

## Appendix A. Need Categories

Table A-1 provides the full list of need categories and definitions.<sup>3</sup> Categories were updated from 2012 to generally align with CWSRF categories. Four CWSRF categories are reported as change types in the CWNS: “improve energy efficiency,” “climate change adaptation,” “renewable energy,” and “improve water efficiency.”

**Table A-1. Need Categories and Definitions**

2022 Category Number	Category Name	Description
I	Secondary Wastewater Treatment	<p>This category includes needs necessary to meet secondary treatment criteria. Secondary treatment typically requires a treatment level that produces an effluent quality of 30 mg/L of both BOD<sub>5</sub> and total suspended solids (secondary treatment levels required for some lagoon systems may be less stringent). In addition, the secondary treatment must remove 85 percent of BOD<sub>5</sub> and total suspended solids from the influent wastewater.</p> <p>Although they do not provide secondary treatment, facilities granted waivers of secondary treatment for marine discharges under Section 301(h) of the CWA and “honey bucket lagoons” are also included in this category.</p>
II	Advanced Wastewater Treatment	<p>This category includes needs necessary to attain or maintain a level of treatment that is more stringent than secondary treatment or produce a significant reduction in nonconventional or toxic pollutants present in the wastewater treated by a facility. A facility is considered to have advanced wastewater treatment if it achieves one or more of the following: BOD<sub>5</sub> less than 20 mg/L, nitrogen removal, phosphorus removal, ammonia removal, metal removal, or synthetic organic removal.</p>
III-A	Infiltration/Inflow (I/I) Correction	<p>This category includes needs for correction of sewer system I/I problems. For infiltration, this includes controlling the penetration of water into a sanitary or combined sewer system from the ground through defective pipes or manholes. For inflow, it includes controlling the penetration of water into the system from drains, storm sewers, and other improper entries. It also includes costs for preliminary sewer system analysis and detailed SSESs.</p>
III-B	Sewer Replacement/ Rehabilitation	<p>This category includes needs for the maintenance (above and beyond ongoing O&amp;M), reinforcement, or reconstruction of structurally deteriorating sanitary or combined sewers. The corrective actions must be necessary to maintain the structural integrity of the system.</p>

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<sup>3</sup> Note that categories VIII, IX, XI, and XIII are no longer collected.

2022 Category Number	Category Name	Description
IV-A	New Collector Sewers and Appurtenances	This category includes needs for new pipes used to collect and carry wastewater from a sanitary or industrial wastewater source to an interceptor sewer that will convey the wastewater to a treatment facility.
IV-B	New Interceptor Sewers and Appurtenances	This category includes needs for constructing new interceptor sewers and pumping stations to convey wastewater from collection sewer systems to a treatment facility or to another interceptor sewer. Needs for relief sewers are included in this category.
V	Combined Sewer Overflow (CSO) Correction	This category includes needs to prevent or control the periodic discharges of mixed stormwater and untreated wastewater (CSOs) that occur when the capacity of a sewer system is exceeded during a wet weather event. This category does not include needs for overflow control allocated to flood control, drainage improvement, or the treatment or control of stormwater in separate storm systems.
VI-A	Gray Infrastructure	This category includes needs for stormwater management program activities associated with the planning, design, and construction of conveying stormwater via pipes, inlets, roadside ditches, and other similar mechanisms. This category also includes needs associated with the planning, design, and construction of treating stormwater with wet ponds, dry ponds, manufactured devices, and other similar means.
VI-B	Green Infrastructure	This category includes needs for stormwater management program activities associated with the planning, design, and construction of low-impact development and green infrastructure, such as bioretention, constructed wetlands, permeable pavement, rain gardens, green roofs, cisterns, rain barrels, vegetated swales, restoration of riparian buffers and flood plains, etc.
VI-C	General Stormwater Management	This category includes needs for stormwater management program activities associated with implementing a stormwater management program, such as geographic information systems (GIS) and tracking systems, equipment (e.g., street sweepers, vacuum trucks), stormwater education program startup costs (e.g., setting up a stormwater public education center, building a traveling stormwater education display), and stormwater management plan development.
VII-A	NPS Control: Agriculture (Cropland)	This category includes costs to address NPS pollution control needs associated with agricultural activities related to croplands, such as plowing, pesticide spraying, irrigation, fertilizing, planting, and harvesting. Some examples of BMPs used to address these needs are conservation tillage, nutrient management, and irrigation water management.

2022 Category Number	Category Name	Description
VII-B	NPS Control: Agriculture (Animals)	This category includes all costs that address NPS pollution control needs associated with agricultural activities related to animal production, such as confined animal facilities and grazing. Some typical BMPs used to address agriculture (animal) needs are animal waste storage facilities, animal waste nutrient management, composting facilities, and planned grazing. Any costs associated with facilities or measures that address point source pollution discharges are not reported in this category.
VII-C	NPS Control: Silviculture	This category includes all costs that address NPS pollution control needs associated with forestry activities, such as removal of streamside vegetation, road construction and use, timber harvesting, and mechanical preparation for the planting of trees. Some typical BMPs used to address silviculture needs are pre-harvest planning, streamside buffers, road management, revegetation of disturbed areas and structural practices, and equipment (e.g., sediment control structures, timber harvesting equipment).
VII-E	NPS Control: Groundwater Protection (Unknown Source)	This category includes all costs that address groundwater protection NPS pollution control needs, such as wellhead and recharge area protection activities. Any need that can be attributed to a specific cause of groundwater pollution, such as leaking storage tanks, soil contamination in a brownfield, or leachate from a sanitary landfill, is reported in that more specific category.
VII-F	NPS Control: Marinas	This category includes all costs that address NPS pollution control needs associated with boating and marinas, such as poorly flushed waterways; boat maintenance activities; discharge of sewage from boats; and the physical alteration of shoreline, wetlands, and aquatic habitat during the construction and operation of marinas. Some typical BMPs used to address needs at marinas are bulk heading, pump-out systems, and oil containment booms.
VII-G	NPS Control: Resource Extraction	This category includes all costs that address NPS pollution control needs associated with mining and quarrying activities. Some typical BMPs used to address resource extraction needs are detention berms, adit (mine entrance) closures, and seeding or revegetation. Any costs associated with facilities or measures that address point source discharges are not reported in this category.
VII-H	NPS Control: Brownfields/Superfund	This category includes all costs that address NPS pollution control needs associated with abandoned industrial sites that might have residual contamination (brownfields) and hazardous waste sites covered under the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund sites). All costs for work at brownfield or Superfund sites, regardless of the activity, should be included in this category. Some typical BMPs used to address needs at brownfield or Superfund sites are excavation, removal, and disposal of contaminated sediment/soil; cleanup of contaminated groundwater or surface water; and capping of wells to prevent stormwater infiltration.

2022 Category Number	Category Name	Description
VII-I	NPS Control: Storage Tanks	This category includes all costs that address NPS pollution control needs associated with tanks designed to hold gasoline, other petroleum products, or chemicals. The tanks may be above or below ground level. Some typical BMPs used to address storage tank needs are spill containment systems; in situ treatment of contaminated soils and groundwater; and upgrade, rehabilitation, or removal of petroleum/chemical storage tanks. If these facilities or measures are part of addressing NPS needs at brownfields, the costs go in category VII-H, "NPS Control: Brownfields/Superfund."
VII-J	NPS Control: Sanitary Landfills	This category includes all costs that address NPS pollution control needs associated with sanitary landfills. Some typical BMPs used to address needs at landfills are leachate collection, on-site treatment, gas collection and control, capping, and closure.
VII-K	NPS Control: Hydromodification	This category includes needs to address the degradation of water resources as a result of altering the hydrological characteristics of coastal and non-coastal waters. For a stream channel, hydromodification is the process of the stream bank being eroded by flowing water, typically resulting in the suspension of sediments in the watercourse. Examples of such hydromodification activities include channelization and channel modification, dams, and stream bank and shoreline erosion. Some typical BMPs used to address hydromodification needs are conservation easements, swales, filter strips, shore erosion control, wetland development or restoration, and bank or channel (grade) stabilization. Any work involving wetland or riparian area protection or restoration is included under this category.
VII-M	NPS Control: Other Estuary Management Activities	This category is only used for management activities in the study areas of the 28 NEPs designated under Section 320 of the CWA. It includes costs associated with a limited number of estuary management activities that may not be appropriately included in other need categories. Some typical estuary BMPs are habitat protection for aquatic species; fisheries, oyster bed, and shellfish restocking and restoration; fish ladders; rejuvenation of submerged aquatic vegetation; artificial reef establishment; control of invasive vegetative and aquatic species; and water control structures for flow regime and salinity. Point source technologies included in the NEP's Comprehensive Conservation and Management Plans should not be included in this category.

2022 Category Number	Category Name	Description
X	Water Reuse	<p>This category includes needs associated with conveyance of treated wastewater that is being reused, including associated rehabilitation/ replacement needs. Examples are pipes to convey treated water from the wastewater facility to the drinking water distribution system or the drinking water treatment facility and equipment for application of effluent on publicly owned land.</p> <p>The needs associated with additional unit processes to increase the level of treatment to potable, or less than potable but greater than that normally associated with surface discharge needs, are reported in category II.</p>
XII	Decentralized Wastewater Treatment Systems	<p>This category includes needs associated with the rehabilitation, replacement, or new installation of OWTs or clustered (community) systems. It also includes the treatment portion of other decentralized sewage disposal technologies. Costs related to the development and implementation of on-site management districts are included (but not the costs of ongoing operations of such districts). Costs could also include the limited collection systems associated with the decentralized system. Public ownership is not required for decentralized systems.</p> <p>This category does not include the needs to change a service area from decentralized wastewater treatment to a publicly owned centralized treatment system. Needs to construct a publicly owned centralized collection and treatment system should be reported in category I, "Secondary Wastewater Treatment," and/or category II, "Advanced Wastewater Treatment." Needs to install sewers to connect the service area to an existing collection system are reported in category IV-A, "New Collector Sewers and Appurtenances," and category IV-B, "New Interceptor Sewers and Appurtenances."</p>
XIV	Desalination	<p>This category includes needs for treatment and disposal of brine, desalination of brackish water to augment water supply, aquifer recharge using desalinated sea water, and treatment/reinjection of brackish groundwater.</p>