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WISCONSIN DEPARTMENT OF NATURAL RESOURCES
2022 STATE REPORT
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BUREAU OF WILDLIFE MANAGEMENT

Staffing

Going into the calendar year 2021, the Bureau of Wildlife Management was experiencing a program vacancy rate of 19%, including 26 field staff vacancies and three staff specialist vacancies. Throughout the first year of the COVID-19 public health crisis, the Wisconsin DNR maintained a voluntary hiring freeze, limiting recruitment efforts to essential positions providing human health and safety and front-line contact at state parks. With the number of coronavirus cases on the decline across WI, there has been an increase in the number of positions approved to proceed to recruitment with the goal of filling positions over the next calendar year.

Across the Agency and specifically within the Wildlife Management program, a significant focus was put on filling vacant positions around the state over the last year. Specifically, within Wildlife Management, the following positions were filled:

- 1 Northeast District Supervisor
- 5 of the 12 Area Wildlife Supervisor positions
- 14 Wildlife Biologist positions
- 7 Wildlife Technician positions

Although significant progress was made on filling vacant positions, the following positions were vacant with the goal of filling them during the 2022 calendar year:

- 3 Section Supervisors within the WM program's Central Office
- 3 Wildlife Biologist positions
- 1 Deer Management Assistance Program Coordinator
- 1 Public Lands Habitat Specialist
- 6 Wildlife Technicians

Wolf Management Plan

The department began efforts to update the state wolf management plan shortly after the January 4th, 2021, federal de-listing of gray wolves, which returned management authority of gray wolves to the states and tribes. Gray wolves were subsequently federally re-listed on February 10th, 2022, midway through the development of this plan, but work continued unabated.

This state wolf management plan is a result of many contributions and guiding factors including multiple sources of public input, the latest wildlife and social science, government-to-government tribal consultations between the department and tribal nations, department policy, and current state and federal law. Throughout these efforts, the department has remained committed to providing a transparent, deliberative, and inclusive management plan update process which recognizes the diversity of interest areas regarding wolf management. This multi-step process has included:

- Launching a dedicated webpage to transparently provide information and updates on the wolf management plan update (winter 2021).
- Collecting broad public input on wolf management through an open access questionnaire (spring 2021).
- Establishing an inclusive 29-member Wolf Management Plan Committee (WMPC) to provide diverse perspectives and input towards the development of the new plan (spring 2021). Committee membership included representatives from various government agencies, tribal nations, and stakeholder groups representing hunting/trapping, agriculture/ranching, and wolf advocacy/education interests.
- Conducting a series of four professionally facilitated meetings of the WMPC, resulting in a comprehensive report detailing the WMPC's input on wolf management and used to guide development of the plan (summer-fall 2021).
- Providing an update on plan development and progress to the Natural Resources Board (winter 2021/22).
- Inviting and participating in government-to-government tribal consultations with tribal nations in Wisconsin, including the department attending a meeting of the Voigt Intertribal Task Force and several meetings with staff from the Great Lakes Indian Fish and Wildlife Commission
- Releasing the draft plan for a 30-day public review and comment period.
- Reviewing and considering public input, revising the draft plan as needed.
- Offering individual briefings to Natural Resources Board members.
- Presentation of the final draft plan to Natural Resources Board.

The development and writing of the draft plan were led by DNR staff in the Bureau of Wildlife Management with collaboration and assistance from DNR staff in the Office of Applied Science, Bureau of Environmental Analysis and Sustainability, Bureau of Legal Services, and the Secretary's Office.

Chronic Wasting Disease – Response Plan Review

In 2010, the Natural Resources Board (NRB) approved the Chronic Wasting Disease (CWD) Response approach to addressing CWD in Wisconsin. This 15-year plan is to be used from 2010-2025 wherein the Department is tasked with completing 5-year reviews of the Plan. The first review was finalized in March 2017. This 2nd review is being initiated during year 5 of the 2nd, 5-year timeframe following implementation of recommendations from the 2017 CWD Response Plan Review Committee.

The DNR established a new Response Plan Review Committee comprised of representatives from the agency, conservation and hunting organizations, tribes, and industries impacted by CWD and CWD response. In developing the 2nd, 5-year review of the Wisconsin CWD Response Plan, the DNR is using a Structured Decision Making (SDM) framework and systems approach modeling to:

1. determine whether the plan is achieving its goal, and
2. revise the plan as needed.

The Committee met virtually seven times between September 2021 and February 2022 to discuss and develop input on the plan's goal statement, objectives, and actions to inform the department's final decision-making process. Additionally, there was one public comment meeting and one "under the hood" meeting where the modeling consultant provided an in-depth description of the model along with a question-and-answer session. The key findings and conclusions from the process include:

1. Given current resources, legal authority, and limitations, DNR activities will have limited capacity to affect CWD prevalence and spread

   While the plans developed by the Committee generally resulted in increased effectiveness at meeting the objectives relative to the status quo, they had limited impact on reducing CWD prevalence and spread. These new plans also rely on actions that would face increased political or social resistance to implementation and require increased resources relative to the status quo. Thus, while the plans provide insights into relative effectiveness of various response strategies, significant increases in resource, implementation of controversial policies, and/or the development of improved response methods for reducing transmission rates are needed for long-term success.

2. Effectively responding to CWD will require a broad portfolio of actions

   To arrest growth, the model suggests that it is necessary to reduce transmission 50-80%. Sufficient reductions in transmission are unlikely to be achieved by one approach alone, but may be possible using multiple approaches aimed at reducing:
   - Contact leading to transmission (baiting & feeding, density reduction, land management)
   - The residence time of infectious deer in the system (hunting or targeted removals)
   - Environmental prion deposition or exposure (carcass management)
   - Susceptibility (vaccines, genetics)
   - Dispersion of infected deer

3. Effectively responding to CWD in the leading edge and new foci requires prompt action

   Delaying action makes control more challenging because growth is difficult to stop after environmental prion accumulation augments disease transmission via direct contact rates of deer. Surveillance efforts thus facilitates early detection and increases the ability to effectively act.

4. When resources are limited, the most effective response strategy will allocate more resources to the leading edge and new foci than to the endemic area

   The Committee largely felt that the difficulties of reducing prevalence in the endemic area should lead the DNR to allocate more resources to the leading edge and new foci, rather than the endemic area. CWD response is more likely to be effective in areas of the state where prevalence rates are still low and environmental prions have not accumulated.

Chronic Wasting Disease – Surveillance Efforts

2021 was the final year of the statewide CWD Surveillance around the state, wrapping up in 13 counties in the Northeast District where adequate sampling did not occur in the 2020. As a result, 16,784 deer were tested with 1,310 CWD-positive samples detected. CWD continues to spread across the state with new wild deer CWD positive detections occurring in Fond du Lac, Vilas, Monroe, and Oconto counties.

The Wisconsin DNR's CWD automation effort allowed hunters to submit data associated with CWD samples through their Go Wild account for the second year. In 2021, 13.4% of hunters who submitted deer for CWD testing used the online form, an increase from 12.7 % in 2020. Further improvements to the online form are planned for 2022 as we continue to enhance user experience and increase use among hunters.

During the nine-day gun deer season, there were 255 total CWD sampling locations available to hunters, including 184 self-serve kiosks, as well as many businesses and Wildlife Management staff statewide that provided CWD sampling by collecting lymph nodes or the entire head of a hunter-harvested deer.

In addition to CWD sampling opportunities, the WDNR provided a total of 147 carcass disposal locations statewide, including 64 volunteer-sponsored dumpsters, with 57 of these participating in the cost-share option, 43 dumpsters hosted by the department, and the remaining disposal options administered by private companies or municipalities.

Trumpeter Swans Telemetry Study

The Interior Population (IP) of trumpeter swans was re-established in the Upper Midwest beginning in the late 1960s. Across much of their current breeding distribution, IP trumpeter swans have transitioned from a rare to a common component of the regional waterfowl community. However, unlike many other waterfowl species, very little is known about the ecology of IP trumpeter swans, including movement ecology and habitat use at multiple spatial scales. Wisconsin DNR is partnering on a multi-state project lead by graduate student David

Wolfson at the University of Minnesota to address some of these information needs through a collaborative project to deploy GPS/GSM transmitters on trumpeter swans distributed across the IP range. In 2019, 19 transmitters were deployed on IP trumpeter swans (7 in Minnesota and 12 in Michigan). In 2020, an additional 77 transmitters were deployed on IP trumpeter swans (10 in Manitoba, 40 in Minnesota, 9 in Iowa, 5 in Wisconsin, 1 in Michigan, 12 in Ohio). Movements of marked swans have been highly variable across the IP breeding range, with swans that breed at higher latitudes more likely to migrate and travel longer distances during the winter.

Great Lakes Mallard Telemetry Study

Wisconsin DNR is partnering on a multi-state project to assess differences in movement, habitat selection, survival, and the rate of return to the same breeding regions in rural and suburban nesting mallards across the Great Lakes region. Along with Illinois, Indiana, Ohio and Michigan, the Wisconsin DNR will work collectively to deploy a minimum of 350 backpack-style satellite transmitters on hen mallards across the project study region. This project was motivated in part by changes in observed mallard breeding abundance during spring aerial surveys across traditional nesting habitat in the last decade and anecdotal increases in mallards nesting in suburban and urban habitats. In addition to the regional objectives of the project, the Wisconsin DNR will use habitat selection data from birds marked within the state to help further inform and refine models depicting priority habitats for conservation and restoration in the Wisconsin Waterfowl Habitat Conservation Strategy.

BUREAU OF FISHERIES MANAGEMENT

Great Lakes

The Wisconsin Fisheries program initiated an update to commercial harvest quotas in Lake Michigan for lake whitefish. If approved by the Wisconsin Legislature, these new quotas for Green Bay and Lake Michigan will go into effect in the summer of 2022. Department staff continue to work with commercial fishers on analyses and a final report on a by-catch study in Green Bay conducted in 2020 and 2021, that will continue to inform our management of Lake Whitefish in the Bay and Lake Michigan. In addition to that study, staff continue to work with partners in Green Bay on a variety of projects including walleye diet study, walleye and whitefish movement patterns, fish passage, and others. Our Electronic Fish Harvest Reporting System that is used by commercial fishers to input their harvest information will have a significant upgrade completed in 2022 to bring it in line with the new rules contained in the lake whitefish quota package.

We also completed our guide reporting rule which went into effect on January 1st, 2022. This requires guides that take anglers on fishing trips on both Green Bay and Superior to report using our new electronic APP.

In 2021, we completed a majority of our fishing assessments.

Inland Trout

From July 1st, 2019, to June 30th, 2021, fisheries management staff completed 112 trout stream habitat improvement projects on 75 streams totaling just over 60 miles. Of the 112 projects completed, 3% restored aquatic connectivity, 13% involved maintenance and repair to existing projects for damaged caused by recent flood events, 21% were intensive instream habitat projects, and 63% were vegetation management projects along the riparian corridor. Staff also completed trout habitat work on 3 spring ponds totaling 2.7 acres. Many of these habitat projects are completed with the assistance from volunteers and external partnerships.

Culture

Fisheries staff raised and stocked over 6.3 million fish during 2021, and we continue to plan for numbers at or near these for 2022. Our newest facility at Kettle Moraine Springs Hatchery in Sheboygan County, Wisconsin is experiencing continued construction delays due to the unavailability of many parts that are not available for critical equipment. Our new facility will have the capacity to rear 340,000 steelhead for stocking into Lake Michigan waters as well as starting half of our Coho salmon production during the year. We will be utilizing recirculation aquaculture technology to efficiently use the available ground water.

Walleye Management Plan

Wisconsin is in the process of updating the state's Walleye Management Plan which was originally created in 1998. The plan outlines goals and objectives for all areas of walleye management in the state. The update was deemed necessary based on the amount of time that had passed since the original plan was written and a host of new challenges walleye face. The plan update process began in early 2020 with a critical review of the past plan. Stakeholder input was gathered throughout the rest of 2020 and into early 2021 via several different methods. An updated draft plan was created in summer 2021. This draft is currently out for public comment and can be viewed at the link below, along with other resources and information about the planning process:
https://dnr.wisconsin.gov/topic/fishing/outreach/WalleyePlan

OFFICE OF APPLIED SCIENCE (Wildlife and Fisheries Research)

Beaver Influence on Coldwater Stream Habitat and Trout Populations in Wisconsin

Beavers play a complex role in low-gradient streams of the Upper Midwest, where dams alter important habitat for trout. DNR management plans provide for beaver control as an important management tool for maintaining free-flowing conditions on priority trout streams. But plans also highlight the need for studies of the ecological influence, both positive and negative, of beaver activity on trout streams. This study will measure the effects of beavers, addressing both dam construction and dam removal, on coldwater streams and trout populations in beaver management zones across Wisconsin

The Office of Applied Science is working together with DNR Fisheries Management and USDA Wildlife Services to quantify the effects of beaver activity and beaver control on salmonids in Wisconsin streams. This is a fieldwork-intensive study. Collection of habitat data includes metrics to characterize water temperature, flow, and physical attributes of streams, beaver dams, and riparian areas. Fish surveys include data on trout abundance, size structure, and movement dynamics, as well as attributes of the broader fish community such as species composition and production.

A key approach to this study is the experimental manipulation of beaver management. Beaver control has been relaxed to allow recolonization and damming of select free-flowing streams. Beaver and beaver dams will be removed from others to recreate free-flowing conditions, while additional control streams will remain under current management. Year 3 of this study begins in spring 2022.

Southwest Wisconsin CWD, Deer and Predator Study

Field work concluded in spring 2020 for the Southwest Wisconsin CWD, Deer and Predator Study and results are being shared now from this landmark study. The study is principally concerned with the potential for chronic wasting disease to negatively impact deer populations. At the end of the 4-year field season, over 1,200 deer and predators were captured and GPS-collared for this ground-breaking study. Overviews of fawn survival, deer cause-specific mortality, and predator survival can be found within the project newsletter, Field Notes. Additional results will be available throughout 2022 leading to an Integration Population Model which will incorporate all aspects of this study to give a complete picture of the impacts of CWD on deer populations in southwestern Wisconsin.

Snapshot Wisconsin

Since its statewide launch in 2018, Snapshot Wisconsin has grown to the largest trail camera network in the nation. This people-powered research project relies on volunteers to host trail cameras that take "snapshots" of wildlife as they pass by. Volunteers classify the species from their trail cameras with help from crowd-sourcers on the online platform, Zooniverse. The data help DNR understand the distribution of wildlife populations around the state and make important wildlife management decisions.

The project continues to grow, with outreach efforts focused on reaching diverse and non-traditional audiences. The project partners with nature centers and educators, connecting the public to the project and to the activities of the department.

In addition to supporting management decisions, data from Snapshot Wisconsin has been made publicly available through an interactive Data Dashboard. This online tool offers both volunteers and the public a new way to explore our Wisconsin wildlife species. Currently, the data for 19 wildlife species is freely available. Anyone can discover how species are spread across the state, when they are most active, and how many sightings Snapshot has observed in each county.

BUREAU OF NATURAL HERITAGE CONSERVATION

Last year marked 70 years since Wisconsin's State Natural Areas (SNA) program was established. It was also the year the Department completed a new State Natural Areas Strategy to sustain and safeguard these special places against accelerating threats, including climate change, habitat loss and fragmentation, and invasive species. The program has grown to include 693 sites owned by more than 60 landowner organizations and individuals. This year's report highlights examples of our work focused on these critically important places. Please see our 2021 Natural Heritage Conservation Field Notes to learn more: (*https://dnr.wisconsin.gov/topic/EndangeredResources/nhcannualreports*).

Cerulean Warbler populations have been declining for the last 30 to 50 years, so the discovery of this threatened species in a trio of state natural areas on Mississippi River bluffs was a welcome surprise. Ceruleans need big blocks of forests with some openings in the tree canopy. In 2019, DNR Driftless Area crew leader Justin Nooker and crew members hiked with chainsaws and other gear across steep, rugged terrain to create this habitat and conduct other restoration of the sites' oak savannas and woodlands. Nooker identified the cerulean warblers in 2020, and DNR conservation biologist Rich Staffen reconfirmed their presence in 2021.

Karner blue butterflies are federally endangered, and most of the remaining population is in Wisconsin. Central Sands ecologist Jon Robaidek and crew leader Josh Karow saw firsthand the benefits of their work to restore barrens habitat at a Central Sands SNA. During surveys in 2020, they located the first Karner blue sightings on the property in a recently restored area, and their 2021 surveys revealed the butterfly on several other restored areas of the property.

One of the state's largest populations of the state threatened **prairie parsley** (*Polytaenia nuttallii*) was found on a central Wisconsin state wildlife area. DNR wildlife biologist Sara Kehrli found the rare plant in an area where she and others had worked on the site to maintain and restore prairie and savanna habitats.

Botanist Kevin Doyle found **little goblin moonwort** (*Botrychium mormo*) within a U.S. Forest Service SNA in Oconto County. Moonwort populations have dropped an estimated two-thirds over the last 20 years as nonnative earthworms chew up the decomposing leaf litter the fern needs. Doyle's discovery underscores the importance of this state natural area.

A trio surveying mosses, liverworts and hornworts on a federally owned and managed state natural area in northeastern Wisconsin discovered a moss never before recorded in the state. "It was immediately clear we had discovered something unexpected and unique," said Keir Wefferling, curator of UW-Green Bay's Fewless Herbarium, who was surveying along with volunteers Joan Berkopec and Ron Eichhorn. They identified the moss as tufted fen moss, ***Paludella squarrosa***, a species indicative of the high-quality fen found within the state natural area.

In August, Sauk County volunteer naturalist Angus Mossman was trudging through a poison sumac bog conducting nocturnal insect surveys at a State Natural Area owned by the Wisconsin Society for Ornithology when he photographed an unfamiliar leafhopper. He thought

it might be ***Norvellina novica***, a species expected to be in Wisconsin but never documented here. Wisconsin DNR staff and the online hopper community confirmed Mossman's hunch.

Tasked with documenting all orchids within a Door County SNA, volunteers Jane Whitney, David Barnes and Julie Knox had located and identified 28 native orchid species when they stumbled upon their biggest find yet. While leading a hike in mid-June, Whitney saw three ladies' tresses in the middle of the trail. She sent photos to fellow "orchid trekkers" who identified them as ***shining ladies' tresses*** (*Spiranthes lucida*), a species of concern that had been recorded in Wisconsin only once before.

"Dear Dad, I hope you find lots of rare stuff," read the note written by DNR ecologist Ryan O'Connor's 6-year-old daughter on the night before his first field survey of the 2021 season. Later, O'Connor found and confirmed **green violet** (*Hybanthus concolor*), a plant that had not been documented in Wisconsin since 1958, in a northwestern Wisconsin SNA.

Prairie voles are grassland engineers whose burrowing and seed dispersal are vital for grassland ecosystems, and their populations have decreased as their native prairie habitats have vanished. This species of greatest conservation need was found at three new sites in Wisconsin in 2021, including two SNAs, by Wisconsin DNR conservation biologists Heather Kaarakka and Rich Staffen.

Many of Wisconsin's rare natural communities evolved with frequent wildfires and **rely on prescribed burns** or other management to sustain them. Maintaining these important habitats also requires vigilant monitoring and control of invasive species. In 2021, more than 200 DNR-owned state natural areas were managed through prescribed burns and invasive species removal, and volunteers provided an additional 5,761 hours of labor on 39 sites. The DNR's nine regional state natural area ecologists and their field crews each manage more than a dozen sites. We share examples here from the nine areas of the state to highlight some of the current priority sites for management and the ongoing work being done.

Chiwaukee Prairie SNA's astounding biodiversity and the unwavering commitment and sweat equity from partner groups make this site the top management priority in southeast Wisconsin. Once subdivided into hundreds of lots, partners have acquired enough undeveloped lots to protect one of Wisconsin's most diverse prairie complexes and Lake Michigan's most intact coastal wetlands. Chiwaukee's mosaic of plant communities makes it a high-priority stopover site for migratory land birds and supports pollinators critical for the reproduction of native prairie plants and agricultural crops. The site benefits surrounding communities by storing rainwater and stormwater runoff. With the help of grant funding paired with private foundation support, State Natural Area crews recently hand-cleared and mowed 90 acres of invasive buckthorn and coordinated 100 acres of brush clearing and mowing by contractors and volunteers. Crews also completed prescribed burns, pulled or cut invasive plants, and cleared and seeded newly acquired lots. A rare new reptile species was documented after this restoration. In Wisconsin, the Chiwaukee Prairie Preservation Fund and The Nature Conservancy are among the key partners. Across the Illinois state line, the DNR routinely collaborates with the Lake County Forest Preserve District. — Sharon Fandel, DNR Southeast ecologist.

One of the Midwest's best prairie remnants, **Young Prairie SNA** is home to 20 rare plant and animal species and many common plants including compass plant flower, prairie dock, blazing star, purple prairie clover, and shooting star. Nesting birds include common yellowthroat, sedge wren, and swamp sparrow. State natural area crews are expanding existing prairies and connecting prairie pockets to aid rare plants, connect to other habitats benefiting grassland birds, and improve resilience to climate change. Prescribed burns, brush mowing, aspen girdling, and selective herbicide application are used. Work began in fall 2021 on a $25,000 project to restore wetlands and hydrology. The site was created from a 52-acre donation in 1976 from the Irvin Young Foundation and expanded through a purchase made possible by the Knowles-Nelson Stewardship Fund. The Natural Resources Foundation of Wisconsin also provides important funding for land management. — Pete Duerkop, DNR ecologist, Kettle Moraine State Forest-Southern Unit.

Dewey Heights Prairie SNA is a breathtaking site overlooking the Mississippi River that boasts large, highly diverse remnant hill prairies transitioning into forest. It is loaded with plants and wildlife on the state endangered and threatened species list. Unique plants thrive in the lime-rich soil, and rare fish and mussels abound in the Mississippi River below. The site also contains one of the largest collections of Native American effigy burial mounds in Wisconsin. State natural area crews use prescribed burns frequently but with careful unburned refugia to restore and expand prairie/savanna while maintaining populations of potentially fire-sensitive invertebrates. Annual invasive species control work keeps weeds out of the prairies, including clearing invasive brush and dense cedar trees encroaching on the prairies from the area. Staff also collect and sow seed on-site after brush clearing. Nelson Dewey State Park staff are important partners along with a local volunteer. — Nate Fayram, DNR Southwest Ecologist.

Rush Creek SNA is a 2,600-acre site that contains a two-mile-long archipelago of connected remnant prairies along the Mississippi River bluffs. It is one of the largest such groupings in the Midwest and provides one of Wisconsin's best opportunities to maintain the long-term viability of the plants, insects, and reptiles associated with these prairies. Most of the species present 250 years ago remain today. In addition, a rare large block of old oak forest in the uplands, as well as floodplain forest in the bottoms, provide critical habitat for many threatened bird species requiring deep woods. The steep, rugged terrain makes management extremely difficult. State natural area staff control invasive species, cut brush, and use prescribed burning to reduce brush and stimulate flowering of native plants. Key partners are the Paul E. Stry Foundation of La Crosse, the Natural Resources Foundation of Wisconsin, and local farmers working with the U.S. Department of Agriculture's Natural Resources Conservation Service to restore adjacent crop fields to planted prairies. — Armund Bartz, DNR Driftless Area Ecologist.

Inch Lake SNA features stands of older, natural-origin red pine and wild lakes, and both of these have become increasingly rare in northern Wisconsin. It also features a diversity of plants and animals due to the mix of wetlands and other natural communities. Red pine, red oak, white pine, bigtooth aspen, and sugar maple dominate, while sweet fern, big- leaved aster, and wild sarsaparilla carpet the forest floor. State natural area crews have used various techniques to remove invasive glossy buckthorn, which threatens to degrade the high-quality wetlands and uplands on this site. Native wetland species have rapidly moved in, including sedges, swamp milkweed, and marsh cinquefoil. A 74-acre restoration timber harvest removed most aspen,

maple, and oak to open the tree canopy and allow sunlight to reach the forest floor, boosting red pine and oak regeneration. The harvest also sets the stage for future prescribed burns to enhance oak and pine regeneration. — Ryan Magana, DNR Northwest Ecologist.

Trenton Bluff Prairie SNA features two separate dry or "goat" prairies on steep Mississippi River sandstone bluffs capped by massive limestone cliffs. Although not a large site, it has a high concentration of rare species, including several unusual Great Plains species at the eastern edge of their range limit. Historically, frequent fires sparked by trains traveling along the bluff presumably played a major role in helping preserve the bluff prairies. By 2014, however, the eastern bluff prairie was on the verge of being lost to invasion by woody species. Today this site is flourishing due to extensive tree and brush removal by state natural area crews and interns. Crews are also using frequent prescribed burning despite the difficulties posed by the site's extreme slopes and topography. The eastern bluff prairie has been burned annually for the last four years to reduce fire hazards and invasive plant species, stimulate growth of wildflowers and grasses, control brush, and improve habitat for local wildlife. Recent surveys show the site's rare species are stable or expanding. — Dean Edlin, DNR West Central ecologist

At 6,700 acres, **Quincy Bluff and Wetlands SNA's** amazing diversity of natural communities, species, and landforms reflect its location on the lakebed of Glacial Lake Wisconsin and in the ecological "tension zone," where Wisconsin's northern mixed forest transitions to its southern prairies, with plants and animals of both intermingling. With its large size, Quincy Bluff and Wetlands provides the unique opportunity to work on its diverse habitats to meet the needs of species requiring such variety. It also allows for restoring globally rare oak barrens. DNR staff use regular prescribed burns, timber cutting, mowing, hand cutting, and some herbicide application to restore early successional communities reflective of those that existed when fires were common on this landscape. Key partners include local DNR wildlife management staff and The Nature Conservancy, which managed part of the property for decades and in 2013 donated a 1,700- acre parcel and a $178,000 endowment for its care. — Jon Robaidek, DNR Central Sands ecologist

The 344-acres of **Red Banks Alvar SNA** supports Wisconsin's best and largest instance of a globally rare alvar community featuring very thin soils on flat limestone. It includes a mile-long cliff, part of the nearly 1,000-mile-long Niagara Escarpment running from central Wisconsin into upstate New York and known locally as "the ledge. "This site contains one of the most diverse land snail communities known in the Midwest, a vital bat hibernaculum, rare ferns, and many vulnerable species. State Natural Area crews have intensively managed this, and an adjacent site owned by the Northeast Wisconsin Land Trust. Management includes controlling invasive species, setting back succession with prescribed burning and brush mowing to grind down red cedar, and collecting and seeding native plant species. Surveys show the work is paying off. Fifteen bee species have been documented here, plus 37 butterfly species and seven moth species. — Jake Kobernik, DNR Upper Lake Michigan state natural areas crew leader.

Bracken grassland and pine barrens are imperiled globally and in Wisconsin, where only an estimated 0.02% of the pine barrens acreage present in the 1800s remains today. The 7,155-acre **Spread Eagle Barrens SNA** contains prominent examples of both communities and is vitally important for many rare and common species requiring large expanses of open habitat.

Dry and wet forests, two small lakes, and the Pine River, a state-designated Wild River, create a tremendous diversity of high-quality habitats and support excellent hunting, fishing, hiking, nature watching, photography, berry picking, and camping. Invasive species control is conducted annually, along with brush mowing, herbicide treatments and timber sales on up to 800 acres. There are regular prescribed burns, and four timber harvests are underway to manage advanced oak wilt and restore open communities and manage oak and aspen. Key partners for this state natural area include Florence County, National Wild Turkey Federation, Natural Resources Foundation of Wisconsin, National Fish and Wildlife Federation, Wild Rivers Invasive Species Coalition, and We Energies, which owns a portion of the site. — Carly Lapin, DNR North Central Ecologist.

This was a small sample of the importance of State Natural Areas to Wisconsin's biodiversity, and sites like these will be even more important in the future. Our bureau will continue to work with partners and seek funds to conserve the natural communities and hundreds of rare plant and animal species of greatest conservation need in our state.

BUREAU OF PARKS AND RECREATION MANAGEMENT

Visitation and Annual Admission Sales

The Wisconsin State Park System (WSPS) experienced record visitation and camping reservation levels again in 2021, with trends of increased interest in outdoor recreation continuing from 2020. Parks and Forests continue to be instrumental for public health and wellness. The WSPS strives to provide opportunities for visitors to engage in outdoor activities and make our properties accessible and welcoming to all visitors.

In spring of 2020, the Wisconsin State Park System launched an online store for customers to purchase Annual Vehicle Admission stickers. The catalog of online purchase options available to customers was expanded in 2021 to include Resident Annual plus one Resident Reduced rate and Non-Resident Annual plus Non-Resident reduced rate packages. This expansion allows customers to purchase a second sticker for a vehicle registered to the same household address in a single transaction.

Sales of Annual Admission passes have risen 51.9% since 2019 (pre-pandemic) to 2021, with a total of 527,228 Annual Passes sold during the 2021 season.

	2021	**2020***	**2019**	**2018**
Sticker Type	Quantity Sold	Quantity Sold	Quantity Sold	Quantity Sold
Resident Annual	297,070	294,392	200,149	190,260
Resident Reduced Rate Annual	70,997	39,735	50,229	49,751
Non-Resident Annual	77,226	103,326	43,502	37,865

Senior Annual	81,935	63,845	53,271	48,658
Total Annual Stickers Sold	**527,228**	**501,298**	**347,151**	**326,534**
*Reduced admission pass sales season due to COVID restrictions				

Electronic Payment Kiosk Expansion

In March of 2021, a prototype electronic kiosk was installed at Devil's Lake State Park that dispenses an actual Resident Annual Vehicle sticker. The electronic payment kiosk program will be significantly expanded during the 2022 season, with the purchase of an estimated 35 additional units. Like the unit at Devil's Lake, the new electronic kiosks will be able to dispense a Resident Annual sticker at the time of purchase. Existing kiosks will also be retrofitted to dispense stickers. Both the new and retrofitted kiosks will provide an enhanced customer service experience to customers throughout the state.

Camping Program

Interest in camping remained high in 2021. Unlike 2020, there were no COVID-19 campground closures. Between this and making campsites across the state 100% reservable, even more camping nights were purchased in 2021 than in 2020 – an increase of about 27%. When compared with 2019, the increase was about 36%.

	Calendar Year 2019	**Calendar Year 2020**	**% Change, 2019-2020**	**Calendar Year 2021**	**% Change, 2020-2021**
# of Camping Nights	447,614	478,458	6.89%	609,896	27.47%
# of Bookings	183,479	203,209	10.75%	248,687	22.38%

- Occupancy rates were high, particularly during the peak season of Memorial Day to Labor Day, when standard non-electric campsites were booked 61% of the time and standard electric sites 85% of the time. Those rates were 95% and 97% respectively on the weekends, meaning that any weekend vacancies were likely last-minute cancellations.
- 46 campsites in the system were booked every single night between Memorial Day and Labor Day, the majority of those sites at either Peninsula or Devil's Lake. More than 700 campsites across the system sat vacant five or fewer nights in that time.
- Big Bay State Park had the highest percent occupancy in 2021, Devil's Lake State Park had the most reservations, and Peninsula State Park and Northern-Highland American Legion State Forest were nearly tied for the highest number of nights booked.
- Off-season camping remained higher than pre-pandemic, with nearly double the nights booked Jan-Apr and Oct-Dec in 2021 vs 2019.
- The 2022 peak season is likely to be equally as busy, with weekends already 65% booked for standard non-electric campsites and 95% booked for standard electric campsites.

Hiring

The WSPS continues to vigorously fill vacancies as opportunities arise, having completed 57 total hiring actions starting in January 2020 until funding authority capacity was reached in January 2021. Sixteen FTE hiring actions occurred between July 2021 and December 2021. Among those positions hired were the Parks and Recreation Management Bureau Director, Steven Schmelzer; five natural resource property supervisors; six park managers; two park rangers; a recreation liaison; and a capital development coordinator.

While these hiring actions help put staff in vacant positions, many of these fills were internal transfers or promotions, so the program intends to continue to request additional authorization to fill vacancies as soon as funding becomes available. There are currently 41 vacant positions out of 201 total authorized FTE, representing a 20.3% vacancy rate. Due to spending authority, the WSPS is unable fill all authorized positions.

Administrative Code Updates: Management of Department Lands

The Wisconsin State Park System is in the process of making updates to Administrative Code NR 45. The Public Lands Team (PLT), which includes representatives from all land managing programs, Legal, and the Division of Public Safety and Resource Protection, is leading the initiative.

The initial request for comment resulted in over 400 proposal submissions from staff. Survey work on public sentiment towards select topics took place in 2021, in anticipation of this rule package, which included property opinionnaires and other staff and visitor topic-specific survey work. Topics covered in the rule package include camping; reservations and fees; drones; animals/pets; vehicles; noise; alcohol; and removal/damage to flora and fauna. General housekeeping modifications have also been made, along with adjustments to language to improve readability and understanding. Enactment of the revised code is anticipated for summer 2024.

Biennial Budgets and Capital Development Backlog

The WSPS's 21-23 biennial budget is currently being implemented, along with previously funded projects in the 19-21 budget. Drafting of the 23-25 biennial budget is currently in progress, with support from the Bureau of Facilities and Lands. Budget requests total approximately $90 million, and this figure will likely increase as projects are updated and emergency projects arise.

The total backlog of outstanding capital development projects is significant and includes all unfunded projects from all bienniums, with the exception of the currently funded 21-23 biennium. Projects are broken down into the following categories: trails, roads, buildings, utilities, and recreational amenities.

Statewide Accomplishments

- Volunteer Impact System launched to track volunteer hours and promote volunteer opportunities
- The Triad (National Park Service, Ice Age Trail Alliance, and Wisconsin Department of Natural Resources) signed a new long-term agreement in 2021
- A Diversity, Equity, and Inclusion Team was established. The team accomplished a number of initiatives in its first year including writing a strategic plan, outreach, and projects to increase access to properties and hiring.
- The Pike Wild River Property (Marinette Co) was awarded a grant through WE Energies that allowed the Department to purchase a 60-acre parcel along the Pike River. This property provides about 4000 feet of river protection along the Pike River and is completely surrounded by state land.
- The newly constructed Eagle Tower at Peninsula State Park officially opened to the public; visitors can reach the top observation deck using the 850-foot fully accessible canopy walk. Eagle Tower is the only known fully accessible wood observation tower of its height in the country.
- With assistance from multiple grants, Havenwoods State Forest restored approximately 49 acres of landscape back to viable native habitats and balanced ecosystems.
- In cooperation with Dane County Parks, a new portion of the North Mendota Trail was constructed; when completed, the 12-foot wide, paved shared-use trail through Governor Nelson State Park will connect the Town of Westport to the Village of Waunakee.

DIVISION-LEVEL ROADMAP INITIATIVE

In 2022, the Wisconsin DNR completed a Roadmap Action plan outlining a course to a desired future state in three key areas: Relevancy; Diversity, Equity, and Inclusion; and Employee Engagement. The action plan provides the framework to guide the division programs' work in these three areas. This plan is deliberately not too prescriptive so that good ideas can be generated and acted upon from all areas of the division. The Fish, Wildlife, & Parks Roadmap serves as an umbrella from which the six programs can collectively work to advance the three goals. The Roadmap is contained within the larger DNR mission and does not replace core programmatic work. The Fish, Wildlife, & Parks Division remains committed to science-based conservation and recreational work while also addressing priority emerging needs such as climate change. Those key priorities remain and are addressed in each program's strategic direction or plan. The Fish, Wildlife, and Parks Division has adopted six vision statements to support the roadmap goals and future desired state:

- We foster a sense of community and become a provider of choice for the outdoor opportunities and recreational resources that Wisconsin's diverse citizens and visitors value and seek.
- Our programs anticipate, recognize, adapt, and respond to changing societal trends, customer preferences, and "here and now" demands; continue to use the best available science and technology for effective decision making.

- Wisconsin citizens understand, value, and support what we do through ongoing political advocacy, diverse partnerships, sustained volunteer efforts, donations, and sustainable financial support.
- Our traditional user group and constituents take pride in their relationship with and support of our core activities and responsibilities, while also supporting efforts for growing our customer base through existing and future programs.
- Our staff recognize, understand, and reflect the diversity of our customers, Wisconsin's citizens and visitors.
- We interact in culturally appropriate ways with a diverse range of customers who are comfortable participating in Department programs, providing input for decision-making, accessing Department properties, and enjoying the recreational opportunities we provide.