M.L. 2019 Environment and Natural Resources Trust Fund (ENRTF) LCCMR Appropriations for FY 2020

On May 24, 2019, the legislature adopted 65 LCCMR recommendations as recommended, provided additional funds to two recommendations and modified one other. They also added 14 additional appropriations, primarily using funds freed up (\$2.94 million FY19; \$7.84 million FY20) following the repeal of M.L. 2018, Chapter 214, Article 6, Section 4 appropriation bonds. On May 31, 2019, 82 appropriations were signed into law by the Governor as M.L. 2019, First Special Session, Chapter 4, Article 2, for \$64,476,000 total appropriations (\$149,000 FY16, \$2,940,000 FY19, and \$61,387,000 FY20).

| Topic Area | Total LCCMR \$ Appropriated | FY2016 Reallocated \$ | FY2019 Trust Fund \$ | FY2020 Trust Fund \$ | Percentage of Total Appropriations |
|--|--------------------------------|--------------------------|-------------------------|-------------------------|--|
| Subd. 03 Foundational Natural Resource Data and Information 20 Appropriations | \$15,405,000 | \$0 | \$1,804,000 | \$13,601,000 | 23.89% |
| Subd. 04 Water Resources 20 Appropriations | \$5,565,000 | \$149,000 | \$0 | \$5,416,000 | 8.63% |
| Subd. 05 Technical Assistance, Outreach, and Environmental Education 4 Appropriations | \$1,136,000 | \$0 | \$0 | \$1,136,000 | 1.76% |
| Subd. 06 Aquatic and Terrestrial Invasive Species 4 Appropriations | \$5,400,000 | \$0 | \$0 | \$5,400,000 | 8.38% |
| Subd. 07 Air Quality and Renewable Energy 4 Appropriations | \$1,485,000 | \$0 | \$0 | \$1,485,000 | 2.30% |
| Subd. 08 Methods to Protect or Restore Land, Water, and Habitat 7 Appropriations | \$6,766,000 | \$0 | \$806,000 | \$5,960,000 | 10.49% |
| Subd. 09 Land Acquisition, Habitat, and Recreation 17 Appropriations | \$26,351,000 | \$0 | \$0 | \$26,351,000 | 40.87% |
| Subd. 10 Administration and Contract Agreement Reimbursement 4 Appropriations | \$1,868,000 | \$0 | \$330,000 | \$1,538,000 | 2.90% |
| Subd. 11 Wastewater Treatment Recommendations 2 Appropriations | \$500,000 | \$0 | \$0 | \$500,000 | 0.78% |
| Total Appropriations | \$64,476,000 | \$149,000 | \$2,940,000 | \$61,387,000 | 100.00% |

| Fund Source | \$ Amount |
|--|--------------|
| FY 2020 - Environment and Natural Resources Trust Fund (ENRTF) | \$61,387,000 |
| FY 2019 - Environment and Natural Resources Trust Fund (ENRTF) | \$2,940,000 |
| ENRTF Dollars Reallocated from 2016 Appropriations | \$149,000 |
| Total \$ | \$64.476.000 |

| | | | Total LCCMR \$ | FY2016 | FY2019 | FY2020 | | | Region of |
|----------|---|---|----------------|----------------|---------------|---------------|------------------|--------------------------------|---------------------------|
| Subd. | Title | Summary | Appropriated | Reallocated \$ | Trust Fund \$ | Trust Fund \$ | Project Manager | Organization | Impact* |
| Subd. 03 | Foundational Natural Resource Da | ata and Information (20 Appropriations - Subtotal = \$15 | ,405,000) | | 1 | | | | |
| 03a | с , | MBS proposes baseline biological field surveys in three northern counties; targeted field surveys of sensitive plant species, pollinators, and plant communities; digital maps; book drafts; technical guidance; and data management. | \$ 1,500,000 | \$ | · \$ - | \$ 1,500,000 | Bruce Carlson | MN DNR | Statewide |
| 03b | Restoring Native Mussels in Streams and Lakes | Restore native freshwater mussel assemblages in the Mississippi, Cedar, and Canon rivers to provide necessary ecosystem services, expand imperiled species populations, and inform the public on mussels and their conservation. | \$ 500,000 | \$. | · \$ - | \$ 500,000 | Mike Davis | MN DNR | Statewide |
| 03c | Quantifying Exposure of Minnesota's Rantors to Mercury | We will quantify exposure to two contaminants for 12 Minnesota raptors. Polyfluoralkyl substances (PFAS) and methylmercury (Hg) are bioaccumulative toxicants that cause reproductive failure in birds. | \$ 250,000 | \$ | · \$ - | \$ 250,000 | Matthew Etterson | Hawk Ridge Bird Observatory | NE |
| 03d | Minnesota Trumpeter Swan Migration Ecology and Conservation | We propose to radio-mark and monitor movements of Minnesota trumpeter swans to provide foundational information necessary for management and conservation. | \$ 300,000 | \$. | • \$ - | \$ 300,000 | David Andersen | U of MN | Statewide |
| 03e | | Our primary objective is to understand how to harvest timber in the boreal forest in a way that enables species with limited movements to thrive in a changing landscape. | \$ 350,000 | \$ | · \$ - | \$ 350,000 | Julia Ponder | U of MN - Raptor Center | NE, NW |
| 03f | Understanding Brainworm | A 2017 workshop determined we don't know enough about brainworm transmission to moose and what mitigation strategies are optimal. We've assembled a multidisciplinary team to tackle the highest research priorities. | \$ 400,000 | \$. | · \$ - | \$ 400,000 | Tiffany Wolf | U of MN | NE |
| 03g | | We will map habitat and diseases of urban foxes and coyotes to understand what they need to live and risks posed to people and pets, thereby demystifying them for residents. | \$ 500,000 | \$ | - \$ - | \$ 500,000 | Nicholas McCann | U of MN | Metro |
| 03h | Accelerated Aggregate Resource Mapping | To map the aggregate resource potential of 6 counties. Each county has passed a county board resolution requesting this work to be completed. | \$ 700,000 | \$. | - \$ - | \$ 700,000 | Heather Arends | MN DNR | SW |
| 03i | Den Boxes for Fishers and other Nesting Wildlife | DNR data show that fisher in Minnesota have declined 50% since 2000. Den sites may be limiting reproduction. We will test if den boxes can help the fisher population increase. | \$ 190,000 | \$ | - \$ - | \$ 190,000 | Michael Joyce | U of MN - Duluth NRRI | Central, Metro, NE, NW |

| | | | Total LCCMR | FY2016 | FY2019 | FY2020 | | | Region of | | | | | | | | | | | |
|---------|---|---|--------------|----------------|----------------|----------------|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Subd. | Title | Summary | Appropriated | Reallocated \$ | Trust Fund \$ | Trust Fund \$ | Project Manager | Organization | Impact* | | | | | | | | | | | |
| 03j | Red-headed Woodpeckers as Indicators of Oak Savanna Health | Red-headed woodpeckers are a flagship species of threatened oak savannas in Minnesota. We aim to better understand red-headed woodpecker population ecology and develop a unified management plan for restoration. | \$ 171,00 | 0\$ | - \$ | - \$ 171,000 | David Andersen | U of MN | Central | | | | | | | | | | | |
| 03k | Implementing Conservation Plans for Avian Species of Concern | Establishing monitoring sites to implement Conservation Plans for selected focal species using information from the statewide marshbird survey and the Breeding Bird Atlas focused within existing Important Bird Areas | \$ 124,00 | 0\$ | - \$ | - \$ 124,000 | Nathaniel Miller | Audubon Minnesota | Statewide | | | | | | | | | | | |
| 031 | Mapping Aquatic Habitats for Moose | Data is needed about which aquatic habitats moose prefer and how moose can potentially enhance nearshore lake foodwebs. This project will map critical aquatic habitats and measure lake foodweb effects. | \$ 199,00 | 0\$ | - \$ | - \$ 199,000 | Joseph Bump | U of MN | NE | | | | | | | | | | | |
| 03m | Improving Statewide GIS Data by Restoring the Public Land Survey | Restoring the Public Land Survey (PLS) will improve foundational GIS data that resource managers and citizens utilize on ENRTF projects and conservation easements. | \$ 135,00 | 0\$ | - \$ | - \$ 135,000 | Patrick Veraguth | Minnesota Association of County Surveyors | Central | | | | | | | | | | | |
| 03n | County Geologic Atlases - Part A, Mapping Geology | Geologic atlases provide maps/databases essential for improved management of ground and surface water. This proposal will complete current projects and start new projects to equal about 10 complete atlases. | \$ 2,000,00 | 0\$ | - \$ | - \$ 2,000,000 | Barbara Lusardi | U of MN - MN Geological Survey | Statewide | | | | | | | | | | | |
| 030 | County Geologic Atlases - Part B, Mapping Aquifer Hydrology | County geologic atlases provide information that is essential to sustainable management of Minnesotas groundwater resources by identifying key areas to protect our drinking water and ensure future availability for all. | \$ 2,400,00 | 0\$ | - \$ | - \$ 2,400,000 | Paul Putzier | MN DNR | Statewide | | | | | | | | | | | |
| 03p | Unlocking the Science of Minnesota's Moose Decline | The Minnesota Zoo will develop educational displays and engaging, hands-on interactives to summarize scientific findings about moose decline in Minnesota. Information will be integrated online to increase accessibility for all. | \$ 199,00 | 0\$ | - \$ | - \$ 199,000 | Nicole Mattson | Minnesota Zoological Garden | Statewide | | | | | | | | | | | |
| 03q | Forest and Bioeconomy Research | n/a | \$ 2,200,00 | 0\$ | - \$ | - \$ 2,200,000 | Rolf Weberg | U of MN - Duluth NRRI | Statewide | | | | | | | | | | | |
| 03r | Minerals and Water Research | n/a | \$ 883,00 | 0\$ | - \$ | - \$ 883,000 | Rolf Weberg | U of MN - Duluth NRRI | Statewide | | | | | | | | | | | |
| 03s | Native Bee Survey | n/a | \$ 600,00 | 0\$ | - \$ | - \$ 600,000 | Jessica Peterson | MN DNR | Central, NE, NW | | | | | | | | | | | |
| 03t | Diagnostic Test for Chronic Wasting Disease | n/a | \$ 1,804,00 | 0 \$ | - \$ 1,804,000 |)\$- | Peter Larsen | U of MN | Statewide | | | | | | | | | | | |
| | | nal Natural Resource Data and Information Subtotal = | \$ 15,405,00 | \$ - | \$ 1,804,000 | \$ 13,601,000 | | | | | | | | | | | | | | |
| ubd. 04 | Water Resources (20 Appropriation | ons - Subtotal = \$5,565,000) | | | | | | | Foundational Natural Resource Data and Information Subtotal = \$ 15,405,000 \$ - \$ 1,804,000 \$ 13,601,000 bd. 04 Water Resources (20 Appropriations - Subtotal = \$5,565,000) | | | | | | | | | | | |

| Subd. | Title | Summany | LCCMR \$ | FY2016 Reallocated \$ | | FY2019 rust Fund \$ | FY2020 ust Fund \$ | Droject Manager | Organization | Region of Impact* |
|-------|--|---|---------------|--------------------------|------|------------------------|-----------------------|-------------------|---------------------------------------|----------------------|
| 04a | Determining Influence of Insecticides on Algal Blooms | Summary The potential of neonicotinoid insecticides to initiate algal blooms will be tested by measuring the occurrence of neonicotinoids and their breakdown products in Minnesota's surface and ground waters. | \$ 350,000 | | - \$ | | \$ 350,000 | Project Manager | Organization U of MN | Statewide |
| 04b | Benign Design: Environmental Studies Leading to Sustainable Pharmaceuticals | We will identify wastewater treatment and natural processes that prevent the formation of highly toxic byproducts from fluoro-pharmaceuticals. This will lead to improved treatment and rules for better pharmaceutical design. | \$ 415,000 | \$ | - \$ | - | \$ 415,000 | William Arnold | U of MN | Statewide |
| 04c | Wastewater Nutrient Reduction through Industrial Source Reduction Assistance | Provide industrial, source reduction technical assistance to reduce nutrient discharge to wastewater treatment facilities through industrial process optimization. Document impact of nutrient reduction on wastewater operations and discharge quality. | \$ 200,000 | \$ | - \$ | - | \$ 200,000 | Laura Babcock | U of MN | Statewide |
| 04d | Quantifying Microplastics in Minnesota's Inland Lakes | We propose to quantify the amount, type, and source of microplastics in the water, sediment, and fishes of a range of Minnesota lakes in collaboration with MN DNR. | \$ 200,000 | \$ | - \$ | - | \$ 200,000 | Kathryn Schreiner | U of MN - Duluth | Statewide |
| 04e | Improving Nitrogen Removal in Greater Minnesota Wastewater Treatment Ponds | This research will help the State of Minnesota understand how to improve the nitrogen removal of wastewater treatment ponds when needed, protecting outstate surface water quality and groundwater safety. | \$ 325,000 | \$ | - \$ | - | \$ 325,000 | Paige Novak | U of MN | Statewide |
| 04f | Improving Drinking Water for Minnesotans through Pollution Prevention | This research will reduce exposure of Minnesotans to toxic, cancer-causing chemicals by identifying and curbing key pollutant sources in the Upper Mississippi River watershed and improving drinking water treatment. | \$ 345,000 | \$ | - \$ | - | \$ 345,000 | Raymond Hozalski | U of MN | Metro |
| 04g | Protecting Minnesota Waters by Removing Contaminants from Wastewater | Wastewater contains many environmental contaminants including pharmaceuticals, personal- care products, PFAS and micro-plastics. They are not removed by treatment plants. We propose to remove them using commercially available drinking water coagulants. | \$ 250,000 | \$ | - \$ | - | \$ 250,000 | Matt Simcik | U of MN | Statewide |
| 04h | Reducing Municipal Wastewater Mercury Pollution to Lake Superior | This technology transfer project helps the municipal wastewater plants in the Lake Superior basin reduce mercury pollution and save money. | \$ 250,000 | \$ | - \$ | - | \$ 250,000 | Scott Kyser | Minnesota Pollution Control Agency | NE |

| | | | Total LO | • | FY2016 | FY2019 | | FY2020 | | | Region of |
|-------|--|---|----------|---------|----------------|------------|------|--------------|-----------------|--|-------------------------------|
| Subd. | Title | Summary | Approp | oriated | Reallocated \$ | Trust Fund | бТ | rust Fund \$ | Project Manager | Organization | Impact* |
| 04i | Extracting Deicing Salt from Roadside Soils with Plants | We propose to study native plants that can adsorb salts to be planted on the roadside to address the environmental concerns over deicing road salts. | \$ | 360,000 | \$ - | \$ | - \$ | 360,000 | Bo Hu | U of MN | Statewide |
| 04j | Transformation of Plastic Waste into Valued Resource | We will develop technologies that utilize indigenous microbes to convert waste plastics into useful chemical compounds and fuels, lowering the likelihood that these materials end up in our environment. | \$ | 225,000 | \$ - | \$ | - \$ | 225,000 | Brett Barney | U of MN | Statewide |
| 04k | Accelerating Perennial Crop Production to Prevent Nitrate Leaching | Reducing nitrate leaching on sandy soils of central Minnesota by developing water-efficient production methods, supply chains, and end-use markets for thee profitable perennial crops: Kernza, prairie, and alfalfa. | \$ | 440,000 | \$ - | \$ | - \$ | 440,000 | Dennis Fuchs | Stearns County Soil and Water Conservation District | Central |
| 041 | Farm-Ready Cover Crops for Protecting Water Quality | We will implement an economically-viable, farm- based strategy to protect water quality across more than 100,000 acres of vulnerable wellhead protection regions using cover crops in corn-soybean rotation. | \$ | 741,000 | \$ - | \$ | - \$ | 741,000 | Keith Olander | Central Lakes College - Ag and Energy Ctr | Central, Metro, NW, SE, SW |
| 04m | Setting Realistic Nitrate Reduction Goals in Southeast Minnesota | Advanced tools are needed which provide critical timelag and feedback information for making environmental policy decisions, as Minnesota prepares to launch the Groundwater Protection Rule and nutrient reduction strategies. | \$ | 350,000 | \$ - | \$ | - \$ | 350,000 | John Nieber | U of MN | SE |
| 04n | Mapping Unprofitable Cropland for Water and Wildlife | We propose conducting the first statewide analysis mapping the extent of Minnesota's unprofitable cropland and estimating both the water-quality and habitat benefits of converting these lands to perennial crops/vegetation. | \$ | 100,000 | \$ - | \$ | - \$ | 100,000 | Jason Ulrich | Science Museum of Minnesota - St. Croix Research Station | Statewide |
| 040 | Evaluating Locally Sourced Materials for Road Salt Reduction | The project will evaluate the effectiveness and benefits/impacts of locally sourced woodchip, corncob, and iron-bearing minerals as alternative effective abrasive materials to lower salt use for protecting Minnesotas water resources. | \$ | 162,000 | \$ - | \$ | - \$ | 162,000 | Chanlan Chun | U of MN - Duluth NRRI | Statewide |
| 04p | Minnesota Spring Inventory Final Phase | The project will complete the Minnesota Spring Inventory, identifying, cataloging and assisting in the protection of important water springs threatened by overuse of groundwater, development, land-use changes, and changing climate. | \$ | 71,000 | \$ - | \$ | - \$ | 71,000 | Paul Putzier | MN DNR | Statewide |

| | | | Total LCC | MR \$ | FY2016 | FY2019 | | FY2020 | | | Region of |
|----------|---|--|-------------------|--------|----------------|----------------|------|---------------|-----------------|--|-----------|
| Subd. | Title | Summary | Appropri | ated | Reallocated \$ | Trust Fund \$ | | Trust Fund \$ | Project Manager | Organization | Impact* |
| 04q | Restoring Impaired Lakes throught Citizen-Aided Carp Management | Citizens will be enlisted to field-test a new method of managing carp to restore an impaired lake. Water quality & cost-effectiveness will be quantified to inform statewide implementation. | \$ 1 | 06,000 | \$ - | \$ | - \$ | 106,000 | Andrew Dickhart | Carver County Water Management Organization | Metro |
| 04r | Spring Biological Nitrate Removal to Protect Drinking Water | Fairmont's drinking water safety is threatened by high springtime nitrate levels. Fairmont intends to build an experimental passive biological treatment system to reduce nitrates that enter its source water supply. | \$ 1 | 75,000 | \$ - | \$ | - \$ | 175,000 | Troy Nemmers | City of Fairmont | SW |
| 04s | Degrading Chlorinated Industrial Contaminants with Bacteria | Sites contaminated with chlorinated industrial pollutants are a significant problem in Minnesota. We will determine the best way to stimulate bacteria for faster and more complete pollutant dechlorination. | \$ 1 | 50,000 | \$ 149,000 | \$ | - \$ | 1,000 | Paige Novak | U of MN | Statewide |
| 04t | Managed Aquifer Recharge | n/a | \$ 3 | 50,000 | \$ - | \$ | - \$ | 350,000 | John Bilotta | U of MN - Water Resources | Statewide |
| | | Water Resources Subtotal = | ¢ 550 | 5,000 | \$ 149,000 | ć | - \$ | 5,416,000 | | Center | |
| Subd. 05 | Technical Assistance, Outreach, a | nd Environmental Education (4 Appropriations - Subtot | ÷ -) | | 5 149,000 | ې ، | - , | 5,410,000 | | | |
| | | | a. <i>+1,100,</i> | , | | | T | | | | |
| 05a | Expanding Camp Sunrise Environmental Program | Camp Sunrise is an integrated environmental education program for economically disadvantaged youth. This innovative camp experience allows children a hands-on program to understand their impact on the environment and nature. | \$ 2 | 37,000 | \$ - | \$ | - \$ | 237,000 | Lori Arnold | YouthCARE MN | Metro |
| 05b | Connecting Students to the Boundary Waters | This project will connect over 11,000 students to the Boundary Waters through classroom education and wilderness canoe experiences, targeting diverse and underserved populations across Minnesota. | \$ 4. | 50,000 | \$ - | \$ | - \$ | 450,000 | Chris Knopf | Friends of the Boundary Waters Wilderness | Statewide |
| 05c | Mississippi National River and Recreation Area Forest Restoration | This is a forest restoration project within the Mississippi National River and Recreation Area to address the loss of ash trees to EAB and plant 15,000 native trees and plants. | \$ 1 | 99,000 | \$ - | \$ | - \$ | 199,000 | Mary Hammes | Mississippi Park Connection | Metro |
| 05d | Increasing Diversity in Environmental Careers | n/a | \$ 2 | 50,000 | \$- | \$ | - \$ | 250,000 | Mimi Daniel | MN DNR | Statewide |
| | | ce, Outreach, and Environmental Education Subtotal = | \$ 1,13 | 6,000 | \$ - | \$. | - \$ | 1,136,000 | | | |
| Subd. 06 | Aquatic and Terrestrial Invasive S | pecies (4 Appropriations - Subtotal = \$5,400,000) | | | | | - 1 | | | - | |
| 06a | Building Knowledge and Capacity to Solve AIS Problems | MAISRC will launch 12-16 new or continuation projects aimed at solving Minnesota's AIS problems using a competitive RFP process, informed by an annual research needs assessment and stakeholder consultation. | \$ 4,0 | 00,000 | \$ - | \$ | - \$ | 4,000,000 | Nicholas Phelps | U of MN - MAISRC | Statewide |

| | | | Tot | al LCCMR \$ | FY2016 | | FY2019 | | FY2020 | | | Region of |
|----------|---|--|--------|-------------|----------------|------|-------------|----|--------------|------------------------|--|---------------------------|
| Subd. | Title | Summary | | propriated | Reallocated \$ | | ust Fund \$ | Tr | rust Fund \$ | Project Manager | Organization | Impact* |
| 06b | Oak Wilt Suppression at its Northern Edge | Eradicate identified oak wilt at these northern most locations on nine private properties by mechanical means to stop the invasiveness before it spreads to healthy state forests affecting habitat. | \$ | 100,000 | \$ | - \$ | - | \$ | 100,000 | Shannon Wettstein | Morrison Soil and Water Conservation District | Central |
| 06c | Noxious Weed Detection and Eradication | n/a | \$ | 1,000,000 | \$ | - \$ | - | \$ | 1,000,000 | Mark Abrahamson | Minnesota Department of Agriculture | Statewide |
| 06d | Emerald Ash Borer Response Grants | n/a | \$ | 300,000 | \$ | - \$ | - | \$ | 300,000 | Valerie McClannahan | MN DNR | Statewide |
| | | Aquatic and Terrestrial Invasive Species Subtotal = | \$ | 5,400,000 | \$. | \$ | • | \$ | 5,400,000 | | | |
| Subd. 07 | Air Quality and Renewable Energ | y (4 Appropriations - Subtotal = \$1,485,000) | 1 | | | | | 1 | | | | |
| 07a | Development of Clean Energy Storage Systems for Farms | Energy storage systems for farms will be developed using wind-generated ammonia. Novel ammonia fuel systems will be tested in a farm grain dryer and engine generator displacing fossil fuels. | \$ | 650,000 | \$ | - \$ | - | \$ | 650,000 | William Northrop | U of MN - WCROC | Statewide |
| 07b | White Earth Nation Community Solar for Economic Resilience | Project goals include installation of a 200-kW White Earth community-owned solar garden reducing GHG emissions, increasing economic development through environmental education and solar workforce training, and improving energy resilience. | \$ | 500,000 | \$ | - \$ | _ | \$ | 500,000 | Vicki O'Day | Rural Renewable Energy Alliance | NE, NW |
| 07c | Sustainable Solar Energy from Agricultural Plant By-Products | Producing new materials from regional plant byproducts for renewable solar energy. This project engages many students in environmental research; this homegrown technology will ultimately provide affordable energy to Minnesota families. | \$ | 185,000 | \$ | - \$ | _ | \$ | 185,000 | Ted Pappenfus | U of MN - Morris | Statewide |
| 07d | Morris Energy and Environment Community Resilience Plan | The City of Morris and several partners will develop a model community for energy and environmental stewardship which will serve as a roadmap for other small communities across the state. | \$ | 150,000 | \$ | - \$ | - | \$ | 150,000 | Blaine Hill | City of Morris | Statewide |
| | | Air Quality and Renewable Energy Subtotal = | | 1,485,000 | \$ | \$ | | \$ | 1,485,000 | | | |
| Subd. 08 | Methods to Protect or Restore La | nd, Water, and Habitat (7 Appropriations - Subtotal = \$ | 6,766, | 000) | | | | | | | | |
| 08a | Saving Endangered Pollinators through Data-Driven Prairie Restoration | Minnesota Zoo, Parks, and TNC will use prairie restorations and Endangered Dakota skipper reintroductions to study factors supporting butterflies and develop foundational habitat management recommendations for Minnesotas imperiled prairie butterflies. | \$ | 800,000 | \$ | - \$ | - | \$ | 800,000 | Erik Runquist | Minnesota Zoological Garden | Central, Metro, NW, SW |
| 08b | Promoting and Restoring Oak Savanna Using Silvopasture | Oak savanna is imperiled and threatened ecosystem with only 0.2% remaining of historically 5.5 million acres in Minnesota. This project will demonstrate the use of silvopasture to restore this ecosystem. | \$ | 750,000 | \$ | - \$ | - | \$ | 750,000 | Diomy Zamora | U of MN | Statewide |

| | | | Tot | al LCCMR \$ | FY2016 | | FY2019 | FY2020 | | | Region of |
|----------|--|--|-----|-------------|----------------|--------|---------------|-----------------|--------------------------|------------------------------------|-----------|
| Subd. | Title | Summary | Ар | propriated | Reallocated \$ | | Trust Fund \$ | Trust Fund \$ | Project Manager | Organization | Impact* |
| 08c | Sauk River Dam Removal and Rock Rapids Replacement | This project consists of habitat restoration, water quality and fish passage improvements through the removal of the existing fixed elevation dam, construction of rock arch rapids and in-stream habitat restoration. | \$ | 2,768,000 | \$ | - ¢ | \$- | \$ 2,768,000 | Tessa Beuning | City of Melrose | Central |
| 08d | Conserving and Monitoring of Minnesota's Rare Arctic Plants | The North Shore houses completely unique plant communities that are in danger of decline. This project will provide critical monitoring and invasive removal to conserve these rare and endangered plants. | \$ | 135,000 | \$ | - ¢ | \$ - | \$ 135,000 | Briana Gross | U of MN - Duluth | NE |
| 08e | Nongame Wildlife Program Acceleration | n/a | \$ | 513,000 | \$ | - \$ | > - | \$ 513,000 | Cynthia Osmundson | MN DNR | Statewide |
| 08f | Lawns to Legumes | n/a | \$ | 900,000 | \$ | - \$ | 806,000 | \$ 94,000 | Angie Becker- Kudelka | BWSR | Statewide |
| 08g | Agricultural Weed Control Using Autonomous Mowers | n/a | \$ | 900,000 | \$ | - \$ | ÷ - | \$ 900,000 | Eric Buchanan | U of MN - Morris | Central |
| | Methods to | Protect or Restore Land, Water, and Habitat Subtotal = | \$ | 6,766,000 | \$. | \$ | 806,000 | \$ 5,960,000 | | | |
| Subd. 09 | Land Acquisition, Habitat, and Re | creation (17 Appropriations - Subtotal = \$26,351,000) | | | | | | | | | |
| 09a | Minnesota Scientific and Natural Areas | Scientific and Natural Area (SNA) habitat restoration and improvements (1100+ acres), increased public involvement and strategic acquisition (500+ acres) will conserve Minnesota's most unique and rare resources for everyone's benefit. | \$ | 3,500,000 | \$ | - ¢ | 5 - | \$ 3,500,000 | Judy Schulte | MN DNR | Statewide |
| 09b | Grants for Local Parks, Trails and Natural Areas | Provide approximately 25 matching grants for local parks, acquisition of locally significant natural areas and trails to connect people safety to desirable community locations and regional or state facilities. | \$ | 3,000,000 | \$ | - Ç | - | \$ 3,000,000 | Audrey Mularie | MN DNR | Statewide |
| 09c | Minnesota State Parks and State Trails In-Holdings | Acquire high priority State Park, Recreation Area and Trail in-holding parcels from willing sellers to protect Minnesotas natural and cultural heritage, enhance outdoor recreation and promote tourism. | \$ | 2,000,000 | \$ | - ¢ | \$ - | \$ 2,000,000 | Jennifer Christie | MN DNR | Statewide |
| 09d | Minnesota State Trails Development | This project fulfills legislative direction to expand recreational opportunities on Minnesota State Trails through the development of new trail segments; and the rehabilitation and enhancement of existing State Trails. | \$ | 5,000,000 | \$ | - ¢ | - - | \$ 5,000,000 | Kent Skaar | MN DNR | Statewide |
| 09e | National Loon Center | National Loon Center dedicated to survival of loon, habitat protection, recreation, and environmental research establishing Minnesota as the premiere destination to experience the freshwater ecosystem we share with native wildlife. | Ş | 4,000,000 | \$ | - ¢ | ÷ - | \$ 4,000,000 | Leah Heggerston | National Loon Center Foundation | Central |

| | | | Total | LCCMR \$ | FY2016 | | FY2019 | | FY2020 | | | Region of |
|-------|---|--|-------|-----------|----------------|------|---------------|----|--------------|-------------------|--|-----------|
| Subd. | Title | Summary | Appro | opriated | Reallocated \$ | | Trust Fund \$ | T | rust Fund \$ | Project Manager | Organization | Impact* |
| 09f | Accessible Fishing Piers | Provide 7-8 accessible fishing piers in locations that have a high potential to serve new angling communities, undeserved populations and anglers with physical disabilities. | \$ | 320,000 | \$ | - \$ | - | \$ | 320,000 | Nancy Stewart | MN DNR | Statewide |
| 09g | Mesabi Trail Extensions | Complete the Mesabi Trail by constructing the four remaining trail segments where further described within the Main Proposal. | \$ | 3,000,000 | \$ | - \$ | - | \$ | 3,000,000 | Bob Manzoline | St. Louis & Lake Counties Regional Railroad Authority | NE |
| 09h | Birch Lake Recreation Area Campground | This project consists of expanding the existing Birch Lake Recreation Area to add a new 22 acre campground that will include 49 campsites for recreational vehicles and tent campers. | \$ | 350,000 | \$ | - \$ | - | \$ | 350,000 | Cathy Bissonette | City of Babbitt | NE |
| 09i | Bike Trail | Sustainably built singletrack mountain bike trail connecting trail clusters that draws new visitors and becomes part of the NE Minnesota efforts to become a national destination for mountain biking. | \$ | 350,000 | \$ | - \$ | - | \$ | 350,000 | Tim Kennedy | Superior Cycling Association | NE |
| 09j | Preserving the Avon Hills with Reverse-Bidding Easements | Utilize proven cost-saving MMAPLE reverse-bid conservation easement ranking system to permanently protect 650 acres and restore/enhance 400 acres of priority private lands already protected in the Avon Hills. | \$ | 1,600,000 | \$ | - \$ | - | \$ | 1,600,000 | John Geissler | Saint Johns University | Central |
| 09k | Bailey Lake Trail and Fishing Pier | This project consists of the reconstruction of the existing Bailey Lake Trail and construction of a new fishing pier on Bailey Lake. | \$ | 550,000 | \$ | - \$ | - | \$ | 550,000 | Britt See-Benes | City of Virginia | NE |
| 091 | Vergas Long Lake Trail | Long Lake is a community asset for Vergas, enjoyed by residents and visitors alike. This project will construct a trail bordering Long Lake, maintaining public access and restoring the shoreline. | \$ | 290,000 | \$ | - \$ | - | \$ | 290,000 | Julie Lammers | City of Vergas | NW |
| 09m | Glacial Edge Trail and Downtown Pedestrian Bridge | The project proposes a .48 mile trail along the Otter Tail River in downtown Fergus Falls as well as a 125 ft. long bicycle and pedestrian bridge crossing the river. | \$ | 600,000 | \$ | - \$ | - | \$ | 600,000 | Ryan Miller | City of Fergus Falls | NW |
| 09n | Crane Lake to Vermilion Falls Trail | This project consists of designating and improving a 5.6 mile wooded trail from Crane Lake to the Vermilion Falls to accommodate ATV and Snowmobile users. | \$ | 400,000 | \$ | - \$ | - | \$ | 400,000 | Bruce Beste | Voyageur Country ATV | NE |
| 090 | Restoring Five Sections of the Superior Hiking Trail | To renew the most damaged parts of five sections of the Superior Hiking Trail, and to return the Trail to an abandoned route. | \$ | 191,000 | \$ | - \$ | - | \$ | 191,000 | Denny Caneff | Superior Hiking Trail Association | NE |
| 09p | Rainy Lake Recreational Access and Boat Wash Station | n/a | \$ | 200,000 | \$ | - \$ | - | \$ | 200,000 | Sherril Gautreaux | City of Ranier | NE |
| 09q | Historic Bruce Mine Park and Mesabi Trailhead | n/a | \$ | 1,000,000 | \$ | - \$ | - | \$ | 1,000,000 | Bob Manzoline | St. Louis & Lake Counties Regional Railroad Authority | NE |
| | | Land Acquisition, Habitat, and Recreation Subtotal = | \$ 20 | 5,351,000 | \$. | \$ | - | \$ | 26,351,000 | | | |

| | | | Total LCCMF | \$ | FY2016 | | FY2019 | | FY2020 | | | Region of |
|----------|--|---|-------------|--------|----------------|----|-------------|----|--------------|-----------------------------|---|-----------|
| Subd. | Title | Summary | Appropriate | d | Reallocated \$ | Tr | ust Fund \$ | Т | rust Fund \$ | Project Manager | Organization | Impact* |
| Subd. 10 | Administration and Contract Agree | ement Reimbursement (4 Appropriations - Subtotal = \$ | 1,868,000) | | | | | | | | | |
| 10a | Contract Agreement Reimbursement | Provide continued contract management and customer service to ENRTF pass-through appropriation recipients. Ensure funds are expended in compliance with appropriation law, state statute, grants policies, and approved work plans. | \$ 135, | 000 : | \$- | \$ | - | \$ | 135,000 | Katherine Sherman- Hoehn | MN DNR | Statewide |
| 10b | LCCMR Administration | n/a | \$ 1,400, | 000 : | \$- | \$ | - | \$ | 1,400,000 | Becca Nash | Legislative-Citizen Commission on Minnesota Resources | Statewide |
| 10c | LCC Administration | n/a | \$3, | 000 | \$- | \$ | - | \$ | 3,000 | Sally Olson | Legislative Coordinating Commission | Statewide |
| 10d | Grants Management System | n/a | \$ 330, | 000 | \$- | \$ | 330,000 | \$ | - | Becca Nash | Legislative-Citizen Commission on Minnesota Resources | Statewide |
| | Administratio | on and Contract Agreement Reimbursement Subtotal = | \$ 1,868,0 | 00 \$ | - | \$ | 330,000 | \$ | 1,538,000 | | | |
| Subd. 11 | Wastewater Treatment Recomme | endations (2 Appropriations - Subtotal = \$500,000) | | | | | | | | | | |
| 11a** | Water Infrastructure Loans | n/a | \$ | - : | \$- | \$ | - | \$ | - | Jeff Freeman | Public Facilities Authority | Statewide |
| 11b | Optimizing Local Mechanical and Pond Wastewater-Treatment Plants | n/a | | 000 : | \$ - | \$ | - | \$ | 500,000 | Joel Peck | МРСА | Statewide |
| | | Wastewater Treatment Recommendations Subtotal = | \$ 500,0 |)00 \$ | - | \$ | - | \$ | 500,000 | | | |
| | | Total \$ Appropriated = | \$ 64,476,0 | 00 \$ | 5 149,000 | \$ | 2,940,000 | \$ | 61,387,000 | | | |

* Region of Impact designated in the State include Statewide, Central, Metro, NE, NW, SE, SW. Metro region includes the 11 counties of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and Wright.

** Subd. 11a "Water Infrastructure Funding Program" - Up to \$5,000,000 of the money in the trust fund is available to the State Board of Investment to invest in loans through the Public Facilities Authority's clean water revolving fund under Minnesota Statutes, section 446A.07. This project will be reflected in the overall appropriations count, but the loan money will not be included in the total dollars.