



**US Army Corps  
of Engineers®**  
St. Paul District

# PUBLIC NOTICE

Date: September 4, 2019

## **ANNOUNCEMENT OF RELEASE OF MINNESOTA STREAM ASSESSMENT TOOLS AND DRAFT DISTRICT-WIDE STREAM MITIGATION GUIDANCE**

### **SUMMARY**

The U.S. Army Corps of Engineers St. Paul District Regulatory Branch (District) is announcing the release of version 1.0 of the Minnesota Stream Quantification Tool and Debit Calculator. These tools are now available for use in Minnesota. With District approval and direction, they may be used in Wisconsin also. The District is also announcing availability of its draft outline of stream mitigation guidance for the states of Minnesota and Wisconsin including a draft threshold for when stream mitigation may be required. We are requesting comments on this draft guidance.

### **WHY A STREAM TOOL?**

In an effort to increase consistency and transparency in decisions surrounding restoration potential of streams, functional loss of permitted stream activities, and functional gains of stream restoration projects, the District is releasing the Minnesota Stream Quantification Tool, Version 1.0 (MNSQT).

The MNSQT provides a science-based, consistent, efficient and repeatable approach to assess functional loss (debits incurred) at impact sites and functional lift (credits generated) at restoration sites. The tool consolidates established stream assessment and monitoring protocols covering hydrology, hydraulic, geomorphology, physicochemical and biological components in an Excel workbook to characterize stream ecosystem functions at a specific project reach.

The MNSQT:

- identifies standard data collection needs for prospective stream impact and mitigation sites.
- provides objective, science-based, and regionally-developed quantitative measures of defined stream variables.
- informs determinations on the functional loss and gains of stream impacts and restorations.

In most cases, the MNSQT will not be used when the functional loss caused by a permitted stream impact will not be monitored. Instead the Debit Calculator may be used and provides a rapid and streamlined evaluation of stream impacts evaluated in a Department of the Army permit application. The Debit Calculator combines information from individual project design documents, models, related literature, and best professional judgment to determine debit (mitigation) needs for a regulated impact. Together the MNSQT and Debit Calculator will be used to inform the District's permitting and mitigation decisions when activities in streams require permits from the Corps.

Available on the Corps website, ([www.mvp.usace.army.mil/Missions/Regulatory/Mitigation](http://www.mvp.usace.army.mil/Missions/Regulatory/Mitigation)) as of the date of this public notice, are multiple MNSQT resources:

- MNSQT and Debit Calculator User Manual
- MNSQT Excel workbook
- MN Debit Calculator Excel workbook
- MNSQT and Debit Tool Field Data Collection Methods (Appendix A)
- MNSQT Excel workbook field forms, both Excel and pdf versions (Appendix B)
- Scientific support for the Debit Calculator
- Field forms for large woody debris, fish, macroinvertebrate and riparian area

Scientific support documentation for the MNSQT will be released January 2020.

The U.S. Environmental Protection Agency (USEPA) provided funding for a consultant, Stream Mechanics, to develop the MNSQT and Debit Calculator. The USEPA, MN Department of Natural Resources, MN Pollution Control Agency and the MN Board of Water and Soil Resources participated cooperatively with the District in MNSQT development.

### **WHEN TO USE THE MNSQT OR DEBIT CALCULATOR**

On the impact side (permit) of the District's regulatory program, applicants for projects in both MN and WI will be informed on a case-by-case basis when they will be required to use the MNSQT or Debit Calculator. Generally, applicants can expect that the MNSQT or debit calculator will be required when permanent piping or complete removal of a stream determined to be a water of the U.S. exceeds 300 linear feet. Between now and August 2020 the District will collect information on stream impacts to inform its determination of a threshold for requiring stream compensation. If the District determines that submittal of a completed Debit worksheet is required for stream impacts above a particular threshold, that change will be broadly communicated to the regulated public.

On the restoration side (banking or permittee-responsible), as of the date of this public notice, all projects in MN will be required to fully and accurately complete the MNSQT. Permittee responsible stream restoration projects that pre-date this notice will continue to be evaluated in the manner previously communicated by the District. The MNSQT must be completed for all future stream banks proposals in MN and stream mitigation credits will be calculated using the "functional foot" output of the tool. Completion of the MNSQT for stream bank proposals in WI will be required on a case-by-case basis. Potential stream bankers are welcome to reach out to the District to discuss use of the MNSQT and to obtain guidance for determining the restoration potential of streams in WI and MN. Release of the District's Stream Mitigation Guidance in January 2020, will provide additional insight to potential bankers on the future of stream banking in WI and MN, including bank service areas and stratification of credits.

### **MNSQT LIMITATIONS**

The MNSQT was developed for the functional as a function-based assessment tool of wadeable intermittent and perennial single-thread channel streams at both low and high gradients. It is not a design or watershed assessment tool. It is limited in its ability to measure functional changes as a result of large dam removals, impacts and restorations in stream/wetland complexes, and projects limited to temporary impacts or riparian vegetation removal. Please contact the District before considering using the MNSQT for those purposes.

### **PRACTITIONER REQUIREMENTS**

Although there is no specific certification or training required to complete a full MNSQT assessment, an assessor should be proficient with the standard stream assessment procedures described in the MNSQT User Manual, including Appendix A- Field Data Collection Methods. Stream restoration practitioners will typically have experience with these procedures; however, those with experience in wetland habitat assessment or delineations may not. As with any permit or bank review, complete and accurate data submittals facilitate timely decisions.

### **COMMENTS ON USE OF THE MNSQT AND TECHNICAL SUPPORT**

The District welcomes any public, tribal, and agency comments related to the usability, utility, and clarity of the MNSQT, Debit Calculator, User Manuals, and field forms. Please email comments by going to [www.mvp.usace.army.mil/Missions/Regulatory/Mitigation](http://www.mvp.usace.army.mil/Missions/Regulatory/Mitigation) and clicking on the "submit SQT comments" link. You may also email feedback directly to [mnsqt@usace.army.mil](mailto:mnsqt@usace.army.mil). An update to the MNSQT and Debit Calculator will be considered fall 2020 based on those comments and MN Agency and District use.

If practitioners or applicants have questions about use of the MNSQT or Debit Calculator, including field data collection or form completion, please reach out to the District. Especially during the first year(s) of use, the District recognizes additional technical support may be required and will aim to provide that support as resources allow.

### **STREAM MITIGATION GUIDANCE**

The District is developing Stream Mitigation Guidance that will be applicable in both WI and MN. The attached Stream Mitigation Guidance outline summarizes topics that the District intends to address in the first release of Stream Mitigation Guidance in January 2020.

**From this point forward, the District will discuss stream mitigation requirements when a loss of stream beyond 300 linear feet (centerline) is proposed<sup>1</sup>.** Mitigation will not be required for impacts to non-jurisdictional waters. Stream mitigation would likely not be required when a project meets the terms of a general permit, unless a waiver is required. Not all projects that have a loss greater than 300 linear feet will require stream mitigation but as permanent impacts to stream functions increase, so will the likelihood that the District would require mitigation. Use of the MNSQT or Debit Calculator will assist in this determination. For linear projects, consistent with the District's approach for wetland mitigation, the District will calculate the overall cumulative effects to streams at all single and complete projects locations when determining the total loss of streams.

The District is planning a phased approach to implementation of the stream mitigation requirements for Department of Army permits. The first year (starting January 2020) will formalize mitigation requirements for projects that involve complete stream removals or piping and procedures to develop stream credits under the District's mitigation program. The next phases of Stream Mitigation Guidance implementation will be informed by data collected through the use of the MNSQT, Debit Calculator, stakeholder coordination in 2019/2020, and evaluation of permit data. The first version of the District's Stream Mitigation Guidance will be released in January 2020.

In lieu of a Wisconsin-specific SQT, applicants or project sponsors may either use other state or federal stream assessments or can appropriately modify the MNSQT (under direction from the District) to determine functional gain and loss, as needed. The District and its partner agencies are in early discussions about the development of a Wisconsin SQT in upcoming years.

#### **COMMENTS ON STREAM MITIGATION GUIDANCE**

**A 30-day public comment period, starting with the date of this notice, is open to solicit recommendations, comments or concerns related to the creation or implementation of stream mitigation guidance or on the proposed guideline when stream mitigation discussions would occur.**

Comments may be submitted to St. Paul District's Minnesota Program Manager, Jill Bathke, as described below.

#### **OUTREACH EVENTS**

Outreach and coordination regarding the MNSQT and the District's Stream Mitigation Guidance will be on-going throughout 2019/2020 to ensure proper coordination with the public, tribes, local, state and federal agencies. If you or your group would like to discuss the development of the Stream Mitigation Guidance or use of the MNSQT, the District will do our best to accommodate requests. Please contact Jill Bathke, as described below.

As of the date of this notice, two public outreach events are scheduled. The targeted audience for these events is stakeholders, consultants, or potential stream bankers who may utilize the MNSQT. The event will include an overview of the MNSQT from Will Harman from Stream Mechanics and a discussion, led by District staff, on the developing Stream Mitigation Guidance. **Space is limited to 30 participants at each event and RSVPs are required by September 30, 2019 at [Colleen.M.Meyer@usace.army.mil](mailto:Colleen.M.Meyer@usace.army.mil).** Please include your name and the group you plan to represent. The District may limit attendance to one group representative, so please coordinate attendees internally before RSVPing. Although not required, a background or understanding of stream restoration design/engineering or stream functions will be helpful. There is no registration fee to attend this event.

- Metro Area (MnDOT Arden Hills Training Center) - November 4, 2019- 9:00-4:00pm
- Brainerd Area (MnDOT District 3A-Baxter office) - November 5, 2019- 9:00-4:00pm

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<sup>1</sup> Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of a regulated activity. Permanent adverse effects include discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The loss of stream bed includes the acres or linear feet of stream bed that are filled or excavated as a result of a regulated activity. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to preconstruction contours and elevations after construction, and exempt activities, are not included in the measurement of loss of waters of the United States.

## **BACKGROUND ON WHY STREAM MITIGATION**

As described in the District's Public Notice published on June 19, 2019, the Federal Mitigation Rule (2008) and the 404 (b)(1) Guidelines (1980) require impacts to aquatic resources to be avoided and minimized to the greatest extent practicable. The District may determine that compensatory mitigation is necessary to offset unavoidable losses of aquatic resource function resulting from permitted activities. Mitigation may be accomplished through the restoration, enhancement, establishment, or preservation of aquatic resources. During the evaluation of Department of the Army permit applications, the need for compensatory mitigation is determined on a case-by-case basis when evaluating potential individual and cumulative adverse impacts to the aquatic environment.

Although the District has had wetland mitigation policies in place for over 10 years in Minnesota and Wisconsin, no formal stream mitigation guidance has been established. To date, the District has required stream mitigation via stream restoration for the complete removal of streams as a result of large-scale hard rock mining. However, research surrounding TMDL impairments, altered watercourses, and restoration sciences has demonstrated that even smaller stream impacts can have lasting and notable effects on stream functions and, in accordance with Federal rules and guidelines, mitigation may be necessary to ensure no-net-loss of stream functions and values. For these reasons, the District is developing a comprehensive stream mitigation guidance to ensure consistent science-based decision making for activities regulated under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

**The District's requirement for stream mitigation does not impact determinations of jurisdiction under the Clean Water Act consistent with current rules and guidance in place in WI or MN.**

## **FUTURE UPDATES**

**If you are interested in future updates on development of stream mitigation and MNSQT initiatives, please send an email to [jill.c.bathke@usace.army.mil](mailto:jill.c.bathke@usace.army.mil) with the subject line of "Stream SQT."** At the most, one email a month will be sent to interested parties and email addresses will only be used for this expressed purpose. All other questions concerning the development of the MNSQT, Debit Calculator and stream mitigation policy should also be directed to Jill Bathke (651-290-5697).

To sign up for other public notices, including on specific project or mitigation proposals, please go to:  
[http://mvp-extstp.mvp.usace.army.mil/list\\_server](http://mvp-extstp.mvp.usace.army.mil/list_server).

## St. Paul District Stream Mitigation Guidance\* Outline - August 2019

\*All topics shown below will be covered in final Guidance; however, additional topics or appendices may be included and order of topics covered are subject to change

### Executive Summary

1. Introduction to Stream Compensatory Mitigation Procedures
2. Determination of stream impacts and compensation requirements

- 2.1. Stream Identification

- 2.1.1. Rivers, streams and ditches regulated by the Corps
- 2.1.2. Identification and classification of streams

- 2.2. Stream Impacts Requiring Compensatory Mitigation

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*PROPOSED THRESHOLD: The District intends to start having stream mitigation requirement discussions with applicants when a loss of stream beyond 300 linear feet (centerline) is proposed. Mitigation would only be required a result of a regulated discharge of dredged or fill material in a water of the US. Stream mitigation would likely not be required when a project meets the terms of a general permit, unless a waiver is required. Not all projects that have a loss greater than 300 linear feet will require stream mitigation but as permanent impacts to stream functions increase, so will the likelihood that the District would require mitigation. Use of the MNSQT or Debit Calculator will assist in this determination.*

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- 2.2.1. Direct impacts
- 2.2.2. Secondary or indirect impacts
- 2.2.3. Cumulative impacts

- 2.3 Compensation Requirements

### 3. Assessment Tools

- 3.1. Stream Quantification Tool (SQT)

- 3.1.1. Application of SQT
- 3.1.2. Credits and the SQT
- 3.1.3. Debit Calculator

- 3.2. Other Assessment Tools

### 4. Stream Compensatory Mitigation

- 4.1. Preference Hierarchy

- 4.1.1. Mitigation Options
- 4.1.2. In-kind, In-place, In-advance

- 4.2. Development of Compensation Sites

- 4.2.1. Site review process
  - 4.2.1.1. Site selection considerations
  - 4.2.1.2. Data collection
  - 4.2.1.3. Mitigation work plan
  - 4.2.1.4. Stream and wetland restoration complexes

4.2.2. Performance Standards

4.2.3. Final approval of mitigation site

4.2.4. Mitigation compliance

4.2.4.1. Functional lift

4.2.4.2. Monitoring and Reporting

4.2.4.3. Financial Assurances

4.2.4.4. Long Term Management Plan and Funding

4.2.4.5. Site Protection

4.3. Development of Banks and In-lieu Fee Sites

4.3.1. Banking/ ILF specific process

4.3.2. MBI or Program Instrument

4.3 Development of Permittee Responsible Compensation Sites

## **Definitions**

## **References**

## **Tables**

Table 1: Summary of Debit Options

## **Appendices**

Appendix A: SQT User Manual

Appendix B: Debit Calculator Workbook

Appendix C: List of associated banking guidance documents

Appendix D: Mitigation Work Plan Checklist