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1	2015	03g	Minnesota Native Bee Atlas	U of MN	Robert Blair	$ 790,000	The Minnesota Bee Atlas relied on volunteers to collect data on native bee distribution and diversity as well as previously unstudied nesting phenology. This data supplements existing information from the Minnesota DNR and UMN Insect Collection and can inform land management and policy decisions.
2	2015	08b	Thirteen Counties Propagating Native Plants and Restoring Diverse Habitats	Martin Soil and Water Conservation District	Ashley Brenke	$ 495,000	This project enhanced the number and variety of native plant species on sites across the state of Minnesota. By working with a variety of partners, we were able to reach citizens from the border of Iowa up to Lake Superior, and teach many people about the importance of native habitats.
3	2015	09i	Mesabi Trail Development Soudan to Ely - Phase II	St. Louis & Lake Counties Regional Railroad Authority	Bob Manzoline	$ 1,000,000	Due in January 2022
4	2016	04s	Agricultural and Urban Runoff Water Quality Treatment Analysis - Phase II	Blue Earth County Drainage Authority	Craig Austinson	$ 110,000	The results will be used to implement the most cost effective BMPs and guide future maintenance to maximize the benefits and lifespan of the associated BMPs implemented on public drainage systems. The data can use used to inform larger watershed plans to meet local and state water quality goals.
5	2016	06c	Advancing Microbial Invasive Species Monitoring from Ballast Discharge	U of MN - Duluth	Randall Hicks	$ 368,000	Bacterial communities and pathogen-containing bacterial genera were characterized in ship ballast water, throughout the St. Louis River estuary including commercial dock areas and muskellunge habitats to better understand the risk of discharging ballast water from commercial ships into this estuary.
6	2016	08a	Bee Pollinator Habitat Enhancement - Phase II	U of MN	Marla Spivak	$ 387,000	Florally enhanced fine fescue lawns provide forage for diverse bee pollinators, maintain recreational and aesthetic value, and reduce the need for irrigation, pesticides, fertilizers, and mowing. In response to demand, many local retailers now sell bee lawn seed mixes, a trend that will likely grow in Minnesota and nationally.

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7	2016	08b	Measuring Pollen and Seed Dispersal for Prairie Fragment Connectivity	U of MN	Lauren Sullivan	$ 556,000	This project determined habitat connectivity between prairie fragments by measuring plant movement of 6 species by dispersal of pollen and seeds to improve prairie restoration implementation. New modeling approaches indicated that spillover from established/remanent prairies is a more complicated process than previous thought and requires different land management.
8	2016	08d	Evaluate Prescribed Burning Techniques to Improve Habitat Management for Brushland Species	U of MN	Rebecca Montgomery	$ 267,000	Lowland brush ecosystems provide critical habitat for a variety of wildlife. Lack of fire degrades habitat value. Our project suggests that prescribed burning in different seasons (e.g., spring, summer, fall) can be a tool to support a variety of outcomes, maintaining a diverse habitat that supports a diverse bird community.
9	2016	08f	Forest Management for Mississippi River Drinking Water Protection	Crow Wing Soil and Water Conservation District	Melissa Barrick	$ 300,000	Keeping forests alive and surrounding our communities is vital for water protection, provides safe drinking water to residents, and benefits wildlife populations into the future. Landowners within the Camp Ripley Sentinel Landscape completed 76 forest stewardship plans totaling 13,104 acres and 38 water quality practices in their woodlands.
10	2016	09b	Minnesota Point Pine Forest Scientific and Natural Area Acquisition	MN DNR	Molly Roske	$ 500,000	The effort to acquire 10 acres of high-quality old growth forest and beach dune habitat from the Duluth Airport Authority as a new addition to Minnesota Point Pine Forest SNA was unfortunately unsuccessful during this appropriation's time-frame. However, opportunities to bring these parcels under protection may yet exist.
11	2017	03b	Assessment of Public Benefits of Protecting Source Water	U of MN - Humphrey School of Public Affairs	Bonnie Keeler	$ 320,000	Source Water protection is associated with multiple economic, environmental, and social benefits. We created new spatially-explicit datasets representing multiple socio-economic benefits of source water protection for all 821 drinking water management units in Minnesota. Our work gives practitioners a more complete picture of the outcomes of source water protection statewide.

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12	2017	03c	Preserving Minnesota Prairie Plant Diversity – Phase II	U of MN	Ruth Shaw	$ 900,000	We gathered seeds of prairie plants and shared them with producers who are expanding seed availability for restorations. We collected, identified and studied many microbes that prairie plants harbor, documenting their effects on their hosts. Our experiments have clarified the geographic scale of plant adaptation and genetics underlying ongoing adaptation.
13	2017	03d	Minnesota Biological Survey - Continuation	MN DNR	Bruce Carlson	$ 2,900,000	The Minnesota Biological Survey (MBS) collects, interprets and delivers foundational data on native plants, animals, plant communities and functional landscapes. These data help prioritize actions to conserve, manage and restore Minnesota's biological diversity and ecological systems.
14	2017	03f	Assessment of Microbes for Improving Wild Rice Restoration	U of MN - Duluth NRRI	Chan Lan Chun	$ 334,000	The project improved our understanding of microbial and nutrient associations with self-sustaining wild rice wetlands. This information will be useful to develop management strategies for wild rice restoration success, which will improve long-term protection of native species and aquatic biodiversity, and support management of Minnesota’s culturally and ecologically important natural resource.
15	2017	03i	Landslide Susceptibility, Mapping, and Management Tools	U of MN	Karen Gran	$ 500,000	Landslides in five regions across Minnesota were mapped and inventoried to identify geologic and topographic conditions vulnerable to slope failures providing resource and emergency managers with better predictive tools to guide land-use decisions. Landslides are a dominant source of sediment to regional waterways, occurring frequently along steep valley walls.
16	2017	03k	Cedar Creek Natural Area Wolf Recolonization Assessment	U of MN	Forest Isbell	$ 398,000	Minnesota's wolves are expanding southward. A new pack recently recolonized Cedar Creek Ecosystem Science Reserve, which is one of the best-studied ecosystems worldwide. Our project assessed costs (e.g., unwanted impacts on pets and livestock) and benefits (e.g., impacts on biodiversity and ecosystem functioning, educational opportunities) of this unassisted wolf recolonization.

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17	2017	03l	Effects of Wolf Predation on Beaver, Moose, and Deer	Voyageurs National Park	Steve Windels	$ 293,000	Our studies of how, where, and when wolves prey on beavers, moose, and white-tailed deer shed exciting new light on the interactions of these iconic denizens of Voyageurs National Park, Minnesota's only National Park.
18	2017	03m	Mapping Taxonomy and Environmental Toxicology of Minnesota Freshwater Sponges	U of MN	Anthony Schroeder	$ 258,000	Our project identified freshwater sponges are widely distributed throughout Minnesota's lakes and rivers. Sponges are thought to be bio-indicators of good water quality, suggesting many rivers and lakes in Minnesota are of relatively good quality. We identified new species of freshwater sponges not described previously, so there is likely significant amounts of biological diversity not described in the state. As filter feeders, it doesn't appear that freshwater sponges are accumulating pollutants that can be passed through the food chain.
19	2017	04b	Wastewater Nitrogen Removal Technology to Protect Water Quality	U of MN	Paige Novak	$ 450,000	A group of bacteria ("anammox") have received attention for their potential in wastewater treatment, transforming harmful reactive nitrogen into harmless dinitrogen gas. However, anammox perform poorly in typical wastewater environments. In this project we developed new materials to selectively enhance anammox growth/retention, supporting more sustainable removal of harmful nitrogen.
20	2017	04c	Rearing Native Mussels for Reintroduction and Expanding Water Quality Awareness	Minnesota Zoo	Seth Stapleton	$ 591,000	The Minnesota Zoo increased capacity for rearing mussels to more than 10,000 individuals and researched methods to improve husbandry, enabling us to better support efforts to recover depleted populations. The Show Us Your Mussels challenge engaged >2,200 students, with student-created content reaching >150,000 citizens and encouraging action to benefit conservation.

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21	2017	04d	Water Quality Monitoring in Southeastern Minnesota Trout Streams	Winona State University	Neal Mundahl	$ 500,000	Strobin fungicides were detected in most water samples from the Whitewater River in southeastern Minnesota. Many citizen scientists were trained and continue to monitor stream sites. Stream habitats and fish and aquatic invertebrate communities ranged from excellent to poor, based largely on upstream versus downstream location and adjacent land uses.
22	2017	04e	Reassessing Toxicity of Petroleum Spills on Groundwater and Surface Water	St. Thomas University	Dalma Martinovic-Weigelt	$ 300,000	The groundwaters contaminated with chemicals from the decades-old crude oil spill and/or their breakdown products can adversely affect development and hormone and liver functioning if vertebrates were to be exposed to them sufficiently. This project advanced understanding of oil spill remediation and will help protect Minnesota's natural resources/drinking water sources.
23	2017	04i	Assessing Release of Mercury and Sulfur on Aquatic Communities	U of MN	Ed Nater	$ 300,000	Objectives were to determine if peatland degradation from increased temperatures will exacerbate mercury and sulfur impairments of surface waters. Results predict slightly decreased export of sulfate and methylmercury, slightly increased export for total mercury, and large increases in mercury volatilization to the atmosphere, with negligible local impact to surface waters.
24	2017	05a	Connecting Youth to Minnesota Waterways through Outdoor Classrooms	Wilderness Inquiry	Nell Holden	$ 1,200,000	The Floating Classroom served more than 25,000 Minnesota youth by creating opportunities to engage in environmental science through accessing Minnesota waterways and public lands. Youth assessed natural resources, collected scientific data, developed a stewardship ethic, and learned about outdoor employment opportunities, becoming Minnesota's next generation of natural resource protectors.
25	2017	05e	Local Planning and Implementation Efforts for Bird Habitat	Audubon Minnesota	Rob Schultz	$ 280,000	In progress

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26	2017	05f	Developing Youth Watershed Stewardship in Northwest Minnesota	Headwaters Science Center	Lee Furuseth	$ 121,000	The project entitled Developing Youth Watershed Stewardship in Northern Minnesota established the Environmental Science Club. Goals were established, pursued and met: skill development, enhanced understanding, recognition of relationships between actions and outcomes, provided positive experiences, shared similar information through presentations, and demonstrated deeper understanding of ecosystems.
27	2017	06b	Emerald Ash Borer Biocontrol - Phase III	Minnesota Department of Agriculture	Jonathan Osthus	$ 729,000	Biological control has been effectively implemented, which has led to increasing recoveries of parasitoids over time. Cold tolerance testing of Spathius galinae resulted in a forecasting model of survival in North America. The Buprestidae of Minnesota guide was created and provides baseline data on jewel beetles present in Minnesota.
28	2017	06c	Invasive Bighead Carp and Silver Carp and Native Fish Evaluation – Phase II	MN DNR	Brian Nerbonne	$ 500,000	Over the past four years, this project tested new capture methods, learned locations where invasive carp are vulnerable to capture, and removed over 150 fish. Our goal in learning how best to remove invasive carp is to disrupt the potential for spawning that could lead to their establishment in Minnesota waters.
29	2017	07a	Extraction of Solar Thermal Energy in Minnesota	U of MN	Lian Shen	$ 250,000	We developed a novel solar particle receiver technology for absorbing, storing, and utilizing solar thermal energy. Extensive experiments utilizing innovative imaging techniques on laboratory apparatuses, assisted by state-of-the-art simulations on supercomputers, have been conducted. Valuable data have been collected for solar energy applications specifically for the sun conditions in Minnesota.
30	2017	07b	Assessment of Urban Air Pollution	Minnesota Pollution Control Agency	Monika Vadali	$ 700,000	Air pollutant concentrations cannot be assumed to be the same across all zip codes in the cities of Minneapolis and St. Paul. There are local differences observed and these can influence quality of life where one lives. Monitor placement is very important in being able to detect these differences in neighborhoods.

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31	2017	07c	Generation, Storage, and Utilization of Solar Energy	U of MN - WCROC	Bradley Heins	$ 500,000	The project benefited lakes and streams through the development of novel methods to reduce energy usage on farm and integrate cattle grazing and solar systems. We evaluated technology that that will reduce the carbon footprint through energy reduction from dairy farms in Minnesota that will improve environmental impact.
32	2017	07e	Geotargeted Distributed Clean Energy Initiative	Center for Energy and Environment	Jennifer Edwards	$ 800,000	This project demonstrated that energy efficiency can be used to reliably offset utility infrastructure expansion, thereby saving money and decreasing the amount of air pollutants from Minnesota's electricity generation.
33	2017	08a	Optimizing the Nutrition of Roadside Plants for Pollinators	U of MN	Emilie Snell-Rood	$ 815,000	This research shows that, from a nutritional perspective, Minnesota roadsides are promising habitat for native bees and monarchs. To minimize the negative effects of roadside pollutants on insect pollinators, managers should prioritize low- to moderate-traffic roads for restoration, mow a buffer strip, and support efforts to ban the pesticide chlorpyrifos.
34	2017	08c	Evaluating the Use of Bison to Restore and Preserve Savanna Habitat	U of MN	Forest Isbell	$ 388,000	Oak savanna is Minnesota's most threatened ecosystem, but effective approaches for protecting and restoring savannas remain elusive. Our project reintroduced bison to one of Minnesota's largest remaining oak savannas. We found that bison grazing helped increase oak regeneration and stimulated plant productivity, providing a promising new strategy for savanna conservation.
35	2017	08e	Enhancing Spawning Habitat Restoration in Minnesota Lakes	U of MN - St. Anthony Falls Laboratory	William Herb	$ 294,000	The main goal of this project was to create easily accessible information on wave energy to enable successful habitat restoration projects and increase natural fish reproduction in Minnesota lakes. We created maps, in GIS format, of wave height and energy statistics for 457 lakes in Minnesota.

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36	2017	08f	Prescribed Fire Management for Roadside Prairies	Minnesota Department of Transportation	Nate Johnson	$ 345,000	MnDOT's fire program has grown exponentially since this funding was secured. All fire crews have gained extensive experience and have gained a lot of confidence on how and when fire should safely be used. The number of areas and districts in which fire occurs on MnDOT property has increased throughout this project. Within the next 5 years MnDOT will be conducting prescribed fire in 6 of its 8 districts around the state.
37	2017	08g	Minnesota Bee and Beneficial Species Habitat Restoration	Pheasants Forever Inc	Sabin Adams	$ 732,000	This project's goal was to enhance and study 800 acres of permanently protected habitat by converting low diversity grassland areas to high diversity native grasses and wildflowers. The result of our efforts was the successful enhancement of 1,949.69 acres of habitat to benefit pollinators and other wildlife.
38	2017	08h	Mississippi and Vermillion River Restoration of Prairie, Savanna, and Forest Habitat - Phase Ten	Friends of the Mississippi River	Lisa Mueller	$ 213,000	Friends of the Mississippi River increased and improved 133 acres of habitat at 6 sites along the Mississippi and Vermillion River corridors, linking existing nodes of high biodiversity. The project restored and enhanced prairie, savanna and forest habitat along the river corridors with a focus on increasing habitat for pollinators.
39	2017	08i	Community Stewardship to Restore Urban Natural Resources - Phase Ten	Great River Greening	Wiley Buck	$ 524,000	To protect Minnesota's natural heritage, Greening restored and enhanced 310 ecologically significant acres in priority metro areas and engaged volunteers in a suite of activities to address the need for long-term management of projects. Greening disseminated results for the layperson through electronic channels and to professionals through a published paper.
40	2017	09a	Metropolitan Regional Parks System Land Acquisition	Metropolitan Council	Jessica Lee	$ 1,500,000	The Metropolitan Council along with Washington County and Carver County acquired 12 parcels to increase recreational opportunities for the Regional Parks System. These critical acquisitions protected over three miles of Minnesota River and St. Croix River shoreline and 192 acres of high-quality natural resource land in Washington and Carver Counties.
41	2017	09d	Minnesota State Trails Acquisition, Development and Enhancement	MN DNR	Kent Skaar		In progress

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42	2017	09f	Leech Lake Acquisition	Leech Lake Division of Resource Acquisition	Joseph Fowler		Project completed; final report not finalized.
43	2018	03b	Providing Critical Water-Quality Information for Lake Management	U of MN	Jeffrey Peterson	$ 250,000	This project created an automated system, which is capable of delivering satellite derived near real-time data and maps of key water quality measures (chlorophyll, clarity, CDOM), and updated the Minnesota LakeBrowser with new data and capabilities to visualize the water quality of all Minnesota lakes to improve data-driven resource management.
44	2018	03h	Mapping Avian Movement in Minnesota	U of MN - Duluth NRRI	Alexis Grinde	$ 200,000	We used automated radio telemetry to understand habitat needs of Minnesota's birds. Specifically, we tracked birds across large and local-scales to document breeding, migratory and winter movements. Automated radio telemetry systems are useful for studying animal movements and can help to increase public awareness and impact for conservation efforts.
45	2018	03j	Develop Sonar Data Mapping on Three Rivers to Assess Suitability for Native Mussel Habitat	National Park Service	Nancy Duncan	$ 200,000	Baseline information in the form of bathymetry and imagery were developed for the National Park Service for native mussel habitat suitability. These data have the analytic capabilities to be viewed and modeled in a digital environment to help understand mussel distribution, define preferred habitat parameters, and identify key habitat locations for restoring imperiled mussels.
46	2018	04a	Pilot Program to Optimize Local Mechanical and Pond Wastewater-Treatment Plants	Minnesota Pollution Control Agency	Joel Peck	$ 700,000	Wastewater treatment systems are critical infrastructure to manage waste effluent within hundreds of communities throughout Minnesota. Optimization means getting better results through existing infrastructure. This project determined that both mechanical and pond wastewater treatment systems can be optimized, and new effluent limits met, without adding substantial new infrastructure.

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47	2018	04j	Using Perennial Grain Crops in Wellhead Protection Areas to Protect Groundwater	Minnesota Department of Agriculture	Margaret Wagner	$ 250,000	This study established demonstration fields of Intermediate wheatgrass (Kernza®) within wellhead protection areas in central and southeast Minnesota and research results showed the nitrate reduction potential of targeted placement of perennials in areas with vulnerable groundwater.
48	2018	04k	Implement a Pilot Credit-Trading System for Storm Water in Shell Rock River Watershed to Improve Water Quality	Shell Rock River Watershed District	Courtney Phillips	$ 300,000	This pilot project developed a water management framework plan along with associated appendices to submit an overlay permit for water quality credit trading to the Minnesota Pollution Control Agency. This work may provide water quality solutions to MS4 permittees bound by funding constraints.
49	2018	05b	YES! Students Take on Minnesota Water-Quality Challenge	Prairie Woods Environmental Learning Center	Shelli-Kae Foster	$ 213,000	Our project, YES! Students Take on Water Quality Challenge, brought water quality and conservation knowledge and expertise to over 800 students from 126 communities across Minnesota. In 3 years, 81 hands-on water quality and prairie/habitat restoration projects were completed, and 20 waterbodies were improved while engaging with 30 resource experts.
50	2018	05e	Expanding River Watch Program on the Minnesota River With High School Teams	Friends of the Minnesota Valley	Ted Suss	$ 100,000	With funding from the ENRTF, we were able to expand River Watch from four high school teams to 14 teams and recruited at least two additional teams to participate in future years. Through the program, approximately 250 students learned how to conduct water quality monitoring, the pollutants that affect water quality, how to operate monitoring equipment, and to report the data. Students learned sources of pollution and actions that can be taken to reduce future water pollution.
51	2018	05h	Expanding Nature Knowledge and Experience with New Interactive Exhibits at North Mississippi Regional Park	Minneapolis Parks and Recreation Board	MaryLynn Pulscher	$ 500,000	The new Nature in the City exhibit at North Mississippi Regional Park features compelling design with interactive components that spark curiosity about Nature, increase knowledge about Nature, entice visitors to explore the outdoors, and become better stewards of the environment.

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52	2018	05j	Expanding the State's Reuse Economy to Conserve Natural Resources	ReUse Minnesota	Jenny Kedward	$ 275,000	ReUSE MN connected businesses and consumers to organizations providing reuse, repair, and rental services through two conferences and 24 educational events. Research conducted revealed the Minnesota reuse sector makes up 1/3 of the retail economy. By avoiding new products, reuse saves 67 billion gallons of freshwater from being used each year.
53	2018	05k	Expand Materials Reuse and Recycling Jobs Program	The NetWork for Better Futures (d/b/a Better Futures Minnesota)	Steve Thomas	$ 800,000	This project funded: the deconstruction of 29 properties; 10.5 FTE jobs; transitional employment of 200 people; a reuse project at a county landfill; and the promotion of deconstruction and material reuse throughout the State. The project generated close to net zero emissions by diverting 80% of 8,000,000 pounds of material from landfills.
54	2018	06d	Developing RNA Interference to Control Zebra Mussels	U.S. Geological Survey	Christopher Merkes	$ 500,000	Project did not occur; funds returned.
55	2018	06e	Install and Evaluate an Invasive Carp Deterrent for Mississippi River Locks and Dams	U of MN - MAISRC	Peter Sorensen	$ 998,000	This project discovered that even when equipped with a sound-light deterrent, Lock and Dam 8 has little promise to stop invasive carp but that Lock and Dam 5 could stop over 99% of all carp if equipped with a sound-light deterrent that includes a bubble curtain.
56	2018	08a	Nongame Wildlife Program Acceleration	MN DNR	Kristin Hall	$ 220,000	Funds from this grant helped us prioritize collaborative efforts in our Conservation Focus Areas. We successfully conducted 10 habitat improvement projects on over 200 acres for multiple Species in Greatest Conservation Need including: bottomland forest songbirds, prairie pollinators, Blanding's turtles, and oak savanna dependent species.
57	2018	08h	Preserving Minnesota's Native Orchids - Phase 2	U of MN - Landscape Arboretum	David Remucal	$ 259,000	Native orchid populations across the state have been stored in a long-term seedbank at the Minnesota Landscape Arboretum, preserving these native jewels. This project also preserved many of the fungal partners that orchids need to survive and establish in the wild.

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58	2018	09e	Swedish Immigrant Regional Trail Segment within Interstate State Park	Chisago County Environmental Services	Joseph Tart	$ 2,254,000	The Swedish Immigrant Regional Trail within Interstate Park was designed and constructed to protect the natural resources within the State Park Land while preserving rare plants, native tree species and wetlands. The Interstate State Park trail enhances Minnesota's air, water, and wildlife by avoidance and mitigation of many natural resources that were present. Resulting trail is a 10 ft. wide bituminous surface with a 160 ft. long bridge crossing a ravine.
59	2018	09g	Protecting Mississippi River Headwaters Lands through Local, State, and Federal Partnership	City of Baxter	Josh Doty		The project preserved 200 acres of forest on the upper Mississippi River. After the grant was awarded, the project grew to ultimately preserve 1,338.4-acres locally. Of this total, Baxter now has 880-contiguous acres (including the project 200 acres) of high-quality natural resource property preserved within Baxter.
60	2018	10a	State-Wide Reconnaissance of SARS-CoV-2 in Drinking Water Supplies	U of MN	Timothy LaPara	$ 59,297	There were concerns that SARS-CoV-2, the virus that causes COVID-19, could contaminate drinking water supplies. In this study, we investigated 30 drinking water samples from homes around the State of Minnesota supplied by either a private well or a public water system, testing for SARS-CoV-2. To date, we have not been able to detect SARS-CoV-2 in any Minnesota drinking water samples.
61	2019	03b	Restoring Native Mussels in Streams and Lakes	MN DNR	Mike Davis	$ 500,000	Reestablishing historical mussel assemblages through laboratory propagation began in 2016 at the MNDNR Center for Aquatic Mollusk Programs (CAMP). Since then, CAMP has released 9,541 sub-adult mussels from five species in three watersheds; restoring ecosystem services and enhancing Minnesota rivers with each mussel.
62	2019	04p	Minnesota Spring Inventory Final Phase	MN DNR	Paul Putzier	$ 71,000	Springs are natural points of groundwater discharge that provide flow for trout streams and cool water fisheries, base flow during to streams, and unique ecological habitats. Management of this resource is only possible when we know their location. The MSI project located and makes available information on over 7,200 springs.
63	2019	05a	Expanding Camp Sunrise Environmental Program	YouthCARE MN	Lori Arnold	$ 237,000	Project cancelled in 2020

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64	2019	09f	Accessible Fishing Piers	MN DNR	Nancy Stewart	$ 320,000	Nine (9) new accessible fishing piers have been installed in various locations around the state to improve fishing opportunities for people of all ages and abilities. The DNR worked with multiple sponsors and donors who brought funding and enthusiasm to the projects.
65	2019	10a	Contract Agreement Reimbursement	MN DNR	Katherine Sherman-Hoehn	$ 135,000	This appropriation was used to support the ENRTF contract management program, which ensured that ENRTF grantees expended grant funds in compliance with state law, session law, approved work plans, and Office of Grants Management grants policies.
66	2019	11b	Optimizing Local Mechanical and Pond Wastewater-Treatment Plants	Minnesota Pollution Control Agency	Joel Peck	$ 500,000	Wastewater treatment systems are critical infrastructure to manage waste effluent within hundreds of communities throughout Minnesota. Optimization means getting better results through existing infrastructure. This project determined that both mechanical and pond wastewater treatment systems can be optimized, and new effluent limits met, without adding substantial new infrastructure.