

# Making the Right Choices for Your Utility:

# **Incorporating Community Priorities into Investment Decision-Making**

Augmented Alternatives Analysis Process January 24, 2023 2:00-4:30 PM



#### Segment 1: Welcome and Introductory Session

SEPA United States Environmental Protection

In Partnership with Saco

#### Welcome

Leslie Corcelli U.S. EPA Office of Wastewater Management

### **Today's Speakers**



**Leslie Corcelli** Office of Wastewater Management US EPA



**Sarah Shadid** Ross Strategic EPA Contractor



**Ed McCormick** McCormick Strategic Water EPA Contractor



Howard Carter Saco Water Resource Recovery Dept



**Dan Bisson** Tighe & Bond



Emily Cole-Prescott Saco Water Resource Recovery Dept



**Emily Roy** City of Saco



### **Workshop Objectives**

- Hear from Saco Water Resource Recovery Department (Saco, ME) about how they used AAA to make investment decisions
- Understand how the AAA process can help your utility connect to infrastructure funding
- Engage in peer-to-peer discussions about how to systematically address community "quality of life" benefits as part of a benefit/cost analysis of project alternatives





Segment 2: Real World Application of EPA's Augmented Alternatives Analysis (AAA)

How AAA added value to Saco's wastewater infrastructure investment decision-making

Howard Carter, City of Saco WRRF Director Dan Bisson, PE, Tighe & Bond Design Engineer



Maine Climate Council's <u>Cost of</u> <u>Doing Nothing Analysis</u> estimates that if we do nothing, we could be faced with an expense of up to **\$43 million+** 

# About the Saco WRRD project

#### Michael Regan EPA Administrator Visits Saco

https://www.wmtw.com/article/epa-administrator-visitsmaine-to-promote-funding-to-protect-criticalinfrastructure/39081543







# Addressing Climate Change Challenges through Stakeholder Engagement supports Innovation

Secure necessary funding for investment (Local, State and Federal \$\$)

Consider Innovative Approaches (Treatment process, Alternative delivery)

Rethink design planning horizons (50 years, 100 years?)

Incorporate community priorities for support

# Alternative Two: Full Plant Upgrade Aerobic Granular Sludge



- Incorporate Innovative Aerobic Granular Sludge Technology
- Increase treatment capacity to 12
  MGD and accommodate growth within
  the community
- Nutrient removal
- Restoration of land for open green space
- Could accommodate solar arrays, with enhanced Riverwalk space and public amenities
- Raise Front Street
- Relocate critical systems to protect against flooding
- Remove older buildings and structures susceptible to flooding and construct newer, more resilient buildings and structures
- Repurpose existing tankage for CSO Storage and Influent pump station and CCT
- Allow for future expansion

# How AAA benefitted our capital planning process

- Helped us identify how to integrate community interests into the project
- Built community and local officials' awareness and support for upgrade
- Community ultimately prioritized local bonds for this project over other public infrastructure needs
- Connected to state and federal bi-partisan infrastructure funds



#### Segment 2: Real World Application of EPA's Augmented Alternatives Analysis (AAA)







#### Segment 3: A Closer Look at the AAA Decision-Making Method



# An Overview of the AAA Method

Ed McCormick & Sarah Shadid



# **Three Key Attributes of the AAA Process**

- 1. Facilitates meaningful community engagement
- 2. Establishes a common, quantitative basis for comparing otherwise dissimilar decision criteria.
- 3. Addresses financial constraints of utilities through a staff-driven, community influenced prioritization process

### **Benefits of the AAA Process**

- Integrates community engagement into capital planning in a proven and systematic way
- Helps establish community groups as advocates for future projects and local utility investments
- Builds awareness for project and investment need with local decision-makers
- Can help justify rate increases and allocation of bond capacity
- Addresses the community engagement requirement of many public funding opportunities (e.g., EPA's integrated planning)



# How does AAA add to a conventional analysis?

	Conventional Alternatives Analysis
	Determine Project Goals
	Define Objectives
$ \land $	Establish Criteria
	Choose Metrics for Your Criteria
9	Evaluate Performance of Each Alternative
	Compare Across Alternatives
	Incorporate Cost Considerations
	11 - All All All All All All All All All A

# How does AAA add to a conventional analysis?

	Conventio	onal Alternatives Analysis	E.	Augmented Steps of AAA
41	1	Understand Co	mmı	unity Priorities
	2	Determine	Proj	ect Goals
	3	Define (	)bje	ctives
•	4	Rank the Imp	orta	nce of Goals
	5	Establis	sh Cr	iteria
	6	Choose Metrics	s for	Your Criteria
٠	7	Create Perfo	orma	nce Ranges
n	8	Evaluate Performan	ce o	f Each Alternative
T	9	Compare Acro	oss A	Alternatives
198	10	Incorporate Cos	st Co	onsiderations

# How does AAA add to a conventional analysis?

#### **Understand Community Priorities**

- Ask the community what they want to achieve with these investments
- Communicate how community input be used to make decisions

#### **Rank the Importance of Goals**

• Community + utility works to determine how important goals are relative to one another

#### **Create Performance Ranges**

• Use performance ranges to create the ability to evaluate otherwise dissimilar metrics (e.g., greenspace and energy use)



What organizations have used the AAA process?

- City of Saco Water Resource Recovery Department
  - Small Town
  - Water Resource Recovery Utility
- Camden County Municipal Utilities Authority
  - Large City
  - Water Resource Recovery Utility
- High Line Canal Conservancy
  - Non-profit
  - Works with 11 jurisdictions and water districts



#### **AAA Resources**



Making the Right Choices for Your Utility: Using Community Priorities and Sustainability Criteria for Water Infrastructure Decision-Making

May 2022

SEPA United States Environmental Protection Apency

EPA's AAA Guide (Revised May 2022) Making the Right Choices for Your Utility - Worksheets | Page 4

#### Step 1: Engage Your Community



A central component of the AAA process is to establish a clear and transparent way for a utility to incorporate community priorities into major capital projects. AAA provides an effective way to convey the decision-making process used to help ensure public support on often costly but necessary infrastructure projects

As a fast step in your process, consider who in your community may have an important role in the success of your project. These individuals may include those who are regularly regularly basis of the other resources and utility planning, but it may benefity our project the basis enage with individuals investentiating groups or organizations that have historically not enagged in these topics. The task of individuals investentiation are enabled in program that the start and would be impacted by potential future projects, hourd or council members that may play a role in approving your project plans, local critic on one profit approaches and the start and approaches and the start and approaches and the start and the sta

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Worksheets Fillable PDF & Excel



Camden County Municipal Utilities Authority: A Wet Weather Case Study of Incorporating Community Interests into Effective Infrastructure Decision-Making

0	Jurisdictions: • City of Camden		<b>***</b>	Receiving water: Delaware River
~	City of Gloucester  Camden County	r	6	Revenues: ~\$100 million/annual
<b>_</b>	CCMUA: a county-w wastewater utility.	ide public	 Ŀŋ	Average number of Combined Se Overflows annually: 70
	Wastewater System	F10 0000		I TCD associated to be in place by
íQì	Lines	125 mi	Ö	2020
	Plant capacity	58 mgd	~ <b>Q</b>	CCMUA Goal: 2018

#### Executive Summary

The following case example describes the ways in which the Canden County Municipal Utility Authority (COMUA), together with the U.B. EPA Office of Watewater Management (WM) and regresentatives from the community-based Canden SMART Initiative, used an augmented infrastructure alternatives analysis approach to help COMUA identity an optimal and cost-feticityem iso of green and gray infrastructure to support its Comhined Sever Long-Tem Centrol Plan (LTOP). The method used by CCMUA is designed to engage community stakeholders in the infrastructure alternatives analysis process at a very early stage. The method allow utilities and community members to use a range of environmental, social, and economic criteria (also known as "Triple Bottom Line" criteria) and create a broad basis for comparison of infrastructure alternatives.

By using this broad range of criteria to assess infrastructure alternatives, CCMUA was able to better understand the optimal mix of green and gray infrastructure necessary to protect the health of its critzens, consistent with a set of community goals agreed to by the Counder SNART stateholders. With this method, utilities can accomplish internal infrastructure objectives and community goals as well as enhance their standing as an integral, engaged, and dynamic part of the economic and social fabric of the community.

Just as importantly, the approach described in this case example will help CCMUA communicate with their board members and other decision makers to ensure these individuals have a clear understanding of the choices before



**Case examples** 

Webinar Recording

#### Segment 3: A Closer Look at the AAA Decision-Making Method



# Q&A

**Segment 4: Preview of Peer-to-Peer Sharing after the Break** 

#### **Return here at 3:30pm to:**

- Hear more specifics from Saco WRRD on how they used the AAA process
- Engage in interactive discussions while you learn about how to use AAA worksheets
  - Begin to think about how AAA can enhance your utility's capital improvement planning





#### Segment 5: AAA Steps 1-4

### A Walkthrough & Saco Example

Emily Roy, Emily Cole-Prescott, & Sarah Shadid



# **Step 1: Understand Community Priorities**

- Determine method of engagement
- Gather information on community needs and priorities

# Step 1: Understand Community Priorities – Saco Example

- Created the Coastal Resiliency Committee
  - environmental groups
  - City Council
  - commercial and recreational fishing
  - consulting firms
- Community Priorities Meeting
  - Overview of plant operations, flooding challenges, cost of doing nothing
  - Introduction to the AAA process & how committee feedback would be used
  - Gathered committee input on priorities for the investments

#### **Step 2: Determine Goals**

- Analyze community and utility needs and priorities
- Identify a set of goals the utility hopes to achieve with the investments

#### **Step 2: Determine Goals – Saco Example**

**Ensure Financial** 

Sustainability

Improve System Resiliency to Enhance Environmental Health



Support Economic and Community Development to Bolster Saco's Livability

> Increase Public Awareness and Appreciation of the Value of Water Services

#### **Step 2: Determine Goals – Saco Example**



**Goals** are big picture and articulate what the investments hope to achieve.

#### **Step 2: Define Objectives – Saco Example**



**Objectives** are a specific, measurable outcome that contributes to the achievement of the goal.

They are specific, measurable, assignable, realistic, and time-based.

# **Step 4: Rank the Importance of Goals**

- Now, with clearly defined goals & objectives, rank the importance of each goal relative to the others
- Instead of ranking goals #1, #2, and #3 "weigh" goals on a 1–10 scale (10 being the highest rank and 1 the lowest)
  - ensures goals accurately represent the priorities of your community
  - The heavier the weight (i.e., 10) the more important the goal

#### **Step 4: Rank the Importance of Goals – Saco Example**

Improve System Resiliency to Enhance Environmental Health (10)

Ensure Financial Sustainability (8.8) Support Economic and Community Development to Bolster Saco's Livability (8.6) Increase Public Awareness and Appreciation of the Value of Water Services (7)

#### **Table Discussions**

• Do you see any similarities between Saco's community priorities and what you anticipate your service area's to be?

#### **Step 5: Establish Criteria – Saco Example**



**Criteria** evaluate an alternative and reveal an alternative's strengths and weaknesses.

They demonstrate how an alternative will perform relative to goal and objective.

#### **Step 6: Choose Metrics – Saco Example**



Goal: Increase Public Awareness and Appreciation of the Value of Water Services

Objective: Make plant an asset to City and community

Criteria: Incorporate greenspace into final WRRD plan

Metric: Percentage of greenspace acreage around plant, particularly near the Riverwalk

-5	-4	-3	-2	-1	0	1	2	3	4	5
					No increase in					
					greenspace					
-				and the second				r -		

"0" represents a neutral, or no impact outcome

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-4	-3	-2	-1	0	1	2	3	4	5
				No increase in					
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11-15% decrease in greenspace					No increase in greenspace					11-15% increase in greenspace
BE										

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-5	-4	-3	-2	-1	0	1	2	3	4	5
11-15% decrease in greenspace		6-10% decrease in greenspace		1-5% decrease in greenspace	No increase in greenspace	1-5% increase in greenspace		6-10% increase in greenspace		11-15% increase in greenspace

#### Table Discussions (15 min)

- What challenges or opportunities could you envision for building in non-conventional criteria into your utility's planning?
- Of Steps 1-7, which one(s) do you think would be particularly useful or challenging for your utility to work through?



- What did you learn from the AAA Saco example?
- Any surprises, key takeaways, or remaining questions?





#### Segment 7: Full Group Discussion

• What advice do you have for improving the presentation materials and/or table exercises for future participants?





# What we've covered & where to find more

Ed McCormick



#### What we've covered

- Heard from those who have used the AAA process
- Learned a little bit about the AAA process
- Reflected on how the AAA process might be applied in the context of your utility

#### Where to find more



Making the Right Choices for Your Utility: Using Community Priorities and Sustainability Criteria for Water Infrastructure Decision-Making

May 2022

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As a first step in your process, consider who in your community may have an important role in the success of your project. These individuals may include those who are regularly engaged in topics relevant to water resources and utility planning, but it may benefit your project to also engage with individuals representing groups or organizations that have historically not engaged in these topics. The list of individuals you'd like to engage may include those that live near and would be impacted by potential future projects, board or council members that may play a role in approving your project plans, local civic or non-profit organizations, or environmental justice groups. Note, examples of stakeholder type are impacted Community Member, Environmental Group, Regulators, Business, Manufacturing, Chic Organization, Environmental Justice, Public Health. The AAA process is most robust when it draws priorities and input from a wide range of diverse community voices.

#### Stakeholder Type & Contac

Stakeholder Type:	
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Stakeholder Type:	
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Stakeholder Type:	
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Worksheets Fillable PDF & Excel



#### Webinar Recording



#### **Executive Summary**

Plant capacity

The following case example describes the ways in which the Camden County Municipal Utility Authority (CCMUA). together with the U.S. EPA Office of Wastewater Management (OWM) and representatives from the community (CowNA), Camden SMART Initiative, used an augmented infrastructure alternatives analysis approach to help CCMUA identify an optimal and cost-effective mix of green and gray infrastructure to support its Combined Sewer Long-Term Control Plan (LTCP). The method used by CCMUA is designed to engage community stakeholders in the infrastructure alternatives analysis process at a very early stage. The method allows utilities and community members to use a range of environmental, social, and economic criteria (also known as "Triple Bottom Line" criteria) and create a broad basis for comparison of infrastructure alternatives.

2020

CCMUA Goal: 2018

125 mi.

58 mgd

By using this broad range of criteria to assess infrastructure alternatives, CCMUA was able to better understand the optimal mix of green and gray infrastructure necessary to protect the health of its citizens, consistent with a set of community goals agreed to by the Camden SMART stakeholders. With this method, utilities can accomplish internal infrastructure objectives and community goals as well as enhance their standing as an integral, engaged, and dynamic part of the economic and social fabric of the community.

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#### **Case examples**

# To view resources:



Or search online for EPA's "Planning For Sustainability" webpage



**EPA hopes to host more AAA** Workshops in 2023-2024.

Stay tuned to the EPA's Sustainable Utility Management webpage for updates! SEPA United States Environmental Protection

In Partnership with Saco

# **Closing Remarks**

#### Leslie Corcelli



# Thank you for attending today's workshop!

Contact:

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