched
NWI_686	0.86	ECT, NWI	No	Perched
NWI_687	0.60	ECT, NWI	No	Perched
NWI_688	0.08	ECT, NWI	Yes	Perched
NWI_689	0.72	ECT, NWI	Yes	Perched
NWI_690	0.37	ECT, NWI	Yes	Perched
NWI_691	0.42	ECT, NWI	Yes	Perched
NWI_692	0.14	ECT, NWI	No	Perched

Table 2-2. Wetlands mapped within the model-predicted 0.05-foot aquifer drawdown contour (400 gpm) associated with Nestle Water's White Pine Springs production well PW-101, indicating regulatory status pursuant to Part 303 (Wetland Protection) of the Natural Resource and Environmental Protection Act of 1994 (NREPA, as amended), and whether the wetland is perched above the source aquifer.

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
A		1085.00		1090.56	1078.69	1082.75	2.25	
B		1091.60		1092.18	1090.03	1091.01	0.59	
C		1097.30		1094.01	1092.93	1093.41	3.89	
D		1098.30		1094.76	1092.87	1093.78	4.52	
E		1092.80		1089.20	1086.58	1088.21	4.59	
F	1112.54	1104.64	1109.75	1088.49	1087.55	1088.14	21.61	Perched
G		1081.80		1086.05	1082.79	1083.28	-1.48	
H		1088.50		1086.72	1084.62	1085.48	3.02	
I	1165.90	1152.16	1159.69	1127.62	1127.02	1127.30	32.39	Perched
J	1170.79	1168.09	1169.58	1127.80	1127.33	1127.66	41.91	Perched
K	1173.35	1171.46	1172.46	1127.17	1126.24	1126.69	45.76	Perched
L	1169.90	1151.20	1161.77	1127.33	1123.57	1125.63	36.14	Perched
M	1169.16	1164.61	1166.84	1123.15	1122.43	1122.73	44.11	Perched
N	1161.44	1159.76	1161.23	1121.83	1121.32	1121.58	39.65	Perched
O	1160.63	1159.45	1160.28	1120.70	1120.60	1120.68	39.60	Perched
P	1144.02	1140.43	1142.37	1112.22	1111.48	1111.91	30.46	Perched
Q	1092.61	1089.94	1090.91	1087.82	1084.50	1086.67	4.24	
R	1198.65	1071.88	1091.65	1154.24	1070.29	1090.29	1.36	
S	1171.26	1167.94	1169.29	1125.64	1123.01	1124.30	44.99	Perched
T	1170.59	1158.53	1166.47	1127.41	1123.42	1125.78	40.69	Perched
U	1141.92	1129.84	1135.15	1103.14	1101.54	1102.31	32.84	Perched
V	1142.04	1139.52	1140.37	1114.00	1113.52	1113.73	26.64	Perched
W	1169.64	1169.47	1169.61	1123.38	1122.77	1123.17	46.44	Perched
X	1162.25	1130.05	1151.13	1126.91	1123.22	1125.95	25.17	Perched
Y		1098.90		1101.71	1099.95	1101.08	-2.18	
Z	1150.92	1141.27	1146.49	1115.12	1113.32	1114.09	32.40	Perched
AA	1179.78	1178.07	1178.69	1121.45	1120.76	1121.13	57.56	Perched
CC	1105.46	1079.64	1087.64	1096.39	1082.75	1086.83	0.81	
DD	1093.59	1081.97	1086.82	1080.68	1079.49	1080.10	6.71	Perched
EE	1100.23	1082.69	1089.81	1079.99	1078.38	1079.01	10.80	Perched
FF	1079.59	1072.58	1076.29	1078.70	1073.01	1076.12	0.17	
GG	1153.08	1149.43	1150.70	1109.84	1109.27	1109.61	41.09	Perched
HH	1152.01	1150.46	1151.25	1110.33	1109.85	1110.12	41.14	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
II	1141.79	1139.49	1140.50	1109.34	1108.56	1108.91	31.59	Perched
JJ	1139.31	1133.85	1136.64	1108.27	1107.61	1107.95	28.69	Perched
KK	1092.51	1090.94	1092.16	1084.23	1083.63	1083.90	8.26	Perched
LL	1092.13	1091.47	1091.51	1085.07	1082.49	1083.81	7.70	Perched
MM	1104.14	1101.99	1102.50	1095.61	1094.80	1095.17	7.33	Perched
NA	1203.80	1196.31	1197.15	1142.98	1136.36	1139.58	57.58	Perched
NB	1206.83	1200.90	1203.29	1141.97	1141.39	1141.62	61.67	Perched
NC	1219.25	1213.23	1216.97	1135.23	1134.17	1134.69	82.29	Perched
ND	1209.84	1204.14	1206.68	1135.86	1135.07	1135.51	71.17	Perched
NE	1207.91	1201.67	1205.35	1139.26	1137.55	1138.48	66.87	Perched
NF	1202.68	1199.75	1200.33	1128.34	1127.60	1128.05	72.28	Perched
NG	1210.62	1207.81	1208.95	1129.64	1129.16	1129.45	79.50	Perched
NH	1201.21	1198.89	1199.50	1129.02	1128.30	1128.65	70.86	Perched
NI	1206.57	1202.56	1204.81	1131.14	1130.80	1130.99	73.83	Perched
NJ	1171.98	1168.21	1169.84	1129.65	1128.69	1129.16	40.67	Perched
NK	1218.92	1215.75	1217.17	1131.28	1131.03	1131.16	86.01	Perched
NL	1218.03	1217.12	1217.44	1143.97	1143.60	1143.78	73.66	Perched
NM	1219.03	1214.62	1216.57	1137.64	1137.25	1137.45	79.12	Perched
NN	1102.19	1101.98	1102.02	1093.73	1092.29	1093.02	9.00	Perched
OO	1077.97	1070.16	1072.29	1074.90	1067.07	1071.84	0.46	
PP	1101.55	1090.80	1093.49	1095.18	1091.35	1092.90	0.59	
QQ	1180.32	1178.18	1179.25	1126.19	1125.11	1125.66	53.59	Perched
RR	1187.11	1179.90	1182.11	1126.88	1126.33	1126.57	55.54	Perched
SS	1189.85	1188.30	1188.82	1129.12	1127.91	1128.53	60.29	Perched
TT	1199.35	1197.09	1197.97	1130.34	1130.04	1130.16	67.81	Perched
UU	1191.22	1188.49	1189.46	1128.79	1127.87	1128.35	61.11	Perched
VV	1199.62	1198.01	1198.69	1130.48	1130.29	1130.38	68.30	Perched
WW	1209.05	1204.83	1206.96	1132.37	1130.60	1131.64	75.33	Perched
XX	1179.30	1176.20	1178.01	1122.29	1121.89	1122.05	55.96	Perched
YY	1198.96	1198.33	1198.60	1134.22	1132.99	1133.61	65.00	Perched
ZZ	1198.51	1191.76	1195.98	1132.65	1131.23	1132.01	63.97	Perched
AAA	1200.65	1196.84	1198.49	1139.44	1138.69	1139.05	59.44	Perched
BBB	1190.76	1189.92	1190.28	1140.86	1140.55	1140.70	49.58	Perched
CCC	1200.92	1184.43	1187.45	1147.90	1143.24	1145.67	41.78	Perched
DDD	1229.34	1225.64	1227.67	1145.89	1144.94	1145.44	82.23	Perched
EEE	1191.79	1186.70	1187.01	1151.14	1147.32	1149.10	37.91	Perched
FFF	1190.85	1188.04	1188.75	1145.92	1143.33	1144.74	44.01	Perched
ZZZ1	1200.36	1198.49	1198.90	1142.68	1139.11	1140.33	58.57	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
ZZZ2	1221.77	1215.71	1218.29	1153.48	1151.59	1152.47	65.82	Perched
ZZZ3	1184.30	1176.50	1179.01	1142.79	1141.74	1142.19	36.82	Perched
ZZZ4	1191.34	1189.78	1190.35	1142.15	1140.90	1141.42	48.93	Perched
ZZZ5	1211.25	1207.35	1208.86	1151.35	1149.51	1150.52	58.34	Perched
ZZZ6	1213.57	1208.35	1208.83	1152.78	1151.18	1152.00	56.83	Perched
ZZZ7	1181.55	1178.80	1179.10	1151.64	1145.95	1148.35	30.75	Perched
ZZZ8	1189.52	1186.45	1188.30	1143.56	1142.47	1143.02	45.27	Perched
ZZZ9	1236.41	1224.54	1228.33	1157.95	1156.06	1157.10	71.23	Perched
ZZZ10	1220.03	1217.22	1217.96	1158.51	1154.04	1156.63	61.33	Perched
ZZZ11	1192.69	1188.50	1188.89	1130.48	1128.33	1129.35	59.53	Perched
ZZZ12	1210.54	1208.30	1209.67	1135.53	1134.81	1135.20	74.47	Perched
ZZZ13	1170.53	1167.44	1168.47	1115.80	1114.99	1115.42	53.05	Perched
ZZZ14	1102.07	1100.54	1101.29	1105.24	1100.81	1102.44	-1.15	
ZZZ15	1160.61	1153.89	1158.03	1131.19	1130.42	1130.79	27.23	Perched
ZZZ16	1137.45	1132.05	1134.68	1127.44	1126.26	1126.85	7.83	Perched
ZZZ17	1188.40	1183.78	1186.22	1144.62	1142.82	1143.63	42.59	Perched
DEQ_1	1062.65	1057.45	1060.20	1062.33	1056.17	1059.55	0.65	
DEQ_2	1102.08	1100.39	1101.31	1102.91	1100.49	1101.56	-0.26	
DEQ_3	1114.34	1111.47	1111.76	1112.32	1110.41	1111.45	0.31	
DEQ_4	1081.44	1078.05	1080.58	1073.52	1072.66	1073.06	7.53	Perched
DEQ_5	1269.97	1263.57	1265.98	1245.76	1244.44	1245.01	20.97	Perched
DEQ_6	1268.88	1267.86	1268.49	1246.87	1246.70	1246.79	21.70	Perched
DEQ_7	1288.87	1283.84	1285.33	1240.43	1239.77	1240.08	45.25	Perched
DEQ_8	1288.72	1282.92	1286.14	1239.02	1238.18	1238.61	47.52	Perched
DEQ_9	1268.63	1263.12	1265.00	1244.35	1241.93	1243.37	21.63	Perched
DEQ_10	1269.63	1263.99	1265.75	1242.25	1238.96	1240.80	24.94	Perched
DEQ_11	1238.59	1231.97	1235.18	1187.90	1186.51	1187.16	48.01	Perched
DEQ_12	1268.19	1266.38	1267.10	1192.08	1191.67	1191.88	75.22	Perched
DEQ_13	1290.32	1282.01	1286.23	1197.21	1193.98	1195.84	90.40	Perched
DEQ_14	1298.72	1292.84	1298.08	1200.35	1199.65	1199.94	98.14	Perched
DEQ_15	1302.35	1299.29	1300.43	1198.18	1197.54	1197.82	102.61	Perched
DEQ_16	1300.10	1298.82	1299.02	1196.53	1196.44	1196.46	102.57	Perched
DEQ_17	1300.14	1294.49	1296.04	1196.55	1195.37	1196.10	99.95	Perched
DEQ_18	1299.61	1294.92	1297.53	1199.67	1197.97	1198.85	98.67	Perched
DEQ_19	1288.01	1282.43	1284.65	1199.44	1198.28	1198.81	85.84	Perched
DEQ_20	1279.19	1278.86	1279.10	1235.31	1234.66	1234.96	44.14	Perched
DEQ_21	1297.15	1293.14	1295.59	1215.12	1214.43	1214.80	80.79	Perched
DEQ_22	1279.70	1275.97	1277.25	1237.16	1234.71	1236.15	41.10	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_23	1307.19	1301.26	1302.62	1212.80	1212.48	1212.62	90.01	Perched
DEQ_24	1298.74	1293.41	1296.63	1213.02	1211.65	1212.39	84.24	Perched
DEQ_25	1285.46	1281.77	1283.02	1244.46	1244.11	1244.31	38.71	Perched
DEQ_26	1307.99	1302.89	1304.76	1243.12	1242.49	1242.81	61.95	Perched
DEQ_27	1295.74	1292.46	1293.48	1245.20	1244.19	1244.72	48.76	Perched
DEQ_28	1317.99	1310.85	1314.92	1234.66	1231.75	1233.21	81.72	Perched
DEQ_29	1307.26	1303.84	1304.99	1244.00	1243.42	1243.70	61.29	Perched
DEQ_30	1300.88	1292.10	1294.25	1239.08	1238.49	1238.76	55.49	Perched
DEQ_31	1316.63	1311.90	1314.36	1237.31	1236.83	1237.07	77.29	Perched
DEQ_32	1275.84	1271.27	1273.55	1242.03	1241.33	1241.65	31.90	Perched
DEQ_33	1297.52	1293.49	1295.30	1243.58	1242.88	1243.22	52.08	Perched
DEQ_34	1271.80	1261.80	1265.09	1240.16	1236.74	1238.47	26.63	Perched
DEQ_35	1269.29	1263.31	1264.60	1242.55	1240.52	1241.49	23.10	Perched
DEQ_36	1269.93	1263.23	1265.08	1246.53	1246.26	1246.39	18.69	Perched
DEQ_37	1269.50	1261.15	1264.80	1242.65	1239.69	1240.92	23.88	Perched
DEQ_38	1274.34	1262.84	1265.27	1246.82	1244.90	1245.90	19.37	Perched
DEQ_39	1119.32	1111.66	1113.54	1104.29	1096.33	1099.95	13.59	Perched
DEQ_40	1219.05	1214.00	1216.98	1161.49	1157.65	1159.46	57.51	Perched
DEQ_41	1214.03	1213.65	1213.72	1161.87	1161.65	1161.71	52.00	Perched
DEQ_42	1210.72	1209.94	1209.96	1170.80	1164.38	1167.27	42.68	Perched
DEQ_43	1220.12	1216.91	1219.08	1175.37	1173.61	1174.44	44.64	Perched
DEQ_44	1220.11	1218.08	1219.90	1173.97	1172.96	1173.41	46.50	Perched
DEQ_45	1161.05	1156.17	1159.44	1153.51	1144.94	1148.40	11.04	Perched
DEQ_46	1318.55	1315.29	1316.87	1195.34	1193.69	1194.56	122.32	Perched
DEQ_47	1160.88	1160.03	1160.12	1154.91	1151.13	1153.14	6.98	Perched
DEQ_48	1169.04	1162.41	1166.31	1158.41	1156.40	1157.38	8.94	Perched
DEQ_49	1350.03	1350.02	1350.02	1201.22	1199.68	1200.51	149.51	Perched
DEQ_50	1357.63	1354.27	1355.38	1207.54	1206.55	1207.01	148.37	Perched
DEQ_51	1161.05	1160.69	1160.86	1154.33	1152.09	1153.21	7.65	Perched
DEQ_52	1179.39	1177.88	1178.46	1161.99	1161.28	1161.65	16.80	Perched
DEQ_53	1357.09	1351.24	1354.33	1205.72	1204.80	1205.23	149.10	Perched
DEQ_54	1178.12	1175.66	1176.70	1161.27	1160.00	1160.62	16.07	Perched
DEQ_55	1200.25	1200.25	1200.25	1178.56	1178.40	1178.47	21.78	Perched
DEQ_56	1200.25	1200.22	1200.25	1179.34	1178.79	1179.02	21.23	Perched
DEQ_57	1200.50	1200.23	1200.25	1178.60	1175.65	1176.81	23.44	Perched
DEQ_58	1200.45	1199.61	1199.70	1176.49	1175.47	1176.01	23.69	Perched
DEQ_59	1280.25	1274.35	1275.59	1195.65	1193.92	1194.62	80.96	Perched
DEQ_60	1317.80	1313.27	1315.75	1199.00	1198.13	1198.57	117.19	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_61	1268.05	1265.92	1266.48	1195.61	1194.43	1194.99	71.49	Perched
DEQ_62	1308.85	1295.82	1303.17	1217.67	1212.12	1214.56	88.61	Perched
DEQ_63	1336.58	1334.24	1334.93	1206.88	1206.17	1206.54	128.39	Perched
DEQ_64	1338.09	1332.67	1335.42	1208.56	1207.67	1208.19	127.23	Perched
DEQ_65	1305.52	1303.82	1304.95	1215.01	1214.86	1214.92	90.03	Perched
DEQ_66	1308.32	1303.05	1305.12	1215.07	1212.08	1213.69	91.43	Perched
DEQ_67	1289.09	1284.96	1286.34	1199.61	1196.93	1198.49	87.85	Perched
DEQ_68	1301.15	1301.15	1301.15	1214.03	1214.03	1214.03	87.13	Perched
DEQ_69	1318.26	1313.03	1315.06	1219.45	1218.31	1218.87	96.19	Perched
DEQ_70	1296.94	1292.48	1293.61	1214.31	1211.40	1212.57	81.04	Perched
DEQ_71	1327.59	1320.34	1323.94	1224.37	1223.31	1223.90	100.04	Perched
DEQ_72	1308.28	1302.81	1305.98	1198.84	1197.90	1198.40	107.58	Perched
DEQ_73	1308.30	1302.74	1304.29	1221.33	1219.34	1220.39	83.90	Perched
DEQ_74	1317.28	1312.61	1315.10	1217.84	1217.35	1217.59	97.51	Perched
DEQ_75	1298.68	1297.60	1297.81	1227.88	1227.82	1227.86	69.96	Perched
DEQ_76	1217.93	1212.76	1213.76	1182.69	1181.65	1182.11	31.65	Perched
DEQ_77	1220.98	1215.54	1218.04	1183.22	1182.75	1182.91	35.12	Perched
DEQ_78	1315.57	1314.25	1315.03	1225.42	1225.31	1225.36	89.67	Perched
DEQ_79	1279.99	1276.45	1277.89	1193.28	1193.03	1193.13	84.75	Perched
DEQ_80	1317.12	1313.39	1314.89	1224.98	1224.28	1224.74	90.15	Perched
DEQ_81	1346.75	1341.07	1343.83	1202.50	1201.74	1202.06	141.77	Perched
DEQ_82	1325.58	1315.21	1320.40	1207.02	1205.97	1206.45	113.94	Perched
DEQ_83	1278.16	1274.80	1276.28	1194.59	1193.48	1194.06	82.21	Perched
DEQ_84	1323.35	1316.26	1317.92	1225.18	1224.97	1225.07	92.85	Perched
DEQ_85	1307.99	1296.56	1298.71	1230.21	1227.04	1228.83	69.88	Perched
DEQ_86	1326.77	1323.31	1325.05	1200.81	1199.76	1200.23	124.82	Perched
DEQ_87	1308.06	1303.90	1306.07	1221.43	1220.48	1220.96	85.11	Perched
DEQ_88	1327.71	1322.83	1325.48	1202.25	1201.02	1201.71	123.77	Perched
DEQ_89	1298.38	1291.80	1294.11	1223.77	1222.57	1223.25	70.86	Perched
DEQ_90	1326.42	1321.06	1325.48	1207.57	1207.13	1207.35	118.14	Perched
DEQ_91	1346.56	1341.13	1344.21	1204.29	1203.49	1203.92	140.29	Perched
DEQ_92	1258.72	1255.68	1257.20	1187.53	1185.84	1186.71	70.49	Perched
DEQ_93	1316.57	1311.83	1314.07	1233.57	1233.03	1233.29	80.78	Perched
DEQ_94	1259.99	1253.23	1258.08	1192.03	1191.84	1191.95	66.13	Perched
DEQ_95	1249.44	1244.23	1247.43	1191.63	1189.98	1190.85	56.58	Perched
DEQ_96	1309.37	1303.06	1305.45	1200.53	1199.73	1200.08	105.36	Perched
DEQ_97	1308.27	1305.18	1306.37	1199.48	1198.83	1199.14	107.23	Perched
DEQ_98	1278.53	1276.52	1277.54	1230.96	1230.76	1230.85	46.68	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_99	1307.15	1304.21	1305.58	1225.49	1225.26	1225.38	80.20	Perched
DEQ_100	1324.21	1323.24	1323.66	1202.15	1201.61	1201.87	121.79	Perched
DEQ_101	1248.63	1239.08	1245.13	1192.04	1189.96	1191.16	53.97	Perched
DEQ_102	1287.54	1280.03	1284.17	1228.04	1226.73	1227.41	56.76	Perched
DEQ_103	1287.51	1286.24	1286.69	1196.35	1196.26	1196.33	90.37	Perched
DEQ_104	1284.66	1283.31	1283.51	1197.33	1196.98	1197.12	86.39	Perched
DEQ_105	1289.32	1284.63	1286.12	1198.25	1196.84	1197.59	88.52	Perched
DEQ_106	1249.65	1248.27	1249.47	1220.69	1216.34	1218.38	31.09	Perched
DEQ_107	1279.22	1272.59	1275.52	1234.14	1228.57	1231.65	43.87	Perched
DEQ_108	1298.29	1295.45	1297.17	1213.39	1212.29	1212.85	84.32	Perched
DEQ_109	1279.65	1272.82	1275.68	1232.20	1229.89	1230.99	44.69	Perched
DEQ_110	1289.05	1287.54	1288.33	1235.13	1232.93	1233.92	54.41	Perched
DEQ_111	1256.51	1248.11	1249.00	1223.94	1217.31	1221.69	27.31	Perched
DEQ_112	1101.68	1013.34	1042.56	1072.84	1012.88	1039.93	2.63	
DEQ_113	1092.95	1091.14	1091.46	1048.91	1046.53	1047.63	43.83	Perched
DEQ_114	1071.42	1060.85	1065.27	1041.07	1038.31	1039.29	25.99	Perched
DEQ_115	1096.09	1091.10	1091.86	1051.05	1049.67	1050.39	41.47	Perched
DEQ_116	1111.30	1104.85	1108.37	1053.85	1052.52	1053.20	55.17	Perched
DEQ_117	1120.33	1116.20	1118.21	1054.47	1053.18	1053.84	64.37	Perched
DEQ_118	1187.54	1176.85	1181.93	1088.35	1087.23	1087.81	94.12	Perched
DEQ_119	1185.04	1176.58	1177.26	1139.07	1135.72	1137.33	39.93	Perched
DEQ_120	1106.58	1101.42	1103.08	1052.14	1051.21	1051.63	51.45	Perched
DEQ_121	1097.55	1095.55	1096.40	1051.07	1050.20	1050.57	45.83	Perched
DEQ_122	1168.54	1158.65	1159.62	1092.04	1086.69	1089.60	70.03	Perched
DEQ_123	1123.37	1106.63	1110.68	1054.96	1053.37	1054.20	56.48	Perched
DEQ_124	1119.23	1115.97	1117.69	1062.75	1061.13	1062.11	55.58	Perched
DEQ_125	1101.78	1098.73	1100.08	1055.58	1054.77	1055.15	44.93	Perched
DEQ_126	1101.50	1091.39	1092.74	1055.78	1052.73	1053.91	38.83	Perched
DEQ_127	1103.50	1081.87	1090.11	1068.87	1064.68	1066.65	23.46	Perched
DEQ_128	1196.28	1188.31	1190.14	1100.22	1098.37	1099.22	90.92	Perched
DEQ_129	1094.60	1089.69	1091.64	1063.61	1062.90	1063.29	28.35	Perched
DEQ_130	1098.42	1090.98	1091.52	1074.21	1072.56	1073.41	18.11	Perched
DEQ_131	1182.84	1179.17	1179.43	1096.57	1094.00	1095.25	84.19	Perched
DEQ_132	1200.20	1199.36	1199.73	1100.65	1100.01	1100.34	99.39	Perched
DEQ_133	1129.37	1126.11	1127.82	1077.63	1076.51	1077.06	50.76	Perched
DEQ_134	1112.84	1100.39	1102.52	1063.89	1062.78	1063.28	39.24	Perched
DEQ_135	1092.13	1090.84	1091.34	1074.33	1073.43	1073.87	17.47	Perched
DEQ_136	1209.70	1205.76	1207.79	1103.41	1102.40	1102.94	104.85	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_137	1092.45	1086.27	1089.50	1074.15	1071.82	1073.02	16.48	Perched
DEQ_138	1122.11	1119.16	1120.67	1078.99	1077.65	1078.34	42.33	Perched
DEQ_139	1093.36	1089.52	1091.95	1073.19	1072.11	1072.69	19.26	Perched
DEQ_140	1078.51	1070.22	1072.39	1062.04	1060.67	1061.50	10.89	Perched
DEQ_141	1088.34	1080.33	1080.90	1071.35	1065.50	1068.39	12.51	Perched
DEQ_142	1112.12	1107.72	1109.91	1079.70	1077.11	1078.29	31.62	Perched
DEQ_143	1091.77	1081.79	1086.15	1072.80	1071.89	1072.35	13.80	Perched
DEQ_144	1198.26	1189.91	1193.28	1107.02	1106.18	1106.61	86.67	Perched
DEQ_145	1189.27	1184.14	1186.93	1100.35	1097.00	1098.61	88.32	Perched
DEQ_146	1208.33	1202.02	1205.12	1104.59	1102.50	1103.62	101.50	Perched
DEQ_147	1101.17	1099.55	1100.37	1079.15	1077.64	1078.47	21.90	Perched
DEQ_148	1101.24	1095.87	1098.29	1077.03	1075.09	1076.11	22.18	Perched
DEQ_149	1101.86	1100.47	1100.85	1080.61	1078.89	1079.70	21.15	Perched
DEQ_150	1111.75	1107.40	1109.37	1083.11	1081.49	1082.29	27.08	Perched
DEQ_151	1063.04	1062.24	1062.29	1063.41	1062.08	1062.42	-0.14	
DEQ_152	1082.19	1075.06	1078.93	1076.37	1070.18	1073.89	5.04	Perched
DEQ_153	1107.63	1105.86	1106.79	1090.65	1089.19	1089.90	16.89	Perched
DEQ_154	1083.39	1030.60	1057.32	1076.27	1029.53	1056.53	0.79	
DEQ_155	1118.83	1111.12	1113.56	1079.45	1078.19	1078.83	34.73	Perched
DEQ_156	1111.99	1105.43	1109.33	1078.95	1076.41	1077.58	31.75	Perched
DEQ_157	1213.83	1208.20	1209.53	1122.13	1120.66	1121.41	88.12	Perched
DEQ_158	1103.10	1101.90	1102.05	1097.10	1095.98	1096.49	5.56	Perched
DEQ_159	1073.20	1057.04	1060.99	1064.40	1054.32	1059.50	1.49	
DEQ_160	1206.27	1198.19	1198.85	1120.28	1119.24	1119.77	79.08	Perched
DEQ_161	1069.38	1018.68	1033.96	1065.09	1009.16	1033.65	0.31	
DEQ_162	1084.47	1079.91	1081.73	1072.67	1070.94	1071.77	9.96	Perched
DEQ_163	1069.37	1065.47	1067.30	1070.85	1065.55	1067.63	-0.33	
DEQ_164	1102.37	1099.52	1100.91	1099.48	1097.42	1098.49	2.43	
DEQ_165	1101.75	1100.69	1101.06	1101.31	1100.08	1100.70	0.36	
DEQ_166	1076.02	1068.91	1071.66	1074.90	1069.10	1071.75	-0.09	
DEQ_167	1317.79	1316.75	1317.22	1160.87	1160.57	1160.73	156.48	Perched
DEQ_168	1093.11	1059.66	1072.40	1077.37	1062.34	1071.18	1.22	
DEQ_169	1227.28	1224.50	1225.26	1127.81	1126.91	1127.33	97.93	Perched
DEQ_170	1105.25	1088.35	1093.46	1079.79	1077.17	1078.79	14.67	Perched
DEQ_171	1319.06	1315.06	1316.42	1163.70	1162.87	1163.29	153.13	Perched
DEQ_172	1111.71	1108.87	1110.57	1102.30	1101.51	1101.93	8.64	Perched
DEQ_173	1332.59	1326.18	1328.50	1162.31	1161.65	1162.00	166.50	Perched
DEQ_174	1082.56	1067.17	1072.80	1081.68	1063.82	1070.97	1.83	

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_175	1086.25	1033.45	1044.20	1078.95	1033.86	1043.57	0.64	
DEQ_176	1230.17	1227.62	1228.87	1131.59	1129.52	1130.57	98.30	Perched
DEQ_177	1086.83	1080.77	1082.13	1084.66	1080.88	1081.89	0.24	
DEQ_178	1306.26	1304.92	1305.42	1162.68	1162.16	1162.44	142.98	Perched
DEQ_179	1137.41	1119.47	1127.82	1078.78	1077.94	1078.38	49.43	Perched
DEQ_180	1083.18	1078.69	1080.99	1084.55	1079.06	1081.86	-0.87	
DEQ_181	1121.34	1115.62	1118.67	1111.07	1108.41	1109.83	8.83	Perched
DEQ_182	1094.37	1091.76	1092.10	1091.78	1090.13	1091.03	1.06	
DEQ_183	1317.57	1313.52	1315.64	1165.23	1163.77	1164.55	151.09	Perched
DEQ_184	1108.88	1105.62	1107.27	1106.58	1104.54	1105.41	1.86	
DEQ_185	1310.62	1302.93	1304.85	1167.87	1166.68	1167.25	137.60	Perched
DEQ_186	1298.86	1294.95	1295.31	1170.04	1168.41	1169.24	126.08	Perched
DEQ_187	1079.69	1076.91	1078.12	1066.94	1062.41	1065.02	13.10	Perched
DEQ_188	1096.48	1088.40	1089.61	1089.96	1085.65	1087.94	1.67	
DEQ_189	1130.15	1126.35	1128.54	1122.19	1120.96	1121.66	6.89	Perched
DEQ_190	1141.78	1140.17	1141.13	1088.44	1086.94	1087.66	53.47	Perched
DEQ_191	1148.82	1143.73	1146.33	1127.71	1126.56	1127.09	19.24	Perched
DEQ_192	1110.99	1109.40	1110.19	1109.87	1108.52	1109.16	1.03	
DEQ_193	1130.91	1127.04	1129.27	1121.58	1119.29	1120.57	8.71	Perched
DEQ_194	1102.47	1081.13	1093.65	1100.39	1080.20	1093.33	0.32	
DEQ_195	1150.95	1149.12	1149.78	1093.65	1092.26	1092.99	56.78	Perched
DEQ_196	1149.05	1147.41	1148.33	1092.65	1092.08	1092.33	56.00	Perched
DEQ_197	1281.37	1272.62	1274.79	1171.95	1170.06	1170.98	103.80	Perched
DEQ_198	1151.36	1149.77	1150.54	1093.99	1093.19	1093.63	56.91	Perched
DEQ_199	1153.40	1151.02	1151.99	1096.15	1095.14	1095.62	56.37	Perched
DEQ_200	1259.44	1256.80	1257.60	1179.09	1178.26	1178.67	78.92	Perched
DEQ_201	1118.97	1104.25	1111.47	1085.81	1083.47	1084.59	26.88	Perched
DEQ_202	1230.35	1227.92	1228.96	1151.97	1150.90	1151.43	77.53	Perched
DEQ_203	1268.92	1266.13	1267.75	1161.17	1158.77	1159.86	107.90	Perched
DEQ_204	1278.40	1274.89	1276.61	1180.77	1180.10	1180.44	96.18	Perched
DEQ_205	1228.11	1221.61	1225.34	1155.89	1153.92	1154.89	70.45	Perched
DEQ_206	1093.76	1089.13	1091.18	1083.78	1081.38	1082.49	8.69	Perched
DEQ_207	1087.63	1083.28	1085.23	1078.90	1077.20	1078.21	7.02	Perched
DEQ_208	1248.11	1243.59	1246.53	1179.57	1178.69	1179.13	67.40	Perched
DEQ_209	1120.26	1111.30	1113.84	1121.12	1111.61	1113.64	0.20	
DEQ_210	1239.20	1235.58	1237.55	1163.51	1162.91	1163.23	74.32	Perched
DEQ_211	1139.17	1127.31	1131.40	1123.99	1119.61	1120.59	10.80	Perched
DEQ_212	1142.60	1138.51	1139.50	1135.07	1133.45	1134.31	5.19	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_213	1128.24	1119.29	1121.61	1124.10	1121.32	1122.65	-1.04	
DEQ_214	1139.15	1131.88	1135.33	1134.45	1133.34	1133.87	1.46	
DEQ_215	1196.16	1188.38	1191.02	1160.64	1159.86	1160.24	30.78	Perched
DEQ_216	1165.76	1160.36	1162.67	1112.90	1111.80	1112.36	50.32	Perched
DEQ_217	1150.66	1141.85	1147.30	1139.78	1136.63	1138.23	9.07	Perched
DEQ_218	1090.41	1084.97	1087.24	1089.11	1087.19	1088.00	-0.76	
DEQ_219	1101.27	1094.98	1098.65	1098.46	1096.44	1097.35	1.30	
DEQ_220	1150.86	1142.64	1147.65	1141.14	1138.02	1139.71	7.94	Perched
DEQ_221	1144.76	1140.90	1142.06	1143.87	1141.09	1142.30	-0.24	
DEQ_222	1163.42	1155.62	1158.69	1144.38	1142.73	1143.75	14.94	Perched
DEQ_223	1180.64	1171.29	1177.43	1114.56	1112.35	1113.49	63.94	Perched
DEQ_224	1165.57	1154.83	1160.02	1147.82	1145.72	1146.89	13.13	Perched
DEQ_225	1153.90	1146.11	1149.62	1137.35	1134.27	1135.87	13.75	Perched
DEQ_226	1172.35	1163.75	1168.15	1114.44	1113.83	1114.12	54.03	Perched
DEQ_227	1161.00	1157.57	1158.81	1147.59	1145.53	1146.44	12.37	Perched
DEQ_228	1143.15	1131.34	1136.48	1114.08	1113.32	1113.78	22.70	Perched
DEQ_229	1172.23	1160.01	1164.62	1148.91	1148.12	1148.50	16.12	Perched
DEQ_230	1180.18	1176.58	1178.59	1117.74	1115.88	1116.76	61.83	Perched
DEQ_231	1180.66	1175.18	1178.47	1151.90	1150.04	1151.05	27.41	Perched
DEQ_232	1170.48	1157.84	1162.29	1160.67	1156.61	1158.61	3.67	
DEQ_233	1193.98	1180.99	1187.93	1152.06	1150.99	1151.57	36.36	Perched
DEQ_234	1172.16	1158.31	1161.22	1144.75	1142.91	1143.87	17.35	Perched
DEQ_235	1185.62	1183.13	1184.25	1119.17	1118.56	1118.86	65.39	Perched
DEQ_236	1190.41	1183.87	1186.08	1176.59	1175.97	1176.34	9.74	Perched
DEQ_237	1180.24	1176.93	1178.51	1165.44	1163.95	1164.73	13.78	Perched
DEQ_238	1186.27	1180.85	1183.46	1165.44	1164.71	1165.10	18.36	Perched
DEQ_239	1187.03	1181.46	1184.23	1166.13	1165.68	1165.90	18.33	Perched
DEQ_240	1150.34	1140.86	1145.02	1121.61	1120.80	1121.25	23.77	Perched
DEQ_241	1156.90	1148.08	1150.53	1122.41	1121.37	1121.82	28.71	Perched
DEQ_242	1083.29	1022.58	1045.19	1075.03	1016.48	1039.09	6.10	Perched
DEQ_243	1091.36	1080.19	1084.17	1075.13	1071.61	1073.36	10.81	Perched
DEQ_244	1118.43	1114.60	1117.27	1106.24	1104.70	1105.37	11.90	Perched
DEQ_245	1103.15	1094.87	1098.25	1094.34	1088.60	1091.50	6.74	Perched
DEQ_246	1130.61	1125.71	1127.92	1119.28	1117.35	1118.33	9.59	Perched
DEQ_247	1184.97	1178.68	1180.00	1175.92	1174.71	1175.38	4.62	
DEQ_248	1157.46	1151.87	1154.59	1123.77	1122.97	1123.39	31.20	Perched
DEQ_249	1120.13	1119.11	1119.38	1108.83	1107.12	1108.03	11.35	Perched
DEQ_250	1138.93	1133.67	1135.58	1122.04	1120.85	1121.41	14.17	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_251	1179.63	1174.19	1176.81	1127.37	1126.08	1126.84	49.97	Perched
DEQ_252	1227.36	1224.84	1225.82	1171.48	1170.53	1171.01	54.81	Perched
DEQ_253	1127.48	1122.70	1125.12	1105.35	1103.75	1104.67	20.45	Perched
DEQ_254	1221.64	1216.37	1218.47	1173.72	1172.63	1173.15	45.32	Perched
DEQ_255	1171.52	1161.28	1167.17	1129.41	1128.93	1129.16	38.01	Perched
DEQ_256	1157.55	1154.62	1156.13	1116.58	1115.06	1115.85	40.28	Perched
DEQ_257	1102.99	1099.38	1101.06	1093.50	1089.10	1091.36	9.70	Perched
DEQ_258	1101.85	1099.02	1100.20	1090.11	1083.53	1086.99	13.21	Perched
DEQ_259	1233.32	1216.44	1222.34	1179.63	1178.45	1179.05	43.29	Perched
DEQ_260	1230.71	1228.41	1228.57	1178.81	1177.53	1178.23	50.33	Perched
DEQ_261	1153.13	1147.95	1149.70	1129.64	1127.69	1128.69	21.01	Perched
DEQ_262	1142.56	1136.91	1140.00	1126.22	1118.93	1122.69	17.31	Perched
DEQ_263	1164.10	1160.56	1161.09	1132.13	1131.10	1131.66	29.43	Perched
DEQ_264	1161.10	1156.76	1159.47	1131.53	1130.45	1131.12	28.35	Perched
DEQ_265	1139.56	1130.93	1133.91	1125.15	1118.83	1122.20	11.71	Perched
DEQ_266	1160.70	1158.64	1159.82	1134.20	1132.51	1133.28	26.54	Perched
DEQ_267	1169.95	1164.08	1167.05	1136.07	1135.58	1135.83	31.22	Perched
DEQ_268	1146.67	1140.27	1140.95	1131.83	1129.24	1130.39	10.56	Perched
DEQ_269	1150.63	1148.84	1149.69	1133.54	1132.99	1133.25	16.44	Perched
DEQ_270	1161.42	1155.02	1157.33	1138.71	1134.23	1136.67	20.66	Perched
DEQ_271	1147.88	1143.41	1145.70	1132.70	1131.27	1132.06	13.64	Perched
DEQ_272	1160.93	1156.57	1158.21	1135.60	1133.41	1134.55	23.66	Perched
DEQ_273	1160.44	1153.03	1156.38	1134.68	1133.74	1134.22	22.17	Perched
DEQ_274	1256.74	1243.11	1247.50	1173.55	1171.21	1172.54	74.96	Perched
DEQ_275	1141.51	1139.42	1140.26	1132.16	1131.28	1131.72	8.54	Perched
DEQ_276	1123.08	1116.13	1119.22	1105.34	1102.25	1103.83	15.40	Perched
DEQ_277	1159.84	1158.12	1158.54	1136.55	1135.94	1136.21	22.33	Perched
DEQ_278	1104.18	1044.33	1064.46	1092.34	1039.89	1061.19	3.27	
DEQ_279	1123.19	1067.80	1103.03	1122.97	1073.25	1099.41	3.62	
DEQ_280	1157.45	1152.03	1154.60	1136.02	1135.27	1135.72	18.88	Perched
DEQ_281	1174.98	1169.91	1171.94	1142.05	1141.52	1141.77	30.17	Perched
DEQ_282	1181.81	1173.22	1176.72	1139.79	1139.16	1139.47	37.24	Perched
DEQ_283	1123.26	1110.54	1116.58	1101.46	1099.65	1100.58	16.00	Perched
DEQ_284	1137.80	1128.41	1131.31	1125.81	1123.15	1124.43	6.88	Perched
DEQ_285	1239.74	1238.18	1239.16	1176.03	1174.57	1175.31	63.84	Perched
DEQ_286	1141.17	1139.52	1140.25	1118.01	1116.43	1117.24	23.01	Perched
DEQ_287	1137.21	1121.66	1127.16	1130.24	1121.76	1126.29	0.86	
DEQ_288	1127.58	1125.72	1126.49	1111.23	1109.42	1110.27	16.21	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_289	1151.45	1147.17	1148.62	1130.06	1127.35	1128.91	19.71	Perched
DEQ_290	1129.30	1127.57	1128.39	1109.07	1107.33	1108.14	20.26	Perched
DEQ_291	1141.27	1133.97	1137.48	1121.78	1113.15	1116.91	20.57	Perched
DEQ_292	1182.19	1179.78	1180.12	1143.74	1143.21	1143.47	36.65	Perched
DEQ_293	1130.88	1124.49	1127.86	1116.03	1109.89	1112.98	14.88	Perched
DEQ_294	1144.80	1137.36	1140.98	1134.89	1132.76	1133.76	7.22	Perched
DEQ_295	1183.50	1169.74	1175.35	1141.74	1141.06	1141.41	33.94	Perched
DEQ_296	1124.72	1111.92	1118.73	1085.57	1083.74	1084.75	33.98	Perched
DEQ_297	1129.72	1128.50	1128.69	1121.94	1118.39	1120.06	8.63	Perched
DEQ_298	1158.44	1149.91	1150.99	1135.62	1134.67	1135.20	15.78	Perched
DEQ_299	1153.51	1151.95	1152.71	1099.56	1097.56	1098.57	54.14	Perched
DEQ_300	1151.50	1149.34	1149.63	1140.58	1138.99	1139.97	9.66	Perched
DEQ_301	1142.18	1138.37	1139.39	1132.56	1125.34	1129.07	10.31	Perched
DEQ_302	1248.94	1243.31	1246.93	1179.88	1178.91	1179.41	67.52	Perched
DEQ_303	1141.64	1137.99	1139.89	1125.47	1123.62	1124.66	15.23	Perched
DEQ_304	1110.49	1107.26	1108.98	1085.31	1082.73	1084.11	24.87	Perched
DEQ_305	1139.70	1128.58	1130.92	1118.53	1112.71	1116.36	14.55	Perched
DEQ_306	1245.85	1231.74	1238.39	1181.49	1180.82	1181.16	57.24	Perched
DEQ_307	1153.07	1149.94	1150.30	1137.61	1136.18	1136.79	13.51	Perched
DEQ_308	1151.33	1143.32	1147.17	1139.81	1134.44	1137.05	10.12	Perched
DEQ_309	1134.67	1129.15	1130.67	1111.18	1107.64	1109.26	21.41	Perched
DEQ_310	1162.05	1155.39	1158.52	1142.26	1141.31	1141.75	16.76	Perched
DEQ_311	1165.23	1153.57	1156.50	1145.10	1144.09	1144.63	11.88	Perched
DEQ_312	1140.54	1133.22	1136.91	1115.33	1112.24	1113.80	23.11	Perched
DEQ_313	1142.13	1138.74	1140.46	1100.98	1093.02	1097.43	43.03	Perched
DEQ_314	1191.73	1187.86	1188.62	1149.70	1149.01	1149.35	39.28	Perched
DEQ_315	1173.10	1167.50	1169.18	1145.26	1144.19	1144.73	24.44	Perched
DEQ_316	1165.02	1159.43	1160.00	1143.82	1142.76	1143.29	16.71	Perched
DEQ_317	1151.02	1150.03	1150.20	1139.92	1138.94	1139.47	10.73	Perched
DEQ_318	1142.20	1130.30	1135.04	1122.65	1118.63	1120.72	14.32	Perched
DEQ_319	1133.08	1130.06	1131.25	1113.68	1111.14	1112.42	18.83	Perched
DEQ_320	1141.49	1139.52	1140.27	1135.94	1134.76	1135.37	4.90	
DEQ_321	1130.86	1129.41	1130.11	1111.31	1109.83	1110.66	19.45	Perched
DEQ_322	1143.21	1139.40	1141.05	1134.32	1129.84	1132.18	8.87	Perched
DEQ_323	1129.48	1128.88	1129.03	1111.35	1109.20	1110.25	18.79	Perched
DEQ_324	1171.17	1165.48	1168.39	1148.42	1147.58	1148.00	20.39	Perched
DEQ_325	1142.10	1138.54	1140.52	1131.52	1123.57	1127.62	12.90	Perched
DEQ_326	1169.17	1157.26	1159.28	1147.13	1146.08	1146.64	12.64	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_327	1131.59	1123.79	1127.36	1109.35	1105.59	1107.37	19.99	Perched
DEQ_328	1150.62	1148.18	1149.30	1121.43	1117.52	1119.72	29.58	Perched
DEQ_329	1167.14	1156.86	1159.44	1146.69	1145.56	1146.13	13.31	Perched
DEQ_330	1150.78	1146.64	1148.73	1124.67	1123.14	1123.89	24.84	Perched
DEQ_331	1141.18	1138.50	1139.72	1115.88	1114.31	1115.11	24.61	Perched
DEQ_332	1163.20	1154.29	1159.10	1142.73	1140.48	1141.56	17.53	Perched
DEQ_333	1154.03	1146.62	1149.26	1136.52	1134.24	1135.46	13.80	Perched
DEQ_334	1161.39	1155.28	1158.85	1122.45	1119.92	1121.17	37.68	Perched
DEQ_335	1168.95	1161.23	1162.61	1143.07	1142.50	1142.81	19.81	Perched
DEQ_336	1182.08	1179.61	1180.41	1151.16	1150.13	1150.62	29.79	Perched
DEQ_337	1153.11	1149.38	1150.54	1135.32	1133.94	1134.65	15.89	Perched
DEQ_338	1152.24	1138.89	1141.27	1140.09	1135.81	1137.92	3.35	
DEQ_339	1231.33	1229.05	1229.48	1211.94	1209.88	1210.99	18.49	Perched
DEQ_340	1167.34	1154.83	1157.59	1146.98	1142.57	1144.70	12.89	Perched
DEQ_341	1173.84	1168.01	1169.77	1128.53	1125.31	1126.99	42.77	Perched
DEQ_342	1180.98	1177.30	1178.61	1151.04	1149.79	1150.42	28.19	Perched
DEQ_343	1131.07	1128.20	1129.65	1117.09	1109.97	1113.48	16.17	Perched
DEQ_344	1118.30	1111.99	1116.11	1104.74	1100.06	1102.18	13.93	Perched
DEQ_345	1158.80	1155.11	1156.39	1138.38	1136.85	1137.64	18.75	Perched
DEQ_346	1183.06	1178.40	1179.13	1155.27	1153.66	1154.36	24.77	Perched
DEQ_347	1171.93	1159.03	1162.40	1141.74	1140.86	1141.32	21.08	Perched
DEQ_348	1157.73	1152.77	1155.17	1140.39	1138.37	1139.40	15.77	Perched
DEQ_349	1190.17	1188.31	1189.35	1153.22	1152.52	1152.87	36.48	Perched
DEQ_350	1182.01	1179.17	1180.05	1156.42	1155.70	1156.09	23.97	Perched
DEQ_351	1162.67	1159.20	1160.25	1125.53	1123.70	1124.74	35.52	Perched
DEQ_352	1238.92	1235.01	1236.87	1213.81	1213.30	1213.54	23.33	Perched
DEQ_353	1211.97	1208.02	1209.50	1162.11	1161.51	1161.78	47.72	Perched
DEQ_354	1191.82	1188.94	1189.93	1157.44	1156.90	1157.17	32.76	Perched
DEQ_355	1189.52	1186.68	1187.69	1158.54	1158.06	1158.28	29.40	Perched
DEQ_356	1223.67	1217.62	1219.39	1163.05	1162.20	1162.65	56.74	Perched
DEQ_357	1191.52	1187.95	1188.86	1159.09	1158.59	1158.85	30.02	Perched
DEQ_358	1160.20	1152.70	1156.18	1126.96	1120.29	1123.37	32.80	Perched
DEQ_359	1278.99	1277.00	1278.11	1171.38	1170.91	1171.15	106.96	Perched
DEQ_360	1322.97	1313.20	1315.67	1218.79	1218.24	1218.52	97.14	Perched
DEQ_361	1157.38	1141.62	1150.04	1117.96	1115.33	1116.76	33.28	Perched
DEQ_362	1174.89	1162.05	1167.66	1125.18	1123.45	1124.34	43.32	Perched
DEQ_363	1175.95	1169.86	1171.29	1131.86	1130.62	1131.29	40.01	Perched
DEQ_364	1150.22	1142.84	1146.93	1116.71	1114.76	1115.76	31.17	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_365	1138.46	1082.34	1101.57	1113.77	1075.84	1093.76	7.82	Perched
DEQ_366	1178.46	1167.76	1169.68	1137.04	1134.43	1135.53	34.15	Perched
DEQ_367	1322.16	1311.73	1313.43	1220.46	1219.46	1220.00	93.44	Perched
DEQ_368	1172.36	1155.12	1158.63	1133.44	1128.66	1131.14	27.49	Perched
DEQ_369	1278.00	1275.27	1275.72	1177.51	1177.02	1177.28	98.43	Perched
DEQ_370	1300.18	1287.12	1293.44	1178.73	1177.98	1178.36	115.08	Perched
DEQ_371	1258.92	1244.57	1247.91	1175.45	1173.50	1174.45	73.46	Perched
DEQ_372	1220.87	1209.44	1210.79	1152.91	1151.81	1152.32	58.46	Perched
DEQ_373	1138.23	1130.02	1134.21	1110.86	1108.97	1109.70	24.52	Perched
DEQ_374	1180.96	1174.65	1179.57	1129.90	1128.27	1129.10	50.47	Perched
DEQ_375	1276.85	1275.37	1275.73	1178.23	1177.43	1177.87	97.86	Perched
DEQ_376	1269.46	1268.08	1268.68	1173.28	1172.82	1173.05	95.62	Perched
DEQ_377	1171.32	1162.02	1167.72	1135.80	1134.21	1135.06	32.65	Perched
DEQ_378	1215.66	1197.42	1204.79	1166.16	1165.43	1165.80	38.99	Perched
DEQ_379	1249.92	1240.71	1245.15	1171.33	1169.74	1170.49	74.66	Perched
DEQ_380	1203.98	1200.01	1202.03	1148.45	1147.32	1147.89	54.14	Perched
DEQ_381	1290.97	1287.73	1287.98	1217.98	1217.38	1217.67	70.31	Perched
DEQ_382	1171.26	1169.81	1170.29	1135.35	1134.16	1134.70	35.59	Perched
DEQ_383	1274.63	1262.93	1267.49	1216.66	1216.24	1216.44	51.05	Perched
DEQ_384	1239.61	1226.87	1230.71	1161.86	1160.84	1161.34	69.37	Perched
DEQ_385	1279.11	1273.14	1274.61	1177.40	1176.78	1177.11	97.50	Perched
DEQ_386	1164.31	1145.93	1153.50	1124.85	1114.23	1120.20	33.29	Perched
DEQ_387	1259.71	1252.50	1254.65	1220.25	1219.72	1219.98	34.68	Perched
DEQ_388	1329.13	1311.89	1315.11	1222.63	1221.77	1222.20	92.91	Perched
DEQ_389	1138.88	1127.84	1132.50	1115.07	1112.30	1113.64	18.86	Perched
DEQ_390	1181.10	1180.43	1180.54	1131.38	1125.68	1128.81	51.73	Perched
DEQ_391	1205.72	1195.55	1198.53	1151.36	1148.64	1150.14	48.39	Perched
DEQ_392	1287.53	1286.45	1287.04	1179.90	1179.50	1179.71	107.32	Perched
DEQ_393	1277.33	1275.24	1275.82	1178.27	1177.49	1177.86	97.96	Perched
DEQ_394	1249.66	1247.94	1248.91	1170.29	1169.47	1169.88	79.02	Perched
DEQ_395	1191.27	1178.04	1181.37	1138.49	1137.03	1137.76	43.61	Perched
DEQ_396	1211.68	1199.34	1201.94	1147.45	1146.66	1147.09	54.85	Perched
DEQ_397	1194.07	1184.07	1188.77	1135.42	1132.44	1133.82	54.95	Perched
DEQ_398	1331.42	1320.07	1324.89	1192.12	1191.65	1191.88	133.01	Perched
DEQ_399	1211.05	1210.16	1210.73	1153.66	1152.43	1153.03	57.70	Perched
DEQ_400	1192.09	1190.97	1191.64	1138.29	1137.09	1137.75	53.89	Perched
DEQ_401	1191.27	1190.13	1190.47	1137.64	1136.28	1136.99	53.48	Perched
DEQ_402	1171.31	1141.17	1156.29	1125.93	1117.81	1122.01	34.28	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_403	1288.12	1277.85	1279.12	1176.18	1175.46	1175.83	103.29	Perched
DEQ_404	1338.02	1336.86	1336.91	1193.48	1192.76	1193.10	143.81	Perched
DEQ_405	1269.24	1246.45	1252.80	1173.90	1172.57	1173.20	79.60	Perched
DEQ_406	1255.83	1244.89	1247.38	1173.13	1171.63	1172.38	75.00	Perched
DEQ_407	1218.94	1216.61	1217.05	1153.89	1152.88	1153.38	63.67	Perched
DEQ_408	1200.64	1198.62	1199.80	1138.77	1136.61	1137.58	62.22	Perched
DEQ_409	1190.22	1180.76	1186.32	1135.16	1131.20	1133.35	52.97	Perched
DEQ_410	1287.09	1277.93	1279.54	1179.07	1178.40	1178.74	100.81	Perched
DEQ_411	1210.89	1203.72	1208.78	1144.32	1141.99	1143.32	65.46	Perched
DEQ_412	1202.18	1200.11	1200.85	1140.31	1139.46	1139.88	60.97	Perched
DEQ_413	1195.21	1189.88	1191.30	1134.83	1133.72	1134.35	56.95	Perched
DEQ_414	1258.16	1250.05	1255.01	1175.24	1174.19	1174.78	80.23	Perched
DEQ_415	1231.00	1228.77	1230.03	1159.14	1158.51	1158.81	71.22	Perched
DEQ_416	1209.54	1201.71	1205.90	1143.28	1141.90	1142.62	63.28	Perched
DEQ_417	1219.67	1211.05	1216.50	1148.97	1146.60	1147.83	68.67	Perched
DEQ_418	1234.36	1228.29	1229.87	1158.20	1157.37	1157.76	72.11	Perched
DEQ_419	1220.18	1213.19	1217.54	1147.05	1145.29	1146.11	71.43	Perched
DEQ_420	1258.63	1253.56	1255.38	1176.90	1175.64	1176.25	79.13	Perched
DEQ_421	1282.41	1272.57	1277.91	1178.28	1177.53	1177.89	100.02	Perched
DEQ_422	1238.87	1235.51	1237.06	1159.05	1158.45	1158.78	78.28	Perched
DEQ_423	1220.11	1219.07	1219.38	1150.75	1149.73	1150.23	69.15	Perched
DEQ_424	1281.15	1277.89	1278.95	1179.48	1178.60	1179.05	99.90	Perched
DEQ_425	1287.12	1277.97	1280.51	1180.32	1179.30	1179.81	100.71	Perched
DEQ_426	1230.26	1229.50	1229.92	1144.02	1143.19	1143.59	86.33	Perched
DEQ_427	1221.97	1219.21	1219.69	1150.58	1149.51	1150.09	69.60	Perched
DEQ_428	1225.47	1219.02	1219.71	1151.36	1149.84	1150.63	69.08	Perched
DEQ_429	1259.34	1256.95	1258.06	1162.36	1161.84	1162.10	95.97	Perched
DEQ_430	1283.81	1278.26	1279.46	1179.48	1179.00	1179.22	100.24	Perched
DEQ_431	1239.84	1237.29	1238.01	1156.33	1154.78	1155.51	82.49	Perched
DEQ_432	1328.49	1318.44	1322.48	1182.04	1181.59	1181.83	140.66	Perched
DEQ_433	1270.25	1258.09	1261.36	1149.97	1148.97	1149.53	111.83	Perched
DEQ_434	1315.83	1310.03	1312.74	1175.17	1174.71	1174.95	137.78	Perched
DEQ_435	1328.70	1302.07	1307.09	1177.44	1175.98	1176.68	130.41	Perched
DEQ_436	1317.26	1315.09	1316.24	1178.77	1178.39	1178.57	137.67	Perched
DEQ_437	1318.72	1316.14	1317.62	1178.12	1177.66	1177.90	139.71	Perched
DEQ_438	1315.18	1310.95	1313.56	1179.39	1178.82	1179.10	134.46	Perched
DEQ_439	1327.63	1320.41	1323.35	1184.74	1184.31	1184.54	138.82	Perched
DEQ_440	1325.10	1316.73	1318.43	1179.88	1179.23	1179.54	138.89	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_441	1316.92	1312.37	1314.38	1180.64	1180.08	1180.36	134.02	Perched
DEQ_442	1268.93	1267.80	1267.87	1169.99	1169.41	1169.72	98.16	Perched
DEQ_443	1309.33	1308.54	1308.70	1181.44	1181.02	1181.25	127.45	Perched
DEQ_444	1297.32	1296.93	1297.16	1215.28	1212.84	1213.99	83.17	Perched
DEQ_445	1308.75	1302.11	1306.43	1183.07	1182.14	1182.56	123.88	Perched
DEQ_446	1308.26	1300.25	1304.67	1184.42	1182.76	1183.67	120.99	Perched
DEQ_447	1332.25	1327.92	1329.19	1187.32	1186.49	1186.92	142.28	Perched
DEQ_448	1297.75	1294.41	1296.21	1183.89	1183.50	1183.69	112.51	Perched
DEQ_449	1328.42	1327.51	1327.73	1187.49	1186.33	1186.93	140.80	Perched
DEQ_450	1318.25	1314.46	1316.03	1191.72	1191.27	1191.49	124.54	Perched
DEQ_451	1318.28	1314.70	1316.18	1192.30	1191.97	1192.12	124.06	Perched
DEQ_452	1308.67	1307.28	1307.88	1184.22	1183.82	1184.01	123.87	Perched
DEQ_453	1322.30	1314.87	1316.54	1188.49	1187.63	1188.04	128.50	Perched
DEQ_454	1322.35	1312.96	1315.87	1186.50	1185.07	1185.83	130.05	Perched
DEQ_455	1333.14	1318.45	1326.01	1187.33	1186.59	1186.98	139.03	Perched
DEQ_456	1422.36	1404.17	1410.11	1212.45	1211.75	1212.12	197.99	Perched
DEQ_457	1348.08	1348.01	1348.08	1194.78	1194.41	1194.59	153.48	Perched
DEQ_458	1406.49	1402.45	1403.82	1211.85	1210.41	1211.17	192.65	Perched
DEQ_459	1351.71	1345.55	1347.38	1192.28	1191.71	1191.99	155.38	Perched
DEQ_460	1408.10	1402.44	1404.29	1212.23	1209.46	1210.69	193.61	Perched
DEQ_461	1397.14	1387.80	1391.29	1206.78	1206.16	1206.46	184.83	Perched
DEQ_462	1408.11	1401.98	1405.11	1208.98	1208.24	1208.60	196.51	Perched
DEQ_463	1407.34	1402.44	1405.81	1208.45	1208.08	1208.25	197.56	Perched
DEQ_464	1331.88	1326.13	1327.58	1195.83	1195.40	1195.60	131.99	Perched
DEQ_465	1467.11	1463.76	1465.20	1214.35	1213.89	1214.11	251.09	Perched
DEQ_466	1456.32	1449.73	1453.08	1213.38	1212.44	1212.90	240.18	Perched
DEQ_467	1411.26	1405.65	1406.41	1207.00	1206.37	1206.68	199.73	Perched
DEQ_468	1416.84	1412.27	1414.31	1206.49	1206.18	1206.35	207.97	Perched
DEQ_469	1444.95	1434.22	1436.94	1212.36	1212.00	1212.17	224.77	Perched
DEQ_470	1410.14	1400.56	1404.67	1210.79	1208.66	1209.61	195.06	Perched
DEQ_471	1408.84	1404.78	1405.84	1209.70	1209.17	1209.45	196.39	Perched
DEQ_472	1328.23	1311.93	1314.90	1240.21	1238.98	1239.57	75.33	Perched
DEQ_473	1440.29	1431.19	1434.38	1240.34	1240.14	1240.24	194.14	Perched
DEQ_474	1391.07	1370.72	1372.80	1230.75	1229.68	1230.27	142.53	Perched
DEQ_475	1132.28	1099.86	1114.60	1124.65	1100.75	1114.07	0.53	
DEQ_476	1121.70	1111.91	1118.72	1031.97	1027.69	1029.70	89.01	Perched
DEQ_477	1186.38	1180.53	1183.83	1120.94	1120.26	1120.59	63.24	Perched
DEQ_478	1023.65	1005.50	1012.17	1015.25	1003.20	1010.11	2.06	

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
DEQ_479	1058.59	1051.00	1054.75	1032.60	1031.18	1031.87	22.88	Perched
DEQ_480	1063.18	1060.72	1061.60	1056.35	1053.51	1054.49	7.12	Perched
DEQ_481	1061.35	1049.11	1052.05	1052.59	1050.58	1051.61	0.44	
DEQ_482	1078.14	1071.55	1073.48	1073.43	1071.08	1072.19	1.29	
DEQ_483	1076.25	1061.02	1068.10	1061.21	1051.66	1057.21	10.89	Perched
DEQ_484	1067.90	1060.43	1063.71	1060.23	1053.97	1058.24	5.47	Perched
DEQ_485	1198.60	1188.68	1190.39	1185.66	1184.11	1185.12	5.27	Perched
DEQ_486	1216.95	1203.14	1206.32	1186.83	1185.58	1186.17	20.14	Perched
DEQ_487	1248.10	1243.75	1245.77	1189.02	1188.50	1188.77	57.00	Perched
DEQ_488	1248.25	1233.67	1235.64	1192.11	1189.08	1190.51	45.13	Perched
DEQ_489	1233.11	1223.13	1224.84	1193.94	1192.95	1193.40	31.44	Perched
DEQ_490	1258.27	1249.56	1253.56	1193.81	1193.61	1193.72	59.85	Perched
DEQ_491	1198.10	1193.92	1195.85	1194.15	1193.10	1193.62	2.23	
DEQ_492	1259.39	1254.91	1255.19	1195.69	1194.85	1195.29	59.90	Perched
DEQ_493	1179.50	1170.54	1172.73	1173.02	1171.29	1172.27	0.46	
DEQ_494	1169.96	1163.70	1167.57	1169.08	1164.14	1166.68	0.89	
DEQ_495	1181.36	1178.32	1179.11	1173.74	1172.50	1173.12	5.99	Perched
DEQ_496	1095.63	1074.86	1082.70	1085.18	1070.06	1076.98	5.72	Perched
DEQ_497	1213.93	1203.47	1205.89	1202.63	1201.60	1202.16	3.74	
DEQ_498	1233.03	1227.09	1229.58	1208.82	1208.56	1208.66	20.92	Perched
DEQ_499	1213.17	1205.66	1207.94	1206.18	1204.00	1205.14	2.80	
DEQ_500	1277.20	1272.67	1275.69	1210.54	1209.58	1210.05	65.64	Perched
DEQ_501	1282.31	1272.62	1277.85	1210.54	1210.14	1210.32	67.53	Perched
DEQ_502	1281.80	1273.28	1275.16	1211.45	1210.68	1211.11	64.05	Perched
DEQ_503	1225.64	1218.12	1219.92	1208.61	1207.91	1208.26	11.66	Perched
DEQ_504	1239.10	1232.80	1235.11	1181.93	1179.35	1180.58	54.53	Perched
DEQ_505	1248.72	1244.67	1246.51	1185.57	1184.60	1185.07	61.44	Perched
DEQ_506	1327.81	1324.78	1326.00	1248.36	1248.10	1248.21	77.79	Perched
DEQ_507	1263.94	1254.25	1257.22	1246.08	1244.56	1245.29	11.93	Perched
DEQ_508	1267.27	1261.64	1265.18	1187.74	1186.21	1186.92	78.26	Perched
DEQ_509	1269.07	1262.61	1265.48	1235.79	1234.01	1235.02	30.45	Perched
DEQ_510	1112.77	1115.50	1114.31	1026.24	1026.65	1026.45	87.85	Perched
DEQ_511	1021.60	1045.94	1036.24	1018.16	1028.92	1020.74	15.49	Perched
DEQ_512	1021.10	1033.36	1024.61	1020.04	1031.34	1023.88	0.73	
NWI_1	1289.26	1283.79	1287.61	1216.70	1216.26	1216.48	71.14	Perched
NWI_2	1219.87	1214.83	1217.03	1170.60	1169.78	1170.18	46.85	Perched
NWI_3	1366.12	1362.69	1364.76	1210.47	1210.31	1210.40	154.37	Perched
NWI_4	1260.93	1258.45	1259.28	1179.85	1179.19	1179.54	79.73	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_5	1356.98	1354.86	1355.81	1207.19	1206.83	1207.01	148.80	Perched
NWI_6	1279.49	1277.20	1277.84	1229.54	1229.21	1229.38	48.46	Perched
NWI_7	1307.80	1297.54	1300.78	1191.47	1190.83	1191.13	109.65	Perched
NWI_8	1289.01	1284.38	1286.19	1197.72	1196.93	1197.30	88.89	Perched
NWI_9	1288.64	1286.76	1287.56	1239.65	1239.10	1239.38	48.17	Perched
NWI_10	1258.45	1256.75	1257.33	1222.97	1222.36	1222.67	34.66	Perched
NWI_11	1402.10	1372.25	1384.52	1247.76	1247.41	1247.60	136.92	Perched
NWI_12	1332.10	1315.69	1319.95	1211.31	1210.82	1211.05	108.90	Perched
NWI_13	1288.47	1278.65	1282.55	1216.63	1216.20	1216.43	66.12	Perched
NWI_14	1327.70	1321.42	1324.78	1212.09	1211.66	1211.86	112.92	Perched
NWI_15	1248.55	1244.85	1246.68	1181.98	1181.42	1181.66	65.02	Perched
NWI_16	1288.30	1282.87	1285.10	1233.51	1232.80	1233.20	51.90	Perched
NWI_17	1288.18	1280.78	1284.32	1216.58	1216.22	1216.41	67.91	Perched
NWI_18	1316.82	1313.51	1314.30	1210.77	1210.24	1210.50	103.79	Perched
NWI_19	1301.57	1287.42	1297.29	1191.97	1191.43	1191.73	105.57	Perched
NWI_20	1337.85	1323.47	1327.05	1204.96	1203.50	1204.19	122.87	Perched
NWI_21	1346.45	1340.07	1342.80	1205.33	1204.11	1204.73	138.08	Perched
NWI_22	1294.86	1262.75	1274.67	1247.07	1246.68	1246.87	27.80	Perched
NWI_23	1289.07	1287.71	1288.29	1231.92	1231.42	1231.67	56.62	Perched
NWI_24	1366.48	1363.32	1365.22	1208.52	1207.94	1208.26	156.96	Perched
NWI_25	1297.86	1293.00	1295.33	1188.81	1188.42	1188.63	106.71	Perched
NWI_26	1240.42	1237.83	1238.89	1173.67	1173.11	1173.38	65.51	Perched
NWI_27	1352.91	1346.71	1348.90	1206.63	1205.75	1206.16	142.74	Perched
NWI_28	1288.58	1271.98	1278.81	1244.50	1244.23	1244.36	34.44	Perched
NWI_29	1302.26	1292.03	1295.70	1195.06	1194.38	1194.69	101.01	Perched
NWI_30	1222.38	1217.34	1219.17	1184.39	1183.57	1183.97	35.20	Perched
NWI_31	1298.64	1290.19	1295.38	1194.18	1193.11	1193.67	101.71	Perched
NWI_32	1307.52	1302.71	1304.74	1201.81	1201.35	1201.64	103.11	Perched
NWI_33	1289.46	1282.54	1286.71	1195.65	1195.05	1195.35	91.36	Perched
NWI_34	1220.08	1217.70	1218.71	1183.71	1182.34	1183.05	35.66	Perched
NWI_35	1289.27	1285.52	1287.42	1188.20	1186.53	1187.40	100.02	Perched
NWI_36	1282.44	1271.55	1277.07	1236.35	1235.89	1236.10	40.97	Perched
NWI_37	1354.00	1331.74	1341.30	1206.08	1204.74	1205.39	135.91	Perched
NWI_38	1280.08	1271.00	1274.52	1237.85	1237.27	1237.56	36.96	Perched
NWI_39	1303.52	1296.72	1298.56	1201.61	1201.07	1201.37	97.19	Perched
NWI_40	1296.47	1294.19	1295.27	1188.88	1188.58	1188.75	106.52	Perched
NWI_41	1259.62	1237.12	1246.25	1188.33	1187.30	1187.89	58.37	Perched
NWI_42	1367.88	1366.66	1367.32	1209.30	1209.06	1209.18	158.14	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_43	1289.39	1284.09	1285.89	1192.66	1192.19	1192.44	93.45	Perched
NWI_44	1307.08	1301.23	1303.90	1215.41	1215.08	1215.25	88.65	Perched
NWI_45	1261.49	1256.76	1258.41	1223.47	1222.22	1222.84	35.57	Perched
NWI_46	1290.19	1285.81	1287.86	1216.07	1215.61	1215.83	72.03	Perched
NWI_47	1297.60	1293.24	1294.89	1200.60	1199.83	1200.21	94.68	Perched
NWI_48	1229.96	1220.73	1226.29	1176.40	1175.77	1176.07	50.22	Perched
NWI_49	1338.14	1335.76	1336.72	1204.17	1203.74	1203.94	132.78	Perched
NWI_50	1309.83	1303.29	1307.59	1197.64	1197.08	1197.36	110.23	Perched
NWI_51	1260.72	1235.66	1251.41	1188.47	1185.41	1187.09	64.32	Perched
NWI_52	1308.85	1306.53	1307.80	1202.63	1201.93	1202.28	105.52	Perched
NWI_53	1347.18	1343.17	1345.28	1206.41	1205.62	1206.03	139.26	Perched
NWI_54	1266.34	1248.45	1250.27	1220.66	1219.41	1219.99	30.28	Perched
NWI_55	1337.60	1331.32	1334.17	1204.69	1204.44	1204.56	129.61	Perched
NWI_56	1318.11	1313.68	1315.62	1210.40	1209.89	1210.13	105.49	Perched
NWI_57	1288.24	1283.77	1286.12	1189.54	1189.15	1189.35	96.77	Perched
NWI_58	1335.76	1323.47	1329.58	1209.95	1209.71	1209.83	119.75	Perched
NWI_59	1298.56	1293.14	1295.97	1195.10	1194.74	1194.91	101.06	Perched
NWI_60	1308.46	1302.04	1305.19	1196.86	1195.93	1196.42	108.77	Perched
NWI_61	1245.10	1222.55	1235.69	1188.25	1184.56	1186.83	48.86	Perched
NWI_62	1343.07	1332.99	1335.76	1211.57	1211.33	1211.44	124.32	Perched
NWI_63	1289.28	1283.23	1286.16	1195.63	1194.57	1195.06	91.10	Perched
NWI_64	1217.75	1206.91	1212.22	1176.11	1175.59	1175.86	36.36	Perched
NWI_65	1279.95	1274.74	1277.41	1239.63	1238.91	1239.29	38.12	Perched
NWI_66	1288.18	1278.17	1283.23	1231.61	1231.08	1231.33	51.90	Perched
NWI_67	1292.19	1287.20	1288.64	1194.24	1193.55	1193.88	94.76	Perched
NWI_68	1318.65	1312.73	1315.95	1214.14	1213.53	1213.82	102.13	Perched
NWI_69	1313.10	1303.64	1306.24	1213.06	1212.71	1212.89	93.35	Perched
NWI_70	1338.20	1335.70	1336.53	1208.78	1208.49	1208.64	127.89	Perched
NWI_71	1318.01	1309.24	1314.41	1203.15	1201.64	1202.44	111.98	Perched
NWI_72	1260.48	1258.50	1259.25	1224.28	1223.82	1224.05	35.20	Perched
NWI_73	1277.58	1273.56	1275.51	1239.38	1238.70	1239.00	36.51	Perched
NWI_74	1253.57	1250.12	1252.09	1180.07	1179.25	1179.64	72.44	Perched
NWI_75	1330.13	1325.24	1326.59	1205.56	1205.02	1205.31	121.29	Perched
NWI_76	1343.30	1337.49	1338.22	1210.53	1210.26	1210.39	127.83	Perched
NWI_77	1337.13	1331.24	1334.32	1212.54	1211.81	1212.18	122.14	Perched
NWI_78	1269.42	1264.20	1266.06	1242.82	1241.53	1242.17	23.90	Perched
NWI_79	1308.68	1301.54	1305.91	1197.04	1196.69	1196.88	109.03	Perched
NWI_80	1271.53	1264.33	1267.50	1191.23	1190.41	1190.77	76.73	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_81	1249.11	1246.34	1247.82	1180.87	1179.54	1180.30	67.52	Perched
NWI_82	1288.00	1285.04	1286.72	1232.49	1232.01	1232.26	54.46	Perched
NWI_83	1369.71	1367.23	1368.28	1209.47	1209.18	1209.32	158.96	Perched
NWI_84	1280.81	1277.01	1277.86	1227.94	1227.61	1227.75	50.10	Perched
NWI_85	1308.46	1305.56	1306.60	1193.55	1192.47	1193.03	113.57	Perched
NWI_86	1304.12	1289.01	1294.75	1200.54	1198.03	1199.28	95.48	Perched
NWI_87	1288.10	1282.06	1283.52	1248.96	1248.79	1248.87	34.65	Perched
NWI_88	1265.56	1258.64	1261.62	1217.66	1217.32	1217.47	44.15	Perched
NWI_89	1347.72	1339.07	1344.91	1205.97	1205.09	1205.50	139.41	Perched
NWI_90	1193.30	1189.17	1189.95	1171.77	1170.99	1171.41	18.54	Perched
NWI_91	1309.00	1307.71	1308.41	1196.03	1195.60	1195.83	112.59	Perched
NWI_92	1299.07	1294.89	1297.34	1191.34	1190.37	1190.83	106.51	Perched
NWI_93	1288.72	1286.72	1287.68	1232.47	1232.19	1232.36	55.32	Perched
NWI_94	1351.66	1343.55	1345.74	1248.74	1248.59	1248.66	97.08	Perched
NWI_95	1363.48	1356.01	1359.30	1209.25	1208.99	1209.13	150.17	Perched
NWI_96	1348.85	1346.18	1347.26	1207.27	1206.39	1206.86	140.39	Perched
NWI_97	1341.77	1339.75	1340.73	1203.69	1203.46	1203.59	137.14	Perched
NWI_98	1394.76	1381.26	1385.89	1248.96	1248.78	1248.87	137.02	Perched
NWI_99	1223.06	1217.81	1219.16	1183.31	1182.28	1182.77	36.39	Perched
NWI_100	1335.53	1322.48	1326.21	1212.03	1211.34	1211.65	114.56	Perched
NWI_101	1335.33	1332.87	1334.26	1209.43	1209.13	1209.28	124.97	Perched
NWI_102	1299.17	1297.94	1298.49	1215.37	1215.16	1215.29	83.20	Perched
NWI_103	1327.07	1321.49	1324.25	1202.50	1202.08	1202.28	121.97	Perched
NWI_104	1318.68	1314.07	1316.59	1202.70	1202.01	1202.39	114.20	Perched
NWI_105	1288.60	1287.68	1288.23	1232.69	1232.52	1232.61	55.62	Perched
NWI_106	1308.98	1307.37	1308.28	1194.82	1194.55	1194.68	113.60	Perched
NWI_107	1278.69	1274.72	1276.65	1193.64	1193.16	1193.41	83.24	Perched
NWI_108	1239.34	1225.40	1232.90	1186.56	1184.72	1185.56	47.34	Perched
NWI_109	1272.23	1262.81	1265.09	1246.70	1246.39	1246.55	18.54	Perched
NWI_110	1257.56	1252.12	1254.95	1223.11	1222.68	1222.90	32.06	Perched
NWI_111	1335.62	1330.94	1332.58	1205.26	1204.98	1205.12	127.46	Perched
NWI_112	1310.52	1304.26	1306.85	1226.28	1225.55	1225.92	80.93	Perched
NWI_113	1185.87	1178.92	1179.30	1168.31	1165.48	1167.09	12.20	Perched
NWI_114	1200.26	1200.19	1200.25	1175.44	1174.79	1175.12	25.12	Perched
NWI_115	1276.90	1264.12	1267.52	1166.65	1166.20	1166.45	101.08	Perched
NWI_116	1432.07	1416.02	1422.70	1208.02	1207.55	1207.80	214.90	Perched
NWI_117	1230.52	1220.73	1226.77	1163.21	1162.35	1162.78	64.00	Perched
NWI_118	1328.77	1323.06	1325.44	1196.38	1195.35	1195.81	129.63	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_119	1299.62	1288.60	1294.48	1242.35	1242.04	1242.20	52.28	Perched
NWI_120	1358.35	1356.28	1357.27	1207.28	1206.98	1207.13	150.14	Perched
NWI_121	1319.44	1311.83	1313.84	1203.36	1202.46	1202.92	110.93	Perched
NWI_122	1350.56	1334.46	1339.22	1209.28	1207.15	1208.29	130.93	Perched
NWI_123	1220.82	1217.09	1218.38	1165.66	1164.74	1165.20	53.18	Perched
NWI_124	1237.96	1227.19	1232.18	1155.57	1154.58	1155.07	77.11	Perched
NWI_125	1278.59	1274.80	1276.93	1214.15	1213.71	1213.91	63.02	Perched
NWI_126	1354.53	1346.37	1349.36	1203.60	1203.01	1203.32	146.04	Perched
NWI_127	1290.58	1284.96	1287.63	1194.86	1194.41	1194.63	93.00	Perched
NWI_128	1288.24	1286.38	1287.04	1186.45	1186.12	1186.25	100.79	Perched
NWI_129	1335.42	1326.81	1328.33	1193.52	1193.21	1193.37	134.96	Perched
NWI_130	1289.04	1282.35	1285.26	1230.18	1229.93	1230.05	55.20	Perched
NWI_131	1364.48	1356.99	1360.91	1210.39	1210.08	1210.24	150.66	Perched
NWI_132	1299.49	1298.67	1298.89	1233.90	1233.55	1233.71	65.18	Perched
NWI_133	1306.09	1287.24	1297.21	1212.84	1211.88	1212.30	84.91	Perched
NWI_134	1259.07	1256.88	1257.85	1192.73	1191.81	1192.26	65.59	Perched
NWI_135	1278.60	1274.26	1276.23	1239.10	1238.75	1238.94	37.29	Perched
NWI_136	1288.94	1285.92	1287.41	1229.90	1229.65	1229.77	57.63	Perched
NWI_137	1245.70	1235.10	1238.71	1177.06	1176.56	1176.84	61.87	Perched
NWI_138	1300.64	1296.43	1298.39	1198.33	1197.70	1198.01	100.38	Perched
NWI_139	1263.85	1254.85	1257.18	1216.62	1213.96	1215.45	41.73	Perched
NWI_140	1328.05	1325.01	1326.32	1236.64	1236.32	1236.48	89.84	Perched
NWI_141	1208.55	1203.72	1206.21	1168.81	1167.21	1167.99	38.22	Perched
NWI_142	1308.08	1305.32	1306.44	1215.47	1214.89	1215.20	91.24	Perched
NWI_143	1343.38	1334.00	1337.08	1202.64	1201.02	1201.79	135.29	Perched
NWI_144	1260.34	1254.59	1257.54	1219.41	1217.84	1218.56	38.98	Perched
NWI_145	1308.56	1297.17	1299.95	1222.15	1221.72	1221.91	78.03	Perched
NWI_146	1306.75	1304.76	1305.77	1191.59	1191.00	1191.28	114.49	Perched
NWI_147	1306.56	1301.16	1304.06	1227.29	1226.95	1227.13	76.93	Perched
NWI_148	1253.53	1245.50	1247.98	1189.84	1189.33	1189.58	58.40	Perched
NWI_149	1279.65	1276.52	1277.51	1239.32	1238.95	1239.12	38.39	Perched
NWI_150	1316.37	1312.60	1314.38	1235.15	1234.84	1234.99	79.38	Perched
NWI_151	1358.48	1356.48	1357.14	1205.62	1204.74	1205.17	151.97	Perched
NWI_152	1259.57	1256.13	1257.48	1222.26	1221.83	1222.06	35.42	Perched
NWI_153	1303.02	1271.02	1285.81	1244.09	1243.61	1243.85	41.96	Perched
NWI_154	1397.79	1389.09	1393.49	1212.59	1210.66	1211.55	181.94	Perched
NWI_155	1268.30	1260.02	1263.97	1213.99	1213.09	1213.42	50.55	Perched
NWI_156	1279.24	1274.66	1277.11	1219.07	1217.96	1218.55	58.56	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_157	1287.97	1281.51	1284.89	1195.18	1194.35	1194.78	90.11	Perched
NWI_158	1350.58	1350.00	1350.03	1202.83	1201.55	1202.13	147.90	Perched
NWI_159	1308.09	1302.39	1305.19	1224.48	1224.08	1224.30	80.89	Perched
NWI_160	1249.26	1236.21	1238.41	1185.83	1185.15	1185.50	52.91	Perched
NWI_161	1269.91	1257.57	1259.43	1221.63	1220.21	1220.93	38.50	Perched
NWI_162	1325.35	1323.76	1324.51	1210.38	1210.05	1210.22	114.29	Perched
NWI_163	1387.89	1386.22	1387.15	1212.35	1211.88	1212.09	175.06	Perched
NWI_164	1393.82	1372.42	1378.20	1243.61	1243.34	1243.49	134.71	Perched
NWI_165	1347.36	1342.81	1345.51	1209.15	1208.64	1208.92	136.59	Perched
NWI_166	1330.48	1321.16	1326.61	1242.98	1242.66	1242.81	83.81	Perched
NWI_167	1298.41	1295.64	1296.64	1199.59	1198.77	1199.18	97.47	Perched
NWI_168	1266.64	1237.70	1246.97	1193.49	1191.63	1192.60	54.37	Perched
NWI_169	1308.56	1307.14	1307.78	1233.88	1233.56	1233.72	74.06	Perched
NWI_170	1200.40	1189.71	1194.98	1152.13	1151.20	1151.73	43.25	Perched
NWI_171	1279.98	1276.05	1278.03	1196.31	1195.74	1196.07	81.96	Perched
NWI_172	1306.03	1292.44	1298.20	1219.81	1219.33	1219.57	78.62	Perched
NWI_173	1219.96	1216.73	1217.40	1156.47	1155.31	1155.82	61.57	Perched
NWI_174	1349.09	1345.87	1347.19	1204.93	1204.50	1204.71	142.48	Perched
NWI_175	1318.97	1307.51	1314.31	1226.49	1226.10	1226.27	88.04	Perched
NWI_176	1269.67	1264.85	1266.22	1213.12	1212.83	1212.98	53.25	Perched
NWI_177	1244.94	1239.34	1239.84	1154.99	1153.94	1154.49	85.35	Perched
NWI_178	1205.21	1195.24	1198.93	1153.44	1152.37	1152.90	46.03	Perched
NWI_179	1237.40	1226.07	1228.29	1169.17	1168.40	1168.78	59.51	Perched
NWI_180	1362.88	1359.44	1361.87	1204.13	1203.84	1203.98	157.89	Perched
NWI_181	1269.93	1267.32	1268.47	1190.51	1190.03	1190.27	78.20	Perched
NWI_182	1359.49	1355.52	1356.31	1210.65	1210.33	1210.48	145.82	Perched
NWI_183	1230.58	1219.84	1226.83	1171.68	1169.84	1170.79	56.04	Perched
NWI_184	1216.73	1214.27	1215.66	1155.42	1154.47	1154.98	60.68	Perched
NWI_185	1178.52	1175.01	1176.57	1165.01	1163.99	1164.49	12.08	Perched
NWI_186	1267.12	1266.11	1266.51	1163.98	1163.66	1163.84	102.67	Perched
NWI_187	1318.64	1314.41	1316.32	1225.55	1225.24	1225.40	90.92	Perched
NWI_188	1271.43	1261.04	1265.47	1214.58	1213.96	1214.23	51.23	Perched
NWI_189	1326.94	1322.68	1324.66	1209.81	1209.32	1209.54	115.12	Perched
NWI_190	1296.27	1284.03	1287.74	1243.81	1243.52	1243.65	44.09	Perched
NWI_191	1236.80	1227.07	1230.24	1188.08	1187.20	1187.68	42.56	Perched
NWI_192	1295.08	1289.22	1292.14	1226.27	1225.86	1226.07	66.07	Perched
NWI_193	1298.63	1296.42	1297.34	1226.45	1226.15	1226.29	71.05	Perched
NWI_194	1299.41	1287.70	1291.71	1200.43	1198.57	1199.48	92.22	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_195	1260.16	1257.69	1258.57	1223.35	1222.25	1222.81	35.76	Perched
NWI_196	1254.64	1246.12	1248.20	1189.04	1188.50	1188.78	59.41	Perched
NWI_197	1160.77	1160.60	1160.65	1136.12	1135.01	1135.60	25.05	Perched
NWI_198	1169.56	1164.33	1167.65	1140.23	1138.13	1139.22	28.43	Perched
NWI_199	1295.24	1293.42	1294.30	1229.24	1228.94	1229.08	65.22	Perched
NWI_200	1296.50	1288.02	1292.26	1197.32	1196.91	1197.11	95.15	Perched
NWI_201	1241.84	1235.96	1237.12	1162.07	1160.55	1161.37	75.75	Perched
NWI_202	1305.58	1296.03	1298.49	1198.65	1196.64	1197.58	100.92	Perched
NWI_203	1348.13	1347.21	1347.63	1207.68	1206.64	1207.23	140.39	Perched
NWI_204	1287.34	1283.82	1285.37	1238.53	1238.05	1238.28	47.09	Perched
NWI_205	1208.46	1205.46	1207.12	1174.72	1174.09	1174.43	32.69	Perched
NWI_206	1268.86	1263.86	1266.40	1215.07	1214.75	1214.91	51.49	Perched
NWI_207	1197.87	1183.22	1188.99	1152.25	1150.41	1151.31	37.68	Perched
NWI_208	1413.57	1405.29	1405.90	1211.95	1211.28	1211.59	194.30	Perched
NWI_209	1358.19	1352.13	1354.71	1206.29	1205.69	1205.98	148.72	Perched
NWI_210	1233.21	1228.40	1229.35	1163.80	1163.19	1163.51	65.85	Perched
NWI_211	1201.26	1191.42	1197.15	1176.85	1174.89	1175.88	21.26	Perched
NWI_212	1287.26	1283.73	1285.22	1196.06	1195.58	1195.83	89.39	Perched
NWI_213	1288.55	1284.52	1286.22	1183.79	1183.01	1183.41	102.82	Perched
NWI_214	1171.03	1158.58	1163.59	1133.18	1131.99	1132.61	30.98	Perched
NWI_215	1339.76	1338.05	1338.80	1208.60	1208.18	1208.40	130.40	Perched
NWI_216	1220.07	1218.79	1219.08	1158.38	1157.55	1157.98	61.10	Perched
NWI_217	1198.77	1196.26	1197.61	1157.63	1157.13	1157.36	40.25	Perched
NWI_218	1298.56	1291.95	1293.60	1198.70	1197.82	1198.25	95.35	Perched
NWI_219	1293.73	1272.75	1281.19	1217.16	1216.40	1216.83	64.36	Perched
NWI_220	1309.83	1301.57	1305.43	1220.83	1219.74	1220.19	85.24	Perched
NWI_221	1271.24	1267.15	1268.83	1191.76	1191.08	1191.40	77.44	Perched
NWI_222	1309.62	1294.77	1299.63	1198.32	1197.53	1197.94	101.69	Perched
NWI_223	1219.69	1216.00	1217.82	1171.88	1171.21	1171.59	46.23	Perched
NWI_224	1311.36	1306.96	1308.06	1209.96	1209.55	1209.74	98.33	Perched
NWI_225	1266.81	1262.39	1265.21	1190.88	1190.37	1190.62	74.59	Perched
NWI_226	1348.04	1344.07	1345.07	1207.75	1207.20	1207.46	137.61	Perched
NWI_227	1190.81	1189.19	1189.59	1175.00	1174.22	1174.63	14.96	Perched
NWI_228	1380.52	1368.13	1374.96	1202.86	1202.44	1202.67	172.29	Perched
NWI_229	1346.79	1337.58	1341.82	1213.91	1213.52	1213.72	128.10	Perched
NWI_230	1337.23	1333.06	1335.18	1203.67	1203.30	1203.47	131.71	Perched
NWI_231	1358.59	1348.58	1354.85	1206.06	1205.71	1205.90	148.95	Perched
NWI_232	1378.04	1370.51	1374.00	1209.83	1209.15	1209.50	164.50	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_233	1332.24	1326.20	1329.58	1214.58	1214.18	1214.39	115.19	Perched
NWI_234	1337.29	1335.96	1336.77	1210.39	1209.85	1210.12	126.65	Perched
NWI_235	1293.66	1274.80	1278.23	1197.30	1195.29	1196.27	81.96	Perched
NWI_236	1299.85	1293.23	1295.34	1222.29	1221.96	1222.13	73.21	Perched
NWI_237	1221.13	1220.12	1220.55	1187.13	1185.84	1186.49	34.06	Perched
NWI_238	1312.67	1303.78	1306.99	1199.70	1197.46	1198.61	108.38	Perched
NWI_239	1263.36	1257.32	1260.34	1151.76	1150.99	1151.41	108.92	Perched
NWI_240	1327.86	1319.08	1324.96	1214.27	1213.96	1214.13	110.83	Perched
NWI_241	1322.94	1314.43	1315.88	1195.08	1194.08	1194.60	121.27	Perched
NWI_242	1307.29	1302.56	1304.12	1219.46	1218.41	1218.94	85.18	Perched
NWI_243	1344.32	1338.00	1341.47	1205.08	1204.82	1204.95	136.52	Perched
NWI_244	1288.09	1284.58	1286.75	1235.70	1234.83	1235.24	51.51	Perched
NWI_245	1270.28	1259.25	1264.15	1215.10	1213.70	1214.32	49.84	Perched
NWI_246	1260.09	1252.32	1253.80	1186.75	1186.27	1186.52	67.29	Perched
NWI_247	1335.22	1316.13	1325.21	1218.02	1217.44	1217.71	107.50	Perched
NWI_248	1226.48	1220.86	1221.99	1180.21	1179.85	1180.05	41.94	Perched
NWI_249	1287.94	1283.37	1285.89	1188.56	1187.92	1188.25	97.64	Perched
NWI_250	1385.22	1374.79	1376.70	1225.44	1224.79	1225.10	151.60	Perched
NWI_251	1377.56	1372.11	1374.83	1208.58	1208.26	1208.40	166.43	Perched
NWI_252	1307.39	1303.90	1305.59	1242.73	1242.08	1242.37	63.22	Perched
NWI_253	1308.50	1306.61	1306.91	1191.28	1189.68	1190.56	116.35	Perched
NWI_254	1239.00	1238.78	1238.86	1159.86	1158.75	1159.28	79.59	Perched
NWI_255	1338.63	1331.22	1337.59	1205.08	1203.95	1204.50	133.09	Perched
NWI_256	1289.45	1281.77	1285.83	1193.99	1192.95	1193.47	92.36	Perched
NWI_257	1367.62	1365.42	1366.01	1203.51	1202.36	1202.95	163.06	Perched
NWI_258	1297.88	1295.10	1295.60	1195.89	1194.83	1195.33	100.27	Perched
NWI_259	1276.96	1262.12	1264.75	1194.06	1191.83	1192.92	71.83	Perched
NWI_260	1196.20	1186.45	1187.61	1173.18	1169.81	1171.65	15.96	Perched
NWI_261	1230.39	1228.51	1228.99	1164.35	1163.70	1164.02	64.98	Perched
NWI_262	1273.16	1267.10	1268.75	1224.79	1224.48	1224.62	44.13	Perched
NWI_263	1368.31	1360.36	1362.04	1241.12	1240.88	1241.01	121.03	Perched
NWI_264	1314.82	1305.68	1307.49	1244.47	1244.24	1244.35	63.14	Perched
NWI_265	1241.77	1233.85	1237.97	1162.73	1162.14	1162.42	75.55	Perched
NWI_266	1308.72	1303.79	1306.65	1187.08	1186.07	1186.56	120.09	Perched
NWI_267	1278.37	1273.88	1276.09	1195.19	1194.58	1194.87	81.21	Perched
NWI_268	1267.96	1255.81	1259.38	1194.13	1192.88	1193.54	65.84	Perched
NWI_269	1347.84	1340.56	1345.32	1205.41	1205.04	1205.23	140.09	Perched
NWI_270	1228.28	1219.23	1225.05	1186.89	1185.72	1186.35	38.70	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_271	1171.02	1166.33	1167.71	1133.91	1132.73	1133.34	34.37	Perched
NWI_272	1152.79	1149.83	1150.65	1122.32	1120.28	1121.35	29.29	Perched
NWI_273	1369.05	1362.19	1365.55	1209.53	1209.08	1209.32	156.24	Perched
NWI_274	1292.11	1287.19	1288.27	1182.43	1181.89	1182.17	106.10	Perched
NWI_275	1396.29	1383.21	1386.92	1232.79	1232.36	1232.57	154.35	Perched
NWI_276	1185.39	1179.37	1180.30	1165.02	1164.15	1164.60	15.70	Perched
NWI_277	1350.52	1347.52	1347.64	1206.58	1206.06	1206.31	141.33	Perched
NWI_278	1328.80	1313.35	1316.93	1224.95	1224.09	1224.54	92.39	Perched
NWI_279	1338.98	1332.51	1336.06	1245.74	1245.52	1245.63	90.43	Perched
NWI_280	1252.54	1246.86	1248.38	1157.65	1157.03	1157.34	91.04	Perched
NWI_281	1209.05	1204.90	1207.23	1168.54	1166.67	1167.67	39.56	Perched
NWI_282	1306.59	1300.30	1303.56	1219.18	1218.38	1218.81	84.75	Perched
NWI_283	1328.86	1323.14	1326.68	1227.54	1227.03	1227.29	99.39	Perched
NWI_284	1160.93	1160.51	1160.56	1153.59	1152.15	1152.92	7.64	Perched
NWI_285	1249.29	1239.77	1241.50	1191.18	1190.45	1190.80	50.70	Perched
NWI_286	1357.35	1354.58	1355.61	1206.51	1206.14	1206.32	149.29	Perched
NWI_287	1297.38	1293.17	1295.59	1198.39	1197.44	1197.88	97.71	Perched
NWI_288	1165.53	1160.87	1161.83	1155.24	1154.29	1154.74	7.09	Perched
NWI_289	1278.85	1275.90	1277.14	1230.95	1229.73	1230.34	46.80	Perched
NWI_290	1178.86	1175.90	1177.56	1158.38	1157.39	1157.89	19.67	Perched
NWI_291	1337.03	1326.43	1327.05	1201.40	1199.92	1200.69	126.36	Perched
NWI_292	1290.64	1286.25	1288.43	1236.17	1235.93	1236.05	52.38	Perched
NWI_293	1308.68	1306.39	1307.39	1225.11	1224.51	1224.85	82.54	Perched
NWI_294	1256.71	1249.79	1252.90	1216.08	1215.25	1215.65	37.25	Perched
NWI_295	1332.05	1326.73	1328.18	1223.47	1223.01	1223.24	104.94	Perched
NWI_296	1180.47	1169.44	1172.51	1164.03	1163.16	1163.63	8.87	Perched
NWI_297	1300.30	1286.93	1291.39	1240.69	1240.19	1240.44	50.95	Perched
NWI_298	1321.16	1313.23	1314.89	1210.10	1209.26	1209.66	105.23	Perched
NWI_299	1257.31	1244.78	1248.61	1176.44	1175.83	1176.12	72.49	Perched
NWI_300	1346.43	1345.55	1345.90	1208.95	1208.67	1208.81	137.08	Perched
NWI_301	1230.46	1218.19	1218.91	1166.12	1164.96	1165.55	53.36	Perched
NWI_302	1346.31	1341.51	1344.64	1208.37	1207.90	1208.14	136.51	Perched
NWI_303	1234.75	1225.41	1228.24	1190.02	1189.39	1189.69	38.55	Perched
NWI_304	1318.88	1307.03	1308.21	1186.29	1184.72	1185.53	122.68	Perched
NWI_305	1269.17	1257.25	1261.40	1183.44	1182.54	1182.99	78.41	Perched
NWI_306	1329.45	1320.83	1325.32	1221.84	1221.53	1221.69	103.63	Perched
NWI_307	1211.33	1209.00	1209.95	1171.18	1170.61	1170.90	39.05	Perched
NWI_308	1338.34	1337.99	1338.26	1210.13	1209.38	1209.76	128.50	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_309	1323.81	1316.60	1319.22	1232.76	1232.41	1232.59	86.63	Perched
NWI_310	1327.34	1324.50	1325.56	1217.61	1217.32	1217.46	108.10	Perched
NWI_311	1311.40	1303.75	1306.21	1201.15	1200.06	1200.58	105.63	Perched
NWI_312	1309.72	1307.27	1308.07	1225.75	1225.43	1225.58	82.49	Perched
NWI_313	1229.04	1219.56	1220.47	1178.68	1176.46	1177.59	42.88	Perched
NWI_314	1289.66	1284.98	1288.03	1235.67	1234.63	1235.08	52.95	Perched
NWI_315	1406.18	1392.37	1399.26	1207.40	1206.98	1207.19	192.07	Perched
NWI_316	1316.95	1314.33	1315.43	1220.47	1220.15	1220.34	95.09	Perched
NWI_317	1392.08	1381.01	1383.04	1244.25	1243.64	1243.96	139.08	Perched
NWI_318	1329.52	1325.38	1327.28	1189.85	1189.35	1189.61	137.67	Perched
NWI_319	1308.31	1307.25	1307.53	1191.02	1190.46	1190.72	116.81	Perched
NWI_320	1278.02	1276.38	1276.93	1195.82	1195.30	1195.57	81.36	Perched
NWI_321	1224.74	1216.11	1217.65	1175.01	1173.96	1174.53	43.13	Perched
NWI_322	1309.77	1305.51	1306.83	1219.68	1219.40	1219.55	87.28	Perched
NWI_323	1358.16	1352.53	1355.73	1206.83	1206.47	1206.66	149.07	Perched
NWI_324	1260.48	1255.11	1257.78	1221.28	1221.00	1221.15	36.62	Perched
NWI_325	1360.03	1342.08	1345.84	1203.21	1202.20	1202.66	143.19	Perched
NWI_326	1279.52	1273.40	1276.16	1220.55	1220.21	1220.39	55.77	Perched
NWI_327	1300.62	1281.91	1290.00	1244.98	1244.51	1244.78	45.23	Perched
NWI_328	1233.32	1225.36	1227.60	1185.70	1184.07	1184.73	42.87	Perched
NWI_329	1346.16	1332.76	1335.69	1207.53	1205.64	1206.59	129.10	Perched
NWI_330	1297.72	1296.27	1296.92	1228.60	1228.44	1228.52	68.39	Perched
NWI_331	1363.53	1349.92	1354.02	1207.93	1207.58	1207.73	146.29	Perched
NWI_332	1239.86	1233.79	1237.19	1162.61	1162.16	1162.37	74.82	Perched
NWI_333	1299.14	1290.97	1294.65	1226.27	1225.90	1226.08	68.56	Perched
NWI_334	1341.87	1333.29	1335.56	1206.27	1205.18	1205.66	129.90	Perched
NWI_335	1209.85	1202.74	1205.74	1181.95	1180.87	1181.36	24.38	Perched
NWI_336	1338.56	1335.00	1336.90	1209.66	1208.88	1209.25	127.65	Perched
NWI_337	1274.60	1267.49	1268.90	1224.27	1223.80	1224.04	44.86	Perched
NWI_338	1300.08	1296.56	1297.82	1196.63	1196.21	1196.42	101.39	Perched
NWI_339	1288.92	1285.25	1286.63	1227.06	1226.45	1226.77	59.86	Perched
NWI_340	1289.76	1284.89	1287.20	1235.04	1234.70	1234.88	52.32	Perched
NWI_341	1320.27	1316.54	1319.25	1213.03	1212.68	1212.85	106.40	Perched
NWI_342	1322.43	1312.57	1317.13	1200.12	1199.56	1199.82	117.31	Perched
NWI_343	1279.87	1276.46	1277.59	1187.41	1186.88	1187.15	90.44	Perched
NWI_344	1202.81	1196.69	1198.32	1179.80	1177.58	1178.78	19.54	Perched
NWI_345	1317.18	1307.64	1310.63	1215.84	1215.19	1215.55	95.08	Perched
NWI_346	1374.27	1364.02	1367.39	1212.48	1211.86	1212.12	155.26	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_347	1325.12	1316.39	1318.86	1220.53	1220.30	1220.41	98.44	Perched
NWI_348	1377.06	1366.33	1369.95	1210.36	1209.73	1210.03	159.92	Perched
NWI_349	1269.36	1264.98	1266.49	1191.58	1191.11	1191.36	75.12	Perched
NWI_350	1338.73	1336.81	1337.58	1221.46	1221.10	1221.27	116.31	Perched
NWI_351	1319.55	1316.40	1317.43	1208.52	1208.06	1208.30	109.13	Perched
NWI_352	1340.99	1310.63	1318.91	1217.30	1215.73	1216.55	102.36	Perched
NWI_353	1281.35	1267.06	1272.23	1244.97	1244.88	1244.93	27.30	Perched
NWI_354	1290.74	1268.16	1273.62	1214.37	1213.51	1213.93	59.69	Perched
NWI_355	1285.32	1274.83	1278.81	1193.60	1192.87	1193.24	85.58	Perched
NWI_356	1338.36	1334.26	1336.25	1202.21	1201.74	1201.98	134.27	Perched
NWI_357	1356.89	1353.37	1355.24	1204.21	1203.81	1204.01	151.23	Perched
NWI_358	1289.61	1277.35	1281.11	1213.02	1212.16	1212.66	68.46	Perched
NWI_359	1190.08	1186.88	1187.86	1164.50	1163.77	1164.11	23.75	Perched
NWI_360	1315.01	1302.61	1305.30	1200.94	1199.94	1200.44	104.86	Perched
NWI_361	1309.37	1304.18	1306.82	1228.00	1227.74	1227.87	78.94	Perched
NWI_362	1258.05	1254.51	1256.21	1223.71	1223.35	1223.54	32.67	Perched
NWI_363	1291.80	1284.62	1286.61	1209.05	1208.40	1208.70	77.91	Perched
NWI_364	1347.88	1334.78	1339.10	1205.47	1205.05	1205.27	133.82	Perched
NWI_365	1298.85	1284.56	1289.46	1210.05	1209.13	1209.64	79.82	Perched
NWI_366	1299.20	1290.90	1295.83	1236.34	1234.72	1235.57	60.27	Perched
NWI_367	1322.39	1308.89	1317.28	1213.51	1213.04	1213.27	104.02	Perched
NWI_368	1306.05	1294.67	1297.02	1228.86	1228.40	1228.62	68.40	Perched
NWI_369	1230.36	1228.52	1228.85	1163.55	1163.01	1163.28	65.57	Perched
NWI_370	1259.12	1252.12	1255.29	1215.77	1214.91	1215.28	40.01	Perched
NWI_371	1270.85	1267.14	1268.68	1221.63	1221.23	1221.42	47.26	Perched
NWI_372	1242.69	1238.79	1239.09	1188.75	1188.36	1188.55	50.54	Perched
NWI_373	1357.62	1349.41	1354.63	1212.53	1210.90	1211.65	142.98	Perched
NWI_374	1297.90	1292.80	1295.68	1228.05	1227.51	1227.78	67.89	Perched
NWI_375	1279.18	1274.83	1276.57	1195.84	1194.72	1195.28	81.29	Perched
NWI_376	1225.68	1219.43	1220.84	1137.67	1136.87	1137.26	83.58	Perched
NWI_377	1339.27	1334.22	1336.38	1204.33	1203.51	1203.87	132.51	Perched
NWI_378	1308.76	1302.25	1305.50	1237.81	1237.27	1237.59	67.91	Perched
NWI_379	1312.15	1293.64	1298.93	1225.25	1224.59	1224.87	74.06	Perched
NWI_380	1298.08	1293.16	1295.79	1210.23	1209.71	1210.01	85.78	Perched
NWI_381	1289.35	1284.71	1286.51	1218.35	1217.94	1218.16	68.35	Perched
NWI_382	1258.89	1256.93	1257.75	1223.89	1223.18	1223.49	34.26	Perched
NWI_383	1337.71	1335.28	1336.05	1204.42	1204.00	1204.21	131.83	Perched
NWI_384	1351.30	1344.01	1345.94	1204.05	1203.62	1203.83	142.11	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_385	1380.32	1375.67	1378.03	1204.22	1203.86	1204.04	174.00	Perched
NWI_386	1313.23	1302.93	1304.85	1202.17	1201.54	1201.85	103.00	Perched
NWI_387	1321.78	1302.39	1308.66	1223.38	1222.86	1223.11	85.55	Perched
NWI_388	1334.16	1327.22	1328.58	1190.97	1190.59	1190.77	137.81	Perched
NWI_389	1307.00	1302.89	1305.38	1243.64	1243.29	1243.44	61.93	Perched
NWI_390	1327.12	1320.89	1322.70	1207.81	1207.27	1207.55	115.15	Perched
NWI_391	1370.03	1364.99	1366.32	1203.35	1202.98	1203.16	163.16	Perched
NWI_392	1328.65	1322.88	1326.01	1196.08	1195.19	1195.66	130.34	Perched
NWI_393	1172.55	1162.19	1168.25	1131.13	1129.48	1130.29	37.96	Perched
NWI_394	1267.85	1264.67	1265.80	1192.32	1190.83	1191.56	74.24	Perched
NWI_395	1307.89	1298.62	1302.84	1226.55	1226.26	1226.39	76.44	Perched
NWI_396	1298.24	1293.42	1295.85	1197.00	1196.54	1196.80	99.05	Perched
NWI_397	1354.92	1354.24	1354.32	1208.14	1207.59	1207.85	146.47	Perched
NWI_398	1191.36	1190.27	1190.45	1173.91	1173.27	1173.59	16.86	Perched
NWI_399	1358.86	1355.22	1356.79	1206.51	1206.06	1206.28	150.51	Perched
NWI_400	1329.16	1325.23	1326.94	1202.99	1202.73	1202.86	124.08	Perched
NWI_401	1317.82	1311.73	1315.04	1234.91	1233.79	1234.41	80.63	Perched
NWI_402	1269.09	1267.04	1267.76	1190.81	1190.43	1190.62	77.14	Perched
NWI_403	1341.84	1334.98	1336.88	1205.69	1204.50	1205.08	131.80	Perched
NWI_404	1278.03	1273.17	1275.61	1213.15	1212.21	1212.67	62.94	Perched
NWI_405	1349.43	1343.35	1346.62	1211.38	1210.96	1211.18	135.45	Perched
NWI_406	1344.55	1340.01	1342.36	1207.46	1206.79	1207.15	135.21	Perched
NWI_407	1357.63	1355.37	1356.45	1206.01	1205.71	1205.86	150.58	Perched
NWI_408	1338.96	1329.99	1335.67	1208.56	1208.15	1208.35	127.32	Perched
NWI_409	1269.25	1264.86	1267.16	1214.63	1213.56	1214.08	53.08	Perched
NWI_410	1338.17	1336.92	1337.62	1210.50	1210.02	1210.24	127.38	Perched
NWI_411	1246.41	1233.78	1237.10	1192.28	1190.45	1191.33	45.77	Perched
NWI_412	1298.88	1295.49	1296.64	1199.71	1199.33	1199.50	97.15	Perched
NWI_413	1329.83	1326.29	1327.63	1212.09	1211.64	1211.87	115.76	Perched
NWI_414	1281.83	1268.06	1269.59	1189.70	1188.97	1189.33	80.27	Perched
NWI_415	1356.89	1350.07	1353.55	1204.24	1203.10	1203.74	149.80	Perched
NWI_416	1273.48	1267.83	1268.98	1194.09	1193.46	1193.75	75.24	Perched
NWI_417	1356.90	1348.42	1352.28	1206.51	1206.24	1206.38	145.90	Perched
NWI_418	1190.57	1188.97	1189.53	1174.24	1173.56	1173.88	15.65	Perched
NWI_419	1376.91	1372.75	1374.73	1202.48	1202.00	1202.23	172.50	Perched
NWI_420	1404.75	1399.24	1402.48	1241.47	1240.99	1241.24	161.24	Perched
NWI_421	1332.60	1327.53	1329.00	1191.91	1191.59	1191.75	137.25	Perched
NWI_422	1348.11	1347.76	1347.88	1206.72	1206.35	1206.53	141.36	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_423	1305.38	1296.31	1298.60	1231.31	1230.50	1230.92	67.69	Perched
NWI_424	1161.39	1160.53	1160.74	1136.57	1135.26	1135.95	24.79	Perched
NWI_425	1366.08	1360.80	1363.95	1215.26	1214.75	1214.99	148.96	Perched
NWI_426	1162.12	1156.51	1158.05	1135.24	1133.67	1134.45	23.60	Perched
NWI_427	1338.42	1330.39	1335.38	1203.44	1203.01	1203.24	132.15	Perched
NWI_428	1287.78	1284.18	1285.30	1209.46	1208.63	1209.07	76.23	Perched
NWI_429	1358.64	1351.72	1356.15	1205.88	1205.00	1205.45	150.70	Perched
NWI_430	1278.86	1273.94	1276.77	1229.21	1228.54	1228.86	47.90	Perched
NWI_431	1293.02	1271.13	1281.45	1212.09	1211.58	1211.84	69.61	Perched
NWI_432	1309.14	1306.65	1307.38	1227.04	1226.74	1226.88	80.50	Perched
NWI_433	1328.65	1325.01	1326.43	1199.18	1198.67	1198.92	127.51	Perched
NWI_434	1338.34	1330.73	1335.10	1203.98	1203.33	1203.63	131.47	Perched
NWI_435	1318.77	1304.88	1308.55	1222.86	1222.40	1222.64	85.90	Perched
NWI_436	1193.53	1188.20	1190.35	1151.31	1150.46	1150.91	39.44	Perched
NWI_437	1280.64	1267.64	1272.36	1245.38	1245.08	1245.23	27.13	Perched
NWI_438	1328.58	1321.64	1325.48	1207.85	1207.07	1207.47	118.01	Perched
NWI_439	1307.14	1302.95	1305.44	1226.12	1225.73	1225.93	79.50	Perched
NWI_440	1210.57	1209.11	1210.05	1170.52	1169.65	1170.08	39.97	Perched
NWI_441	1211.93	1208.38	1209.48	1167.63	1166.85	1167.24	42.24	Perched
NWI_442	1307.73	1305.07	1305.71	1194.41	1193.86	1194.14	111.57	Perched
NWI_443	1220.11	1218.77	1219.57	1176.54	1175.51	1176.03	43.54	Perched
NWI_444	1211.50	1206.79	1209.22	1172.43	1171.86	1172.13	37.09	Perched
NWI_445	1348.33	1346.50	1347.23	1207.21	1206.81	1207.00	140.22	Perched
NWI_446	1219.99	1212.48	1216.46	1181.92	1180.55	1181.22	35.24	Perched
NWI_447	1210.47	1208.53	1209.30	1172.90	1172.45	1172.69	36.61	Perched
NWI_448	1267.44	1266.15	1266.49	1187.09	1186.61	1186.85	79.65	Perched
NWI_449	1269.22	1261.09	1264.22	1189.98	1188.74	1189.32	74.91	Perched
NWI_450	1255.67	1243.72	1246.32	1181.96	1180.95	1181.42	64.90	Perched
NWI_451	1298.53	1293.59	1295.96	1185.28	1184.13	1184.79	111.17	Perched
NWI_452	1329.99	1297.38	1311.63	1213.27	1211.21	1212.00	99.63	Perched
NWI_453	1329.23	1325.99	1327.17	1189.96	1189.51	1189.75	137.42	Perched
NWI_454	1377.98	1374.45	1375.16	1204.67	1203.83	1204.26	170.90	Perched
NWI_455	1280.18	1271.81	1273.94	1246.17	1245.87	1246.02	27.92	Perched
NWI_456	1180.35	1179.00	1179.32	1139.74	1137.03	1138.45	40.87	Perched
NWI_457	1368.92	1365.95	1367.33	1205.22	1204.87	1205.06	162.26	Perched
NWI_458	1313.00	1304.08	1307.57	1200.63	1200.21	1200.42	107.15	Perched
NWI_459	1221.25	1217.94	1219.28	1173.93	1171.75	1172.80	46.49	Perched
NWI_460	1326.64	1322.74	1324.33	1196.05	1195.65	1195.87	128.46	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_461	1287.15	1283.70	1285.11	1227.96	1227.67	1227.81	57.30	Perched
NWI_462	1230.21	1227.08	1228.45	1179.76	1179.06	1179.43	49.02	Perched
NWI_463	1199.68	1198.94	1199.11	1172.30	1171.46	1171.88	27.23	Perched
NWI_464	1258.26	1254.11	1256.39	1221.87	1221.48	1221.68	34.71	Perched
NWI_465	1159.51	1158.28	1158.71	1143.59	1142.53	1143.03	15.68	Perched
NWI_466	1284.71	1279.34	1281.84	1224.77	1224.46	1224.61	57.23	Perched
NWI_467	1261.42	1259.32	1260.17	1222.51	1222.08	1222.30	37.87	Perched
NWI_468	1250.25	1245.79	1247.29	1177.23	1175.66	1176.38	70.91	Perched
NWI_469	1200.56	1198.95	1199.56	1151.99	1150.86	1151.49	48.07	Perched
NWI_470	1339.03	1329.54	1335.08	1208.18	1207.56	1207.88	127.21	Perched
NWI_471	1325.29	1302.04	1305.54	1245.72	1245.34	1245.52	60.02	Perched
NWI_472	1268.94	1266.91	1267.87	1212.52	1211.88	1212.21	55.66	Perched
NWI_473	1231.22	1224.75	1227.40	1183.66	1182.41	1183.09	44.32	Perched
NWI_474	1269.87	1256.41	1258.61	1220.31	1219.47	1219.90	38.71	Perched
NWI_475	1305.53	1297.51	1300.01	1236.40	1236.18	1236.30	63.71	Perched
NWI_476	1176.58	1170.54	1170.77	1161.48	1159.82	1160.66	10.11	Perched
NWI_477	1272.54	1265.77	1267.83	1214.42	1213.78	1214.09	53.74	Perched
NWI_478	1387.90	1379.77	1385.28	1209.78	1209.21	1209.47	175.80	Perched
NWI_479	1318.92	1315.11	1316.67	1209.37	1208.94	1209.14	107.53	Perched
NWI_480	1318.63	1314.83	1316.88	1224.72	1224.41	1224.59	92.29	Perched
NWI_481	1209.88	1207.20	1208.63	1173.84	1172.59	1173.26	35.37	Perched
NWI_482	1358.30	1351.20	1354.45	1207.16	1206.72	1206.93	147.52	Perched
NWI_483	1230.09	1218.91	1222.67	1178.91	1177.84	1178.43	44.24	Perched
NWI_484	1209.96	1209.95	1209.96	1169.03	1168.33	1168.70	41.26	Perched
NWI_485	1249.50	1242.47	1247.15	1191.96	1191.53	1191.76	55.39	Perched
NWI_486	1262.30	1257.41	1258.28	1224.17	1223.61	1223.89	34.39	Perched
NWI_487	1358.39	1351.51	1355.47	1203.76	1202.73	1203.23	152.25	Perched
NWI_488	1353.15	1346.29	1348.73	1208.78	1208.11	1208.47	140.26	Perched
NWI_489	1374.02	1358.45	1363.95	1202.63	1202.06	1202.37	161.58	Perched
NWI_490	1276.88	1268.26	1272.13	1175.78	1175.18	1175.51	96.62	Perched
NWI_491	1307.45	1301.07	1304.31	1210.71	1210.09	1210.40	93.91	Perched
NWI_492	1357.80	1350.20	1353.69	1205.74	1205.27	1205.51	148.18	Perched
NWI_493	1236.52	1233.71	1234.56	1174.34	1173.64	1174.01	60.54	Perched
NWI_494	1287.00	1281.54	1284.94	1236.81	1236.43	1236.62	48.32	Perched
NWI_495	1407.10	1401.57	1404.84	1212.57	1211.83	1212.20	192.65	Perched
NWI_496	1297.45	1294.50	1296.01	1228.70	1228.41	1228.55	67.46	Perched
NWI_497	1207.97	1201.03	1205.01	1176.15	1175.59	1175.89	29.12	Perched
NWI_498	1269.59	1261.54	1266.34	1217.73	1217.35	1217.54	48.80	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_499	1222.02	1215.10	1218.15	1185.23	1184.83	1185.06	33.09	Perched
NWI_500	1309.31	1295.21	1299.70	1218.44	1217.55	1218.00	81.70	Perched
NWI_501	1338.43	1335.92	1336.93	1208.56	1208.24	1208.39	128.54	Perched
NWI_502	1312.09	1307.36	1308.34	1220.03	1219.58	1219.81	88.53	Perched
NWI_503	1317.67	1298.83	1305.65	1226.77	1224.91	1225.87	79.79	Perched
NWI_504	1299.86	1282.41	1288.16	1198.20	1197.23	1197.70	90.46	Perched
NWI_505	1170.69	1161.47	1166.25	1144.64	1142.98	1143.80	22.45	Perched
NWI_506	1323.26	1312.14	1316.20	1199.63	1198.86	1199.28	116.92	Perched
NWI_507	1260.55	1253.11	1256.82	1193.61	1192.39	1192.98	63.83	Perched
NWI_508	1328.34	1325.47	1326.36	1202.20	1201.60	1201.94	124.42	Perched
NWI_509	1135.81	1124.94	1130.08	1129.40	1121.98	1126.52	3.56	
NWI_510	1308.72	1307.95	1308.35	1210.49	1210.13	1210.31	98.04	Perched
NWI_511	1357.17	1341.34	1345.87	1204.74	1204.03	1204.35	141.52	Perched
NWI_512	1288.19	1287.39	1287.71	1190.54	1190.16	1190.38	97.33	Perched
NWI_513	1247.78	1240.87	1244.30	1157.37	1155.65	1156.56	87.74	Perched
NWI_514	1161.84	1157.05	1159.89	1134.20	1131.08	1132.62	27.28	Perched
NWI_515	1261.84	1258.98	1260.39	1222.61	1222.12	1222.38	38.01	Perched
NWI_516	1352.59	1330.38	1334.68	1245.29	1244.67	1244.97	89.70	Perched
NWI_517	1300.24	1294.57	1297.56	1231.43	1231.18	1231.31	66.25	Perched
NWI_518	1338.18	1335.78	1336.42	1197.85	1197.39	1197.61	138.81	Perched
NWI_519	1194.99	1189.45	1190.81	1152.15	1151.49	1151.82	38.99	Perched
NWI_520	1269.23	1256.53	1261.93	1227.18	1226.83	1227.01	34.92	Perched
NWI_521	1243.15	1235.39	1238.86	1186.69	1186.13	1186.44	52.42	Perched
NWI_522	1214.10	1211.37	1212.89	1183.76	1183.06	1183.40	29.49	Perched
NWI_523	1352.66	1347.88	1350.32	1206.99	1206.74	1206.87	143.45	Perched
NWI_524	1265.41	1258.53	1261.58	1166.27	1165.79	1166.04	95.54	Perched
NWI_525	1302.99	1273.12	1282.15	1245.54	1244.99	1245.27	36.87	Perched
NWI_526	1280.92	1276.51	1277.71	1185.69	1185.06	1185.38	92.33	Perched
NWI_527	1234.33	1223.57	1225.35	1180.08	1179.48	1179.78	45.57	Perched
NWI_528	1298.37	1294.89	1296.54	1220.09	1219.40	1219.75	76.78	Perched
NWI_529	1331.83	1325.82	1327.58	1222.44	1222.10	1222.26	105.31	Perched
NWI_530	1289.14	1273.89	1280.99	1211.28	1209.26	1210.41	70.58	Perched
NWI_531	1289.35	1283.61	1286.86	1213.22	1212.78	1213.00	73.85	Perched
NWI_532	1291.99	1263.14	1278.32	1214.21	1212.95	1213.57	64.75	Perched
NWI_533	1339.78	1337.08	1338.03	1197.61	1197.25	1197.43	140.61	Perched
NWI_534	1325.89	1318.02	1321.52	1225.07	1224.66	1224.88	96.65	Perched
NWI_535	1229.62	1222.73	1225.56	1181.11	1180.52	1180.83	44.72	Perched
NWI_536	1239.84	1235.11	1236.79	1188.26	1186.43	1187.12	49.67	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_537	1268.91	1260.31	1263.29	1214.25	1213.56	1213.94	49.35	Perched
NWI_538	1270.85	1266.47	1268.03	1223.97	1223.24	1223.58	44.46	Perched
NWI_539	1356.97	1354.57	1355.75	1205.14	1204.63	1204.90	150.85	Perched
NWI_540	1327.87	1317.57	1322.93	1211.50	1211.17	1211.34	111.59	Perched
NWI_541	1332.10	1324.34	1326.69	1202.59	1201.77	1202.21	124.48	Perched
NWI_542	1319.79	1303.58	1308.47	1209.54	1208.40	1209.07	99.40	Perched
NWI_543	1322.58	1318.39	1320.19	1209.28	1208.94	1209.11	111.09	Perched
NWI_544	1239.57	1234.14	1236.13	1174.20	1172.75	1173.45	62.68	Perched
NWI_545	1319.70	1314.44	1317.69	1207.88	1207.49	1207.68	110.01	Perched
NWI_546	1348.53	1346.09	1347.69	1207.34	1206.93	1207.13	140.56	Perched
NWI_547	1400.26	1395.09	1396.37	1212.55	1211.85	1212.22	184.15	Perched
NWI_548	1276.88	1262.47	1266.62	1191.65	1190.71	1191.24	75.39	Perched
NWI_549	1278.69	1276.34	1277.01	1212.29	1212.02	1212.15	64.85	Perched
NWI_550	1337.91	1336.44	1336.57	1198.96	1198.13	1198.52	138.04	Perched
NWI_551	1301.99	1294.57	1296.16	1184.69	1184.09	1184.38	111.77	Perched
NWI_552	1189.32	1183.47	1187.03	1157.84	1157.12	1157.49	29.54	Perched
NWI_553	1294.78	1289.20	1291.98	1223.81	1223.52	1223.64	68.34	Perched
NWI_554	1345.81	1332.84	1336.44	1203.32	1202.79	1203.04	133.41	Perched
NWI_555	1419.33	1406.48	1412.26	1212.70	1212.32	1212.51	199.75	Perched
NWI_556	1368.32	1365.22	1365.87	1205.13	1204.78	1204.96	160.91	Perched
NWI_557	1340.13	1334.18	1336.01	1227.15	1226.64	1226.92	109.08	Perched
NWI_558	1348.52	1339.28	1343.69	1208.54	1207.99	1208.23	135.46	Perched
NWI_559	1229.40	1225.78	1227.39	1181.83	1181.35	1181.57	45.82	Perched
NWI_560	1288.46	1287.90	1288.06	1190.76	1190.44	1190.60	97.46	Perched
NWI_561	1240.59	1228.13	1235.01	1147.51	1146.25	1146.87	88.14	Perched
NWI_562	1329.04	1327.65	1327.83	1191.33	1191.08	1191.21	136.61	Perched
NWI_563	1298.29	1295.90	1296.49	1196.82	1196.38	1196.58	99.90	Perched
NWI_564	1266.61	1261.66	1264.57	1185.15	1184.12	1184.66	79.91	Perched
NWI_565	1301.99	1298.12	1299.39	1220.68	1220.36	1220.53	78.86	Perched
NWI_566	1322.47	1315.43	1317.91	1217.17	1216.79	1216.98	100.93	Perched
NWI_567	1211.70	1207.61	1209.84	1182.63	1182.14	1182.39	27.45	Perched
NWI_568	1164.76	1160.40	1161.38	1138.60	1137.41	1138.07	23.32	Perched
NWI_569	1308.17	1305.05	1306.47	1198.57	1198.15	1198.36	108.11	Perched
NWI_570	1329.15	1324.05	1324.85	1210.71	1210.26	1210.50	114.35	Perched
NWI_571	1409.79	1397.80	1404.42	1241.59	1240.93	1241.30	163.13	Perched
NWI_572	1356.04	1354.30	1355.14	1206.88	1206.59	1206.73	148.41	Perched
NWI_573	1301.78	1295.81	1297.30	1197.45	1197.06	1197.24	100.06	Perched
NWI_574	1287.19	1275.64	1279.95	1221.19	1220.59	1220.89	59.06	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_575	1221.53	1217.71	1218.51	1164.46	1163.62	1164.04	54.47	Perched
NWI_576	1330.40	1325.04	1326.83	1206.40	1205.84	1206.15	120.68	Perched
NWI_577	1316.29	1301.37	1305.77	1218.32	1215.32	1216.91	88.86	Perched
NWI_578	1337.16	1336.26	1336.49	1205.60	1205.27	1205.43	131.06	Perched
NWI_579	1327.45	1314.14	1317.41	1216.98	1215.38	1216.19	101.22	Perched
NWI_580	1327.60	1323.01	1326.08	1208.75	1208.36	1208.55	117.53	Perched
NWI_581	1269.25	1265.13	1267.02	1215.93	1215.20	1215.58	51.44	Perched
NWI_582	1289.21	1285.72	1287.53	1196.05	1195.38	1195.73	91.80	Perched
NWI_583	1232.20	1229.51	1230.08	1163.79	1163.08	1163.44	66.64	Perched
NWI_584	1385.92	1377.39	1381.15	1210.79	1210.48	1210.63	170.53	Perched
NWI_585	1308.17	1304.80	1305.59	1216.02	1215.37	1215.70	89.89	Perched
NWI_586	1311.30	1308.21	1308.66	1188.00	1187.20	1187.54	121.12	Perched
NWI_587	1202.82	1196.93	1198.89	1175.37	1173.56	1174.33	24.55	Perched
NWI_588	1192.45	1189.15	1189.91	1166.45	1165.70	1166.10	23.82	Perched
NWI_589	1239.20	1218.37	1225.72	1183.82	1183.00	1183.45	42.27	Perched
NWI_590	1219.90	1216.51	1218.21	1170.99	1170.24	1170.60	47.60	Perched
NWI_591	1319.04	1307.37	1316.40	1214.77	1214.16	1214.46	101.95	Perched
NWI_592	1250.03	1242.12	1246.54	1175.77	1174.03	1174.96	71.58	Perched
NWI_593	1212.36	1209.95	1210.20	1171.45	1170.67	1171.06	39.14	Perched
NWI_594	1163.77	1156.37	1160.16	1143.99	1142.52	1143.40	16.76	Perched
NWI_595	1296.49	1291.87	1294.20	1173.70	1173.33	1173.54	120.65	Perched
NWI_596	1279.48	1277.48	1278.36	1231.59	1230.52	1231.13	47.23	Perched
NWI_597	1310.40	1286.93	1295.49	1215.00	1214.43	1214.75	80.75	Perched
NWI_598	1310.05	1305.38	1307.37	1226.64	1226.37	1226.49	80.88	Perched
NWI_599	1336.77	1336.22	1336.30	1207.75	1207.17	1207.48	128.81	Perched
NWI_600	1270.37	1263.73	1267.49	1189.33	1188.02	1188.67	78.81	Perched
NWI_601	1307.56	1304.85	1306.34	1230.98	1230.51	1230.73	75.61	Perched
NWI_602	1349.53	1347.29	1348.04	1209.15	1208.92	1209.03	139.01	Perched
NWI_603	1279.62	1275.80	1276.65	1184.41	1183.62	1184.02	92.63	Perched
NWI_604	1181.58	1177.27	1179.67	1137.88	1136.80	1137.35	42.31	Perched
NWI_605	1358.15	1330.01	1334.26	1244.84	1244.57	1244.70	89.55	Perched
NWI_606	1365.69	1355.23	1357.17	1206.89	1206.00	1206.46	150.70	Perched
NWI_607	1240.04	1225.15	1228.37	1189.81	1188.41	1189.09	39.28	Perched
NWI_608	1260.09	1248.16	1251.47	1177.88	1177.37	1177.61	73.86	Perched
NWI_609	1301.46	1298.78	1300.28	1226.81	1226.54	1226.67	73.61	Perched
NWI_610	1268.73	1264.48	1266.70	1224.44	1223.84	1224.11	42.59	Perched
NWI_611	1307.70	1298.89	1303.08	1226.73	1226.54	1226.63	76.45	Perched
NWI_612	1308.73	1305.17	1307.00	1210.26	1209.94	1210.11	96.89	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_613	1162.07	1159.61	1160.46	1130.06	1128.54	1129.33	31.13	Perched
NWI_614	1277.57	1270.97	1272.95	1237.48	1236.98	1237.26	35.69	Perched
NWI_615	1388.38	1369.31	1374.76	1224.31	1223.93	1224.12	150.64	Perched
NWI_616	1307.27	1299.66	1303.53	1209.46	1209.11	1209.27	94.25	Perched
NWI_617	1339.25	1336.67	1337.01	1208.25	1207.40	1207.84	129.16	Perched
NWI_618	1337.28	1327.97	1331.78	1214.51	1214.22	1214.37	117.41	Perched
NWI_619	1269.56	1263.19	1266.35	1191.07	1190.64	1190.86	75.49	Perched
NWI_620	1220.23	1213.83	1217.39	1154.11	1153.04	1153.58	63.81	Perched
NWI_621	1256.57	1255.27	1255.91	1162.14	1161.62	1161.87	94.04	Perched
NWI_622	1121.22	1119.61	1120.38	1096.99	1096.34	1096.69	23.68	Perched
NWI_623	1251.84	1249.91	1250.86	1159.20	1158.82	1159.02	91.84	Perched
NWI_624	1218.58	1215.62	1217.10	1134.97	1134.52	1134.75	82.35	Perched
NWI_625	1198.93	1185.33	1187.62	1164.38	1161.42	1162.91	24.71	Perched
NWI_626	1197.21	1193.35	1195.01	1123.04	1121.24	1122.06	72.95	Perched
NWI_627	1200.91	1197.96	1198.32	1146.01	1145.35	1145.71	52.61	Perched
NWI_628	1170.43	1160.75	1164.40	1134.23	1133.19	1133.67	30.72	Perched
NWI_629	1218.80	1213.48	1216.57	1144.13	1143.54	1143.87	72.70	Perched
NWI_630	1231.48	1219.63	1227.25	1156.00	1155.42	1155.72	71.53	Perched
NWI_631	1162.85	1157.94	1158.39	1139.66	1137.42	1138.57	19.82	Perched
NWI_632	1191.80	1185.10	1187.43	1150.36	1149.35	1149.84	37.59	Perched
NWI_633	1160.45	1153.22	1157.16	1117.51	1115.52	1116.37	40.79	Perched
NWI_634	1189.18	1185.62	1186.74	1163.33	1161.86	1162.55	24.19	Perched
NWI_635	1276.05	1269.43	1272.93	1162.34	1161.54	1161.92	111.00	Perched
NWI_636	1282.64	1276.80	1278.33	1174.14	1173.10	1173.62	104.70	Perched
NWI_637	1218.32	1214.95	1216.78	1131.73	1130.57	1131.21	85.57	Perched
NWI_638	1192.75	1187.89	1189.39	1151.96	1151.30	1151.61	37.77	Perched
NWI_639	1160.95	1160.77	1160.81	1133.45	1132.04	1132.78	28.03	Perched
NWI_640	1214.72	1209.33	1210.92	1131.04	1130.61	1130.80	80.12	Perched
NWI_641	1178.49	1174.73	1176.95	1117.80	1117.32	1117.58	59.37	Perched
NWI_642	1155.84	1150.59	1151.66	1115.63	1114.35	1114.92	36.73	Perched
NWI_643	1216.86	1212.65	1215.10	1158.96	1157.73	1158.25	56.85	Perched
NWI_644	1263.61	1259.02	1259.70	1162.46	1161.32	1161.89	97.81	Perched
NWI_645	1214.83	1212.51	1213.67	1134.56	1133.92	1134.24	79.43	Perched
NWI_646	1176.42	1170.41	1173.14	1137.21	1136.71	1136.98	36.16	Perched
NWI_647	1276.98	1274.33	1275.73	1164.37	1163.66	1164.05	111.68	Perched
NWI_648	1169.39	1168.97	1169.14	1141.68	1140.83	1141.26	27.88	Perched
NWI_649	1210.39	1208.55	1209.65	1130.73	1128.55	1129.44	80.21	Perched
NWI_650	1277.50	1273.84	1275.50	1169.06	1167.74	1168.46	107.03	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_651	1112.58	1109.10	1110.54	1091.79	1090.83	1091.38	19.16	Perched
NWI_652	1148.56	1145.24	1146.88	1112.40	1111.79	1112.10	34.78	Perched
NWI_653	1260.66	1250.55	1255.72	1168.33	1165.86	1167.08	88.64	Perched
NWI_654	1259.05	1255.41	1257.59	1160.57	1159.60	1160.05	97.54	Perched
NWI_655	1197.11	1190.83	1193.80	1140.38	1140.05	1140.21	53.59	Perched
NWI_656	1126.99	1111.18	1118.24	1095.50	1092.35	1093.71	24.53	Perched
NWI_657	1265.04	1259.90	1262.52	1168.99	1168.50	1168.73	93.80	Perched
NWI_658	1232.10	1218.50	1223.51	1161.19	1160.28	1160.74	62.78	Perched
NWI_659	1270.37	1267.62	1268.79	1164.09	1163.44	1163.80	104.99	Perched
NWI_660	1201.29	1199.52	1199.75	1148.17	1147.52	1147.86	51.89	Perched
NWI_661	1259.59	1256.17	1257.37	1225.19	1224.08	1224.57	32.80	Perched
NWI_662	1274.23	1270.57	1272.27	1238.85	1238.62	1238.73	33.53	Perched
NWI_663	1176.97	1174.05	1175.60	1146.01	1145.63	1145.87	29.73	Perched
NWI_664	1342.35	1329.07	1335.04	1249.41	1249.19	1249.29	85.74	Perched
NWI_665	1186.59	1180.92	1183.80	1147.71	1147.00	1147.40	36.40	Perched
NWI_666	1322.05	1298.62	1307.62	1213.14	1212.54	1212.85	94.77	Perched
NWI_667	1286.49	1278.20	1280.42	1236.84	1236.51	1236.67	43.75	Perched
NWI_668	1317.18	1303.27	1306.65	1226.38	1226.01	1226.19	80.46	Perched
NWI_669	1281.56	1275.34	1278.04	1240.23	1239.41	1239.85	38.20	Perched
NWI_670	1281.00	1258.10	1269.15	1186.98	1186.52	1186.73	82.42	Perched
NWI_671	1289.08	1283.65	1286.52	1193.94	1193.43	1193.71	92.81	Perched
NWI_672	1279.22	1278.35	1279.07	1235.14	1234.54	1234.84	44.23	Perched
NWI_673	1281.76	1262.74	1266.53	1243.68	1242.39	1242.93	23.61	Perched
NWI_674	1189.13	1186.43	1187.65	1141.77	1141.31	1141.56	46.09	Perched
NWI_675	1187.47	1181.75	1185.24	1145.19	1144.30	1144.72	40.52	Perched
NWI_676	1179.62	1174.79	1177.83	1139.62	1139.07	1139.33	38.50	Perched
NWI_677	1179.39	1174.73	1176.82	1141.90	1141.00	1141.42	35.40	Perched
NWI_678	1289.77	1286.19	1287.54	1230.93	1230.63	1230.74	56.80	Perched
NWI_679	1298.70	1291.42	1295.53	1179.68	1179.16	1179.45	116.08	Perched
NWI_680	1341.14	1334.18	1336.81	1249.70	1249.59	1249.65	87.17	Perched
NWI_681	1272.76	1253.05	1258.90	1244.31	1243.63	1244.06	14.84	Perched
NWI_682	1294.53	1290.37	1292.43	1230.60	1230.36	1230.47	61.96	Perched
NWI_683	1337.14	1330.90	1333.75	1249.49	1249.23	1249.35	84.40	Perched
NWI_684	1170.69	1167.87	1168.53	1143.74	1143.10	1143.42	25.10	Perched
NWI_685	1288.86	1283.30	1286.53	1238.03	1237.20	1237.59	48.94	Perched
NWI_686	1311.36	1302.79	1306.72	1207.63	1207.03	1207.32	99.40	Perched
NWI_687	1366.87	1360.56	1363.99	1248.71	1248.54	1248.62	115.37	Perched
NWI_688	1178.66	1176.48	1177.50	1141.07	1140.56	1140.85	36.65	Perched

Table 2-2. (cont'd)

Wetland Identifier	Maximum Ground Surface Elevation (feet)	Minimum Ground Surface Elevation# (feet)	Average Ground Surface Elevation (feet)	Maximum Aquifer Elevation No-Pumping (feet)	Minimum Aquifer Elevation No-Pumping (feet)	Average Aquifer Elevation No-Pumping (feet)	Unsaturated Zone Thickness (feet)	Perched (>5 ft)
NWI_689	1172.13	1168.01	1169.93	1143.57	1142.71	1143.14	26.79	Perched
NWI_690	1274.38	1264.31	1266.23	1246.94	1246.65	1246.80	19.43	Perched
NWI_691	1177.17	1170.90	1173.93	1144.06	1142.85	1143.39	30.55	Perched
NWI_692	1268.39	1257.32	1259.91	1187.27	1187.00	1187.14	72.77	Perched

 # Surveyed ground elevations.

3.0 Wetland Monitoring Well Data

3.1 Monitoring Wells

NWNA has installed and monitored twenty-six shallow drive-point monitoring wells in and adjacent to wetlands connected to the water table at White Pine Springs (Table 3-1, Map 3-1). The monitoring wells were installed in 2000 and 2001. Some monitoring wells were monitored from 2000 through 2016. However, some monitoring wells were monitored for a shorter period. All monitoring wells were monitored manually and a few continuously during an 8-day pump test of PW-101 conducted in June 2001 (Table 3-1). The long-term and pump test data collected at these twenty-six monitoring wells are provided in Excel® files on the enclosed USB DRIVE, including tables and graphs referenced herein.

The water levels in the shallow drive-point monitoring wells are assumed to represent the groundwater table at or near the wetlands, including water levels within the soil profile of the wetlands, given they do not penetrate substantial confining layers. In fact, the water levels in the shallow drive points, due to strong upward hydraulic gradients in the wetlands as noted above, likely overestimate the height of the water table. Stratigraphic boring logs and monitoring well construction logs have been provided on the enclosed USB DRIVE. The monitoring wells were screened between 0.92 and 5.75 feet below the ground, but the screen length and depth below ground varies from well-to-well.

NWNA installed in 2017 an additional nine shallow drive-point monitoring wells in wetlands (Map 3-2). Water level data collected at these monitoring wells will be available for future monitoring.

3.2 Long-Term Data Summary

Table 3-2 provides summary statistics for the long-term water level data, including the number of measurements, minimum and maximum water levels, range, and average water level for each year. Summary statistics are provided for years with ten or more measurements. Ten or more measurements per year provides a reasonable representation of the natural water level variability of the wetlands near NWNA's production well PW-101. Table 3-2 contains a water level summary for twenty-one of the twenty-six monitoring wells in Table 3-1 and Map 3-1.

More water level measurements were obtained in 2001, 2002, 2003, 2007, 2008, and 2009 than in the other years. The other years do not have ten or more measurements per year for most of the twenty-six monitoring wells. Aside from an 8-day PW-101 pump test in 2001, no production pumping at PW-101 occurred in any of those years. Use of PW-101 on a regular basis began in 2011. Average annual pumping rates were less than 25 gallons per minute (gpm) through 2014, 59 gpm in 2015 and 121 gpm in 2016.

For monitoring wells with ten or more measurements in a given year, time-series plots were generated (Figures 3-1 through 3-44). The vertical axis scale was fixed at two feet to accurately depict natural variability (with only a few exceptions to accommodate higher ranges). Monitoring wells with water levels falling within a two-foot range were grouped together on the same figure, regardless of well location. For monitoring wells with more than 40 measurements, monthly mean water levels were

calculated and graphed to better show seasonal trends (Figures 3-45 through 3-54). The same vertical axis scale and well groupings used for time series plots were used for graphing the monthly means.

3.3 Natural Water Level Variability and Seasonal Trends

Wetland monitoring well data show seasonal trends related to precipitation and evapotranspiration (ET) patterns. Snowmelt and precipitation in the spring causes an increase in level. Decreasing precipitation and increasing ET during the summer cause a short-term decrease in water levels typically lasting two to three months. Increasing precipitation and decreasing ET in the fall cause a corresponding increase in water level that lasts through the fall and into early winter. Below freezing temperatures and precipitation falling in the form of snow cause a decrease in water levels during January and February. Water levels in monitoring wells reflect these natural hydrological patterns.

Monthly water levels in all monitoring wells follow a similar trend with the highest water levels occurring March through May (Figures 3-45 through 3-54). The lowest monthly mean water levels typically occur June through September, although a few monitoring wells also have similarly low water levels in January and February. Mean monthly water levels October through December in most of the monitoring wells are similar to the spring high levels, although slightly lower in most cases. Mean monthly water levels in monitoring wells installed at springs and seeps are consistent throughout the year. The trends are similar to other monitoring wells, but are less discernable. Monitoring wells SW-1-DP, SW-2-DP, SW-8-DP, SW-11-DP, and SW-14-DP are shallow drive-point monitoring wells installed in Wetland R adjacent to streams. Water levels in those monitoring wells are very stable, typically ranging less than 0.5 feet in any given year. Monthly means also vary little from month to month.

Natural water level variability is low, typically less than one foot excepting monitoring well DP-1 (Table 3-2). The lowest range is 0.09 feet at Vent-1/1r, located near a spring/seep along the north edge of Wetland R. The highest range is 1.76 feet at well DP-1 located along the up-gradient (north) edge of Wetland G. The mean range is 0.43 feet for all 21 monitoring wells in Table 3-2. Excluding the three monitoring wells with the most variable ranges (DP1, DP2, and DP3), the mean range is 0.3 feet. The data provide a reasonable representation of natural water level variability annually, and show that annual variability is typically less than one foot.

Water levels in monitoring wells Vent-1r, Seep 1, Seep 2, SW-14-DP, and SW-1-DP were consistently higher than the ground elevation (as surveyed at the wells) without evidence of standing water. The median values ranged from 0.1 feet to 2.1 feet above ground. These water levels show upward groundwater flow under Wetland R caused by groundwater gradients and low permeability soils underlying Wetland R. Water levels in monitoring wells Seep 3, Seep 4, DP-6, DP-7, DP-8, SW-11-DP, SW-2-DP, Seep 5, and SW-8-DP were consistently below the ground at the wells, with median levels ranging from 0.12 to 1.51 feet below ground.

3.4 2001 PW-101 Pump Test

An 8-day pump test of production well PW-101 was conducted in June 2001. The well was pumped at a rate of 400 gpm for 7 days starting at 9:00AM on June 12, 2001. It was then pumped at a rate of 700 gpm for one day, starting at 9:00AM on June 20, 2001. The test ended at 9:00AM on June 21, 2001. Monitoring well water level data collected during the pump test can be used to evaluate water level drawdown in monitoring wells.

Twenty-four shallow drive-point monitoring wells located within or immediately adjacent to wetlands R, G, and A were manually monitored periodically (approximately once to twice per day) during the 2001 pump test (Table 3-1, Map 3-1). A subset of the monitoring wells was also monitored continuously during the pump test using data logging pressure transducers (i.e., "trolls", Table 3-1).

The manual and troll water level measurement data are provided in an Excel® file on the attached USB DRIVE, including graphs referenced in this Addendum. The data are depth to water (DTW), which have been converted to change in water level with time by subtracting each subsequent measurement from the baseline or starting water level measurement. Positive values indicate a decrease in water level, while negative values indicate an increase in water level. Figures 3-55 through 3-65 are graphs of the manual and continuous monitoring data for the geographically grouped monitoring wells. The monitoring wells in the same geographical area of Wetlands R, G, and A were plotted together.

To evaluate changes in water levels at the monitoring wells that may be due to pumping, background water level trends during the pumping period were estimated using the last manual well water level measurement before and first measurement after the pump test in 2001. Measurements were taken before the test on June 5, 2001 and after the test on July 18, 2001 at thirteen shallow drive-point monitoring wells associated with wetlands R, A, and G. The estimated background trend lines were plotted with the manual and continuous water level data in Figures 3-55 through 3-65.

The estimated background trends were used to calculate the change in water levels over the nine-day pump test (Table 3-3). Linear regression of the manual water level measurements taken during the pump test was used to estimate water level trends during the pump test, and those estimates were compared to background trends (Table 3-3). The resulting deltas reported in Table 3-3 show that decreases in water level based on manual measurements were greater than decreases in water level estimated from the background trends at monitoring wells Seep 1, Seep 3, Seep 5, and Seep 6. The difference between estimated background water levels and levels measured during the pump test at those four monitoring wells ranged from 0.01 to 0.05 feet. Estimates for the other monitoring wells in Table 3-2 showed a decrease less than predicted by background or an increase greater than background. These data suggest that the 2001 pump test may have resulted in water level decreases of less than 0.05 feet at Seep 1, Seep 3, Seep 5, and Seep 6. However, such small differences are difficult to measure accurately and discern with the estimation methods used in this analysis. They could be due to pumping at PW-101 during the pump test, the precision of manual water level measurements, change in background trends during the test, and/or limitations of the data analysis methods reported herein.

Table 3-1. Shallow drive-point monitoring wells located within or adjacent to wetlands A, G, and R that were monitored manually 2000 through 2016 to establish a long-term record, and during the 2001 PW-101 8-day pump test.

Well ID	Wetland	Relative Wetland Position†	Number of Days Measured	Continuous Monitoring During Pump Test*
DP1	G	Up-gradient edge	112	■
DP2	G	Up-gradient edge	110	■
DP3	G	Up-gradient edge	148	■
DP5	R	Up-gradient edge	144	
DP6	R	Down-gradient edge	82	
DP7	R	Down-gradient edge	54	
DP8	R	Down-gradient edge	55	
SEEP1/1r	R	Up-gradient edge	153	■
SEEP2	R	Up-gradient edge	173	■
SEEP3	R	Up-gradient edge	175	
SEEP4	R	Up-gradient edge	184	■
SEEP5	A	Up-gradient edge	132	
SEEP6	R	Up-gradient edge	106	■
VENT1/1r	R	Up-gradient edge	136	
SW1DP	R	Interior near astream channel	130	■
SW2DP	R	Interior near astream channel	93	
SW3DP	R	Interior near astream channel	46	
SW4DP	R	Interior near astream channel	3	
SW5DP	R	Interior near astream channel	7	
SW6DP	R	Interior near astream channel	38	
SW7DP	R	Interior near astream channel	5	
SW8DP	A	Interior near astream channel	153	
SW11DP	R	Interior near astream channel	143	
SW12DP	R	Interior near astream channel	3	
SW14DP	R	Interior near astream channel	94	
SW15DP	R	Interior near astream channel	11	

† *Up-gradient/Down-gradient based on general direction of groundwater flow from north to south.*
* *All other monitoring wells not indicated with the closed box were monitored manually approximately once to twice per day during and after the pump test.*

Table 3-2. Annual water level summary statistics for the twenty-one monitoring wells with ten or more measurements per year.

Year	Statistic	Vent-1r	Seep-1	Seep-2	Seep-3	Seep-4	Seep-5	Seep-6
2001	Count	19	19	18	19	19	19	17
	Min	1090.46	1088.80	1083.05	1082.45	1084.41	1090.61	1106.74
	Max	1090.59	1089.06	1083.26	1082.72	1084.60	1090.90	1107.10
	Range	0.13	0.26	0.21	0.27	0.19	0.29	0.36
	Mean	1090.53	1088.93	1083.17	1082.57	1084.50	1090.76	1106.87
2002	Count	18	18	17	18	18	18	17
	Min	1090.51	1088.73	1082.81	1082.47	1084.31	1090.73	1106.85
	Max	1090.57	1089.05	1083.23	1082.65	1084.65	1090.92	1107.19
	Range	0.06	0.32	0.42	0.18	0.34	0.19	0.34
	Mean	1090.54	1088.91	1083.08	1082.55	1084.50	1090.80	1107.04
2003	Count	15	14	15	15	15	15	12
	Min	1090.52	1088.68	1082.82	1082.32	1084.29	1090.47	1106.91
	Max	1090.61	1088.92	1083.11	1082.56	1084.60	1090.79	1107.28
	Range	0.09	0.24	0.29	0.24	0.31	0.32	0.37
	Mean	1090.56	1088.81	1083.01	1082.47	1084.46	1090.68	1107.10
2004	Count	9	8	9	9	10	9	6
	Min					1084.31		
	Max					1084.51		
	Range					0.20		
	Mean					1084.43		
2007	Count	3	4	11	11	11	4	3
	Min			1083.11	1082.56	1084.31		
	Max			1083.19	1082.91	1084.51		
	Range			0.08	0.35	0.20		
	Mean			1083.16	1082.67	1084.42		
2008	Count	4	4	12	12	12	4	3
	Min			1083.14	1082.51	1084.27		
	Max			1083.18	1082.74	1084.63		
	Range			0.04	0.23	0.36		
	Mean			1083.17	1082.63	1084.41		
2009	Count	4	4	12	12	12	4	3
	Min			1083.17	1082.51	1084.39		
	Max			1083.28	1082.76	1084.71		
	Range			0.11	0.25	0.32		
	Mean			1083.21	1082.64	1084.55		
All Years	Count	6	6	6	6	6	6	6
	Min	1090.50	1088.74	1083.02	1082.47	1084.33	1090.60	1106.83
	Max	1090.59	1089.01	1083.21	1082.72	1084.62	1090.87	1107.19
	Range	0.09	0.27	0.19	0.25	0.27	0.27	0.36
	Mean	1090.54	1088.89	1083.13	1082.59	1084.47	1090.75	1107.00

Table 3-2 (Cont'd)

Year	Statistic	DP-5	DP-6	DP-7	DP-8	SW-3-DP	SW-6-DP	SW-11-DP
2001	Count	17	14	12	13	7	6	7
	Min	1080.81	1080.25	1080.46	1079.26			
	Max	1081.37	1080.72	1080.89	1079.55			
	Range	0.56	0.47	0.43	0.29			
	Mean	1081.17	1080.60	1080.75	1079.42			
2002	Count	17	17	17	17	11	0	18
	Min	1080.95	1080.42	1080.64	1079.47	1075.83		1101.12
	Max	1081.35	1080.73	1080.88	1079.64	1076.64		1101.50
	Range	0.40	0.31	0.24	0.17	0.81		0.38
	Mean	1081.20	1080.65	1080.83	1079.55	1076.24		1101.30
2003	Count	14	13	11	11	10	12	15
	Min	1080.85	1080.22	1080.66	1079.52	1076.21	1074.34	1101.03
	Max	1081.32	1080.81	1080.93	1079.68	1076.55	1074.59	1101.44
	Range	0.47	0.59	0.27	0.16	0.34	0.25	0.41
	Mean	1081.14	1080.51	1080.81	1079.62	1076.42	1074.47	1101.18
2004	Count	9	9	7	7	6	7	9
	Min							
	Max							
	Range							
	Mean							
2007	Count	10	11	3	3	3	3	11
	Min	1080.98	1080.34					1101.00
	Max	1081.50	1080.63					1101.47
	Range	0.52	0.29					0.47
	Mean	1081.19	1080.53					1101.16
2008	Count	12	12	1	1	4	4	12
	Min	1080.90	1080.42					1100.96
	Max	1081.32	1080.64					1101.25
	Range	0.42	0.22					0.29
	Mean	1081.17	1080.56					1101.10
2009	Count	12	2	0	0	1	1	12
	Min	1080.97						1100.87
	Max	1081.78						1101.19
	Range	0.81						0.32
	Mean	1081.24						1101.00
All Years	Count	6	6	6	6	6	6	6
	Min	1080.91	1080.33	1080.59	1079.42	1075.83	1074.34	1100.87
	Max	1081.44	1080.71	1080.90	1079.62	1076.64	1074.59	1101.50
	Range	0.53	0.38	0.31	0.21	0.58	0.25	0.37
	Mean	1081.19	1080.57	1080.80	1079.53	1076.33	1074.47	1101.15

Table 3-2 (Cont'd)

Year	Statistic	SW-14-DP	DP-1	DP-2	DP-3	SW-1-DP	SW-2-DP	SW-8-DP
2001	Count	2	18	16	19	8	8	10
	Min		1083.13	1083.47	1083.05			1080.65
	Max		1085.07	1084.72	1084.21			1080.88
	Range		1.94	1.25	1.16			0.23
	Mean		1084.71	1084.40	1083.70			1080.78
2002	Count	6	17	18	18	16	18	18
	Min		1083.85	1083.67	1083.17	1090.62	1082.93	1080.79
	Max		1085.02	1084.41	1084.18	1091.07	1083.12	1080.97
	Range		1.17	0.74	1.01	0.45	0.19	0.18
	Mean		1084.73	1083.99	1083.74	1090.84	1083.00	1080.88
2003	Count	12	14	14	14	14	13	14
	Min	1078.99	1082.90	1083.25	1082.78	1090.50	1082.68	1080.76
	Max	1079.11	1085.07	1083.85	1083.85	1090.94	1082.95	1081.02
	Range	0.12	2.17	0.60	1.07	0.44	0.27	0.26
	Mean	1079.05	1084.35	1083.63	1083.41	1090.76	1082.81	1080.92
2004	Count	7	9	9	9	7	8	10
	Min				1083.04	1090.65		1080.70
	Max				1083.99	1091.00		1080.85
	Range				0.95	0.35		0.15
	Mean				1083.54	1090.80		1080.79
2007	Count	7	4	4	11	10	3	11
	Min				1083.17	1090.60		1080.71
	Max				1084.06	1090.98		1080.97
	Range				0.89	0.38		0.26
	Mean				1083.54	1090.79		1080.83
2008	Count	7	6	4	12	11	4	12
	Min				1083.12	1090.58		1080.73
	Max				1083.90	1091.06		1080.94
	Range				0.78	0.48		0.21
	Mean				1083.54	1090.80		1080.83
2009	Count	9	4	4	12	10	4	12
	Min				1083.16	1090.66		1080.90
	Max				1084.06	1091.02		1081.13
	Range				0.90	0.36		0.23
	Mean				1083.64	1090.82		1080.99
All Years	Count	6	6	6	6	6	6	6
	Min	1078.99	1082.90	1083.25	1082.78	1090.50	1082.68	1080.65
	Max	1079.11	1085.07	1084.72	1084.21	1091.07	1083.12	1081.13
	Range	0.12	1.76	0.86	0.97	0.42	0.23	0.22
	Mean	1079.05	1084.59	1084.00	1083.60	1090.80	1082.90	1080.87

Table 3-3. June 2001 estimated background water level trends based on manual measurements before and after the 2001 pump test compared to water level trends measured during the pump test.

Monitoring Well	Initial Pump Test DTW (ft)	Before Test DTW (ft)	Delta Before Test	After Test DTW (ft)	Delta After Test	Delta After-Before (ft)	Background Water Level Trend	Background Expected Change During Test (ft)	Water Level Change During Test (ft)	Water Level Trend During Test	Estimated Change Versus Expected Background (ft)
Vent1	4.48	4.50	0.02	4.50	0.02	0.00	No Change	0.000	-0.008	Increasing	-0.01
Seep1	2.44	2.43	-0.01	2.47	0.03	0.04	Decreasing	0.007	0.030	Decreasing	0.02
Seep2	4.39	4.42	0.03	4.40	0.01	-0.02	Increasing	-0.004	-0.028	Increasing	-0.02
Seep3	4.77	4.75	-0.02	4.92	0.15	0.17	Decreasing	0.032	0.046	Decreasing	0.01
Seep4	4.89	4.88	-0.01	4.81	-0.08	-0.07	Increasing	-0.013	-0.060	Increasing	-0.05
Seep5	5.45	5.49	0.04	5.65	0.20	0.16	Decreasing	0.030	0.059	Decreasing	0.03
Seep6	1.18	1.23	0.05	1.34	0.16	0.11	Decreasing	0.020	0.068	Decreasing	0.05
DP5	4.31	4.55	0.24	4.96	0.65	0.41	Decreasing	0.076	0.013	Decreasing	-0.06
DP6	3.15	3.14	-0.01	3.45	0.30	0.31	Decreasing	0.058	0.032	Decreasing	-0.03
DP7	2.03	1.99	-0.04	2.26	0.23	0.27	Decreasing	0.050	0.045	Decreasing	-0.01
DP1	3.85	3.81	-0.04	4.91	1.06	1.10	Decreasing	0.205	0.079	Decreasing	-0.13
DP2	4.44	4.34	-0.10	5.26	0.82	0.92	Decreasing	0.171	0.153	Decreasing	-0.02
DP3	3.85	3.79	-0.06	4.78	0.93	0.99	Decreasing	0.184	0.171	Decreasing	-0.01

Figure 3-1. 2001 times series plot of water levels in monitoring well Seep 6 (Wetland R), White Pine Springs, Evart, Michigan.

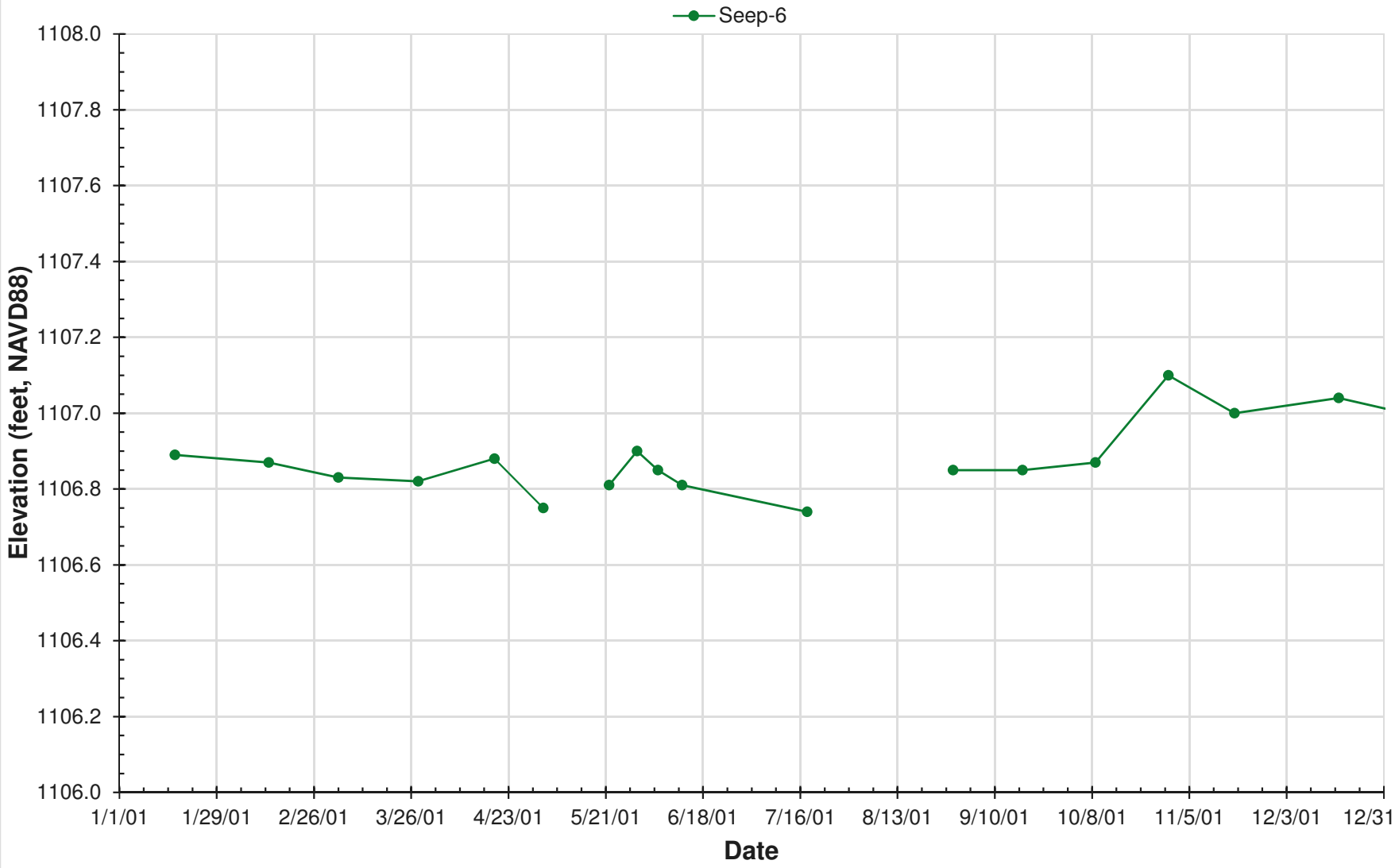


Figure 3-2. 2001 time series plot of water levels in monitoring well Seep-1 (Wetland R), White Pine Springs, Evart, Michigan.

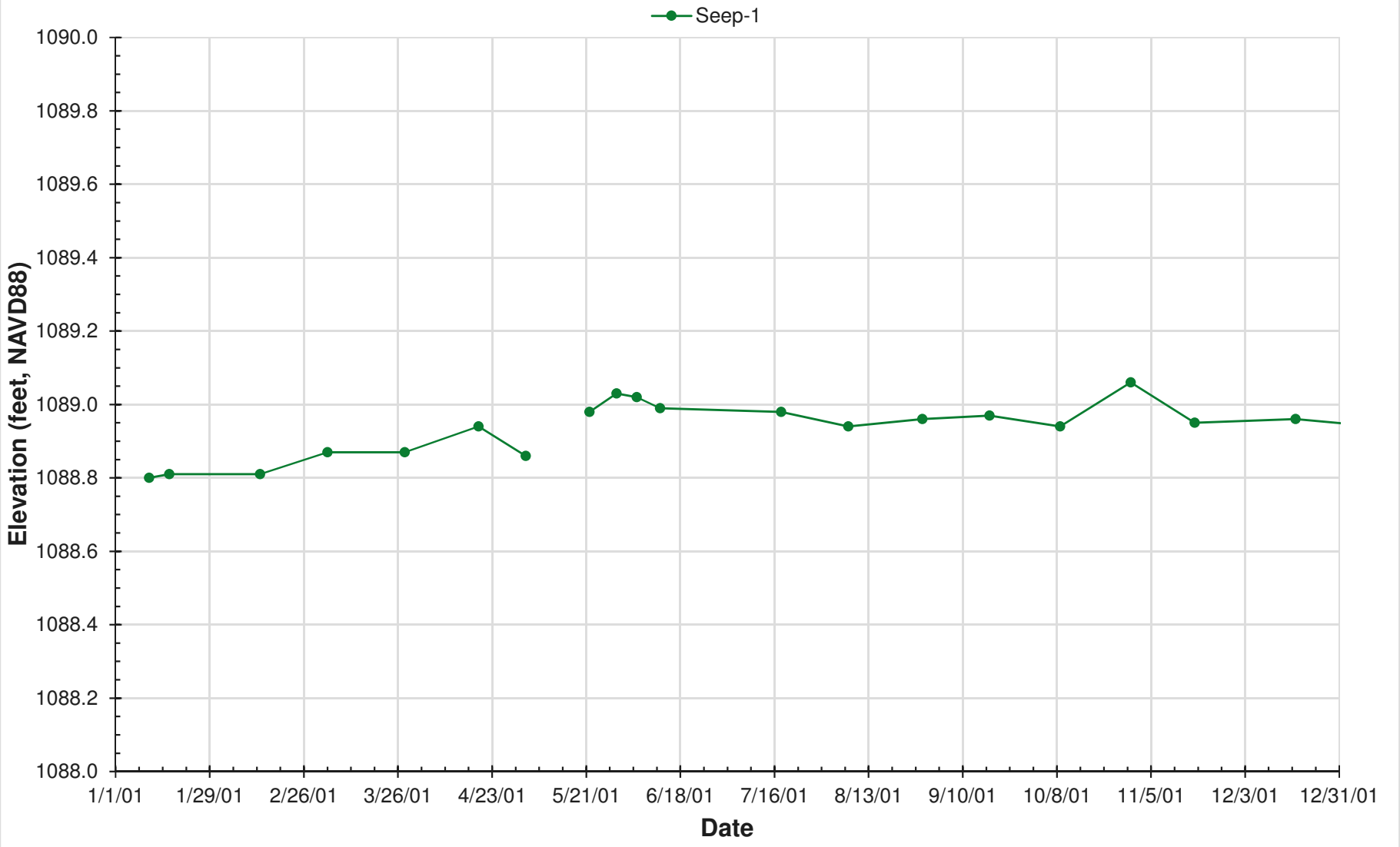


Figure 3. 2001 time series plot of water levels in monitoring wells Vent-1r (Wetland R), and Seep-5 (Wetland A), White Pine Springs, Evart, Michigan.

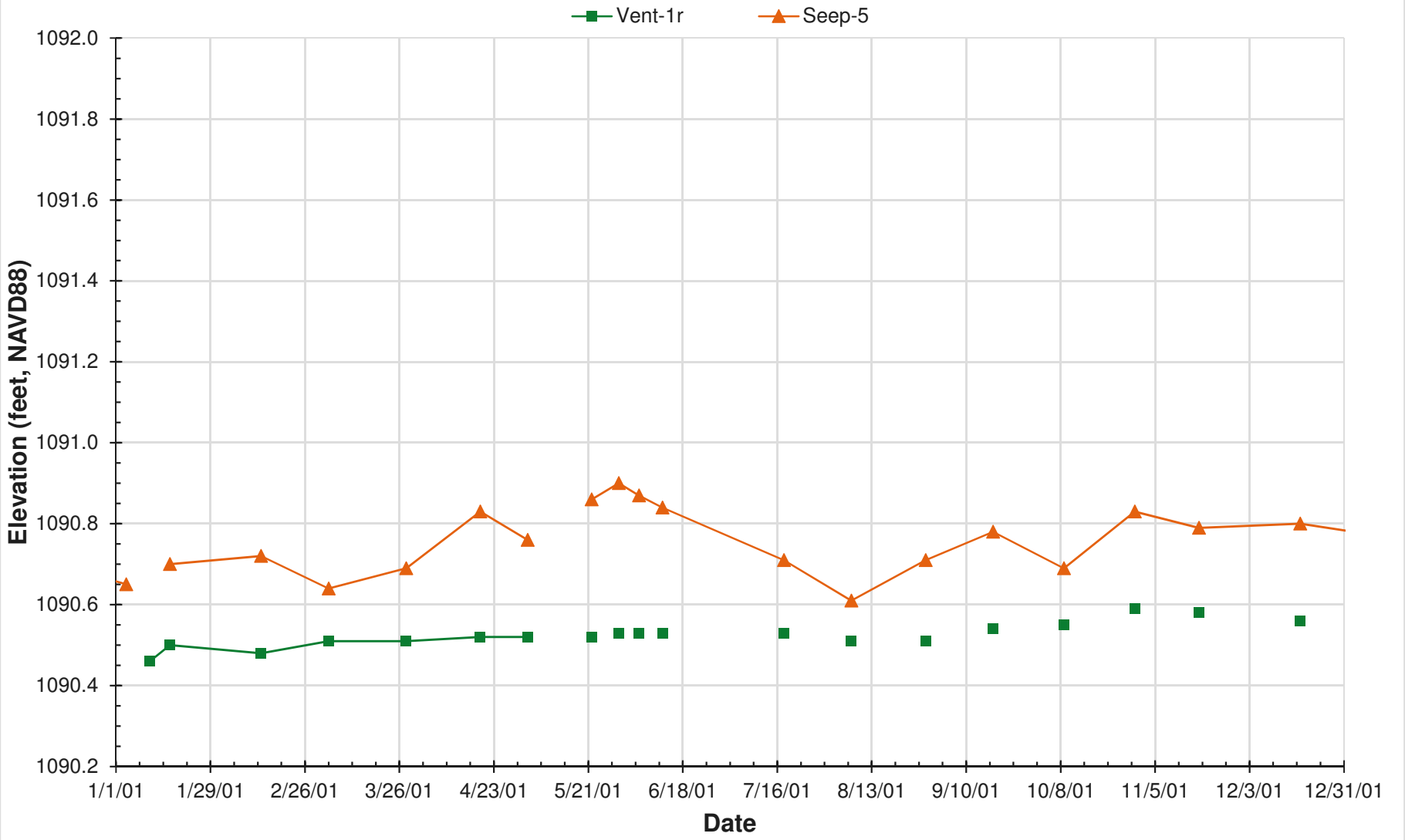


Figure 3-4. 2001 time series plot of water levels in monitoring well DP-8 (Wetland R), White Pine Springs, Evart, Michigan

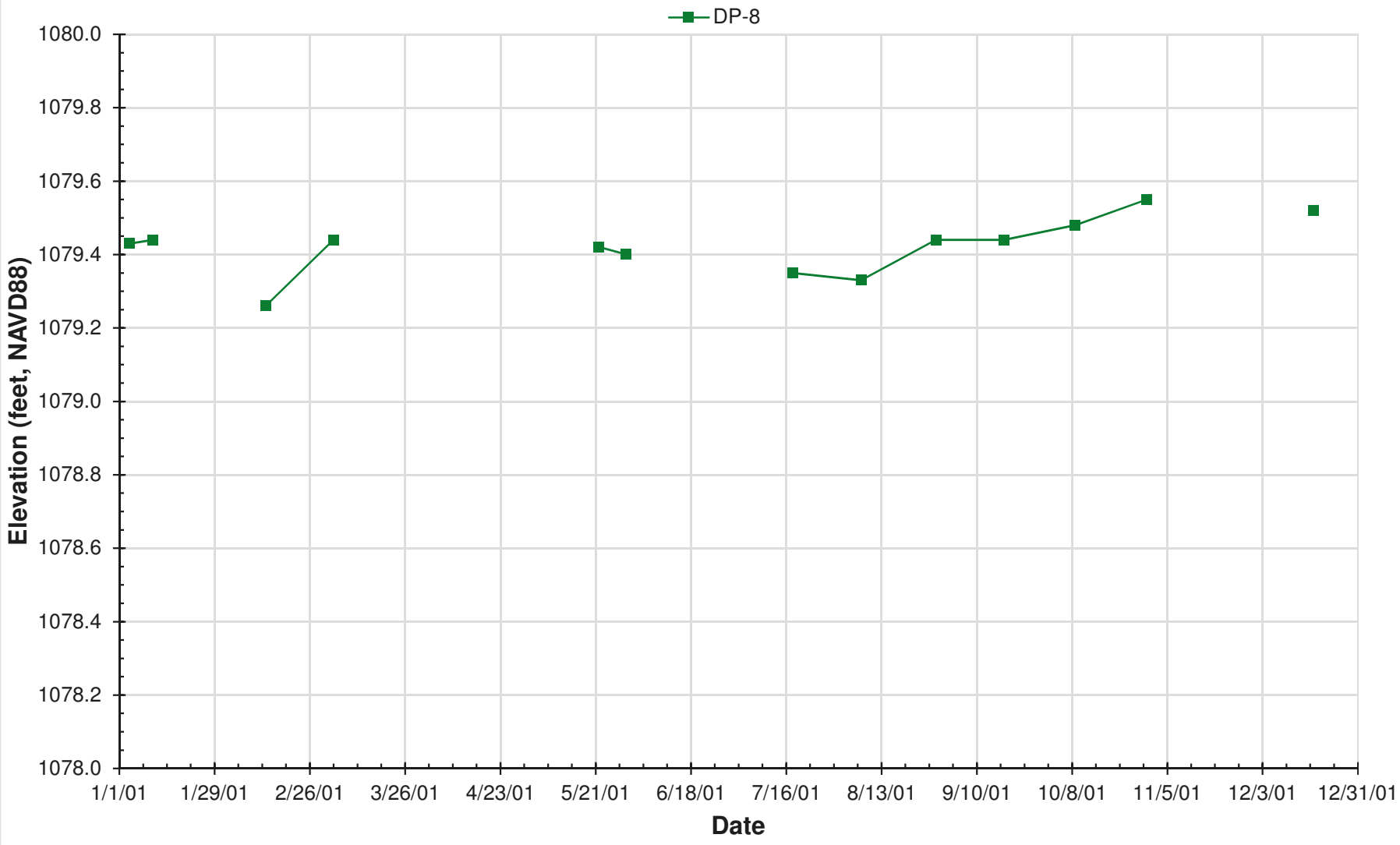


Figure 3-5. 2001 time series plot of water levels in monitoring wells DP-5, DP-6, and DP-7 (Wetland R) and SW-8-DP (Wetland A), White Pine Springs, Evart, Michigan.

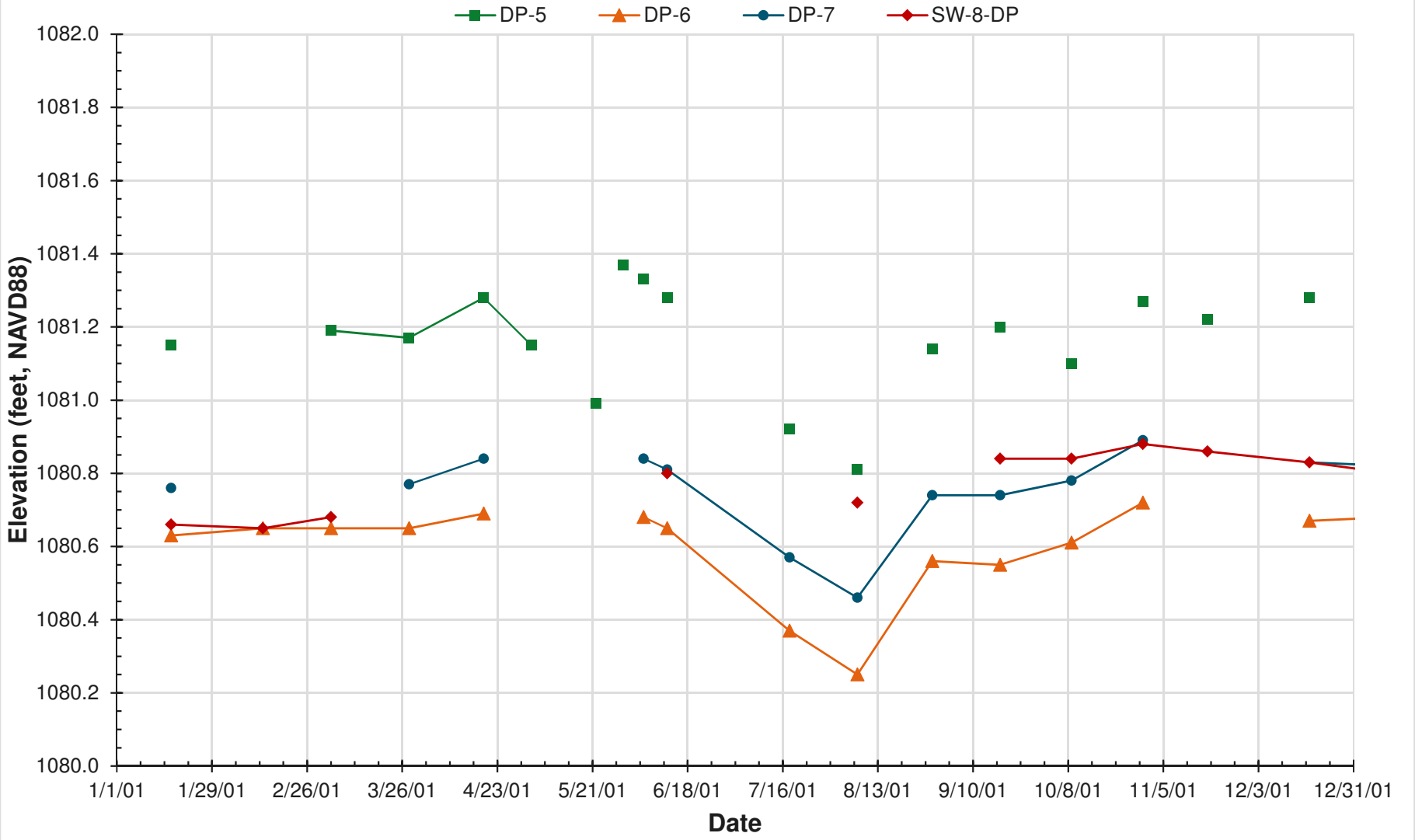


Figure 3-6. 2001 time series plot of water levels in monitoring wells DP-1, DP-2, and DP-3 (Wetland G) and Seep-4 (Wetland R), White Pine Springs, Evart, Michigan.

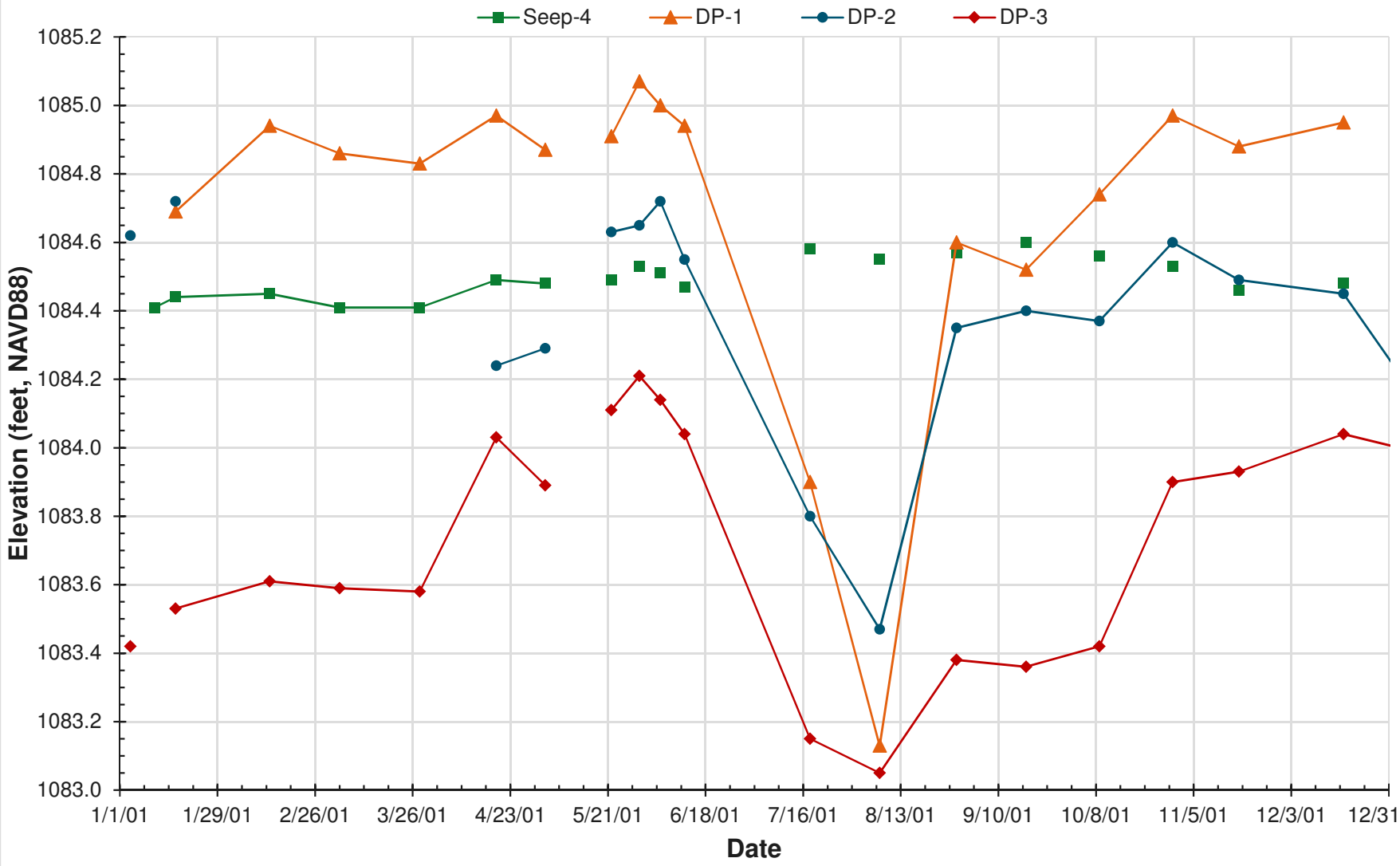


Figure 3-7. 2001 time series plot of water levels in monitoring wells Seep-2 and Seep-3 (Wetland R), White Pine Springs, Evart, Michigan.

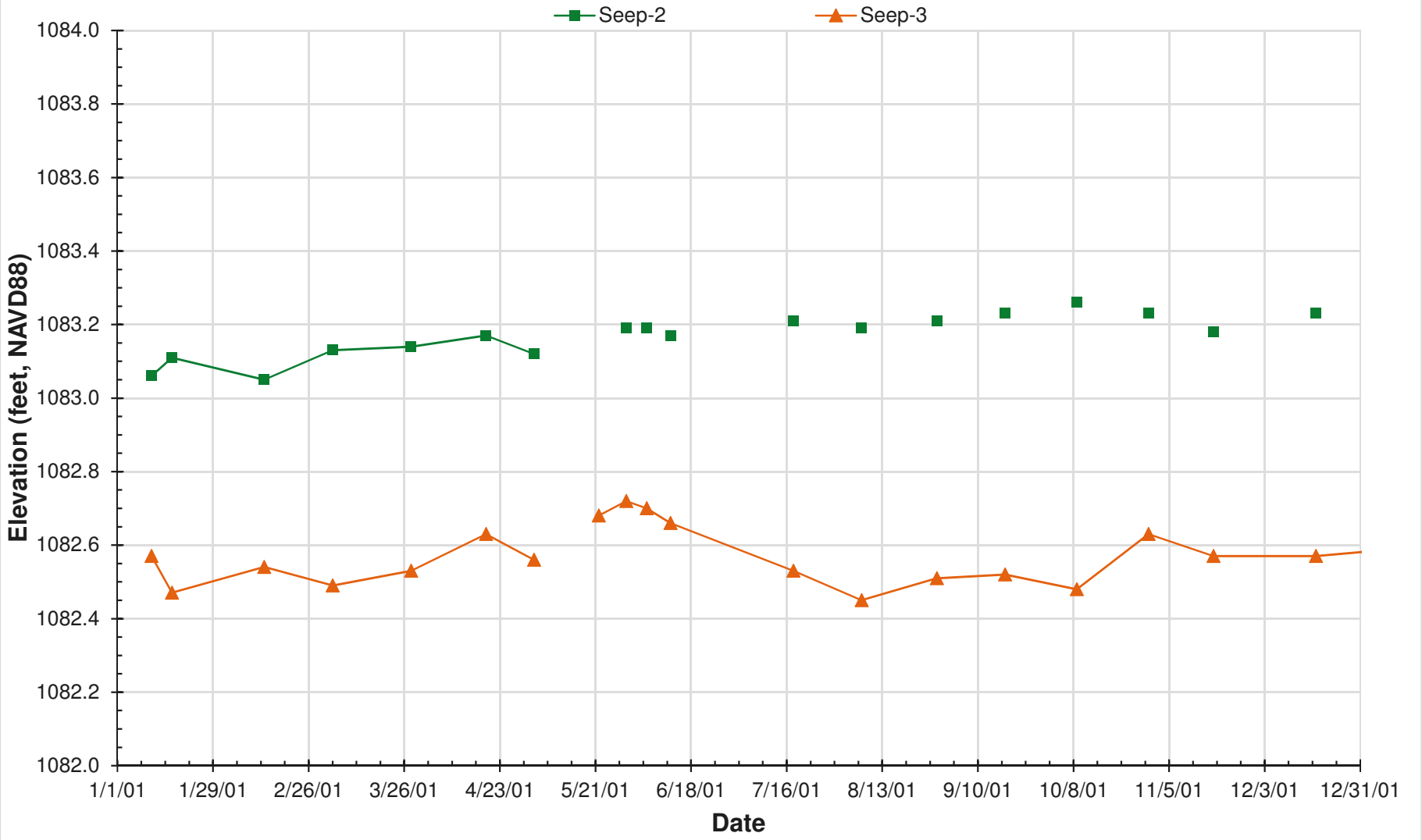


Figure 3-8. 2002 time series plot of water levels in monitoring well Seep-6 (Wetland R), White Pine Springs, Evart, Michigan.

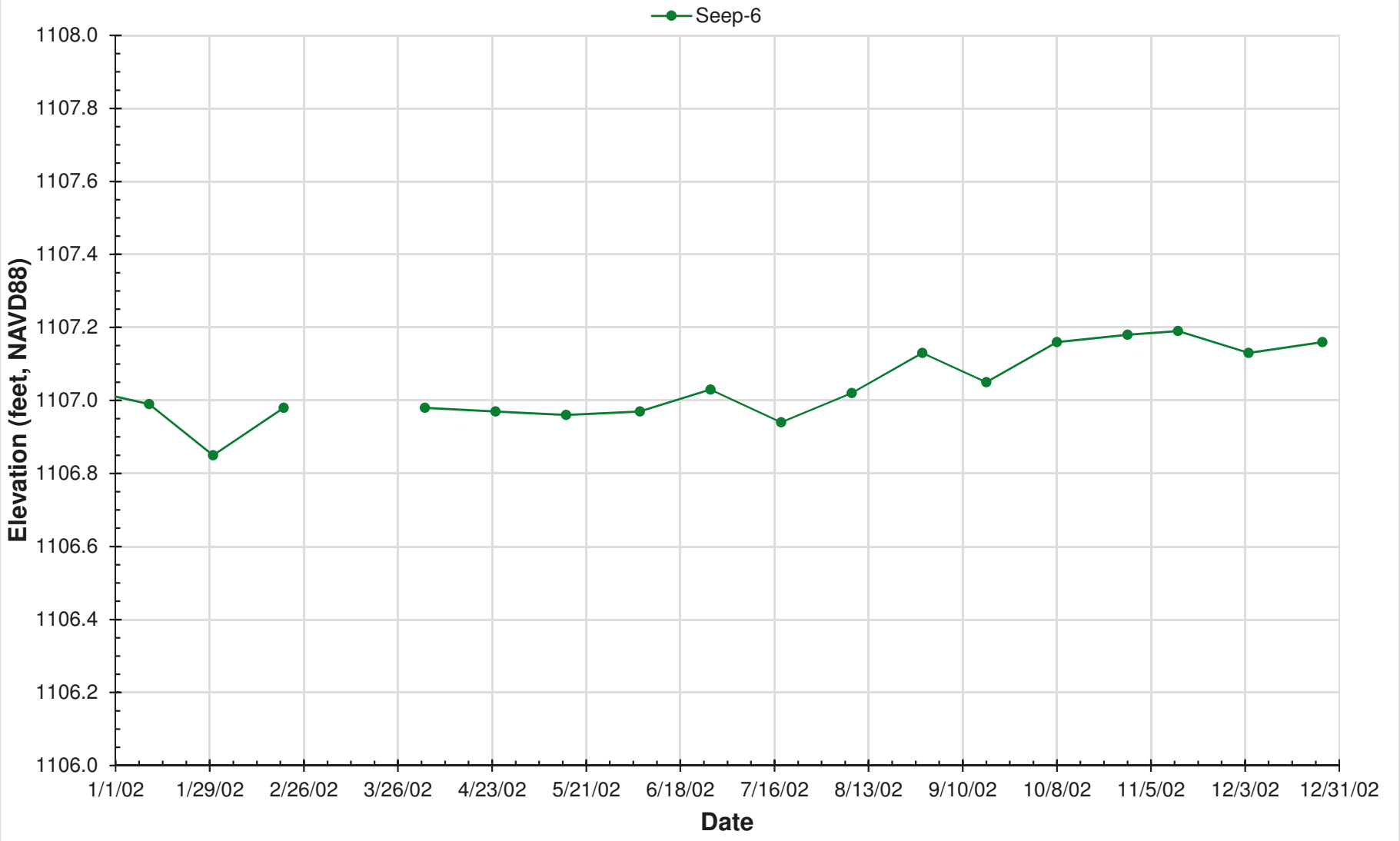


Figure 3-9. 2002 time series plot of water levels in monitoring well Seep-1 (Wetland R), White Pine Springs, Evart, Michigan.

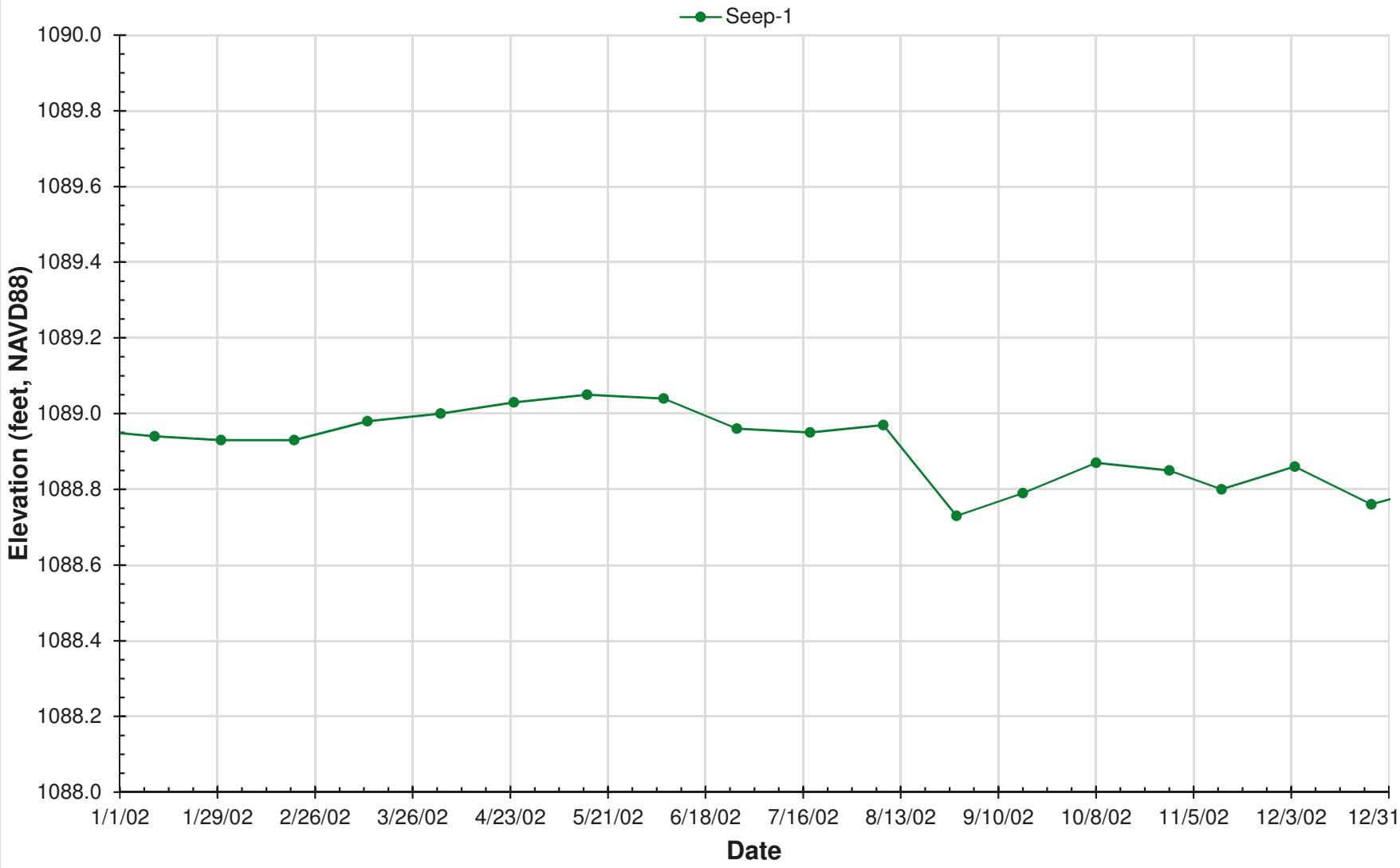


Figure 3-10. 2002 time series plot of water levels in monitoring wells Vent-1r and SW-1-DP (Wetland R) and Seep-5 (Wetland A), White Pine Springs, Evart, Michigan.

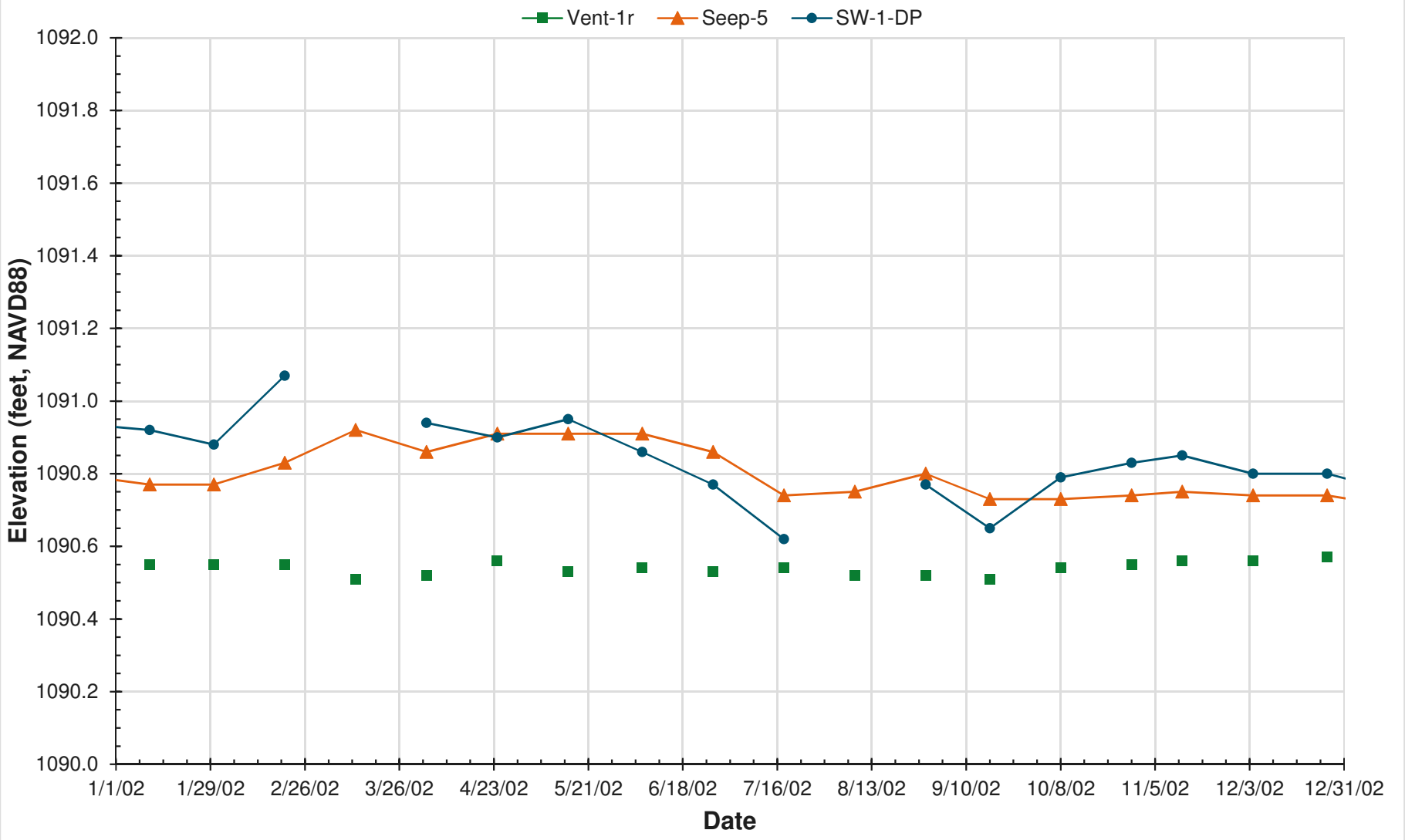


Figure 3-11. 2002 time series plot of water levels in monitoring well SW-2-DP (Wetland R), White Pine Springs, Evart, Michigan.

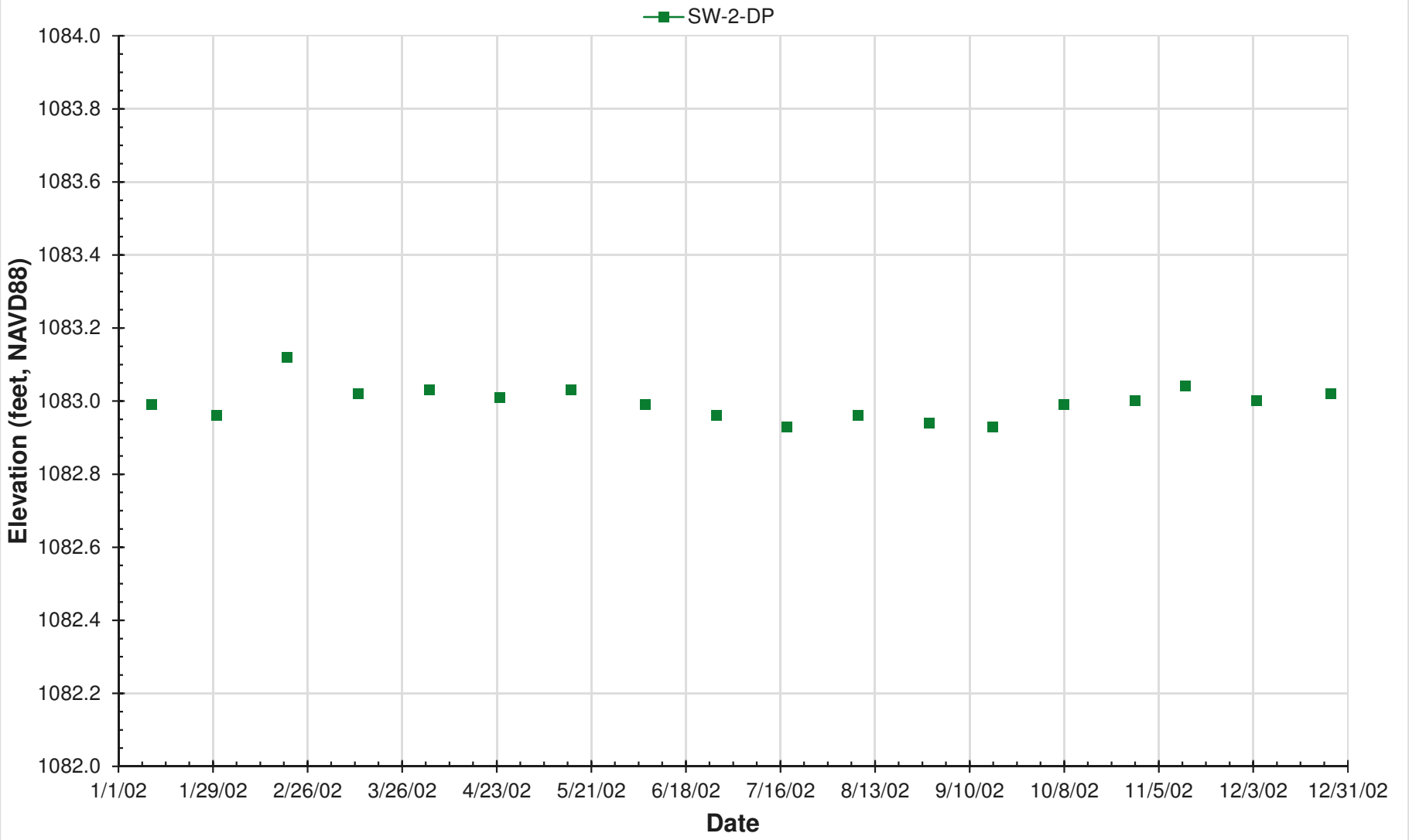


Figure 3-12. 2002 time series plot of water levels in monitoring well SW-3-DP (Wetland R), White Pine Springs, Evart, Michigan.

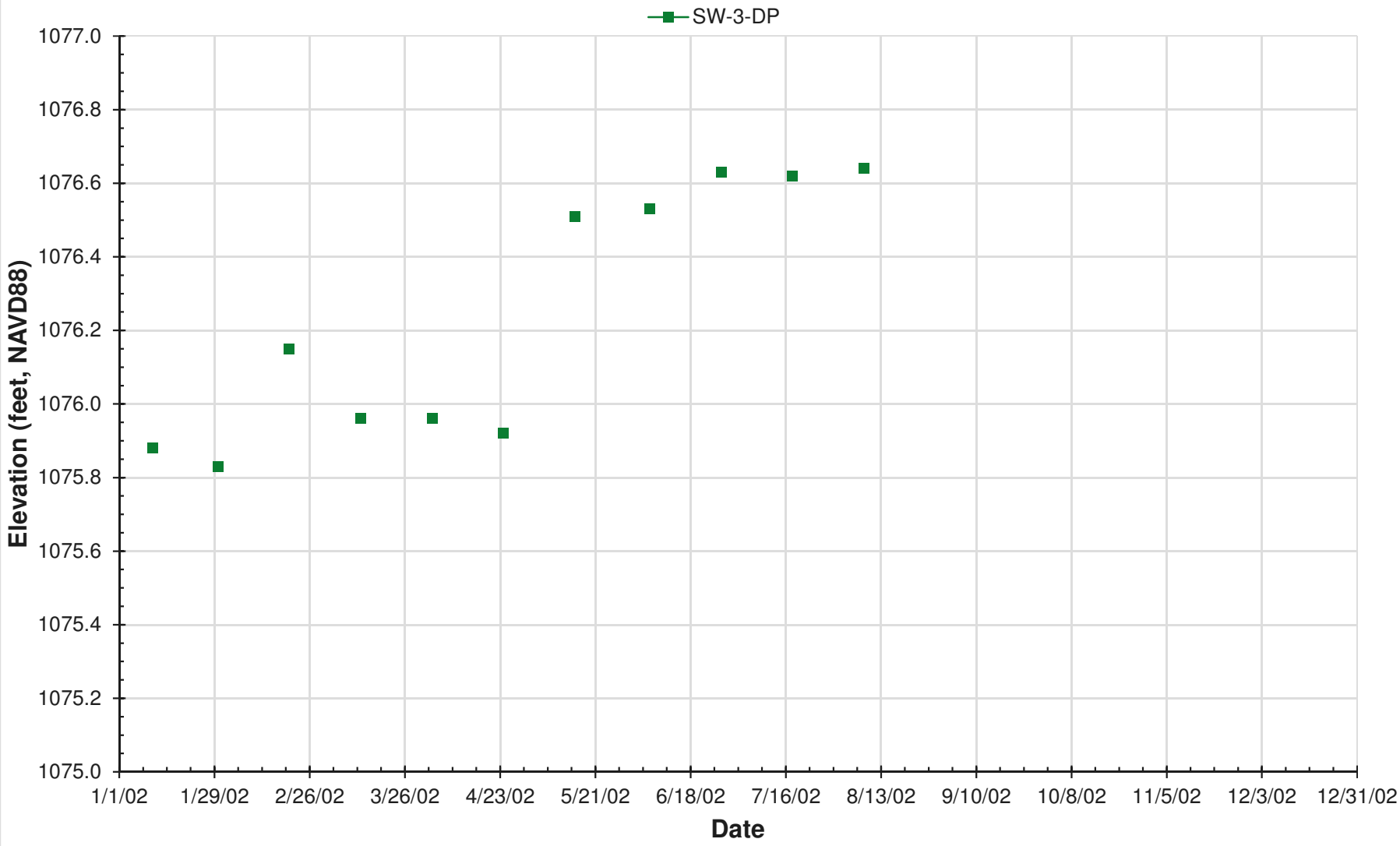


Figure 3-13. 2002 time series plot of water levels in monitoring well SW-11-DP (Wetland R), White Pine Springs, Evart, Michigan.

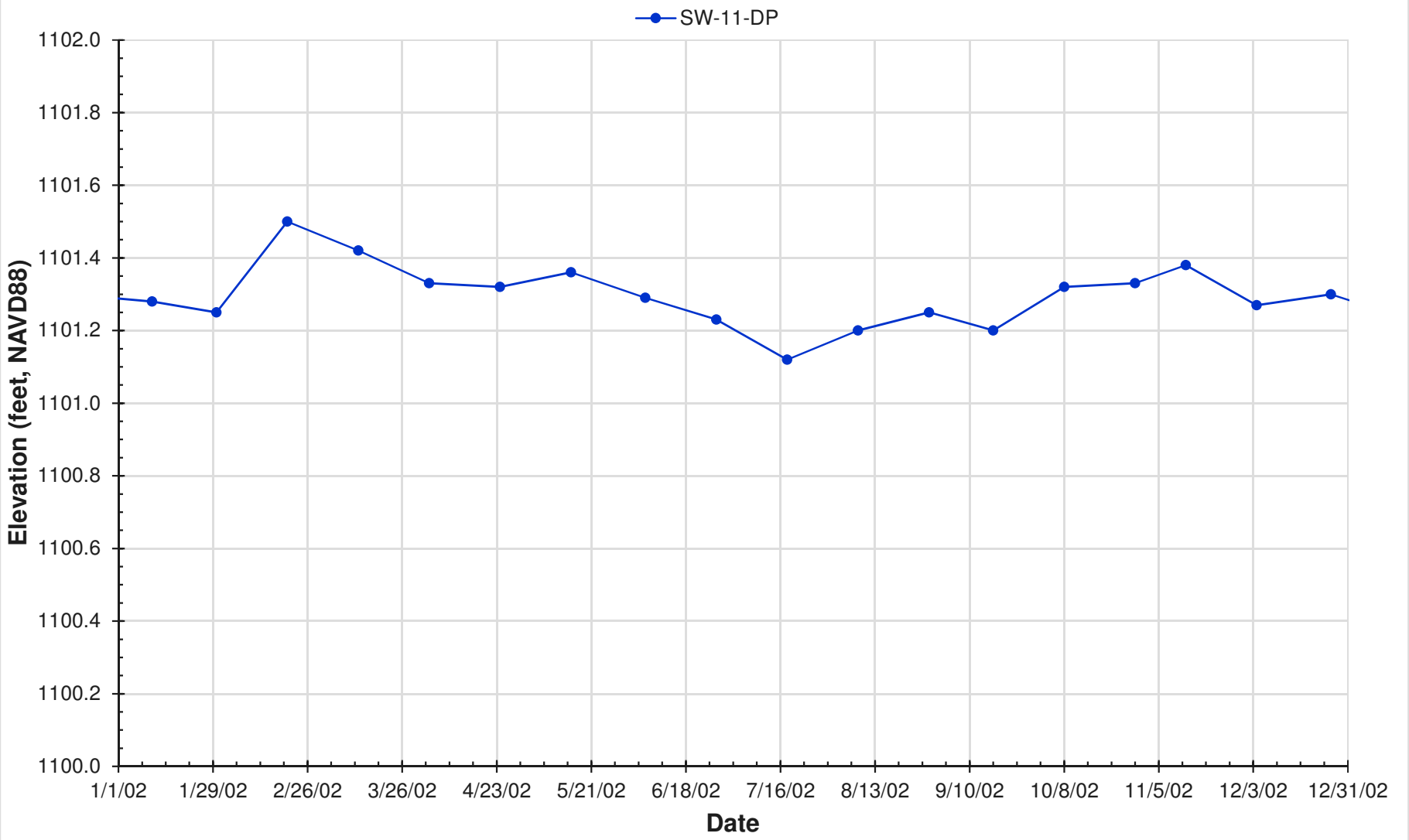


Figure 3-14. 2002 time series plot of water levels in monitoring well DP-8 (Wetland R), White Pine Springs, Evart, Michigan.

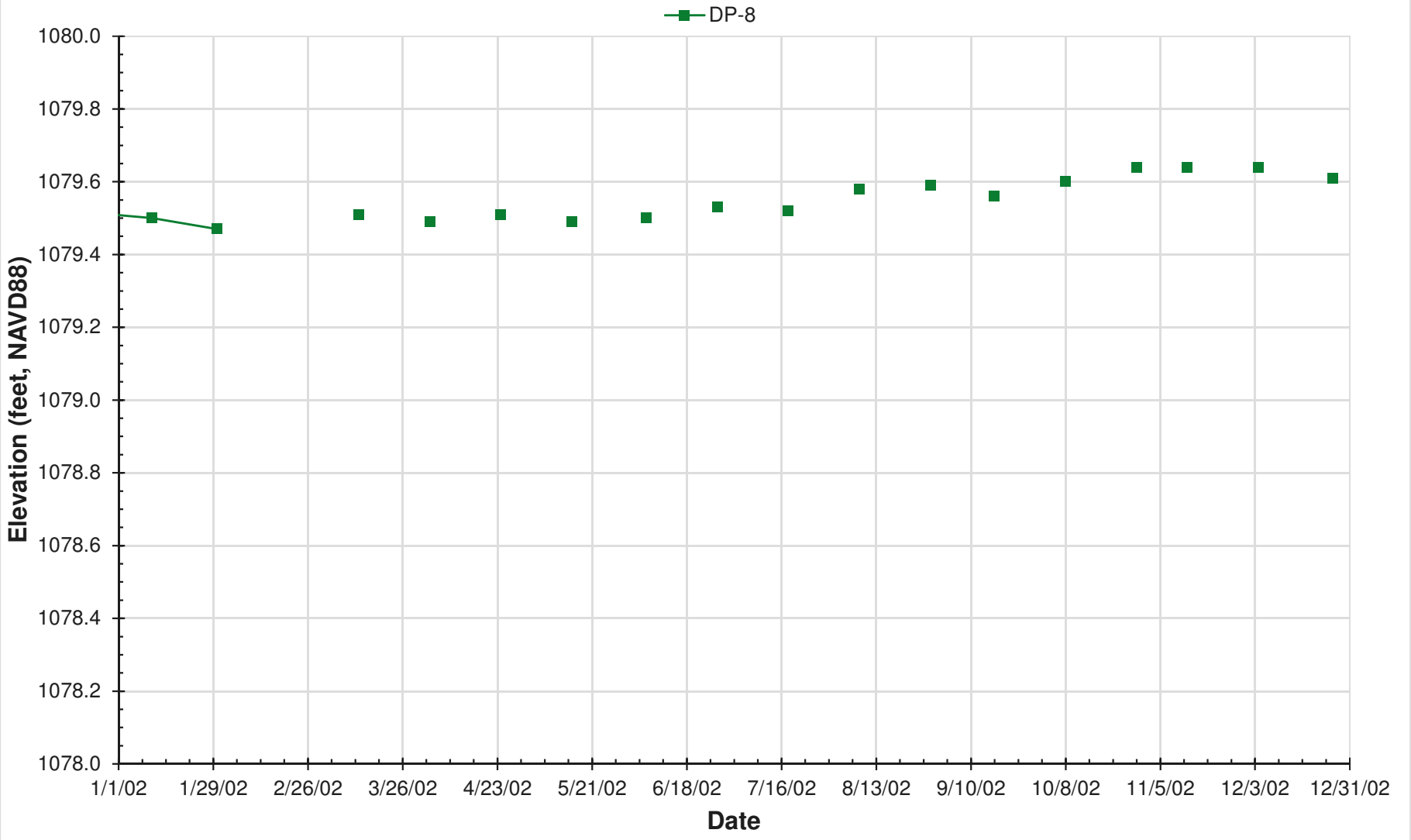


Figure 3-15. 2002 time series plot of water levels in monitoring wells DP-5, DP-6, and DP-7 (Wetland R) and SW-8-DP (Wetland A), White Pine Springs, Evart, Michigan.

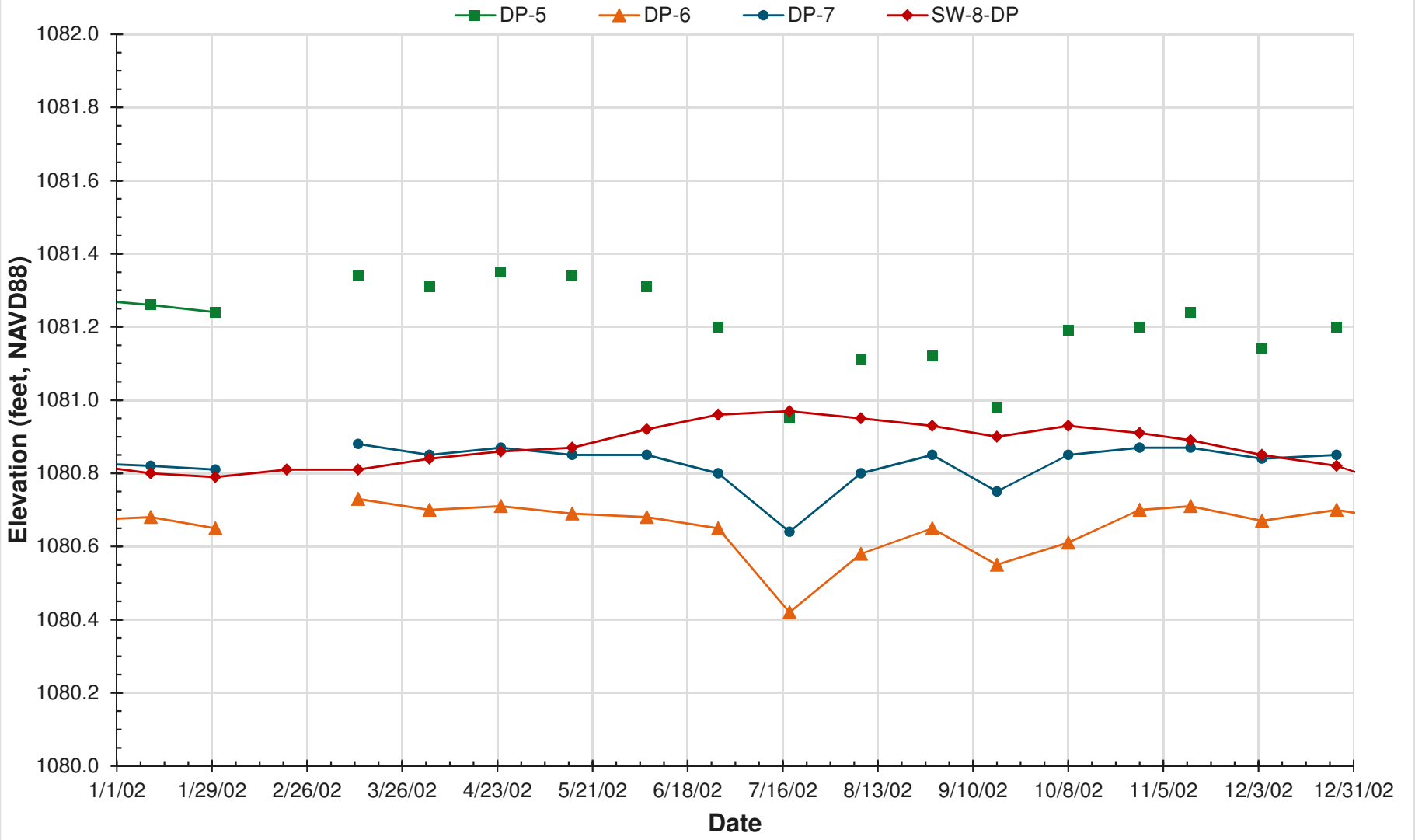


Figure 3-16. 2002 time series plot of water levels in monitoring wells DP-1, DP-2, and DP-3 (Wetland G) and Seep-4 (Wetland R), White Pine Springs, Evart, Michigan.

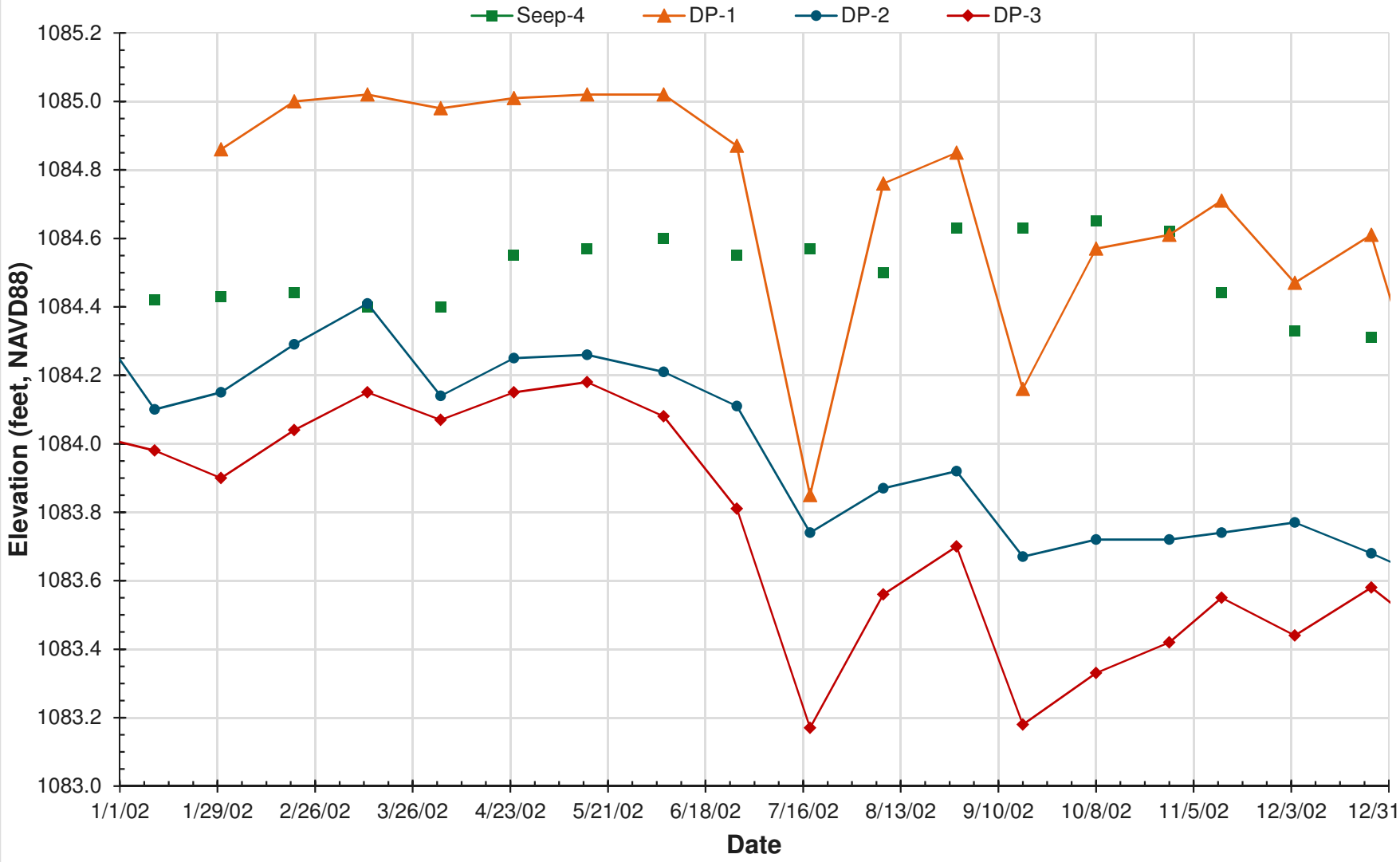


Figure 3-17. 2002 time series plot of water levels in monitoring wells Seep-2, Seep-3, and SW-2-DP (Wetland R), White Pine Springs, Evart, Michigan.

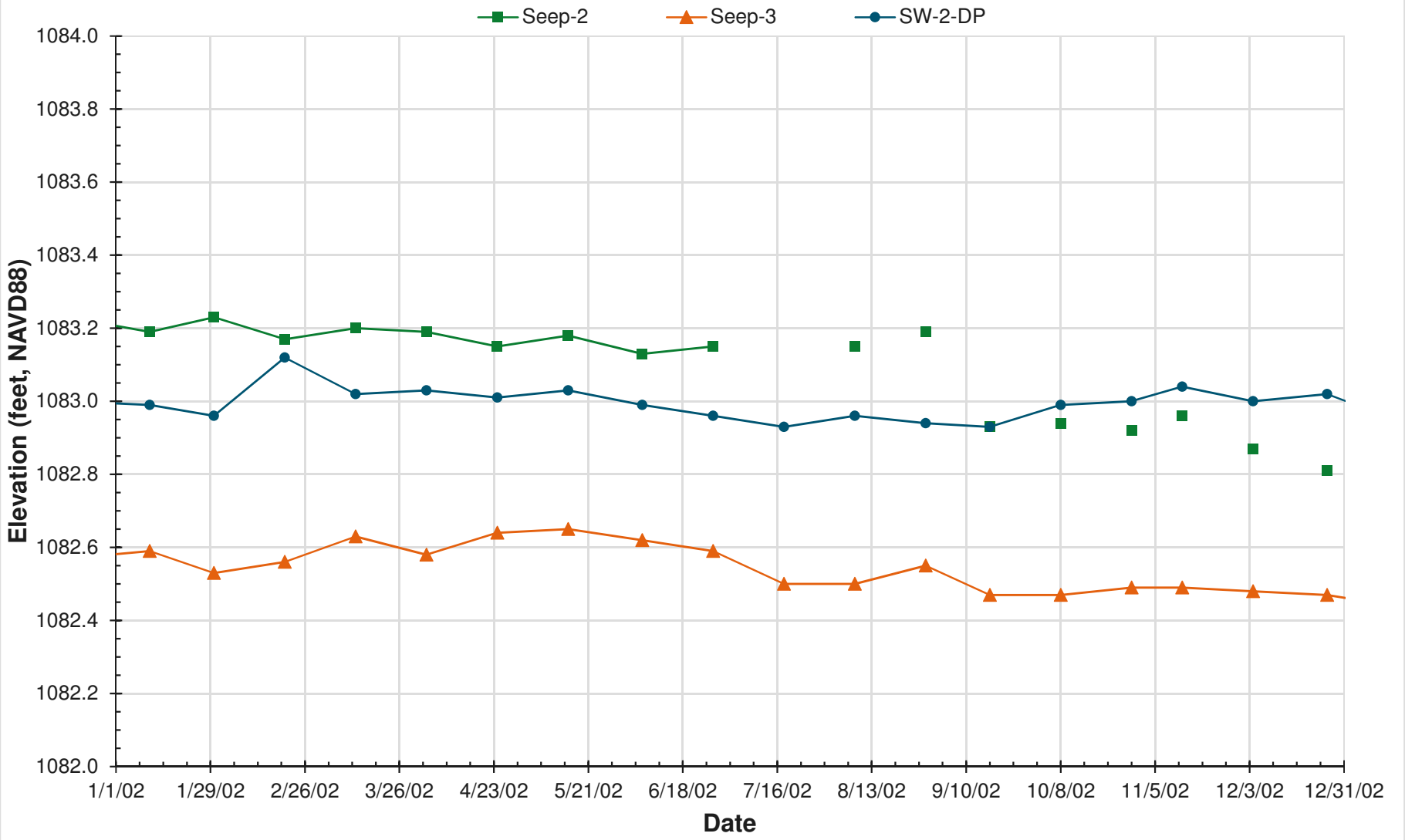


Figure 3-18. 2002 time series plot of water levels in monitoring well Seep-6, White Pine Springs, Evart, Michigan.

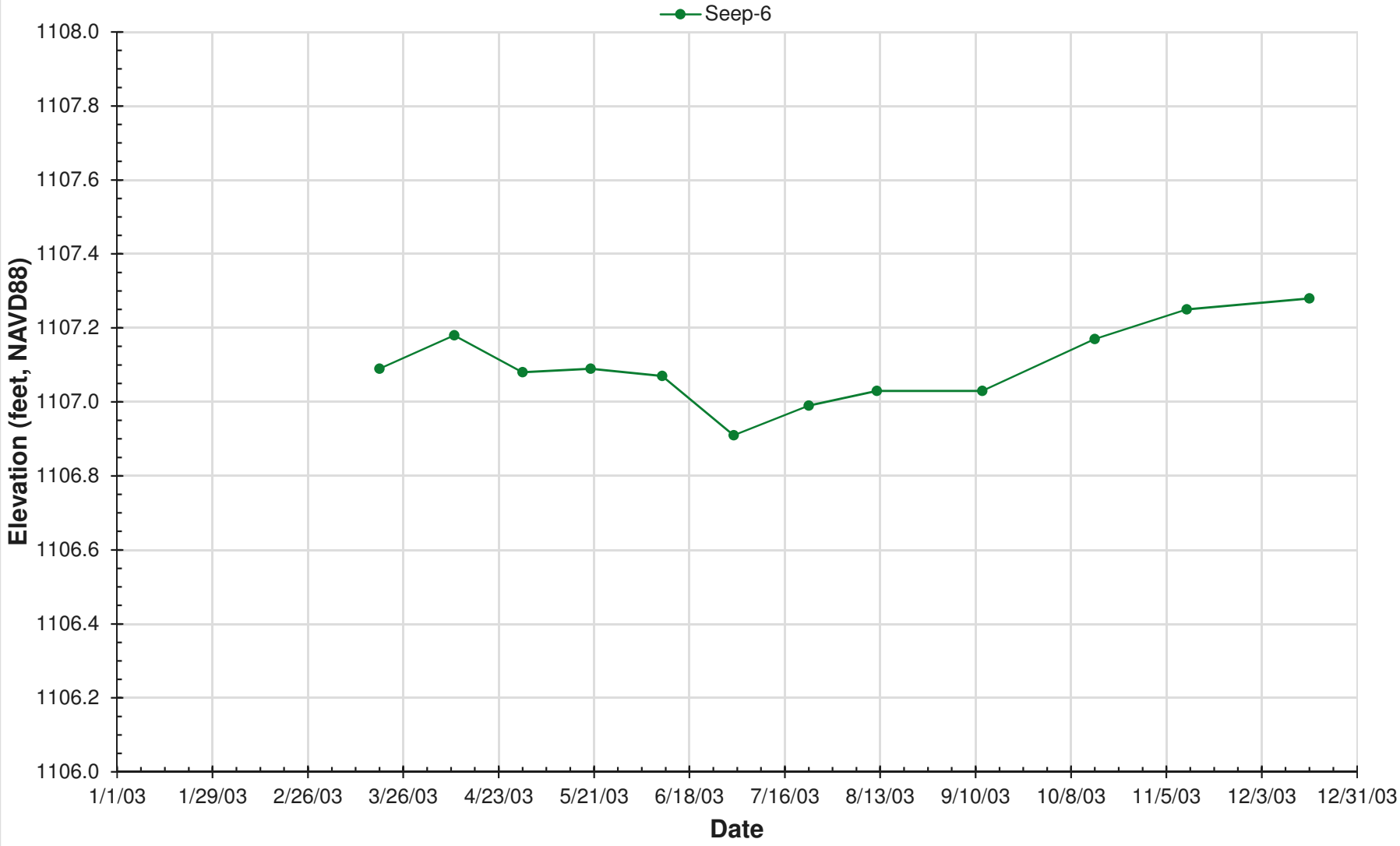


Figure 3-19. 2003 time series plot of water levels in monitoring well Seep-1 (Wetland R), White Pine Springs, Evart, Michigan.

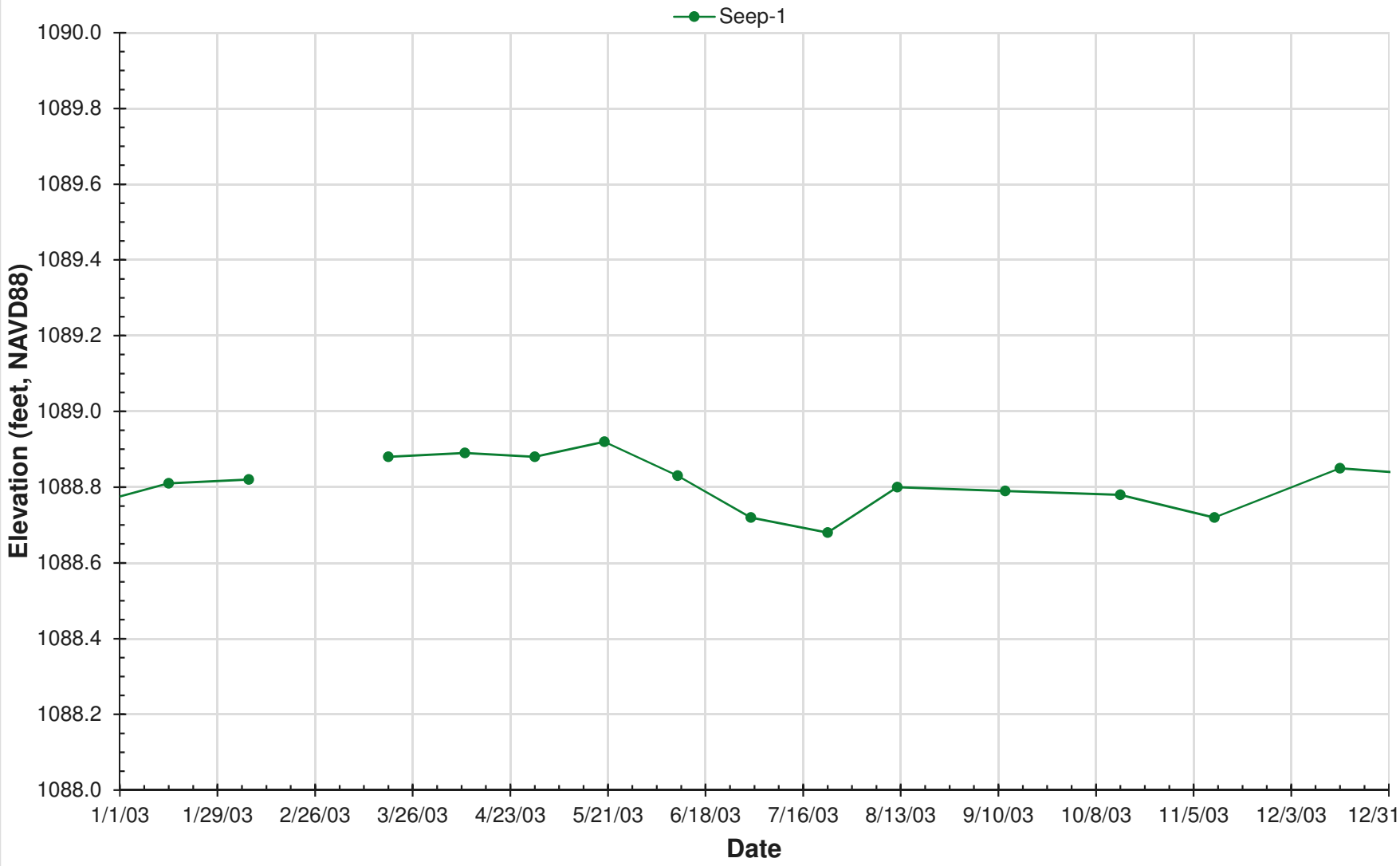


Figure 3-20. 2003 time series plot of water levels in monitoring wells Vent-1r, Seep-5, SW-1-DP White Pine Springs, Evart, Michigan.

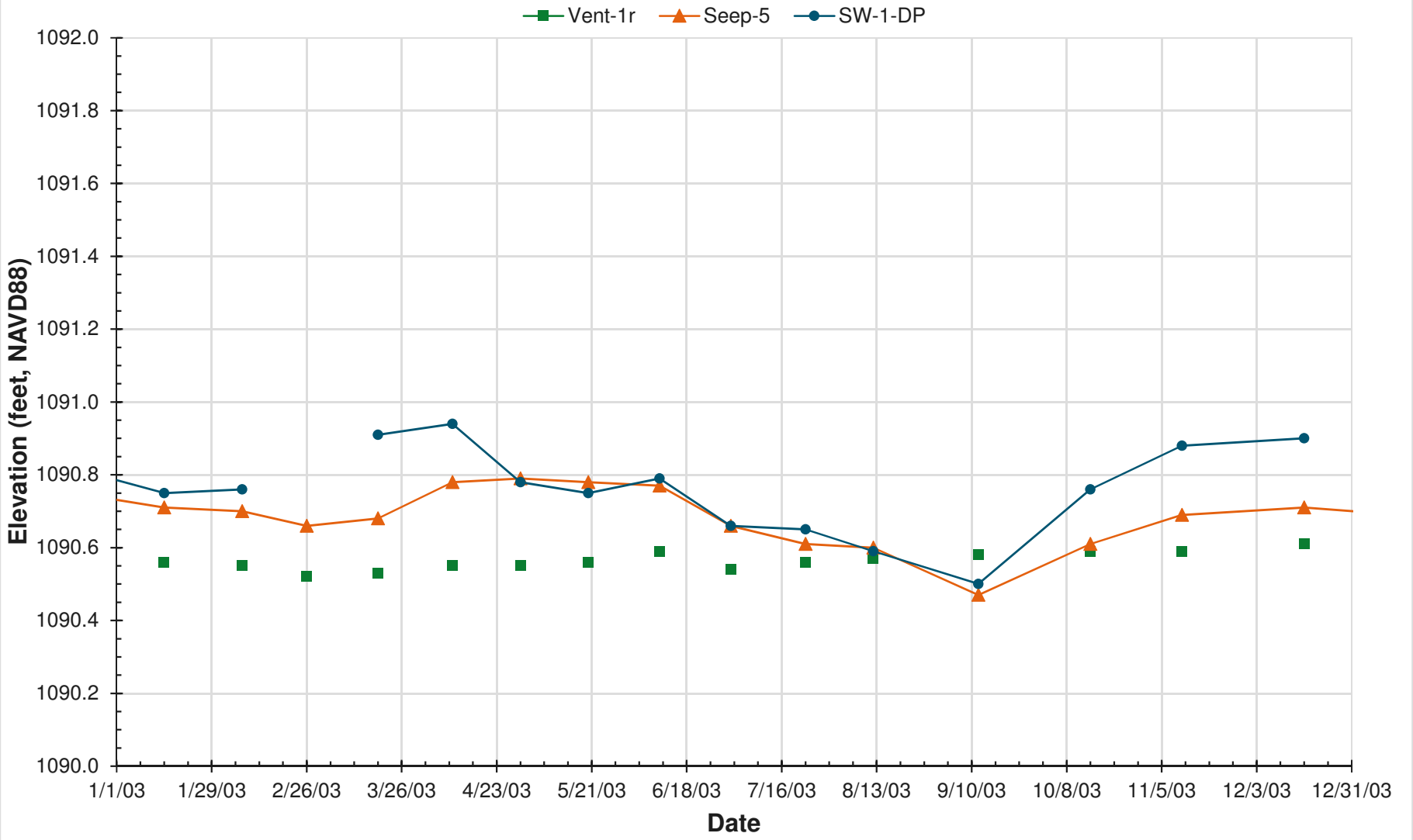


Figure 3-20. 2004 time series plot of water levels in monitoring wells Vent-1r, Seep-5, SW-1-DP White Pine Springs, Evart, Michigan.

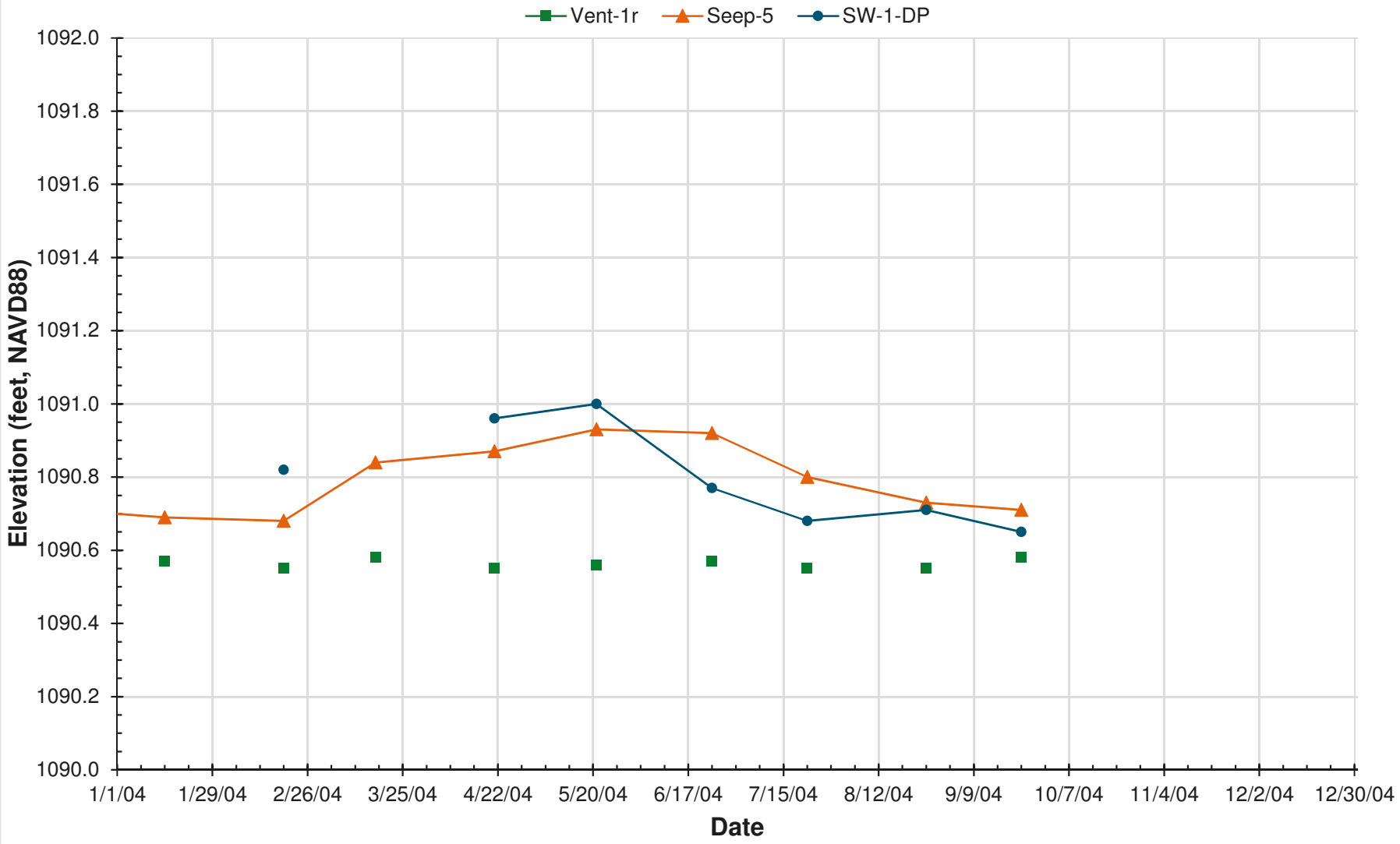


Figure 3-21. 2003 time series plot of water levels in monitoring well SW-2-DP White Pine Springs, Evart, Michigan.

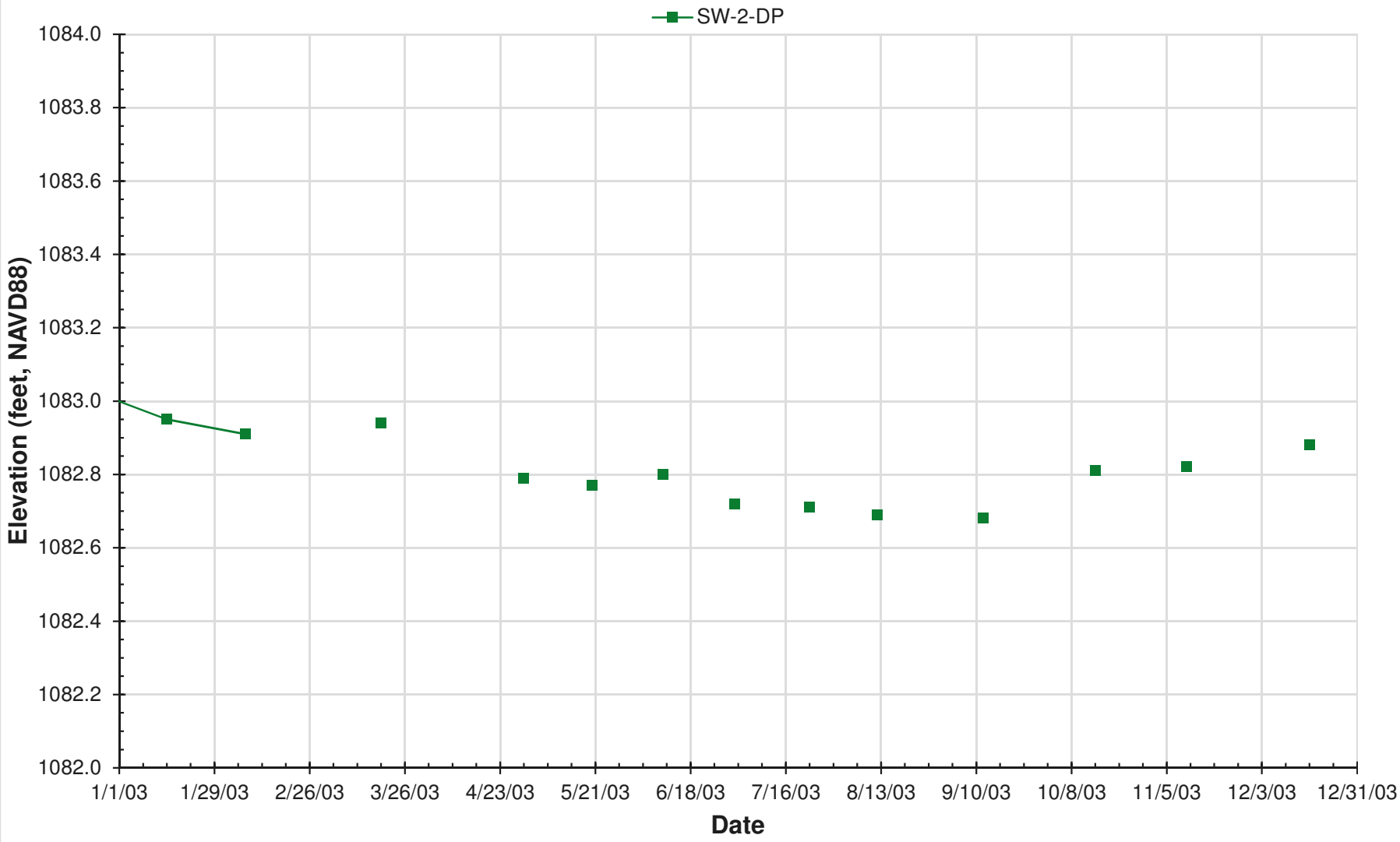


Figure 3-22. 2003 time series plot of water levels in monitoring well SW-3-DP White Pine Springs, Evart, Michigan.

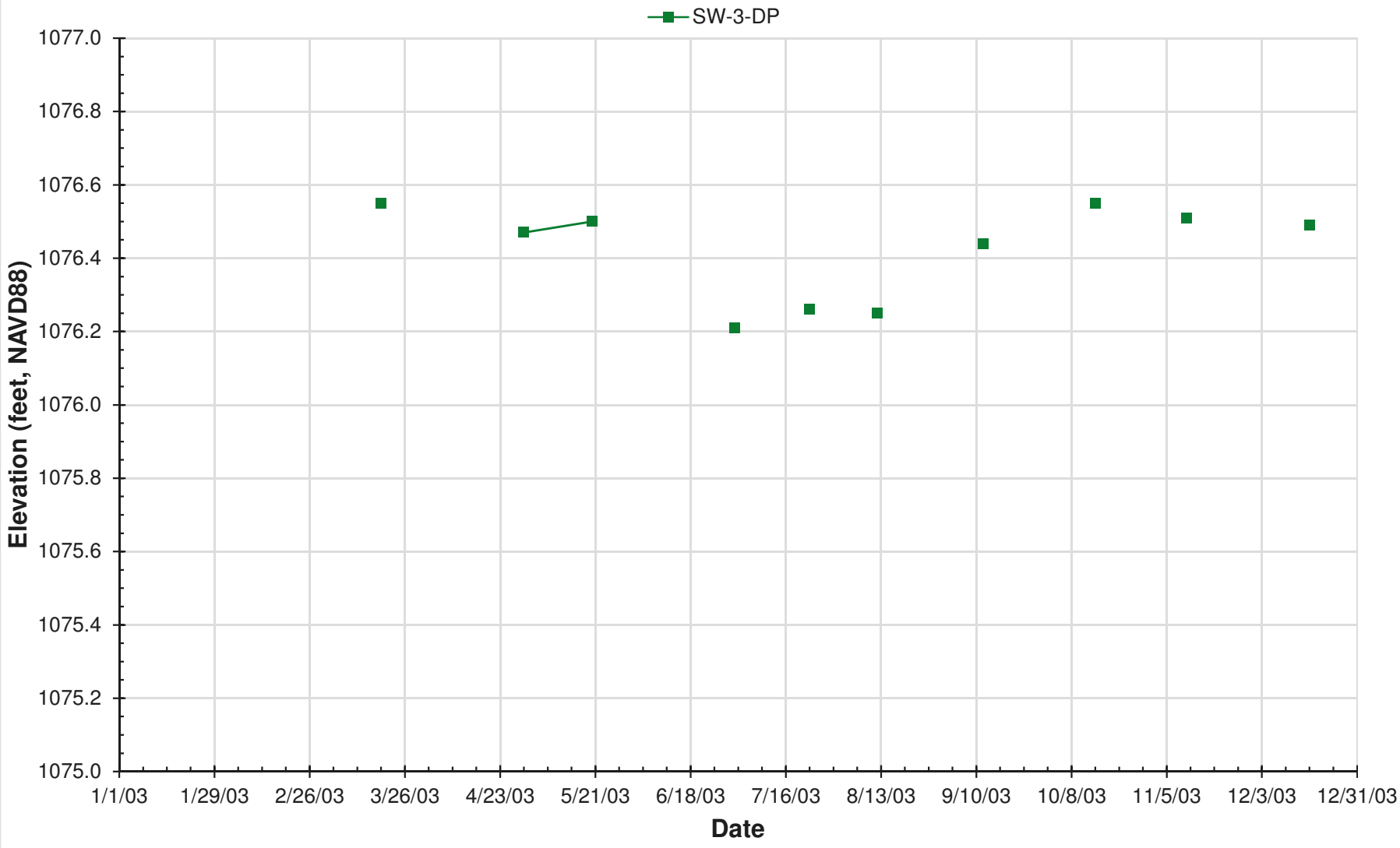


Figure 3-23. 2003 time series plot of water levels in monitoring well SW-6-DP White Pine Springs, Evart, Michigan.

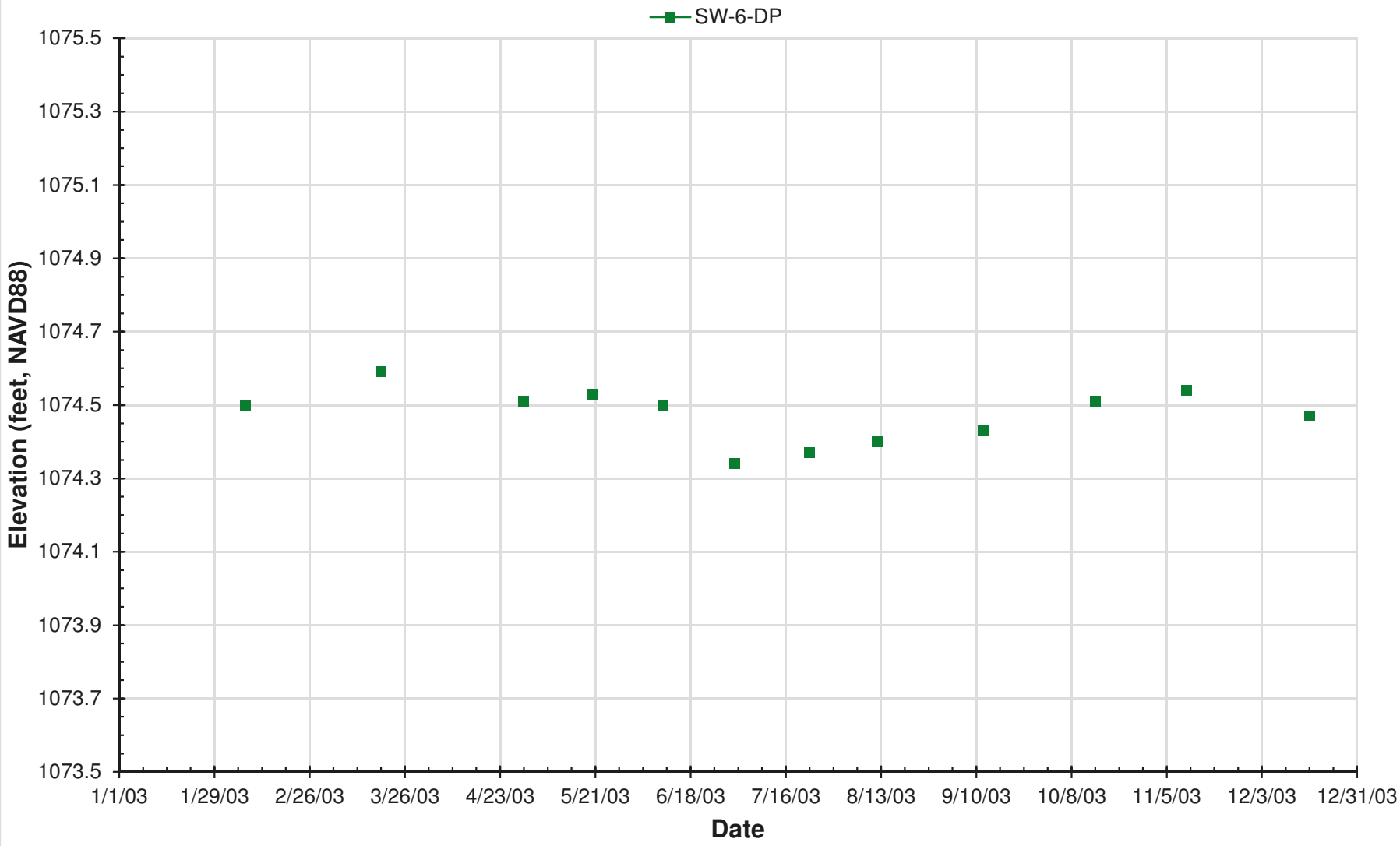


Figure 3-24. 2003 time series plot of water levels in monitoring well SW-11-DP White Pine Springs, Evart, Michigan.

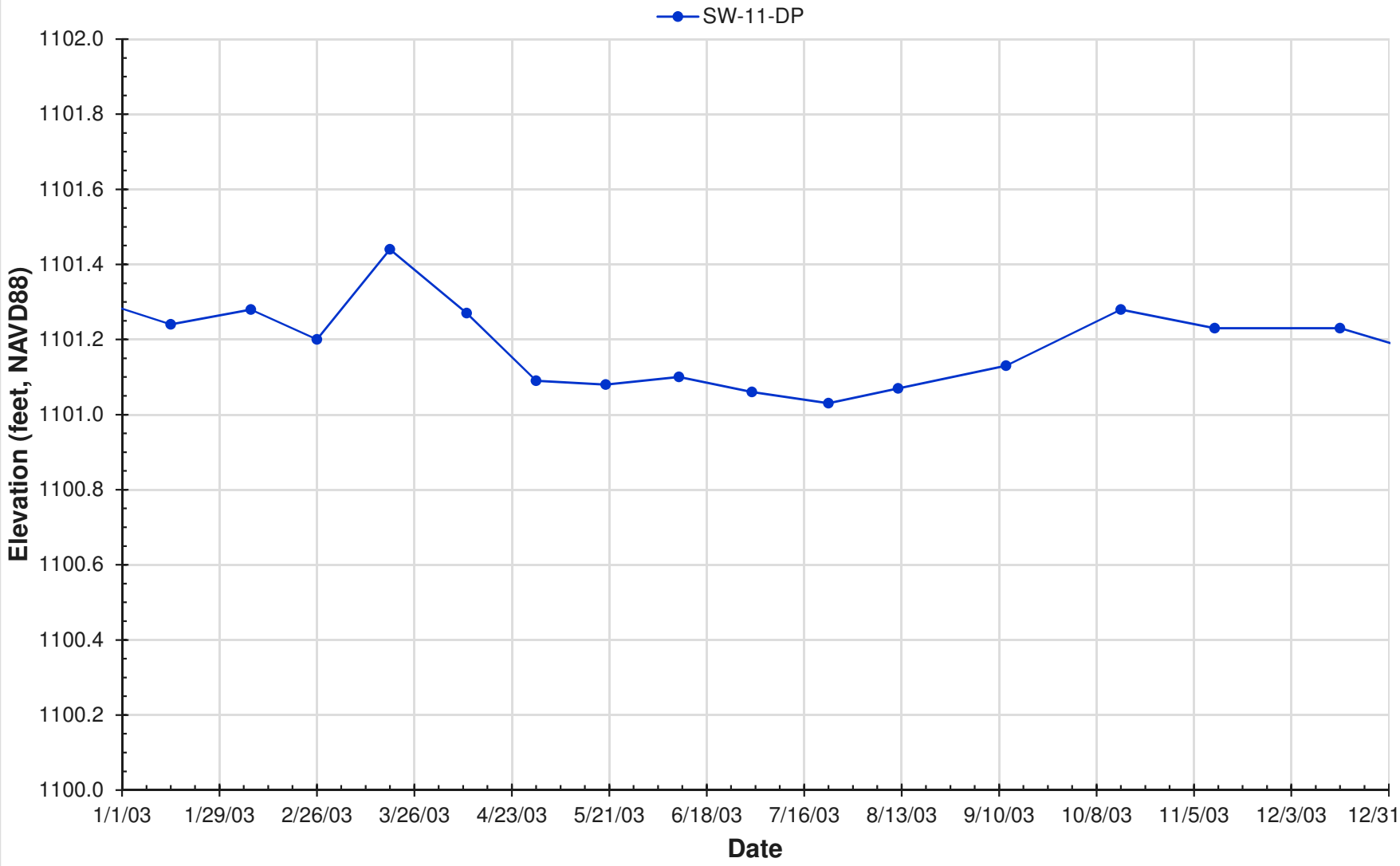


Figure 3-25. 2003 time series plot of water levels in monitoring well SW-14-DP White Pine Springs, Evart, Michigan.

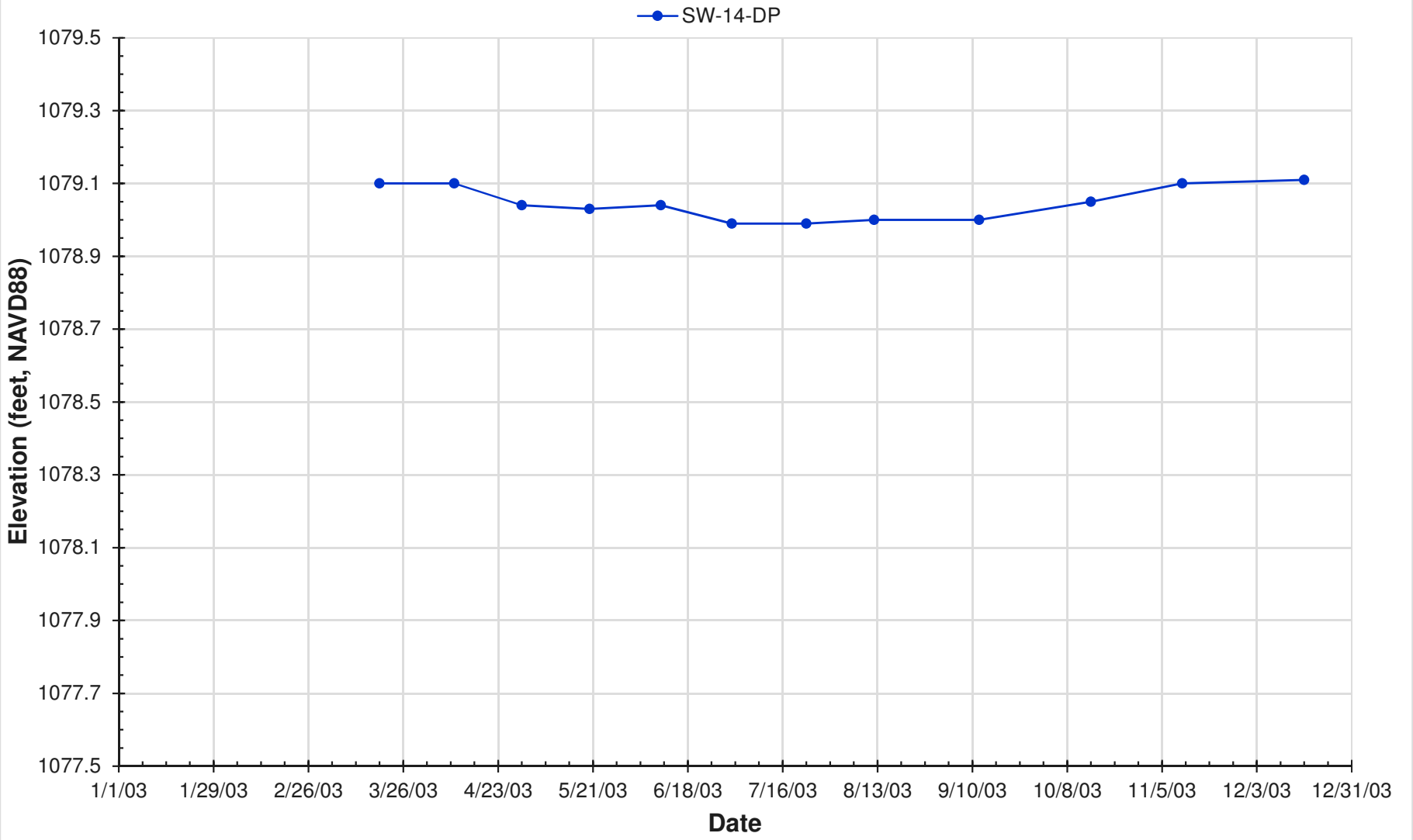


Figure 3-26. 2003 time series plot of water levels in monitoring well DP-8 White Pine Springs, Evart, Michigan.

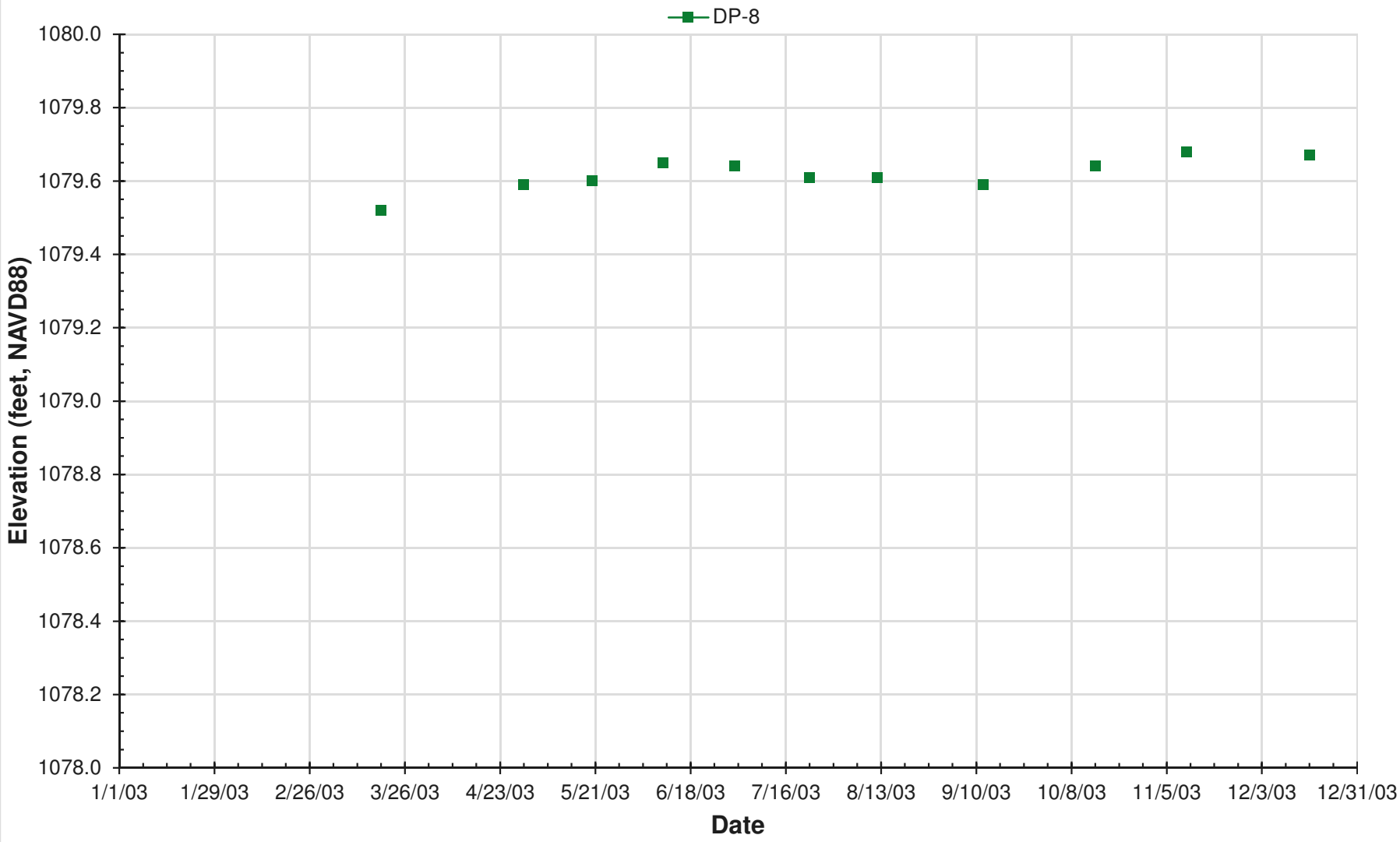


Figure 3-27. 2003 time series plot of water levels in monitoring wells DP-5, DP-6, DP-7 and SW-8-DP White Pine Springs, Evart, Michigan.

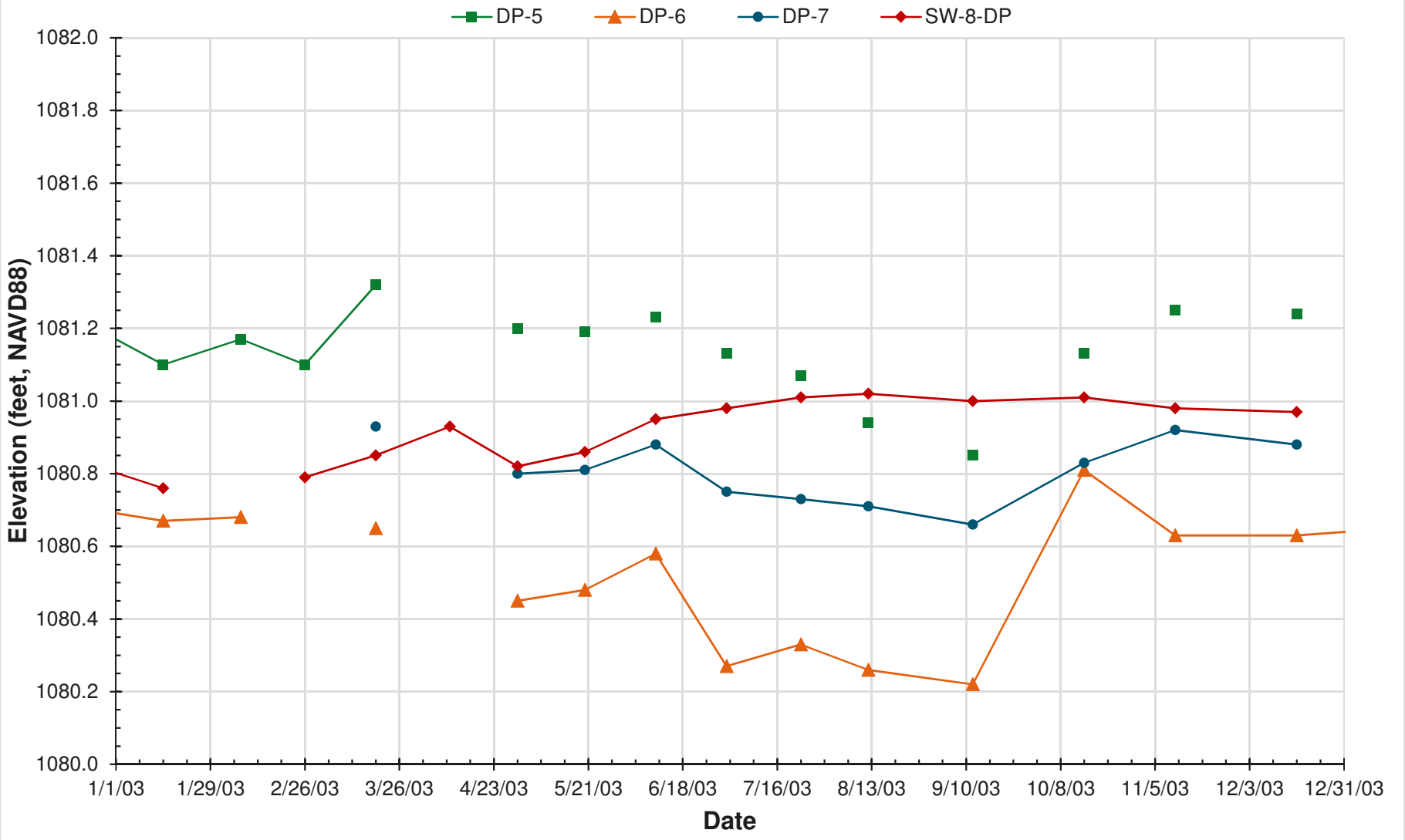


Figure 3-27. 2004 time series plot of water levels in monitoring wells DP-5, DP-6, DP-7 and SW-8-DP White Pine Springs, Evart, Michigan.

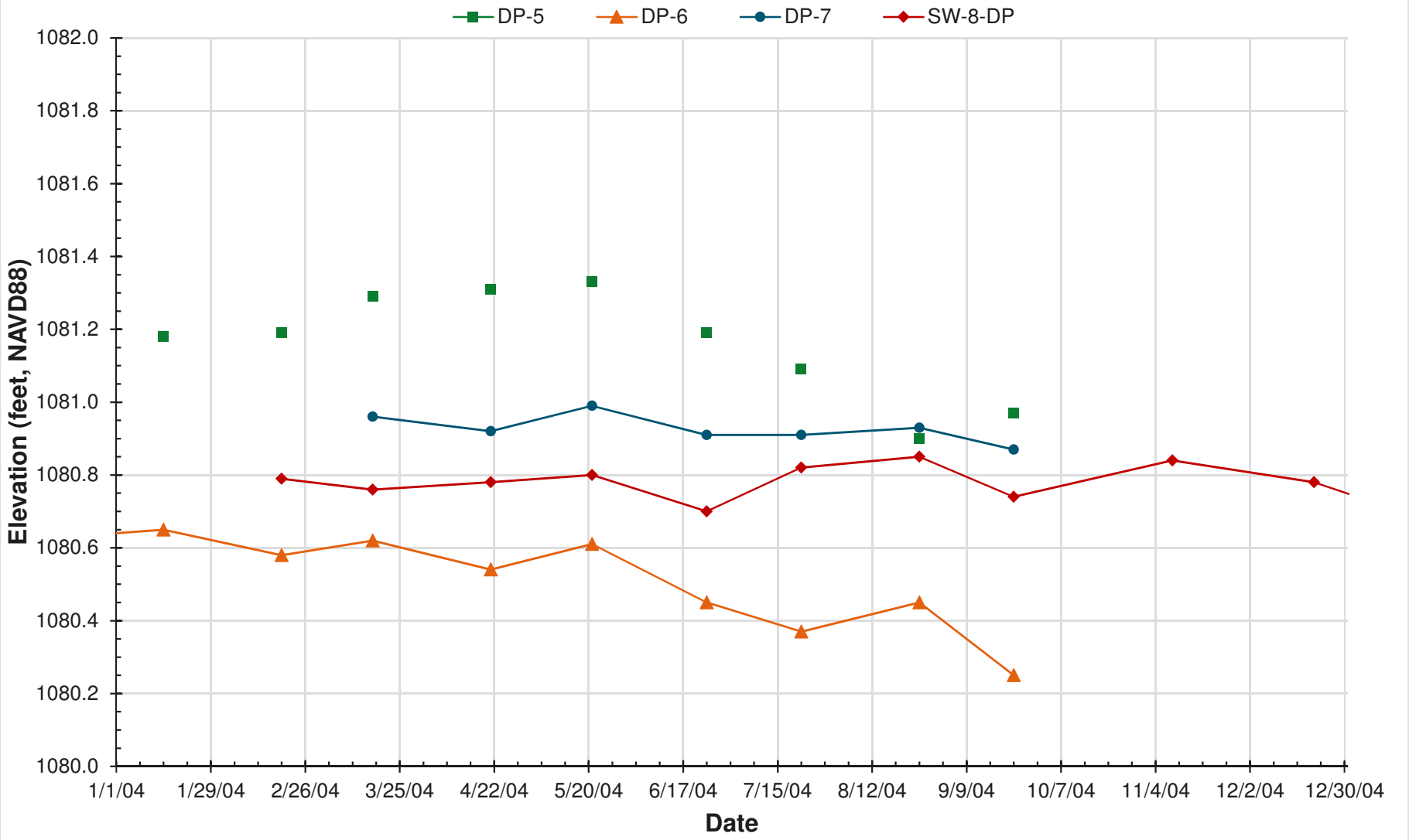


Figure 3-28. 2003 time series plot of water levels in monitoring wells Seep-4, DP-1, DP-2 and DP-3 White Pine Springs, Evart, Michigan.

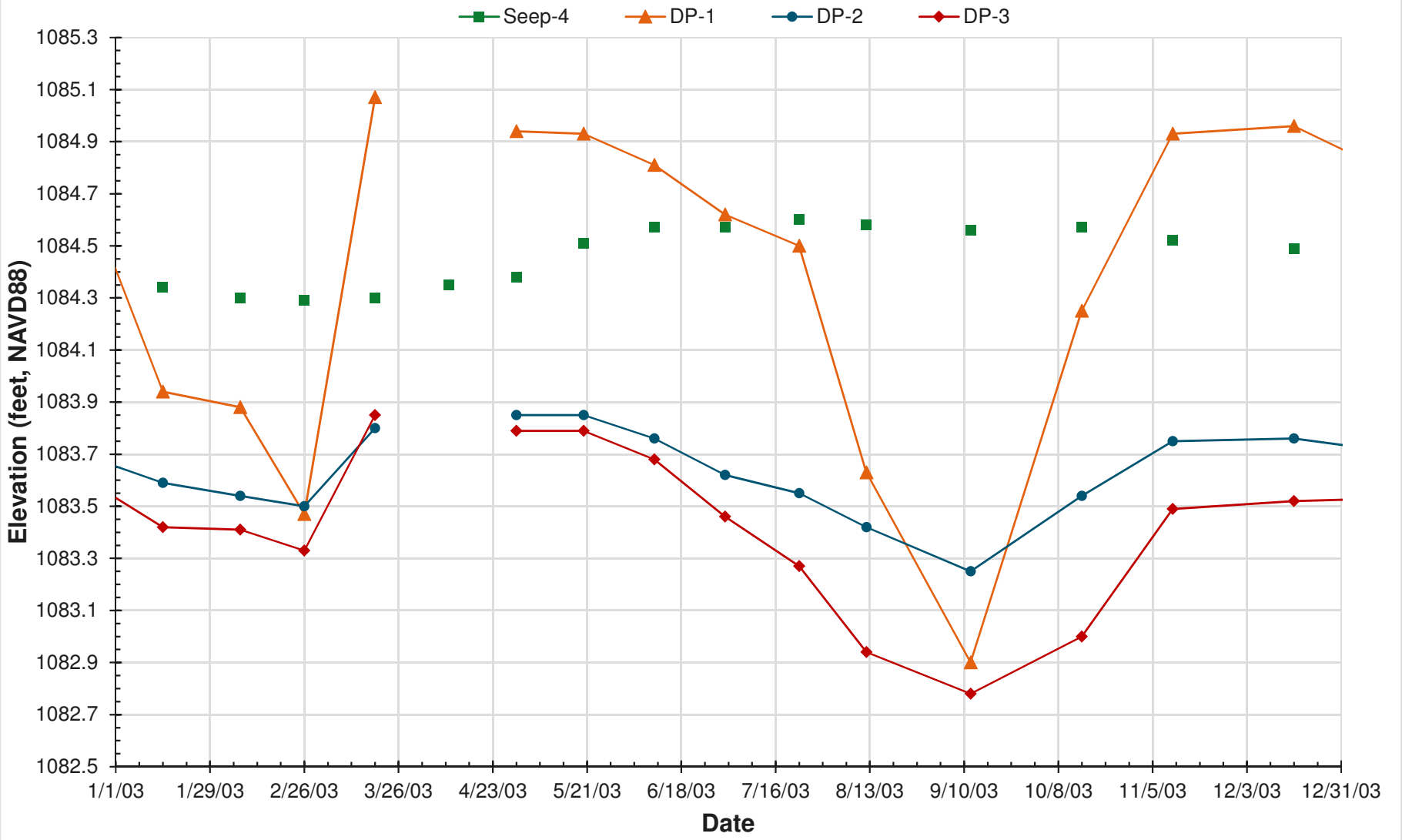


Figure 3-28. 2004 time series plot of water levels in monitoring wells Seep-4, DP-1, DP-2 and DP-3 White Pine Springs, Evart, Michigan.

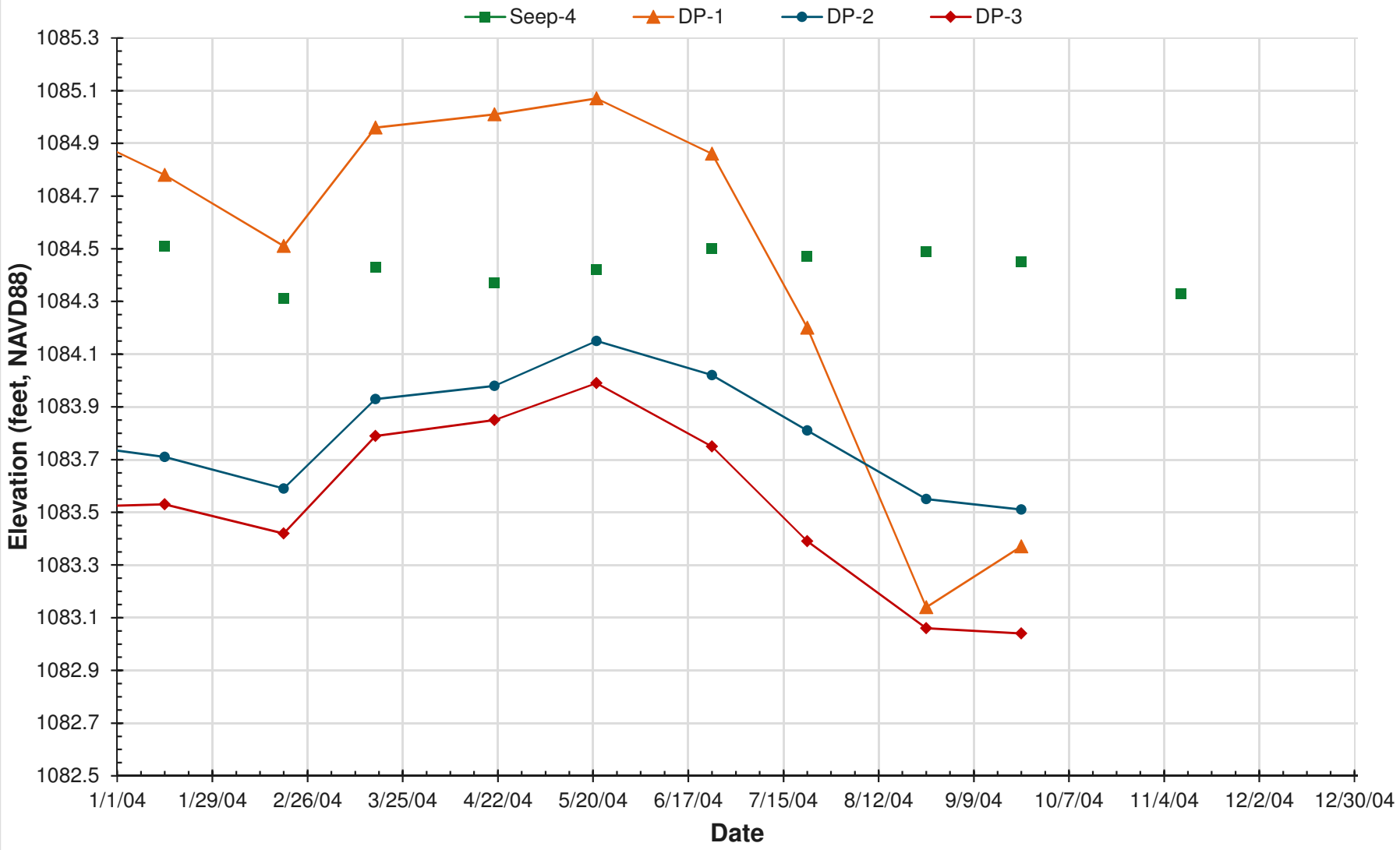


Figure 3-29. 2003 time series plot of water levels in monitoring wells Seep-2, Seep-3 and SW-2-DP White Pine Springs, Evart, Michigan.

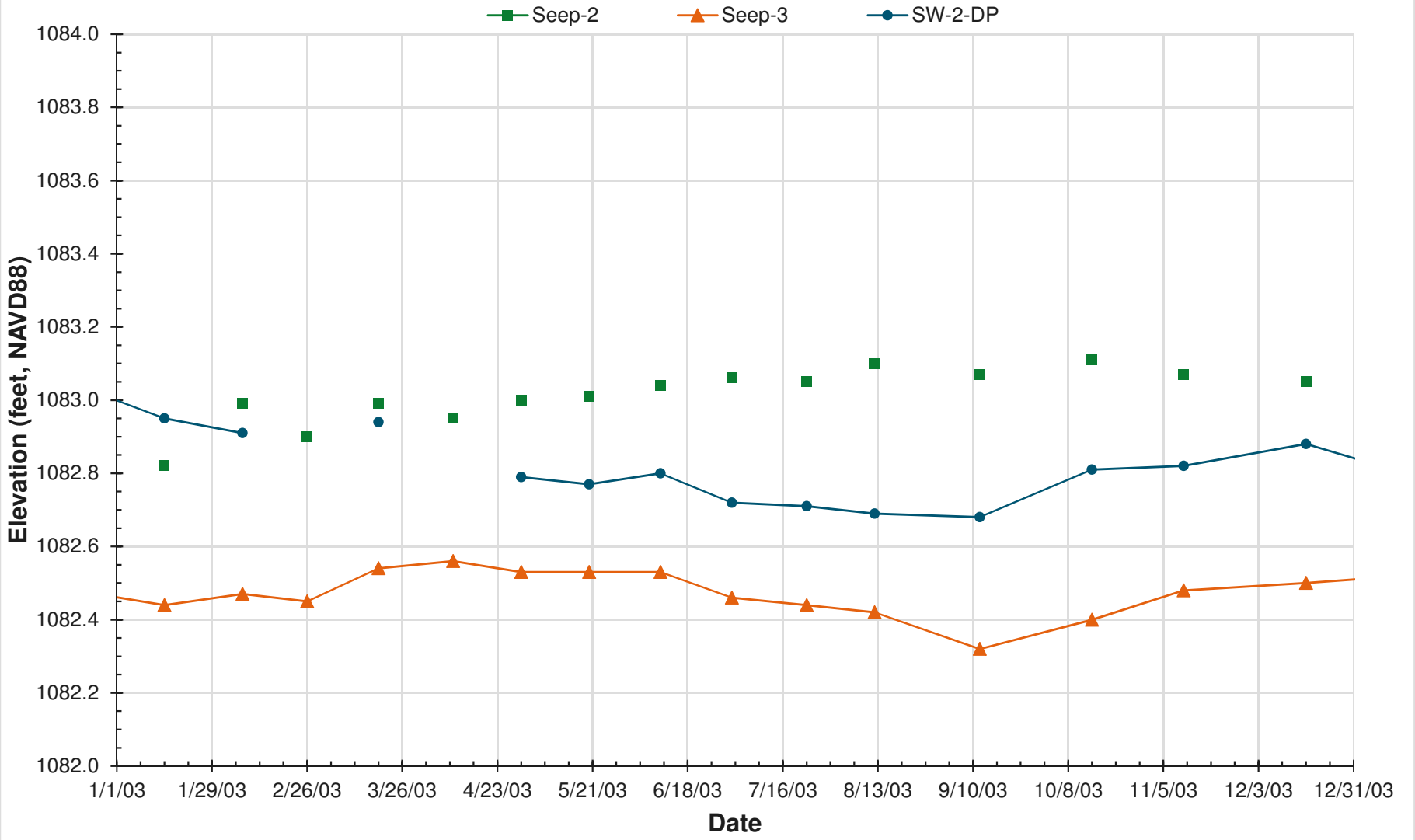


Figure 3-30. 2007 time series plot of water levels in monitoring well SW-1-DP White Pine Springs, Evart, Michigan.

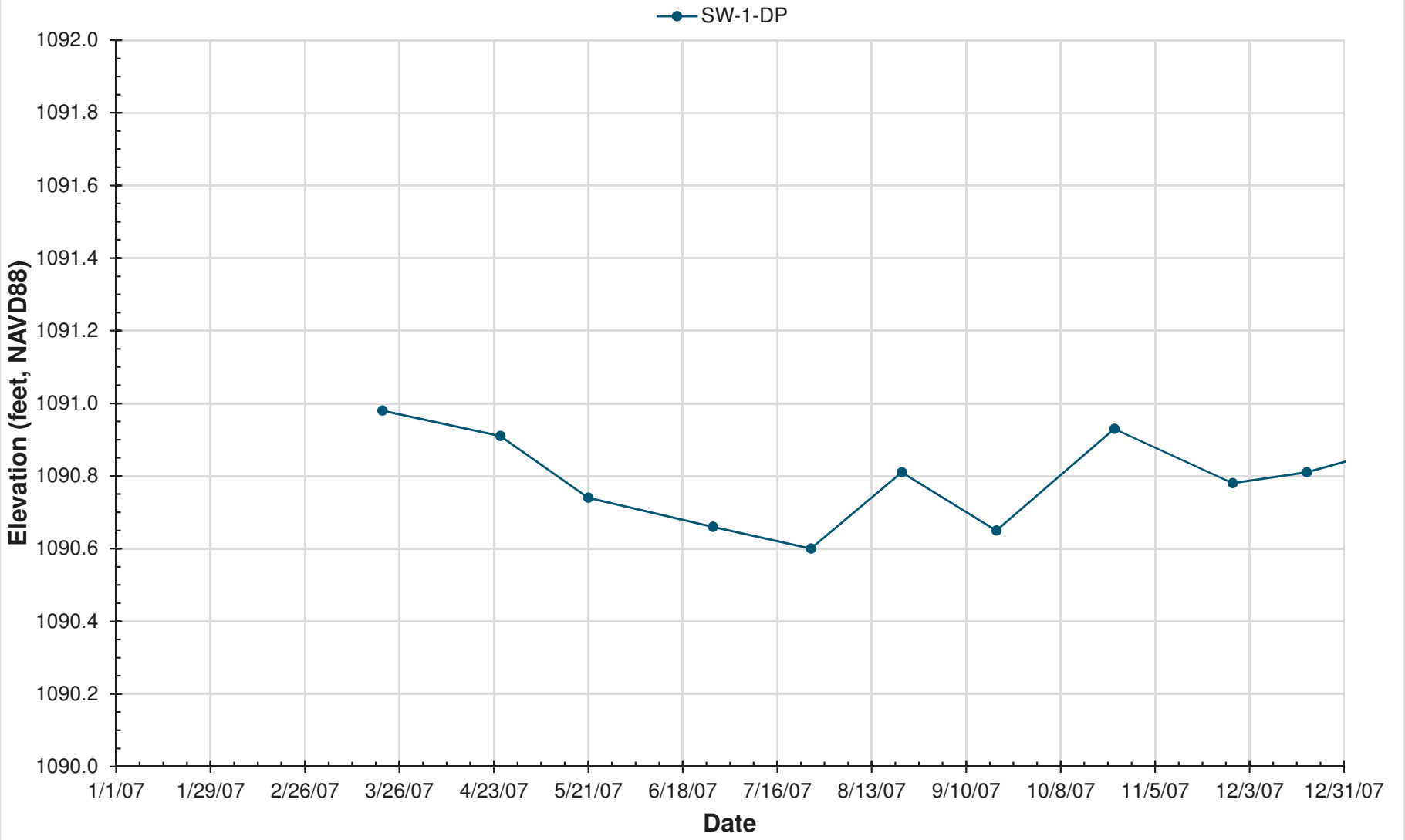


Figure 3-31. 2007 time series plot of water levels in monitoring well SW-11-DP White Pine Springs, Evart, Michigan.

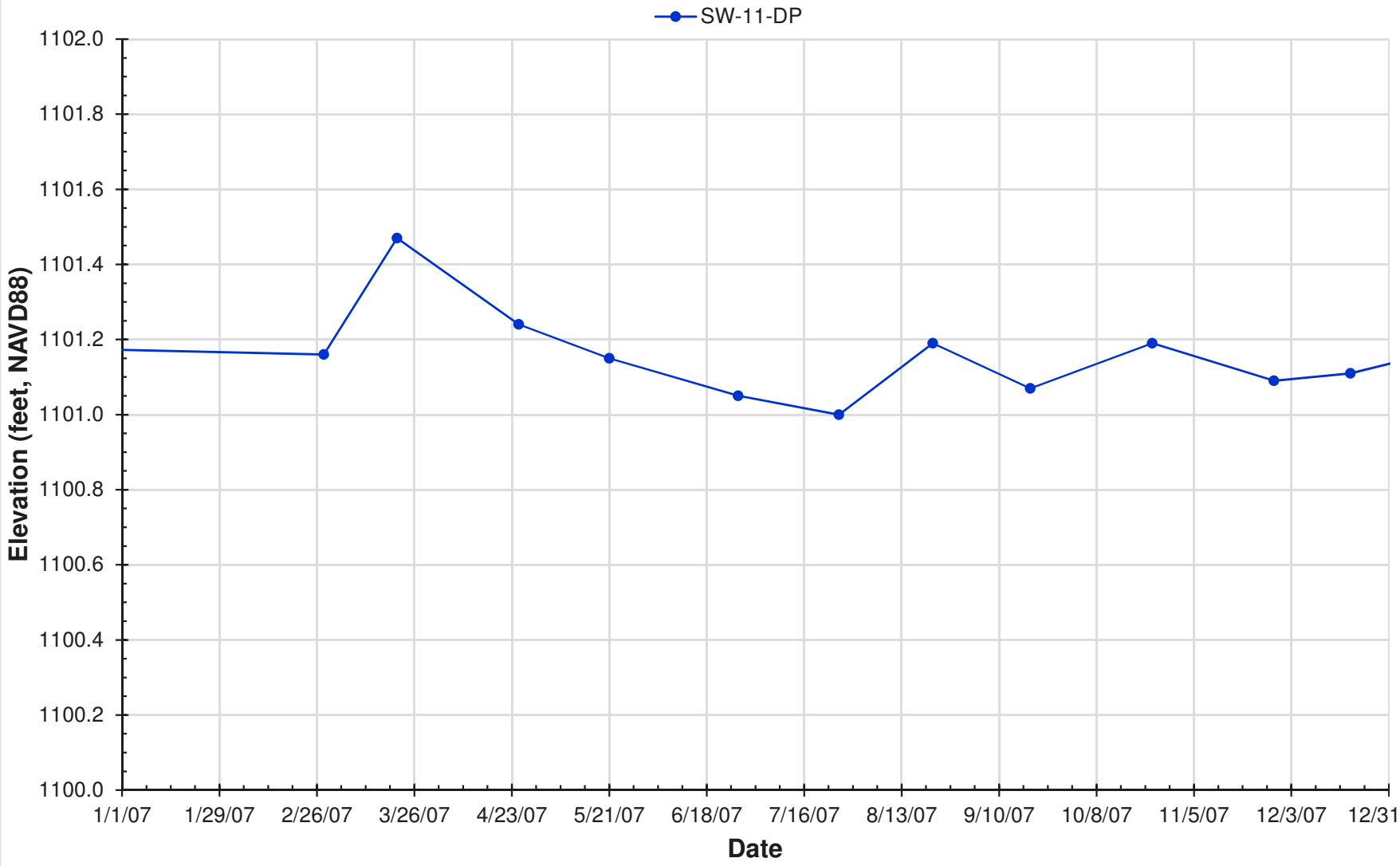


Figure 3-32. 2007 time series plot of water levels in monitoring wells DP-5, SW-8-DP and DP-6 White Pine Springs, Evart, Michigan.

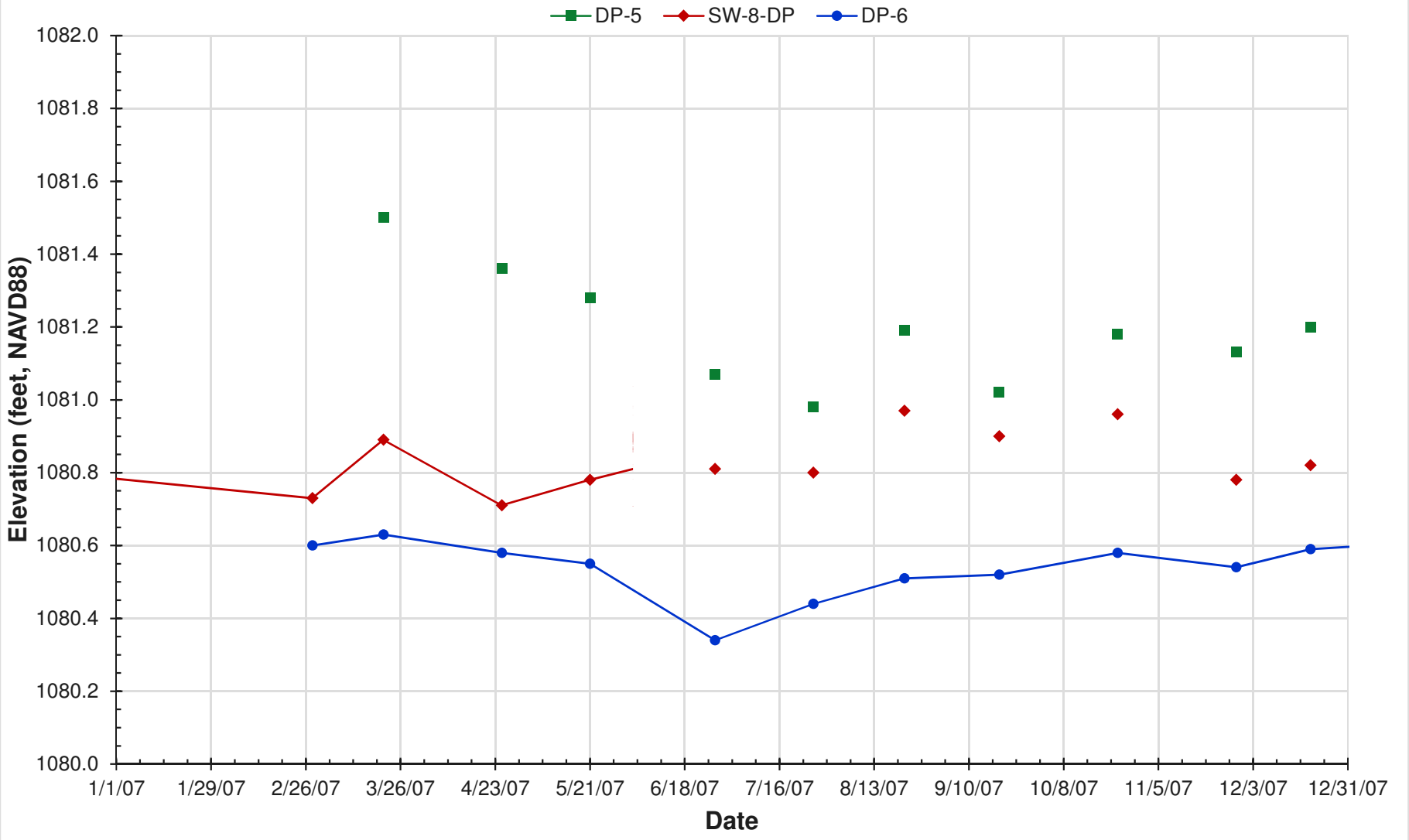


Figure 3-33. 2007 time series plot of water levels in monitoring wells Seep-4 and DP-3 White Pine Springs, Evart, Michigan.

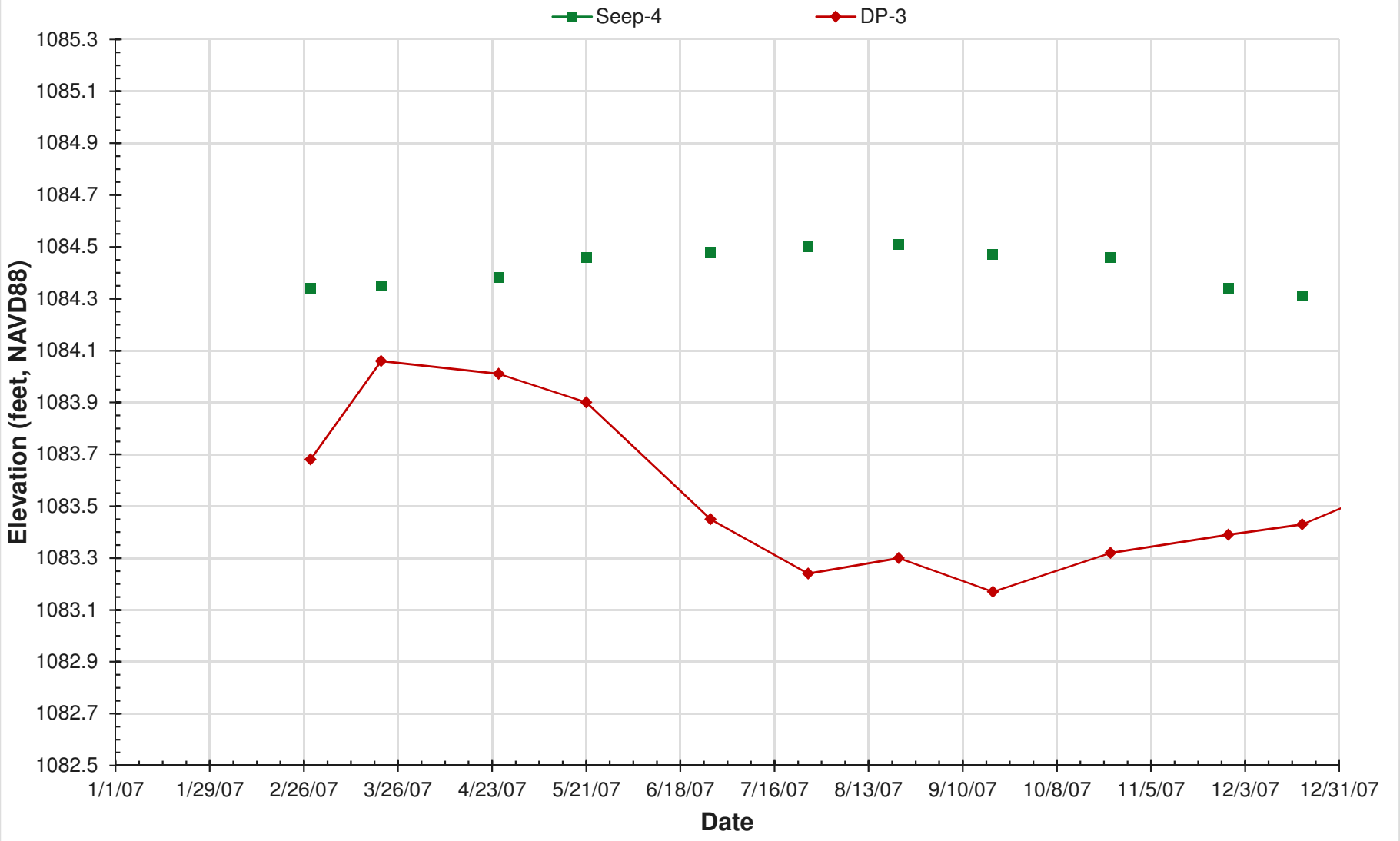


Figure 3-34. 2007 time series plot of water levels in monitoring wells Seep-2 and Seep-3 White Pine Springs, Evart, Michigan.

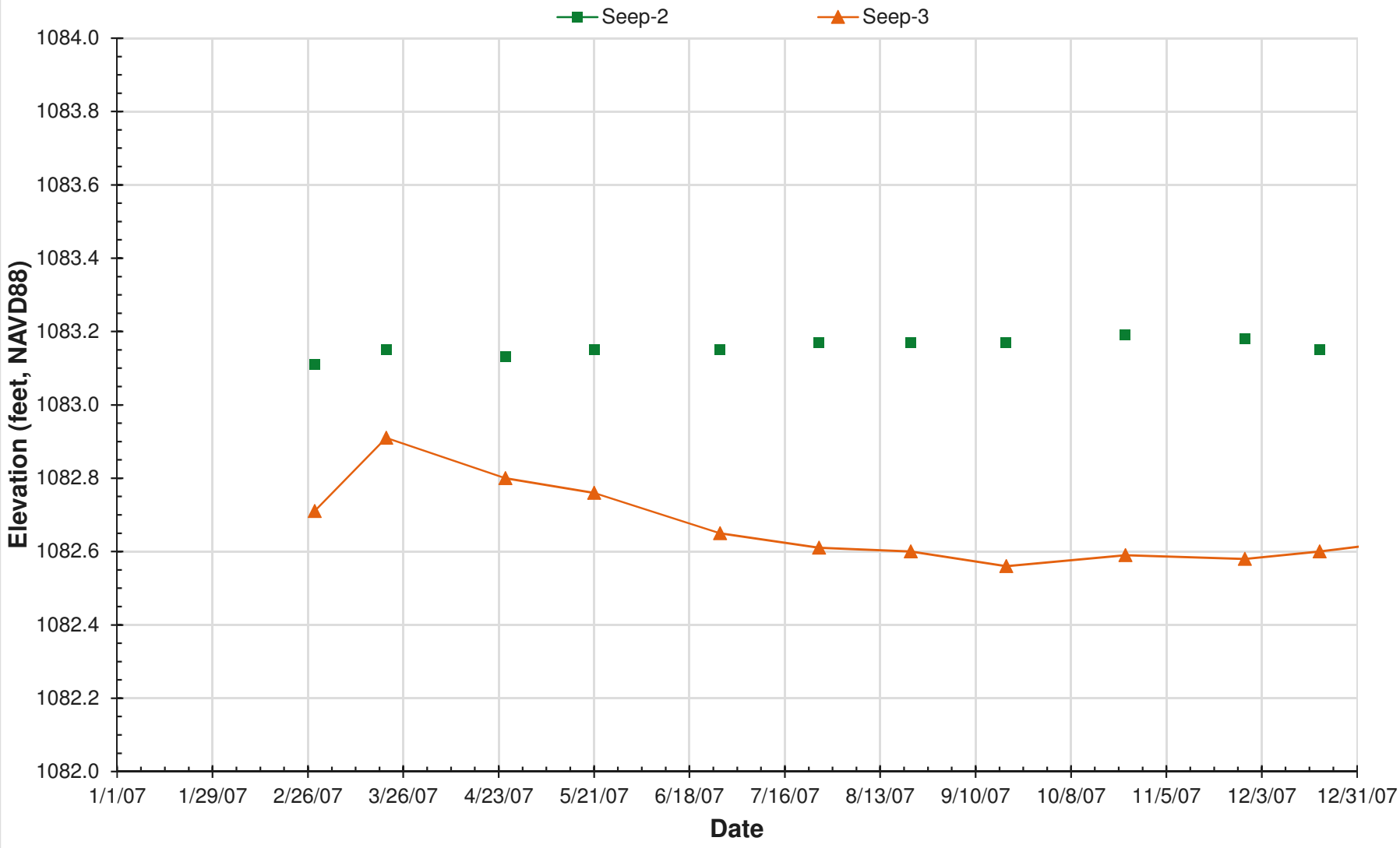


Figure 3-35. 2008 time series plot of water levels in monitoring well SW-1-DP White Pine Springs, Evart, Michigan.

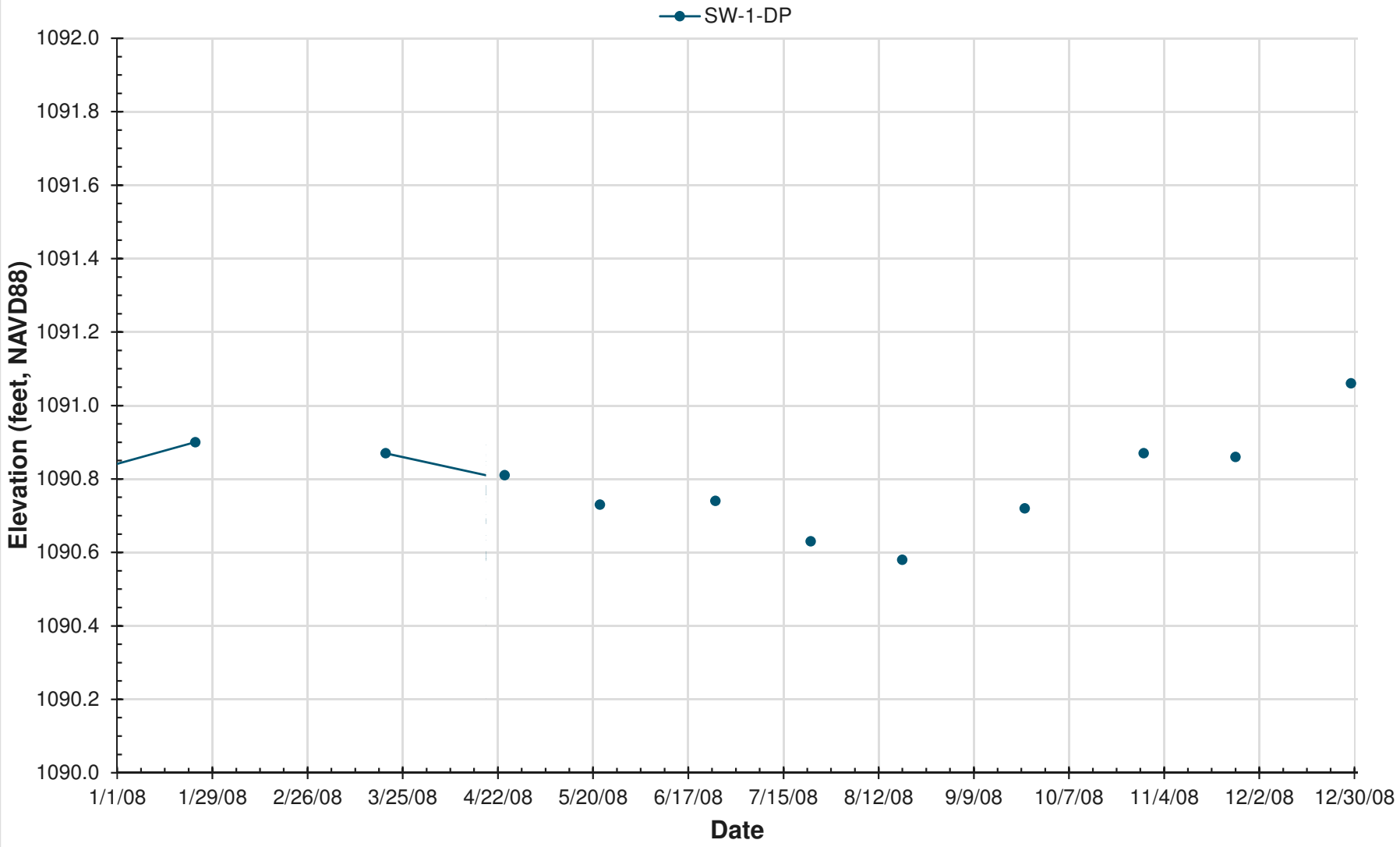


Figure 3-36. 2008 time series plot of water levels in monitoring well SW-11-DP White Pine Springs, Evart, Michigan.

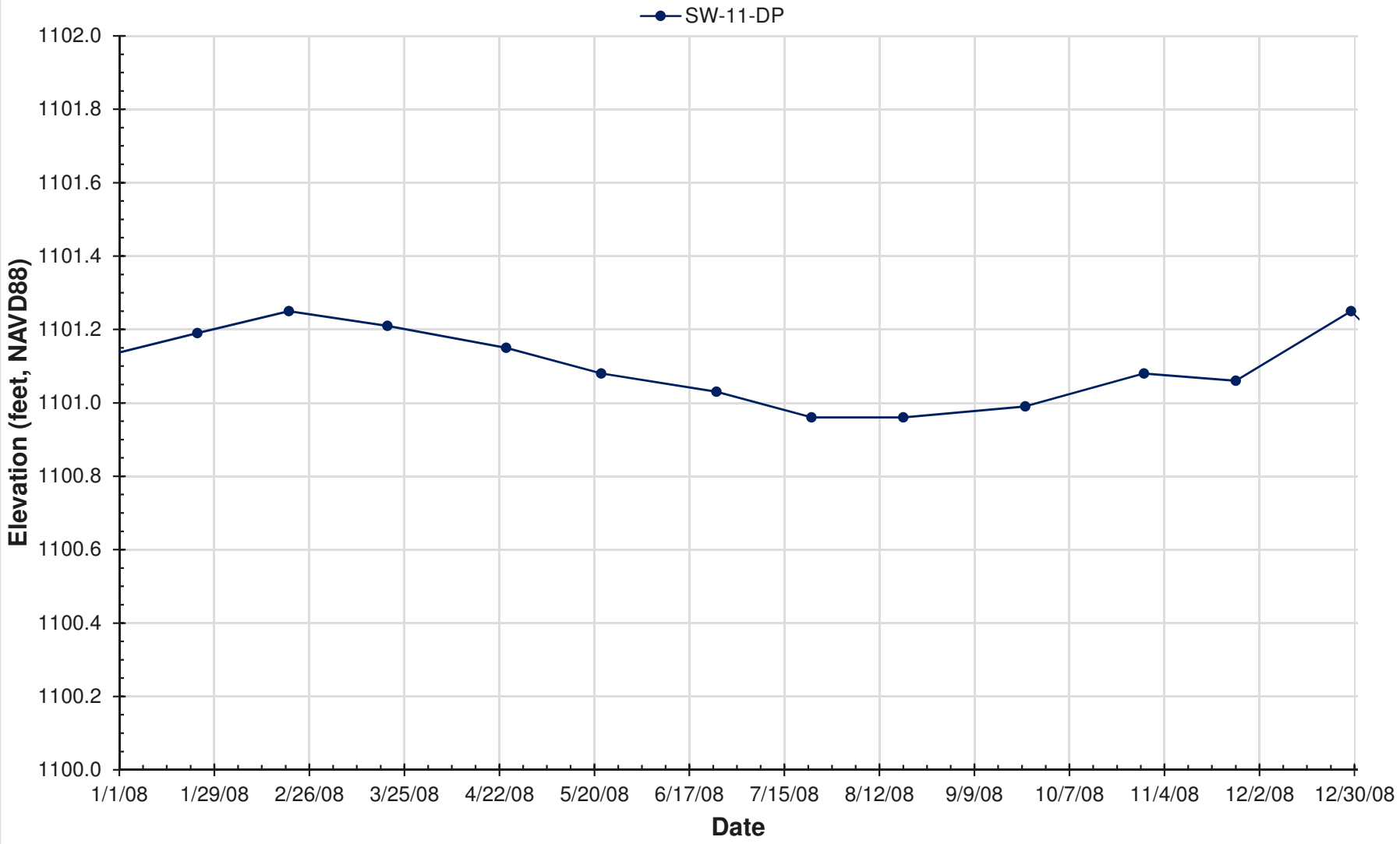


Figure 3-37. 2008 time series plot of water levels in monitoring wells DP-5, SW-8-DP and DP-6 White Pine Springs, Evart, Michigan.

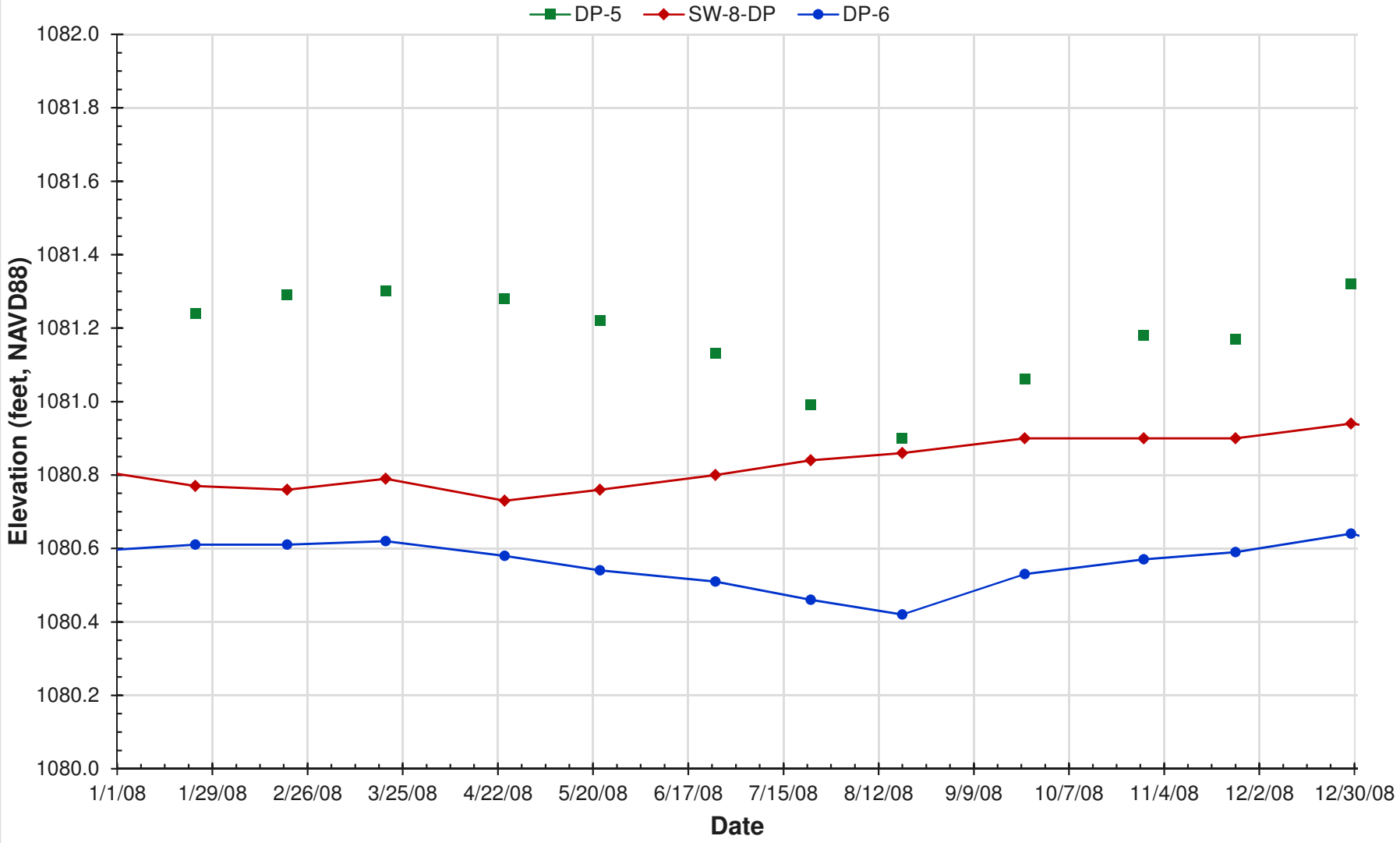


Figure 3-38. 2008 time series plot of water levels in monitoring wells Seep-4 and DP-3 White Pine Springs, Evart, Michigan.

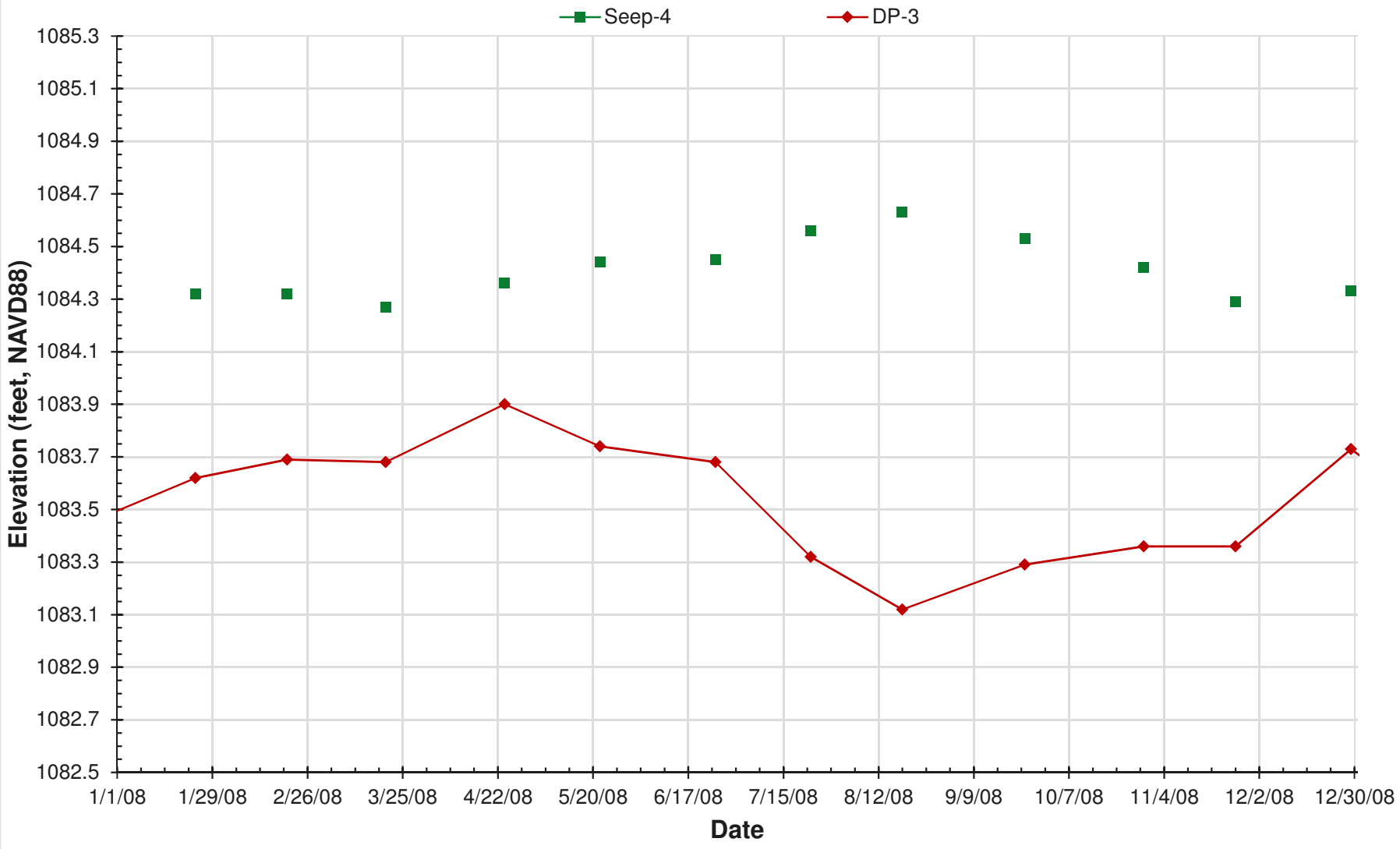


Figure 3-39. 2008 time series plot of water levels in monitoring wells Seep-2 and Seep-3 White Pine Springs, Evart, Michigan.

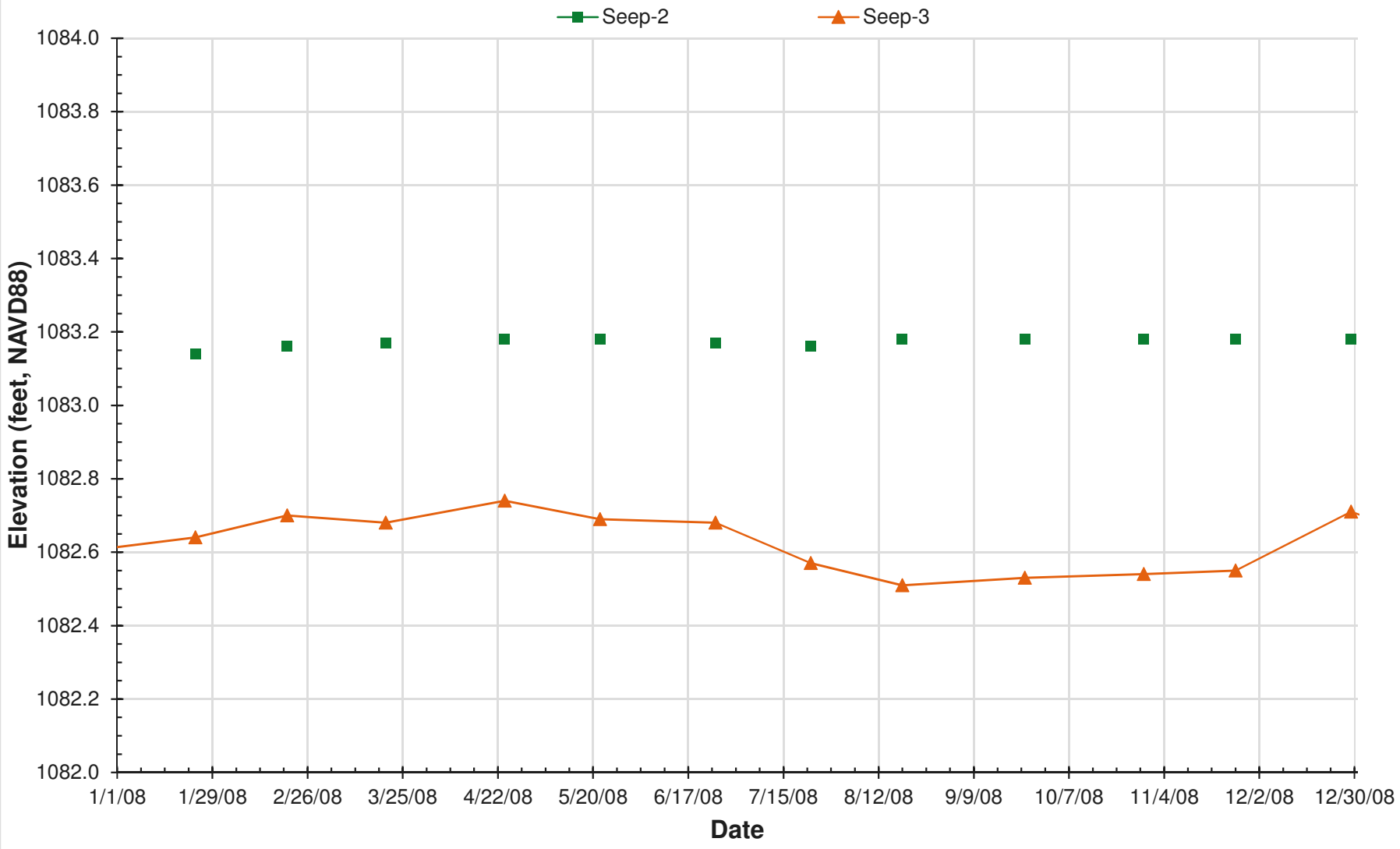


Figure 3-40. 2009 time series plot of water levels in monitoring well SW-1-DP White Pine Springs, Evart, Michigan.

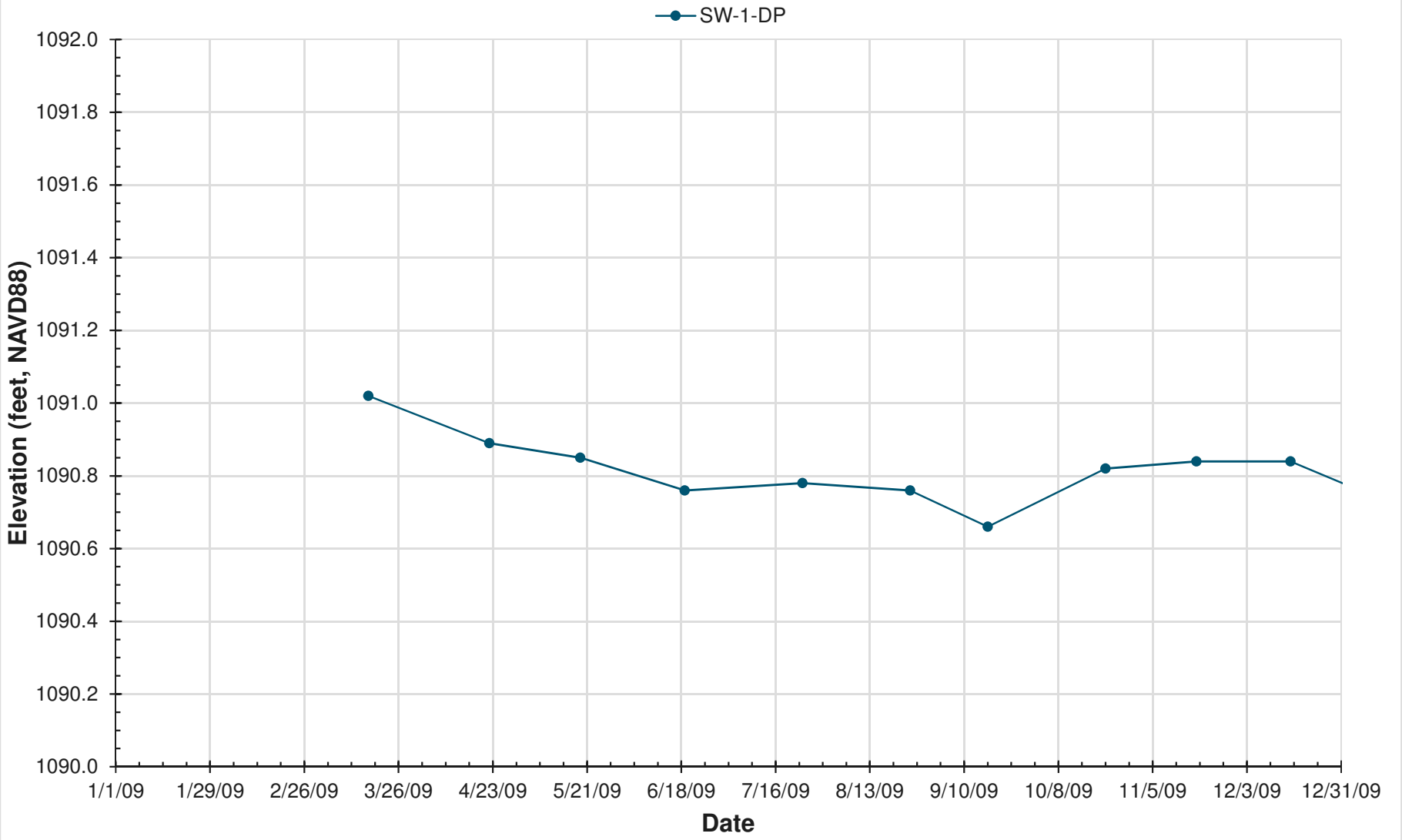


Figure 3-41. 2009 time series plot of water levels in monitoring well SW-11-DP White Pine Springs, Evart, Michigan.

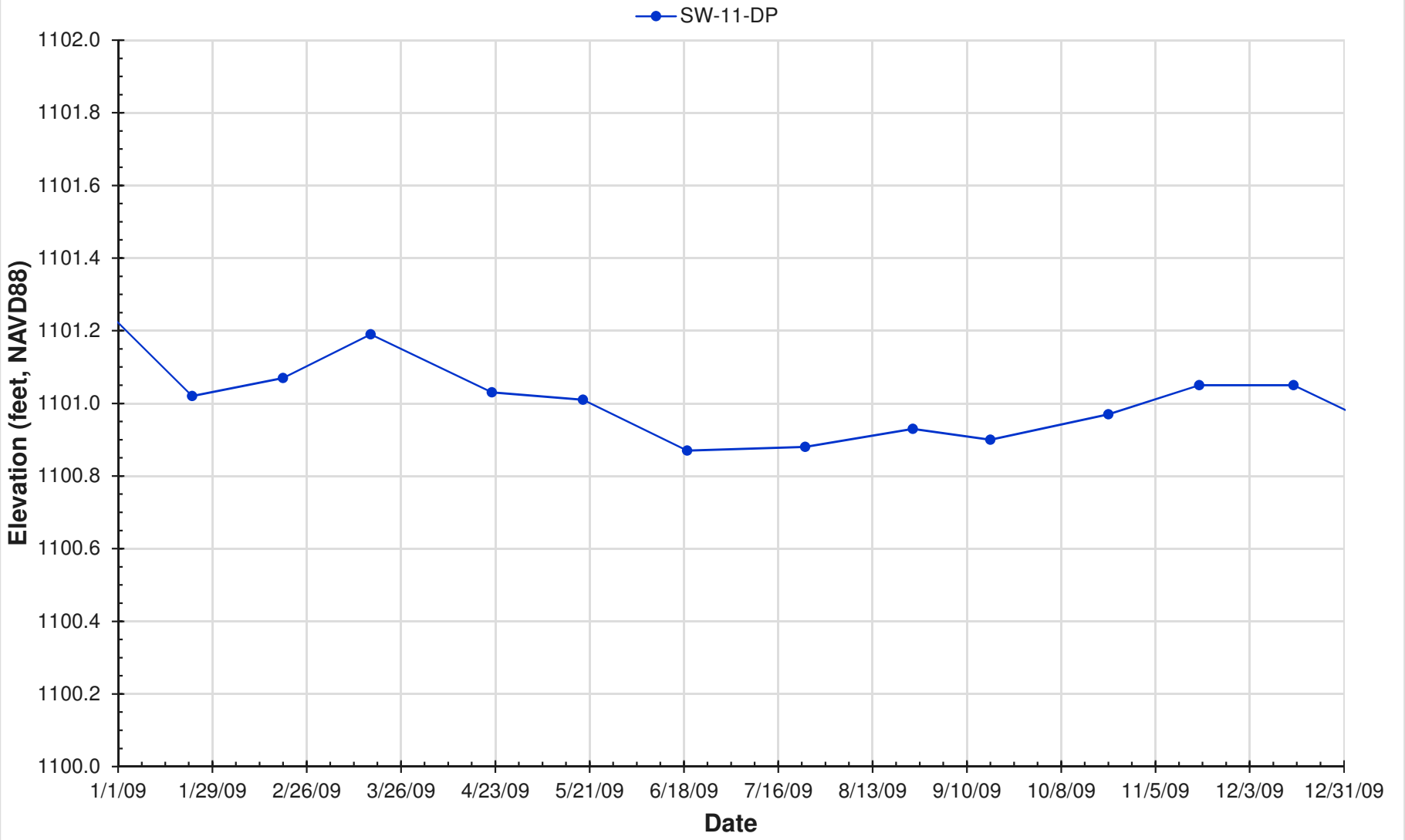


Figure 3-42. 2009 time series plot of water levels in monitoring wells DP-5 and SW-8-DP White Pine Springs, Evart, Michigan.

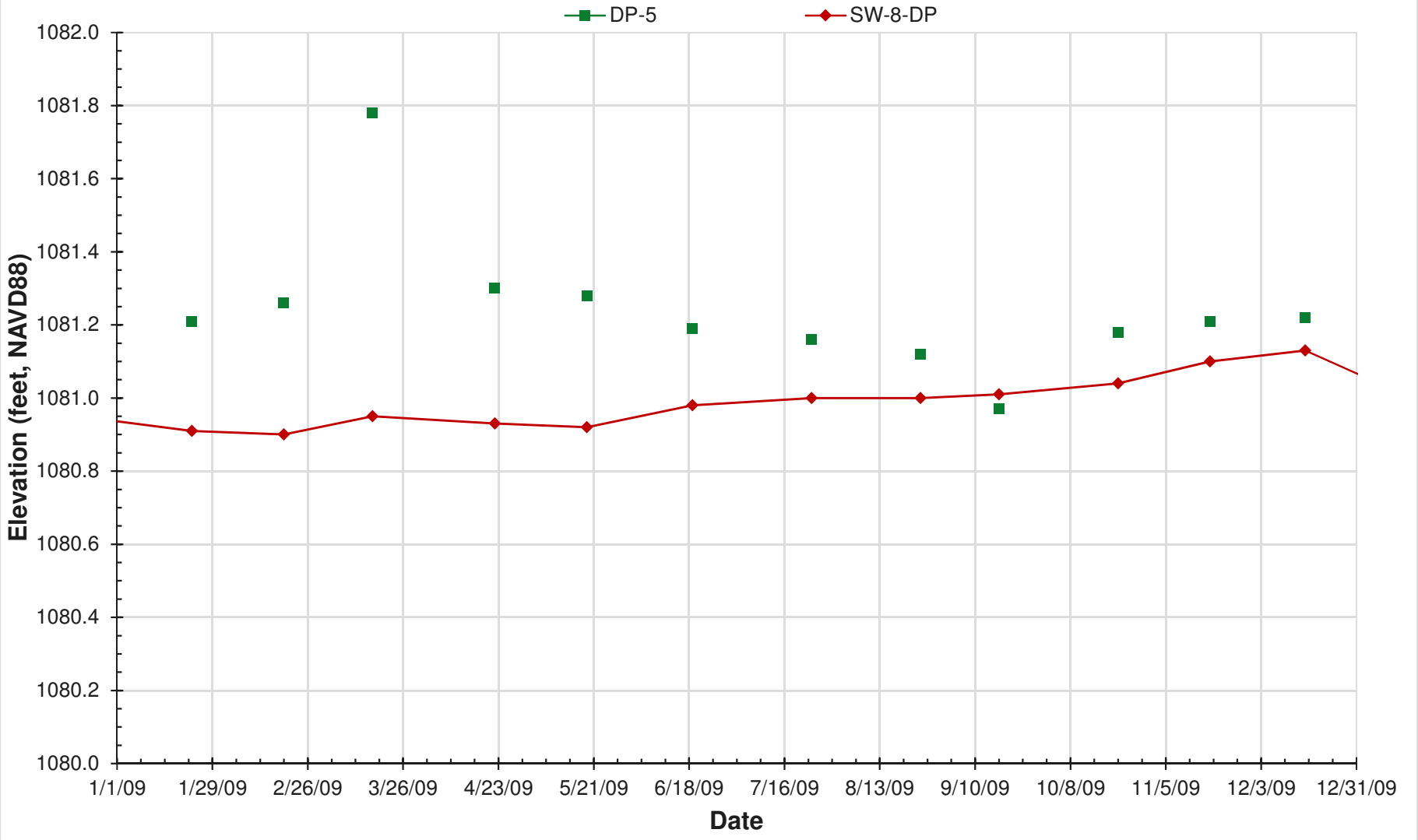


Figure 3-43. 2009 time series plot of water levels in monitoring wells Seep-4 and DP-3 White Pine Springs, Evart, Michigan.

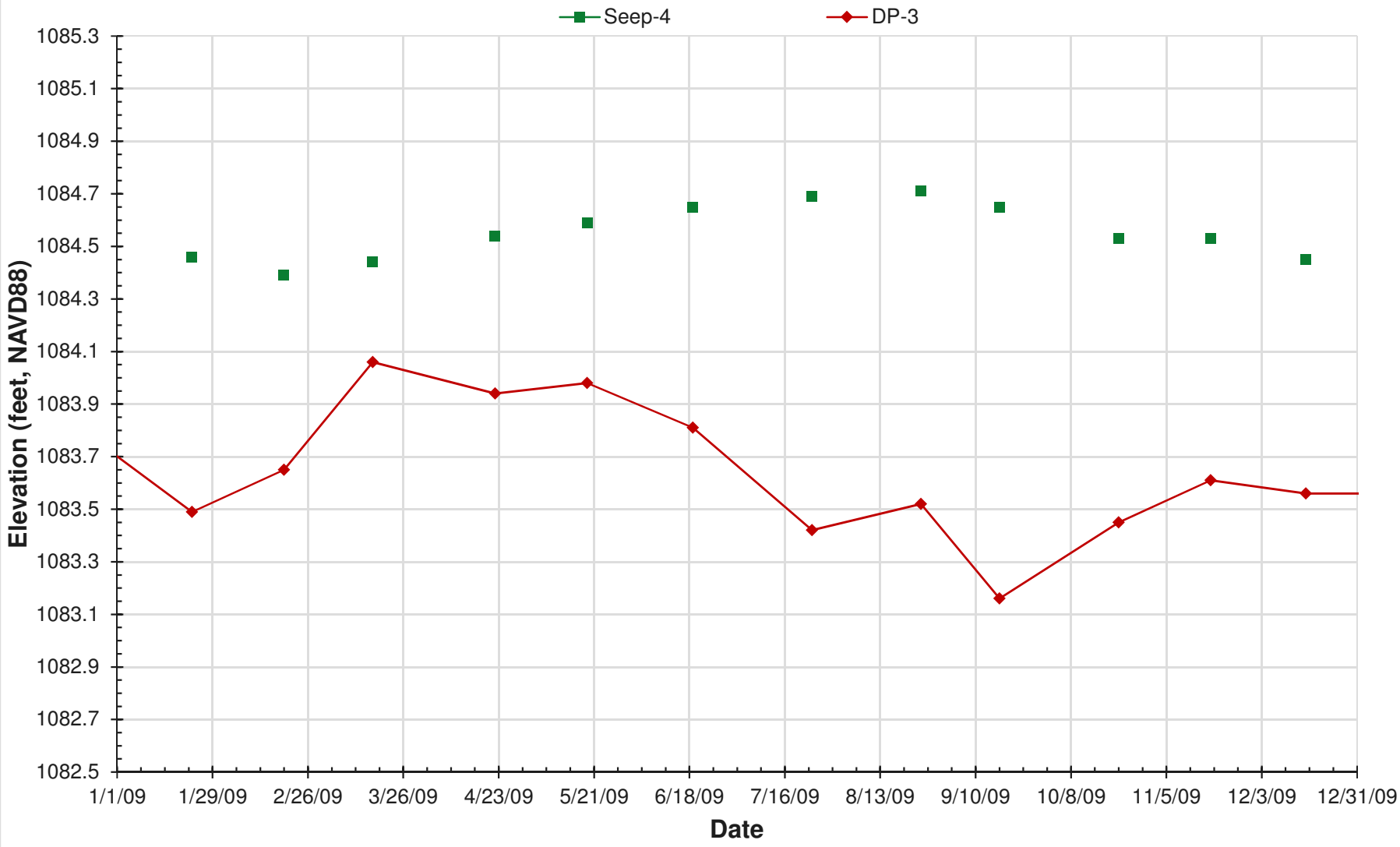


Figure 3-44. 2009 time series plot of water levels in monitoring wells Seep-2 and Seep-3 White Pine Springs, Evart, Michigan.

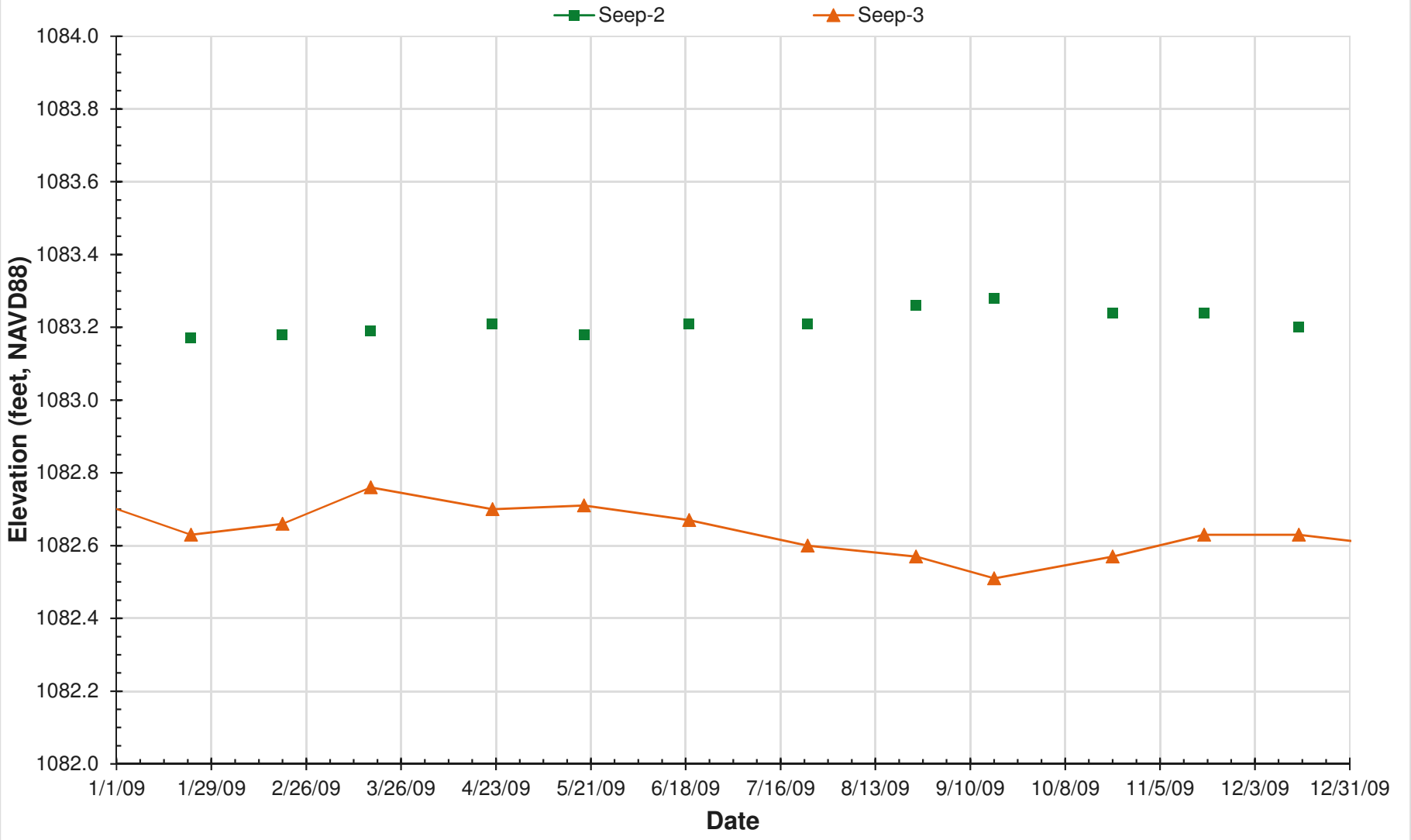


Figure 3-45. Mean monthly water levels in monitoring wells Vent-1r and SW-1-DP (Wetland R) and Seep-5 (Wetland A), White Pine Springs, Evart, Michigan.

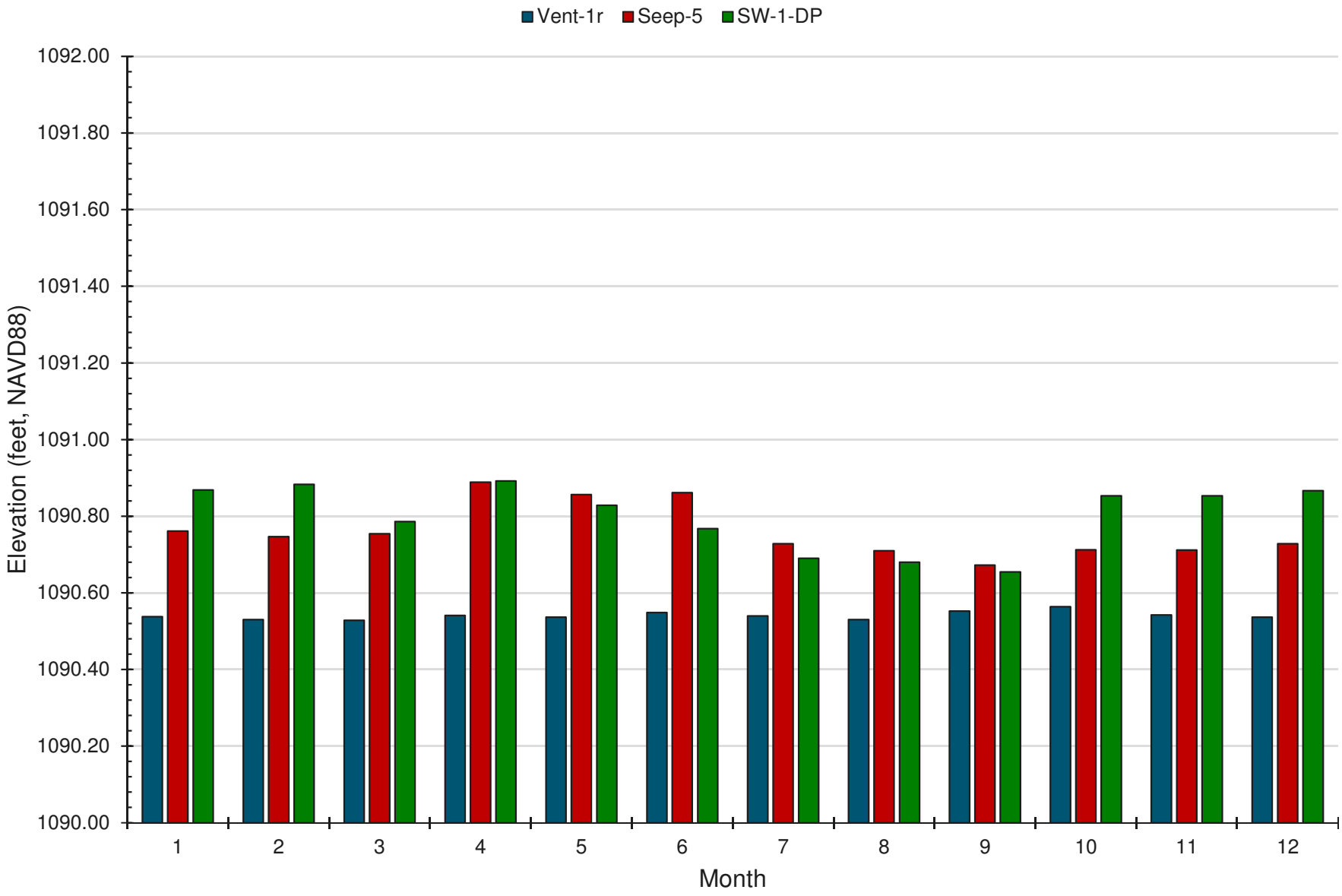


Figure 3-46. Mean monthly water levels in monitoring well Seep-6 (Wetland R), White Pine Springs, Evart, Michigan.

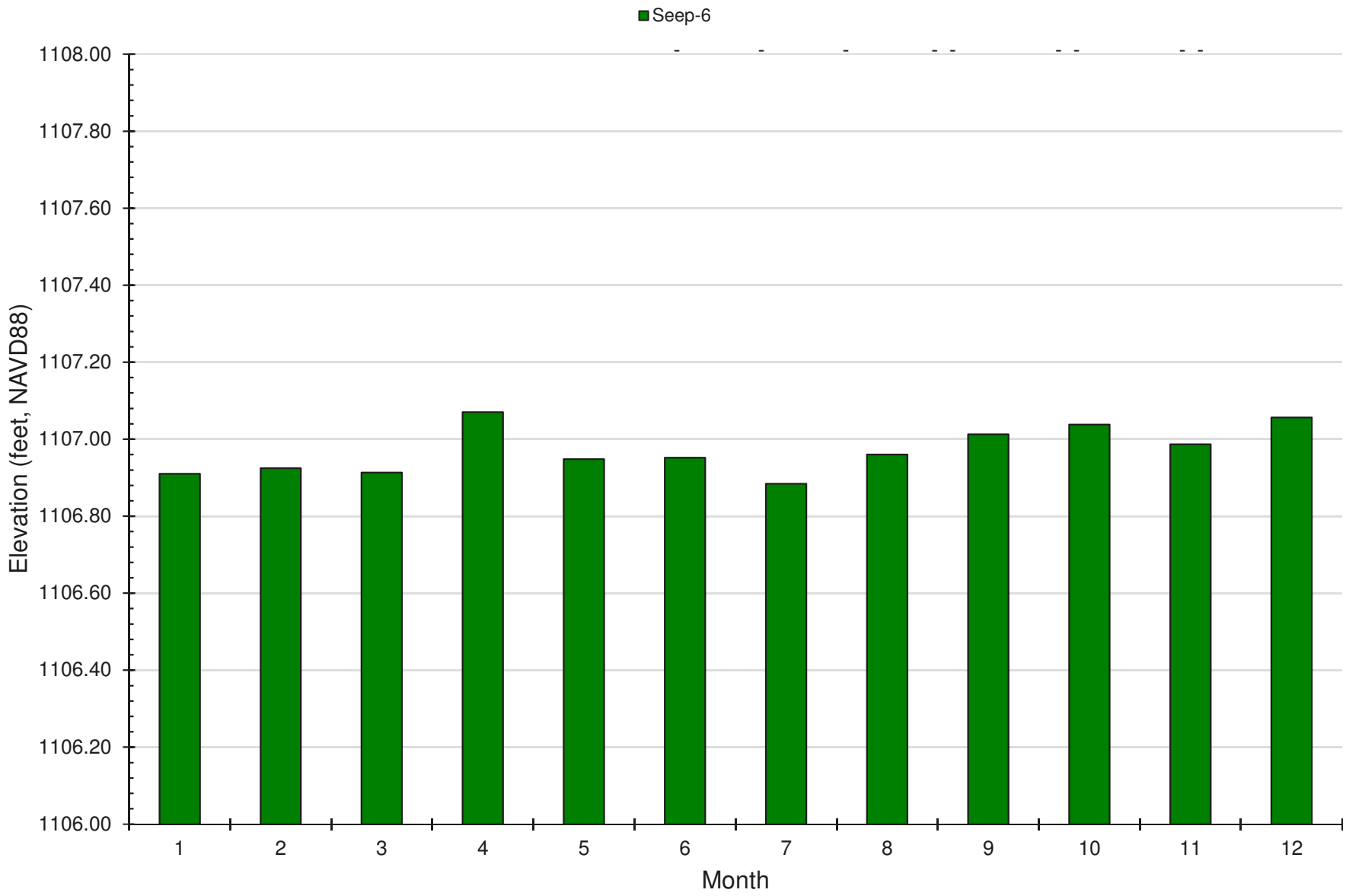


Figure 3-47. Mean monthly water levels in monitoring well SW-3-DP (Wetland R), White Pine Springs, Evart, Michigan.

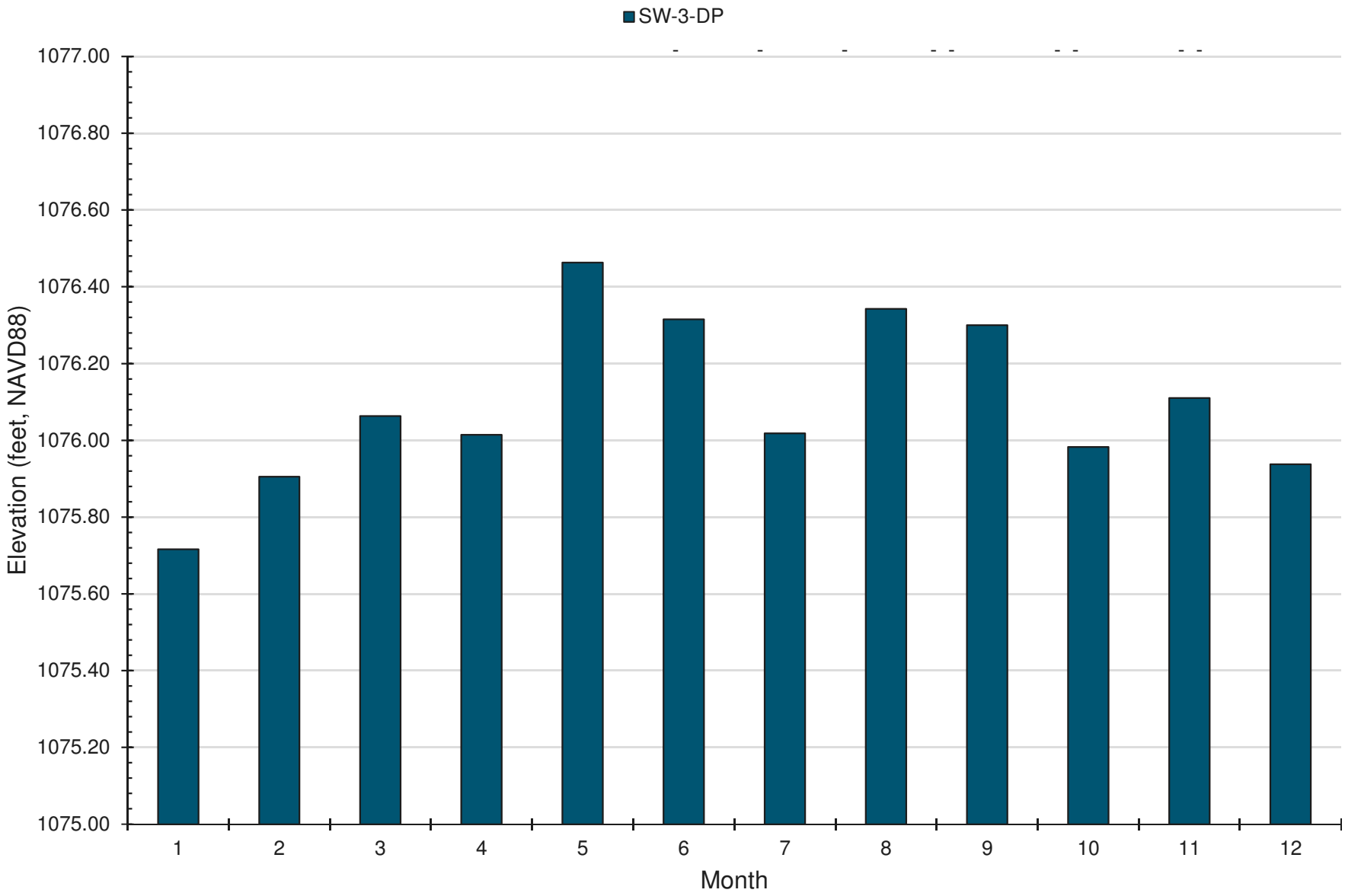


Figure 3-48. Mean monthly water levels in monitoring well DP-8 (Wetland R), White Pine Springs, Evart, Michigan.

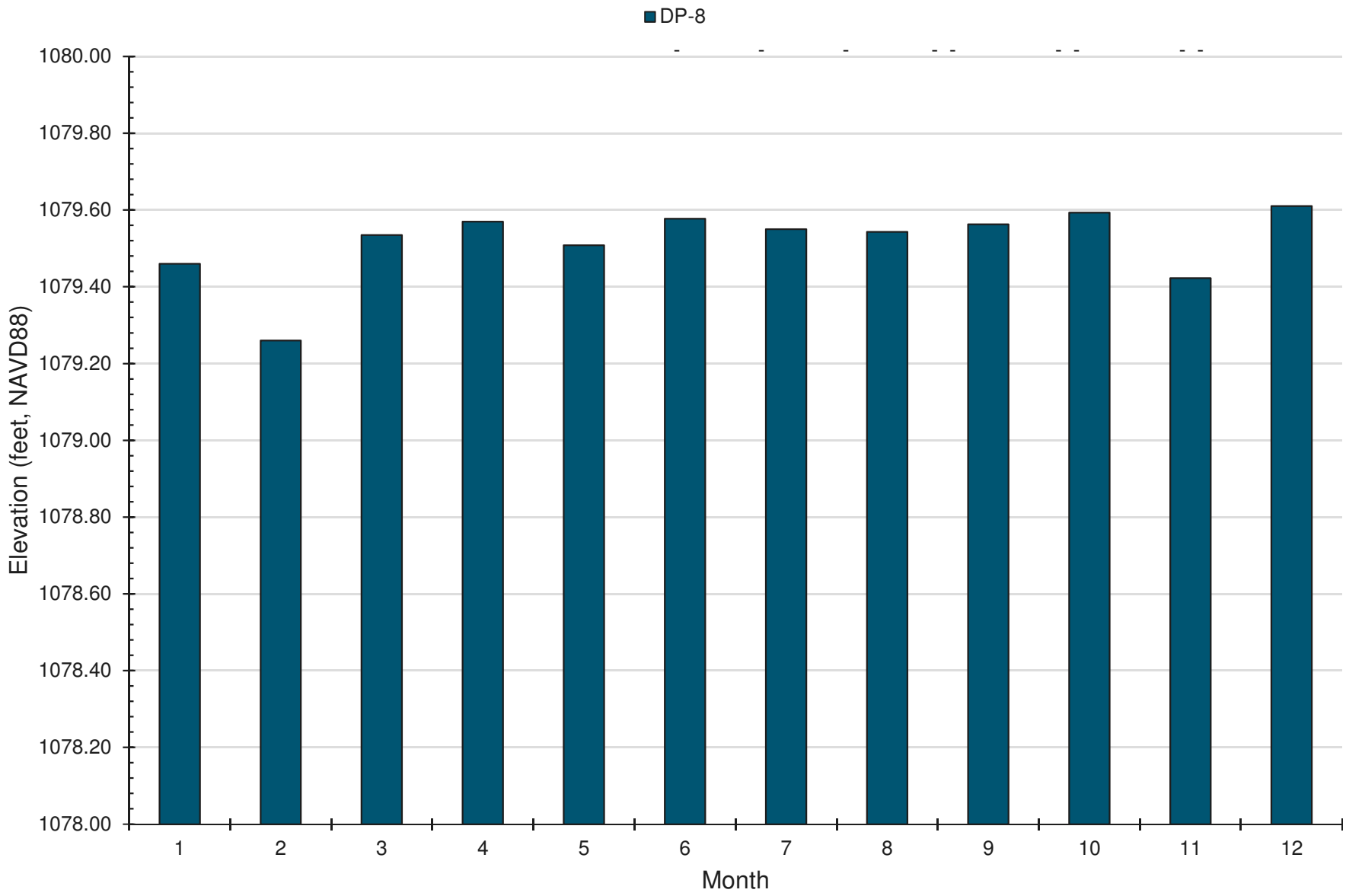


Figure 3-49. Mean monthly water levels in monitoring wells SW-8-DP (Wetland A) and DP-5, DP-6, and DP-7 (Wetland R), White Pine Springs, Evart, Michigan.

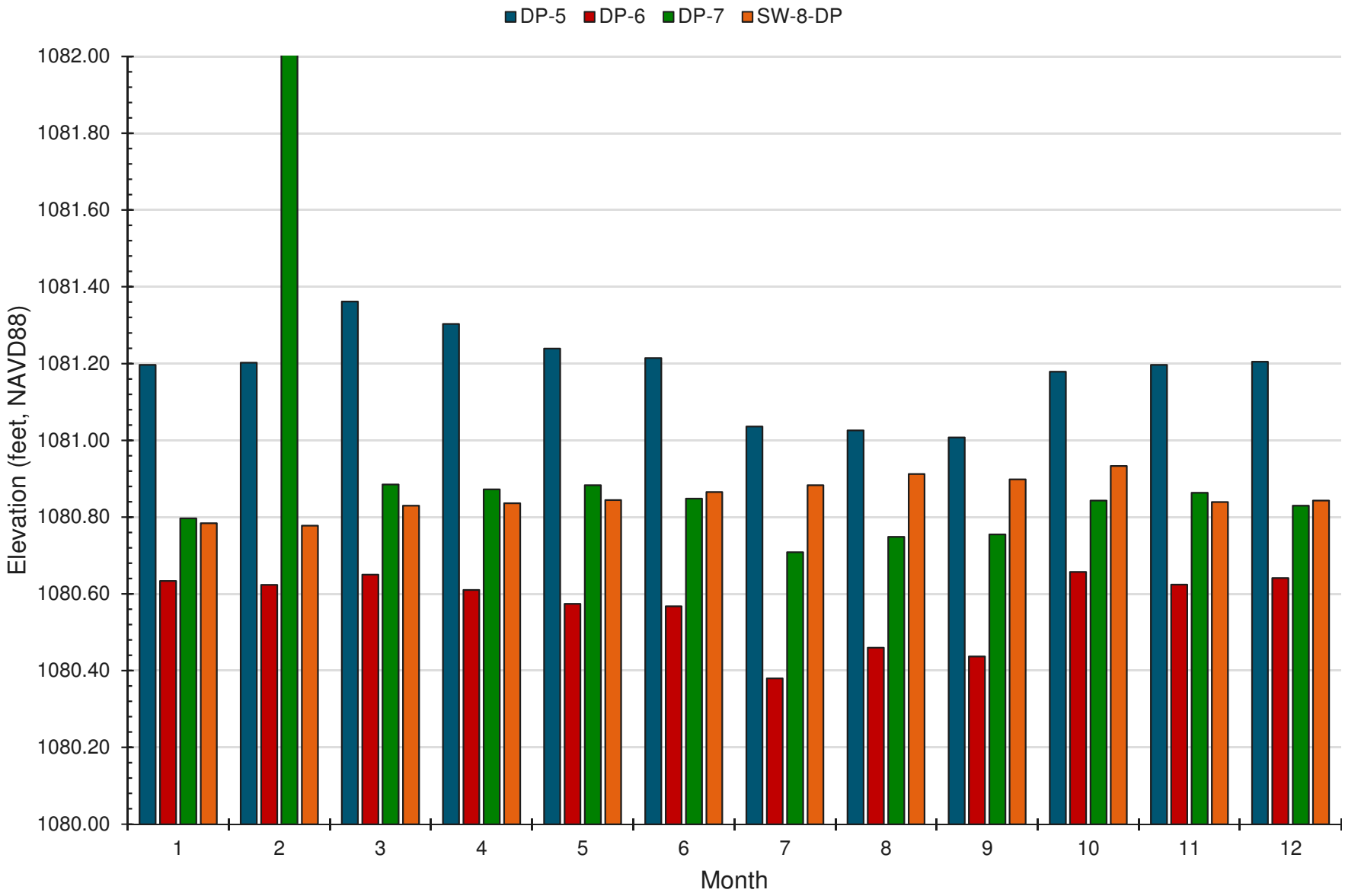


Figure 3-50. Mean monthly water levels in monitoring wells Seep-4 (Wetland R) and DP-1, DP-2, and DP-3 (Wetland G), White Pine Springs, Evart, Michigan.

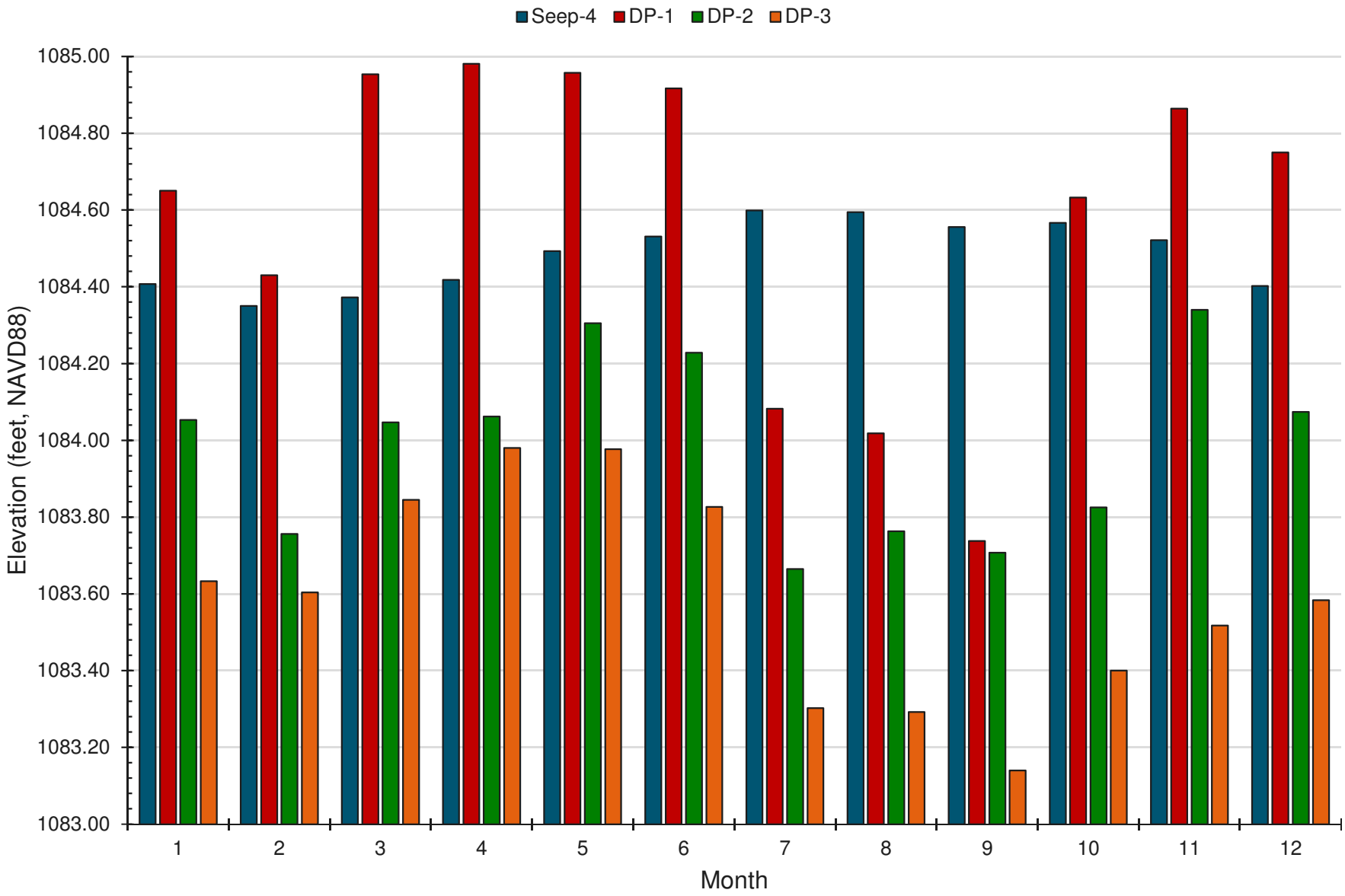


Figure 3-51. Mean monthly water levels in monitoring wells SW-2-DP, Seep-2, and Seep-3 (Wetland R), White Pine Springs, Evart, Michigan.

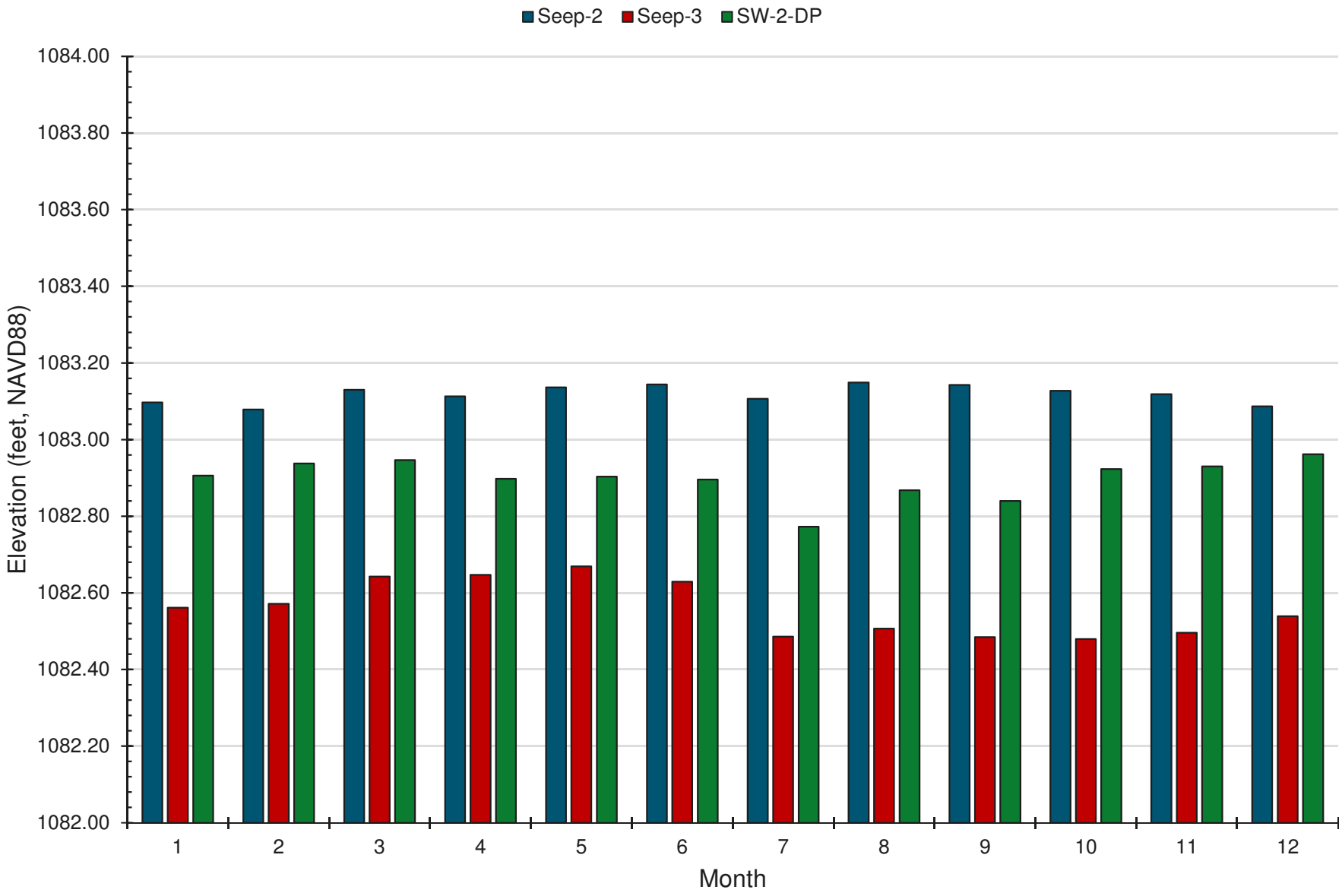


Figure 3-52. Mean monthly water levels in monitoring well SW-11-DP (Wetland R) White Pine Springs, Evart, Michigan.

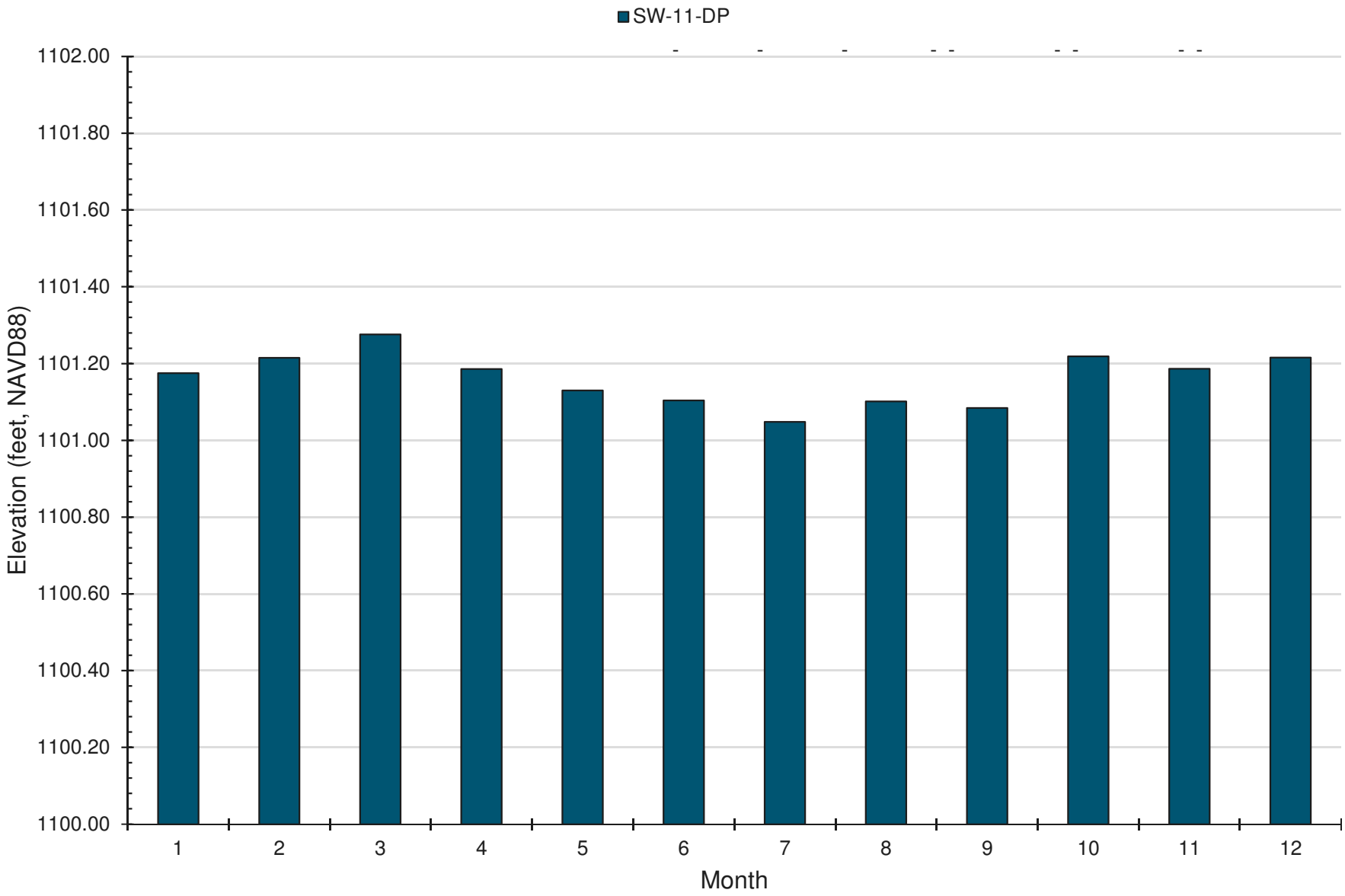


Figure 3-53. Mean monthly water levels in monitoring well Seep-1 (Wetland R) White Pine Springs, Evart, Michigan.

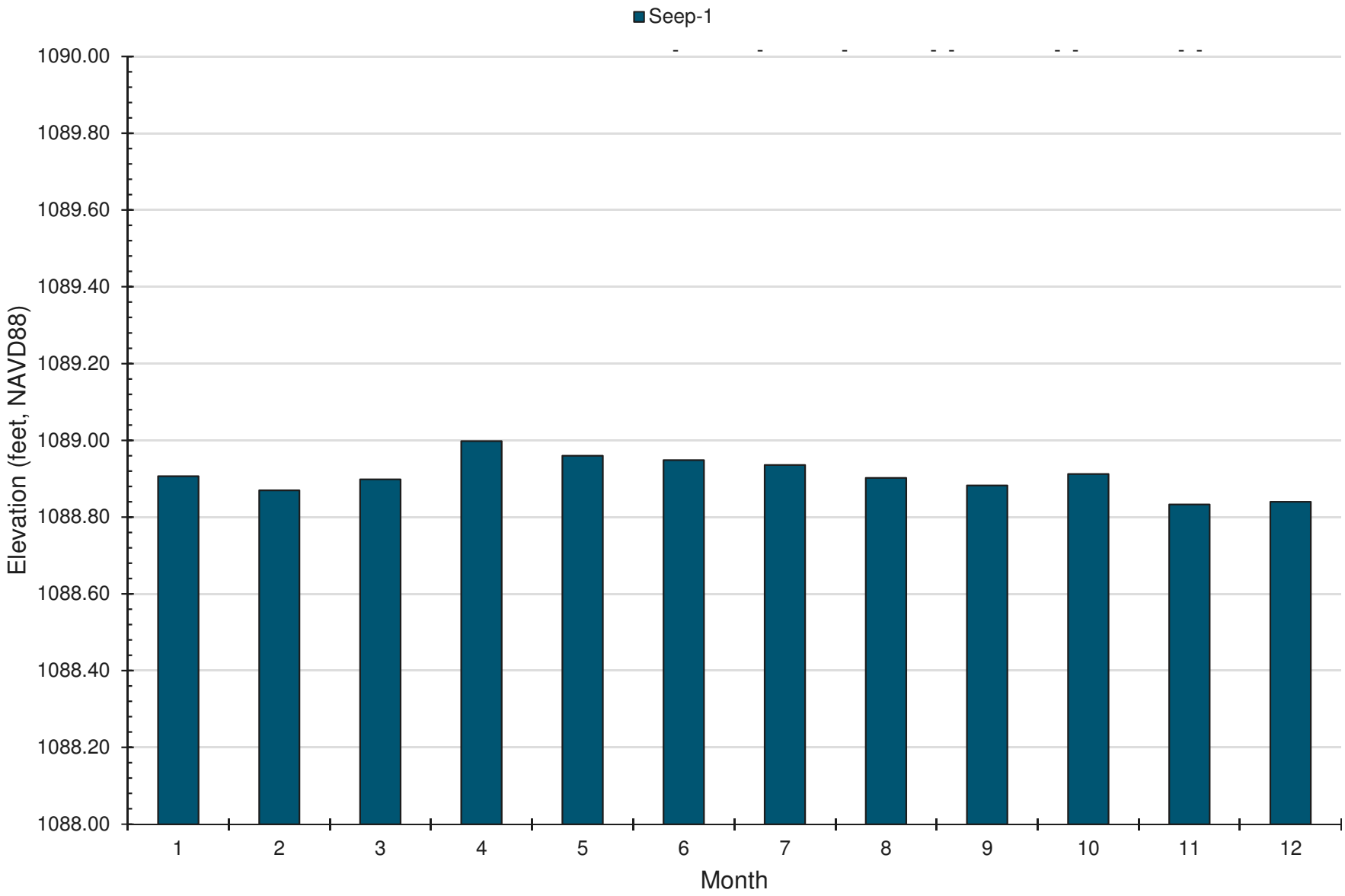


Figure 3-54. Mean monthly water levels in monitoring well SW-14-DP (Wetland R) White Pine Springs, Evart, Michigan.

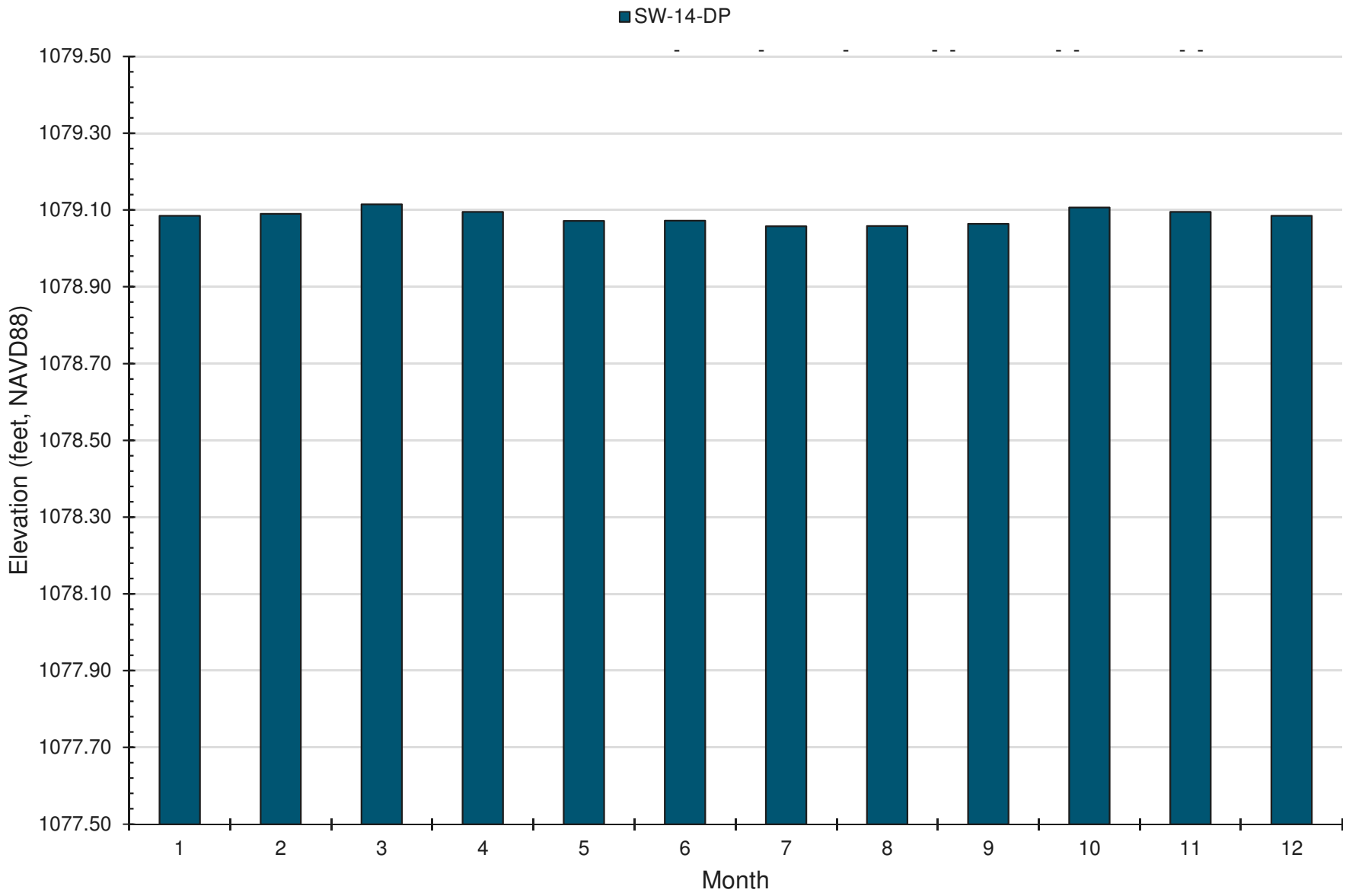


Figure 3-55. Wetland G monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.

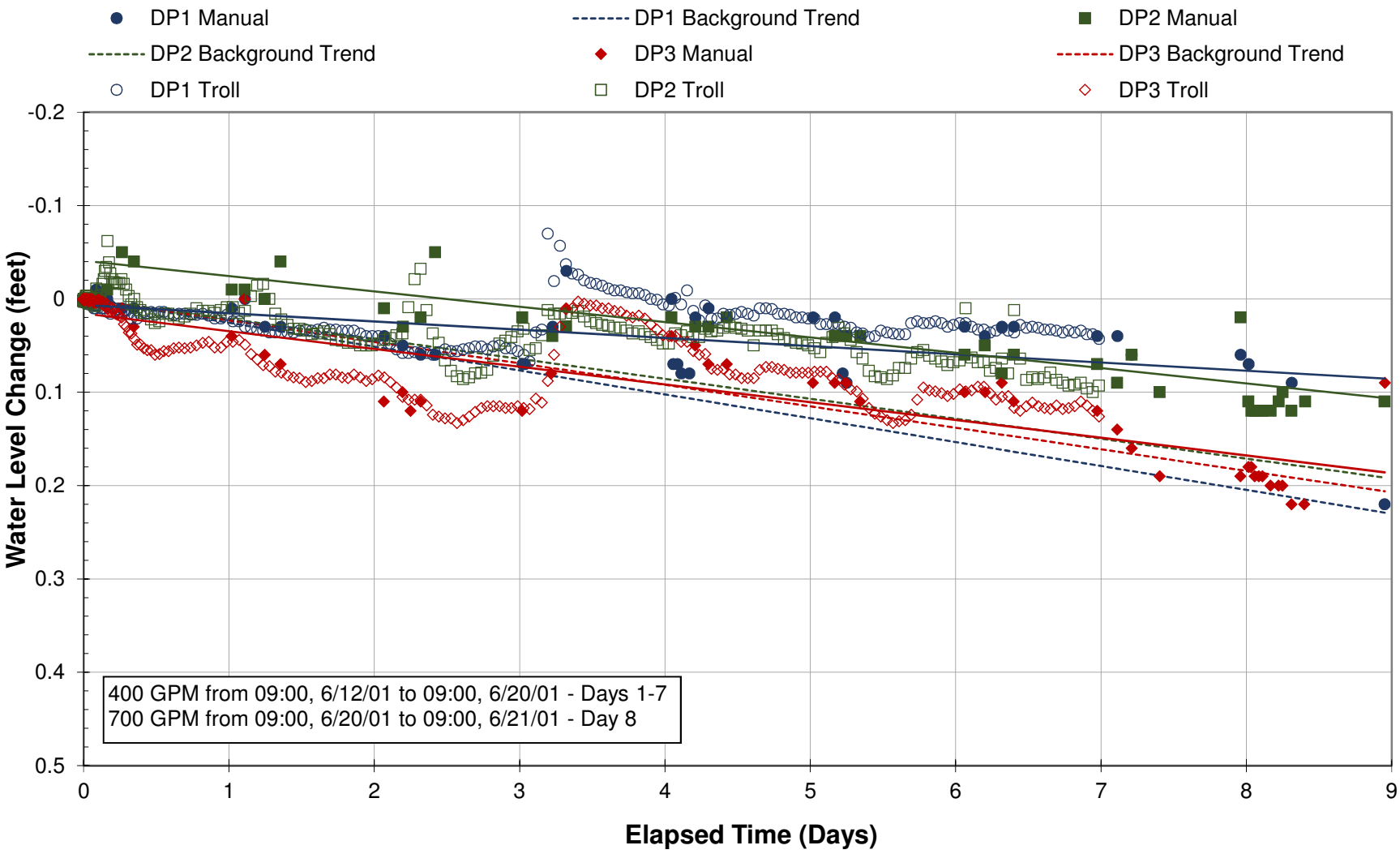


Figure 3-56. Wetland R monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.

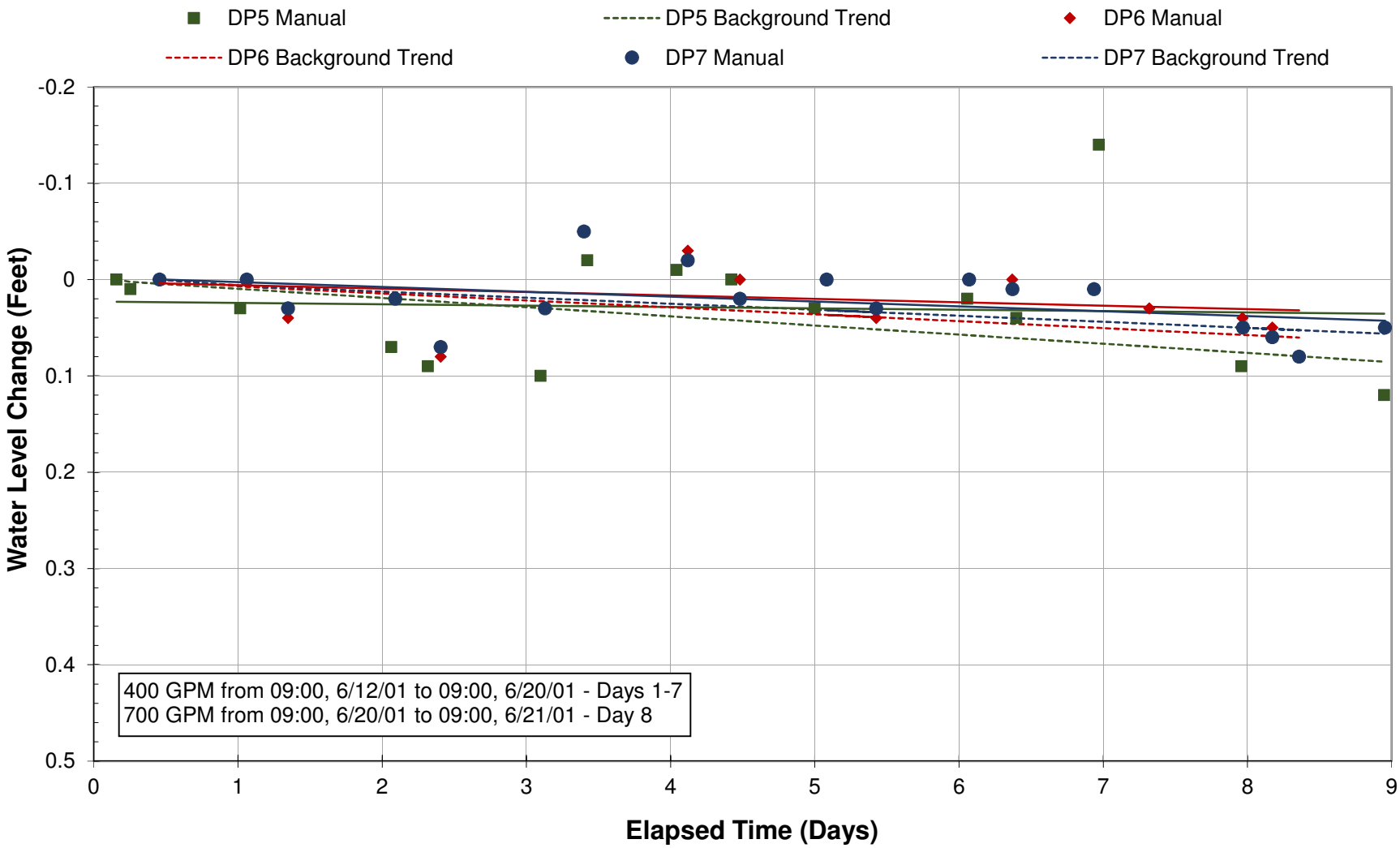


Figure 3-57. Wetland R monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.

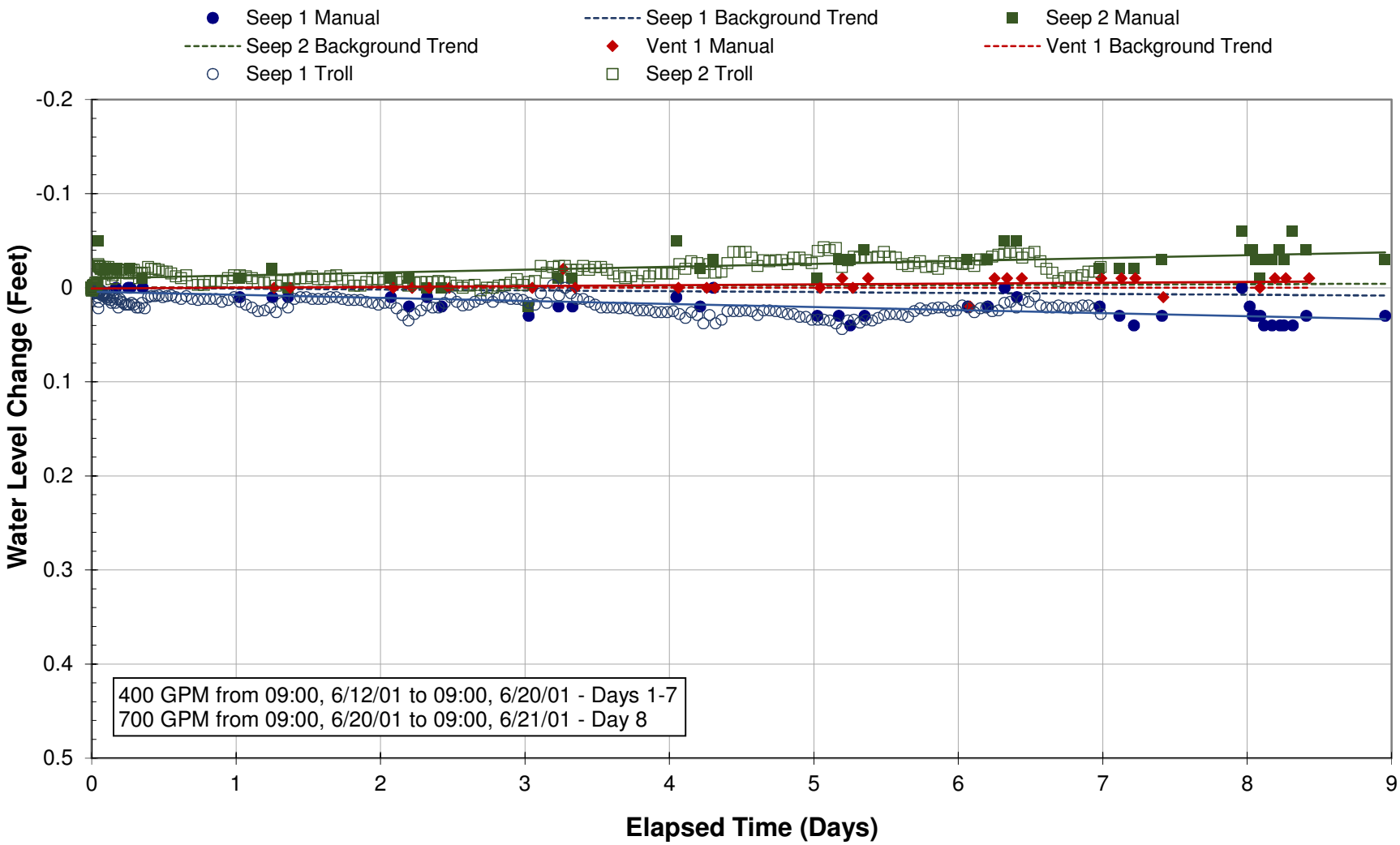


Figure 3-58. Wetland R monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.

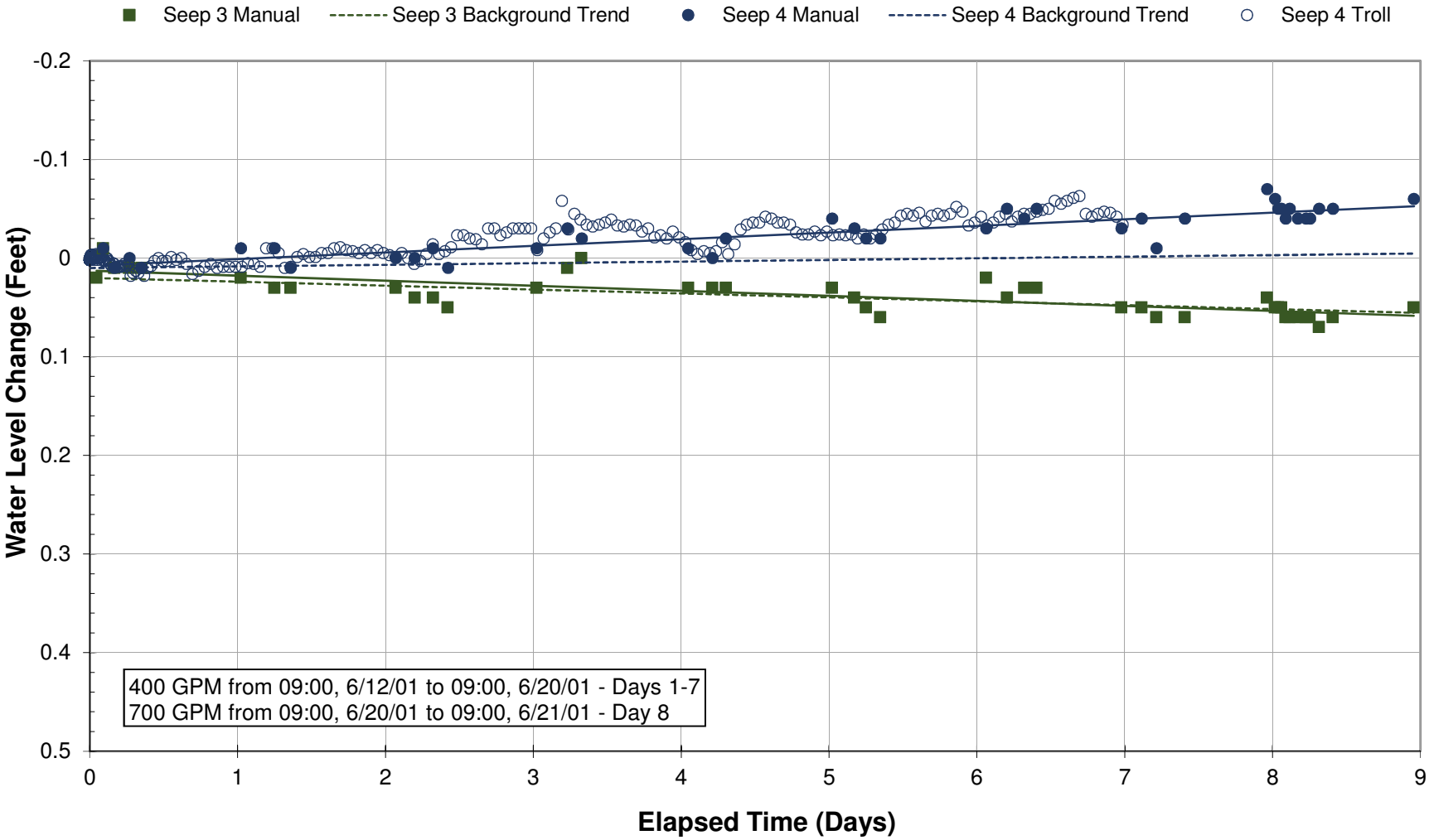


Figure 3-59. Wetland A monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.

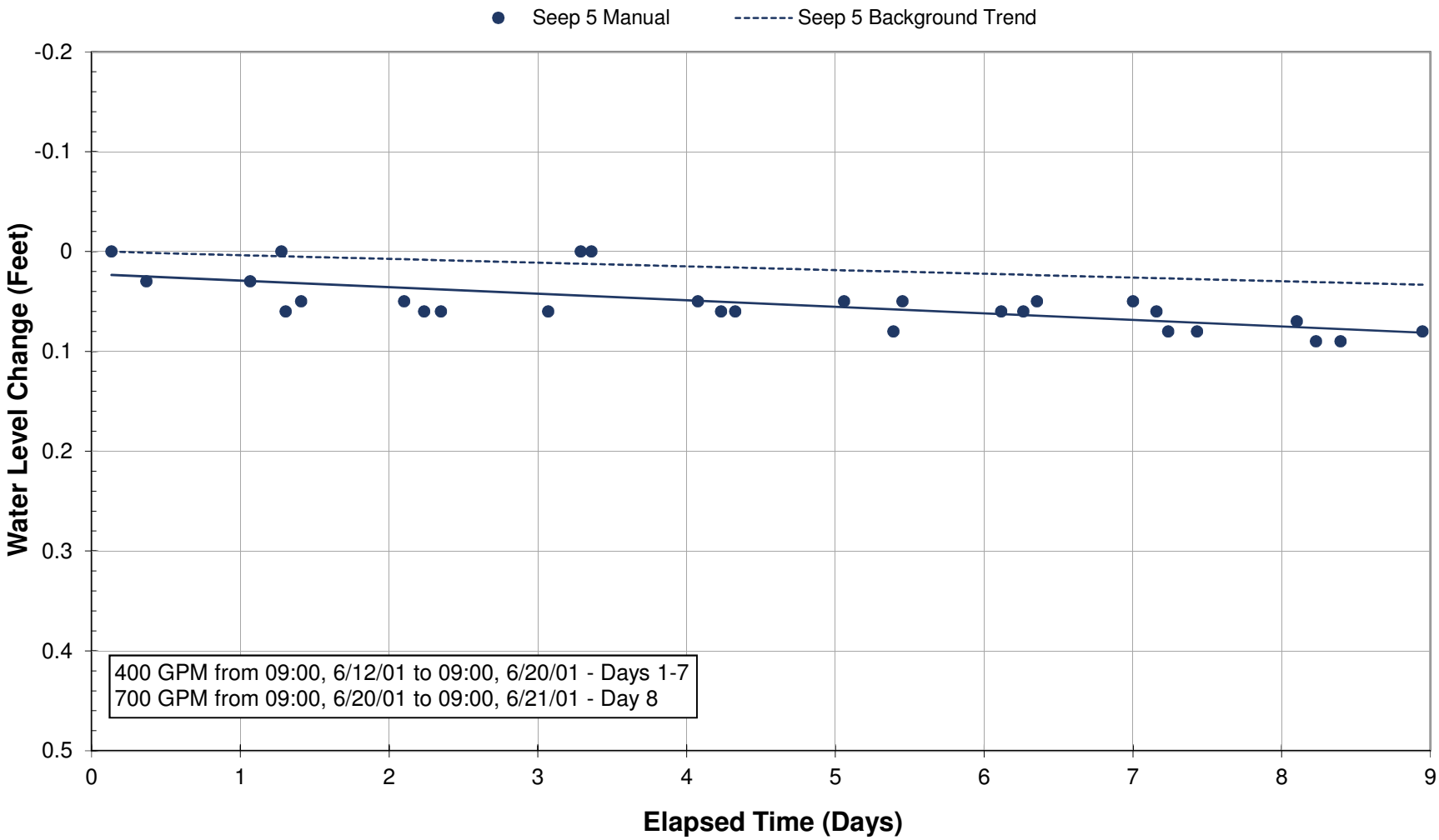


Figure 3-60. Wetland R monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.

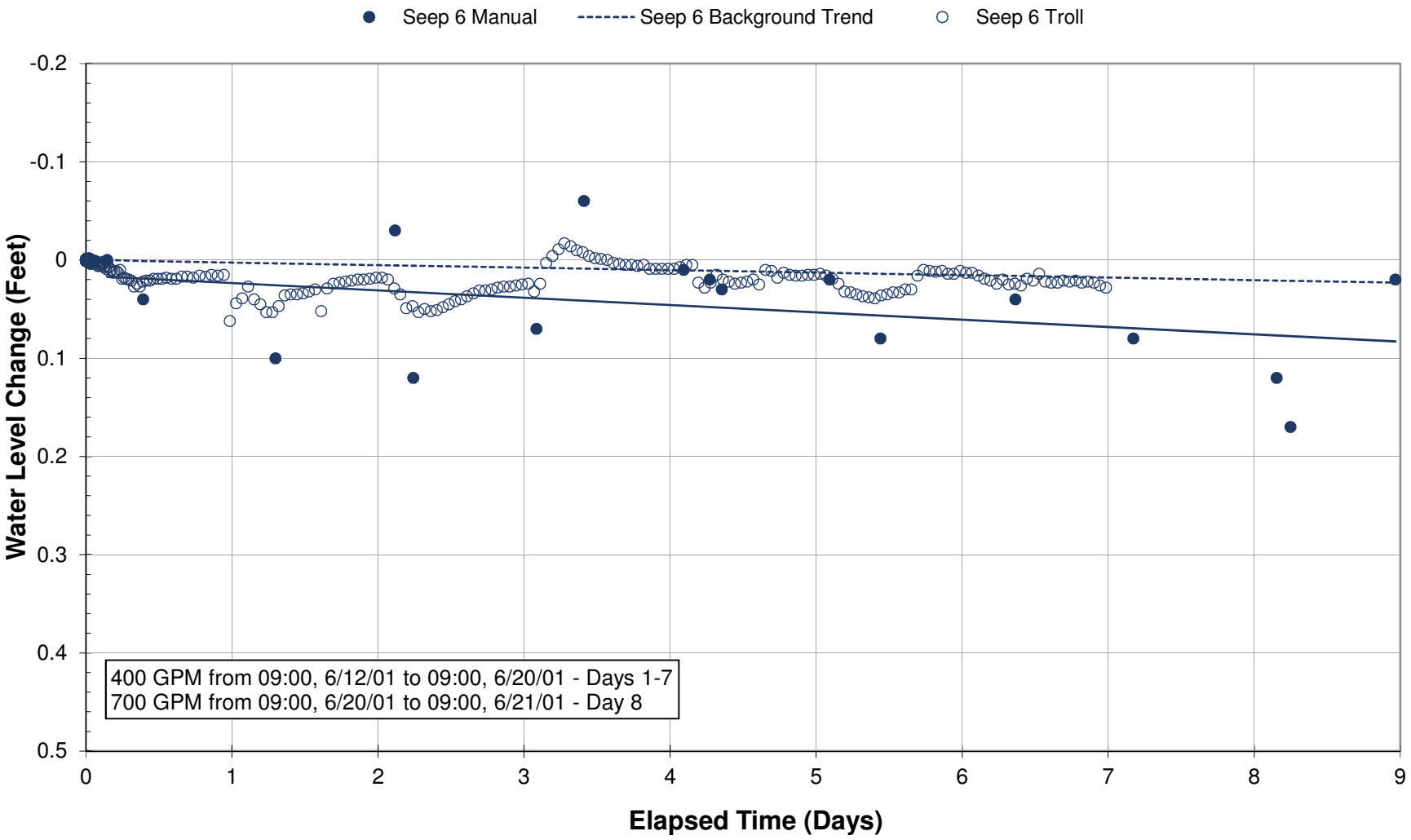


Figure 3-61. Wetland R monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.

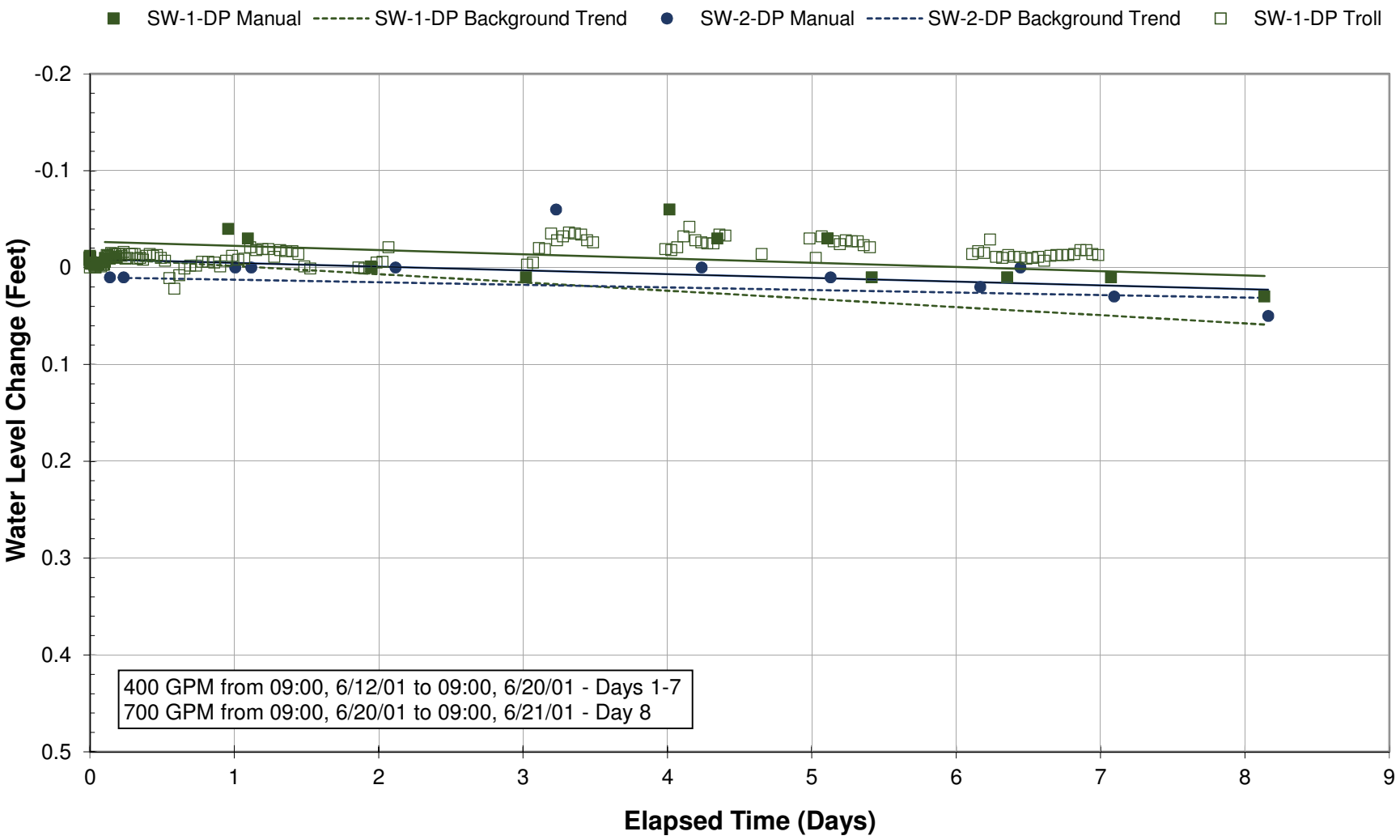


Figure 3-62. Wetland R monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.

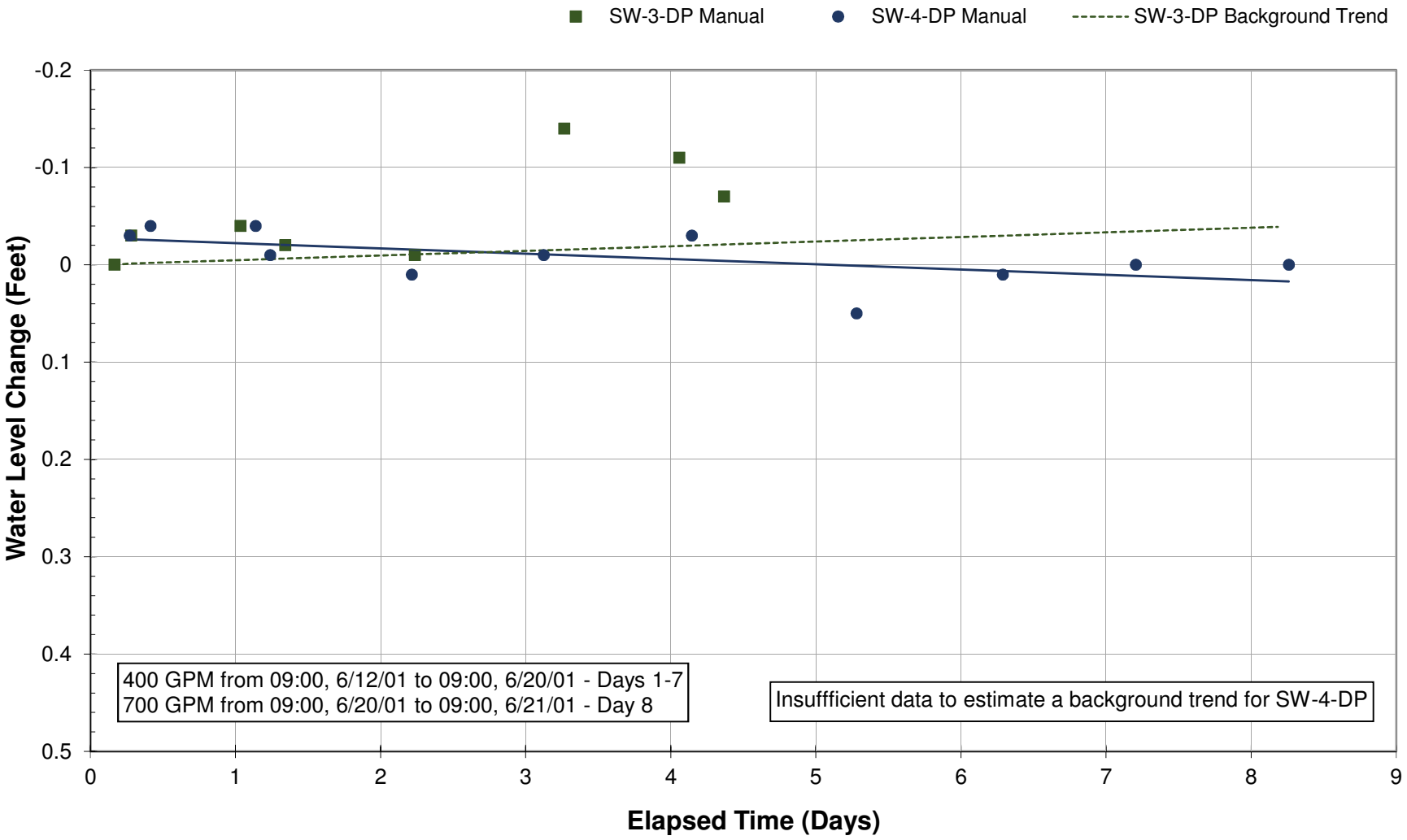


Figure 3-63. Wetland R monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.

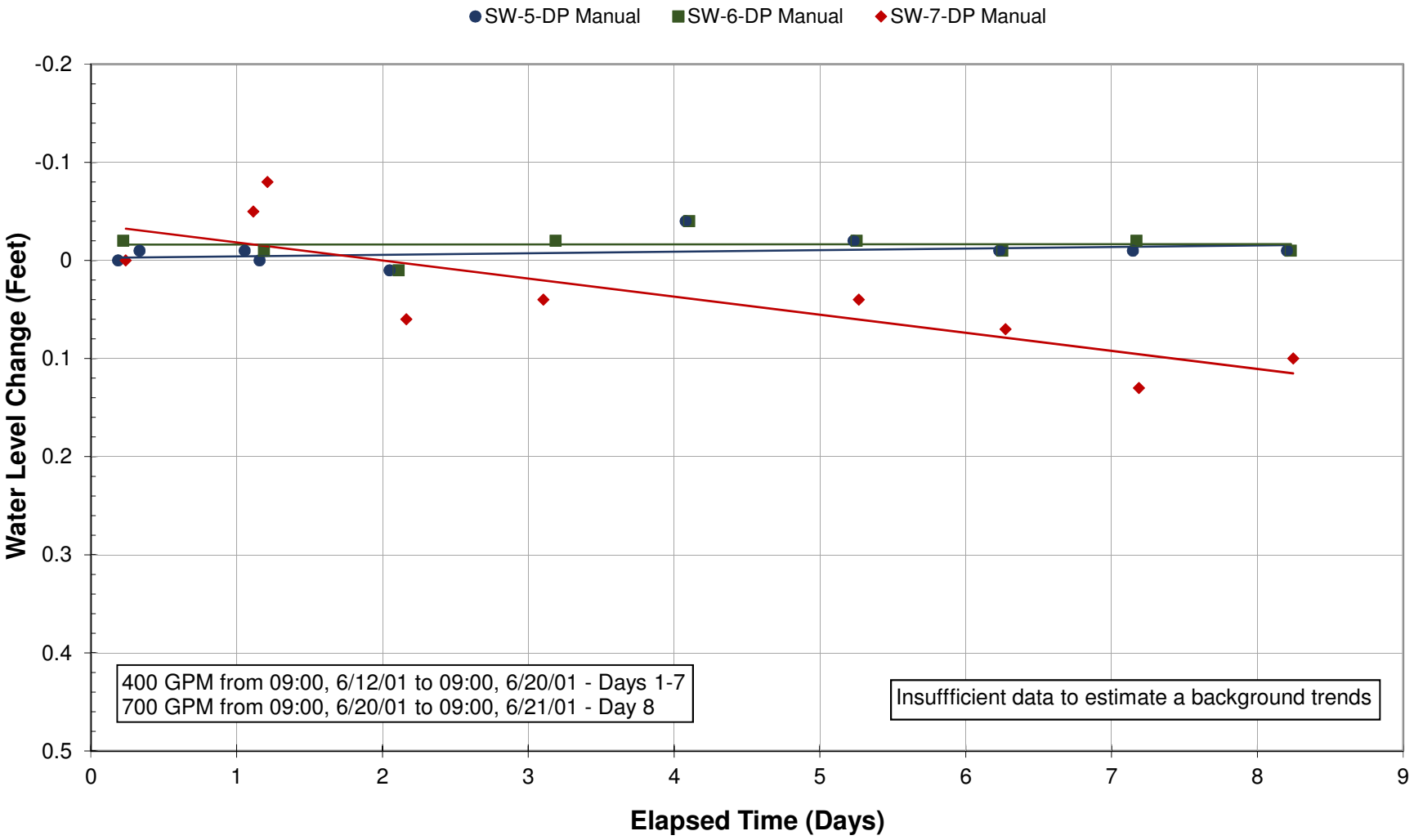


Figure 3-64. Wetland A monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.

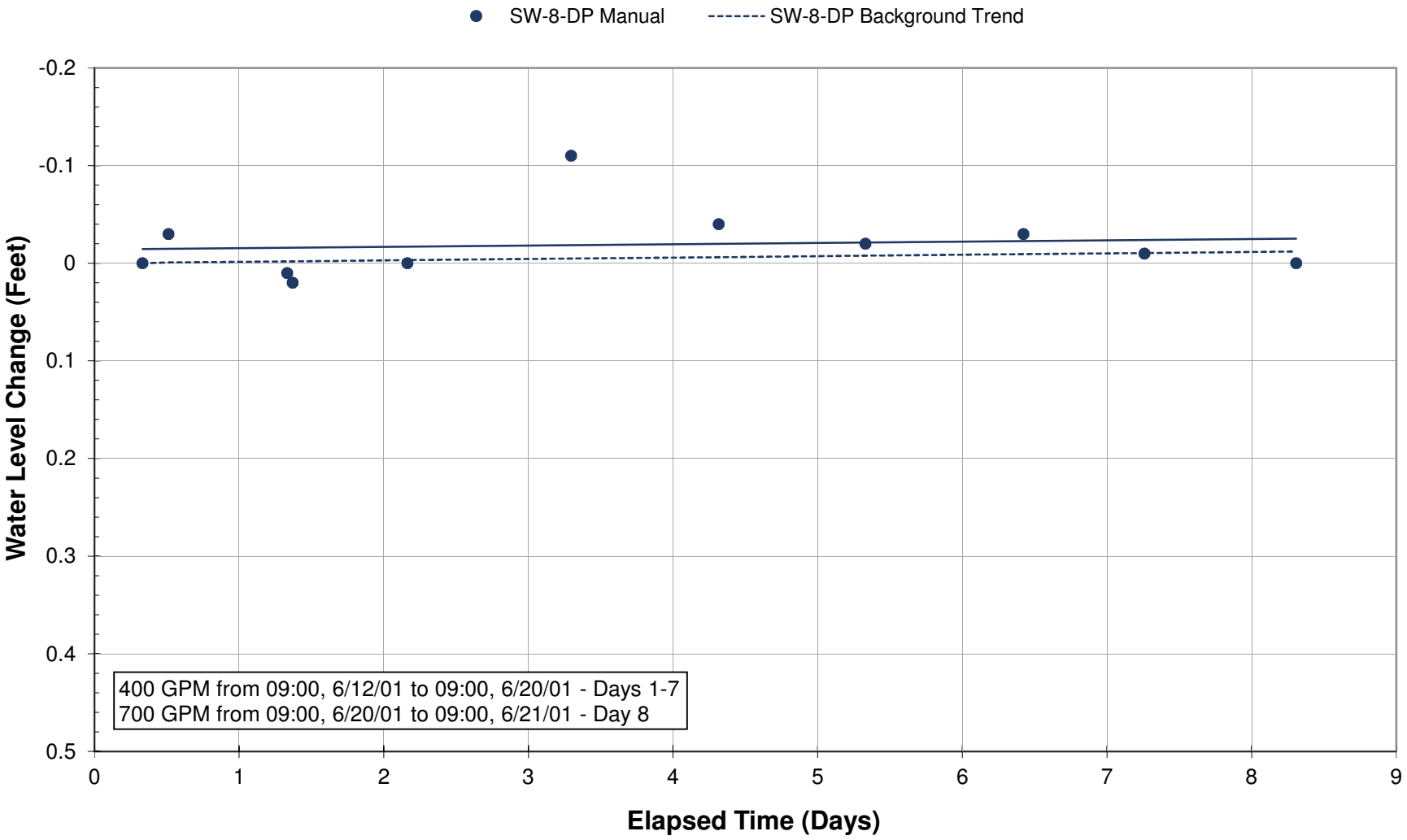
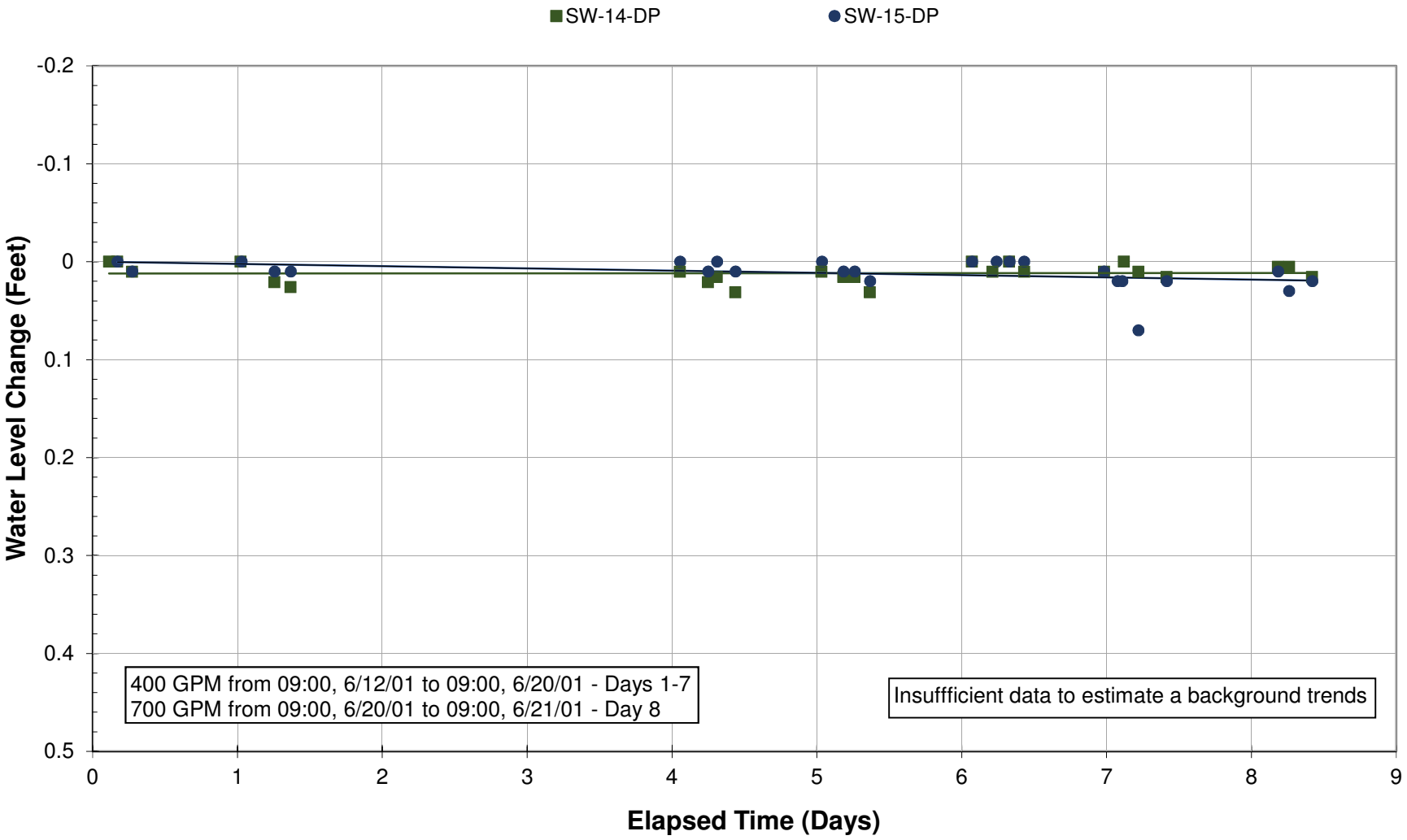
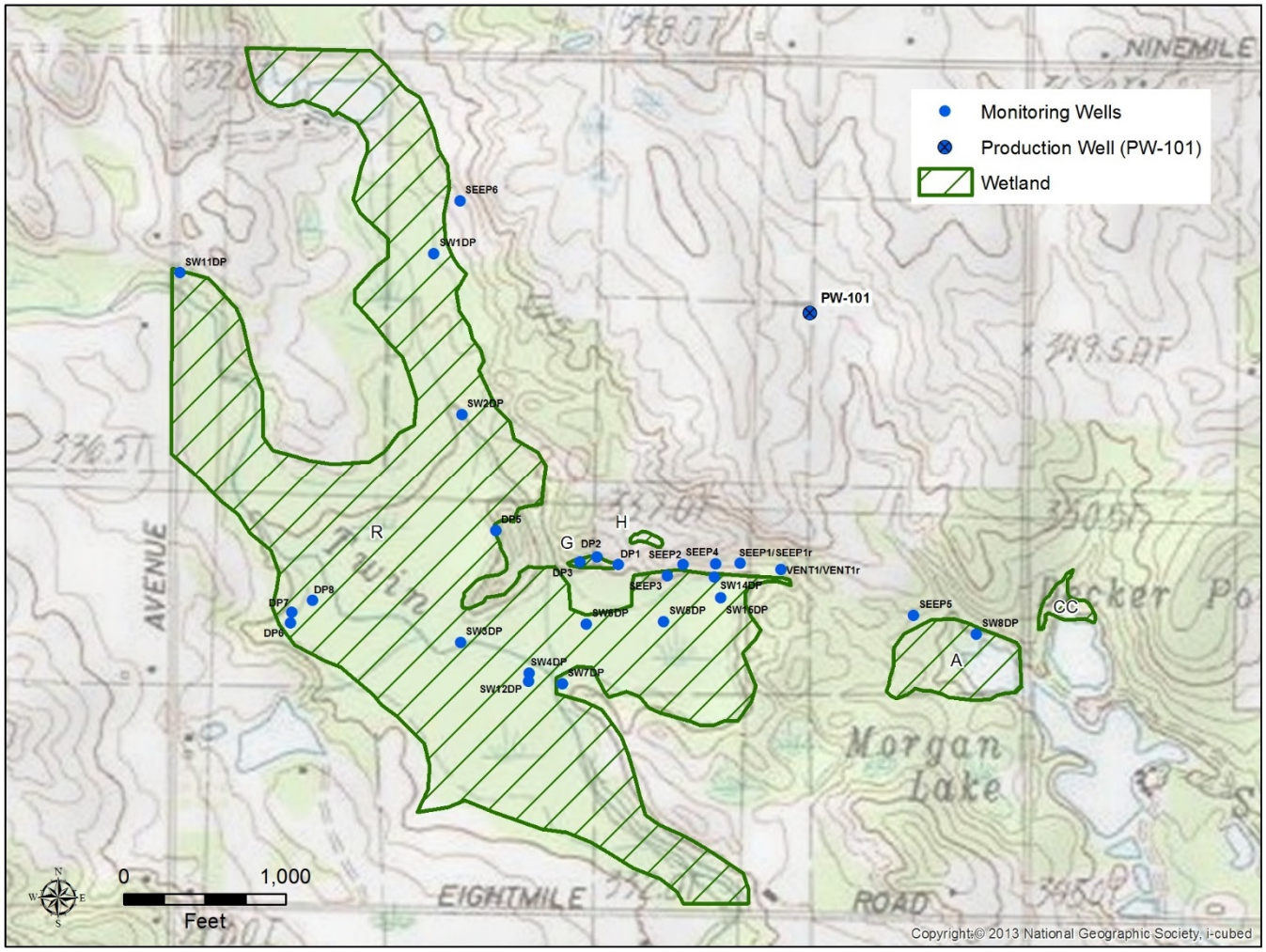
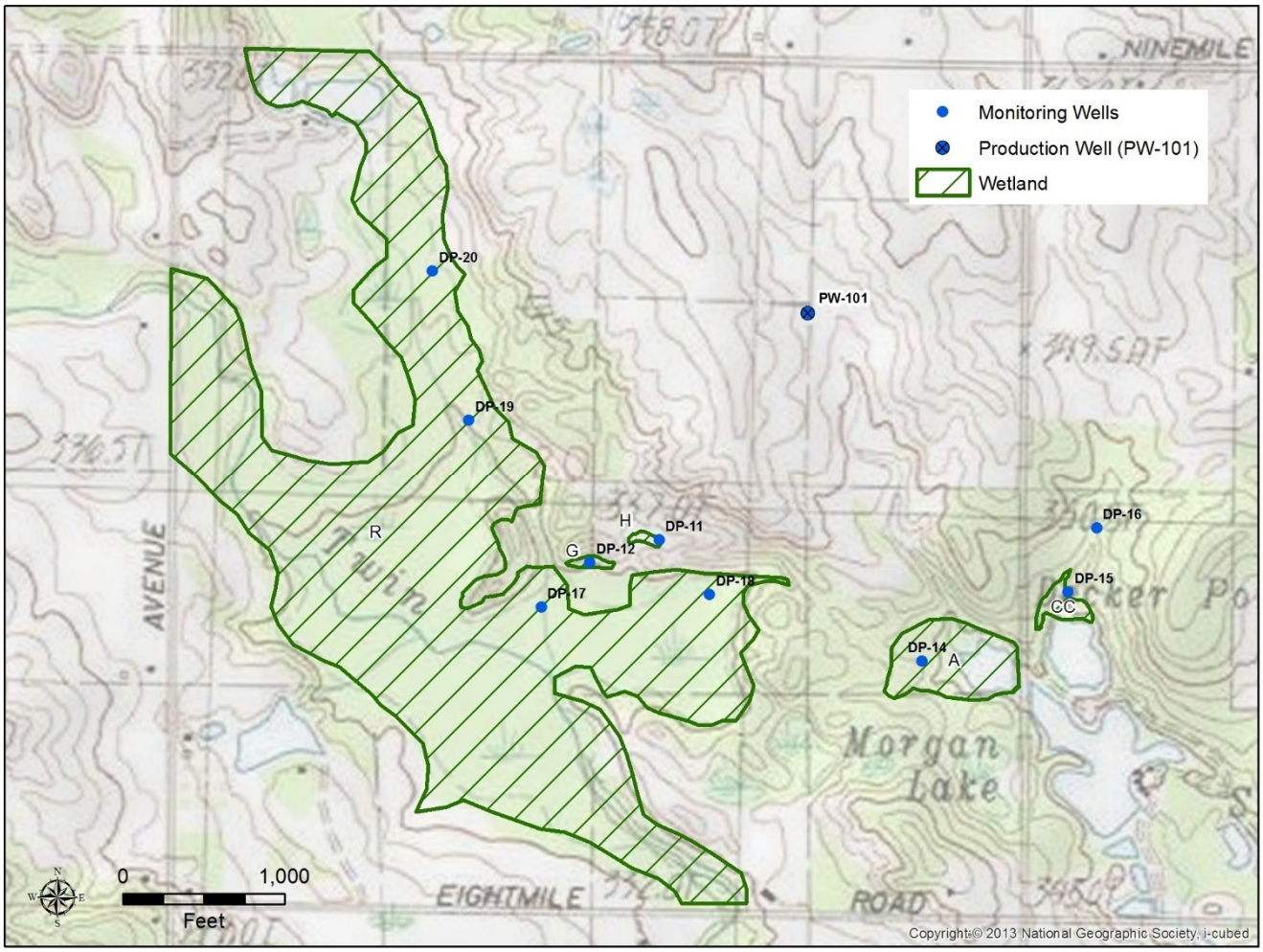


Figure 3-65. Wetland R monitoring well level data and trends during the 2001 PW-101 pump test, White Pine Springs, Evart, Michigan.





Map 3-1. Shallow drive-point monitoring wells located immediately adjacent to and within wetlands near White Pine Springs production well PW-101.



Map 3-2. Shallow drive-point monitoring wells recently installed by NWNA in wetlands located near production well PW-101 to provide water level data for future monitoring of pumping effects.

4.0 Wetland Water Budgets

4.1 Normal, Wet, and Dry Rainfall Years

Based on guidance from the Michigan Department of Environmental Quality, ECT obtained and analyzed rainfall data from the Big Rapids Waterworks station to identify normal, wet, and dry years. According to that guidance, a wet year is defined as any year with total precipitation exceeding the rainfall total with a 30% probability of being exceeded. Likewise, a dry year is defined as any year with total precipitation less than the rainfall total with a 30% probability of being lower. In addition, the guidance states that the definition of wet and dry should be the result of relatively consistent rainfall patterns throughout the year, rather than being determined by rainfall in a single month or two that was extreme.

ECT obtained rainfall data from the Big Rapids Waterworks station for a 30-year period starting in 1986 and ending in 2015. This period was chosen because it is representative of the period over which NWNA has conducted monitoring (2000-2016). The Big Rapids Waterworks station is the nearest station with sufficient data for the analysis. The 30% probability threshold values are 34.77 and 40.30 inches (Table 4-1). Nine years do not have a complete annual record and cannot be used (Table 4-2). Of the remaining 21 years, six are wet, ten dry, and five normal. It is preferable to select normal, wet, and dry years from the period over which NWNA has conducted monitoring. The years 2007, 2003, and 2004 are normal, dry, and wet years respectively.

To further evaluate rainfall patterns in these years, the daily and cumulative rainfalls were plotted on the same graph (Figure 4-1). The cumulative rainfall graph shows that the normal year (2007) follows the long-term daily averages closely, especially during the growing season. Likewise, the wet (2004) and dry (2003) years remained above and below the long-term daily average cumulative rainfall. Although the wet year was only slightly above the long-term average for the first 60 to 100 days, it was much higher than the long-term average throughout the entire growing season and through the end of the year. The wet year was not dominated by one particularly large rainfall event. The largest rainfall event recorded in the three years was 2.5 inches, which occurred in the normal year. This analysis shows that the three years selected as the normal, wet, and dry years are representative of those conditions. Therefore, they have been used in the wetland water budgets.

4.2 Non-Perched Wetlands Selected for Water Budget Analysis

Wetland water budgets were developed for mapped wetlands R, A, CC, and G (Map 5, Appendix A). These wetlands are considered connected to the source aquifer, are located near PW-101, and represent the two types of connected wetlands near the well - depression wetlands and groundwater slope wetlands connected to streams. As such, these five non-perched wetlands located near production well PW-101 are representative of potential wetland effects from pumping.

4.3 Water Budget Equation

The universal water budget equation used accounts for all water inputs and outputs to the wetlands, resulting in a change in wetland storage expressed as a volume (acre-feet) and depth (feet). The volume is then converted to feet of water depth in the wetlands.

[Inputs] – [Outputs] = ΔStorage (acre-feet)
[P + GI +SRO + SI] – [E +ET +GO + SO]
Where,

P	=	precipitation (inches, converted to gpm)
GI	=	groundwater inflow (gpm, from model)
SRO	=	surface runoff (not applicable)
SI	=	stream (and seep) inflow (gpm, from model)
E	=	evapotranspiration (inches, converted to gpm)
ET	=	evapotranspiration (inches, converted to gpm)
GO	=	groundwater outflow (gpm, from model)
SO	=	stream outflow (gpm, from model)

Water inputs and outputs were converted to gallons per minute (gpm) to be consistent with groundwater model output.

Surface runoff is a negligible component of the water budgets of the five wetlands. The soils are hydrological group A and the runoff curve number is approximately 35. This means that athreshold rainfall of approximately 4 inches in 24 hours is required to generate any appreciable runoff into the wetlands. Given this rarely occurs, surface water runoff into the wetlands is a negligible input. Therefore, surface runoff is not estimated or used in the water budgets.

Stream and seep inputs and outputs apply to Wetlands A, R, and CC because they are groundwater slope wetlands connected to streams. Those inputs and outputs don't apply to Wetland G. Specific water inputs and outputs used or not used in each wetland, and the supporting rationale, are further explained in the water budgets (Appendix B).

4.4 Inputs and Outputs Derived from the Groundwater Model

The groundwater model can calculate water inputs and outputs to the non-perched wetlands with a greater level of accuracy than simple spreadsheet equations. Therefore, applicable model outputs are used for water inputs and outputs in the wetland water budget analyses presented in this memo. Model outputs for the no-pumping and 20-year, 400 gpm pumping scenarios were used in the water budgets. Those specific inputs and outputs are:

- Stream and seep inflow (SI) and outflow (SO); and
- Groundwater inflow (GI) and outflow (GO).

4.5 Inputs and Outputs Derived from Data or Other Sources

Monthly rainfall data for the Big Rapids Waterworks station (see Section 4.1) were used for calculating the volume of direct rainfall over the surface of the wetlands and then converted to gallons per minute. Rainfall falling within the wetland drainage basins was not used to calculate inputs in the form of runoff for reasons discussed in Section 4.3.

Monthly evapotranspiration (ET) rates used in the water budgets are the same used in the groundwater model. ET is estimated as a volume over the surface of the wetland, and converted to gallons per minute. ET accounts for water loss due to evaporation from the wetland water surface and plant surfaces, and plant transpiration.

4.6 Groundwater Profiles

Ten groundwater profiles were created to graphically illustrate the groundwater table slope, relationship to the land surface, and relationship to non-perched wetlands A, R, and G (Map 4-1, Figures 4-2 through 4-11). Monitoring wells were not installed and monitored in Wetland CC prior to NWNA's submittal of its Section 17 application, so a transect could not be created for Wetland CC. The land surface profile was generated from USGS 1:24,000 Digital Elevation Model spatial data using GIS software. Those data have a30m x 30m resolution.

Baseline (without pumping) groundwater table profiles shown are based on the long-term mean water levels derived from the long-term monitoring well data. The groundwater levels at each well are shown for the 250 gpm and 400 gpm model simulations to illustrate changes in groundwater table slope resulting from groundwater table drawdown at the monitoring wells as calculated by the groundwater model. Well water levels reported for the 250 gpm and 400 gpm modeled pumping scenarios are derived by subtracting the calculated drawdown in the model grid in which the monitoring wells are located from the long-term mean water level. The groundwater profiles under the baseline (no pumping) and two modeled pumping scenarios are labeled with the resulting mean slope of the groundwater table between monitoring wells.

The groundwater table slopes decrease when the groundwater table is drawn down by pumping at PW-101. The decrease in slope is greatest closest to MW-103i, which is adjacent to PW-101. Decreased groundwater table slopes result in a decrease in groundwater flow toward and into the wetlands. This decrease in groundwater flow is simulated by the groundwater model and results in lower groundwater and stream/seep inflow and outflow in the water budgets.

4.7 Water Budgets

Water budgets for non-perched wetlands A, R, G,and CC are provided in Appendix B.

Water budgets show that year-to-year differences in wetland water levels are small because the wetlands all have stable water levels, typically fluctuating less than 0.5-feet annually. Furthermore, the primary input to the wetland water budgets is groundwater. The groundwater system does not respond quickly to year-to-year differences in precipitation. Water level data confirm this water budget result:

- At monitoring well SW-8-DP in Wetland A, the normal, wet, and dry years have mean water levels of 1080.83, 1080.79, and 1080.92 feet respectively. The maximum difference between the three years is 0.09 feet.
- At monitoring well SW-1-DP in Wetland R the mean water levels are 1090.79, 1090.80, and 1090.76 feet for the normal, wet, and dry years respectively. The maximum difference is only 0.04 feet.

The water budgets also show stability of water level similar to that seen in monitoring data:

- The water budget for Wetland G shows a range in water depth of 0.93 feet during the normal year without pumping. Water levels in monitoring well DP-3 located along the north edge of Wetland G have an average annual range of 0.97 feet.
- The Wetland A water budget shows a range in water depth of 0.1 feet. Water levels in monitoring wells SW-8-DP and Seep 5 have an annual average range of 0.22 and 0.27 feet respectively.
- The Wetland R water budget also shows a range of 0.1 feet. The annual average range of fourteen monitoring wells located within Wetland R is 0.28 feet.

Simulated pumping at 400 gpm for 20-years results in a decrease in groundwater and stream and seep inflow to wetlands A, R, and CC. It results in a decrease in groundwater inflow to wetlands G and H. These reductions were calculated with the groundwater model and are accounted for in the water budgets. Pumping at 400 gpm also results in a proportional decrease in groundwater and stream and seep outflow from wetlands A, R, and CC; and groundwater outflow from wetland G and H. Therefore, the water budgets show similar storage volume and depth changes from month-to-month with and without pumping. That is, the relative change in storage volume and depth from month to month is the same due to the proportional reductions in inputs and outputs with pumping. The long-term average water level in Wetlands R, A, G, H, and CC will be lower with pumping, but the relative change in water level from month to month would be similar.

Table 4-1. Thirty-percent (30%) probability annual rainfall thresholds for defining normal, wet, and dry years per Michigan Department of Environmental Quality guidance.

Lower/Upper Threshold Values	Big Rapids Waterworks 1986-2015	Big Rapids Waterworks 1971-2000	Reed City WWTP 1971-2000
30% Chance Less Than[1]	34.77	31.59	Insufficient Data
30% Chance Greater Than[2]	40.30	37.70	Insufficient Data

1 Total annual rainfall less than this value represents a dry year.
2 Total annual rainfall greater than this value represent a wet year.

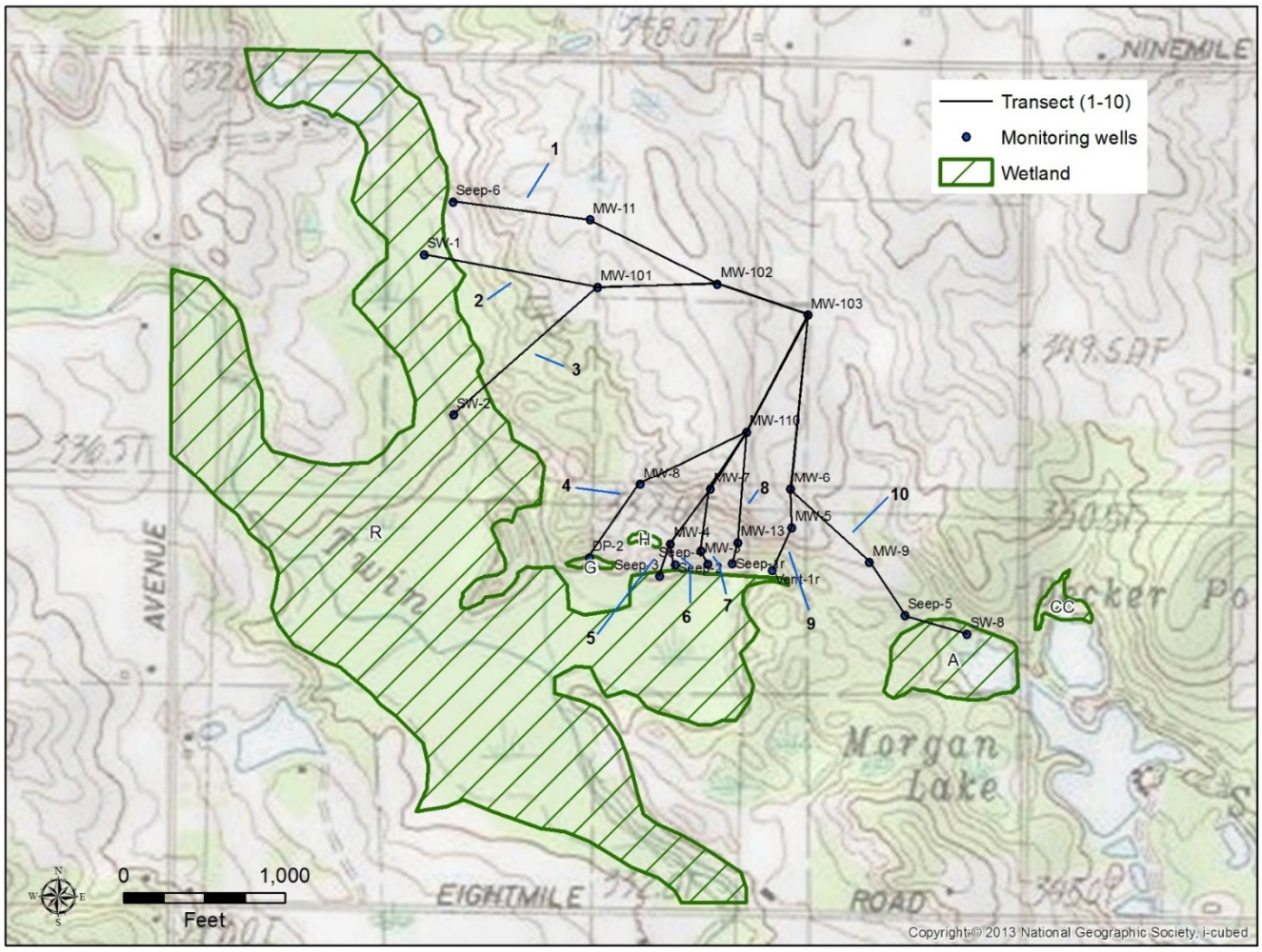
Table 4-2. Analysis of monthly rainfall data from the Big Rapids Waterworks station to identify normal, wet, and dry years.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual (inches)	Condition
1986	1.42	2.32	2.24	2.06	5.49	4.69	2.75	1.20	19.05	2.56	0.64	1.64	46.06	WET
1987	1.06	0.28	0.85	2.61	2.29	1.79	2.14	7.47	3.54	2.66	2.85	3.40	30.94	DRY
1988	2.95	1.12	2.74	4.15	0.75	0.77	2.14	2.94	5.23	4.24	6.34	M	33.37	DRY
1989	M	0.73	3.75	1.75	4.51	M	0.87	5.54	1.56	0.98	2.80	0.82	23.31	DRY
1990	2.91	1.41	2.18	2.08	6.49	5.59	4.10	2.94	4.24	4.90	4.65	1.85	43.34	WET
1991	1.47	0.88	4.81	4.80	4.04	1.77	5.11	2.45	3.02	7.70	3.57	2.10	M	
1992	M	1.67	2.76	4.35	0.68	M	3.10	2.43	6.25	2.94	5.49	1.75	M	
1993	2.17	0.62	1.26	4.75	3.11	6.39	2.36	5.41	3.04	1.76	1.82	0.77	33.46	DRY
1994	1.94	2.67	1.55	3.97	1.29	2.35	5.64	7.97	1.74	2.43	5.87	0.82	38.24	NORMAL
1995	2.37	0.69	1.52	4.32	1.83	1.86	3.62	M	2.00	3.53	4.49	1.00	M	
1996	2.05	2.13	1.17	3.08	3.46	M	2.20	3.55	2.73	3.71	1.18	3.65	M	
1997	3.54	4.23	2.33	3.02	3.27	3.65	1.35	4.65	3.29	1.31	1.47	0.80	32.91	DRY
1998	3.21	0.96	5.29	1.23	2.40	1.44	0.57	3.33	2.46	5.06	2.59	1.45	29.99	DRY
1999	3.31	1.89	0.77	4.06	3.70	4.70	5.70	3.40	3.00	1.19	0.88	2.29	34.89	NORMAL
2000	2.21	2.02	1.54	3.01	5.74	3.56	3.58	3.20	3.72	2.33	2.16	2.47	35.54	NORMAL
2001	1.21	2.42	0.31	4.02	6.55	2.68	1.35	5.32	3.75	M	2.95	1.44	M	
2002	0.91	2.02	3.77	4.06	3.61	2.38	3.47	5.21	2.03	2.55	1.28	1.10	32.39	DRY
2003	0.84	0.72	1.79	3.01	2.79	2.99	4.40	3.75	2.08	3.01	7.12	1.58	34.08	DRY
2004	3.15	1.32	4.64	2.67	8.65	4.31	2.01	3.95	0.57	4.76	3.20	3.68	42.91	WET
2005	3.83	2.52	1.77	0.59	1.83	1.00	5.12	3.44	4.02	0.49	5.54	1.74	31.89	DRY
2006	3.98	1.62	3.68	3.48	4.69	2.18	10.35	1.63	4.38	6.30	2.89	3.47	48.65	WET
2007	1.49	1.24	4.46	5.20	1.63	3.22	3.94	4.35	1.23	3.36	1.43	4.49	36.04	NORMAL
2008	3.56	M	M	3.99	1.94	5.53	1.73	2.48	5.04	2.47	2.45	6.10	M	
2009	0.91	3.85	2.86	4.37	2.54	3.69	3.06	5.01	2.79	6.35	1.16	M	M	
2010	0.85	0.68	1.30	2.79	3.32	3.94	2.56	2.81	4.02	2.36	2.00	1.34	27.97	DRY
2011	2.10	1.60	3.33	7.77	2.49	5.24	1.14	10.54	M	3.48	3.27	1.72	M	
2012	M	1.41	4.73	2.39	3.83	2.91	4.00	4.09	1.15	4.66	0.54	4.15	M	
2013	5.06	2.82	1.00	6.94	7.42	2.30	1.93	2.27	1.27	3.47	5.54	2.24	42.26	WET
2014	2.83	1.39	1.77	7.25	3.98	4.43	3.92	3.00	3.10	3.09	4.63	1.56	40.95	WET
2015	1.57	0.94	1.33	5.21	5.30	3.42	2.58	2.46	4.24	2.79	5.05	4.39	39.28	NORMAL

Table 4-3. List of transects and monitoring wells used to show groundwater table profiles and slopes.

Transect Number	Non-perched Wetland†	Monitoring Wells Upgradient (left) to Downgradient (right)
1	R	MW-103i→MW-102i→MW-11s→Seep 6
2	R	MW-103i→MW-102i→MW-101s→SW-1-DP
3	R	MW-103i→MW-102i→MW-101s→SW-2-DP
4	G	MW-103i→MW-110i→MW-8i→DP-2
5	R	MW-103i→MW-110i→MW-7i→MW-4u→Seep 3
6	R	MW-103i→MW-110i→MW-7i→MW-4u→Seep 4
7	R	MW-103i→MW-110i→MW-7i→MW-3i→Seep 2
8	R	MW-103i→MW-110i→MW-13i→Seep 1
9	R	MW-103i→MW-6i→MW-5i→Vent 1r
10	A	MW-103i→MW-6i→MW-9i→Seep5→SW-8-DP

† *Monitoring wells were not installed and monitored at non-perched wetland CC.*



Map 4-1. Ground water transects used to display ground water slopes and relationships through multiple monitoring wells between production well PW-101 and non-perched wetlands in response to the Michigan Department of Environmental Quality RAI dated June 21, 2017, Item #5.

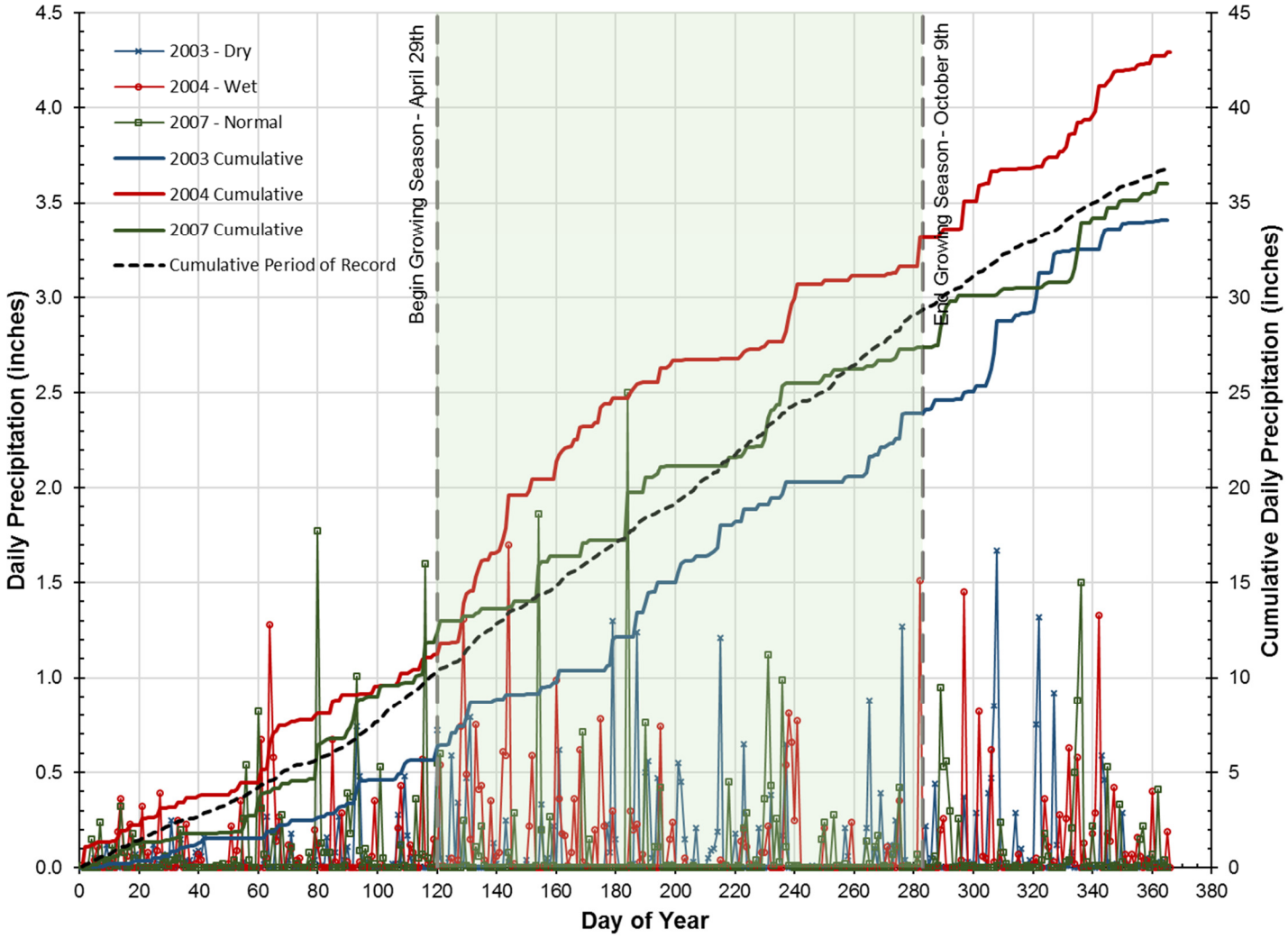


Figure 4-1. Daily and cumulative rainfall for the proposed normal (2007), wet (2004), and dry (2003) years.

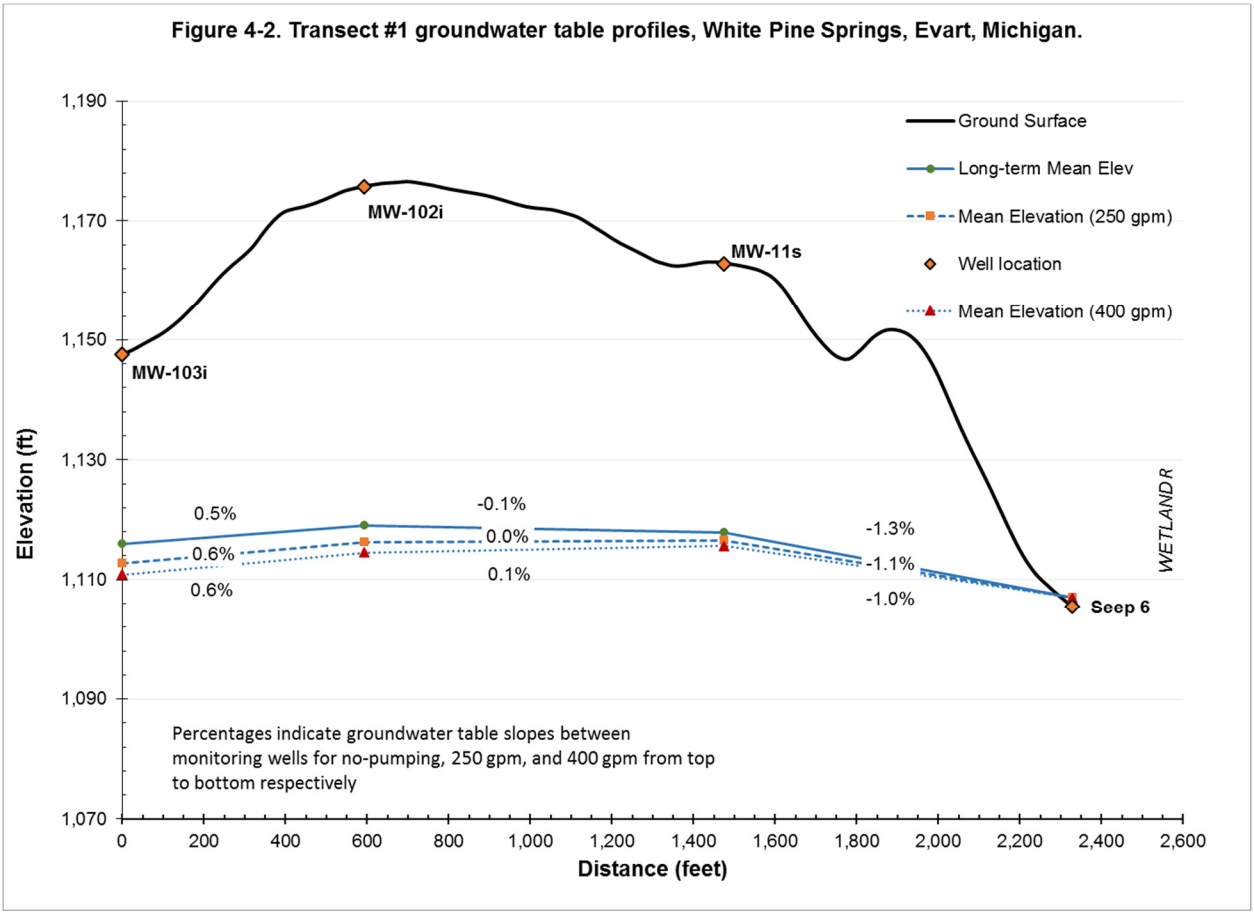


Figure 4-2. Transect 1 groundwater table profiles (see Table 4-3 and Map 4-2 for transect locations), White Pine Springs, Evart, Michigan.

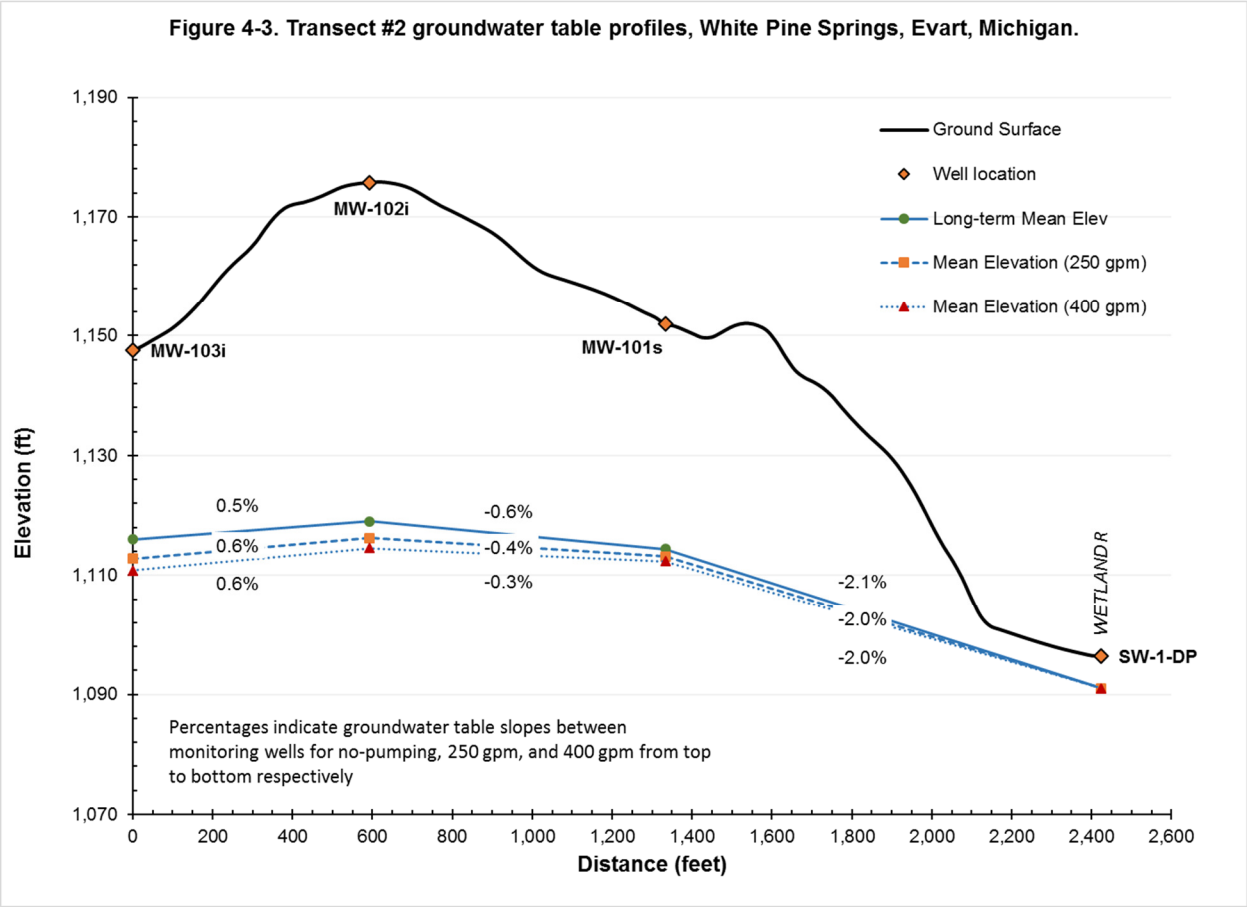


Figure 4-3. Transect 2 groundwater table profiles (see Table 4-3 and Map 4-2 for transect locations), White Pine Springs, Evart, Michigan.

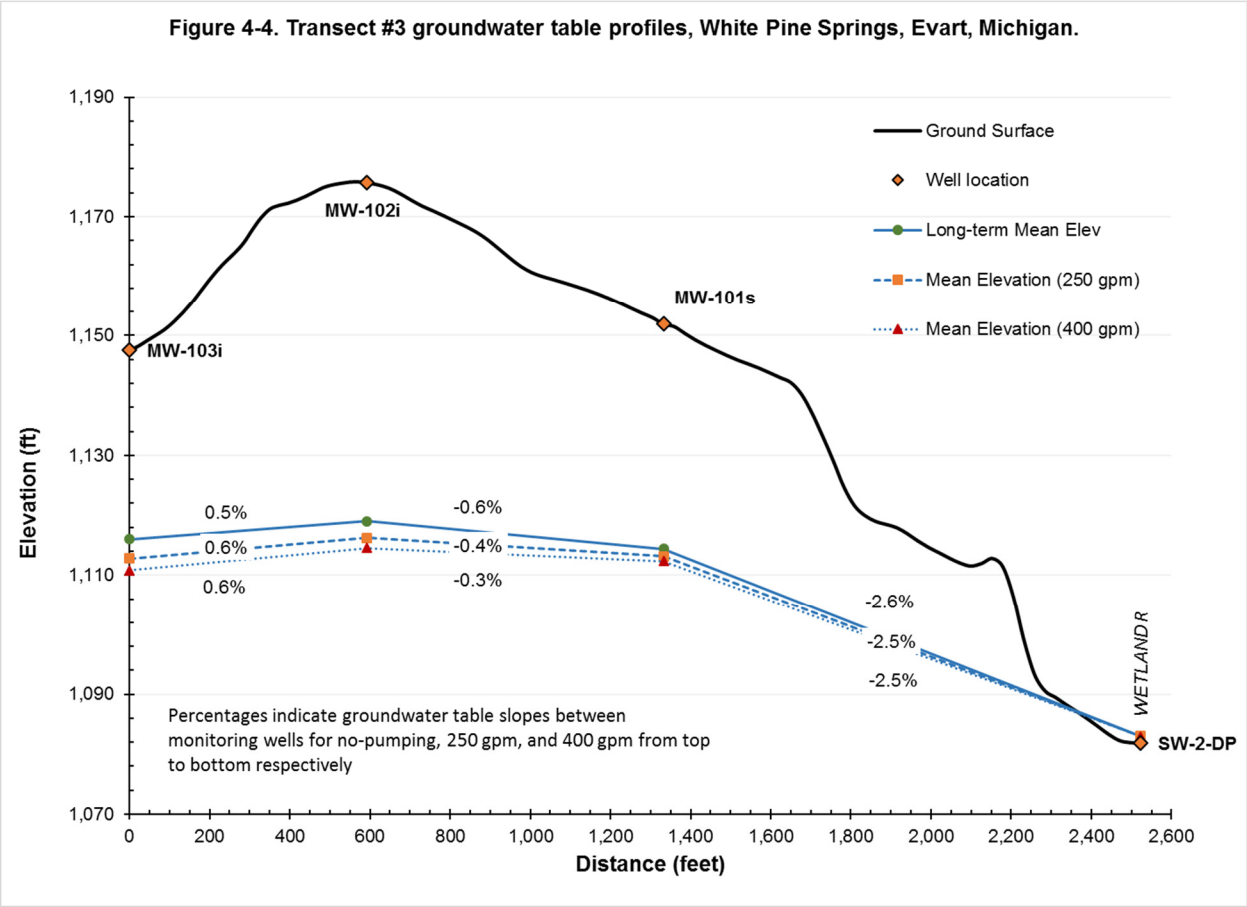


Figure 4-4. Transect 3 groundwater table profiles (see Table 4-3 and Map 4-2 for transect locations), White Pine Springs, Evart, Michigan.

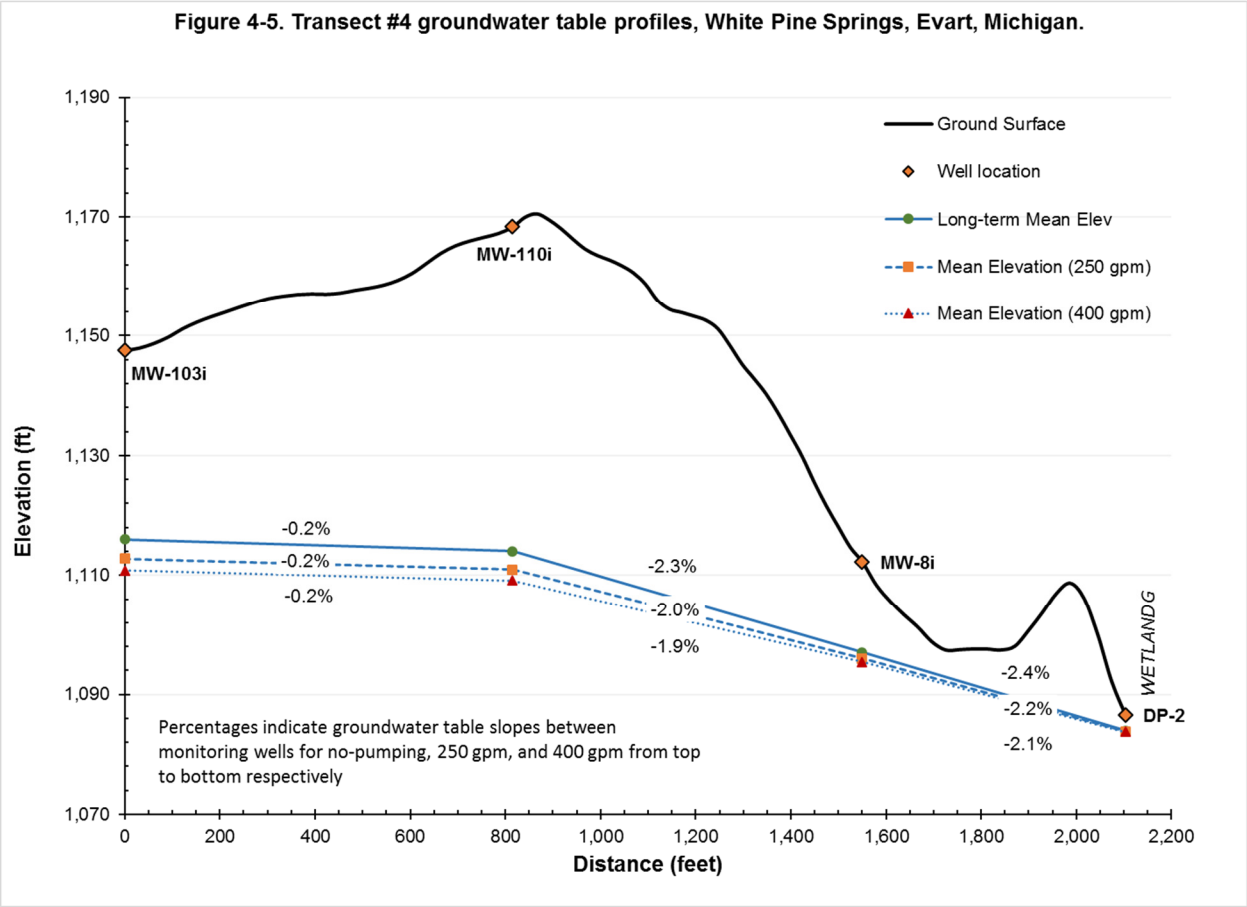


Figure 4-5. Transect 4 groundwater table profiles (see Table 4-3 and Map 4-2 for transect locations), White Pine Springs, Evart, Michigan.

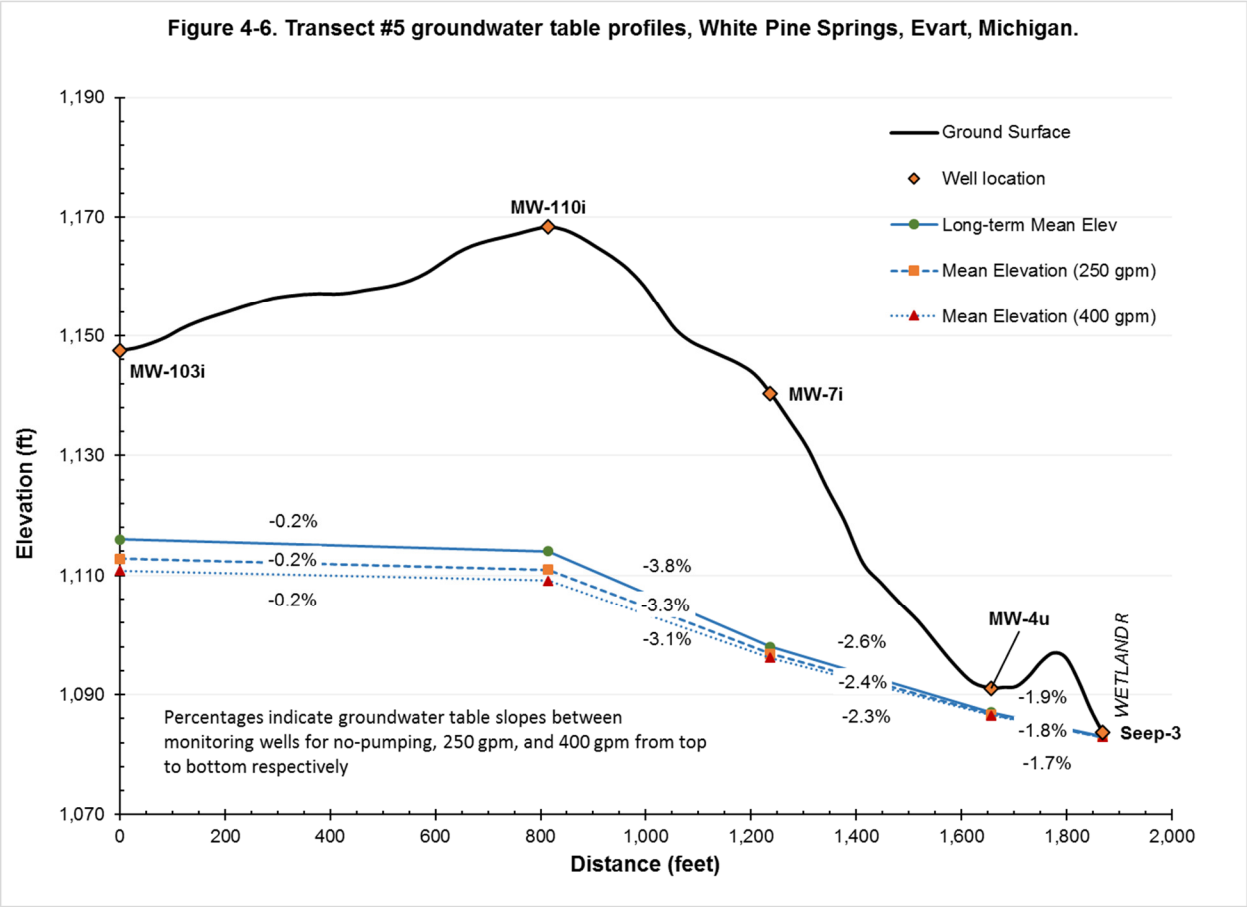


Figure 4-6. Transect 5 groundwater table profiles (see Table 4-3 and Map 4-2 for transect locations), White Pine Springs, Evart, Michigan.

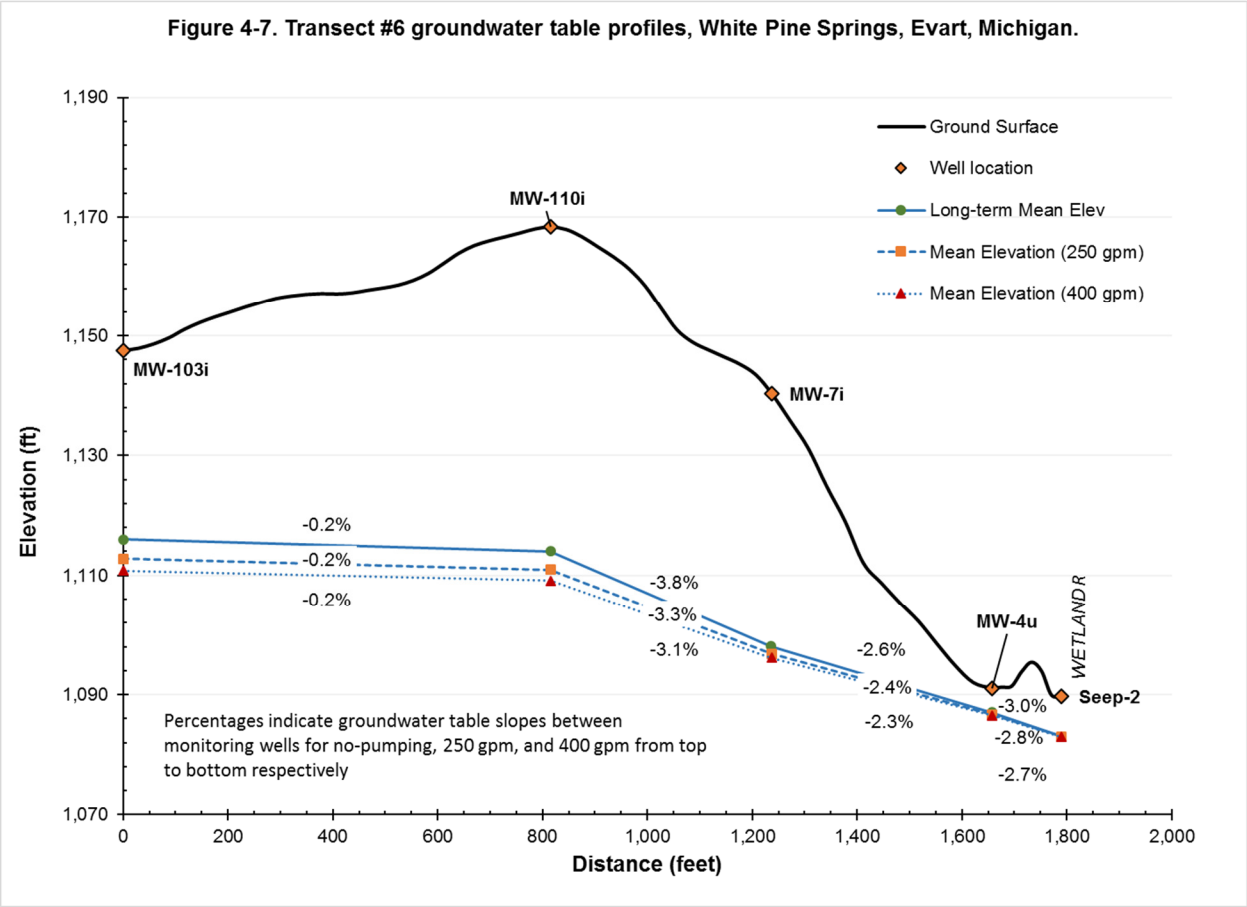


Figure 4-7. Transect 6 groundwater table profiles (see Table 4-3 and Map 4-2 for transect locations), White Pine Springs, Evart, Michigan.

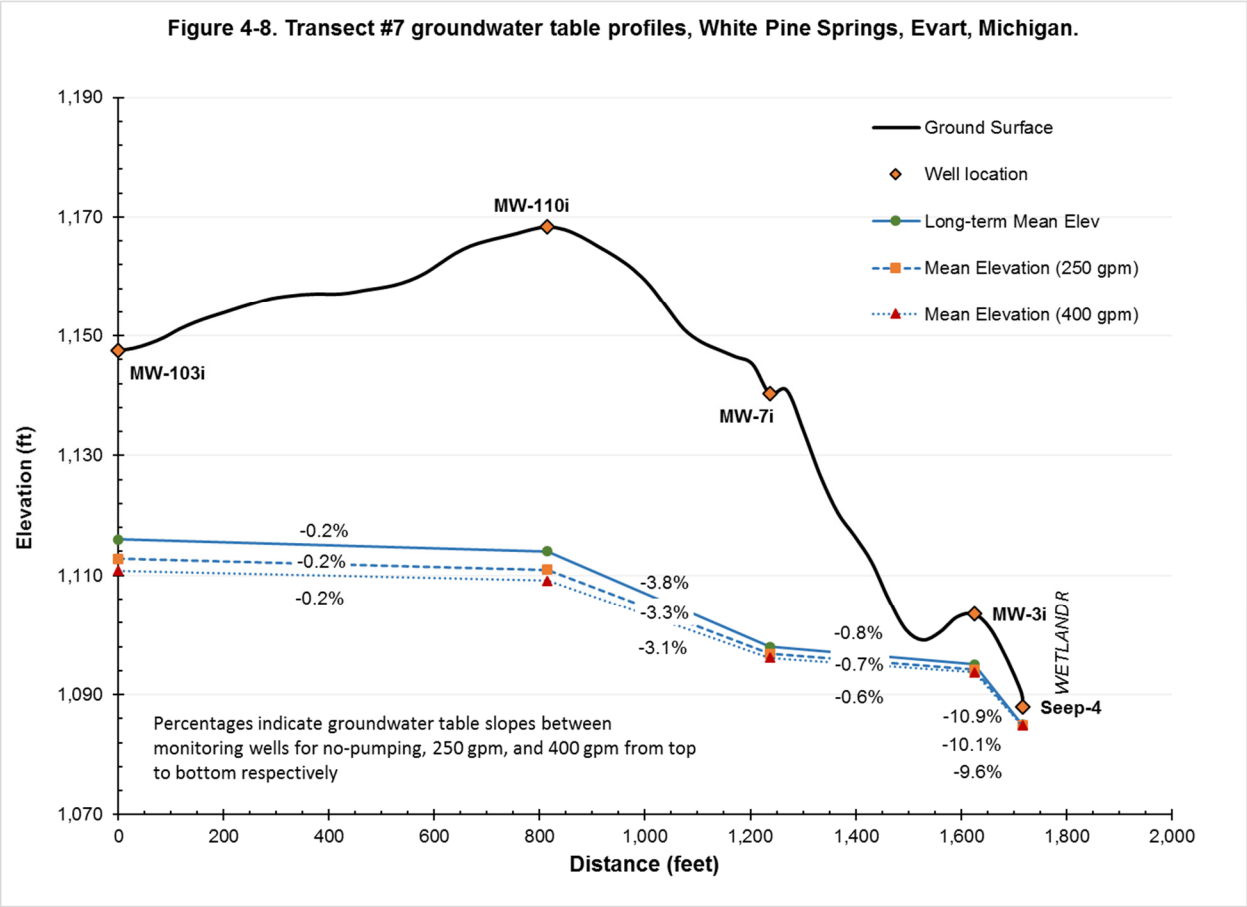


Figure 4-8. Transect 7 groundwater table profiles (see Table 4-3 and Map 4-2 for transect locations), White Pine Springs, Evart, Michigan.

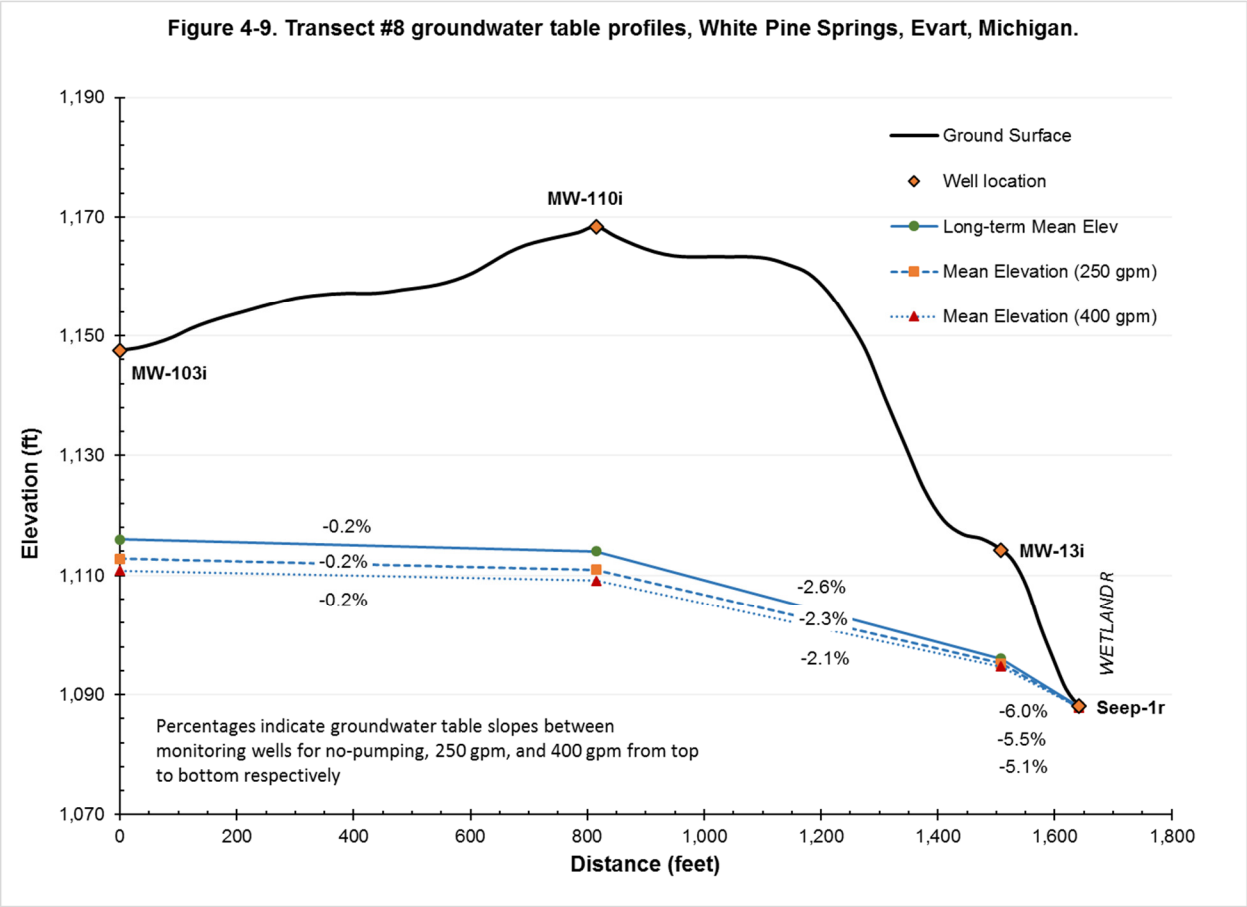


Figure 4-9. Transect 8 groundwater table profiles (see Table 4-3 and Map 4-2 for transect locations), White Pine Springs, Evart, Michigan.

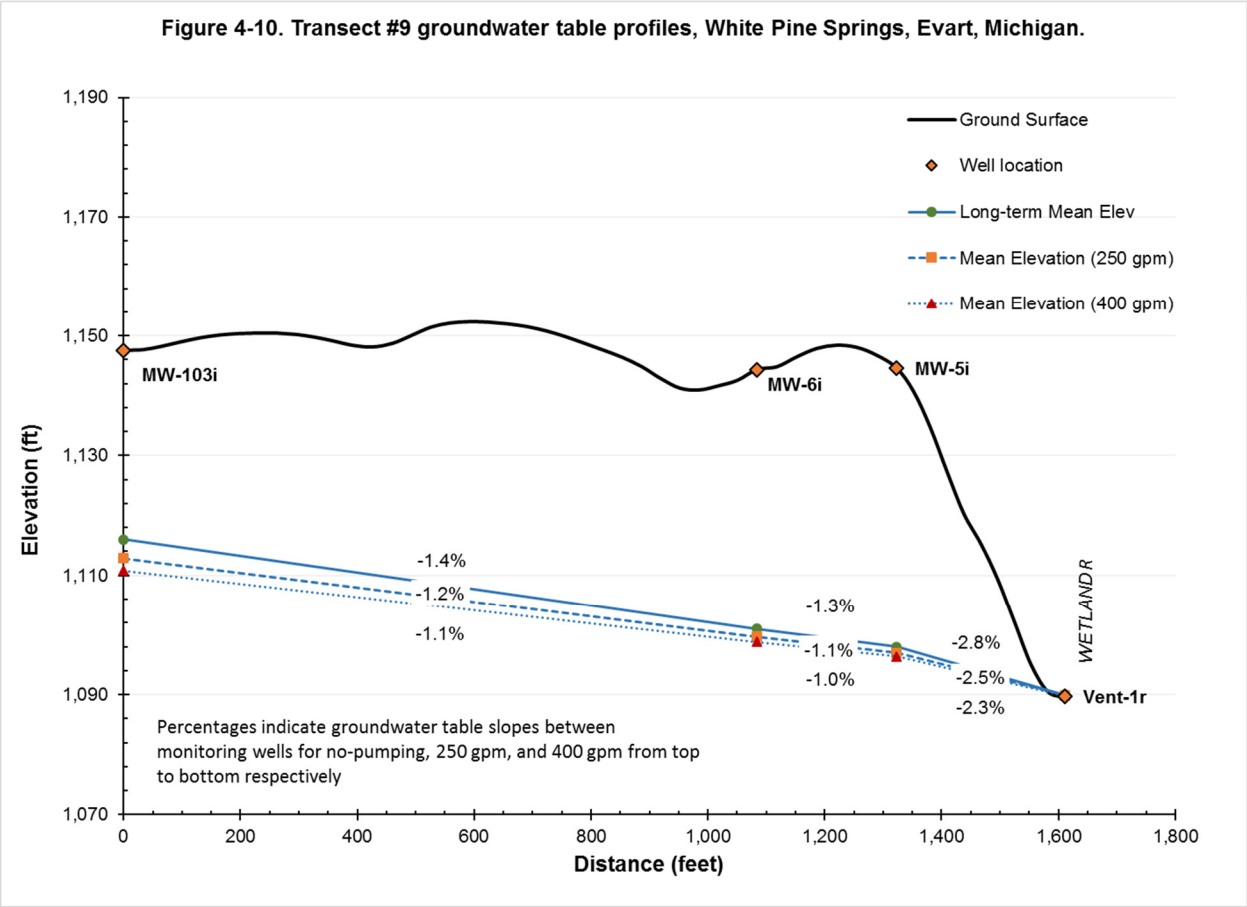


Figure 4-10. Transect 9 groundwater table profiles (see Table 4-3 and Map 4-2 for transect locations), White Pine Springs, Evart, Michigan.

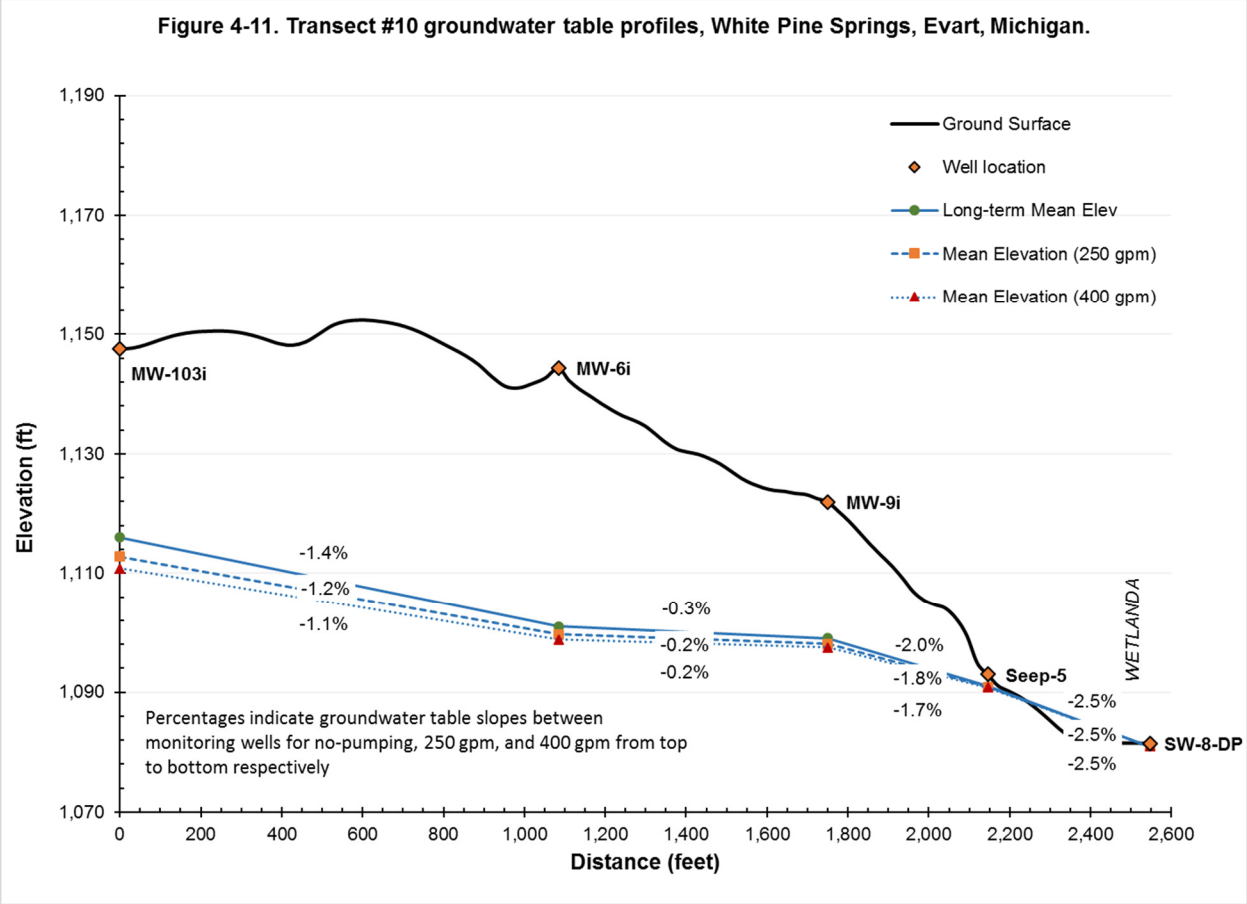


Figure 4-11. Transect 10 groundwater table profiles (see Table 4-3 and Map 4-2 for transect locations), White Pine Springs, Evart, Michigan.

Appendix A
Wetland Maps

Appendix B
Wetland Water Budgets

Wetland A Water Budget Analysis and Discussion

Discussion:

Wetland A is a ground water slope wetland connected to a stream. However, Wetland A is partially flooded by the Decker Pond dam. The open water portion of Wetland A has a surface water elevation that is the same as Decker Pond. Wetland A has surface water outflow via Decker Pond and Chippewa Creek. It also has surface water inflow via a stream and seeps. Based on monitoring well data and observations by a Professional Wetland Scientist, the shallow ground water aquifer creates saturated soil conditions throughout the portion of Wetland A that does not contain open water. Absent the Decker Pond dam, Wetland A would not have appreciable surface water storage volume. As is, it stores water at a maximum depth of approximately 3 feet. Water discharges from Wetland A at an elevation of approximately 1,079 feet - the elevation of the dam. The open water area of Wetland A has an estimated storage volume of 1.8 acre-ft, based on a surface area of 1.8 acres and estimated average depth of 1 foot.

Water Budget Equation: $\Delta Storage = [P + GI + SRO + SI] - [E + ET + GO + SO]$
Inputs: Precipitation (P), Ground Water Inflow (GI), Surface Runoff (SRO), Stream & Seep Inflow (SI)
Outputs: Evaporation [E], Evapotranspiration (ET), Ground Water Outflow (GO), and Stream Outflow

Due to high infiltration rates in its watershed, surface runoff is a negligible component of the Wetland A water budget. The soil hydrological class is A and the runoff curve number is ~35. A rainfall of greater than 4 inches would be required to generate appreciable runoff. Furthermore, evaporation is negligible becasue there is very little exposed open water in the drainge basin of Wetland A. Therefore, the water budget equation becomes:
$\Delta Storage = [P + GI + SI] - [ET + GO + SO]$.

Wetland A Morphological Data:

Area	7.5 acres
Surface Storage Max Depth	3 ft
Surface Storage Volume	1.8 ac-ft

Annual Water Budget:

	2007 - Normal Year		2004 - Wet Year		2003 - Dry Year	
	No Pumping	Pumping 400 gpm	No Pumping	Pumping 400 gpm	No Pumping	Pumping 400 gpm
Precipitation (P, gpm)	14	14	17	17	13	13
Groundwater Inflow (GI, gpm)	82	77	88	83	77	71
Stream and Seep Inflow (SI, gpm)	112	83	128	99	96	67
Evapotranspiration (ET, gpm)	12	12	12	12	12	12
Groundwater Outflow (GO, gpm)	1	1	1	1	1	1
Stream Outflow (SO, gpm)	195	161	220	186	173	139
ΔStorage (acre-ft)	0.0	0.0	0.1	0.1	-0.1	-0.1
Δstorage Depth (ft)	0.00	0.00	0.01	0.01	-0.01	-0.01

Wetland A Water Budget

Monthly Water Budget, Normal Year (2007), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	1.49	0.54	6.8	2.5	74	93	0.4	171	-0.1	-0.01	-0.01
Feb	28	1.24	0.72	6.3	3.4	76	96	0.5	175	0.0	0.00	-0.01
Mar	31	4.46	1.43	20.3	6.7	86	119	1.0	215	0.3	0.04	0.03
Apr	30	5.20	2.60	24.5	12.3	92	132	1.1	235	0.0	-0.01	0.03
May	31	1.63	4.34	7.4	20.5	93	135	1.2	214	0.0	0.00	0.03
Jun	30	3.22	5.00	15.2	23.6	91	131	1.0	213	-0.1	-0.01	0.01
Jul	31	3.94	5.21	18.0	24.6	84	116	0.7	195	-0.2	-0.03	-0.01
Aug	31	4.35	4.10	19.8	19.3	81	110	0.6	194	-0.3	-0.04	-0.05
Sep	30	1.23	3.10	5.8	14.6	80	106	0.5	177	-0.1	-0.01	-0.07
Oct	31	3.36	1.68	15.3	7.9	80	106	0.6	192	0.2	0.02	-0.05
Nov	30	1.43	1.02	6.7	4.8	77	100	0.5	176	0.3	0.05	0.00
Dec	31	4.49	0.56	20.5	2.6	75	96	0.4	189	0.0	0.00	0.00

Monthly Water Budget, Normal Year (2007), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	1.49	0.54	6.8	2.5	69	64	0.4	137	-0.1	-0.01	-0.01
Feb	28	1.24	0.72	6.3	3.4	70	68	0.5	140	0.0	0.00	-0.01
Mar	31	4.46	1.43	20.3	6.7	80	90	1.0	180	0.3	0.04	0.03
Apr	30	5.20	2.60	24.5	12.3	86	103	1.1	201	0.0	-0.01	0.03
May	31	1.63	4.34	7.4	20.5	87	106	1.2	179	0.0	0.00	0.03
Jun	30	3.22	5.00	15.2	23.6	85	103	1.0	179	-0.1	-0.01	0.01
Jul	31	3.94	5.21	18.0	24.6	79	88	0.7	160	-0.2	-0.03	-0.01
Aug	31	4.35	4.10	19.8	19.3	76	82	0.6	160	-0.3	-0.04	-0.05
Sep	30	1.23	3.10	5.8	14.6	74	77	0.5	143	-0.1	-0.01	-0.07
Oct	31	3.36	1.68	15.3	7.9	74	78	0.6	158	0.2	0.02	-0.05
Nov	30	1.43	1.02	6.7	4.8	72	71	0.5	142	0.3	0.05	0.00
Dec	31	4.49	0.56	20.5	2.6	70	67	0.4	154	0.0	0.00	0.00

Wetland A Water Budget Analysis and Discussion

Monthly Water Budget, Wet Year (2004), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	3.15	0.54	14.4	2.5	77	100	0.4	188	0.0	-0.01	-0.01
Feb	28	1.32	0.72	6.7	3.4	79	105	0.6	187	0.0	0.00	-0.01
Mar	31	4.64	1.43	21.2	6.7	93	136	1.1	241	0.2	0.03	0.02
Apr	30	2.67	2.60	12.6	12.3	101	155	1.5	255	0.0	0.00	0.02
May	31	8.65	4.34	39.5	20.5	102	159	1.6	279	0.0	0.00	0.02
Jun	30	4.31	5.00	20.3	23.6	100	154	1.4	250	0.0	-0.01	0.02
Jul	31	2.01	5.21	9.2	24.6	91	134	0.9	209	-0.1	-0.02	0.00
Aug	31	3.95	4.10	18.0	19.3	87	126	0.7	213	-0.2	-0.03	-0.03
Sep	30	0.57	3.10	2.7	14.6	85	121	0.6	194	-0.1	-0.01	-0.04
Oct	31	4.76	1.68	21.7	7.9	85	122	0.7	219	0.1	0.02	-0.03
Nov	30	3.20	1.02	15.1	4.8	82	114	0.5	203	0.2	0.03	0.01
Dec	31	3.68	0.56	16.8	2.6	80	108	0.5	202	0.0	0.00	0.01

Monthly Water Budget, Wet Year (2004), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gmp)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	3.15	0.54	14.4	2.5	71	71	0.4	154	0.0	-0.01	-0.01
Feb	28	1.32	0.72	6.7	3.4	73	77	0.6	153	0.0	0.00	-0.01
Mar	31	4.64	1.43	21.2	6.7	87	108	1.1	206	0.2	0.03	0.02
Apr	30	2.67	2.60	12.6	12.3	96	126	1.5	221	0.0	0.00	0.02
May	31	8.65	4.34	39.5	20.5	97	131	1.6	245	0.0	0.00	0.02
Jun	30	4.31	5.00	20.3	23.6	94	126	1.4	216	0.0	-0.01	0.02
Jul	31	2.01	5.21	9.2	24.6	85	105	0.9	175	-0.1	-0.02	0.00
Aug	31	3.95	4.10	18.0	19.3	81	98	0.7	179	-0.2	-0.03	-0.03
Sep	30	0.57	3.10	2.7	14.6	79	92	0.6	159	-0.1	-0.01	-0.04
Oct	31	4.76	1.68	21.7	7.9	80	93	0.7	185	0.1	0.02	-0.03
Nov	30	3.20	1.02	15.1	4.8	76	85	0.5	169	0.2	0.03	0.01
Dec	31	3.68	0.56	16.8	2.6	74	80	0.5	167	0.0	0.00	0.01

Wetland A Water Budget Analysis and Discussion

Monthly Water Budget, Dry Year (2003), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	0.84	0.54	3.8	2.5	72	85	0.4	158	-0.1	-0.01	-0.01
Feb	28	0.72	0.72	3.6	3.4	73	87	0.4	160	0.0	0.00	-0.01
Mar	31	1.79	1.43	8.2	6.7	79	102	0.8	180	0.2	0.03	0.02
Apr	30	3.01	2.60	14.2	12.3	83	110	0.9	195	0.0	0.00	0.01
May	31	2.79	4.34	12.7	20.5	84	112	0.9	187	0.0	0.00	0.01
Jun	30	2.99	5.00	14.1	23.6	82	109	0.8	181	-0.1	-0.01	0.00
Jul	31	4.40	5.21	20.1	24.6	78	99	0.5	173	-0.2	-0.02	-0.02
Aug	31	3.75	4.10	17.1	19.3	76	95	0.5	169	-0.2	-0.03	-0.05
Sep	30	2.08	3.10	9.8	14.6	74	91	0.4	161	-0.1	-0.01	-0.06
Oct	31	3.01	1.68	13.7	7.9	74	91	0.5	170	0.1	0.01	-0.04
Nov	30	7.12	1.02	33.6	4.8	72	86	0.4	186	0.2	0.03	-0.01
Dec	31	1.58	0.56	7.2	2.6	71	83	0.4	159	0.0	0.00	-0.01

Monthly Water Budget, Dry Year (2003), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gmp)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	0.84	0.54	3.8	2.5	66	57	0.4	124	-0.1	-0.01	-0.01
Feb	28	0.72	0.72	3.6	3.4	67	59	0.4	126	0.0	0.00	-0.01
Mar	31	1.79	1.43	8.2	6.7	73	73	0.8	146	0.2	0.03	0.02
Apr	30	3.01	2.60	14.2	12.3	77	82	0.9	160	0.0	0.00	0.01
May	31	2.79	4.34	12.7	20.5	78	83	0.9	152	0.0	0.00	0.01
Jun	30	2.99	5.00	14.1	23.6	77	80	0.8	147	-0.1	-0.01	0.00
Jul	31	4.40	5.21	20.1	24.6	72	70	0.5	138	-0.2	-0.02	-0.02
Aug	31	3.75	4.10	17.1	19.3	70	66	0.5	135	-0.2	-0.03	-0.05
Sep	30	2.08	3.10	9.8	14.6	69	63	0.4	127	-0.1	-0.01	-0.06
Oct	31	3.01	1.68	13.7	7.9	69	62	0.5	136	0.1	0.01	-0.04
Nov	30	7.12	1.02	33.6	4.8	67	58	0.4	151	0.2	0.03	-0.01
Dec	31	1.58	0.56	7.2	2.6	65	55	0.4	124	0.0	0.00	-0.01

Wetland CC Water Budget Analysis and Discussion

Discussion:

Wetland CC is a ground water slope wetland and open basin wetland. However, the downstream extent of Wetland CC is hydrologically altered by the Decker Pond dam. Wetland CC does not contain an open water area or appreciable surface water storage - water flows into and out of Wetland CC, similar to Wetland R. Based on monitoring well data and observations by a Professional Wetland Scientist, the shallow ground water aquifer creates saturated soil conditions throughout Wetland CC, but ground water gain results in surface water flow at times. Wetland CC is part of the headwaters of Chippewa Creek.

Water Budget Equation: ΔStorage = [P + GI + SRO + SI] - [E + ET + GO + SO]
Inputs: Precipitation (P), Ground Water Inflow (GI), Surface Runoff (SRO), Stream & Seep Inflow (SI)
Outputs: Evaporation [E], Evapotranspiration (ET), Ground Water Outflow (GO), and Stream Outflow

Due to high infiltration rates in its watershed, surface runoff is a negligible component of the Wetland CC water budget. The soil hydrological class is A and the runoff curve number is ~35. A rainfall of greater than 4 inches would be required to generate appreciable runoff. Furthermore, evaporation is zero becasue there is no open water in the drainge basin of Wetland CC. Therefore, the water budget equation becomes:
ΔStorage = [P + GI + SI] - [ET + GO + SO].

Wetland CC Morphological Data:

Area	1.2 acres
Surface Storage Max Depth	3 ft
Surface Storage Volume	1.8 ac-ft

Annual Water Budget:

	2007 - Normal Year		2004 - Wet Year		2003 - Dry Year	
	No Pumping	Pumping 400 gpm	No Pumping	Pumping 400 gpm	No Pumping	Pumping 400 gpm
Precipitation (P, gpm)	2	2	3	3	2	2
Groundwater Inflow (GI, gpm)	51	45	55	49	46	40
Stream & Seep Inflow (SI, gpm)	90	67	106	84	74	52
Evapotranspiration (ET, gpm)	2	2	2	2	2	2
Groundwater Outflow (GO, gpm)	1	1	1	1	1	1
Stream Outflow (SO, gpm)	139	111	160	132	119	91
ΔStorage (acre-ft)	0.0	0.0	0.0	0.0	0.0	0.0
Δstorage Depth (ft)	0.0	0.0	0.0	0.0	0.0	0.0

Wetland CC Water Budget Analysis and Discussion

Monthly Water Budget, Normal Year (2007), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	ET (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	1.49	0.54	1.1	45	73	0.4	1.3	117	-0.01	-0.01	-0.01
Feb	28	1.24	0.72	1.0	46	75	0.5	1.3	120	-0.01	0.00	-0.01
Mar	31	4.46	1.43	3.3	52	93	1.1	1.2	145	0.05	0.04	0.03
Apr	30	5.20	2.60	3.9	56	106	2.0	1.2	162	-0.01	-0.01	0.03
May	31	1.63	4.34	1.2	57	110	3.3	1.2	163	0.00	0.00	0.03
Jun	30	3.22	5.00	2.4	56	108	3.8	1.2	161	-0.01	-0.01	0.01
Jul	31	3.94	5.21	2.9	52	95	3.9	1.2	145	-0.04	-0.03	-0.01
Aug	31	4.35	4.10	3.2	51	90	3.1	1.2	139	-0.05	-0.04	-0.05
Sep	30	1.23	3.10	0.9	49	86	2.3	1.3	132	-0.02	-0.01	-0.07
Oct	31	3.36	1.68	2.5	49	85	1.3	1.3	134	0.02	0.02	-0.05
Nov	30	1.43	1.02	1.1	48	80	0.8	1.3	126	0.05	0.05	0.00
Dec	31	4.49	0.56	3.3	46	76	0.4	1.3	124	0.00	0.00	0.00

Monthly Water Budget, Normal Year (2007), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	ET (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	1.49	0.54	1.1	39	50	0.4	1.3	89	-0.01	-0.01	-0.01
Feb	28	1.24	0.72	1.0	40	53	0.5	1.3	92	-0.01	0.00	-0.01
Mar	31	4.46	1.43	3.3	46	71	1.1	1.2	117	0.05	0.04	0.03
Apr	30	5.20	2.60	3.9	50	84	2.0	1.2	134	-0.01	-0.01	0.03
May	31	1.63	4.34	1.2	51	87	3.3	1.2	135	0.00	0.00	0.03
Jun	30	3.22	5.00	2.4	50	85	3.8	1.2	133	-0.01	-0.01	0.01
Jul	31	3.94	5.21	2.9	46	73	3.9	1.2	117	-0.04	-0.03	-0.01
Aug	31	4.35	4.10	3.2	45	67	3.1	1.2	111	-0.05	-0.04	-0.05
Sep	30	1.23	3.10	0.9	43	63	2.3	1.3	104	-0.02	-0.01	-0.07
Oct	31	3.36	1.68	2.5	43	63	1.3	1.3	106	0.02	0.02	-0.05
Nov	30	1.43	1.02	1.1	42	58	0.8	1.3	98	0.05	0.05	0.00
Dec	31	4.49	0.56	3.3	40	54	0.4	1.3	96	0.00	0.00	0.00

Wetland CC Water Budget Analysis and Discussion

Monthly Water Budget, Wet Year (2004), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	ET (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	3.15	0.54	2.3	48	80	0.4	1.3	128	0.0	-0.01	-0.01
Feb	28	1.32	0.72	1.1	49	84	0.5	1.3	132	0.0	-0.01	-0.02
Mar	31	4.64	1.43	3.4	57	110	1.1	1.2	167	0.1	0.06	0.04
Apr	30	2.67	2.60	2.0	62	127	2.0	1.2	188	0.0	-0.01	0.04
May	31	8.65	4.34	6.3	63	132	3.3	1.2	197	0.0	0.00	0.04
Jun	30	4.31	5.00	3.3	62	130	3.8	1.2	190	0.0	-0.01	0.03
Jul	31	2.01	5.21	1.5	57	114	3.9	1.2	168	0.0	-0.04	-0.01
Aug	31	3.95	4.10	2.9	55	107	3.1	1.2	161	-0.1	-0.05	-0.06
Sep	30	0.57	3.10	0.4	54	101	2.3	1.2	152	0.0	-0.02	-0.08
Oct	31	4.76	1.68	3.5	54	102	1.3	1.2	156	0.0	0.03	-0.05
Nov	30	3.20	1.02	2.4	52	94	0.8	1.2	146	0.1	0.06	0.01
Dec	31	3.68	0.56	2.7	50	89	0.4	1.2	140	0.0	0.00	0.01

Monthly Water Budget, Wet Year (2004), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	ET (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	3.15	0.54	2.3	42	58	0.4	1.3	100	0.0	-0.01	-0.01
Feb	28	1.32	0.72	1.1	43	62	0.5	1.3	104	0.0	-0.01	-0.02
Mar	31	4.64	1.43	3.4	51	87	1.1	1.2	139	0.1	0.06	0.04
Apr	30	2.67	2.60	2.0	56	105	2.0	1.2	159	0.0	-0.01	0.04
May	31	8.65	4.34	6.3	57	110	3.3	1.2	169	0.0	0.00	0.04
Jun	30	4.31	5.00	3.3	56	107	3.8	1.2	162	0.0	-0.01	0.03
Jul	31	2.01	5.21	1.5	51	91	3.9	1.2	139	0.0	-0.04	-0.01
Aug	31	3.95	4.10	2.9	49	84	3.1	1.2	133	-0.1	-0.05	-0.06
Sep	30	0.57	3.10	0.4	48	79	2.3	1.2	124	0.0	-0.02	-0.08
Oct	31	4.76	1.68	3.5	48	79	1.3	1.2	128	0.0	0.03	-0.05
Nov	30	3.20	1.02	2.4	46	72	0.8	1.2	118	0.1	0.06	0.01
Dec	31	3.68	0.56	2.7	44	67	0.4	1.2	112	0.0	0.00	0.01

Wetland CC Water Budget Analysis and Discussion

Monthly Water Budget, Dry Year (2003), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	0.84	0.54	0.6	0.4	43	65	1.3	107	0.0	-0.01	-0.01
Feb	28	0.72	0.72	0.6	0.5	43	66	1.3	108	0.0	0.00	-0.01
Mar	31	1.79	1.43	1.3	1.1	47	78	1.3	123	0.0	0.03	0.02
Apr	30	3.01	2.60	2.3	2.0	50	85	1.3	134	0.0	-0.01	0.01
May	31	2.79	4.34	2.0	3.3	50	87	1.3	135	0.0	0.00	0.01
Jun	30	2.99	5.00	2.3	3.8	50	86	1.3	132	0.0	-0.01	0.00
Jul	31	4.40	5.21	3.2	3.9	47	78	1.3	123	0.0	-0.02	-0.02
Aug	31	3.75	4.10	2.7	3.1	46	74	1.3	118	0.0	-0.03	-0.05
Sep	30	2.08	3.10	1.6	2.3	45	70	1.3	113	0.0	-0.01	-0.06
Oct	31	3.01	1.68	2.2	1.3	45	70	1.3	114	0.0	0.01	-0.05
Nov	30	7.12	1.02	5.4	0.8	43	66	1.3	112	0.0	0.03	-0.02
Dec	31	1.58	0.56	1.2	0.4	42	63	1.3	105	0.0	0.00	-0.02

Monthly Water Budget, Dry Year (2003), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	0.84	0.54	1	0	37	43	1.3	79	0.0	-0.01	-0.01
Feb	28	0.72	0.72	1	1	37	44	1.3	80	0.0	0.00	-0.01
Mar	31	1.79	1.43	1	1	41	55	1.3	95	0.0	0.03	0.02
Apr	30	3.01	2.60	2	2	44	63	1.3	106	0.0	-0.01	0.01
May	31	2.79	4.34	2	3	44	65	1.3	107	0.0	0.00	0.01
Jun	30	2.99	5.00	2	4	44	63	1.3	104	0.0	-0.01	0.00
Jul	31	4.40	5.21	3	4	41	55	1.3	95	0.0	-0.02	-0.02
Aug	31	3.75	4.10	3	3	40	51	1.3	90	0.0	-0.03	-0.05
Sep	30	2.08	3.10	2	2	39	48	1.3	85	0.0	-0.01	-0.06
Oct	31	3.01	1.68	2	1	39	48	1.3	86	0.0	0.01	-0.05
Nov	30	7.12	1.02	5	1	37	44	1.3	84	0.0	0.03	-0.02
Dec	31	1.58	0.56	1	0	36	41	1.3	76	0.0	0.00	-0.02

Wetland G Water Budget Analysis and Discussion

Discussion:

Wetland G is a depressional, closed basin wetland. Based on topography at the west end of Wetland G, it appears possible Wetland G could outflow to Wetland R during very wet years. However, surface outflow has not been observed or recorded. The primary water inputs are ground water inflow and precipitation. The primary outputs are evapotranspiration and ground water outflow. Wetland G is a small wetland, so direct precipitaiton and ET result in small inputs and outputs. The primary inputs and uptputs are ground water inflow and outlfow. Based on monitoring well data and observations by a Professional Wetland Scientist, the shallow ground water aquifer creates inundated to saturated soil conditions throughout Wetland G. However, monitoring wells were not installed in Wetland G prior to 2017. The closest monitoring wells are DP-1, DP-2, and DP-3 located along the upgradient (north) edge of Wetland G. Estimated avergae depth is 0.5 feet, and the surface area is 0.34 acres, resulting in a surface storage volume of 0.17 acre-feet.

Water Budget Equation: ΔStorage = [P + GI + SRO + SI] - [E + ET + GO + SO]
Inputs: Precipitation (P), Ground Water Inflow (GI), Surface Runoff (SRO), Stream & Seep Inflow (SI)
Outputs: Evaporation [E], Evapotranspiration (ET), Ground Water Outflow (GO), and Stream Outflow

Due to high infiltration rates in its watershed, surface runoff is a negligible component of the Wetland G water budget. The soil hydrological class is A and the runoff curve number is ~35. A rainfall of greater than 4 inches would be required to generate appreciable runoff. Furthermore, evaporation is zero because there is little open water area in Wetland G. Lastly, there are no streams or seeps draining to or from Wetland G. Therefore, the water budget equation becomes: ΔStorage = [P + GI] - [ET + GO].

Wetland G Morphological Data:

Area	0.34 acres
Surface Storage Max Depth	2 ft
Surface Storage Volume	0.17 ac-ft

Annual Water Budget:

	2007 - Normal Year		2004 - Wet Year		2003 - Dry Year	
	No Pumping	Pumping 400 gpm	No Pumping	Pumping 400 gpm	No Pumping	Pumping 400 gpm
Precipitation (P, gpm)	0.6	0.6	0.7	0.7	0.6	0.6
Groundwater Inflow (GI, gpm)	7.5	7.1	8.1	7.7	7.1	6.7
Evapotranspiration (ET, gpm)	0.5	0.5	0.5	0.5	0.5	0.5
Groundwater Outflow (GO, gpm)	7.6	7.2	8.4	8.0	7.2	6.8
ΔStorage (acre-ft)	0.0	0.0	0.0	0.0	0.0	0.0
Δstorage Depth (ft)	0.00	0.00	-0.14	-0.14	-0.14	-0.14

Wetland G Water Budget Analysis and Discussion

Monthly Water Budget, Normal Year (2007), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	GW Outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	1.49	0.54	0.3	0.1	7.1	7.1	0.0	0.09	0.09
Feb	28	1.24	0.72	0.3	0.2	7.2	7.2	0.0	0.05	0.14
Mar	31	4.46	1.43	0.9	0.3	7.5	9.2	-0.2	-0.45	-0.31
Apr	30	5.20	2.60	1.1	0.6	7.8	8.2	0.0	0.06	-0.25
May	31	1.63	4.34	0.3	0.9	7.9	7.3	0.0	0.00	-0.25
Jun	30	3.22	5.00	0.7	1.1	7.9	7.2	0.0	0.10	-0.15
Jul	31	3.94	5.21	0.8	1.1	7.7	6.6	0.1	0.29	0.14
Aug	31	4.35	4.10	0.9	0.9	7.6	6.6	0.1	0.40	0.54
Sep	30	1.23	3.10	0.3	0.7	7.5	6.7	0.1	0.15	0.69
Oct	31	3.36	1.68	0.7	0.4	7.5	8.3	-0.1	-0.21	0.49
Nov	30	1.43	1.02	0.3	0.2	7.3	8.6	-0.2	-0.46	0.03
Dec	31	4.49	0.56	0.9	0.1	7.2	8.1	0.0	-0.03	0.00

Monthly Water Budget, Normal Year (2007), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	GW Outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	1.49	0.54	0.3	0.1	6.7	6.7	0.0	0.09	0.09
Feb	28	1.24	0.72	0.3	0.2	6.8	6.8	0.0	0.05	0.14
Mar	31	4.46	1.43	0.9	0.3	7.1	8.8	-0.2	-0.45	-0.31
Apr	30	5.20	2.60	1.1	0.6	7.4	7.8	0.0	0.06	-0.25
May	31	1.63	4.34	0.3	0.9	7.5	6.9	0.0	0.00	-0.25
Jun	30	3.22	5.00	0.7	1.1	7.5	6.8	0.0	0.10	-0.15
Jul	31	3.94	5.21	0.8	1.1	7.3	6.2	0.1	0.29	0.14
Aug	31	4.35	4.10	0.9	0.9	7.2	6.2	0.1	0.40	0.54
Sep	30	1.23	3.10	0.3	0.7	7.1	6.3	0.1	0.15	0.69
Oct	31	3.36	1.68	0.7	0.4	7.1	7.9	-0.1	-0.21	0.49
Nov	30	1.43	1.02	0.3	0.2	6.9	8.2	-0.2	-0.46	0.03
Dec	31	4.49	0.56	0.9	0.1	6.8	7.7	0.0	-0.03	0.00

Wetland G Water Budget Analysis and Discussion

Monthly Water Budget, Wet Year (2004), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	GW Outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	3.15	0.54	0.7	0.1	7.4	7.7	0.0	0.08	0.08
Feb	28	1.32	0.72	0.3	0.2	7.4	7.5	0.0	0.04	0.12
Mar	31	4.64	1.43	1.0	0.3	8.3	10.1	-0.2	-0.46	-0.34
Apr	30	2.67	2.60	0.6	0.6	9.3	9.2	0.0	0.04	-0.30
May	31	8.65	4.34	1.8	0.9	9.3	10.2	0.0	-0.01	-0.31
Jun	30	4.31	5.00	0.9	1.1	8.8	8.4	0.0	0.09	-0.22
Jul	31	2.01	5.21	0.4	1.1	8.1	6.7	0.1	0.28	0.06
Aug	31	3.95	4.10	0.8	0.9	8.0	6.9	0.1	0.39	0.45
Sep	30	0.57	3.10	0.1	0.7	7.8	6.9	0.0	0.14	0.59
Oct	31	4.76	1.68	1.0	0.4	7.8	9.0	-0.1	-0.22	0.37
Nov	30	3.20	1.02	0.7	0.2	7.7	9.4	-0.2	-0.47	-0.10
Dec	31	3.68	0.56	0.8	0.1	7.6	8.3	0.0	-0.04	-0.14

Monthly Water Budget, Wet Year (2004), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	GW Outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	3.15	0.54	0.7	0.1	7.0	7.3	0.0	0.08	0.08
Feb	28	1.32	0.72	0.3	0.2	7.0	7.1	0.0	0.04	0.12
Mar	31	4.64	1.43	1.0	0.3	7.9	9.7	-0.2	-0.46	-0.34
Apr	30	2.67	2.60	0.6	0.6	8.9	8.8	0.0	0.04	-0.30
May	31	8.65	4.34	1.8	0.9	8.9	9.8	0.0	-0.01	-0.31
Jun	30	4.31	5.00	0.9	1.1	8.4	8.0	0.0	0.09	-0.22
Jul	31	2.01	5.21	0.4	1.1	7.7	6.3	0.1	0.28	0.06
Aug	31	3.95	4.10	0.8	0.9	7.6	6.5	0.1	0.39	0.45
Sep	30	0.57	3.10	0.1	0.7	7.4	6.5	0.0	0.14	0.59
Oct	31	4.76	1.68	1.0	0.4	7.4	8.6	-0.1	-0.22	0.37
Nov	30	3.20	1.02	0.7	0.2	7.3	9.0	-0.2	-0.47	-0.10
Dec	31	3.68	0.56	0.8	0.1	7.2	7.9	0.0	-0.04	-0.14

Wetland G Water Budget Analysis and Discussion

Monthly Water Budget, Dry Year (2003), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	GW Outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	0.84	0.54	0.2	0.1	6.9	6.8	0.0	0.08	0.08
Feb	28	0.72	0.72	0.2	0.2	6.9	6.9	0.0	0.04	0.12
Mar	31	1.79	1.43	0.4	0.3	7.2	8.4	-0.2	-0.46	-0.34
Apr	30	3.01	2.60	0.6	0.6	7.3	7.3	0.0	0.04	-0.30
May	31	2.79	4.34	0.6	0.9	7.4	7.1	0.0	-0.01	-0.31
Jun	30	2.99	5.00	0.6	1.1	7.4	6.7	0.0	0.09	-0.22
Jul	31	4.40	5.21	0.9	1.1	7.2	6.3	0.1	0.28	0.06
Aug	31	3.75	4.10	0.8	0.9	7.1	6.1	0.1	0.39	0.45
Sep	30	2.08	3.10	0.4	0.7	7.1	6.5	0.0	0.14	0.59
Oct	31	3.01	1.68	0.6	0.4	7.0	7.8	-0.1	-0.22	0.37
Nov	30	7.12	1.02	1.5	0.2	6.9	9.4	-0.2	-0.47	-0.10
Dec	31	1.58	0.56	0.3	0.1	6.8	7.1	0.0	-0.04	-0.14

Monthly Water Budget, Dry Year (2003), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	GW Outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	0.84	0.54	0.2	0.1	6.5	6.4	0.0	0.08	0.08
Feb	28	0.72	0.72	0.2	0.2	6.5	6.5	0.0	0.04	0.12
Mar	31	1.79	1.43	0.4	0.3	6.8	8.0	-0.2	-0.46	-0.34
Apr	30	3.01	2.60	0.6	0.6	6.9	6.9	0.0	0.04	-0.30
May	31	2.79	4.34	0.6	0.9	7.0	6.7	0.0	-0.01	-0.31
Jun	30	2.99	5.00	0.6	1.1	7.0	6.3	0.0	0.09	-0.22
Jul	31	4.40	5.21	0.9	1.1	6.8	5.9	0.1	0.28	0.06
Aug	31	3.75	4.10	0.8	0.9	6.7	5.7	0.1	0.39	0.45
Sep	30	2.08	3.10	0.4	0.7	6.7	6.1	0.0	0.14	0.59
Oct	31	3.01	1.68	0.6	0.4	6.6	7.4	-0.1	-0.22	0.37
Nov	30	7.12	1.02	1.5	0.2	6.5	9.0	-0.2	-0.47	-0.10
Dec	31	1.58	0.56	0.3	0.1	6.4	6.7	0.0	-0.04	-0.14

Wetland R Water Budget Analysis and Discussion

Discussion:

Wetland R is a ground water slope wetland and open basin wetland. Wetland R has zero or negligible surface storage capacity because it is drained by several tributaries, primarily Twin Creek, and those tributaries have base elevations below the surface of the wetland. The sub-surface storage capacity is represented by the shallow ground water aquifer, which has been modeled using a ground water model. Based on monitoring well data and observations by a Professional Wetland Scientist, the shallow ground water aquifer creates saturated soil conditions throughout the surface of Wetland R. Ground water flowing into Wetland R also feeds the tributaries and Twin Creek draining it. That is, flow into Wetland R roughly equals flow out of Wetland R, minus water loss due to evapotranspiration within Wetland R. Therefore, the ground water storage does not change as inputs increase or decrease.

Water Budget Equation: $\Delta Storage = [P + GI + SRO + SI] - [E + ET + GO + SO]$
Inputs: Precipitation (P), Ground Water Inflow (GI), Surface Runoff (SRO), Stream & Seep Inflow (SI)
Outputs: Evaporation [E], Evapotranspiration (ET), Ground Water Outflow (GO), and Stream Outflow

Due to high infiltration rates in its watershed, surface runoff is a negligible component of the Wetland R water budget. The soil hydrological class is A and the runoff curve number is ~35. A rainfall of greater than 4 inches would be required to generate appreciable runoff. Furthermore, evaporation is negligible becasue there is very little exposed open water in the drainge basin of Wetland R.

Therefore, the water budget equation becomes: $\Delta Storage = [P + GI + SI] - [ET + GO + SO]$.

Wetland R Morphological Data:

Area	174 acres
Surface Storage Max Depth	0 ft
Surface Storage Volume	0 ac-ft

Annual Water Budget:

	2007 - Normal Year		2004 - Wet Year		2003 - Dry Year	
	No Pumping	Pumping 400 gpm	No Pumping	Pumping 400 gpm	No Pumping	Pumping 400 gpm
Precipitation (P, gpm)	322	322	383	383	306	306
Groundwater Inflow (GI, gpm)	2,053	1,951	2,281	2,179	1,826	1,724
Stream & Seep Inflow (SI, gpm)	858	822	996	960	715	679
Evapotranspiration (ET, gpm)	276	276	276	276	271	271
Groundwater Outflow (GO, gpm)	17	17	17	17	18	18
Stream Outflow (SO, gpm)	2,939	2,801	3,365	3,227	2,559	2,421
ΔStorage (acre-ft)	0.0	0.3	3.2	3.5	-3.2	-2.9
Δstorage Depth (ft)	0.00	0.00	0.02	0.02	-0.02	-0.02

Wetland R Water Budget Analysis and Discussion

Monthly Water Budget, Normal Year (2007), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	1.49	0.54	158	59	1826	662	16	2582	-1.63	-0.01	-0.01
Feb	28	1.24	0.72	145	79	1859	737	18	2652	-0.81	0.00	-0.01
Mar	31	4.46	1.43	472	156	2112	1053	22	3402	7.81	0.04	0.03
Apr	30	5.20	2.60	569	284	2269	1138	21	3678	-0.98	-0.01	0.03
May	31	1.63	4.34	173	475	2309	1097	19	3085	0.00	0.00	0.03
Jun	30	3.22	5.00	352	547	2278	1018	17	3098	-1.79	-0.01	0.01
Jul	31	3.94	5.21	417	570	2118	817	15	2804	-5.12	-0.03	-0.01
Aug	31	4.35	4.10	460	448	2055	798	16	2899	-6.91	-0.04	-0.05
Sep	30	1.23	3.10	135	339	2004	771	16	2574	-2.60	-0.01	-0.07
Oct	31	3.36	1.68	356	184	2003	803	17	2936	3.58	0.02	-0.05
Nov	30	1.43	1.02	156	112	1926	715	16	2610	7.97	0.05	0.00
Dec	31	4.49	0.56	475	61	1872	686	16	2953	0.49	0.00	0.00

Monthly Water Budget, Normal Year (2007), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gmp)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	1.49	0.54	158	59	1724	626	16	2444	-1.60	-0.01	-0.01
Feb	28	1.24	0.72	145	79	1758	701	18	2514	-0.79	0.00	-0.01
Mar	31	4.46	1.43	472	156	2010	1017	22	3264	7.83	0.05	0.03
Apr	30	5.20	2.60	569	284	2167	1102	21	3540	-0.95	-0.01	0.03
May	31	1.63	4.34	173	475	2207	1061	19	2947	0.03	0.00	0.03
Jun	30	3.22	5.00	352	547	2176	982	17	2960	-1.76	-0.01	0.02
Jul	31	3.94	5.21	417	570	2016	780	15	2666	-5.09	-0.03	-0.01
Aug	31	4.35	4.10	460	448	1953	761	16	2761	-6.88	-0.04	-0.05
Sep	30	1.23	3.10	135	339	1902	735	16	2436	-2.58	-0.01	-0.07
Oct	31	3.36	1.68	356	184	1902	767	17	2798	3.60	0.02	-0.05
Nov	30	1.43	1.02	156	112	1824	678	16	2472	7.99	0.05	0.00
Dec	31	4.49	0.56	475	61	1770	650	16	2815	0.52	0.00	0.00

Wetland R Water Budget Analysis and Discussion

Monthly Water Budget, Wet Year (2004), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	3.15	0.54	333	59	1940	719	16	2931	-1.84	-0.01	-0.01
Feb	28	1.32	0.72	155	79	1995	825	18	2885	-0.81	0.00	-0.02
Mar	31	4.64	1.43	491	156	2348	1247	22	3831	10.42	0.06	0.04
Apr	30	2.67	2.60	292	284	2557	1358	21	3910	-1.00	-0.01	0.04
May	31	8.65	4.34	916	475	2612	1303	18	4335	0.27	0.00	0.04
Jun	30	4.31	5.00	471	547	2575	1200	16	3699	-2.06	-0.01	0.03
Jul	31	2.01	5.21	213	570	2367	941	13	2984	-6.38	-0.04	-0.01
Aug	31	3.95	4.10	418	448	2291	922	14	3232	-8.71	-0.05	-0.06
Sep	30	0.57	3.10	62	339	2231	890	14	2853	-3.12	-0.02	-0.08
Oct	31	4.76	1.68	504	184	2239	938	16	3446	4.92	0.03	-0.05
Nov	30	3.20	1.02	350	112	2139	821	15	3105	10.62	0.06	0.01
Dec	31	3.68	0.56	390	61	2074	786	15	3166	0.91	0.01	0.02

Monthly Water Budget, Wet Year (2004), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gmp)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	3.15	0.54	333	59	1839	683	16	2793	-1.81	-0.01	-0.01
Feb	28	1.32	0.72	155	79	1894	789	18	2747	-0.78	0.00	-0.01
Mar	31	4.64	1.43	491	156	2247	1210	22	3693	10.45	0.06	0.05
Apr	30	2.67	2.60	292	284	2456	1322	21	3772	-0.98	-0.01	0.04
May	31	8.65	4.34	916	475	2510	1266	18	4197	0.30	0.00	0.04
Jun	30	4.31	5.00	471	547	2474	1164	16	3561	-2.03	-0.01	0.03
Jul	31	2.01	5.21	213	570	2265	905	13	2846	-6.36	-0.04	-0.01
Aug	31	3.95	4.10	418	448	2190	885	14	3094	-8.68	-0.05	-0.06
Sep	30	0.57	3.10	62	339	2129	854	14	2715	-3.09	-0.02	-0.07
Oct	31	4.76	1.68	504	184	2137	902	16	3308	4.95	0.03	-0.05
Nov	30	3.20	1.02	350	112	2038	785	15	2967	10.65	0.06	0.02
Dec	31	3.68	0.56	390	61	1972	750	15	3028	0.94	0.01	0.02

Wetland R Water Budget Analysis and Discussion

Monthly Water Budget, Dry Year (2003), No Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gpm)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	0.84	0.54	89	57	1713	601	17	2340	-1.41	-0.01	-0.01
Feb	28	0.72	0.72	84	84	1728	649	18	2365	-0.82	0.00	-0.01
Mar	31	1.79	1.43	189	151	1883	852	21	2714	5.19	0.03	0.02
Apr	30	3.01	2.60	329	284	1981	911	21	2923	-0.95	-0.01	0.01
May	31	2.79	4.34	295	459	2003	882	19	2703	-0.27	0.00	0.01
Jun	30	2.99	5.00	327	547	1978	826	18	2577	-1.52	-0.01	0.00
Jul	31	4.40	5.21	466	551	1868	689	16	2483	-3.86	-0.02	-0.02
Aug	31	3.75	4.10	397	434	1818	672	17	2474	-5.11	-0.03	-0.05
Sep	30	2.08	3.10	227	339	1777	650	17	2314	-2.09	-0.01	-0.06
Oct	31	3.01	1.68	319	178	1770	667	18	2544	2.23	0.01	-0.05
Nov	30	7.12	1.02	779	112	1715	604	17	2929	5.31	0.03	-0.02
Dec	31	1.58	0.56	167	59	1675	580	17	2345	0.07	0.00	-0.02

Monthly Water Budget, Dry Year (2003), 400 gpm Pumping

Month	Days	Precip (inches)	ET (inches)	Precip (gpm)	ET (gpm)	GW Inflow (gpm)	Stream & Seep Inflow (gpm)	GW Outflow (gmp)	Stream outflow (gpm)	Change In Storage (acre-ft)	Change In Storage (ft)	Relative Level (ft)
Jan	31	0.84	0.54	89	57	1612	565	17	2202	-1.38	-0.01	-0.01
Feb	28	0.72	0.72	84	84	1626	613	18	2227	-0.79	0.00	-0.01
Mar	31	1.79	1.43	189	151	1782	816	21	2576	5.22	0.03	0.02
Apr	30	3.01	2.60	329	284	1879	875	21	2785	-0.92	-0.01	0.01
May	31	2.79	4.34	295	459	1901	845	19	2565	-0.25	0.00	0.01
Jun	30	2.99	5.00	327	547	1876	790	18	2439	-1.49	-0.01	0.00
Jul	31	4.40	5.21	466	551	1766	653	16	2345	-3.83	-0.02	-0.02
Aug	31	3.75	4.10	397	434	1717	636	17	2336	-5.08	-0.03	-0.05
Sep	30	2.08	3.10	227	339	1676	613	17	2176	-2.06	-0.01	-0.06
Oct	31	3.01	1.68	319	178	1669	631	18	2406	2.26	0.01	-0.05
Nov	30	7.12	1.02	779	112	1614	567	17	2791	5.34	0.03	-0.02
Dec	31	1.58	0.56	167	59	1573	544	17	2207	0.09	0.00	-0.02