THE MDE FOREST FINANCING IMPLEMENTATION TOOL (MD FFIT)
FIRST, SOME BACKGROUND INFO:
WHAT IS THE MD WATER QUALITY REVOLVING LOAN FUND?

Maryland’s Water Quality Revolving Loan Fund, more commonly known as the Clean Water State Revolving Fund (CWSRF), provides financial assistance for a wide variety of projects to protect or improve the quality of Maryland’s rivers, streams, lakes, the Chesapeake Bay and other water resources.

The CWSRF program:

- Represents the best value in the market for financing water infrastructure and nonpoint source projects
- Is administered by the Maryland Department of the Environment (MDE)
- Provides over $150M in assistance per year to Maryland communities, on average
Why Choose an SRF loan?

The SRF generates BIG SAVINGS with below-market SRF loan rates:
- 50% of the Bond Buyer I I-Bond Index rate for Standard Loans currently 0.9%
- 25% of BB 1-I rate for Disadvantaged Communities currently 0.4%

It has ample CAPACITY:
A CWSRF loan can cover 100% of costs for most projects

and FLEXIBILITY:
The CWSRF can customize assistance to a borrower’s needs, including:
- loan terms
- interest rates & fees
- guarantees
- refinancing
- additional subsidy
…and more
MDE’s Water Quality Financing Administration takes several criteria into account to determine whether a community should be designated as "disadvantaged." These include:

- Community MHI < 70% State MHI
- Located in an Environmental Benefit District
- Unemployment rate in upper 33rd percentile, and
- Population decline

Disadvantaged communities may qualify for reduced interest rates or loan forgiveness from MDE’s CWSRF program.
All applications for CWSRF assistance are scored and ranked using MDE’s Integrated Project Priority System (IPPS)

Riparian buffer restoration / tree planting projects are rated based on the below criteria:

- Water Quality Benefit (Total Nitrogen (TN) reduction)
- Effectiveness of TN reduction based on location of the project
- Mitigation of a public health emergency, contamination, or flooding issue
- Compliance credit toward a TMDL, a CCMP, or addressing a 4c listing from the Maryland Integrated Report of Surface Water Quality
- Nitrogen Removal Cost Efficiency, and;
- Co-Benefits (for Climate Mitigation, Adaptation, Resiliency, or Sustainability)

Click HERE for more information about the IPPS and project ranking criteria.
• Riparian Forest Buffer (RFB) Restoration was recently added to the IPPS as a fundable project type / ranking methodology
• This along with the Tool are part of MDE’s efforts to encourage CWSRF applications from communities for tree planting / RFB restoration projects
# The Calculator at 10,000 Feet

## The Maryland Forest Financing Implementation Tool

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**Welcome to MDE's Ecosystem Restoration Calculator!**

This calculator is designed to help you estimate the potential benefits of ecosystem restoration projects in the state of Maryland. To use the calculator, please enter your project details and the project budget. The calculator will then provide you with an estimated return on your investment, including the potential increase in property values, the number of trees that can be planted, and other key metrics.

**How to Use the Calculator:**

1. **Project Information:** Enter the details of your project, including the location, size, and expected benefits.
2. **Budget Information:** Input your project budget and any other relevant financial information.
3. **Output:** The calculator will generate a report with estimated returns on your investment, including the potential increase in property values, the number of trees that can be planted, and other key metrics.

**Example:**

<table>
<thead>
<tr>
<th>Project Information</th>
<th>Calculation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Benefits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budget</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Returns:**

- **Increase in Property Value:** $X,000
- **Number of Trees Planted:** Y
- **Other Key Metrics:** Z

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**Disclaimer:**

This calculator is provided for educational and informational purposes only. It is not a substitute for professional advice. Please consult with a financial advisor before making any investment decisions.

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**The Framework:**

- **Financial Analysis:** Determine the financial viability of your project.
- **Environmental Impact:** Assess the potential environmental benefits of your project.
- **Community Engagement:** Engage with the local community to ensure their support.

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**Estimated Project Costs:**

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Low</th>
<th>Med</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mulch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

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**Estimated Project Report:**

- **Total Project Cost:** $XX,XXX
- **Estimated Benefit:** $YY,YYY

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**Estimated Loan Repayment:**

<table>
<thead>
<tr>
<th>Loan Category</th>
<th>Low</th>
<th>Med</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Repayment</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**What is a "Disadvantaged Community"?**

The federal program designated as a "disadvantaged community" is a term used by government agencies to describe areas that have historically experienced social and economic disadvantages. These communities are often underserved by infrastructure and services, and may face additional challenges in accessing resources and opportunities. In Maryland, disadvantaged communities are identified based on a combination of income, race, and employment data. The Maryland Department of Transportation (MDOT) considers disadvantaged communities when allocating funds for transportation projects.
Why is the tool helpful?

When a jurisdiction selects a best management practice (BMP), the focus is often on cost per acre. This tool can calculate reductions and efficiencies for Total Nitrogen (TN), Total Phosphorus (TP) & and Total Suspended Solids (TSS) based on user-defined inputs.

The Tool also helps an implementer calculate costs of working with partners like NGOs, decide which elements of a project to retain versus outsource, and estimate how competitive a loan proposal to MDE or a grant provider might be.
Why is the tool helpful? (Cont’d)

The Cost Efficiency section of the Tool provides usable information such as:
- Cost per Acre
- Annualized cost per pound of pollutant reduced (TN, TP, and TSS)
- Estimated Impervious Acre (EIA) Cost per acre, and
- EIA Cost per MS4 Credit. (MS4 = Municipal Separate Storm Sewer System)

These efficiencies can be compared to other grant program criteria, e.g., the Chesapeake Atlantic & Coastal Bays Trust Fund
ALRIGHT, CAN YOU SHOW ME HOW THIS THING WORKS?

Yes!
Let’s Look Under the Hood

DEMO #1
2021 GUIDANCE

DEMO #2
2014 GUIDANCE
# 2021 VS. 2014 GUIDANCE CALCULATIONS

<table>
<thead>
<tr>
<th>2021 GUIDANCE</th>
<th>2014 GUIDANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permits for large, county jurisdictions</td>
<td>Permits for smaller populations such as Maryland municipalities</td>
</tr>
<tr>
<td>Tentative determinations issued 2020, expected final by end of 2021</td>
<td>Issued in 2018</td>
</tr>
<tr>
<td>2021 Guidance available <a href="#">HERE</a></td>
<td>2014 Guidance available <a href="#">HERE</a></td>
</tr>
<tr>
<td>Relies on the latest Chesapeake Bay program environmental modeling information (version 6.0) and is consistent with the Chesapeake Assessment Scenario Tool (CAST)</td>
<td>Relies on modeling data from the previous model (version 5.3.2)</td>
</tr>
</tbody>
</table>
2021 VS. 2014 GUIDANCE CALCULATIONS

- Due to inherent differences between model versions, the load calculations, credit received, and BMP options are different.
- MDE’s Sediment, Stormwater, and Dam Safety Program (SSDS) can answer any questions about the equivalencies and review credit calculation outcomes on a case-by-case basis.
- *It may be possible for a community initially under the 2014 Guidance to apply for and receive credit using the 2021 Guidance under certain circumstances.*
Enhancing Habitat

**NATIVE GRASS PLANTINGS**

- Calculations based on the 2021 Guidance (riparian and non-riparian) are based on EIA conversions for both forest plantings and conservation landscaping (which includes native grasses).

- The 2014 Guidance did not include conservation landscaping, so these calculations are based on EIA land conversions for reforestation of previous urban areas ONLY.

- Also, for 2014 Guidance calculations, there is no difference in credits between reforestation of riparian and non-riparian
What it Does not Do

**LIMITATIONS OF THE CALCULATOR**

The Tool is for **PLANNING PURPOSES ONLY!**

- **Tool outputs are dependent on user-defined inputs.** The user must understand each step of the process and decide whether the elements they include in the calculations make sense.

- The Tool does not compare costs between RFBs and other BMPs. However, a user can make comparisons with known past expenditures for BMPs, or by referring to MDE’s 2019 Stormwater Cost Report.

- Costs in “Budget” and other supporting tabs were estimated based on research done in 2020/21. These costs provide a range of High, Medium, and Low estimates for the user’s convenience. However, if better local data is available, users can request an unlocked version of the Tool from MDE to customize these values.
Points of Contact

QUESTIONS AND TECHNICAL ASSISTANCE

• For MDE, permits help to achieve the [Watershed Implementation Plan (WIP) Goals](#), therefore the MDE FFIT Tool has been designed for use by MS4 jurisdictions. However, if users wish to partner with a non-profit to carry out planting, maintenance or communications, all of these costs are independent and can be included or excluded in the calculations.

• Estimations from the Tool always require follow up with MDE staff to ensure that data, costs, and procedures are relevant and current. After using this Tool, please follow up with the appropriate Program:
  • **Financial Questions** – Contact MDE WQFA [HERE](#)
  • **Stormwater Permit Questions** – Contact MDE SSDS [HERE](#)
  • **Watershed Restoration Questions** – Contact MDE IWPP [HERE](#)