# DAM HISTORY

1929 - 2014

#### BEFORE THE

21.13

#### RAILROAD COMMISSION OF WISCONSIN

In the matter of the determination of the maximum and minimum levels to WP-364 be maintained in Pine Lake, Township 37 North, Range 12 East, Forest County, Wisconsin.

The petition of Walter Hoffman and eighteen others, alleging that the Minneapolis St Paul and Sault Ste Marie Railway Company, whose line crosses the southwest corner of Pine Lake, had placed certain culverts under its track, as a result of which the level of Pine Lake has been lowered below its former natural level, was filed with this Commission on September 6, 1929. The petition requests the Commission to take such action as will result in restoring the natural lake level. A public hearing was held on the matter in the court house at Crandon, Wisconsin, on November 26, 1929.

The appearances were as follows:

Nohl, Nohl, Petrie and Blume, by Mr. Nelson F. Petrie, Attorneys, Milwaukee, Wisconsin, for the petitioners;
Mr. A. O. Bjorklund, Attorney, for the Minneapolis St Paul and Sault Ste Marie Rallway Company;
Mr. Lawrence E. Gooding, District Attorney, Crandon, Wisconsin, for Forest County.

It appears that the bridge which existed at this site previous to 1927, consisted of a pile treatle structure which was replaced in 1927 by two concrete pipes approximately 5' 3" inside diameter, that later in 1927, upon complaint of certain riparian owners, the railroad company lowered the two concrete pipes then in place to approximately the natural bed of the stream as it existed prior to the improvements, and in addition placed two additional concrete pipes approximately 4' inside diameter each in the stream beside the original pipes.

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The two additional 4<sup>1</sup> diameter pipes were placed approximately 1<sup>1</sup> below the natural stream bed as it existed prior to the improvements. The stream bed prior to the improvements was approximately 20<sup>2</sup> in width at normal stages of water.

The petitioners now complain that the new culvert has lowered the level of Pine Lake in the neighborhood of 1-1/2 to 2 feet below its natural level. The elevation of the surface of the lake at various times was as follows:

Aug.	4,	1927	Railroad	Company	90 <b>.5</b> 5
June	5,	1928	Staff	~ -	89,91
July	21,	1928	Ħ		90.14
Aug.	14,	1928	Railroad	Company	89.75
Sept	24,	1928	I	- ú	92.03
Oct.	4,	1928 -	. H .	n	90.55
July	9,	1929	11	п	90.39
Sept	21,	1929	19	u	90.45
Nov.	6,	1929	11	k	89.49
Nov.	30,	1929	11	16	89,60

The above elevations are referred to Railroad Commission bench mark 663B described as follows:

> "Bench mark 663B is a bronze tablet marked 'Railroad Commission of Wisconsin' set in rock ledge on west shore of lake about 500' north of the outlet and about 4' from the water's edge. Elevation 92.03'."

To change any of the above elevations to the datum used by the railroad company engineers, subtract 1.05 feet. Most of the elevations referred to in the testimony are on the datum of the railroad company engineers. For convenience, all of the above elevations referred to in the testimony have been changed to Railroad Commission datum.

From the testimony it appears that with the lake at elevation 90.55° on August 4, 1927, the railroad company was receiving complaints from certain riparian owners to the effect that the lake level was above normal and entirely too high, while the elevation of 89.60° which existed at the time of the hearing was

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claimed by several interested parties to be below normal.

From all the information and data available, it appears that the desirable minimum elevation is at approximately 90.001. The maximum elevation need not be fixed, since it is determined by the amount of rainfall and the capacity of the outlet stream of the lake to discharge flood waters.

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It is the further opinion of the Commission that the change in the railroad culvert at the outlet of the lake as it now exists does not materially change the levels of the lake from the levels which would have existed had the old bridge still remained in place. Since, however, there appears to be no objection to the maintaining of a minimum level on Pine Lake, such a level may be maintained by the following operation:

When the level of water in the lake falls below elevation 90.00; or less than a depth of one foot of water in the upstream end of the highest concrete pipe in the culvert, the upstream end of one of the four-foot diameter pipes may be closed off by stop planks so as to prevent the discharge of the water through this pipe.

If after one four-foot diameter pipe is closed for a period of seven days or more, the water in the lake has continued to lower until it has reached elevation 89.80° or a depth of .30° or less in the upstream end of the highest concrete pipe, the upstream end of the other four-foot diameter pipe may also be closed off by means of stop planks.

All of the pipes must be open when the water is at elevation 90.00; or above, or when there is a depth of one foot or more of water in the upstream end of the highest concrete pipe in the culvert at the outlet of Pine Lake. The highest pipe referred to above is the one at the right end of the culvert when looking down the stream. Since it is the opinion of the Commission that the replacement of the culvert has not materially affected the levels of Pine Lake, the duty of installing stop planks and operating the same must rest with the interested riparian owners on Pine Lake. These riparian owners shall inform the Commission from time to time the name of the party or parties who have been delegated to operate these stop planks.

It does not appear to be necessary at the present time to install any permanent control works at the outlet of the lake, since such control work would serve no useful purpose and might affect the flood capacity of the culvert to such an extent as to cause unusually high stages of water during flood periods. Jurisdiction is retained by the Commission to make such further order concerning the operation of the stop planks as from time to time may appear to be necessary.

IT IS THEREFORE ORDERED that the minimum level of Pine Lake be controlled in the manner designated by the above findings.

Dated at Madison, Wisconsin, this <u>Jud</u>day of February, 1930.

RAILROAD COMMISSION OF WISCONSIN

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Commissioners

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#### BEFORE THE

#### PUBLIC SERVICE COMMISSION OF WISCONSIN

In the Matter of the Determination of the ) Maximum and Minimum Levels to be Maintained ) WP-364 in Pine Lake, Township 37 North, Range 12 ) 2-WP-1419 East, Forest County, Wisconsin )

#### FINDINGS OF FACT AND ORDER

The operation of the Pine Lake dam in recent years has been to hold levels in excess of the minimum level established in docket WP-364, dated April 2, 1930 wherein jurisdiction was retained to make further order as to operation.

#### Findings of Fact

#### THE COMMISSION FINDS:

1. A minimum level for Pine Lake was established in docket WP-364 dated April 2, 1930 at elevation 90.0 feet, Public Service Commission datum, and gate operation was also directed. At this time control of the lake level was effected by culverts passing the stream through a railway grade.

2. Subsequently, in 1938, the town of Hiles constructed a dam in its town road bridge, crossing the outlet just above the railway. It has three 10-feet stop-log gates with sills at elevation 89.45 feet. Elevations are referred to Public Service Commission benchmark 663-C, which is a bronze tablet set in top of the right upstream abutment of bridge and dam. Its elevation is 96.95 feet.

3. The operation of the dam has been to hold water levels above the minimum established level of 90.0 feet, and water levels held above elevation 91.0 feet have caused com4. The interest of public rights in Pine Lake and the promotion of safety and the protection of life, health, and property, require that the maximum level of said lake be established at elevation 91.0 feet, Public Service Commission datum; that said maximum elevation is a reasonable level and within the range which has been normal for said lake in the past.

#### Conclusion of Law

#### THE COMMISSION CONCLUDES:

That it has authority under jurisdiction retained in docket WP-364 dated April 2, 1930 to make an order establishing a maximum level for Pine Lake and to order the operation of the dam.

#### Order

#### THE COMMISSION THEREFORE ORDERS:

1. That the maximum level for Pine Lake, Forest County, be and it is hereby fixed at elevation 91.0 feet, Public Service Commission datum.

2. That the dam be operated to have all gates fully opened when elevation 91.0 feet is had or exceeded.

3. That the town of Hiles have its designated operator take measurements of the water level at least weekly when the elevation of the lake is below 91.0 feet, and daily when it is at or above elevation 91.0 feet with gate operation indicated. The record is to be submitted to the Commission upon request.

Dated at Madison, Wisconsin, this <u>30</u> day of <u>1959</u>. By the Commission.

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#### BEFORE THE

#### PUBLIC SERVICE COMMISSION OF WISCONSIN

Petition of Eugene A. Winkler and Other Property Owners on Pine Lake in Forest 2-WP-2216 County for Establishment of a Higher Minimum Level to be Maintained in Such Lake

#### FINDINGS OF FACT AND ORDER

Eugene A. Winkler, Hiles, Forest County, and 36 other property owners on Pine Lake in the town of Hiles, Forest County, on July 12, 1965 filed a petition with the Commission requesting the establishment of higher levels in Pine Lake than those maintained in the past. Petition

denied.

Pursuant to due notice, hearing was held on August 12, 1965 at Crandon before Examiner Clarence B. Sorensen.

Appearances:

Petitioners for Establishment of Higher Minimum Levels in Pine Lake, Forest County, by

> Eugene A. Winkler and Mrs. Grace M. Winkler Hiles, and by

Henry M. Gehl West Bend

In Opposition:

Group of Objectors and Self by

Edward D. Colburn, resort owner Argonne

As Interests May Appear:

Town of Hiles by

John Tauer, chairman Hiles

Wisconsin Conservation Department by

Clyde Sundberg, conservation warden

Appearances: (Cont.)

Of the Commission Staff:

William Sayles, engineering department

Findings of Fact

THE COMMISSION FINDS:

1. Eugene A. Winkler, Hiles, Forest County, and 36 other property owners on Pine Lake in the town of Hiles, Forest County, on July 12, 1965 filed a petition with the Commission requesting that Pine Lake be held either at elevation 91.0 feet or 91.5 feet and that the lake be held at the same elevation all year.

2. The Pine Lake dam is placed in the upstream end of a bridge located on a town road which crosses the outlet stream in the southwest quarter of the northeast quarter of section 28, township 37 north, range 12 east. The town road grade acts as a partial dike.

3. The Pine Lake dam consists of three ten-foot gates equipped with stop logs. The center gate is equipped with a hoist mechanism. The elevation of the top of the stop logs in the right and left gates is 90.90 feet.

4. Immediately downstream from the dam and bridge there is a railroad crossing which crosses the outlet stream by means of four parallel culverts. During periods of high flow these culverts control the level of Pine Lake.

5. The minimum elevation of Pine Lake was established on April 2, 1930 at elevation 90.0 feet in docket WP-364 (see 33 Wis. R. Comm. Rep. 571). The maximum elevation was established on July 30, 1959 at 91.0 feet in docket 2-WP-1419. (see 44 PSCW 446.)

6. During the winter of 1964 and 1965 a major fish kill occurred in Pine Lake. At the hearing, the petitioners requested that the lake be raised to elevation 91.5 feet to avert a repetition of the fish kill by providing a greater volume of water.

7. The fish kill which occurred during the winter of 1964 and 1965 occurred during a period of above-normal ice and snow cover on the lake.

8. Any increase in the maximum elevation of Pine Lake will damage low lying riparian private and public property.

9. Elevations herein are referred to Public Service Commission benchmark 663-C, which is a bronze tablet set in the top of the right upstream abutment of the bridge and dam. Elevation is 96.95, PSC datum.

10. The interest of public rights in Pine Lake and the promotion of safety and the protection of life, health, and property require that the levels of said lake be maintained as established in the previous orders. Said maximum and minimum levels are reasonable and within the range which has been normal for Pine Lake.

#### Conclusion of Law

#### THE COMMISSION CONCLUDES:

That it has authority under section 31.02(2), Statutes, and in accordance with the foregoing findings of fact to deny the petition herein.

#### Order

#### THE COMMISSION THEREFORE ORDERS:

That the petition to raise the level of Pine

Lake to elevation 91.5 feet be and it is hereby denied.

Dated at Madison, Wisconsin, NOV 9-1965 By the Commission.

John /J/ Acting Secretary



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

North Central District Headquarters Box 818 Rhinelander, Wisconsin 54501 Anthony S. Earl Secretary

April 26, 1976

IN REPLY REFER TO: \_\_3560-4

Ms. Lois Buick, Secretary Pine Lake Protection & Rehabilitation District Hiles, Wisconsin 54533

Dear Ms. Buick:

Your letter of April 19, 1976, to Larry Maltbey concerning water levels in Pine Lake, Forest County, has been referred to me for investigation. We are aware that water levels have been a problem on this lake for some time now. However, proper steps have not been taken to document low water levels and possible leakage of water through the dam.

The established water levels are a minimum of 90.00 feet and a maximum of 91.00 feet. In response to your letter and a phone call from Grace Winkler, a water level elevation determination was made April 23, 1976. The elevation at that time was 91.72 feet or .72 feet above the maximum established level. Thus, the lake level should be reduced to 91.00 feet as soon as possible.

It is permissible to maintain the water level at 91.00 feet. Should the level drop below 90.00 feet due to a malfunctioning of the dam, an order could be issued requiring the repair of the dam. Periodic water level checks will be made in the future to determine whether the established levels are being complied with.

If at any time you feel the water levels are too low, please contact this office so that a check may be made as soon as possible.

Thank you for informing us of this situation.

Sincerely,

Dale J. Lang Waters Management Investigator

DJL:jmk cc: Ed Brick, Madison Woodruff Area Glen Votis, Chairman, Town of Hiles, Hiles, Wisconsin Bob Jacobson, Forest County Zoning Administrator

## State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

North Central District Headquarters Box 818 Rhinelander, Wisconsin 54501

Anthony S. Earl Secretary

March 15, 1977

IN REPLY REFER TO: 3560-4 2-WP-1419

Mr.<sup>4</sup>Glen Votis, Chairman Town of Hiles Hiles, Wisconsin 54533

Dear Mr. Votis:

#### Re: Pine Lake Dam

This is a follow-up to the interest last fall in modifying the dam at Pine Lake to maintain a higher water elevation of The Pine Lake Protection and Rehabilitation District through the Town Board was seeking approval of plans to install fixed sills to replace the three stoplog sections which currently exist.

Genisot and Associates, Inc., consulting engineers, calculated that the installation of any such permanent structure would not allow for the passage of flood waters without causing the lake to exceed its maximum established level of 91.00 feet; that is, with all stoplogs removed, the dam would pass the water associated with the ten-year flood (which is a common standard to follow) without exceeding the 91 foot level. We agree with these figures.

In order to install a fixed structure higher than the present spillway, the spillway would need to be lengthened beyond its present 32 feet. I believe it is apparent that such an undertaking would be difficult and costly.

We feel that seeking a modification of the dam at this time is a premature action, especially on the part of the lake district. The lake rehabilitation feasibility study is currently underway. Altering the water levels could negate the value of the study. Also, the lake management plan may call for a different water level, or for an annual drawdown, which may require additional dam modification. In any event, should a decision be made to seek a higher lake level, the Town must obtain rights to the additional land which would be flooded, either by flowage easements or through condemnation. It will be necessary to petition the Department to modify the current order setting maximum and minimum water levels. As you may be aware, there are persons who are opposed to a higher water level, and a hearing would probably be required. The Department has not made an evaluation of the environmental effects of raising the water level; therefore, we do not have a position at this time.

Until such time as the order is modified, it is the Town's obligation to operate the dam so as to maintain the lake within the established range. It is understood that this is not always possible due to unanticipated precipitation, heavy spring runoff, or drought conditions. However, a reasonable effort to properly manage the dam should be made. It has been observed that during spring runoff, the stoplogs are often all in place, creating excessively high water. This indicates a lack of concern for proper dam management. We have noted evidence of shoreline erosion due to high water. I am certain that the Town does not wish to be held liable for damage to private property.

In conclusion, the Department recommends that any decision on dam modification be delayed until the total lake management plan has been developed. In the meantime, the dam should, be managed in accordance, with the Department's order.

Should you wish to discuss this matter further, please contact me. My

Sincerely,

->Dale J. Lang District Water Management 1 Investigator DJL:cmr cc: Ed Brick, Madison L. A. Posekany, Madison Woodruff Area Office Dick Abney, Crandon Ranger Station O. D. Williams, Madison Larry Maltbey, Rhinelander Grace Winkler, Pine Lake Protection and Rehabilitation District, Box 44F, Hiles, Wisconsin 54533 Ron Krueger, Northern Lakes Service, Route 1, Box 171, Crandon, Wisconsin 54520 Scott Hendrickson, Forest County Resource Agent, Courthouse, Crandon, Wisconsin 54520 Robert Jacobson, Forest County Zoning Administrator Genisot and Associates, Inc., 1512 Eagle Street, Rhinelander, WI 54501 Lowell Klessig, UW-Extension, Environmental Resources Unit, 1815 University Avenue, Madison, WI 53706 Roger Bentley, S69 W17338 Kirkwood Drive, Muskego, WI 53150 Joe Shidell, Marathon, Wisconsin 54448

DEPARTMENT OF NATURAL RESOURCES State of Wisconsin orth Central District Headquarters

Box 818 Rhinelander, Wisconsin 54501

Carroll D. Besadny Secretary

July 16. 1981

IN REPLY REFER TO: 2-WP-1419

Mr. William Dixon. Chairman Town of Hiles Hiles, Wisconsin 54533

Dear Mr. Dixon:

Re: Pine Lake Dam

After receiving several complaints about high water on Pine Lake. I met with Arvin Wilder and Bud Votis on July 14, 1981. At that time, the lake appeared to be about four inches above the established maximum elevation. The gate was open and water was flowing quite well, although the presence of downstream beaver dams was said to be obstructing flows somewhat. The unusually heavy rains within the last month have certainly caused high water in many areas, and four inches over maximum would not be considered unreasonable.

The major water level problem appears to center around the normal operation of the dam. Your operator attempts to keep the lake at the maximum level or slightly below whenever possible. This does not allow for any storage of runoff, and consequently the maximum is exceeded rather often.

When the water is below the maximum, I am sure you receive complaints of low water. Low water is an inconvenience to boaters and some landowners. But high water can physically damage other properties, which should be of greater concern than a mere inconvenience.

Shoreline erosion is inevitable, regardless of water levels. Excessively high water only makes matters worse. If the Town intentionally maintains high water, it may be subject to action from any property owners who are damaged.

We urge you to maintain a lower water level in Pine Lake. The Town should seek a compromise level which might cause minor inconveniences for some landowners, but could avoid major problems for all parties.

Another alternative you may consider is to install lifts for the other two gates so that more water could be passed at times, although the railroad culverts may restrict additional flow. This could be evaluated by an engineer, as the Lake Protection District started to do in 1977.

To hopefully aid you in controlling levels, we have installed a gage on one of the dam piers. The maximum water level is 0.97 on the gage (for all practical purposes, 1.00 should be considered the maximum, and 0.00 the minimum).

Should you have any questions, please feel free to contact me at (715) 362-7616.

Sincerely,

Dale J. Lang District Water Management Coordinator

DJL:kjh cc: Woodruff Area Office Water Regulation Section, Madison-WRZ/5 hcc: Dan Stover. Hiles. WI 54533



State of Wisconsin

## \ DEPARTMENT OF NATURAL RESOURCES

off D. Besodory Secretary

North Central District Headquarters P. O. Box 818 Rhinelander, Wisconsin 54501 (715)362-7618

2-WP-1419 21.13

May 15, 1990

Ms. Marilyn Pfeiffer Town of Hiles Chairperson Rt. 2, Box 680 Hiles, Wisconsin 54511

Dear Ms. Pfeiffer:

We've received complaints again about high water on Pine Lake. This seems to be a regular occurrence, especially in spring. I understand the gate was open only a small amount, then someone cut the cables.

State law requires the Town to maintain the lake within the limits established by the Department or its predecessor agencies. If the Town doesn't operate the dam properly, we may start legal action to seek compliance and a penalty. Also, affected property owners could sue the Town for damages. I'm sure Town taxpayers prefer to avoid such situations, and so do we.

Please return Pine Lake to its proper level.

If you have any questions, please contact me.

Thank you for your cooperation.

Sincerely,

Dale J. Lang District Water Regulation & Zoning Supervisor

#### DJL:da

Jack Smith, Woodruff David Goldsworthy, Warden, Three Lakes Water Regulation Section, WZ/6

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YOODRUFF AREA HDO

Form: 3500-27

Max level = 91.0' Min. level = 90.0'

Lake or St	ream Pine La	ke Outlet	Dam	Wolf River
cation	S.c. 28, T3	STN, RIZE,	,	Forest Co.
Date	.Taken by	Field Book No.	Lake Level or Gage Reading	Remarks
7/21/28	W. Muegge	750	90.14'	Patum - Assumed E.M. 663A - 100.00
7/28/38	W. Maegge	889	91.90	Same
9/28/43	W. Muegge	898	91.30	Same B.M. 663-C.
6/26/50	J. Siuley	916	90.71	Same
8/24/61	G. Tamke	960	90.75	Sane
7/11/68	J. Whiting	<b>1</b> 99	1634,22 91,17	H.S. G.S. B.M. H.E. 16- B.M. 663-E.
18/74	Me Cluskey Ries		91.15' -> 1634.20	В.М. 663-C elevation 96.95'
-23-76 8-31-76	C. Mastaglio		90.65	Same
6-22-77	P. Lang		90,88	li
7/15/81	OfficeFe	1032	91.20	Set goon gange 1.17
8-27-35	P. Lang		91:08	9198 c. 1.05
9-30-88	D.Lang		91.00	Town set new gage (white) 1,00
5-17-90	D.Laray		91.52	havening (while) 1.52

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### State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

-> Dale Long

Tommy G. Thompson, Governor George E. Meyer, Secretary Dale T. Urso, District Director



Woodruff Area Headquarters 8770 Hwy J. Woodruff, WI 54568-9635 TELEPHONE 715-358-9235 FAX 715-358-2352

21.13

April 18, 1996

Mr. Pat Corragio P.O. Box 296 Hiles, WI 54511

Dear Pat:

In response to our recent phone conversation and your letter of April 2, 1996 to Pat Zatopa, I provide the following information.

Water levels on Pine Lake, Forest Co. were set at a maximum elevation of 91.0 feet and a minimum of 90.0 feet by the Public Service Commission (PSC). These levels are referenced to the PSC benchmark which is a bronze benchmark set on the top of the right upstream abutment of the bridge and dam at an elevation of 96.65 feet (see attached letter of March 24, 1975 to Mr. Eugene Winkler).

Responsibility for operation of the dam within these set minimum and maximum are the responsibility of the owner of the dam which is the Town of Hiles (see attached letter dated May 15, 1990 to Ms. Marilyn Pfeiffer).

I also have some comments relative to fisheries and aquatic plants and water levels. Aquatic plants will grow to a depth of 1.7 times the secchi disk reading for a lake. The secchi disk measures depth of light penetration in a lake. Since Pine Lake has a self-help monitoring program, secchi disk readings are taken frequently. Secchi disk readings in 1994 ranged from 9.0 to 10.8 feet. Thus plants would grow to a depth of about 17 feet in Pine Lake. Since the lake is shallower than this, aquatic plants will grow anywhere in the lake as you are well aware. Raising the lake level to its maximum elevation of 91.0 feet would do nothing to reduce aquatic plant growth. In fact, it is possible that lowering the water level to the minimum of 90.0 feet in the winter could freeze out seed beds in dewatered shoreline areas. Ice breakup in the spring may also scour out the dewatered areas.

Your letter also indicates concern that lowering water levels will have a negative impact on fish populations particularly during the winter. We have monitored dissolved oxygen concentrations on Pine Lake this winter. They held up pretty well until April. Pine Lake is likely to experience some winterkill of fish this winter but I don't think it will be real bad. We will see for sure when the ice goes out. The potential for winterkill in lakes like Pine (shallow and weedy) is primarily related to the length of time ice cover stays on the lake and snow depths over that ice. In my opinion, the potential for winterkill on Pine Lake would not be affected by raising or lowering the lake the one foot allowed between minimum and maximum elevation.

In the long term, the health of fisheries and aquatic plant communities in Pine Lake is really dependent on the continued efforts of Pine Lake residents to control the influx of nutrients to the lake from septics, fertilizers, run-off and sedimentation.

Sincerely,

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Steve AveLallemant Fisheries Biologist

> Quality Natural Resources Management Through Excellent Customer Service



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## State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor Scott Hassett, Secretary John Gozdziałski, Regional Director Northern Region Headquarters 107 Sutliff Ave. Rhinelander, Wisconsin 54501-3349 Telephone 715-365-8900 FAX 715-365-8932 TTY Access via relay - 711

July 9, 2004

Mr. Karl Tauer, Chair Town of Hiles 10831 W. Pine Lake Road Hiles, WI 54511

SUBJECT: Water Surface Elevation at Pine Lake

Dear Mr. Tauer:

On July 9, 2004 I measured the water surface elevation at Pine Lake at the request of Mr. Paul Jenkins. On that day the elevation of the lake was 91.17 based on local datum. I also recorded the gauge reading that corresponded to the lake elevation. The gauge read 1.17. With that information, and referring to the past records in our file, I put together a table for the Town to correlate the lake level with the gauge. The table will refer to both local and mean sea level data.

	Local Datum	Mean Sea Level Datum	Gauge Reading*
Benchmark 663-C	96.95	1640.00	-
Benchmark 663-E	96.85	1639.90	-
Authorized Minimum	90	1633.05	0.00
Authorized Maximum	91	1634.05	1.00

\*Using the white gauge

Descriptions of the above referenced benchmarks are included on the attached field notes.

I hope that this information is useful to you. Since the elevations would be recoverable if the benchmarks were ever lost or damaged, it is recommended that the Town use the Mean Sea Level datum for future use or at least retain the information. As noted in the field notes from the survey, the lake was 0.17 feet (2.04 inches) above its authorized maximum on July  $9^{th}$ .

If you have any questions concerning this information, feel free to contact me. I can be reached at (715)365-8938 or at the above address.

Terry Cummings, P.E.

Water Management Engineer Northern Region, Rhinelander

CC: Jim Grafelman, Rhinelander





State of Wisconsin DEPARTMENT OF NATURAL RESOURCES 107 Sutliff Avenue Rhinelander WI 54501-3349

Scott Walker, Governor Cathy Stepp, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



October 29, 2014

Mr. Karl Tauer Town of Hiles 10831 W. Pine Lake Road Hiles WI 54511

#### Subject: Water Surface Elevation at Pine Lake

Dear Mr. Tauer:

In 2004, the Town of Hiles was provided copies of the legal authorizations for the minimum and maximum lake elevations for Pine Lake. These elevations were established by Orders WP-363 (April 2, 1930) and 2-WP-1419 (July 30, 1959). Additionally, a table was provided to the Town of Hiles allowing the Town to correlate the lake level with the staff gauge located on the upstream face of the dam. The authorized minimum lake elevation correlates to a staff gauge reading of 0.00 and the authorized maximum lake elevation correlates to a staff gauge reading of 1.00.

On Thursday, September 25, 2014, I conducted a site visit to the Pine Lake Dam. At the time of my visit, the elevation of Pine Lake corresponded to a staff gauge reading of 1.24, indicating that Pine Lake's elevation was exceeding the authorized maximum lake elevation by approximately 0.24 feet or 2.88 inches. The Department is providing the Town of Hiles with this reminder that the Town is required to maintain the elevation of Pine Lake within the authorized operational range. Please lower the level of Pine Lake to within the authorized range within 7 days of the date this letter was mailed. Failure to do so may result in the issuance of citations and/or referral to the Department of Justice for enforcement. Once the elevation of Pine Lake has been brought into compliance, please notify me at (715) 365-8938 or at the address listed above.

Sincerely. T. Chapman

Barton T. Chapman, P.E. Water Management Engineer Northern Region, Rhinelander

Cc: Keith Patrick – WDNR Northern Region Basin Supervisor (via e-mail) Brad Dahlquist – WDNR Conservation Warden (via e-mail) Bill Sturtevant – WDNR State Dam Safety Engineer (via e-mail)

