

CONSERVATION

AGENDA

DNR'S 10-YEAR STRATEGIC PLAN 2015 – 2025



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Strategic Conservation Agenda

The DNR's 10-year Strategic Plan

The DNR's Mission

The mission of the Minnesota Department of Natural Resources (DNR) is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.

The time to shape tomorrow is today.

We Minnesotans take great pride in our natural resources. As our population grows and demands on resources intensify, that pride remains steady — but our approach to conservation must evolve. Caring for the land, air and water that supports us and other living things is more urgent than ever, and we must be prepared to address the challenge. Now more than ever, a positive future is in the hands of those who plan for it. The time to shape tomorrow is today.

Transformative Trends

Increased threat of invasive species, intensifying land use, declining participation in outdoor recreation and a changing climate are among many interacting trends threatening our resources and demanding attention. Ignored, they have the potential to undo past and impede future conservation successes. Acknowledged and addressed, we can enjoy a resource-rich Minnesota for many generations.

An Aspirational Vision

This Strategic Conservation Agenda presents a broad and aspirational vision of the future we seek in the context of four goals: 1) conserve and enhance our waters, lands and habitat; 2) provide quality outdoor recreation opportunities for all citizens; 3) support our natural resource-based economy while protecting environmental quality; and 4) efficiently and effectively serve Minnesotans.

This all adds up to a Minnesota where healthy and resilient natural resources form a rock-solid foundation for our state's high quality of life.

Charting a Course

For each of the four goals, the Conservation Agenda outlines key challenges the state faces over the next 10 years and strategies the DNR will use to address them. It also identifies how DNR will turn vision to action — through hard work and effective partnerships that target natural resources in immediate trouble as well those projected to decline in the long term if we do not act today.

Securing Our Future

The road to a resource-rich tomorrow is rough and will require substantial work. Whoever you are and whatever Minnesota's natural resources mean to you, we invite you to join us on this journey. If we anticipate the challenges and opportunities, collaborate on effective solutions and use the full power of the conservation community, I trust we will find our way to securing our natural heritage future for generations to come.



The Minnesota Department of Natural Resources' 2015-2025 Strategic Conservation Agenda presents four broad goals.

The first three focus on conserving the state's natural resources, providing outdoor recreation opportunities and supporting commercial uses of natural resources. The fourth, operational excellence, seeks to ensure that the DNR efficiently and effectively provides high-quality services to citizens. This document does not describe all details of DNR's efforts, but highlights key strategies and actions to move us forward in the face of pressing conservation challenges.

The DNR's **four goals** and their associated challenges, strategies and actions drive our conservation work.

Challenges

Challenges are critical trends and impending issues that affect the DNR's progress toward achieving our goals.

Strategies

Strategies are broad approaches that frame how the DNR will address these challenges.

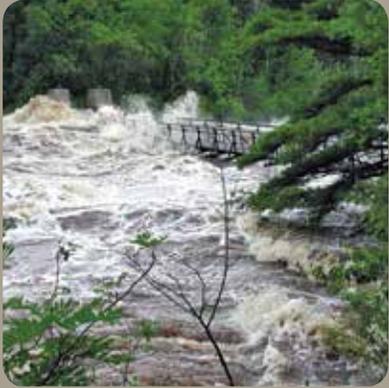
Actions

Actions are examples of the day-to-day project and program work needed to implement these core strategies.

Example Performance Measures

Performance measures presented here offer examples of how the DNR will measure success toward achieving our four goals. For additional information visit the DNR's Performance and Accountability website, which describes more than 90 performance measures and conservation targets used to measure and communicate progress. View the measures at www.mndnr.gov/conservationagenda.

www.mndnr.gov/conservationagenda



MPR News

Above: Jay Cooke State Park swinging bridge collapses during a 2012 mega-rain event in northeastern Minnesota in which the St. Louis River set a new record, rising 10 feet in 24 hours and cresting at 16.62 feet. Five of the 12 heaviest rainfall events in Minnesota history have occurred since 2000. These intense storms drop huge amounts of rain (8 inches plus) over short time spans and cause substantial damage to infrastructure and natural resources.

Right: The St. Louis River at its normal flow in June 2014, as viewed from the restored swinging bridge.



MPR News

Minnesota's waters, natural lands, and diverse fish and wildlife habitats are conserved and enhanced.

The Challenge

The cumulative effects of land use change, invasive species spread, pollution and a changing climate are combining in new ways to threaten the health of Minnesota's natural lands and waters.

Why is this important?

Complex interactions among these multiple threats create some of the greatest challenges we have ever faced. For example, under a changing climate we expect to see more severe storms, larger wildfires, accelerating spread of invasive species, outbreaks of pests and shifting wildlife populations. Recent events illustrate the unique challenges posed by these interactions and indicate the emergence of long-term trends that require action today.

Changing Land Use and Ownership Patterns:

Development and fragmentation of lands adjacent to public land is impeding natural resource management, restricting public recreational access and reducing habitat quality. Indicative of this, from 1989 to 2013, approximately 900,000 acres of Minnesota private forest land was sold.

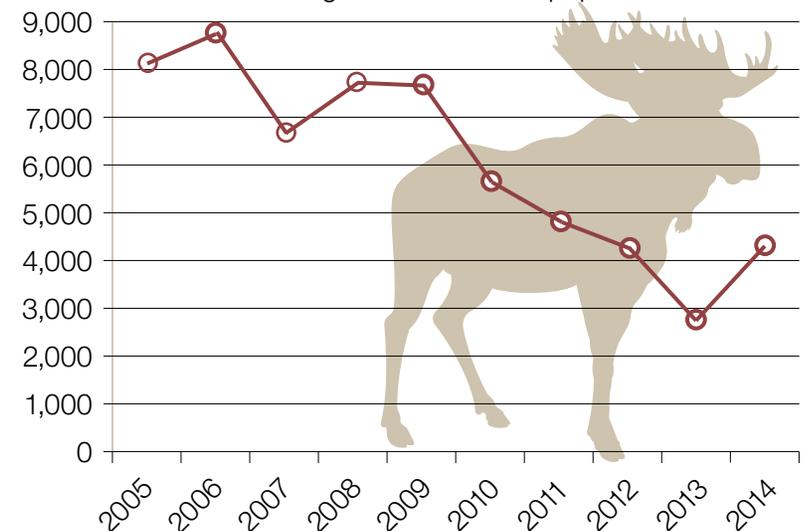
Expanding Forest Pests and Disease:

For example, eastern larch beetle—a native pest proliferating in a warmer climate—has caused extensive mortality to over 120,000 acres of the state's tamaracks since 2000.

Changing Wildlife Populations:

Northeastern Minnesota's moose population decreased about 50 percent in the past eight years. If this trend continues, moose could be almost gone from the state in the coming decades. Researchers suspect the decline is caused by a combination of factors, including increasing parasites, average warmer weather, predators and habitat change.

Estimated number of moose in northeastern Minnesota and long-term trend in the population



Northeastern Minnesota's moose population decreased about 50 percent in the past eight years.

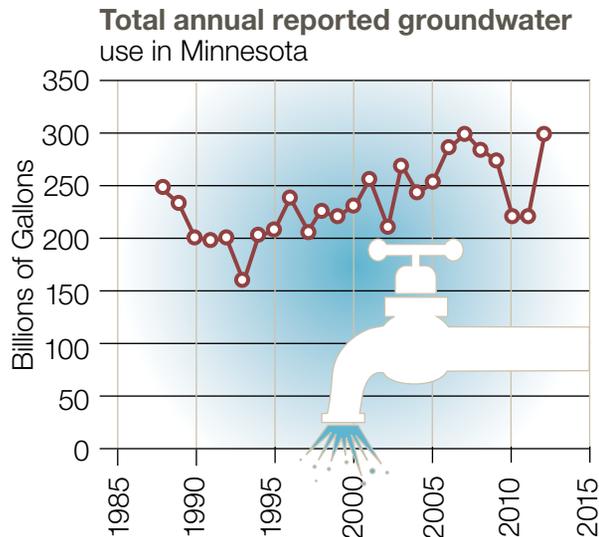
Four Key Trends next page

Trends

Four key trends illustrate this overarching conservation challenge:

Groundwater supplies are threatened

- Statewide, groundwater use has increased 35 percent over the past 25 years, an increase of about 3 billion gallons per year on average. Ground water is at risk of overuse and contamination in parts of the state.
- In some areas of the state, nitrate from agricultural production is showing up in ground water. For example, nitrate concentration in Park Rapids Well #4 increased by 347 percent from 1993 to 2009.
- Agricultural irrigation is increasing, with the number of permits being issued increasing from 65 in 2004 to 412 in 2013.

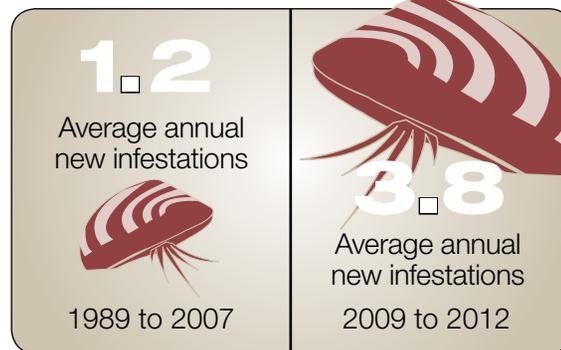


As population and domestic, industrial and agricultural demand for water grow, the DNR and partners must work to avoid conflicts over water use, depletion of aquifers and adverse impacts on surface waters.

Invasive species are spreading

- The emerald ash borer (EAB) has killed more than 50 million ash trees in a dozen states. First discovered in Minnesota in 2009, EAB threatens the state's 1 billion ash trees. A warming climate is expected to facilitate the spread of invasive species and make forests more vulnerable to pests and disease.
- Invasive carp pose an imminent threat to Minnesota's lakes and rivers as they advance up the Mississippi River.
- In four of Minnesota's largest lakes, infestations of the spiny waterflea are contributing to an estimated 40 to 60 percent loss of zooplankton biomass. Native zooplankton are a vital food source for fish.

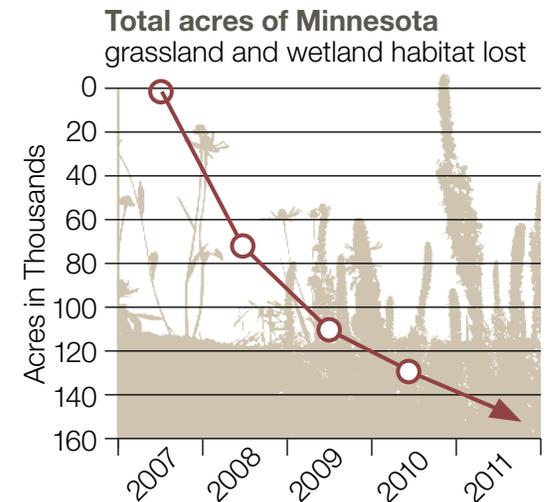
New infestations of zebra mussels



Invasive species harm ecosystems, disrupt economic activity and degrade the quality of recreation. Preventing the introduction of new invasive species into Minnesota buys us time to find long-term solutions.

Prairies, grasslands, and wetlands are declining

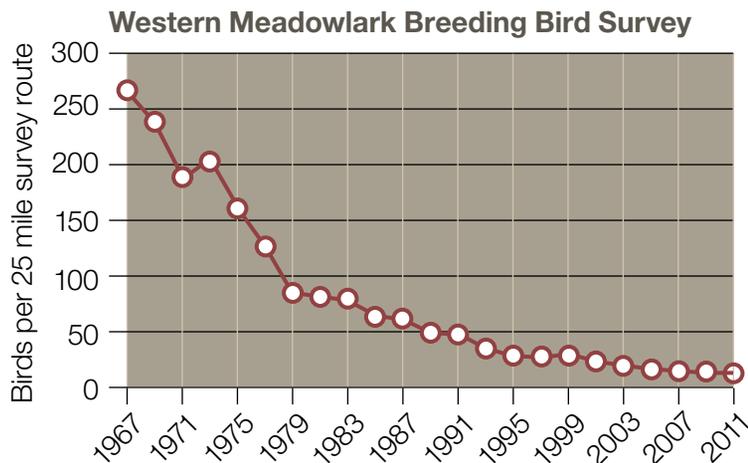
- Prairie once covered one-third of the state, but now less than 2 percent remains.
- Minnesota has lost more than 90 percent of its prairie wetlands.
- Between 2013 and 2016, contracts for nearly 400,000 acres of Conservation Reserve Program (CRP) land have expired or will expire. If landowners do not re-enroll in the program, CRP acres that provide critical wildlife habitat in Minnesota will decrease by 30 percent.



Native prairie, grasslands, and wetlands provide homes for fish, wildlife and native plants; protect soil and water; and support groundwater recharge. Conversion of these habitats to cropland reduces their ability to provide these critical benefits.

● Grassland bird populations are decreasing

- Loss and degradation of grassland habitat has led to declines of many grassland bird species. Between 1967 and 2011, the population index of 24 grassland birds declined nearly 40 percent.
- The western meadowlark has declined by more than 95 percent and the grasshopper sparrow has declined by 65 percent since 1967.
- The 2014 Minnesota pheasant index was 58 percent below the 10-year average and 71 percent below the long-term average, primarily due to habitat loss.



The grassland-dependent western meadowlark, an indicator of habitat quality for many grassland species, is threatened by habitat loss and degradation. The long-term population decline is exacerbated by a recent accelerated loss of grassland and wetland habitat.

Strategies

The following core strategies provide the fundamental steps needed to respond to these pressing conservation trends and guide targeted management actions.

Identify

Identify lands and waters at greatest risk from pressures such as land use change, pollution, climate change and invasive species. Set priorities for protecting and managing resources under greatest threat.

Manage

Manage lands and waters in ways that foster healthy habitats and boost the ability of fish and wildlife to cope with change.

Conserve

Conserve remaining natural areas and working lands containing important habitats — especially habitats in jeopardy, such as native prairies, wetlands, shallow lakes and shorelines. Connect fragments of high-quality habitat. Conserve endangered, threatened, rare, declining and vulnerable species.

Restore

Restore the health of degraded lakes, wetlands, rivers, grasslands and forests. Enroll marginal cropland in long-term habitat conservation programs. Reduce invasive species.

Monitor

Monitor and fine-tune management to improve the effectiveness of our conservation work.

Actions next page

Actions

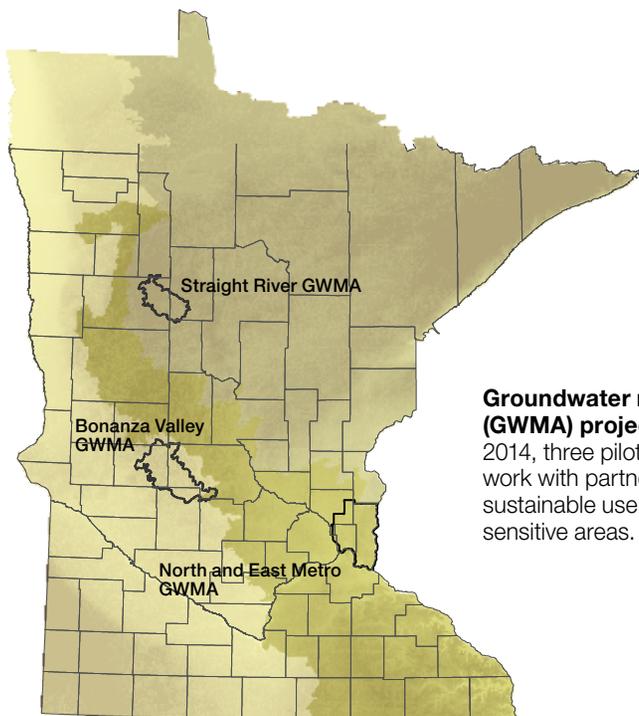
The following actions are examples of how we will carry out these strategies:

● Improve groundwater management

- Increase groundwater monitoring, education and compliance.
- Implement groundwater management area plans to help guide water appropriations and water quality improvements within designated areas.
- Accelerate water and habitat assessments to evaluate projects that might affect trout streams. Use permitting to ensure sustainable water use and reduce habitat impacts.

Example performance measure

Number of counties with a county geologic atlas or a regional hydrogeological assessment



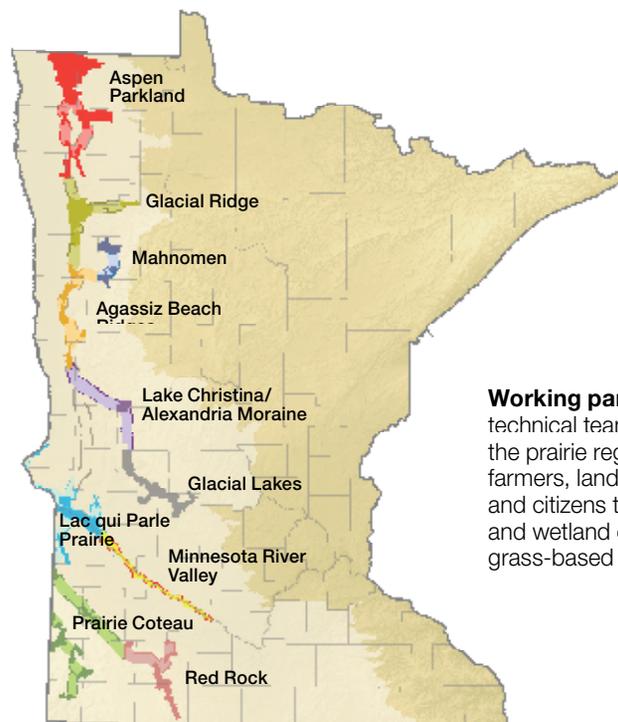
Groundwater management area (GWMA) projects. Initiated in 2014, three pilot projects coordinate work with partners to ensure sustainable use of groundwater in sensitive areas.

● Conserve prairies, grasslands, and wetlands

- Work with conservation organizations and agricultural communities to implement the Minnesota prairie conservation plan.
- Conserve public and private prairies, grasslands and wetlands through incentives, acquisition, restoration and enhancement using active management tools such as prescribed fire, conservation grazing and invasive species control.

Example performance measure

Number of prairie stewardship plans and management projects



Working partnerships. Ten local technical teams stretching across the prairie region are working with farmers, landowners, local officials and citizens to promote grassland and wetland conservation and grass-based agriculture.

● Prevent and curb the spread of invasive species

- Protect habitat and increase connectivity for native fish species while preventing and curbing the spread of invasive species by installing fish barriers and carrying out other deterrent measures at key sites.
- Expand the recreation-focused outreach campaign PlayCleanGo: Stop Invasive Species in Your Tracks, and build on the sister campaign WorkCleanGo for public employees to engage Minnesota residents in simple action steps designed to prevent the spread of terrestrial invasive species.
- Work with University of Minnesota Aquatic Invasive Species Research Center to develop better invasive species control technologies.



Example performance measure

Number of water bodies infested with Eurasian water milfoil



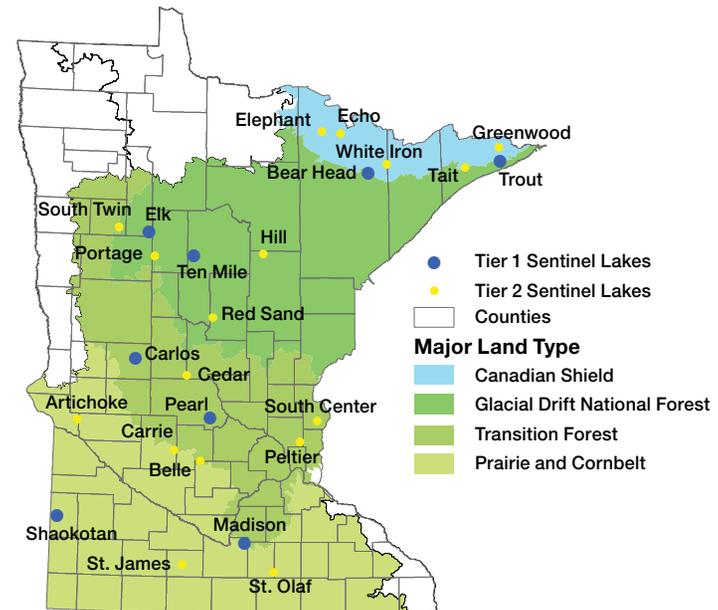
The DNR will increase public understanding of invasive species laws, roadside compliance checks and use of zebra mussel-detecting dogs.

● Monitor natural lands, waters, and species

- Accelerate inventory and monitoring for sound decision-making with emphasis on 1) forest, grassland and wetland vegetation; 2) rare species and habitats; 3) fish and wildlife populations; 4) groundwater quality and quantity; and 5) lake and river health.
- Develop cooperative approaches for land management such as the vegetation monitoring initiative, which shares data and best management practices among state and local governments and private landowners.
- Improve data management and science-based decisions by ensuring that DNR data are reliable, usable and accessible to staff and the public.

Example performance measures

Number of counties with completed Minnesota biological surveys; acres of DNR forest lands re-inventoried; walleye population levels



Sentinel lakes program. The DNR and the Minnesota Pollution Control Agency are collecting climate, lake habitat and fish population data on 25 Minnesota lakes. This will help us detect how lakes are changing in response to climate change, watershed development and invasive species and provide a solid foundation for future management.

Source: MN DNR and MPCA



Above: Serving the next generation requires being adaptive and offering new recreational opportunities, such as stand-up paddleboarding. Right: Kayaking is one outdoor activity growing in popularity (shown here at Bear Head Lake State Park).



Minnesota's outdoor recreation opportunities meet the needs of new and existing participants so all benefit from nature.

The Challenge



Outdoor recreation is a key ingredient of natural resource conservation and healthy living, but participation is declining. Declines are linked to changing demographics, increasing urbanization, competing priorities for leisure time and deteriorating infrastructure.

Why is this important?

Spending time outdoors is a Minnesota tradition. Our state consistently ranks among one of the top states to live, and a key factor for this is a healthy natural environment with abundant parks, natural lands and high-quality recreation opportunities. We must build on this rich tradition and plan for the future.



Outdoor Recreation Heritage:

The percent of residents licensed to fish and hunt in 2012 (28 percent and 12 percent, respectively) was double the national averages. But, participation rates are declining in the U.S. and Minnesota.

Outdoor Recreation Infrastructure:

Minnesota's park and trails are celebrated across the country. Itasca State Park was named one of America's 10 best state parks in 2014. In 2010, Bear Head Lake State Park was voted "America's Favorite Park" and Minnesota was voted the second-most bike-friendly state.

However, we're challenged to maintain basic operations at many state recreation facilities while also meeting expectations for new and enriched outdoor experiences. New, targeted strategies are needed to provide experiences that help reconnect families with nature and get them outdoors and active.



Four Key Trends next page

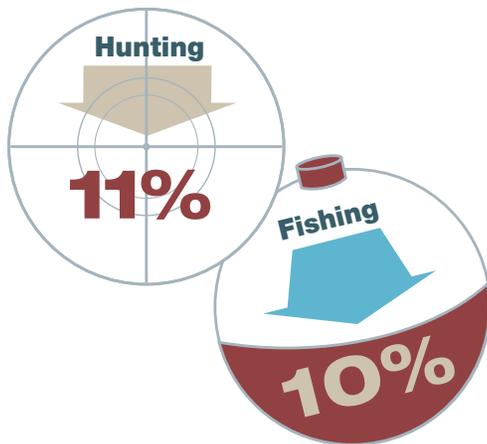
Trends

Four key trends illustrate this challenge:

Participation in traditional outdoor recreation is changing

- The percentage of young adults and families who participate in outdoor recreation is declining.
- Minnesota pheasant hunter numbers declined 40 percent from 2006 to 2013.
- Some outdoor activities, such as walking, jogging, stand-up paddleboarding and geocaching, are on the rise.

Percentage of Minnesotans licensed to hunt and fish declined from 2000 to 2012

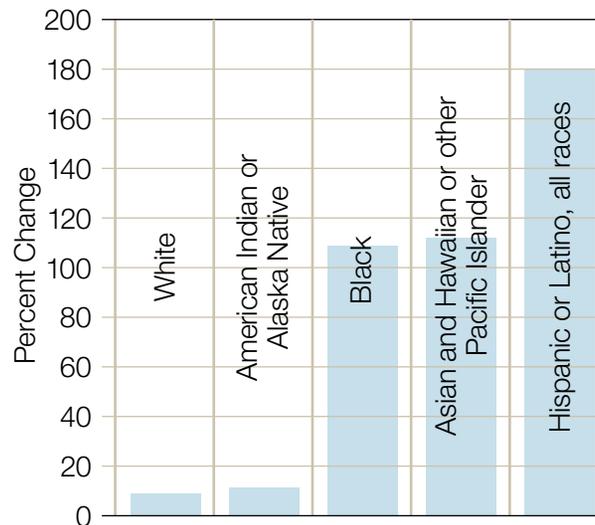


As Minnesota's population grows, a smaller percentage of people are purchasing hunting and fishing licenses. However, overall license numbers are steady.

Minnesota's population is urbanizing, diversifying and aging

- The population in Minnesota's metropolitan areas grew nearly 10 percent from 2000 to 2010, while nonmetro areas grew about 2.5 percent over this same period.
- The 65-and-older age group will be the fastest growing between 2010 and 2035.
- In 2035, Minnesota will have about 1.37 million older adults.
- From 2005 to 2035, Minnesota's Hispanic or Latino population will increase by 181 percent.

Minnesota population projections by race and ethnicity 2005 to 2035



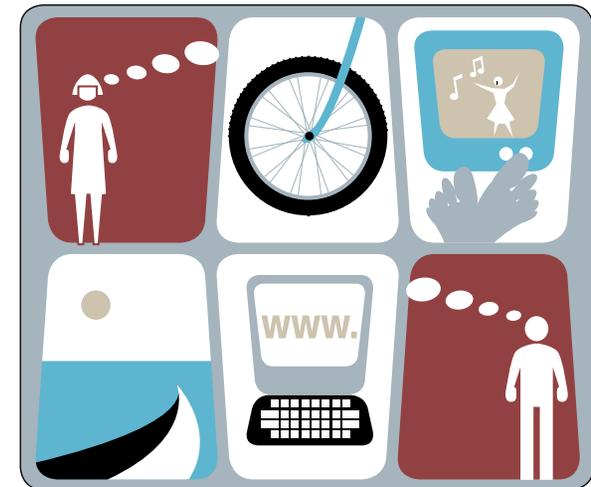
As Minnesota diversifies, the DNR will need to adapt its outdoor recreation programs to ensure people of all backgrounds and life stages are engaged and benefit.

Source: United States Census Bureau

Competition for leisure time is intensifying

- Limited time and information, challenging schedules, and travel distance make it difficult for people to participate in outdoor recreation.
- From 1985 to 2010, the average vacation length in the United States shrank from 5.4 to 3.8 days.
- In 2013, Americans ages 15 and older spent more than half of their leisure time watching television.

Competing priorities for leisure time



Decreasing leisure time demands prioritization of recreational activities. In recent years, watching TV or using the computer for leisure has been a higher priority than outdoor recreation for many.

● **Outdoor recreation infrastructure is outdated and deteriorating**

- The DNR is challenged to meet modern standards and preferences for facilities and trails, including requirements of the Americans With Disabilities Act (ADA).
- Adequate maintenance and rehabilitation to the DNR's parks and trails infrastructure will cost more than \$320 million over the next 10 years.
- One-third of Minnesota state parks buildings are on the National Register of Historic Places and need specialized rehabilitation.
- More than 2,300 miles of state forest roads require regular maintenance for hunting, motorized recreation and other uses.



Worn by daily use and weather, state trails such as the Willard Munger above, require consistent maintenance to provide high-quality recreational experiences.

Strategies

The following core strategies provide the fundamental steps needed to respond to these pressing recreation trends and guide targeted management actions.

Learn

Learn how families with young children and others want to interact with Minnesota's natural resources. Evaluate the effectiveness of DNR outreach, and adapt programs and facilities accordingly.

Develop

Develop and promote outdoor programs and activities for people of all backgrounds, especially families with children, diverse cultures, urban dwellers, women, youth and young adults.

Leverage

Leverage outreach by engaging our partners in outdoor recreation recruitment and retention.

Implement

Implement retention and marketing initiatives to minimize loss of current outdoor recreationists.

Maintain

Maintain and enhance our high-priority outdoor recreation system to provide high-quality, easy-to-access and safe recreational opportunities while repurposing lower priority facilities.

Actions next page

Actions

The following actions are examples of how we will carry out these strategies:

Expand and promote "I Can!" Programs



The DNR developed "I Can!" programs based on research that identified barriers and motivations to getting the next generation of Minnesotans outdoors.

ROLF HAGBERG

- Expand participation in "I Can Camp!," "Archery in the Parks," "I Can Fish!," "I Can Paddle!," "I Can Climb!," and "I Can Mountain Bike!" programs to accommodate a wide variety of interests.
- Provide families with affordable introductory experiences, equipment and trained instructors in a safe and friendly environment.
- Expand opportunities for urban residents.

Example performance measure

Number of participants in state park and trail interpretive and skill-building programs

Expand hunter recruitment and retention

- Promote innovative hunter recruitment approaches, such as "Learn to Hunt Whitetail Deer," a program aimed at urban adults with little or no hunting experience and an interest in local, sustainable food.
- Promote the DNR's firearms safety and hunter education outreach to Minnesota's Hispanic community.
- Invest in shooting range development and rehabilitation to increase access to and participation in shooting sports, especially among youth.

Example performance measures

Number of participants in special youth hunts;
number of youth license sales



Firearms safety hunter education programs promote resource stewardship and outdoor ethics. Adults-only and women-only courses ensure a supportive and comfortable learning environment.

● Increase user-friendly access to information

- Market “Fish Minnesota,” a Web-based tool that answers common questions about fishing regulations and locations.



- Market “ParkFinder,” a Web-based trip planner that matches visitors to Minnesota state parks based on their interests.



- Improve the DNR's website and create new tools to promote other outdoor recreation opportunities such as hunting and trail use.

Example performance measure

Number of website page views

● Implement a new parks and trails system plan

- Provide high-quality visitor experiences by investing in innovative facility designs, new technologies and improvements to existing buildings and trails.
- Keep Minnesota a national leader in outdoor recreation by enhancing and maintaining parks, trails, state lands and water access sites.

Example performance measures

Number of state trail miles maintained; number of visitors and overnight guests at state parks and recreation areas



Partnerships help the DNR's Parks and Trails Division offer needed services and amenities. The DNR worked with the Minnesota Department of Transportation to construct the new visitor center and rest area at Tettegouche State Park.



Above: The DNR manages 5.6 million acres of state-owned surface land and 12 million acres of state-owned mineral rights. Right: Our 4.2 million acres of state forestry-administered lands meet third-party certification standards for sustainability. The state's extensive and varied forest land interspersed with lakes and streams is a key contributor to our natural resource-based economy.



Minnesota's natural resources contribute to strong and sustainable job markets, economies and communities.

The Challenge

A rapidly changing global economy is altering competition, demand and opportunity for environmentally sound and economically beneficial natural resource development.

Why is this important?

Minnesota's natural lands and waters have drawn people here to live, work and play for generations. They also provide raw materials that support economies across the state. Careful management ensures Minnesota will be able to attract future businesses, tourists and skilled workers to the state. We've been successful in the past at growing a competitive economy and protecting the land, air and water that make Minnesota among the nation's leaders in quality-of-life measures.

Forestry and Mining Economies:

Forest products and mining sectors are major employers in the state, accounting for 62,400 and 11,000 jobs, respectively. Minnesota mines produce 80 percent of U.S.-mined iron ore and taconite.

Tourism Economy:

Minnesota's lakes, wild lands, and state parks and trails are main attractions that contribute to the state's \$12.5 billion annual sales from travel and tourism.

If done right, natural resource-based economic development can help Minnesota maintain our competitive advantage as a top place to live, work and play.



Four Key Trends next page

Trends

Four key trends illustrate this challenge:

● The forest products industry is changing

- The 2007–2011 recession reduced forest products demand, timber harvest and economic activity.
- Since 2000, annual timber harvest on state-managed lands in Minnesota has fluctuated between 500,000 and 1 million cords, while annual harvest on private and tribal lands has declined from nearly 2.5 million to less than 1 million cords.
- Timber sales from state forests yield \$18 million to \$20 million of revenue per year to the state.

● Demand for mineral development is increasing

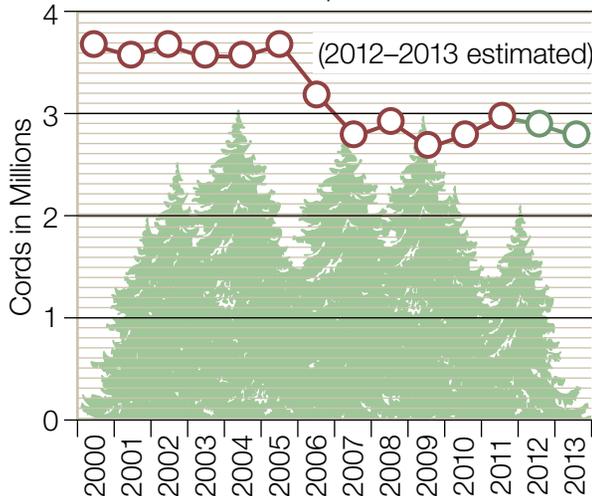
- As global demand grows, mining companies are increasingly interested in Minnesota’s reserves of iron, copper, nickel, platinum, gold, other precious metals and silica sand.
- Proposals for new and expanded mine operations are increasing demands on the DNR’s environmental review and regulatory staff to protect the environment, encourage appropriate minerals development, and ensure a transparent and accessible process.

● Revenue from school trust lands is increasing

- Net revenue from mineral leases, timber sales, surface leases, utility licenses, easements, land sales and state forest campground fees on DNR-managed school trust lands for the Permanent School Fund increased from \$11.7 million in 2003 to \$31 million in 2013.
- Increased mineral demand is the primary contributor to this increase.

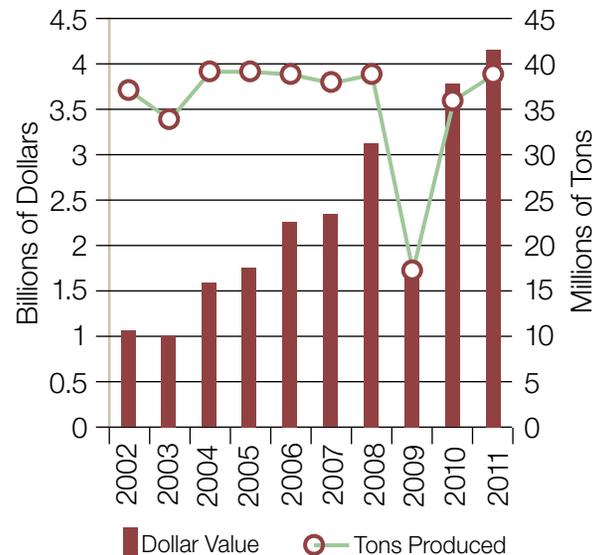
Total wood harvest in Minnesota

from all landownership



Reduced harvest has limited foresters’ ability to manage diverse, healthy forests for recreation, forest products, habitat and other goals. A recovering economy and new bio-based chemical and fiber markets offer increased opportunities.

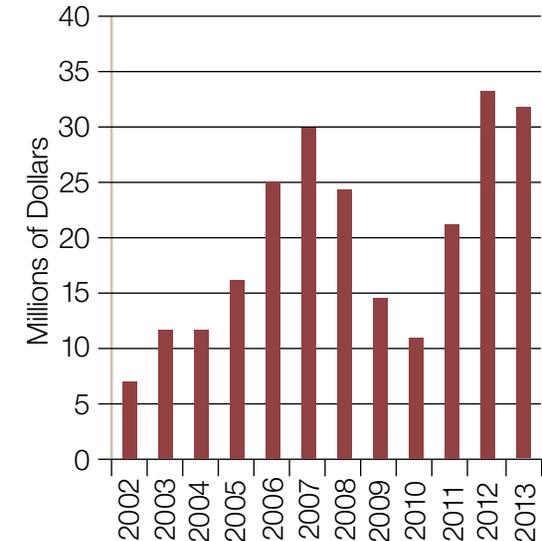
Minnesota iron ore production



While iron ore production in Minnesota dipped during the recent financial crisis, it’s at record levels today due to increased global demand.

Source: United States Geological Survey

School Trust Revenues

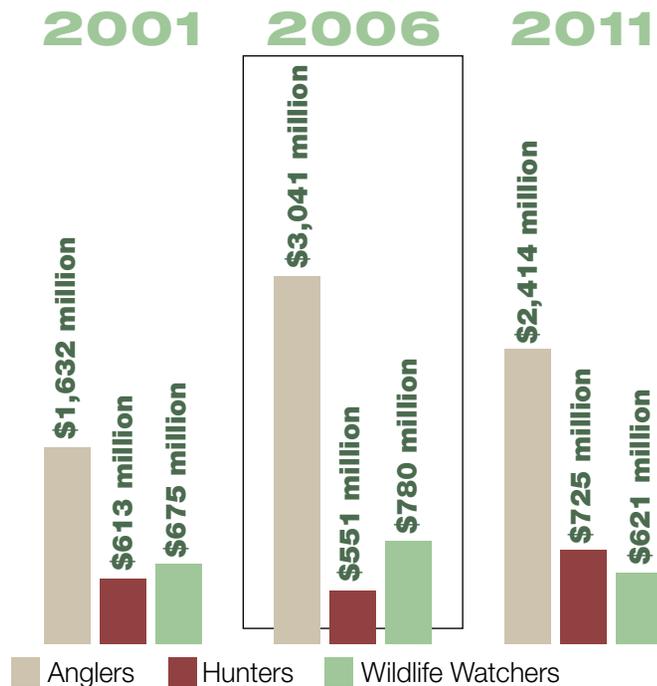


The DNR manages 2.5 million acres of school trust lands for maximum long-term economic return to Minnesota’s public schools using sound conservation practices.

Fish and wildlife recreation spending continues to grow the state's economy

- Retail sales in Minnesota amounted to \$2.4 billion for fishing and more than \$670 million for hunting in 2011.
- Fishing supported 35,462 jobs and hunting supported 12,439 jobs statewide in 2011.
- Fishing brought in \$264 million and hunting brought in \$94 million in state and local tax revenues in 2011.

Total expenditures by participants in Minnesota (In 2011 dollars)



Spending in Minnesota on angling, hunting and wildlife watching totaled \$3.8 billion in 2011.

Source: United States Fish and Wildlife Service

Strategies

The following strategies guide targeted management actions aimed at cultivating strong and sustainable job markets, economies and communities.

Forests

Manage for healthy, productive forests that support jobs, provide a sustainable supply of wood resources, and create the foundation for outdoor recreation, tourism, biodiversity and clean water.

Minerals

Develop and manage mineral resources responsibly to enhance environmentally sound mining as a contributor to job markets, economies and community well-being.

Water

Sustain healthy watersheds and ground water supplies to provide clean, abundant water and flood protection essential to supporting aquatic life, industry, agriculture, community growth and development.

Nature-based Tourism

Support and grow nature-based tourism to provide exceptional outdoor recreation experiences that create jobs and generate dollars for local economies.

School Trust Fund

Manage trust fund lands effectively and sustainably to meet our fiduciary responsibility, using sound natural resource management principles.

Actions next page

Actions

The following actions are examples of how the DNR will carry out these strategies:

● Encourage emerging forest industries

- Provide sustainable access to 800,000 cords of wood annually, amounting to one-third of the state's timber harvest.
- Enhance forest inventory and monitoring to ensure accurate assessment of forest resources.
- Meet third-party certification standards by sustaining diverse, healthy and productive forests.
- Promote bioenergy to diversify the state's energy portfolio, bolster the economy in northeastern Minnesota, and reduce emissions from fossil fuels.

Example performance measure

Acres of state-administered lands approved for forest certification



The DNR helps maintain traditional paper and wood markets and promotes emerging wood-based, bio-based chemical and fiber opportunities.

● Advance mining technologies and strategies that protect the environment

- Accelerate development of mining technologies that provide long-term environmental protection.
- Advance connection of new technologies to ongoing efforts to reclaim mine lands for future use.
- Maintain and improve financial assurance measures to provide adequate funds for reclamation and environmental protection in case mining companies fail to cover costs.

Example performance measure

Acres of mine land reclaimed



DNR staff study the use of alternative vegetation to protect drainage water from mining waste.

● Enhance and expand nature-based tourism

- Respond to demand for new recreational amenities, such as mountain bike trails and yurt lodging in state parks and recreation areas.
- Provide rental opportunities such as stand-up paddleboards, kayaks and snowshoes to increase access to new recreation activities in state parks.
- Continue acquisition of private inholdings in state parks to enhance resource protection and recreational opportunities.
- Connect state trails to cities and parks to provide access to more recreation options.

Example performance measure

Annual rentals at state parks



Camper cabins offer a rustic yet cozy option for state park overnight trips.

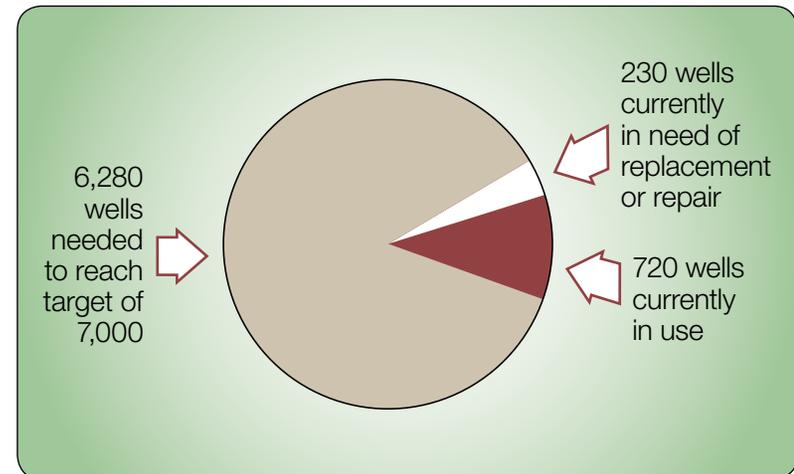
● Improve groundwater and surface water systems

- Install an additional 6,280 monitoring wells so the DNR can track aquifer health and ground water–surface water interactions.
- Improve data management to provide better access to, and analysis of, groundwater and surface water sustainability data.
- Improve the accuracy of water use information.

Example performance measure

Number of long-term groundwater monitoring wells in Minnesota

Building our groundwater monitoring well network, installing 50 per year.



The DNR is striving to install groundwater monitoring equipment at about 100 new wells each year to improve our understanding of ground water and surface water relationships.



Above: Engaged Minnesotans participate in public meetings and provide comments on natural resource issues to inform and guide the DNR's work.

Right: The DNR manages 30 sites (24 state parks and six other DNR facilities) that use photovoltaic installations or solar thermal panels to help meet their energy needs.



The DNR demonstrates operational excellence and continuous improvement in service to citizens.

The Challenge

DNR operations must adapt to an increasingly changing and diverse world. Rapid developments in technology, more complex conservation challenges, increasing pressures on state spending, and growing and diversifying public expectations accelerate the need for change in our organization and how we work with partners.

Why is this important?

Accomplishing our natural resource goals requires operational excellence. DNR business practices must continually become more efficient to make the best use of Minnesotans' dollars and minimize waste. We must build on recent accomplishments.

Continuously Improve Operations:

In the past two years, we completed continuous improvement projects in online permitting, records management, land acquisition, aquatic plant management, land surveys, financial management and purchasing.

Meeting New Demands:

We must be leaders in energy conservation and renewable energy practices. Today, the DNR is one of the top 10 renewable energy producers in Minnesota.

Increased efficiency alone can't address every challenge we face. Investing in facilities, equipment, and professional development for our employees is crucial if we are to support core operations, be nimble in the face of new challenges, and recruit and retain workers who reflect a full diversity of perspectives, skills and interests.



Process improvement events help DNR staff improve efficiency of business practices.

Four Key Trends next page

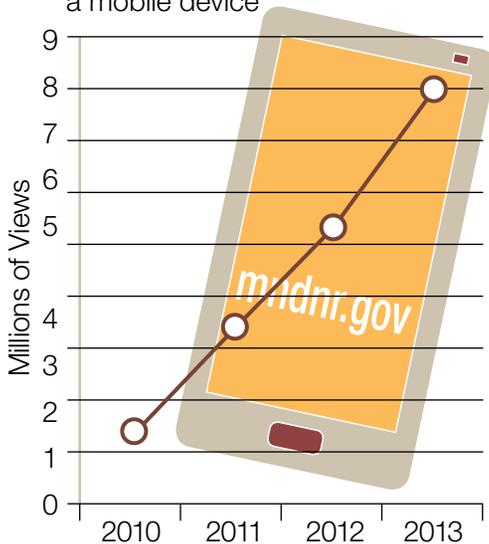
Trends

Four key trends illustrate this challenge:

● Citizen demand for information and service is growing

- Demand for easily accessible, accurate, and usable information is growing due to widespread use of the Internet, smartphones, mapping tools and other technology.
- Citizens today expect higher government transparency, more opportunities for engagement and greater accountability.

DNR website views from a mobile device

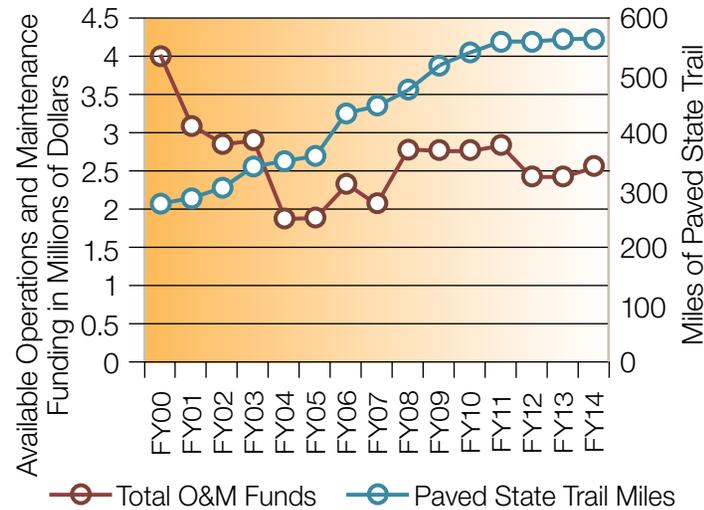


As of January 2014, 90 percent of American adults have a cell phone, 58 percent have a smartphone, and 42 percent own a tablet. Keeping pace with mobile technology demand is vital to providing high-quality customer service.

● Costs of doing business are increasing

- Energy, gasoline, and propane costs have all increased significantly since 2005. While prices have moderated recently, energy prices are volatile and difficult to predict.
- Minnesota’s Next Generation Energy Act of 2007 challenges the DNR to reduce our carbon footprint 30 percent by 2025.
- In 1998, a DNR review estimated it needed to spend 2.8 percent of the current replacement value of its properties each year to catch up with capital maintenance. In 2013, this is equivalent to \$13.7 million.

State trail operations funding

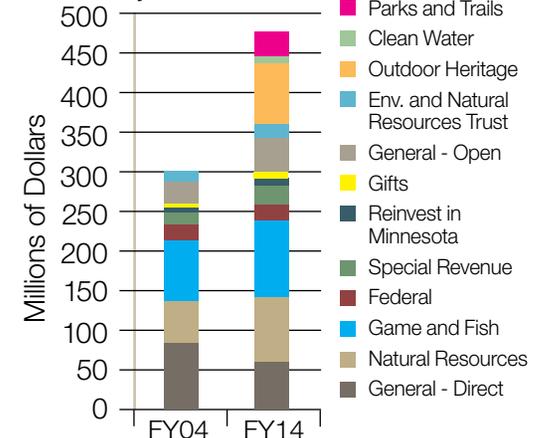


In recent years, the number of state trail miles has increased while the funds available to operate and maintain them have not kept pace. The result is a \$3.7 million funding gap in operation and maintenance, hampering our ability to maintain aging treadways, manage trail corridors and meet operations costs.

● Funding capacity and flexibility are decreasing

- The DNR’s funding has shifted in recent years to increased dependence on more stable but less flexible dedicated funding.
- DNR programs that depend highly on the state’s general fund, including parks, forestry and water management, struggle to keep up with demands.
- Since 2008, state parks have lost funding for 36,000 staff hours. Similarly, the Enforcement Division has lost 57,224 patrol hours due to 23 vacant field stations in 2014.

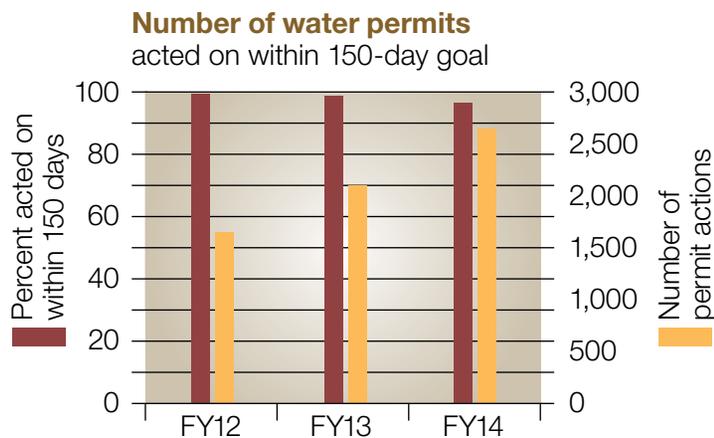
DNR history of expenditures by fund



Although the DNR’s overall budget has increased since fiscal year 2010, general fund (direct) expenditures dropped from approximately \$89 million in fiscal year 2004 to \$60 million in fiscal year 2014, limiting our ability to meet maintenance and basic operational needs.

Demands on staff time and resources are growing

- Longer fire seasons and greater intensity of wildfires increase the need for response. In the wake of severe drought the DNR spent more than \$30 million on emergency firefighting in 2013, the highest expenditure since 1977.
- Invasive species are outpacing our capacity to respond. As of 2014, the DNR had identified more than 130,000 infestations of terrestrial invasive plants on DNR lands, an increase of approximately 80,000 since 2009.
- Increasing frequency of floods require the DNR to respond by providing more hydrological information, clean-up support, and rescue assistance to local governments.
- The number of comments on environmental impact statements (EIS) and environmental assessment worksheets (EAW) are increasing exponentially. For example, the 2013 PolyMet Supplement Draft EIS generated approximately 58,000 comments.



The number and complexity of water permit applications increased 60 percent from 2011 to 2014, challenging our capacity to act on them in a timely manner.

Strategies

The following strategies define our identity as an excellent workplace and guide targeted management actions in response to changing trends.

Invest

Invest wisely to manage future operational costs.

- Invest in facilities, information technology and fleet to ensure safe and effective delivery of public services and efficient internal operations.
- Lead the way in energy conservation and renewable energy use to demonstrate wise use to citizens and other organizations.

Streamline

Streamline to deliver desired results more safely, efficiently and effectively.

Enhance

Enhance easy and transparent access to information so citizens can understand and participate in the DNR's work.

Develop

Develop the DNR's workforce by ensuring a safe, respectful and dynamic work environment that attracts and retains top talent from across the country.

Practice

Practice adaptive management to respond to rapid changes and an unpredictable environment.

Actions next page

Actions

The following actions are examples of how we will carry out these strategies:

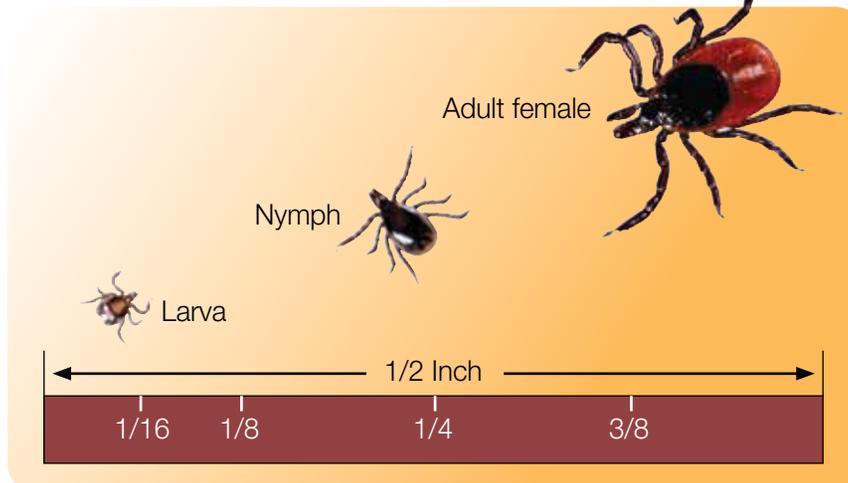
Put safety first

- Strive to reduce the number of work-related accidents to zero through practices such as hazard recognition, customized training, use of personal protective equipment and defensive driving.
- Provide emergency response to local governments when floods, wildfires and other natural disasters occur. Help local governments prevent, prepare for and reduce future damages from wildfires and floods.
- Improve safety and accessibility of DNR facilities by making all outdoor recreation facilities ADA accessible and consistent with modern design standards.

Example performance measure

Number of recordable work injuries per 100 employees

Blacklegged tick life stages



Tick-borne diseases are a major threat to field workers. The DNR mandates tick-borne illness training for all employees and provides insect repellent and protective clothing to field staff.

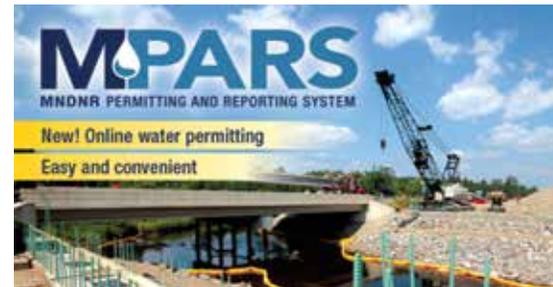
Provide better service

- Train, mentor and coach staff in continuous improvement and implement organizational improvements every year.
- Use plain language to improve customer service, reduce confusion and save time.
- Modernize our Web platform and digital content to provide easy, secure access to permits, licenses, parks reservations, mobile applications and other information.



Example performance measure

Percent of environmental permit decisions made within 150 days of receiving a complete application



The Minnesota Permitting And Reporting System simplifies water permitting for cities, farmers, businesses and landowners. The system increases the DNR's ability to track water use, identify permit violations and boost compliance.

Upgrade Minnesota's public land portfolio

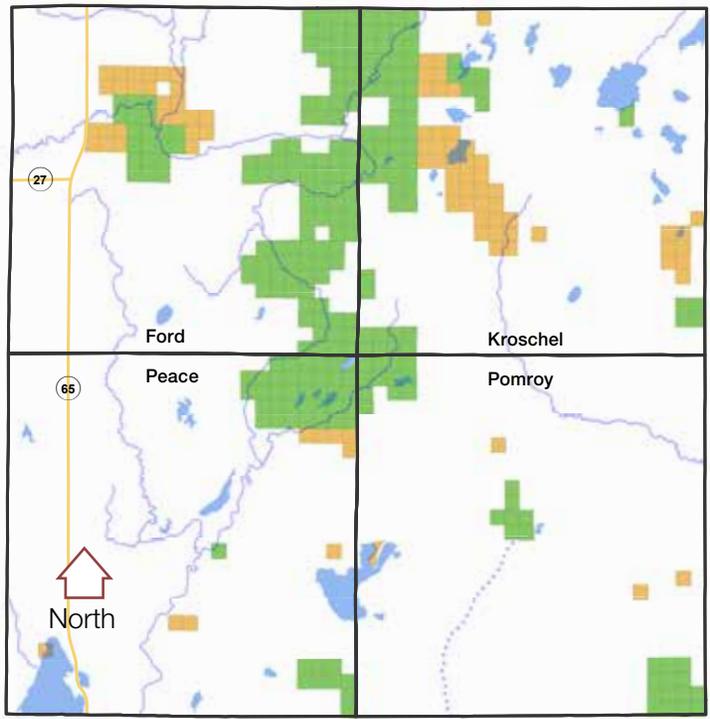
- Increase the conservation value of public lands through strategic land acquisitions, sales and exchanges. Fully integrate strategic land asset management into daily operations.
- Secure funding to enable sales and exchanges of low-priority scattered lands.

- Better coordinate public land asset management with nonprofit organizations, counties and other partners.

Example performance measures

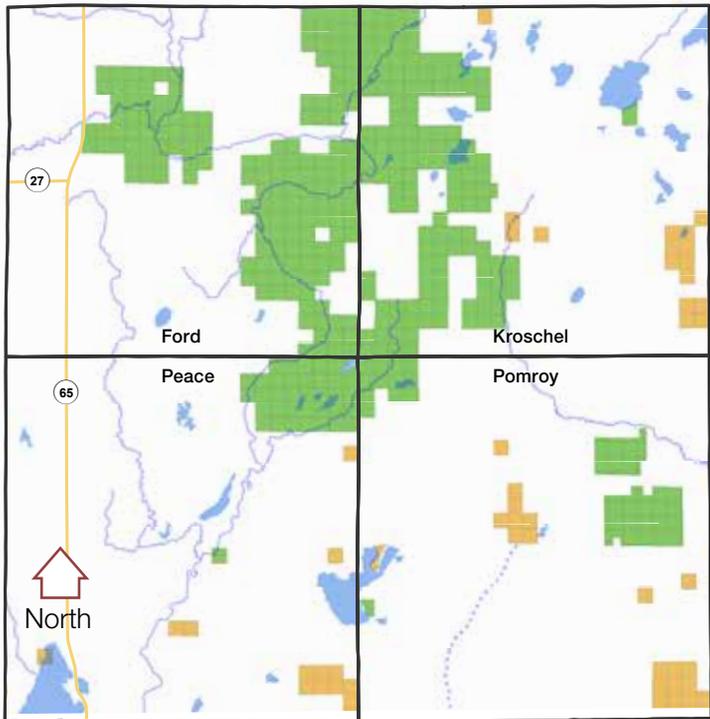
Acres made accessible through acquisition or exchange; miles of state boundary reduced by consolidating state lands

2010



State Land
County Land

2014



State Land
County Land

This Kanabec County land exchange consolidated land for the state and county, created connections between existing DNR management units, provided new access to timber, and improved overall protection, use and management of state land for current and future generations.

Actions continued next page

Actions continued

● **Grow a diverse, highly skilled and responsive workforce**

The DNR's culture of respect is a set of core values that support and promote accomplishment of the agency's mission.



- Conduct outreach and seek partnerships to foster a more diverse workforce. Explore promising opportunities including work with Wilderness Inquiry and the Conservation Corps.
- Accelerate incorporation of workforce diversity goals into all DNR programs.
- Invest in training and skills development to help staff adapt to changing constituencies and public expectations.

Example performance measure

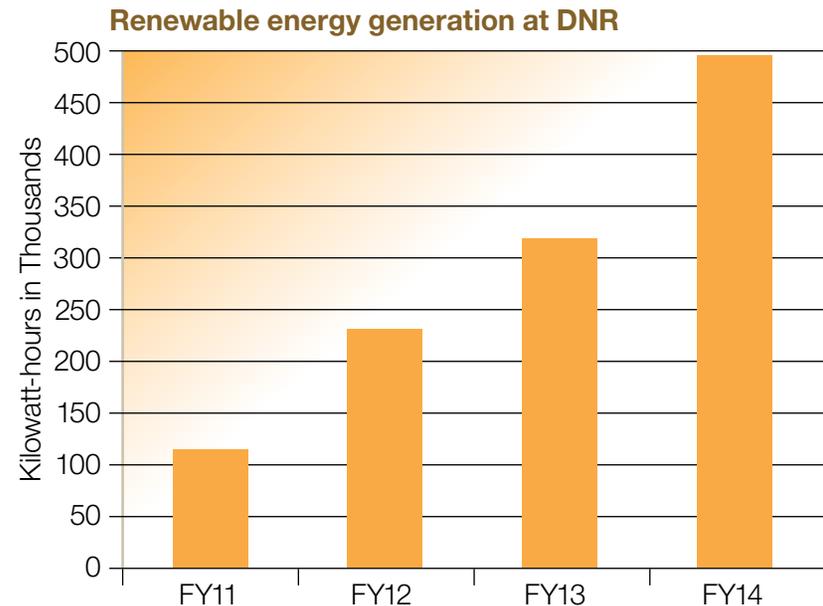
Percent of women, minorities and individuals with disabilities in the workforce

● **Increase energy efficiency and renewable energy use**

- Use more efficient vehicles and equipment to reduce fuel consumption.
- Reduce miles driven per employee by investing in teleconferencing and other technology.
- Improve energy efficiency of existing buildings and pursue net-zero energy consumption in new buildings.
- Install 125 kilowatts of renewable energy annually.

Example performance measure

Percent renewable energy used at DNR facilities



The DNR seeks to meet the state's 30 percent energy reduction goal by 2025 by increasing energy efficiency and reducing energy use.

Mission

DNR's mission is to work with citizens to **conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources** in a way that creates a sustainable quality of life.

Natural Resources Conservation

- 5,586,000 acres of DNR-administered land, about 10% of Minnesota's land area
- 3,415,000 acres of lakes administered by the DNR
- 10,620,000 acres of wetlands
- 69,200 miles of rivers and streams administered by the DNR

Outdoor Recreation

–System–

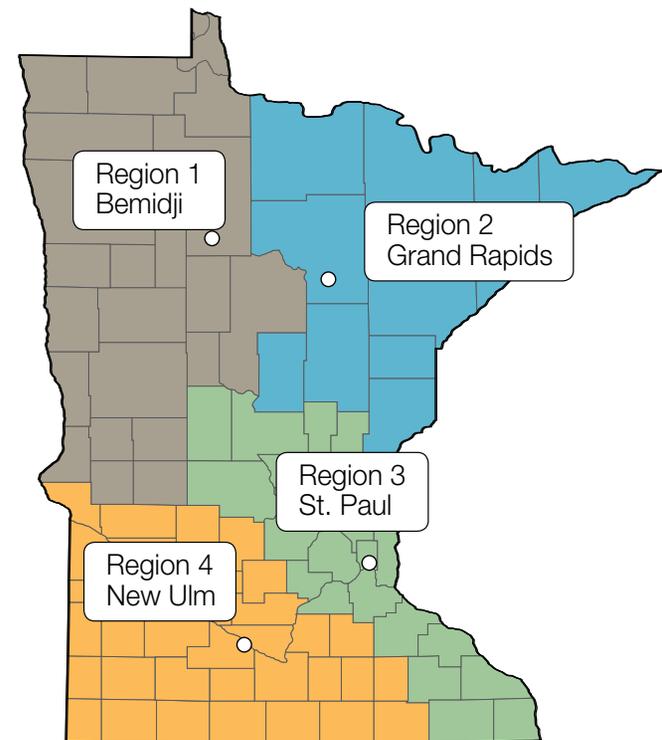
- 66 state parks and nine state recreation areas; second oldest state park system in the United States, after New York
- 1,300,000 wildlife management area acres
- 185,000 scientific and natural area acres
- 45,000 aquatic management area acres
- 4,100 miles of hiking/biking/motorized trails and 22,000 miles of snowmobile trails
- 1,495 public water access sites
- 58 state forests covering 3,800,000 acres

–People–

- 1,500,000 licensed anglers
- 580,000 licensed hunters and trappers
- 810,000 registered recreational boats
- 8,700,000 estimated state park visitors

Natural Resources Economy

- 12 million acres of state mineral interests
- 4,200,000 acres of state forestry-administered land
- Minnesota nature-based tourism contributes to the \$12.5 billion annual sales from overall travel and tourism



The DNR operates out of four regional offices that oversee many more area offices.

Divisions next page

Divisions

DNR carries out its integrated mission through seven divisions and four regions.

Ecological and Water Resources

- Conducts watercraft inspections for aquatic invasive species (123,000 inspections in 2014)
- Issues water appropriation permits (994 new permits in 2014)
- Collects and delivers ecological information on the state's plants, animals, and native plant communities through its Biological Survey (80% complete in 2014)

Enforcement

- 155 field station officers patrol an average of 500 square miles each
- More than 4,400 volunteer instructors certify more than 36,000 students annually in all-terrain vehicle, snowmobile, boat, and firearms safety
- Connect with people through 1,300 outreach opportunities annually

Fish and Wildlife

- Manages more than 1.3 million acres of wildlife management areas and 45,000 acres of aquatic management areas
- Protects, monitors, enhances, and restores aquatic habitat for 5,400 fishing lakes and 16,000 miles of fishable streams and rivers
- Manages 61 wildlife and 28 sport fish game species

Forestry

- Manages 58 state forests covering 3.8 million acres
- Reforests 11,500 acres annually
- Maintains forest management certification on 4.2 million acres of DNR-administered land

Operations Services

- Directs budget and accounting policy for effective use of approximately \$500 million per year
- Manages 2.9 million square feet of office space at over 200 site locations statewide
- Provides human resource services to approximately 4,760 employees (equates to 2,684 FTEs)

Parks and Trails

- Operates 66 state parks, 9 state recreation areas, 8 state waysides, 62 forest recreation areas and nearly 5,000 campsites
- Maintains more than 4,100 miles of hiking/biking/motorized trails and 22,000 miles of snowmobile trails
- Maintains 1,495 public water accesses, 355 fishing piers, and 33 state water trails

Lands and Minerals

- Completed 140 acquisitions of land and interests in land in 2014
- Manages 12 million acres of state-owned mineral rights
- Manages real estate activities for 5.6 million acres of state-owned land

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The Office of Policy and Planning within DNR's Operations Services Division

led interdisciplinary development and review of content, document design, writing and review.

Arielle Courtney	Rachel Hopper
Andrea Date	Jim Manolis
Andy Holdsworth	Emmett Mullin
Peter Holt	Keith Wendt

DNR commissioners, senior managers, operations managers and key staff members

directed content development for this Strategic Conservation Agenda.

DNR Commissioners

Tom Landwehr, Dave Schad, Mike Carroll, Bob Meier, and Barb Naramore.

DNR Senior Managers Team

Forrest Boe, Ed Boggess, Lori Dowling-Hanson, Sherry Enzler, Dennis Frederickson, Steve Hirsch, Barb Juelich, Denise Legato, Bob Lessard, Kent Lokkesmoe, Robert Maki, Laurie Martinson, Greg Nelson, Chris Niskanen, Keith Parker, Jess Richards, Erika Rivers and Ken Soring.

DNR Operations Managers

Pete Clevestine, Rob Collett, Steve Colvin, Colleen Coyne, Kathy DonCarlos, Karl Olmstead, Olin Phillips, Joe Rokala, Craig Schmid, Luke Skinner, Rodmen Smith, Bob Tomlinson, John Williams and Terri Yearwood.

Other DNR contributors and reviewers

Jacqueline Amor, Pat Arndt, Baishali Bakshi, Rich Baker, Amy Barrett, Jed Becher, Lisa Bell, Marybeth Block, Peggy Booth, Cindy Buttleman, CB Bylander, Beth Carlson, Daren Carlson, Rebecca Carpentier, Jennifer Christie, Amanda Dirnberger, Amber Ellering, Cathy Ellis, Amy Ellison, Emily Engel, Nick Frohnauer, Jason Garms, Vikki Getchell, Judy Grew, Lisa Grieme, Brenda Henry, Jodie Hirsch, Bob Hobart, Marcia Honold, Kent Jacobson, Holly Johnson, Jay Johnson, Tim Kelly, Tom Klein, Greg Koch, Andrew Korsberg, Jacqueline Kovarik, Ben Lagerquist, Olivia LeDee, Mark Lindquist, Tim Loesch, Molly MacGregor, Jason Moeckel, Jon Nelson, Tim Norton, Dan O'Shea, Kath Ouska, Cory Palmer, Ann Pierce, Laura Preus, Tom Provost, Ed Quinn, Bart Richardson, Pat Rivers, Deb Rose, Rose Rudesill, Dave Schiller, Dave Schuller, Greg Spoden, Brian Stenquist, Mike Tenney, Aaron Vande Linde, Curtis Vanderschaff, Laura Van Riper, Bob Welsh, Jenifer Wical, Grant Wilson, Laurie Young, and Trina Zieman.

Editing by

Mary Hoff

Graphic design by

Steve Seefeldt, Minnesota DNR
Creative Services Unit

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