Anne Arundel County Clean Water Program

Our wAAter Public Advisory Group Meeting

January 25, 2023

Agenda

01 **Purpose and Objectives**

02 **Program Needs**

03 **Project Scoring**

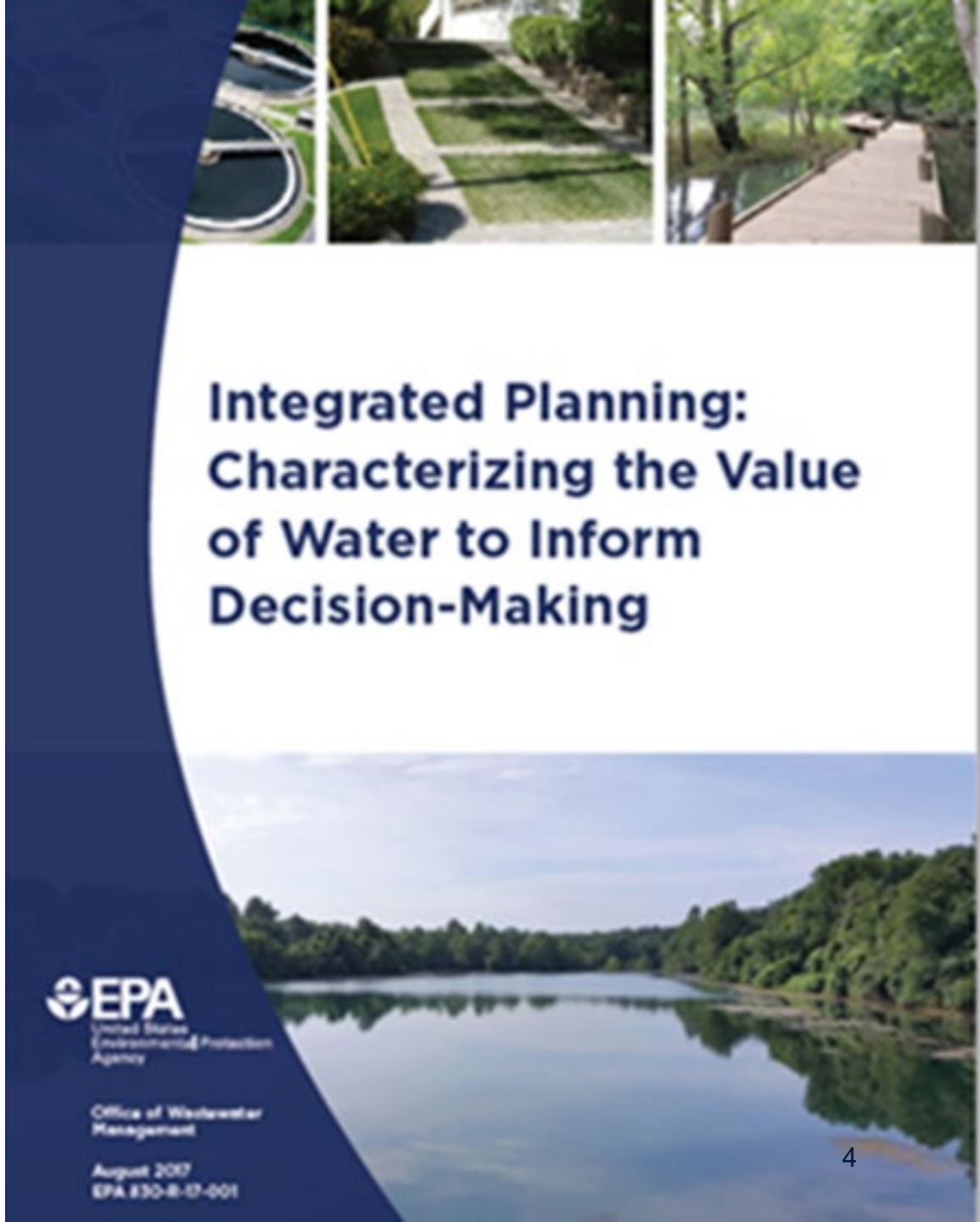
04 **Weighting Exercise**

05 **Discussion**

01 Purpose and Objectives

Meeting Purpose

- Review needs for the water, wastewater, and stormwater programs
- Prioritize and weight objectives for use in evaluating program needs



ourwAAter.org

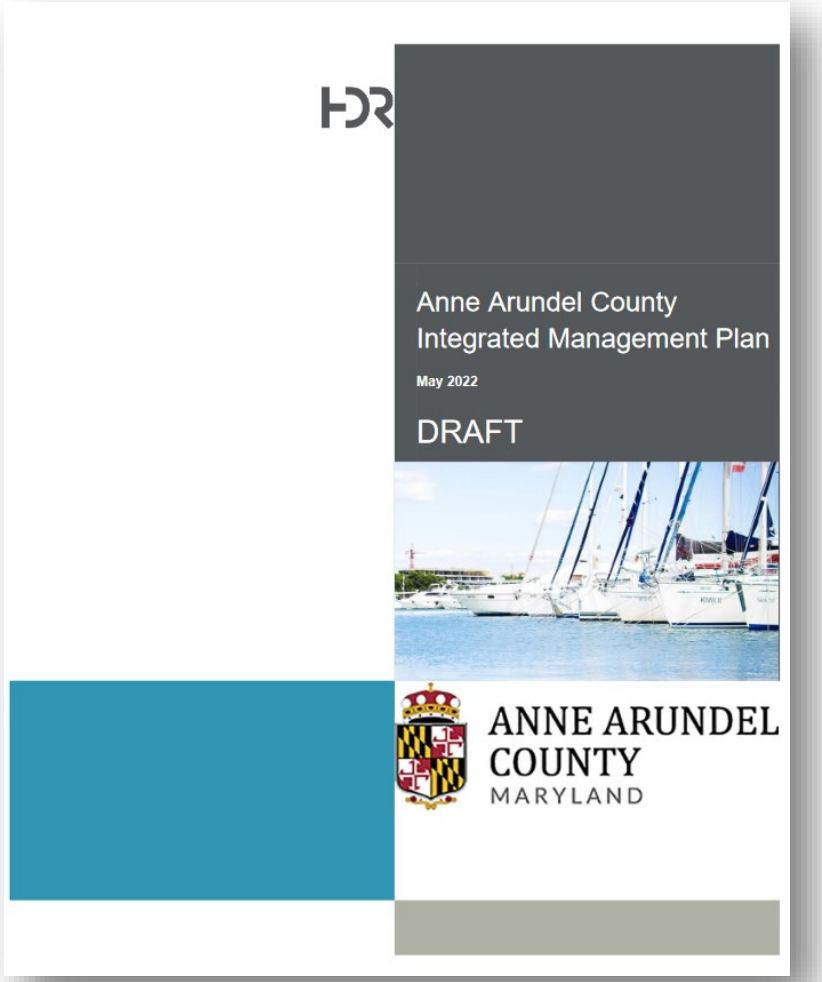
About Our wAAter

- Septic-to-Sewer Connection Program
  - Resources & FAQs
  - Application Review Process
- Wastewater Treatment Enhancements
- Small System Upgrades
- Stormwater Improvements
- Groundwater Resiliency
  - Managed Aquifer Recharge (MAR)
- Integrated Management Plan ←

News & Events

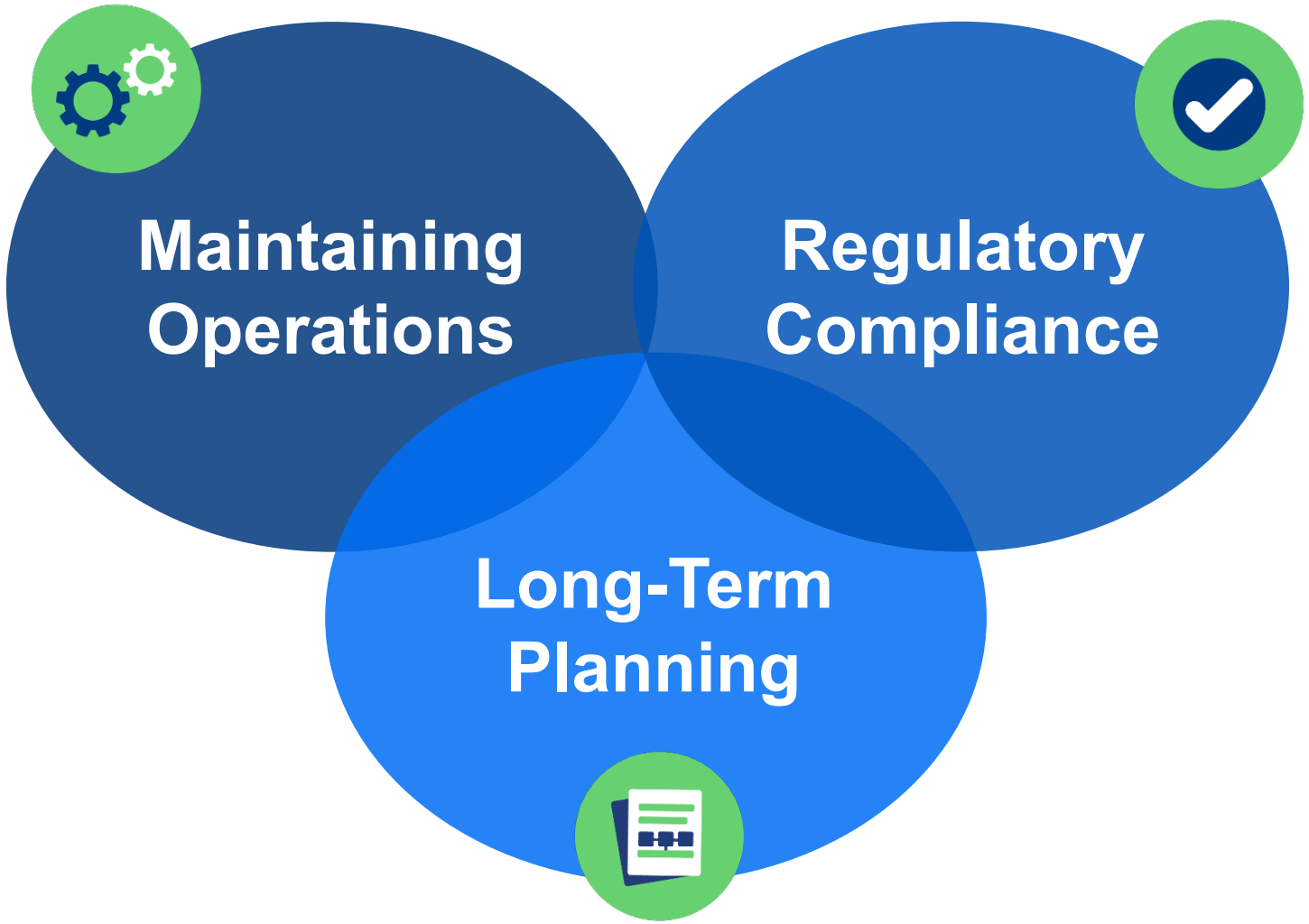
Our wAAter Blog

Contact Us



02 Program Needs

Typical Project Drivers



Water Program Needs

Category	Project and Estimated 30-Year Budget (in 2020 $)**
Water Treatment Facilities	WTP Construction/Expansions ($461M)
	Dorsey Road Offline ($1M)
	Ongoing WTP Upgrades ($5M) *(Includes Arnold/Dorsey WTP Improvements)*
Distribution System Planning	Water Storage Tank Painting, Water Main Replacement/Reconstruction, Water Infrastructure Upgrades/Retrofits ($515M)*
	TM-MD Route 32 at Meade and East/West Transmission Main ($50M)
	Planning Wastewater Strategic Plan ($3.5M)* *(Includes Water Strategic Plan and Water Project Planning)*

Non-Discretionary Funding

****Project Budgets from FY22 CIP***

Wastewater Program Needs

Category	Project and Estimated 30-Year Budget (in 2020 $)**
Wastewater Treatment Facilities	Ongoing WRF Upgrades ($30M)*
	Broadneck WRF Upgrade ($8M)*
	WRF Infrastructure Upgrades/Retrofit ($30M)*
	WRF Expansions ($29M) *(Cox Creek and Maryland City)*
	Minor Systems Upgrades ($21M)
	Managed Aquifer Recharge ($357M)
Collection System	Sewer Main Replacement & Reconstruction ($402M)*
	Upgrade/Retrofit Sanitary Sewer Pump Stations ($330M)*
	SPS Facility Generator Replacements ($73M)*
	Sewer Extensions ($40M)*
Planning	Planning ($53M)* *(Includes Wastewater Strategic Plan and Wastewater Project Planning)*

Non-Discretionary Funding

****Project Budgets from FY22 CIP***

Miscellaneous Water/Wastewater Program Needs

Category	Project and Estimated 30-Year Budget (in 2020 $)**
Miscellaneous Water and Wastewater Projects	Baltimore County Sewer Agreement ($20M)*
	Wastewater Service Connections ($52M)*
	Water Facility Emergency Generators ($5M)*
	Water Extensions ($7M)*
	Grinder Pump Replacements & Upgrades ($15M)*
	State Highway Sewer Relocation ($6M)*
	Fire Hydrant Rehabilitation ($15M)*
	Demolition ($2M)
	Septic-to-Sewer ($392M)
	Biosolids ($70M)
	Billing (AMI/AMR) ($43M)
	Existing Well Redevelopment & Replacements ($72M)
	Elevated Water Storage ($8M)
	Aquifer Storage and Recovery (ASR) ($24M)

Non-Discretionary Funding

****Project Budgets from FY22 CIP***

Stormwater Program Needs

Category	Project and Estimated 30-Year Budget (in 2020 $)**	Project Details
Stormwater Management	Stormwater Permit Cycle 3 (FY23-FY27) Placeholder ($150M)	Funding to be allocated for County's expected "Permit Cycle 3" requirements
	Stormwater Infrastructure ($260M)	Includes Culvert/Storm Drain Rehab*, Emergency Storm Drain*, Ongoing Projects, and other Stormwater Management Infrastructure*

Non-Discretionary Funding

****Project Budgets from FY22 CIP***

03 Project Scoring

Project Scoring Criteria

Safeguard the Environment	Customer Service	Financial Sustainability
• Meet Regulatory Objectives • Watershed Protection/Restoration • Sustainable, Forward-Thinking Use of Natural Resources • Resiliency/Ability to Adapt	• Maximize Public Health, Safety, Welfare, and Equity • Provide for Reliable Services	• Affordable for Customers • Partnered Financial Support • Economic Impact

Criteria provided in IMP Appendix B handout

- *Projects ranked 0, 3, 5, 7, or 10 for each sub-objective*

Example – Meet Regulatory Objectives

Project	"Meet Regulatory Objectives" Score	Reason
Upgrade/Retrofit Sanitary Sewer Pump Stations	10	Address regulatory objectives that present significant risk - control the discharge of untreated wastewater
Permit Cycle 3 Placeholder	10	Address regulatory objectives that present significant risk – MS4 Requirements
Stormwater Infrastructure	7	Address regulatory objectives that present substantial risk - existing TMDL requirements

04 Weighting Exercise

Multiple Criteria Decision Analysis Tool

Goal	**Identify projects that provide the greatest community and environmental benefit.**
Projects and Programs	**The projects and programs were defined based on an assessment of forecasted needs through the year 2050.**
Weighted Evaluation Criteria	**The weighting reflects the relative importance of each criterion. In this MCDA, the evaluation criteria reflect DPW's Mission Statement.**
Benefit Scores	**Benefit scores were developed to quantify how well each project address the planning objectives.**

Prioritizing Objectives

1

Weight the
primary objectives

Total of weights = 100%

2

Weight the
sub-objectives

Total of weights = 100% for each primary objective

3

Combined weight for each sub-objective is the **product**

Prioritizing Objectives

How would you weight these primary objectives to reflect their relative importance?

Safeguard the Environment	41%
Customer Service	39%
Financial Sustainability	20%

Prioritizing Objectives

How would you weight these Safeguard the Environment sub-objectives to reflect their relative importance?

Meet Regulatory Obligations	19%
Watershed Protection and Restoration	31%
Sustainable, Forward-thinking Use of Natural Resources	29%
Resiliency/Ability to Adapt	21%

Prioritizing Objectives

How would you weight these Customer Service sub-objectives to reflect their relative importance?

Maximize Public Health, Safety, Welfare, & Equity	75%
Provide for Reliable Services	25%

Prioritizing Objectives

How would you weight these Financial Sustainability sub-objectives to reflect their relative importance?

Affordable for Customers	40%
Partnered Financial Support	35%
Economic Impact	25%

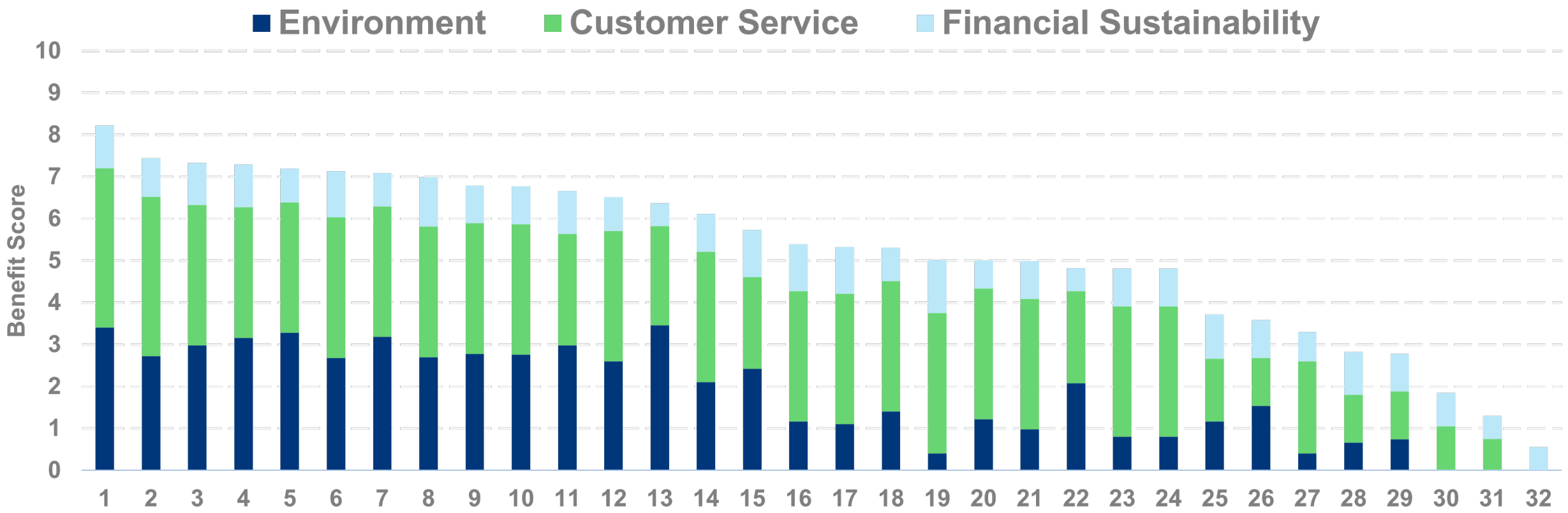
Results

Objective (Weight)	Sub-Objective (Weight)	Combined Weight
Safeguard the Environment (0.41)	Meet Regulatory Objectives (0.19)	0.08
	Watershed Protection and Restoration (0.31)	0.12
	Sustainable, Forward-Thinking Use of Natural Resources (0.29)	0.12
	Resiliency, Ability to Adapt (0.21)	0.09
Customer Service (0.39)	Maximize Public Health, Safety, Welfare, & Equity (0.75)	0.29
	Provide for Reliable Services (0.25)	0.10
Financial Sustainability (0.20)	Affordable for Customers (0.40)	0.08
	Partnered Financial Support (0.35)	0.07
	Economic Impact (0.25)	0.05

05 Discussion

Weighted Prioritization Criteria - County

Objective (Weight)	Sub-Objective (Weight)	Combined Weight
Safeguard the Environment (0.40)	Meet Regulatory Objectives (0.40)	0.16
	Watershed Protection and Restoration (0.24)	0.10
	Sustainable, Forward-Thinking Use of Natural Resources (0.16)	0.06
	Resiliency, Ability to Adapt (0.20)	0.08
Customer Service (0.38)	Maximize Public Health, Safety, Welfare, & Equity (0.60)	0.23
	Provide for Reliable Services (0.40)	0.15
Financial Sustainability (0.22)	Affordable for Customers (0.48)	0.11
	Partnered Financial Support (0.28)	0.06
	Economic Impact (0.24)	0.05



1 - Sewer Main Replacement & Reconstruction
2 - Stormwater Infrastructure
3 - Minor Systems Upgrades
4 - Upgrade/Retrofit Sanitary Sewer Pump Stations
5 - Ongoing WRF Upgrades
6 - Septic-to-Sewer
7 - Ongoing WTP Upgrades
8 - Managed Aquifer Recharge (MAR)
9 - Broadneck WRF Upgrade
10 - Baltimore County Sewer Agreement
11 - Grinder Pump Replacements & Upgrades
12 - WRF Infrastructure Upgrades/Retrofit
13 - Stormwater Permit Cycle 3 Placeholder
14 - Sewer Extensions
15 - SPS Facility Generator Replacements
16 - Water Main Repl./Recon., Water Storage Tank Painting, & WTR Infrastr. Up/Retro
17 - Existing Well Redevelopment and Replacements
18 - Aquifer Storage and Recovery (ASR)
19 - Fire Hydrant Rehabilitation
20 - TM-M Rte 32 @ Meade & E/W TM
21 - Elevated Water Storage
22 - Planning
23 - Water Facility Emergency Generators
24 - Water Extensions
25 - Billing (AMI/AMR)
26 - Cox Creek WRF Expansion
27 - Wastewater Service Connections
28 - Biosolids
29 - WTP Construction/Expansions
30 - State Highway Sewer Relocation
31 - Dorsey Road Offline
32 - Demolition

Next Steps

Please submit feedback on IMP content by
Friday, February 3

Send comments to
Rahkia.Nance@hdrinc.com

Project team will present updated project ranking during February 22 meeting

Next Steps: Meeting Series Overview

	Date	Location	Topic
Meeting 2	November 16, 2022	Heritage Complex-Independence Room	Septic-to-Sewer and Small Systems
Meeting 3	December 14, 2022	Patuxent Water Reclamation Facility	Site visit to MAR pilot demonstration and MAR discussion
Meeting 4	January 25, 2023	Heritage Complex-Independence Room	Project Prioritization Exercise
Meeting 5	**February 22, 2023**	**Heritage Complex-Independence Room**	**Present Updated IMP**

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Thank you!