ATTACHMENT 3

CLEAN WATER STATE REVOLVING LOAN FUND

INTENDED USE PLAN (IUP)

RANKING FRAMEWORK

for

PENNVEST WASTEWATER PROJECTS

Draft
June 2025

Prepared by
Bureau of Clean Water
Division of Municipal Facilities

Pennsylvania
Department of
Environmental Protection

BACKGROUND

States develop and implement a project rating system to prioritize projects for Clean Water State Revolving Fund (CWSRF) funding. The Department of Environmental Protection (DEP) and the Pennsylvania Infrastructure Investment Authority (PENNVEST) use the methodology in this document to perform that function. PENNVEST also has state-sourced funds to award in addition to the federal monies. This rating system is designed to prioritize those funds as well.

DEP generates a priority list which is ranked to reflect DEP priority points. PENNVEST adds additional points.

PROCESS FOR RATING SYSTEM REVISIONS

This ranking system is included as an attachment to the CWSRF Intended Use Plan (IUP) as part of the capitalization grant application for federal funding. As part of the IUP, this ranking system is available for public review and comment and is posted on the DEP website. Before any revisions can be made to this ranking system it must be reviewed and approved by the U. S. Environmental Protection Agency (EPA) and the PENNVEST Board before implementation to ensure consistency with federal and state requirements.

PROJECT SELECTION PROCESS

Ratings are done after all the DEP permits necessary for the project have been issued. DEP program staff meets and discusses each project and comes to a consensus on the score. One month before each Board meeting DEP submits a final list of recommended projects and scores to PENNVEST. The PENNVEST Board approves projects for funding.

DEP PRIORITY RATING FACTORS

(a) The maximum points for each factor are:

(1) Public Health – 35 points
(2) Aquatic Health – 20 points
(3) Infrastructure Health – 34 points
(4) Compliance – 25 points
(5) Community Health – 15 points

(b) A project's total priority points are the sum of the points assigned in each of the individual rating factors. The maximum point total is 129.

DOCUMENTATION OF THE DEP RATING PROCESS

DEP Project Managers complete a PENNVEST Rating Form with tentative ratings during application review. The Priority Rating Review Committee (PRRC) reviews those

forms during their consideration of the tentative ratings. If the final ratings are different than the tentative ratings the Project Manager resubmits the form as a record. The Project Manager enters a summary of the final rating on the PENNVEST website.

PENNVEST AFFORDABILITY RATING

PENNVEST provides the affordability portion of the rating by comparing what the project would cost without funding to the target user rate for the applicant. That ratio is presented in the form of a percentage, resulting in up to 20 points according to the following scale:

(a) 200% and greater	20 points
(b) 176% but less than 200%	16 points
(c) 151% to 175%	12 points
(d) 126% to 150%	8 points
(e) 100% to 125%	4 points
(f) Less than 100%	0 points

PENNVEST ADDITIONAL RATING FACTORS

To develop a final score for each project, PENNVEST adds the following points to the project scores DEP develops. The total points that can be added to DEP's rating for each project are 70 points.

(a) Economic Development – The Department of Community and Economic Development (DCED) provides this ranking based on:

(1) High (20 points) – The project has a direct link to job creation or preservation and private investment.
(2) Medium (15 points) – An indirect link to job creation or preservation and private investment exists.
(3) Low (5 points) – Project implementation.

(b) Distressed Community – DCED evaluates communities across the Commonwealth for financial well-being. Communities on the Distressed Communities list are identified in order to have access for consideration for assistance from various state agencies in order to get the communities back to normal status. If the project is in a community that is considered distressed, 10 points are added to the project.

(c) Infill – PENNVEST adds 10 points to those projects that serve a city, borough or township of the first class. Redevelopment of existing population centers is a priority.

(d) Brownfield – PENNVEST adds 15 points to those projects that serve a designated

Brownfield site as identified by DEP.

(e) Community Action Team (CAT) Projects – DCED adds 10 points to those projects that are in a CAT community. The CAT community system is an effort to focus financial and technical resources to specific communities identified by the CAT Team. Members of the CAT Team include DCED, DEP, the Pennsylvania Department of Transportation, the Public Utility Commission and other local and state agencies.

(f) Comprehensive Planning – DCED adds 5 points to those projects that are within communities with a comprehensive plan, where the community plan is consistent with the adopted county comprehensive plan.

DEFINITIONS OF TERMS

For the purpose of this rating system, the following terms are defined as follows:

(a) Cesspool – a pit for disposal without any type of leach bed or field.

(b) Combined Sewer Overflows (CSOs) – Intermittent overflows, or other untreated discharges from a municipal combined sewer system (including domestic, industrial and commercial wastewater and stormwater) which result from flows in excess of the dry weather carrying capacity of the system.

(c) Energy Efficiency Projects – These projects improve the ratio of useful work (energy) out of a system divided by work put into a system. Engineering judgment is required for viability.

(d) Financial Capability (Capacity) - The ability of a system to acquire and manage sufficient financial resources to achieve and maintain regulatory compliance.

(e) Groundwater Contamination (nitrates) – Water below the land surface in a zone of saturation with nitrate (as nitrogen) concentration greater than 10 milligrams per liter.

(f) Hydraulic Overload – The condition that occurs when the monthly average flow entering a plant exceeds the hydraulic design capacity for 3-consecutive months out of the preceding 12 months **or** when the flow in a portion of the sewer system exceeds its hydraulic carrying capacity.

(1) Dry Weather Flow - The base flow or surface discharge from an area or treatment facility which occurs immediately prior to a precipitation event, and which resumes 24 hours after the precipitation event ends.
(2) Wet Weather Flow – The flow or surface discharge from an area or treatment facility that is not dry weather flow.

(g) Infrastructure Sustainability – An approach that combines consideration of system management practices, full cost pricing and efficient use of water resources within a watershed approach to ensure present and future wastewater system infrastructure needs are met while balancing the relationship between ecological integrity, economic prosperity and social equity.

(h) Managerial Capability (Capacity) - The ability of a system to effectively manage and operate the system as indicated by whether or not they have a certified operator, an emergency response plan and/or an operation and maintenance plan.

(i) NPDES Violation - Lack of intention or ability to comply with the National Pollutant Discharge Elimination System permit – the national system for the issuance of permits under section 402 of the Federal Clean Water Act (33 U.S.C.A. § 1342) including a state or interstate program which has been approved in whole or in part by the EPA.

(j) Nutrient Reduction Directive – A Department policy to reduce nitrogen or phosphorus from a discharge source.

(k) Organic Overload - The condition that occurs when the average daily organic load exceeds the organic design capacity upon which the permit and the plant design are based.

(l) Private or Public Well – A well that is used as a potable water supply.

(m) Proactive Asset Management – Preventing a crisis through maintaining or improving the resources, rights and properties owned by an entity.

(n) Public Sources – Any system that serves two or more users.

(o) Resilience - The ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents.

(p) Sanitary Sewer Overflows (SSOs) – Intermittent overflows of wastewater, or other untreated discharges from a separate sanitary sewer system (which is not a combined sewer system), which result from flows in excess of the carrying capacity of the system or from some other cause prior to reaching the headworks of the plant.

(q) Section 303(d) List – State waterbodies outlined in the Clean Water Act that remain polluted after the application of technology-based controls.

(r) Substandard On-Lot System - An individual sewage system not meeting design standards or possessing a permit and composed of a system of piping, tanks or other facilities for collecting, treating and disposing of sewage.

(s) Technical Capability (Capacity) - The physical and operational ability of a wastewater system to meet regulatory requirements.

(t) Wildcat Sewer – Collection systems (community sewers) serving more than one equivalent dwelling unit (EDU) and discharging untreated or partially treated sewage to the surface of the ground, storm sewers or other waters of the Commonwealth.

(u) Worn Out – Infrastructure is understood to be worn out when it has had frequent breakdowns or other failures to achieve design performance resulting in excessive repair cost or regulatory compliance problems.

PUBLIC HEALTH (Maximum total 35 points)

The Public Health rating is a function of scores provided for the following categories:

A. On-Lot/Collection-Conveyance/Treatment (maximum 25 points)
B. Domestic Water Supply (maximum 20 points)

The rating is completed for A and B. If the total is greater than 35 points it is held to a maximum of 35 points.

A. On-Lot/Collection/Treatment

Points for the On-Lot/Collection-Conveyance/Treatment rating are assigned through Tables 1, 2 and 3.

Table 1: Confirmed On-Lot Malfunctions (includes wildcats)			Points		
			Percent Population or Cost*		
Category	Service Area Failure Rate*	Notes	1-30%	31-70%	71-100%
A	>50%	1, 2, 3, 4	10	15	25
B	26-50%		6	10	15
C	11-25%		3	6	10
D	1-10%		1	3	6

*Percentages are rounded up to the nearest whole number (e.g. 10.1% is rounded to 11%).

Table 2: Collection-Conveyance Raw Sewage Discharge Problem			Points		
Category	Nature of Problem	Notes	Percent Population or Cost **		
			1-30%	31-70%	71-100%
A	Frequent dry weather raw sewage discharge on public property	5, 6	10	15	25
B	Intermittent dry weather raw sewage discharge on public property	5, 6	6	10	15
C	Raw sewage discharge during wet weather (including but not limited to basement backups)	6, 7, 8	3	6	10
D	Other collection system pollution problems	9	1	3	6

Table 3: Treatment Inadequate Wastewater Treatment			Points		
Category	Nature of Project	Notes	Percent Population or Cost**		
			1-30%	31-70%	71-100%
A	Projects required to satisfy a new more stringent issued NPDES permit for TSS, BOD5, NH3N, N or P, TRC, and other pollutants	10	3	6	10
B	Projects required to satisfy an existing permit	11	1	3	6

**Project information for communities is typically presented in terms of population (or number of homes) affected. As a result, it makes sense to ensure against double-counting by identifying what percent of the service area population is affected by the water quality problem, not to exceed 100% of the homes. In other cases, like with SSO or CSO it is impossible to tie the problem to individual homes. Ratings for those projects attribute the approximate proportion of the project cost to whatever mix of issues that impact the service area, not to exceed 100% of project cost. See Multiple Pollution Sources Methodology. Also, percentages are rounded up to the nearest whole number (e.g. 30.1% is rounded to 31%).

Table 1: On-Lot Notes:

1. On-lot failures must be documented in accord with the Department's *Sewage Disposal Needs Identification Guidance Manual, September 2008* (the Gold Book).
   On-lot disposal systems are considered failures only if they are confirmed malfunctions as defined in the Gold Book. On-lot disposal systems that do not meet current Departmental regulations or standards are not necessarily considered malfunctions, unless the system has been permitted as a Best Technical Guidance Repair.

2. Evidence that at least 50% of the systems in the area are cesspools counts the same as 11-25% septic failures.

3. A minimum "Representative Sample" size is required for a new survey and defined in the Gold Book as follows:

Up to 50 Homes	Approximately 50%
50 to 100 Homes	Approximately 35%
100 to 500 Homes	Approximately 25%
500 to 1,000 Homes	Approximately 20%
> 1,000 Homes	Approximately 15%

   Surveys previously conducted and approved by the Department may use smaller samples.

4. Wildcats are considered malfunctioning on-lots. Wildcat system confirmation is necessary and will be based on a dye test conducted from the house at the highest elevation available for testing in the suspected community. If there is a direct discharge to surface water through a pipe, confirmed through this dye test, the person doing the test will use discretion as to other connections.

Table 2. Collection-Conveyance Notes:

5. Category A points are awarded for a project which eliminates a frequent raw sewage discharge on public property in dry weather from a collection system. Category B points are awarded for an intermittent raw sewage discharge on public property in dry weather from a collection system.

6. The correction to a collection or conveyance system must be of a construction nature and not operation/maintenance. Permanent (20-year plus) corrections like pipe-lining are considered construction but grouting is not. If the problem is of an operation and maintenance nature, it should not be rated. Rating points may only be awarded when

collection/conveyance system deficiencies cause improper discharges to the ground surface, etc., due to structural deficiencies. Sewer Overflow projects must propose construction activities that will lessen the impact of the affected CSO's on the receiving watercourse.

7. CSO needs where a Department Order is issued, and construction (not O&M) is required.

8. Permitted CSO needs, and construction (not O&M) is required.

9. Category D points are awarded for other collection system problems like exfiltration and infrequent CSO/SSO.

Table 3: Treatment Notes:

10. Category A points are earned for an upgrade required by a new permit requirement involving BOD5, NH3N, TSS, nitrogen or phosphorus, Total Residual Chlorine or other pollutants. Project must be of a construction nature (not O&M).

11. Category B points are earned in the case of an existing wastewater treatment facility which is unable to achieve the level of treatment required by its existing NPDES permit.

Multiple Pollution Sources Methodology: Public Health

Multiple wastewater and drinking water issues can affect different parts of a community and to varying levels of severity. The rating system must allow for this, and at the same time avoid the double-counting of issues which do not affect the entire community or affect the entire community in the same way.

Points for the On Lot/ Collection-Conveyance/Treatment rating are assigned through use of Tables 1, 2 and 3. Some projects involve a mix of on-lot, raw sewage discharge and inadequate treatment at a wastewater system. In such cases it is necessary to apply points from more than one table. Note however that the total rated area population (or cost) for the project which is used in the tables may not exceed 100%*, and the maximum total points are 25 for On-lot / Collection-Conveyance / Treatment.

- Independent of the actual % project population equivalent being rated, the % population or cost for rating purposes will be the upper limits of either 30, 70 or 100%. For example:
  1. Applying 75% of the population or cost to a given pollution problem type commits either 70% or 100% of the population in the table
  2. Applying 5% of the population or cost to a given pollution problem type commits 30% of the population in the table.

- If points are assigned under the 71 - 100% population/cost column, no other needs may be awarded points since 100% of the population or cost is committed for rating purposes.

The rating for some projects can be calculated two ways as in the following example:

60% of the project cost solves a problem at a wastewater treatment facility that is not meeting its existing advanced secondary permit limits. In addition, through a representative survey, a 35% on-lot malfunction rate will be corrected with the remaining 40% of the project cost.

Method 1: For the wastewater treatment part use the 31-70 Column (representing 60% of the cost) in Table 3 and assign 3 points.

For the on-lot malfunction part use the 1-30 Column (Representing 40 % of the population) in Table 1 and assign 6 points. The final total allowable points using this method is nine.
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Method 2: For the wastewater treatment part use the 1-30 Column (representing 60% of the population) in Table 3 and assign 1 point.

For the on-lot malfunction part use the 31-70 column (representing 40% of the population) in Table 1 and assign 10 points. The total allowable points using this method are eleven.

The correct point assignment would be eleven points under Method #2 since this would yield the greatest number of points.

The same principle is applied separately to Table 4 below.

B. Domestic Water Supply

Points for the Domestic Water Supply rating for multiple sources are assigned through Table 4.

Category	Table 4 Domestic Water Supply* (Apply Notes 1,2,3,4,5,6 below.)	Points		
		Percent Population or Cost **		
		1-30%	31-70%	71-100%
A	> 25% of domestic private wells contaminated Or Water Supply Intake frequently contaminated by sewage sources	10	15	20
B	10-25% of domestic private wells contaminated Or Water Supply Intake contaminated by sewage sources during Critical Source Conditions (Q_{7-10} Low Flow)	5	10	15
C	5-10% of domestic private wells contaminated Or Water Supply Intake could be contaminated by sewage sources during Critical Source Conditions (Q_{7-10} Low Flow)	2	5	10
D	1-5% of domestic private wells contaminated Or Water Supply Intake contamination by sewage sources unlikely	1	2	5

*Percentages are rounded up to the nearest whole number (e.g. 5.1% is rounded to 6%).

**Project information for communities is typically presented in terms of population (or number of homes) affected. As a result, it makes sense to ensure against double-counting by identifying what percent of the project service area population (not the total system service area) is affected by the water quality problem, not to exceed 100% of the homes. See Multiple Pollution Sources Methodology below. Also, percentages are rounded up to the nearest whole number (e.g. 30.1% is rounded to 31%).

Table 4: Domestic Water Supply Notes:

1. Well water contamination is demonstrated by a combination of the following types of supporting data:
   a. Community Survey Reports with certified lab results
   b. Knowledge of physical conditions and locations of sewage disposal systems and water supply systems
   c. History of waterborne health problems

2. If private well water contamination is presumed to be caused by on-lot system contamination of groundwater supplies, the following applies:

   a. Soils and/or geological conditions for the area are known to be conducive to groundwater contamination by the type of sewage disposal systems currently in use. This contamination could be due to either nitrates or total or fecal coliform.
   b. On-lot disposal systems are the primary means of sewage disposal in the area.
   c. Private wells or a public well in the area and in the problem soil zone are the primary water supply for the area.

3. Well Construction Considerations:

   Wells which are known to be improperly constructed (such as hand dug wells) may not be used to justify a wastewater project even if they have high coliform counts.

4. Clarification on the Use of Total and Fecal Coliform Testing for Well Contamination:

   The primary contamination indicator is total coliform where fecal coliform (or E coli) is also present in 20% of the samples testing positive for total coliform and/or there is evidence of contamination through dye testing.

   Example: 25 wells out of 100 (25%) have positive readings of total coliform. 5 of the 25 wells (20%) also show fecal coliform or had positive dye tests. Therefore, 25% of the representative sample (which is the 100 well figure) is considered contaminated.

   Secondary tests which use indicators other than coliform (testing for detergents, pharmaceuticals, caffeine or other) are sometimes used when there is reason to believe that poor well construction is the reason for contaminated wells rather than failed on-lot systems. These tests do not serve as a useful indicator of failing septic systems because it is possible to have traces of such chemicals from septic effluent even if the soil media has

accomplished adequate treatment for disease causing organisms.

5. A minimum "Representative Sample" size is required for a new survey and defined in the Gold Book as follows:

Up to 50 Homes	Approximately 50%
50 to 100 Homes	Approximately 35%
100 to 500 Homes	Approximately 25%
500 to 1,000 Homes	Approximately 20%
> 1,000 Homes	Approximately 15%

   Surveys previously conducted and approved by the Department may use smaller samples.

6. When using Table 4 consider the following example**:**

   The area studied for septic failures and well contamination can include a mix of different types of existing water sources and wastewater disposal. Part of a study area might be served with public water and/or wastewater, and part might have neither. A cost-effective project will begin with a clear identification of the problem to be solved.

   Consider a total area with 200 homes. 188 of the homes are served by public drinking water and have no indication of septic failures. 12 homes have private wells contaminated with sewage. The analysis should consider providing water service to the 12 homes or decentralized wastewater service to the 12 homes. If one of those options would solve the problem and is cost-effective then the rating could be based on the 12-home study area (100% failure rate), not the entire 200-home area (6% failure rate). Implementation of the decentralized option would have to consider its management; consolidation with a nearby wastewater system could be considered.

AQUATIC HEALTH (Maximum total 20 Points)

The Aquatic Health rating is a function of scores provided for the following categories:

A. Collection, Conveyance and Treatment Impacts
B. Water Quality
C. State Water Quality Priorities

If the total is greater than 20 points it is held to a maximum of 20 points.

A. Collection, Conveyance and Treatment Impacts (maximum 20 points)

1. Collection and Conveyance Impacts

Table 5 Collection and Conveyance			Points		
			Percent Population or Cost *		
Category	Nature of Problem	Notes	1- 30%	31-70%	71-100%
A	- Projects that eliminate a wildcat sewer system discharge with a service area failure rate >50%. For the purpose of this category, this is limited to piped, direct discharges to a surface stream. -Documented evidence in the project area of untreated or inadequately treated sewage discharged from collection	1, 2	6	12	20
B	-Projects that eliminate a wildcat sewer system discharge with a service area failure rate of 26-50%. For the purpose of this category, this is limited to piped, direct discharges to a surface stream. -Visual evidence in the project area of discharges of untreated or inadequately treated sewage from sewage collection and conveyance facilities in wet weather**. -Combined Sewer Overflow (CSO) needs where a Department Order is issued.	1, 2	3	6	12
C	-Projects that eliminate a wildcat sewer system discharge with a service area failure rate of 11-25%. For the purpose of this category, this is limited to piped,	1	2	3	6
D	-Projects that eliminate a wildcat sewer system discharge with a service area failure rate of 1-10%. For the purpose of this category, this is limited to piped,	1	1	2	3

*Percentages are rounded up to the nearest whole number (e.g. 30.1% is rounded to 31%).
**This does not include wet weather basement backups.

2. Treatment Impacts

Points for the Treatment Impacts rating are assigned through Table 6. The maximum total points are 20.

Table 6 Treatment			Points		
			Percent Population or Cost *		
			1-30%	31-70%	71-100%
Category	Nature of Problem	Notes			
A	Hydraulic overload** at the wastewater treatment facility during dry weather.	1	6	12	20
B	Hydraulic overload** at the wastewater treatment facility during wet weather.	1	3	6	12
C	-Organic Overload. -The wastewater treatment facility is under a nutrient reduction directive.	1	2	3	6
D	Projects designed to address NPDES violations.	1	1	2	3

*Project information for communities is typically presented in terms of population (or number of homes) affected. As a result, it makes sense to ensure against double-counting by identifying what percent of the project service area population is affected by the water quality problem, not to exceed 100% of the homes. Percent of cost can be used instead if some aspects of the project do not lend themselves to comparing populations served. See Multiple Pollution Sources Methodology at the end of this section. Also, percentages are rounded up to the nearest whole number (e.g. 30.1% is rounded to 31%).

** This only applies to existing hydraulic overload.

B. Water Quality (maximum 20 points)

Table 7 Water Quality			Points		
			Percent Population or Cost *		
			1-30%	31-70%	71-100%
Category	Nature of Problem	Notes			
A	Surface waters are capable of supporting a cold or warm water fishery, but documented evidence shows that they are not because of pollution caused by discharges of untreated or inadequately treated sewage which would be eliminated or upgraded by the project implementation.	1,6	6	12	20
B	Surface waters are currently supporting a depressed cold or warm water fishery, shown through documentation to be caused by discharges of untreated or inadequately treated sewage that would be eliminated or upgraded by project implementation.	1, 5, 7	3	6	12
C	Surface waters are currently supporting a cold or warm water fishery, documented to be periodically affected or threatened by the discharge of untreated or inadequately treated sewage which would be eliminated or upgraded by project implementation based upon evaluation of the stream's physical characteristics.	1, 5, 8, 9	2	3	6
D	Surface waters are potentially impacted from on-lot systems if there is evidence acceptable to the ranking committee that the on-lot disposal systems may be the cause of the problem.	1, 10	1	2	3

*Project information for communities is typically presented in terms of population (or number of homes) affected. As a result, it makes sense to ensure against double-counting by identifying what percent of the project service area population is affected by the water quality problem, not to exceed 100% of the homes. Percent of cost can be used instead if some aspects of the project do not lend themselves to comparing populations served. See Multiple Pollution Sources Methodology at the end of this section. Also, percentages are rounded up to the nearest whole number (e.g. 30.1% is rounded to 31%).

C. State Water Quality Priorities (Maximum 4 points)

Table 8
State Water Quality Priorities

Nature of Problem	Points
(a) Future TMDL: Points are awarded if the project discharges to a stream that does not meet its designated use due to an impairment that would be addressed in part or in whole by the project, and the impairment is on the Section 303d list for the future development of a Total Maximum Daily Load (TMDL). The link to this information is: https://www.pa.gov/agencies/dep/programs-and-services/water/clean-water/water-quality/integrated-water-report.html (b) Current TMDL: Points are awarded if the project would contribute to achievement of a TMDL-required load allocation. The link to this information is: http://www.ahs.dep.pa.gov/TMDL/. This applies to treatment plants not collection systems.	2
Points are awarded if the project is designed to protect the water quality of streams whose designations are Wilderness Trout, Class A Wild Trout Stream, Exceptional Value or High-Quality streams. The links to this information are: Wilderness Trout and Class A Wild Trout - http://fishandboat.com/waters_trout.htm EV & HQ - http://www.pacode.com/secure/data/025/chapter93/chap93toc.html To assign these additional points, the location of greatest environmental benefit from project needs to be identified. Sources of information for finding this is the lat/long of the discharge point as identified in the NPDES permit or the center of the project as identified in the water quality permit.	2

Notes:

1. Corrections must be of a construction nature and not operation/maintenance. If the problem is of an operation and maintenance nature, it should not be rated. Rating points may only be awarded under this subcategory when system deficiencies cause improper discharges due to structural deficiencies. All deficiencies must be documented, such as Chapter 94 reports, evidence of public outcry, newspaper articles or evidence that shows that the field staff has verified the problem.

2. Raw discharges must include sewage solids and other like materials as typically seen in a raw, untreated discharge.

3. Combined Sewer Overflow (CSO) projects must propose construction activities that

will lessen the impact of the CSO on the receiving watercourse. The project (correction) must be of a construction nature and not just operation/maintenance.

4. Dry weather hydraulic overload will necessitate sufficient documentation that the condition exists.

5. The following documentation is required for lake application in the rating category:

   a) Great Effect - Field survey, impact analysis of point/non-point source contribution required.
   b) Moderate Effect - Impact from sewage sources is documented by macroinvertebrate survey.
   c) Slight Effect - Desktop evaluation of the relative significance of sewage sources versus non-sewage, non-point-source impact on lake degradation. Points would be awarded only if it can be judged that the impact related to sewage sources is significant. Department or municipal data is required.

6. Approved surveys include those done by the Pennsylvania Fish & Boat Commission. Survey data will generally characterize benthic macroinvertebrates composed of greater than 90% facultative or pollution tolerant forms and less than 10% pollution sensitive forms; or fish community non-existent or dominated by rough or forage forms with absence or near absence of game or pan fish.

7. Survey data will generally characterize benthic macroinvertebrates of greater than 50% facultative or pollution tolerant forms and less the 50% pollution sensitive forms; or fish community dominated by rough and forage species and depression of game or pan fish; or documented fish kills have occurred throughout the year.

8. On-lot disposal systems cannot be the basis for a calculated impact. Points for potential impacts should not be awarded unless the proper documentation is provided to support the hypothesis that the on-lot disposal systems may be the cause of the problem. However, wildcat sewer systems are another story. Points for a potential impact can be awarded if an impact can be calculated.

9. NH_3-N upgrade due to ammonia toxicity (modeling). Phosphorus upgrade does not warrant any points.

10. Points are not provided when discharge is to sterile stream conditions due to acid mine drainage.

Multiple Pollution Sources Methodology: Aquatic Health

Multiple wastewater and drinking water issues can affect different parts of a community and to varying levels of severity. The rating system must allow for this, and at the same time avoid the double-counting of issues which do not affect the entire community or affect the entire community in the same way. See Multiple Pollution Sources Methodology below.

- Independent of the actual % project population equivalent being rated, the % population or cost for rating purposes will be the upper limits of either 30, 70 or 100%. For example:

    1. Applying 75% of the population or cost to a given pollution problem type commits either 70% or 100% of the population in the table.
    2. Applying 5% of the population or cost to a given pollution problem type commits 30% of the population in the table.

- If points are assigned under the 71 - 100% population/cost column, no other needs may be awarded points since 100% of the population or cost is committed for rating purposes.

The rating for some projects can be calculated two ways as in the following example:

60% of the project cost will be used to construct a collection system. Over half of the EDU's served by that system are currently served by a wildcat. The remaining 40% of the project cost will be used to eliminate a wet weather hydraulic overload at the treatment plant.

1. Method 1: The 60% used to construct the collection system generates 12 points in the 31-70% column of Table 5. The remaining 40% for the treatment plant work generates 3 points in the 1-30% column of Table 6, for a total of 15 points.

2. Method 2: The alternative method to calculate the rating generates 6 points in the 1-30% column for the collection system work. The treatment plant work would then receive 6 points in the 31-70% column, for a total of 12 points.

The total points assigned are 15 because that is the greater of the two calculations.

INFRASTRUCTURE HEALTH (Maximum total 34 points)

The Infrastructure Health rating is a function of scores provided for the following categories:

A. Wastewater System Adequacy and Safety
B. Proactive Management

A. Wastewater System Adequacy and Safety (maximum 15 points)

This section provides points for projects which propose replacement of outdated, worn-out, underperforming infrastructure. Additional points are provided when the worn-out infrastructure is causing or will be causing SSO, CSO or treatment overloads.

Points for Wastewater System Adequacy and Safety rating are assigned through Table 9.

Category	Table 9: Wastewater System Adequacy	Notes	Points		
			Percent Cost *		
			1%-30%	31-70%	71-100%
A	Infrastructure at demonstrated end-of-useful-life and CSO or SSO in dry weather	1, 2, 3, 4, 5, 6,7	7	10	15
B	Infrastructure at demonstrated end-of-useful-life and treatment plant hydraulic and/or organic overload or collection system with wet weather overflow		4	7	10
C	Infrastructure at demonstrated end-of-useful-life		2	4	7

*Project information for wastewater system projects can include collection, conveyance or treatment. Projects which involve both pipes (collection/conveyance) and treatment must be rated on both. The relative value of both is calculated as a proportion of the total project cost. See Multiple Pollution Sources Methodology below. Also, percentages are rounded up to the nearest whole number (e.g. 30.1% is rounded to 31%).

Notes:

1. Projects satisfy the "end-of-useful-life" test if the applicant provides a compelling argument that the infrastructure is worn out, not sustainable or reduces NPDES permit requirements. The argument must include data such as breakdown frequency, excessive maintenance cost, infiltration/inflow or whatever other information is relevant, given the nature of the project, to explain why the infrastructure is considered worn out.

2. Problems caused by inadequate operation/maintenance of a treatment system (collection, conveyance or treatment) may not contribute to a rating. Problems that contribute to the rating can only be those that are solved through construction.

3. The applicant can demonstrate end-of-useful life either for individual pieces of equipment, unit processes or entire facilities. The cost of whatever infrastructure is supported by that demonstration is used in the Multiple Pollution Sources Methodology.

4. Points for CSO, SSO or organic overload impact can be awarded if documentation of past problems is available, or if a compelling argument is made that the likely failure of infrastructure assets is likely to result in near-term worsened overflows or overloads.

5. Projects are not limited to "replacements in kind." This means for example that points could be awarded for a conveyance project which eliminates a 40 year old treatment plant by connecting it to a nearby treatment plant. It also means that a replacement may involve an upgraded or expanded unit.

6. Applicants are encouraged to use nutrient credits, as long as this is demonstrated to be the most cost-effective alternative. As an example, the addition of a nutrient removal unit process to an existing wastewater plant in good condition would not warrant Wastewater System Adequacy points. However, if nutrient credits were used until such time as the existing wastewater plant was worn out, the construction of the entire replacement facility would qualify for these points. Adding nutrient removal to an existing facility alone does not qualify for Infrastructure Health points on its own.

7. Wildcats are assigned Infrastructure Health points only if they are owned or operated by a municipality or an authority and permitted by DEP. The number of points earned is determined based on their condition as applied to Table 9.

B. Proactive Management (maximum 19 points)

The focus of this section is to promote better management.

Points for Proactive Infrastructure Management are assigned through Table 10.

Table 10: Proactive Infrastructure Management	Points
Implementing risk management practices by improving pollutant discharge requirements or product quality requirements (examples include but not limited to (1) replacing gaseous chlorine with UV disinfection and (2) improving the quality of biosolids to exceptional quality biosolids). Implementing resiliency practices to reduce the magnitude and/or duration of disruptive events, ability to anticipate, absorb, adapt to, and/or rapidly recover from a potentially disruptive event, or the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Implement resilience practices to safeguard a system to the address impact from the following: 1. Extreme Weather and Natural Disasters 2. Physical and Workforce Security 3. Contamination Incidents 4. Infrastructure Degradation 5. Cybersecurity and Cyber Risk Management Additional information about the above practices can be found on EPA's "Roadmap to a Secure and Resilient Water and Wastewater Sector" (EPA 810-R-24-002)	10
Basic Asset Management Five points are added when the facility is doing all of the basics of Asset Management below: • Is there a public education or outreach program in place designed to highlight the services provided by the Applicant? • Does the facility use a maintenance management system that prompts needed maintenance activities, records the completion of those activities and records their cost? • Is the location, age and condition of all major assets known and recorded? • Is there a process to determine the probability of asset failures, redundancy and consequence of those failures? • Is there an estimated date for the renewal of all major assets and an estimated cost for each? • Does the system generate a periodic report (Asset Management Plan)?	5
Complete Asset Management Two additional points are added if there is a long-term budget (ten-year plus) that describes how much money will be needed to pay for needed infrastructure replacement.	2
Full Cost Pricing Two additional points are added if basic Asset Management (above) is being done, and the Applicant shows that it has targeted revenues over the next ten years consistent with what its Asset Management system says is needed to implement the long-term budget.	2

Multiple Pollution Sources Methodology: Infrastructure Health

Wastewater System Adequacy See Infrastructure Health Table 9.

- Independent of the actual % project population equivalent being rated, the % population for rating purposes will be the upper limits of either 30, 70 or 100%. For example:
  a) 75% of the population commits 100% of the population.
  b) 5% of the population commits 30% of the population.
- If points are assigned under the 71 - 100% population column, no other needs may be awarded points since 100% of the population is committed for rating purposes.

  Example:

  The Applicant is served by a 15 year old wastewater treatment facility which does not satisfy its permit because it does not have nutrient control. The project will replace the entire plant using 60% of the project cost. In addition, there is a dry-weather SSO discharge due to a 100 year old collapsed sewer which would be funded with the remaining 40%.

  The wastewater treatment facility is not worn out, so no Wastewater System Adequacy points are warranted. The collapsed sewer was however old, so ten points are warranted.

COMPLIANCE (Maximum total 25 points)

(A) The number of points for Compliance shall be based on the extent to which project implementation improves a community's ability to comply with the state and federal statutes, regulations and standards.

(B) The following point values, in conjunction with Table 11, shall be used to determine rating points for this factor:

(1) **Enforcement Status & Overload Conditions -**

a) **25 Points** – The project provides:

1. Compliance with an order ISSUED by the Department, the Federal Government or the Courts that directs a municipal entity to address problems with on-lot wastewater disposal system(s) and/or a wastewater treatment facility.
2. Compliance with Consent Order and Agreements negotiated and executed by the Department, the Federal Government or the Courts and the affected party(ies), and similarly, Consent Order and Adjudications executed by the Department or the Federal Government. The Consent Order's primary goal must be to address problems at a wastewater treatment facility, or wastewater collection/conveyance facility(ies) concerns.

b) **20 Points** - The Department has evaluated the pollution or public health problems in the municipality and gathered sufficient data to support the issuance of an order for corrective action or has adopted revised water quality standards which cannot be met by the existing treatment facilities, but an upgrade order has not been issued. This project category includes:

1. Projects designed to address the resolution of on-lot wastewater disposal system problems where the municipal entity(ies) involved is currently NOT under an Order from the Department or any other agency or Court with jurisdiction. The project must be able to meet the "YES-NO-YES" criteria outlined in NOTE 1 in paragraph (c) AND be designed to eliminate an on-lot wastewater disposal system malfunction rate which is currently >25%. Non-municipal project Applicants are not eligible to receive points in this sub-category using the "YES-NO-YES" criteria.
2. Documented evidence exists of the occurrence of substandard on-lot systems is >50%.
3. Projects that meet the criteria under Table 12, Domestic Water Supply, for the 20-point category.
4. Projects that enable the permittee of an NPDES-permitted wastewater treatment facility to bring the facility into compliance with more stringent effluent limits contained in a revised and upgraded NPDES Permit.
5. Projects that eliminate a wildcat wastewater system.

6. Compliance with a nutrient reduction directive issued by the Department.
7. A CSO/SSO exists with a documented impact on the treatment processes of a drinking water system.

c) **15 Points** - The point category includes:

1. Projects where the Department has evaluated the pollution or public health problems in the municipality and gathered sufficient data to support the issuance of an order for corrective action, but an upgrade order has not been issued. The project has been designed to address the resolution of on-lot wastewater disposal system problems where the municipal entity(ies) involved is currently NOT under an Order from the Department or any other agency or Court with jurisdiction. The project must be able to meet the "YES-NO-YES" criteria outlined in NOTE#1 in paragraph (c) AND be designed to eliminate an on-lot wastewater disposal system malfunction rate which is currently 11-25%.
2. Documented evidence exists of the occurrence of substandard on-lot systems is 26-50%.
3. Projects that meet the criteria under Table 12, Domestic Water Supply, for the 15-point category.
4. The professional opinion of the hydrogeologist indicates that groundwater contamination is related to on-lot system malfunctions or the density of on-lot systems in the area.
5. Projects that are part of an APPROVED Corrective Action Plan/Corrective Plan and Schedule (C.A.P./C.P.& S.) designed to allow the permittee of an NPDES-permitted wastewater treatment facility to bring its facility into compliance with the discharge parameters contained in the facility's NPDES permit. Points under this sub-category may not be awarded until such time as the C.A.P./C.P.& S. is APPROVED by the Department.
6. Wastewater collection or conveyance system construction projects that are part of an APPROVED C.A.P./C.P.&S. or an approved Act 537 plan. Points under this sub-category may not be awarded until such time as the plan is APPROVED by the Department. There must also be a Wastewater Connection Restriction in place.
7. CSO Construction Projects (Not O&M) proposed to facilitate compliance with the Part C condition relating to CSO management controls found in an applicable permit. See Note 2 in paragraph (c).

d) **10 Points** - This category includes:

1. Projects that meet the criteria under Table 12, Domestic Water Supply, for the 10-point category
2. The project is NOT currently part of an APPROVED C.A.P./C.P.& S. designed to allow the permittee of an NPDES-permitted wastewater treatment facility to bring its facility into compliance with the discharge parameters contained in the facility's NPDES permit.

3. Points under this point category should be awarded when an NPDES-permitted facility is hydraulically or organically overloaded OR when a wastewater collection or conveyance system component/structure is hydraulically overloaded, but a C.A.P./C.P.& S. has NOT been APPROVED by the Department.
4. Projects where documentation exists to indicate the treatment processes of a nearby drinking water system are impacted by a discharge from a wastewater treatment facility.

e) **5 Points** - Projects that ensure continued compliance with statutory and regulatory requirement

(C) In calculating the points for compliance and the use of Table 11, the following notes need to be considered:

Notes

1. There was significant debate concerning the Department's reasoning for not issuing orders to certain projects. When the regulations were initially developed, it was recognized that it would appear that some municipalities were being rewarded for recalcitrant conduct. Enforcement status was also generally viewed as an overall indicator of the Department's measure of project importance or priority. The problem with this logic occurs where there is a project of greater or equal importance to the Department, but because of desire, initiative, or cooperation on the municipality's/authority's part, an order to correct the problem or to establish an enforceable schedule is unnecessary. Given this scenario, the Department believed it would be encouraging the wrong perception by awarding 15 Points in priority to those municipalities to which the Department needed to issue orders. Some regional interpretation of this rating component has resulted in assigning Enforcement Status Points to nearly all projects. The Department "could" issue an order in practically all situations. To remedy this misinterpretation, the following direction is provided:

   a) **General:** Where an Order has **NOT** been issued, answer the following three questions in conjunction with the proposed project:
      1) Is there a Department-approved schedule for correction or project implementation (Act 537 Plan Implementation Schedule, Corrective Action Plan with Implementation Schedule, etc.)?
      2) Will an Order be necessary, in all likelihood, to ensure correction or project implementation?
      3) Upon evaluating the supporting documentation, has it been determined that the Department **would** devote the necessary staff time to issue an order to ensure correction or project implementation? For on-lot malfunction correction projects, this question **CANNOT** be answered **"YES"** unless at least an 11% on-lot wastewater disposal system malfunction rate has been documented or the proposed project is intended to correct a wastewater treatment facility problem, and points have been awarded under Public Health and Category "D".

The answers to these three questions must be as follows: Question #1-Yes, Question #2-No, and Question #3-Yes; in order to award either twenty (20) or fifteen (15) Enforcement Status Points where there is currently not an Order in place. If the history of the project suggests that an order will be necessary, do **NOT** award twenty-five (25) points until such time as the Order is issued. Also, non-municipal project applicants are not eligible to receive points in this sub-category using the "Yes-No- Yes" criteria.

b) **Documentation - NO enforcement points are to be awarded for projects where the documented septic system malfunction rate is less than 10%.** However, where sufficient documentation is provided to enable the Department's staff to determine that the project area's on-lot wastewater disposal systems are malfunctioning downward and contaminating water supplies, then enforcement points may be awarded even where the documented surface malfunction rate is less than 10%. In such a case, water supply survey data and soils and hydrogeological information would show that the potential for groundwater contamination is high and that, indeed, at least 10% of the representative sample well tests are contaminated (10% positive for total coliform, and 20% of those samples also positive for fecal coliform; with no well-construction bias).

2. CSO projects must propose construction activities that will lessen the impact of the affected CSO's on the receiving watercourse. The project (correction) must be of a construction nature and not just operation/maintenance.

TABLE 11 -- COMPLIANCE RATING*

RATING CATEGORY

DISPOSAL SYSTEM

	25 POINTS	20 POINTS	15 POINTS	10 POINTS	5 POINTS
ON-LOT PROBLEMS	Order or consent order issued to require correction of an On-Lot Problem(s).	"Yes-No-Yes" Scenario in Note 1 in paragraph (c) applies where the on-lot malfunction rate is ≥26%. The documented occurrence of substandard systems is >50%. Meets the criteria in Table 12 Domestic Water Supply for the 20-point category.	"Yes-No-Yes" Scenario in Note 1 in paragraph (c) applies where the on-lot malfunction rate is 11-25%. The documented occurrence of substandard systems is 26-50%. Meets the criteria in Table12 Domestic Water Supply for the 15-point category. The professional opinion of the hydrogeologist indicates that groundwater contamination is related to on-lot system malfunctions or the density of on-lot systems in the area.	Meets the criteria in Table 12, Domestic Water Supply for the 10-point category.	No Order or Consent Order is currently in place, but project ensures continued compliance with statutory and regulatory requirements.
TREATMENT FACILITY (WWTF)	Order or Consent Order issued to require correction of a problem(s) at a treatment facility	WWTF that cannot meet revised and upgraded NPDES effluent limits (No Order Issued) WWTF is under a nutrient reduction directive.	C.A.P./C.P.&S. APPROVED to Address Hydraulic or Organic Overload at WWTF.	Wastewater Connection Restrictions imposed but C.A.P./C.P.&S. NOT approved. Documentation exists related to the impact on treatment processes at a drinking water system due to discharge of WWTF.	No Order, Consent Order, Connection Restriction is currently in place, but project ensures continued compliance with statutory and regulatory requirements.

TABLE 11 – COMPLIANCE RATING, cont.

DISPOSAL SYSTEM

RATING CATEGORY

	25 POINTS	20 POINTS	15 POINTS	10 POINTS	5 POINTS
COLLECTION & CONVEYANCE	Order or Consent Order issued to require correction of problem(s) related to a Wastewater Collection/ Conveyance System	Project eliminates a wildcat wastewater system discharge. CSO/SSO discharge has a documented impact on treatment processes at a drinking water system.	Wastewater Connection Restrictions imposed with a C.A.P./C.P.&S. Or Act 537 Plan approved. CSO Construction Project (Not O&M) proposed to facilitate compliance with the Part C conditions in an Applicable Permit - See NOTE#2 in paragraph (c)	Wastewater Connection Restrictions imposed but C.A.P./C.P.&S. NOT approved.	No Order, Consent Order, Connection Restriction is currently in place, but project ensures continued compliance with statutory and regulatory requirements .

*Percentages are rounded up to the nearest whole number (e.g. 25.1% is rounded to 26%).

TABLE 12 – COMPLIANCE - DOMESTIC WATER SUPPLY*

	20 POINTS	15 POINTS	10 POINTS	5 POINTS
PRIVATE WELLS	>25%% of "Representative Sample" contaminated	10-25% of "Representative Sample" contaminated	5-10% of "Representative Sample" contaminated	1-5% of "Representative Sample" contaminated
PUBLIC SOURCES	Water Supply Intake subject to water quality violations that occur frequently	Water Supply Intake subject to water quality standards violations that occur depending on critical source conditions ($Q_{7\text{-}10}$ Low Stream Flow conditions)	Water Supply Intake subject to water quality standards violations that could occur depending on critical source conditions ($Q_{7\text{-}10}$ Low Stream Flow conditions)	Water Supply Intake subject to water quality standards violations that are remote

*Percentages are rounded up to the nearest whole number (e.g. 30.1% is rounded to 31%).

COMMUNITY HEALTH (Maximum total 15 points)

The Community Health rating is a function of scores provided for the following categories:

(A) Consolidation (Maximum total 5 points)

1. 5 Points - Project implementation will result in both:
   a) Eliminate a "non-compliant wastewater system discharge"* operated under a Department-issued NPDES or Water Quality Management Permit, **and**
   b) Consolidated ownership and management of what were previously two separate wastewater systems.

2. 3 points- Project implementation will result in:
   a) Eliminate a "non-compliant wastewater system discharge"* operated under a Department-issued NPDES or Water Quality Management Permit, **or**
   b) Consolidated ownership and management of what were previously two separate wastewater systems.

3. 1 point- Project implementation will result in consolidated management of two separate wastewater systems.

   *Note – A "non-compliant wastewater system discharge" has an Order issued, a Consent Order and Agreement in place, a Consent Order and Adjudication in place or it satisfies the "YES-NO-YES" criteria described in NOTE 1 of the Compliance section.

(B) Population Affected (2 points)

Two points- Provides service to a small community (population 3500 or less).

A small municipality is defined as a municipality having a total population of 3,500 persons or fewer based on the most recent United States Bureau of the Census figures.

Where a project will serve more than one municipality, the project shall qualify as a small municipality project if each municipality in the project service area conforms to the definition of a small municipality.

Non-Municipal projects not treating municipal sewers do NOT qualify for "small municipality" points.

(C) Green Infrastructure (3 points)

Three points - The project satisfies the most recent definition for EPA "Green" or the project replaces the current use of nutrient credits.

(D) Emerging Contaminant (Maximum 5 points)

5 points – Project that implements emerging contaminants remediation efforts.