State Water Infrastructure Authority Meeting Date: April 9-10, 2019 Agenda Item N – Priority System Modifications for the 2019 Intended Use Plans (IUPs) for CWSRF and DWSRF Programs

Division of Water Infrastructure Staff Report

Background

The federal Clean Water Act and federal Safe Drinking Water Act provide states with the broad authority to implement and operate State Revolving Fund (SRF) loan programs, including project funding prioritization. North Carolina General Statute G.S. 159G-71 empowers the State Water Infrastructure Authority (Authority) to establish priorities for making loans and grants consistent with federal law.

The US Environmental Protection Agency (EPA) requires the Division of Water Infrastructure (Division) to update its Intended Use Plan (IUP) for the Clean Water SRF (CWSRF) and Drinking Water SRF (DWSRF) programs. Included within each program's IUP is the Priority Rating System which contains the points that are applied by Division staff when an application for funding is evaluated. The Division proposes the Priority Rating System to the EPA each year in the IUP for each SRF and submits the IUPs to the EPA as part of the capitalization grant applications.

The same or similar Priority Rating Systems are applied in the Division's other funding programs (i.e., CDBG-I and State Reserve Programs). The Priority Rating Systems include four categories:

- 1. Category 1 Project Purpose
- 2. Category 2 Project Benefits
- 3. Category 3 System Management
- 4. Category 4 Affordability

Overview

The Division proposes the following Priority Rating System modifications:

- I. Add a new line item for projects that address emerging compounds in drinking water
- II. Revise Line Item 1.A (which currently addresses failed drinking water systems) to more broadly address consolidation of nonviable drinking water or wastewater utilities
- III. Renumber several line items in both the drinking water and clean water (wastewater) Priority Rating Systems to clarify the relationships between them

Item I – Proposed New Line Item for Emerging Compounds in Drinking Water

Background

At the Authority's July 2018 meeting, the Division reviewed comments received on the Priority Rating System for drinking water projects. Two letters were received requesting emerging compounds be prioritized including one from Brunswick County, quoted below:

"Frank Williams, Chairman, Brunswick County Commissioners – The commenter voiced concerns related to the impact of Per- and Polyfuoroalkyl Substances (PFAS), GEN-X, 1,4-Dioaxane, and other emerging contaminants and their impacts of the drinking water supply of Brunswick County."

The staff report discussed during the Authority's July 2018 meeting included the following response:

"Staff will talk with NCDEQ leadership and other NCDEQ divisions about defining a process in order to establish an appropriate basis for a given health threshold. Note that this process could be utilized as other emerging contaminants become issues. Once a process has been established, staff may recommend changes to the prioritization."

The Division has consulted with NCDEQ leadership and the Division of Water Resources on this issue and recommends addressing emerging compounds when EPA has not established a maximum contaminant level (MCL) for that parameter.

The current Priority Rating System provides priority points for a project that addresses contamination in water under Line Items 2.H, 2.I and 2.J. The Division proposes to add an additional level of priority as shown below:

Line Item #	# Category 2 – Project Benefits	
2.H	Project addresses acute contamination of a water supply source	15
2.1	Project addresses contamination of a water supply source other than acute	
PROPOSED	Project addresses an emerging compound without a maximum contaminant level (MCL) but above a health advisory level	<u>7</u>
2.J	Project improves treated water quality by adding or upgrading a unit process	3

Overview

The acute contaminants in Line Item 2.H can lead to health impacts from short-term exposure. The other-than-acute-contaminants can cause illness only after repeated exposure over a longer time and projects to remove these contaminants are of lower priority because they are less urgent. Taken together, Line Items 2.H and 2.I represent projects that address violations of a maximum contaminant level (MCL), treatment techniques (e.g., turbidity exceedances), or other similarly developed standards such as Action Levels for lead and copper. The EPA establishes these standards after rigorous and extensive studies that consider the following:

• Prevalence of the contaminant

- Health effects of the contaminant at various doses (usually including human health data)
- Availability, cost and cost-effectiveness of treatment, and consequent practicality of achievement of a proposed standard

Once proposed, the rule establishing a standard is subjected to a formal public comment and review process prior to finalization. After finalization, systems have a reasonable length of time to show compliance with the standard; it does not become effective immediately. Once effective, such a standard is legally enforceable.

In contrast, drinking water health advisory levels are not necessarily based on extensive data, may not go through formal rulemaking and are not constrained by practicality. So, drinking water health advisory levels are not legally binding on the water system (but may be for the responsible party).

The Division polled five states that the Division believes have looked at emerging compounds. The results follow:

<u>Michigan</u>

Michigan awards 250 priority points <u>for each</u> acute violation up to a maximum of 450. Michigan awards 200 points for an "other-than-acute" violation. Michigan would recognize the federal Drinking Water Health Advisory Levels to determine if the emerging contaminant were acute (in which case it would receive 250 priority points) or chronic (in which case it would receive 200 priority points), the same as an MCL violation.

<u>Minnesota</u>

Minnesota awards 25 priority points for a violation of an acute MCL such as nitrate or nitrite. Minnesota awards 15 priority points for violations of a non-acute primary MCL. However, Minnesota can award 25 priority points if the level of a contaminant with a non-acute MCL exceeds an acute toxicity level established by a Minnesota Department of Health (MDH) health risk assessment. Minnesota does not award priority points for emerging compounds for which there is no MCL, even if the contamination exceeds an acute toxicity level established by an MDH health risk assessment.

New Hampshire

New Hampshire awards up to 60 priority points for the most acute violations, if repeated. New Hampshire awards up to 52 priority points for certain other MCL violations (if repeated). New Hampshire awards up to 52 priority points for an emerging contaminant with a site-specific do-not-drink Health Advisory.

New Jersey

New Jersey awards 500 priority points for the most acute violation. New Jersey awards 250 priority points for other MCL violations. New Jersey awards up to 200 points for an emerging contaminant that exceeds an "advisory as deemed applicable by the DEP".

West Virginia

West Virginia awards up to 50 priority points for the most acute violation. West Virginia awards up to 40 priority points for a project to address a chronic MCL. These represent the maxima for repeated violations of the MCLs; a project to address a merely 'periodic' violation of an MCL earns only 30 points. West Virginia would consider the EPA's Drinking Water Health Advisory Levels the same as an MCL violation: West Virginia would determine if the emerging contaminant were acute (in which case it would receive up to 50 priority points) or chronic (in which case it would receive up to 40 priority points).

This information is tabulated below. Most of the surveyed states prioritize emerging compounds near the priority of other-than-acute MCLs.

Summary of States' Emerging Compound Information						
State	Acute MCL or equivalent violations	Other- than- acute MCL	Emerging Contaminant	Notes		
Michigan	Max 450 (250 per violation)	200	200-250	Same as single violation of MCLs		
Minnesota	25	15-25	-	Does not prioritize emerging compounds		
New Hampshire	60	52	52	Exceedance of a do-not-drink Health Advisory		
New Jersey	500	250	200	Exceedance of an "advisory as deemed applicable by the DEP"		
West Virginia	50	40	40-50	Based on health effect		

The Division proposes to award seven priority points to a project that addresses an emerging compound. Seven points is near but below the priority for an "other-than-acute" contaminant that has an MCL. This level of priority reflects that emerging compounds do not require regulatory action (fewer points than Line Items 2.H. and 2.I.) but do address public health concerns (higher priority than Line Item 2.J.).

The Division will define in guidance that an emerging compound without a MCL but above a health advisory level refers only to Drinking Water Health Advisory Levels established by the US EPA¹ or other compound with comparable technical information (such as a reference dose) as determined by NCDEQ. The Division will develop (and update as needed) guidance to include a list of compounds in consultation with the Division of Water Resources to supplement the EPA list.

¹ 2018 Edition of the Drinking Water Standards and Health Advisories Tables available at https://www.epa.gov/dwstandardsregulations/drinking-water-contaminant-human-health-effects-information

Item II – Extending Priority for Consolidation

<u>Summary</u>

The current Drinking Water Priority Rating System (Line Item 1.A) prioritizes any project that "will eliminate by merger or dissolution, a failing public water supply system". The Division proposes to extend this same priority to wastewater utilities. The Division further proposes to provide this same priority not only to systems that are failing, but to more broadly-defined "nonviable systems", effectively, systems that are in danger of failing. The proposed revised Line Item 1.A will prioritize any project that "will consolidate a nonviable drinking water or wastewater utility".

Proposal

The current Drinking Water Priority Rating System Line Item 1.A provides the highest possible points in Category 1 – Project Purpose to projects that consolidate failing drinking water systems into nearby (generally larger) viable systems. The Division (and the Division of Water Resources Public Water Supply Section) have been pleased with the consolidation projects that have been funded, which have accomplished the following:

- Eliminated threats to public health from failing systems that were generally not performing routine monitoring
- Freed the time and attention of the staff of the Division of Water Resources Public Water Supply Section, who spent a disproportionate amount of time on the failed systems
- Reduced the need for future grant funding by the Division of Water Infrastructure

Having addressed many of the failing systems, the Division proposes to provide this priority more broadly for consolidation of nonviable (as opposed to already-failing) utilities. This would provide proactive funding to consolidate systems before noncompliance is experienced or before a financial situation becomes dire. The Division proposes to extend the high priority of Line Item 1.A to wastewater utilities as well as drinking water. The proposed revision is shown below:

Line Item #	Category 1 – Project Purpose	Points
1.A	Project will eliminate, by merger or dissolution, a failing public water supply system	25
<u>1.A</u>	Project will consolidate a nonviable drinking water or wastewater utility	<u>25</u>

<u>Item III – Renumbering Line Items</u>

Background

Certain sets of priority line items are mutually exclusive. For example, Line Item 2.E prioritizes projects that directly address enforcement documents:

Line Item #	Category 2 – Project Benefits	Points
2. E	Project directly addresses enforcement documents	
2.E.1	Project directly addresses an EPA Administrative Order for a local government Applicant located in a Tier 1 county, or addresses an existing or pending SOC, or a DENR Administrative Order, OR	5
2.E.2	Project directly resolves a Notice of Violation or Notice of Deficiency	3

As another example, Line Item 2.L prioritizes projects that create an interconnection:

Line Item #	Category 2 – Project Benefits	Points
2.L	Project provides a public water system interconnection	
2.L.1	Project creates a new interconnection between systems not previously interconnected OR	10
2.L.2	Project creates an additional or larger interconnection between two systems already interconnected which allows one system's public health water needs to be met during an emergency OR	10
2.L.3	Project creates any other type of interconnection between systems	5

The display of these line items follows two conventions:

- The main line item (2.E or 2.L) is a title and confers no priority points. Only the sub-line items confer priority points.
- The sub-line items are listed in descending order of priority points and clearly distinguishes that the project is eligible for only one of the sub-line-items.

<u>Proposal</u>

This proposal clarifies that other sets of priority points that are already mutually exclusive follow the above convention. Three sets of line items are proposed to be renumbered as follows:

<u>1. Asset Planning</u>: Currently projects can be awarded points for either a Capital Improvement Plan or an Asset Management Plan. Projects cannot earn points for both 3.A and 3.B:

Line Item #	Category 3 – System Management	Points
3.A	Applicant has a current Capital Improvement Plan (CIP) that spans at least 10-years and proposed project is included in the plan OR	2
3.B	Applicant has implemented an Asset Management Plan as of the date of application	10

The Division proposes to emphasize that these line items <u>are</u> mutually exclusive by renumbering them as follows:

Line Item #	Category 3 – System Management	Points
<u>3.A</u>	Capital Planning Activities	
<u>3.A.1</u>	Applicant has implemented an Asset Management Plan as of the date of application <u>OR</u>	10
<u>3.A.2</u>	Applicant has a current Capital Improvement Plan (CIP) that spans at least 10-years and proposed project is included in the plan	2

<u>2. Contamination</u>: The current numbering of line items that address contamination of drinking water does not reflect the Division's intent that these line items be mutually exclusive:

Line Item #	Category 2 – Project Benefits	SDWR Pts
2.H	Project addresses acute contamination of a water supply source	15
2.1	2.1 Project addresses contamination of a water supply source other than acute	
PROPOSED	PROPOSED Project addresses an emerging compound without a MCL but above a health advisory level	
2.J Project improves treated water quality by adding or upgrading a unit process		3

The Division proposes to emphasize that the three line items that address drinking water standards <u>are</u> mutually exclusive by renumbering them as follows:

Line Item # Category 2 – Project Benefits		SDWR Pts
<u>2.H</u>	Project addresses contamination	
2.H.1	Project addresses acute contamination of a water supply source OR	15
2.H.2	Project addresses contamination of a water supply source other than acute <u>OR</u>	10
2.H.3	Project addresses an emerging compound without a MCL but above a health advisory level	<u>Z</u>
<u>2.1</u> -2.3	Project improves treated water quality by adding or upgrading a unit process	3

The current Line Item 2.J is available for both drinking water and wastewater projects, and it is possible to earn Line Item 2.J simultaneously with current Line Items 2.H or 2.I (proposed as 2.H.1 or 2.H.2). Therefore, the Division proposes to keep current Line Item 2.J (proposed to be renumbered as 2.I) as a separate line item.

Staff Recommendations

- Staff recommends that the Authority approve the change to Line Item 1.A to prioritize projects that will consolidate nonviable drinking water or wastewater utilities as part of the draft Priority Rating Systems to be made available for public review.
- Staff recommends that the Authority approve the new priority Line Item 2.H.3 for drinking water projects that address emerging compounds as part of the draft Priority Rating System to be made available for public review.
- Staff recommends that the Authority approve the renumbering of the priority line items as part of the draft Priority Rating Systems to be made available for public review.

The complete Priority Rating System for Wastewater Projects and Priority Rating System for Drinking Water Projects including all proposed modifications are shown below in red:

Proposed Changes to PRIORITY RATING SYSTEM for Wastewater Projects

Instructions: For each line item, <u>mark "X" to claim the points for that line item</u>. Be sure that your narrative includes justification for every line item claimed. At the end of each Category, provide the total points claimed for each program in the subtotal row for that category. Then add the subtotals from each category and enter the Project Total in the last line. Note that some categories have a maximum allowed points that may be less than the total of individual line items.

Line Item #	Category 1 – Project Purpose	Claimed Yes/No	Points
1.A	Project will consolidate a nonviable drinking water or wastewater utility		25
1.B	Project will resolve failed infrastructure issues		15
1.C	Project will rehabilitate or replace infrastructure		15
1.C.1	Treatment units, pumps and/or pump stations to be rehabilitated or replaced are greater than 20 years old, OR water/sewer lines, storage tanks, drinking water wells or intake structures to be rehabilitated or replaced are greater than 40 years old		10
1.D	Project will expand infrastructure		2
1.D.1	Treatment units, pumps and/or pump stations to be rehabilitated or replaced are greater than 20 years old, OR lines, storage tanks, drinking water wells or intake structures to be rehabilitated or replaced are greater than 40 years old		10
1.E – 1.E.2	Reserved for Other Programs		
1.F	Project will provide stream/wetland/buffer restoration		15*
1.F.1	Restoration project that includes restoration of a first order stream and includes stormwater infiltration BMPs		5*
1.F.2	Restoration project that includes restoration and / or protection of riparian buffers to at least 30 feet on both sides of the stream		5*

Line Item #	Category 1 – Project Purpose (Continued)	Claimed Yes/No	Points
1.G	Project will provide stormwater BMPs to treat existing sources of pollution		15*
1.G.1	Project that includes BMPs or BMPs in series that achieve at least 35% nutrient reduction (both TN and TP) and 85% TSS reduction		10*
1.H	Project will provide reclaimed water/usage or rainwater harvesting/usage		15*
*CWSRF O	nly		
	Maximum Points for Category 1 – Project Purpose		25
	Subtotal claimed for Category 1 – Project Purpose		
Line Item #	Category 2 – Project Benefits	Claimed Yes/No	Points
2.A – 2.B	Reserved for Other Programs		
2.C	Project provides a specific environmental benefit by replacement, repair, or merger; includes replacing failing septic tanks		15
2.D	Project addresses promulgated but not yet effective regulations		10
2.E	Project directly addresses enforcement documents		
2.E.1	Project directly addresses an EPA Administrative Order for a local government Applicant located in a Tier 1 county, or addresses an existing or pending SOC, or a DEQ Administrative Order, OR		5
2.E.2	Project directly resolves a Notice of Violation or Notice of Deficiency		3
2.F	Project includes system merger		10
2.G – 2.H	Reserved for Other Programs		

Line Item #	Category 2 – Project Benefits (Continued)	Claimed Yes/No	Points
2. <u>l</u>	Project improves treated water quality by adding or upgrading a unit process		3
<u>2.J –</u> <u>2.N</u>	Reserved for Other Programs		
2. <u>0</u>	Project <u>directly benefits</u> subwatersheds that are impaired as noted on the most recent version of the Integrated Report		20
2. <u>P</u>	Project <u>directly benefits</u> waters classified as HQW, ORW, Tr, SA, WS-I, WS-II, WS-III* or WS-IV* (* these classifications must be covered by an approved Source Water Protection Plan to qualify)		10
2. <mark>Q</mark>	Project will result in elimination of an NPDES discharge		3
2. <u>R</u>	Primary purpose of the project is to achieve at least 20% reduction in energy use		5*
*CWSRF O	nly		
	Maximum Points for Category 2 – Project Benefits		35
	Subtotal claimed for Category 2 – Project Benefits		
Line Item #	Category 3 – System Management	Claimed Yes/No	Points
<u>3.A</u>	Capital Planning Activities		
<u>3.A.1</u>	Applicant has implemented an Asset Management Plan as of the date of application OR		10
<u>3.A.2</u>	Applicant has a current Capital Improvement Plan (CIP) that spans at least 10-years and proposed project is included in the plan		2
3. <u>B</u>	System Operating Ratio is greater than or equal to 1.00 based on a current audit, or is less than 1.00 and unit cost is greater than 2.5%		5

Line Item #	Category 3 – System Management (Continued)	Claimed Yes/No	Points
3. <mark>C</mark> - 3.F	Reserved for Other Programs		
	Maximum Points for Category 3 – System Management		15
	Subtotal claimed for Category 3 – System Management		
Line Item #	Category 4 – Affordability	Claimed Yes/No	Points
4.A	Residential Connections		
4.A.1	Less than 10,000 residential connections OR		2
4.A.2	Less than 5,000 residential connections OR		4
4.A.3	Less than 1,000 residential connections		8
4.B	Current Monthly Utility Rates at 5,000 gallons Usage		
4.B.1	Greater than \$33 OR		4
4.B.2	Greater than \$40 OR		6
4.B.3	Greater than \$47		8
4.B.4	Greater than \$58		10
4.C	Local Government Unit (LGU) Indicators		
4.C.1	3 out of 5 LGU indicators worse than state benchmark OR		3

Line Item #	Category 4 – Affordability (Continued)	Claimed Yes/No	Points
4.C.2	4 out of 5 LGU indicators worse than state benchmark OR		5
4.C.3	5 out of 5 LGU indicators worse than state benchmark		7
4.D – 4.E	Reserved for Other Programs		
	Maximum Points for Category 4 – Affordability		25
	Subtotal claimed for Category 4 – Affordability		
	Total of Points for All Categories		

Proposed Changes to PRIORITY RATING SYSTEM for Drinking Water Projects

Instructions: For each line item, mark "X" to claim the points for that line item. Be sure that your narrative includes justification for every line item claimed. At the end of each Category, provide the total points claimed for each program in the subtotal row for that category. Then add the subtotals from each category and enter the Project Total in the last line. Note that some categories have a maximum allowed points that may be less than the total of individual line items.

	maximum anowed points that may be less than the total of individual line items.			
Line Item #	Category 1 – Project Purpose	Claimed Yes/No	Points	
1.A	Project will consolidate a nonviable drinking water or wastewater utility		25	
1.B	Project will resolve failed infrastructure issues		25	
1.C	Project will rehabilitate or replace infrastructure		12	
1.C.1	Treatment units, pumps and/or pump stations to be rehabilitated or replaced are greater than 20 years old, OR water/sewer lines, storage tanks, drinking water wells or intake structures to be rehabilitated or replaced are greater than 40 years old		8	
1.D	Project will expand infrastructure		2	
1.D.1	Treatment units, pumps and/or pump stations to be rehabilitated or replaced are greater than 20 years old, OR lines, storage tanks, drinking water wells or intake structures to be rehabilitated or replaced are greater than 40 years old		8	
1.E – 1.H	Reserved for Other Programs			
	Maximum Points for Category 1 – Project Purpose		25	
	Subtotal claimed for Category 1 – Project Purpose			
Line Item #	Category 2 – Project Benefits	Claimed Yes/No	SDWR Pts	
2.A – 2.A.1	Reserved for Other Programs			
2.B	Project provides a specific public health benefit to a public water supply system by replacement, repair, or merger; includes replacing dry wells, addressing contamination of a drinking water source by replacing or additional treatment; or resolves managerial, technical & financial issues		20	
2.C	Reserved for Other Programs			

Line Item #	Category 2 – Project Benefits	Claimed Yes/No	SDWR Pts
2.D	Project addresses promulgated but not yet effective regulations		10
2.E	Project directly addresses enforcement documents		
2.E.1	Project directly addresses an EPA Administrative Order for a local government Applicant located in a Tier 1 county, or addresses an existing or pending SOC, or a DENR Administrative Order, OR		5
2.E.2	Project directly resolves a Notice of Violation or Notice of Deficiency		3
2.F	Project includes system merger		10
2.G	Project addresses documented low pressure		10
<u>2.H</u>	Project addresses contamination		
<u>2.H.1</u>	Project addresses acute contamination of a water supply source OR		15
<u>2.H.2</u>	Project addresses contamination of a water supply source other than acute OR		10
<u>2.H.3</u>	Project addresses an emerging compound without a MCL but above a health advisory level		<u>Z</u>
2. <u>I</u>	Project improves treated water quality by adding or upgrading a unit process		3
2. <u>J</u>	Water loss in system to be rehabilitated or replaced is 30% or greater		3
2. <u>K</u>	Project provides a public water system interconnection		
2. <u>K</u> .1	Project creates a new interconnection between systems not previously interconnected OR		10
2. <u>K</u> .2	Project creates an additional or larger interconnection between two systems already interconnected which allows one system's public health water needs to be met during an emergency OR		10
2. <u>K</u> .3	Project creates any other type of interconnection between systems		5
2.L – 2.M	Reserved for Other Programs		
2. <u>N</u>	Project provides redundancy/resiliency for critical treatment and/or transmission/distribution system functions including backup electrical power source		3

Line Item #	Category 2 – Project Benefits (Continued)	Claimed Yes/No	Points
<u>2.0 –</u> <u>2.R</u>	Reserved for Other Programs		
	Maximum Points for Category 2 – Project Benefits		35
	Subtotal claimed for Category 2 – Project Benefits		
Line Item #	Category 3 – System Management	Claimed Yes/No	Points
<u>3.A</u>	Capital Planning Activities		
<u>3.A.1</u>	Applicant has implemented an Asset Management Plan as of the date of application <u>OR</u>		10
<u>3.A.2</u>	Applicant has a current Capital Improvement Plan (CIP) that spans at least 10-years and proposed project is included in the plan		2
3. <u>B</u>	System Operating Ratio is greater than or equal to 1.00 based on a current audit, or is less than 1.00 and unit cost is greater than 2.5%		5
3. <u>C</u>	Applicant has an approved Source Water Protection Plan and/or a Wellhead Protection Plan		5
3. <mark>D</mark>	Applicant has implemented a water loss reduction program		5
3. <u>E</u>	Applicant has implemented a water conservation incentive rate structure		3
	Maximum Points for Category 3 – System Management		15
	Subtotal claimed for Category 3 – System Management		
Line Item #	Category 4 – Affordability	Claimed Yes/No	Points
4.A	Residential Connections		
4.A.1	Less than 10,000 residential connections OR		2
4.A.2	Less than 5,000 residential connections OR		4
4.A.3	Less than 1,000 residential connections		8
4.B	Current Monthly Utility Rates at 5,000 Usage		
4.B.1	Greater than \$33 OR		4
4.B.2	Greater than \$40 OR		6

Line Item #	Category 4 – Affordability (Continued)	Claimed Yes/No	Points
4.B.3	Greater than \$47 OR		8
4.B.5	Greater than \$58		10
4.C	Local Government Unit (LGU) Indicators		
4.C.1	3 out of 5 LGU indicators worse than state benchmark OR		3
4.C.2	4 out of 5 LGU indicators worse than state benchmark OR		5
4.C.3	5 out of 5 LGU indicators worse than state benchmark		7
4.D	Reserved for the CDBG Program		
4.E	Reserved for the CDBG Program		
	Maximum Points for Category 4 – Affordability		25
	Subtotal claimed for Category 4 – Affordability		
	Total of Points for All Categories		