

## XV. Appendices:

### Appendix A – Project Priority List

#### Priority Setting Procedures for Drinking Water State Revolving Loan Fund

Priority Points shall be used for ranking proposed drinking water projects for eligibility for funding from the Drinking Water State Revolving Loan Fund (Fund). The points system presented below will be used.

A project otherwise determined to be eligible under the Fund may not receive funding for improvements that were not included in the original project for which priority points were assigned. The additional unranked improvements must rely on alternate funding sources for these improvements, or wait for the next funding cycle for a new point's assessment. Fundable projects proposing to omit specific improvements for which points were assigned must show that this will not compromise public health and will not otherwise impair the water system's capacity when compared to the original project. Acceptable downsized projects will be reassessed and re-ranked under the priority ranking system, possibly resulting in a lower priority status.

PRIMARY MCL VIOLATIONS FACTORS	POINTS
1. Surface Water or Groundwater under the direct influence of surface water with no filtration	100
2. Treatment technique violations, microbiological MCL violations	
a. Total points for first two violations	100
b. Points for additional violations after first two	5
c. Points for imminent violation of future regulation	50
3. Acute Chemical Violations	
a. Total points for first two violations	100
b. Points for additional violations after first two	5
c. Points for imminent violation of future regulation	50
4. New Service Areas for area(s) with contaminated private drinking water sources	100
a. Points for Microbial Contamination	100
b. Points for Acute Chemicals	50
c. Points for Other Chemicals	
5. Chemical MCL Violations	
a. Total points for first two violations	50
b. Points for additional violations after first two	5
c. Points for imminent violation of future regulation	50
SOURCE VULNERABILITY FACTOR	POINTS
1. Vulnerable to point or non-point upstream discharge	
a. Microbiological	25
b. Industrial, agricultural, or mineral	15
c. Unprotected watershed	15
CONSOLIDATION / INTERCONNECTION FACTOR	POINTS
1. Consolidation with an existing system	

< 40 service connections	50
41 – 200	40
201 - 1,320	30
1,321 - 4,000	20
> 4,000	10
2. Interconnection with an existing system	
< 40 service connections	25
41 – 200	20
201 - 1,320	15
1,321 - 4,000	10
> 4,000	5
<b>AFFORDABILITY FACTOR</b>	<b>POINTS</b>
1. Total Population Served: Service Connections < 1,321	10
2. Affordability Ratio	
a) > 2.49 %	15
b) 2.0 % - 2.49 %	12
c) 1.5 % - 1.99 %	9
d) 1.0 % - 1.49 %	6
e) <1.0 %	3
<b>OTHER DEFICIENCIES FACTOR</b>	<b>POINTS</b>
1. Secondary MCL violation	25
2. Fluoridation start-up	5
3. Quantity deficiencies	
Continual/frequent outages	25
Peak demand/daily shortages	20
Peak demand/seasonal shortages	10
Peak demand/sporadic shortages	5
3. Design deficiencies	
Disinfection	10
Chemical Feed	8
Mixing	8
Clarification	8
Filtration	8
Storage	8
Distribution/low pressures	10
Distribution/deteriorated mains	8
Distribution/unaccounted for water	8
Treatment capacity	8
Intake structure	8
Well construction	10
<b>BONUS POINTS</b>	<b>POINTS</b>
1. Board Member or City Council Training in the past 5 years	15

### Eligibility for Priority Points

Projects for public water systems shall not be eligible for points in any category unless they meet the requirements specified below for that category. Should two or more projects accumulate the same number of points, priority will be given beginning with the project serving the least population and moving to the project serving the next higher population, until all projects with that point total are prioritized.

It should be noted that discretion will be used in the awarding of points in the following categories. If a public water system is accumulating violations due to negligence or inattention on the part of the system, points will not be awarded. The system must be taking reasonable actions to achieve compliance.

### Primary MCL Violations Factors

- 1) Surface Water or Ground Water under the direct influence of surface water with inadequate filtration
  - a) Points will be awarded only for a water system that currently is required by the Safe Drinking Water Act to provide filtration, and the system does not have a filtration system that complies with the Safe Drinking Water Act regulations. In the case of consolidating systems where the project applicant does not qualify, but one of the consolidating systems does, then points will be awarded based on the consolidating system. If there are multiple consolidating systems within the same project which are SW or GWUDI, then an additional five (5) points will be awarded for each system after the first.
- 2) Treatment technique violations and microbiological MCL violations.
  - a) Points will be awarded only for a water system that has had more than one treatment technique or microbiological MCL violation of the Safe Drinking Water Act during the eighteen months preceding the date of the most recent ranking questionnaire.
  - b) Each microbiological MCL violation and treatment technique violation will be counted as an individual violation, even if they occur in the same month. Points can be awarded for multiple violations of the same type or in combination with other violation types, (e.g.; if a system had both a microbiological MCL and a treatment technique violation in the same month, they would get points for two violations in that month.).
    - i) One hundred (100) points total will be awarded for the first two (2) violations.
    - ii) Five (5) points will be awarded for each additional violation.
    - iii) Fifty (50) points may be awarded to a project whose purpose is to prevent a future NPDWS treatment technique or microbiological violation based upon promulgated EPA regulations or EPA regulations which are essentially final, but not yet promulgated.
- 3) Acute Chemical & Chemical MCL violations.
  - a) Points will be awarded only for a water system that currently has contamination from a Safe Drinking Water Act regulated contaminant, or other chemical contaminant for which no MCL has been adopted, which presents an acute health risk to consumers, based on EPA standards, health advisories, or other peer reviewed health risk studies found acceptable to the Department.
    - i) One hundred (100) points will be awarded for the first two (2) violations.
    - ii) Five (5) points will be awarded for each additional violation.
    - iii) Fifty (50) points may be awarded to a project whose purpose is to prevent a future NPDWS violation based upon promulgated EPA regulations or EPA regulations which are essentially final, but not yet promulgated.

- 4) New Service Area for Area(s) with contaminated Private Drinking Water Sources. Points may be awarded for a project to provide public drinking water service to an unserved area provided that:
  - a) At least 10% of the private water sources in the project area are sampled at random for microbiological contamination and at least 50% of those samples are coliform positive; or
  - b) At least 10% of the private water sources in the project area are sampled at random for a regulated acute chemical contaminant and at least 50% of those samples exceed the Maximum Contaminant Level or Action Level specified by EPA; or
  - c) At least 10% of the private water sources in the project area are sampled at random for other chemical contaminants and at least 50% of those samples exceed the Maximum Contaminant Level or Action Level specified by EPA.
- 5) Chemical MCL Violations. Points will be awarded only for a water system that currently has contamination from a Safe Drinking Water Act regulated contaminant at a level which exceeds the MCL or Action Level specified by EPA and has not already received points under “Acute Chemical Violations.”
  - a) Each chemical MCL violation will be counted as an individual violation, even when multiple violations occur in the same reporting period. Points can be awarded for multiple violations of the same type (inorganic, organic, radiochemical, etc.) or in combination with other violation types, (e.g.; if a system had both an arsenic MCL and a barium MCL in the same reporting period, they would get points for two violations in that reporting period.).
    - i) Fifty (50) points will be awarded for the first two (2) violations.
    - ii) Five (5) points will be awarded for each additional violation.
    - iii) Fifty (50) points may be awarded to a project whose purpose is to prevent a future NPDWS violation based upon promulgated EPA regulations or EPA regulations which are essentially final, but not yet promulgated.

### **Source Vulnerability Factors**

- 1) Source Vulnerable Due to Contamination from a Point or Non-point Source Discharge (with the potential to cause microbiological contamination). Points will be awarded only to a surface water source where there exists identifiable point or non-point discharges which can be documented to result in, or can potentially result in, instances where the raw water coliform concentrations exceed the limitations set forth in Section IX.A of the “Rules and Regulations Pertaining to Public Water Systems”, or otherwise cause significant microbiological contamination of the source water.
  - a) Source Vulnerable Due to Contamination from Industrial Operations. Points will be awarded for a water source where analyses indicate the occasional presence of hazardous chemicals from an industrial source. In the case of a water system utilizing a ground water source, points will be awarded when documentation is provided that a contaminant plume exists in the source aquifer and is approaching the wellhead.
  - b) Source Vulnerable Due to Contamination from Agricultural Operations. Points will be awarded for a water source where analyses indicate the occasional presence of agricultural chemicals. Points will be awarded in the case of a water system utilizing a ground water source, only when analyses indicate the occasional presence of contaminants of agricultural origin in the source water or documentation of a contaminant plume in the source aquifer which is approaching the wellhead.
  - c) Source Vulnerable Due to Potential Contamination from Oil, Gas, or Mineral Operations. Points will be awarded for a surface water source where analyses indicate the occasional presence of contaminants from oil, gas, or mineral operations. Points will be awarded for a ground water

source where the recharge area contains oil, gas, or mineral operations that have caused a plume of contamination that is approaching the water supply wellhead.

- d) Source with Inadequate Buffer Zone. Points will be awarded for a surface water source where the required 300-foot buffer zone required under the Arkansas Rules and Regulations Pertaining to Public Water Systems has not been obtained. Points will be awarded for a ground water source where the 100-foot radius buffer area zone required in these regulations has not been obtained.

### **Consolidation/Interconnection Factor**

1. Consolidation with an Existing System. Points will be awarded only for systems which agree to legally merge with another water system which is fully compliant with Safe Drinking Water Act water quality regulations or will become compliant as a result of the merger. In cases where multiple systems will consolidate, point assignments will be based upon the number of service connections of the smallest system. Extra points for additional consolidating systems under the same project will be assigned at a rate of ten percent (10%) of the original rate for each additional consolidating system.
2. Interconnection with an Existing System. Points will be awarded only for systems which propose an interconnection and water purchase agreement with another water system, which is SDWA compliant, as a means of resolving a water quantity or quality problem for which points are awarded. In cases where multiple systems will interconnect, point assignments will be based upon the number of service connections of the smallest system. Extra points for additional systems under the same project will be assigned at a rate of ten percent (10%) of the original rate for each additional consolidating system.
3. Projects are eligible for either consolidation points or interconnection points, but not both.

### **Affordability Factor**

1. Total Population Served. Points will be awarded for systems serving fewer than 1321 service connections.
2. Affordability Ratio. Points will also be awarded based on the value of the Affordability Ratio, calculated as the current average yearly residential rate, based on a usage of 4000 gallons of water per month, divided by the Median Household Income. The Median Household Income shall be based on the entire service area of the project water system using the most current information available.

### **Other Factors – Public Health Improvements or Deficiencies**

1. Secondary MCL Violations. Points will be awarded only for those water systems where analyses document that a violation of an MCL for any of the Secondary Drinking Water Standards has occurred.
2. Fluoridation start-up. Points will be awarded for those water systems adding installing fluoridation to the treatment process.
3. Quantity Deficiencies
  - a. Continual Shortage (Frequent Outages). Points will be awarded only for a water system that experiences frequent complete pressure losses, which are the result of demand exceeding supply, and are not the result of main break, equipment failure, lack of proper maintenance, or other operational failures.
  - b. Shortage During Peak Demand Period (Daily). Points will be awarded only for a water system that frequently experiences minimal pressures due to daily demand exceeding supply.
  - c. Shortage During Peak Demand Period (Seasonal). Points will be awarded only for a water system that has to routinely issue conservation orders during heavy use periods or experiences minimal pressures during heavy use periods.

- d. Occasional Shortage During Peak Demand Period. Points will be awarded only for a water system that, once or twice a year, experiences some pressure loss due to peak demands.

#### 4. Design Deficiencies

- a. Inadequate Disinfection. Points will be awarded for a water system that either does not disinfect or does not continuously disinfect due to equipment failure or lack of adequate feed rate capacity. Points may also be awarded for inadequate chlorine contact time (CT) as defined by regulation.
- b. Inadequate Chemical Feed. Points will be awarded only for a water system that is unable to either reliably or consistently feed adequate chemicals to meet treatment objectives.
- c. Inadequate Mixing. Points will be awarded only for a water system whose rapid mixing detention time is inadequate based on Department design standards.
- d. Inadequate Clarification. Points will be awarded for a water system whose clarification process is functioning improperly due to an inadequate detention time, using Department accepted design standards. Points will be awarded for a water system where improper functioning is occurring due to mechanical or structural failure.
- e. Inadequate Filtration. Points will be awarded for a water system whose filtration process is functioning improperly due to excessive filtration rates, damaged underdrains, or other physical plant defects. Points shall not be awarded under this section if points were awarded under the section pertaining to filtration of surface water or groundwater under the direct influence of surface water.
- f. Inadequate Storage. Points will be awarded only for a water system whose usable storage is less than one day's average system demand.
- g. Inadequate Distribution (Low Pressures). Points will be awarded only for a water system that has areas of chronic low pressure due to localized peak demands.
- h. Inadequate Distribution (Deteriorated Mains). Points will be awarded only for a water system that has chronic consumer complaints that can be directly tied to the deterioration of cast iron, galvanized, or other metal piping, or has frequent main breaks due to deteriorated pipe.
- i. Inadequate Distribution (Unaccounted for Water). Points will be awarded only for a water system that has unaccounted for water at a level that exceeds 10% of average daily production.
- j. Inadequate Treatment Unit Capacity. Points will be awarded only for a system whose plant, or individual process units in the plant, are undersized for process flow rates determined by using Department accepted design standards.
- k. Inadequate Intake Structure. Points will be awarded only for a water system whose intake structure is either unable to deliver an adequate quantity of water or whose intake structure will not allow for adjustment of withdrawal depth.
- l. Improper Well Construction. Points will be awarded only for a water system whose well is vulnerable to surface drainage into the well from improper wellhead and appurtenances construction or inadequate casing and/or grouting.

#### **Bonus Points**

1. Board Member or City Council Training in the past 5 years. Points will be awarded to systems for training.
2. Up-to-date Asset Management Plan. Points will be awarded only for a water system whose Asset Management Plan is current.