

Cross Keys Park Naturalization Efforts

What Went Wrong

**Demetria Kimball Mehlhorn, Program Manager Sr
Division of Environmental Services, Natural Resource Protection
Lexington-Fayette Urban County Government, Kentucky**

Funding for this project was provided in part by a grant from the U.S. Environmental Protection Agency (USEPA) through the Kentucky Division of Water, Nonpoint Source Section, to LFUCG as authorized by the Clean Water Act Amendments of 1987, §319(h) Nonpoint Source Implementation Grant #CC9994861-09 & #CC9994861-12. Mention of trade names or commercial products, if any, does not constitute endorsement.

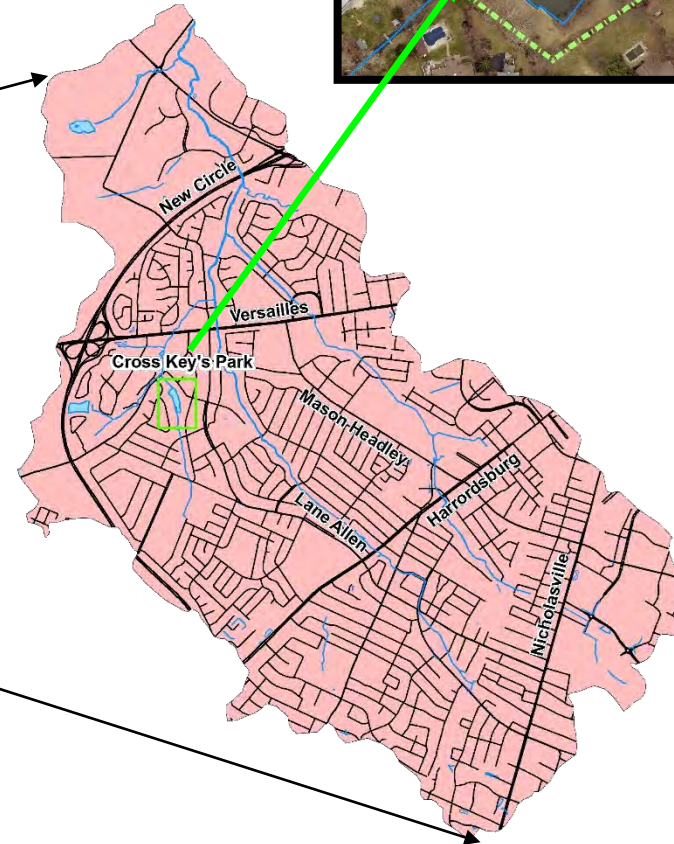
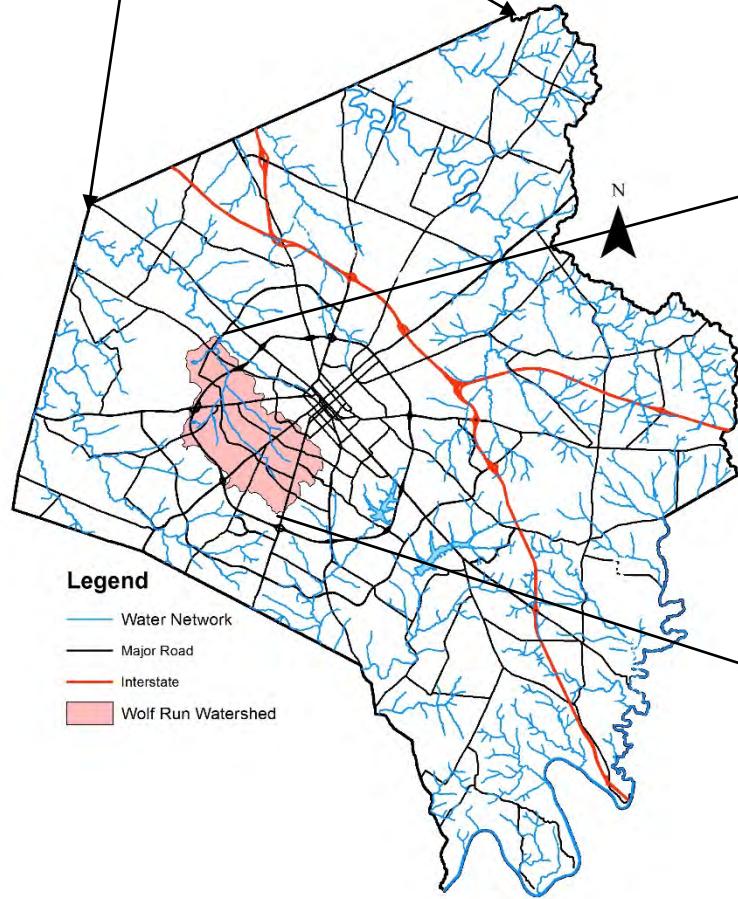
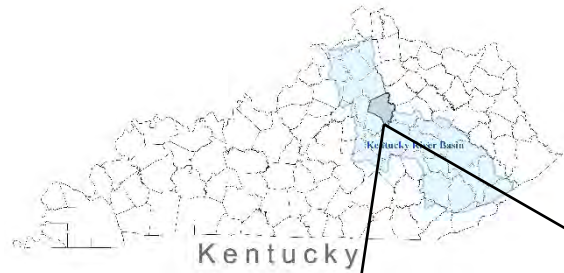


LEXINGTON

*Environmental Quality
& Public Works*

Southeast Stormwater Association, October 6, 2022

Cross Keys Park – Wolf Run Watershed



- Watershed Path
- Wolf Run
 - Town Branch
 - South Elkhorn
 - Lower Kentucky River

Cross Key's Park

Cross Key Pond

- About 50 Years Old
- Original Farm Pond
- 4 Acres in Size
- 280 Acres of Drainage Area ($c=0.44$)



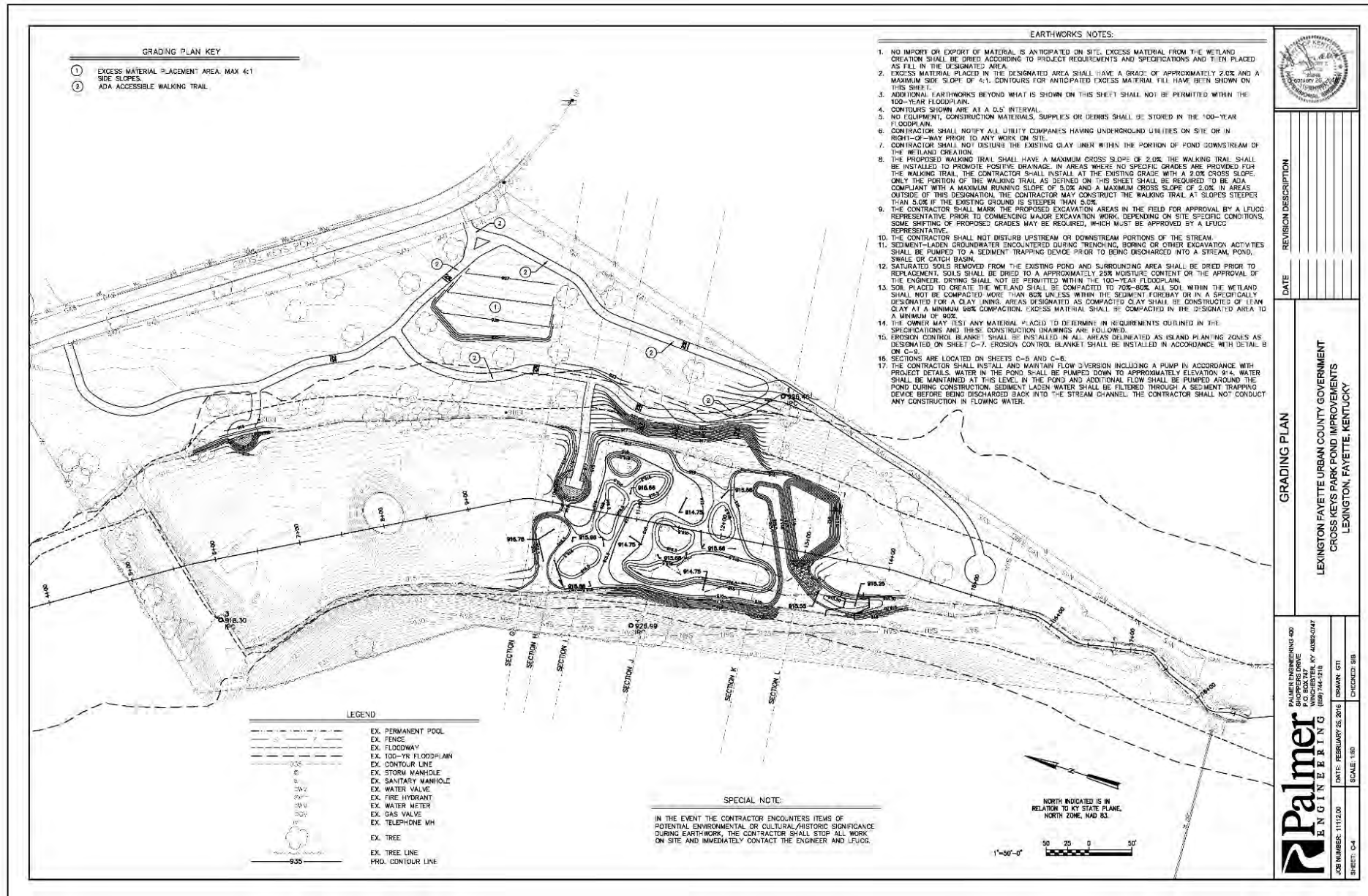
Problem #1 - Project Timeline

- Wolf Run Watershed Mgt Plan (March 2013)
- Cross Keys Pond Retrofit Clean Water Act §319(h) Application (May 2013)
- Clean Water Act §319(h) Project Period (**October 1, 2013-September 30, 2016**)
- Cross Keys Engineering Design (Palmer Engineering/Redwing **2015**) (Design, Permitting, Public Education, Construction Doc)
- Cross Keys Construction Bid/Award (**March 2016**)
- Cross Keys Construction (**July – September 2016**)
- Clean Water Act §319(h) Funds End **September 30, 2016.**
- Clean Water Act §319(h) Final Project Report (October 4, 2016)

Cross Keys Retrofit Design



Cross Key's Pond Design & Cost



Engineer Estimate

- \$295,727

Bid Tab

- \$243,732

- \$394,848

- \$570,303

Problem #2 – Contractor Experience Requirements

- Project included experience requirements for contractors as part of bid proposal submittal
- A form was included in the bid documents, but did not include identification of the company that the key personnel were employed by
- It was not evident from the information provided by the Contractor that all key personnel were not employed directly by the Contractor.
- The main experience listed in specialized wetland and green BMP work was actually that of a sub-contractor who ended up only being on site to complete the plantings.

9. STATEMENT OF EXPERIENCE

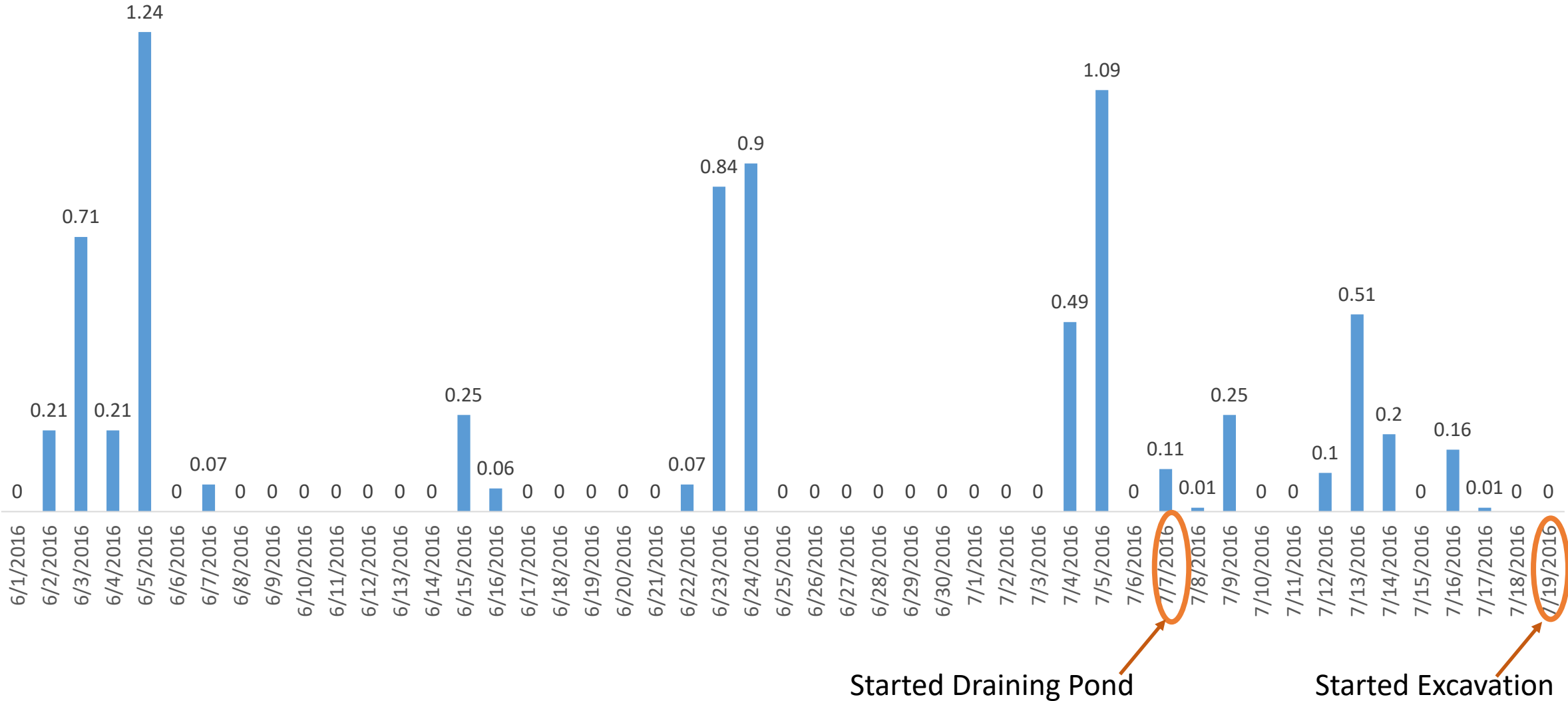
NAME OF INDIVIDUAL: _____
POSITION/TITLE: _____
STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: _____
POSITION/TITLE: _____
STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: _____
POSITION/TITLE: _____
STATEMENT OF EXPERIENCE: _____

Problem #3 – Started Late (Bid March 2016, Pre-Con May 2016)

Rain Data – Weather Underground



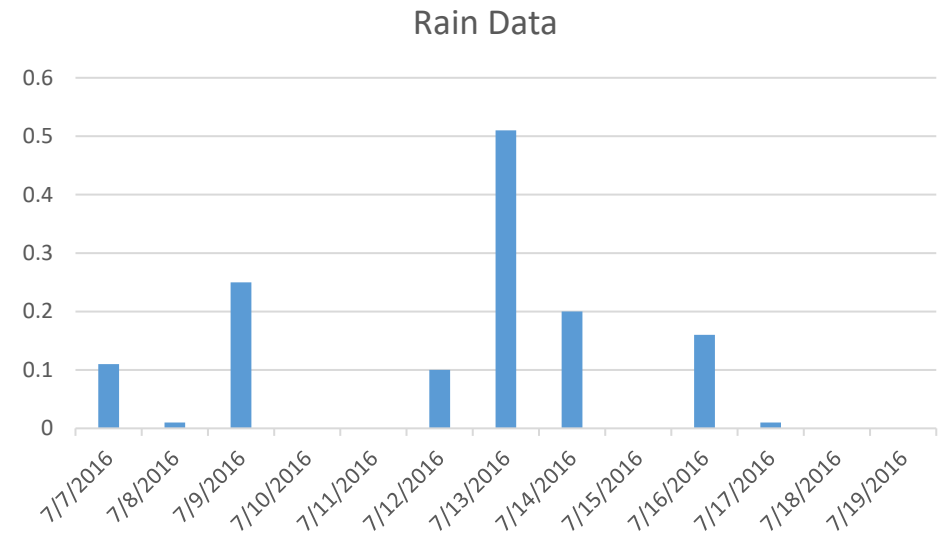
Draining the Pond



July 7, 2016



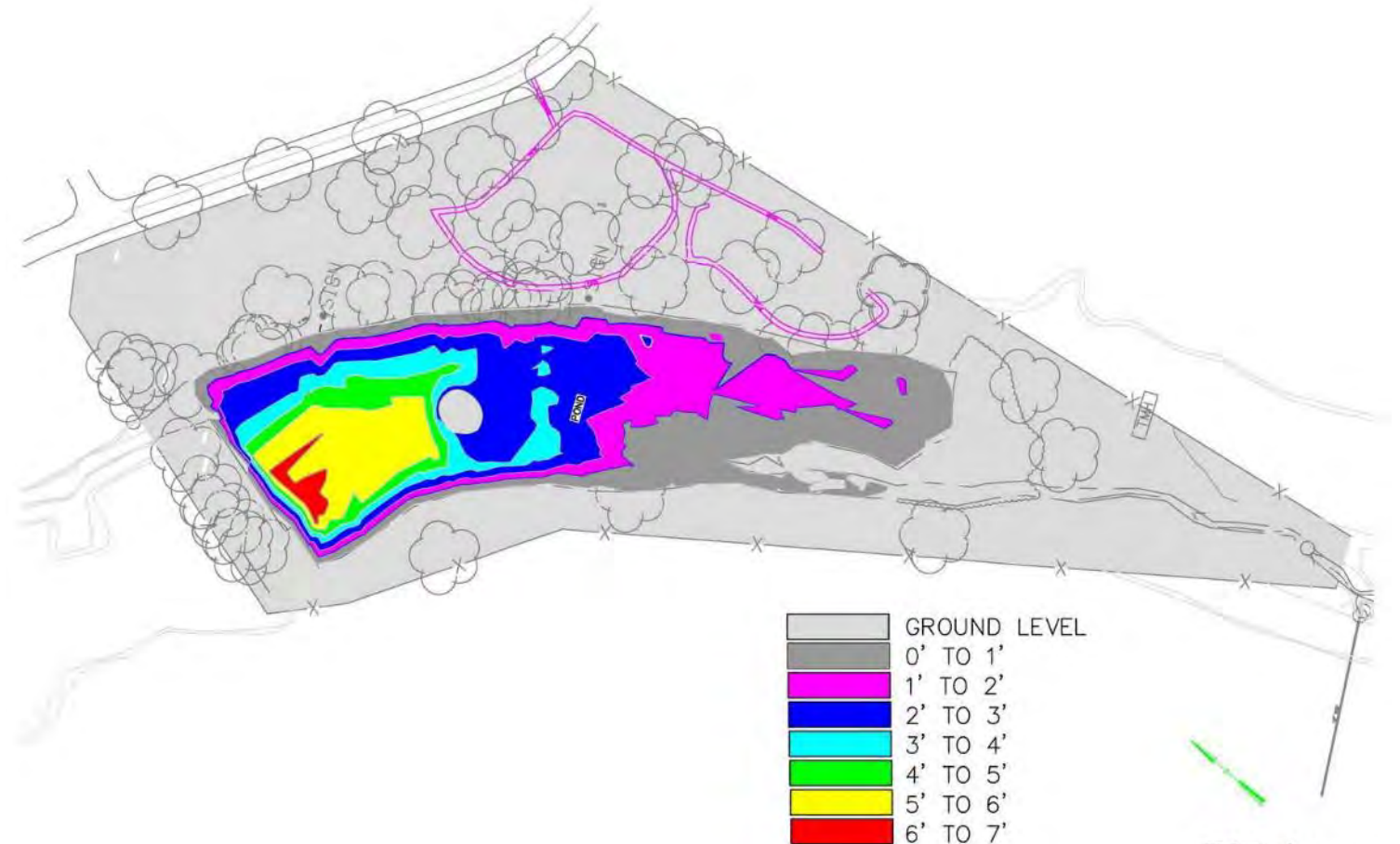
July 12, 2016



July 14, 2016

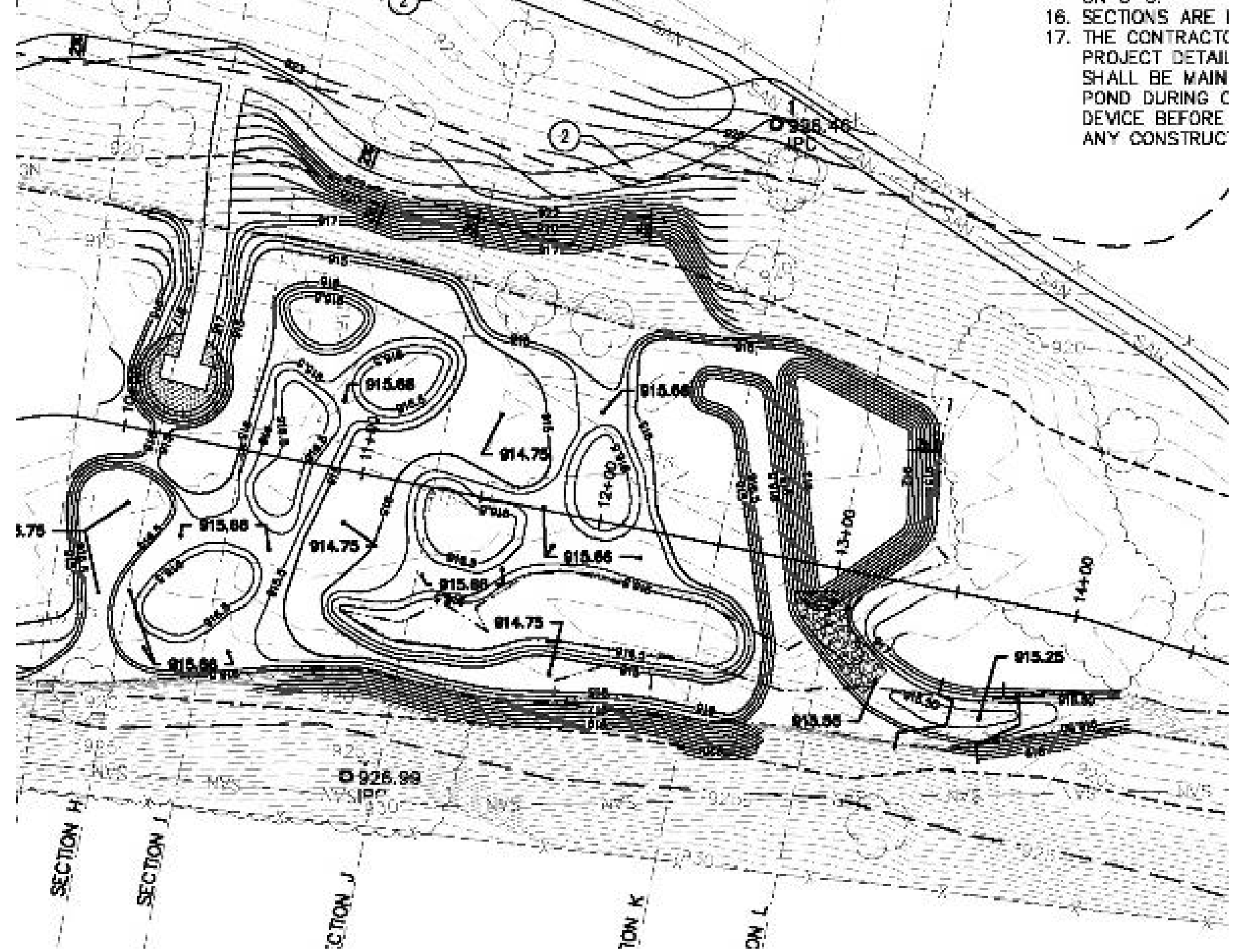
Problem #4 - Contractor Pulls off the Job (July 19th)

- Contractor claims there is more sediment than shown on engineer drawings.
- Wants to pull equipment until a new engineer drawing completed.

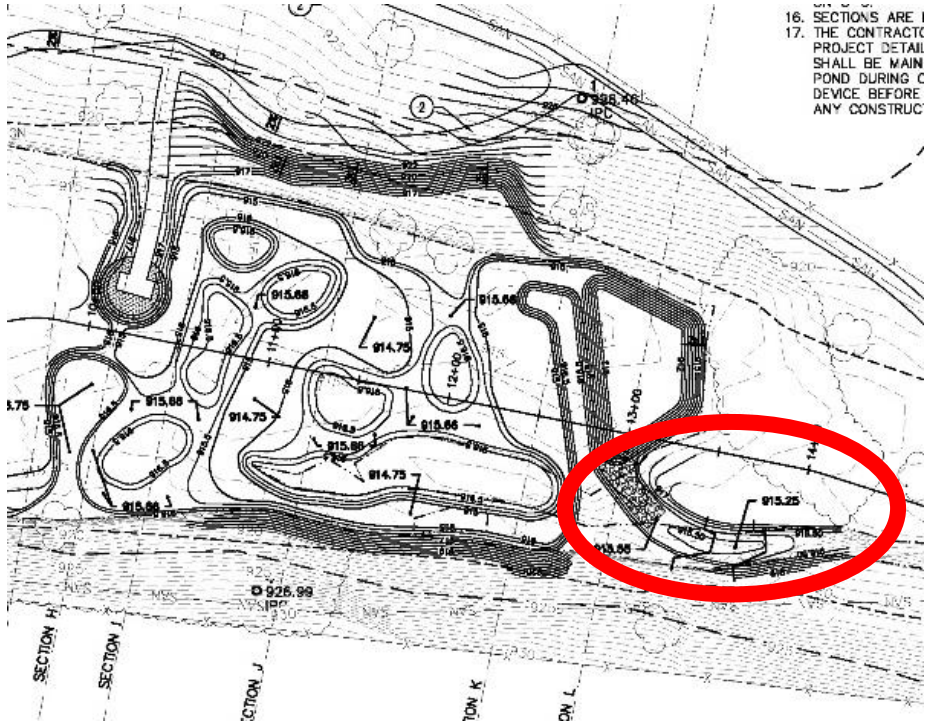




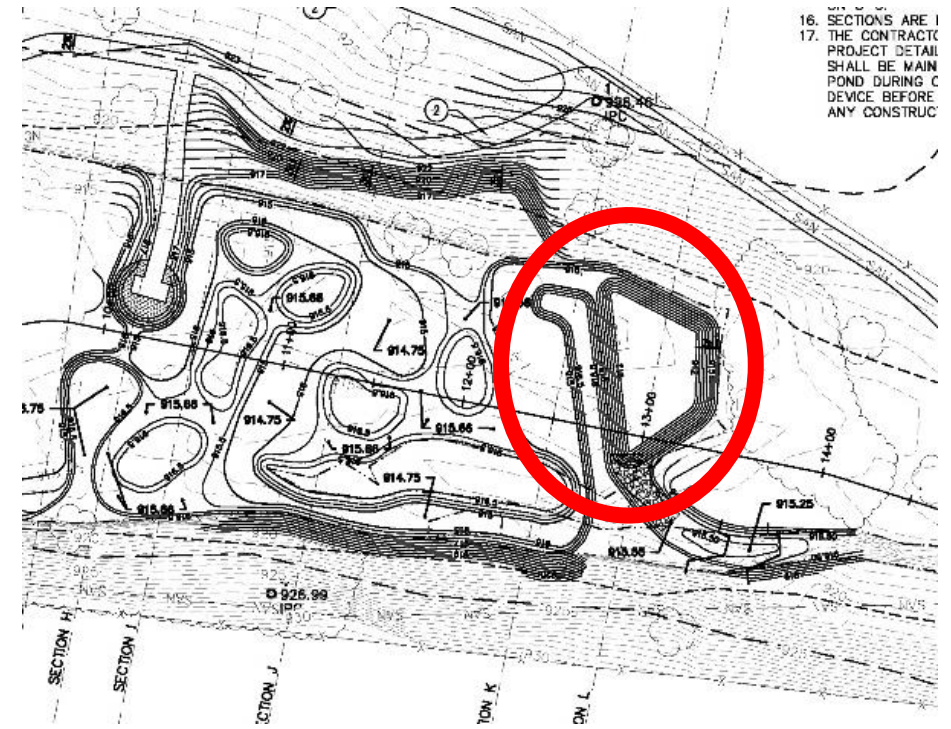
- 16. SECTIONS ARE I
- 17. THE CONTRACTOR SHALL BE MAIN POND DURING CONSTRUCTION BEFORE ANY CONSTRUCTION



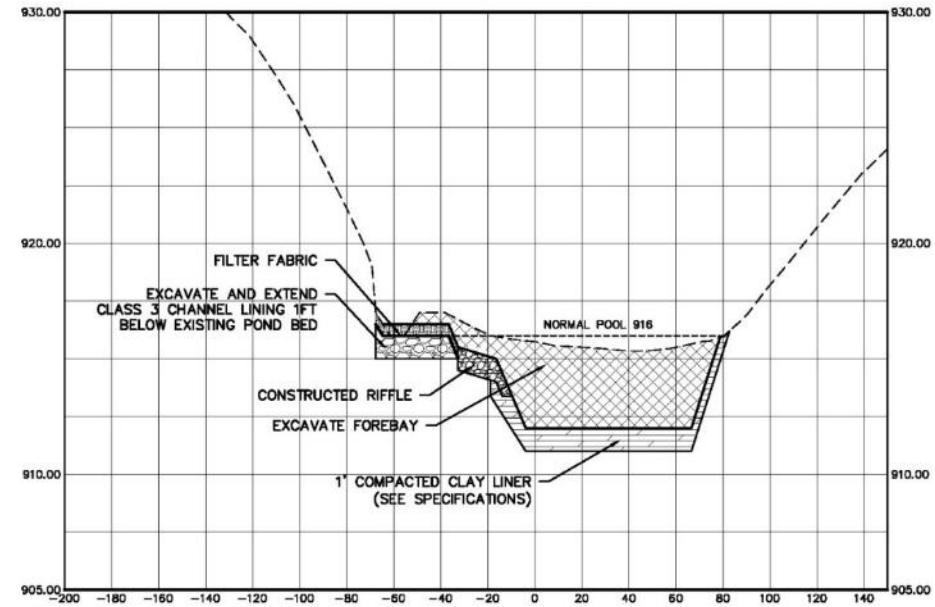
Upstream J-Hook



Forebay



16. SECTIONS ARE I
17. THE CONTRACT
PROJECT DETAIL
SHALL BE MAIN
POND DURING C
DEVICE BEFORE
ANY CONSTRUCT



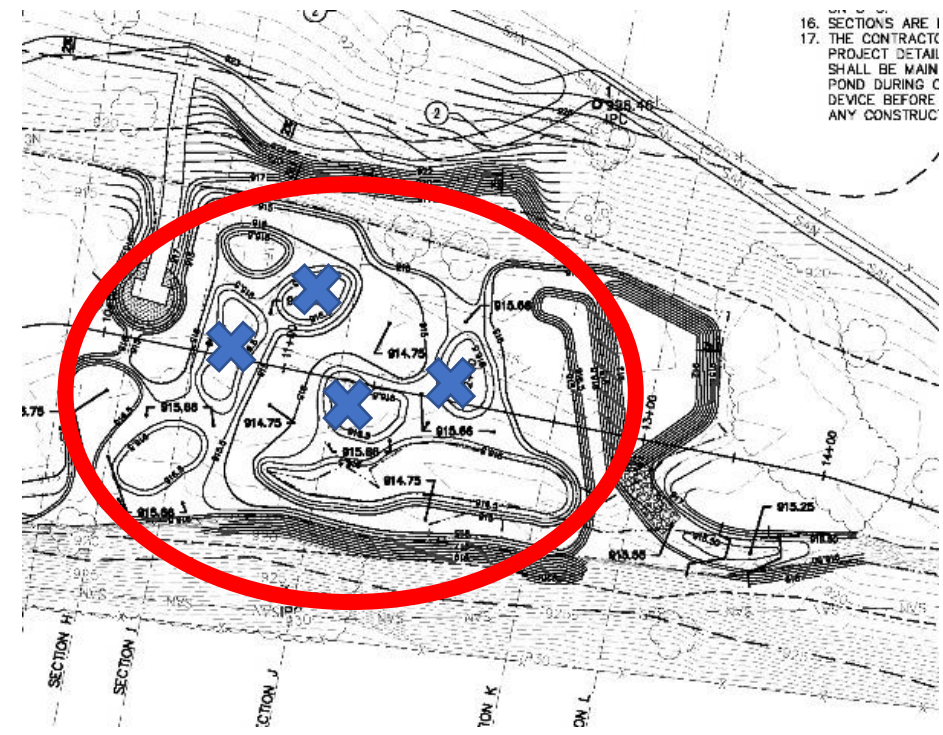
Forebay



Forebay – July 2, 2021



Constructed Wetlands



16. SECTIONS ARE I
17. THE CONTRACTOR
PROJECT DETAIL
SHALL BE MAIN
POND DURING C
DEVICE BEFORE ANY CONSTRUCT

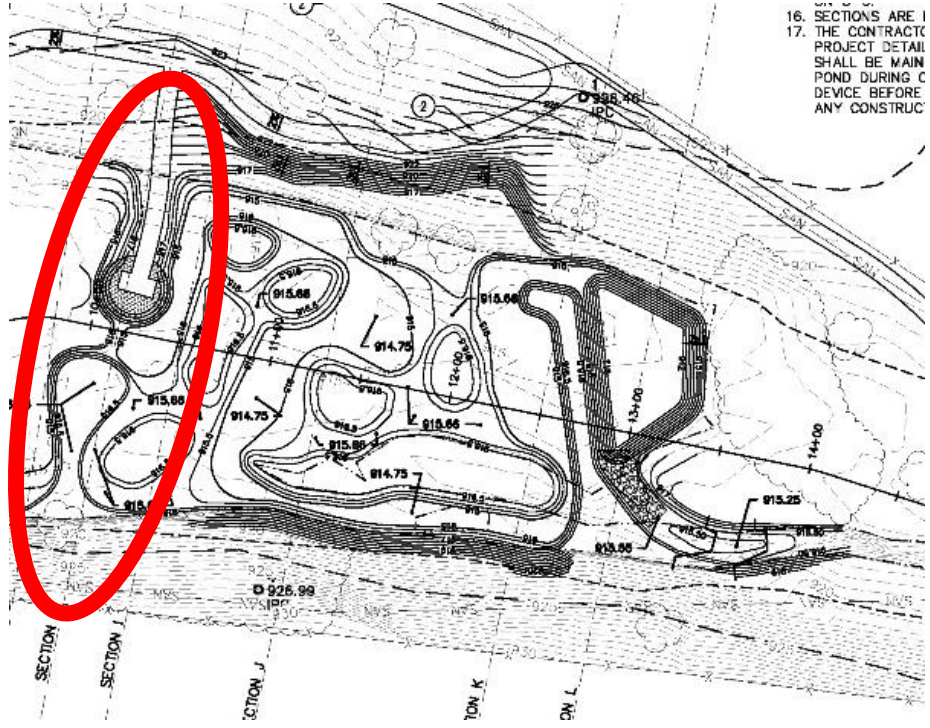


Constructed Wetlands

June 27, 2021



Peninsula Construction



16. SECTIONS ARE I
17. THE CONTRACTOR
PROJECT DETAIL
SHALL BE MAIN
POND DURING C
DEVICE BEFORE
ANY CONSTRUCT



Peninsula – July 2, 2021



Step Boulder Platform



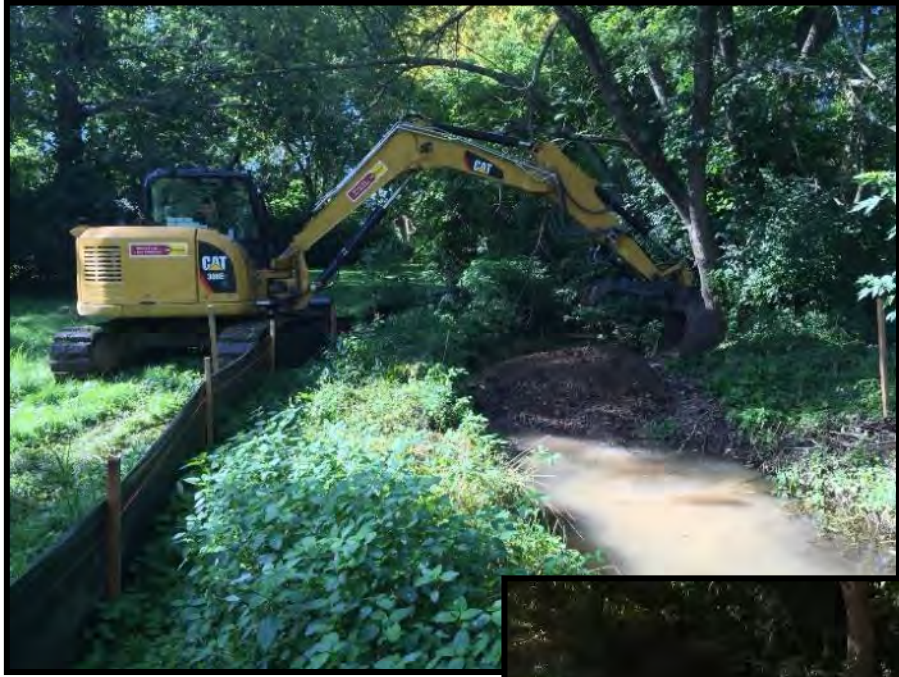
Step Boulder Platform – July 2, 2021



Problem #4 – Trash Rack Location



Trash Rack



Problem #5 – Nothing Growing

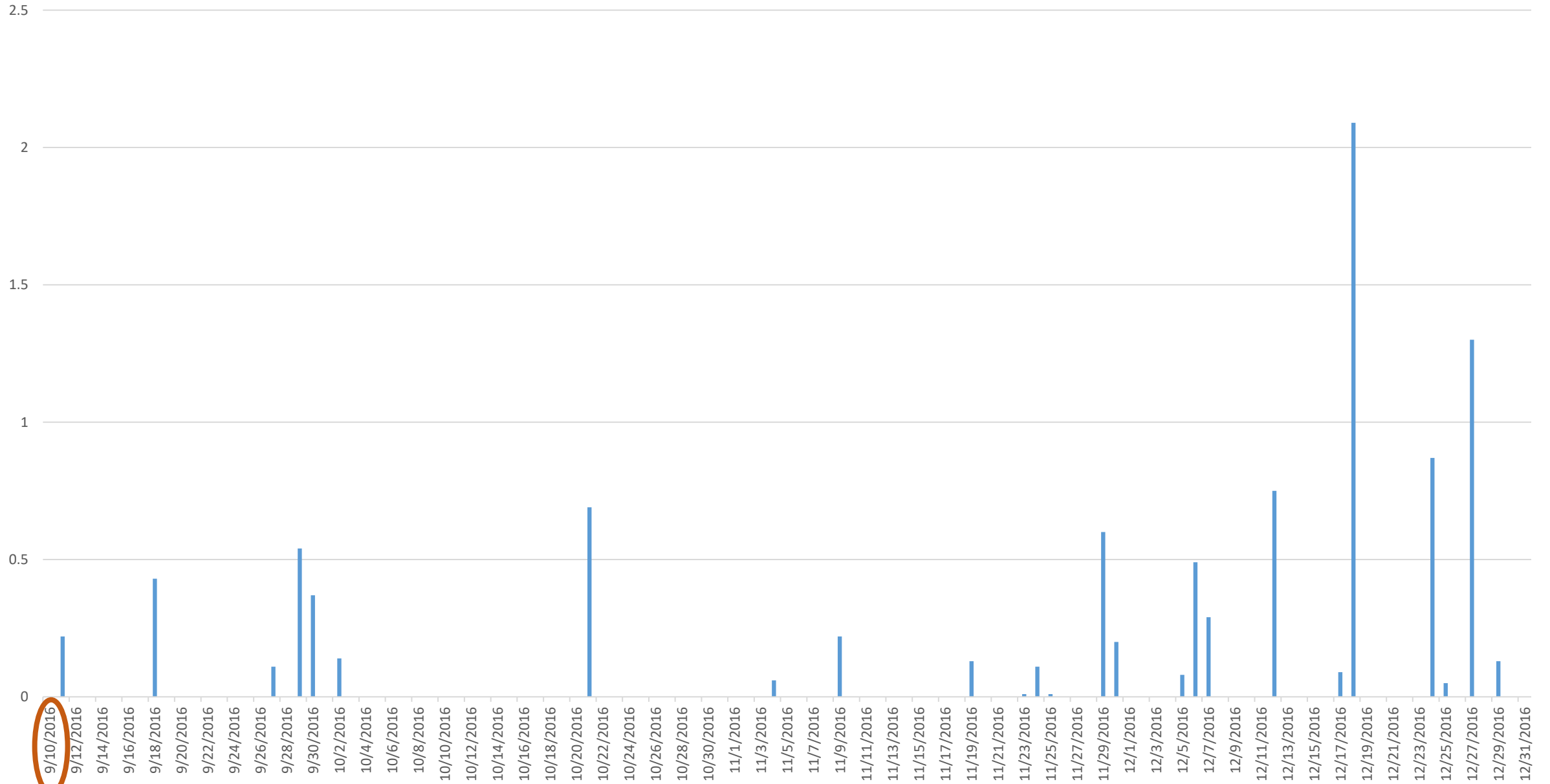


- September 10, 2016
- 28 Volunteers
- 700 Plugs
- 15 Bags of Trash



Native Seed Installed Sept 19, 2016

Rain Data



Cross Keys Construction Timeline & Issues

- Contractor Experience (or lack thereof)
- Month Behind Schedule
- Geotechnical 'wrong' – or just too wet
- Contractor Concerns – Threatening to Leave
- Engineering Field Redesign/Change Order
 - Wetland Islands
 - Trash Rack Location
- Contractor Prevailing Wage Issues (\$50,000) – Final cost \$298,697
- Contractor Payment Request Excel Sheet Wrong
- Planting Season – Wrong Time of Year
- Geese pulled 700+ Plants out of water
- Pond didn't refill until December 2016

BUT WAIT

ShamWow![™]



THERE'S MORE

Contractor Slow to Complete Warranty Items

- Site Meeting held October 10, 2017
- No additional response from the Contractor until November 27, 2017
- Work finally completed May 10, 2018



(September 2017)

Trash Rack – Eroding Around Wing Walls



(May 2017)



(Jan 2017)

Higher shear stresses present than anticipated due to constant clogging with organic debris

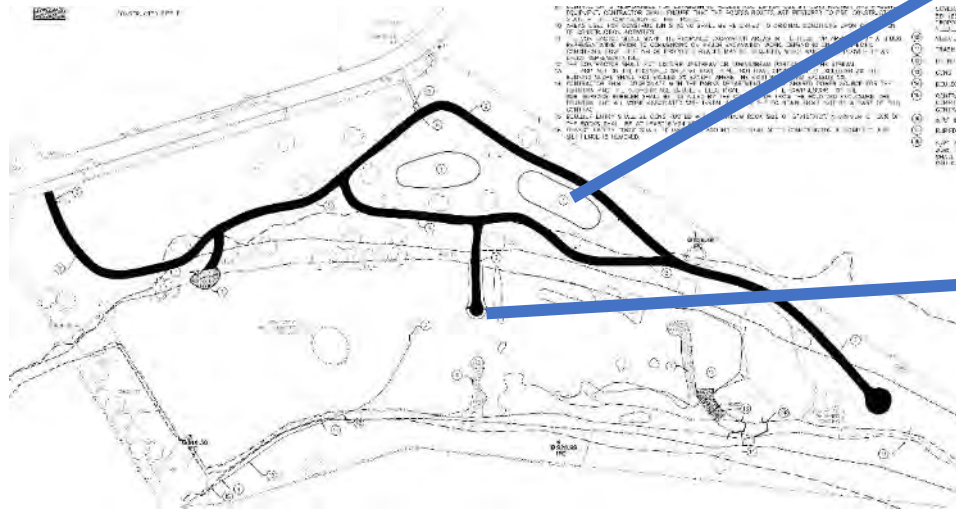
Trash Rack – Only Collect Organic Debris



June 28, 2018

Neighborhood Concerns

- Wildflowers Too Tall (2017)
- Drugs Being Hidden (2018)
- Snakes



Buffer Gets Mowed Down



June 24, 2021

QUESTIONS????



Demetria Kimball Mehlhorn, Program Manager Sr
Division of Environmental Services, Natural Resource Protection
dkimball@lexingtonky.gov; 859-425-2554