



**Devils Lake Water
Improvement District**

DEVILS LAKE STRATEGIC PLAN

ADOPTED OCTOBER 13, 2022

Board of Directors:

Tina French, Chair
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EXECUTIVE SUMMARY

Devils Lake is a 680-acre shallow lake located in Lincoln City and unincorporated Lincoln County, Oregon. Devils Lake Water Improvement District (District) is a science-based organization responsible for managing and protecting water resources in Devils Lake and its watershed. The District's job is to protect and restore water quality and related natural resources to enhance Devils Lake for the benefit of the residents of the District as well as the general public.

BOARD OF DIRECTORS

A 5-member Board of Directors 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, although revenues are also derived 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 millage rate for fiscal year 2021-2022 is 0.2499 inside the watershed and 0.128 outside the watershed. Changes to the tax rate are subject to approval by the residents of the District through regularly scheduled elections. The Board has recently approved a 5-year local option tax to be voted on in the November 2022 election for an additional 0.2499 inside the watershed and 0.128 outside the watershed. In 2021, the estimated total allocated to the District from taxes was \$300,000.

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 grouped 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 Infestation
- Public Access, Marina, and Community Outreach

CORE BUSINESS PROCESSES

In addition to adhering to its adopted values, the District must excel in 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 community, non-governmental organizations, and governments other than the District, large and small. These stakeholders include not only scientists, property owners, and permitting agencies, but they are indeed the very fabric necessary for the success of the plan to which they are a part.

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 July 31 and October 1, 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 Emergency sediment removal permit to conduct planned maintenance action sediment and woody debris (driftwood) 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.

A modified permit would allow for a significant deposition to be removed from the lower lake zone in front of Hostetler Park, near the D River along with the River excess material. Estimated material removal total 2000 cubic yards of sand. This project was brought to the District by a group of individuals that wished to volunteer their efforts and equipment to reduce the sand buildup that has occurred during the past twenty years. While initially it was to be physically conducted by volunteer efforts, current state regulations prevent the removal activities without first obtaining extensive regulatory approvals.

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: The District has updated its protocols and 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 greatly ease water sampling data capture. Additionally, data graphing, reporting and data distribution have become far more efficient as a result. During the busiest recreation season work is undertaken to determine the presence of e-Coli (fecal coliform) in Devils Lake. Ecoli testing continues to be accomplished on a weekly basis from Memorial Day through Labor Day each year. The results are posted in a variety of electronic and print media to inform the public of real-time 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: There are eleven official, documented in-lake sample locations for the updated water quality testing regime. In years past samples taken at the outlet of Thompson Creek have tested highest positive for E-coli bacteria since the testing regime began. As with our other testing regime the results are posted with warning information 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. In recent years, Thompson Creek has been the primary location where this has occurred. Over the summer of 2021 and 2022 large parcels above the South shore have been stripped of all trees for housing developments. The District will monitor for these events and to the extent possible try to discover and characterize the cause. Once identified the District Board will discuss the findings and suggest the most appropriate response. Additionally, as development is initiated around the watershed, the District will work with the appropriate regulatory entities to ensure compliance with stormwater regulations.

Action: Members of the Devils Lake Water Improvement District's Board of Directors have taken the lead on sewerage, through the formation of a Local Improvement District, providing a model that may serve other neighborhoods. During 2018 and 2019 extensive research, collaboration and outreach were conducted for a project which was designed to serve a sizable percentage of the homes currently on septic systems. A preliminary design based on a pressurized sewer system utilizing grinder pumps and small diameter piping, eventually connecting under contract to the City of Lincoln City's treatment plant was created. The working group, after two years of study, determined that while such a system could be beneficial to the lake, it proved financially unachievable. Construction costs to build such a system along East Devils Lake Road were simply too high to stand alone. 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. It is

anticipated that based on in lake measurements since the aeration system installation that low dissolved oxygen will be removed from the list in the next update.

Strategic Initiative - Aeration and Oxygen Level Improvement and Monitoring

Action: In 2014 the District created a Request for Proposal in which it sought proposals for Engineering Plans for a lake-wide, subsurface aeration/oxidation system for Devils Lake. The project was designed to address reoccurring Harmful Algal Blooms (HABs). The District has since contracted with a professional lake restoration firm who installed 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's goal is to continue to maintain and operate this lake-wide 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. In 2018, the Oregon Department of Fish & Wildlife (ODFW) stocked Devils Lake with 13,500 rainbow trout during March and April for the Youth Fishing Derby and general spring and summer fishing opportunities. The most popular method of Devils Lake fishing is from the bank with worms or salmon eggs, although many people troll with their own boat. Local trout fishing is especially good during the spring and summer seasons. Anglers have found that Devils Lake also hosts largemouth bass and clubs have held fishing derbies at the season's peak. In addition to trout and bass, the lake also has a fluctuating population of yellow perch, crappie, bluegill, and catfish.

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 December 2016.

The forests, beaches and marshes surrounding Devils Lake are home to millions of insects, birds, frogs, squirrels, deer, elk, and bear. 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 of 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.

On Devils Lake, populations of geese, wood ducks, mallards, blue herons, and egrets are enjoyed by recreational visitors, local anglers, and residents.

The small seabird, Marbled Murrelet are 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. Additionally, osprey, and the American Bald Eagle are frequently observed in trees around the perimeter of the lake.

Strategic Initiative - Conservation and Restoration

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 possibly 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: The EPA funded Clear Lakes Program introduced sterile Chinese Grass Carp (*Ctenopharyngodon idella*) to Devils Lake in 1986 to reduce non-native plants which had all but destroyed the beneficial recreational use of the lake. That program succeeded. Recreation

eventually returned to Devils Lake and, until mid-2022, the lake was enjoyed by thousands of residents and visitors each year throughout those past thirty-plus years. During those more than thirty years of managing carp, much was learned.

Action: The constituents of the District are very concerned with the recent explosion of elodea canadensis at levels never imagined possible – exceeding the Milfoil infestation of the 1980’s. To that end, the District is undertaking a three-pronged approach to mitigating the weed infestation by implementing chemical treatments, mechanical weed harvesting, and the restocking of triploid sterile grass carp into Devils Lake. The magnitude of this undertaking is addressed separately in the ***Devils Lake Submerged Aquatic Vegetation (SAV) Lake Plan and Permit Application***.

Action: A monitoring plan is to be developed for creating a base map of the percent of aquatic and shoreline vegetation, further broken down to invasive and non-invasive species categories. The base map will be updated on an annual basis to track overall growth trends and consolidations by location.

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. The District has also been conducting direct outreach to lakefront property owners and lake enthusiasts through one-on-one communication. As a result, the District has increased its outreach to hundreds of individuals, which in turn continues to increase its website traffic.

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

Action: Establishing measures and monitoring to improve public access to Devils Lake includes ensuring 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. Specific actions include coordinating with local jurisdictions, especially Marine Patrol for any impediments to safe navigation; working with local jurisdictions and the Devils Lake Neighborhood Association (DNLA) to monitor and report any access points presenting an impediment to access; and,

continue discussions with City and State Parks departments relating to access improvement possibilities relating to sand deposition and woody debris.

Action: Promote public involvement through increased citizen knowledge of lake management practices and activities. The Executive Director will attend public functions with ties to Devils Lake activities and provide lake management messaging of interest to the public. As new lake practices and education pieces are developed, the Executive Director will invite the public to become informed and involved with the management practices of the lake. Typically, the District website and email are promoted to educate and inform the public of meetings and educational opportunities.

Action: In May 2021, the District acquired an existing lake-front marina and for the first time, the District has permanent lakefront access to Devils Lake and a site for the eventual construction of the Center for Applied Freshwater Ecology (The CAFÉ). The CAFÉ will be a research based science and interpretive center which will serve the community and the lake for generations. The center will not only house the District, but it will be a living museum and resource for the public, continually demonstrating to the public the needs for ongoing protection and restoration of Devils Lake.

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 Executive Director. As can be imagined, the Executive Director must wear many hats and engage contractors and service providers for assistance. 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 and Regional Priorities, 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 practices processes for project management and budgeting for all significant projects. The Executive Director 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, which vary from year to year. In addition to paying for its operating costs, the District, in rare circumstances, has provided financial support to public and private entities on projects that protect and restore the water resources of the region, such as promoting water conservation, enhancing natural systems and water quality, and promoting public access. The District explores and develops the materials necessary to apply for various grants that provide additional financial support.

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 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. Surplus is considered when items are not necessary for statutory requirements, benefit only one of the District's areas of responsibilities or present a management inefficiency for the District.

Knowledge Management

As an information-based organization, high-quality data are 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 key business practices and related supporting documentation (governing documents). The District will continue efforts to organize governing documents to facilitate knowledge sharing, ensure the alignment of District practices with the Board of Directors' policies and Executive Director procedures, and allow for timely retrieval and review of existing governing documents.

Information technology and water resource data collection activities at the District are managed by governance procedures, with oversight by the District's Board and Executive Director. The information technology and data governance processes monitor, inform, and control the efficient and effective use of information technology and data collection to ensure these initiatives and associated resource expenditures are in alignment with the strategic direction and priorities of the District.

Engagement

Engagement is a key to retaining a highly skilled and motivated work force, the cornerstone of any successful organization. The District is small, generally with one or two employees. There is currently only one employee – its Executive Director, who necessarily wears many hats. Keeping staff informed and involved promotes good morale and increases productivity. Additionally, engagement extends beyond internal staff.

To manage the District, engaging the external public, including citizens, media, elected officials, advisory committees and other stakeholders is also critical. Outreach and education engage these various groups to foster behaviors, secure funding and assist in developing laws that conserve, protect and sustain Devils Lake, its watershed, and related natural resources. Also, through its planning and outreach processes, the District collaborates with stakeholders and advisory committees to help meet those goals. Input from stakeholders and advisory committees is used by the Board of Directors to make decisions.

Engagement helps to communicate those shared interests, forging relationships that support collaboration to benefit Devils Lake resources, the District's economic stability and quality of life.

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. Within these entities, specific individuals have been identified to represent the interests of the body. With that comes a vast range of expertise and experience. It is anticipated that all such entities will continue to 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
- Lincoln City Visitors & Convention Bureau (VCB)
- 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)