

P-15/16 STORMWATER IMPROVEMENT PROJECT

Project Introduction Meeting
September 28, 2015



Agenda

- Welcome & Introductions
- Storm Water Master Plan Overview
- Overview of Project Area
- Examples of Projects
- Detention Basin Management Program
- Permission Letters
- Schedule
- Questions



2011 Storm Water Master Plan

- 47-miles of Stream Assessment & 250 Basins
- Hydrologic and Hydraulic Modeling
 - Flooding, Stream Stability & Habitat, Water Quality
- Storm Water Code and Ordinance Review
- Capital Improvement Projects
 - Over 100 projects identified @ a cost of \$125,000,000
 - To date completed 10 Project areas (23 basins, 8 reaches)



CIP Project Distribution

\$0 < 75 Projects < \$ 2 Million

(\$20 Million)

\$2 Million < 11 Projects < \$ 4 Million

(\$32 Million)

\$10 Million < 5 Projects < \$15 Million

(\$66 Million)



Funding

- 2008: City Voters authorized the City to issue up to \$ 40 million for Storm Water Bonds
- Aug 2012: Voters passed Proposition P
 - 0.4% Sales Tax Increase
 - Generate \$4.8 million annually for Parks & Storm Water
- Nov 2012: City sold first \$ 4 million in bonds
- Sales Tax started January 1, 2013
- Completed 10 Project areas (23 basins, 8 reaches)

Partnership

SWMP outlines projects & conceptual improvements

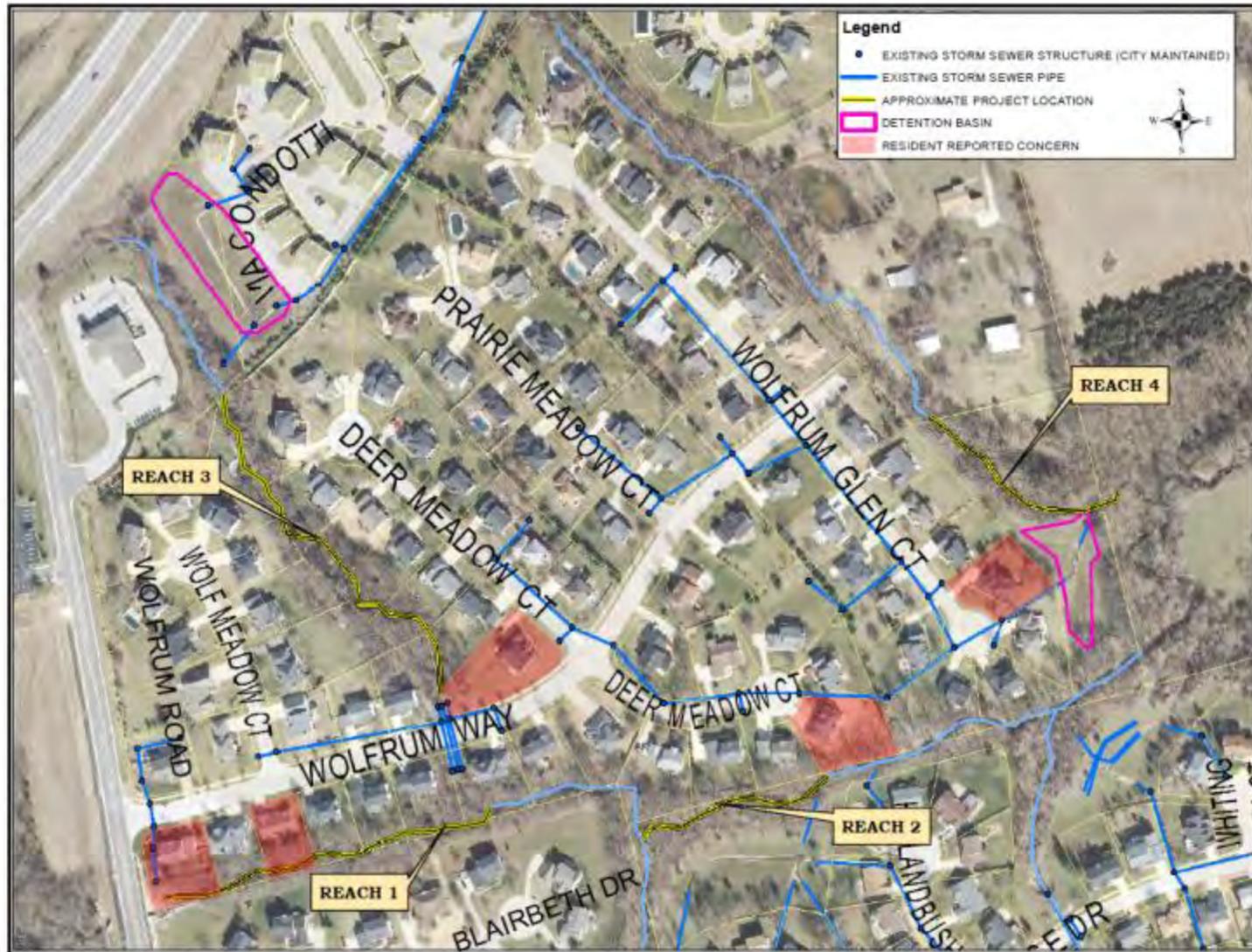
Prop P provides funding to design & construct

City cannot spend public \$ on private property

Property owner donates necessary easements

City can fund design, construction & maintenance

P-15/16 Highlands Improvement Project

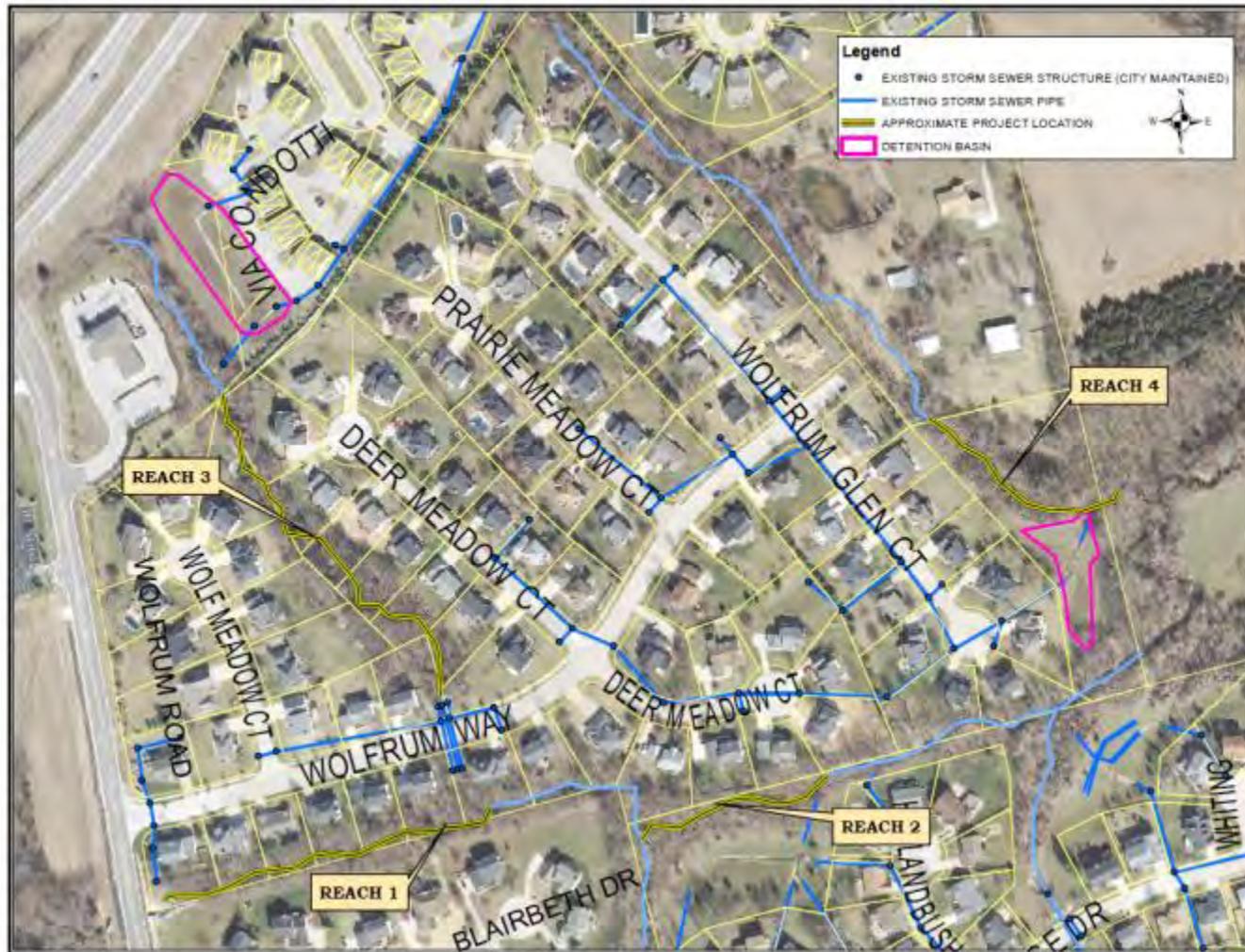




Overall Goals and Benefits

- Watershed based improvement to stabilize bank erosion and improve water quality
- Infiltrate as much rainfall and runoff as possible
- Filter and settle runoff pollutants
- Provide diverse and productive ecosystem
- City will maintain improvements
- Relieves HOAs and property owners from financial burden

Conceptual Project Overview



Watershed based improvement

Each project area can stand alone

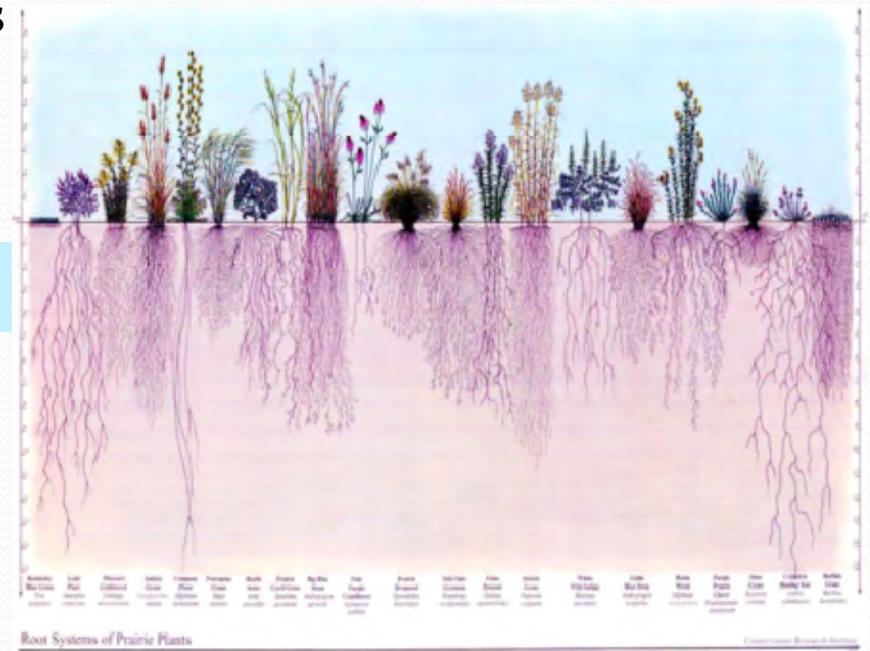
Conceptual Project Overview

- Retrofit existing basins for Water Quality Standards

- “ Capture the Water Quality Storm (First 1.14” rain, 90% Storm)
- “ Forebay & Underdrain Systems
- “ Removal of turf & concrete swales
- “ Use of native plantings
- “ Outfall structure improvements

- Channel improvements

- “ Bank & channel bed stabilization
- “ Remove invasive plants
- “ Improve riparian corridor





Recently Constructed Examples

- We are at very beginning stages
- No conceptual designs developed at this time.
- Following slides are examples of recent projects

P-6 PEGASUS FARMS

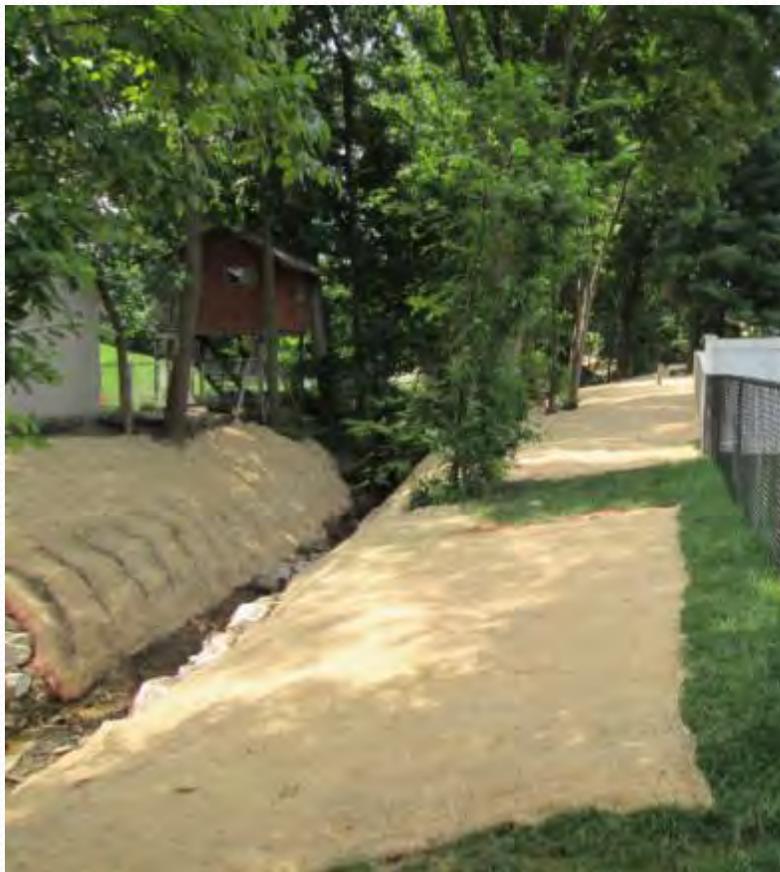


15 August 2013

P-6 PEGASUS SOUTH



P-7 ENGLEWOOD CHANNEL



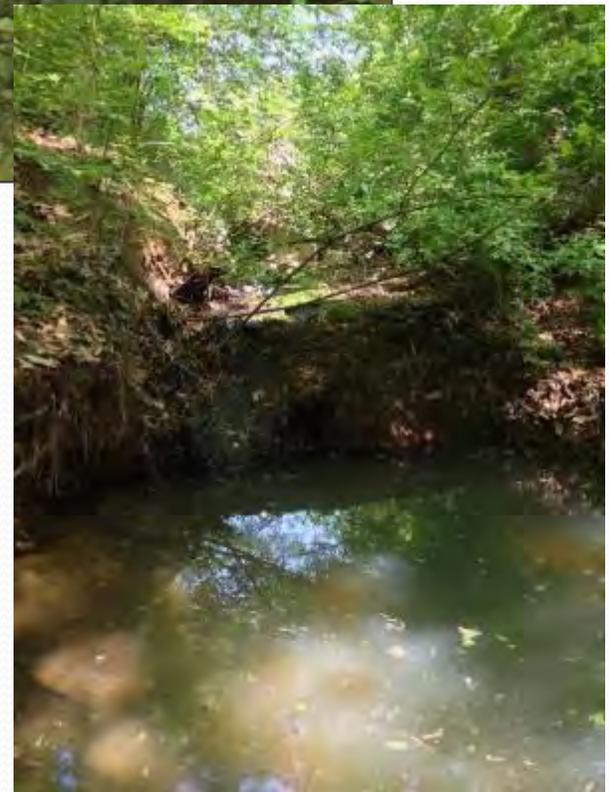
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P-8 COUNTRY CROSSING



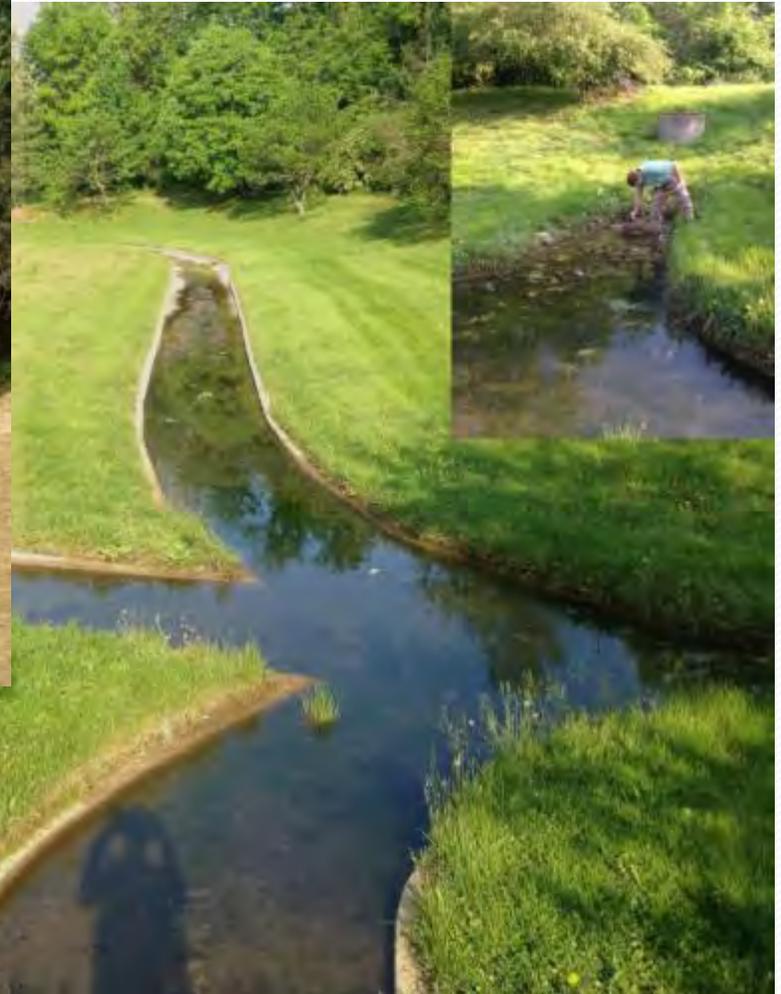
15 August 2013

P-10 CRESCENT HILLS



15 August 2013

P-14HIGHLANDS



15 August 2013



Maintenance & Easement Limits

- “ Channel reaches are entirely on private property
- “ Basins on Common Ground

- “ Easements are necessary, and may include
 - “ Temporary Construction Easements
 - “ Permanent Drainage Easements
 - “ Permanent Access Easements
 - “ Basin Management Agreements

Easements

- Property Owner will retain ownership of land
- City and Property Owner define the easement areas for designed improvements.
- City will maintain channel improvements within easement
- Property Owner will retain maintenance of property outside of improvement and easement area



Channel Improvements on Private Property

Home Owner supports project - provides permission for invasive vegetation removal

30% Design

Review Meeting w/ Home Owners

Home Owner signs Easement Documents

Finish Design & Construct



Permission to Access

- Permission to access property for invasive vegetation removal, and other data collection
- Granted by Home Owner, shows support of project
- Allows City to proceed to spend public funds for design services
- Removal of invasive vegetation occurs prior to land survey
- MO Professional Land Surveyor has right to access (not trespassing) and is liable for any damage done to property
- Understand if the project does not have support from all affected property owners within a reach, project may not move forward

Invasive Vegetation Removal



Invasive Vegetation Removal



Basin Improvements on Common Ground

HOA supports project - enters into Basin Management Agreement with City

30% Design

Review Meeting w/ Home Owners & HOA

Finalize Maintenance Limits

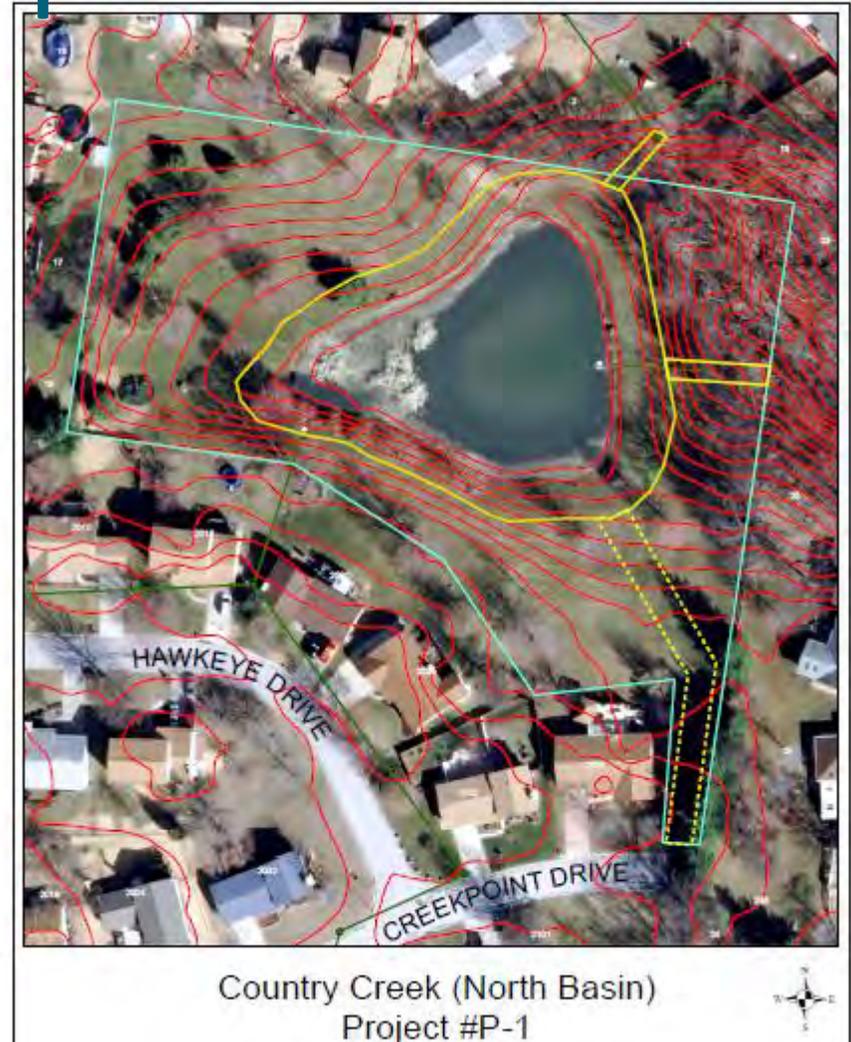
Finish Design & Construct

Detention Basin Management Agreement

- Provides necessary easements to allow City to construct and maintain improvements
- Provides general description of proposed basin improvements
- Indicates City will pay for costs associated with improvements and City's maintenance responsibilities
- Outlines maintenance responsibilities and areas of HOA and City

Maintenance Responsibilities

- HOA retains ownership of common ground
- City and HOA will define maintenance area
- City will maintain improved basin area
- HOA retains maintenance of common ground outside of improved basin area.





Schedule

- September: Highland Estates meeting to determine support/interest in project
- October: Highlands meeting (St. Peters & Weldon Spring residents) to determine support/interest
- Oct/Nov: Invasive vegetation removal
- Nov/Dec: Survey, data collection and design
- December: 30% Design Review (Meeting)
- May 2016: Final Design
- Summer 2016: Construction



Questions?