

## **APPENDIX A**

### **Description and Extent of “Meandered” Rivers and Lakes in Iowa.**

Approximately 1,600 miles of Iowa rivers were designated as “meandered rivers” at the time of the original government surveys in the 1800s. The state of Iowa owns the riverbed of meandered rivers, and the lakebed of meandered lakes, up to the normal high water mark (INRC 1978: 99). Jurisdiction over all meandered rivers and lakes within Iowa is the responsibility of the Iowa DNR.

Where streams or lakes were encountered in the original survey of the state, the surveyor was instructed to “meander” those rivers, “the right angle of which was three chains (198 feet) or more” and “all lakes and deep ponds of the area of twenty-five acres and upward, also navigable bayous” (Land Laws of the United States, J.C. Zabriskie). A “meandered” river or lake is one whose sinuosities are defined by a series of straight lines, the course and distance of which are entered in the field book as part of the regular survey.

The meander lines so established were used to determine acreage in the fractional parts of the section sold by the government and bounded by or containing the meandered river or lake. A 1925 decision of the Iowa Supreme Court held that “A ‘meander line’ is not a boundary, but one which has been run by the government to define the sinuosities of the banks of streams, and as a means of extending the quantity of land in a fractional area subject to sale by the government” (*City of Cedar Rapids v. Marshall*, 199 Iowa 1262). Riparian landowners along meandered rivers are assumed to own to the ordinary high water mark of the river.

The title to the beds of meandered rivers has remained with the state. The land comprising the bed of a meandered river which lies below the ordinary high water mark is considered state sovereign land, and permission from the DNR pursuant to Iowa Code Section 111.4 may be needed for any work within the channels of meandered rivers.

The following reaches of rivers bordering and within Iowa, and natural lakes, are considered “meandered.” For interior streams, the meandered reaches were determined by examination of the original township plats and survey notes in the vault of the Secretary of State. The mileage indicated is the approximate valley length, not the channel length. For natural lakes, elevations of ordinary high water lines have been determined for most of the “meandered” lakes listed below.

#### **Border Rivers:**

The boundary streams of the state, namely the **Mississippi (315 miles)**, **Des Moines (31 miles)**, **Missouri (178 miles)**, and **Big Sioux (136 miles)** rivers, are meandered for their entire length along the boundary of the state.

#### **Interior Rivers:**

**Upper Iowa River:** from mouth to west line of Section 28, T100N, R4W, Allamakee County: 6 miles.

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**Turkey River:** mouth to the west line of Section 30, T95N, R7W, Fayette County, near Clermont: 58 miles.

**Little Maquoketa River:** mouth to the west line of Section 35, T90N, R2E, Dubuque County: 2 miles.

**Maquoketa River:** mouth to the west line of Section 18, T84N, R3E, Jackson County, near Maquoketa: 26 miles.

**Wapsipinicon River:** mouth to the west line of Section 19, T86N, R6W, Linn County, near Central City: 98 miles.

**Cedar River:** mouth (at confluence with the Iowa River in Louisa County) to the west line of Section 7, T89N, R13W, Black Hawk County, at Cedar Falls: 157 miles.

**Iowa River:** mouth to the west line of Section 7, T81N, R11W, Iowa County (approximately 6 miles west of Marengo): 123 miles.

**Skunk River:** mouth to the north line of Section 1, T73N, R8W, Jefferson County: 61 miles.

**Des Moines River** (mainstem): mouth to confluence with the East and West forks of the Des Moines River in Section 19, T91N, R26W, Humboldt County, near Humboldt: 278 miles.

**East Fork Des Moines River:** mouth to north line of Section 2, T95N, R29W, Kossuth County (north edge of Algona): 39 miles.

**West Fork Des Moines River:** mouth to the west line of Section 7, T95N, R32W, Palo Alto County (immediately south of Emmetsburg): 44 miles.

**Raccoon River:** mouth to the west line of Section 30, T-78N, R-35W, Polk County (Polk-Dallas County line): 13 miles.

**Nishnabotna River:** mouth (at confluence with Missouri River in the state of Missouri) to north line of Section 1, T67N, R42W, Fremont County (approximately 3 miles southwest of Riverton: 6 miles in Iowa.

#### Natural Lakes:

The following list of Iowa's natural ("meandered") lakes was prepared from two sources: (1) *Report of the State Conservation Commission for the Biennium ending June 30, 1958* issued by the State Conservation Commission, Des Moines, Iowa, Bruce F. Stiles, State Conservation Director (pages 41 and 148) and (2) a 1953 listing of The Ordinary High-Water Line of the Natural Lakes of the State of Iowa" prepared

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by C.E. Sayre, Superintendent of Land Acquisition and Surveys for the Iowa State Conservation Commission. Lake acreages are taken from the following sources: (1) *A classification of Iowa's lakes for restoration* (Bachmann et al. 1994b), (2) the DNR Section 305(b) assessment database, and (3) unpublished information in DNR files.

	<b>Lake Name</b>	<b>County</b>	<b>Acres</b>
1.	Kains Lake	Allamakee	200
2.	Lansing Lake	Allamakee	679
3.	Mud Hen Lake	Allamakee	164
4.	New Albin Big Lake	Allamakee	200
5.	Pickerel Lake	Buena Vista	35
6.	Storm Lake	Buena Vista	3,147
7.	North Twin Lake	Calhoun	454
8.	South Twin Lake	Calhoun	600
9.	Clear Lake	Cerro Gordo	3,684
10.	Dan Green Slough	Clay	311
11.	Elk Lake	Clay	261
12.	Round (aka Mud) Lake	Clay	430
13.	Trumbull Lake	Clay	1,183
14.	Silver Lake	Delaware	34
15.	Center Lake	Dickinson	272
16.	Diamond Lake	Dickinson	166
17.	East Okoboji Lake	Dickinson	1,835
18.	Hottes Lake	Dickinson	378
19.	Jemmerson Slough	Dickinson	273
20.	Little Spirit Lake	Dickinson	618
21.	Lower Gar Lake	Dickinson	242
22.	Marble Lake	Dickinson	184
23.	Minnewashta Lake	Dickinson	118
24.	Pleasant Lake	Dickinson	77
25.	Prairie Lake	Dickinson	100
26.	Silver Lake	Dickinson	1,041
27.	Spirit Lake	Dickinson	4,169
28.	Swan Lake	Dickinson	371
29.	Upper Gar Lake	Dickinson	36
30.	Welch Lake	Dickinson	75
31.	West Okoboji Lake	Dickinson	3,847
32.	Cheever Lake	Emmet	341
33.	Iowa Lake	Emmet	308
34.	High Lake	Emmet	467
35.	Ingham	Emmet	421
36.	Tuttle (aka Okomanpedan) Lake	Emmet	2,360
37.	Twelve Mile Lake	Emmet	290
38.	West Swan Lake	Emmet	379
39.	Four Mile Lake	Emmet & Dickinson	209
40.	Little Wall Lake	Hamilton	236

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	<b>Lake Name</b>	<b>County</b>	<b>Acres</b>
41.	Crystal Lake	Hancock	268
42.	Eagle Lake	Hancock	906
43.	East Twin Lake	Hancock	193
44.	West Twin Lake	Hancock	109
45.	Babcocks Lake*	Johnson	58
46.	Swan Lake	Johnson	44
47.	Burt Lake	Kossuth	46
48.	Goose Lake	Kossuth	103
49.	Klum Lake	Louisa	212
50.	Green Bay	Lee	272
51.	Blue Lake	Monona	228
52.	Keokuk Lake (part of Muscatine Slough)	Muscatine	511
53.	Iowa Lake	Osceola	116
54.	Rush Lake	Osceola	336
55.	Five Island Lake	Palo Alto	951
56.	Lost Island Lake	Palo Alto	1,147
57.	Rush Lake	Palo Alto	460
58.	Silver Lake	Palo Alto	664
59.	Virgin Lake	Palo Alto	200
60.	Clear Lake	Pocahontas	187
61.	Lizard Lake	Pocahontas	268
62.	Lake Manawa	Pottawattamie	714
63.	Nobles Lake	Pottawattamie & Harrison	102
64.	Black Hawk Lake	Sac	925
65.	Harmon Lake	Winnebago	241
66.	Rice Lake	Winnebago & Worth	702
67.	Browns Lake	Woodbury	219
68.	Brights Lake**	Worth	122
69.	Silver Lake	Worth	316
70.	Elm Lake	Wright	463
71.	Lake Cornelia	Wright	243
72.	Morse Lake***	Wright	108
73.	Wall Lake***	Wright	935
		<b>TOTAL:</b>	18,715

\*Inundated by Coralville Reservoir

\*\*Drained lake bed

\*\*\*On Sayre's 1953 list but not on lists published in biennial reports of the State Conservation Commission.