MUNICIPAL ALLIANCE FOR ADAPTIVE MANAGEMENT
MEETING OF THE MEMBERS
AGENDA

Meeting Type:	**Members Meeting**
Meeting Location:	**Rochester DPW** 209 Chestnut Hill Road
Remote Location:	**Register in advance for this meeting:** https://us06web.zoom.us/meeting/register/tZEpcOirqzMoGNeLXUkVgnDSLrmreT7lyxWf
Meeting Date:	**December 7, 2022**
Meeting Time:	**9:00 am** **A quorum of Members will be in person, but for those interested in participating remotely please register at the above link.**

1. **Call to order**
2. **Approval of minutes of September 15, 2022 meeting**
3. **Review of 2023 budget recommendations – vote on final budget**
4. **Discussion of Website Development**
5. **Discussion of GB2030 funding opportunity**
6. **Stakeholder comment**
7. **Public comment**
   a. **Limited to 5 minutes per speaker**
8. **Other business**
9. **Schedule next meeting and agenda items (January: 6 Month AMP Review)**
10. **Adjourn**

AMENDMENT NO. <u>1</u> TO
AGREEMENT FOR CONSULTING SERVICES
BETWEEN <u>CITY OF ROCHESTER, NH</u>
AND BROWN AND CALDWELL
FOR <u>PREP ENGAGEMENT</u>

THIS AMENDMENT NO. <u>2</u> to the Agreement for Consulting Services dated <u>January 26, 2021</u> between <u>the City of Rochester</u>, hereinafter referred to as "Client", and <u>*Brown and Caldwell*</u>, a California corporation, hereinafter referred to as "Consultant," is made and entered into this ____ day of _____, 20__.

<u>RECITALS</u>:

WHEREAS, Client and Consultant entered into an agreement for consulting services <u>January 26, 2021</u> (hereinafter referred to as the "Agreement");

WHEREAS, in Article II.B of the Agreement, Client and Consultant agreed that certain of the work contemplated to be performed by Consultant could not be sufficiently defined at the time of execution of the Agreement;

WHEREAS, Client desires <u>to engage with the Piscataqua Region Estuaries Partnership (PREP) regarding the research and monitoring plan currently being developed for the Great Bay Estuary (GBE) and receive continued Consultant support with the Adaptive Management Framework development and implementation</u>; and

WHEREAS, Client has requested changes in the Scope of Services;

NOW, THEREFORE, Client and Consultant agree to amend the Agreement as follows:

I.   SCOPE OF CONSULTING SERVICES

The Scope of Services in the Agreement is amended to include the following tasks:

<u>Task 1 – Project Management and Administration</u>

BC shall perform project management and administration while performing Engineering Services throughout the project. Project management and administration shall include:

  i)   Preparation of monthly invoices
  ii)   Oversight of deliverables, schedule, and budget
  iii)   Project management communications

Task 1 assumes a budget of 40 labor hours.

Task 2 – Meeting Participation and Administration

BC will participate in meetings with PREP, PRMC, and related subcommittees regarding the ongoing research and monitoring. BC will also participate in meetings with MAAM, DES, or other stakeholders as needed. This scope assumes participation in 16 virtual meetings, each up to two hours in duration. It also assumes that two BC scientists will participate in one in-person workshop or field visit of 1.5-day duration. This task includes preparation for each meeting, meeting participation, and as-needed email summaries of meeting notes and any proposed action items submitted to MAAM (following legal counsel review for attorney-client privileged communications or information) within seven working days of the meeting. It also includes budget for brief, routine communications between BC and MAAM representatives.

Task 2 assumes a budget of 175 labor hours.

Task 3 – As-Need Technical Support

This task includes as-needed technical support that might arise during our engagement with PREP and other stakeholders. Examples of activities that could be accomplished under this task include literature reviews, independent data analyses, reviews of PREP/agency documents, development of monitoring recommendations, and drafting of materials to advocate technical positions. In 2021 and 2022, effort under the as-needed technical support task focused on identifying data gaps, coordinating on monitoring priorities, and providing oversight of PREP monitoring activities. BC anticipates similar efforts will continue in 2023 under this task. Additionally, BC anticipates providing data synthesis and support with data analysis as PREP begins to interpret data from multiple projects and draws scientific conclusions that could have regulatory consequences. Hence, BC included budget to support independent evaluations of data to confirm or modify major scientific conclusions. This task includes a concise (e.g., 2-page) year-end deliverable in which BC summarizes activities completed under this scope of work during the calendar year.

Task 3 assumes a budget of 175 labor hours.

II.   SCHEDULE

Consultant is authorized to proceed with the modified Scope of Services effective on the date of this Amendment. The modified Scope of Services shall be completed by December 31, 2023.

III.   COMPENSATION

Compensation for the services provided under Article I of this Amendment shall be calculated on the same basis as in the Agreement as modified by any previous amendment(s). The labor hours and cost estimates for completing the services defined in this Amendment are shown in Attachment 1. The estimated compensation for the services performed under this Amendment is $77,000, which increases the total estimated compensation under the Agreement to $ 192,530.

All other terms and conditions of the Agreement and any amendments thereto remain unchanged.

BROWN AND CALDWELL   CITY OF ROCHESTER, NH, AS FISCAL
                                            AGENT FOR THE MAAM GROUP."

Signature: _____   Signature: _____

Printed Name: Deborah Mahoney   Printed Name: Blaine Cox

Title: Senior Director Client Services   Title: City Manager

ATTACHMENT 1

COMPENSATION

For the work described in Amendment 1, compensation shall be a fee not to exceed of

$77,000.00, including labor and expenses. The table below summarizes the project budget by

task.

Task Name	Estimated Labor Hours	Expense Budget	Total Budget
Task 1 - Project Management and Administration	40	-	$7,000
Task 2 - Meeting participation and communications	175	$2,000	$36,000
Task 3 - As-Needed Technical Support	175	-	$34,000
Total Hours	390	$2,000	$77,000

Dover
The City of Dover is approximately 29 square miles, with a population of 32,000 and is considered one of the fastest growing communities in New Hampshire. The city is bordered by tidal rivers and the New Hampshire Great Bay. The City's Wastewater Treatment Facility (WWTF), located on Middle Road, treats on average 2.5 MGD from approximately 2/3 of the community, while the remaining population continues to use private septic systems. The city also owns and operates a complex citywide network of stormwater infrastructure. The stormwater management is regulated by the NPDES MS4 program, however, the City of Dover has a long history of exceeding the minimum requirements and has invested heavily in Low Impact Development infrastructure and retrofits throughout the city. Additionally, the city recently invested in a multi-million dollar investment at the WWTF to improve nitrogen removal discharging to the Great Bay. The City is committed to continue to invest in water quality improvement projects as is outlined in Appendix D of this plan.

Milton
The Town of Milton is a small community with a population of approximately 4,600 people within the Town's total area of approximately 34.34 square miles. Milton is a manufacturing, resort and residential town, and includes the village of Milton Mills which is the most densely populated area with a total of 575 people. The community is located along the Salmon Falls River, just north of Route 75. The Milton Wastewater Facility services approximately 300 units in the town of Milton and treats annually approximately 22,593,000 gallons of sewerage at an average daily flow of 62,000 gallons. The facility operates at around 62% of plant design capacity allowing future growth within the community.

Newington
The Town of Newington is a small community with a population of approximately 800 people within the Town's total area of approximately 12.5 square miles (8.2 square miles of land, 4.2 square miles of water). The Town includes a large commercial/industrial area, a large area encompassing the Pease International Trade port and NH Air National Guard (NHANG), and Great Bay National Wildlife Refuge. The remaining areas of the Town are mainly slowly developing rural residential areas. Future development and population growth shall be governed by the Town as identified in the Newington Master Plan (May, 2020). The Town's urbanized area (+/- 3.5 square miles) includes very few homes and is almost entirely commercial, industrial, NHANG and Trade port properties. The Town was granted an MS4 waiver in 2013 based on the Town's minimal urbanized area and potential impacts associated within this area.

The Newington Sewer Commission, on behalf of the Town of Newington, owns and operates a wastewater collection, treatment and disposal system which serves the entire industrial, office and commercial zoned areas of Town, as well as a small number of residential users. The 0.29-MGD wastewater treatment facility (WWTF) processes sewage as well as septage from residential users which are not connected to the collection system. The collection system includes two pumping stations and approximately 11 miles of sanitary sewers. In anticipation of the Great Bay Total Nitrogen Permit, the Town proactively proceeded with an $8.2M WWTF & Pump Station upgrade project in 2016 to improve performance and provide nitrogen removal capabilities. The WWTF upgrades have allowed the facility to consistently reduce nitrogen to < 3 mg/L (< 2.5 lbs TN/day) during the growing season. This improvement in effluent total nitrogen represents a significant reduction in total nitrogen loading to the Great Bay.

Portsmouth
The City of Portsmouth (City) is a historic community located in southeastern New Hampshire at the mouth of the Piscataqua River. The City has a population of approximately 22,000 people and is a frequently visited

tourist destination due to its restaurants, historic past, geographic location, and other amenities. The overall land area of the City is approximately 16.8 square miles (15.6 square miles of land and 1.2 square miles of water). Downtown Portsmouth is densely developed with mixed commercial and residential properties with intermixed industrial development. Outside the downtown, land use is still urban in nature and primarily residential and multi-unit residential with mixed commercial zones. The City has within its boundaries the Pease International Tradeport and NH Air National Guard. The primary land area of the City is private property (~71%) with the remaining land area comprised of Department of Transportation roadway right-of-way (~6%), City roadway right-of-way (7%) and City owned properties (16%). Growth in the City is controlled through land use and zoning ordinances and approval of proposed development through the Planning Board, Zoning Board of Adjustment, Historic District Commission and Conservation Commission as applicable. The City is compliant with its MS4 permit effective July 1, 2018 and NPDES permits for its two wastewater treatment facilities, Pease Tradeport WWTF and Peirce Island WWTF.

The City's Department of Public Works is organized into multiple utility groups overseeing the stormwater collection system, sewer collection system, combined sewer overflows, and water distribution system. The sewer group oversees the treatment of sewerage at the Pease Tradeport WWTF and Peirce Island WWTF. The water group oversees treatment at the Madbury Water Treatment Plant and the Pease Water Treatment Plant. This water group is primarily responsible for the day-to-day operations and long term projects associated with stormwater best management practices, points source discharge points of nitrogen (e.g. WWTFs), and water source protection and water conservation.

The City has long been a regional leader in environmental stewardship and innovation. In 2007 the City Council voted on a resolution to become an Eco-Municipality and use the four principles of The Natural Step (https://thenaturalstep.org/approach/) to guide sustainable decision-making. The City's commitment to sustainability and environmental stewardship shows up in its many proactive efforts to curb pollution, supports science, and minimize it impact on the Estuary. These items cannot always be quantified as a specific nitrogen reduction but are important to support the nitrogen control and reduction efforts and include the following:

- Professional Staffing and Organizational Structure: The City has developed a Stormwater Specialist Position and reorganized personnel to establish a Stormwater Division within the Public Works Department. At the Planning Department there are staff dedicated to site plan regulation compliance for private property and developments. The majority of the team has completed the Stormwater Management Certificate program offered by UNH Professional Development Training. Staff regularly hold tours or presentations of the innovative BMP's being implemented. Staff also regularly speak at conferences about technologies and particularly focus on maintenance and long-term performance. Wastewater operations staff are trained licensed professionals who participate in professional organizations including New Hampshire Water Pollution Control Association, New England Water Environment Association/WEF, and others. Staff participate in these associations to maintain training and stay in front of the most recent industry trends and to optimize treatment operations.
- Incorporation of Stormwater BMPs: The City incorporates stormwater controls and other BMPs into City projects. Staff continue to work on developing new BMPs by working with consultants and the UNH Stormwater Center. Some examples include Community Campus Athletic Fields gravel wetland and bio retention stormwater treatment, State Street sand filtration and tree box filters, use of compost tea and incorporation of pervious pavement and other LID type projects within the City. The City has and will continue to work with private and public entities in the installation of rain gardens, tree box filters and other stormwater controls.
- Consulting Services: The City has contracted with professional consultants to conduct past studies specific to stormwater and non-point source projects and planning. This work is ongoing and will incorporate an update to the City's Stormwater Master Plan and a future discussion on implementing a storm utility funding option.

- Regulations and Ordinance Adjustments: The City Site Plan Review Regulations promote the use of Low Impact Development to the maximum extent practical and sets limits more restrictive than the MS4 permit for redevelopment projects. Ordinance changes have increased wetland buffers with credit for going green projects that show added nitrogen removal.
- Outreach and Education: City staff work with the Seacoast Stormwater Coalition to develop BMP implementation and regular operation and maintenance requirements for private properties.
- Address the Future: Working with stakeholders, the City seeks to address stormwater, sea level rise, and coastal resiliency issues that impact Portsmouth. This includes addressing the overlap in project needs to address coastal resiliency and impact of tidal changes on stormwater controls in areas like Prescott Park.

These are some of the efforts put forth by Portsmouth toward supporting improvement of water quality for the Great Bay Estuary. The greatest and most impactful, however, is the recently completed upgrade of the Peirce Island WWTF. Over the last 5 years the Peirce Island WWTF underwent a significant upgrade converting the once primary level treatment facility to a tertiary level nitrogen removal facility with biological treatment. This $92 Million project has decreased the amount of nitrogen discharged to the estuary by over 84%, total suspended solids by over 86%, and biochemical oxygen demand by over 90%.

Rochester

The City of Rochester, located in southeastern New Hampshire, is the one of the five largest municipalities in the state. The City has a land area of 44.8 square miles, water area of approximately .6 square miles and a population of 32,000. The majority of land abutting the .6 square miles of water in the City is owned by private property owners. The City owns 213 parcels containing approximately 1,668.5 acres, but also controls approximately 1,050 acres of right-of-ways. The State of NH Department of Transportation also owns and controls approximately 42% of the right-of-ways (775 acres) located within the City. The City owns and operates a wastewater treatment facility (WWTF) which discharges treated effluent to the Cocheco River. The Cocheco River is within the Great Bay watershed and forms the Piscataqua River at the confluence of the Cocheco and Salmon Falls Rivers. The City has listed planned projects along with associated, estimated capital budget costs in Appendix D.

Rollinsford

The Town of Rollinsford is a small community with a population of approximately 2600 people within the Town's total area of approximately 7.6 square miles along the Salmon Falls River bordering Maine. The Town is densely populated in about 20% of the area. The rest of the Town is mainly slowly developing rural residential areas and conservation land. The Town is an MS-4 community and sweeps 20 lane miles of roadway and cleans 115 catch basins annually, in addition to several outreach measures as a provision of the MS-4 permit. Rollinsford is currently working on a stormwater asset management loan program through NH DES to catalog and map stormwater assets in the Town.

The Rollinsford Water Sewer District is governed by a Commission separate from the Town and provides water and wastewater services to the more densely populated area of Rollinsford.

Section 1: General Project Information

A. Project Title: Estuarine Water Quality Monitoring 2023

B. Type (choose one):

*Monitoring X   Analysis   Workplan Development   Research & Synthesis
Other (describe):*

C. Is this a continuing project or a new project? Continuing

D. Anticipated start date: Jan 1, 2023

E. Anticipated end date: June 1, 2024

F. Estimated total cost: $200,000

G. MAAM funding requested: $64,000

Section 2. Pre-Funding Information

A. Brief description of project background and goals:

Use grab sampling and datasondes to monitor key parameters in the estuary at established sites. This year, this includes winter monitoring as well at easy-to-access sites.

B. Does the project have an approved Workplan, SAP, or QAPP that describes the project tasks, timelines, and work products? Yes, but recent updates are included below.

- January, February and March grab sampling added at Great Bay, Adams Point, Upper Little Bay, Upper Piscataqua, and CML, as these sites will be relatively easy to access in the winter.

i. If so, attach and/or provide a link: https://scholars.unh.edu/prep/419/

ii. If not, provide the following information:

    a. Description of project background and goals.

    b. Description of task(s) with timeline and anticipated work products.
        *Include information about data QA/QC and timelines for sharing project data and results with MAAM

        *For monitoring projects, include a description of monitoring locations, frequency, and parameters

        *For modeling projects, include a description of anticipated model inputs and outputs

    c. Study leader(s) and list of entities or cooperative partners involved in project.

Section 3. Post-Implementation Information

A. MAAM funding received:

B. Completion date(s) by task:

C. Data and work product delivery date(s):

D. Describe any changes or modifications made to the planned study tasks or timeline.
Include reason(s) for changes and anticipated impacts to study results

Section 1: General Project Information

A. Project Title: Light Array Program 2023

B. Type (choose one):

   Monitoring X   *Analysis*   *Workplan Development*   *Research & Synthesis*
   Other (describe):

C. Is this a continuing project or a new project? Continuing

D. Anticipated start date: May 1, 2023

E. Anticipated end date: June 1, 2024

F. Estimated total cost: $42,000

G. MAAM funding requested: 42,000

Section 2. Pre-Funding Information

A. Brief description of project background and goals:

   Three light-array stations have been set up in Great Bay, Piscataqua River and Portsmouth Harbor. The light arrays remain out for approximately 3 – 4 months, collecting light at two levels, allowing the determination of light attenuation.

B. Does the project have an approved Workplan, SAP, or QAPP that describes the project tasks, timelines, and work products? No. This work will be incorporated into the Estuarine Water Quality QAPP by March 2023, but this has not happened yet.

   i. If so, attach and/or provide a link:

   ii. If not, provide the following information:

      a. Description of project background and goals.

Most light attenuation measurement in the Great Bay Estuary lack resolution over time; measurements are "snap shots" taken once a month. The purpose of the light arrays is to be able to better understand short-term dynamics and how these are changing from year to year.

      b. Description of task(s) with timeline and anticipated work products.

QA/QC will be similar to the processes implemented for the datasonde program, since both data collection methods are susceptible to bio-fouling and other sensor programs. We anticipate that the first full year of data (2022; 2021 was a pilot year to work out operations and maintenance issues) should be complete by Jan 1, 2023. 2023 data should be complete with the rest of the estuarine water quality data, which is June 1, 2024.

As noted, light arrays are set up at three locations, which are noted in the Tier 2 Report for 2021: https://scholars.unh.edu/prep/460/

Measurements are taken automatically every 15 minutes. A sample data plot looking at one week of data in September, 2021, is pasted below. These data compare light array data from Great Bay to Portsmouth Harbor. In the full report, light data from Piscataqua River would be included as well.

Include information about data QA/QC and timelines for sharing project data and results with MAAM

For monitoring projects, include a description of monitoring locations, frequency, and parameters

*For modeling projects, include a description of anticipated model inputs and outputs*

   c.   Study leader(s) and list of entities or cooperative partners involved in project.

Study leader is Tom Gregory of Jackson Estuarine Lab.

Section 3. Post-Implementation Information

A.   MAAM funding received:

B.   Completion date(s) by task:

C.   Data and work product delivery date(s):

D.   Describe any changes or modifications made to the planned study tasks or timeline.
       Include reason(s) for changes and anticipated impacts to study results

FF and SNET_C Kd vs. time
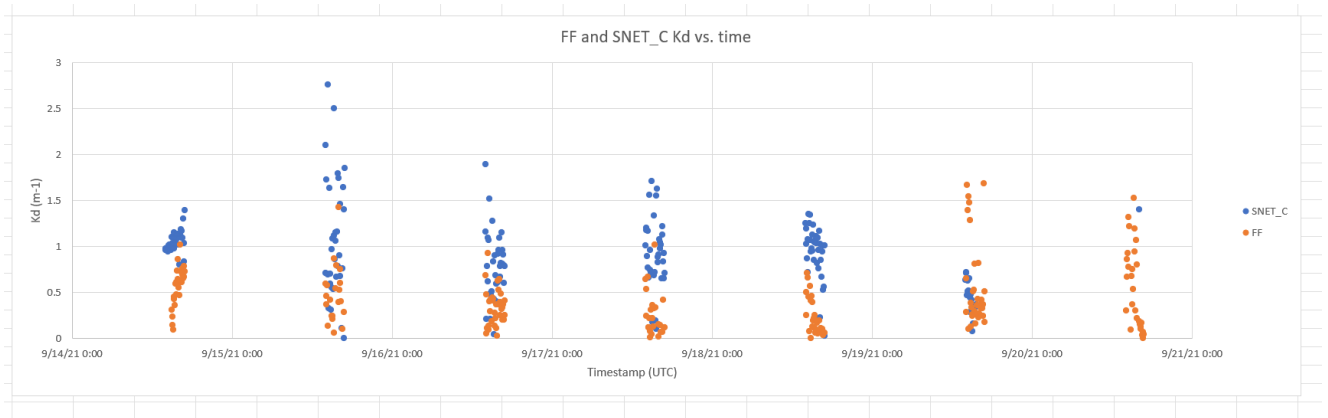
Section 1: General Project Information

A. Project Title: External Advisors 2023

B. Type (choose one):

   *Monitoring   Analysis X   Workplan Development X   Research & Synthesis X
   Other (describe):*

C. Is this a continuing project or a new project? Continuing

D. Anticipated start date: January 1, 2023

E. Anticipated end date: December, 2023

F. Estimated total cost: $40,000

G. MAAM funding requested: $10,000

Section 2. Pre-Funding Information

A. Brief description of project background and goals:

   Funding is requested to for the time (and potentially, travel costs) for three external advisors: Brian Howes, Judd Kenworthy, Simon Courtenay.

   i.   Does the project have an approved Workplan, SAP, or QAPP that describes the project tasks, timelines, and work products? No.

   ii. If so, attach and/or provide a link:

   iii. If not, provide the following information:

        a. Description of project background and goals.

External advisors work with PREP, as part of the Technical Advisory Community, to help with a number of efforts, from monitoring and research planning to interpretation of results. The goal of involving external advisors is to increase the technical credibility of work that PREP sponsors.

        b. Description of task(s) with timeline and anticipated work products.

External advisors have been and will continue to help in a number of ways in 2023. First, advisors have helped with the Eelgrass Resilience Project. While some funding was made available to Brian Howes through the project funding from NOAA, additional funds are necessary to pay for the other two advisors. Second, advisors have been closely involved in discussions about how to modify the monitoring for water quality as well as seagrass and seaweed. These two areas will be the focus for 2023. In 2024, there may be more interpretation work as part of the Eelgrass Resilience Project.

   *Include information about data QA/QC and timelines for sharing project data and results with MAAM

   *For monitoring projects, include a description of monitoring locations, frequency, and parameters

   *For modeling projects, include a description of anticipated model inputs and outputs

c. Study leader(s) and list of entities or cooperative partners involved in project.

Study leader Kalle Matso, Director of PREP.

Section 3. Post-Implementation Information

A. MAAM funding received:

B. Completion date(s) by task:

C. Data and work product delivery date(s):

D. Describe any changes or modifications made to the planned study tasks or timeline.
   Include reason(s) for changes and anticipated impacts to study results

Section 1: General Project Information

A. Project Title: Storm Add-On to Eelgrass Resilience Project

B. Type (choose one):

    *Monitoring   Analysis   Workplan Development   Research & Synthesis X
    Other (describe):*

C. Is this a continuing project or a new project? New Project

D. Anticipated start date: April 1, 2023

E. Anticipated end date: April 1, 2024

F. Estimated total cost: $91,000

G. MAAM funding requested: $91,000

Section 2. Pre-Funding Information

A. Brief description of project background and goals:

    The Eelgrass Resilience Project looks at eelgrass stressors but does not explicitly consider storm effects, which may be significant. Therefore, the goal of this project is to complement the Eelgrass Resilience Project by collecting storm-relevant data, which can be added to the insights from the Eelgrass project.

    i.   Does the project have an approved Workplan, SAP, or QAPP that describes the project tasks, timelines, and work products? No.

    ii. If so, attach and/or provide a link:

    iii. If not, provide the following information:

         a. Description of project background and goals.

Project background is described above.

         b. Description of task(s) with timeline and anticipated work products.

Given that this is a research effort rather than a monitoring protocol, QA/QC will focus on methods calibration and data filtering to identify suspect or invalid data as well as outliers. Laboratory analysis QA/QC is standard for the Water Quality Analysis Lab and are detailed in the QAPP for the Tributary Water Quality monitoring program, at: https://scholars.unh.edu/prep/418/

Project Data will be shared on the same schedule as the Tributary Water Quality program: that is, 2023 data will be summarized in a report by June 1, 2024.

In 2023, sensor packages will be deployed at head of tide of the tributaries that enter the Great Bay Proper: Lamprey River, Squamscott River and Winnicutt River. Parameters of interest include: TSS, nitrate and CDOM. These data would then be compared with data from the estuary to discern relationship between storm inputs and estuarine condition over a set amount of time. The amount of

time can also be anticipated using the hydrodynamic model developed for the Eelgrass Resilience Project.

> **Include information about data QA/QC and timelines for sharing project data and results with MAAM*
>
> **For monitoring projects, include a description of monitoring locations, frequency, and parameters*
>
> **For modeling projects, include a description of anticipated model inputs and outputs*

    c.   Study leader(s) and list of entities or cooperative partners involved in project.

Study leader Bill McDowell, Water Quality Analysis Lab, UNH.

Section 3. Post-Implementation Information

A.   MAAM funding received:

B.   Completion date(s) by task:

C.   Data and work product delivery date(s):

D.   Describe any changes or modifications made to the planned study tasks or timeline.
> **Include reason(s) for changes and anticipated impacts to study results*

Section 1: General Project Information

A. Project Title: Tier 1 Seagrass Monitoring 2023

B. Type (choose one):

   *Monitoring X   Analysis   Workplan Development   Research & Synthesis
   Other (describe):*

C. Is this a continuing project or a new project? Continuing

D. Anticipated start date: May 1, 2023

E. Anticipated end date: April 1, 2024

F. Estimated total cost: $100,000

G. MAAM funding requested: $75,000

Section 2. Pre-Funding Information

A. Brief description of project background and goals:

   Tier 1 Bottom Habitat mapping identifies acreage of seagrass, seaweed and oyster habitat in the Great Bay Estuary, using a combination of satellites, airborne imagery, drones and field verification.

   i.   Does the project have an approved Workplan, SAP, or QAPP that describes the project tasks, timelines, and work products? Yes.

   ii.   If so, attach and/or provide a link: https://scholars.unh.edu/prep/450/

   iii. If not, provide the following information:

         a. Description of project background and goals.

         b. Description of task(s) with timeline and anticipated work products.

              *Include information about data QA/QC and timelines for sharing project data and results with MAAM

              *For monitoring projects, include a description of monitoring locations, frequency, and parameters

              *For modeling projects, include a description of anticipated model inputs and outputs

         c. Study leader(s) and list of entities or cooperative partners involved in project.

Study leader Michael Routhier, Geospatial Science Center, UNH.

Section 3. Post-Implementation Information

A. MAAM funding received:

B.   Completion date(s) by task:

C.   Data and work product delivery date(s):

D.   Describe any changes or modifications made to the planned study tasks or timeline.
       Include reason(s) for changes and anticipated impacts to study results

THEORETICAL COST ALLOCATION				
FACILITY				
		Total Permitted Flow	**SHARE**	
NAME				
				$ -
Large (> 2 MGD)				
Rochester		5.03	18.65%	$ 114,112.18
Portsmouth		6.13	22.73%	$ 139,067.13
Dover		4.70	17.43%	$ 106,625.70
Exeter		3.00	11.12%	$ 68,058.95
Durham		2.50	9.27%	$ 56,715.80
Somersworth		2.40	8.90%	$ 54,447.16
Subtotal		*23.76*	*88.10%*	*$ 539,026.92*
Small (<2 MGD)				
Pease ITP		1.20	4.45%	$ 27,223.58
Newmarket		0.85	3.15%	$ 19,283.37
Epping		0.50	1.85%	$ 11,343.16
Newington		0.29	1.08%	$ 6,579.03
Rollinsford*		0.15	0.56%	$ 3,402.95
Newfields		0.12	0.44%	$ 2,722.36
Milton*		0.10	0.37%	$ 2,268.63
Subtotal		*3.21*	*11.90%*	*$ 72,823.08*
TOTAL Permit N Load		26.97	100.00%	

Costs:		
Website	$ 5,000.00	
Brown and Caldwell	$ 77,000.00	
PTAP	$ 50,000.00	
PREP Priority Group 1	$ 296,100.00	
PREP Priority Group 2	$ 101,850.00	
PREP Priority Group 3	$ 36,750.00	
Exeter		$ 47,016.00
	$ 566,700.00	$ 519,684.00

Facility Name	Total Permitted Flow	Share	2022	2023 (proposed)	2023 (less previous appropriation)
			$ 422,805.00	$ 566,700.00	$ 519,684.00
Rochester	5.03	24.42%	$120,835.75	$138,373.83	$126,893.71
Portsmouth	6.13	29.76%	$147,261.06	$168,634.51	$154,643.83
Dover	4.7	22.82%	$112,908.15	$129,295.63	$118,568.68
Exeter	3	14.56%		$82,529.13	$75,682.14
Pease ITP	1.2	5.83%	$28,827.61	$33,011.65	$30,272.85
Newington	0.29	1.41%	$6,966.67	$7,977.82	$7,315.94
Rollinsford	0.15	0.73%	$3,603.45	$4,126.46	$3,784.11
Milton	0.1	0.49%	$2,402.30	$2,750.97	$2,522.74

Table 1. Priority Group 1 Studies for 2023 Municipal Alliance Funding				
Study Name	MAAM 2022 Expenditure	MAAM 2023 Request	Study Description	Notes
Estuarine Water Quality Monitoring	$41,000	$64,000	Expanded temporal and/or spatial scope of ongoing estuarine water quality monitoring program for a more comprehensive understanding of water quality patterns.	MAAM would be providing a portion of overall study cost (~$170k); other funds would come from DES and other non-MAAM municipalities.
Light Array Program	$29,000	$42,000	Continuation of work that started in 2021 and will continue annually. Provides high resolution data on the light environment in the estuary and fills an important data gap.	Overall study cost increased for 2023 monitoring year is for increased maintenance or arrays, based on 2021-2022 field experiences.
External Advisors: Monitoring Program Review	$25,000	$10,000	Funding for engaging external advisors to review and provide guidance on the overall monitoring program.	Decreased cost from last year based on 2021 billings and advisor engagement level.
Tier 1 Seagrass Monitoring[1]	$75,000	$75,000	Continuation of annual aerial imagery mapping of seagrass in GBE.	
Storm Add-On to Eelgrass Stressor Project	$5,000	$91,000	Implementation of a study to investigate the impacts of storm events and inputs on water quality in GBE. This study would collect data to help fill an important data gap.	Preliminary workplan and budget provided by B. McDowell. The cost shown here is for the first year of a two-year plan.
5% Contingency		$14,100	Budget for additional unanticipated costs. Discretionary contingency not included.	
Group 1 Total		$296,100		

[1]MAAM also provided $53k for Tier 2 seagrass monitoring in 2022. In 2023, PREP expects to use base funds for that effort.

Table 2. Priority Group 2 Studies for 2023 Municipal Alliance Funding				
Study Name	MAAM 2022 Expenditure	MAAM 2023 Request	Study Description	Notes
Turbidity Monitoring	$60,000	$67,000	Work will focus on collecting data on turbidity and light attenuating components, expanding on data collection conducted in 2022. This study will collect important data on non-nutrient stressors and light dynamics.	Preliminary workplan provided by A. Matsuoka
Macroalgal Dynamics Synthesis and Recommendations		$25,000	Work will focus on compiling, reviewing, and synthesizing work done to date related to green and red macroalgae in GBE, identifying data gaps related to macroalgae as potential stressors to eelgrass, and development of a monitoring plan to close data gaps (if needed).	Cost depends on anticipated scope, which could be decreased. Work may be done by PREP/UNH researchers or could go out to bid.
Tributary Discharge Measurements		$5,000	Estimating river discharge measurements on the Bellamy, Great Works, and Salmon Falls Rivers. This study is a stated commitment in MAAM AMP.	The workplan for this study has not been developed yet. Based on the proposed cost, it appears PREP's approach will likely be to get discharge estimates, rather than by installing gaging or other continuous recording equipment.
5% Contingency		$4,850	Budget for additional unanticipated costs. Discretionary contingency not included.	
Group 2 Total		$101,850		

Table 3. Priority Group 3 Studies for 2023 Municipal Alliance Funding				
Study Name	MAAM 2022 Expenditure	MAAM 2023 Request	Study Description	Notes
Estuarine Water Quality Monitoring Equipment		$20,000	Funding would be used to buy new sondes for continuous data collection at the estuarine water quality locations.	MAAM would be providing a portion of overall study cost (~$100k); other funds would come from Infrastructure/CARE and/or DES and EPA.
Shoreline Hardening Survey		$15,000	A survey to determine the location and extent of hardened shoreline in GBE. Shoreline hardening impacts hydrodynamics, sediment movement, and water quality, all of which can impact eelgrass health. Results of this survey could help inform the analysis and interpretation of the water quality and hydrodynamic studies, and may be useful in identifying and management of non-point source stressors.	This study does not need to be conducted annually; PREP recommends a frequency of 5–10 years.
5% Contingency		$1,700	Budget for additional unanticipated costs. Discretionary contingency not included.	
Group 3 Total		$36,750		

Section 1: General Project Information

A. Project Title: Macroalgal Dynamics Synthesis and Recommendations

B. Type (choose one):

*Monitoring   Analysis   Workplan Development X   Research & Synthesis
Other (describe):*

C. Is this a continuing project or a new project? New

D. Anticipated start date: February 1, 2023

E. Anticipated end date: Dec 1, 2024

F. Estimated total cost: $25,000

G. MAAM funding requested: $25,000

Section 2. Pre-Funding Information

A. Brief description of project background and goals:

The goal of this project is to come up with a monitoring/research plan that better enables PREP community to understand changes in macroalgal abundance, species diversity, and location over the coming years.

  i.   Does the project have an approved Workplan, SAP, or QAPP that describes the project tasks, timelines, and work products? No.

 ii.   If so, attach and/or provide a link:

iii.   If not, provide the following information:

   a.   Description of project background and goals.

Macroalgal monitoring and research is currently ongoing within the PREP community, but the temporal and spatial dynamics are not being adequately captured, since macroalgae is often not attached, so it moves quickly around the system. Also, it can grow and die more quickly than seagrass.

The goal is to have concrete recommendations for how to monitor these changes by the Fall of 2023 so that plans can be incorporated into the 2024 field season.

   b.   Description of task(s) with timeline and anticipated work products.
   c.

- In early 2023, identify contractor(s)—through RFP or other means—to 1) synthesize what we know about macroalgae patterns in Great Bay Estuary, 2) look at other case studies from similar estuaries to understand monitoring and research approaches that could benefit management of macroalgae blooms, 3) and recommend a set of steps for future monitoring (and research, if necessary).

- If recommendations are made by Fall of 2023, they can be incorporated into 2024 field season.

Include information about data QA/QC and timelines for sharing project data and results with MAAM

> **For monitoring projects, include a description of monitoring locations, frequency, and parameters*
>
> **For modeling projects, include a description of anticipated model inputs and outputs*

    d.   Study leader(s) and list of entities or cooperative partners involved in project.

Study leaders will be PREP, which will identify the best contractor(s) for this work. While several candidates exist, this determination hasn't been made yet.

Section 3. Post-Implementation Information

A.   MAAM funding received:

B.   Completion date(s) by task:

C.   Data and work product delivery date(s):

D.   Describe any changes or modifications made to the planned study tasks or timeline.
> **Include reason(s) for changes and anticipated impacts to study results*

Section 1: General Project Information

A. Project Title: Tributary Discharge Monitoring (expansion)

B. Type (choose one):

    Monitoring X   *Analysis*   *Workplan Development*   *Research & Synthesis*
    Other (describe):

C. Is this a continuing project or a new project? New (expansion of existing program)

D. Anticipated start date: March 1, 2023

E. Anticipated end date: June 1, 2024

F. Estimated total cost: $5,000

G. MAAM funding requested: $5,000

Section 2. Pre-Funding Information

A. Brief description of project background and goals:

    The goal is to extend existing tributary discharge monitoring to three sub-watersheds that do not have this activity: Bellamy River, Great Works River, Salmon Falls River.

    i. Does the project have an approved Workplan, SAP, or QAPP that describes the project tasks, timelines, and work products? No

    ii. If so, attach and/or provide a link:

    iii. If not, provide the following information:

        a. Description of project background and goals.

        Step 1: Review methods used for other five tributaries in order to assess whether same methods are appropriate for three new sub-watersheds.

        Step 2: Work with USGS to deploy stage height sensor and build a rating curve to relate water level to flow. This may include personnel time to sample after storms to understand full range of flow.

        *Include information about data QA/QC and timelines for sharing project data and results with MAAM
        > **For monitoring projects, include a description of monitoring locations, frequency, and parameters*
        > **For modeling projects, include a description of anticipated model inputs and outputs*

        b. Study leader(s) and list of entities or cooperative partners involved in project.

Study leader: Michelle Shattuck from the Water Quality Analysis Lab, UNH

Section 3. Post-Implementation Information

A.   MAAM funding received:

B.   Completion date(s) by task:

C.   Data and work product delivery date(s):

D.   Describe any changes or modifications made to the planned study tasks or timeline.
      Include reason(s) for changes and anticipated impacts to study results

Section 1: General Project Information

A. Project Title: Turbidity Monitoring

B. Type (choose one):

   *Monitoring   Analysis   Workplan Development   Research & Synthesis X
   Other (describe):*

C. Is this a continuing project or a new project? Continuing

D. Anticipated start date: June 1, 2023

E. Anticipated end date: Dec 1, 2024

F. Estimated total cost: $67,000

G. MAAM funding requested: $67,000

Section 2. Pre-Funding Information

A. Brief description of project background and goals:

   The goal of this project is to a) synthesize existing data on light and turbidity in the Great Bay Estuary, and b) combine older data with newly acquired data in order to build the foundation for a bio-optical model. This will model will eventually allow us to understand light dynamics with less monitoring. (The model will have to be calibrated and tested occasionally to maintain high level of accuracy.)

   i.   Does the project have an approved Workplan, SAP, or QAPP that describes the project tasks, timelines, and work products? No.

   ii. If so, attach and/or provide a link:

   iii. If not, provide the following information:

      a. Description of project background and goals.

Project background is described above.

      b. Description of task(s) with timeline and anticipated work products.

Given that this is a research effort rather than a monitoring protocol, QA/QC will focus on methods calibration and data filtering to identify suspect or invalid data as well as outliers.

Project Data will be shared on the same schedule as the Estuarine Water Quality program: that is, 2023 data will be summarized in a report by June 1, 2024.

Existing Data: Towards examining K_d over the last decades in the Great Bay, the first objective is to continue to examine seasonal and interannual trends in SPM, CDOM, and CHL at the following four stations: GRBUPR, GRBCML, GRBAP, GRBGB. These stations are chosen because a number of changes of not only eelgrass but also seaweed and oyster habitats have been reported in those areas. In addition, this analysis will be extended to other sites, such as GRBGBE and GRBSQ.

Includes valid trend analyses, statistics on data as well as supporting data including river discharge, precipitation, etc.

New Field Work:

Sites include the 4 flowpath transects from the Eelgrass Resilience Project as well as the main sites used in the historical analysis: GRBUPR, GRBCML, GRBAP, GRBGB.

Includes data processing on each profile by carefully checking the quality (QA/QC). Uncertainty based on several profiles (casts) at a given station will be provided.

Parameters include: IOPs: Inherent Optical Properties such as SPM, CDOM, CHL

AOPs: Apparent Optical Properties such as water (or remote sensing) reflectance spectra

*Include information about data QA/QC and timelines for sharing project data and results with MAAM

*For monitoring projects, include a description of monitoring locations, frequency, and parameters

*For modeling projects, include a description of anticipated model inputs and outputs

c.   Study leader(s) and list of entities or cooperative partners involved in project.

Study leader Atsushi Matsuoka, UNH.

Section 3. Post-Implementation Information

A.   MAAM funding received:

B.   Completion date(s) by task:

C.   Data and work product delivery date(s):

D.   Describe any changes or modifications made to the planned study tasks or timeline.
    *Include reason(s) for changes and anticipated impacts to study results

Meeting Type:	**Regular Meeting**	
Meeting Location:	**Newington Wastewater Treatment Plant**	
Remote Location:		
Meeting Date:	**September 15, 2022**	
Meeting Time:	**10:00 AM**	

1. CALL TO ORDER

The Meeting was called to Order at 10:00 AM. with a quorum of the Members present.

Members Present:

Town/City	Representative	Present
Dover	Gretchen Young (GY) Environmental Projects Manager	Yes
Portsmouth	Suzanne Woodland (SW) Deputy City Manager	Yes
Rochester	Katie Ambrose (KA)	Yes - remote
Exeter	Jennifer Perry (JP) Public Works Director	Yes
Newington	Denis Messier (DM) Plant Operator	Yes

Town of Milton and Rollinsford representatives unable to attend.

Non-Members Participating In-Person:
Melissa Paly (MP), CLF Waterkeeper
Jamie Houle (JH), UNHSWC
Brian Getz (BG), Portsmouth DPW
Jamie McCarthy (JM), Portsmouth DPW
Sally Soule (SS), NH DES
Danielle Gaito (DG), EPA

Non-Members Participating Remotely via Zoom:
Erik Beck, EPA Region 1
Emma Williams, GeoSyntec
Jim Steinkrauss, Rath, Young and Pignatelli

Meeting Type:	**Regular Meeting**	
Meeting Location:	**Newington Wastewater Treatment Plant**	
Remote Location:		
Meeting Date:	**September 15, 2022**	
Meeting Time:	**10:00 AM**	

2. **Minutes of June 23, 2022 Meeting.** KA noted Milton and Rollinsford representatives attended remotely.

   Motion by SW, seconded by JP to approve the minutes as amended.

   Roll Call Vote:

Town/City	Representative	Vote
Dover	GY	Yes
Portsmouth	SW	Yes
Rochester	KA	Yes
Exeter	JP	Yes
Newington	DM	Yes

3. **Community Plans for Nitrogen Reduction Efforts.**

   GY from Dover presented a detailed spreadsheet on ongoing projects, planned projects tied in with Dover's CIP, and reasonable estimates on nitrogen reduction. Several projects have ballooned out to larger ones through the planning process. Projects include culvert improvements, flood mitigation, stormwater reconstruction, and reducing impervious surfaces. Dover was able to work collaboratively with a private development with a failed septic system to extend the municipal sewer into a private subdivision. Through an easement the city paid for the connection and was able to decrease nitrogen by 280 lbs. Currently they have another SRF to work on a similar project and are looking for additional ways to extend the wastewater system into septic areas. In addition. they are working on leaf litter management at the recycling center and are participating in a street sweeping pilot project – weighing the trucks to determine amount of materials collected. Electric vehicle readiness is now in their site plan review as is slow-release nitrogen for landscaping plans. 30% of all building should have green roofs or solar. Ongoing outreach programs are in place for pet waste, septic systems, leaf litter, and vehicle idling. Lastly, they are working on staff training and increasing their commitment to innovation.

Meeting Type:	**Regular Meeting**
Meeting Location:	**Newington Wastewater Treatment Plant**
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Meeting Date:	**September 15, 2022**
Meeting Time:	**10:00 AM**

JM from Portsmouth advised the WWTP is continuing to work as designed, operating efficiently and well below permitted amounts for nitrogen. Review of spreadsheet of current and upcoming projects that include bike lanes and shared use paths. Like Dover, Portsmouth is continuing street sweeping, picking up curbside leaf litter weekly and cleaning catch basins. Goal is to clean more than 25% each year, averaging 600 catch basins a season. Continuing to improve programs for stormwater best practices for larger projects, encouraging liquid biological systems instead of fertilizers, and septic system outreach. Recently they connected 88 homes along Sagamore Ave from septic to a low pressure forcemain system and are looking to purchase conservation easements along the Bellamy Reservoir. They are looking at long-term funding for a storm water mitigation program. To tag on to this, using the PTAP system to verify that projects are meeting the requirements and being entered into an online permitting system to provide a mechanism to follow up with properties for future inspection and maintenance. The Water as a Memory Exhibit at Strawbery Banke is still on display.

KA gave an update from Rochester. Looking at developments, road work, and parking lot designs. Continuing on non-structural best practices such as street sweeping, leaf litter, and catch basin work. Goal is cleaning 25% of their catch basins annually. Working on their Asset Management Plan and Nitrogen source identification report. They just hired an assistant engineer to focus on stormwater projects. Currently working on a pilot project at their septage facility – receiving septage at the headworks did not impact the secondary and tertiary systems at the plant. They are also looking at non-point source benefits and working with surrounding communities.

JP had no written report from Exeter to share, but they are working on a number of projects. Focus is Salem St area, an older neighborhood with poor condition sewer – replacing the main and residential lines to the system. They are replacing catch basins with deep sumps and have upcoming utility replacement projects. Exeter is also planning on water main replacements and minimizing road widths. A dam feasibility study is coming up and they are working with their town planner to encourage infill development vs. expansion development.

DM provided a quick update for Newington. The WWTP is running below 5lbs for nitrogen. Catch basins have been vacuemed out, the first time in almost 10 years. Permits for a large development have been submitted to NH DES. MP asked if there was any focus on how to reduce nitrogen load in the mall parking lots. Currently there are retention ponds. GY pointed out getting the PTAP up and running with UNHSWC will help. Rollinsford and Newington are similar on the residential side for this.

MUNICIPAL ALLIANCE FOR ADAPTIVE MANAGEMENT
MEMBERS MEETING
DRAFT MINUTES

Meeting Type:	**Regular Meeting**
Meeting Location:	**Newington Wastewater Treatment Plant**
Remote Location:	
Meeting Date:	**September 15, 2022**
Meeting Time:	**10:00 AM**

JH brought up the Clean Sweep program – experts to look at street sweeping credits. It's an innovated measured approach – pick it up, measure it, get credit for it. The University of Minnesota has a great study and data on this. It's simple and incentivizes cleaning streets, they will be working this into the PTAP. Based on research USGS has done, 70-80% of phosphorus load occurs in the fall. Target street sweeping for fall. DM inquired about spring street sweeping to remove salt and sand. JH advised we should continue to do so, but also in the fall for leaf debris. Because of the difference in solid matter, the credits are different seasonally

4. **Review of PTAP progress and year one reports.**

Review of load reductions shown for each community. JH advised the database is working well, and they are continuing to make improvements. They can look at individual reports and will want to verify that a project meets 80% reduction. Portsmouth, Dover, and Exeter are using this as part of the planning review process. Reports can be generated annually that meet requirements. A batch import feature has just been added but features and attributes must line up with the database. What the PTAP does is a user authentication – anyone can put stuff in. Administrators authorize what is a valid entry. The database only counts what is constructed, not what is planned. Non-structural needs to be entered or reviewed annually. Infiltration rate is required with infiltration best management practices. In the back of the report is land use change tracking, this will provide a rough idea of efforts done to date. It can show effective impervious surface decrease and calculate nitrogen load. I.e., in Durham the Riverwoods complex has 16 acres, 10 acres are now impervious cover with a commercial development, and they are now working to mitigate that impact. Land use changes are included – classes on how we track this are numerous and depending up on data set used – how we classify land use is different than others. They are now testing hydrological response monitoring for Great Bay. At this level they can easily track long use land change over time. Between DES, EPA, and UNH they can track land use change over time. Focus on land use change is at the local GIS level. So, they can focus on nitrogen reduction. We have hit every target so far from the EPA. The data begins when the PTAP was started in 2015. BG noted when posting, add a footnote if it is a draft or work in progress so they can look at potential credits and how to assign them. JH advised they can produce annual reports. Their recommendation is for municipalities to control how data is shared and should post this on their municipal websites. There is no sunset on structural credits, however that might change down the road. They are tracking property owner information as well. Part of a UNH senior project has been inputting that type of data. Their baseline was 2014 information from a 2010 data set. GY added that a MAAM dashboard is being developed to showcase information from PTAP as well as with information about land conservation. Focus is on

MUNICIPAL ALLIANCE FOR ADAPTIVE MANAGEMENT
MEMBERS MEETING
DRAFT MINUTES

Meeting Type:	**Regular Meeting**
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Meeting Time:	**10:00 AM**

phosphorus, nitrogen, TSS, and land use. Put your information into the database and then start showing progress that you can share with your community. SW also mentioned that sharing data can help with buy in from municipal and community leaders. Sediment removal as well. Reports with both of there are helpful. JH concluded that metrics are aligned with the MS4. In the future there is the potential for features to be added in or if an emergency contaminate comes up they can work with the EPA to develop credits.

5. **Discussion for improvements for PTAP implementation for next year**

PTAP and NHDES to continue to work with towns to improve the data input.

6. **Stakeholder comment**

MP advised that they had a very interesting stakeholder meeting and that a few questions came up:
- How are communities accounting for new development? Rapid growth in towns, increases in wastewater, site changes, stormwater, etc. Are we really reducing or slowing the rate of increase?
- Are we seeing negative numbers for impervious surfaces?
- What are the municipalities doing that is new as a result of this permit? What is happening that wasn't already happening? How are we illuminating where things are happening?
- Stakeholders seeing projects, how is a small project part of a nitrogen control permit, how are they producing a small net gain?
- Seeing some reports, what are the other towns doing that did not submit a report? Maybe dashboard and more municipal involvement?
- Everyone is talking about for state regulations for different things … are municipalities actively advocating or just saying it?

GY noted that there were answers to these stakeholder questions. SW asked if there was a municipal representative at the stakeholder meeting – no. GY asked MP to provide a written list of questions. MAAM will work to formally respond to each comment, and at the same time formally respond to EPA comments. This will likely be completed for the 6-month AMP review slated for January or February 2023.

7. **Public comment**

Meeting Type:	**Regular Meeting**
Meeting Location:	**Newington Wastewater Treatment Plant**
Remote Location:	
Meeting Date:	**September 15, 2022**
Meeting Time:	**10:00 AM**

DG commenting from the EPA lens – exciting to be here today and seeing stormwater bleeding into every project and part of the planning process. General permit was in larval stage and now moving into juvenile stage. They want to see how we are benchmarking so we can move forward. But also want municipalities to get credits for all actions taken. PTAP is the process – PTAP answers most if not all of the Appendix D questions raised in the EPA comment letter. Would like to streamline process for municipalities. Lists right now are a bit vague, the power of PTAP is helping to quantify. It puts everyone on same page with equal comparisons. Want to clarify that PTAP and BATT programs are open-source software, free to use. Will make it easier for EPA to issue future permits.

8. **Other business**

Letter from EPA will get some comments in writing, GY would like to create a subcommittee to compile a response. Then potentially look at the feed from the output of PTAP how it is adjusted to create annual report or forecasting. Consensus is yes to a subcommittee. JH was nominated. If we streamline reporting it will make the education piece easier.

Goal of January update – EPA wants submission in the Fall. Keep Jan/Feb as goal for mid-year check in and then look forward.

JP advised that Exeter did receive new individual general permit, effective with their November reporting. GY inquired- will that impact the funding into the alliance? JP is looking into that.

KA advised that the Alliance receive a second and final invoice. Turbidity was included in it but thought that the scope had changed. Moving forward as fiscal agent, if we have an invoice come forward that was different than original vote should we revote? GY suggested that if the invoice is greater than $1,000, there should be a vote of the executive committee. It could be done electronically.

Motion by SW, seconded by DM to approve the change of scope on the invoice

Roll Call Vote:

Meeting Type:	**Regular Meeting**
Meeting Location:	**Newington Wastewater Treatment Plant**
Remote Location:	
Meeting Date:	**September 15, 2022**
Meeting Time:	**10:00 AM**

Town/City	Representative	Vote
Dover	GY	Yes
Portsmouth	SW	Yes
Rochester	KA	Yes
Exeter	JP	Yes
Newington	DM	Yes

9. Schedule next meeting and agenda items

Next meeting will be November 3, 2022 at 10 am in Portsmouth. Budgeting will be on the agenda.

10. Adjourn

Motion by SW to adjourn, seconded by DM.

Roll Call Vote:

Town/City	Representative	Vote
Dover	GY	Yes
Portsmouth	SW	Yes
Rochester	KA	Yes
Exeter	JP	Yes
Newington	DM	Yes

All in favor, motion approved. Meeting adjourned at 12:02 pm.

Minutes Prepared by: Gail Klanchesser, Sewer Clerk, Newington Sewer Commission.

<p align="center">**Proposal for On-going Program Support for the**
Pollution Tracking and Accounting Project (PTAP)</p>

Project Lead: James Houle, UNH Stormwater Center
Project Cost: $50,000
Duration: Winter 2023 – December 2024

Project Purpose

This funding will provide critical continued support for two key regional efforts to manage and track municipal efforts to reduce nutrient pollution from nonpoint sources.

- The PTAP pollutant tracking tool, which has now been in existence for over six years, will be enhanced and upgraded based on recent input from end users to provide better functionality for current tracking needs. On-going technical assistance for PTAP will be provided to participating municipalities via direct communication and planned trainings and webinars. UNH Research Computing Services and NH GRANIT are included again as project partners to provide consistency with their past efforts to refine and enhance PTAP database functionality and operability. Accounting calculations for structural BMPs will be upgraded to comply with EPA Region 1 methods embodied in the 2017 NH MS4 permit and developed to comply with the adaptive management framework outlined in the Great Bay Total Nitrogen General Permit.

- Pollutant control tools developed through the pollutant "hot spots" mapping project will be further enhanced to provide greater utility for towns regulated under the NH MS4 permit and for towns subject to requirements of the Great Bay Total Nitrogen General Permit.

Project Scope

Objective 1: Technical assistance and improved functionality of the PTAP tracking and accounting platform.

Task 1: Review PTAP database functionality

Description: UNH and NHDES will coordinate with participating municipalities to receive feedback on the working PTAP database. The goal will be enhanced functionality and assist with PTAP participation. Feedback will be gathered through workshops, webinars, and meetings with end users.

Estimated cost: $15,000

Objective 2: Develop PTAP reporting tools to track nitrogen additions or reductions in the Great Bay watershed.

Task 2: Annual Nitrogen Tracking Reporting

Description: UNHSC will work with MAAM communities to develop an annual report template that will be developed in compliance with the General Total Nitrogen Permit guidelines and will satisfy permit obligations.

Estimated cost: $15,000

Objective 3: UNHSC will work with MAAM to refine, build, and provide enhanced technical assistance for hotspot mapping products.

Task 3: Working with NHDES, UNH and GRANIT will continue supporting and developing the online hotspot maps for all NH MS4 communities.

Description: Additional technical assistance may include, but not be limited to, completing hotspot maps for communities not included in the original product development due to insufficient data; changes, additions, or enhancements to existing mapping products; enhanced or new mapping products such as highlighted areas of high potential septic loading; and technical assistance for end users (workshops, webinars, written guidance materials).

Estimated cost: $10,000

Objective 4: UNHSC will work with project partners to develop long-term land use change metrics to support permit compliance.

Task 4: Working with MAAM, NHDES, UNH GRANIT, and EPA, UNHSC will continue supporting development of hotspot maps for all Great Bay communities and associated land use change statistics.

Description: Additional technical assistance may include, but not be limited to, completing hotspot maps and hydrologic response unit (HRU) basemaps for communities tracking long-term land use change trends in the watershed.

Estimated cost: $10,000