

1.1 A bill for an act
 1.2 relating to natural resources; appropriating money from environment and natural
 1.3 resources trust fund; correcting previous appropriations; amending Laws 2015,
 1.4 chapter 76, section 2, subdivision 9; Laws 2017, chapter 96, section 2, subdivision
 1.5 8.

1.6 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

1.7 Section 1. APPROPRIATIONS.

1.8 The sums shown in the columns marked "Appropriations" are appropriated to the agencies
 1.9 and for the purposes specified in this act. The appropriations are from the environment and
 1.10 natural resources trust fund, or another named fund, and are available for the fiscal years
 1.11 indicated for each purpose. The figures "2018" and "2019" used in this act mean that the
 1.12 appropriations listed under them are available for the fiscal year ending June 30, 2018, or
 1.13 June 30, 2019, respectively. "The first year" is fiscal year 2018. "The second year" is fiscal
 1.14 year 2019. "The biennium" is fiscal years 2018 and 2019.

1.15		<u>APPROPRIATIONS</u>	
1.16		<u>Available for the Year</u>	
1.17		<u>Ending June 30</u>	
1.18		<u>2018</u>	<u>2019</u>

1.19 Sec. 2. MINNESOTA RESOURCES

1.20	<u>Subdivision 1. Total Appropriation</u>	<u>\$</u>	<u>-0-</u>	<u>\$</u>	<u>45,389,000</u>
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1.21 The amounts that may be spent for each
 1.22 purpose are specified in the following
 1.23 subdivisions. Appropriations are available for
 1.24 two years beginning July 1, 2018, unless

2.1 otherwise stated in the appropriation. Any
 2.2 unencumbered balance remaining in the first
 2.3 year does not cancel and is available for the
 2.4 second year or until the end of the
 2.5 appropriation.

2.6 **Subd. 2. Definition**

2.7 "Trust fund" means the Minnesota
 2.8 environment and natural resources trust fund
 2.9 established under the Minnesota Constitution,
 2.10 article XI, section 14.

2.11 **Subd. 3. Foundational Natural Resource Data**
 2.12 **and Information**

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7,293,000

2.13 **(a) County Geologic Atlases - Part A**

2.14 \$2,500,000 the second year is from the trust
 2.15 fund to the Board of Regents of the University
 2.16 of Minnesota, Minnesota Geological Survey,
 2.17 to continue producing county geologic atlases
 2.18 for the purpose of informed management of
 2.19 surface water and groundwater resources. This
 2.20 appropriation is to complete part A, which
 2.21 focuses on the properties and distribution of
 2.22 earth materials to define aquifer boundaries
 2.23 and the connection of aquifers to the land
 2.24 surface and surface water resources. This
 2.25 appropriation is available until June 30, 2022,
 2.26 by which time the project must be completed
 2.27 and final products delivered.

2.28 **(b) County Geologic Atlases - Part B**

2.29 \$1,500,000 the second year is from the trust
 2.30 fund to the commissioner of natural resources
 2.31 to continue producing county geologic atlases
 2.32 for the purpose of informed management of
 2.33 surface water and groundwater resources for
 2.34 drinking water and other purposes. This
 2.35 appropriation is to complete part B, which

3.1 uses the geologic formations mapped in part
3.2 A of the county geologic atlas project to
3.3 characterize the potential water yields of
3.4 aquifers and their sensitivity to contamination.

3.5 This appropriation is available until June 30,
3.6 2021, by which time the project must be
3.7 completed and final products delivered.

3.8 **(c) Providing Critical Water-Quality**
3.9 **Information for Lake Management**

3.10 \$250,000 the second year is from the trust
3.11 fund to the Board of Regents of the University
3.12 of Minnesota to develop a semiautomated
3.13 system to acquire, process, and deliver new
3.14 satellite-derived water-quality data in near real
3.15 time on water clarity, algae, and turbidity for
3.16 Minnesota lakes. This appropriation is
3.17 available until June 30, 2021, by which time
3.18 the project must be completed and final
3.19 products delivered.

3.20 **(d) Minnesota Biodiversity Atlas - Phase 2**

3.21 \$350,000 the second year is from the trust
3.22 fund to the Board of Regents of the University
3.23 of Minnesota to expand the biodiversity atlas
3.24 project by adding more than 800,000 records
3.25 and images of Minnesota wildlife, plants, and
3.26 fungi, including observations from state
3.27 agencies and other museum collections, to
3.28 enhance research, guide field surveys, and
3.29 inform conservation planning. This
3.30 appropriation is available until June 30, 2021,
3.31 by which time the project must be completed
3.32 and final products delivered.

3.33 **(e) Peatland Forest Management**

3.34 \$600,000 the second year is from the trust
3.35 fund to the Board of Regents of the University

4.1 of Minnesota to identify management actions
4.2 to maximize benefits to wildlife, water quality,
4.3 timber production, and native plant
4.4 communities in peatland forests. This
4.5 appropriation is available until June 30, 2022,
4.6 by which time the project must be completed
4.7 and final products delivered.

4.8 **(f) Assessing Natural Resource Benefits Provided**
4.9 **by Lichens and Mosses**

4.10 \$213,000 the second year is from the trust
4.11 fund to the Board of Regents of the University
4.12 of Minnesota to survey, map, and analyze
4.13 mosses and lichens across the state, including
4.14 their moisture-retention capacity, effects on
4.15 hydrology, and ability to filter airborne
4.16 pollutants. This appropriation is available until
4.17 June 30, 2021, by which time the project must
4.18 be completed and final products delivered.

4.19 **(g) Develop a System to Assess Wildlife Health**
4.20 **Threats in Minnesota**

4.21 \$280,000 the second year is from the trust
4.22 fund to the Board of Regents of the University
4.23 of Minnesota to develop a statewide
4.24 information-management system that uses
4.25 wildlife-rehabilitation data to identify
4.26 emerging threats to wildlife health in
4.27 Minnesota.

4.28 **(h) Conserving Minnesota's Forest Birds of**
4.29 **Management Concern**

4.30 \$500,000 the second year is from the trust
4.31 fund to the Board of Regents of the University
4.32 of Minnesota for the Natural Resources
4.33 Research Institute in Duluth to identify
4.34 forest-management actions and guidelines to
4.35 conserve birds in Minnesota's forests. This
4.36 appropriation is available until June 30, 2021,

5.1 by which time the project must be completed
5.2 and final products delivered.

5.3 **(i) Mapping Avian Movement in Minnesota**

5.4 \$200,000 the second year is from the trust
5.5 fund to the Board of Regents of the University
5.6 of Minnesota for the Natural Resources
5.7 Research Institute in Duluth to pilot the
5.8 establishment of a network of automated
5.9 radio-telemetry stations to monitor bird
5.10 migration and local movements and to develop
5.11 strategic plans for using infrastructure long
5.12 term to monitor animal movement for
5.13 conservation. This appropriation is available
5.14 until June 30, 2021, by which time the project
5.15 must be completed and final products
5.16 delivered.

5.17 **(j) Improve Trout-Stream Management by**
5.18 **Understanding Variable Winter Thermal**
5.19 **Conditions**

5.20 \$400,000 the second year is from the trust
5.21 fund to the Board of Regents of the University
5.22 of Minnesota to identify how winter
5.23 groundwater flows, air temperature, and
5.24 streambed conditions affect insect productivity
5.25 in order to guide restoration and management
5.26 efforts in southeastern Minnesota trout
5.27 streams. This appropriation is available until
5.28 June 30, 2021, by which time the project must
5.29 be completed and final products delivered.

5.30 **(k) Conserving Minnesota's Nine Species of**
5.31 **Freshwater Turtles**

5.32 \$300,000 the second year is from the trust
5.33 fund to the Minnesota Zoological Garden to
5.34 improve the long-term viability of Minnesota's
5.35 imperiled turtle populations by researching
5.36 threats, identifying mitigation strategies,

6.1 implementing mechanisms to reduce threats
 6.2 and mortality, and creating related outreach
 6.3 and educational materials. This appropriation
 6.4 is available until June 30, 2021, by which time
 6.5 the project must be completed and final
 6.6 products delivered.

6.7 **(l) Develop Sonar Data Mapping on Three**
 6.8 **Rivers to Assess Suitability for Native Mussel**
 6.9 **Habitat**

6.10 \$200,000 the second year is from the trust
 6.11 fund to the commissioner of natural resources
 6.12 for an agreement with the National Park
 6.13 Service to create high-resolution sonar data
 6.14 maps to identify critical native mussel habitat
 6.15 for the designated Lower St. Croix National
 6.16 Scenic Riverway and the Mississippi National
 6.17 River and Recreation Area including part of
 6.18 the Minnesota River.

6.19 Subd. 4. **Water Resources**

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5,275,000

6.20 **(a) Pilot Program to Optimize Local Mechanical**
 6.21 **and Pond Wastewater-Treatment Plants**

6.22 \$700,000 the second year is from the trust
 6.23 fund to the commissioner of the Minnesota
 6.24 Pollution Control Agency, in partnership with
 6.25 the Minnesota Rural Water Association and
 6.26 the University of Minnesota's Technical
 6.27 Assistance Program, to implement a pilot
 6.28 program to optimize existing local mechanical
 6.29 and pond wastewater-treatment systems to
 6.30 increase nutrient removal and improve
 6.31 efficiency without requiring costly upgrades.

6.32 **(b) Assess and Develop Strategies to Remove**
 6.33 **Microscopic Plastic-Particle Pollution from**
 6.34 **Minnesota Water Bodies**

6.35 \$300,000 the second year is from the trust
 6.36 fund to the Board of Regents of the University

7.1 of Minnesota to assess, track, and develop
7.2 methods to remove microscopic plastic
7.3 particles that are dispersed and accumulating
7.4 as pollution in Minnesota water bodies. This
7.5 appropriation is subject to Minnesota Statutes,
7.6 section 116P.10. This appropriation is
7.7 available until June 30, 2021, by which time
7.8 the project must be completed and final
7.9 products delivered.

7.10 **(c) Reduce Chlorides in Minnesota Waters by**
7.11 **Evaluating Road-Salt Alternatives and**
7.12 **Pavement Innovations**

7.13 \$400,000 the second year is from the trust
7.14 fund to the Board of Regents of the University
7.15 of Minnesota to investigate road-salt
7.16 alternatives and pavement innovations to
7.17 reduce lake, stream, and groundwater
7.18 degradation caused by road-salt chlorides. This
7.19 appropriation is available until June 30, 2021,
7.20 by which time the project must be completed
7.21 and final products delivered.

7.22 **(d) Protect Water Quality with Efficient**
7.23 **Removal of Contaminants in Treatment Ponds**
7.24 **for Storm Water**

7.25 \$325,000 the second year is from the trust
7.26 fund to the Board of Trustees of the Minnesota
7.27 State Colleges and Universities system for St.
7.28 Cloud State University to evaluate the
7.29 effectiveness of best-management practices
7.30 in removing contaminants from storm water
7.31 to safeguard aquatic habitats. This
7.32 appropriation is available until June 30, 2021,
7.33 by which time the project must be completed
7.34 and final products delivered.

7.35 **(e) Develop Small and Inexpensive Purification**
7.36 **System for Community Drinking Water**

8.1 \$425,000 the second year is from the trust
8.2 fund to the Board of Regents of the University
8.3 of Minnesota to develop a small and
8.4 inexpensive purification-technology system
8.5 for community drinking water facilities to
8.6 remove toxic contaminants, make water safe
8.7 to drink, and improve drinking-water quality.
8.8 This appropriation is subject to Minnesota
8.9 Statutes, section 116P.10. This appropriation
8.10 is available until June 30, 2021, by which time
8.11 the project must be completed and final
8.12 products delivered.

8.13 **(f) Evaluate Emerging Pathogens in Lakes,**
8.14 **Rivers, and Tap Water to Keep Drinking Water**
8.15 **Safe**

8.16 \$325,000 the second year is from the trust
8.17 fund to the Board of Regents of the University
8.18 of Minnesota to evaluate emerging pathogens
8.19 including *Legionella* and mycobacteria to
8.20 ensure that surface water used for drinking
8.21 water and tap water is safe to drink. This
8.22 appropriation is available until June 30, 2021,
8.23 by which time the project must be completed
8.24 and final products delivered.

8.25 **(g) Characterize Unregulated Contaminants in**
8.26 **Source Water and Drinking Water**

8.27 \$1,000,000 the second year is from the trust
8.28 fund to the commissioner of health to establish
8.29 monitoring networks of public water-system
8.30 wells and surface-water intakes to determine
8.31 if contaminants persist after standard public
8.32 water treatment. This appropriation is
8.33 available until June 30, 2023, by which time
8.34 the project must be completed and final
8.35 products delivered.

9.1 **(h) Mapping Antibiotic Resistance in Minnesota**
9.2 **to Help Protect Environmental, Animal, and**
9.3 **Human Health**

9.4 \$750,000 the second year is from the trust
9.5 fund to the Board of Regents of the University
9.6 of Minnesota to quantify and map antibiotic
9.7 and antibiotic-resistance gene contamination
9.8 in Minnesota waters and soils to identify
9.9 locations in need of mitigation to protect
9.10 environmental, animal, and human health. This
9.11 appropriation is available until June 30, 2021,
9.12 by which time the project must be completed
9.13 and final products delivered.

9.14 **(i) Farmer-Led Expansion of Alfalfa Production**
9.15 **to Increase Water Protection**

9.16 \$500,000 the second year is from the trust
9.17 fund to the Board of Regents of the University
9.18 of Minnesota to develop a farmer-led,
9.19 market-based working-lands approach to
9.20 increase water protection in agricultural areas
9.21 by targeted expansion of alfalfa production
9.22 and development of methods to convert alfalfa
9.23 to high-value bioproducts. This appropriation
9.24 is available until June 30, 2021, by which time
9.25 the project must be completed and final
9.26 products delivered.

9.27 **(j) Using Perennial Grain Crops in Wellhead**
9.28 **Protection Areas to Protect Groundwater**

9.29 \$250,000 the second year is from the trust
9.30 fund to the commissioner of agriculture to
9.31 establish demonstration plots of Kernza, a new
9.32 intermediate perennial grain crop, to evaluate
9.33 the potential to profitably reduce nitrate
9.34 contamination of groundwater in vulnerable
9.35 wellhead protection regions of Minnesota.
9.36 Any income generated as part of this

10.1 appropriation may be used to expand the
 10.2 project.

10.3 **(k) Implement Pilot Credit-Trading System for**
 10.4 **Storm Water in the Shell Rock River Watershed**
 10.5 **to Improve Water Quality**

10.6 \$300,000 the second year is from the trust
 10.7 fund to the commissioner of natural resources
 10.8 for an agreement with the Shell Rock River
 10.9 Watershed District to develop and implement
 10.10 a pilot water-quality credit-trading program
 10.11 for storm water that provides voluntary and
 10.12 cost-effective options to reduce pollution on
 10.13 a watershed scale.

10.14 **Subd. 5. Technical Assistance, Outreach, and**
 10.15 **Environmental Education**

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5,168,000

10.16 **(a) Prairie Sportsman Statewide Environmental**
 10.17 **Broadcasts and Videos**

10.18 \$300,000 the second year is from the trust
 10.19 fund to the commissioner of natural resources
 10.20 for an agreement with Pioneer Public
 10.21 Television to provide outreach on outdoor
 10.22 recreation, conservation, and natural resource
 10.23 issues, including water quality, wildlife
 10.24 habitat, and invasive species, through a series
 10.25 of interrelated educational and training videos
 10.26 and statewide broadcast-television programs.

10.27 **(b) YES! Students Take on Minnesota Water-**
 10.28 **Quality Challenge**

10.29 \$213,000 the second year is from the trust
 10.30 fund to the commissioner of natural resources
 10.31 for an agreement with Prairie Woods
 10.32 Environmental Learning Center to expand the
 10.33 Youth Energy Summit (YES!) model to
 10.34 improve local waterways by training and
 10.35 mobilizing over 20 youth-led teams in
 10.36 Minnesota communities to complete 30 or

11.1 more projects related to water quality
11.2 including monitoring and reporting.
11.3 **(c) Get Outdoors After-School Training**
11.4 \$30,000 the second year is from the trust fund
11.5 to the commissioner of natural resources for
11.6 an agreement with Project Get Outdoors to
11.7 train and equip youth leaders at out-of-school
11.8 youth organizations across Minnesota with
11.9 knowledge, skills, and resources to incorporate
11.10 outdoor nature activities into after-school
11.11 programs for at least 6,000 children, including
11.12 those from underserved populations.

11.13 **(d) Connecting Students with Water**
11.14 **Stewardship through Hands-on Learning**
11.15 \$400,000 the second year is from the trust
11.16 fund to the commissioner of natural resources
11.17 for an agreement with Minnesota Trout
11.18 Unlimited to engage students in classroom and
11.19 outdoor hands-on learning focused on water
11.20 quality, groundwater, aquatic life, and
11.21 watershed stewardship and providing youth
11.22 and their families with fishing experiences.
11.23 This appropriation is available until June 30,
11.24 2021, by which time the project must be
11.25 completed and final products delivered.

11.26 **(e) Expanding River Watch Program on the**
11.27 **Minnesota River With High-School Teams**
11.28 \$100,000 the second year is from the trust
11.29 fund to the commissioner of natural resources
11.30 for an agreement with Friends of the
11.31 Minnesota Valley to expand a River Watch
11.32 program on the Minnesota River to recruit at
11.33 least 15 additional teams of high-school
11.34 students in monthly monitoring and reporting
11.35 of water quality.

12.1 **(f) Increase Diversity in Environmental Careers**
12.2 **to Serve Minnesota's Changing Demographics**

12.3 \$750,000 the second year is from the trust
12.4 fund to the commissioner of natural resources
12.5 in cooperation with Conservation Corps
12.6 Minnesota and Iowa to provide a
12.7 college-to-work pathway for students of
12.8 diversity to pursue natural resources careers
12.9 through internships and mentorships with state
12.10 agencies. This appropriation is available until
12.11 June 30, 2023, by which time the project must
12.12 be completed and final products delivered.

12.13 **(g) Pollinator Ambassadors Program for**
12.14 **Gardens**

12.15 \$250,000 the second year is from the trust
12.16 fund to the Board of Regents of the University
12.17 of Minnesota to increase knowledge of
12.18 pollinators in gardens and yards and improve
12.19 pollinator habitat by expanding outreach,
12.20 training, and tools for Minnesota communities
12.21 as part of the Pollinator Ambassadors program.
12.22 This appropriation is available until June 30,
12.23 2021, by which time the project must be
12.24 completed and final products delivered.

12.25 **(h) Morris Prairie Pollinator Demonstration**
12.26 **Area and Education**

12.27 \$550,000 the second year is from the trust
12.28 fund to the Board of Regents of the University
12.29 of Minnesota for the West Central Research
12.30 and Outreach Center at Morris to restore 17
12.31 acres of native prairie for pollinators and to
12.32 construct wayside shelters and kiosks along
12.33 an existing trail to provide information to
12.34 visitors on the importance of pollinators and
12.35 native prairie ecosystems. This appropriation
12.36 is available until June 30, 2021, by which time

- 13.1 the project must be completed and final
13.2 products delivered.
- 13.3 **(i) Expanding Nature Knowledge and**
13.4 **Experience with New Interactive Exhibits at**
13.5 **North Mississippi Regional Park**
- 13.6 \$500,000 the second year is from the trust
13.7 fund to the commissioner of natural resources
13.8 for an agreement with the Minneapolis Park
13.9 and Recreation Board to develop new
13.10 interactive exhibits at North Mississippi
13.11 Regional Park to encourage the approximately
13.12 326,000 annual visitors to better understand
13.13 and explore the river and surrounding natural
13.14 area.
- 13.15 **(j) Update International Wolf Center Exhibits**
- 13.16 \$1,000,000 the second year is from the trust
13.17 fund to the commissioner of natural resources
13.18 for an agreement with the International Wolf
13.19 Center to design, construct, and install new
13.20 interactive educational exhibits to help
13.21 Minnesotans understand coexistence with the
13.22 state's wolf populations and ongoing wolf-
13.23 management efforts.
- 13.24 **(k) Expanding the State's Reuse Economy to**
13.25 **Conserve Natural Resources**
- 13.26 \$275,000 the second year is from the trust
13.27 fund to the commissioner of natural resources
13.28 for an agreement with ReUSE Minnesota to
13.29 provide outreach and technical assistance to
13.30 communities and small businesses to create
13.31 and expand opportunities for reusing, renting,
13.32 and repairing consumer goods as an alternative
13.33 to using new materials so solid-waste disposal
13.34 and its impacts are measurably reduced and
13.35 more local reuse jobs are created.

14.1 **(l) Expand Materials Reuse and Recycling Jobs**
 14.2 **Program**

14.3 \$800,000 the second year is from the trust
 14.4 fund to the commissioner of natural resources
 14.5 for an agreement with Better Futures
 14.6 Minnesota, in cooperation with the Northwest
 14.7 Indian Community Development Corporation
 14.8 and the Board of Regents of the University of
 14.9 Minnesota for the Natural Resources Research
 14.10 Institute in Duluth, to expand building
 14.11 deconstruction and material-reuse practices
 14.12 and jobs in partnership with counties, tribes,
 14.13 and municipalities statewide and to document
 14.14 the environmental, health, and economic
 14.15 benefits of these practices.

14.16 **Subd. 6. Aquatic and Terrestrial Invasive Species** -0- 5,760,000

14.17 **(a) Minnesota Invasive Terrestrial Plans and**
 14.18 **Pest Center - Phase 4**

14.19 \$3,500,000 the second year is from the trust
 14.20 fund to the Board of Regents of the University
 14.21 of Minnesota for high-priority research at the
 14.22 Invasive Terrestrial Plants and Pests Center
 14.23 to protect Minnesota's natural and agricultural
 14.24 resources from terrestrial invasive plants,
 14.25 pathogens, and pests as identified through the
 14.26 center's strategic prioritization process. This
 14.27 appropriation is available until June 30, 2023,
 14.28 by which time the project must be completed
 14.29 and final products delivered.

14.30 **(b) Palmer Amaranth Detection and Eradication**
 14.31 **Continuation**

14.32 \$431,000 the second year is from the trust
 14.33 fund to the commissioner of agriculture to
 14.34 continue to monitor, ground survey, and
 14.35 control Palmer amaranth primarily in
 14.36 conservation plantings and to develop and

15.1 implement aerial-survey methods to prevent
15.2 infestation and protect prairies, other natural
15.3 areas, and agricultural crops.

15.4 **(c) Evaluate and Control Methods for Invasive**
15.5 **Hybrid Cattails**

15.6 \$131,000 the second year is from the trust
15.7 fund to the commissioner of natural resources
15.8 for an agreement with Voyageurs National
15.9 Park to evaluate the effectiveness of
15.10 mechanical harvesting and managing muskrat
15.11 populations to remove exotic hybrid cattails
15.12 and restore fish and wildlife habitat in
15.13 Minnesota wetlands. This appropriation is
15.14 available until June 30, 2021, by which time
15.15 the project must be completed and final
15.16 products delivered.

15.17 **(d) Developing RNA Interference to Control**
15.18 **Zebra Mussels**

15.19 \$500,000 the second year is from the trust
15.20 fund to the commissioner of natural resources
15.21 for an agreement with the United States
15.22 Geological Survey to develop a genetic control
15.23 tool that exploits the natural process of RNA
15.24 silencing to specifically target and effectively
15.25 control zebra mussels without affecting other
15.26 species or causing other nontarget effects. This
15.27 appropriation is available until June 30, 2021,
15.28 by which time the project must be completed
15.29 and final products delivered.

15.30 **(e) Install and Evaluate Invasive Carp Deterrent**
15.31 **for Mississippi River Locks and Dams**

15.32 \$998,000 the second year is from the trust
15.33 fund to the Board of Regents of the University
15.34 of Minnesota in cooperation with the United
15.35 States Army Corps of Engineers and the
15.36 United States Fish and Wildlife Service to

16.1 install, evaluate, and optimize a system in
 16.2 Mississippi River locks and dams to deter
 16.3 passage of invasive carp without negatively
 16.4 impacting native fish and to evaluate the
 16.5 ability of predator fish in the pools above the
 16.6 locks and dams to consume young carp. The
 16.7 project must conduct a cost comparison of
 16.8 equipment purchase versus lease options and
 16.9 choose the most effective option. This
 16.10 appropriation is available until June 30, 2021,
 16.11 by which time the project must be completed
 16.12 and final products delivered.

16.13 **(f) Determining Risk of Toxic Alga in Minnesota**
 16.14 **Lakes**

16.15 \$200,000 the second year is from the trust
 16.16 fund to the Science Museum of Minnesota for
 16.17 the St. Croix Watershed Research Station to
 16.18 determine the historical distribution,
 16.19 abundance, and toxicity of the invasive
 16.20 blue-green alga, *Cylindrospermopsis*
 16.21 *raciborskii*, in about 20 lakes across Minnesota
 16.22 and inform managers and the public about the
 16.23 alga's spread and health risks. This
 16.24 appropriation is available until June 30, 2021,
 16.25 by which time the project must be completed
 16.26 and final products delivered.

16.27 **Subd. 7. Air Quality and Renewable Energy**

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1,750,000

16.28 **(a) Develop Solar Window Concentrators for**
 16.29 **Electricity**

16.30 \$350,000 the second year is from the trust
 16.31 fund to the Board of Regents of the University
 16.32 of Minnesota to develop, evaluate, and
 16.33 optimize thin film silicon-based luminescent
 16.34 solar window concentrators in order to
 16.35 produce inexpensive, clean energy and reduce
 16.36 air pollution. This appropriation is subject to

17.1 Minnesota Statutes, section 116P.10. This
 17.2 appropriation is available until June 30, 2021,
 17.3 by which time the project must be completed
 17.4 and final products delivered.

17.5 **(b) Demonstrations for Community-Scale**
 17.6 **Storage Systems for Renewable Energy**

17.7 \$550,000 the second year is from the trust
 17.8 fund to the Board of Regents of the University
 17.9 of Minnesota to install, demonstrate, and
 17.10 evaluate three community-scale storage
 17.11 systems for renewable energy and develop a
 17.12 guidebook on storing renewable energy for
 17.13 statewide use. This appropriation is available
 17.14 until June 30, 2021, by which time the project
 17.15 must be completed and final products
 17.16 delivered.

17.17 **(c) Develop Inexpensive Energy from Simple**
 17.18 **Roll-to-Roll Manufacturing**

17.19 \$300,000 the second year is from the trust
 17.20 fund to the Board of Regents of the University
 17.21 of Minnesota to develop inexpensive,
 17.22 high-efficiency solar energy with simple
 17.23 roll-to-roll advanced manufacturing
 17.24 technology, using new materials such as
 17.25 perovskite to make solar cells. This
 17.26 appropriation is subject to Minnesota Statutes,
 17.27 section 116P.10. This appropriation is
 17.28 available until June 30, 2021, by which time
 17.29 the project must be completed and final
 17.30 products delivered.

17.31 **Subd. 8. Methods to Protect or Restore Land,**
 17.32 **Water, and Habitat**

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2,569,000

17.33 **(a) Nongame Wildlife Program Acceleration**

17.34 \$1,000,000 the second year is from the trust
 17.35 fund to the commissioner of natural resources
 17.36 to accelerate the nongame wildlife program

18.1 including rare wildlife data collection, habitat
18.2 management, collaborative land protection,
18.3 conservation education, and a new emphasis
18.4 on promoting nature tourism to benefit
18.5 wildlife, visitors, and rural communities.

18.6 **(b) Develop Biomulch to Replace Plastic Soil**
18.7 **Covering in Vegetable and Fruit Production to**
18.8 **Increase Yield and Reduce Waste**

18.9 \$310,000 the second year is from the trust
18.10 fund to the Board of Regents of the University
18.11 of Minnesota to develop and test the
18.12 performance of biodegradable biomulch to
18.13 increase yield, conserve water, suppress weeds
18.14 and pests, add nutrients to the soil, and replace
18.15 large amounts of nonrecyclable and
18.16 nondegradable plastic used in vegetable and
18.17 fruit production. This appropriation is
18.18 available until June 30, 2021, by which time
18.19 the project must be completed and final
18.20 products delivered.

18.21 **(c) Develop Market-Based Alternatives for**
18.22 **Perennial Crops to Benefit Water Quality and**
18.23 **Wildlife**

18.24 \$150,000 the second year is from the trust
18.25 fund to the Science Museum of Minnesota for
18.26 the St. Croix Watershed Research Station to
18.27 design and evaluate at least six market-based
18.28 scenarios for perennial cropping systems in
18.29 Minnesota, including technological and
18.30 economic feasibility, and estimate their
18.31 potential to improve water quality and provide
18.32 wildlife habitat. This appropriation is available
18.33 until June 30, 2021, by which time the project
18.34 must be completed and final products
18.35 delivered.

18.36 **(d) Agricultural Weed Control Using**
18.37 **Autonomous Mowers**

19.1 \$550,000 the second year is from the trust
19.2 fund to the Board of Regents of the University
19.3 of Minnesota for the West Central Research
19.4 and Outreach Center at Morris to design,
19.5 integrate, and field-test a robotic pasture
19.6 mower and solar charging station to control
19.7 weeds, reduce herbicide use, reduce energy
19.8 costs, and improve native vegetation and
19.9 forage quality on agricultural lands. This
19.10 appropriation is subject to Minnesota Statutes,
19.11 section 116P.10. This appropriation is
19.12 available until June 30, 2021, by which time
19.13 the project must be completed and final
19.14 products delivered.

19.15 **(e) Restoring Forests in Minnesota State Parks**

19.16 \$250,000 the second year is from the trust
19.17 fund to the commissioner of natural resources
19.18 to restore at least 255 acres of high-quality
19.19 forests in state parks such as Itasca, Jay Cooke,
19.20 and Forestville Mystery Cave State Parks and
19.21 Greenleaf Lake State Recreation Area. This
19.22 appropriation is available until June 30, 2023,
19.23 by which time the project must be completed
19.24 and final products delivered.

19.25 **(f) Develop Strategies for Timber Harvest to**
19.26 **Minimize Soil Impacts to Maintain Healthy and**
19.27 **Diverse Forests**

19.28 \$200,000 the second year is from the trust
19.29 fund to the Board of Regents of the University
19.30 of Minnesota to develop strategies and
19.31 practical tools to minimize soil compaction
19.32 and other impacts across a range of conditions
19.33 during timber harvest to maintain timber
19.34 availability, improve regeneration of diverse
19.35 forests, and benefit wildlife habitat. This
19.36 appropriation is available until June 30, 2022,

20.1 by which time the project must be completed
20.2 and final products delivered.

20.3 **(g) Restoring Wetland Invertebrates to Revive**
20.4 **Wildlife Habitat**

20.5 \$400,000 the second year is from the trust
20.6 fund to the commissioner of natural resources
20.7 to assess invertebrate amphipods in wetlands
20.8 and explore stocking them as a valuable food
20.9 source for ducks and other wildlife in the
20.10 Prairie Pothole Region of the state. This
20.11 appropriation is available until June 30, 2021,
20.12 by which time the project must be completed
20.13 and final products delivered.

20.14 **(h) Preserving and Restoring Minnesota's Native**
20.15 **Orchids - Phase 2**

20.16 \$259,000 the second year is from the trust
20.17 fund to the Board of Regents of the University
20.18 of Minnesota for the Minnesota Landscape
20.19 Arboretum to expand collection and
20.20 preservation efforts to enable long-term
20.21 conservation of at least 25 of the 48 native
20.22 orchid species in Minnesota and to continue
20.23 propagation and cultivation research. This
20.24 appropriation is available until June 30, 2021,
20.25 by which time the project must be completed
20.26 and final products delivered.

20.27 **Subd. 9. Land Acquisition, Habitat, and**
20.28 **Recreation**

-0-

17,439,000

20.29 **(a) Grants for Local Parks, Trails, and Natural**
20.30 **Areas**

20.31 \$2,000,000 the second year is from the trust
20.32 fund to the commissioner of natural resources
20.33 to solicit, rank, and fund competitive matching
20.34 grants for local parks, trail connections, and
20.35 natural and scenic areas under Minnesota
20.36 Statutes, section 85.019. The appropriation is

21.1 for local nature-based recreation and
21.2 connections to regional and state natural areas
21.3 and recreation facilities and does not include
21.4 athletic facilities such as sport fields, courts,
21.5 and playgrounds. This appropriation is
21.6 available until June 30, 2021, by which time
21.7 the project must be completed and final
21.8 products delivered.

21.9 **(b) Develop Mesabi Trail Segment From County**
21.10 **Road 88 to Ely**

21.11 \$600,000 the second year is from the trust
21.12 fund to the commissioner of natural resources
21.13 for an agreement with the St. Louis and Lake
21.14 Counties Regional Railroad Authority for
21.15 environmental assessment, permitting,
21.16 right-of-way easements or other acquisition
21.17 as needed, engineering, and construction of a
21.18 bituminous surface section of the Mesabi Trail
21.19 from Highway 169 and County Road 88 to
21.20 Ely. This appropriation is available until June
21.21 30, 2022, by which time the project must be
21.22 completed and final products delivered.

21.23 **(c) Harmony State Trail Extension Land**
21.24 **Acquisition**

21.25 \$235,000 the second year is from the trust
21.26 fund to the commissioner of natural resources
21.27 for an agreement with the city of Harmony to
21.28 acquire fee title of about 16 parcels to allow
21.29 for the approximate six-mile extension of the
21.30 legislatively authorized state trail from
21.31 Harmony south to the Iowa state border with
21.32 a spur to Niagara Cave. The land must be
21.33 transferred to the state after it has been
21.34 purchased.

21.35 **(d) Mississippi Blufflands State Trail - Red Wing**
21.36 **Barn Bluff to Colvill Park Segment**

22.1 \$550,000 the second year is from the trust
22.2 fund to the commissioner of natural resources
22.3 for an agreement with the city of Red Wing
22.4 to be used with other nonstate funds to
22.5 construct an approximate
22.6 three-quarter-mile-long hard-surfaced segment
22.7 of the Mississippi Blufflands State Trail along
22.8 Red Wing's Mississippi River riverfront from
22.9 Barn Bluff Regional Park to Colvill Park. This
22.10 appropriation is available until June 30, 2021,
22.11 by which time the project must be completed
22.12 and final products delivered.

22.13 **(e) Swedish Immigrant Regional Trail Segment**
22.14 **within Interstate State Park**

22.15 \$2,254,000 the second year is from the trust
22.16 fund to the commissioner of natural resources
22.17 for an agreement with Chisago County
22.18 Environmental Services to construct an
22.19 approximate one-half-mile regional county
22.20 trail segment within Interstate State Park from
22.21 the end point of the existing trail at the park
22.22 boundary to city hall including a trail bridge
22.23 over the ravine and parking and trailhead
22.24 improvements and to conduct a natural and
22.25 cultural review to determine the feasibility and
22.26 route of a future section of the trail through
22.27 the park. This appropriation is available until
22.28 June 30, 2021, by which time the project must
22.29 be completed and final products delivered.

22.30 **(f) Enhancement Plan for Superior Hiking Trail**

22.31 \$100,000 the second year is from the trust
22.32 fund to the commissioner of natural resources
22.33 for an agreement with the Superior Hiking
22.34 Trail Association to evaluate improvements
22.35 to the 310-mile-long Superior Hiking Trail

23.1 including routing, safety, water management,
23.2 maintenance, and other environmental,
23.3 recreational, and design issues and to develop
23.4 an interactive trail-management system to
23.5 capture efficiencies and best-management
23.6 practices.

23.7 **(g) Protecting Mississippi River Headwaters**
23.8 **Lands through Local, State, and Federal**
23.9 **Partnership**

23.10 \$700,000 the second year is from the trust
23.11 fund to the commissioner of natural resources
23.12 for an agreement with the city of Baxter, in
23.13 cooperation with Brainerd Public Schools and
23.14 the Camp Ripley Sentinel Landscape Program,
23.15 to acquire about 200 acres of forested land on
23.16 the upper Mississippi River adjacent to
23.17 Mississippi River Overlook Park for multiple
23.18 public benefits, including being an outdoor
23.19 classroom for local schools. To be eligible for
23.20 reimbursement, costs for real estate
23.21 transactions must be specific to this acquisition
23.22 and documented as required in subdivision 13,
23.23 paragraph (k).

23.24 **(h) Protecting North-Central Minnesota Lakes**

23.25 \$750,000 the second year is from the trust
23.26 fund to the commissioner of natural resources
23.27 for an agreement with the Crow Wing County
23.28 Soil and Water Conservation District to
23.29 increase watershed protection to maintain and
23.30 improve water quality in lakes and rivers in
23.31 Aitkin and Crow Wing Counties with about
23.32 ten permanent RIM conservation easements
23.33 and 12 forest stewardship plans and by
23.34 implementing six best-management practices.

23.35 **(i) Easement Program for Native Prairie Bank**

24.1 \$2,000,000 the second year is from the trust
24.2 fund to the commissioner of natural resources
24.3 to provide technical stewardship assistance to
24.4 private landowners, restore and enhance about
24.5 270 acres of native prairie protected by
24.6 easements in the native prairie bank, and
24.7 acquire easements for the native prairie bank
24.8 in accordance with Minnesota Statutes, section
24.9 84.96, on about 275 acres, including preparing
24.10 initial ecological baseline property
24.11 assessments. About \$120,000 of this
24.12 appropriation may be deposited in the natural
24.13 resources conservation easement stewardship
24.14 account, created in Minnesota Statutes, section
24.15 84.69, proportional to the number of easement
24.16 acres acquired. A list of proposed easement
24.17 acquisitions and restoration sites for the native
24.18 prairie bank are required in the work plan.
24.19 This appropriation is available until June 30,
24.20 2021, by which time the project must be
24.21 completed and final products delivered.
24.22 **(j) Minnesota State Trail Development**
24.23 \$2,500,000 the second year is from the trust
24.24 fund to the commissioner of natural resources
24.25 to expand high-priority recreational
24.26 opportunities on Minnesota's state trails by
24.27 developing new trail segments and
24.28 rehabilitating, improving, and enhancing
24.29 existing state trails. High-priority trail
24.30 segments to develop and enhance include but
24.31 are not limited to the Gateway, Gitchi Gami,
24.32 Paul Bunyan, and Heartland State Trails. A
24.33 proposed list of trail projects on legislatively
24.34 authorized state trails is required in the work
24.35 plan. This appropriation is available until June

25.1 30, 2021, by which time the project must be
25.2 completed and final products delivered.

25.3 **(k) Minnesota State Parks and State Trails**

25.4 \$2,500,000 the second year is from the trust
25.5 fund to the commissioner of natural resources
25.6 to acquire about 163 acres of high-priority
25.7 inholdings from willing sellers within the
25.8 legislatively authorized boundaries of state
25.9 parks and trails in order to protect Minnesota's
25.10 natural heritage, enhance outdoor recreational
25.11 opportunities, and improve the efficiency of
25.12 public land management. Priorities include
25.13 but are not limited to Tettegouche, Sibley, and
25.14 Minneopa State Parks and the Goodhue
25.15 Pioneer State Trail. A list of proposed
25.16 acquisitions is required in the work plan. This
25.17 appropriation is available until June 30, 2021,
25.18 by which time the project must be completed
25.19 and final products delivered.

25.20 **(l) Scientific and Natural Areas Program**

25.21 \$3,250,000 the second year is from the trust
25.22 fund to the commissioner of natural resources
25.23 for the scientific and natural areas program.
25.24 Of this amount, \$1,500,000 is for habitat-
25.25 restoration activities, \$500,000 is for scientific
25.26 and natural areas public engagement and
25.27 outreach, and \$1,250,000 is to acquire strategic
25.28 high-quality lands that meet criteria for
25.29 scientific and natural areas under Minnesota
25.30 Statutes, section 86A.05, from willing sellers
25.31 in southern Minnesota. For each acre acquired
25.32 with this appropriation, the Department of
25.33 Natural Resources must document that the
25.34 department has sold an acre of state land. If
25.35 these acquisition requirements cannot be met,

26.1 the appropriation may be used for scientific
 26.2 and natural areas restoration. A list of
 26.3 proposed acquisitions and restorations is
 26.4 required in the work plan. This appropriation
 26.5 is available until June 30, 2021, by which time
 26.6 the project must be completed and final
 26.7 products delivered.

26.8 **Subd. 10. Contract Agreement Reimbursement** -0- 135,000

26.9 \$135,000 the second year is from the trust
 26.10 fund to the commissioner of natural resources,
 26.11 at the direction of the Legislative-Citizen
 26.12 Commission on Minnesota Resources, for
 26.13 expenses incurred for preparing and
 26.14 administering contracts for the agreements
 26.15 specified in this section. The commissioner
 26.16 must provide documentation to the
 26.17 Legislative-Citizen Commission on Minnesota
 26.18 Resources on the expenditure of these funds.

26.19 **Subd. 11. Availability of Appropriations**

26.20 Money appropriated in this section may not
 26.21 be spent on activities unless they are directly
 26.22 related to and necessary for a specific
 26.23 appropriation and are specified in the work
 26.24 plan approved by the Legislative-Citizen
 26.25 Commission on Minnesota Resources. Money
 26.26 appropriated in this section must not be spent
 26.27 on indirect costs or other institutional overhead
 26.28 charges that are not directly related to and
 26.29 necessary for a specific appropriation. Costs
 26.30 that are directly related to and necessary for
 26.31 an appropriation, including financial services,
 26.32 human resources, information services, rent,
 26.33 and utilities, are eligible only if the costs can
 26.34 be clearly justified and individually
 26.35 documented specific to the appropriation's

27.1 purpose and would not be generated by the
27.2 recipient but for receipt of the appropriation.
27.3 No broad allocations for costs in either dollars
27.4 or percentages are allowed. Unless otherwise
27.5 provided, the amounts in this section are
27.6 available until June 30, 2020, when projects
27.7 must be completed and final products
27.8 delivered. For acquisition of real property, the
27.9 appropriations in this section are available for
27.10 an additional fiscal year if a binding contract
27.11 for acquisition of the real property is entered
27.12 into before the expiration date of the
27.13 appropriation. If a project receives a federal
27.14 grant, the period of the appropriation is
27.15 extended to equal the federal grant period.
27.16 **Subd. 12. Data-Availability Requirements**
27.17 Data collected by the projects funded under
27.18 this section must conform to guidelines and
27.19 standards adopted by the Office of MN.IT
27.20 Services. Spatial data must also conform to
27.21 additional guidelines and standards designed
27.22 to support data coordination and distribution
27.23 that have been published by the Minnesota
27.24 Geospatial Information Office. Descriptions
27.25 of spatial data must be prepared as specified
27.26 in the state's geographic metadata guideline
27.27 and must be submitted to the Minnesota
27.28 Geospatial Information Office. All data must
27.29 be accessible and free to the public unless
27.30 made private under the Data Practices Act,
27.31 Minnesota Statutes, chapter 13. To the extent
27.32 practicable, summary data and results of
27.33 projects funded under this section should be
27.34 readily accessible on the Internet and
27.35 identified as having received funding from the
27.36 environment and natural resources trust fund.

28.1 Subd. 13. Project Requirements

28.2 (a) As a condition of accepting an
28.3 appropriation under this section, an agency or
28.4 entity receiving an appropriation or a party to
28.5 an agreement from an appropriation must
28.6 comply with paragraphs (b) to (l) and
28.7 Minnesota Statutes, chapter 116P, and must
28.8 submit a work plan and annual or semiannual
28.9 progress reports in the form determined by the
28.10 Legislative-Citizen Commission on Minnesota
28.11 Resources for any project funded in whole or
28.12 in part with funds from the appropriation.
28.13 Modifications to the approved work plan and
28.14 budget expenditures must be made through
28.15 the amendment process established by the
28.16 Legislative-Citizen Commission on Minnesota
28.17 Resources.

28.18 (b) A recipient of money appropriated in this
28.19 section that conducts a restoration using funds
28.20 appropriated in this section must use native
28.21 plant species according to the Board of Water
28.22 and Soil Resources' native vegetation
28.23 establishment and enhancement guidelines
28.24 and include an appropriate diversity of native
28.25 species selected to provide habitat for
28.26 pollinators throughout the growing season as
28.27 required under Minnesota Statutes, section
28.28 84.973.

28.29 (c) For all restorations conducted with money
28.30 appropriated under this section, a recipient
28.31 must prepare an ecological restoration and
28.32 management plan that, to the degree
28.33 practicable, is consistent with the
28.34 highest-quality conservation and ecological
28.35 goals for the restoration site. Consideration

29.1 should be given to soil, geology, topography,
29.2 and other relevant factors that would provide
29.3 the best chance for long-term success and
29.4 durability of the restoration project. The plan
29.5 must include the proposed timetable for
29.6 implementing the restoration, including site
29.7 preparation, establishment of diverse plant
29.8 species, maintenance, and additional
29.9 enhancement to establish the restoration;
29.10 identify long-term maintenance and
29.11 management needs of the restoration and how
29.12 the maintenance, management, and
29.13 enhancement will be financed; and take
29.14 advantage of the best-available science and
29.15 include innovative techniques to achieve the
29.16 best restoration.

29.17 (d) An entity receiving an appropriation in this
29.18 section for restoration activities must provide
29.19 an initial restoration evaluation at the
29.20 completion of the appropriation and an
29.21 evaluation three years after the completion of
29.22 the expenditure. Restorations must be
29.23 evaluated relative to the stated goals and
29.24 standards in the restoration plan, current
29.25 science, and, when applicable, the Board of
29.26 Water and Soil Resources' native vegetation
29.27 establishment and enhancement guidelines.
29.28 The evaluation must determine whether the
29.29 restorations are meeting planned goals,
29.30 identify any problems with implementing the
29.31 restorations, and, if necessary, give
29.32 recommendations on improving restorations.
29.33 The evaluation must be focused on improving
29.34 future restorations.

- 30.1 (e) All restoration and enhancement projects
30.2 funded with money appropriated in this section
30.3 must be on land permanently protected by a
30.4 conservation easement or public ownership.
- 30.5 (f) A recipient of money from an appropriation
30.6 under this section must give consideration to
30.7 contracting with Conservation Corps
30.8 Minnesota for contract restoration and
30.9 enhancement services.
- 30.10 (g) All conservation easements acquired with
30.11 money appropriated under this section must:
- 30.12 (1) be permanent;
- 30.13 (2) specify the parties to an easement in the
30.14 easement;
- 30.15 (3) specify all the provisions of an agreement
30.16 that are permanent;
- 30.17 (4) be sent to the Legislative-Citizen
30.18 Commission on Minnesota Resources in an
30.19 electronic format at least ten business days
30.20 before closing;
- 30.21 (5) include a long-term monitoring and
30.22 enforcement plan and funding for monitoring
30.23 and enforcing the easement agreement; and
- 30.24 (6) include requirements in the easement
30.25 document to address specific groundwater and
30.26 surface-water quality-protection activities such
30.27 as keeping water on the landscape, reducing
30.28 nutrient and contaminant loading, protecting
30.29 groundwater, and not permitting artificial
30.30 hydrological modifications.
- 30.31 (h) For any acquisition of lands or interest in
30.32 lands, a recipient of money appropriated under
30.33 this section must not agree to pay more than

31.1 100 percent of the appraised value for a parcel
31.2 of land using this money to complete the
31.3 purchase, in part or in whole, except that up
31.4 to ten percent above the appraised value may
31.5 be allowed to complete the purchase, in part
31.6 or in whole, using this money if permission is
31.7 received in advance of the purchase from the
31.8 Legislative-Citizen Commission on Minnesota
31.9 Resources.

31.10 (i) For any acquisition of land or interest in
31.11 land, a recipient of money appropriated under
31.12 this section must give priority to high-quality
31.13 natural resources or conservation lands that
31.14 provide natural buffers to water resources.

31.15 (j) For new lands acquired with money
31.16 appropriated under this section, a recipient
31.17 must prepare an ecological restoration and
31.18 management plan in compliance with
31.19 paragraph (c), including sufficient funding for
31.20 implementation unless the work plan addresses
31.21 why a portion of the money is not necessary
31.22 to achieve a high-quality restoration.

31.23 (k) To ensure public accountability for using
31.24 public funds, a recipient of money
31.25 appropriated under this section must, within
31.26 60 days of the transaction, provide to the
31.27 Legislative-Citizen Commission on Minnesota
31.28 Resources documentation of the selection
31.29 process used to identify parcels acquired and
31.30 provide documentation of all related
31.31 transaction costs, including but not limited to
31.32 appraisals, legal fees, recording fees,
31.33 commissions, other similar costs, and
31.34 donations. This information must be provided
31.35 for all parties involved in the transaction. The

32.1 recipient must also report to the
32.2 Legislative-Citizen Commission on Minnesota
32.3 Resources any difference between the
32.4 acquisition amount paid to the seller and the
32.5 state-certified or state-reviewed appraisal, if
32.6 a state-certified or state-reviewed appraisal
32.7 was conducted.

32.8 (l) A recipient of an appropriation from the
32.9 trust fund under this section must acknowledge
32.10 financial support from the environment and
32.11 natural resources trust fund in project
32.12 publications, signage, and other public
32.13 communications and outreach related to work
32.14 completed using the appropriation.

32.15 Acknowledgment may occur, as appropriate,
32.16 through use of the trust-fund logo or inclusion
32.17 of language attributing support from the trust
32.18 fund. Each direct recipient of money
32.19 appropriated in this section, as well as each
32.20 recipient of a grant awarded pursuant to this
32.21 section, must satisfy all reporting and other
32.22 requirements incumbent upon constitutionally
32.23 dedicated funding recipients as provided in
32.24 Minnesota Statutes, section 3.303, subdivision
32.25 10, and Minnesota Statutes, chapter 116P.

32.26 **Subd. 14. Payment Conditions and**
32.27 **Capital-Equipment Expenditures**

32.28 (a) All agreements, grants, or contracts
32.29 referred to in this section must be administered
32.30 on a reimbursement basis unless otherwise
32.31 provided in this section. Notwithstanding
32.32 Minnesota Statutes, section 16A.41,
32.33 expenditures made on or after July 1, 2018,
32.34 or the date the work plan is approved,
32.35 whichever is later, are eligible for
32.36 reimbursement unless otherwise provided in

33.1 this section. Periodic payments must be made
33.2 upon receiving documentation that the
33.3 deliverable items articulated in the approved
33.4 work plan have been achieved, including
33.5 partial achievements as evidenced by approved
33.6 progress reports. Reasonable amounts may be
33.7 advanced to projects to accommodate
33.8 cash-flow needs or match federal money. The
33.9 advances must be approved as part of the work
33.10 plan. No expenditures for capital equipment
33.11 are allowed unless expressly authorized in the
33.12 project work plan.

33.13 (b) Single-source contracts as specified in the
33.14 approved work plan are allowed.

33.15 **Subd. 15. Purchasing Recycled and Recyclable**
33.16 **Materials**

33.17 A political subdivision, public or private
33.18 corporation, or other entity that receives an
33.19 appropriation under this section must use the
33.20 appropriation in compliance with Minnesota
33.21 Statutes, section 16C.0725, regarding
33.22 purchasing recycled, repairable, and durable
33.23 materials and Minnesota Statutes, section
33.24 16C.073, regarding purchasing and using
33.25 paper stock and printing.

33.26 **Subd. 16. Energy Conservation and Sustainable**
33.27 **Building Guidelines**

33.28 A recipient to whom an appropriation is made
33.29 under this section for a capital-improvement
33.30 project must ensure that the project complies
33.31 with the applicable energy conservation and
33.32 sustainable building guidelines and standards
33.33 contained in law, including Minnesota
33.34 Statutes, sections 16B.325, 216C.19, and
33.35 216C.20, and rules adopted under those
33.36 sections. The recipient may use the energy

- 34.1 planning, advocacy, and State Energy Office
- 34.2 units of the Department of Commerce to
- 34.3 obtain information and technical assistance
- 34.4 on energy conservation and alternative-energy
- 34.5 development relating to planning and
- 34.6 constructing the capital-improvement project.
- 34.7 **Subd. 17. Accessibility**
- 34.8 Structural and nonstructural facilities must
- 34.9 meet the design standards in the Americans
- 34.10 with Disabilities Act (ADA) accessibility
- 34.11 guidelines.
- 34.12 **Subd. 18. Carryforward; Extension**
- 34.13 (a) The availability of the appropriations for
- 34.14 the following projects are extended to June
- 34.15 30, 2019:
- 34.16 (1) Laws 2014, chapter 226, section 2,
- 34.17 subdivision 6, paragraph (j), Dredged
- 34.18 Sediment for Forest Restoration on
- 34.19 Unproductive Minelands;
- 34.20 (2) Laws 2014, chapter 226, section 2,
- 34.21 subdivision 7, paragraph (b), Metropolitan
- 34.22 Regional Park System Acquisition, as
- 34.23 extended by Laws 2017, chapter 96, section
- 34.24 2, subdivision 18, paragraph (a), clause (5);
- 34.25 (3) Laws 2015, chapter 76, section 2,
- 34.26 subdivision 6, paragraph (d), Preventing New
- 34.27 Disease of Pines in Minnesota;
- 34.28 (4) Laws 2015, chapter 76, section 2,
- 34.29 subdivision 9, paragraph (d), Native Prairie
- 34.30 Stewardship and Prairie Bank Easement
- 34.31 Acquisition;
- 34.32 (5) Laws 2015, chapter 76, section 2,
- 34.33 subdivision 10, Emerging Issues Account; and

35.1 (6) Laws 2016, chapter 186, section 2,
 35.2 subdivision 9, paragraph (g), Otter Tail River
 35.3 Recreational Trail Acquisition.

35.4 (b) The availability of the appropriations for
 35.5 the following projects are extended to June
 35.6 30, 2020:

35.7 (1) Laws 2015, chapter 76, section 2,
 35.8 subdivision 9, paragraph (b), Metropolitan
 35.9 Regional Park System Land Acquisition –
 35.10 Phase IV;

35.11 (2) Laws 2016, chapter 186, section 2,
 35.12 subdivision 10, paragraph (b), Grant
 35.13 Management System; and

35.14 (3) Laws 2017, chapter 96, section 2,
 35.15 subdivision 6, paragraph (d), Adapting Stream
 35.16 Barriers to Remove Common Carp.

35.17 (c) The availability of the appropriation under
 35.18 Laws 2017, chapter 96, section 2, subdivision
 35.19 8, paragraph (l), Conservation Reserve
 35.20 Enhancement Program (CREP), is extended
 35.21 to June 30, 2022.

35.22 (d) The availability of the appropriation under
 35.23 Laws 2017, chapter 96, section 2, subdivision
 35.24 3, paragraph (n), Pollinator Research and
 35.25 Outreach, is extended to June 30, 2023.

35.26 Sec. 3. Laws 2015, chapter 76, section 2, subdivision 9, is amended to read:

35.27 **Subd. 9. Land Acquisition for Habitat and**
 35.28 **Recreation**

14,190,000

-0-

35.29 **(a) State Parks and Trails Land**
 35.30 **Acquisitions**

35.31 \$1,500,000 the first year is from the trust fund
 35.32 to the commissioner of natural resources to
 35.33 acquire at least 335 acres for authorized state

36.1 trails and critical parcels within the statutory
36.2 boundaries of state parks. State park land
36.3 acquired with this appropriation must be
36.4 sufficiently improved to meet at least
36.5 minimum management standards, as
36.6 determined by the commissioner of natural
36.7 resources. A list of proposed acquisitions must
36.8 be provided as part of the required work plan.
36.9 This appropriation is available until June 30,
36.10 2018, by which time the project must be
36.11 completed and final products delivered.

36.12 **(b) Metropolitan Regional Park System**

36.13 **Land Acquisition - Phase IV**

36.14 \$1,000,000 the first year is from the trust fund
36.15 to the Metropolitan Council for grants to
36.16 acquire at least 133 acres of lands within the
36.17 approved park unit boundaries of the
36.18 metropolitan regional park system. This
36.19 appropriation may not be used to purchase
36.20 habitable residential structures. A list of
36.21 proposed fee title and easement acquisitions
36.22 must be provided as part of the required work
36.23 plan. This appropriation must be matched by
36.24 at least 40 percent of nonstate money that must
36.25 be committed by December 31, 2015, or the
36.26 appropriation cancels. This appropriation is
36.27 available until June 30, 2018, by which time
36.28 the project must be completed and final
36.29 products delivered.

36.30 **(c) SNA Acquisition, Restoration,**

36.31 **Enhancement, and Public Engagement**

36.32 \$4,000,000 the first year is from the trust fund
36.33 to the commissioner of natural resources to
36.34 acquire at least 350 acres of lands with
36.35 high-quality native plant communities and rare

37.1 features to be established as scientific and
37.2 natural areas as provided in Minnesota
37.3 Statutes, section 86A.05, subdivision 5, restore
37.4 and improve at least 550 acres of scientific
37.5 and natural areas, and provide technical
37.6 assistance and outreach. A list of proposed
37.7 acquisitions must be provided as part of the
37.8 required work plan. Land acquired with this
37.9 appropriation must be sufficiently improved
37.10 to meet at least minimum management
37.11 standards, as determined by the commissioner
37.12 of natural resources. This appropriation is
37.13 available until June 30, 2018, by which time
37.14 the project must be completed and final
37.15 products delivered.

37.16 **(d) Native Prairie Stewardship and Prairie**
37.17 **Bank Easement Acquisition**

37.18 \$3,325,000 the first year is from the trust fund
37.19 to the commissioner of natural resources to
37.20 acquire native prairie bank easements on at
37.21 least 675 acres, prepare baseline property
37.22 assessments, restore and enhance at least 1,000
37.23 acres of native prairie sites, and provide
37.24 technical assistance to landowners. Of this
37.25 amount, up to ~~\$135,000~~ \$195,000 must be
37.26 deposited in a conservation easement
37.27 stewardship account. Deposits into the
37.28 conservation easement stewardship account
37.29 must be made upon closing on conservation
37.30 easements or at a time otherwise approved in
37.31 the work plan. A list of proposed easement
37.32 acquisitions must be provided as part of the
37.33 required work plan. This appropriation is
37.34 available until June 30, 2018, by which time

38.1 the project must be completed and final
38.2 products delivered.

38.3 **(e) Metro Conservation Corridors - Phase**
38.4 **VIII Coordination, Mapping, and**
38.5 **Conservation Easements**

38.6 \$515,000 the first year is from the trust fund
38.7 to the commissioner of natural resources for
38.8 an agreement with the Minnesota Land Trust
38.9 for Phase VIII of the Metro Conservation
38.10 Corridors partnership to provide coordination
38.11 and mapping for the partnership and to acquire
38.12 permanent conservation easements on at least
38.13 120 acres of strategic ecological landscapes
38.14 to protect priority natural areas in the
38.15 metropolitan area, as defined under Minnesota
38.16 Statutes, section 473.121, subdivision 2, and
38.17 portions of the surrounding counties. A list of
38.18 proposed easement acquisitions must be
38.19 provided as part of the required work plan.
38.20 Land acquired with this appropriation must
38.21 be sufficiently improved to meet at least
38.22 minimum management standards, as
38.23 determined by the commissioner of natural
38.24 resources. Expenditures are limited to the
38.25 identified project corridor areas as defined in
38.26 the work plan. Up to \$40,000 may be used for
38.27 coordination and mapping for the Metro
38.28 Conservation Corridors. All conservation
38.29 easements must be perpetual and have a
38.30 natural resource management plan. A list of
38.31 proposed easement acquisitions must be
38.32 provided as part of the required work plan.
38.33 This appropriation is available June 30, 2018,
38.34 by which time the project must be completed
38.35 and final products delivered.

39.1 **(f) Metro Conservation Corridors - Phase**
39.2 **VIII Strategic Lands Protection**

39.3 \$750,000 the first year is from the trust fund
39.4 to the commissioner of natural resources for
39.5 an agreement with The Trust for Public Land
39.6 for Phase VIII of the Metro Conservation
39.7 Corridors partnership to acquire in fee at least
39.8 35 acres of high-quality priority state and local
39.9 natural areas in the metropolitan area, as
39.10 defined under Minnesota Statutes, section
39.11 473.121, subdivision 2, and portions of the
39.12 surrounding counties. A list of proposed
39.13 acquisitions must be provided as part of the
39.14 required work plan. Land acquired with this
39.15 appropriation must be sufficiently improved
39.16 to meet at least minimum management
39.17 standards, as determined by the commissioner
39.18 of natural resources. Expenditures are limited
39.19 to the identified project corridor areas as
39.20 defined in the work plan. This appropriation
39.21 may not be used to purchase habitable
39.22 residential structures, unless expressly
39.23 approved in the work plan. A list of fee title
39.24 acquisitions must be provided as part of the
39.25 required work plan. This appropriation is
39.26 available until June 30, 2018, by which time
39.27 the project must be completed and final
39.28 products delivered.

39.29 **(g) Metro Conservation Corridors - Phase**
39.30 **VIII Priority Expansion of Minnesota**
39.31 **Valley National Wildlife Refuge**

39.32 \$500,000 the first year is from the trust fund
39.33 to the commissioner of natural resources for
39.34 an agreement with the Minnesota Valley
39.35 National Wildlife Refuge Trust, Inc. for Phase

40.1 VIII of the Metro Conservation Corridors
40.2 partnership to acquire in fee at least 100 acres
40.3 of priority habitat for the Minnesota Valley
40.4 National Wildlife Refuge in the metropolitan
40.5 area, as defined under Minnesota Statutes,
40.6 section 473.121, subdivision 2, and portions
40.7 of the surrounding counties. A list of proposed
40.8 acquisitions must be provided as part of the
40.9 required work plan. Land acquired with this
40.10 appropriation must be sufficiently improved
40.11 to meet at least minimum management
40.12 standards. Expenditures are limited to the
40.13 identified project corridor areas as defined in
40.14 the work plan. This appropriation may not be
40.15 used to purchase habitable residential
40.16 structures, unless expressly approved in the
40.17 work plan. This appropriation is available until
40.18 June 30, 2018, by which time the project must
40.19 be completed and final products delivered.

40.20 **(h) Metro Conservation Corridors - Phase**
40.21 **VIII Wildlife Management Area**
40.22 **Acquisition**

40.23 \$400,000 the first year is from the trust fund
40.24 to the commissioner of natural resources for
40.25 Phase VIII of the Metro Conservation
40.26 Corridors partnership to acquire in fee at least
40.27 82 acres along the lower reaches of the
40.28 Vermillion River in Dakota County within the
40.29 Gores Pool Wildlife Management Area. Land
40.30 acquired with this appropriation must be
40.31 sufficiently improved to meet at least
40.32 minimum management standards. This
40.33 appropriation may not be used to purchase
40.34 habitable residential structures, unless
40.35 expressly approved in the work plan. This

41.1 appropriation is available until June 30, 2018,
41.2 by which time the project must be completed
41.3 and final products delivered.

41.4 **(i) Mesabi Trail Development Soudan to**
41.5 **Ely - Phase II**

41.6 \$1,000,000 the first year is from the trust fund
41.7 to the commissioner of natural resources for
41.8 an agreement with the St. Louis and Lake
41.9 Counties Regional Railroad Authority for the
41.10 right-of-way acquisition, design, and
41.11 construction of segments of the Mesabi Trail,
41.12 totaling approximately seven miles between
41.13 Soudan and Ely. This appropriation is
41.14 available until June 30, 2018, by which time
41.15 the project must be completed and final
41.16 products delivered.

41.17 **(j) Multi-benefit Watershed Scale**
41.18 **Conservation on North Central Lakes**

41.19 \$950,000 the first year is from the trust fund
41.20 to the Board of Water and Soil Resources to
41.21 secure permanent conservation easements on
41.22 at least 480 acres of high-quality habitat in
41.23 Crow Wing and Cass Counties. Of this
41.24 amount, up to \$65,000 must be deposited in a
41.25 conservation easement stewardship account;
41.26 and \$54,000 is for an agreement with the
41.27 Leech Lake Area Watershed Foundation in
41.28 cooperation with Crow Wing County Soil and
41.29 Water Conservation District and Cass County
41.30 Soil and Water Conservation District. Deposits
41.31 into the conservation easement stewardship
41.32 account must be made upon closing on
41.33 conservation easements or at a time otherwise
41.34 approved in the work plan. A list of proposed
41.35 easement acquisitions must be provided as

42.1 part of the required work plan. This
 42.2 appropriation is available until June 30, 2018,
 42.3 by which time the project must be completed
 42.4 and final products delivered.

42.5 **(k) Conservation Easement Assessment and**
 42.6 **Valuation System Development**

42.7 \$250,000 the first year is from the trust fund
 42.8 to the Board of Regents of the University of
 42.9 Minnesota to assess the effectiveness of
 42.10 existing conservation easements acquired
 42.11 through state expenditures at achieving their
 42.12 intended outcomes of public value and
 42.13 ecological benefits and to develop a
 42.14 standardized, objective conservation easement
 42.15 valuation system for guiding future state
 42.16 investments in conservation easements to
 42.17 ensure the proposed environmental benefits
 42.18 are being achieved in a cost-effective manner.
 42.19 This appropriation is available until June 30,
 42.20 2018, by which time the project must be
 42.21 completed and final products delivered.

42.22 Sec. 4. Laws 2017, chapter 96, section 2, subdivision 8, is amended to read:

42.23 **Subd. 8. Methods to Protect**
 42.24 **or Restore Land, Water, and**
 42.25 **Habitat**

	2,729,000	16,554,000	5,000,000
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42.26 **(a) Optimizing the Nutrition of Roadside Plants**
 42.27 **for Pollinators**

42.28 \$815,000 the first year is from the trust fund
 42.29 to the Board of Regents of the University of
 42.30 Minnesota in cooperation with the
 42.31 Departments of Agriculture, Natural
 42.32 Resources, and Transportation and the Board
 42.33 of Water and Soil Resources to produce
 42.34 site-specific recommendations for roadside
 42.35 plantings in Minnesota to maximize the

43.1 nutritional health of native bees and monarch
43.2 butterflies that rely on roadside habitat
43.3 corridors. This appropriation is available until
43.4 June 30, 2020, by which time the project must
43.5 be completed and final products delivered.

43.6 **(b) Promoting Conservation Biocontrol of**
43.7 **Beneficial Insects**

43.8 \$400,000 the first year is from the trust fund
43.9 to the Board of Regents of the University of
43.10 Minnesota to research integrated pest
43.11 management strategies, including insecticide
43.12 alternatives, and overwintering habitat sites
43.13 to conserve beneficial insects, including bees,
43.14 butterflies, and predator insects. The integrated
43.15 pest management strategies will be used to
43.16 develop best management practices to increase
43.17 pollinator and beneficial insect diversity and
43.18 abundance in various restored habitats. This
43.19 appropriation is available until June 30, 2020,
43.20 by which time the project must be completed
43.21 and final products delivered.

43.22 **(c) Evaluating the Use of Bison to Restore and**
43.23 **Preserve Savanna Habitat**

43.24 \$388,000 the first year is from the trust fund
43.25 to the Board of Regents of the University of
43.26 Minnesota, Cedar Creek Ecosystem Science
43.27 Reserve, to research combined bison grazing
43.28 and fire management strategies to restore
43.29 Minnesota's oak savanna ecosystems. This
43.30 appropriation is available until June 30, 2020,
43.31 by which time the project must be completed
43.32 and final products delivered.

43.33 **(d) State Park Pollinator Habitat Restoration**

43.34 \$672,000 the first year is from the trust fund
43.35 to the commissioner of natural resources to
43.36 restore at least 520 acres of monarch butterfly

44.1 and other native pollinator habitats in at least
44.2 seven state parks in the Minnesota Prairie
44.3 Conservation Plan core areas and establish
44.4 pollinator plantings and interpretive exhibits
44.5 in at least ten state parks. This appropriation
44.6 is available until June 30, 2021, by which time
44.7 the project must be completed and final
44.8 products delivered.

44.9 **(e) Enhancing Spawning Habitat Restoration in**
44.10 **Minnesota Lakes**

44.11 \$294,000 the first year is from the trust fund
44.12 to the Board of Regents of the University of
44.13 Minnesota, St. Anthony Falls Laboratory, in
44.14 cooperation with the Department of Natural
44.15 Resources to enhance efforts to increase
44.16 natural reproduction of fish in Minnesota lakes
44.17 by assessing wave energy impacts on
44.18 near-shore spawning habitat. This
44.19 appropriation is available until June 30, 2020,
44.20 by which time the project must be completed
44.21 and final products delivered.

44.22 **(f) Prescribed-Fire Management for Roadside**
44.23 **Prairies**

44.24 \$345,000 the first year is from the trust fund
44.25 to the commissioner of transportation to
44.26 enhance the prescribed-fire program to manage
44.27 roadsides to protect and increase biodiversity
44.28 and pollinator habitat. This appropriation is
44.29 available until June 30, 2020, by which time
44.30 the project must be completed and final
44.31 products delivered.

44.32 **(g) Minnesota Bee and Beneficial Species Habitat**
44.33 **Restoration**

44.34 \$732,000 the first year is from the trust fund
44.35 to the commissioner of natural resources for
44.36 an agreement with Pheasants Forever in

45.1 cooperation with the University of Minnesota
45.2 and the Minnesota Honey Producers
45.3 Association to restore approximately 800 acres
45.4 of permanently protected land to enhance bee,
45.5 butterfly, beneficial insect, and grassland bird
45.6 habitats. This appropriation is available until
45.7 June 30, 2021, by which time the project must
45.8 be completed and final products delivered.

45.9 **(h) Mississippi and Vermillion Rivers**
45.10 **Restoration of Prairie, Savanna, and Forest**
45.11 **Habitat - Phase X**

45.12 \$213,000 the first year is from the trust fund
45.13 to the commissioner of natural resources for
45.14 an agreement with Friends of the Mississippi
45.15 River for continued implementation of the
45.16 Metro Conservation Corridors partnership by
45.17 improving at least 80 acres of habitat at
45.18 approximately seven sites along the
45.19 Mississippi River and Vermillion River
45.20 corridors. Expenditures are limited to the
45.21 identified project corridor areas as defined in
45.22 the work plan. A list of proposed restoration
45.23 sites must be provided as part of the required
45.24 work plan. Plant and seed materials must
45.25 follow the Board of Water and Soil Resources'
45.26 native vegetation establishment and
45.27 enhancement guidelines. This appropriation
45.28 is available until June 30, 2020, by which time
45.29 the project must be completed and final
45.30 products delivered.

45.31 **(i) Community Stewardship to Restore Urban**
45.32 **Natural Resources - Phase X**

45.33 \$524,000 the first year is from the trust fund
45.34 to the commissioner of natural resources for
45.35 an agreement with Great River Greening to
45.36 work with volunteers for continued
45.37 implementation of the Metro Conservation

46.1 Corridors partnership to restore approximately
46.2 250 acres of forest, prairie, woodland, wetland,
46.3 and shoreline throughout the greater Twin
46.4 Cities metropolitan area. Expenditures are
46.5 limited to the identified project corridor areas
46.6 as defined in the work plan. A list of proposed
46.7 restoration sites and evaluations must be
46.8 provided as part of the required work plan.

46.9 Plant and seed materials must follow the Board
46.10 of Water and Soil Resources' native vegetation
46.11 establishment and enhancement guidelines.

46.12 This appropriation is available until June 30,
46.13 2020, by which time the project must be
46.14 completed and final products delivered.

46.15 **(j) Economic Assessment of Precision**
46.16 **Conservation and Agriculture**

46.17 \$400,000 the first year is from the trust fund
46.18 to the commissioner of natural resources for
46.19 an agreement with Pheasants Forever to
46.20 demonstrate a new approach to promote
46.21 conservation practices utilizing
46.22 return-on-investment analysis and identifying
46.23 revenue-negative acres on agricultural land to
46.24 assist farmers in implementing conservation
46.25 practices that will provide environmental and
46.26 economic benefits. This appropriation is
46.27 available until June 30, 2020, by which time
46.28 the project must be completed and final
46.29 products delivered.

46.30 **(k) Conservation Reserve Enhancement**
46.31 **Program (CREP) Outreach and Implementation**

46.32 \$6,000,000 the first year is from the trust fund
46.33 to the Board of Water and Soil Resources to
46.34 fund staff at soil and water conservation
46.35 districts to assist landowners participating in
46.36 the federal Conservation Reserve

47.1 Enhancement Program. This appropriation is
47.2 contingent upon receipt of federal funds for
47.3 implementation. This appropriation is
47.4 available until June 30, 2020, by which time
47.5 the project must be completed and final
47.6 products delivered.

47.7 **(l) Conservation Reserve Enhancement Program**
47.8 **(CREP)**

47.9 \$2,729,000 in fiscal year 2017 and \$5,771,000
47.10 the first year and \$5,000,000 the second year
47.11 are from the trust fund to the Board of Water
47.12 and Soil Resources to acquire permanent
47.13 conservation easements and restore land under
47.14 Minnesota Statutes, section 103F.515. Of this
47.15 amount, up to \$2,184,000 is for establishing
47.16 a monitoring and enforcement fund as
47.17 approved in the work plan and subject to
47.18 Minnesota Statutes, section 103B.103. This
47.19 work may be done in cooperation with the
47.20 federal Conservation Reserve Enhancement
47.21 Program. This appropriation is available until
47.22 June 30, 2021, by which time the project must
47.23 be completed and final products delivered.