

to ref. 1328

NPS Form 10-900  
(Rev. 8/86)  
Wisconsin Word Processor Format (1331D)  
(Approved 3/87)

OMB No. 1024-0018

RECEIVED

OCT 25 1993

NATIONAL  
REGISTER

United States Department of the Interior  
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES  
REGISTRATION FORM

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in Guidelines for Completing National Register Forms (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries. Use letter quality printer in 12 pitch, using an 85 space line and a 10 space left margin. Use only archival paper (20 pound, acid free paper with a 2% alkaline reserve).

1. Name of Property

historic name Cedars Lock & Dam Historic District

other names/site number N/A

2. Location

street & number 4527 East Wisconsin Road N/A not for publication

city, town Little Chute N/A vicinity

state Wisconsin code WI county Outagamie code 087 zip code 54911

3. Classification

Ownership of Property	Category of Property	No. of Resources within Property	
		contributing	noncontributing
<input type="checkbox"/> private	<input type="checkbox"/> building(s)		
<input type="checkbox"/> public-local	<input checked="" type="checkbox"/> district	2	2 buildings
<input type="checkbox"/> public-State	<input type="checkbox"/> site		sites
<input checked="" type="checkbox"/> public-Federal	<input type="checkbox"/> structure	3	structures
	<input type="checkbox"/> object		objects
		5	2 Total

Name of related multiple property listing:

Waterway Resources of the Lower Fox River

No. of contributing resources  
previously listed in the  
National Register N/A

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this X nomination    request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property X meets    does not meet the National Register criteria.    See continuation sheet.

Dr. William L. Kusch  
Signature of certifying official

14 Oct '93  
Date

Corps of Engineers  
State or Federal agency and bureau

In my opinion, the property X meets    does not meet the National Register criteria.    See continuation sheet.

[Signature]  
Signature of commenting or other official

8/24/92  
Date

State Historic Preservation Officer-WI

    
State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:

✓ entered in the National Register  
   See continuation sheet

   determined eligible for the National Register.    See continuation sheet

   determined not eligible for the National Register.

   removed from the National Register.

   other, (explain:)   

Beth Boland

12/3/93

Signature of the Keeper

Date

6. Functions or Use

Historic Functions

(enter categories from instructions)

Transportation/water related

Domestic/single dwelling

Current Functions

(enter categories from instructions)

Transportation/water related

Domestic/single dwelling

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## 7. Description

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### Architectural Classification

(enter categories from instructions)

### Materials

(enter categories from instructions)

Other: Lock

Other: Concrete Dam

Colonial Revival

foundation Stone

walls Brick

Stone

roof Asphalt

other Concrete

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Describe present and historic physical appearance.

The Cedars Lock and Dam Historic District is located adjacent to STH 96, between Appleton and Little Chute. It is located adjacent to the Circle Acres Trailer Park, and is at the 27.7 mile point on the Lower Fox River. The district, which is near the site at which the Cedars Treaty was signed with the Indians in 1837, consists of three structures and four buildings. The structures, all contributing, are the lock, a dam, and a canal segment. The buildings include a garage, a storage shed, the lockkeeper's house and the lock shack, the latter two of which are also contributing.

### Cedars Lock (Contributing):

The present lock, which is oriented on an E/W axis was built in 1887 to replace one of composite construction.<sup>1</sup> The 144 by 35 foot lock chamber and wing walls are comprised of quarried limestone blocks, the sides of which are capped with concrete coping and a pipe railing. Each of the four lock gates is constructed of squared wooden timbers that are laid horizontally atop one another and joined with structural ties. Adjacent to each gate is a concrete platform that contains a tripod. A vertical shaft extends the height of the tripod. A handle is fixed to the top of the shaft, while the bottom of the shaft contains a gear that drives a horizontally placed spar, the end of which is attached to a lock gate. (It is a horizontal rack and pinion system.) Depending on which way the handle is turned, the spar is either taken in, thus opening the lock gate, or it is pushed out, in which case the gate closes. The chamber is flooded by four butterfly valves that are set in the floor of the lock, immediately upstream from the structure. As the valves are opened, water passes down into a culvert with a 90 degree turn, which then directs it under the upstream sill and straight into the chamber. Each valve is adjusted by a geared mechanism that sits on the lock's coping. A metal shaft connects the valve to the adjusting mechanism, all four of which are placed in line adjacent to the right, upstream corner of the lock. The chamber is discharged through six small butterfly valves found at the bottom of the two downstream gates. There are three valves per gate. These valves are operated by the levers atop each gate. The gates contain a cat-walk that facilitates moving from one side of the lock to the other. The lock provides 9.8 feet of lift as it moves crafts from the 698.66 feet above sea level upper pool to the 688.88 foot above sea level lower pool. It can be filled in five minutes and four seconds, while it can be

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<sup>1</sup> Annual Report Upon the Construction of Harbor of Refuge, Milwaukee Bay; Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan; And Improvement of Fox and Wisconsin Rivers, in Charge of W.L. Marshall, Captain of Engineers, U.S.A.; Being Appendix HH of the Annual Report of the Chief of Engineers for 1887 (Washington: Government Printing Office, 1887), 2086.

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Outagamie County, WI

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discharged in two minutes and fifty-four seconds.

Details about the lock's construction, as well as about subsequent changes and major maintenance activities prior to 1953, are as follows:

- 1886      2,449 linear feet of 14" thick dressed stone delivered for future lock construction.<sup>2</sup>
- 1887      Old lock removed and new one built. 3,859 cubic yards of material removed. New miter sill installed 7" lower than the old one and 10' "further down the lock." It was bolted to bedrock. New gates built for lower end of lock. Upper gates rehabilitated. Lock reconstruction utilized 2,085 cubic yards of cement masonry; 20,378 feet B.M. of pine lumber; 10,027 feet, B.M. of oak lumber; 3,411 pounds of iron; 141 pounds of steel; 450 pounds of nails/spikes; 2,635 barrels of Milwaukee Cement; 80 barrels of Louisville cement; 22 barrels of Portland cement; 250 pounds of powder; 350 exploders; 650 feet of fuse; 236 cords of wood; 33 tons of bituminous coal; and 5 tons of blacksmith's coal.<sup>3</sup>
- 1904      Lock's gates received new steel spars and gas pipe handrails, and three concrete tripod platforms. Use of steel spar on upper right gate necessitated permanently closing one filling valve.<sup>4</sup>

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<sup>2</sup> Annual Report Upon the Construction of Harbor of Refuge, Milwaukee Bay; Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan; And Improvement of Fox and Wisconsin Rivers, in Charge of W.L. Marshall, Captain of Engineers, U.S.A.; Being Appendix GG of the Annual Report of the Chief of Engineers for 1886 (Washington: Government Printing Office, 1886), 1698.

<sup>3</sup> Annual Report (1887), 2086.

<sup>4</sup> Annual Report Upon the Improvement of Rivers and Harbors on the Western Shore of Lake Michigan, In Charge of J.G. Warren, Major, Corps of Engineers, U.S.A.; Being Appendix JJ of the Annual Report of the Chief of Engineers for 1904 (Washington, D.C.: Government Printing Office, 1904), 2856.

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- |      |   |
|------|---|
| 1906 | Upper right side of lock received concrete tripod platform. <sup>5</sup>                              |
| 1908 | Lock gates received new fenders. Filling gear mechanism replaced with ratchets and dogs. <sup>6</sup> |
| 1909 | Chamber walls repointed with portland cement. <sup>7</sup>  |
| 1924 | Lock walls raised. <sup>8</sup>   |
| 1941 | Lock received new upper and lower gates, also new steel valves and frames. <sup>9</sup>               |

Dam (Contributing):

This dam is a concrete structure with an overall length of 654 feet. Built in 1933-34, it is located immediately to the south of the lock. The dam creates the pool that floods the canal in which the Cedars lock is located. It is generally oriented on an NNE/SSW axis, and its south abutment adjoins the Mid-Tec Paper Company power house.

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<sup>5</sup> Annual Report Upon the Improvement of Rivers and Harbors on the Northern and Western Shores of Lake Michigan, In the Charge of W.V. Judson, Major, Corps of Engineers, U.S.A.; Being Appendix KK of the Annual Report of the Chief of Engineers for 1906 (Washington, D.C.: Government Printing Office, 1906), 1766.

<sup>6</sup> Annual Report of the Chief of Engineers, U.S. Army, 1908 Part II (Washington, D.C.: Government Printing Office, 1908), 1980.

<sup>7</sup> Annual Report of the Chief of Engineers, U.S. Army, 1909 Part II (Washington, D.C.: Government Printing Office, 1909), 1982.

<sup>8</sup> Annual Report of the Chief of Engineers, 1924: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1925), 1380.

<sup>9</sup> Annual Report of the Chief of Engineers, 1941: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1941), 1546.

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Anchored to the river's rock bottom, the dam consists of three sections. The northern section, which is 211 feet, and the southern section, which is 263 feet, are spillways. The spillways are twenty four feet wide, and fix the maximum level of the pool the dam creates at 698.66 feet above sea level (it maintains about a ten foot head). The middle portion of the dam is 180 feet, and contains seven concrete sluiceways, each of which contains a fourteen by twenty foot, steel Tainter gate. The gates are operated by a "crab," a small electrically operated mechanism that moves from gate to gate on a track. The "crab" contains a wench, to which the chain on each end of the gate is attached. As the wench is activated, the chain is taken in or let out, and the height of the gate is adjusted accordingly. A steel catwalk, which facilitates inspections and maintenance, extends the length of the dam.

Placed atop the dam is a single story front gabled shed that was erected to shelter the electric "crab." Spanning the abutments adjacent to the northernmost gate, the lift house is reached by the catwalk. It is clad with drop siding, roofed with asphalt shingles, and has walls bounded with pilaster strips. The single window in each side wall and the panelled door at the right of the lockside endwall have simple surrounds. A pair of heavy wooden doors in the opposite endwall swing out to allow passage of the "crab" to whichever gate must be adjusted.

The need for a new dam was noted by the Corps of Engineers in 1932 when it observed that the old structure could not adequately discharge flood waters.<sup>10</sup> Construction started in 1933, and was completed in 1934.<sup>11</sup> No structural changes are thought to have been made to this structure since its construction.

Canal (Contributing): circa 1850s

Approximately 1,300 feet of the Lower Fox navigation canal are located within this

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<sup>10</sup> Annual Report of the Chief of Engineers, 1932: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1933), 1374.

<sup>11</sup> Annual Report of the Chief of Engineers, 1933: Extract - Report upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1933), 877; Annual Report of the Chief of Engineers, 1934: Extract - Report upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1935), 1041.

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district. Generally running west to east at this point, the canal's depth does not exceed six feet, and its width varies between 100 to 150 feet across the top. A unique feature found here is a dry rubble wall that lines much of this canal segment. It is generally 4 feet high, and contains 9 courses of stone. The canal has been periodically dredged throughout its history.

Lockkeeper's House (Contributing):

Situated approximately fifty feet northwest of the lock, this 1.5 story Colonial Revival house is representative of the style most commonly used for keeper's houses on the system. A gambrel-roofed rectangle, it has flat-roofed, rectangular frame porches projecting at the front (upstream) and rear. Built into the landward lock embankment, it has an exposed, stone foundation with a small, centered, segmental-arched window and metal basement doors below the main block and rear porch. The brick first story has windows (covered with plywood) with stone sills. The upper story gable is clad with wooden shingles and has paired windows surmounted by a louvered attic vent. The roof has a molded cornice. The upper slope of the roof extends front and rear to create pairs of shed-roofed dormers with molded cornices with sidewall returns. A brick chimney protrudes from the center of the roof ridge.

The house was built in 1927, at a cost of \$8,811.25.<sup>12</sup>

Lockshack (Contributing): circa 1917

This is a one story, front gabled shed that is used as the locktender's station. Clad with asbestos shingles and roofed with asphalt shingles, its walls are bounded by pilaster strips. The front door and single side windows have plain surrounds. The roof has a plain cornice, and a brick chimney protruding at the rear of the downstream slope.

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<sup>12</sup> Annual Report of the Chief of Engineers, 1927: Extract - Report Upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1927), 1303.

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Garage (Non-contributing)

This modern structure is sheathed in clapboard and has a hipped roof. It is located 25 feet northwest of the house.

Storage Shed (Non-contributing):

Located approximately sixty feet east of the house, this is a small, modern, metal structure.

     See continuation sheet

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#### 8. Statement of Significance

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Certifying official has considered the significance of this property in relation to other properties:      nationally   X   statewide      locally

Applicable National Register Criteria   X   A      B   X   C      D

Criteria Considerations (Exceptions)      A      B      C      D      E      F      G

#### Areas of Significance

(enter categories from instructions)

Transportation

Engineering

Period of Significance

1887-1941

Significant Dates

1887<sup>1</sup>

1934<sup>2</sup>

Cultural Affiliation

N/A

Significant Person

N/A

Architect/Builder

N/A

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State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

#### Statement of Significance:

The Cedars Lock and Dam are significant components in the Lower Fox River Waterway System, a system which, as discussed in Cultural Resource Management in Wisconsin, was initially envisioned as part of the larger Fox-Wisconsin Waterway.<sup>3</sup> Originally constructed by private interests between 1850 and about 1860, and rebuilt by the US Army Corps of Engineers between 1872 and 1941, the Lower Fox River system operated between Lake Winnebago and Green Bay. It is historically significant as a complete and operable mid-nineteenth century example of a river/canal, slack water transportation system, the technology of which was so well suited that it works effectively today. It is the only such system extant in Wisconsin. The system is also significant for its role in the evolution of Wisconsin's nineteenth century

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<sup>1</sup>Annual Report Upon the Construction of Harbor of Refuge, Milwaukee Bay: Improvement of the Harbors of Milwaukee, Racine, Kenosha, and Waukegan; And Improvement of Fox and Wisconsin Rivers, in Charge of W.L. Marshall, Captain of Engineers, U.S.A.; Being Appendix HH of the Annual Report of the Chief of Engineers for 1887 (Washington, D.C.: Government Printing Office, 1887), 2086.

<sup>2</sup>Annual Report of the Chief of Engineers, 1934: Extract - Report upon the Improvement of Rivers and Harbors in the Milwaukee, Wis., District (Washington, D.C.: Government Printing Office, 1935), 1041.

<sup>3</sup>Barbara Wyatt, ed., Cultural Resource Management in Wisconsin (Madison: State Historical Society, Historic Preservation Division, 1986), Transportation 2/2.

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political and constitutional history. Further, it is an interesting chapter in the transportation history of the state.

History:

The Cedars Dam was responsible for creating the pool that flooded the canal in which the Cedars Lock was located. It is that combination of lock and dam that enabled water craft to navigate the rapids at Cedars as they navigated between Little Chute and Appleton.

The Cedars Lock and Dam Historic District consists of an historic lock, dam, canal, lockkeeper's house and lockshack, built between 1887-1941 that meet the registration requirements set forth in Waterway Resources of the Lower Fox River multiple property form. The resources possess integrity of location, design and materials and are properties significant to the operation of the waterway.

\_\_\_ See continuation sheet

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## 9. Major Bibliographical References

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United States Army Corps of Engineers. Annual Reports. Washington, D.C.: Government Printing Office, 1872-1953.

Previous documentation of file (NPS):

\_\_\_ See continuation sheet

\_\_\_ preliminary determination of  
    individual listing (36 CFR 67)  
    has been requested  
\_\_\_ previously listed in the National  
    Register  
\_\_\_ previously determined eligible by  
    the National Register  
\_\_\_ designated a National Historic  
    Landmark  
\_\_\_ recorded by Historic American  
    Buildings Survey # \_\_\_\_\_  
\_\_\_ recorded by Historic American  
    Engineering Record # \_\_\_\_\_

Primary location of additional data:

X State Historic Preservation Office  
\_\_\_ Other State agency  
\_\_\_ Federal agency  
\_\_\_ Local government  
\_\_\_ University  
\_\_\_ Other

Specify repository:  
\_\_\_\_\_

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## 10. Geographical Data

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Acreage of Property 7.9

UTM References:

A 1/6    3/9/3/8/1/0    4/9/0/3/5/6/0  
    Zone    Easting        Northing

B /    / / / / /    / / / / /  
    Zone    Easting        Northing

C /    / / / / /    / / / / /

D /    / / / / /    / / / / /

\_\_\_ See Continuation Sheet

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Verbal Boundary Description

See continuation sheet

X See Continuation Sheet

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Boundary Justification

This boundary encompasses an appropriate setting, and includes that area immediately adjacent to, and historically associated with the subject property.

\_\_\_ See Continuation Sheet

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## 11. Form Prepared By

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name/title John N. Vogel

organization J.N. Vogel, Ph.D. Consulting Hist. date 01 October 1991

street & number 301 North 73rd Street telephone (414) 258-6598

city or town Milwaukee state Wisconsin zip code 53213

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VERBAL BOUNDARY DESCRIPTION:

Starting at the NW Corner of S 21, then S 2° 17' 29" W 2482.32', then N 87° 01' 00" W to POB; then N 66° 17' 57" E 50.79 ft.; then S 87° 01' 00" E 283.09 ft.; then S 84° 01' 20" E 21.12 ft.; then N 7° 24' 29" E 100.00 ft.; then S 82° 06' 33" E 109.00 ft.; then S 7° 24' 29" W 100.00 ft.; then S 83° 40' 24" E 67.21 ft.; then S 81° 21' 42" E 514.17 ft.; then S 81° 57' 56" E 398.79 ft.; then S 72° 47' 31" E 150 ft.; then S 34° 33' 12" W 185'; then N 82° 25' 16" W 590.06 ft.; then N 9° 04' 50" E 17.50 ft.; then N 78° 36' 02" W 492.49 ft.; then S 9° 04' 50" W 14.56 ft.

The property boundary descriptions given have not been audited or verified. They are not, at any time, to be used for any legal boundary descriptions. They are used here only for the purpose of describing the approximate property location.

       See continuation sheet

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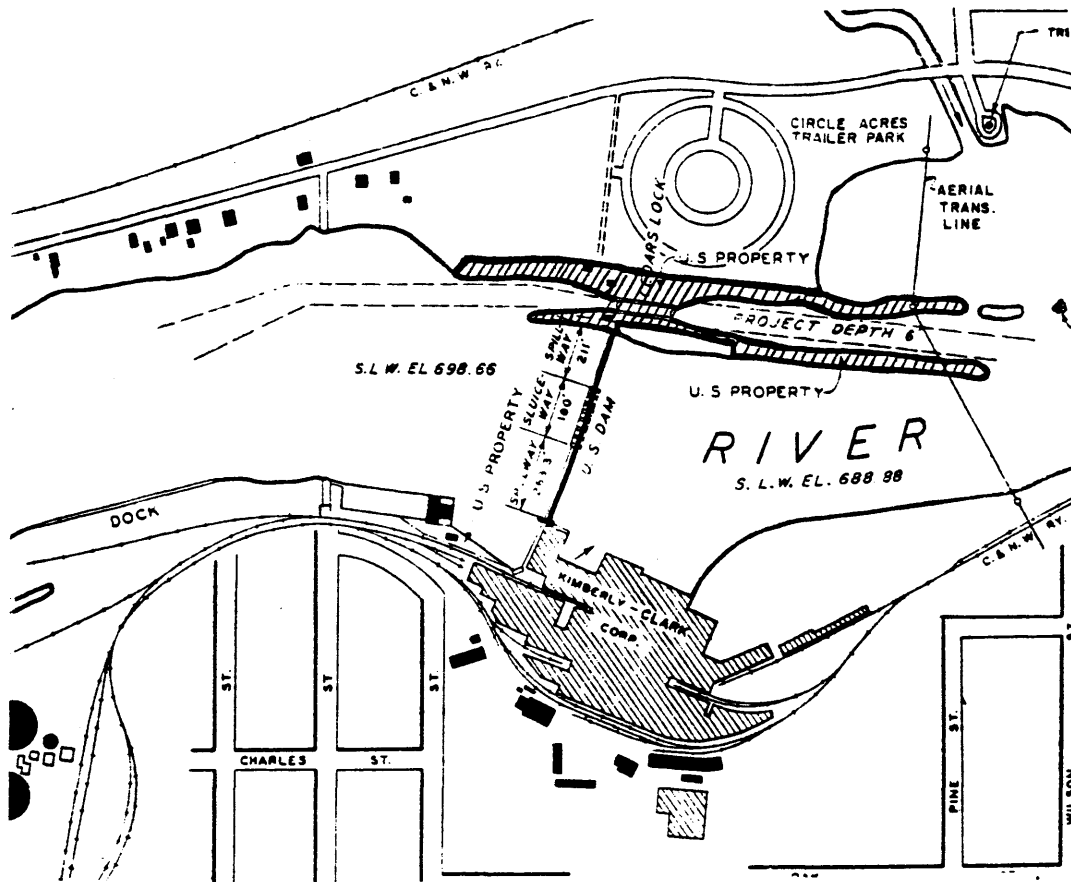
CEDARS LOCK AND DAM HISTORIC DISTRICT (Dam)  
4527 East Wisconsin Road  
Little Chute, Outagamie County  
Photo by Bill O'Brien  
January 1989  
View to Northeast  
Photo #1 of 4

CEDARS LOCK AND DAM HISTORIC DISTRICT (Lockkeeper's house)  
4527 East Wisconsin Road  
Little Chute, Outagamie County  
Photo by Bill O'Brien  
October 1988  
View to South  
Photo #2 of 4

CEDARS LOCK AND DAM HISTORIC DISTRICT (Lock)  
4527 East Wisconsin Road  
Little Chute, Outagamie County  
Photo by Bill O'Brien  
October 1988  
View to West Southwest  
Photo #3 of 4

CEDARS LOCK AND DAM HISTORIC DISTRICT (Lockshack)  
4527 East Wisconsin Road  
Little Chute, Outagamie County  
Photo by Bill O'Brien  
October 1988  
View to South  
Photo #4 of 4

\_\_\_ See continuation sheet



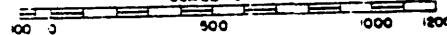
**CEDARS LOCK AND DAM  
FOX RIVER  
WISCONSIN**

 U.S. Gov't Property/  
Historic District

IN 1 SHEET

SCALE OF FEET

SHEET NO. 1

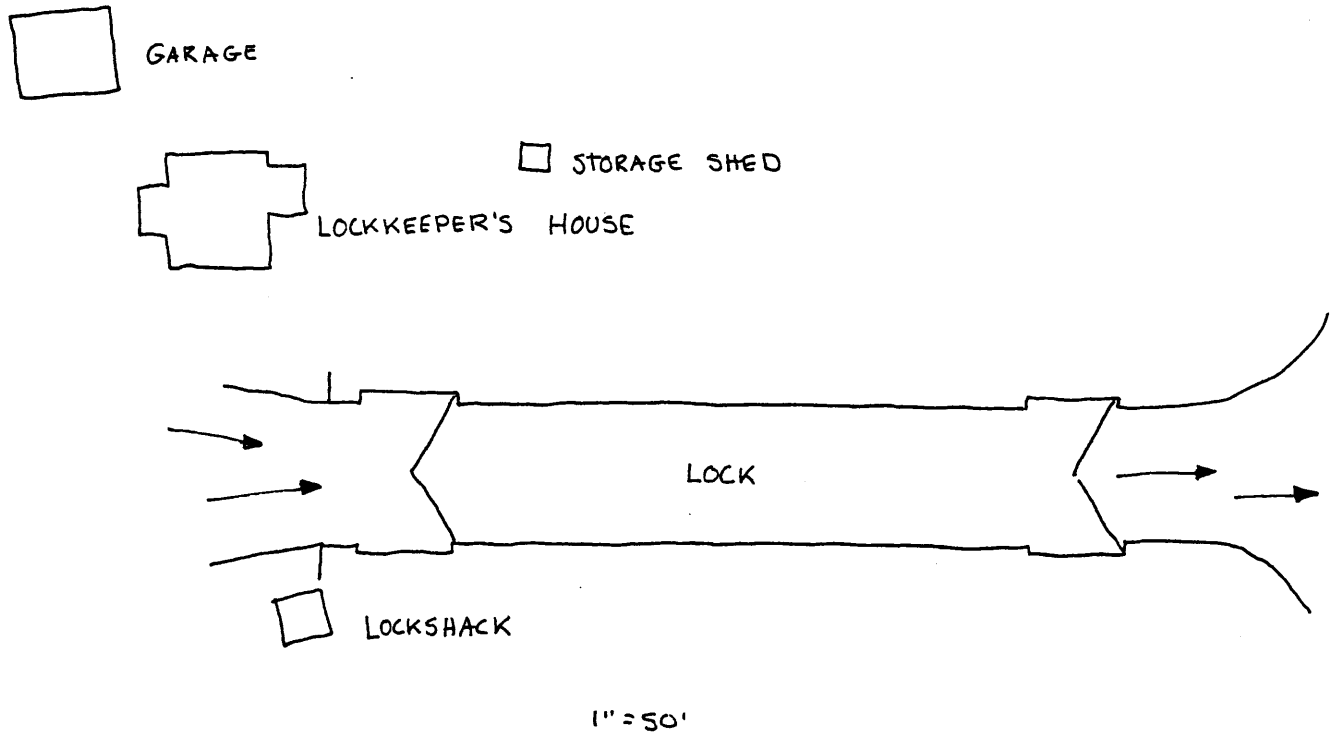


CORPS OF ENGINEERS

CHICAGO, ILLINOIS

30 JUNE 1975

# SKETCH MAP



**CEDARS LOCK**

**CEDARS LOCK HISTORIC DISTRICT**

**Waterway Resources of the Lower Fox River**