WARNERVILLE ROAD: MAY

Time Lapse Overview - Demonstrating 740% Improvement in Infiltration Rate from Native Conditions.
ANALYSIS OF INFILTRATION

Area of Influence:
• Impervious vs. pervious surface area influencing the site.
ANALYSIS OF INFILTRATION

Soil at the Warnerville site is classified by the USDA Web Soil Survey as a SaA sandy loam, 0 to 3 percent slopes, MLRA 17.

- Typical profile includes:
  - Ap - 0 to 9 inches: sandy loam
  - Bt1 - 9 to 15 inches: sandy clay loam
  - 2Bt2 - 15 to 21 inches: clay
  - 2Bkqm - 21 to 37 inches: cemented material
  - 2C - 37 to 79 inches: loam

- Hydrologic Soil Group: D
  - Typical infiltration between 0.00 and 0.06 in/hr.
ANALYSIS OF INFILTRATION

The site at Warnerville Road is estimated to originally hold 6 to 12 inches of standing water, particularly after rain events in excess of 0.30 inches. This water would remain standing for 1 to 2 weeks. The observed, prior infiltration at this site is consistent with the low end of the spectrum for its USDA Soil Group D classification.

<table>
<thead>
<tr>
<th>Example Precipitation Event (in)</th>
<th>Approximate Time to Infiltrate (hrs)</th>
<th>Estimated Rate (in/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.30</td>
<td>336</td>
<td>0.000892</td>
</tr>
</tbody>
</table>
# Analysis of Infiltration

## Major Precipitation Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Precipitation (in)</th>
<th>Approximate Time to Infiltrate (hrs)</th>
<th>Estimated Rate (in/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/25/2018</td>
<td>0.24</td>
<td>32</td>
<td>0.0075</td>
</tr>
</tbody>
</table>

**Average Estimated Rate:** 0.0075

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**Table Notes:**
- Analysis of infiltration rates following major precipitation events.
- Data includes date, precipitation amount, and estimated infiltration time.
- Estimated rate calculated from average infiltration time and precipitation amount.

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**Footnotes:**
- Additional data or notes on infiltration analysis.
- Historical data on infiltration rates over multiple events.

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**References:**
- Literature and resources used in the analysis.
- External data sources and studies.

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**Appendix:**
- Additional calculations or detailed analysis.
- Detailed methodology of infiltration analysis.
Estimated Infiltration Rate Showing Improvements From Native Conditions Through April
ANALYSIS OF INFILTRATION

<table>
<thead>
<tr>
<th>Estimated Rate (Original) (in/hr)</th>
<th>Estimated Rate (Post-Install) (in/hr)</th>
<th>Percent Increase (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000892</td>
<td>0.0075</td>
<td>740.80717488</td>
</tr>
</tbody>
</table>

It can be concluded, for the month of April, that the EGRP® has a quantifiable effective increase in infiltration rate at the site of 740.81% from native conditions, showing an approximate -60.52631578% decrease in performance from April, but given only one rain event above trace value for comparison.
MAY VISUALS

Time lapse photos are provided only for days that saw significant precipitation and following days of infiltration.
PRECIPITATION
05/25/2018
0.24”
PRECIPITATION

05/25/2018

0.24”
PRECIPITATION

05/26/2018

0.00"
PRECIPITATION

05/26/2018

0.00”