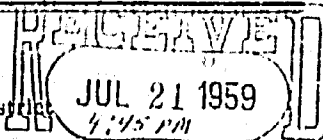


Water Division No. 3

(Blanks to be filled by the Engineer for the W. R. C.)

No. 646-3Big Horn River

APPLICATION FOR PERMIT

THE WATER RESOURCES COMM.
PIERRE, SOUTH DAKOTA

To appropriate Water within the State of South Dakota

(NOTE—Draw a line through items not applicable.)

1. Name of applicant South Dakota Department of Game, Fish and Parks
 Postoffice address Pierre, County Hughes, State South Dakota

- I. If a corporation _____
 (a) Name of same _____
 (b) Date and place of incorporation _____
 (c) Amount of capital stock _____
 (d) Amount paid in _____
 (e) Names and addresses of director _____

(NOTE—A certified copy of articles of incorporation must accompany the application.)

II. Method of accomplishing the work and financial resources of the applicant:

- (a) Method of accomplishing work (Whether by contract, employment of others, or by direct labor) _____

- (b) Cash on hand, \$ _____ (c) Treasury stock, \$ _____
 (d) Bonds to be issued, \$ _____ (e) Other resources, \$ _____

2. Name of diversion work Lake Herman - Lake County
As required to fill lake to outlet level approximately 4050
 3. Amount of water claimed acre-feet per year cubic feet per second _____
 4. Source of water supply Local watershed

5. Location of point of diversion Five points in the watershed-SE1/4 Sec. 10; SE1/4 Sec. 10; NW1/4 Sec. 14; NE1/4 Sec. 15; SW1/4 Sec. 23 all in Township 106N, Range 53W
 _____ on _____ bank _____ County.

6. Annual period or periods during which water is to be used All year long
 7. To be used for:

I. Irrigation or domestic use: Gravity, overhead sprinkling or combination system?

- (a) Number of acres to be irrigated _____ acres.

- (b) Legal subdivisions to be irrigated _____

(NOTE—A list of lands to be irrigated, giving each subdivision and fraction with acreage thereof, should be written here, or may be appended as a part of this application. Same must also be shown on accompanying map.)

- (c) Statement as to domestic use (giving location, etc.) _____

II. Stockwatering, mining, milling, power, fish culture, fire protection and public recreation:

- (a) Nature of use Fish and wildlife protection, conservation and recreation purposes

 Name any of the above uses claimed

- (b) Amount of power to be generated _____ horse power.

Amount claimed for engine cooling _____

- (c) Location of plant _____

- (d) Method of developing power _____

- (e) Point where water will be returned to stream _____

Map No. 491-3

8. Estimated cost of work:

(a) Head Gates, \$-----

(b) Pumping plant, \$-----

(c) Fluming, \$-----

(d) Canal-earth, \$-----

Rock, \$-----

(e) Other structures Spillway \$295.67

Total, \$-----

9. Description of diversion works:

I. Nature of works: (Reservoir, dam, ditch, flume, pumping plant, etc.)

Dike & concrete spillway located under bridge 20' wide raised lake 2' in 1936

II. Dimensions of works: Information requested not applicable. Lake Herman is a meandered lake.

(a) Dam: Height 100 feet; length at bottom 800 feet; length at top 800 feet; thickness at bottom 50 feet; thickness at top 30 feet; slope at front water face 2-1; slope at back face 2-1

material used in construction Earth fill - used as roadway

(b) Reservoir: Capacity when filled 5000 acre feet. Surface area at highwater mark 1350 acres.

Lake Herman before outlet was installed 1000 acres with max depth of 6 feet

DEPTH AT OUTLET-FEET	SURFACE AREA AT EACH DEPTH AT OUTLET-ACRES	FEET	ACRE-FEET CAPACITY

(c) Head gate: Width feet; height feet;

Material

(d) Canal: Total length miles.

LOCATION BELOW HEADGATE	DEPTH	BOTTOM WIDTH	WIDTH AT WATER-LINE	GRADE PER MILE
At <u> </u> Mile	<u> </u> feet	<u> </u> feet	<u> </u> feet	<u> </u> feet
At <u> </u> Mile	<u> </u> feet	<u> </u> feet	<u> </u> feet	<u> </u> feet
At <u> </u> Mile	<u> </u> feet	<u> </u> feet	<u> </u> feet	<u> </u> feet
At <u> </u> Mile	<u> </u> feet	<u> </u> feet	<u> </u> feet	<u> </u> feet
At <u> </u> Mile	<u> </u> feet	<u> </u> feet	<u> </u> feet	<u> </u> feet
At <u> </u> Mile	<u> </u> feet	<u> </u> feet	<u> </u> feet	<u> </u> feet

(Give dimensions where reductions in size are made.)

10. Time required for completion of work Completed years Not applicable - a meandered lake

11. Time required for complete application of water to the proposed beneficial use years.

12. Choice of newspaper for publication of notice of intention to appropriate

STATE OF SOUTH DAKOTA

County of Hughes

SS.

I, Harry R. Woodward, being first duly sworn on my oath depose and say: That my relation to the above described undertaking is that of owner, that I have read the above foregoing statement, examined the map accompanying the same, and that I know of my own personal knowledge that the matters therein stated and shown are true.

Signed

Harry R. Woodward

Subscribed and sworn to before me this 20

day of July

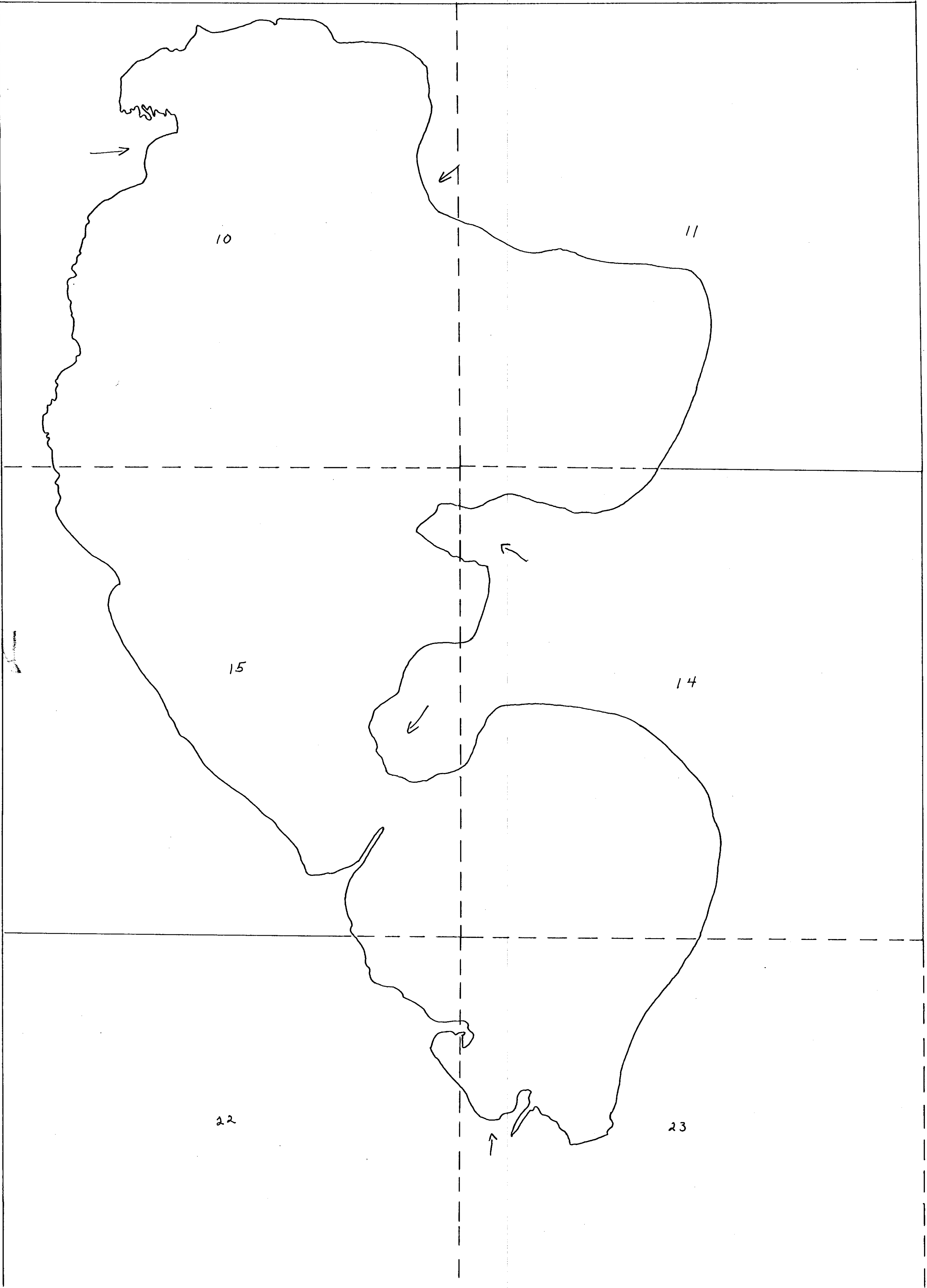
1957

Edward Johnson
Notary Public (or other qualified officer.)

*Each diversion must have a headgate or measuring device.



LAKE HERMAN
Sec. 10, 11, 14, 15, 22, 23 - Twp. 106 - Range 53
1350 Acres
LAKE CO.



Map No. 4913 (Hppd. No. 646-5)

Remarks by State Water Resources Commission:

Vested Right Claimed

STATE OF SOUTH DAKOTA

County of Hughes

City of Sioux Falls, South Dakota

This is to certify that the foregoing application was received by the Commission at 4:45 o'clock

P.m. upon the 21st day of July, 1959

State Water Resources Commission

By: W. B. Bruner

Chief Engineer, Executive Officer

Number of permit 646-3

Date of first receipt of application July 21, 1959

Date of return to applicant for correction, amendments or changes required as follows: August 19, 1959

Date of receipt of corrected application October 20, 1959

Date from which applicant may claim right 3000 acre feet annually from 1884, 1959

Approved November 10, 1959, Recorded in Book 5 Page 254

This is to certify that we have examined the foregoing application for a permit to appropriate water of the State of South Dakota, and we hereby grant the same as stated herein, subject, however, to the following limitations and conditions:

1st. The equivalent of at least one-fifth of the work above specified is to be completed on or before

Completed, 1959

2nd. The whole of said work is to be completed on or before Completed, 1959

3rd. The limit of time for proof of beneficial use of water appropriated in accordance herewith is

Completed, 1959

4th. The water appropriated shall be used for the purpose of public recreation

5th. The prior right of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be injuriously affected by this appropriation.

6th. The amount of the appropriation herein granted shall not exceed 4050 acre feet annually cubic feet per second; neither shall it exceed the capacity of the above described system of diversion works, nor the least amount of water that experience may hereafter indicate as necessary for the production of crops in the exercise of the best husbandry; and further, said appropriation must be limited to not more than one-seventieth (1/70) of one cubic foot of water per second of time for each acre of land to which water is actually and beneficially applied for irrigation on or before June 31, 1959; said water to be used during the following described annual period:

Continuously

Witness my hand this 10th day of November, 1959

State Water Resources Commission

By: W. B. Bruner

Chief Engineer, Executive Officer

Certificate of Construction Issued November 10, 1959

Water License Issued November 10, 1959

An Ordinary High Water Mark was established on Lake Herman at an elevation of 1669.0 feet msl at the October 7 & 8, 1981 Water Management Board Meeting.

At the same meeting, Game, Fish & Parks Water Right No. 646-3 was clarified to allow the water level at Lake Herman to be maintained at no higher than 1668.4 feet msl.

Permit No. 46-3Water Division No. 2 Big Sioux River Water District

Certificate of Completion of Works

TO ALL WHOM IT MAY CONCERN:

This is to Certify, That The South Dakota Department of Game, Fish and Parks

Pierre, County of Hughes, and State of South Dakota, the holder of Vested Right of Permit No. 646-3, issued upon Application No. 646-3, bearing date of priority of 1889 and 1936, authorizing the diversion of 4050 acre feet annually of the waters of Lake Herman County of Lake, State of South Dakota, at five points located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ and SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 10; NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; NE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 15; and SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 23, all in T 106N R 53W, for public recreation purposes, has fully complied with the provisions of the laws of the State of South Dakota relating to proof of completion of the works of diversion set out and described in said Vested Right Permit; that said works are recognized as ~~recognized as~~ satisfactory ~~for diverting and conveying to the place of intended use~~ 4050 acre feet annually ~~per second~~ of water; and that the lands reserved to be dedicated to the use of said water are described as follows, to-wit: to be used in place for public recreational purposes.

Witness my hand this 10th day of November A. D. 1959

State Water Resources Commission

By:

J.W. ORJES, Chief Engineer, Executive Officer

STATE OF SOUTH DAKOTA

WATER LICENSE No. . . . 646-3 . . .

WHEREAS, On the 21st day of July A. D. 1959

The South Dakota Department of Game, Fish and Parks

of Pierre County of Hughes and State of South Dakota duly made application (No. 646-3) to us for a vested right 4050 acre feet annually ~~XXXXXX~~ of the waters of Lake Herman County of Lake, State of South Dakota, for public recreational purposes, and

WHEREAS, On the 10th day of November A. D. 1959 Vested right recognizing Permit No. 646-3 was issued to said applicant for the diversion of said water, and ~~providing for~~ the completion of the works of diversion therein described on or before the completed ~~XXXXXX~~ ~~XXXXXX~~ and for the application to beneficial use of said water on or before the completed ~~XXXXXX~~ ~~XXXXXX~~ and,

WHEREAS, On the 21st day of July A. D. 1959 the holder of said Vested Right permit duly made proof of the completion of adequate works for the diversion of 4050 acre feet annually ~~XXXXXX~~ of said waters, as evidenced by our Certificate No. 646-3 dated November 10, 1959 confirming the completion of works of sufficient capacity for feet annually diverting and conveying to the place of intended use 4050 acre / XXXXX of water, with date of priority of 1889 and, 1936 and,

WHEREAS, On the 21st day of July A. D. 1959 proof was duly made of the application to beneficial use of 4050 acre feet annually ~~XXXXXX~~ of said water; to be used in place for public recreational purposes.

NOW, THEREFORE, By the virtue of the authority vested in us by the laws of the State of South Dakota,
We hereby grant and confirm to The South Dakota Department of Game, Fish and Parks
of Pierre the holder and owner of said Vested Right 646-3
a water right, dating from 1889 and 1936 to the use of 4050 acre feet annually
~~or for other purposes~~ of the waters of Lake Herman
in the County of Lake and State of South Dakota, or so much thereof as may be
necessray for the purposes hereinbelow mentioned, to be diverted at 5 points in the watershed, more
clearly defined in Certificate of Completion of Works.
and ~~conducted for other purposes~~ used in place for public recreation purposes.

~~for other purposes~~

subject, however, to the laws of the State of South Dakota applicable to a license for the use of the waters of the State, and subject, also to the local or community customs, rules and regulations which have been or may be adopted from time to time by a majority of the users from a common source of supply, canal or lateral from which such water may be taken, when such rules and regulations have for their object the economical use of such water.

WITNESS, My hand and seal of our office at Pierre, South Dakota,
this 10th day of November A. D. Nineteen
Hundred and fifty-nine.

State Water Resources Commission

By:

J.W. GRIMES,

Chief Engineer, Executive Officer

STATE OF SOUTH DAKOTA

Water License No. _____

To _____

Source of Supply _____

County _____

Am't _____ c. f. s.

Point of Diversion _____

Place of Use _____

Purpose _____

Date of Priority _____

Recorded _____

In Book _____ of _____ Page _____

Location No. 646-3Water Division No. 3Water District Big Sioux River

Proof of Application of Water to Beneficial Use

PETITION OF HOLDER

Ques. 1. State your name, residence, occupation and postoffice address.

Ans. South Dakota Department of Game, Fish and Parks, Pierre, South Dakota

Ques. 2. If acting in behalf of a corporation, state its name, principal place of business (if a foreign corporation, give name and postoffice of statutory agent,) your position with reference to same, and your authority for appearing in its behalf.

Ans. _____

Ques. 3. State date of posting and date of recording notice of appropriation.

Ans. _____

Ques. 4. State source of water supply and give exact location of point of diversion.

Ans. Local watershed - five points in the watershed - SE1NE1, SE1NW1 Sec. 10, NW1NW1 Sec. 14; NE1SE1 Sec. 15; SW1NW1 Sec. 23 all in Township 106, Range 53

Ques. 5. Describe your works of diversion giving length and height of each dam and state amount of water they are capable of conveying from point of diversion to place of use, and give name of canal or ditch or other works by which water is conducted to such place of use, and date of completion of same.

Ans. A meandered lake - depth 6 feet - 1350 acres

Ques. 6. State for what purpose water is used and describe place of use. (If for irrigation, name each subdivision in which used, and number of acres in each subdivision that have ACTUALLY been irrigated with said water.)

Ans. Fish and Wildlife propagation, conservation and recreation

Ques. 7. If for other than irrigation purpose, state how applied, amount of horse power generated, etc.

Ans. Used in place in lake or reservoir

Ques. 8. What is the minimum amount of water required for the use specified above?

Ans. As required to fill lake to outlet level - approximately 4050 acre feet per year

Ques. 9. If you are not the person or representative of the corporation to whom above mentioned permit was originally issued, please state how ownership was acquired by present holder.

Ans. _____

Ques. 10. State when, how, in what amount and to what extent, the water diverted under above mentioned permit has been used.

Ans. A meandored lake, used by the public for uses specified except
for that amount lost by evaporation and seepage

(Sign) Harry R. MacArthur

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in PIERRE, County of Hughes

State of South Dakota, on this 20 day of July A. D. 1959

Edward Johnson
} Witnesses.

I, the undersigned, do hereby certify that I am a duly qualified elector residing in the immediate vicinity of the diversion works designated in the foregoing testimony, that I have no interest in the works, water or land above described, that I have read the foregoing testimony and that I know of my own personal knowledge that the matters therein stated are true.

Location No. _____

**PROOF OF APPLICATION OF
WATER TO BENEFICIAL USE**

PETITION OF HOLDER

Amount of Water _____ c. f. s.

Source _____

County _____

Purpose _____

Place of Use _____

Date of recording _____

Received and filed _____

646-3

ORDINARY HIGH WATER MARK
INVESTIGATION FOR

LAKE HERMAN



LAKE
COUNTY



Department of
Water & Natural Resources

Joe Foss Building
Pierre, South Dakota 57501

ORDINARY HIGH WATER MARK INVESTIGATION
FOR LAKE HERMAN
JUNE, 1981

The Water Management Board pursuant to SDCL 43-17-21 is mandated to establish the Ordinary High Water Mark (OHWM) on public lakes in South Dakota. This report contains the results of the investigation conducted by the Water Rights Division to determine the elevation of the OHWM and outlet structure for Lake Herman.

The ordinary high water mark is coordinated with the upper level of a lake. The determination of the OHWM is derived from the examination of the bed and banks of the lake to ascertain where the continuous presence and action of the water has left a distinct mark either by erosion, destruction of terrestrial vegetation, or some other easily recognized characteristic. In examining a lake for the determination of this level, it is necessary to consider the size, watershed, topography, soils and general characteristics of the lake.

The principle field investigation for this report was conducted in June, 1981. At this time the examination of the shoreline, banks, and vegetation of Lake Herman was conducted. The shoreline areas selected for study were those least affected by man. Public access areas and gradually sloping beaches provide the best OHWM indicators.

Lake Herman is located in Lake County, Sections 10, 11, 14, 15, 22 and 23 of Township 106 North; Range 53 West (see page 4). The lake has a surface area of 1350 acres and a watershed area of 41,622 acres (see page 5). Lake Herman is classified as a shallow lake with a large watershed to lake area ratio. Extensive cultivation of the watershed has caused accelerated eutrophication and siltation in the past few decades. Recharge of the lake is mainly from precipitation - runoff from its watershed and limited aquifer connection.

Elevations in this report are referenced to a Coast and Geodetic Survey Bench mark. This bench mark is located on the northeast side of Lake Herman at a concrete box culvert on the road around Lake Herman, in the center of the top of the northeast concrete head wall. A standard disk is stamped "F 54 1934" elevation 1677.890 feet mean sea level (msl).

Trees which are the largest and most permanent expression of upland growth, are used to determine a relationship of the ground in which the tree grows to the OHWM level. Records of ordinary high water levels are reflected in the well established trees along a lake's shoreline. Cottonwood, ash, and willow are the most predominant trees that grow along the shores of South Dakota's lakes. Experimentation and research have shown that most trees will not survive if water levels exceed one half to one tree diameter below the base elevation of the tree for more than 25% of the growing season. Consideration must be given to the characteristics of the soil, slope of the ground, effects of water and ice on the shoreline and bank, and the physical condition and growing characteristics of the tree.

The OHWM can be approximated by a relationship of the base elevation of a tree to its diameter. This is determined by averaging the base elevations of the lakeside and landside of the tree, then subtracting one-half the diameter of the tree from its average base elevation. By this method the OHWM was determined to be 1669.0 ft. msl.

The photos in this report are of trees revealing signs of being adversely affected by the zone of saturation in which their root systems have existed and reflect this zone in their growing characteristics. Such trees are often stunted and their development is inferior to a normal tree of that species. The branches are shorter than usual and taper rapidly. The base of the tree sometimes exhibits swelling due to the presence of water during the growing season. This "butt swell" is apparent in all the photos of trees in this report.

The trees along the shoreline of Lake Herman can be divided into three categories. Those where their lakeside base elevation (the elevation where the soil meets the tree trunk on the lakeside of the tree) is below the OHWM (see photos 1 through 3), leaving roots exposed from erosion of the soil and destruction and decay of the tree caused by the zone of soil saturation smothering part of the root system. These trees survive because part of their root system has escaped the zone of saturation. The second category of trees are those where their lakeside base elevation is from zero to one half of a foot above the OHWM (see photos 4 through 7). These trees show signs of butt swell, erosion, and their root system is on the surface and growing away from the lake. The third category of trees are those with a lakeside elevation approximately one foot above the OHWM (see photos 8 through 10). These trees show lesser degrees of butt swell, little or no root erosion, and some surface roots.

The outlet structure for Lake Herman is located on the northeast shore (see page 6). The structure is a concrete wall set at an elevation of 1668.4 ft. msl. This structure was built in the 1940's and is one of the main controlling factors producing the OHWM on Lake Herman.

According to the Game, Fish and Parks Department Vested Water Right No. 646-3 filed July 21, 1959 on Lake Herman, the amount of water claimed is "as required to fill the lake to outlet level". This would require approximately 4050 acre feet annually. The outlet structure elevation is 0.6 ft below the OHWM.

The ordinary high water level (OHWL) is the calm water level generally equal to the outlet structure elevation and one half to one foot below the OHWM. The present outlet elevation will maintain an OHWL of sufficient height and duration to perpetuate the present OHWM.

Conclusions

From the examination of the bed and banks of Lake Herman and of the vegetation found on the shore, it has been found that the OHWL has been at an elevation of 1668.4 ft. msl for a long enough period, to establish the OHWM at an elevation of 1669.0 ft. msl.

Recommendations

The outlet elevation and the ordinary high water mark for Lake Herman were not specified when Vested Water Right No. 646-3 was filed by the Department of Game, Fish and Parks on July 21, 1959. The recommendation to the Water Management Board is that the OHWM be established, based on the evidence presented, at an elevation of 1669.0 ft. msl.

Based on the water level elevation needed to establish this OHWM, it is recommended to the Board that Vested Right No. 646-3 be clarified to establish the maximum elevation at which the Game, Fish and Parks Department can maintain the lake level. Based upon the evidence, this level would be at an elevation not to exceed 1668.4 ft. msl.

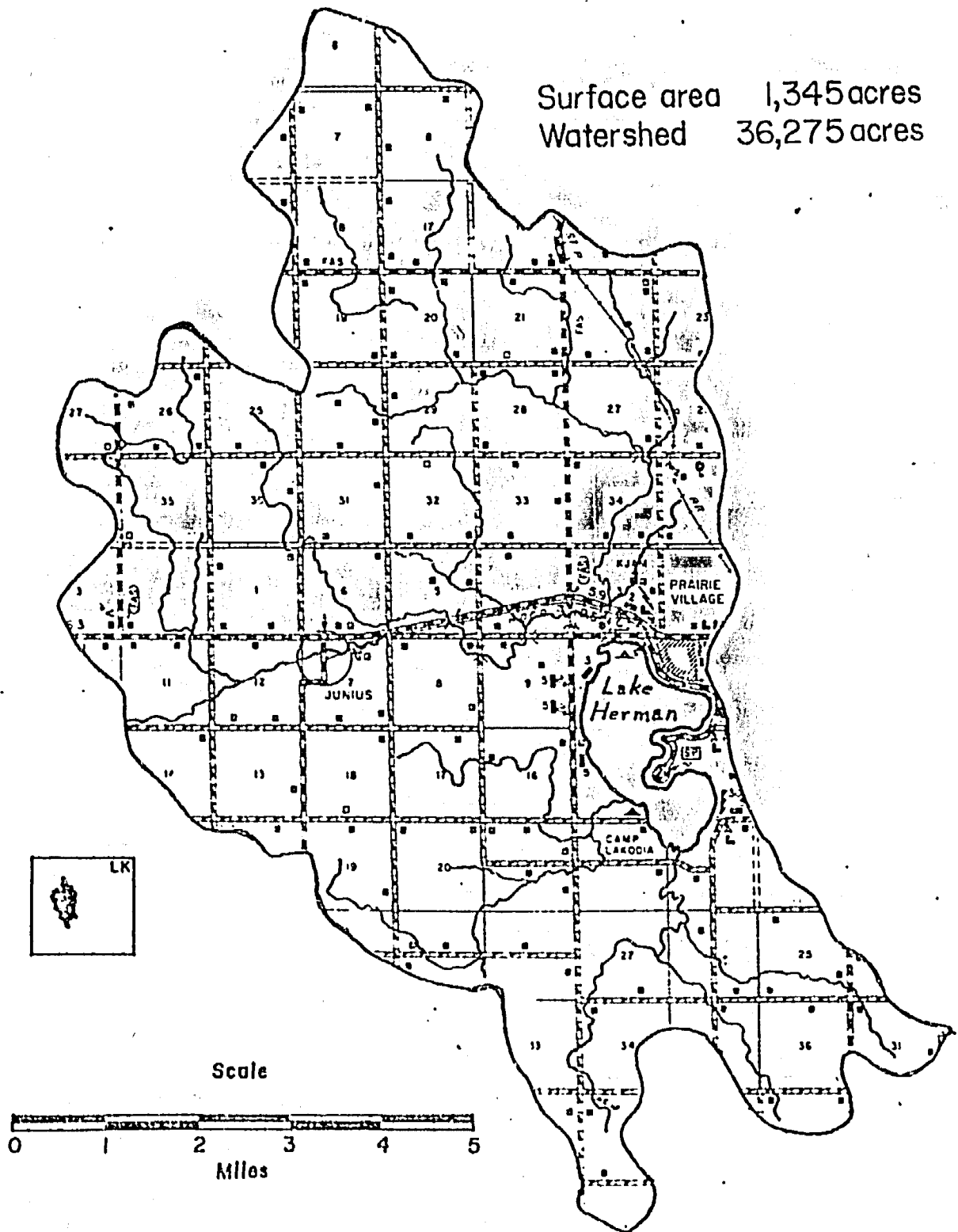
Jerry Steffen, Water Resource Engineer
Division of Water Rights
Department of Water and Natural Resources

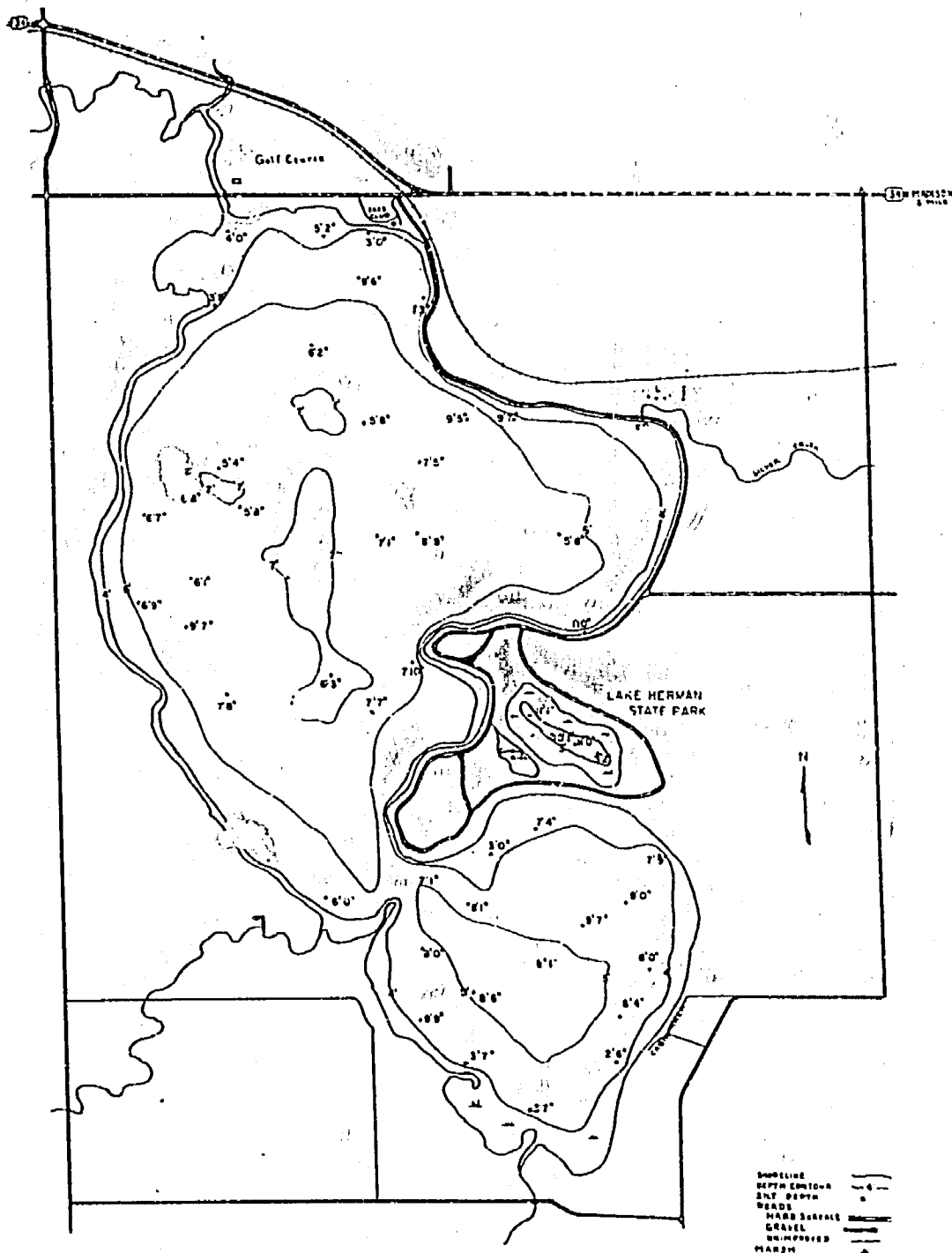
For information regarding OHWM bench marks established around Lake Herman, contact the Department of Water and Natural Resources, Water Rights Division, Pierre, South Dakota.

B92302JS

Lake Herman

Surface area 1,345 acres
Watershed 36,275 acres





SOUTH DAKOTA
DEPT. OF GAME, FISH AND PARKS
LAKE HERMAN
LAKE COUNTY

WATER SURVEYED BY: J. H. HARRIS
DATE: 1950
FIELD PHOTO: 1950
DATE: 1950
SEE: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 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2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110,



Photo No. 1 - Northeast Shoreline
Cottonwoods (left to right):

		1.8 ft.dia.:	2.5 ft.dia.:	2.3 ft.dia.
Base	Lakeside -	1669.0	: 1668.7	: 1668.9
Elev.	Landside -	1670.7	: 1670.4	: 1670.9
	Ave. -	1669.9	: 1669.6	: 1669.9

OHWM - 1669.9 - 0.5 (1.8) = 1669.0
 OHWM - 1669.6 - 0.5 (2.5) = 1668.3
 OHWM - 1669.9 - 0.5 (2.3) = 1668.8



Photo No. 2 - N.W. Shoreline
Willow 1.8 ft. dia.

Base	Lakeside -	1668.0
Elev.	Landside -	1669.7
	Ave. -	1668.9

OHWM - 1668.9 - 0.5 (1.8) = 1668.0



Photo No. 3 - East Shoreline
 Lateral root elevations (left to right)
 1669.1, 1668.8, 1669.1, 1669.3
 center



Photo No. 4 - NW Shoreline
 Willow/5 shoots/0.5 ft. to 1.0 ft. di.
 Base Lakeside - 1668.4
 Elev. Landside - 1670.6
 Ave. - 1670.0
 OHWM - $1670.0 - 0.5 (1.5) = 1669.3$



Photo No. 5 - N.W. Shoreline

Willow 1.5 ft. dia.

Base Lakeside - 1669.5

Elev. Landside - 1670.7

Ave. - 1670.1

OHM - $1670.1 - 0.5 (1.5) = 1669.4$

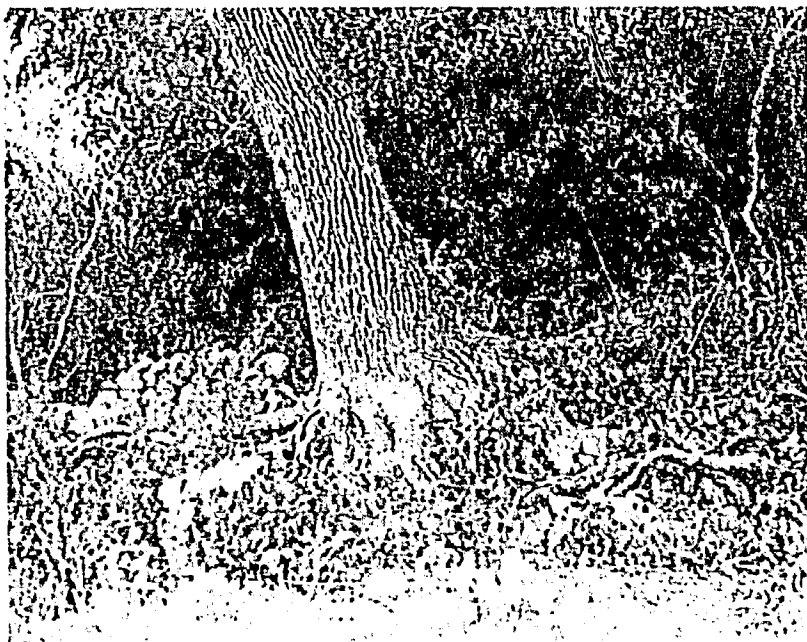


Photo No. 6 - East Shoreline

Ash/55 yr. old/1.4 ft. dia.

Base Lakeside - 1669.3

Elev. Landside - 1671.1

Ave. - 1670.2

OHM - $1670.2 - 0.5 (1.4) = 1669.5$

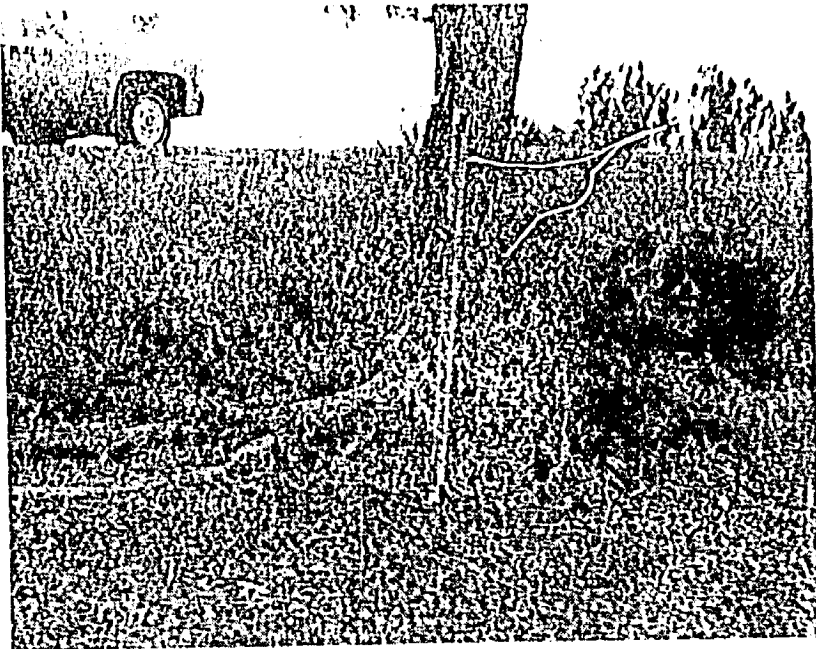


Photo No. 7 - East Shoreline

Ash/40 yr. old/1.0 ft. dia.

Base Lakeside - 1669.4

Elev. Landside - 1670.8

Ave. - 1670.1

OHWM - $1670.1 - 0.5 (1.0) = 1669.6$



Photo No. 8 - Southeast Shoreline

Ash (left 1.5 ft. dia. right):

1.5 ft. dia: 1.7 ft. dia.

Base Lakeside - 1670.1 : 1670.2

Elev. Landside - 1671.1 : 1671.6

Ave. - 1670.6 : 1670.9

OHWM - $1670.6 - 0.5 (1.5) = 1669.9$

OHWM - $1670.9 - 0.5 (1.7) = 1670.1$



Photo No. 9 - N.E. Shoreline

Willows (left to right)

		1.4 ft. dia.	: 1.3 ft. dia.
Base	Lakeside	1670.0	: 1669.6
Elev.	Landside	- 1670.5	: 1669.7
	Ave.	- 1670.2	: 1669.7

OHWM - 1670.2 - 0.5 (1.4) = 1669.5

OHWM - 1669.7 - 0.5 (1.3) = 1669.0

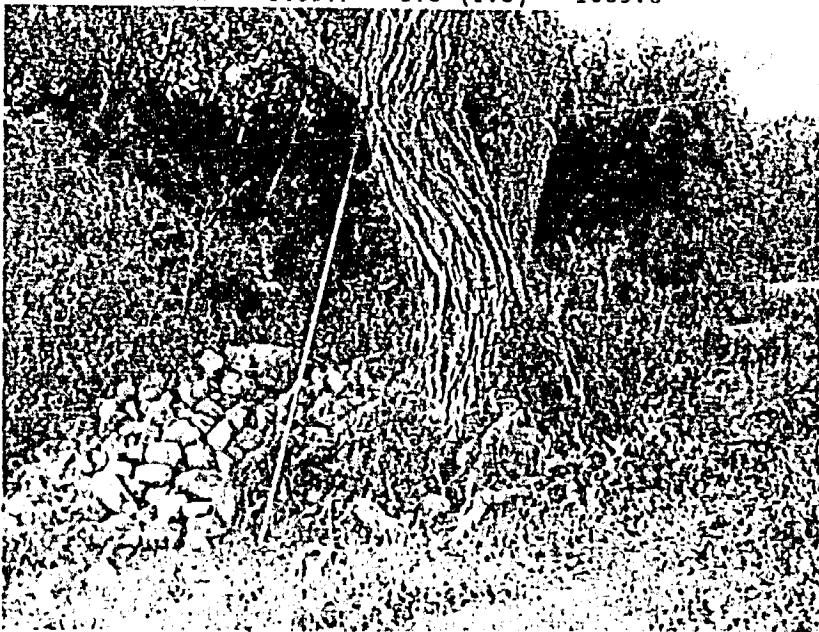


Photo No. 10 - East Shoreline

Willow 1.5 ft. dia.

Base	Lakeside	- 1669.8
Elev.	Landside	- 1671.0
	Ave.	- 1670.4

OHWM - 1670.4 - 0.5 (1.5) = 1669.6

Water Rights Division - DWNR
Conversation or File Documentation

File No. 646-3

NAME OF PERSON OR FILE: SD Dept of Game, Fish and Parks - Lake Herman

ADDRESS: _____ COUNTY _____

DATE: _____ TELEPHONE _____

RE: Ordinary High Water Mark Determination

COMMENTS:

October 7 & 8, 1981 - Water Management Board Minutes

Mr. Harms MOVED, SECONDED by Mr. Decker that the Ordinary High Water Mark for Lake Herman be set at elevation 1669.0 feet msl. MOTION CARRIED.

Mr. Harms MOVED, SECONDED by Mr. Rylance that Water Right No. 646-3 is hereby clarified to allow the water level at Lake Herman to be maintained at no higher than 1668.4 feet msl. MOTION CARRIED.

For more information see OHWM file.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

South Dakota
Department of
Water & Natural Resources

Joe Foss Building
 523 East Capitol
 Pierre, South Dakota 57501-3181

September 21, 1988

Richard Beringson, Secretary
 Department of Game, Fish and Parks
 Anderson Building
 445 E Capitol
 Pierre SD 57501

Dear Mr. Beringson:

I am writing to notify you that pursuant to the Notice of Intent to Validate Vested Water Right Claims dated June 20, 1988 that I intend to oppose validation of all Department of Game, Fish and Parks Vested Water Right Claims for lakes for the following reasons:

1. Until the outlet elevation for each lake is surveyed and the outlet elevation is set by the Water Management Board.
2. To allow the Vested Water Right Claim to be amended, if necessary, as follows:
 - a) Include the outlet elevation;
 - b) To correct the amount of water claimed;
 - c) To add the qualification that a vested claim is subject where necessary to installation of a concrete outlet structure to assure retention of the outlet as the established elevation; and
 - d) To add any amendments and qualifications necessary to clarify a Vested Right Claim.

Also, that I intend to oppose validation of all Department of Game, Fish and Parks Vested Water Right Claims for dams to allow the Vested Water Right Claim to be amended, if necessary, as follows:

1. To include the spillway elevation;
2. To correct the amount of water claimed; and
3. To add any amendments and qualifications necessary to clarify a Vested Right Claim.

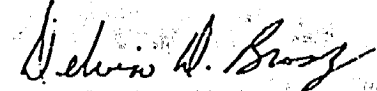


September 21, 1988
Richard Raringson, Secretary
Page 2

We will be working with your staff on these validations. We have already discussed setting outlet elevations before validating claims for lakes. Although the work necessary to complete the validation process will take several years to complete, the results should be of benefit to the public and to your Department. As the work is completed to validate each claim, the claim will be presented to the Water Management Board for validation.

Please advise if you have any questions.

Very truly yours,



for JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

cc: Ron Koth, Department of Game, Fish and Parks

AGENDA
WATER MANAGEMENT BOARD MEETING
OCTOBER 7 & 8, 1981

Place: Staurolite Inn, Brookings, South Dakota

WEDNESDAY, OCTOBER 7, 1981

- 9:00 am Call to Order
Approval of July 29 & 30, 1981 Minutes
Set February Meeting Place & Date
Report on Special Legislative Session
Status & Review of Water Right Litigation
Cancellation Considerations
"Vested Right" Considerations
Requests For Extension of Time
Other Business
- 9:45 am Break
- 10:00 am Administer Oath to Water Rights Staff
Introduction of Board & Water Rights Staff
Requirements Before Water Right Can Be Advertised & At Time Of Hearing
Water Right Hearings
- 12:00 noon Lunch
- 1:00 pm Water Right Hearings Continued
- 1:30 pm Establish Ordinary High Water Marks and Clarify Game, Fish & Parks
Dept. Water Rights
Lake Herman - Lake Co. - No. 646-3
Oakwood Lakes - Brookings Co. - Nos. 894-3, 895-3, 903-3 & 905-3
Lake Cochrane - Deuel Co. - No. 1468-3
Clarify Game, Fish & Parks Dept. Water Rights No. 890-3 - Lake Kampeska,
No. 880-3 - Pelican Lake & No. 790-3 - Lake Madison
- 3:00 pm Conclusions of Law, Findings of Fact & Final Decision
Blue Dog Lake Outlet Elevation
No. 4786-3, Charles Johanson
Water Right Hearings Continued

REPRODUCTION: REFLECTION 2611 ROLL NO. 10
DATE MICROFILMED 12-2-79
FILMED BY 11-11-82
CIVIL ENGINEER

and also whether or not the additional well should have water quality approval.

Chairman Arend administered the oath to Morris Mortimer.

Mr. Mortimer stated he took it for granted the application had been advertised for the additional water. He stated he originally intended to use the additional water on the SE 1/4 of Section 5.

Mr. Harms stated the application will have to be amended and readvertised before action can be taken.

4722-3A, Morris Mortimer, Hitchcock, South Dakota

Application is for no additional water from two 75 foot deep wells to irrigate no additional acres. Application is for additional diversion points on Permit No. 4722-3. Affidavit of Publication received. No complaints were received on the application. Mr. Mortimer was present on the application.

Mr. Harms MOVED, SECONDED by Mr. Decker that Application No. 4722-3A be APPROVED with the Well Interference Qualification. The land covered under this Permit is also covered under Permit No. 4722-3. Combinations of diversions under the two permits shall not exceed the Statutory limit of 1.00 cfs for each 70 acres of land to be irrigated. Priority date established under 4722-3. MOTION CARRIED.

ESTABLISHMENT OF ORDINARY HIGH WATER MARKS AND CLARIFICATION OF GAME, FISH & PARKS DEPARTMENT WATER RIGHTS

Lake Herman, Lake Co., No. 646-3

Jerry Steffen presented a report and slides prepared on Lake Herman (copy on file). He stated he is recommending an Ordinary High Water Mark be established for Lake Herman at an elevation of 1669.0 feet msl. The present outlet elevation structure of Lake Herman is 1668.4 feet msl.

Mr. Steffen stated on October 1, 1981 he measured the water level. The ordinary high water mark was 3.9 feet above the present water level. The outlet elevation was 3.3 feet above the water level.

Mr. Hatch read a letter from Jack Merwyn, Game, Fish and Parks Department (copy on file). In the letter, Mr. Merwyn states his Department concurs with the Staff recommendations for setting the Ordinary High Water Marks on Lake Herman, Oakwood Lakes and Lake Cochrane.

Mr. Harms MOVED, SECONDED by Mr. Decker that the Ordinary High Water Mark for Lake Herman be set at elevation 1669.0 feet msl. MOTION CARRIED.

Mr. Harms MOVED, SECONDED by Mr. Rylance that Water Right No. 646-3 is hereby clarified to allow the water level at Lake Herman to be maintained at no higher than 1668.4 feet msl. MOTION CARRIED.

RECOMMENDATIONS, REDUCTION 23.1 ROLL NO. 10
DATE MICROFILMED
CAMERA OPERATOR



DENR
SOUTH DAKOTA

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

Memo to File

Lake Herman in Lake County

VWR No. 646-3

The OHWM was set by the Water Management Board on October 7, 1981.

OHWM elevation 1669.0 fmsl NGVD29

The outlet elevation was set by the Water Management Board on October 7, 1981.

OHWM elevation 1668.4 fmsl NGVD29