Appendix A. CWNS 2008 Needs Categories

(Bold Areas indicate new categories, subcategories, or refined descriptions since CWNS 2004)

2008 Category Number	2004 Category Number	Category Name	Description
I	I	Secondary Wastewater Treatment	This category includes needs and costs necessary to meet the minimum level of treatment that must be maintained by all treatment facilities, except those facilities granted waivers of secondary treatment for marine discharges under section 301(h) of the Clean Water Act. Secondary treatment typically requires a treatment level that produces an effluent quality of 30 mg/l of both BOD5 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 BOD5 and total suspended solids from the influent wastewater.
II	II	Advanced Wastewater Treatment	This category includes needs and costs necessary to attain 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 its permit includes one or more of the following: Biochemical Oxygen Demand (BOD) less than 20mg/l; **Nitrogen Removal; Phosphorous Removal; Ammonia Removal; Metal Removal; Synthetic Organic Removal.**
III-A	III-A	Infiltration/ Inflow (I/I) Correction	This category includes needs and costs for correction of sewer system infiltration/inflow problems. Infiltration includes controlling the penetration of water into a sanitary or combined sewer system from the ground through defective pipes or manholes. Inflow 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 sewer system evaluation surveys.

2008 Category Number	2004 Category Number	Category Name	Description
III-B	III-B	Sewer Replacement/ Rehabilitation	This category includes needs and costs for the maintenance, reinforcement, or reconstruction of structurally deteriorating sanitary or combined sewers. The corrective actions must be necessary to maintain the structural integrity of the system.
IV-A	IV-A	New Collector Sewers and Appurtenances	This category includes the needs and costs of 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	IV-B	New Interceptor Sewers and Appurtenances	This category includes needs and costs 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 and costs for relief sewers are included in this category.
V	V	Combined Sewer Overflow (CSO) Correction	This category includes needs and costs to prevent or control the periodic discharges of mixed stormwater and untreated wastewater (combined sewer overflows) that occur when the capacity of a sewer system is exceeded during a wet weather event. This category does not include needs and costs for overflow control allocated to flood control, drainage improvement, or the treatment or control of stormwater in separate storm systems.

2008 Category Number	2004 Category Number	Category Name	Description
VI	VI, **VII-D**	Stormwater Management Program (pre-2008 needs only)	This category includes the needs and costs to plan and implement structural and nonstructural measures to control the runoff water resulting from precipitation (stormwater). It includes controlling stormwater pollution from diffuse sources by (1) reducing pollutants from runoff from commercial and residential areas that are served by the storm sewer, (2) detecting and removing illicit discharges and improper disposal into storm sewers, (3) monitoring pollutants in runoff from industrial facilities that flow into municipal separate storm sewer systems, and (4) reducing pollutants in construction site runoff discharged to municipal separate storm sewers. Needs and costs may be reported for Phase I, Phase II, and non-traditional (e.g., universities, prisons, school districts) municipal separate storm sewer systems (MS4). **Unregulated communities can also report needs and costs in this category (formerly reported in VII-D: NPS-Urban).** **Only pre-2008 needs and costs are in Category VI. For 2008 and future surveys, Stormwater Management Program needs and costs must be reported in sub-categories A-D described below.**
VI-A	**VI**	**Stormwater Conveyance Infrastructure**	**This category includes the needs and costs to address the Stormwater Management Program activities associated with the planning, design, and construction of conveying stormwater via pipes, inlets, road side ditches, and other similar mechanisms.**
VI-B	**VI**	**Stormwater Treatment Systems**	**This category includes the needs and costs to address the Stormwater Management Program activities associated with the planning, design, and construction of treating stormwater with wet ponds, dry ponds, manufactured devices, and other similar means.**

2008 Category Number	2004 Category Number	Category Name	Description
VI-C	**VI**	**Green Infrastructure**	**This category includes the needs and costs to address the 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. Projects in this category can be both publicly-owned and privately-owned.**
VI-D	**VI**	**General Stormwater Management**	**This category includes the needs and costs to address the 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, etc.), stormwater education program start-up costs (e.g., setting up a stormwater public education center, building a traveling stormwater education display), and stormwater management plan development.**
VII	VII	Nonpoint Source Pollution (NPS) Control	Nonpoint Source Pollution (NPS) does not have a single point of origin and/or are not introduced into a receiving stream from a specific outlet. NPS pollution sources are diffuse and may be a result of runoff, precipitation, atmospheric deposition, drainage, seepage, or hydrological modification.
VII-A	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 best management practices (BMPs) used to address these needs are conservation tillage, nutrient management, and irrigation water management.

2008 Category Number	2004 Category Number	Category Name	Description
VII-B	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. If the facility has a NPDES permit, these needs are classified as Category VIII, Confined Animal Point Source.
VII-C	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	VII-E	NPS Control: Ground Water Protection (Unknown Source)	This category includes all costs that address ground water protection NPS pollution control needs, such as wellhead and recharge area protection activities. Any need that can be attributed to a specific cause of ground water 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	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 are used to address needs at marinas are bulk heading, pump out systems, and oil containment booms.

2008 Category Number	2004 Category Number	Category Name	Description
VII-G	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 that 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 from mining and quarrying activities that have an identified owner should be included in Category IX, Mining (Point Source).
VII-H	VII-H	NPS Control: Brownfields	This category includes all costs that address NPS pollution control needs associated with abandoned industrial sites which might have residual contamination (Brownfields). All costs, regardless of the activity, for work at Brownfield sites should be included in this category. Some typical BMPs used to address needs at Brownfield sites are ground water monitoring wells, in situ treatment of contaminated soils and ground water, and capping to prevent storm water infiltration.
VII-I	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 located 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 ground water; 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, Brownfields.
VII-J	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.

2008 Category Number	2004 Category Number	Category Name	Description
VII-K	VII-K	NPS Control: Hydromodification	This category includes the needs and costs 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, and typically resulting in the suspension of sediments in the watercourse. Examples of such 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	**XI**	NPS Control: Other Estuary Management Activities	This category is only used for management activities in the study areas of the twenty-eight National Estuary Programs (NEPs) designated under section 320 of the Clean Water Act. It includes costs associated with a limited number of estuary management activities that may not be appropriately included in other needs 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. Most activities included in the NEP's Comprehensive Conservation and Management Plans are considered point or NPS technologies and should be included in the appropriate category.
VIII	VIII	Confined Animals (Point Source)	This category includes needs and costs to address point source pollution from animal production activities that are subject to the concentrated animal feeding operations (CAFO) regulations and have a NPDES permit. Needs and costs reported in this category are unofficial.

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IX	IX	Mining (Point Source)	This category includes needs and costs by point source pollution from mining and quarrying activities that have an identified owner. Needs and costs reported in this category are unofficial.
X	X	Recycled Water Distribution	This category includes the needs and costs associated with conveyance of treated wastewater that is being reused (recycled water), 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. The needs and costs 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.

2008 Category Number	2004 Category Number	Category Name	Description
XII	**VII-L**	Decentralized Wastewater Treatment Systems	This category includes needs and costs associated with the rehabilitation or replacement of onsite wastewater treatment systems (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 onsite 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. This category does not include the needs and costs 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 Appurtences and IV-B- New Interceptor Sewers and Appurtenances.
XIII	**n/a**	**Planning**	**This category includes needs and costs for developing plans to address water quality and water quality-related public health problems. Examples include Watershed-Based Plans (including 319 Watershed-Based Plans) and Total Maximum Daily Load Implementation Plans. Needs and costs reported in this category are unofficial.**