



**Devils Lake Water
Improvement District**

DEVILS LAKE STRATEGIC PLAN

REVISED JULY 2024

Board of Directors:

Tina French, Chair

Dayton Mays, Director

Susan Elworth, Director

Keith Fowler, Director

Robert Stolberg, Director

Lake Manager:

Boone Marker

EXECUTIVE SUMMARY

Devils Lake is a 680-acre shallow lake located in Lincoln City and unincorporated Lincoln County and is managed by the Devils Lake Water Improvement District (District). The District is protecting, restoring, enhancing and maintaining water quantity, quality, and the natural resources within the Devils Lake watershed.

BOARD OF DIRECTORS

The Districted is managed by a 5-member Board of Directors which establishes policies and sets the budget for the District. Board members are elected by the residents of the District and serve as unpaid volunteers representing varied backgrounds and interests. Board members, who must own property in the district, serve four-year terms.

BUDGET

The District's primary funding source is ad valorem taxes on real property, although funding can be available from other sources such as grants and funds specifically designated by the Oregon Legislature. The taxing capability of the District is established by the Legislature within the limits set by the Oregon Constitution. The current tax rate for the fiscal year 2024-2025 is 0.2499 per 1,000 in assessed value inside the watershed and 0.128 outside the watershed. Changes to the tax rate can only be made with approval by the residents of the District through an election. In 2023-2024, the estimated total allocated to the District from taxes was \$329,793.

MISSION

The District is authorized to direct a range of initiatives, programs, and actions to achieve the restoration, maintenance, and enhancement of Devils Lake. These responsibilities can be grouped under four general areas, which form the District's core mission: water supply, water quality, natural systems, and public access. The District has established goals for each of these areas of responsibility:

Water Supply Goal: Ensure the proper supply and level of water in Devils Lake to provide for all existing and future reasonable and beneficial uses while protecting and maintaining water resources and related natural systems.

Water Quality Goal: Protect and improve water quality to sustain the water resources, environment, economy, and quality of life.

Natural Systems Goal: Preserve, protect, and restore natural systems to support their natural hydrologic and ecologic functions and improve the environment for fish, wildlife, and humans in Devils Lake and its watershed.

Public Access Goal: Improve and maintain public access and awareness, safe and efficient navigation, and recreational opportunities in and on Devils Lake

STRATEGIC INITIATIVES

The District is implementing a wide array of programs and projects to meet these four goals. These activities are listed under 7 Strategic Initiatives:

- Minimum Flows and Levels Establishment and Monitoring
- Water Quality Assessment and Planning
- Water Quality Maintenance and Improvement
- Aeration and Oxygen Level Improvement and Monitoring
- Conservation and Restoration
- Mitigation of Submerged Aquatic Vegetation
- Public Access, Marina, and Community Outreach

CORE BUSINESS PROCESSES

In addition to adhering to its adopted values, the District uses seven core business processes to successfully achieve its Strategic Initiatives:

- Water Resources Planning
- Innovative Projects
- Financial Sustainability
- Regulation
- Structure Maintenance and Operations
- Knowledge Management
- Engagement

STAKEHOLDERS

Achieving the Devils Lake Strategic Plan Strategic Initiatives requires the collective support of many varied stakeholders including properties owners within the watershed, local, state and federal government agencies, tribes, and users of the watershed. These many varied entities are further detailed on page 12.

STRATEGIC INITIATIVES

MISSION - Water Supply: *Ensure the proper supply and level of water in Devils Lake to provide for all existing and future reasonable and beneficial uses while protecting and maintaining water resources and related natural systems.*

Strategic Initiative - Minimum Flows and Levels Establishment and Monitoring

Action: The District has an impoundment permit for Devils Lake for the period each year between April 15 and October 15, however during August and September the inflow must equal the outflow. As a function of that impoundment right, a weekly sampling procedure monitors and evaluates lake level and water temperature.

Action: The District along with Lincoln City, is working towards obtaining a Corps of Engineers dredging permit to conduct sediment and woody debris removal from the D River. This material is transported by high tide wave energy to not only the D River but also the lowest 300-400 feet of Devils Lake. It is estimated that approximately two thousand cubic yards of sand is currently located in this area. The permit would allow the District to remove sand and debris from the lower lake zone in front of Hostetler Park, near the D River. The District is working in conjunction with a city sewer project to conduct this removal in the summer of 2025.

MISSION - Water Quality: *Protect and improve water quality to sustain the water resources, environment, economy, and quality of life.*

Strategic Initiative - Water Quality Assessment and Planning

Action: During the recreational season (Memorial Day to Labor Day), the District conducts water quality sampling at eleven official in-lake sample location son a weekly basis using its established work practices for water testing, laboratory analysis, and public analysis posting. The District's sampling equipment includes a multiprobe sonde with sensor probes installed to identify and record the presence of electrical hydro conductivity and temperature, dissolved oxygen, ph, turbidity, algae, and nitrate. Findings are automatically recorded on either hand-held or other electronic devices to capture water sampling data. Water collection is performed to determine the presence of e-Coli (fecal coliform) in Devils Lake. E. coli is performed on a weekly basis. The results are posted in a variety of electronic and print media to inform the public of weekly water quality and notify them of any water quality concerns. District staff also constantly monitor for signs of harmful algal blooms (HABs). If blue-green algae are identified, samples are forwarded to the Oregon Health Authority to assess the presence of cyanotoxins in the water column. If cyanotoxins are present and exceeding safe levels, regulatory agencies are provided notice, and the lake is posted with warning notices by signage postings. Electronic postings are sent via a variety of websites.

Action: Devils Lake receives an average of 82 inches of rainfall with the wettest period beginning in October and ending in May. During heavy rain periods, stormwater runoff can cause severe siltation events. The District will monitor these events and to the extent possible try to discover and characterize the cause. Once identified, the District will discuss the findings and suggest the most appropriate response. Over the summer of 2021 and 2022, large parcels above the south shore have been stripped of all trees for housing developments. As developments such as this occur in the future, the District will work with the appropriate regulatory entities to ensure compliance with stormwater regulations.

Action: The District addressed the need for a sewer system around the lake, through the formation of a Local Improvement District. During 2018 and 2019 research, collaboration and outreach were conducted for a sewer project designed to serve a sizable percentage of the homes currently on septic systems along East Devils Lake Road. A preliminary design of a pressurized sewer system utilizing grinder pumps and small diameter piping, which would connect to the City of Lincoln City's treatment plant was created. Ultimately, the group determined that while such a system could be beneficial to the Lake, it proved financially unachievable. The working group recommended that the District keep abreast of developments such as a major road improvement that could be coupled with such a project on a cost share basis. Currently, the District is monitoring any such developments as recommended by the working group.

Action: The 2022 Oregon Integrated Water Quality Report was approved by the U.S. Environmental Protection Agency on Sep. 1, 2022. Devils Lake is a 303 (d) listed waterbody identified for impairment by excess chlorophyll, high pH and low dissolved oxygen. Water quality was previously deemed limited by the proliferation of algae and cyanobacteria. Based on in lake measurements since the aeration system installation showing that low dissolved oxygen is no longer an issue, the District will work to have the Lake removed from the Report in regard to dissolved oxygen during the Reports' next update.

Strategic Initiative - Aeration and Oxygen Level Improvement and Monitoring

Action: In 2014, the District installed a subsurface aeration/oxidation system to address reoccurring Harmful Algal Blooms (HABs). The system includes 24 air diffusers connected by weighted tubing on the lakebed. Air is supplied via a blower located in a specially constructed enclosure near the lake shore at the Water Street Boat Ramp. The system has proven to be quite successful with the elimination of all toxic algae blooms since its installation. The District will continue to maintain and operate this system.

Action: In support of the aeration project, data gathering continues in nine lake locations: five in the deep-water central lake, two each in the mid-depth north and south lake locations. The district's goal is to conduct quarterly testing, weather permitting, providing results for temperature, turbidity, nitrate, algae, dissolved oxygen, pH, and conductivity. This extended water quality testing period will be accomplished to record the positive effects of the operating

aeration system considering changes in water temperature, ambient air temperature and large increases in precipitation. The District is currently accessing the expansion of the current in-lake aeration system to help offset recent drops in dissolved oxygen.

MISSION - Natural Systems: *Preserve, protect, and restore natural systems to support their natural hydrologic and ecologic functions and improve the environment for fish, wildlife, and humans in Devils Lake and its watershed.*

Background: Devils Lake is a popular fishing location on the Central Oregon Coast. Each year the Oregon Department of Fish & Wildlife (ODFW) stocks Devils Lake with rainbow trout, resulting in excellent trout fishing during the spring and summer months. ODFW also offers free fishing days for youth. Anglers have found that Devils Lake also hosts largemouth bass and clubs have held fishing derbies on the Lake. In addition to trout and bass, the lake also has a fluctuating population of yellow perch, crappie, bluegill, and catfish.

The forests, beaches and marshes surrounding Devils Lake are home to millions of insects, birds, frogs, squirrels, deer, elk, and bears. The mature forests and estuaries nearby support black tail deer, with evergreen and riparian zones providing habitat for harbor chipmunks, rabbits, porcupines, weasels, and badgers. Raccoons and possums are also commonly found.

Another species is the coyote, which preys on insects, birds, rodents, and small animals. Every year, a few residents report viewing black bears in remote areas of the lake. Other carnivores, more seldom seen, include mountain lions and bobcats. The rivers/creeks that feed Devils Lake support populations of beaver, muskrat, nutria, and otter. Beaver dams can be seen in close vicinity to the lake.

Strategic Initiative - Conservation and Restoration

Action: Oregon Coast Coho salmon are currently listed as threatened under the federal Endangered Species Act. The National Marine Fisheries Service (NMFS) completed its most recent 5-year Status Review in 2016 and concluded the Oregon Coast Coho salmon evolutionarily significant unit (ESU) should remain listed under Endangered Species Act (ESA) as threatened. ODFW worked closely with NMFS on the development of their Oregon Coast Coho Recovery Plan, which was finalized in December 2016. The District plans to dredge a section of west end of Devils Lake to maintain water quality and quantity to sustain the salmon run.

Action: On Devils Lake, populations of geese, wood ducks, mallards, blue herons, and egrets are enjoyed by recreational visitors, local anglers, and residents. Additionally, osprey, bald eagle, and vultures are frequently observed nesting in trees around the perimeter of the Lake. The small seabird, Marbled Murrelet is suspected to be present near the lake, nesting in large coniferous trees. In 1992, the USFWS federally listed the Oregon and California population of the Marbled Murrelet as a Threatened Species. The District works with local organizations such as Audubon Society of Lincoln City, to provide education on the many bird species around the

Lake.

Action: Thompson Creek is the location of one of the native Coho Salmon runs on Devils Lake and therefore deserves special attention. The District previously invested resources to conduct fecal source tracking in Thompson Creek. That tracking indicated that the primary source tested as canine and likely from a single upstream parcel. In more recent years, testing at the entrance of Thompson Creek has not found e coli levels outside of thresholds. Additionally, in recent years, upstream development in the Thompson Creek watershed has contributed to large volumes of soil runoff when heavy winter rains occur, resulting in soil deposition in the creek and ultimately the lake. If left unchecked, this deposition may make it impossible or exceedingly difficult for the salmon run to continue. The source of these deposition events needs to be investigated so that stream protection techniques can be put in place.

Strategic Initiative - Mitigation of Submerged Aquatic Vegetation Infestation

Background: In 1986, sterile Chinese Grass Carp (*Ctenopharyngodon idella*) were introduced to Devils Lake to reduce non-native plants which had all but destroyed the beneficial recreational uses of the lake. Recreation eventually returned to Devils Lake and, until mid-2022, the lake was enjoyed by thousands of residents and visitors each year.

Action: In 2022, explosive growth of elodea canadensis at levels never imagined possible occurred, exceeding the Milfoil infestation of the 1980's. To address this recent incident, the District is developed a three-pronged approach to mitigating weed infestation by implementing chemical treatments, mechanical weed harvesting, and the restocking of triploid sterile grass carp into Devils Lake. In June 2023, 5,000 triploid sterile grass carp were stocked in Devils Lake. In addition, during the summer months of 2023 the use of the mechanical harvester removed over 5,000 cubic yards of submerged aquatic vegetation from the lake. The District also provided education regarding homeowner harvesting and herbicide application to address near-shore elodea. As of July 2024, there is little to no elodea throughout the lake, compared to the previous 3-years. The magnitude of this undertaking is addressed separately in the ***Devils Lake Submerged Aquatic Vegetation (SAV) Lake Plan and Permit Application***.

Action: To address emerging submerged aquatic vegetation, the District has a base map of aquatic vegetation which will be updated on an annual basis to track overall growth trends and consolidations by location.

Strategic Initiative – Public Access, Marina, and Community Outreach

Action: The District provides outreach to community organizations, attends community events, and hosts educational events with partnerships with ODFW, Oregon State Marine Board, Lincoln City Parks & Recreation, Audubon Society of Lincoln City, and the Lincoln County Sheriff's

Department.

MISSION - Public Access: *Improve and maintain public access and awareness, safe and efficient navigation, and recreational opportunities in and on Devils Lake.*

Strategic Initiative - Public Access, Marina, and Community Outreach

Action: The District has recently revised, overhauled and expanded its communication mechanisms including a new email listserv and social media connectivity. As a result, the District has increased its outreach to hundreds of individuals, educating property owners and users about the history, future plans, and uniqueness of the Lake.

Action: The District completed a Shoreline Planting Guide which is available on the District's website. This guide, which is in its second printing, provides homeowners, landscapers, and nurseries with detailed information about the native plant communities and their environmental requirements.

Action: The District ensures that lake vegetation is not impeding boat traffic; the lake level is adequate for safe navigation; and near-shore locations are adequately marked with safety buoys. This is accomplished by working with Marine Patrol for any impediments to safe navigation, with Lincoln City, County and Oregon State Parks departments regarding access improvements possibilities, and with the Devils Lake Neighborhood Association (DNLA) plan community events on the Lake.

Action: The District promotes public involvement through direct outreach to lakefront property owners and lake enthusiasts via one-on-one communication and attendance at community meetings. The Lake Manager attends public functions with ties to Devils Lake activities and provides updates on lake management to the public. As new lake practices and educational pieces are developed, the Lake Manager will invite the public to become informed and involved.

Action: In May 2021, the District acquired an existing lake-front marina for the purpose of providing both the District and the public access to the Lake. The District is evaluating options for the future development and use of this property. These options include developing property funded by DLWID, private investment, or selling the property.

CORE BUSINESS PROCESSES

Managing and protecting the water resources of the District requires a skilled, motivated work force with the right tools, support, and information to make informed decisions and provide high-quality service to the residents of the District. Devils Lake Water Improvement District is a very small organization, currently with a single employee – its Lake Manager. With that said, the various functions required to conduct the District’s business are the same as larger Districts. Those necessary functions have been evaluated and categorized into seven core business processes. To successfully achieve our Strategic Initiatives, the District must excel in each of these.

Water Resources Planning

Water Resources Planning encompasses surface water and groundwater resource evaluations and other comprehensive planning efforts in partnership with local, state, regional, federal, and other stakeholders. These responsibilities include identifying, collecting, analyzing, and disseminating relevant and accurate data and providing technical assistance.

Innovative Projects

The District initiates and supports creative, collaborative projects to produce measurable benefits to the environment, water resources and the regional community. The projects address the core mission goals for water supply, water quality, natural systems, and public access.

To ensure tax dollars are used as efficiently and effectively as possible, the District uses best management practices for project management and budgeting for all significant projects. The Lake Manager oversees contractors and service providers to ensure project processes are accomplished efficiently to maximize benefits to the District.

Financial Sustainability

The District’s primary funding source is ad valorem taxes. The District explores and develops the materials necessary to apply for various grants that provide additional financial support. The District undertakes an extensive budgeting process each year to ensure that it has the necessary funds to undertake projects in the future.

Regulation

The District does not create or promote new regulations. It does follow all regulations relating to District activities. Those regulations primarily involve obtaining and complying with permits relating to the District’s activities, regulations that protect wetlands, and ensure septic/sewer systems and new construction activities do not increase the risk of degrading water quality. The District is committed to protecting its water resources and related natural systems while also providing quality service to the community.

Structure Maintenance and Operations

Structure Maintenance and Operations processes manage all aspects of the District's water impoundment structure, in-lake aeration system, marina property and all other District physical assets. The aerations system is important to restoring and sustaining natural systems and the marina is important to achieving the District's public access and outreach goals. District assets are evaluated periodically to ensure that benefits are being achieved.

Knowledge Management

As an information-based organization, high-quality data is critical to making informed decisions that protect and enhance the water resources. Knowledge Management is the practice of systematically and actively collecting, managing, sharing, and leveraging an organization's data, information, and processes. The District has collected a variety of regulatory, scientific, socio-economic, and business data to support its Strategic Initiatives. While the focus of Knowledge Management activities is on meeting and supporting these initiatives, it is recognized that many public and private stakeholders also rely on this information to meet their needs. An emphasis has been placed on building public awareness and expanding a culture of Knowledge Management throughout the District, as well as improving the documentation, organization, review and storage of documentation. The District will continue efforts to organize documents to facilitate knowledge sharing, ensure the alignment of District practices with the Board of Directors' policies and Lake Manager procedures, and allow for timely retrieval and review of existing governing documents.

STAKEHOLDERS

Achieving the Strategic Initiatives in this plan will be possible only with the support of the community, non-governmental organizations, and governments other than the District, large and small. The District relies upon the following entities to help provide it with a vast range of expertise and experience. All of these entities will aid in the development and implementation of this plan.

- Residents and property owners in the watershed: ranging in size from single family residents to the State of Oregon
- Recreational users of Devils Lake: boaters, fishers, pilots, kayakers, bird watchers, and others
- Tourism industry, including hotel and vacation rental dwelling operators and users, restaurants and shops, and the marina.
- City of Lincoln City
- Lincoln City Chamber of Commerce
- Explore Lincoln City
- Confederated Tribes of Siletz Indians of Oregon (CTSI)
- Lincoln County
- Lincoln Soil and Water Conservation District (Lincoln SWCD)
- Mid Coast Watersheds Council
- Master Gardeners, OSU Extension Office
- North Lincoln Fire and Rescue (NLFR)
- Oregon Department of Agriculture (ODA)
- Oregon Department of Environmental Quality (DEQ)
- Oregon Department of Fish & Wildlife (ODFW)
- Oregon Department of Forestry (ODF)
- Oregon Department of State Lands (DSL)
- Oregon Department of Water Resources (WRD)
- Oregon State Marine Board (OSMB)
- Oregon Watershed Enhancement Board (OWEB)
- National Oceanic and Atmospheric Administration (NOAA)
- National Marine Fisheries Service (NMFS)
- Natural Resources Conservation Service (NRCS)
- US Army Corp of Engineers (USACE)
- US Coast Guard Auxiliary
- US Environmental Protection Agency (US EPA)
- US Fish and Wildlife Service (USFWS)