Stormwater Retrofit Inventory & Prioritization by Tetratech
### Existing Conditions

<table>
<thead>
<tr>
<th>Drainage Acres</th>
<th>Wetland (ac-ft)</th>
<th>TN Load (lbs/year)</th>
<th>50.8</th>
<th>136.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impervious Acres</td>
<td>Impervious Acres (ac-ft)</td>
<td>TP Load (lbs/year)</td>
<td>15.2</td>
<td>20.2</td>
</tr>
<tr>
<td>Flood/Water Quality Treatment</td>
<td>Flood/Water Quality Treatment (ac-ft)</td>
<td>TSS Load (lbs/year)</td>
<td>0%</td>
<td>12,945</td>
</tr>
</tbody>
</table>

General Finding: 36 inch pipe enters directly into Big Creek just downstream of the bridge. There is a manhole on private property that would provide access to the pipe.

### Proposed Conditions

| Existing Storage Volume (ac-ft) | Pretreatment Cell (SF) | 0 | 5,701 |
| Proposed Storage Volume (ac-ft) | Wetland (SF) | 0.77 | 27,807 |
| Proposed Ohio EPA Water | Proposed Ohio EPA Water (ac-ft) | TSS Load Reduction (lbs/year) | 10,744 |
| Quality Volume Met (%) | Quality Volume Met (%) | 100% | 35.4 |
| Additional Flood Control | Additional Flood Control (ac-ft) | TP Load Reduction (lbs/year) | 27,807 |
| Volume (ac-ft) | Volume (ac-ft) | 0.06 | 8.7 |

**Retrofit Description**

Runoff associated with small storm events will be diverted from an existing pipe into a pretreatment cell, which will allow sediment to fall out of suspension. Water will then meander through a constructed wetland, whose depth will be maintained by a flow control structure that empties into the existing stormwater pipe. Vehicle access will be provided to ensure ease of maintenance.

### Planning Level Cost Estimate

| Total Cost | Lower Range | $192,000 | Upper Range | $304,000 |
| Cost per Square Foot | $5.73 | $9.08 |

*Includes probable construction costs, design, survey, permitting, sediment testing, and a 25% contingency.
Surface Water Improvement Grant
Received by Parma

Project Management
By Cleveland Metroparks

Landscape sketch
Pre-bid Site Visit
March 2014
Construction Begins
March 2015
By Metroparks Site Construction
Construction Begins
March 2015
By Metroparks Site Construction
Want to check it out first hand?

Join a Naturalist & Big Creek Connects

Friday, June 26, Noon - 1pm
Restoration Tour
Cleveland Metroparks

BIG CREEK STORM WATER WETLAND PROJECT

This project was financed in part through a grant from the Ohio Environmental Protection Agency under the provisions of the Surface Water Improvement Fund and the USEPA Great Lakes Restoration Initiative.

Completion June 2015