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## Clean Water State Revolving Fund

### Final Affordability Criteria

August 31, 2015

Public Law 113-121, the Water Resources Reform and Development Act of 2014” (WRRDA), amended sections of the Federal Water Pollution Control Act (FWPCA) that impact the Clean Water State Revolving Fund (CWSRF) loan program, administered by the Department. Section 603(i) was added requiring States to establish affordability criteria to assist in identifying municipalities that would experience a significant hardship raising the revenue necessary to finance a project or activity eligible under the CWSRF program if additional subsidization is not provided. The amendment requires States to establish the affordability criteria not later than September 30, 2015, and after providing notice and an opportunity for public comment. It also requires that the criteria be based on income and unemployment data, population trends, and other data determined relevant by the State. The Draft Affordability Criteria was posted on the Department’s website on August 10, 2015 and open for comment until 5:00 p.m. on August 28, 2015. No comments were received. The CWSRF Affordability Criteria became final on August 31, 2015.

Within the funding limits of the program, the Department currently provides additional subsidization for affordability in the form of loan principal forgiveness. In determining affordability, the Department currently uses a standard expressing the sewer user cost for a typical single-family residence as a percentage of the median household income. In accordance with the amendment, the Department has developed new affordability criteria based on the required criteria of income and unemployment data and population trends. In addition to the required criteria, the Department has determined that two additional criteria are also relevant in determining a municipality’s ability to raise the revenue necessary to finance a project. Those criteria are the municipality’s Poverty Rate and the Sewer User Cost as a Percentage of the Median Household Income (MHI). The justification for adding the additional criteria is:

- **Poverty Rate:** A municipality’s MHI is the median household income for the municipality, with just as many households with incomes above the MHI as below it. The MHI alone does not take into consideration the variation in incomes from the median that might exist between communities, nor does it factor in the lower incomes that might exist in the sewered area and the ability of those households to afford the additional cost of a project. Factoring in a community’s Poverty Rate into the analysis helps take into consideration this variation from the median and the community’s ability to finance the project.

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- **Sewer User Cost as a Percentage of the MHI (User Cost):** This standard of affordability has been utilized by the Environmental Protection Agency, the State, and other agencies for decades. By itself, it gives a ratio of the typical single-family residence sewer cost to the MHI and a general sense as to how much the households in the community are paying for sewer services compared to their income. A lower percentage compared to a higher percentage generally means that more funds are potentially available to assist with funding a project. A higher percentage indicates that a community might experience a hardship in raising the revenues necessary to finance a project.

### **State Affordability Criteria**

In establishing the new affordability criteria, the Department's goal is to use data that has a bearing on a municipality's ability to finance a project, is readily available, is obtainable for the municipalities that the program serves, and can be compared to State data to establish need. The affordability criteria will be used to identify both municipalities' and wastewater districts' that would experience a significant hardship raising the revenue necessary to finance a project. District projects that span municipal boundaries will have to use municipal data for the communities served by the project and weight their analysis accordingly.

Where possible, the State's Affordability Criteria 'indexes' the municipal rate to the State rate for that criteria. In doing so, indexing expresses the Municipal rate as a ratio to the State rate/average. A ratio of 1.0 indicates that the municipality's rate is the same as the State's rate. A ratio of less than 1.0 indicates that the municipality's rate is below the State's rate; and conversely, a rate greater than 1.0 indicates that the municipality's rate is above the State's rate for that criterion. In this affordability analysis, the various criteria indexes are added together to arrive at the overall affordability points for the municipality. The municipality's affordability points can then be compared to State's points for need, and to other municipalities for affordability ranking and ultimately the affordability principal forgiveness percentage that might be available.

Ideally, all of the criteria would be indexed to the State rates. An appropriate goal of indexing for affordability would be to have all positive trends for affordability result in a ratio less than 1.0 and all negative trends result in a ratio greater than 1.0. Then, when the various criteria indexes are added together, the higher the number the more likely a municipality will experience a hardship in raising the necessary project funds and be more in need of financial assistance.

However, because of the criteria being used, indexing was not always possible. Straight indexing worked well for the Poverty Rate data and the Unemployment Rate data, but did not work for the Median Household Income data or the Population Trend data. The reason is that a municipal rate above the State rate for these criteria has a positive financial impact, not a negative one. The indexing issue for the Income data was resolved by inversely indexing the Income data, i.e., State rate as a ratio to the Municipal rate. This achieved the desired result of an indexed criterion greater than 1.0 for municipalities with median household incomes less than the State's.

Indexing, or even inversely indexing, the Population Trend data does not work because of the positive and negative trend of the data of the municipalities. Instead of indexing, this criterion will be evaluated using a point system based on the municipality's 10-year population trend. Ranges for the municipalities' 10-year population trends were established in 5% increments above and below the State's average/rate (SR) and points assigned.

Unlike the other four criteria, the Sewer User Cost data for all of the municipalities is not collected by the State or the U.S. Census Bureau. Therefore, establishing a State average for the Sewer User Cost as a percent of the MHI is not possible. After reviewing the cost information that was available, it was determined that the average and range for this criterion was similar the average and range of the other indexed criteria. Therefore, the sewer user cost as a percentage of the MHI, expressed as a whole number, could be used in the analysis.

The five criteria are roughly weighted the same and therefore each criteria has roughly the same impact on the Affordability Analysis. The indexes and points for each of the five criteria are added together to arrive at the total affordability points for each municipality. The higher the points awarded, the greater the hardship a municipality might have in affording the project without additional subsidization. The State's five criteria total 5.0 points, i.e. one point for each of the five criteria.

## **Criteria and Methodology**

### **Poverty Rate**

Data from U.S. Census Bureau – American FactFinder  
<http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

Poverty Rate Index (PRI) is calculated as the ratio of the municipality's poverty rate to the State's poverty rate.

$$\text{PRI} = (\text{Municipal Poverty Rate}) \div (\text{State Poverty Rate})$$

### **Income**

The income data for the community is the Median Household Income. When available, income data presented to the Department shall be prioritized in this order: 1) a State approved system-wide income survey that was finalized within the past two years; 2) Census Designated Place (CDP) data, if the sewered area closely approximates the CDP area; then 3) town data. CDP and town data shall be from the U.S. Census Bureau – American FactFinder <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>  
American Community Survey Use 5-year MHI estimates.

The U.S. Census Bureau has an application on its website that lets you see the CDP boundaries without needing any GIS expertise: <http://tigerweb.geo.census.gov/tigerweb/>. Zoom into a small portion of the state at a time and select the "Places and County Subdivisions" checkbox to see the CDP boundaries.

Income Index (II) is calculated as the ratio of the State's Median Household Income to the municipality's Median Household Income.

$$\text{II} = (\text{State Median Household Income}) / (\text{Municipal Median Household Income})$$

## Unemployment Rate

Data from Maine Department of Labor (MDOL), Center for Workforce Research and Information <http://www.maine.gov/labor/cwri/laus.html> , Average Annual Labor Force Estimates – City/Town (Minor Civil Division)

Unemployment Rate Index (URI) is calculated as the ratio of the municipality’s unemployment rate to the State’s unemployment rate.

$$\text{URI Points} = (\text{Municipal Unemployment Rate}) \div (\text{State Unemployment Rate})$$

## Population Trend

Data from U.S. Census Bureau – Population Estimates – Use most current information for the population trend over the past 10 years.

2003 data - City and Town Intercensal Estimates (2000-2010) at: <http://www.census.gov/popest/data/intercensal/cities/cities2010.html> (This is a very large text data file that must be saved and opened in Excel to work with. The data is delimited by commas, so use the Text Import Wizard when opening in Excel to get data into a workable format).

2013 data – City and Town Totals: Vintage 2013 – Minor Civil Divisions: 2010 to 2013 at: <http://www.census.gov/popest/data/cities/totals/2013/index.html>

The most current 10-year population trends (PT) for municipalities are compared to the State’s population trend over the same period.

$$\text{PT as Percent} = ((\text{Current Municipal Population}) - (\text{Municipal Population 10 years prior})) \div (\text{Municipal Population 10 years prior}) \times 100$$

Ranges for the municipalities’ 10-year population trends are established in 5% increments above and below the State’s rate/average (SR) and points assigned as follows:

<b>Population Trend Range</b>	<b>Points</b>
Greater than 5% above the State Rate: > (SR+5%)	0.0
State Rate to 5% above the State Rate: (SR+5%) to SR	0.5
State Rate to 5% below the State Rate: SR to (SR-5%)	1.0
5% below the State Rate to 10% below the State Rate: (SR-5%) to (SR-10%)	1.5
10% below the State Rate to 15% below the State Rate: (SR-10%) to (SR-15%)	2.0
15% below the State Rate to 20% below the State Rate: (SR-15%) to (SR-20%)	2.5
More than 20% below the State Rate: < (SR-20%)	3.0

### **Sewer User Cost as a Percentage of the Median Household Income (MHI)**

Yearly Sewer User Cost data for a typical single-family residence is provided by the municipality. Cost data shall be based on a use of 8,000 cu. ft. per year.

Median Household Income data is derived as outlined previously under “Income”.

Sewer User Cost as a Percentage of the MHI (UC/MHI) Points are calculated by dividing the municipality’s yearly sewer cost for a typical single-family residence by the municipality’s Median Household Income then multiplying by 100.

$$\text{UC/MHI Points} = (\text{Single Family Residence Yearly Sewer User Cost}) \div (\text{Municipality's MHI}) \times 100$$

### **Additional Subsidization (Principal Forgiveness)**

The purpose of indexing is to compare a municipality’s data to State data. If equal, the indexed ratio is 1.0. Criteria for Poverty Rate, Income and Unemployment Rate are indexed, and therefore the State Rate is equal to 1.0. The non-indexed data for Population Trend and Sewer User Rate as a Percent of the MHI are handled differently. Municipal Population Trends equal to the State’s Rate and slightly below are awarded one point. Therefore, one (1.0) is utilized to establish the baseline points for Population Trend. Sewer User Rates as a percentage of the MHI around 1.0 percent are typically thought to be affordable. Therefore, the base line points for Sewer User Rates as a Percentage of the MHI is established at 1.0. Summing the State average data, as a base line for each of the five criteria, results in a total of 5.0 points as the State Average Points for the affordability criteria.

Poverty Rate Index	1.0
Income Index	1.0
Unemployment Index	1.0
10-Year Population Trend	1.0
Sewer User Rate as a Percentage of MHI	<u>1.0</u>
Total State Average Points	5.0

The requirement and purpose of establishing affordability criteria is to identifying municipalities that would experience a significant hardship raising the revenue necessary to finance a project, if additional subsidization is not provided. In meeting this requirement, the Department has established that a municipality’s affordability points must exceed the total of State average points by 40% in order to be eligible for additional subsidization (principal forgiveness). Therefore, the sum of a municipality’s affordability criteria must be a minimum of 7.0 (140% of 5.0) points to be eligible for possible affordability principal forgiveness. The Department estimates that approximately 20 – 25% of the municipalities in the State with wastewater infrastructure would meet the minimum requirement for principal forgiveness.

The amendment requires States to establish affordability criteria that help in identifying municipalities that would experience a significant hardship in raising the necessary project revenues. The amendment does not require the States to establish the amount of additional subsidization (principal forgiveness) that will be offered. The States have the ability to offer from 0% to 30% of the State's capitalization grant. The upper limit might be limited even more depending upon the annual federal appropriations for the program. The Department believes that the establishment of principal forgiveness that is offered should be determined on an annual basis when the Intended Use Plan is developed. Please note: Development of the Intended Use Plan also requires an opportunity for public review and comment.

**Examples of Municipality Affordability Criteria and Points:**

	State		Goodville		Martenville		Mooseville	
		Points		Points		Points		Points
Poverty Rate	13.6%	<b>1.0</b>	6.9%	<b>0.51</b>	16.4%	<b>1.21</b>	24.8%	<b>1.82</b>
Income (MHI)	\$48,453	<b>1.0</b>	\$46,964	<b>1.03</b>	\$33,068	<b>1.47</b>	\$27,587	<b>1.76</b>
Unemployment Rate	6.7%	<b>1.0</b>	4.8%	<b>0.72</b>	11.7%	<b>1.75</b>	11.3%	<b>1.69</b>
Population 2003	1,306,513		7,879		2,380		1,127	
Population 2013	1,328,302		8,109		2,284		907	
Population Trend	1.67%	<b>1.0</b>	2.99%	<b>0.5</b>	-4.03	<b>1.5</b>	-19.52%	<b>3.0</b>
Sewer User Cost			\$619		\$365		\$496	
UC/MHI		<b>1.0</b>	1.32%	<b>1.32</b>	1.10%	<b>1.10</b>	1.80%	<b>1.80</b>
<b>Affordability Points</b>		<b>5.0</b>		<b>4.05</b>		<b>7.03</b>		<b>10.07</b>