

# OKABENA-OCHEDA WATERSHED DISTRICT 2023 ANNUAL REPORT



Maintaining Prairie Vegetation at Bella Park

**OKABENA-OCHEDA WATERSHED DISTRICT**  
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# OKABENA-UCHEDA WATERSHED DISTRICT

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## ADVISORY COMMITTEE

Tom	Ahlberg
John	Ahlers
Logan	Ahlers
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Caleb	Fellows
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# OKABENA-OCHEDA WATERSHED DISTRICT

## 2023 Annual Report

### **Clean Water Partnership**

Worthington and the district formed the Okabena-Ocheda-Bella Clean Water Partnership Joint Powers Organization (JPO) in 1998 to accomplish the goals established by the 1993 Clean Water Partnership Implementation Plan. The governing board consists of two members from the city council, two managers from the watershed district and a city resident appointed at-large.

Since its formation, the JPO has paid annual incentives to install and maintain grass buffer strips, restored a wetland, installed, and managed water quality improvement basins, monitored surface water quality, measured lake water levels, and conducted studies on the sediment deposition in Sunset Bay, carp populations and causes of Lake Okabena's impairments.

The district completed the following JPO activities in 2023:

1. Provided administrative and technical assistance to manage board affairs and structures.
2. Conducted water quality monitoring of Okabena and Ocheda lakes from June through September.
3. Tested Lake Okabena algae blooms at public boat landings and beaches for microcystins and cylindrospermopsin toxins. Worked with the Worthington Public Works Department to notify the public when harmful algae blooms were detected.
4. Managed water levels at the Prairie View project pond. Sprayed thistles and cut unwanted cottonwood and willow trees near the pond and filter benches.
5. Issued incentive payments for 128.4 acres of grass filter strips covering 90 percent of the streams in the Lake Okabena sub-watershed.

The district will continue to work with Worthington in 2024 to monitor lake water quality and harmful algae blooms, provide filter strip incentives and operate and maintain the Prairie View project site. The district will also work with the city to fund the local share of the Crailsheim Water Quality Improvement Pond engineering and construction costs during 2024 and 2025.

### **Conservation Practices**

The district budgets money annually to install best management practices to prevent flooding and improve and protect surface water and groundwater resources. Below is a summary of how the money was spent in 2023.

1. Issued 43 CRP filter strip incentive payments totaling \$36,642 and covering 244.3 acres district wide. The filter strips protect about 10 miles of stream courses and 12 miles of lake and wetland shorelines.
2. Issued four cost-share payments totaling \$2000 for upgrading individual sewage treatment systems.
3. Issued cost-share payments totaling \$1200 to seal four unused wells.

The district will continue to pay filter strip incentives and provide cost-share payments for eligible best management practices in 2024.

### **Lake Ocheda Enhancement Project**

The Lake Ocheda Management Plan was approved by the DNR in December 2017. The plan allows for periodic lake level drawdowns to reduce carp populations, improve water quality, promote wildlife habitat, and reestablish submerged vegetation. Construction modifying the outlet dam to make the drawdown possible was mostly complete in December 2019.

The first water level drawdown was done during the fall and winter of 2020/2021. Due to warm weather for most of the season, the lake did not freeze to the bottom. Low oxygen conditions were

achieved in the lake for a few weeks in February killing many rough fish and gamefish, but a significant population of carp and other species survived under the ice. Despite the fish kill, water clarity did not improve, nutrients remained high and no submerged vegetation was observed during the 2021 growing season.

The lake plan advisory committee met and decided to attempt another drawdown during the winter of 2021/2022. After receiving permission from the DNR, stoplogs were removed for the second drawdown in early September 2021. Heavy cattail and reeds vegetation growth in the Ocheyedan River channel between lakes Ocheda and Bella slowed outflow. Lake Ocheda levels remained within a half-foot of the full-service level at the end of December 2021. Two to three feet of well oxygenated water remained under the lake's ice in most locations until spring 2022. No winterkilled fish were observed in the spring.

After a drier than normal fall, heavy snow covering Ocheda's ice during the winter of 2022-2023 led to low oxygen levels lakewide in January and February. Winter killed fish were observed during February. No water quality improvement or significant new vegetation was observed during 2023.

Growing season water quality has not improved in the lake since the first drawdown. For unknown reasons, the vegetation growth expected after the fish kills did not occur. The Lake Ocheda Management Plan committee will meet in 2024 to diagnose the problem and decide whether it is time to apply for grants to install pumps in the lake to achieve more complete future drawdowns.

### **Lake Okabena Carp Population Analysis and Control Project**

In 2018, Worthington allocated approximately \$52,000 for a multi-year carp population analysis and control project. The Olson Trust board approved approximately \$35,000 more for the project. Three electrofishing transect surveys were completed to estimate the lake's carp population density. All the surveys agreed that the lake's carp biomass density exceeded the 100 kg/ha threshold for maintaining healthy water quality but did not agree about by how much.

Radio telemetry tags were implanted in 15 carp in 2019 and their movements were tracked during 2019 and 2020. Passive integrated transponder (PIT) tags were implanted in about 178 carp to better assess their carp population after removal events. Radio telemetry tags were implanted in another 20 carp during October 2020.

Radio tagged carp were located during January and February 2021 to facilitate potential seining and estimate the size of the lake's carp population. Telemetry and sonar data showed a school of fish large enough for Deslauriers Fishing to sein on February 25<sup>th</sup>. A total of 600 pounds of carp were caught during the day's haul. The captured carp were measured and scanned but none had telemetry or PIT tags. Deslauriers Fishing was paid \$3,500 to subsidize the fishing costs. Radio telemetry tagged fish were located weekly during the spawning season and monthly thereafter until the tag's batteries were depleted in September. Deslauriers Fishing attempted to remove carp again on December 2<sup>nd</sup>. About 800 pounds more carp were caught. None were radio tagged. Damage to the nets and cold weather prevented making additional hauls before freeze up.

The district contracted with Carp Solutions in 2022 to better determine the carp biomass density for the lake. To accomplish this electrofishing transects were completed. Pitt tags were implanted in 101 carp. Box nets were installed and baited with cracked corn. Carp were removed using the box nets twice during July. Of the 676 carp captured and removed from the lake, 11.8% were PITT tagged. Carp Solutions estimated that about 4600 carp individuals remain in the lake and the biomass density is 68.8 kg/ha.

Since the tag and capture gives the most accurate population estimate of the two methodologies used, it appears that carp populations are below the threshold where they degrade Lake Okabena's water quality. The partners believe actions should be taken to keep the population below the threshold. The district contacted Carp Solutions in early 2023 about taking the next steps for carp capture and removal. Their schedule was full, so they were unable to provide services during the year. Carp Solutions will be asked to provide a proposal for carp removal in 2024.

Many hoped that the area's commercial fisherman would remove carp before lake freeze up. Unfortunately, weather conditions did not cooperate when fishing was scheduled in November 2023.

### **Public Information and Education**

The district works with partners to provide watershed related educational opportunities for Worthington's residents, area civic groups and schools. Below are the 2023 accomplishments.

1. Worked with Nobles SWCD to provide walking tours and Prairie Ecology Bus activities at the Worthington Prairie Wetland Learning Area for all the 5<sup>th</sup> grade students in the district's schools.
2. Updated the district website monthly.
3. Worked with Worthington to accomplish educational components of the city's Stormwater Pollution Prevention Plan including:
  - Distributing three pollution prevention factsheets to Worthington Public Utilities customers.
  - Installing 132 catch basin markers in Worthington.
4. Did presentations about Lake Okabena and its watershed for residents at the Meadows and members of the Center for Active Living in June.

### **Crailsheim Water Quality Improvement Pond Grant**

During 2021, the OOWD and the Worthington school board worked with Houston Engineering to propose a water quality improvement pond to detain and clean up water flowing through the school district's Crailsheim property. The chosen alternative will prevent 327 pounds of phosphorus pollution from reaching Lake Okabena annually and reduce sediment loading by 234,464 pounds per year.

In early 2022, the school board agreed to sign an easement for the OOWD to build, operate and maintain the project if a state grant is received. The OOWD applied for a \$970,312 Clean Water Legacy Grant in August. The grant was approved by the Board of Water and Soil Resources in December. It requires a \$242,578 local match.

The grant agreement was signed in early 2023. A permanent easement for the project site and a temporary easement for construction activities were completed and signed by the school board. Wetlands were delineated and a dam safety analysis was conducted. Onsite meetings and remote meetings were held between the Wetland Conservation Act Technical Evaluation Panel, Army Corps of Engineers, DNR and Houston Engineering staff to discuss permitting requirements for the project.

Corps of Engineers and DNR permit applications will be submitted in early 2024. The project design will be completed and bidding, contracting, and construction are expected to occur later in the year.

### **District Property Management**

The district owns 414 acres of land in four locations. Approximately 15 acres is managed as pollinator habitat, with the rest managed for water quality protection, recreational activities or wildlife habitat. At Lake Bella Park, the district operates and maintains the Stateline Dam structure, a boat landing, picnic shelters, roads, trails and a restroom. Below are the land management activities completed in 2023.

1. Mowed and maintained the trails at Bella Park.
2. Picked up litter and mowed around the shelters and restrooms as needed at Bella Park.
3. Sprayed herbicide to kill thistles, unwanted volunteer cottonwood and willow trees growing on the St. John property and prairie areas of Bella Park.
4. Sprayed and cut trees growing on the Lake Bella dam.
5. Mowed cottonwood and willow trees around the Prairie View pond and filter benches.
6. Removed litter multiple times at the St. John Property.
7. Mowed fire breaks at Bella Park to prepare for prescribed burns during spring 2024.

### **Construction Site Inspections**

The district works with Worthington to require erosion and sediment control permits for construction sites and complete inspections monitoring compliance with watershed district and state required plans. During 2023, the district conducted 134 inspections at 21 different NPDES permitted construction sites in Worthington. District staff communicated regularly with the City Engineer and Stormwater Pollution Prevention Plan responsible parties about installation and maintenance of required Best Management Practices

### **Permits and Drainage Project Notifications**

The district reviewed applications and issued permits seven projects in 2023 including:

1. One large project requiring implementation of Stormwater Pollution Prevention Plan (SWPPP),
2. Five projects requiring implementation of erosion and sediment control plans, and
3. One private ditch cleanout project.

**Okabena-Ocheda Watershed District  
2023 Income and Expenses**

**Ordinary Income/Expense**

**Income**

District Levy	253,348.66
CWP Reimbursements	14,159.20
Insurance Dividend	224.00
Local Government Aid	1,469.95
Miscellaneous Income	13.04
Money Market Account Interest	1,120.02
Permit Inspection Fees	50.00
Prairie View Project Income	1,250.00
Storm Water Education	8,445.90

<b>Total Income</b>	<b>280,080.77</b>
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**Expense**

Audits	5,000.00
BMP Cost-Share	3,200.00
CWP Board Expense Contributions	2,477.00
Education Expenses	1,511.81
Filter Strip Incentives	36,642.00
Insurance and Bonds	3,324.00
MAWD Dues	2,482.00
MAWD Meeting Expenses	2,732.21
Office Expenses	6,678.46
Payroll Expenses	102,339.36
Property Maintenance	5,371.04
Property Taxes	450.26
Public Notices	377.20
Storm Water Education Expenses	2,795.44
SWCD Services	5,000.00
Water Sampling	2,859.94

<b>Total Expense</b>	<b>183,240.72</b>
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<b>Net Ordinary Income</b>	<b>96,840.05</b>
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**Other Income/Expense**

**Other Income**

Crailsheim Project Grant Income	485,156.00
CWL Grant Interest	2,623.66
Okabena Carp Control Reimburse	3,160.00

<b>Total Other Income</b>	<b>490,939.66</b>
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**Other Expense**

ISD 518 Crailsheim Engineering	99,318.16
ISD 518 Crailsheim Project Ease	2,780.50

<b>Total Other Expense</b>	<b>102,098.66</b>
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<b>Net Other Income</b>	<b>388,841.00</b>
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<b>Net Income</b>	<b>485,681.05</b>
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