

# **MnDOT Office of Environmental Stewardship**

## **CY 2017 Work Plan**

March 31, 2017

The following is meant to guide work priorities, encourage accountability, clarify roles, and demonstrate value to internal and external stakeholders for the 7 units in the MnDOT Office of Environmental Stewardship (OES). The plan will be updated each fiscal year. Additional information about OES is available online: <http://www.dot.state.mn.us/environment/>.

For questions, please contact OES Office Director Lynn Clarkowski at (651) 366-3602 or [lynn.clarkowski@state.mn.us](mailto:lynn.clarkowski@state.mn.us).



# Office of Environmental Stewardship

## Organizational Chart

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**Lynn Clarkowski**  
 Chief Environmental Officer, Director  
 651-366-3602

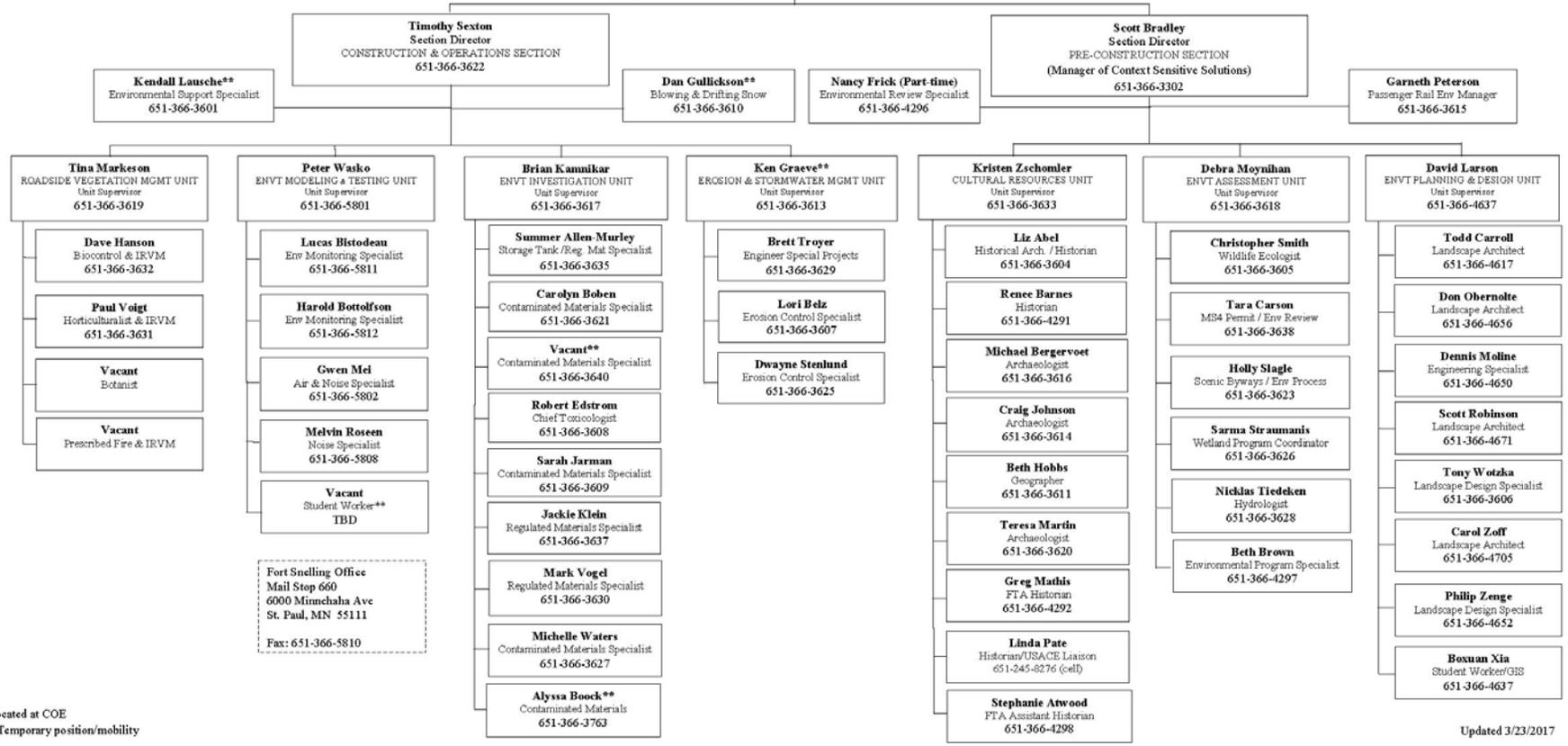
**Peter Leete**  
 MnDOT/DNR Permit Coordination  
 651-366-3634

**Ben Orne**  
 MnDOT / COE Permit Liaison\*  
 651-366-4297

**Vacant**  
 MnDOT / COE Permit Liaison\*  
 State Aid and MNDOT

**Vacant**  
 Office Administrative Assistant Sr  
 651-366-3601

**Vacant**  
 MnDOT/PCA Permit Coordination



\*Located at COE  
 \*\* Temporary position/mobility

## **MnDOT Office of Environmental Stewardship - Pre-Construction Section**

### **CY 2017 Work Plan**

- Cultural Resources Unit
- Environmental Assessment Unit
- Environmental Planning and Design Unit

For questions, please contact OES Pre-Construction Section Director, Scott Bradley, at (651) 366-33022 or [scott.bradley@state.mn.us](mailto:scott.bradley@state.mn.us).

## Cultural Resources Unit

### Unit Overview

Five members of the professionally qualified staff (per 36 CFR 61) of the CRU (Zschomler, Johnson, Abel, Martin, and Barnes) serve as the delegated agent for the Federal Highway Administration, reviewing all FHWA funded or permitted undertakings for potential impacts to historic properties pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended. FHWA undertakings are defined as any project (on the state or local system) funded and approved by FHWA, include Interstate Access Requests. For FHWA undertakings, CRU also aid and assist with Section 4(f) evaluations for historic properties.

Five staff (Zschomler, Johnson, Abel, Martin, and Barnes) reviews state-funded MnDOT projects pursuant to applicable state statutes.

One professionally qualified staff (Pate) serves as a liaison between MnDOT State Aid and the U.S. Army Corps of Engineers, reviewing locally funded projects with a Corps permit for compliance with Section 106 of the NHPA.

Two professionally qualified staff (Mathis and Atwood) review projects funded by the Federal Transit Authority (FTA) on a project-by-project basis for compliance with Section 106 of the NHPA.

One professionally qualified staff (Peterson) reviews projects for compliance with Section 106 and the National Environmental Policy Act (NEPA) for projects funded by the Federal Rail Authority (FRA) on a project-by-project basis for compliance with Section 106 of the NHPA.

Two professionally qualified staff (Hobbs and Bergervoet) oversee the development and implementation of streamlining projects and studies using the SP&R dollars allocated to CRU every fiscal year (\$1.6 million) (MnModel, CRIS, OSA Portal, SHPO Portal, MAID project, GIS).

### CRU Team

*Kristen Zschomler, Unit Supervisor, Historian and RPA-Registered Archaeologist*

Project Manager for FHWA undertakings, interagency liaison, workload management, Historic Bridge Program, policy and procedures, partnerships with other federal, state and local agencies

*Craig Johnson, Archaeologist*

Project Manager for FHWA undertakings

*Elizabeth Abel, Archaeologist and Historian*

Project Manager for FHWA undertakings, work as needed on FTA undertakings

*Teresa Martin, Archaeologist*

Project Manager for FHWA undertakings, tribal liaison for FHWA Section 106 issues

*Renee Barnes, Historian*

Project Manager for FHWA undertakings

*Linda Pate, Historian*

Project Manager for Corps permitted transportation projects (primarily State Aid projects)

*Garneth Peterson, Historian*

Project manager for FRA undertakings

*Greg Mathis, Historian*

Project Manager for FTA undertakings

*Stephanie Atwood, Historian*

Assistant Project Manager for FTA undertakings

*Elizabeth Hobbs, Geographer*

MnModel Project Manager, SP&R Program

*Michael Bergervoet, Archaeologist*

Streamlining Projects Manager, SP&R Program (CRIS, OSA Portal, SHPO Portal, MAID project, other GIS related support)

### **Guiding Regulation**

- 36 CFR 800 of the National Historic Preservation Act
- National Environmental Policy Act
- Minnesota Historic Sites Act
- Minnesota Field Archaeology Act
- Private Cemeteries Act of Minnesota
- Minnesota Environmental Policy Act (MEPA)
- Section 4(f) of USDOT Act
- Secretary of the Interior's Standards for the Treatment of Historic Properties
- Rivers and Harbors Act of 1899 - Sec.10 for navigable waters
- Clean Water Act - Section 404 - all other waters, including wetlands
- Appendix C – guidance for determining the regulatory (tiny) permit area - , a.k.a. TITLE 33 - NAVIGATION AND NAVIGABLE WATERS CHAPTER II - CORPS OF ENGINEERS, DEPARTMENT OF THE ARMY, DEPARTMENT OF DEFENSE PART 325 - PROCESSING OF DEPARTMENT OF THE ARMY PERMITS Appendix C to Part 325 - Procedures for the Protection of Historic Properties

### **Other Core Functions**

- Provide technical assistance to MnDOT personnel and local units of government
- Provide training to internal staff and external partners

### **Deliverables**

- Phase I and II Identification and Evaluation Reports
- Consultant Contracts
- Assistance with project plan development in compliance with the SOI Standards
- Letters – consultation (including with tribes), determinations of eligibility for properties and findings of effects
- Assessment of effect analysis and documentation
- Project-specific Section 106 Agreements – memorandum of agreements (MOA) (when adverse effects) or project-level programmatic agreements (PA) when effects are not known)
- Program-level Section 106 Agreements – general statewide PA, tribal consultation agreements, historic bridge PA

- Mitigation items (e.g., recordation, contexts, interpretive material, reports)
- Public meeting facilitation
- Public outreach and education
- Streamlining study reports and products
- CRIS
- OSA Portal
- SHPO Portal
- MnModel
- Passenger rail environmental documents (Scoping, environmental assessments, environmental impact statements and decision documents for MEPA and NEPA)

### **Emerging or Continuing Issues of Concern**

- Poor state of data on Minnesota's historic properties (archaeological sites and structures)
- Continue federal review of work types that have no or extremely low risk of impacting historic properties (e.g., striping, sign replacement, lighting replacement, etc.)
- Two-year time limit established by MAP-21 for completing environmental documentation that can be insufficient for completing the required Section 106 reviews on large and/or complex projects
- Increase in number of letters to obtain SHPO concurrence; lack of sufficient staffing at SHPO to meet their workload levels
- Lack of existing historic contexts and survey of specific historic property types
  - Twin Cities suburban and exurban areas (large portions of Metro District)
  - Cultural landscapes

### **Partnerships**

- FHWA, FTA, FRA
- State Historic Preservation Office (SHPO) and Minnesota Historical Society (MHS)
- Corps of Engineers
- Local Agencies
- State Aid Office
- Office of the State Archaeologist
- Minnesota DNR
- Minnesota's 11 Federally Recognized Tribes, and select tribes living outside of Minnesota
- Minnesota Indian Affairs Council
- Minnesota State University, Mankato; and AGES Research Lab, including transfer of MnModel to the research facility over the next year or two

### **Recurring Tasks**

- Project Reviews
- SP&R planning and implementation
- Consultation
- Training

## FY 2016 Action Plan – Cultural Resources Unit

What is the planned action?	Who is the lead?	When is expected completion or milestones?	What resources are needed?	Partners
Amended Historic Bridge PA	Zschomler	Draft by Dec 2015; Executed by June 2016	Staff time	FHWA, Corps, SHPO, ACHP
Local Bridge Phase III	Zschomler	Project completion June 2016	Staff time. Funding secured through TPIC, SALT & SP&R	FHWA, Corps, SHPO, State Aid, local agencies
Historic Context Development Update for Roadside Properties	Zschomler	December 2015	Staff time. Funding is secured.	FHWA, SHPO
CRIS Complete Deployment	Bergervoet	June 2016	Staff & MnIT time. Training resources. Funding secured	Districts, SALT
OSA Portal	Bergervoet	June 2016	Staff time. Funding secured	OSA, MN.IT, MnGEO, SHPO
SHPO Standardized inventory forms	Pate	June 2016	Staff time. Funding secured	SHPO
Minnesota Archaeological Database Inventory (MAID)	Martin	Phase II by June 2016	Staff time. Funding secured	OSA, SHPO, MHS, local agencies, MnSCU, Mankato State, others
MnModel Phase IV Pre-Contact Terrain, Landscape, and Vegetation Modeling	Hobbs	June 2016	Staff time. Funding is secured	FHWA, SHPO, OSA
Railroad MPDF Update	Abel	June 2016	Staff time. Funding secured	FHWA, SHPO
Historic Roads Context and Evaluations	Barnes	June 2016	Staff time. Funding secured	FHWA, SHPO
Tribes and Transportation Conference	Martin	October 2015	Staff time. Funding secured	FHWA, Government Affairs
Tribal Agreement with Leech Lake	Martin	June 2016	Staff time.	FHWA, Tribe
Southwest Light Rail MOA and Mitigation	Mathis	Draft by Dec 2015; Execute by March 2016	Staff time. Funding secured through MOA execution	FTA, Corps, SHPO, Metro Transit, local agencies, others
Blue Line Extension Light Rail MOA and Mitigation	Mathis	Draft by Feb 2016; Executed by June 2016	Staff time. Funding secured through MOA execution	FTA, Corps, SHPO, Metro Transit, local agencies
Nicollet-Central Streetcar MOA and Mitigation	Mathis	TBD		FTA, Corps, SHPO, Minneapolis, Metro Transit, local agencies, others

## Environmental Assessment Unit– FY 2016

### Unit Overview

MnDOT's Environmental Assessment Unit provides technical support for MnDOT Districts and other stakeholders in the areas of aquatic resources, wetland mitigation, stormwater requirements, and protected species, including federally threatened and endangered species. We also review and approve environmental documents (EISs, Environmental Assessments, and Categorical Exclusions) and provide guidance on the interpretation of NEPA and MEPA regulations. The Unit additionally serves as a gateway for funding opportunities and technical support for National Scenic Byway communities and stakeholders.

### EAU Team

#### *Debra Moynihan, Unit Supervisor*

Responsible for NEPA/MEPA review, technical guidance, and policy; FHWA liaison and Environmental Quality Board (EQB) Technical Representative; workload management; and P6 updates and scheduling.

#### *Sarma Straumanis, Wetland Program Coordinator*

Promote compliance with Corps of Engineers and Wetland Conservation Act (WCA) requirements, fulfill Local Government Unit (LGU) responsibilities under WCA, review wetlands sections of environmental documents, and provide technical support to internal staff regarding wetland issues.

#### *Nick Tiedeken, Hydrologist*

Provide guidance for water resource compliance and policy matters, and technical assistance for Section 404/10, MPCA 401 certification, floodplain, stormwater, and other water related requirements.

#### *Holly Slagle, Scenic Byway Program Coordinator*

Provide direction to external clients on the availability, programming, and administration of the National/State Scenic Byway Program using Transportation Alternative Funding. Also responsible for legislative tracking, coordinating environmental document comments, and distributing EQB documents to District coordinators.

#### *Tara Carson, Transportation Program Specialist*

Work with EQB on the environmental review process and rulemaking, assist Districts with MS4 Permit compliance, participate in stakeholder processes for MPCA permits and regulations, partner with MnDOT Maintenance on salt storage and handling issues, and oversee HPDP administration for OES.

#### *Christopher E. Smith, Natural Resource Program Coordinator*

Responsible for federal Endangered Species Act - Section 7 Consultation process, Migratory Bird Treaty Act compliance, wildlife permitting, wildlife survey coordination, and P6 updates and scheduling.

#### *Elizabeth Brown, Environmental Program Specialist*

Provide technical support for Protected Species, Wetland/WCA, and NEPA/MEPA programs.

### Work Duties Required by Regulation

#### Environmental Review

- National Environmental Policy Act/Minnesota Environmental Policy Act
- Environmental document review and distribution (23 CFR 771, MS 116D, Minn. Rule 4410)
- Section 4(f) (49 USC 303, 23 USC 138, 23 CFR 774)

- Section 6(f) (Land and Water Conservation Fund Act of 1965, 36 CFR 59)
- Environmental Justice (E.O. 12898, DOT Order 5610.2)

#### Scenic Byways

- Highway Beautification Act of 1965
- National Scenic Byways Program, Title 23, Section 162
- FAST ACT Transportation Alternatives Program (TAP)
- Scenic Byway Commission MOU

#### Water Resources and Wetlands

- Assist Districts and USACOE Liaisons with Section 404/10 (CWA 404, RCH 10)
- Federal and State Wild and Scenic Rivers
- FHWA and USEPA sole source aquifer MOU
- Wetland Conservation Act ( MS 103B, 103G, Minn. Rule 8420)
- Floodplains (U.S. Executive Order 11998)
- U.S. Executive Order 11990
- MN Executive Order 03-04

#### Water Quality

- NPDES Stormwater Program (CWA 402)
- Water Quality Certification (CWA 401)
- Minnesota Impaired Waters and Total Maximum Daily Load (CWA 303)
- Watershed District Review (MS 103D)
- Assist Districts with MS4 permit compliance (CWA 40 CFR 122, 123, 124; MS 115, 116; Minn. Rule 7090)

#### Protected Species

- Endangered Species Act of 1973, as amended (16 USC 1531-1544, 87 Stat. 884)
- Migratory Bird Treaty Act of 1918 (16 USC 703-712; Ch. 128; 40 Stat. 755)
- Bald & Golden Eagle Protection Act of 1940, as amended (16 USC 668-668c)
- Fish & Wildlife Coordination Act of 1934, as amended (16 USC 661-667e; Ch. 55; 48 Stat. 401)
- Protection of Threatened and Endangered Species (MS 84.0895; Minn. Rules 6134; Minn. Rules 6212.1800-6121.2300)

#### **Other core functions** (typically performed for liability reduction or District request)

- Training and Policy Development: NEPA/MEPA, WCA, Wetlands, Water, MS4, Threatened and Endangered Species, Scenic Byways
- HPDP updates
- Technical assistance
- ENM ownership
- Scenic Byways STIP Amendments
- P6 scheduling

#### **Deliverables**

- Signed NEPA/MEPA Environmental Documents
- Comments on water-related federal and state permits, policies, and other water resource issues
- WCA Public Notices and WCA Notifications
- Major Projects—Mitigation Costs Legislative Report

- MS4 Annual Report
- ESA Section 7 Determinations
- Annual Scenic Byways Activity Reports
- FHWA Inactivity Reports for Scenic Byways

### Emerging issues in 2017

- Northern Long-eared Bat, Rusty-patched Bumble Bee, and Section 7 Compliance
- Jurisdictional Waters of the U.S. under the CWA
- Transportation General Permit RGP-004-MN
- Nationwide Permits/ RGP-003-MN
- EQB Mandatory Categories 5-year Review
- FHWA FAST Act
- Programmatic CE Agreement
- NEPA Assignment
- *Consideration of GHG Emissions and Effects of Climate Change in NEPA Documents*
- Health in project development/NEPA
- WCA Rules

### Partnerships

- Federal: FHWA , US Fish and Wildlife Service, Army Corps of Engineers, US Coast Guard, US EPA, US Park Service
- Tribal Governments
- State: MPCA, DNR, BWSR, MDH, MDA, EQB, MnDOT Districts, Office of State Aid
- Counties, Cities, Townships, Metropolitan Mosquito Control District, General Public
- Scenic Byways: Scenic Byway Commission, Office of Transportation System Management, Legislative-Citizen Commission on MN Resources (LCCMR), Regional Development Commissions, Explore MN, Byway Organizations

### Recurring Tasks

- Environmental Document Review and Comment Coordination
- Environmental Document Writers Semiannual Meetings
- EQB Activities
- MS4/Water Quality Training and Assistance
- ESA Section 7 Determinations
- P6 Updates and Scheduling
- HPDP Updates
- Legislative Tracking (January-May+)
- Scenic Byway FY Solicitations (Annual)
- FHWA Inactivity Report (Quarterly)
- Title V Coordination for OES (Annual)
- WCA LGU Activity Report (Annual)
- Wetland Coordinators Semiannual Meetings

## Action Plan for CY 2017

<b>What</b> is the planned action?	<b>Who</b> is the lead?	<b>When</b> is expected completion or milestones?	<b>What</b> resources are needed?	<b>Partners</b>
Scenic Byway Workshop	Holly	Fall 2017		UMVRDC
Other WIG Supporting Activities – E-Signature*	Deb/Nancy	December 2017	MnDOT Business Office	FHWA, MnDOT Districts
Section 404 RGP-004-MN/003/NWP*	Sarma/Nick	ongoing		USACOE Liaisons, FHWA
Rusty-patched Bumble Bee Project Re-reviews Section 7 Consultation*	Chris	USACOE, FHWA, USFWS Meeting July 2017		US FWS, FHWA, USACOE,
WOTUS Definition – Implementation & Training*	Nick/Sarma	Begins March 2017**		
Programmatic CE Agreement*	Nancy/Deb	July 2017		FHWA, State Aid
Guidance and Training for New Programmatic CE Agreement*	Nancy/Deb	July 2017	MnDOT Training location(s)	FHWA
Respond to FHWA May 2013 Programmatic CE Program Review	Deb	July 2017		State Aid
EQB Mandatory Category Rulemaking*	Tara/Deb	Summer 2018		EQB
Environmental Management Commitments, aka “Green Sheets”	Peter/Deb	Summer 2017	District Project Managers	FHWA
WIG 2.0	Scott	Ongoing through 2018		All OES
N: Drive File Management and Transfer	EAU	December 2017		All OES
Emergency Repair and Programmatic Agreement Section 7*	Chris	December 2017		FHWA, State Aid
Sole Source Aquifer Agreement*	Nick/Deb	Summer 2017		FHWA, EPA, Mille Lacs Band, Districts 1 & 3
WCA Rules	Sarma/Nick	2018		BWSR
WCA Policy and Program – 404 Assumption Study	Sarma/Nick	January 2017***		

<b>What</b> is the planned action?	<b>Who</b> is the lead?	<b>When</b> is expected completion or milestones?	<b>What</b> resources are needed?	<b>Partners</b>
Swales Research	Nick	Winter 2018		MPCA, Materials, Districts, Fort Snelling
Chloride Quantification and Reduction Project	Nick	on hold		Districts, Fort Snelling

\*These activities require extensive collaboration with federal partners. Due to the complexity of these undertakings, it is premature to establish specific time frames for the completion of these tasks.

\*\*On hold due to legal proceedings, however EO 13778 directs EPA and COE to review and revise or rescind the rule.

\*\*\*Report has been completed. Further action depends on legislature's direction.

## Environmental Planning & Design Unit Work Plan – CY 2017

### Unit Overview

The Environmental Planning & Design Unit (EPDU) provides technical and design support services for all aspects of project development from project scoping, preliminary & final design, construction and maintenance using the core principles of Context Sensitive Solutions (CSS), Complete Streets (CS) and Visual Quality Management (VQM). The Community Roadside Landscape Partnership Program, the Great River Road Program, and the Outdoor Advertising Program are also managed within the Unit.

### EPDU Team

*David Larson, Unit Supervisor, Registered Landscape Architect*

Workload Management, Technical Planning & Design Support for CSS, CS and VQM

*Todd Carroll, Registered Landscape Architect*

Community Roadside Landscape Partnership Coordinator, Technical Planning & Design Support for CSS, CS, VQM and Landscape Plans & Partnerships

*Dennis Moline, Engineering Specialist*

Micro-Station & CADD Support for Unit /Office initiative, Technical Planning & Design Support for CSS, CS, VQM and Landscape Plans & Partnerships

*Don Obernolte, Registered Landscape Architect*

Landscape Plans for Partnerships

*Scott Robinson, Registered Landscape Architect*

State Outdoor Advertising Coordinator, Technical Planning & Design Support for CSS, CS, VQM and Landscape Plans & Partnerships

*Tony Wotzka, Landscape Design Specialist*

Technical Planning & Design Support for CSS, CS, VQM and Landscape Plans & Partnerships

*Boxuan Xia, SEEDS Student Worker*

Specializing in GIS Data Base Mgmt. for the new GRR Corridor Mgmt. Plan

*Philip Zenge, Landscape Design Specialist*

Design support for CSS, CS, VQM Technical Planning & Design Support for CSS, CS, VQM and Landscape Plans & Partnerships

*Carol Zoff, Registered Landscape Architect*

Great River Road Program Manager, Technical Planning & Design Support for CSS, CS and VQM

### Work Duties Required by Regulation

- Coordinate the control of Outdoor Advertising/Billboards (MN CHAPTER 173. SIGNS AND BILLBOARDS ALONG HIGHWAYS)
- Member of the Mississippi River Parkway Commission (MN Statue 161.142 GREAT RIVER ROAD)

**Other core functions** (typically performed for liability reduction or District request)

- Contract landscape inspection assistance for construction
- Landscape Partnership Project Management
- Corridor Landscape and Erosion Control Planning and Design
- Complete Streets Planning and Design
- Technical assistance for living snow fences and other blowing snow control measures
- Community Entrance Monument Design and Technical Support

**Deliverables**

- Contract Landscape Plan Sets
- Certification Training Classes for Inspection & Contract Administration of Landscape Projects
- Preventative Blowing Snow Control Treatment Tool development and support

**Emerging issues in CY 2017**

- Vegetation Management Contracts
- Plan Efficiency development and coordination as a WIG Supporting Activity
- Complete Streets & ADA Coordination
- Greater concentration of pollinator friendly plantings
- Restoration & establishment of native prairie cover

**Partnerships**

- Erosion and Storm Water Management Unit: Storm Water Mgmt. and Seed Mixes
- Roadside Vegetation Management Unit (RVMU): Certified Landscape Specialist Training, Blowing and Drifting Snow design tools, Landscape Design & Maintenance
- Environmental Assessment Unit : Visual Quality
- Environmental Modeling and Testing Unit: Noise Walls
- Bikeway & ADA Units: Complete Streets

**Recurring Tasks**

- Updates to Standard Specifications, HPDP, Web Site, Special Provisions, etc.
- Coordination of Annual Certified Landscape Specialist Training (held February/March)
- Update Community Roadside Landscape Partnership Application
- Update EPDU Website to reflect changes in programs/applications
- GPS/GIS integration into landscape design and construction

**CY 2017 Action Plan – Environmental Planning and Design Unit**

<b>What is the planned action?</b>	<b>Who is the lead?</b>	<b>When is expected completion or milestones?</b>	<b>What resources are needed?</b>	<b>Partners?</b>
Convert, update and publish: "Inspection and Contract Administration Manual for MNDOT Landscape Projects – 2018"	Philip	January 2018	Adobe In-Design graphic software assistance	RVM Unit, Publishing & Design Services
Refine Snow Control Tools and Fence Construction Details	Dennis	August 2017	NA	RVM Unit
Refine OES Folder and File Naming Conventions – Facilitate Unit efforts	Dennis	Spring/Summer 2017	Unit Reps	OES Staff
Plant Selector Upgrade	Todd	Fall 2017	RVM Unit assistance for Seed Mix information	MnIT, RVM
Landscape Partnership District Visits	Todd	December 2017	Cooperation from Districts to identify appropriate personnel	MnDOT (D 1-8), RVM?
Implementation of GRRCMP (Plan your trip, Plan your project)	Carol	On-going	Training & Outreach Coordinators	MnDOT (D 1-6)

## **MnDOT Office of Environmental Stewardship - Construction and Operations Section**

### **FY 2016 Work Plan**

- Blowing and Drifting Snow Control
- Environmental Modeling & Testing Unit
- Environmental Investigation Unit
- Erosion Control and Stormwater Management Unit
- Roadside Vegetation Management Unit

For questions, please contact OES Construction and Operations Section Director, Tim Sexton, at (651) 366-3622 or [timothy.sexton@state.mn.us](mailto:timothy.sexton@state.mn.us).

## Blowing and Drifting Snow Control Unit Work Plan

### Unit Overview

The Blowing and Drifting Snow Control Unit (BDSCU) provides professional technical support for MnDOT program delivery and maintenance operations to integrate preventative snow control measures to reduce winter crash severity, improve mobility, and save operational dollars.

### BDSCU Team

*Dan Gullickson, State Program Administrative Coordinator*

Directs Statewide Blowing and Drifting Snow Control Policy and Practices, interagency liaison, research, training, media outreach, and project implementation

Part-Time Support:

*Denny Moline, Environmental Engineering Specialist*

Microstation, VBA, GEOPAK blowing snow control technical support, project review, training, and research

*Dan Flatgard, MnDOT Central Office Maintenance Operations*

GIS support to update and maintain snow trap inventory with District Maintenance Key Expert Group (MKEG)

*MnDOT District Snow Fence Coordinators*

District contacts for private landowners interested in enrolling in short/long term blowing snow control solutions. Provide local connections between maintenance operations and program delivery.

### Work Duties Required by Regulation

- No specific regulation applies to BDSC, but the efforts enhance safety and financial effectiveness.

### Other core functions (typically performed for liability reduction or District request)

- Provide expertise to the MnDOT Districts responsible for project delivery, safety and maintenance on blowing snow control measures; e.g., standing corn rows, structural snow fences and ditch grading to achieve drift free roads.
- Provide statewide quality assurance and professional expertise on blowing snow control measures
- Collaborate with partners and external stakeholders
- Conduct research on blowing and drifting snow control

### Deliverables

- Snow control site studies
- Develop and support for snow control decision tools
- Plan review to determine right-of-way requirements and snow control treatment options
- Guidance on short term (1 winter season) and long term (+10 years) and snow control agreements
- Training

## Emerging issues in FY 2017

- Reducing chloride pollution
- Increasing/improving pollinator habitat
- Governor Dayton's water quality initiatives
- Palmer Amaranth weed or other invasive species concerns
- Reducing greenhouse gas emissions

## Partnerships

The program has limited dedicated staff resources and is highly dependent on the following internal partners:

- Environmental Planning and Design Unit-Microstation/GEOPAK snow control tool development, living snow fence landscape contact plans for letting, structural snow fence detail sheet, training, and utilization
- Erosion and Storm Water Management Unit - seed mix and compost recommendations
- Roadside Vegetation Management Unit - vegetation management best management practices, tree thinning with DNR or Forest Service
- Communications - Outreach materials, website, and interviews.
- Research Office - coordinate with research institutions and disseminate research
- Office of Technical Support - agreements for processing consultant service contracts, Cooperative Municipal agreements-for processing SWCD Living Snow Fence Agreements, GEOMETRICS for plan review, Project Lettings, PIF's , HPDP
- Office of Maintenance - communicate best practices, building and grounds, fleet, labor/material/equipment costs for mechanical snow & ice removal
- Materials Lab - soil conditions for structural snow fence sleeve length
- Office of Traffic and Safety - crash study guidance and eligibility for HSIP funds
- Office of Land Management - right of way negotiations, compensation, land use
- District Snow Fence Coordinators and Project Managers

External Partners:

- University of Minnesota - Center for Transportation Studies, Center for Integrated Natural Resource and Agricultural Management, Climatology, Extension
- Department of Natural Resources - Forestry, Climatology, and Roadsides for Wildlife
- Minnesota Association of Soil and Water Conservation Districts
- US Forest Service - National Forest tree thinning adjacent to MnDOT R/W
- USDA Natural Resources Conservation Service - EQIP and Conservation Reserve Program Technical Plan review oversight
- USDA Farm Service Agency - Conservation Reserve Program administrator
- Private landowners - 50% of MnDOT's snow fence (living, structural, standing corn row) practices occur on private lands.

## Recurring Tasks

- Coordinate Annual Statewide District Snow Fence Coordinator meeting (winter/spring)
- Update snow control and living snow fence websites
- Review and update landowner snow fence agreements
- Review and update snow control media campaign materials

- Media interviews on snow control measures
- Update Standard Specifications, HPDP, and Special Provisions
- Annual update on miles of snow control treatments for the MnDOT District Fact Sheets
- Living Snow Fence maintenance requirements for Maintenance Operations
- Training on snow control measures/procedures/design/use of benefit cost tool

### Research Needs

- Update Winter Climate Database-Current data is based on the period from 1971 to 2000
- Further refine the % chloride reduction on roadways protected with snow fences and roadways that receive greater solar gain due to forest canopy thinning
- Assess how snow fence porosity changes over time between various living snow fence plant material species as it relates to plant vigor, snow storage capacity, and drift length
- Social Science research on how land use decisions are being made by landowners who live on the land, absentee landowners, and renters

### Action Plan for CY 2017

<b>What</b> is the planned action?	<b>Who</b> is the lead?	<b>When</b> is expected completion or milestones?	<b>What</b> resources are needed?
Update 2008 Interagency MOU with USDA Farm Service Agency, NRCS, and MN Association of Soil and Water Conservation Districts	Dan	May 1, 2017	Coordination with USDA and MASWCD staff in St. Paul. MnDOT legal assistance if MOU needs to be renewed.
Snow Trap Inventory Validation and Update	Dan	June 1, 2017	MnDOT District MKEG and District maintenance on snow trap locations. Technical assistance from Dan Flatgard.
Flow chart for design on blowing and drifting snow control measures	Dan	June 1, 2017	Input from MnDOT PM Group and Dennis Moline to chart the path.
Complete Benefit Cost Tool Website Enhancements and Updates	Arlene Mathison, U of M CTS	June 31, 2017	Updated snow trap inventory, traffic counts, highway speeds, and pay/cost rates.
Complete KAP Study in MnDOT D8	U of M Dean	June 31, 2017	Technical Advisory Panel approval of final report.
Snow Control Treatment Location Asset Management Inventory	Dan	November 31, 2017	Snow trap locations from District MKEG/maintenance. Technical assistance from Dan Flatgard and Trisha Stefanski to integrate into Asset Mngmnt Database.
Blowing Snow Control Unit Staffing Plan	Dan	December 1, 2017	Support from Senior Management

## Environmental Modeling & Testing Unit– CY 2017

### Unit Overview

The MnDOT Environmental Modeling and Testing Unit (EMTU) provides technical support and expertise in transportation-related noise, air quality, water quality and special studies. EMTU is located at the MnDOT Central Shop Facility, 6000 Minnehaha Avenue, Saint Paul, MN.

### EMTU Team

*Peter Wasko, Unit Chief*

Noise and air quality policies, interagency liaison, workload management

*Melvin Roseen, Noise Analyst*

MNNoise programming and modeling, noise analysis and review

*Harold Bottolfson, Environmental Monitoring Specialist*

Lowry Hill Tunnel air monitoring, ambient carbon monoxide monitoring, TH 610 iron filings study, noise monitoring, waste oil & parts washer sampling, growth study, lead paint testing, and prescribed burn team

*Lucas Bistodeau, Environmental Monitoring Specialist*

TH 36 water quality monitoring, TH 100 turbidity monitoring, I-94 rest area pond volunteer monitoring project, noise monitoring, PCB paint study, growth study, and prescribed burn team

*Gwen Mei, Senior Engineer*

Noise analysis and review, air quality analysis, and P6 updates

*Student Worker*

Full-time civil engineering student worker every summer supports Unit work

### Work Duties Required by Regulation

#### Air Quality

- Environmental document review (NEPA, MN Rule 7009.0080)
- Modeling and analysis (CAA, Conformity Rule, NAAQS, FHWA Guidance on MSAT)
- Tunnel/safety monitoring (CAA, Conformity Rule, NAAQS, MN Rule 7011.0150)
- Ambient carbon monoxide (CO) background monitoring (NAAQS, Top Ten Screening)

#### Water Quality

- Automated storm water sampling (CWA, DNR General Permit, MN Rules 7050, 7052, 7053, Point Source Discharge Permitting, and Section 404)
- Surface water and ground water well sampling and monitoring
- Flow metering
- Wetland monitoring

#### Noise

- Policy development (23 CFR 772)
- Environmental document review (23 CFR 772, MN Rule 7030, MN Statutes 116.070 and 161.125)
- Modeling and analysis (23 CFR 772, MN Rule 7030, MN Statutes 116.070 and 161.125)

#### Regulated Waste

- Compliance sampling (e.g., PCBs, waste oil, parts washer fluid, lead) (MN Rules 7000, 7001, 7035, 7045, 7150, 7151, 9220)

**Other core functions** (typically performed for liability reduction or District request)

- Provide intra- and interagency technical assistance for noise, air quality and water quality
- Training: noise policy, USEPA MOVES model
- Ecological monitoring and growth studies
- Research & special testing, e.g., hazardous materials
- Sediment water quality sampling
- Responses to public inquiries and requests for noise measurements
- Environmental document review (noise and air quality analysis)
- Air quality monitoring
- Prescribed burn team support

**Deliverables**

- MnDOT Noise Policy and guidance
- Noise and Air Quality HPDP
- Research & special testing reports
- Noise, air quality & water quality monitoring data
- Invasive weed control and wetland restoration assistances through prescribed fire

**Potential Emerging issues in 2017:**

- Greenhouse gas analysis
- Sulfate and chloride sampling/monitoring
- Climate Change
- Change to using the FHWA TNM noise model

**Partnerships**

- Erosion and Storm Water Management Unit – growth studies, soil sampling, etc.
- Roadside Vegetation Management Unit – growth studies, prescribed fires
- Environmental Investigation Unit – waste oil and parts washer sampling, PCB testing, other
- Environmental Assessment Unit – environmental document review
- Interagency - Interagency Air Quality & Transportation Planning Committee, Interagency Climate Adaptation Team, Clean Air MN, AASHTO Air Quality, Climate Change & Energy Subcommittee
- Minnesota Pollution Control Agency – air quality monitoring audits and noise meter calibration

**Recurring Tasks**

- Update Minnesota Department of Health contract (July)
- Renew Siemens water system maintenance contract (July)
- NITON leak test and registration (testing and registration in February, additional tests in August)
- Review noise & air prequalified consultants (every 2 years)
- Review & update HPDP for air and noise (December)
- TH 36/McKnight flow data to Metro District (Winter)
- TH 610 water quality monitoring data to Metro District (Winter)
- TH 100 turbidity monitoring data to Metro District (Winter)
- I94 Storm water sampling data to Metro District (Winter)
- I94 Rest Area Pond volunteer water quality monitoring data to Met Council (April – October)
- Maintain current sampling data for MnDOT used oil burning activities (every 2 to 3 years)

**Action Plan for CY 2017**

<b>What</b> is the planned action?	<b>Who</b> is the lead?	<b>When</b> is expected completion or milestones?	<b>What</b> resources are needed?	<b>Partners</b>
Complete testing procedures for soil enhancement products	Harold	October 2017	Growth chamber supplies, soil enhancement products.	OES ESWU, multiple vendors
Equipment & office cleanup/reorg	All	December 2017		Waste & recycle haulers
Update Air Quality HPDP	Gwen	July 2017	Technical assistance	MPCA, Met Council, Metro
Update Noise HPDP	Gwen	July/August 2017	Technical assistance & IT services	IT, EMTU
Air Quality Hot Spot Screening Method Update with New EPA MOVES Emission Model	Gwen	July 2017	Technical assistance	MPCA, Met Council
2017 Noise Requirement Update	Peter	July 2017	Technical assistance	FHWA, MPCA

## Environmental Investigation Unit

### Unit Overview

Most duties performed by the Environmental Investigation Unit (EIU) are required by regulation or are done to reduce agency liability from regulatory violations and/or unexpected future costs (e.g., cleanups). EIU staff performs these duties directly and through oversight of consultant resources.

The EIU has four primary service areas: Contaminated Materials Management Team (CMMT), Regulated Materials Management Team (RMMT), Product/waste reuse evaluation and storage tank compliance management.

### EIU Team

*Brian Kamnikar, Unit Chief*

Contaminated and regulated material policies, interagency liaison, workload management

*Mark Vogel, Regulated Materials Specialist*

Manage regulated materials for District 1, 2, 3, CO Facilities, Metro North and East and provides Regulated Team Leadership

*Bob Edstrom, Toxicologist*

Manages product and waste reuse evaluation process to determine environmental performance

*Carolyn Boben, Hydrogeologist*

Manage contaminated soil and groundwater products and services for District 1, 3, and Metro North and East

*Summer Allen-Murley, Regulated Materials Specialist*

Manages storage tank compliance program, manage regulated materials for District 4 and assists Regulated Materials Team with audits

*Michelle Waters, Hydrogeologist*

Manage contaminated soil and groundwater products and services for District 2, 4, and Metro West

*Jackie Klein, Regulated Materials Specialist*

Manage regulated materials for District 6, 7, 8 and Metro South and West

*Vacant, Hydrogeologist*

Manage contaminated soil and groundwater products and services for transit projects

*Sarah Jarman, Hydrogeologist*

Manage contaminated soil and groundwater products and services for District 6, 7, 8 and Metro South

### Work Duties Required by Regulation

- Investigation of chemical releases at MnDOT maintenance facilities (MN Rule 7037, MERLA, CERCLA, RCRA)
- Management of wastes produced through MnDOT operations (MN Rule 7035)
- Management of regulated materials for MnDOT highway construction and facility projects (MN Rule 7035)
- Management of contaminated soil and groundwater encountered at highway construction sites. (MN Rule 7037, MERLA, CERCLA, RCRA)
- Maintain department storage tank compliance program (MN Rules 7150, 7151, 40 CFR 112)

### **Other core functions (typically performed for liability reduction or District request)**

- Assess costs and help manage agency liability when acquiring contaminated property
- Evaluate environmental performance, determine liability, and approve products and waste materials for use by department
- Provide technical assistance to MnDOT personnel and local units of government
- Provide training to internal staff and external partners

### **Deliverables**

- Permits and approvals from regulatory agencies
- Investigation reports and product evaluations and use recommendations
- Guidance documents, technical memoranda, compliance manuals
- Facility and end site audits

### **Emerging Issues in FY 2017**

- Surface and groundwater impacts
- Increasing reuse of waste materials in highway infrastructure
- The ability to identify chemicals at lower concentrations in soil and water samples may increase regulation of chemical releases at more sites
- Contaminated soil vapor assessment and mitigation
- Reducing nitrogen loading to surface water and groundwater

### **Partnerships**

- Minnesota Pollution Control Agency (MPCA) - revise existing bituminous beneficial use determination (BUD)
- Minnesota Pollution Control Agency - initiate process to create agreement on management of contaminated and regulated materials on highway construction projects
- Minnesota Department of Natural Resources – provide guidance to DNR on how to manage contaminated and regulated materials on trail projects within MnDOT right of way

### **Recurring Tasks**

- Annual Waste Management Coordinator meetings (August)
- Review and update websites and Highway Project Development Process (complete during summer/fall 2017 any documents not completed with WIG 2.0)
- Specification review (August/September)

**FY 2017 Action Plan – Environmental Investigation Unit**

<b>What</b> is the planned action?	<b>Who</b> is the lead?	<b>When</b> is expected completion or milestones?	<b>What</b> resources are needed?	<b>Partners</b>
Complete spill response policy	Brian	September 2017	Concurrence with other MnDOT functional offices	Various MnDOT offices, Office of Chief Council
Complete soil import special provision	CMMT	December 2017	Concurrence from MnDOT construction and materials, industry	MnDOT Construction, Materials, and CMG
Develop succession planning for RMMT	RMMT	December 2017	Plan for knowledge management and, potential, job shadowing	EMTU
Update district tank compliance manuals	Summer	December 2017		District tank coordinators

## Erosion Control and Stormwater Management Unit

### Unit Overview

The Erosion Control and Stormwater Management ECSM Unit provides technical support to MnDOT Design, Maintenance and Construction. This support includes developing statewide standards and practices as well as project-specific oversight and problem solving. It also includes extensive training, collaboration with external partners, and product quality assurance. The goals of this support are 1) to protect environmental resources during construction, 2) to comply with regulations, and 3) to establish functional roadside vegetation.

### ECSM Unit

*Ken Graeve, Unit Supervisor*

Erosion control and stormwater management policies, interagency liaison, workload management, seed standards/quality control program

*Dwayne Stenlund, Erosion Control Specialist*

Trainer for Construction Site Management and SWPPP Design, Research, primary contact for erosion control and stormwater management for District 1, 4, 7 and Metro (north half)

*Lori Belz, Erosion Control Specialist*

Construction Installer trainer, primary contact for Approved Products List for erosion control products, primary contact for erosion control & stormwater management for District 2, 3, 6, 8, and Metro (south half)

*Brett Troyer, Special Projects Engineer*

Technical support for construction standards, specifications, standard details, and other guidance documents

### Work Duties Required by Regulation

- Construction Standards (NPDES Permit, MN Rule 7090, CWA, 33 U.S.C 1251, DNR General Permit )
- Erosion Control Design Standards(NPDES Permit, MN Rule 7090, CWA, 33 U.S.C 1251)
- SWPPP Plan Review(NPDES Permit, MN Rule 7090, CWA, 33 U.S.C 1251)
- BMP standards, Standard Plans (NPDES Permit, MN Rule 7090, CWA, 33 U.S.C 1251, DNR General Permit)

### Other core functions (typically performed for liability reduction or District request)

- Construction project reviews for erosion & stormwater management
- New product demonstrations and research
- Vegetation forensics and plant establishment
- Bio-engineering (steep slopes, stream banks, shorelines)
- Training
- Special provision development and guidance
- Turf establishment and Topsoil recommendations
- Approved product reviews for erosion control products
- Quality Assurance for Seed, Sod, and Mulch

### Deliverables

- Turf Establishment Guidance letter

- Manuals, field handbooks, technical memorandum
- Product approval letters
- Standard specifications and special provisions
- Construction guidance documents

### **Emerging Issues in CY 2017**

- Construction Stormwater Permit update expected October of 2017
- Establishing vegetation during construction that will meet long term roadside objectives
- Climate adaptation (BMPs to handle more intense storms & floods; payment for storm/flood repair)
- Troubleshooting infiltration & filtration basins for stormwater function & vegetation establishment
- Outreach to raise awareness of the critical function of roadside vegetation
- Shared risk for permit compliance, e.g., lump sum temporary erosion control
- Increasing green infrastructure, e.g., permeable pavements, bio-swales, rain gardens
- Brownwater management during construction
- increased use of compost

### **Partnerships**

- OES Roadside Vegetation Management Unit – Invasive species control; prescribed fire
- OES Environmental Modeling and Testing Unit - growth studies and soil sampling
- Minnesota Crop Improvement Association - certified seed, sod, mulch program
- University of Minnesota - Erosion and Sediment Control Certification Program
- Metro District MS4 Staff – collaboration on construction oversight for metro district projects
- Seeding Contractors Association

### **Reoccurring tasks**

- Training for UM Certification program (December - March)
- Present at Seed, Sod, Mulch vendor meetings (Spring & Fall)
- Present at Seeding Contractors meetings (December)
- Present at Design and Hydraulic workshops (Spring)
- Present at MnDOT Construction workshops (Spring)
- Approved Products list updates (January – April)
- Materials control Schedule updates (January)
- District meetings (odd years, February – April)

**CY 2017 Action Plan – Erosion Control and Stormwater Management Unit**

<b>What</b> is the planned action?	<b>Who</b> is the lead?	<b>When</b> is expected completion or milestones?	<b>What</b> resources are needed?
Update HPDP guidance	Dwayne	July 1, 2017	
Finalize five new standard details	Brett	July 1, 2017	
Update Design Manual & SWPPP template	Brett	September 1, 2015	
Incorporate Erosion/Stormwater Review into P6 process	Ken	September 1, 2017	
Create standard detail showing findings of embankment research	Lori	October 1, 2017	

## Roadside Vegetation Management Unit Work Plan

### Unit Overview

The Roadside Vegetation Management Unit (RVMU) provides technical support to District Design, Construction, and Maintenance personnel for the management of existing vegetation along MnDOT roads.

### RVM Team

*Tina Markeson, Unit Supervisor*

Vegetation management practices and policies, interagency liaison, workload management

*Paul Voigt, Horticulturalist*

Certified Landscape Specialist Training Program Coordinator, formal landscaping near MnDOT district headquarters buildings

*Dave Hanson, Urban Forester*

Tree Risk Management Program Coordinator, Biological Control Program Coordinator

### Work Duties Required by Regulation

- Provide technical support for the control of noxious weed control (MN Chapter 18)
- Educate, investigate, and develop standard operating procedures for quarantined pests (insects, diseases, fungi, etc.) found on MnDOT roadsides (MN Chapter 18G)
- Investigate and mitigate for MN DNR listed Threatened and Endangered Plant species found within MnDOT right-of-way (MN Statute 84.0895)
- Provide recommendations to MnDOT Districts on vegetation value and purpose (MnDOT Technical Memo 11-17-ENV-03)

### Other core functions (typically performed for liability reduction or District request)

- Tree risk identification and training
- Tree appraisals for District permits office
- Vegetation reviews for all phases of construction and maintenance projects
- Contract landscape inspection assistance for construction
- Biological weed control capture, release, and monitoring of beneficial insects
- Prescribed fire management
- Training District personnel on vegetation management practices
- Interagency Governmental Liaison (DNR, MDA, BWSR)
- Research Technical Liaison
- Invasive species identification and control technical support

### Deliverables

- Vegetation reviews on all phases of construction and maintenance projects including follow-up and special provisions as needed
- Tree Appraisals/Vegetation Review memos for permits
- Determination of vegetation impact for utility permits
- Plant Health Diagnostic Analysis reports
- Plan development for building landscaping

### **Emerging Issues in CY17**

- Understanding impacts to construction and maintenance from new Threatened and Endangered Species: Long-eared bat and Monarch Butterfly
- Invasive species quarantines
- Logging ROW with DNR assistance
- Roadside habitat for pollinators and pheasants
- Mowing and haying roadsides
- Spread of invasive plant and plant pests in MN including Emerald Ash Borer and Palmer Amaranth

### **Partnerships**

- Erosion and Storm Water Management Unit and Environmental Assessment Unit – threatened and endangered plant mitigation
- Environmental Planning and Design Unit – Spec 2571, Certified Landscape Specialist Training
- Environmental Modeling and Testing Unit and Erosion and Storm Water Management Unit – Prescribed burns
- Erosion and Storm Water Management Unit – impacts and maintenance of vegetation on infiltration basins and storm water ponds

### **Recurring Tasks**

- Updates to Standard Specifications, HPDP, web site, special provisions
- Coordination of Annual Certified Landscape Specialist training (held February/March)
- Coordination of Annual District Herbicide Meetings (April/May)
- Coordination of Annual Statewide Herbicide Season-end Meeting ( September)

### **Research Needs**

- Economic cost/benefit of native roadside vegetation
- Use of root ball boxing vs scoring on containerized trees
- Better understanding of infiltration areas and impacts of vegetation on drainage structures

**CY 2017 Action Plan – Roadside Vegetation Management Unit**

<b>What</b> is the planned action?	<b>Who</b> is the lead?	<b>When</b> is expected completion or milestones?	<b>What</b> resources are needed?	<b>Partners?</b>
Update State Pesticide Contract	Tina	May	Coordination with DNR, Dept of Admin	DNR, Office of Maintenance, MN Dept of Admin
Create E-Learning module for Pesticide Training	Paul & Tina	December	Newest editions of manual Technical assistance from eLearning Services	Office of Maintenance eLearning Services
Complete RVM web site update	All	September	Technical assistance from Web Team and Communications	Web Team
Tree Risk Management Guidelines	Dave	December	Clarification from Office of Chief Counsel	Chief Counsel
Streamline Mowing/Haying Permit Reviews	Tina	June	Feedback from District Permit personnel	District Permit personnel