Stormwater User Fee Program Perspectives 2006-2021

December 08, 2021

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System Background

- **Immediate City Area**
  ≈ Population: 72,000
- **Wilmington Area**
  ≈ Population: 500,000

CITY OF WILMINGTON

Combined Sewer Overflow Locations within City Limits

Legend

- WPCF
- Combined Sewer Overflows
- Interceptors
- Major Roads
- Sewers (Diameter ≥ 12")
- Wilmington City Limits

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Long Term Control Plan

- Early LTCP in 1990:
  - Response to EPA's 89/94 CSO Policies
  - $30M WPCF upgrade
  - Series of key features:
    - New operation procedures
    - Source pollution control
    - CSO assessment / public education

Enhanced LTCP

- ELTCP developed in 2003, with new goals:
  - Achieve 85% average annual capture of CSO volume via a presumptive approach
  - Eliminate dry weather overflows
  - Eliminate CSOs upstream of the City's drinking water intake
  - Meet the load allocations for the Christina Basin TMDL and achieve water quality standards

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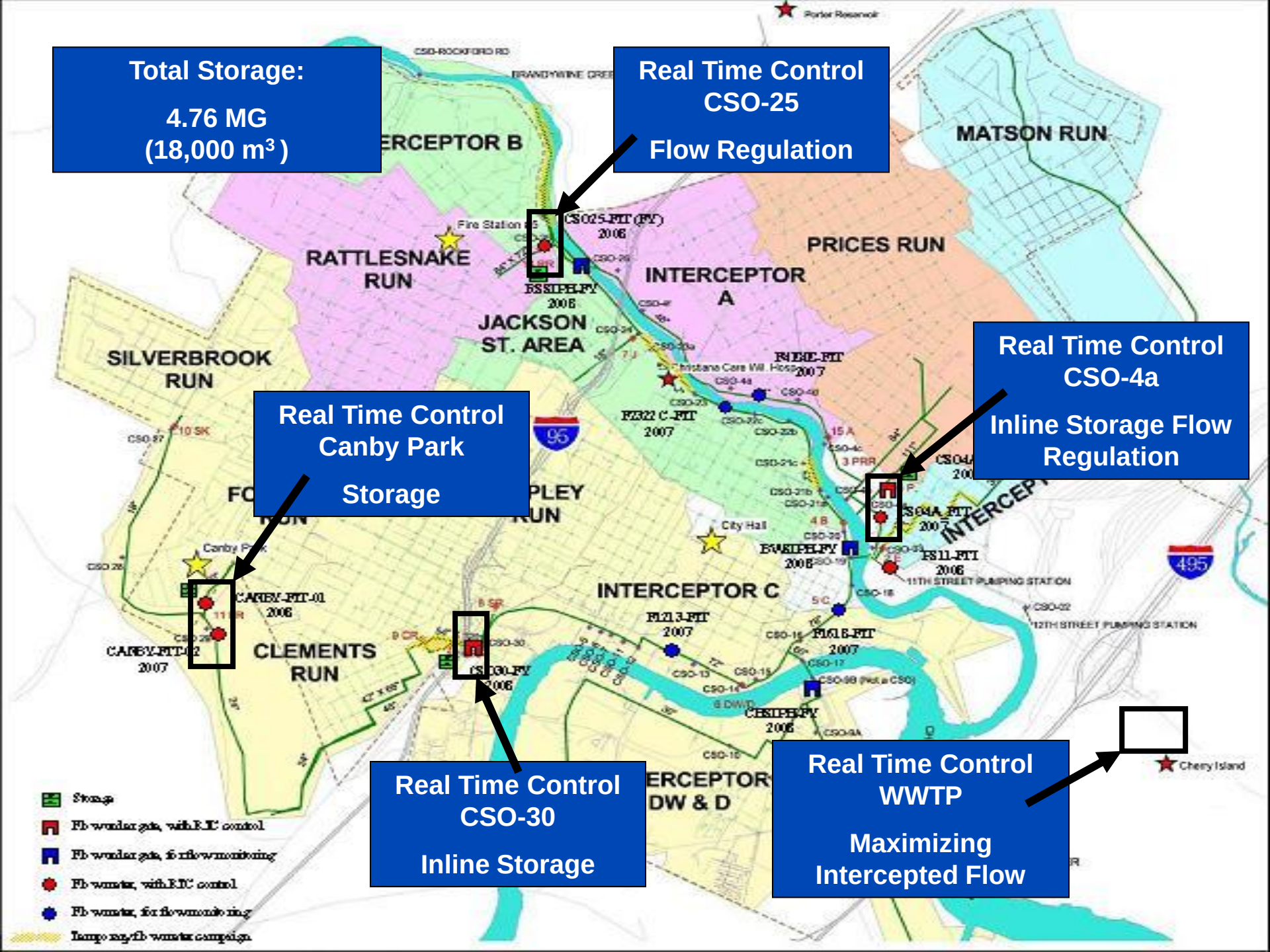
Major ELTCP Projects

- **Canby Park Storage Tank to protect Silverbrook Run**

2.7 MG (10,200 m^3)

Start-up in 2004


Total Storage:
4.76 MG
(18,000 m³)
Real Time Control
CSO-25
Flow Regulation
Real Time Control
CSO-4a
Inline Storage Flow
Regulation
Real Time Control
Canby Park
Storage
Real Time Control
CSO-30
Inline Storage
Real Time Control
WWTP
Maximizing
Intercepted Flow
MATSON RUN
PRICES RUN
RATTLESNAKE
RUN
SILVERBROOK
RUN
JACKSON
ST. AREA
INTERCEPTOR
A
INTERCEPTOR C
CLEMENTS
RUN
CSO25-FIT (FY)
2006
ESSIPH-FY
2006
R4BE-FIT
2007
FS22 C-FIT
2007
CSO4A_FIT
2007
FS11-FIT
2006
11TH STREET PUMPING STATION
12TH STREET PUMPING STATION
CANBY-FIT-01
2006
CANBY-FIT-02
2007
FL213-FIT
2007
FL615-FIT
2007
CSO30-FY
2006
CHSIPH-FY
2006
BVASIPH-FY
2006
Fire Station 6
City Hall
Canby Park
Christiana Care Wil. Hosp.
Cherry Island
Storage
Fb wonder gate, with RTC control
Fb wonder gate, for flow monitoring
Fb weister, with RTC control
Fb weister, for flow monitoring

Major ELTCP Projects

Real Time Control

with siphon improvements

- **Two RTC feasibility and preliminary design studies in 2004-2005**
- **Validate RTC benefits in the ELTCP framework for increasing CSO capture**
- **Significant savings: $87M over initial LTCP**

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CSO Priorities

- City will establish elements of a sustainable long term approach to CSO reduction via **green infrastructure (GI) and source controls**:
  - Stormwater utility billing structure
  - Reduce runoff from new and redevelopment
  - Examine a variety of pilot programs
  - Incorporate GI in future water and sewer replacement projects
- Continue to pursue and identify pollution sources upstream of the City's CSO areas.
- Continuation of compliance and performance of the Nine Minimum Controls to maintain CSO and TMDL objectives.

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Stormwater Permit Overview

- Separated Stormwater System (10%)
- MS4 Co-Permitee (2013)
  - Primary: NCC, Deldot
  - Co-permitee: Wilmington, Newark, New Castle, Elsmere
- Considering Migration to Phase II Next Permit
- Develop Integrated Wet Weather Management Program

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Stormwater Fee Program

- Key Objectives
  - Recover cost of Combined Sewer Overflow (CSO) mitigation / stormwater management
  - Achieve cost recovery that is fair to everyone
    - Include parcels without water/sewer service
  - Establish a defensible basis for stormwater fee
    - Impervious area-based methodology

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Stormwater Fee Program: Key Features

- User Fee not a Tax
  - Cost Accounting for Treatment, Sewer Maintenance and Stormwater Costs
    - Wastewater Treatment Costs Allocated to Stormwater
  - Rates designed to recover cost
- Revenue Neutral
  - Sanitary Sewer Fees Reduced
    - Water Billing Recovery Factor Reduced
      - 1.4 to 0.7

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SW Program FY 2006 to FY 2009: Fee Methodology

- Non-residential stormwater classes
  - 12 classes with runoff factors
    - Direct Discharge Permit (DDP) holder class
      - Lowest runoff factor of 10%
  - Impervious area = Gross area X runoff factor
- Residential stormwater classes
  - 2 classes with four-tiered rate structure
  - Impervious area provided by New Castle County
- Condominium stormwater class
  - Impervious area estimated using GIS application

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SW Program FY 2006 to FY 2009: Credit Program

- Stormwater credit program (non-residential and condominium parcels only)
  - Two types of credit for onsite SW management
    - Quantity credit: Maximum of 50% credit
    - Quality credit: Maximum of 10% credit
  - Total credit cannot exceed 60%
  - Parcel owners apply for credits through a formal application process
  - Public works performs technical review and site assessment

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SW Program FY 2006 to FY 2009: Credits / Appeals

- Total of 141 Appeals/Credit requests received
- Total of 112 cases processed

TYPE	APPROVED AS REQUESTED	APPROVED WITH MODIFICATION	TOTAL APPROVED	TOTAL DENIED	TOTAL PENDING	TOTAL CASES
SW Appeals	31	21	52	13	25	90
SW Credits	20	0	20	27	4	51
TOTAL	**51**	**21**	**72**	**40**	**29**	**141**

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SW Program Implementation: Legislative/Legal

- One Case Preparing for Court
- Army Corp of Engineers Property
  - Did not pay until update in Federal Legislation

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Key Issues

- **Issue 1:** Existing Direct Discharge Permit (DDP) class with 10% runoff factor is not appropriate
  - Receive significant fee reduction without any onsite stormwater management
  - Impacts stormwater revenue generation
    - 28 parcels cause an annual revenue reduction of **$972,784**
  - Impacts equitable cost recovery and shifts the burden to other customers
  - Potential risk of more appeals from other direct dischargers

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FY 2010 and Onwards: Impact of Existing DDP Class

CUSTOMERS	COUNT OF PARCELS	EXISTING ANNUAL CHARGES *(WITH DDP CLASS)*[1]	POTENTIAL ANNUAL CHARGES *(WITH CREDITS)*[2]	POTENTIAL ANNUAL CHARGES *(NO CREDITS)*[3]
Total DDP Holder Parcels	28	$126,468	$1,026,028	$1,099,253

[1] DDP Holder Classification with 10% Runoff Factor
[2] 10% Credit for Individual NPDES; 5% Credit for General NPDES
[3] No NPDES Credit and no DDP Holder Classification

ANNUAL REVENUE IMPACT *(WITH DDP)* = **$972,784**
ANNUAL REVENUE IMPACT *(WITH NPDES CREDITS)* = **$73,225**

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Key Issues

- **Issue 2:** Stormwater exemption for "City Owned" properties
  - Impacts equitable cost recovery
  - Potential violation of State statutes
  - Impacts perception of City's stormwater stewardship
- **Solution:** Eliminate stormwater Exemption
  - Bill all parcels within the City limits
- **Impact**
  - Overall reduction in stormwater Unit Cost ($/ESU)

SOUTH WILMINGTON WETLANDS PROJECT

City of Wilmington, DE

RK&K

BrightFields, Inc.
Environmental Services

DIAMOND Materials

NFWF

The Nature Conservancy

Consent Decree Compliance
Engineering
Real Estate Acquisition
Funding
Grant Monitoring
Community Outreach
Bidding
Planning
Construction Administration
Problem Assessment
Construction
O&M
Permit Compliance
6
RK&K

Multiple Project Goals

- **Mitigate/reduce flooding**
- Improve water quality
- Restore a functioning tidal wetland
- Clean up a brownfield
- Create a safe and attractive wetlands park
- Reduce mosquito breeding grounds

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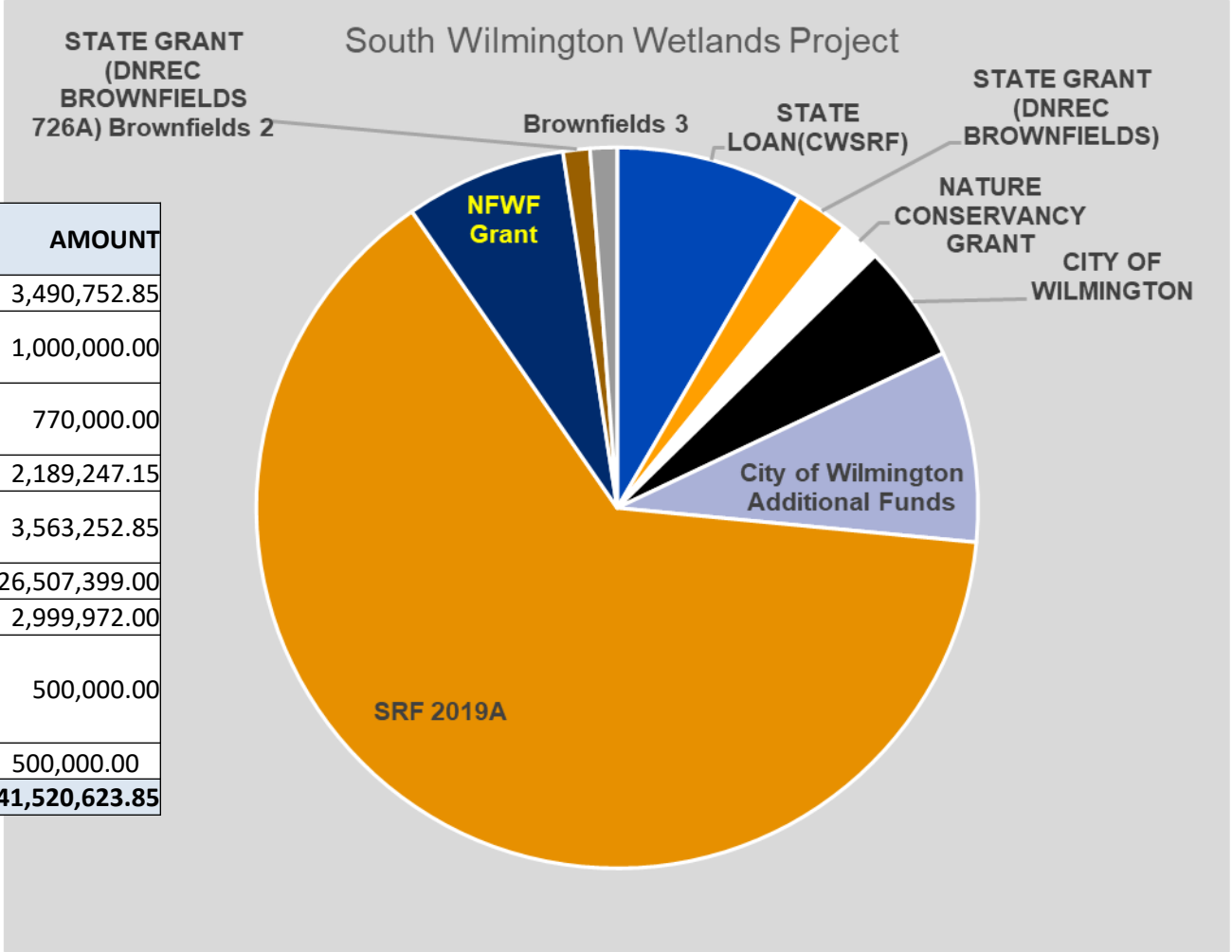
Mutiple Project Funding Sources

SOURCES OF FUNDING		AMOUNT
STATE LOAN(CWSRF)	$	3,490,752.85
STATE GRANT (DNREC BROWNFIELDS)	$	1,000,000.00
NATURE CONSERVANCY GRANT	$	770,000.00
CITY OF WILMINGTON	$	2,189,247.15
City of Wilmington Additional Funds	$	3,563,252.85
SRF 2019A	$	26,507,399.00
NFWF Grant	$	2,999,972.00
STATE GRANT (DNREC BROWNFIELDS 726A) Brownfields 2	$	500,000.00
Brownfields 3	$	500,000.00
SOURCE TOTALS	**$**	**41,520,623.85**



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Neighborhood Revitalization Project
September 14, 2021

Integrate GI into an Arts Project

Urban Artist Exchange

SITE GI/SW MANAGEMENT

GI in Wilmington

Why GI?

- Reimagine GI/SW management as an asset
- Find Opportunities to Collaborate

City Projects Featuring GI:

- Cool Spring Park
- Rodney Square
- UAE – Neighborhood Revitalization Project

~90% of Storms Result in 1"-2" of Runoff

Utilize GI to manage frequent Storms and minimize impacts to sewers

ARCADIS

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Neighborhood Revitalization Project
September 14, 2021

GI Investment Offsets Site Development Cost

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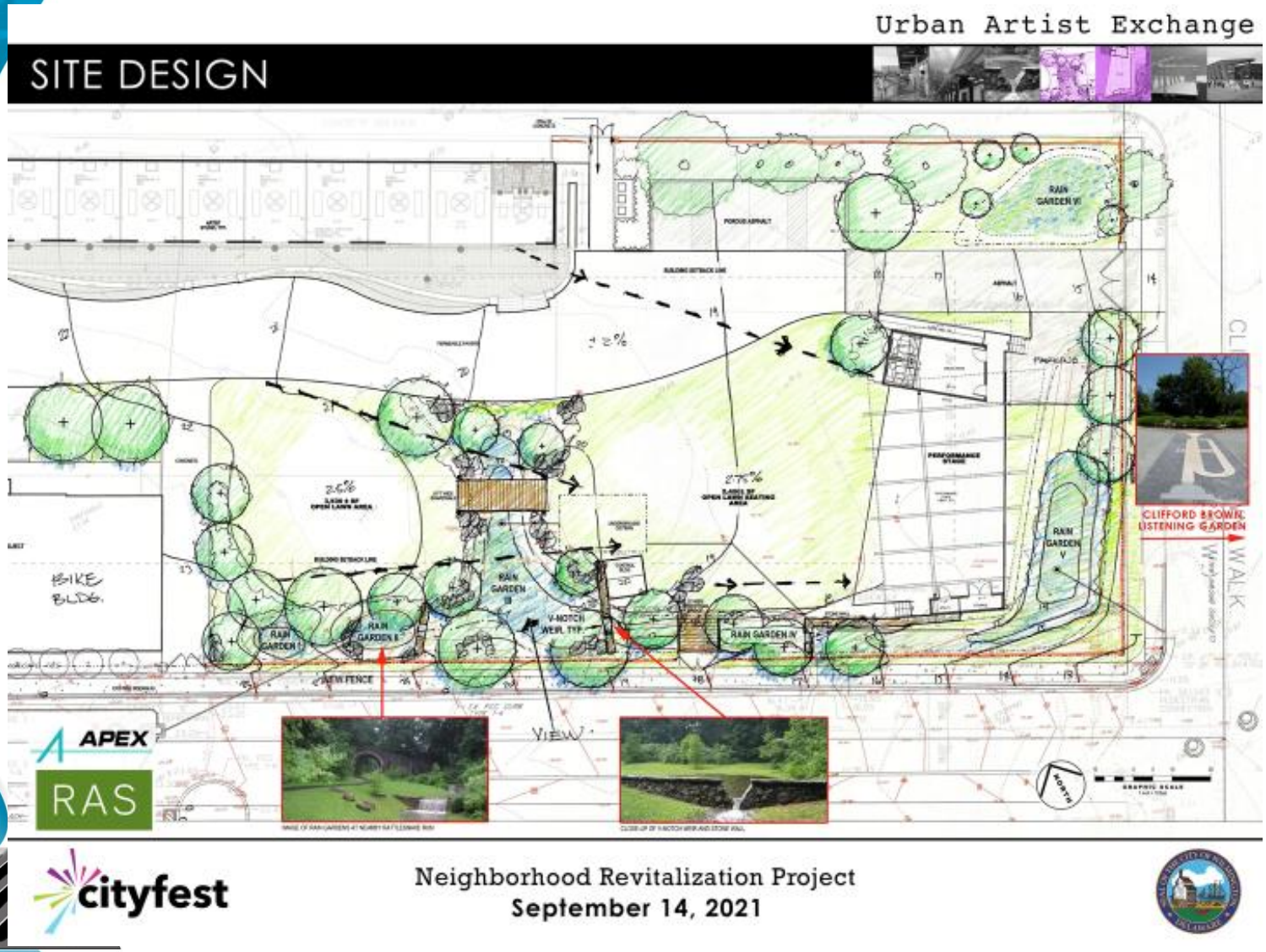
Neighborhood Revitalization Project
September 14, 2021

Integrated GI into Site Plan



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Enjoy the Arts while managing stormwater!

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Mutiple Project Goals Leads to Mutiple Sources of Funding

	FUNDING		PREVIOUS DISBURSEMENT	BALANCE REMAINING
SOURCES OF FUNDING				
PLANNING GRANT	$ 100,000.00		$ 100,000.00	$ -
STATE LOAN (SRF)	$ 1,369,500.00		$ 71,944.00	$ 1,297,556.00
DNREC/EPA Grant	$ 340,000.00		$ -	$ 340,000.00
CITY OF WILMINGTON (DPW)	$ 50,000.00		$ 37,277.00	$ 12,723.00
STATE GRANT - BOND BILL	$ 300,000.00		$ -	$ 300,000.00
WELFARE GRANT	$ 100,000.00		$ -	$ 100,000.00
FUNDRASING GOAL FROM VARIOUS GRANTS; NON COMMITTED	$ 1,096,953.58		$ -	$ 1,096,953.58
SOURCE TOTALS	**$ 3,356,453.58**		**$ 209,221.00**	**$ 3,147,232.58**

Thank You!

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