DEPARTMENT OF NATURAL RESOURCES

ECOLOGICAL AND WATER RESOURCES DIVISION STRATEGIC PLAN 2018-2028

LEADERSHIP MESSAGE: PURPOSE AND EXECUTIVE SUMMARY

Luke Skinner

Minnesota is blessed with a rich diversity of natural resources that we all need and cherish, but we sometimes take them for granted. Our vast waters, deep forests, prairies and all the plants and animals that inhabit them are part of the fabric of our state. We value and use our natural resources in many ways. Water is core to the livelihood of all people, and clean and plentiful water is an expectation for domestic use, businesses, agriculture and recreation. This same water is the lifeblood of ecosystems that support an array of plant and animal communities. Our forests, prairies and other landscapes are also under pressure to provide for multiple values and uses within our state.

Minnesotans want future generations to have the same rich quality of life, and protection and management of our natural resources is paramount. To sustain our natural resources, we must better understand the threats to natural resources, regulate responsibly and take care of the resources in our charge. The work we do is all around you.

We are the Minnesota Department of Natural Resources (DNR) Ecological and Water Resources (EWR) Division. EWR protects and manages our natural resources, and provides critical information and regulatory oversight to state and local governments and landowners to foster natural resources stewardship and enhance recreational and economic uses.

Steve Colvin

Our customers include local governments, conservation organizations, businesses, landowners and all citizens who benefit from healthy natural resources. We have a number of diverse and important programs that contribute to our work, including invasive species, water regulation, dam safety, rare species, environmental review and nongame wildlife. Back in 2010, EWR underwent a transformative process that integrated the former Waters and Ecological Resources divisions to create a new division. A lot has changed since then. The size of the division, the diversity and importance of its programs and projects, and the challenges of effectively integrating these efforts require a strategic plan.

EWR is one of seven divisions within the DNR. | Number of full-time staff: 406 | Number of programs: 38
Four work sections: ecosystem management and protection; conservation assistance and regulation; inventory, monitoring and analysis; and strategic information services | 2016/17 Budget: $174 million

EWR'S VISION STATEMENT:

HEALTHY LANDS AND WATERS THROUGHOUT MINNESOTA.

The DNR's strategic plan, known as the Conservation Agenda, includes the department's mission and goals. EWR's strategic plan describes how we will fulfill our role in the department. It will help set and communicate direction and priorities, shape and guide division-level work, align our internal resources and guide our decision-making. Our strategic plan articulates why we do our work as well as how it gets done. Our hope is that the plan will lead to a better understanding of the importance of our work, improved communications and public relations, and increasing public, professional and political support.

To achieve our vision, we must seek to understand the key strategic issues the state is facing that stand in the way of success. This plan identifies eight issues that will affect our ability to achieve healthy lands and waters in Minnesota. The plan outlines goals and strategies needed to overcome each issue and reach our vision and mission, and meet public expectations.

The strategic plan will be our roadmap for the next decade. It will provide a better understanding of the challenges and trends that affect us, outline our needs, and provide new opportunities for collaboration that can advance our vision to the benefit of all Minnesotans.

Luke Skinner, Outgoing Director
Ecological and Water Resources
Minnesota Department of Natural Resources

Steve Colvin, Division Director
Ecological and Water Resources
Minnesota Department of Natural Resources

May 2018

LAKE COUNTY.
A NATIVE PLANT
COMMUNITY WITHIN
A WHITE PINE/RED
PINE FOREST.

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FRONT COVER: A REMOTE LAKE IN THE BOUNDARY WATERS CANOE AREA. INFORMATION AND DATA COLLECTED ON NATIVE HABITATS, PLANTS AND ANIMALS HELP US BETTER UNDERSTAND THE CONDITION OF OUR LAKES, WETLANDS AND FORESTS.

INTRODUCTION

Who We Are

Ecological and Water Resources (EWR) is one of seven divisions within the Department of Natural Resources. EWR programs are organized into four sections.

In total, EWR has more than 400 staff and 38 distinct programs (see Appendix A), creating a diverse and skilled professional workforce.

EWR HAS FOUR PROGRAM SECTIONS

1 **ECOSYSTEM MANAGEMENT AND PROTECTION**
SCIENTIFIC AND NATURAL AREAS, INVASIVE SPECIES, WETLANDS, NONGAME WILDLIFE, RARE RESOURCES, AND NATIVE PLANT ECOLOGY.

2 **CONSERVATION ASSISTANCE AND REGULATION**
WATER REGULATION, LAND USE AND FLOODPLAIN MANAGEMENT, ENVIRONMENTAL REVIEW, AND DAM SAFETY.

3 **INVENTORY, MONITORING AND ANALYSIS**
WATER MONITORING AND RESEARCH, STREAM HABITATS, CLEAN WATER COORDINATION AND COLLABORATION, BIOLOGICAL SURVEYS, AND CLIMATOLOGY.

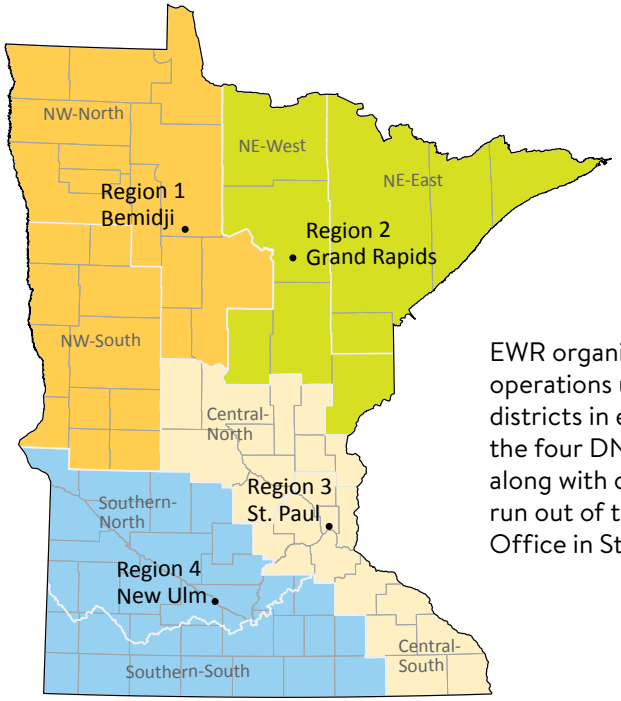
4 **STRATEGIC INFORMATION SYSTEMS**
BUSINESS OPERATIONS, COMMUNICATIONS AND PLANNING, AND INFORMATION TECHNOLOGY.

Plan Purpose and Timeline

This plan provides the division's strategic direction from 2018 to 2028. It is designed to guide division management and support the DNR's Conservation Agenda. The plan communicates the division's 10-year goals and describes important trends and issues facing the division as it pursues those goals.

Audience

Key audiences for this strategic plan are our external partners in public, private and nonprofit organizations; members of the Minnesota Legislature; colleagues and leaders in the DNR, and of course, members of our own division. During our outreach process, other DNR divisions and interest groups emphasized a desire for more communication and collaboration with us as we pursue our goals. We hope this plan provides to those interested in our work a clear and compelling vision, a set of important goals, and the strategies necessary to achieve success.



EWR organizes its field operations using two districts in each of the four DNR regions, along with operations run out of the Central Office in St. Paul.

The division's leaders will use the plan to develop budget and policy priorities, which will influence annual and biennial work planning.

Essential Elements of our Strategic Plan

- Organizational mission—*the DNR mission*
- EWR vision statement—*our vision of the future*
- Strategic issues—*the challenges we face as we work toward our vision*
- 10-year goals—*our commitment to outcomes and results that are important to Minnesotans*
- Primary strategies to accomplish our 10-year goals—*essential elements of our work*
- Performance measures for the 10-year goals—*how we measure the results of our work*

GUIDING PRINCIPLES

Guiding principles represent a broad philosophy that guides the organization irrespective of changes in type of work or the top management structure. Our division is guided by the DNR's overarching mission and its commitment to cultivating a culture of safety and respect for all, our division vision, a set of division values, and the values of Minnesotans, embodied in our statutes and rules.

DNR Mission

Each of the seven DNR divisions plays a role in helping the department achieve its mission and goals and carry out its work; therefore, the DNR's mission is also EWR's mission.

EWR staff monitor trends for a wide range of Minnesota animal and plant species.

DNR/EWR MISSION:

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.

GUIDING PRINCIPLES continued

EWR Vision

Each division has its own way of describing the successful achievement of the DNR's mission. EWR had a vision ("Healthy watersheds throughout Minnesota") that was developed during the integration of the former divisions of Waters and Ecological Resources in 2010. Many thought that this vision statement was no longer inclusive enough, given that our work is both land- and water-based, as well as above and below ground. One goal of this strategic plan was to refresh our vision statement.

EWR'S REFRESHED VISION STATEMENT:

Healthy lands and waters throughout Minnesota.

EWR's refreshed vision statement expresses our commitment to healthy lands and waters.

EWR Values

EWR staff are passionate about our state's rich and vast natural resources. We care about resource conservation, protection and restoration, and integrating human use for recreation and the economy. We strive to apply the following values in our day-to-day interactions and behavior:

- **Integrity:** We value professional integrity in the decisions we make, the quality of our work, the science we use, and the public services we offer.
- **Respect:** We respect the views, values and beliefs of each other, our partners, and the public. We respect our natural resources, the diversity and interconnectedness of those resources, and people's use of natural resources.
- **Dedication:** We are dedicated to the DNR's mission and doing our part to continue the DNR's legacy. We are dedicated to using sound science to inform our decisions.
- **Collaboration:** We are collaborative, working with each other, our partners, and the public; committed to listening and being responsive, inclusive, open and transparent.
- **Adaptation:** We adapt to changing circumstances and priorities, new information and varying points of view, allowing us to continually grow and improve.

VALUES SHARED BY MINNESOTANS

reflect values that the DNR must weave into the everyday fabric of our work.

Minnesota Values

Minnesotans value many things about the state, including clean water, natural places, plants and animals, and using our state's vast natural resources for recreation and economic gain. Sometimes those values conflict with one another, and balancing the wide range of uses and interests can be challenging. Minnesotans let us know what they value when they vote and through discussions with their elected officials who help safeguard certain state values by creating laws and funding government work. Much of the department's work is guided by Minnesota statutes and rules, which provide the foundation for decision-making, especially in the face of conflicting values. Minnesotans want to help shape decisions and policy. We strive to provide a respectful and safe environment for this involvement.

SINCE 1979, EWR'S MINNESOTA BIOLOGICAL SURVEY PROGRAM HAS COLLECTED DATA ON MORE THAN 420 SPECIES OF BEES. THIS GREATLY INCREASES OUR KNOWLEDGE OF MINNESOTA'S RARE FEATURES.

STRATEGIC ISSUES, GOALS AND STRATEGIES

Trends

The world is constantly changing all around us. Each day we face new social, political, economic and technological opportunities and challenges. Looking at trends in these areas provides information that helps us identify issues that might limit our ability to reach our vision, achieve our mission and meet public expectations. Trends and challenges include:

- Public demand and expectations for natural resources are changing, such as how people want to use and enjoy them, or how they want to engage with us.
- Changes in the global market, Minnesota's human population and associated increases in land development and intensified land use can disrupt watersheds, reduce water quality, decrease and contaminate water supplies and other natural resources, and reduce biological diversity.
- Changes in Minnesota's climate, which can put public safety at risk, change surface and underground water supplies, and harm biological diversity, especially for species at the edge of their range.
- Invasive species spread, which can diminish recreational opportunities, negatively affect biological diversity, and cause economic harm.
- Rapidly changing communications technologies expanding opportunities for engagement and collaboration with stakeholders. At the same time, the flood of information makes it more challenging for our messages to be heard and understood. The pace of modern life makes it difficult for individuals and organizations to find time to collaborate with us, yet the need for collaborative solutions is greater than ever.
- New data collection, storage and delivery technologies and expectations for data governance practices put pressure on projects, programs and the organization to invest in and use state of the art data management systems. These changes not only increase the cost of data but also increase the value of data as a foundation for decision-making and as a product in and of itself.
- Changes in Minnesota's workforce, the number of people available, training, diversity and employee expectations bring new workplace challenges and opportunities.
- Shifts in environmental funding to specialized sources intended to support new initiatives and decreased funding for long-term traditional activities put pressure on the division to deliver high-priority services that are required by law.

STRATEGIC ISSUES, GOALS AND STRATEGIES continued

Issues, Goals and Strategies

For our division to be successful, we have to focus on the key issues that challenge us—issues that are informed by trends. We have identified eight strategic issues. These eight issues are intimately tied together.

Biological Diversity

Water Resources

Invasive Species

Climate Change

Communication and Collaboration

Data

Workforce Health

Sustainable Funding

Our 10-year goals (our commitment to a set of outcomes valuable to Minnesotans):

- The biological diversity of Minnesota's lands and waters will be healthy, protected, restored and enhanced, and will be used and enjoyed sustainably.
- Minnesota waters will be managed and used sustainably and the water quality will be improved and protected.
- The spread of new and existing invasive species will be prevented and their harmful effects on Minnesota's lands and waters will be minimized.
- The impacts of climate change on Minnesota's lands and waters will be minimized.
- We will exemplify excellence in organizational communication and collaboration.
- We will exemplify excellence in data management and delivery.
- Our workforce will be diverse, skilled and adaptable, and will exemplify our culture of respect.
- Our financial support systems will be strong, sustainable and innovative.

Each goal also has a set of strategies that, when implemented, help us address the issues and increase our chances of being successful in realizing our long-term vision: Healthy lands and waters throughout Minnesota. We set measureable goals, which can be tracked using performance measures. The performance measures identified in this plan provide examples on how to measure progress toward realizing our vision.

IONA'S BEACH SCIENTIFIC AND NATURAL AREA ON THE NORTH SHORE.

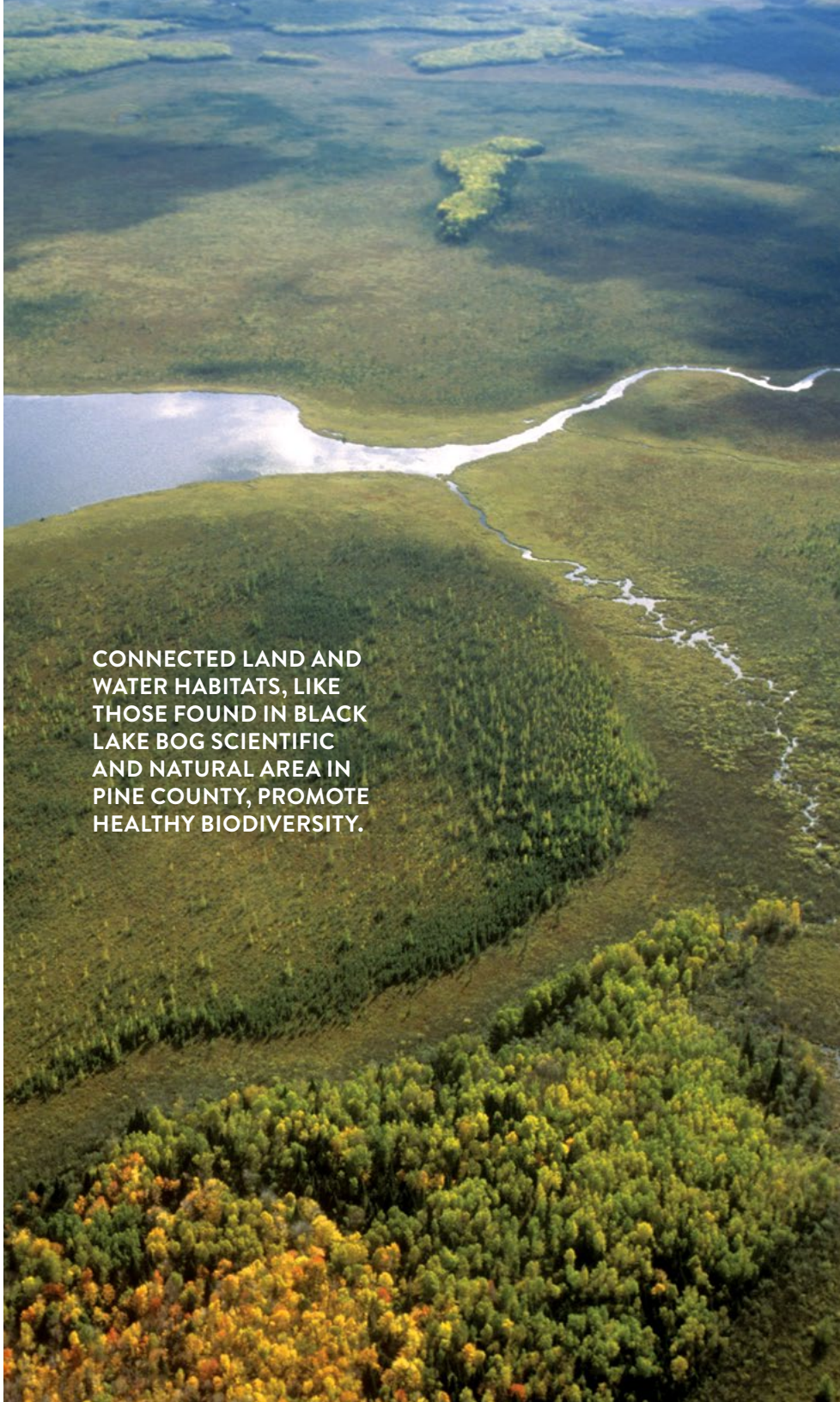
STRATEGIC ISSUE

BIOLOGICAL DIVERSITY

GOAL: The biological diversity of Minnesota's lands and waters will be healthy, protected, restored and enhanced, and will be used and enjoyed sustainably by people.

Why this is important:

Biological diversity is defined as the variety, functions and interactions of all living things at the genetic, species and ecosystem level. As such, biological diversity is a key ingredient in healthy lands and waters, social and economic vitality, and the high quality of life that Minnesotans value. Biological diversity is critical to key ecosystem services that benefit people, such as water purification, plant pollination, and resistance to invasive species. Current biological diversity can be threatened by environmental and human stresses, such as changing temperature and precipitation patterns, urban development and other land uses, resource extraction, pollution, and wildlife diseases. Our division provides department leadership in protecting, restoring, and enhancing rare plants and animals as well as rare aquatic habitats like calcareous fens and vernal pools. Healthy lands and waters depend on healthy biological diversity.



CONNECTED LAND AND WATER HABITATS, LIKE THOSE FOUND IN BLACK LAKE BOG SCIENTIFIC AND NATURAL AREA IN PINE COUNTY, PROMOTE HEALTHY BIODIVERSITY.

Strategies to accomplish our goal:

- Create a network of connected habitats across the landscape that can withstand external pressure and disturbance.
- Ensure sufficient resources to maintain and manage EWR-administered lands.
- Work closely with land managers to protect biological diversity and enhance resilience on state, county, federal and private lands.
- Collect and analyze important data on the biological diversity of Minnesota's lands and waters.
- Provide opportunities for the public to enjoy, learn about and participate in the conservation of Minnesota's biological diversity.
- Carry out permitting responsibilities efficiently, effectively and consistently with regulatory authority.

Sample performance measures:

- Number of acres of High Priority habitat identified as protected in the state prairie plan.
- Number of rare species and communities in Scientific and Natural Areas (SNAs).

BIOLOGICAL DIVERSITY
IS THE VARIETY, FUNCTIONS AND INTERACTIONS OF ALL LIVING THINGS AT THE GENETIC, SPECIES AND ECOSYSTEM LEVEL.

SCIENTIFIC AND NATURAL AREAS, SUCH AS BLUESTEM PRAIRIE, PROVIDE OPPORTUNITIES TO SEE BIG BLUESTEM GRASS AND OTHER NATIVE GRASSES.

DID YOU KNOW?

EWR manages 166 Scientific and Natural Areas, protecting 191,445 acres and 215 (or 37%) of our state's rare species.

STRATEGIC ISSUE

WATER RESOURCES

GOAL: Minnesota water resources will be managed and used sustainably and the water quality will be improved and protected.

Why this is important:

Water is vital to Minnesota. Adequate water supply is necessary to support industries and households. Clean water, and management of water on the landscape, is not only essential to plant and animal health but also human health. Changing water resources affect how Minnesotans live and work, and where and how they recreate. Minnesota water use is increasing and water resources are at risk of overuse, contamination and degradation. Minnesota's population is increasing, new land development continues, existing land use is intensifying, and land development is disrupting watershed functions. It is our division's charge to manage water so that it is available for people to use, now and in the future.

Strategies to accomplish our goal:

- Collect, analyze and share important data on the status and trends of Minnesota's waters and their use to support decision-making, permitting and awareness.
- Engage water users and other stakeholders to address challenges and opportunities in water use, watershed function and impaired waters.
- Use a systems-based approach for water management and conservation.
- Ensure our permitting responsibilities are carried out efficiently, effectively and consistently with regulatory authority.

Sample performance measures:

- Aquifer water level trends.
- Rate of compliance with appropriation permit regulations.

EWR staff and interagency biologists propogate new mussels as part of an education and outreach project aimed at cleaning water.

WATER SUSTAINABILITY IS THE USE OF WATER TO PROVIDE FOR THE NEEDS OF SOCIETY, NOW AND IN THE FUTURE, WITHOUT UNACCEPTABLE SOCIAL, ECONOMIC OR ENVIRONMENTAL CONSEQUENCES.

WATER QUALITY DESCRIBES THE CONDITION OF THE WATER, INCLUDING CHEMICAL, PHYSICAL AND BIOLOGICAL CHARACTERISTICS, USUALLY WITH RESPECT TO ITS SUITABILITY FOR A PARTICULAR PURPOSE, SUCH AS DRINKING OR SWIMMING.

EWR ECOLOGISTS AND HYDROLOGISTS HAVE PLAYED IMPORTANT ROLES IN UNDERSTANDING MINNESOTA'S CALCAREOUS FENS. CALCAREOUS FENS ARE PROTECTED BY STATE LAW AND ARE HOTSPOTS FOR RARE PLANT SPECIES.

DID YOU KNOW?

- EWR manages 124 dams and 94 water level control structures.
- The new Minnesota Water Conservation Reporting system was launched in January 2018, aimed at fostering water conservation behavior and measuring water appropriation permit progress.
- Five agencies help administer our state's water quality and quantity:

DNR: water quantity and water quality

Pollution Control Agency: water quality and pollution

Department of Agriculture: water quality and agricultural chemicals

Department of Health: drinking water quality

Board of Water and Soil Resources: local water planning, wetlands protection, support to watershed districts

STRATEGIC ISSUE

INVASIVE SPECIES

GOAL: The spread of new and existing invasive species will be prevented and their harmful effects on Minnesota's lands and waters will be minimized.

Setting a controlled fire on state land is one way to manage terrestrial invasive species.

Why this is important:

Minnesota is known for its great outdoors. Our lands and waters provide abundant boating, fishing, hunting, hiking, and wildlife watching opportunities. They also provide our businesses with the resources they need to succeed. Invasive species such as zebra mussels, Eurasian watermilfoil, common buckthorn and emerald ash borer can harm natural resources and native species. Invasive species decrease native populations and biological diversity, affect recreational use of our lands and waters, and impact businesses that depend on healthy lands and waters. EWR is responsible for leading the department's efforts in managing invasive aquatic plants, animals and terrestrial vertebrates.

Strategies to accomplish our goal:

- Provide leadership and guidance to prevent and manage invasive species based on effectiveness, risk and negative impacts.
- Actively prevent and manage invasive species with existing and new science-based technologies.
- Protect and manage DNR-administered lands and waters by promoting DNR Operational Order 113: Invasive Species Prevention and Management throughout the department.
- Create and build upon partnerships with academic institutions, nonprofit organizations and all levels of government to enhance our understanding of invasive species ecology, prevention and management.
- Work with partners and staff to expand awareness that personal responsibility is the key to reducing the risk of spreading aquatic and terrestrial invasive species.
- Work with partners, such as counties and lake associations, to reduce the negative effects of invasive species in public waters and on state lands.

Sample performance measures:

- Percent of waters not infested / infested with invasive species.
- Rate of compliance with invasive species.

INVASIVE SPECIES
ARE SPECIES THAT ARE NOT NATIVE TO MINNESOTA AND CAUSE ECONOMIC OR ENVIRONMENTAL HARM OR HARM TO HUMAN HEALTH. INVASIVE SPECIES CAN OCCUR IN THE WATER (AQUATIC) OR ON LAND (TERRESTRIAL).

DOZENS OF DECONTAMINATION LOCATIONS AROUND MINNESOTA HELP BOATERS PREVENT THE SPREAD OF AQUATIC INVASIVE SPECIES.

DID YOU KNOW?

- 100 non-native species are reportedly living in Lake Superior and its wetlands.
- Since 2010, the Scientific and Natural Area Program has controlled an average of 1,400 acres of invasive species each year.
- More than 9 out of 10 Minnesota lakes are not listed as infested with any invasive species.
- Zebra mussels have been confirmed in fewer than 200 of Minnesota's 11,842 lakes.

STRATEGIC ISSUE

CLIMATE CHANGE

GOAL: The impacts of climate change on Minnesota's lands and waters will be minimized.

Why this is important:

Changes in Minnesota's temperature and precipitation put public safety, water resources and biological diversity at risk. The most pronounced climate changes anticipated so far are: Low temperatures are rising, both in the winter and at night; precipitation is increasing, often in the form of larger, heavier storms; and it is also likely that, as time progresses, summer days will grow hotter.

Recent devastating events have painted this picture. In the record-setting Duluth summer floods of 2012, there were cave-ins at bridge and water crossings, dam failures, zoo animals that escaped or were drowned, and more than $100 million in damage to homes. In the summer of 2017, southern Minnesota experienced more than nine inches of rain and multiple tornados in one day, causing mudslides and extensive damage to infrastructure and crops.

Statewide, higher- and lower-than-average precipitation and temperatures can affect Minnesota businesses, as well as plant and animal species: Droughts can impact agricultural businesses; extreme rain events can cause dam failures, resulting in significant design and regulatory implications; earlier springs and warmer summers and falls allow the eastern larch beetle to reproduce faster and for a longer period of time, leading to more beetles killing tamarack; lack of frozen ground can impact timber harvest; and fewer days of ice cover on lakes can have widespread economic, biological and recreational impacts. To further complicate things, the impacts of climate change are occurring simultaneously with other changes in the landscape, such as loss of habitat, the spread of invasive species and expanded agricultural drainage.

Humans may be able to adapt, but not all species can. EWR's data collection and analysis work helps us better understand climate-related trends and impacts, and our partnerships help enhance climate change preparedness and recovery.

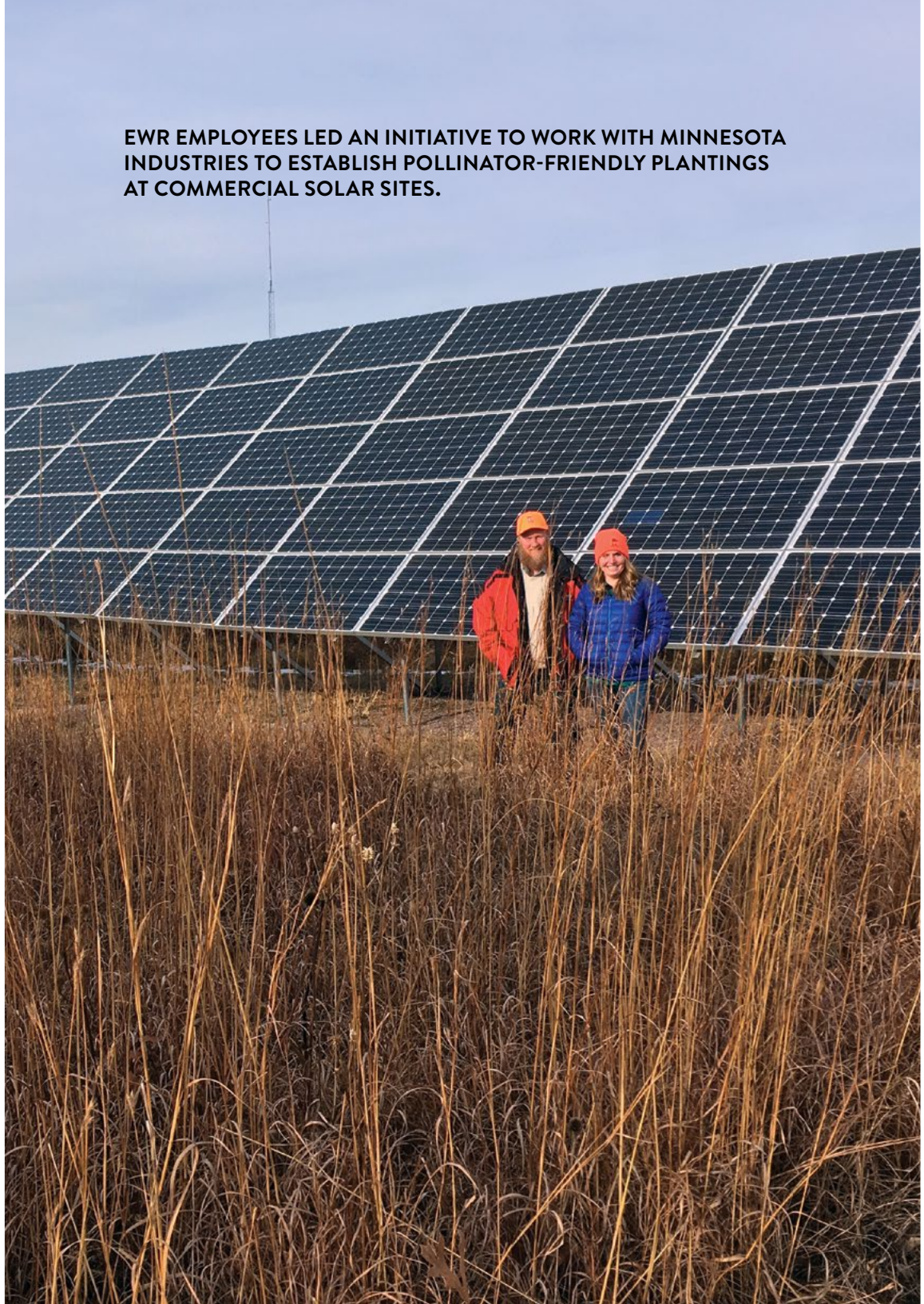
Strategies to accomplish our goal:

- Provide leadership and expertise in climate adaptation and mitigation.
- Continue to collect, analyze and publish information on Minnesota's changing climate.
- Address climate change mitigation by reducing our use of fossil fuels for transportation, electricity and heating and improving green business practices.
- Implement climate change adaptation by advising on how to reduce impacts of floods and droughts, invasive species risk reduction and other biological stressors.
- Integrate climate change response into our work.

Sample performance measures:

- Number of climate monitoring stations.
- Percent reduction of energy use measured in gasoline equivalents.

CLIMATE CHANGE IS A STATISTICALLY SIGNIFICANT CHANGE, OVER A PERIOD OF SEVERAL DECADES OR LONGER, IN TEMPERATURE, PRECIPITATION, WIND SPEED OR OTHER CLIMATIC MEASURE.



EWR EMPLOYEES LED AN INITIATIVE TO WORK WITH MINNESOTA INDUSTRIES TO ESTABLISH POLLINATOR-FRIENDLY PLANTINGS AT COMMERCIAL SOLAR SITES.

DID YOU KNOW?

- Through 2016,Minnesota has warmed by an average of 0.24 degrees Fahrenheit per decade since 1895, and by 2.5 times that rate, or 0.59 degrees Fahrenheit per decade, since 1970.
- Locations throughout Minnesota have lost nine to 16 annual subzero (Fahrenheit) nights since 1970.
- Two-inch and three-inch rains increased in frequency by 51% and 82%, respectively, between 1916 and 2015.

STRATEGIC ISSUE

COMMUNICATIONS AND COLLABORATION

GOAL: We will exemplify excellence in organizational communication and collaboration.

Why this is important:

Our work is complex. It has far-reaching impacts on natural resources and the people who use them. It is challenging to communicate effectively about complex science and statutes. When we ignore this challenge, we can leave people feeling confused, frustrated and upset. When we embrace it, we can help people feel informed, respected and engaged. Incorporating diverse perspectives makes our efforts and outcomes better, more authentic and thoughtful. A step in this direction is to improve our listening skills. When we seek first to understand and only then to be understood, we can earn the respect and engagement of the many people and partners involved in and affected by what we do. We can make our communications and collaboration efforts more targeted, coordinated and integrated. To more effectively represent our division, the department and our work on behalf of all Minnesotans, we will improve our conversations, our presentations and our broader communications.

VOLUNTEERS HELP COLLECT SEEDS AT EVENTS LIKE THIS ONE AT LOST VALLEY PRAIRIE SCIENTIFIC AND NATURAL AREA.

Strategies to accomplish our goal:

- Enhance our communication and outreach with active stakeholders and the public.
- Continuously improve EWR understanding of public perceptions and perspectives on ecological and water resources issues.
- Effectively communicate the value of healthy lands and waters.
- Enhance our collaboration with individuals and organizations on important natural resource issues.
- Improve internal communication, including two-way communication, to foster effective working relationships.
- Expand training in interpersonal communication skills.

Sample performance measures:

- Percent of projects and initiatives for which a communications plan is developed and implemented.
- Percent of staff who receive training in effective communication skills, such as customer service, two-way communication, handling difficult conversations, regulatory situations, plain language, accessibility, saying "no," and informed consent.

Volunteers are instructed on proper invasive species removal.

DID YOU KNOW?

- The DNR trained 949 authorized aquatic invasive species watercraft inspectors statewide during the 2017 boating season.
- In 2016, Minnesota Project WET (Water Education for Teachers) reached more than 20,000 K–12 educators, interpreters, college students and youth leaders in hands-on lessons that encourage critical thinking about water conservation.

STRATEGIC ISSUE

DATA

GOAL: We will exemplify excellence in data management and delivery.

Why this is important:

Data are not only primary ingredients for greater understanding, but are also powerful tools in making sound resource management decisions. For instance, data can help alert us to a declining water trend. Analysis of those data may help us understand it is a natural trend supported by years of data collection. The analysis helps inform a water permitting decision, which can help people feel confident water is being used and managed appropriately. EWR is one of the state's main repositories of natural history data. EWR also collects large volumes of water monitoring, groundwater, climate, rare species, ecological and other data, serving both internal and external customers. Many interest groups, partners and members of the public rely on the DNR as an authoritative data source to perform work and improve understanding. EWR data are frequently treated as a product, and we want to ensure that the data we collect and manage are what people need and can be easily delivered. Data must also be analyzed and made consumable to be useful. Through data analysis and delivery, EWR provides the science to influence and inform department and partner decision-making. It is time-consuming, expensive and necessary to analyze and manage data so that they are accurate, complete and accessible.

Strategies to accomplish our goal:

- Adopt and implement state of the art data governance practices.
- Enhance the delivery of high priority data to stakeholders.
- Invest in new information technology and expertise to support excellence in data management.

Sample performance measures:

- Percent of databases with current metadata.
- Percent of data collected by EWR that exist in a connected, enterprise-level data management system.

1.
We **capture data** on water, ecology, natural history and much more.

2.
We analyze and **evaluate data** in order to make them consumable and useful.

3.
We **share data** within the DNR, with outside partners, and with the public.

4.
Data then becomes a powerful tool in making **sound resource management decisions**.

EWR COLLEAGUES WORKING ON A COUNTY GEOLOGIC ATLAS: A MAP WHICH CAN IDENTIFY GEOLOGY, GROUNDWATER, POLLUTION SENSITIVITY, MINERAL DEPOSITS OR OTHER FEATURES OF INTEREST.

DID YOU KNOW?

EWR collects water quantity data from more than 3,800 monitoring locations statewide: 1,030 groundwater level monitoring locations; 280 stream flow locations; 1,000 lake level locations; 1,500 rainfall locations and 40 weather stations.

STRATEGIC ISSUE

WORKFORCE HEALTH

GOAL: Our workforce will be diverse, skilled and adaptable, and will exemplify our culture of respect.

Why this is important:

Satisfied, engaged and respected employees are vital to the state's ability to provide exceptional customer service. We want to retain our staff, train them, and make sure they have what they need to succeed. Employee retention is strongly linked to job satisfaction, which can be strengthened by providing ample training and advancement opportunities, succession planning, a clear organizational structure, work-life balance, and a culture of safety and respect. At the same time, Minnesota's population continues to diversify, both demographically and in skill sets, and our workforce doesn't currently reflect that diversity. To better understand the communities that EWR serves, we need to have a more diverse workforce. A more diverse workforce can help employees learn new ideas, be more creative, become better communicators, gain perspective, and become more respectful and well-rounded.

Strategies to accomplish our goal:

- Enhance our recruitment of diverse employees (both demographically and for 21st Century skill sets).
- Strengthen the division's workforce through an innovative hiring process that attracts and recruits diverse, passionate and qualified individuals.
- Support our existing employees, enhancing their adaptability and opportunities for advancement and developing skills.
- Create a transitioning workforce (succession plan) that transfers knowledge from experienced employees and provides development for upcoming staff.
- Ensure that all of our employees embody the principles of a respectful and safe culture.
- Ensure an organizational structure that supports effective and efficient work and decision-making.

Sample performance measures:

- Results from an EWR staff satisfaction survey.
- Percent of our workforce that have annually-reviewed position descriptions and Growth Opportunity Plans.
- Number of preventable accidents and safety violations per year.

Data collection in St. Louis County is guiding conservation and land management by the DNR and others across the state.

EWR STAFF ORGANIZE AND CONDUCT PLANT IDENTIFICATION TRAINING FOR STAFF OF CONSERVATION ORGANIZATIONS AND NUMEROUS FEDERAL, STATE AND LOCAL RESOURCE AGENCIES.

DID YOU KNOW?

- EWR staff by work location: 46% Central Office, 54% Regional.
- EWR's overall female/male ratio: 44% female, 56% male. The only age range with a greater number of females than males is 30-39 years.

STRATEGIC ISSUE

SUSTAINABLE FUNDING

GOAL: Our financial support systems will be strong, sustainable and innovative.

Why this is important:

EWR carries out a number of important and valuable services. Public expectations for EWR services are high; many of which are required by state statute, laws and rule. In some instances, not enough resources are available to meet those statutes or expectations effectively. The high priority work of other state agencies, the DNR and EWR often exceed the existing financial resources of the state. EWR leverages a wide range of funding to fulfill our mandates, but funding constraints can limit our effectiveness. Some of our diverse funding sources have constraints on their use that limit our staff's ability to backfill or help out on a parallel work assignment. Other aspects of our work, such as managing rare species, are not supported by user fees. Sustainable funding means being able to maintain and deliver on our statutory obligations. Having diverse funding is important for the broad variety of work for which we are responsible. We must also constantly improve our processes, think strategically and rethink our work priorities.

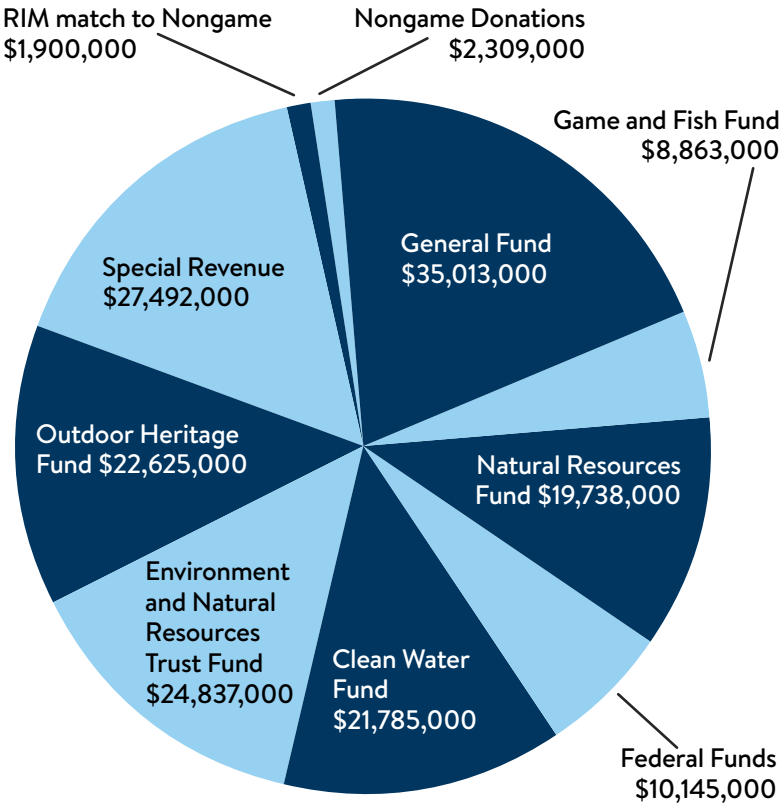
Strategies to accomplish our goal:

- Work with partners to sustain and diversify our financial resources to meet mandates and strategic goals.
- Ensure that we are effective and efficient in our use of funding sources.
- Use funds in a fiscally-accountable manner that meets mandates, public expectations and fund requirements.
- Ensure that stakeholders understand the value of the services in which they have invested.

Sample performance measures:

- Percent of our funding sources that support their own operation cost.
- Budget trends over time.

ECOLOGICAL AND WATER RESOURCES FY16-FY17 BIENNIAL BUDGET OVERVIEW BY FUND – $174.7 MILLION



PARTNERSHIPS ARE A KEY INGREDIENT TO LEVERAGING AND MAXIMIZING FUNDING.

DID YOU KNOW?

EWR manages ten different major funding sources to maintain and deliver our statutory obligations.

PLAN DEVELOPMENT AND IMPLEMENTATION

Strategic Planning Team

An 18-member Strategic Planning Team met monthly between January and October of 2017 to develop the plan's core content. The team consisted of 15 EWR staff and three other representatives from the Enforcement, Forestry, and Lands and Minerals divisions. The team was built to reflect our division's program and regional diversity and included a range of staff positions, experience levels and genders.

STRATEGIC PLANNING TEAM

Strategic Planning Process Overview

The strategic planning process ran from January 2017 to January 2018. The chart below outlines the major steps in and timeline for the planning process.

1. Information gathering

- Stakeholder analysis.
- SWOT analysis: Internal analysis of Strengths, Weaknesses, Opportunities and Threats.
- PEST analysis: External analysis of Political, Economic, Social and Technological forces.
- Mandates analysis: Analysis of the statutes, rules and operational orders that shape our work.

2. Content development

- Vision statement.
- Values.
- Issues identification, goal formulation, strategy and measure development.

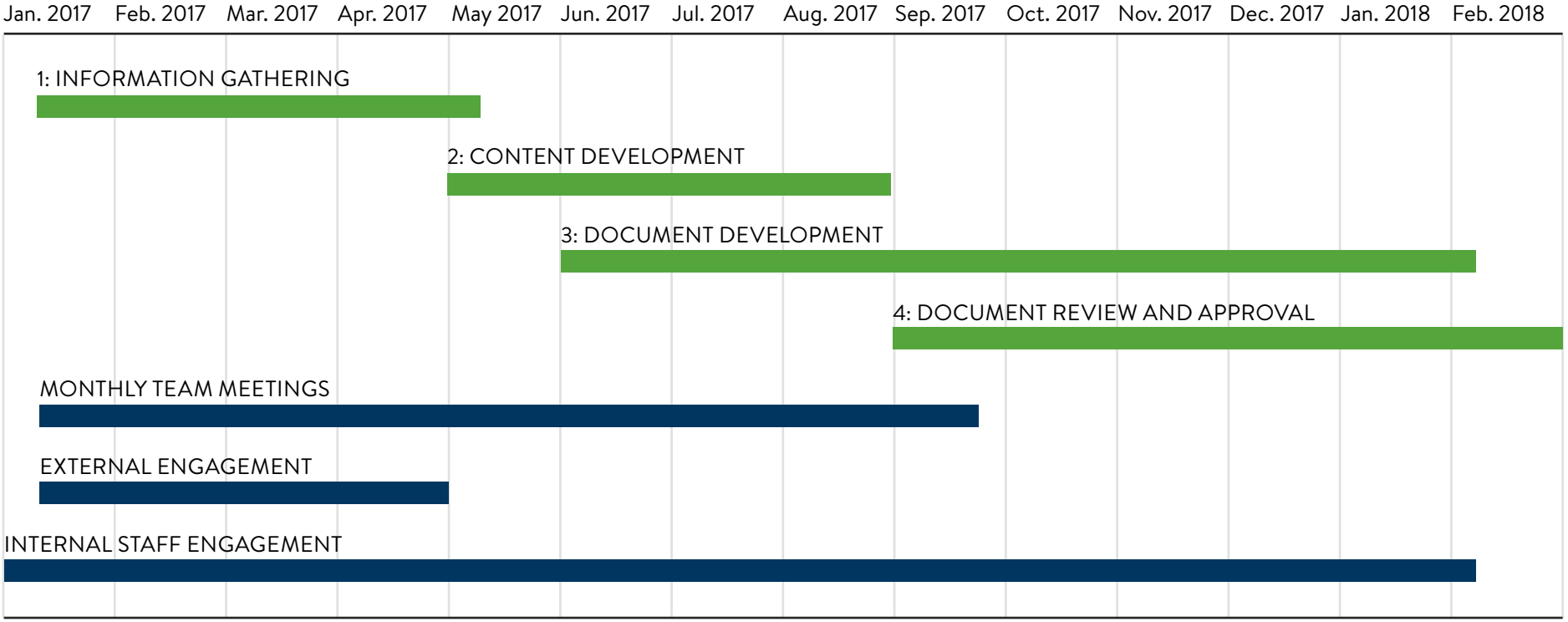
3. Document development

- Photos and facts.
- The story of "why" for each issue.

4. Document approval

- Nine draft reviews, involving more than 80 people from our division.

FOUR BASIC STRATEGIC PLANNING STEPS



Plan Engagement

It was critical for people inside and outside the department to be engaged in the planning process. Input from colleagues, as well as our partners, influenced the plan's content. Taking a bottom-up approach, the Planning Team was continuously fed new input and plan considerations, which were then distilled and incorporated, as appropriate, into each planning step along the way.

Internal

Engagement with EWR staff started in December 2016, before the Strategic Planning Team ever met, and continued through the end of the project. Following is a list of EWR staff engagements completed:

- Two EWR all-staff surveys, one in the beginning of the process and one in the middle.
- Eleven EWR in-person information and engagement sessions, held statewide.
- One Skype information and engagement session.
- Eight EWR staff product review groups.
- One non-EWR (i.e., other DNR divisions) staff product review group.
- Nine EWR all-staff update emails.
- Four EWR supervisor/manager input sessions.
- Three EWR leadership reviews.
- Two commissioner's office reviews.

External

Early in the planning process, the Planning Team performed a stakeholder analysis. More than 300 stakeholders were identified (not including individual cities, counties), which shows the diversity of our division and the reach it has in our state. Due to the large number of entities, engagement mostly included "opt in" monthly email updates. Five external focus group meetings were held around the state (one north, one south and three central) with our most active stakeholder groups to help us determine what outside forces (political, economic, social and technological) were affecting our division.

How to Use, Implement and Track this Plan

Division and department leadership will use the strategic plan as a lens to evaluate existing and proposed strategies, programs, products, services and projects to establish which plan strategies are a priority, including their impact on mandates, mission, interest groups, and our organization's ability to deliver the desired outcomes. Managers and supervisors will use the plan to inform program, region and work plan changes. All EWR colleagues should feel empowered to share and collaborate on the strategic direction of their own work.

Executing a strategic plan is frequently called Operational Planning. Programs, regions, sections and units can use this plan to inform annual priorities and work plans. Operational plans can focus on a particular goal that many different programs and regions work to achieve, or they can focus on what a particular group, such as section or region, is going to do to achieve a set of goals. These regional, program and individual efforts put the plan's strategies into motion.

Monitoring and evaluation: The effective dates of this 10-year Strategic Plan are 2018-2028. To make this plan more effective, it should be regularly reviewed and monitored. Each topic area provides sample performance measures, or ways to show whether we are making progress on the goals. These are meant to be examples, rather than a limitation on how to measure goal progress. Measures should be determined soon after this plan is adopted. Baseline data should be readily available and collected for about two years (2018-2020). A trend analysis should then be completed, and specific quantifiable goals should be established for the measure. Monitoring of measures should be completed as time and resources allow; every two years at a minimum. Four formal performance measure evaluations are recommended for years 2022, 2024, 2026 and 2028.

ACKNOWLEDGEMENTS

We would like to thank the many people who helped contribute to the plan from beginning to end.

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DNR Commissioner's Office

All partner and stakeholder focus group attendees;
your time and input is very much appreciated!

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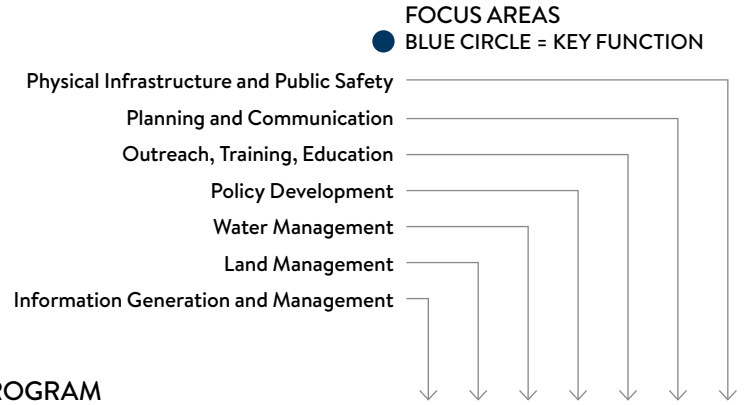
SUPPORTING DOCUMENTS

Below are notable past and present reports that informed this strategic plan. Those interested are encouraged to read the following reports to better understand the initiative and resource connections:

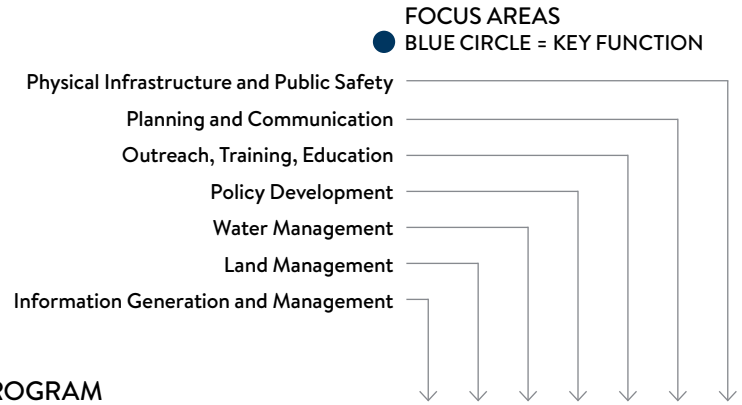
- DNR's 10-year Strategic Plan: Conservation Agenda 2015-2025.
- Biological Diversity: Minnesota's Wildlife Action Plan 2015-2025.
- Water Resources: Draft Strategic Plan for DNR's Groundwater Management Program October 2013.

SCUBA-CERTIFIED EWR STAFF PLAN A DIVE FOR HAND REMOVAL OF STARRY STONEWORT, AN AQUATIC INVASIVE SPECIES.

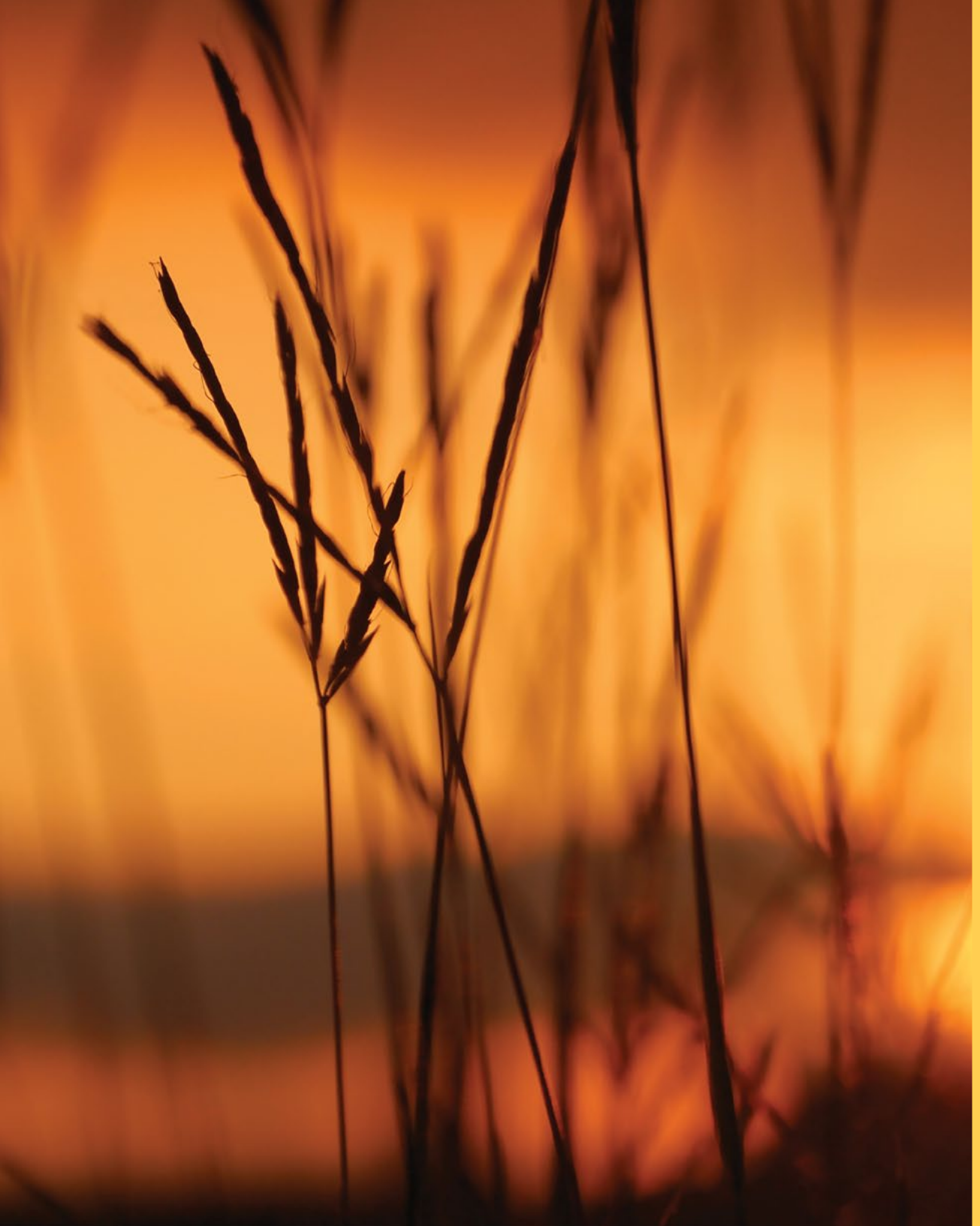
APPENDIX: KEY FUNCTIONS OF EWR PROGRAMS



DIVISION, SECTION OR REGION	UNIT	PROGRAM	Physical Infrastructure and Public Safety	Planning and Communication	Outreach, Training, Education	Policy Development	Water Management	Land Management	Information Generation and Management
Inventory, Monitoring and Analysis (IMA) Section	Hydrogeology and Groundwater	Groundwater Technical	●				●		
		Hydrogeology and Groundwater	●			●	●		
		County Geologic Atlas	●				●		
	Minnesota Biological Survey	Minnesota Biological Survey	●				●		
	Lakes Ecology Unit	Lake and Shoreline Assessment	●		●		●		
		Restoration Evaluation	●				●		
	River Ecology Unit	River Ecology and Restoration	●		●	●	●		
		Freshwater Mussel Restoration	●		●		●		
	Water Monitoring and Surveys	Climatology	●				●		
		Groundwater Monitoring	●						
		Stream Flow Monitoring	●						
		Lake Level Monitoring	●						
Conservation Assistance and Regulation (CAR) Section	Water Regulations	Natural Resources Damage Assessment		●	●			●	●
		Public Waters Permitting			●	●			●
		Water Appropriation Permits			●	●			
		Buffer Protection Map	●		●	●			
		Lake Aeration			●				●
	Dam Safety	Dam Safety	●		●	●	●		●
	Land Use	Floodplain Management	●	●		●	●		
		Shoreland, Wild and Scenic, and Mississippi River Critical Areas	●	●		●	●		
		Flood Damage Reduction Grants							●
	Environmental Review	Environmental Review	●	●	●	●	●	●	



DIVISION, SECTION OR REGION	UNIT	PROGRAM	Information Generation and Management	Land Management	Water Management	Policy Development	Outreach, Training, Education	Planning and Communication	Physical Infrastructure and Public Safety
Ecosystem Management and Protection (EMP) Section	Invasive Species	Invasive Species		●	●	●	●	●	
	Scientific and Natural Areas	Scientific and Natural Areas		●			●		
		Native Prairie Bank and Native Prairie Tax Exemption		●					
	Conservation Management and Rare Resources	Endangered Species	●	●		●		●	
		Wetland Policy	●	●		●	●		
		Regional Ecology	●	●	●		●	●	
		Forest Policy				●			
	Nongame Wildlife and Education	Nongame, WET, WILD	●	●	●	●	●		
Strategic Information Services (SIS) Section	Communications and Planning	Communications and Planning					●	●	
	Business	Business	●						
	Information Technology	Information Technology	●						
IMA, CAR and EMP Sections	Crosses several units (MBS, Nongame, CMRR, Environmental Review)	Natural Heritage Information System	●						
Region 1		Red River Coordination			●	●		●	
Region 2		Minnesota's Lake Superior Coastal Program					●		●
		St. Louis River Area of Concern Habitat Restoration			●		●		●
Region 3		Mississippi River Management	●		●	●		●	



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