

State Water Infrastructure Authority

Meeting Date: April 18-19, 2018

Agenda Item G – Key Program Metrics

Division of Water Infrastructure Staff Report

Background

North Carolina General Statute G.S. 159G-71 contains the powers and the duties of the State Water Infrastructure Authority which include the following:

- To establish priorities for making loans and grants consistent with federal law
- Develop guidelines for making loans and grants
- Make recommendations on ways to maximize the use of current funding resources and ensure that funds are used in a coordinated manner

Synchronized priority points system and affordability criteria were implemented prior to administering the Connect NC Bond funds. In early 2018, the Division undertook an analysis of data resulting from the application that occurred in 2016 and 2017. The goal of the analysis is to examine the effectiveness of the:

- Priority rating systems for both the construction and non-construction funding programs, and
- Affordability criteria for the grant eligibility and grant percentage determination processes.

Overview

The attached document provides information about the priority rating systems and affordability criteria, which will be presented at the Authority meeting by Division staff. The document includes:

- I. Purpose
- II. History
- III. Evaluation of Priority Points Systems
- IV. Evaluation of Affordability Criteria
- V. Division Recommendations

Staff is seeking the Authority's input on a number of items; these are highlighted within the document in gray boxes and are summarized below.

Staff Recommendations

Staff recommends that the Authority approve seeking public input on the following changes:

1. Changing the "Debt Service Per Connection" axis to use project cost per connection using aggregate boundaries for the affordability criteria.
2. Grant eligibility for CDBG-I:
 - a. Apply the last two steps of the affordability criteria with an adjustment to the grant percentage by adding 25% to the grant percentages in the matrix, not to exceed 100%
 - b. Continue to allow 100% grants for projects that extend lines to existing homes with failing wells and septic systems
 - c. Continue to allow 100% grants for projects that extend lines to new low-to-moderate income housing projects
3. Priority rating system changes as described in Agenda Items H. and I.

State Water Infrastructure Authority Meeting – April 18-19, 2018

Agenda Item G. Key Program Metrics

I. Purpose

When creating the State Water Infrastructure Authority (the Authority), the North Carolina General Assembly (the General Assembly) charged it with several duties related to water and sewer infrastructure funding. These included establishing priorities for making loans and grants; reviewing the criteria for making loans and grants; and making recommendations in ways to maximize the use of current funding resources [NCGS 159G-71(2), (3), and (8)]. The Division of Water Infrastructure (the Division), in conjunction with the Authority, undertook the development of affordability criteria and revision of the priority points systems to fulfill these requirements by:

- synchronizing the priority points systems,
- funding certain project types first,
- encouraging proactive system management, and
- targeting and stretching limited grant funding.

With the results of several funding rounds now available, the Division has undertaken an evaluation of both the priority points systems utilized in these rounds and the affordability criteria utilized for construction projects.¹ The purpose of this report is to report the results of this analysis.

II. History of the Priority Points Systems and Affordability Criteria

Historically, various funding programs were housed within different divisions of the Department of Environment and Natural Resources. The Division of Water Resources managed the Drinking Water State Revolving Fund and State Revolving Loan program for drinking water. The Division of Water Quality managed the Clean Water State Revolving Fund and State Revolving Loan program for wastewater. Additionally, the Department of Commerce managed the Community Development Block Grant program, which included funding for infrastructure projects.

In July 2013, the General Assembly passed and the Governor signed into law the biennium budget bill (SL2013-360) that created the Division and the Authority. In conjunction with the Authority, the Division administers all water and wastewater infrastructure funding for the State of North Carolina.

II.A Synchronization of Priority Systems for Construction Projects

Since each funding program had created priority systems to address their programmatic goals, the systems differed greatly both in categories and in amount of points available. Division staff

¹ Funding rounds analyzed for the State Reserve Projects included April 2016, September 2016, April 2017, and September 2017. Funding rounds analyzed for the State Revolving Fund included September 2016, April 2017, and September 2017. Note that Drinking Water State Reserve application intakes occurred in September 2016 and September 2017.

began the process of revising the priority points system to better synchronize them and provide a mechanism to tailor funding to meet an applicant's needs.

In conjunction with the Authority, the Division developed priority points systems for its construction funding programs. At Authority meetings in 2015 and 2016, members approved revised priority points systems for these programs that contained four major categories:

- Project Purpose – with an emphasis on prioritizing existing infrastructure issues first
- Project Benefit – with an emphasis on direct public health or environmental benefits
- System Management – with an emphasis on proactive system management
- Affordability² -- with an emphasis on utility bills and rural, economically distressed communities

Changes to the application form as well as the synchronization of the priority points systems enabled the Authority to offer the best funding fit possible. The best available funding followed this order:

- Grants and grant-like options
 - State grants if affordability provide for 100% grant³
 - CDBG-I grants which are 100% grant funds
 - State grants if affordability criteria provide for 75% and 50% grant
 - Principal forgiveness in CWSRF and DWSRF programs (50% up to \$500,000)
 - State grants if affordability criteria provide for 25% grant
- Low-interest loans
 - State loans
 - SRF loans

The Authority has now utilized the synchronized systems for three funding rounds.⁴

II.B Non-Project Grant Priority Points Systems

At the March 2016 meeting, the Authority approved the priority points system for the Asset Inventory and Assessment (AIA) and Merger / Regionalization Feasibility Study (MRF) grants. These grants are 100% grants (note that a 5% to 20% match is required for AIA grants) that would enable systems to either assess their inventory or study the feasibility of mergers or regionalization with other systems. These grants require a match by the recipient. The Division launched the programs in April 2016 and has completed a total of three rounds.

II.C Affordability Criteria

Prior to the affordability criteria, to determine financial need, funding programs utilized a High-Unit Cost (HUC) threshold in determining state grant eligibility that utilized only utility rates per 5,000 gallons and median household income (MHI). As part of its 2014 Annual Report, the Authority recommended a shift to a new “affordability” criteria that encompassed more factors.

² Called Financial Situation for the CDBG-I program.

³ See discussion below regarding affordability criteria.

⁴ Funding rounds were September 2016, April 2017, and September 2017.

In addition to qualifying for a grant, the new affordability criteria would be used to set the amount of a grant to a percentage of overall project cost. The General Assembly passed and the Governor signed into law these changes as part of the biennium budget (SL2015-241). The Division began implementing the affordability criteria in its April 2016 state project reserve funding round. Since then, the affordability criteria have been utilized for all three Connect NC funding rounds.

II.D Role of the Priority Points Systems and Affordability Criteria in the Master Plan

In December 2016, the Authority approved the *North Carolina Statewide Water and Wastewater Infrastructure Master Plan: The Road to Viability* (the *Master Plan*). The *Master Plan* discusses the need to expand access to capital so that water and wastewater utilities can operate and maintain their systems. The priority points systems and affordability criteria enable limited funding to reach systems who desire to repair existing infrastructure and who have the most financial need.

A viable system is one that functions as a long-term, self-sufficient business enterprise, establishes organizational excellence, and provides appropriate levels of infrastructure maintenance, operation, and reinvestment that allow the utility to provide reliable water services now and in the future.

Additionally, the AIA grants provide a way for systems to determine their infrastructure needs by assessing their infrastructure for location and condition of water and wastewater assets. Knowledge of both will enable a system to begin planning for capital improvements and any needed utility rate increases. Such planning shifts a system from a reactive to a proactive stance in terms of management as they move toward viability.

The MRF grants enable systems who recognize that managing water and/or wastewater utilities may not be something they can accomplish alone to study the feasibility of merging or consolidating with other systems. Systems joining together may enable smaller systems to become viable.

III. Evaluation of Current Priority Points Systems

The following sections discuss the Division's evaluation of the priority points systems for construction and non-construction funding programs. Each section will contain recommendations by Division staff for consideration by the Authority.

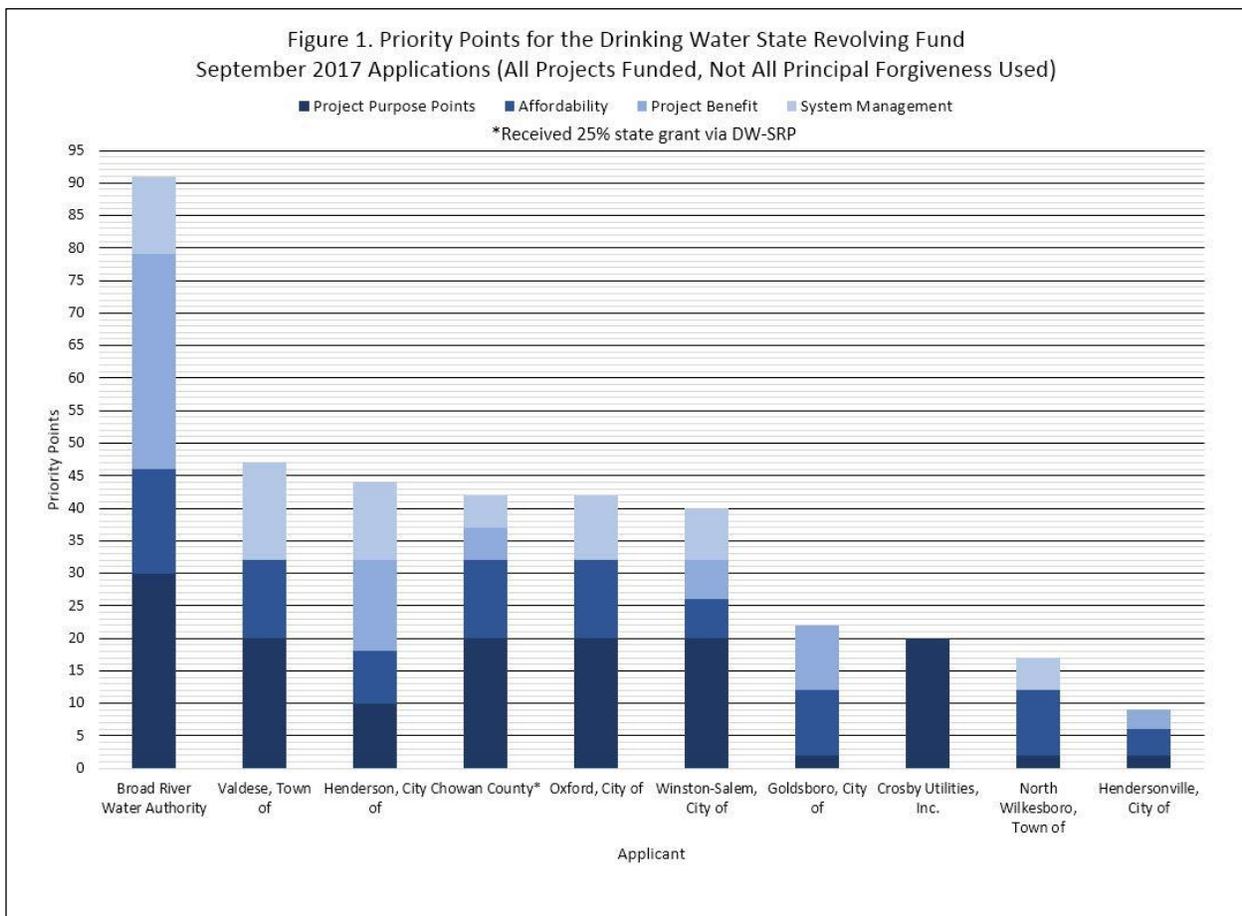
III.A Priority Points Systems Evaluation for Construction Projects Funded by the State Revolving Fund and State Revolving Loan Programs

As discussed in Section II.A, the priority points systems for construction projects are broken down into four major categories. Within the Project Purpose category, projects that fix existing infrastructure are given the greatest priority. The Project Benefit category gives higher priority to projects that have direct public health or environmental benefits. The System Management category prioritizes proactive system management such as utilizing capital improvement plans or maintaining an operating ratio greater than 1.0. Last the Affordability category considers various aspects of the affordability criteria such as system size, local government unit (LGU) indicators,

and monthly utility bills.⁵ Table 1 lists the points of the State Reserve Projects (SRP) and State Revolving Funds (SRF).

Category	Drinking Water		Wastewater	
	SRP	SRF	SRP	SRF
Category I – Project Purpose	25	30	30	30
Category II – Project Benefit	35	35	35	35
Category III – System Management	15	15	15	15
Category IV – Affordability	30	20	30	20
Total	105	100	110	100

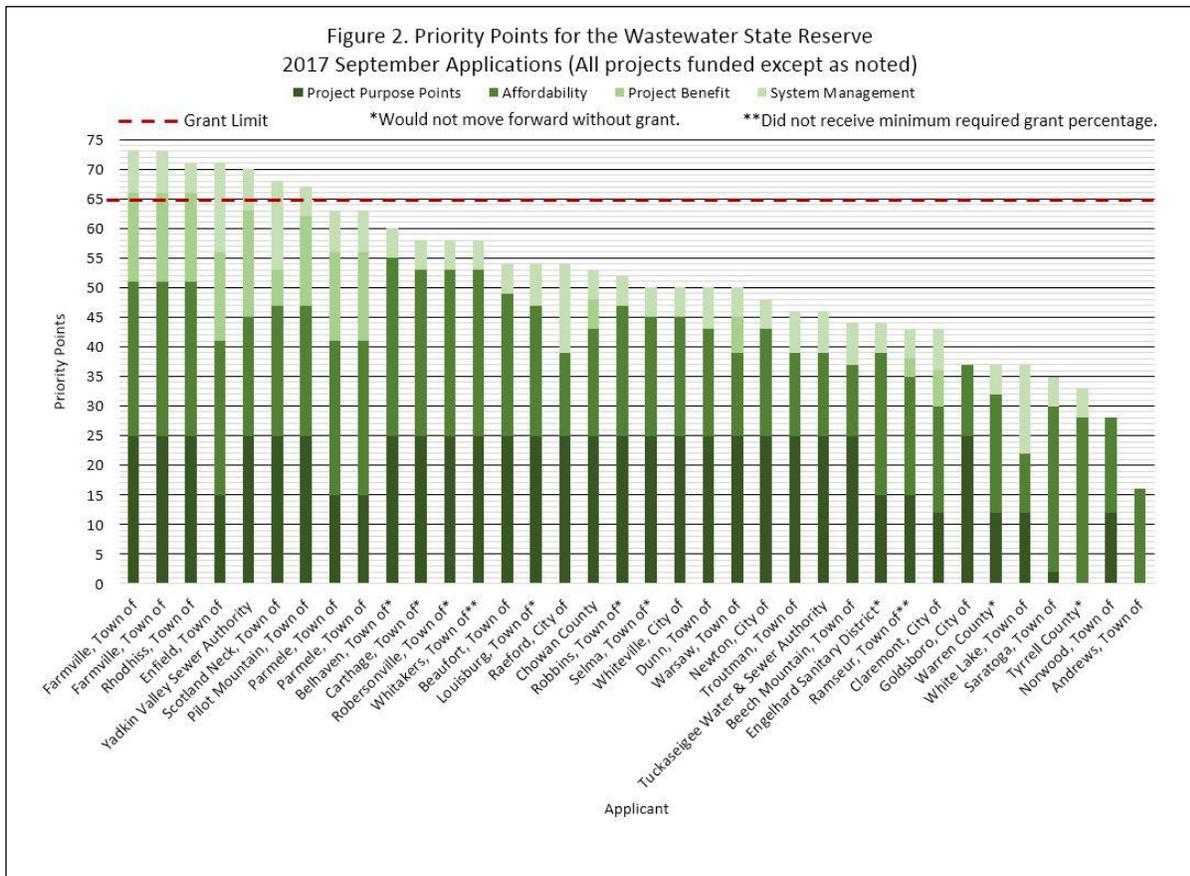
As shown in the table, point differences within Category I and Category IV result in differences in total point value. Staff examined the source of these differences. Figure 1 shows a representative sample of priority system ranking for the Drinking Water State Revolving Fund (DWSRF). Appendix A contains all figures associated with the SRP and SRF construction programs.

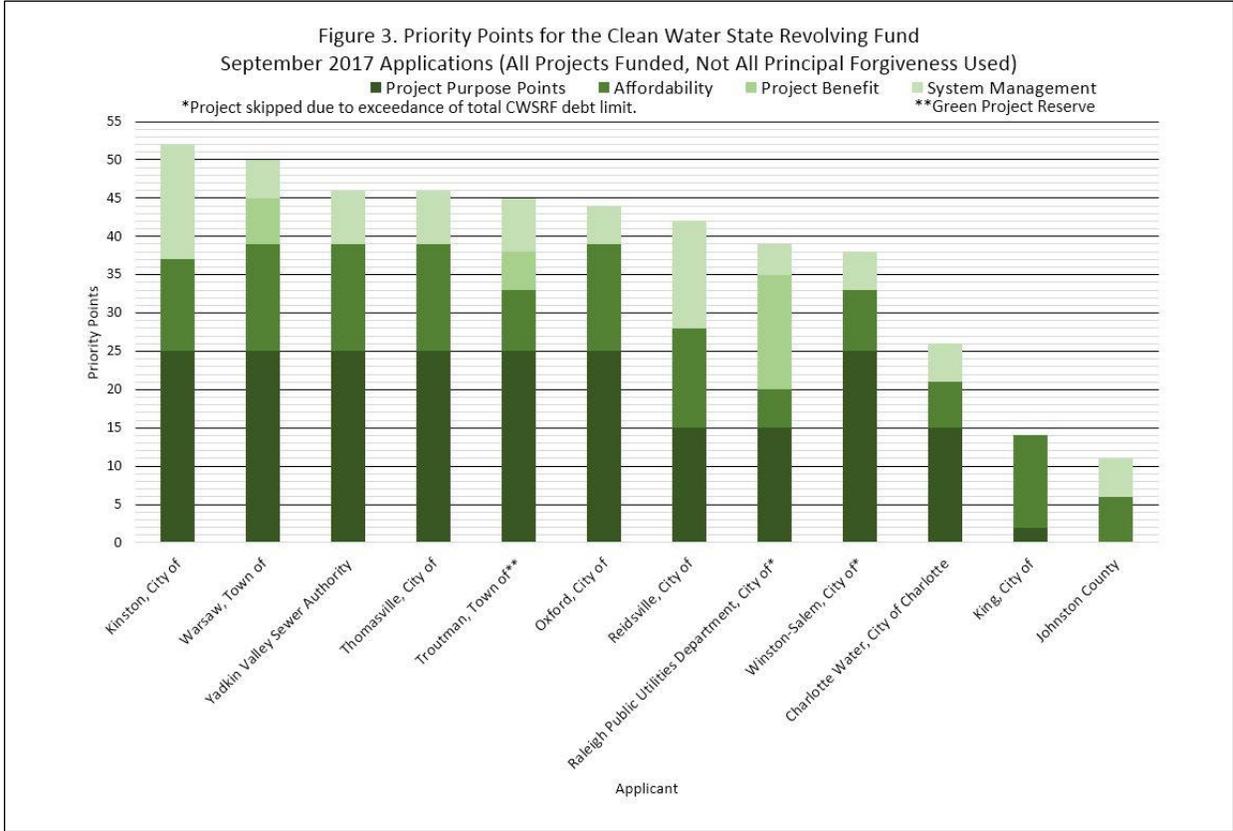


⁵ Currently, only the SRP priority system utilizes system size.

As shown in the above figure, the Broad River Water Authority project is a consolidation project and scored 91 points while the next highest-scoring project was a replacement / rehabilitation project scoring 47 points. Reducing the consolidation point value found in Line Item 1.A from 30 points to 25 points would equalize Project Purpose points for the Drinking Water SRP (DW-SRP) and DWSRF. Regarding wastewater projects funded under the SRF and SRP, Project Purpose totals are also 30 points. Reducing Line Items 1.F and 1.G, stream restoration and stormwater projects, respectively, from 20 points to 15 points would allow a reduction of the total Project Purpose points to go from 30 points to 25 points. This would result in total Project Purpose points across drinking water and wastewater being 25 points.

The second area where Division staff noticed discrepancies relates to Category IV – Affordability. Currently, the SRP programs for affordability both drinking water and wastewater allow for 30 points while the SRF programs allow for 20 points. Figures 2 and 3 show Wastewater SRP (WW-SRP) and Clean Water State Revolving Fund (CWSRF) examples.





Division Recommendations for SRP and SRF Programs

Category I – Project Purpose

- DWSRF Line Item 1.A – Reduce from 30 points to 25 points
- CWSRF Line Items 1.F and 1.G – Reduce from 20 points to 15 points
- Category I Maximum Points Available – For DWSRF, WW-SRP, CWSRF – Reduce from 30 points to 25 points

Category IV – Affordability

- Line Item 4.A – Add to SRF programs
- Line Item 4.A.1 – Eliminate
- Renumbered Line Item 4.A.1 – Change from 4 to 2 points
- Renumbered Line Item 4.A.2 – Change from 6 to 4 points
- Renumbered Line Item 4.A.3 – Change from 10 to 8 points
- Line Item 4.B.1 – Eliminate
- Renumbered Line Item 4.B.4 – Change from 12 to 10 points
- Line Item 4.C.1 – Eliminate
- Renumbered Line Item 4.C.1 – Change from 4 to 3 points
- Renumbered Line Item 4.C.2 – Change from 6 to 5 points
- Renumbered Line Item 4.C.3 – Change from 8 to 7 points

Affordability plays a large role in the WW-SRP (see Figure 2), as much as Project Purpose. For the CWSRF, Affordability has a more minor role (see Figure 3). Changing line item values within this category would result in both the SRP and SRF having equal point values.

If the Authority implemented the recommended changes, then Table 2 shows the results of the points changes. Appendix B contains each priority system with changes shown in specific line items.

Table 2. Major Category Points for State Reserve Project and State Revolving Fund Programs as Recommended[†]				
Category	Drinking Water		Wastewater	
	SRP	SRF	SRP	SRF
Category I – Project Purpose	25	25	25	25
Category II – Project Benefit	35	35	35	35
Category III – System Management	15	15	15	15
Category IV – Affordability	25	25	25	25
Total	100	100	100	100

[†]Red shows scores that changed.

III.B Priority Points System Evaluation for Construction Projects Funded by the Community Development Block Grant for Infrastructure Program

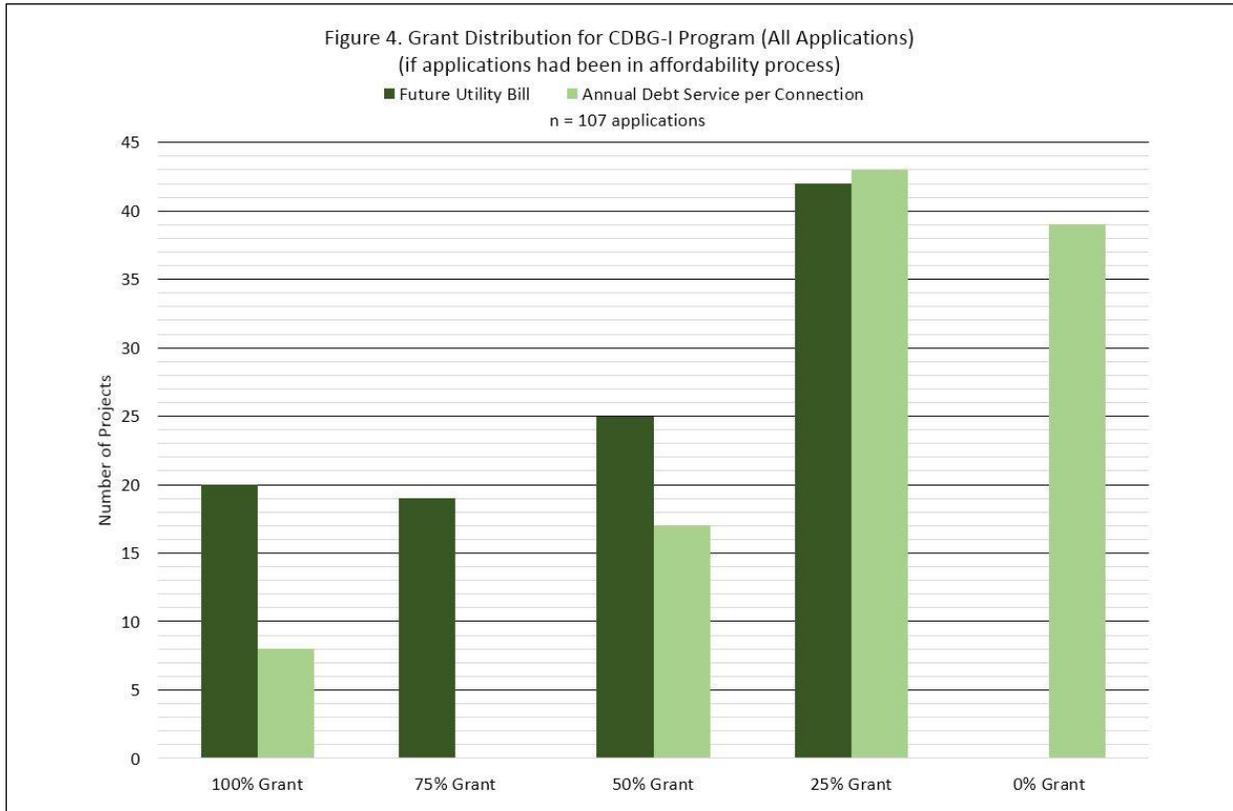
For the most part, the CDBG-I program has a priority points system similar to the ones for the SRP and SRF programs. Table 3 shows the weighting of the major categories for the CDBG-I program.

Table 3. Major Category Points for State Reserve Project and State Revolving Fund Programs as Implemented	
Category	Points
Category I – Project Purpose	15
Category II – Project Benefit	20
Category III – System Management	15
Category IV – Financial Situation	50
Total	100

While the line item points for the major categories equal 100, Division staff are proposing changes that will enable the program to better meet its major goals. See Appendix C for results from CDBG-I funding rounds.

To further efforts to facilitate affordable housing, the CDBD-I program recommends providing benefit points for housing projects (in addition to project purpose points). In addition, the Division recommends changing Line Item 4.G to reflect Line Item 4.B used in other programs – scaled to match the CDBG-I program system. This will provide more consistency with other programs’ emphasis on rates without respect to MHI. Households will continue to be utilized as reflected in the low and moderate-income points as well as poverty rates. Appendix D shows the priority points system with specific line items modified.

Another aspect that Division staff are considering relates to the ability of the Authority to better disseminate the limited grant funds associated with the CDBG-I program. Staff reviewed the applications submitted to the CDBG-I program and utilized the affordability criteria to determine what percentage of grant the applications would have received had they come through the SRP process for both future monthly utility bill and annual debt service per connection for the project only. Figure 4 shows the results.



In the CDBG-I program, regardless of whether future utility bill or annual debt service per connection was considered, most applicants would have received 50% grant or less with the trend of less than 50% being more prevalent when considering annual debt service per connection. This presents a significant discrepancy between the Authority's desire to stretch grant funds and to encourage financing of all or part of a project if the local government can take on some amount of debt.

There are several issues to consider for the CDBG-I program:

- The program is intended to help low- and moderate-income households.
- This program has been utilized to provide water or sewer service to LMI areas where there are failing systems (e.g., failing septic tanks, dry or contaminated wells).
- The CDBG-I program is more expensive to administer with complex federal regulations.

The Division considered applying the affordability criteria to the CDBG-I program. However, the first two steps in the criteria are somewhat redundant to the federal CDBG criteria. That is,

the State CDBG program is for non-entitlement communities – the smaller communities as determined by federal criteria. The federal program also determines economic status (i.e., low-to-moderate income).

Division Recommendations for the Community Development Block Grant for Infrastructure Program

Grant Eligibility

- Apply the last two steps of the affordability criteria with an adjustment to the grant percentage by adding 25% to the grant percentages in the matrix, not to exceed 100%)
- Continue to allow 100% grant for projects that extend lines to existing homes with failing wells and septic systems
- Continue to allow 100% grant for projects that extend lines to new low-to-moderate income housing projects

Priority Points System

- Category II (Project Benefits) – Add Line Item 2.T – Project provides site work and new water and/or wastewater infrastructure, including house or apartment connections, to new low-to-moderate income housing (5 points)
- Category IV (Financial Situation) – Modify Line Item 4.G to consider rates only as potentially modified in Section III.A above for other programs with points scaled to the CDBG-I system as follows:
 - Line Item 4.G.1 – 6 points
 - Line Item 4.G.2 – 9 points
 - Line Item 4.G.3 – 12 points
 - Line Item 4.G.4 – 15 points

III.C Priority System Evaluation for Non-Construction Project Programs

In addition to funding capital projects, the Authority funds non-construction project grant programs. These programs are 100% grant and enables LGUs to study various aspects of their systems. The subsections below evaluate the priority points systems related to both.

III.C.1 Asset Inventory and Assessment Grant Program

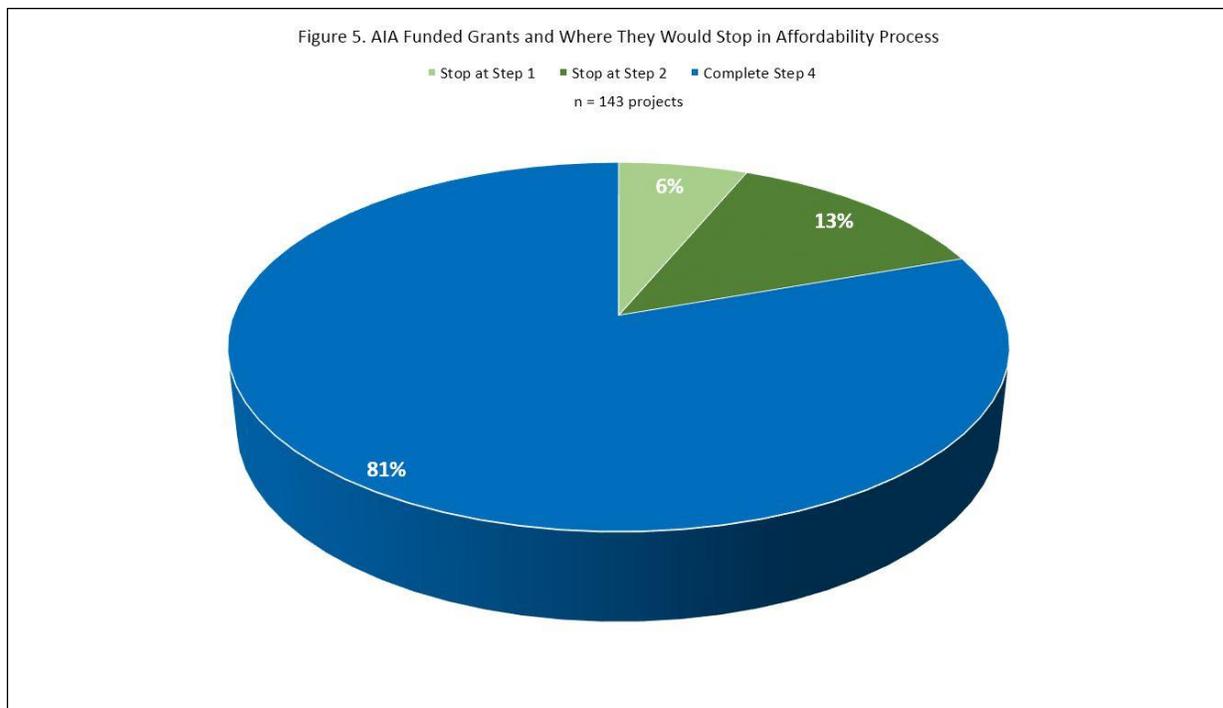
As part of the biennium budget passed by the General Assembly in 2015 and signed into law by the Governor, the AIA grant program was initiated to provide systems with a grant to inventory either their existing water or sewer system and document its condition [NCGS 159G-33(3a)]. These grants enable recipients to either continue asset management, such as preparing a CIP, or

to begin the process of asset management by mapping their assets and assessing their condition.⁶ Applicants are required to submit a narrative for most of the line items, which is then evaluated by Division staff. The priority points system contains three major categories:

- Project Benefit – with an emphasis on benefits similar to construction projects (8 points)
- System Management – with an emphasis on being able to manage and utilize the data generated by the grant (12 points)
- Affordability – with an emphasis on utility bills and rural, economically distressed communities (4 points)

Based upon analysis of the applications received during three funding rounds⁷, system management, with a total of 12 points, is the primary driver for AIA scoring. Within system management, both the team and data management line items act as primary drivers. Appendix E shows the results of the three funding rounds

Due to the new nature of the program, Division staff wanted to determine if the grants were reaching those who most needed them. Staff reviewed data related to the three funding rounds completed and determined, based on available data, who would have stopped at Step 1 in the affordability process (Population), who would have stopped at Step 2 (LGU Indicators), and who would have made it to Step 4 (Monthly Utility Bills and Annual Debt Service per Connection).⁸ Figure 5 below shows that the majority of applicants would have reached the grant percentage matrix. A few large LGUs applied, but they would not have passed Step 1. Several wealthier, smaller LGUs applied, but they would have stopped at Step 2 due to their LGU indicators.



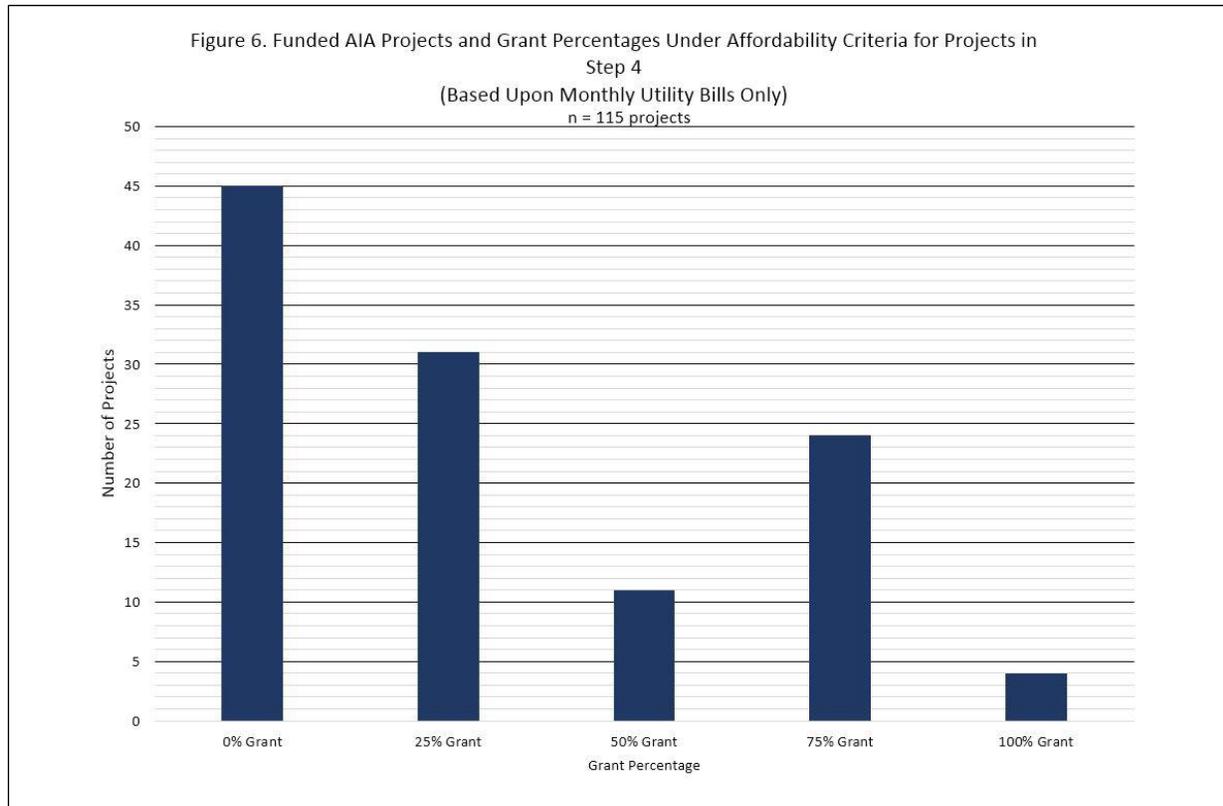
⁶ Recipients of the grant are required to provide some form of match.

⁷ Funding rounds occurred in April 2016, September 2016, and April 2017.

⁸ No data were readily available to evaluate Step 3.

Staff also reviewed, for those of the funded projects who made it to Step 4, the amount of grant percentage an applicant would have received based upon monthly utility bills only. Figure 6 shows the results of this analysis.

Slightly over half of the projects funded by the AIA would have received some type of grant with very few (28 projects) receiving 75% grant or greater. While the figure indicates that many systems have monthly utility bills below the state median of \$33, the AIA grants are aimed at enabling systems to begin the process of understanding the need to raise rates to maintain a



viable system. Additionally, the current project priority system already accounts for systems with higher monthly utility bills.

III.C.2 Merger / Regionalization Study Grant Program

When the General Assembly passed and the Governor signed into law the biennium budget, the MRF grant program was initiated. Since the inception of this grant program, the Authority has awarded funding to all eligible applications. The priority points system for these grants contains the three major categories of technical status (6 points), organizational status (6 points), and affordability (8 points). Figure E.7 in Appendix E shows the results of the three funding rounds.

Division Recommendations for Non-Construction Grant Programs

Asset Inventory and Assessment Grant Program

- Eligibility – Limit eligibility for the AIA grant program to those systems with 10,000 residential accounts or less
- Eligibility Exceptions
 - If small systems applying are considering consolidation with larger, ineligible, systems (> 10,000 residential accounts), the applicant can utilize the system management of the larger system (must pass resolutions for both systems)
 - If a larger system (> 10,000 residential connections) has consolidated with a smaller system within the past 5 years, the larger system may utilize the grant to work within the smaller system
- Priority points system – No recommendations

Merger / Regionalization Feasibility Study Grant Program

- No recommendations

IV. Evaluation of Affordability Criteria Methodology and Grant Percentages

As discussed in Section II, the implementation of the biennium budget expanded the definition of affordability to encompass more than the HUC definition. In response to the change in definition, the Authority developed a new affordability criteria methodology and provided a mechanism to enable applicants to the construction grants program to receive a combination of grants and loans. This fulfills one of the duties of the Authority to maximize the use of currently available funding [NCGS 159G-71(8)].

The relative affordability of a project for a community compared to other communities in North Carolina is based on factors that shall include, at a minimum, water and sewer service rates, median household income, poverty rates, employment rates, the population of the served community, and past expenditures by the community on water infrastructure compared to that community's capacity for financing of water infrastructure improvements. [NCGS 159G-20(1)]

As discussed in the *Master Plan*, the affordability criteria accounts for not only the economic situation of a community but also a system's efforts toward managing its water and/or sewer utility as a financially viable business. The financial capacity of a system to fund a project without grant funds is also essential in determining the need for a grant.

Division staff used data collected from the funding rounds held to evaluate the effectiveness of the affordability criteria related both to process and to grant percentages. The questions staff reviewed are:

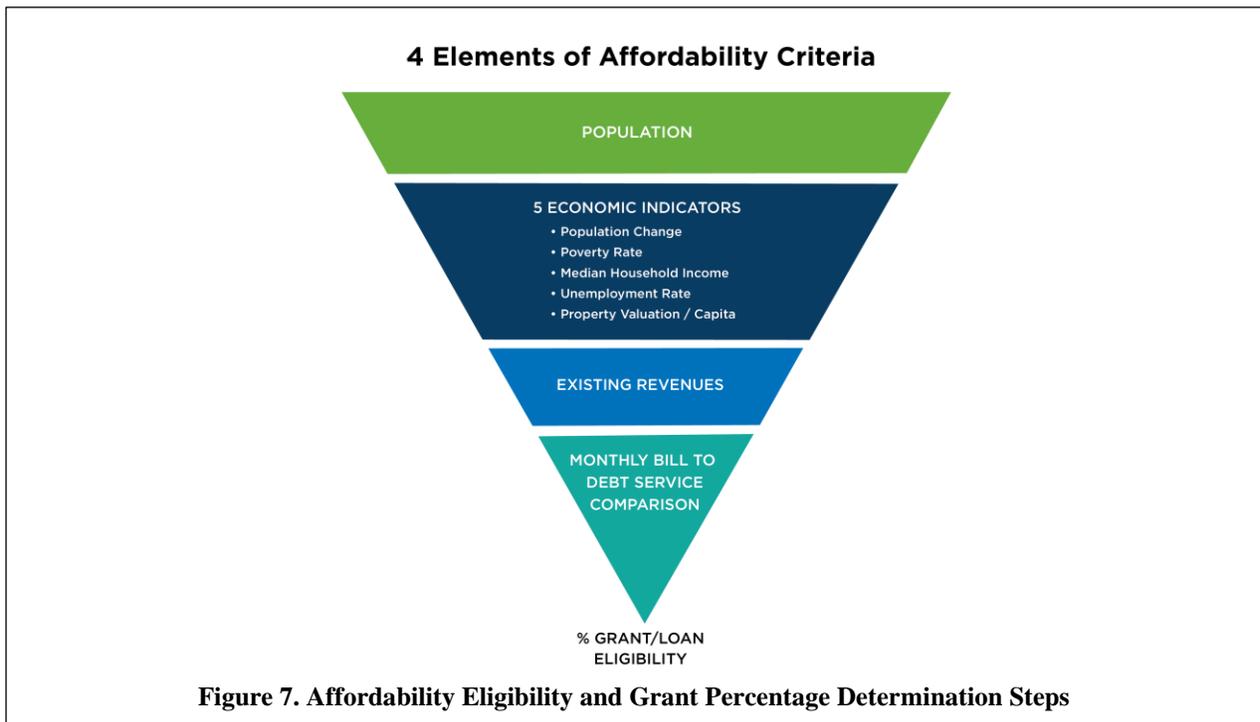
- Are most applicants receiving less than a 100% grant?
- Did the affordability criteria function as envisioned by the Authority?
- Should drinking water and wastewater systems be viewed individually rather than as an aggregate group?
- Is there a better x-axis within the grant percentage matrix to address the financial burden of a project?

The subsections below explore the results of the evaluation of these questions.

IV.A Affordability Criteria Process

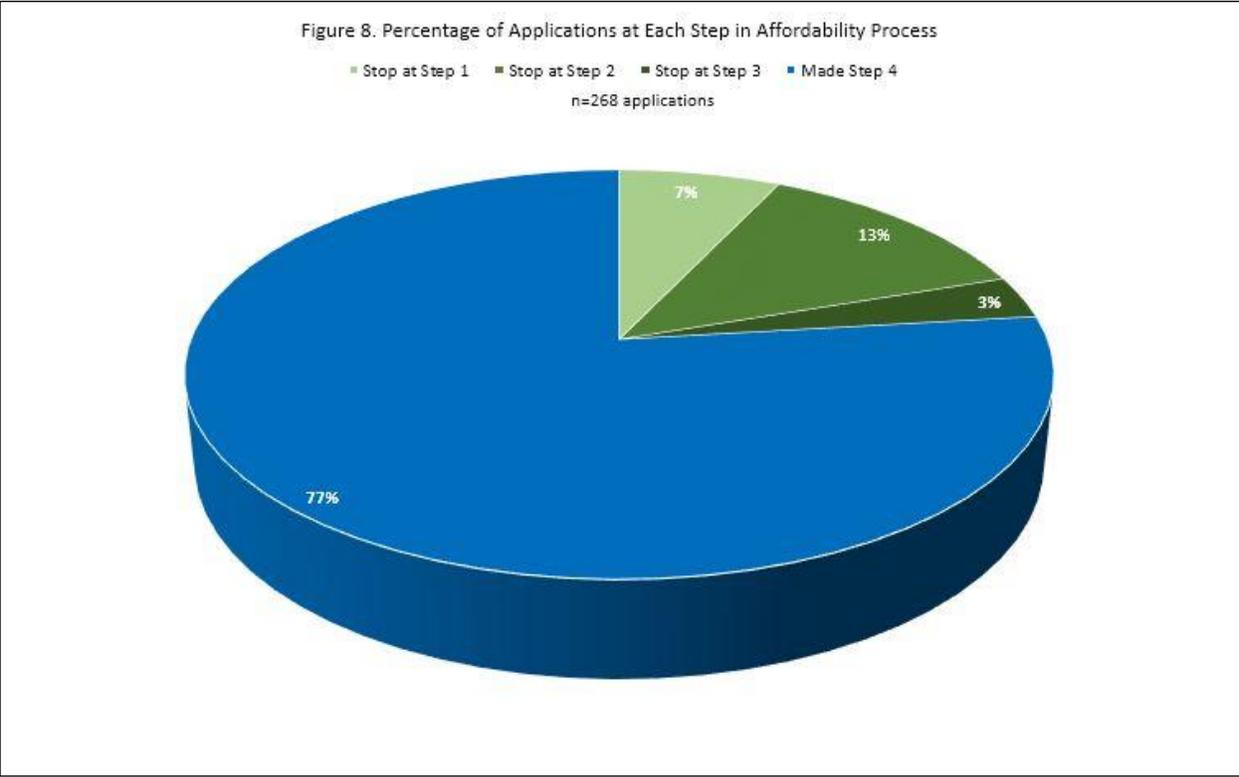
The affordability process for grant eligibility consists of four steps through which an applicant must pass before it becomes eligible for a grant (see Figure 7 below). These steps are as follows:

- Number of residential water or sewer accounts is below 20,000 accounts (eligibility)
- 3 out of 5 LGU indicators are worse than the state benchmark (eligibility)
- Operating ratios, which include the project cost, are below 1.3 (eligibility) Monthly utility bills and / or annual debt service per capita are above the state benchmark (grant percentage determination)



Most applications received a verified grant percentage of 0%, either because they did not reach Step 4 or did not qualify in Step 4 for a grant. Wastewater applications tended to qualify for higher grant percentages than drinking water applications.

To answer the question as to whether the affordability criteria functioned as intended, Division staff evaluated which projects dropped out at various stages in the process to determine if the smallest, most economically distressed applicants were able to reach Step 4, where they would be eligible for a grant. Figure 8 shows the results of this analysis.



As shown in the figure, most projects made it to Step 4. The larger applicants such as Raleigh and Charlotte Water did not make it past Step 1. Smaller communities that are better off economically such as Carolina Beach and Brevard did not make it past Step 2. A very small number of applicants (3%) that had operating ratios 1.3 or greater, including the project cost, did not make it past Step 3. Table 4 shows the percentage results of the data analysis versus those from the initial analysis conducted to derive the affordability criteria process.

Table 4. Comparison of Percentage of Projects at Each Step in Affordability Criteria Process

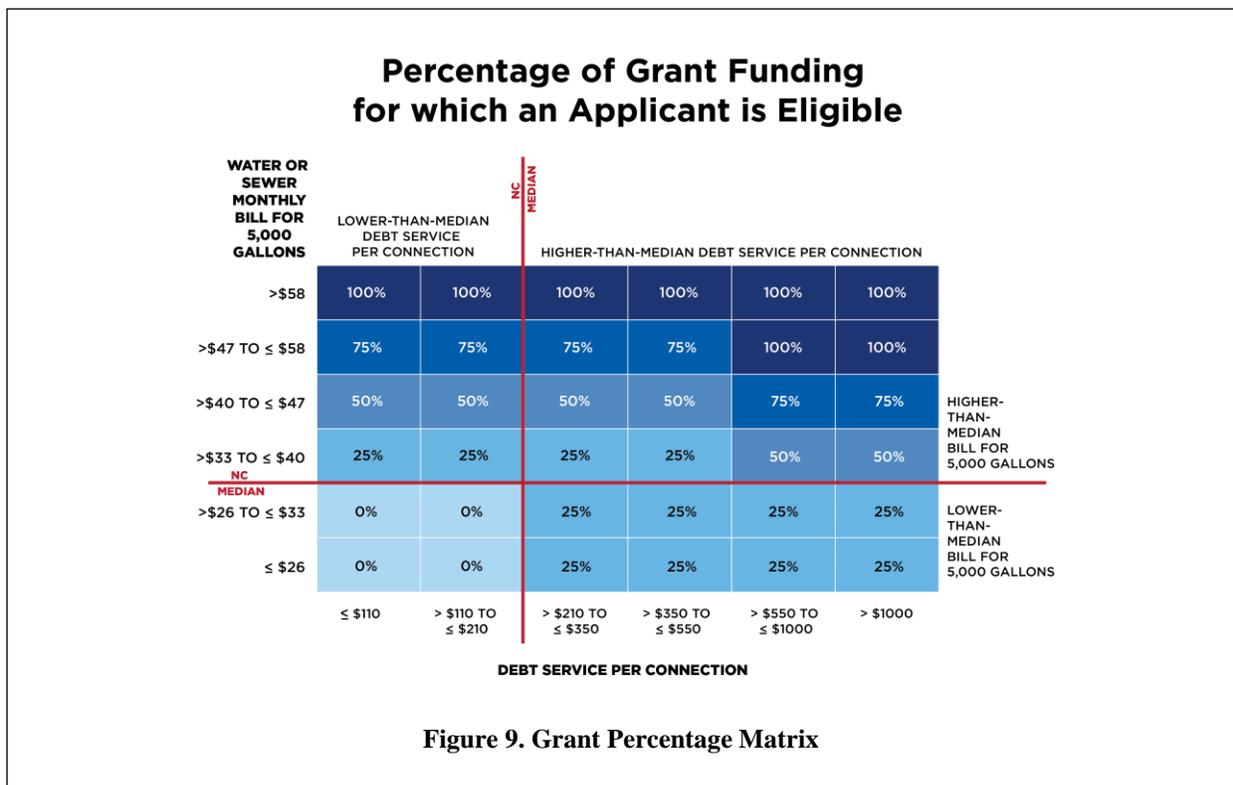
Step	Original Data Analysis (2016)	Data Analysis of Applications (2018)
Stop at Step 1 (Population)	5%	7%
Stop at Step 2 (LGU Indictors)	24%	13%
Stop at Step 3 (Existing Revenues)	5%	3%
Arrive at Step 4 (Grant Percentage Matrix)	66%	77%

As shown in the table, the affordability criteria eligibility process works the envisioned. While the percentages do not match up exactly, more applicants than not make it to the grant percentage matrix, which enabled them to be considered for a grant.

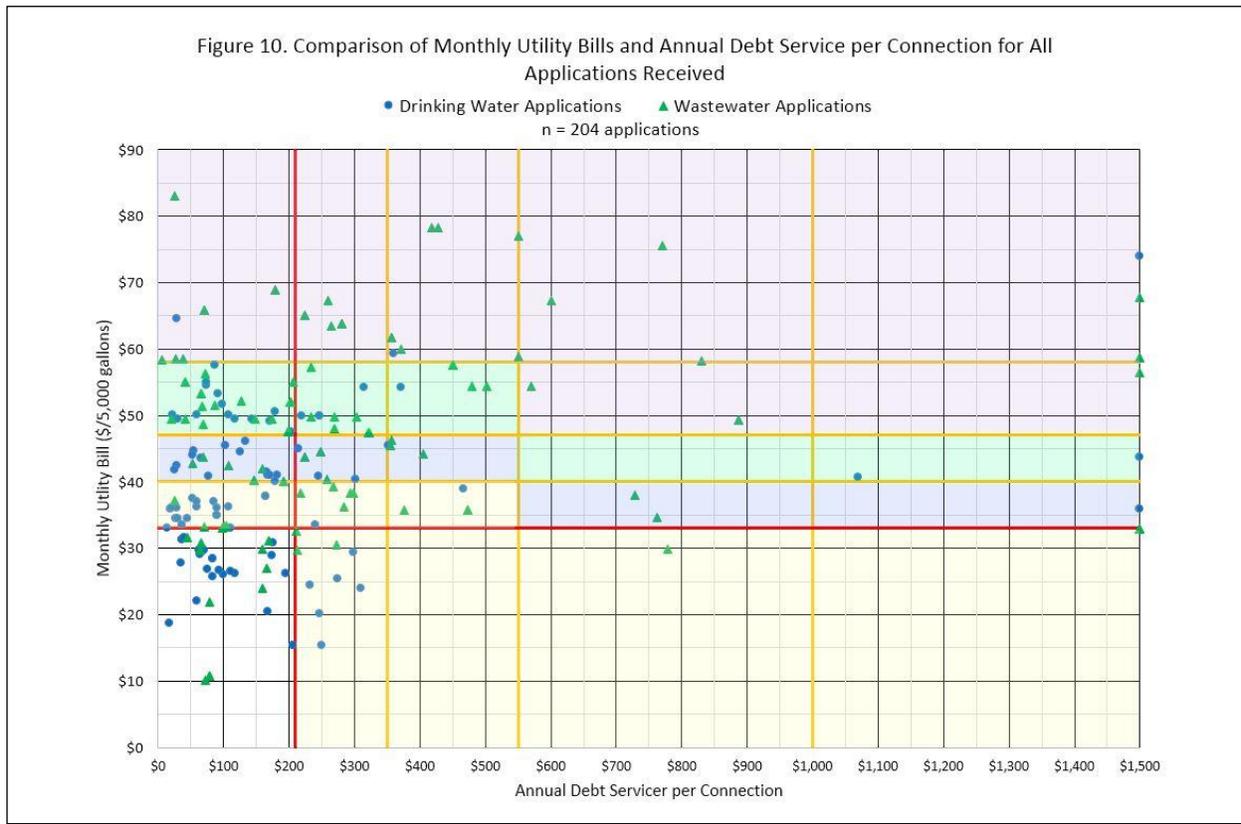
IV.B Affordability Criteria Grant Boundaries

Once systems make it to Step 4 of the affordability criteria process, they have the potential to receive a 25%, 50%, 75%, or 100% grant, provided that their monthly utility bill and/or annual debt service per connection is above the state median. Figure 9 shows the affordability matrix utilized to make this determination. The boundary for each parameter in the matrix was established at the 25th, 50th (median), 70th, 85th, and 95th percentile of the respective parameter (i.e., rates or debt service per connection). For example, 25% of utilities have bills for 5,000 gallons of \$26 or less per month.

Figure 10 below shows the results of the applications that made it to Step 4. The shading represents the different grant percentages available (yellow for 25%, green for 50%, blue for 75%, purple for 100%). Red lines show the medians while the orange lines denote the grant boundaries.



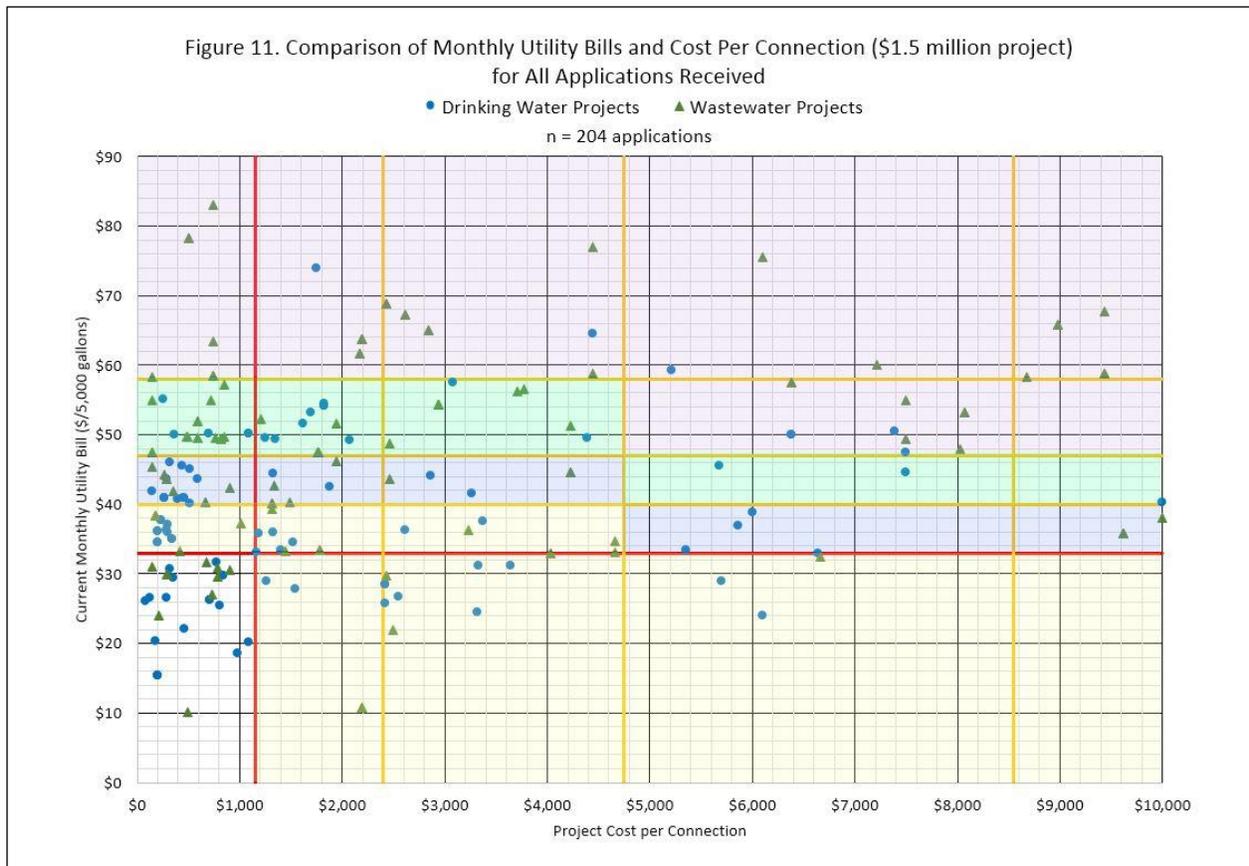
For example, in Figure 10, systems in the uppermost rectangle have monthly utility bills and annual debt service per connection that is greater than 95% of the rest of the state. Most of the projects that made it to this step have monthly utility bills higher than the state median but lower than the median for annual debt service per connection. Those that are in the 100% grant portions of the matrix tended to be wastewater. Very few applicants, mainly drinking water applicants, wound up in the lower right-hand corner of the matrix that would be eligible for 25% grant. These projects would have lower-than-median monthly utility bills but higher than median annual debt service per connection.



Utilizing an aggregated set of data as what was used to set the grant percentage boundaries shown above considers all data regardless of system type as one unit. The typically higher monthly utility bills and annual debt service per connection for wastewater systems resulted in wastewater systems generally receiving a higher grant percentage than drinking water systems.

Division staff considered the possibility of utilizing grant percentage boundaries derived for single-system types. The boundaries are calculated in the same manner as for the aggregate data, only using wastewater or drinking water boundaries. Figures F.1 and F.2 in Appendix F show the results of this analysis. Utilizing single-system boundaries would yield more drinking water projects eligible for a 100% grant and less wastewater projects eligible for 100% grant.

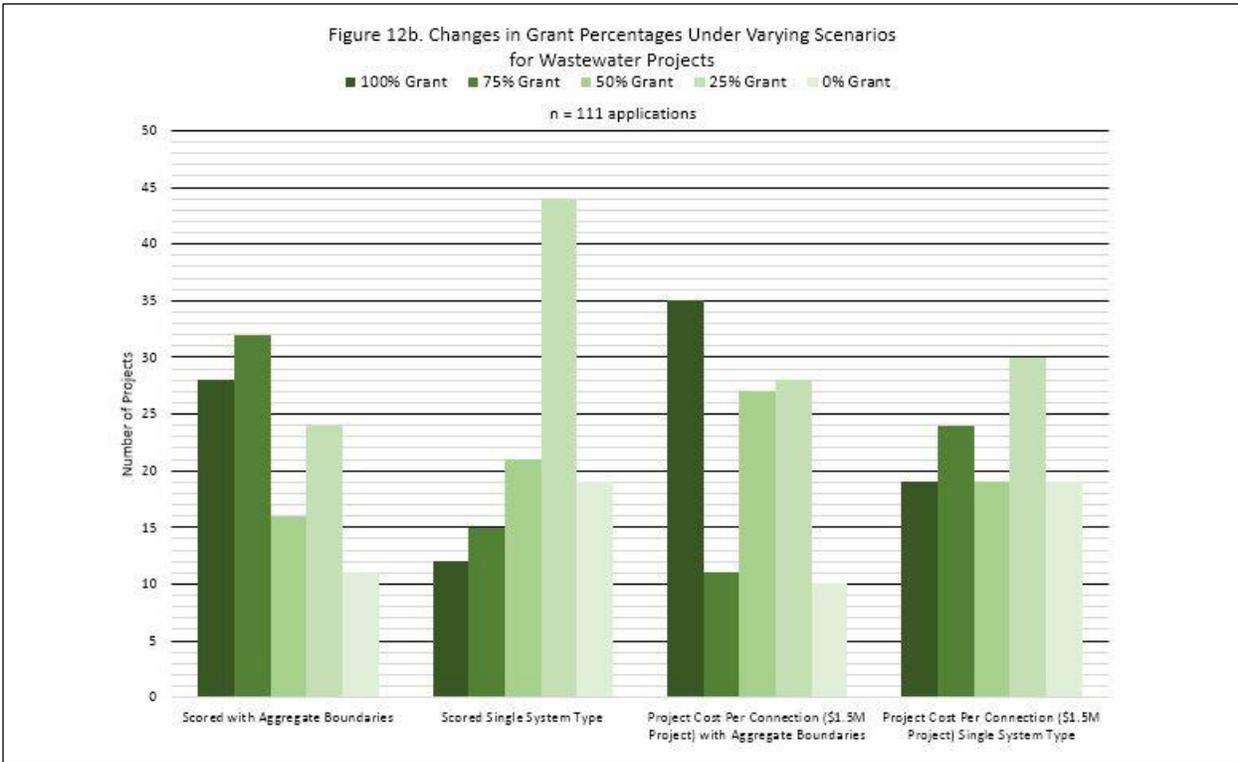
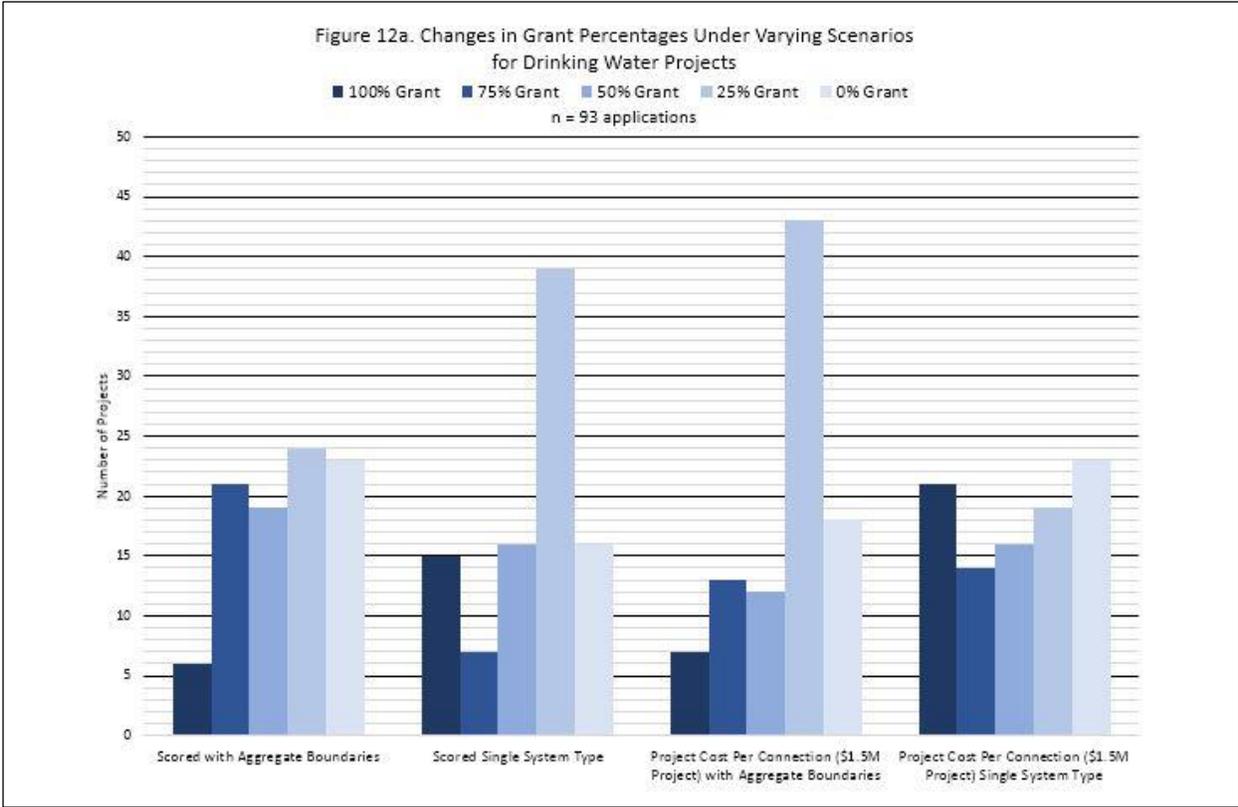
Another issue regarding the affordability criteria relates to using annual debt service per connection on the x-axis. The Division requires applicants to show their annual debt service per connection through the LGC-129 form, which is generated by the Local Government Commission (LGC) and sent to all systems that have debt with the LGC. However, in many situations, water and sewer annual debt service may not be specifically broken out. Additionally, there have been some cases in which debt may not be recorded by the LGC. Due to difficulties the Division has had in obtaining accurate annual debt service per connection, staff investigated the potential of utilizing the project cost per connection for the x-axis of the grant percentage matrix. Figure 11 shows the grant percentage matrix with project cost per connection for a \$1.5 million project, a typical project size (see Figures F.3 and F.4 in Appendix F for cost per connection applied to single system boundaries).



Utilizing project cost per connection yields grant percentage boundaries that show potential impacts to monthly utility bills. For example, in the figure, a wastewater project is shown with a current monthly utility bill of approximately \$69 per 5,000 gallons, but with their project for which they applied would have at least a project cost per connection of approximately \$9,200. Without a grant, their monthly utility bill due to the project would rise to approximately \$107. The project cost per connection shows that without a 100% grant, monthly utility bills for wastewater only could potentially rise to unmanageable levels, hence the need for a grant.

Figures 12a and 12b below summarize the four potential scenarios resulting from staff analysis. They are:

- Continue utilizing the grant percentage matrix as-is;
- Use single-system boundaries with the current grant percentage matrix axes;
- Use aggregate boundaries with project cost per connection as the x-axis; or
- Use single-system boundaries with project cost per connection as the x-axis.



If utilizing aggregate system boundaries for project cost per connection, the new matrix would look like that shown in Figure 13.

Current Monthly Utility Bill for 5,000 Gallons	Lower-than-Median Project Cost per Connection		Higher-than-Median Project Cost per Connection				
	≤ \$350	> \$350 to ≤ \$1,150	> \$1,150 to ≤ \$2,400	> \$2,400 to ≤ \$4,750	> \$4,750 to ≤ \$8,550	> \$8,550	
> \$58	100%	100%	100%	100%	100%	100%	Higher-than-Median Current Monthly Utility Bill for 5,000 Gallons Usage
> \$47 to ≤ \$58	75%	75%	75%	75%	100%	100%	
> \$40 to ≤ \$47	50%	50%	50%	50%	75%	75%	
> \$33 to ≤ \$40	25%	25%	25%	25%	50%	50%	
> \$26 to ≤ \$33	0%	0%	25%	25%	25%	25%	Lower-than-Median Current Monthly Utility Bill for 5,000 Gallons Usage
≤ \$26	0%	0%	25%	25%	25%	25%	
	≤ \$350	> \$350 to ≤ \$1,150	> \$1,150 to ≤ \$2,400	> \$2,400 to ≤ \$4,750	> \$4,750 to ≤ \$8,550	> \$8,550	Project Cost per Connection

Figure 13. Revised Grant Percentage Matrix

Division Recommendations for Affordability Criteria

- For x-axis, utilize project cost per connection using aggregate boundaries.

V. Summary of Recommendations from Metrics Analysis

Division recommendations related to the metrics analysis are as follows:

State Reserve Projects and State Revolving Loans

- Category I – Project Purpose
 - DWSRF Line Item 1.A – Reduce from 30 points to 25 points
 - CWSRF Line Items 1.F and 1.G – Reduce from 20 points to 15 points
 - Category I Maximum Points Available – For DWSRF, WW-SRP, CWSRF – Reduce from 30 points to 25 points
- Category IV – Affordability
 - Line Item 4.A – Add to SRF programs
 - Line Item 4.A.1 – Eliminate
 - Renumbered Line Item 4.A.1 – Change from 4 to 2 points
 - Renumbered Line Item 4.A.2 – Change from 6 to 4 points
 - Renumbered Line Item 4.A.3 – Change from 10 to 8 points
 - Line Item 4.B.1 – Eliminate
 - Renumbered Line Item 4.B.4 – Change from 12 to 10 points
 - Line Item 4.C.1 – Eliminate
 - Renumbered Line Item 4.C.1 – Change from 4 to 3 points
 - Renumbered Line Item 4.C.2 – Change from 6 to 5 points
 - Renumbered Line Item 4.C.4 – Change from 8 to 7 points

Community Development Block Grant for Infrastructure

- Grant Eligibility
 - Apply the last two steps of the affordability criteria with an adjustment to the grant percentage by adding 25% to the grant percentages in the matrix, not to exceed 100%)
 - Continue to allow 100% grant for projects that extend lines to existing homes with failing wells and septic systems
 - Continue to allow 100% grant for projects that extend lines to new low-to-moderate income housing projects
- Priority Points System
 - Category II (Project Benefits) – Add Line Item 2.T – Project provides site work and new water and/or wastewater infrastructure, including house or apartment connections, to new low-to-moderate income housing (5 points)
 - Category IV (Financial Situation) – Modify Line Item 4.G to consider rates only as potentially modified in Section III.A above for other programs with points scaled to the CDBG-I system as follows:
 - Line Item 4.G.1 – 6 points
 - Line Item 4.G.2 – 9 points
 - Line Item 4.G.3 – 12 points
 - Line Item 4.G.4 – 15 points

Asset Inventory and Assessment Grants

- Eligibility – Limit eligibility for the AIA grant program to those systems with 10,000 residential accounts or less
- Eligibility Exceptions
 - If small systems applying are considering consolidation with larger, ineligible, systems (> 10,000 residential connections), the applicant can utilize the system management of the larger system (must pass resolutions for both systems)
 - If a larger system (> 10,000 residential connections) has consolidated with a smaller system within the past 5 years, the larger system may utilize the grant to work within the smaller system

Affordability Criteria

- For x-axis, utilize project cost per connection using aggregate boundaries.

Appendices

Appendix A
State Reserve Project and State Revolving Fund

Figure A.1. Priority Points for the Drinking Water State Reserve
September 2016 Applications (All projects and grants funded except as noted)

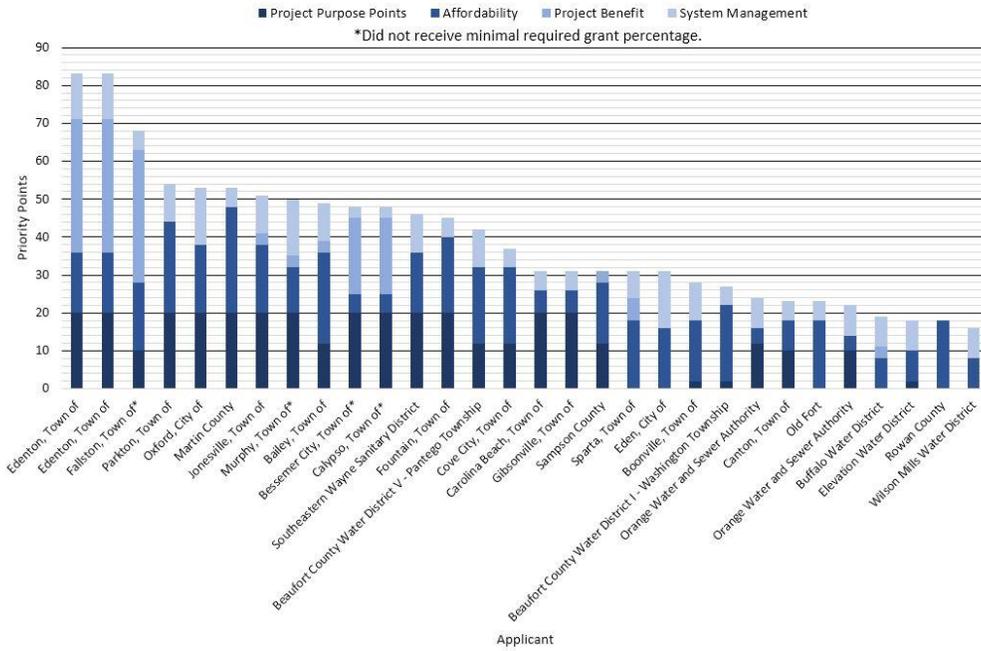


Figure A.2. Priority Points for the Drinking Water State Reserve
April 2017 Applications (All projects and grants funded except as noted)

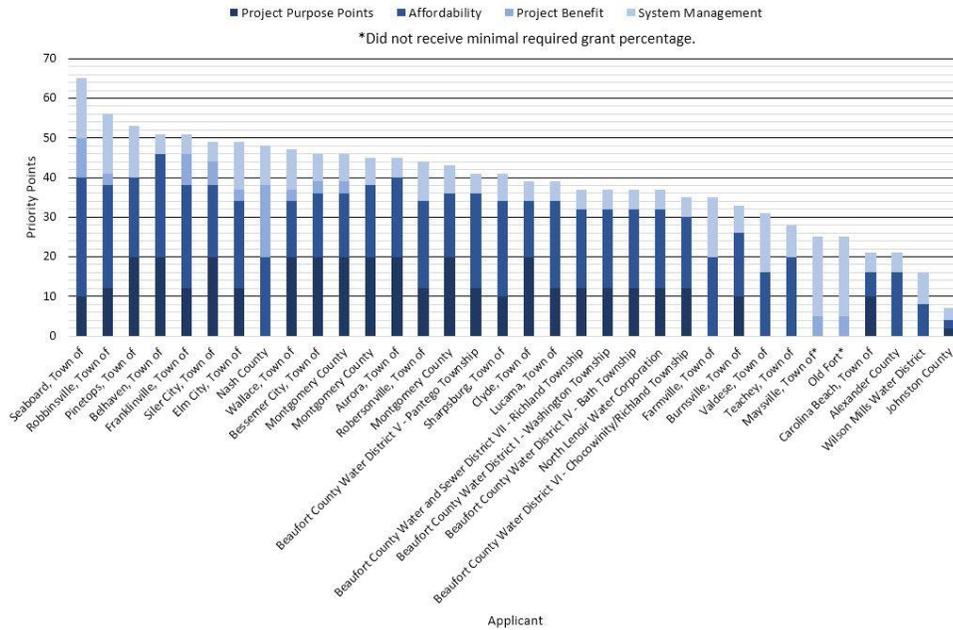


Figure A.3. Priority Points for the Drinking Water State Reserve
September 2017 Applications (All projects and grants funded except as noted)

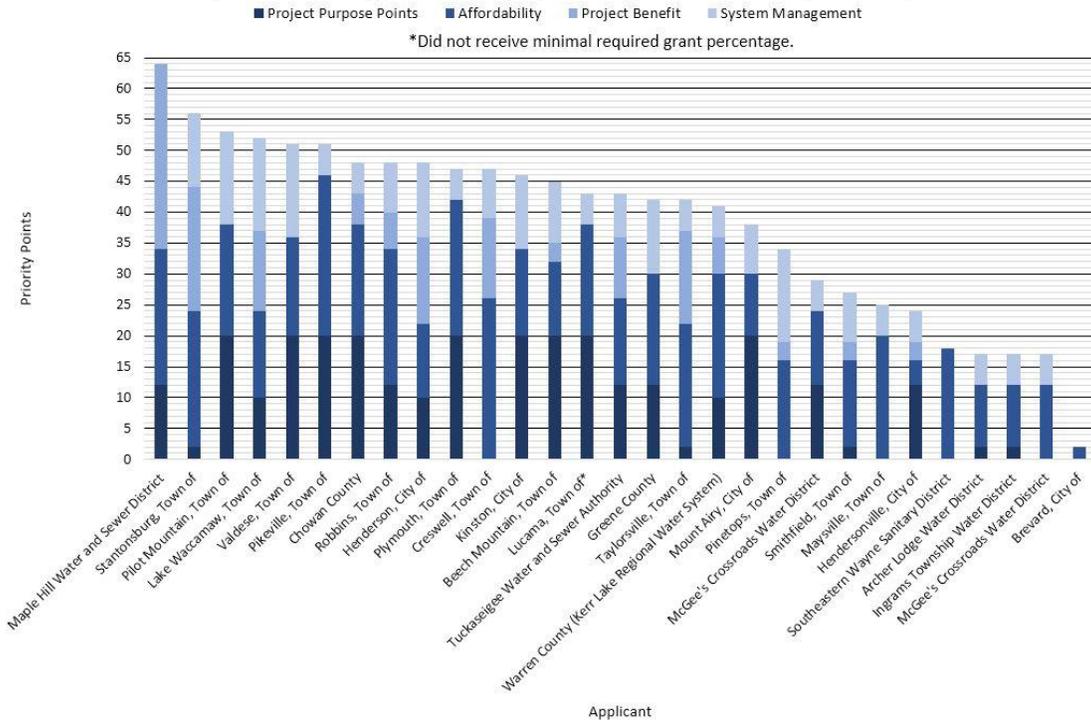


Figure A.4. Priority Points for the Wastewater State Reserve
September 2016 Applications (All projects funded except as noted)

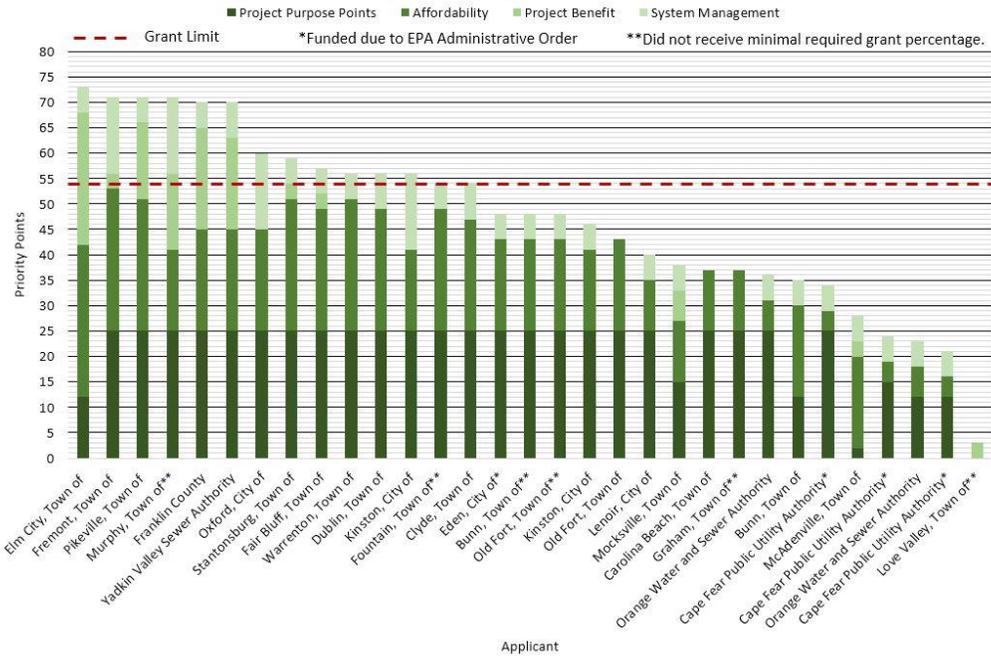


Figure A.7. Priority Points for the Drinking Water State Revolving Fund
September 2016 Applications (All Projects Funded, Not All Principal Forgiveness Used)

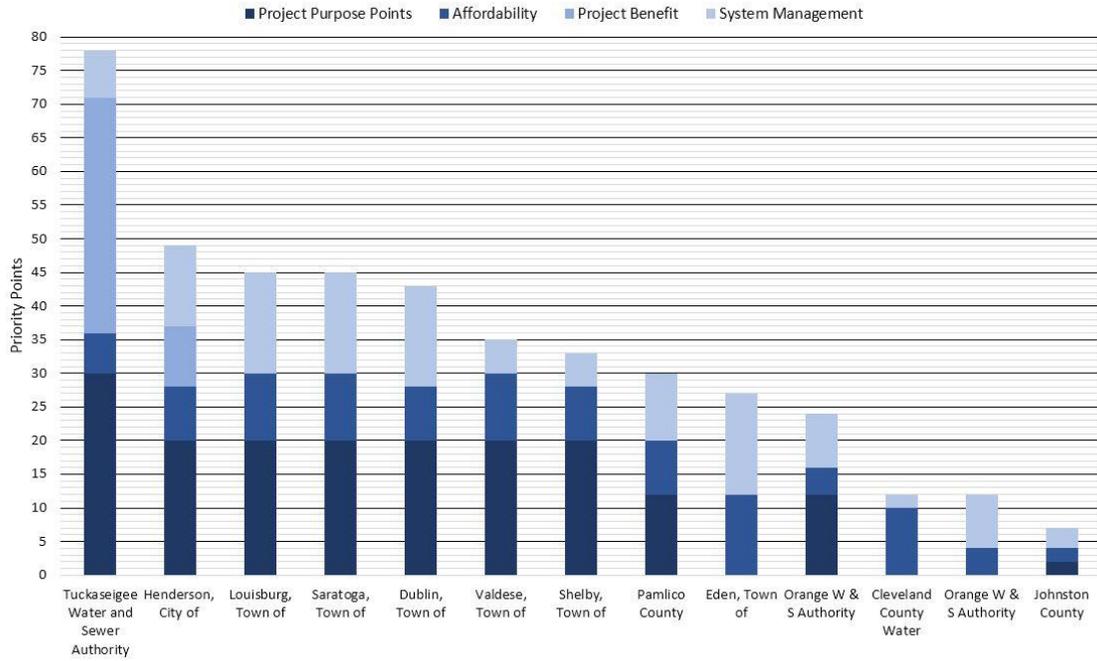


Figure A.8. Priority Points for the Drinking Water State Revolving Fund
September 2017 Applications (All Projects Funded, Not All Principal Forgiveness Used)

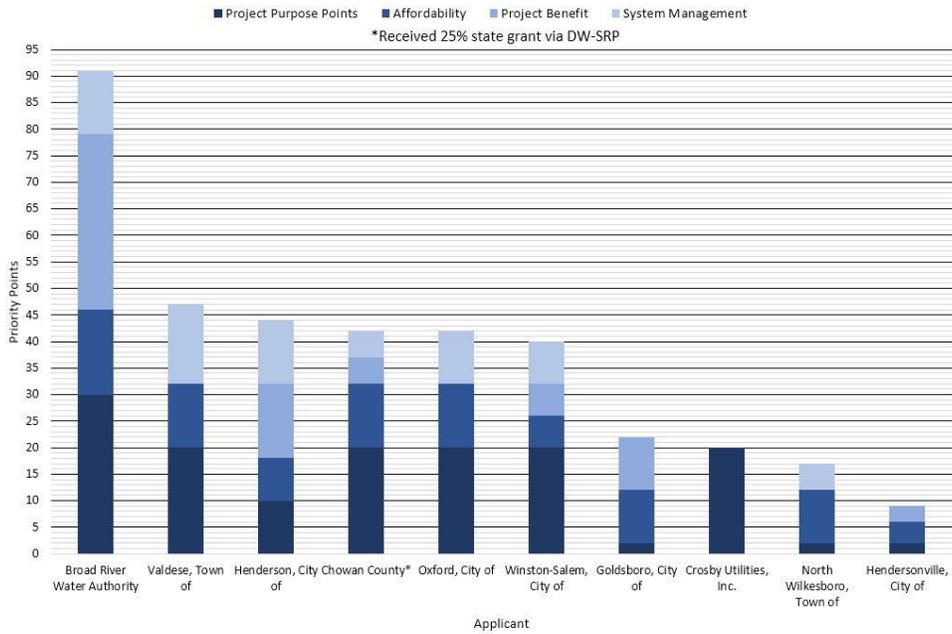


Figure A.9. Priority Points Analysis for the Clean Water State Revolving Fund
September 2016 Applications (All Projects Funded)

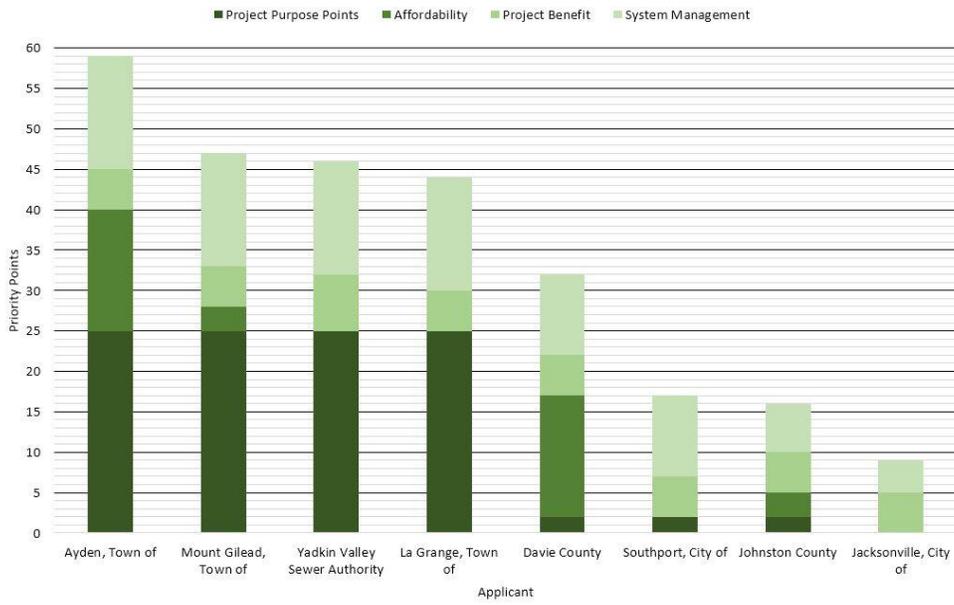


Figure A.10. Priority Points Analysis for the Clean Water State Revolving Fund
April 2017 Applications (All Projects Funded)

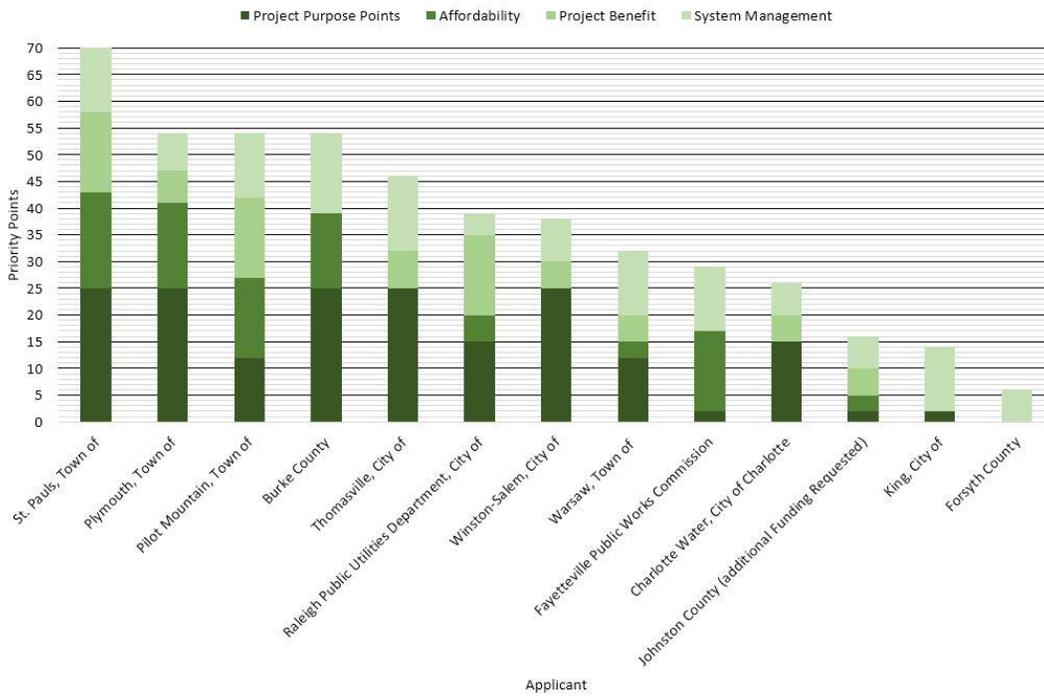
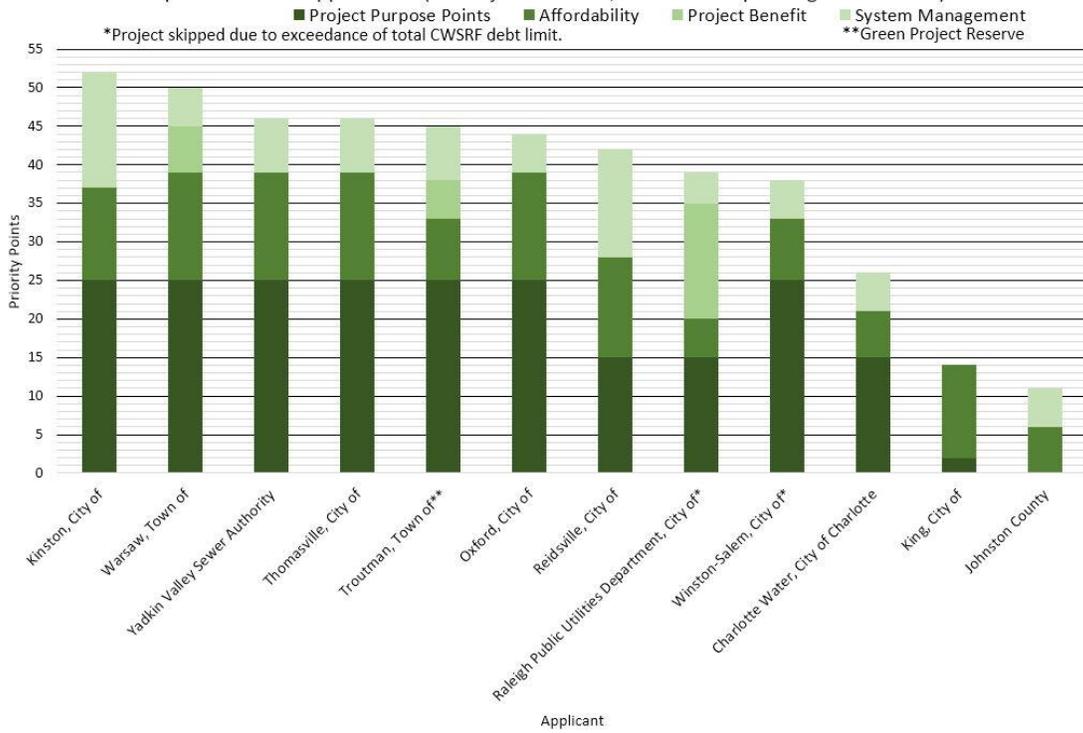


Figure A.11. Priority Points for the Clean Water State Revolving Fund
 September 2017 Applications (All Projects Funded, Not All Principal Forgiveness Used)



Appendix B
Proposed Changes to Priority Rating Systems for Drinking Water and
Wastewater Projects

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.

Line Item #	Category 1 – Project Purpose	Claimed Yes/No	SDWR Pts	DWSRF Pts
1.A	Project will eliminate, by merger or dissolution, a failing public water supply system		25	30 25
1.B	Project will resolve failed infrastructure issues		25	25
1.C	Project will rehabilitate or replace infrastructure		12	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	8
1.D	Project will expand infrastructure		2	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	8
1.E – 1.H	Reserved for Other Programs			
	Maximum Points for Category 1 – Project Purpose		25	30 25
	Subtotal claimed for Category 1 – Project Purpose			
Line Item #	Category 2 – Project Benefits	Claimed Yes/No	SDWR Pts	DWSRF Pts
2.A – 2.A1.	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	20
2.C	Reserved for Other Programs			
Line Item #	Category 2 – Project Benefits	Claimed Yes/No	SDWR Pts	DWSRF Pts
2.D	Project addresses promulgated but not yet effective regulations		10	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	5
2.E.2	Project directly resolves a Notice of Violation or Notice of Deficiency		3	3
2.F	Project includes system merger		10	10
2.G	Project addresses documented low pressure		10	10
2.H	Project addresses acute contamination of a water supply source		15	15
2.I	Project addresses contamination of a water supply source other than acute		10	10
2.J	Project improves treated water quality by adding or upgrading a unit process		3	3
2.K	Water loss in system to be rehabilitated or replaced is 30% or greater		3	3
2.L	Project provides a public water system interconnection			
2.L.1	Project creates a new interconnection between systems not previously interconnected OR		10	10
2.L.2	Project creates an additional or larger interconnection between two systems already interconnected which allows one system's		10	10

	public health water needs to be met during an emergency OR			
2.L.3	Project creates any other type of interconnection between systems		5	5
2.M – 2.N	Reserved for Other Programs			
2.O	Project provides redundancy/resiliency for critical treatment and/or transmission/distribution system functions including backup electrical power source		3	3
2.P – 2S	Reserved for Other Programs			
	Maximum Points for Category 2 – Project Benefits		35	35
	Subtotal claimed for Category 2 – Project Benefits			
Line Item #	Category 3 – System Management	Claimed Yes/No	SDWR Pts	DWSRF Pts
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	2
3.B	Applicant has implemented an Asset Management Plan as of the date of application		10	10
3.C	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	5
3.D	Applicant has an approved Source Water Protection Plan and/or a Wellhead Protection Plan		5	5
3.E	Applicant has implemented a water loss reduction program		5	5
3.F	Applicant has implemented a water conservation incentive rate structure		3	3
	Maximum Points for Category 3 – System Management		15	15
	Subtotal claimed for Category 3 – System Management			
Line Item #	Category 4 – Affordability	Claimed Yes/No	SDWR Pts	DWSRF Pts
4.A	Residential Connections			

4.A.1	Less than 20,000 residential connections OR		2	
4.A.1	Less than 10,000 residential connections OR		4 2	2
4.A.2	Less than 5,000 residential connections OR		6 4	4
4.A.3	Less than 1,000 residential connections		10 8	8
4.B	Current Monthly Utility Rates at 5,000 gallons Usage			
4.B.1	Greater than \$26 OR		2	2
4.B.1	Greater than \$33 OR		4	4
4.B.2	Greater than \$40 OR		6	6
4.B.3	Greater than \$47		8	8
4.B.4	Greater than \$58		12 10	12 10
4.C	Local Government Unit (LGU) Indicators			
4.C.1	2 out of 5 LGU indicators worse than state benchmark OR		2	2
4.C.1	3 out of 5 LGU indicators worse than state benchmark OR		4 3	4 3
4.C.2	4 out of 5 LGU indicators worse than state benchmark OR		6 5	6 5
4.C.3	5 out of 5 LGU indicators worse than state benchmark		8 7	8 7
4.D	Reserved for the CDBG Program			
4.E	Reserved for the CDBG Program			
	Maximum Points for Category 4 – Affordability		30 25	20 25
	Subtotal claimed for Category 4 – Affordability			
	Total of Points for All Categories			

Proposed Changes to PRIORITY RATING SYSTEM for Wastewater 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.

Line Item #	Category 1 – Project Purpose	Claimed Yes/No	SWWR Pts	CWSRF Pts
1.A	Reserved for Other Programs			
1.B	Project will resolve failed infrastructure issues		15	15
1.C	Project will rehabilitate or replace infrastructure		15	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	10
1.D	Project will expand infrastructure		2	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	10
1.E – 1.E.2	Reserved for Other Programs			
1.F	Project will provide stream/wetland/buffer restoration			20 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	SWWR Pts	CWSRF Pts
1.G	Project will provide stormwater BMPs to treat existing sources of pollution			20 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
	Maximum Points for Category 1 – Project Purpose		30 25	30 25
	Subtotal claimed for Category 1 – Project Purpose			
Line Item #	Category 2 – Project Benefits	Claimed Yes/No	SWWR Pts	CWSRF Pts
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	15
2.D	Project addresses promulgated but not yet effective regulations		10	10
2.E	Project directly addresses enforcement documents			
2.E.1	Project directly addresses an EPA Administrative Order for a local government Applicant located		5	5

	in a Tier 1 county, or addresses an existing or pending SOC, or a DEQ Administrative Order, OR			
2.E.2	Project directly resolves a Notice of Violation or Notice of Deficiency		3	3
2.F	Project includes system merger		10	10
2.G – 2.I	Reserved for Other Programs			
2.J	Project improves treated water quality by adding or upgrading a unit process		3	3
2.K – 2.O	Reserved for Other Programs			
2.P	Project <u>directly benefits</u> subwatersheds that are impaired as noted on the most recent version of the Integrated Report		20	20
2.Q	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	10
2.R	Project will result in elimination of an NPDES discharge		3	3
2.S	Primary purpose of the project is to achieve at least 20% reduction in energy use			5
	Maximum Points for Category 2 – Project Benefits		35	35
	Subtotal claimed for Category 2 – Project Benefits			
Line Item #	Category 3 – System Management	Claimed Yes/No	SWWR Pts	CWSRF Pts
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	2

3.B	Applicant has implemented an Asset Management Plan as of the date of application		10	10
3.C	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	5
3.D – 3.F	Reserved for Other Programs			
Maximum Points for Category 3 – System Management			15	15
Subtotal claimed for Category 3 – System Management				
Line Item #	Category 4 – Affordability	Claimed Yes/No	SWWR Pts	CWSRF Pts
4.A	Residential Connections			
4.A.1	Less than 20,000 residential connections OR		2	
<u>4.A.1</u>	Less than 10,000 residential connections OR		4 2	2
<u>4.A.2</u>	Less than 5,000 residential connections OR		6 4	4
<u>4.A.3</u>	Less than 1,000 residential connections		10 8	8
4.B	Current Monthly Utility Rates at 5,000 gallons Usage			
4.B.1	Greater than \$26 OR		2	2
<u>4.B.1</u>	Greater than \$33 OR		4	4
<u>4.B.2</u>	Greater than \$40 OR		6	6
<u>4.B.3</u>	Greater than \$47		8	8
<u>4.B.4</u>	Greater than \$58		12 10	12 10
4.C	Local Government Unit (LGU) Indicators			
4.C.1	2 out of 5 LGU indicators worse than state benchmark OR		2	2
<u>4.C.1</u>	3 out of 5 LGU indicators worse than state benchmark OR		4 3	4 3
<u>4.C.2</u>	4 out of 5 LGU indicators worse than state benchmark OR		6 5	6 5

4.C.3	5 out of 5 LGU indicators worse than state benchmark		87	87
4.D	Reserved for the CDBG Program			
4.E	Reserved for the CDBG Program			
	Maximum Points for Category 4 – Affordability		30 25	20 25
	Subtotal claimed for Category 4 – Affordability			
	Total of Points for All Categories			

Appendix C
Community Development Block Grant for Infrastructure

Figure C.1. Priority Points for the Community Development Block Grant for Infrastructure
September 2015 Applications

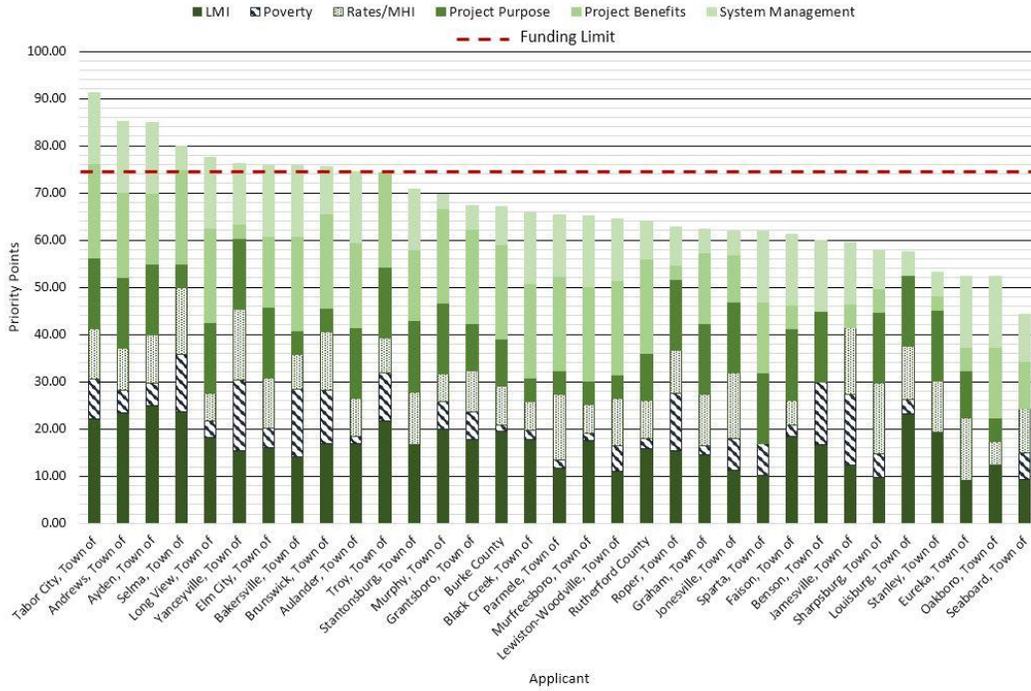


Figure C.2. Priority Points for the Community Development Block Grant for Infrastructure
September 2016 Applications

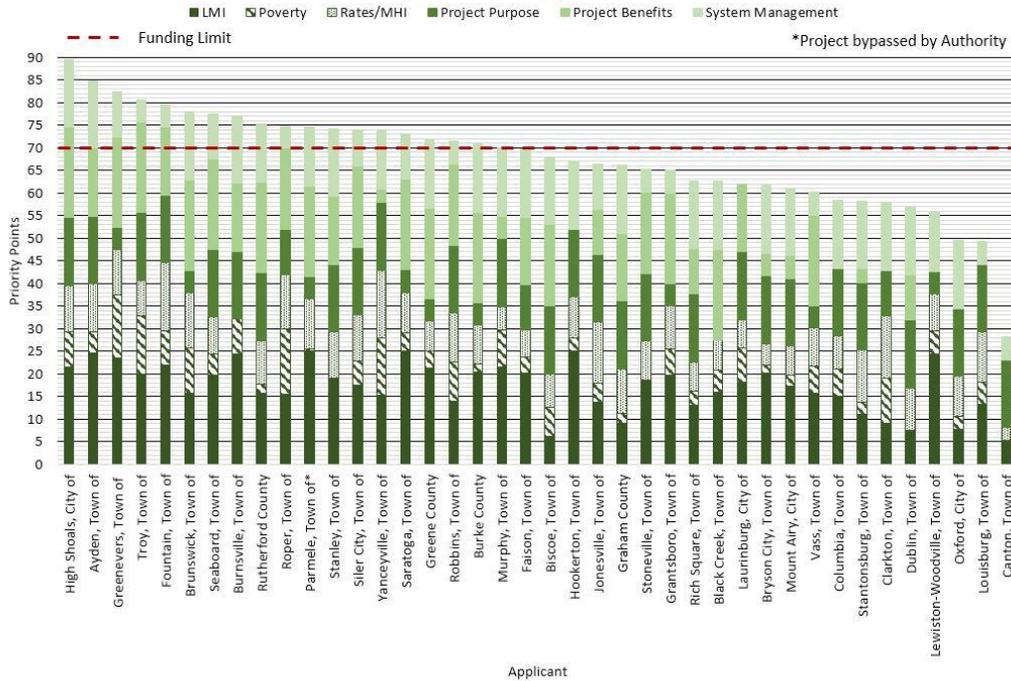
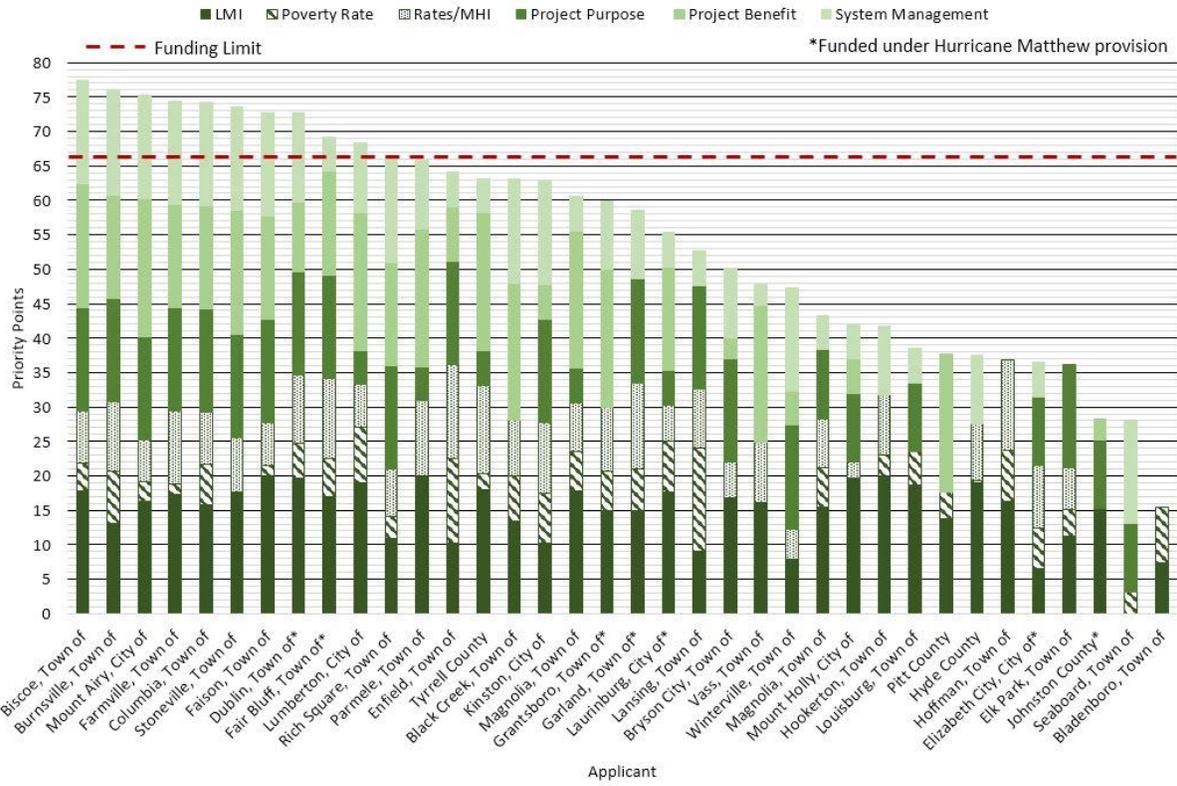


Figure C.3. Priority Points for the Community Development Block Grant Infrastructure
September 2017 Applications



Appendix D
Community Development Block Grant for Infrastructure Priority
Rating System

CDBG PRIORITY RATING SYSTEM - For All CDBG Projects

CDBG PRIORITY RATING SYSTEM - For All CDBG Projects			
	Category 1 – Project Purpose	Points	Points Claimed
1.A	Project will eliminate, by merger or dissolution, a failing public water supply system	15	
1.B	Project will resolve failed infrastructure issues	5	
1.C	Project will rehabilitate or replace infrastructure	10	
1.C.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	5	
1.D	Reserved for the CWSRF and DWSRF Programs		
1.D.1	Reserved for the CWSRF and DWSRF Programs		
1.E	Project will extend service for the following specific reasons:		
1.E.1	Extend water and/or sewer service to new low-income housing, or to an area where existing LMI homes are being rehabilitated	15	
1.E.2	Connect existing LMI homes to water and/or sewer service	10	
1.F	Reserved for the CWSRF Program		
1.F.1	Reserved for the CWSRF Program		
1.F.2	Reserved for the CWSRF Program		
1.G	Reserved for the CWSRF Program		
1.G.1	Reserved for the CWSRF Program		
1.H	Reserved for the CWSRF Program		
	Subtotal for Category 1 – Project Purpose (max = 15)		
	Category 2 – Project Benefits	Points	Points Claimed

2.A	Project provides a specific environmental or public health benefit by replacement, repair, or merger; includes replacing failing septic tanks, replacing dry wells, addressing contamination of a drinking water source by replacing or additional treatment	15	
2.A.1	In the project area, 20% or greater of individual septic tanks are failing, or water sources are contaminated, or wells are dry	5	
2.B	Reserved for the DWSRF Program		
2.C	Reserved for the CWSRF Program		
2.D	Project addresses promulgated but not yet effective regulations	3	
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	Project addresses low pressure in a public water supply system	5	
2.H	Project addresses acute contamination of a water supply source	15	
2.I	Project addresses contamination of a water supply source other than acute	10	
2.J	Reserved for the CWSRF and DWSRF Programs		
2.K	Water loss in system to be rehabilitated or replaced is 30% or greater	10	
2.L	Project provides a public water system interconnection		
2.L.1	Project creates a new interconnection between systems not previously interconnected OR	5	
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	3	
2.L.3	Reserved for the DWSRF Program		

2.M	Project directly addresses a moratorium on a local government unit system	7	
2.N	Water and sewer project is located within the same footprint	5	
2.O	Reserved for the DWSRF Program		
2.P	Reserved for the CWSRF Program		
2.Q	Reserved for the CWSRF Program		
2.R	Reserved for the CWSRF Program		
2.S	Reserved for the CWSRF Program		
2.T	<u>Project provides site work and new water and/or wastewater infrastructure, including house or apartment connections, to new low-to-moderate income housing</u>	<u>5</u>	
	Subtotal for Category 2 – Project Benefits (max = 20)		
	Category 3 – System Management	Points	Points Claimed
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	3	
3.B	Applicant has implemented an Asset Management Plan as of the date of application	10	
3.C	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.D	Applicant has an approved Source Water Protection Plan and/or a Wellhead Protection Plan	5	
3.E	Applicant has implemented a water loss reduction program	5	
3.F	Reserved for the DWSRF Program		
	Subtotal for Category 3 – System Management (max = 15)		

	Category 4 – Financial Situation	Points	Points Claimed
4.A	Reserved for the CWSRF and DWSRF Programs		
4.B	Reserved for the CWSRF Program		
4.C	Reserved for the DWSRF Program		
4.D	Reserved for the CWSRF Program		
4.E	Reserved for the CWSRF Program		
4.F	Poverty rate	Calculation; cap = 15	
4.G	Utility rates/MHI <u>Current Monthly Residential Single Utility Rates at 5,000 Gallons Usage</u>	Calculation; cap = 15	
<u>4.G.1</u>	<u>Greater than \$33</u>	<u>6</u>	
<u>4.G.2</u>	<u>Greater than \$40</u>	<u>9</u>	
<u>4.G.3</u>	<u>Greater than \$47</u>	<u>12</u>	
<u>4.G.4</u>	<u>Greater than \$58</u>	<u>15</u>	
4.H	Low to Moderate Income	Calculation; cap = 20	
	Subtotal for Category 4 – Financial Situation (max = 50)		
	Total of Points for All Categories:		

Appendix E
Asset Inventory and Assessment Grants
Merger / Regionalization Feasibility Study Grants

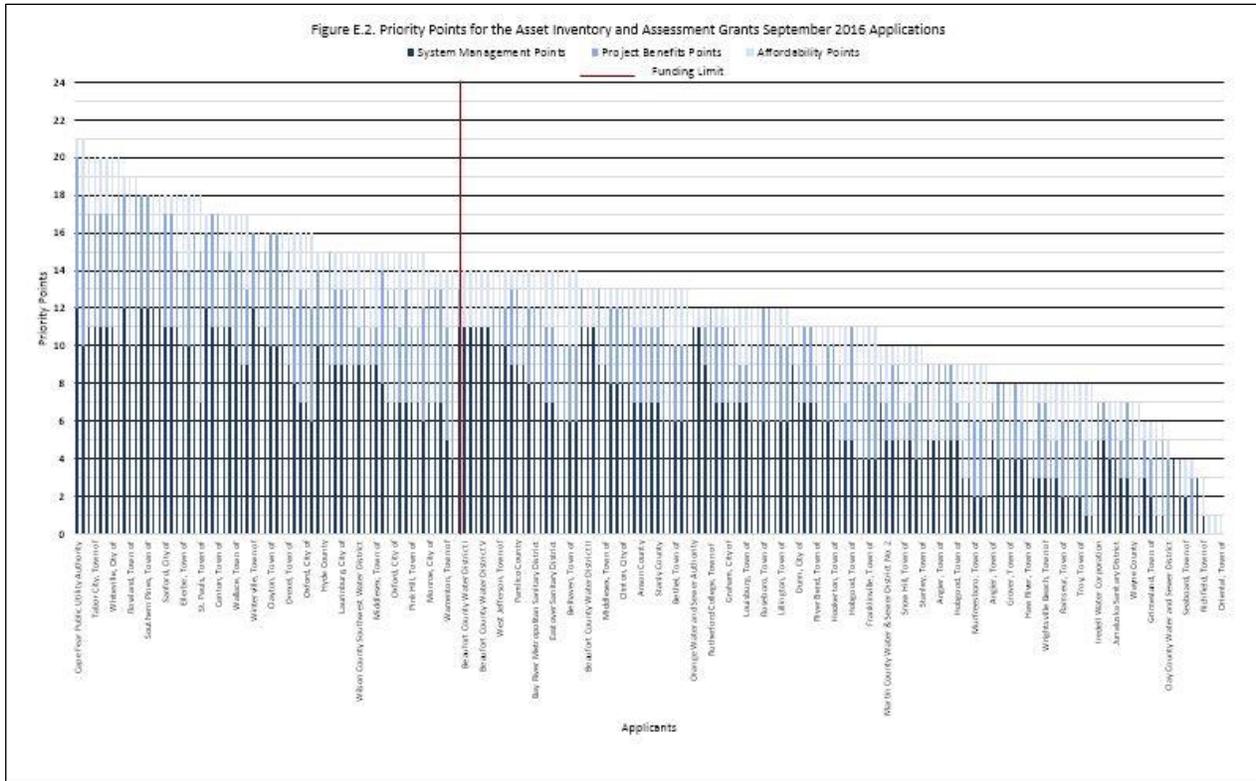
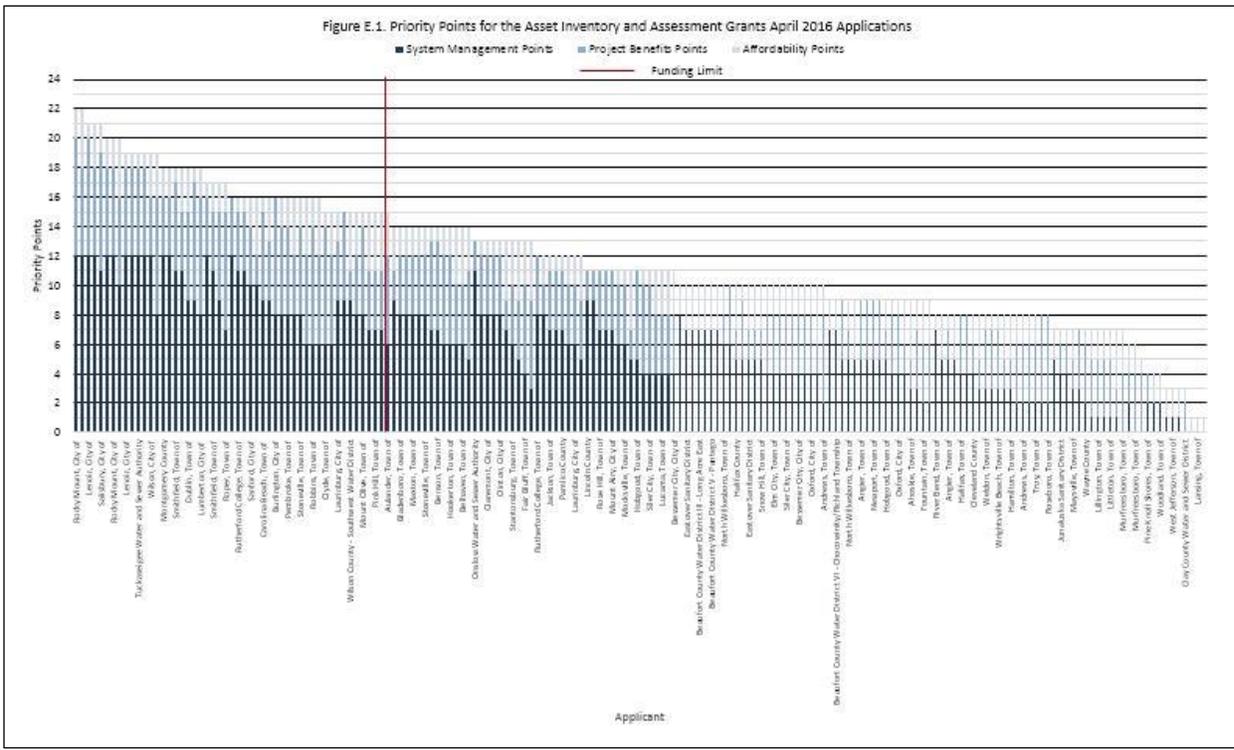


Figure E.5. Priority Points for the Asset Inventory and Assessment Grants
September 2016 Funded Projects

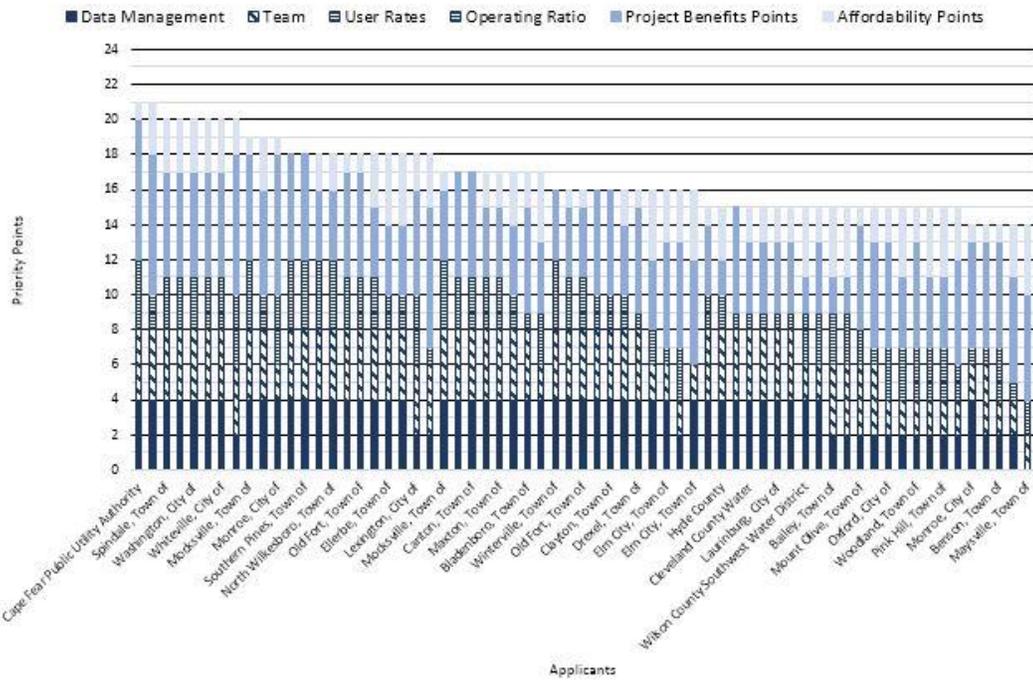


Figure E.6. Priority Points for the Asset Inventory and Assessment Grants
September 2017 Funded Projects

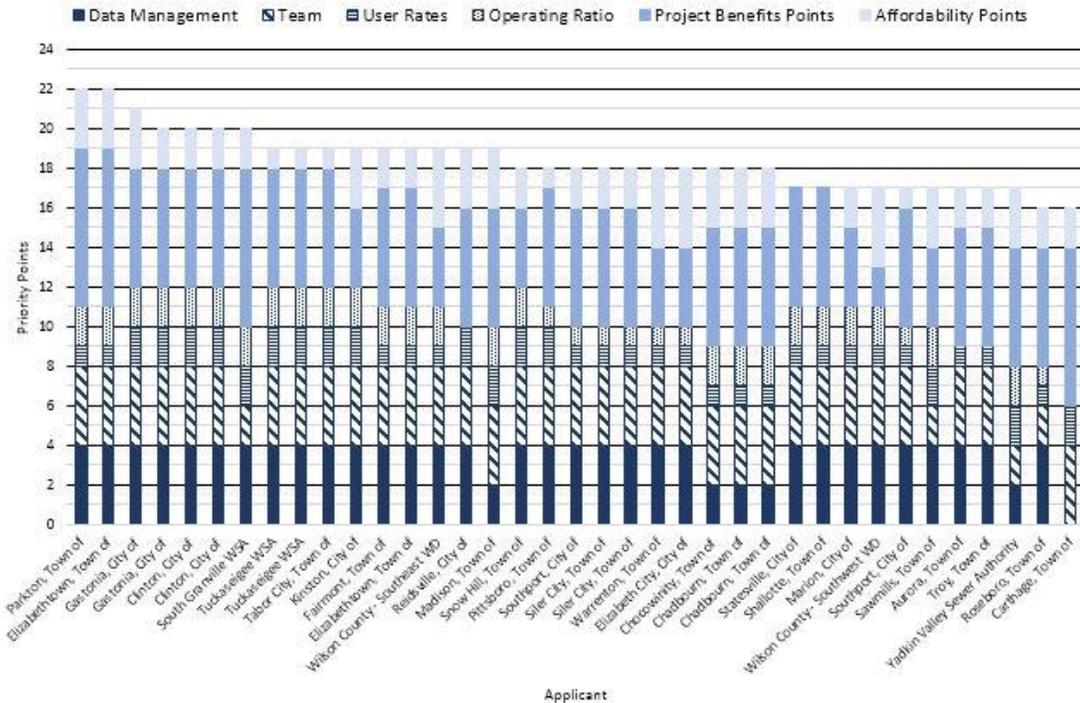
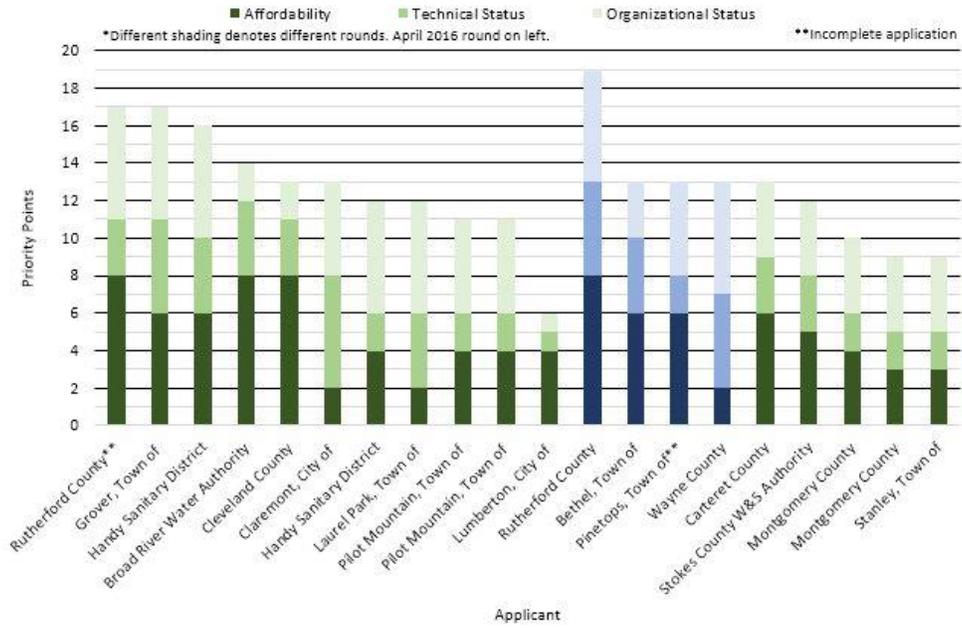


Figure E.7. Priority Points for the Merger/Regionalization Feasibility Study Grants*
(All Projects Funded)



Appendix F
Affordability Criteria

Figure F.1. Comparison of Monthly Utility Bills and Annual Debt Service per Connection for All Applications Received (Drinking Water Projects Only)

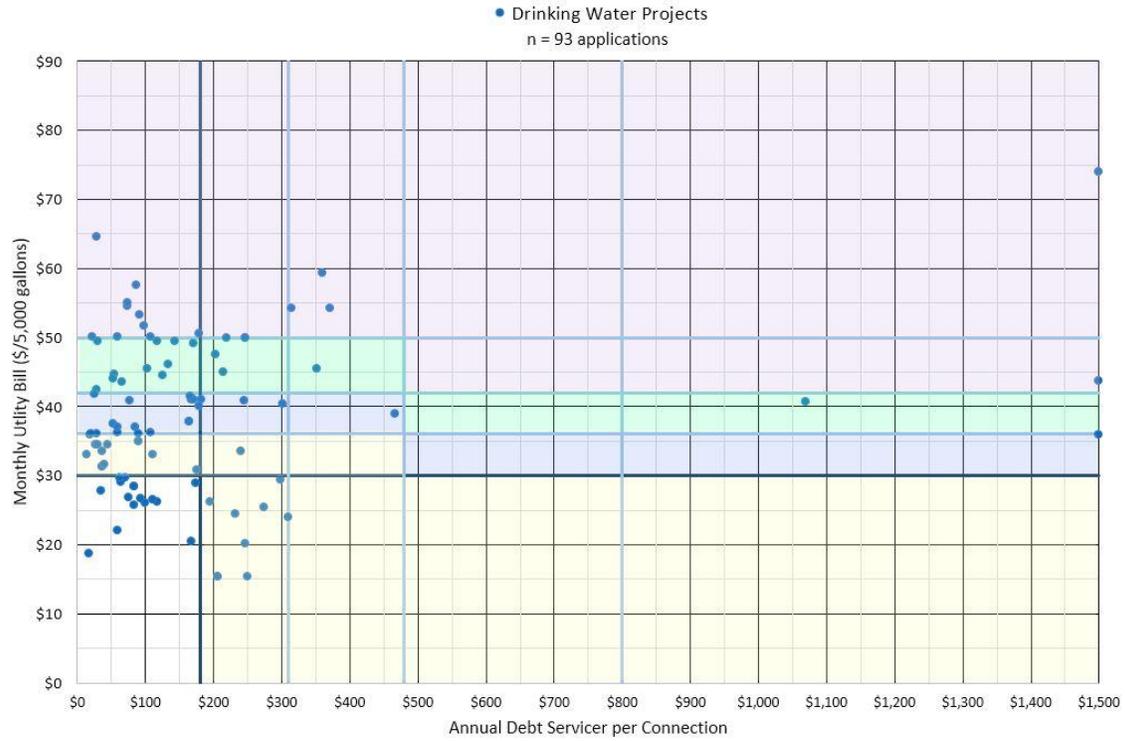


Figure F.2. Comparison of Monthly Utility Bills and Annual Debt Service per Connection for All Applications Received (Wastewater Projects Only)

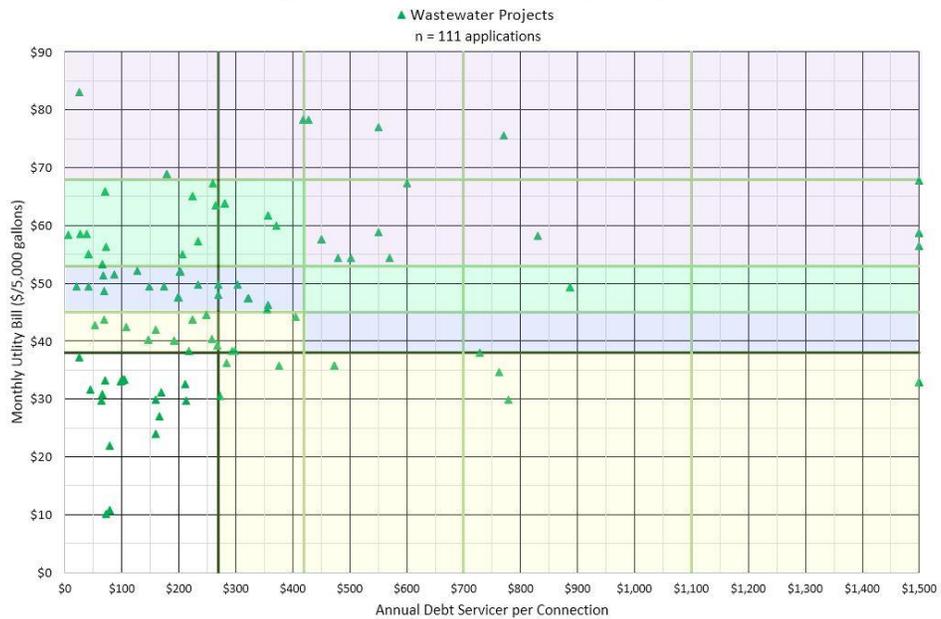


Figure F.3. Comparison of Monthly Utility Bills and Cost Per Connection (\$1.5 million project) for All Applications Received (Drinking Water Projects Only)

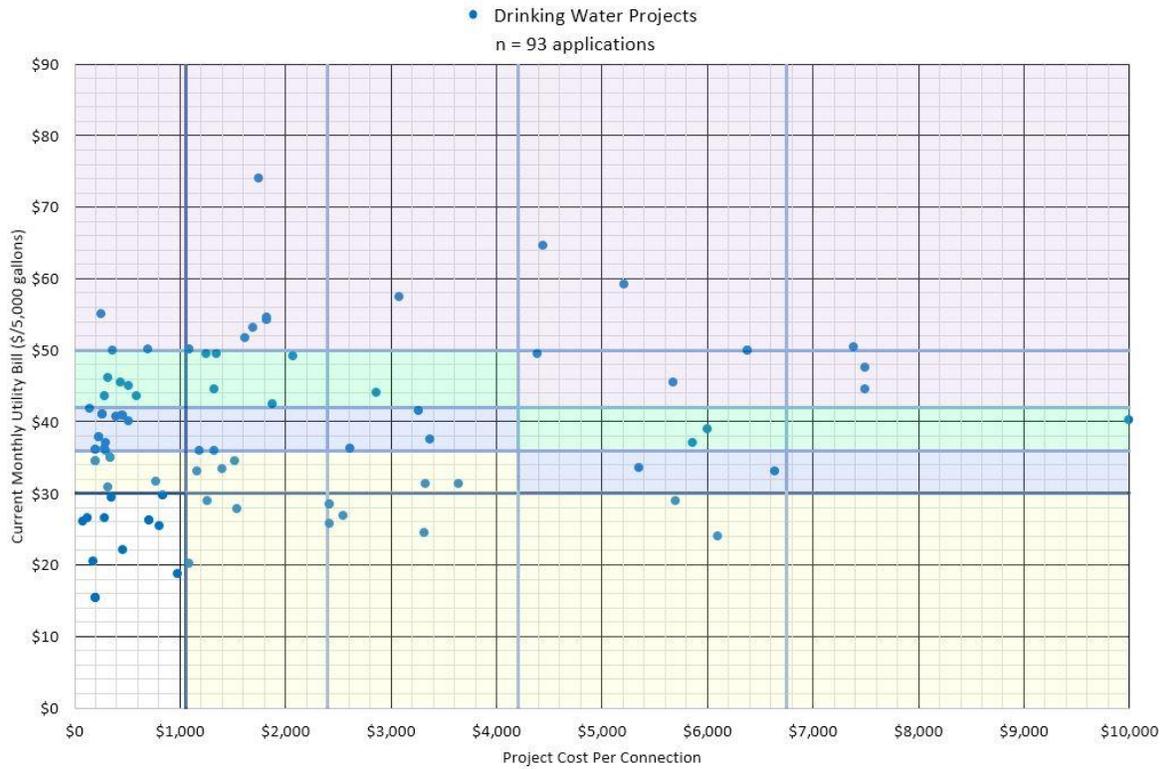


Figure F.4. Comparison of Monthly Utility Bills and Cost Per Connection (\$1.5 million project) for All Applications Received (Wastewater Projects Only)

