

RODNEY DORMITORY SITE STORMWATER MANAGEMENT PROJECT

Public Workshop #2

September 28, 2017

WORKSHOP AGENDA

- **▶** Welcome and Introductions
- Project Background
- Stormwater Management
- Workshop #1 Summary
- Concepts 1-3
- Project Costs
- Question and Answer Session





WELCOME AND INTRODUCTIONS



Tim Filasky, PE
Interim Dir. Public Works and
Water Resources



Kelly Bachman
Communications Manager



Tom Coleman, PE *Acting City Manager*



Joe Spadafino
Director of Parks and Recreation



Christopher Brendza, PE
Project Manager



Elisabeth McCollum, CPSM
Public Participation



Jay Kelley, PEStormwater Management



Andrew Mears, PLA
Parks / Recreation



Gregg Crystal *Brownfields / Demolition*



WORKSHOP GOALS

- ► Clearly articulate the purpose and need for this project
- Present three stormwater control and park concepts
- ► Solicit feedback on each concept to determine which single concept to present at Workshop #3





PROJECT HISTORY

- 1966: Rodney Dormitory opened
- Spring 2014: Rodney Dormitory closed
- Spring 2015: Winter 2017 preliminary Due Diligence (cost estimating and planning)
- Winter 2017: City begins contractual process to acquire the site
- March 2017: City Council votes to enter into purchase agreement with UD
- ▶ Spring 2017: City hires JMT to design and manage the project
- ▶ July 2017: Workshop #1 held to help determine overall design components



ACCOMPLISHMENTS TO DATE

- Real Estate appraisal
- ✓ Planning Commission meeting
- Existing Conditions Traffic Study performed (prior to closure of dorms)
- ✓ Phase I and Phase II Environmental Site Assessments (ESA) including asbestos identification and sampling
- ✓ Preparation of demolition estimate
- ✓ Special Council hired to negotiate Purchase and Sales Agreement with UD
- ✓ Initial discussion of project and entering the State Brownfield program with DNREC
- ✓ Finalized terms of preliminary Purchase and Sales Agreement with UD subject to the final approval of Mayor and Council

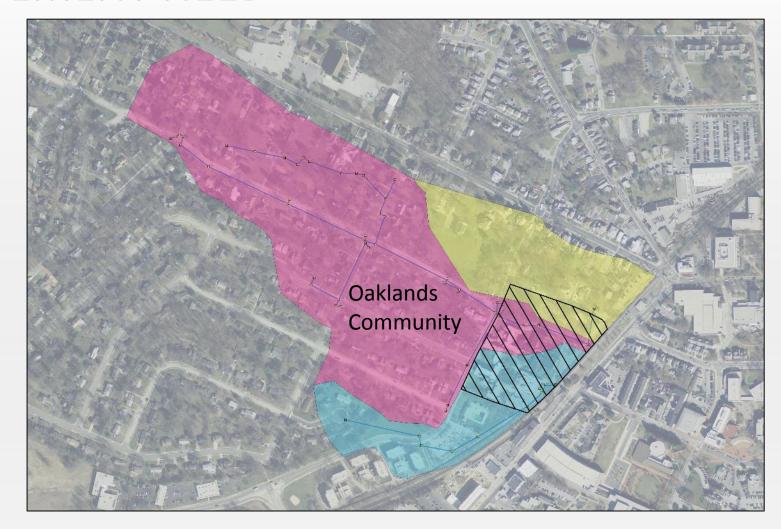


PROJECT SCHEDULE



STORMWATER MANAGEMENT NEED

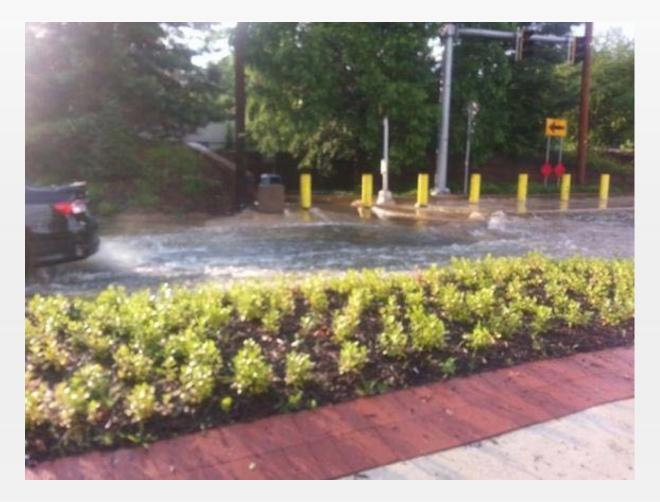
- Rodney Complex Contributing Watershed
 - ► Total Area = 73.7 Acres
 - ► Impervious Area = 19.9 Acres





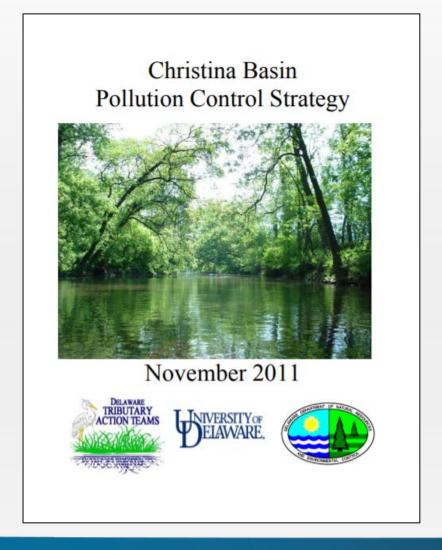
STORMWATER MANAGEMENT NEED

- ► Frequent flooding along South Main St. and throughout the downstream community
 - ► Flooding at Rodney Underpass
 - ► August 13, 2013 3.1" rainfall
 - ► Approximate 2-year Storm Event
 - **▶** Design 10-year storm event 4.8"
- ► Flood Control Goals
 - Design to manage 6.0"



STORMWATER MANAGEMENT NEED

- Christina River Basin
 - ► Includes 4 Major Watersheds
 - **▶** Brandywine Creek
 - ► Red Clay Creek
 - **▶** White Clay Creek
 - ► Christina River (Rodney Site)
 - ► Source of drinking water for over 400,000 people
 - **▶** Multiple recreational activities



STORMWATER MANAGEMENT DESIGN

- SWM Wet Pond
 - **▶** Provides water quality treatment
 - ► Reduction of suspended solids
 - **▶** Reduction of nutrients
 - **▶** Flood Mitigation
 - ► Manages larger contributing drainage areas
 - ► Aesthetics / Park Features
 - **▶** Unique features flowing spillways
 - ► Native species plantings
 - ► Support aquatic life

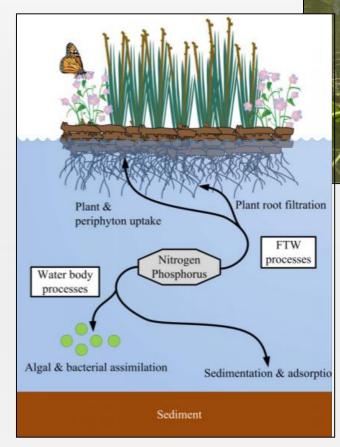






STORMWATER MANAGEMENT DESIGN

- ► Green Technology BMPs
 - Additional Water Quality
 - **▶** Floating Wetlands
 - **▶** Bio-soil pollutant reduction
 - Vegetative contact/nutrient uptake
 - ► Removal of suspended solids
 - **▶** Aesthetic enhancements
 - Rain Gardens
 - **▶** Bio-retention areas
 - **Educational Opportunities**
 - ► How the system works and how you can help!







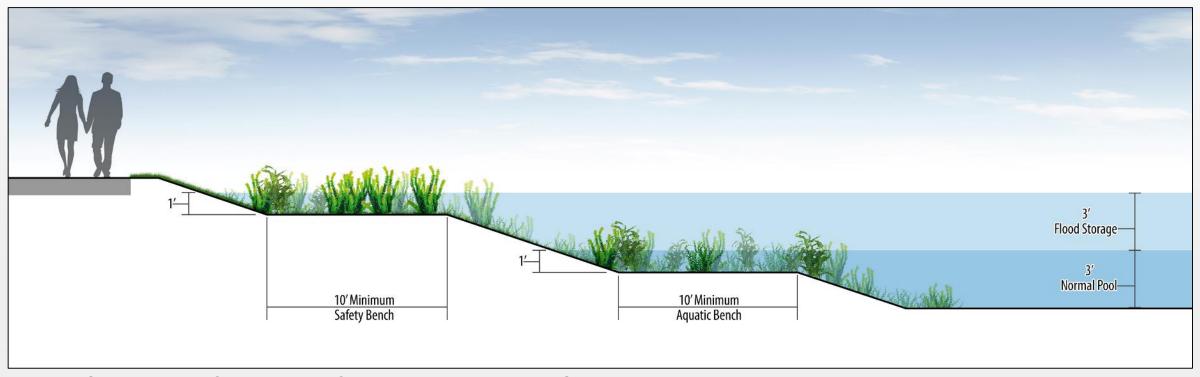
STORMWATER MANAGEMENT DESIGN

- SWM Dry Pond
 - ▶ No water quality credit
 - Creates large open space
 - **▶** Flood tolerant vegetation
 - ► Trails and permanent features are discouraged
 - ► Must drain within 48 hours
 - **▶** Discharge flows are increased
- **▶** Infiltration BMPs
 - **▶** Poor underlying soils





STORMWATER MANAGEMENT - SAFETY



- Delaware Sediment and Stormwater Regulations
 - **▶** Sediment and Stormwater Technical Document
 - Post Construction Stormwater BMP Standards and Specification
- **▶** Pond Code 378 for Urban Stormwater Management Ponds



Workshop #1 Summary (July 25, 2017)



VISUAL PREFERENCE SURVEY RESULTS

▶ Top ranking images:



















POLL EVERYWHERE RESULTS

- 90% of attendees have been to the site
- ► Majority would like to see trails at the new site
- Parking and security should be improved at existing site
- Attendees would like to see yoga and educational events at new site
- ► Flood control was the single most thing attendees wanted to see happen at the site







ROUNDTABLE EXERCISE RESULTS

- ▶ Question #1 Park vision in 2, 5, and 10 years
 - **▶** Stormwater management feature first and foremost
- Question #2 Barriers and challenges
 - ► Referendum; education re: flooding and stormwater management
- Question #3 Attractive features
 - ► Walking trails; natural; safety/security



ONLINE SURVEY RESULTS

► Trails and native plants were also top requests, as well as improving or adding new tennis and volleyball courts

► Safety/security and lighting were also concerns

► Majority wanted to see the park used for athlethic activities

► Funding, budget, and public awareness identified as key barriers/challenges



PARK GOALS AND PROGRAM



Protecting open space, connecting children to nature, and engaging communities in conservation practices.

Source: www.nrpa.org



Leading the nation to improved health and wellness through parks and recreation.



Ensuring all people have access to the benefits of local parks and recreation.

- Aligns with the Goals of the recently updated Newark Parks, Recreation, and Open Space Plan, 6/21/2016
- Supports Newark's Vision of a "Healthy, Sustainable, and Inclusive Community"
 - Healthy Community
 - Sustainable Community – Environmental
 - SustainableCommunity –Economic
 - ► Inclusive Community



PARK GOALS AND PROGRAM

- Re-purpose the site to manage storm water runoff and help alleviate flooding
- Incorporate appropriate amenities desired by the residents and in line with Newark Parks, Recreation, and Open Space Plan
- Provide residents and visitors with a fun and unique recreational destination that compliments the function of the site as a stormwater mitigation measure

Multi- Use Trails	Dog Park
Trail Lighting	Amphitheatre
Natural Playground	Fitness Stations
Destination Playground	Restrooms
Open Lawn Area	Ice Rink
Outdoor Classrooms	Event Stage
Fishing	Volleyball Courts
Environmental Education	Park Building
Shade and Shelter	Sports Fields
Game Tables	Increased Programming
Small BMPs	Educational Programs
Preserve Existing Grove	Fitness Programs



CONCEPT DESIGNS









PARK AMENITIES Drop Off / Parking - 12 Spaces (1 ADA) On-Street Parking - +/- 26 Spaces Improved Parking - 10 Spaces (1 ADA) Pond 12' Wide Multi-Use Trail 6 8' Wide Multi-Use Trail Pedestrian Crosswalk Rest Stop Raised Landscape Mounds Riparian (Pond Side) Meadow Existing Grove to Remain 12 Short Meadow



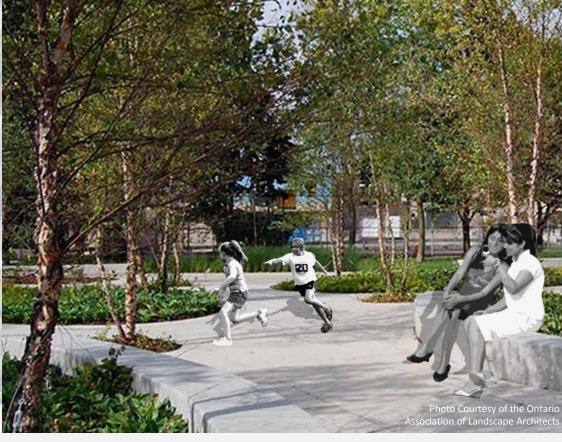






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- Overlook Terrace
- Raised Overlook
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- 🛕 Drop Off / Parking 45 Spaces (2 ADA)
- 🛕 On-Street Parking +/-18 Spaces
- A Entry Plaza
- Destination Playground
- Streetside Overlook Terrace
- Accessible Pedestrian Bridge with Fishing Docks
- 🛕 Large Group Pavilion
- Multi-Tiered Pond
- 🐧 12' Wide Multi-Use Trail
- 🛝 8' Wide Multi-Use Trail
- A Half-Court Basketball
- Pavilion with Raised Overlook
- 🔼 Open Lawn (150' x 120')
- Pavilion with Terraced Seating
- 15 Existing Grove to Remain
- A Pedestrian Crosswalk
- Pavilion with Cut Stone Terrace
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- Interactive Themed Playground
- **▶** Precedent Project
 - ► The Big Back Yard at the Science Museum of Minnesota
 - "Welcome to our wondrous outdoor playground, er, we mean our educational interactive biodiversity and ecological exhibit"
 - 9-hole miniature golf course where your ball represents a drop of water on its course from uplands through various landscape and finally into the sea











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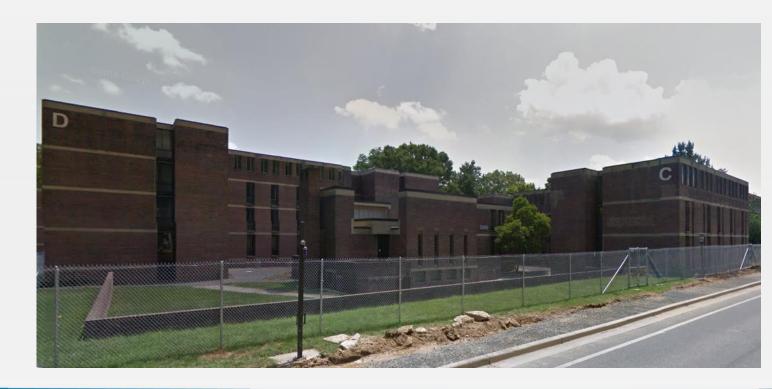




PROJECT COSTS

- Fixed Costs
 - ► Property Purchase \$2,100,000
 - **▶** Site Demolition \$2,000,000
 - ► Site Remediation \$800,000
 - **▶** UD Credit (Less \$700,000)

Total Cost: \$4,200,000





ESTIMATED PROJECT COSTS

Concept	Stormwater Components	Park Amenities	Total (Variable Costs)
1	\$1,400,000	\$400,000	\$1,800,000
2	\$1,400,000	\$2,500,000	\$3,900,000
3	\$1,800,000	\$3,800,000	\$5,600,000



PROJECT COSTS

Concept	Stormwater Components	Park Amenities	Total (Variable Costs)	Fixed Costs	Project Total
1	\$1,400,000	\$400,000	\$1,800,000	\$4,200,000	\$6,000,000
2	\$1,400,000	\$2,500,000	\$3,900,000	\$4,200,000	\$8,100,000
3	\$1,800,000	\$3,800,000	\$5,600,000	\$4,200,000	\$9,800,000

*Tier 2 Home, Approximate Cost



PROJECT COSTS

Concept	Stormwater Components	Park Amenities	Total (Variable Costs)	Fixed Costs	Total	Stormwater Utility Rate Adjustment*
1	\$1,400,000	\$400,000	\$1,800,000	\$4,200,000	\$6,000,000	\$0.82/Month
2	\$1,400,000	\$2,500,000	\$3,900,000	\$4,200,000	\$8,100,000	\$1.10/Month
3	\$1,800,000	\$3,800,000	\$5,600,000	\$4,200,000	\$9,800,000	\$1.36/Month

*Tier 2 Home, Approximate Cost



QUESTION AND ANSWER SESSION



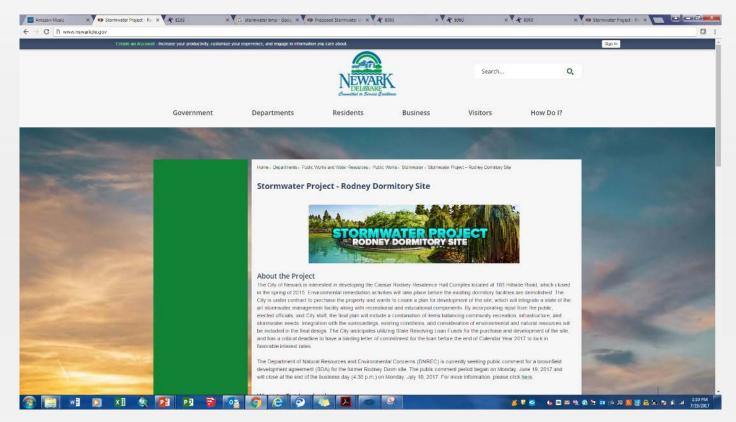


WRAP UP AND NEXT STEPS



PLEASE VISIT WEBSITE FOR MORE INFORMATION

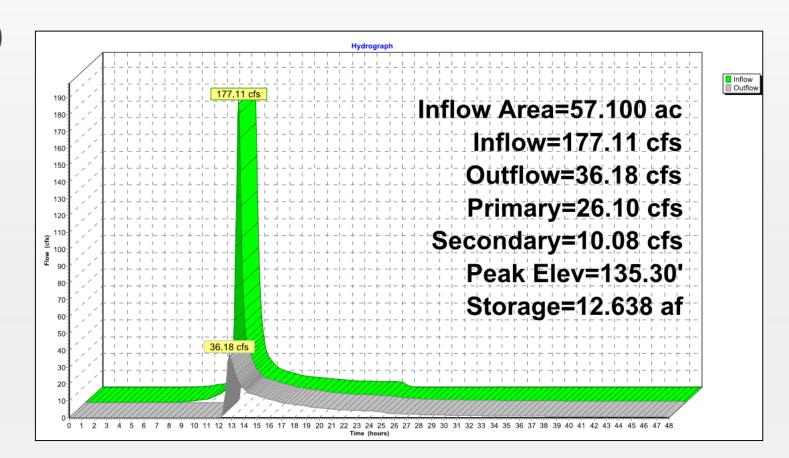
► http://newarkde.gov/Rodney



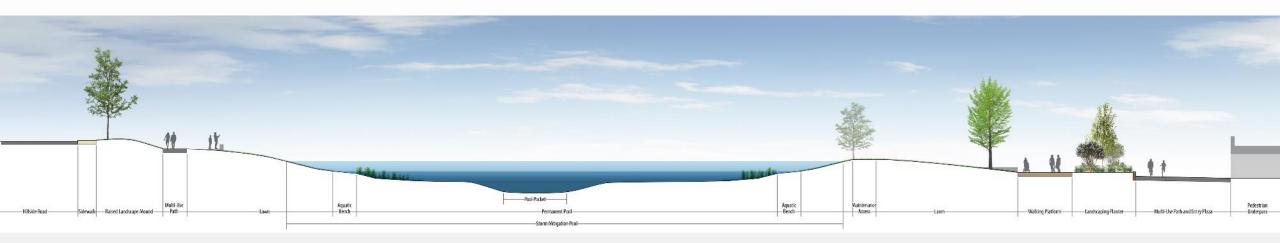


SWM CONCEPT PERFORMANCE

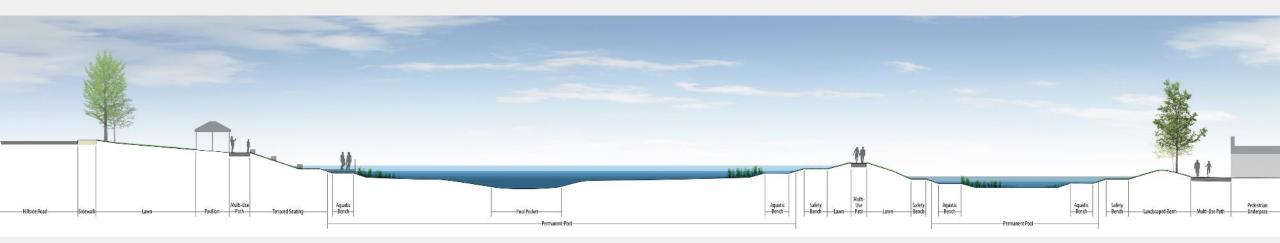
- Frequent Storms (Water Quality)
 - ► Manage 2.7"/24 hour storm event
 - ► Receives 1.4M gallons of runoff
 - ► Reduces flow to downstream system 98%
- Flood Event (Water Quantity)
 - ► Manage 6.0"/24 hour storm event
 - ► Receives 5.1M gallons of runoff
 - Reduces flow to downstream system 80%







CONCEPT 1 AND 2 – TYPICAL SECTION



CONCEPT 3 – TYPICAL SECTION