

**THE NATIONAL
“GREEN”
STANDARDS OF PERFORMANCE
-
EFFLUENT LIMITATION GUIDELINES
-
CATEGORICAL PRETREATMENT
STANDARDS
&
NATIONAL STANDARDS
REGULATIONS
(CODE OF GREEN REGULATIONS “CGRs”)**

**The Best Management Practices and Measures to Control, to the
Maximum Extent Practicable, the Level of Pollution Resulting
from Categories and Subcategories of
Point and Nonpoint Sources of Pollution**

(US Code Title 42 Chapter 55 – National Environmental Policy Act)
(US Code Title 33 Chapter 26 - Water Pollution Prevention and Control)
(US Code Title 42 – The Public Health and Welfare, Chapter 133 - Pollution Prevention)

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EXECUTIVE **D**IRECTIVE

POLLUTION **P**REVENTION AND **C**LEAN **W**ATER

NATIONAL GREEN STANDARDS REGULATIONS

NATIONAL STANDARDS ENFORCEMENT AGENCY

EXECUTIVE **S**UMMARY

(Pending Final Edition)

PREFACE

These Green Standards and National Standard Regulations are developed with the intent of satisfying the National Goals of the National Environmental Policy Act of 1969, the Clean Water Act of 1972 and the Pollution Prevention Act of 1990. The National Goal is to eliminate all discharges of all pollutants at all sources and for a sustainable alternative new water source to be established at all such point sources of discharge to achieve the objectives of these Best Management Practices and Measures. Such objectives are:

- Protection, restoration and conservation of all State's waters (Nation's waters)
- Pollution prevention to be accomplished through application of at-source reduction control technology
- Eliminate the discharges of all point sources into publicly owned treatment works and navigable waters by implementing innovative and alternative control at all point sources so as to control both point and nonpoint sources of pollution
- Establish a National standard to prevent the discharge of pollutants equal to the Primary Standards for drinking water applicable to all classes and categories of point sources
- Eliminate sewage flows through implementation of sustainable alternative water source control technology providing containment for pollutants at the source and recycle and reuse new water at the source to 1) prevent pollutants from migrating to cause water or other multi-media environmental pollution and 2) reduce demand on State's public water supplies by conserving all water used by implementation of practices to recycle and reuse the new water at-source, serving the original consumer's beneficial reuse applications.

The following is provided with intent to have an effect on the purposes and objectives of the States' nonpoint source pollution management program and to achieve the intent and purpose of the National Goal in the interest of the public health and welfare and protection of oceanic life and wildlife through restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters.

EXECUTIVE DIRECTIVE

TO ALL STATES AND POLITICAL SUBDIVISIONS:

All States and Political Subdivisions pursuant to US Code Title 33 Chapter 26 Section 1370 – State Authority, as expediently as practicable in the interest of public health or welfare, shall adopt and enforce the herein defined Water Quality Standard, Pretreatment Standard Requirements and Effluent Limitation Regulations or be construed as impairing State’s waters.

(Applicable to all point sources of discharge, other than publicly owned treatment works, in compliance with the requirements of US Code Title 33 Chapter 26 – Water Pollution Prevention and Control, Sections [1311](#), [1312](#), [1313](#), [1314](#), [1316](#), [1317](#) and [1342\(b\)\(8\)](#))

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1.0 - GENERAL PROVISIONS

1.1 - Green Standard Objective

The objective of the Green Standards of Performance is to implement sustainable alternative water sources utilizing best available innovative and alternative demonstrated control technology (BADCT) in compliance with the National Code of Green Regulations (CGRs) at all point sources, a standard of practice to achieve the National Goal for water quality, the Primary Standards of the National Primary Drinking Water Regulations' (NPDWRs), the Maximum Contaminant Level Goal (MCLGs).

1.2 - Green Standard Goals

- 1.2.1 In the interest of public health and welfare pursuant to the Pollution Prevention Act of 1990, prevent the discharge of all pollutants at the source through application of best available cost-effective innovative and alternative control technology.
- 1.2.2 In the interest of the public health and welfare and protection of oceanic life and wildlife, restore and maintain the chemical, physical, and biological integrity of the Nation's waters pursuant to the requirements of the Clean Water Act of 1972.
- 1.2.3 Achieve the Green Standard Effluent Limitations for point sources established pursuant to the USEPA's MCLGs for water quality, in compliance with the CGRs.
- 1.2.4 Establish a sustainable alternative new water source (SAWS) at each point source.
- 1.2.5 Eliminate sewage flows so as to prevent the discharge of pollutants into Nation's waters, State's waters, underground waters, ground waters, navigable waters, waters of the contiguous zone and the oceans.
- 1.2.6 Provide means to economically recycle and reuse water at each point source to prevent wasting of water.
- 1.2.7 Reduce or eliminate the Greenhouse Gas (GHG) and toxic gas emissions generated by conventional treatment works and septic systems.

1.3 - Green Standard Priorities

It is the Green Standard's Enforcement Priorities, in the interest of public health, to as expediently as practicable –

- 1.3.1 Take action to address all State orders regarding the conservation and protection of State waters, including orders addressing drought and cease and desist orders regarding discharges of pollutants.
- 1.3.2 Take action to eliminate the discharges into the Navigable waters.
- 1.3.3 Take action to prevent the permitted toxic discharges in toxic amounts through implementing control of both point and nonpoint sources.

2.0 – GLOSSARY OF TERMS

All definitions and clarifications herein the Glossary of Terms is intended to define the intent and purpose of, but not limited to, the National Environmental Policy Act of 1969, Clean Water Act of 1972 and the Pollution Prevention Act of 1990. Additionally defined are terms common in the wastewater industry (industry).

“301(h) Waiver” (also known as 301(h) Variance) means a National Pollution Discharge Elimination System (NPDES) permit as defined in subsection [1311\(h\)](#). A conditional requirement of a “301(h) Waiver” is to implement “pretreatment requirements” at sources (other than public owned treatment works) introducing waste into publicly owned treatment works pursuant to 33USC26§[1317](#) and 33USC26§[1311\(h\)\(5\)](#) pursuant to enforcement requirements of 33USC26§[1370](#). See “Categorical Pretreatment Standard” and “Classes and Categories of point sources (other than publicly owned treatment works)”

“A hazardous waste” is waste that poses substantial or potential threats to public health or the environment and generally exhibits one or more of these characteristics:

- carcinogenic
- ignitable (i.e., [flammable](#))
- [oxidant](#)
- [corrosive](#)
- [toxic](#)
- [radioactive](#)
- [explosive](#)

U.S. environmental laws (see [Resource Conservation and Recovery Act](#)) additionally describe a "hazardous waste" as a waste (usually a solid waste) that has the potential to:

- cause, or significantly contribute to an increase in mortality (death) or an increase in serious irreversible, or incapacitating reversible illness; or
- pose a substantial (present or potential) hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

These wastes may be found in different physical states such as gasses, liquids, or solids. Furthermore, a hazardous waste is a special type of waste because it cannot be disposed of by common means like other by-products of our everyday lives. Depending on the physical state of the waste, treatment and solidification processes might be available. In other cases, however, there is not much that can be done to prevent harm. “Municipal wastes”, i.e. domestic wastewater or sewage from sources in a community, are the source of toxic and carcinogenic substances. “Municipal wastes” are “hazardous waste.” See “Municipal wastes” and “Toxic pollutants”. See “Toxic waste (pollution)” and “Hazardous substance”

“A system of collection and centralized treatment” means publicly owned treatment works owned by the public, i.e. the people in general, that is typically operated by a government entity. Such system of collection is a nonpoint

source of pollution and is subject to federally mandated at-source pretreatment requirements, i.e. other than publicly owned treatment works, prior to receiving any discharges from any source or point sources of pollutants pursuant to 33USC26§1365(f), effective July 1, 1973. Such publicly owned treatment works are responsible for the nonpoint source and point source pollution of our Nation's waters including navigable waters, i.e. oceans, rivers, lakes, wetlands, etc. The first National Goal of the Clean Water Act of 1972 is that all discharges into such publicly owned treatment works be eliminated by 1985, thereby eliminating the discharge of pollutants into navigable waters. See "Nonpoint source of pollution", "Point source", "Publicly owned treatment works", "Navigable waters" and "National Goal".

"Accumulated sources" means an accumulation of the discharges from the classes and categories of point sources (other than publicly owned treatment works) via a sewer system, i.e. publicly owned treatment works, creating and causing a nonpoint source of pollution. See "Classes and categories of point source (other than publicly owned treatment works)"

"Accumulated sources" means an accumulation of the discharges from the classes and categories of point sources (other than publicly owned treatment works) via a sewer system, i.e. publicly owned treatment works, creating and causing a nonpoint source of pollution. See "Classes and categories of point source (other than publicly owned treatment works)"

"Administrative review" means a review of the Administrator's, or any State or political subdivision authorized pursuant to [33USC26§1369](#), action (A) in promulgating any standard of performance under section 1316 of the Clean Water Act, (B) in making any determination pursuant to section 1316(b)(1)(C) of the Clean Water Act, (C) in promulgating any effluent standard, prohibition, or pretreatment standard under section 1317 of the Clean Water Act, (D) in making any determination as to a State permit program submitted under section 1342(b) of the Clean Water Act, (E) in approving or promulgating any effluent limitation or other limitation under section 1311, 1312, 1316, or 1345 of the Clean Water Act, (F) in issuing or denying any permit under section 1342 of the Clean Water Act, and (G) in promulgating any individual control strategy under section 1314(l) of the Clean Water Act, may be had by any interested person in the Circuit Court of Appeals of the United States for the Federal judicial district in which such person resides or transacts business which is directly affected by such action upon application by such person. See "Knowing violation" and "Knowing endangerment"

"Administrator" means the "National Standards Enforcement Agency", a private non-profit unincorporated legal enforcement agency sworn to uphold the law and defend the Constitution of the United States in the interest of executing administrative authority to enforce the herein defined "National Green Standards of Performance, Effluent Limitation Guidelines, Categorical Pretreatment Standards and Regulations", herein after known as "Administrator". Administrator shall have authority pursuant to 33USC§§1251(e) – Public Participation, 33USC§1364 – Emergency Powers, and 33USC§1370 – State Authority. The "Administrator" shall have authority to declare emergencies in the interest of public health and welfare under 33USC§1364. Administrator additionally

means the “United States Environmental Protection Agency” under statutory requirement to administer the Chapter. See “United States Environmental Protection Agency”

“Advanced waste treatment techniques” means “other than publicly owned treatment works”, i.e. innovative alternatives and innovative pretreatment applied at-source consisting of the best available innovative and alternative control technology that will cost effectively achieve the National Goal, to eliminate all discharges of all pollutants from all classes and categories of point sources (other than publicly owned treatment works). See “Alternative”, “Pretreatment”, “Mini I.D.E.A. BESTEP 10”, “I.D.E.A.” and “RECLAMATOR”.

“AES Technology” is the “brand name” of the best available demonstrated control technology (BADCT) which, based upon demonstrated and proven performance, achieves the effluent limitations, effluent standard, prohibition requirements, pretreatment standard, or standard of performance in effect under 33USC26. See “State authority”

“Alternative” means an “at-source” innovative and alternative waste management control device required to achieve effluent limitations established for “classes and categories of all point sources (other than publicly owned treatment works)” which achieves the MCLG drinking water standard in compliance with the National Green Standards of Performance. For clarification, any conventional waste management methods or practices, such as a sewer collection and conveyance system with centralized treatment (aka publicly owned treatment works) or an OWTS, i.e. septic system, cannot be construed as an “alternative”. See “BADCT”, “SAWS” and “RECLAMATOR”.

“Alternative requirement” means for all pollutants identified in section 1311 (b)(2)(C), (D), (F) and 1317 (b), “effluent limitations” for categories and classes of point sources, other than “publicly owned treatment works”, which shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants at the source.

“Alternative water source project” means a project designed to provide municipal, industrial, and agricultural water supplies in an environmentally sustainable manner by conserving, managing, reclaiming, or reusing water or wastewater or by treating wastewater to meet critical water supply needs pursuant to 33USC§1300. Also see “Sustainable Alternative Water Source” and “SAWS”.

“Ammonia” (NH₃) means a toxic and hazardous gas which has the sharp odor characteristic of household ammonia [NIOSH/OSHA 1981]. This gas can severely irritate the eyes, nose, throat, and lungs. Exposure to high concentrations can be fatal. Ammonia is converted to carbamoyl phosphate by the enzyme carbamoyl phosphate synthetase, and then enters the urea cycle to be either incorporated into amino acids or excreted in the urine. Urine is a precursor of “N-nitrosamines”, the toxic pollutants listed on the USEPA Toxic Pollutant List as #50. All sources of urine, i.e. municipal wastes, are subject to innovative and alternative or innovative pretreatment

requirements if such source were to discharge into a publicly owned treatment works. Upon being mixed with water, it is referred to as ammonium. Ammonia even at dilute concentrations is highly toxic to aquatic animals, and for this reason it is classified as dangerous for the environment. Ammonia is a pollutant subject to pass through publicly owned treatment works and is therefore subject to alternative waste management methods to eliminate discharge from its source so as to prevent it being discharged into navigable waters by publicly owned treatment works. Sources of ammonia have been subject to pretreatment requirements since 1977. See “Nitrosamines”, “Pollution”, “Pollutants”, “Methane gas”, “Hydrogen sulfide gas” and “Carbon footprint”.

“Ammonia (as poison)” means the volatile alkali. It has the same chemical relations as the fixed alkalies, potassa, soda, and lithia; but flies off into the air when exposed, requiring, unless dissolved, extreme cold or very good pressure to condense it. It is intensely pungent to the taste and to the breathing organs, and acts as an irritant poison when taken in large quantities. Two or three teaspoonfuls, at least, of the stronger solution of ammonia will be necessary to cause danger of a fatal result. Aromatic spirit of ammonia might have such an effect, if a tablespoonful or two were swallowed at once. Symptoms of such poisoning are, extreme burning and pain in the [stomach](#), with nausea and vomiting, followed by collapse (deathly prostration), which may end fatally in a few hours. One case has been reported in which this took place in a few minutes; another, after three days. Its being breathed freely hastens the effect. Regarding direct discharge into navigable waters, ammonia is lethal to aquatic life (fish) at levels greater than 0.1 mg/l.

“Areawide basis” means waste treatment management, to the extent practicable, shall provide control or elimination of all point and nonpoint sources of pollution, including in place (at-source) or accumulated pollution sources pursuant to 33USC§1281(c). See “Regulate”.

“Ash” means bug bones and digested organic residuals that is removed from a BADCT Technology as necessary. “Ash”, unlike sludge, has been fully stabilized having little or no organic value remaining.

“At-source” means within the property boundaries or domain of a source within which the owner or operator of such source has authority. See “Onsite” and “In-place”

“BADCT” means “best available demonstrated control technology”. BADCT is that sustainable alternative water resource (SAWS) technology which is the best practicable control technology currently available and is listed as either “brand name or equal” on the Green Standard “Official Comparator”, based upon demonstrated performance. Only onsite systems qualifying as “BADCT” shall be specified by “brand name or equal” to serve any source or point source of discharge within the State.

“BADCT Technology” is innovative alternative or innovative pretreatment technology that achieves the Green Standard.

“Basin Plan” means an areawide waste treatment management plan which is specific to the land and waters within a watershed.

“Beneficial reuse application” means a direct or indirect reuse of reclaimed water at the source resulting in a reduction of the public water supplies and sewage flows.

“Best Available Technology Economically Achievable” means the “brand name” of the “Certified BADCT” listed pursuant to the “Green Standards of Performance” under the “Official Comparator”.

“Best management practices for (wastewater) industry” means a practice of adopting and enforcing the National Green Standards of Performance, Effluent Limitation Guidelines, Categorical Pretreatment Standards and National Green Standards Regulations (Green Standards) specified under section 1314 (b) and section 1314 (c) for a class or category of point sources (other than publicly owned treatment works), for any specific pollutant which the Administrator (or a State under section 1370) is charged with a duty to regulate as a toxic or hazardous pollutant under section 1317(a)(1). The applicable controls established within the “Green Standards” shall be considered a requirement for the purposes of section 1311, 1312, 1316, 1317, or 1343 of the Clean Water Act, as the case may be, in any permit issued to a point source pursuant to section 1342 of the Clean Water Act.

“Best practicable control technology currently available” means “BADCT Technology”, i.e. “SAWS”, required in compliance to the “CGRs” of the “Green Standards”.

“Brand name or equal” means the identification of the BADCT Technology that established the highest standard of performance as defined in the Green Standard Official Comparator that is required to be applied for control of all classes and categories of point sources. See “Classes and categories of point sources (other than publicly owned treatment works)”

“CGRs” means the herein defined National “Code of Green Regulations” established under, at a minimum, US Code Title 42 Chapter 55 – National Environmental Policy Act, US Code Title 33 Chapter 26 - Water Pollution Prevention and Control and US Code Title 42 – The Public Health and Welfare, Chapter 133 - Pollution Prevention. Additionally, the “CGRs” provide the parameters for enforcement of the “National Green Standards of Performance.” The “CGRs” provides for an industry-wide Code of Green Regulation standard that prevents the discharge of pollutants to achieve the goal of the Clean Water Act of 1972, clean water.

“Carbon footprint” a measure of the amount of Greenhouse gas emissions (GHG) or “CO2 Equivalents” produced by a “person” or a “source” in a given time period. See “Methane gas”.

“Carcinogenic contaminants” means toxic pollutants in domestic (household) sewage that, at a minimum, cause cancer and leads to death. All classes and categories of point sources (other than publicly owned treatment works), such being sources of “carcinogenic contaminants”, since July 1, 1973, has been required to implement at-source innovative pretreatment consisting of the best practicable control technology currently available pursuant to 33USC26§1317 for control of such toxic carcinogenic pollutants. Examples of such carcinogenic contaminants are nitroso compounds, i.e. nitrosamines, tetrachloroethylene, trichloroethylene, acrylamide and epichlorohydrin. See “Toxic pollutants”, “Hazardous substances” and “Nitrosamines”

“Categorical Pretreatment Standard” means a standard which applies applicable “pretreatment requirements” to sources (other than public owned treatment works) introducing waste into publicly owned treatment works pursuant to 33USC26§1317 and 33USC26§1311(h)(5) pursuant to enforcement requirements of 33USC26§1370. See “301(h) Waiver”, “Indirect Potable Reuse Standard” and “National Green Standards of Performance”

“Certified” means listed as a “brand name or equal” on the Green Standards Official Comparator Certified BADCT Technology List, the list all authorities of all States and political subdivisions make available to the public (promulgate and enforce) for their selection and application.

“Certification” means a qualified independent third party evaluation of the performance of a control technology. See “BADCT”.

“Certified Installer” means a licensed contractor holding at a minimum a State excavating and plumbing contractor’s license. Additionally, a “Certified Installer” must also hold a “Certified Installer’s Certificate” issued to such licensed contractor by the manufacturer of the BADCT Technology or its Licensee(s) demonstrating proper training has been completed, validating his qualifications for installing a “BADCT Technology”. The “Certified Installer” shall be responsible for acquiring any permits for such installation and for completing all documentation and reports in regard to such installation, i.e. as-built drawings, etc. Copies of all documents shall be provided to the “Permitting Agency” and manufacture of the “BADCT Technology”.

“Certified Service Provider” means a person who is a manufacture or who has been licensed by a manufacturer of a “BADCT Technology” to provide service of a Licensed BADCT Technology. “Certified Service Provider” additionally means a person who has been trained and is qualified to provide service for “BADCT Technology” and holds a Certificate of Certification issued by the NSEA. No person shall provide service to any “BADCT Technology” without such certification.

“Chapter” means the “US Code Title 33 Chapter 26 – WATER POLLUTION PREVENTION AND CONTROL” or 33USC§1251 et seq., also known as the “Clean Water Act of 1972” or “Clean Water Act”. See “Water Pollution Prevention and Control”.

“Classes and categories of point sources (other than publicly owned treatment works)” means point sources of “pollutants” subject to the most strict control, or abatement of pollution in compliance with any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard or standard of performance (“Green Standards of Performance” or “Green Standards”) in compliance with 33USC §§1311, 1312, 1316, 1317 and 1342 no later than July 1, 1977, otherwise CGRs. A partial list of classes and categories of point sources (other than publicly owned treatment works) that are subject to such effluent limitations are, but not limited to, the following:

- Apartment / Multi-Family (per unit)
- Bars without Dining
- Car Wash with Recycling
- Car Wash without Recycling
- Commercial Laundry/Dry Cleaning
- Condos (per unit)
- Delicatessen
- Fitness / Beauty Salon
- Grocery Stores
- Hospital / Convalescent
- Hotel / Motel (per room)
- Hotel / Motel with Restaurant (per room)
- Industrial
- Laundromat
- Libraries
- Mortuaries
- Nurseries/Bottled Water
- Parks
- Professional Offices
- Repair Shop / Service Shop
- Residential
- Restaurants
- Retail / Convenience Store
- RV Parks (per space)
- Schools
- Schools with Cafeteria
- Schools with Gym / Cafeteria
- Septage Haulers
- Theaters

Pursuant to the requirements of section 1311(b)(1), each point source shall require the application of the best practicable control technology currently available pursuant to section 1314 (b) of the Clean Water Act as defined in this Green Standard's Official Comparator, or in the case of a discharge from a class and category of a point source (other than a publicly owned treatment works) into a publicly owned treatment works which shall require compliance with the "Categorical Pretreatment Standard". Pursuant to 33USC§1251(a)(7), it is the National Policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of the Clean Water Act be met through the control of both point and nonpoint sources of pollution. The only way to control both point and nonpoint sources of pollution is to prevent any discharge from point sources becoming a nonpoint source discharge. See "Nonpoint sources", "Discharge", "Pollutants", "Carcinogenic contaminants", "Effluent" and "CGRs"

"Clean water" means "water" that achieves the requirements of the National Green Standards of Performance upon being subjected to at-source treatment following its use by any person. It additionally means "water" that achieves the National Goal thereby eliminating the discharge of any pollutant from any source point source and thereby preventing any effect on or contribution to any nonpoint source of pollution.

"Clean Water Act" mean "Chapter" or "Clean Water Act of 1972" codified by the United States Congress into Federal Law as United States Code Title 33 Chapter 26. See "Clean Water Act of 1972" and "Chapter"

"Clean Water Act of 1972" means the Clean Water Act of 1972 adopted into law by the United States Congress as "US Code Title 33 Chapter 26 – WATER POLLUTION PREVENTION AND CONTROL" to prevent or eliminate all nonpoint sources of pollution (septic systems / onsite wastewater treatment systems that dispose of wastewater effluent via a disposal field in the ground polluting ground water supplies and publicly owned treatment works, i.e. sewers, which pollute ground water via sewer collection system exfiltration and surface water via point source discharges of pollutants) through implementation of point source control at each source or group of sources pursuant to policy defined in 33USC1251(a)(7). The Statutes of the Clean Water Act are "strict liability statutes". The Clean Water Act requires at-source control for all point source of discharge through mandatory application of best available innovative and alternative control technology at each such point sources of discharge so as to prevent nonpoint source pollution, hence accomplishing the National Goal; to eliminate all point sources of discharges of all pollutant so as to prevent nonpoint sources of pollution. Since July 1, 1973, it has been unlawful for any person to discharge raw sewage which has not first been subjected to advanced treatment provided by the best practicable control technology currently available PRIOR to discharging effluent into 1) a leach field, i.e. drainfields, dispersal field, etc, or 2) into a publicly owned treatment works, i.e. public sewer, collection system, etc., both considered nonpoint sources of pollution subject to the Clean Water Act point source control requirements. Note: Only statute citations having 4 digit numbers in reference to the Clean Water Act have authority. No referencing of citations of statutes of the Clean Water Act using only 3 digit numbers have authority. The three digit numbers only reference statutes of the Clean Water Act in its form as

an amendment, prior to its adoption into Federal Law by the United States Congress in 1972.

“Code of Green Regulations (“CGRs”)” means the current most strict environmental regulations existing and, due to their “stricter” levels of requirements, all authorities within the United States, their territories, agencies, governors, political subdivisions, etc., are required to adopt and enforce the CGRs as expediently as practicable, as a requirement of law, or shall be construed as being complicit with environmental terrorists for knowingly violating, and shall be charged under law accordingly. See “Zero tolerance” and “CGR 3.7 - Enforcement”.

“Collection system” means an underground infrastructure consisting of a series of pipes and laterals which are connected together to collect and transfer “waste streams” consisting of pollutants, collectively “effluent”, to a centralized treatment facility. Collection systems are typically a publicly owned. Collection systems are a nonpoint source of pollution. “Collection system” additionally means a publicly owned treatment works subject to the pretreatment requirements pursuant to 1317 for any new source discharging into them since 1977.

“Confined disposal of pollutants” means to contain and control all pollutants at the source to prevent pollutants from migrating (to any other source) to cause water or any other environmental pollution. See “Disposal of pollutants”.

“Conflict of interest” is what occurs when an individual or organization has an interest that might compromise their actions.

“Consideration” means a legal concept of value in connection with a contract.

“Contiguous zone” means a part of a navigable body of water which extends approximately 12 miles from a shoreline of such body of water. Any “direct discharge” into such a body of water shall not compromise the chemical, physical or biological integrity of such body of water. The primary pollutants of concern are thermal, pharmaceuticals and personal care products, phosphates, nitrosamines, nitrosamine precursors and acidic pH levels. See “Acidic discharge”

“Control” means application of a device consisting of “technology”, processes, operating methods or other “alternatives” required to prevent, reduce or eliminate the discharge of pollutants through application of such best available “control technology” at all “point sources”. US Code, Title 33, Chapter 26, Subchapter III – Standards and Enforcement, Sec. 1316.- National standards of performance (a)(1) states: the best available demonstrated control technology, processes, methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants. Control additionally means application of technology to achieve a standard to prevent the discharge of pollutants and which will reflect the greatest degree of effluent reduction. See “Control

technology”, “Control of nonpoint sources of pollution” and “Nonpoint source of pollution”.

“Control of nonpoint source of pollution” means to eliminate all discharges of all pollutants from entering into such nonpoint source through application of at-source control of all point source discharges. An example would be to control of pollutants utilizing SAWS Technology so as to eliminate any pollutants from entering into a leachfield or a publicly owned treatment works, both considered nonpoint sources of pollution subject to control. The best available innovative alternative at-source control technology is required to provide control to prevent discharges of pollutants into any underground excavation, i.e. leachfield, and the best available innovative pretreatment at-source control technology is required to provide control to prevent discharges of pollutants into any publicly owned treatment works pursuant to policy established pursuant to 33USC1251(a)(3), (4), (5), (6) and (7) in order that the National Goals established pursuant to 33USC1251(a)(1) and (2) be achieved.

“Control technology” means 21st Century “control technology” that achieves the National Goal, to eliminate all discharges of all pollutants from all classes and categories of point sources, other than publicly owned treatment works. See “Classes and categories of point sources (other than publicly owned treatment works)”, “BADCT Technology” and “Categorical Pretreatment Standard”

“Conventional treatment works” means “sewer systems” and “septic systems”. “Conventional treatment works” have been identified as the number one source of pollution of our Nation’s waters. They are also a major contributor to uncontrolled GHG emissions. “Conventional treatment works” are century-old technology that treated wastewater for disposal. See “OWTS”, “Alternative” and “Pretreatment”.

“Critical water supply needs” means, at a minimum, emergency need for protection and conservation of public water supplies as defined by a state executive order declaring droughts or orders requiring the cease and desist of pollution of State’s waters.

“Damages” means loss of profits that would have otherwise been realized by the manufacturer of the best available technology, the at-source service establishment, the at-source service provided and from the new water produced, provided the strict liability statutes of the Chapter requiring application of standards and limitations had been adopted and enforced by the federal agencies, the State and its political subdivisions, the State water pollution control agencies, interstate agencies, and the municipalities and industries involved had administered their authority pursuant to 33USC26§1370. The direct liability of the above officials is realized pursuant to their acting on behalf of the State as a licensee of the State, thereby establishing an association-in-fact, and such State authority being subject to the obligatory federal requirements of 33USC26§1370 in the interest of public health, welfare and the water. Accordingly, each person as an employed official of such licensed entities are also, as owner and or operator of their individual source and pursuant to the requirements under 33USC26§1311(a) and 33USC26§1365(f), is individually subject to damages resulting from the strict liability code violation. See

“Industries involved” and “Public officials”

“Definite barrier” means a barrier of a physical nature, typically a back-flushable spiral wound membrane, having 100% integrity and of which is a mandatory component of a SAWS technology that cannot be breached to allow disease carrying pathogens (fecal coliform and E. coli) generated by a source or its alternative or pretreatment facilities to leave the works to enter the environment via discharge into either an underground excavation or a publicly owned treatment works. Such is a control technology component and is required to be specified by “brand name or equal” based upon such performance and criteria. Hollow fiber type membranes are not a 100% integrity “definite barrier” membrane technology and as such, shall not be acceptable.

“Demonstrated performance” means performance has been shown clearly by evidence. The minimum demonstrated performance requirement for any “equal” control technology shall be provided by an accredited third party performance evaluation entity such as NSF International, a performance standards organization. Such standards organization shall provide evaluation which will equal the level of criteria defined within the National Green Standards of Performance that has been established by the “name brand” BADCT Technology. All owners of BADCT Technology shall additionally demonstrate the validity of such performance evaluation by executing the Green Standards Performance Guarantee for each application of their control technology, assuming 100% liability for the ongoing field performance of their control technology. Any manufacture of a BADCT Technology shall have the right to perform in-field testing of any BADCT Technology at anytime.

“Department” means a state agency, political subdivision, county, municipality, community services district, special district or any other authority within the state assigned, authorized and having the right to enforce the effluent limitations, standards or prohibition established or defined under 33USC26.

“Device” means the best available at-source control technology which eliminates the discharge of pollutants. Additionally, a “device” is an innovative alternative which does not require or utilize soil treatment, i.e. disposal field, and produces new water for the original consumer’s beneficial reuse, or an innovative pretreatment technology which produces a valuable resource, i.e. new water, a commodity for purchase.

“Direct potable reuse” means “new water” that meets the “MCLG” drinking water standard for reuse and recycle for all beneficial reuse applications. See “Indirect Potable Reuse”

“Direct potable reuse limitation” means a public health goal requiring the “above ground point source effluent limitation” to achieve potable water quality utilizing treatment techniques of a definite-barrier membrane technology and activated carbon charcoal filtration to remove all contaminants, with the exception of 1) nitrates and 2) pH alkalinity recovery, which are accomplished biologically. The definite-barrier membrane additionally provides for physical disinfection / removal of fecal coliform. To achieve the goal, the additional required “direct potable reuse

limitation” pursuant to application of the best available demonstrated control technology (BADCT Technology) to achieve the goal pursuant to the US EPA National Drinking Water Regulation, is:

1. Nitrate (NO3-N) biological removal less than 10 mg/l
2. pH biological alkalinity recovery 6 – 9 (pH values less than 7.5 are carcinogenic)

To achieve the goal, the additional required “direct potable reuse limitation” pursuant to application of the best available demonstrated control technology (BADCT Technology) to achieve the goal pursuant to the NSEA National “Green” Drinking Water Regulation, a more stringent standard than the US EPA National Drinking Water Regulation, is:

1. Nitrate (NO3-N) biological removal less than 2 mg/l
2. pH biological alkalinity recovery greater than 7.5
3. Fecal Coliform disinfection (chlorine) a maintained residual of .01

See “Indirect potable reuse limitation”, “Direct potable reuse” and “Indirect potable reuse”

“Direct Potable Reuse Standard” means the “Green Standards of Performance” that provides for a “Sustainable Alternative New Water Source” at all classes and categories of point sources (other than publicly owned treatment works). Such standard provides for a “new water” quality, enabling 100% reuse of original consumer’s water for all above ground beneficial potable water applications. (See Appendix 8.2)

“Discharge” means for any person to allow any pollutant to leave the jurisdictional boundaries of a source, i.e. cross over the legal boundaries of a legal parcel, within the sphere of influence or authority of such person, owner or operator of a source. Additionally, “discharge” means failure to confine pollutants [at the source] so they will not migrate [via a disposal field or sewer system or ocean out-fall] to cause water or other [multi-media] environmental pollution. Section 1311(a) states, “the discharge of any pollutant by any person shall be unlawful.” See “Wastewater”

“Discharger” means any person who causes or allows a discharge. It additionally means any person that allows any pollutant to leave the jurisdictional boundaries of a source within the sphere of influence or authority of such person, owner or operator of a source. Additionally, a “discharger” is any person who fails to confine pollutants [at the source] so they will not migrate [via a disposal field or sewer system or ocean out-fall] to cause water or other [multi-media] environmental pollution. Section 1311(a) states, “the discharge of any pollutant by any person shall be unlawful.” See “Source”, “Person” and “Pollutant”

“Discharge permit” means a permit to discharge pollutants that is issued to an owner or operator of a source by a regulatory authority to allow a non-controllable discharge, subject to 33USC§1311(a), of a pollutant or pollutants into a disposal field, sewer system or ocean out-fall. It additionally means a prima facie evidence of a knowing violation of a daily discharge (33USC26 §§ 1319(c)) at a minimum, as such permit would have been issued by a public official having a duty pursuant to authority under 33USC26 §§ 1370.

“Discharge of pollutants into navigable waters be eliminated by 1985” means to eliminate all discharges of pollutants into publicly owned treatment works by 1985 through implementation of best available innovative alternative control technology at all classes and categories of point sources (other than publicly owned treatment works), or in the case of discharge into a publicly owned treatment works, innovative pretreatment at-source control technology in compliance with 33USC§1317 and 33USC§1342 pursuant to 33USC§1365(f).

“Dispersal system” means a leachfield, seepage pit, mound, at-grade, subsurface drip field, evapotranspiration and infiltration bed, or other type of system for final wastewater treatment and subsurface discharge, i.e. “disposal systems”. Dispersal systems are unlawful unless used behind BADCT Technology.

“Dispose” means dispose of pollutants and waste water, i.e. discharge.

“Disposal” means discharge of pollutants and wasting of water. It is unlawful for any person to discharge any pollutants pursuant to 33USC§1311(a) and 33USC§1365(f).

“Disposal system” means a nonpoint source of discharge that is unlawful pursuant to 33USC§1311(a).

“Domestic wastewater” means municipal wastes or municipal sewage produced by classes and categories of point sources other than publicly owned treatment works and industrial point sources. See “Classes and categories of point sources (other than publicly owned treatment works)

“Dual liability” means a person subject to strict liability as a public official, employee of the United States or a licensed member of any “State Industry” under [33USC26§1370\(a\)](#); and, who is additionally subject to strict liability as a person under [33USC26§1311\(a\)](#), for committing any unlawful act of discharge defined under [33USC26§1365\(f\)](#) and punishable under [33USC26§1319](#). If it is determined the person is a knowing member of a criminal enterprise as defined under [18USC§1961-1968](#), the damages shall be tripled. Note: There is no immunity available for the individual(s) charged with these crimes. They each will be individually responsible for the foreseeable consequences of their actions. Their defense shall not be provided by the people.

“DUE” means Dwelling Unit Equivalent. A DUE is measure of the average amount of effluent (pollutants) which is expected to be generated by a single family residential user class point source. A DUE equals 2.5 people, 150 gallon per day and .425 pound of organics per day (based on the national average of .17 lb/person/day).

“Duty of Care” is “Common Law” which states: “a requirement that a person act toward others and the public with the watchfulness, attention, caution and prudence that a reasonable person in the circumstances would use. If a person's actions do not meet this standard of care, then the acts are considered negligent, and any damages

resulting may be claimed in a lawsuit for negligence.” In **tort law**, a **duty of care** is a legal obligation imposed on an individual requiring that they exercise a reasonable **standard of care** while performing any acts that could foreseeably harm others.

“Easement” means the right to use the land of another for a specific purpose, such as a right of way for utilities.

“Economically achievable” means purchasable.

“Effluent” means any quality of water still having levels of contaminants which are in the Maximum Contaminant Level (MCL) range and does not achieve the Maximum Contaminant Level Goals (MCLGs). The MCLG is the “standard of performance” for the control of the discharge of pollutants which reflect the greatest degree of effluent reduction pursuant to 33USC§1316, a standard permitting no discharge of pollutants. See “Maximum Contaminant Level Goal (MCLG)” and “Maximum Contaminant Level (MCL)”.

“Effluent limitation” means required application of best available demonstrated control technology at each class and category of point sources (other than publicly owned treatment works) to achieve a standard for the control of the discharge of pollutants which reflect the greatest degree of effluent reduction, and where possible, a standard permitting no discharge of pollutants pursuant to 33USC§1316. Since July 1, 1973, failure for any person to comply with effluent limitation requirements is an unlawful act under 33USC§1365(f).

“Effluent source” is any source of a discharge of a pollutant or discharge of pollutants.

“Effluent standards” means the “Green Standards of Performance” or “CGRs” herein defined. The National Primary Drinking Water Regulation Standards (NPDWRs or primary standards), i.e. the Maximum Contaminant Level Goals (MCLGs), in themselves do not allow for a margin of safety of certain levels of contaminants and is now to be construed as the new maximum contaminant level. The National Contaminant Level Goals (“NCLGs”) are the new Maximum Contaminant Level Goals for all water quality, nationally. The US EPA MCLGs are no longer to be considered as acceptable levels for even “indirect potable reuse” applications due to, at a minimum, their lack of provisions for margins of safety in regards to the allowable levels for pH and ammonia discharges. By definition, “allow for a margin of safety” pursuant to 33USC§1317 Toxic and Pretreatment Effluent Standards, subsection (a), subparagraph (4) states, “Any effluent standard promulgated under this section shall be at that level which...provides an ample margin of safety.” The allowable “pH” level defined in the US EPA MCLG is 6, an acidic level in water known to support growth of cancer cells (and many other diseases) in the human body and is known to be extremely toxic to aquatic life. The US EPA MCLG does not recognize “ammonia”. Ammonia is known to convert to nitroso compounds which, in a human body causes cancer and, in small concentrations, is known to be deadly to aquatic life. See “NCLG”, “MCL”, “Ammonia”, “Nitrosamine”, “pH” and “Effluent”

“Effluent standard or limitation” means, effective July 1, 1973, it shall be unlawful for any person to discharge any pollutant pursuant to 1365(f). Effluent limitations shall be established in accordance with sections 1311(b)(2)(A) and 1314(b)(2) pursuant to section 1317. The National Green Standards of Performance establish such effluent standard and limitation. Furthermore, effluent standards and limitations are subject to nondiscretionary adoption and enforcement by States and their political subdivisions pursuant to 33USC§1370 – State Authority.

“Effluent limitation guidelines” means guidelines herein defined pursuant to requirements of 33USC§§[1311](#), [1312](#) and [1314](#). See “Green Standards of Performance” and “Official Comparator”

“Emergency action” means an action initiated by an authority to mitigate a situation which poses an immediate risk to health, life, property or environment, such action requiring urgent intervention to prevent a worsening of the situation. Example: A State governor issued executive order addressing drought conditions or a State issued cease and desist order.

“Endocrine disruptors” are [exogenous](#) substances that act like [hormones](#) in the [endocrine system](#) and disrupt the physiologic function of [endogenous](#) hormones. They are sometimes also referred to as hormonally active agents^[1] or endocrine disrupting chemicals^[2]/compounds^[3] (EDC). Studies have linked endocrine disruptors to adverse [biological](#) effects in animals, giving rise to concerns that low-level exposure might cause similar effects in human beings.

“Environment” means an environment that consist of three (3) basic resources, air, land and water, collectively referred to as “multi-media resources”.

“Environmental Marshal” means a person officially appointed by an attorney general, to include a private attorney general, to fill a vacant post within a judiciary district of a State and shall be charged with supervisory duties and enforcement powers of specific laws as defined in the CGRs of the Green Standards. The “Environmental Marshal” is a “NSEA” official in charge of enforcement over point and nonpoint sources of pollution. The “Environmental Marshal” has the power to initiate enforcement actions against any person who is a violator of the federal laws of the United States defined herein, such violator being subject to compliance with the Code of Green Regulations herein defined. As provided under 28USC§564, the “Environmental Marshal”, in executing the environmental laws of the United States, herein defined, within a State, may exercise the same powers (pursuant to the 28th Amendment of the Constitution of the United States) which a sheriff of the State may exercise in executing the laws thereof. See “Private Attorney(s) General”

“Environmental terrorism” means to knowingly and or willfully commit any act which results in the degradation of air or land and or any chemical, physical or biological integrity of any “State’s waters”. See “Knowing endangerment”

“Environmental terrorist” is a person who commits “environmental terrorism”. See “Environmental terrorism”

“EPA Maximum Containment Level Goal (MCLG)” means the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals. The MCLGs are “primary standards” established by the EPA’s National Primary Drinking Water Regulations. See “Effluent”

“Exfiltration” means uncontrolled discharge of raw sewage from public sewers resulting in a nonpoint source of pollution of State’s waters. See “Nonpoint source of pollution”.

“Facility” means a single installation, set of installations or production processes (stationary or mobile), which can be defined within a single geographical boundary, organizational unit or production process. Something that is built, installed or established to serve a particular purpose. A property having a building or structure intended for a purpose of personal dwelling is a residential facility. A property having a building or structure intended for a purpose of commercial activity is a commercial facility. A property having a building or structure intended for a purpose of industrial activities is an industrial facility. Additionally, the term is commonly used to refer to any installation for the treatment of sewage or wastewater. If located on private property it is known as an “onsite” wastewater treatment facility. A facility for treating municipal wastewater flows located on public right-of-way and operated by a municipality it is known as a municipal wastewater treatment facility.

“Fecal Coliform” means disease-causing agents defined as “toxic pollutants”. All sources of toxic pollutants are subject to at source control pursuant to [33USC26§1317\(a\)](#) mandatory of the Administrator under [33USC26§1311\(l\)](#) since July 1, 1983 pursuant to [33USC26§1319\(a\)](#). Such unlawful discharge by any person makes such person subject to civil damages under [33USC26§1319\(b\)](#) and subject to criminal action pursuant to [33USC26§1319\(c\)](#) for the unlawful violation as defined under [33USC26§1365\(f\)](#). See “Toxic pollutants”

“Federal standards of performance” means standards established for marine discharges, industrial discharges, and any new source established since 1977 that is owned and or operated by the United States. Federal standards of performance do not apply to classes and categories of point sources which are other than publicly owned treatment works. See “National Standard of Performance”.

“Fugitive emission” means escape of gases from vessels (septic tanks) or pipes (publicly owned treatment works) in association with treatment works. The two most common gases associated with treatment works are methane, a Greenhouse gas, and hydrogen sulfide, a toxic and hazardous gas. Methane (CH₄), as a fugitive emission, is a hydrocarbon Greenhouse gas with a global warming potential most recently estimated at 24.5 times that of carbon dioxide (CO₂). Methane is produced through anaerobic (without oxygen) decomposition of domestic, municipal and industrial wastes. The atmospheric concentration of methane has been shown to be

increasing at a rate of about 0.6% per year and the concentration of about 1.7 parts per million by volume (ppmv) is more than twice its preindustrial value. A primary source of Greenhouse gas emissions in the United States are conventional waste management systems, i.e. sewer systems and septic systems. See “Source reduction”, “Methane”, “Hydrogen sulfide” and “Greenhouse gases”.

“Goal” means the National Goal of the Clean Water Act of 1972 in accordance with the Congressional declaration of purpose, “Clean Water”, i.e. ZERO Discharge. See “Zero Discharge” and “Clean Water”.

“Gravel-less chamber” means a buried structure used to create an aggregate-free absorption area for infiltration of reclaimed water which meets the MCLG drinking water quality standard to implement the beneficial reuse application of “indirect potable reuse”. Gravel-less chambers are no longer lawful to use for treatment and or disposal of wastewater or OWTS effluent.

“Grease interceptor” means a passive interceptor located at a source and is designed to separate grease (aka FOG, i.e. fats, oils and grease) from a wastewater flow and contain it prior to such wastewater flows entering into a “control” “alternative”. Grease interceptors shall be designed to reduce such FOG to a level less than 100 mg/l.

“Green Carbon Credits” means a commodity that is generated by the reduction of global Greenhouse gas emissions through implementation of BADCT Technology versus conventional methods. Such carbon footprint reduction factors to be considered shall include:

- Total flow reduction of public water supply (transmission energy)
- Total flow reduction of sewage in publicly owned treatment works (transmission energy)
- Total reduction of Greenhouse gas emissions as apposed to production from conventional systems

“Green Standards of Performance” means a standard that is more strict than the United States Environmental Protection Agency’s CGRs, i.e. National Primary Drinking Water Regulations / Standard. See “Direct Potable Reuse Standard” and “MCLG”

“Green Standards” means the National Green Standards of Performance, Effluent Limitation Guidelines, Categorical Pretreatment Standards and National Green Standards Regulations applicable to classes and categories of point sources other than publicly owned treatment works, which are subject to adoption and enforcement by all States and political subdivisions within the United States of America. See “State authority”

“Groundwater” means State’s waters below the land surface that is at or above atmospheric pressure.

“Groundwater remediation”, in the interest of public health and water quality, means a primary beneficial reuse in compliance with the Green Standard, the “Indirect Potable Reuse Standard”, the objective and National Goal of the

Clean Water Act by achieving a standard to prevent the discharge of pollutants. Groundwater quality having nitrate as nitrogen levels greater than 1.6 and or pH levels of less than 7.5 would be construed to be impaired and a public health emergency. See “Zero Effluent Limitation” and “Zero Effluent Standard”.

“Hazardous substance” means any “toxic pollutant” listed under [33USC26§1317\(a\)](#). It additionally means any substance, other than oil, which, when discharged in any quantities into waters of the U.S. (includes both State’s waters and navigable waters), presents an imminent and substantial danger to the public health or welfare, including but not limited to fish, shellfish, wildlife, shorelines and beaches (Section 1311 of the CWA); identified by EPA as the pollutants listed under 40 CFR Part 116. Additionally, “hazardous substance” means any substance, other than oil, which, when discharged in any quantities into waters of the U.S., presents an imminent and substantial danger to the public health or welfare, including but not limited to fish, shellfish, wildlife, shorelines and beaches (Section 1311 of the CWA); identified by EPA as the pollutants listed under 40 CFR Part 116. See “Sewage”, “Nitrosamine”, “Wastewater”, “Environmental terrorism” and “Toxic pollutants”.

“High-strength wastewater” means wastewater produced by some commercial and industrial sources that exceeds domestic wastewater strengths. Many high-strength wastewater flows will require additional pretreatment, components, devices, techniques or processes to achieve the “Green Standards”. See “Areawide application”.

“Hydrogen sulfide gas” (H₂S) is a highly toxic gas with a "rotten egg" odor at low concentrations [NIOSH/OSHA 1981]. At high concentrations, hydrogen sulfide can paralyze the olfactory senses [NIOSH 1979]. Like methane, its carrier, hydrogen sulfide gas is produced by decomposition of domestic wastewater (sewage) sludge (organics) by anaerobic bacteria common in publicly owned treatment works and OWTS processes, i.e. septic systems. Because this gas is heavier than air, it can escape through sewer traps which have dried out from lack of use and settle in sources. Hydrogen sulfide is a severe eye irritant and may cause tissue damage [NIOSH/OSHA 1981]. At low concentrations, gas can cause dizziness, headache, nausea, and irritation of the respiratory tract. At high concentrations, hydrogen sulfide can cause unconsciousness, respiratory failure, and death within minutes. In addition, hydrogen sulfide may be explosive at a wide range of concentrations in air--4.3% to 46% by volume [NIOSH 1985a]. Hydrogen sulfide is considered a broad-spectrum poison, meaning that it can poison several different systems in the body, although the nervous system is most affected. The toxicity of H₂S is comparable with that of hydrogen cyanide. It forms a complex bond with iron in the mitochondrial cytochrome enzymes, thereby blocking oxygen from binding and stopping cellular respiration. All sources of toxic and hazardous substances have been subject to control and pretreatment requirements since 1977. See “Methane gas”.

“I.D.E.A.” means the advanced extended activated sludge biological process know a the Intermittent Decant Extended Aeration Continuous Feed Cyclic Reactor (aka “IDEA-CFCR”) of the RECLAMATOR (“BADCT”). The I.D.E.A. Process is the most advanced biological process of the Wastewater Industry, the other two being over 100 years old. Those processes are known as Conventional and Batch. The I.D.E.A. Process overcomes the industry

commonly known problems that are associated with both the Conventional and Batch century-old biological process. The I.D.E.A. Process is the subject of several U.S. and International Patents. See “Indirect Potable Reuse Standard”

“Impaired Water Bodies” means any body of water that does not meet water quality standards and designated uses because of pollutant(s), pollution, or unknown causes of impairment. See “Emergency”, “Acid deposition” and “pH”.

“In the interest of public health” means to expediently eliminate all toxic nitrosamine and nitrosamine precursor source discharges and to remediate all State’s waters through implementation of pretreatment requirements at all point sources of sources subject to the federally mandated requirements, to implement the National standards of performance so as to achieve the National Goal of ZERO Discharge pursuant to US Code, Title 33, Chapter 26, Subchapter III – Standards and Enforcement, Sec. 1316.- National Standards of Performance and US Code, Title 33, Chapter 26, Subchapter III – Standards and Enforcement, Sec. 1317.- Toxic and Pretreatment Effluent Standards as defined in the Green Standards.

“In the public interest” means in the best interest of public health or welfare and the multi-media environmental resources.

“Indirect potable reuse” means the application of the Indirect Potable Reuse Standard for below ground use of reclaimed water having a quality suitable to restore and maintain the chemical, physical, and biological integrity of the State’s [Nation’s] waters achieving the primary requirements of the CGRs. The “Indirect Potable Reuse Standard”

“Indirect potable reuse limitation” means a public health goal requiring a “below ground point source effluent limitation” to achieve potable water quality utilizing the natural treatment benefits provided by the soil, i.e. leachfield. With the exception of 1) disinfection, 2) nitrates and 3) pH, all other contaminants are removed within 2-4 feet (depending on soil type) of the bottom of the leachfield prior to reaching the water aquifer. The natural treatment benefits of the soil utilized in the “indirect potable reuse limitation” eliminates the requirement for the “definite-barrier membrane” and activated carbon filtration” required to achieve the “direct potable reuse limitation” for above ground potable reuse goal. To achieve the goal, the required “indirect potable reuse limitation” established for the best available demonstrated control technology (BADCT Technology) to achieve the goal pursuant to the US EPA National Drinking Water Regulation is:

- | | | |
|--------------------|--------------------------------|--|
| 3. Nitrate (NO3-N) | biological removal | less than 10 mg/l |
| 4. pH | biological alkalinity recovery | 6-9 (pH values less than 7.5 are carcinogenic) |
| 5. Fecal Coliform | disinfection (chlorine) | MPN/100ml |

To achieve the goal, the required “indirect potable reuse limitation” established for the best available demonstrated

control technology (BADCT Technology) to achieve the goal pursuant to the NSEA National “Green” Drinking Water Regulation, a more stringent standard than the US EPA National Drinking Water Regulation, is:

- | | | |
|---------------------------------|--------------------------------|------------------|
| 4. Nitrate (NO ₃ -N) | biological removal | less than 2 mg/l |
| 5. pH | biological alkalinity recovery | greater than 7.5 |
| 6. Fecal Coliform | disinfection (chlorine) | MPN/100ml |

See “Direct potable reuse limitation”, “Direct potable reuse” and “Indirect potable reuse”

“Indirect Potable Reuse Standard” means a standard for at-source (onsite) below ground beneficial potable reuse applications defined by the standard of performance promulgated by NSF International in March of 1995, WASTEWATER TECHNOLOGY Report on Evaluation of Advanced Environmental Systems Inc. Mini I.D.E.A. Model BESTEP 10, #94/01/2015/060, under the provisions of NSF Standard 40 on Individual Aerobic Wastewater Treatment Plants. It additionally means the “Categorical Pretreatment Standard”. (See Appendix 8.1)

“Individual control strategy” means control of toxic pollutants at each class and category of point sources (other than publicly owned treatment works) to establish a water quality which shall assure protection of public health, public water supplies, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water in compliance with requirements defined in 33USC26 §§ [1311](#), [1312](#), [1316](#), [1317](#) and [1342](#) under requirements of the NPDES permit program. See “NPDES” and “Pretreatment”.

“Industries involved” means, but is not limited to, industries within a state and licensed by the state to conduct business in relation to sources. Such industries, having authority pursuant to the license by the State, are subject to the requirements as the State and other political subdivisions under [1370](#). A list of such industries involved ([1252\(a\)](#)) are, but not limited to, 1) wastewater treatment plant operators, 2) lawyers, 3) civil engineers, 4) building and excavation contractors, 5) Realtors, 6) banks and mortgage companies, and 7) title insurance companies. All these industries involved are required to carry and or offer insurance to cover any errors and omissions or malpractices that may occur in the course of their doing business in the State, that might result in committing, whether by negligence or knowing, an unlawful act under a strict liability law that justifies damages. Example: A property not served by best available at-source control technology, pursuant to the strict liability requirements under [33USC26§1311\(a\)](#) and [33USC26§1365\(f\)](#) as of July 1, 1983. See “Damages”

“Industry” means the people and companies engaged in a particular commercial enterprise, in this case, the “wastewater industry”. Prior to adoption of the Clean Water Act, the industry predominantly consisted of municipal public works departments, state and local regulatory authorities, large private engineering and construction companies and equipment suppliers providing conventional wastewater management systems. See “State authority” and “Best management practices for (wastewater) industry”.

“Industry wide application” means an innovative alternative control technology which is scalable to serve classes

and categories of residential, commercial, industrial and municipal point sources. “Industry wide application is a “BADCT Technology” requirement. See “SAWS”, “Indirect Potable Reuse Standard” and “Direct Potable Reuse Standard”

“Innovative technology” means In the case of any facility subject to a permit under section [1342](#) of 33USC26 which proposes to comply with the requirements of subsection 1311 (b)(2)(A) or (b)(2)(E) by replacing existing production capacity with an innovative production process which will result in an effluent reduction significantly greater than that required by the limitation otherwise applicable to such facility and moves toward the national goal of eliminating the discharge of all pollutants, or with the installation of an innovative control technique that has a substantial likelihood for enabling the facility to comply with the applicable effluent limitation by achieving a significantly greater effluent reduction than that required by the applicable effluent limitation and moves toward the national goal of eliminating the discharge of all pollutants, or by achieving the required reduction with an innovative system that has the potential for significantly lower costs than the systems which have been determined by the Administrator to be economically achievable, the Administrator (or the State with an approved program under section [1342](#) of the Clean Water Act, in consultation with the Administrator) may establish a date for compliance under subsection 1311 (b)(2)(A) or (b)(2)(E) no later than two years after the date for compliance with such effluent limitation which would otherwise be applicable under 1311 (k), if it is also determined that such innovative system has the potential for industrywide application.

“Innovative and alternative” means “BADCT Technology” required for classes and categories of point sources other than publicly owned treatment works.

“In-place” means “onsite”, “at-source” or “individual control strategy”.

“Installation” means “installation of an innovative control technique that has a likelihood for enabling the facility to comply with the applicable effluent limitation by achieving a significantly greater effluent reduction than that required by the applicable effluent limitation and moves toward the national goal of eliminating the discharge of all pollutants, or by achieving the required reduction with an innovative system that has the potential for significantly lower costs than the systems which have been determined by the Administrator to be economically achievable” as defined under [33USC26§1311\(k\)](#). “Installation” additionally means the act of installing something (as equipment); “the state licensed contractor installed an onsite wastewater treatment facility that did not comply with the requirements of U.S. Code”; or, “the state licensed engineer designed and certified [stamped] a wastewater treatment facility that did not comply with the requirements of U.S. Code”. See “Facility”, “Source” “Innovative and alternative”, “BADCT Technology”, “Facility” and “Discharge”

“Integration of facilities” means integration of all treatment works, to include treatment works located on private property, such as alternatives and pretreatment (private facilities) with publicly owned treatment works

(municipal facilities) in compliance with the requirements of sections 1281, 1288, 1312, 1316, 1317 and 1342. “BADCT Technology” achieving the “Green Standard” renders need for “integration of facilities” virtually obsolete.

“Interested person” means any person or citizen actively involved in the administration and or implementation of the Green Standards. See “Promulgate”.

“Knowing endangerment” means a premeditated “knowing violation”, either by omission or commission, of public health and safety laws by any “person”. “Knowing endangerment” additionally means any person who knowingly violates section 1311, 1312, 1313, 1316, 1317, 1318, 1321(b)(3), 1328, or 1345 of the Clean Water Act thereby placing another person in imminent danger of death or serious bodily injury (to humans and aquatic life). Such person, upon conviction, shall be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both, for each violation committed. As declared by the United States Congress, the Administrator, the States and their political subdivisions are commissioned with the authority to administer, i.e. adopt, promulgate and enforce the federal environmental laws. To omit requirements of these laws established in the interest of public health and welfare and not implement at-source control of a hazardous and toxic substance (household sewage) having pollutants known to cause death and serious bodily injury, i.e. disease-carrying pathogens and carcinogens as defined in 33USC§1363(13), is a “knowing endangerment” felony violation. See “Environmental terrorism” and “Knowing violation”

“Knowing violation” mean a knowing act by any “person” in violation of public health and safety law, posing a potential treat to public health and safety, shall be subject to criminal charges pursuant to 33USC§1319 Enforcement. (c)(2) which says, any person who — (A) knowingly violates section 1311, 1312, 1316, 1317, 1318, 1321(b)(3), 1328, or 1345 of the Clean Water Act shall be punished by a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment shall be by a fine of not more than \$100,000 per day of violation, or by imprisonment of not more than 6 years, or by both. See “Knowing endangerment”, “Sewer system”, “Pollutant”, “Toxic pollutant” and “A hazardous waste”

“Less stringent” means no State or political subdivision or interstate agency may adopt or enforce any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, of standard of performance (the Green Standards) which is less stringent than the effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance (the Green Standards) under 33USC§1370. See “Interested person” and “Effluent standard and limitation”.

“License” means to have a document which validates a person’s right to use and or do business utilizing a patented device.

“License Agreement” means an agreement established between any BADCT Technology manufacture and any other interested person.

“Licensee” means a “Certified Service Provider”. See “Certified Service Provider”

“Licensed Authority” means any legal entity licensed under the “Green Standards” by “NSEA” to provide, operate and or maintain “BADCT Technology”.

“Licensor” mean a party who license another to do business utilizing BADCT Technology.

“List” means the list of “Certified BADCT Technologies” to be specified and required to serve classes and categories of point sources, other than publicly owned treatment works.

“Maximum Contaminant Level (MCL)” means “effluent” having levels of contaminants which fall within the MCL range and are subject to enforcement. See “Maximum Contaminant Level Goal (MCLG)” and “Effluent”.

“Maximum Contaminant Level Goals (MCLGs)” means the goals to be achieved for water quality through implementation of best available technology as previously defined by the US EPA for water quality. The MCLGs are now to be construed as the MCLs subject to the new goals established herein by the National Green Standards of Performance, now to be recognized, adopted and enforced by all States and their political subdivisions, having authority under 33USC§1370, as the most strict standards and regulations, i.e. the New Maximum Contaminant Level Goals. The levels of certain contaminants established pursuant to the MCLGs are now known to cause risk to health and not allowing for a margin of safety and are therefore enforceable public health goals. See “Direct Potable Reuse Standard”

“Maximum degree of effluent reduction” means to achieve the “GREEN Standards of Performance”.

“Memorandum of understanding” (MOU) means a formal agreement between two interested persons.

“Meter” shall mean a “new water meter”.

“Methane gas” means a highly explosive (Greenhouse) gas of which the molecular density is 65 times greater than that of carbon dioxide (CO₂) and which is produced by conventional wastewater management methods, i.e. sewer systems and septic systems. As a hazardous substance, methane is a Greenhouse gas subject to control through application of “innovative alternatives” and “innovative pretreatment” control technologies. See “Carbon footprint” and “Hydrogen Sulfide gas”

“Modification for secondary treatment requirements” (also known as a “301(h) Waiver” or “301(h) Variance”) requires application of the best practicable control technology currently available at all classes and categories of point sources, other than publicly owned treatment works. Any less stringent requirements would be unlawful pursuant to 33USC§1311(a). See “Pretreatment requirements”, “301(h) Waiver” and “Discharge of pollutants into navigable waters be eliminated by 1985”.

“Modified NPDWRs” mean “Code of Green Regulations (CGRs)”. The CGRs provide for at least three more strict levels of requirements for constituents listed in the NPDWRs and, as a stricter regulation, replaces use of the US EPA National Drinking Water Regulations. See “Code of Green Regulations (CGRs)” and “National Contaminant Level Goals” and “NCLGs”

“MOU” see “Memorandum of Understanding.”

“Multi-media” means water, air and land. See: “Pollution Prevention Act of 1990”, “Source reduction” and “Fugitive emissions”.

“Municipal discharge” means a discharge from a publicly owned treatment works point source. An example would be an ocean outfall.

“Municipal sewage” means wastes (typically of a liquid nature) originating from classes and categories of point sources (other than publicly owned treatment works) within a community. Such municipal wastes may be composed of both domestic and industrial discharges. (Source: USEPA “Terms of Environment”). All sources of municipal sewage or wastes are subject to effluent limitations standards. See “Effluent limitations” and “Pretreatment standards”.

“NCLGs” mean “National Contaminant Level Goals”. “NCLGs” means the level of a contaminant in drinking water below which there is no known or expected risk to health. NCLGs are more strict than the MCLGs and provide for a healthy margin of safety for drinking water, assured by definite barrier membrane disinfection technology and are nondiscretionary public health goals. States and political subdivisions have a nondiscretionary authority to adopt and enforce the most strict standards pursuant to 33USC26§1370. See “National Contaminant Level Goals”

“NPDES” means National Pollution Discharge Elimination System. [\(33USC26§1342\(a\)\)](#) Under the “NPDES” permitting program, it is unlawful to issue any NPDES permit to allow any discharge of pollutants or any combination of pollutants notwithstanding [33USC26§1311\(a\)](#). Section 1311(a) states “Except as in compliance with this section and sections [1312](#), [1316](#), [1317](#), [1328](#), [1342](#), and [1344](#) of the Clean Water Act, the discharge of any pollutant by any person shall be unlawful.” All point sources of any source of a toxic pollutant (domestic

wastewater sources) discharge are required to be served by pretreatment alternatives consisting of the best practicable control technology currently available prior to discharging into a publicly owned treatment works since 1977 under the requirements of the “NPDES” permit program, such permit being issued after July 1, 1973.

“NPDWRs” means the US EPA National Primary Drinking Water Regulations, aka National Primary Drinking Water Standards. The NPDWRs have been superseded by more strict regulations / standards, the Code of Green Regulations (CGRs) aka the National Green Standards of Performance. For any Federal, State or political subdivision NOT to adopt, promulgate and enforce the more strict standards and regulations is unlawful and shall be construed as an act of environmental terrorism. See “Environmental Terrorist” and “CGR 3.7 – Enforcement”

“NSEA” means the “National Standards Enforcement Agency”, an independent agency. “NSEA” means “Administrator” and enforcement authority of the CGRs of the “Green Standards”. See “Environmental Marshal”, “National Code of Green Regulations (CGRs)” and “Administrator”

“National Contaminant Level Goals (“NCLGs”)” are more strict than the US EPA “Maximum Contaminant Level Goals” or “MCLGs” in three (3) distinct areas, 1) mandatory definite barrier disinfection, 2) mandatory healthy pH levels of 7.5 and above, and 3) mandatory removal of endocrine disruptors.

“National Goal” means for a “Sustainable Alternative Water Source” to be established at all point sources of discharge to achieve the objectives of the Clean Water Act. Such objectives are:

- Protection, restoration and conservation of all State’s waters (Nation’s waters)
- Pollution prevention is to be accomplished through application of at-source reduction control technology
- Eliminate the discharges of all point sources into publicly owned treatment works and navigable waters by implementing innovative and alternative control at all point sources so as to control both point and nonpoint sources of pollution
- A National standard to prevent the discharge of pollutants, a National standard equal to the Primary Standards for drinking water, such being the standard to prevent all discharges of pollutants at all classes and categories of point sources (other than publicly owned treatment works)
- Eliminate sewage flows through implementation of sustainable alternative water source control technology to provide for containment of all pollutants at the source and recycle and reuse of all new water at the source so as to 1) prevent pollutants from migrating to cause water or other multi-media environmental pollution and 2) reduce demand on State’s public water supplies.

“National discharge prohibition” means, since July 1, 1973 ([33USC26§1365\(f\)](#)), it has been an unlawful act for any person or persons to discharge any pollutants into publicly owned treatment works without implementation of innovative pretreatment (other than publicly owned treatment works) at each class and category of point sources, other than publicly owned treatment works, consisting of the best practicable (pretreatment) control technology

currently available (BADCT Technology) pursuant to the requirements of Section 1317.

“National Goal” means the goals declared by the United States Congress pursuant to the Clean Water Act of 1972. Such National Goals are defined in 33USC§1251(a)(1) and (2) and summed up in 33USC§1311(b)(2) as “the National Goal of eliminating all discharge of all pollutants” by requiring all persons to implement at-source control by applying best available [innovative] technology economically achievable pursuant to 33USC§1311(a), (k) and 33USC§1365(f).

“National Green Standards of Performance” means the most stringent effluent limitation, effluent standard, prohibition, pretreatment standard or standard of performance (“Green Standards”) which all States and political subdivisions have a nondiscretionary obligation, i.e. authority, to adopt and enforce under 33USC§1370. Such Green Standards provide for the achievement of the National Goal. See “National Goal”, “Direct Potable Reuse Standard”, “Categorical Pretreatment Standards” and “Classes and categories of point sources (other than publicly owned treatment works)”.

“National Standard of Performance” means a standard that prevents the discharge of pollutants applicable to classes and categories of point sources other than publicly owned treatment works. See: “Federal Standard of Performance”.

“Nation’s waters” means “people’s waters”. Nation’s includes all people who live in a nation, territory or state within the jurisdiction of the United States of America who are subject to compliance under the United States Codes, i.e. federal laws. The term “Nation’s waters” confirms ownership rights of all waters within the jurisdiction of the United States belong to the people of the United States and not government. Government, as a State, is commissioned with the responsibility (authority) to protect and preserve all Nation’s waters in the interest of the people. See “State’s waters”.

“Navigable waters” means any waters that receive a discharge of a pollutant or a discharge of pollutants from any system of collection and centralized treatment. It is the National Goal that all such discharges of pollutants into navigable waters be eliminated by 1985. See “A system of collection and centralized treatment” and “Publicly owned treatment works”.

“Negligent violation” means a criminal act pursuant to 33USC§1319(c).

“New interceptors and appurtenances” means a new system for collection and centralized treatment. It means a “publicly owned treatment works” upgrade and or replacement project as defined in 33USC§1281(g)(1).

“New sources” means any “source” established after July 1, 1977, such source being subject to “Categorical

Pretreatment Standards” established under 33USC§§1317 and 1342 and that are subject to standards of performance pursuant to 33USC§1316, a standard for the control of the discharge of pollutants to reflect the greatest degree of effluent reduction which the administrator determines to be achievable through application of the best available demonstrated control technology (BADCT) processes, operating methods, or other alternatives, including, where practicable (possible), a standard permitting no discharge of pollutants. See “Source”, “Wastewater” and “Discharge”

“New water” means any reclaimed water that meets the “MCLGs”, the “Direct Potable Reuse Standard”, i.e. the “Green Standards of Performance”. “New water” is a man-made “valuable commodity” and a “valuable resource”.

“New Water for Peace” means an NGO who is the Licensor of the AES Technology. See “AES Technology”

“New water rights” means those rights of the “Licensed Authority” to the reclaimed water produced by the “BADCT Technology”. The “Licensed Authority” has the right to dedicate the new water back to the original consumer for consumer’s reuse benefits. Nothing in these Green Standards shall preclude the right for the “Licensed Authority” to implement a “system of charges” for new water upon any other person receiving the new water, other than the original consumer.

“New water source” means “SAWS”. See “Sustainable alternative water source”.

“New water meter” is a “water meter” that measures units of “new water” produced and or usage. See “Valuable commodity”

“New water service” means a service provided to an owner or operator of a source by a “Certified Service Provider” which reclaims used water to a water quality that meets a direct or indirect potable reuse standard. See “Certified Service Provider”, “Indirect Potable Reuse Standard”, “Direct Potable Reuse Standard”, “New water rights” and Appendix 8.0

“Nitrates” means a toxic compound responsible for the formation of stomach and nasopharyngeal cancers of which its source is human urine. Nitrate, as is ammonia and nitrite, is a precursor of nitrosamine(s), a toxic pollutant and carcinogen listed on the US EPA Toxic Pollutant List. (All sources of toxic pollutants are subject to a standard of performance as provided by BADCT Technology prior to discharging into either an underground excavation or into a publicly owned treatment works pursuant to the pretreatment standards defined in section 1317(a)) Bacteria cause nitrates in drinking water to undergo a chemical conversion into nitrites, which in turn can be converted into nitrosamines in the gastrointestinal tract to cause birth defects, cancer and even death. The primary source of these toxic substances is human urine in domestic wastewater or sewage. All sources of these toxic substances are subject to federally mandated pretreatment requirements since 1977 pursuant to section 1317(c) and the

standards of performance in section [1316\(a\)\(1\)](#). See “Nitrosamine(s)” “Nitrosamine precursors”, “Pretreatment requirements” and “Toxic substances”.

“Nitrosamine(s)” means a toxic carcinogenic pollutant of which the source of it and its precursors is human urine. Nitrosamine(s) also means the toxic pollutant listed as # 50 on the United States EPA Toxic Pollutant List and is a known carcinogen and of which the source of is urine, associated with domestic “wastewater” and “sewage” “effluent”, i.e. municipal wastes or sewage. All sources of toxic (poison) pollutants listed on the USEPA Toxic Pollutant List are subject to mandatory pretreatment requirements since 1977. Any source having a shower, urinal or toilet is a source of nitrosamines, i.e. toxic or nonconventional pollutants. Nitrosamines are commonly known as ammonia, nitrate and nitrite, all of which are toxic pollutants. Ammonia, nitrate and nitrites are classified as nonconventional pollutants, i.e. toxic pollutants, which all sources of are subject to “pretreatment requirements” that will provide for prevention, reduction or elimination through containment of such pollutants at the source to prevent them from migrating to cause water and other environmental pollution while eliminating such discharge of such toxic pollutants into either an underground excavation or into a publicly owned treatment works, i.e. collection system of laterals in public right-of-ways. The “BADCT” is required to achieve such “SAWS” standard or Green Standards which achieves the National Goal; to eliminate all discharges of all pollutants at the source. All “sources” of “nitrosamine” are subject to “pretreatment requirements”. See “Toxic Pollutant” and “Nitrate”.

“Nitrosamine precursors” means human urine, ammonia (ammonium), nitrite and nitrate. Nitrite and nitrate are toxic pollutants. All nitrosamine sources are subject to at-source control via an innovative alternative, or in the case of discharge into a publicly owned treatment works, an innovative pretreatment control technology pursuant to [33USC26§1342](#).

“Nonindustrial sources” means all residential and commercial sources of municipal wastes or sewage (pollutants) other than industrial and municipal point sources. See “Classes and categories of point sources (other than publicly owned treatment works)” and “Point sources”.

“Nonpoint source of pollution” means any waste stream having a pollutant of which the source of cannot be specifically identified. Nonpoint sources of pollution which are subject to control pursuant to the requirements of the Chapter are, at a minimum, septic systems, sewer collection systems and publicly owned treatment works discharging into navigable waters. See “Clean Water Act”, “Conventional treatment works”, “Publicly owned treatment works”, “Soil-based dispersal field” and “Underground excavations”.

“Official Comparator” means effluent limitation guidelines and factors defined in the CGRs pursuant to [33USC§1314](#) relating to the assessment of best practicable control technology currently available (BADCT) to comply with objectives defined in section [1311\(b\)\(1\)](#). (See “Official Comparator” in “CGRs”)

“Omission” means, when committed by an employee, agent, industry, etc., of the United States having a duty and strict liability as such public official of administration, adoption and or enforcement pursuant to their authority under [33USC26§1370](#) of the United States of America’s Statutes at Large, to include the Constitution of the United States of America and the United States Codes, an unlawful act of “knowing endangerment”, punishable under [33USC26§1319](#), and more specifically [33USC26§1319\(c\)\(3\)](#).

“Onsite” means a common industry term which refers to “at-source” or “in-place”.

“Onsite Wastewater Treatment System(s)” (OWTS) means onsite wastewater treatment systems, also known as septic systems. “OWTS” are utilized to discharge pollutants into subsurface excavations for disposal. Such discharge of pollutants into any underground excavations utilizing soil-based dispersal for disposal of wastewater is unlawful. “OWTS” are additionally utilized to discharge pollutants into publicly owned treatment works, also an unlawful act at “OWTS” are not “BADCT Technology” and have been unlawful to permit since July 1, 1973 pursuant to [33USC26§1311\(a\)](#) and [33USC26§1365\(f\)](#). See “OWTS” and “BADCT Technology”

“Other environmental pollution” means multi-media, i.e. “Greenhouse Gas” (GHG). See “Fugitive emissions”

“Other than publicly owned treatment works” means classes and categories of point sources other than publicly owned treatment works. See “Classes and categories of point sources (other than publicly owned treatment works)”

“Owner or operator” means any “person” who is an owner or operator of any class or category of a point source, such point source subject to innovative and alternative control technology requirements pursuant to 33USC26 §§ [1311](#), [1312](#), [1313](#), [1314](#), [1316](#), [1317](#) and [1342\(b\)\(8\)](#)). See “Person” and “Point source”.

“OWTS” means an “onsite wastewater treatment system”. “OWTS” contribute to nonpoint sources of pollution. “OWTS” are an unlawful point source method used to discharge pollutants pursuant to [33USC26§1311\(a\)](#) and [33USC26§1365\(f\)](#).

“Performance Guarantee” means a guarantee provided by the “Certified Manufacture” to a “Certified Service Provider” of a “BADCT Technology”. The “Certified Service Provider” has a strict liability to operate the “BADCT Technology” to perform within the guidelines of the “Performance Guarantee”. See “Demonstrated performance”.

“Performance standard” means the most strict defined process or manner of functioning and or operating utilizing processes and techniques of guidelines established under [33USC26§1314\(d\)\(3\)](#) so as to accomplish a clearly defined desired result to achieve a particular objective or goal. Example: The “performance standards” are established so that the National Goal is achieved, requiring, where possible, each person to eliminate the

discharges of all pollutants at such person's source pursuant to a "performance standard" that will assure the objective of the Clean Water Act of 1972, that each person be lawfully responsible for the restoration and maintenance [to at least its original water quality] of the chemical, physical and biological integrity of the [Nation's] waters used by such person, consistent with the provisions of the Clean Water Act of 1972 and the declared goals and policy of the Clean Water Act of 1972 by the United States Congress. Such "performance standard" requires the quality of the water to be restored by each person after use to achieve the "National Contaminant Level Goals" ("NCLGs") prior to discharge or reuse of such water. There are two basic performance standards that have been established to assure such water quality will be achieved following use by each person, one for subsurface [indirect] potable reuse applications and the other for above surface [direct] potable reuse applications. See "Direct Potable Reuse Standard" and "Indirect Potable Reuse Standard".

"Permit" means any permit required to install "BADCT Technology" in either an alternative application or in a pretreatment application. "Permit" additionally means documented evidence issued by a public official to allow a discharge of pollutants from either 1) an onsite wastewater treatment system ("OWTS"), e.g. septic tank, 2) outside the boundaries of the jurisdiction of the owner and or operator of the source, e.g. property lines, or 3) into a publicly owned treatment works, all in violation of 33USC26 § 1311(a) pursuant to 33USC26 § 1365(f) since July 1, 1973 and punishable under 33USC26 §§ 1319(c) as such a violation would have been committed by an officer of the public having authority under 33USC26 §§ 1370. All such permits would be considered as *prima facie* evidence of at least a knowing violation of a public official. When a public official issues a person a permit to allow a "discharge" from an onsite wastewater treatment system or a septic system, not being that technology which represents the best available demonstrated control technology (BADCT) determined under 33USC26 § 1314 pursuant to 33USC26 §§ 1311(a), [1311](#), [1312](#), [1313](#), [1314](#), [1316](#); or a "direct connect" of a "source" to a "publicly owned treatment works" absent of application of the "best possible control technology currently available", i.e. innovative pretreatment pursuant to 33USC26 §§ [1317](#) and [1342\(a\) and \(b\)\(8\)](#)). Such violations or offenses are to be enforced under 33USC26 § 1319 Enforcement. See "Discharge", "BADCT Technology" and "Pretreatment"

"Permitting agency" means any public agency authorized to issue a building permit.

"Person" means an individual, corporation, firm, organization, business trust, company, partnership, association, State, State agency or department, municipality, commission, or political subdivision of a State or any interstate body or unit of local government who is, or that is, subject to the requirements of the Chapter. The President of the United States and State Governors are "persons" who have executive powers and who are charged with a strict liability to exercise their duties under 33USC26 to adopt, administer and provide enforcement of under and pursuant to 33USC26. No "person" of the United States is immune of liability and corrective action administered pursuant to 33USC§1319. See "Jurisdictional boundaries", "Knowing endangerment" and "Person's obligation".

"pH" is a chemical in water. pH is a measure of the hydrogen ion in water. A low pH indicates increasing acidity (a

“pollutant”), whereas a high pH indicates increasing alkalinity. pH is a measure of healthy water (pH level of 7.4 or greater) or unhealthy water (pH level of 7.4 or less). The acidity or alkalinity of wastewater affects both treatment and the environment. The normal range of pH of [conventional] wastewater effluent is between 6.5 and 7.2. Such pH level degrades the chemical, physical and biological integrity of our Nation’s waters which compromises human health and the health of the aquatic life, wild life and the environment pursuant to 1314(a)(1). In humans, cancer cells survive and thrive at pH levels of less than 7.5. A pH level of 7.5 is the potable reuse goal for “new water”. See “Categorical Pretreatment Standard” and “Toxic pollutant”

“Point source” means a sewer pipe coming from a “source”, i.e. building, structure or facility, having an “owner or operator”. Additionally, “point source” means any discernable, confined and discrete conveyance, including but not limited to any pipe or container from which pollutants are or may be discharged. For example, a “point source”, such as a sewer pipe, of a “source”, i.e. building, is the first discernable point that control technology is to be implemented. A “point source” of a building or structure is where the sewer pipe extends beyond the plane of the foundation of the structure at which pollutants, i.e. effluent, generated by such source may be controlled through implementation of innovative alternative or innovative pretreatment control technology. See “Classes and categories of point sources (other than publicly owned treatment works)” and “Discharge”.

“Pollutant” means having a maximum concentration of any constituents which measures to have a level greater than the greatest level allowable as defined in the EPA Maximum Containment Level Goal (MCLG) Drinking Water Quality Standard or any discharge or “acidic deposition” from a “source” having a “pH” level of less than basic, i.e. 7.5. Specifically, any concentration of any constituent defined in a primary drinking water quality standard that, when measured, exceeds the MCLGs and breaches into the Maximum Containment Level (MCL) range, defines the maximum allowable contaminant level for drinking water quality, then such constituent shall be considered a pollutant. For oceanic waters, any “discharge” having a pH level of less than 8.1 shall be considered an “acidic disposition” and a “pollutant” to such navigable waters. See “Maximum Contaminant Level Goal (MCLG)”, “Acidic deposition” and “pH”.

“Pollution” means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water, land or air. See “Multi-media”

“Pollution Prevention Act of 1990” means the United States Code Title 42 - The Public Health and Welfare, Chapter 133 - Pollution Prevention, Sections 13101 – 13109 ([42USC133](#))

“Potable” means suitable to drink but not intended for drinking.

“Potable reuse goals” means the point source effluent limitation goal established to achieve the National goal, to eliminate all discharge of pollutants into receiving waters, i.e. aquifers and sewers, through application of best

available demonstrated control technology (BADCT Technology), and thereby restore and maintain the chemical, physical, and biological integrity of the waters for reuse applications. Such level of integrity is referred to as “potable”. There are two distinct “Potable Reuse Goals” established, one for “indirect (below ground / future reuse) potable reuse” applications and the other for “direct (above ground / instant reuse) potable reuse” applications. The limitations of these two standards, i.e. goals, vary, however, the goal of water quality which result from each of the standards remains to be “potable”. The “indirect potable reuse” goal is to restore and maintain our subsurface potable drinking water resources for future potable reuse benefit, while the “direct potable reuse” goal is to restore and maintain the actual water used to enable it to be reused so as to provide for instant beneficial reuse, at-source water conservation and demand reduction on our current public drinking water resources. The “direct potable reuse” standard and limitation is more desirable for areas having critical water supply needs and conservation is priority. The “indirect potable reuse” standard and limitation is more desirable for areas having adequate water supplies, but only needing to be maintained and restored.

“Pretreatment” means application of the “Categorical Pretreatment Standards” required pursuant to section 1317 and section 1342 prior to discharging into a publicly owned treatment works.

“Pretreatment device” means an innovative pretreatment control technology which achieves the “Categorical Pretreatment Standards”. See “Indirect Potable Reuse Standard”

“Pretreatment requirements” are defined by the “Categorical Pretreatment Standard”. The “Categorical Pretreatment Standard” is to be applied at classes and categories of sources or point sources (other than public owned treatment works) prior to discharge into a publicly owned treatment works in compliance with requirements under US Code, Title 33, Chapter 26, Subchapter III – Standards and Enforcement, Sec. 1317. - Toxic and Pretreatment Effluent Standards. See “Classes and Categories of point sources (other than publicly owned treatment works)” and Appendix 8.1

“Pretreatment standard” means that “Categorical Pretreatment Standard” (of performance) as demonstrated per the NSF Standard 40 Report #94/01/2015/060 established under section 1317(b) to achieve the pretreatment requirements pursuant to section 1317(a) and which was promulgated to all States and Territories of the United States of America by the NSF International, March 1995.

“Primary Standards” means “National Primary Drinking Water Regulations (NPDWRs)”. See “MCLG” and Sec. 6.0

“Private Attorney General” means the Private Attorney General is a due provision for the rights of innocent persons provided by the district court of the United States. Private Attorney General additionally means any person who assumes authority, in the interest of the public, to administer enforcement actions and who is authorized to prosecute violators of, at a minimum, 18USC§1962 and 33USC§1251 et seq. The Private Attorney General has

authority authorized an attorney general, to appoint a Marshal, i.e. Environmental Marshal; to fill a vacant post within any judicial jurisdiction, to perform enforcement duties authorized a Marshal.

“Process Guarantee” means a legal document executed by the “Licensed Authority”, providing a guarantee a particular BADCT Technology will achieve that water quality required by the Green Standards of Performance. The RME is additionally liable for BADCT Technology performance under the “Process Guarantee”.

“Promulgate” means to “publish”, otherwise make available to the public. Pursuant to 1251(e), the State shall assist, provide for and encourage any person of the public, i.e. “interested persons” or citizens, in the development, revision promulgation and enforcement of this “water quality standard” pursuant to the guidelines provide for in section 1314. Standards may be promulgated by any “person” or “interested persons” pursuant to the provisions of the Chapter. The Administrator and/or State shall assist any person of the public, i.e. “interested persons”, in the enforcement of any regulation, standard, effluent limitation, plan, or program (1251(e)) established by the Administrator, State or “interested persons”, pursuant to the provisions of section 1314 under this Chapter. See “Interested persons”.

“Public interest” means health or welfare and preservation of the water quality.

“Public water supplies” means a “valuable resource”. See “Valuable resource”.

“Publicly owned treatment works” means “facilities” or treatment works that are owned by the people in general, whether actually operated by the political subdivision’s administration, such as a department of public works, or by private enterprise. All treatment works are referred to as “publicly owned treatment works” as they are required to be paid for by federal financial assistance (the people’s [public’s] money). The states and political subdivisions are required to submit application for the funds (pursuant to statutory requirements) to cover all costs for preparation/construction of all treatment works, including at-source controls. Thus the term “publicly owned”. Alternatives [to a system of collection and centralized treatment] and / or innovative pretreatment control [in the case of connection to a system of collection and centralized treatment] are required to be applied (installed / installation) at-source within the boundaries of the private property [source] prior to any effluent being discharged from such source into a system of collection and centralized treatment. At-source publicly owned treatment works are managed by a private enterprise entity or agency as government has no jurisdiction [outside of the public right-of-ways] to administer management services of private facilities. Application of or ownership or operation of publicly owned treatment works without consideration, i.e. statutory required application of, innovative technology, i.e. best available alternatives and best available pretreatment pursuant to 1311(a) and 1365(f), has been unlawful acts since July 1, 1983 pursuant to 1319(a). See “Pretreatment requirements”, “A system of collection and centralized treatment” and “Toxic discharges”.

“Public officials” means any person employed, licensed or authorized by any federal, state or local government entity

and is subject to a requirement as such to execute an oath of affirmation (aka office). Such public officials would be, but not limited to, the Administrator [of any standard], federal agencies to include independent and corporations of such, state water pollution control agencies, interstate agencies, and the municipalities and industries involved, such industries of a state being at a minimum, wastewater treatment plant operators, civil engineers, attorneys, contractors, realtors, banks and mortgage companies and title insurance companies. Such industries having one thing in common, all authorized to operate in the state pursuant to a license issued by a state agency or department. All such industries, being licensed by the state, are additionally subject to the requirements of 1370 as is the state in the carrying out of their duties and or conducting their operations in addition to 1311(a) and 1365(f) as individual persons.

“RME” means a responsible management entity. See “Certified Service Provider”

“Reclaimed water” means “new water”. See “New water”

“Receiving waters” means any accumulation of H₂O subject to “Water Quality Standards”. It additionally means navigable waters, ground waters, underground waters, sewer waste streams and any waters of the States which may be impacted by a discharge and / or effluent from any classes or categories of point sources, including a publicly owned treatment works point source discharge. See “Discharge” and “Pollution Prevention Act of 1990”

“RECLAMATOR” means the device provided by new water utility services that achieves the new Water Quality Standards to meet critical water supply needs. The RECLAMATOR accounts for every gallon of new water produced. The device is monitored 24/7 by NSF International (or approved equal) via wireless technology. (See “BADCT” and “I.D.E.A.”)

“Regulate” means as defined in US Code Title 33 Chapter 26 Sec. 1281(c) which states: “To the extent practicable, waste treatment management shall be on an “areawide basis” and provide control or treatment of all “point and non point sources of pollution”, including “inplace” or “accumulated pollution sources.” To “regulate” means to implement the applicable innovative alternative point source controls so as to prevent a “point source” from becoming or contributing to a “non point source” of pollution.

“Repair” means repair actions taken in association with existing OWTS. All repairs shall be done in compliance with the Green Standard.

“Responsible management entity” (RME) means any entity authorized to manage the operation, monitoring, maintenance, repair, or oversight of a BADCT Technology. See “Certified Service Provider”

“SAWS” is an acronym for a “Sustainable Alternative Water Source”.

“Schedules of compliance” means as defined in the U.S.C. Title 33 Chapter 26 Section 1311 and in no case later than March 31, 1989.

“Septic system” means an “in-place” nonpoint source of pollution. A septic system is a conventional wastewater treatment method that converts a point source of toxic pollution into a nonpoint source of toxic pollution. The national policy of the Clean Water Act (33USC§1251(a)(3)) establishes a prohibition for the discharge of toxic pollutants in toxic amounts. The CGRs define the parameters of toxic pollutant in toxic amounts. Pursuant to 33USC§1311(a), discharge from a septic system is unlawful effective July 1, 1973 pursuant to 33USC§1365(f).

“Septic tank” means a conventional method of waste management and disposal of effluent. A septic tank is a known and, pursuant to 33USC§1365(f), is an unlawful source of toxic pollutant discharge which factors provided in the Clean Water Act have precluded the use of since 1973. A septic tank is a watertight covered receptacle designed for primary treatment of wastewater and constructed to receive wastewater discharged from a point source or group of point sources. Septic tanks discharge nitrosamine and nitrosamine precursors. Nitrosamine is a toxic carcinogen pollutant listed #50 on the US EPA Toxic Pollutant List of which is subject to pretreatment requirements pursuant to 33USC§1317 and require the application of the best practicable control technology currently available. Additionally, septic tanks produce methane [Greenhouse] gas at a rate of 4 cubic feet per person per day, an average of 10 cubic feet per septic tank (OWTS) per day per “DUE” or approximately 300,000,000 cubic feet per day nationally. Methane molecules are 65 times denser than carbon dioxide molecules as it relates to Greenhouse gas effects. It shall be construed as a “knowing violation” for any person to permit any person to discharge utilizing a septic tank pursuant to 33USC§1319(c). It shall also be construed as a “negligent violation” for such person to discharge utilizing a septic tank pursuant to 33USC§1319(c). See “Toxic discharge”.

“Septic tank effluent” means a point source discharge of toxic nitrosamine source subject to the best practicable control technology currently available requirements since 1977. See “Septic tank” and “Effluent” and “Toxic pollutants”.

“Sewage” means a “hazardous substance”, “toxic substance” or “source of toxic pollutants” generated by any “person”, i.e. “owner or operator” of any “source”. See “Wastewater”, “Toxic substance”, “Hazardous substance”, “Source of toxic pollutants” and “Person”.

“Sewage sludge” means any accumulated mass of toxic organics and/or inorganics derived from a treatment works having disease carrying pathogens or pollutants that would pose a threat to public health and requiring disposal of.

“Sewer system” means a system of collection and conveyance and providing centralized treatment of municipal wastes and or municipal sewage owned or operated by any “person”. See “Person”

“Sewer vent” means, when a source is served by conventional waste management method, i.e. septic tank or sewer system, a point source of Greenhouse (GHG) emissions and toxic (poisonous) hydrogen sulfide gas discharge. See “Discharge”, “Septic tank”, “Indirect potable reuse” and “Knowing endangerment”.

“Schedule of Compliance” means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard. States and political subdivisions are subject to the schedule of compliance pursuant to their authority under 33USC§1370.

“Significant Source” means any building, structure, facility, or installation from which there is or may be the discharge of pollutants. At a minimum, the defined classes and categories of point sources (other than publicly owned treatment works) are significant. See “Classes and Categories of point sources (other than publicly owned treatment works)”, “Toxic pollutants”, “Source” and “Point source”.

“Site” means “source”. See “Source”.

“Site Evaluation” means an assessment of a site sufficient to determine the location options for installation of SAWS, or in the case of a discharge into a publicly owned treatment works, innovative pretreatment. However, the SAWS BADCT Technology produces pure potable quality new water. To discharge pure potable quality new water into a publicly owned treatment system would be construed as a negligent wastefulness of a precious resource. Consequently, pretreatment applications are subject to a “system of charges”. The site evaluation will consider all beneficial reuse and recycle options to achieve zero waste discharge. See “System of charges”

“Soil-based Dispersal Fields” means an underground excavation designed to receive pollutants from “OWTS” and disperse pollutants, thereby creating a nonpoint source of pollution. Use of “Soil-based Dispersal Fields” are unlawful. Soil-based dispersal fields are a primary component of “OWTS”, i.e. onsite wastewater treatment systems, also known as septic systems. Discharges introduced into soil-based dispersal or disposal fields are subject to the “Zero Effluent Limitations”. See “Zero Effluent Limitations”, “Indirect potable reuse” and “Groundwater remediation”.

“Source” means any parcel of land having a legal description and a building, structure, facility, or installation from which there is or may be a discharge of a pollutant or a discharge of pollutants. Example: a dwelling having a toilet. It is an unlawful act for any “person”, who is the owner or operator of such legal parcel, to discharge any pollutant outside of the boundaries of such parcel pursuant to 33USC§1311(a) as defined under 33USC§1365(f) – Effluent Standard or Limitation. Such allowed discharge would violate national policy causing

a discharge into a nonpoint source, either a leachfield (underground excavation) or a publicly owned treatment works (sewer collection and centralized treatment system), both nonpoint sources of pollution. At-source point source elimination of all discharges of all pollutants is the goal of the Clean Water Act of 1972, i.e. 33USC§1251 et sq., aka “the Chapter”. To enable the goals of the Chapter to be met, it is the National Policy pursuant to 33USC§1251(a)(7) that programs for the control of nonpoint sources of pollution (as defined herein) be expediently implemented through implementing at-source control of both point and non-point sources of pollution. Such at-source control for both point and nonpoint sources of control is only able to be accomplished through implementation of the best available innovative alternative technology at such source, or in the case of discharging into a publicly owned treatment works, implementing at-source best available innovative pretreatment technology in compliance with the categorical pretreatment requirements of the Chapter pursuant to 33USC§1311(b). See “Discharge” and “Nonpoint source”

“Source reduction” means to reduce or prevent pollution at the source and is fundamentally different and more desirable than the conventional practices of wastewater management. The United States Congress has declared it to be national policy of the United States to implement “source reduction”. “Source reduction” additionally means any practice which - (i) reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and (ii) reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants. The term includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. The term "source reduction" does not include any practice which alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity which itself is not integral to and necessary for the production of a product or the providing of a service. See “United States Code Title 42 - The Public Health and Welfare, Chapter 133 - Pollution Prevention, Sections 13101 – 13109 ([42USC133](#))”

“Standard of Performance” means, at a minimum, the “Indirect Potable Reuse Standard” and the “Direct Potable Reuse Standard”. (See Appendices Sec. 8.0)

“Standard of Performance of 1995” means the “Effluent standard or limitation” established under the Modified NSF Standard 40, Report #94/01/2015/060 by AES Technology, establishing such AES Technology as the best available demonstrated control technology (“BADCT”) pursuant to 33USC§1316 – National Standards. Upon completion of testing and Certification, the BADCT was promulgated by NSF/ANSI International (“interested person”) in March of 1995 to all State and Territory regulatory authorities or all States and political subdivisions of the United States of America. The “Standard of Performance of 1995” established the “effluent limitation”, “effluent standard” and “pretreatment standard” for all classes and categories of point sources (other than publicly owned treatment works) and point sources of publicly owned treatment works. Noncompliance with this promulgated

“Effluent standard or limitation” by any “person” is an unlawful act since July 1, 1973 pursuant to 33USC§1365(f) and is subject to enforcement under 33USC§1319. See “Industrywide application”.

“State authority” means as defined under section 1370 – State authority, which states, “Except as expressly provided in this chapter, nothing in this chapter shall (1) preclude [stop] or deny [prevent] the right [duty] of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance is in effect under this chapter, such State or political subdivision or interstate agency may not adopt or enforce any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance which is less stringent than the effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance under this chapter; or (2) [such State or political subdivision shall] be construed as impairing [committing an unlawful act] or in any manner affecting any right [duty] or jurisdiction of the States with respect to the waters (including boundary waters) of such States.” See “Best management practices for (wastewater) industry”, “Knowing endangerment”, “Discharge”, “Standard of Performance of 1995” and “Pretreatment Standard of 1995”.

“State’s waters” means all waters under the authority of a State government, such as, but not limited to, all underground waters, ground waters, surface waters, United State’s waters, etc. See “Nation’s waters”

“Strict Liability (Criminal)” means absolute legal responsibility for an injury that can be imposed on the wrongdoer without proof of carelessness or fault. The Clean Water Act is a “strict liability” statute and thereby attaches “strict liability” to all violators.

“Sustainable Alternative Water Source (SAWS)” means an innovative alternative control technology or device serving classes and categories of point sources (other than publicly owned treatment works) that reclaims the used water produced by such sources to meet the “Green Standards of Performance”, a water quality as defined in the Modified MCLGs pursuant to the CGRs. “SAWS” achieves “critical water supply needs”.

“System abuse” means misuse of an on-site water reclamation system serving a DUE, which would be considered a “neglectful” use which may contribute to a “pollutant discharge” or which would create an “unnecessary” additional cost to operate and maintain or service which would be out of the ordinary.

“System of charges” means a schedule for charging for new water services. It additionally means a schedule for charging for new water, a resource of value, upon change of possession and or right to the beneficial reuse of the new water.

“Telemetric” means the ability to automatically measure and transmit “SAWS” data by wire, radio, or other means.

“TMDL” is the acronym for “total maximum daily load” of pollutants. Consideration of TMDL is no longer required as “BADCT Technology” eliminates discharge of pollutants at each source. See “Zero Discharge”.

“Total coliform” means a group of bacteria consisting of several *genera* belonging to the family *Enterobacteriaceae*, which includes *Escherichia coli* bacteria. Total coliform is not a health threat in itself; it is used to indicate whether other potential harmful bacteria may be present (Source: US EPA Maximum Contaminant Level Goal National Primary Drinking Water Regulations)

“Toxic pollutant” means those pollutants, or combinations of pollutants, including disease-causing agents (viruses), which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. Examples of “toxic pollutants” from sources are:

- Nitrosamine precursors, i.e. ammonia, nitrite and nitrate
- Pharmaceuticals and personal home care products
- Pathogens

Specific toxic pollutants / hazardous substances are, but not limited to, by number as defined on the US EPA List of Toxic Pollutants is:

6. Arsenic and compounds
8. Benzene
12. Carbon tetrachloride
15. Chlorinated ethanes (including 1,2-di-chloroethane, 1,1,1- trichloroethane, and hexachloroethane)
19. Chloroform
25. Dichlorobenzenes (1,2-, 1,3-, and 1,4-di-chlorobenzenes)
27. Dichloroethylenes (1,1-, and 1,2-dichloroethylene)
35. Ethylbenzene
36. Fluoranthene
37. Haloethers (other than those listed elsewhere; includes chlorophenylphenyl ethers, bromophenylphenyl ether, bis(dichloroisopropyl) ether, bis-oroethoxy) methane and polychlorinated diphenyl ethers)
38. Halomethanes (other than those listed elsewhere; includes methylene chloride, methylchloride, methylbromide, bromoform, dichlorobromomethane)
44. Lead and compounds
50. Nitrosamines
59. Tetrachloroethylene
61. Toluene
63. Trichloroethylene

All persons that are either an owner or operator of any source of domestic sewage are subject to requirements under [33USC26§1311\(a\)](#) and obligatory at-source control pursuant to [33USC26§1317\(a\)](#) mandatory of the Administrator (which means mandatory of each person) under [33USC26§1311\(l\)](#) since July 1, 1983 pursuant to

[33USC26§1319\(a\)](#). Such unlawful discharge by any person makes such person subject to and liable for civil damages under [33USC26§1319\(b\)](#) and further subject to criminal action pursuant to [33USC26§1319\(c\)](#) for such unlawful violation as defined under [33USC26§1365\(f\)](#). Note: Omission of administration of the Chapter by the Secretary or the US EPA or the State or political subdivisions, i.e. counties, municipalities, state licensed industries, etc., DOES NOT affect each person's duty nor strict liability under law for their own individual compliance actions. See "Omission"

"Treated wastewater" means "effluent" that is not in compliance with the "Green Standards". See "Discharge".

"Treatment works" is defined by US Code, Title 33, Chapter 26, Subchapter II – Grants for Construction of Treatment Works, Sec. 1292. Definitions (2)(A) and (B) is "BADCT Technology" which represents the most cost efficient alternative to comply with sections 1311 or 1312 of the Clean Water Act, or the requirements of section 1281 of the Clean Water Act.

"US Code Title 33 Chapter 26" means the Clean Water Act.

"Underground excavations" means any excavation into the ground made by man, whether in a public or a private domain, into which there may be a discharge of pollutants, waste or sewage. "Underground excavations" are, but not limited to, leachfields, disposal or dispersal fields, sewer collection and conveyance systems, publicly owned treatment works. See "Nonpoint source of pollution".

"United States Environmental Protection Agency ("US EPA")" means the independent agency under statutory obligation to administer the National Standards of Performance and the Federal Standards of Performance of the Chapter. The US EPA has publicly admitted to omitting administering of the National Standards of Performance of the Chapter. The National Drinking Water Standards of the US EPA are no longer the most strict water quality standard. The National Green Standards adopted and administered by the National Standards Enforcement Agency are the most strict standards required to be adopted and enforced by the States and their political subdivisions, i.e. agencies, public officials etc.

"Used water" means purchased water of a source containing waste subject to being reclaimed and reused and recycled via BADCT Technology, i.e. SAWS

"Valuable commodity" means any "valuable resource" purchased by a person, owner or operator of a source. Water purchased from public water supplies, used and reclaimed, is a valuable resource and a valuable commodity. See "New water"

"Valuable resource" means any public water supplies that meet water quality standards that assure the protection

of the public health, public water supplies and the protection and propagation of a balanced, indigenous population of shell fish, fish, fauna, wildlife, and other aquatic organisms, and to allow recreational activities in and on the water. Public water supplies are a valuable resource. See “Valuable Commodity”, “New water” and “Reclaimed water”.

“Waste” means discarded as worthless, defective, or of no use. Waste is not a “valuable resource” and is to be disposed of. Waste means having pollutants which prevents it from serving a beneficial use. Treated wastewater effluent of OWTS is a waste. It is not lawful to discharge waste for disposal into underground excavations.

“Waste discharge permit” means a permit allowing discharge of pollution. Except as in compliance with 33USC§1311 and 33USC§§1312, 1316, 1317, 1328, 1342, and 1344 of 33USC§1251 et sq., the discharge of any pollutant by any person shall be unlawful pursuant to 33USC§1311(a). Issuance of a waste discharge permit to allow any discharge, i.e. disposal of pollutants, is unlawful pursuant to 33USC§1365(f). See “Permits”.

“Waste water” means for any owner or operator, the original consumer of the water, to not utilize such new water to serve either a direct or indirect beneficial reuse application within the sphere of influence of such owner or operator of a source. It shall be unlawful to waste water, i.e. new water.

“Wastewater” means “discharge”. Specifically, it means the non-controlled “discharge” of raw sewage (a hazardous substance containing toxic pollutants) from any “source”, an unlawful act pursuant to 33USC§1311(a) and 33USC§1365(f). Sewage of a source becomes wastewater upon leaving any source or group of sources and passing over the legal boundaries of such source(s) into another’s jurisdiction or sphere of influence. “BADCT Technology” eliminates wastewater and need for “wastewater management”. To “discharge” or produce “wastewater” is unlawful. See “Discharge” and “Disposal”

“Wastewater treatment” means an unlawful practice of treating wastewater utilizing conventional waste management methods, i.e. septic systems and a system of collection and centralized treatment for disposal. Such practice is no longer acceptable pursuant to the National Green Standards. The old paradigm of “wastewater treatment and disposal” shifts to the new paradigm of “wastewater elimination and new water reuse”. The conventional practice of wastewater treatment and disposal, i.e. “discharge” by any “person”, is an unlawful act pursuant to 33USC§1365(f). See “MCLG”.

“Wastewater management” is a business of managing wastewater (pollutants) for financial gain conducted primarily by Federal, State and political subdivisions, i.e. public agencies, special interest groups and independent agencies (aka the “wastewater industry”) that stand to gain self-serving economic benefits gained through participating in the practice of creating sewage flows. Since July 1, 1973, the paradigm practice of wastewater management, pursuant to the Congressional declaration of purpose under 33USC§1281, was to shift to a practice of “wastewater

elimination”, providing for containment of pollutants at their source and thereby providing for maximum conservation and reuse of the water and reduction of sewage flows. The practice or business of Wastewater management, as we know it, has been unlawful since July 1, 1973, the date which mandatory “control” through providing for reduction, containment and where possible, elimination of pollutants and the discharge of pollutant at their source through at-source application of the best available innovative alternative / innovative pretreatment control technology pursuant to 33USC§1311(a) and as clarified pursuant to 33USC§1365(f). In the interest of public health and welfare, U.S.C Title 42 Chapter 133 additionally confirms: “Source reduction is fundamentally different and more desirable than wastewater management” (“Pollution Prevention Act of 1990”). Pursuant to the above mentioned laws, it shall be construed as a flagrant disregard for law that any person would participate in a practice of managing wastewater and thereby discharging pollutants for disposal and shall be construed as an unlawful act, a threat to public health and welfare and our multi-media resources.

“Water” is a valuable resource necessary to sustain life. Water is a natural resource of which States have authority over pursuant to 33USC§1251(g). States having authority means they are obligated, i.e. responsible as public servants under law, to adopt and enforce laws established to restore, maintain and preserve the chemical, physical and biological integrity of all Nation’s waters of the United States of America pursuant to, at a minimum, 33USC§1251 et seq. Otherwise, it is to be construed as a flagrant disregard for law. See “New water”

“Water quality standard” means the most strict standard for water (defined by its chemical, physical and biological components), in the interest of public health and welfare, that is possible to achieve. Such is a standard that poses no threat to health and allows for a margin of safety. See “NCLGs”, “Green Standards of Performance” and “Water Quality Standards”

“Water Quality Standards” means a complete accumulation of all components of water and the best possible levels achievable of those components considering best management practices are implemented utilizing best available demonstrated control technology, having the most advanced innovative and alternative wastewater treatment processes and techniques which provide for the reclaiming and reuse of water and eliminate the discharge of pollutants, and utilize recycling techniques, providing new and improved methods of waste treatment management for municipal and industrial waste prior to such discharging into a publicly owned treatment works / nonpoint source of pollution, and provides for the confined disposal of pollutants as 100% of all pollutants are eliminated, achieving the Clean Water Act National Goal of ZERO Discharge at-source, and reclaims 100% of the water used by sources, making an alternative water source producing equal to the public water supply daily, such water achieving an assured water quality standard more strict than its origin water quality standard. Water Quality Standards additionally provide for eliminating greenhouse emissions and a reduced carbon footprint, including energy usage and production. (33USC§1281) Additionally, it is a complete accumulation of Water Quality Standards that comply with the Congressional Declaration of Purpose for the Clean Water Act of 1972, thereby qualifying for federal and state financial assistance (grants), pursuant to the Act to

cover the costs to implement the new Water Quality Standards, presenting no financial burden upon and thereby serving the best interest of the public welfare. (33USC§§1281(g), 1281(l), 1282(a) plus 1300(g). Such accumulation of standards is the National Green Standards of Performance (aka “Water Quality Standards”) herein. See “National Green Standards of Performance” and “RECLAMATOR”

“Waters” means a substance having at least a chemical of H₂O. It additionally means any waters in any State to include but not be limited to navigable, ground water, underground waters, surface waters, etc. Such “waters” are also included in the meaning of the term “Nation’s waters” and “State’s waters”.

“Will-Serve” means a letter of intent to comply with “CGRs” issued from the Certified Service Provider of that area.

“Zero discharge” means to achieve an “effluent limitation” at a point source in compliance with the CGRs pursuant to the “Modified” US EPA Maximum Contaminant Level Goal (MCLG) Drinking Water Quality Standard. See “Green Standards of Performance”, “Modified NPDWRs”, “CGRs 3.7 – Enforcement” and also “Discharge”.

“Zero Effluent Limitation” pertains to innovative alternative control technology requirements. Limitations establish alternative requirements for “at-source” reuse and recycle of “new water”.

“Zero Effluent Standard” pertains to any innovative pretreatment control technology requirement. Standards established pretreatment requirements prior to discharging [from the source] into a publicly owned treatment works. “New water” is a “valuable resource” and a “valuable commodity” and is subject to purchase.

NATIONAL GREEN STANDARDS REGULATIONS

3.0. – CODE OF GREEN REGULATIONS (CGRs) AND REQUIREMENTS

CGR 3.0. - Administration and Enforcement of the Green Standards; Authority

The Governor of each State, as such State's Executive Authority and pursuant to 33USC§1370 – State Authority, including all such State's political subdivisions, shall, without discretion, adopt and enforce The National Green Standards of Performance, Effluent Limitation Guidelines, Categorical Pretreatment Standards & National Green Standards Regulations as the most strict water quality standards providing the greatest degree of effluent limitation and other limitation, effluent standard, prohibition, pretreatment standard and standard of performance respecting discharges of multi-media human origin at-source pollutants in the interest of public health and welfare, the preservation of State's waters, water quality and aquatic life and for the mitigation of such human origin toxic pollutant discharges into such State's multi-media resources under 33USC§§1329 – Nonpoint Source Management Programs.

The Governor of each State, as such State's Executive Authority and under 33USC§1251(e) – Public Participation and 33USC§1365 – Citizen Suits, including all such State's political subdivisions, shall recognize the National Standards Enforcement Agency (NSEA) as having authority to administer The National Green Standards of Performance, Effluent Limitation Guidelines, Categorical Pretreatment Standards & National Green Standards Regulations. Additionally, the Governor, as a nondiscretionary condition of the adoption and enforcement of The National Green Standards of Performance, Effluent Limitation Guidelines, Categorical Pretreatment Standards & National Green Standards Regulations, shall, as expedient as practicable, execute a MEMORANDUM OF UNDERSTANDING and JOINT POWERS AGREEMENT with NSEA, the State's resources agency and the State's fish and wildlife agency, recognizing the authority of all officers and agents of NSEA within such State and such officers and agents shall be referred to as Environmental Marshals. Pursuant to such authority, the Environmental Marshal shall collaborate with other local enforcement authorities to initiate enforcement of The National Green Standards of Performance, Effluent Limitation Guidelines, Categorical Pretreatment Standards & National Green Standards Regulations pursuant to 33USC§1365(f) – Effluent Standard or Limitation, which means, effective July 1, 1973, any violation of an effluent standard or limitation under 33USC§1251 et sq. including, but not limited to:

- an unlawful act under subsection (a) of United States Code Title 33 Chapter 26 § 1311 for a State and its political subdivisions not to adopt and enforce the most strict effluent standard or limitation; and,
- an unlawful act for a State and its political subdivisions not to adopt and enforce the most strict effluent

- limitation or other limitation under United States Code Title 33 Chapter 26 §§ 1311 and 1312; and,
- an unlawful act for a State and its political subdivisions not to adopt and enforce the most strict standard of performance under United States Code Title 33 Chapter 26 § 1316; and,
- an unlawful act for a State and its political subdivisions not to adopt and enforce the most strict prohibition, effluent standard or pretreatment standard under United States Code Title 33 Chapter 26 § 1317; and,
- an unlawful act for a State and its political subdivisions not to adopt and enforce a permit or condition thereof issued under United States Code Title 33 Chapter 26 § 1342; and,
- an unlawful act for a State and its political subdivisions not to adopt and enforce a regulation under United States Code Title 33 Chapter 26 § 1345.

CGR 3.1 State and Industry-wide Promulgation of Green Standards

The Governor and/or political subdivision shall promulgate [\(33USC26 § 1311 \(b\)\(2\)\(E\)\)](#) to all State and/or political subdivision licensing and permitting agencies and regulatory authorities the Green Standards of Performance, a list of the SAWS technology provider(s) and notify such authorities of their nondiscretionary obligation to require persons to comply with the CGRs. The SAWS technology shall be applied at all point sources of discharge within such authority’s jurisdictions. Those entities shall be, but not limited to, environmental protection agencies and councils, environmental resources agencies, the state board of professional engineers and land surveyors, and all other authorities of such State and their political subdivisions having permit writing authority over building, planning, public utilities, etc. Timeline for implementing Green Standards of Performance shall be as expedient as practicable as defined in [33USC26 § 1311 \(b\)\(1\)\(A\)](#).

CGR 3.1.2 BADCT Technology List Requirements (facility selection)

The State and political subdivisions, such as county planning and building departments, shall maintain a list of BADCT Technologies qualified pursuant to the CGR 5.3 - Official Comparator. Such list shall include the “brand name and equals” of BADCT Technologies to provide to permittee.

CGR 3.1.3 Public Notice

The State and its political subdivisions shall recognize their nondiscretionary duty under their authority to immediately provide public notice to, at a minimum, all authorities referred to pursuant to CGR 3.1 upon any new BADCT Technology being added to the List of BADCT Technologies. Such List shall be made available to the public.

CGR 3.1.4 Applicable Entities

The Pretreatment Standard Requirements and Effluent Limitation Regulations (“CGRs”) apply to all persons, owners and operators of classes and categories of sources and point sources (other than publicly owned treatment

works), within the State. The CGRs additionally apply to owners and operators of all classes and categories of sources and point sources of municipal and industrial sources, i.e. facilities, subject to Federal standards of performance.

CGR 3.1.5 Point of Compliance Requirements

- a. The point of compliance shall be required at the point source as close as practicable, typically within 20 feet of the foundation of any building, structure or facility, and within the boundaries of the property, or within a dedicated adjacent easement.
- b. Compliance shall be achieved through application of a BADCT Technology.
- c. Date for compliance shall be not later than July 1, 1977 pursuant to 33USC26 § 1311(b).

CGR 3.1.6 Administrator's Authority

- a. The National Standards Enforcement Agency (NSEA), as a non-profit / non-government private enforcement agency, shall be recognized by all States and political subdivisions as a premier enforcement authority.
- b. The NSEA shall have unlimited authority to revise the Green Standards as practicable to be more strict, but in no case to be less strict.
- c. The NSEA shall provide a license to any technology upon successfully being recognized as a BADCT Technology via the Official Comparator.
- d. The NSEA shall have authority to authorize any Licensed Authority the right to monitor any other BADCT Technology of any other Licensed Authority in order to assure integrity of performance under the terms and conditions of the Process Guarantee.
- e. The NSEA shall have enforcement authority and the State shall instruct its legal resources to assist NSEA in any civil or criminal enforcement actions it commences against any person accused of violation of these Green Standards.
- f. The NSEA or its Private Attorney General or any other Private Attorney General shall have authority to indict any violator (person) of the National Green Standards of Performance by executing a criminal complaint, which shall be recognized by any judge within the jurisdiction where the crime was committed, which shall lead to the indictment, issuance of warrant and the arrest of that person.

CGR 3.1.7 Groundwater Monitoring Requirements

- a. BADCT Technology is a sustainable alternative new water source technology, having definite barrier membrane that achieves the USEPA Maximum Contaminant Level Goal standard for drinking water quality. Therefore, no economic burden placed upon any person for groundwater monitoring requirements shall be construed as justifiable.

CGR 3.2 Sustainable Alternative Water Source (SAWS) General Provisions

CGR 3.2.1 Technology Certification Requirements

The NSEA shall issue a certificate to any manufacture of a BADCT technology to become a Licensed Authority upon such manufacture demonstrating his control technology achieves the criteria of CGR 3.8 - Official Comparator.

CGR 3.2.2 Permit Requirements

- a. Installation of a SAWS Technology shall require a Will-Serve from a Certified Service Provider and a county building and planning department permit.
- b. Upon completion of installation, the Certified Service Provider will issue a Final Will-Serve and a report shall be submitted to the county to include at a:
 - 1) A copy of Final Will-Serve
 - 2) A copy of As-built drawings
 - 3) A copy of county recorded easement locations
- c. All other local onsite requirements (except dispersal field requirements)
- d. All permits issued on any source or group of sources shall require implementation of a BADCT Technology at all classes and categories of point source or group of point sources.

CGR 3.2.3 Technical Requirements (facility design)

- a. The minimum technical requirements shall be performance based and shall achieve the Green Standards of Performance for water quality.
- b. The Licensed Authority shall be the sole entity to determine the final technical requirements and shall be liable for achieving the Green Standards and shall guarantee the performance.
- c. All BADCT Technology shall provide at a minimum a definite barrier physical filtration component of a back-flushable spiral wound design to prevent any disease carrying organisms from passing.

CGR 3.2.4 Alert Levels, Discharge Limitations and Monitoring Requirements

- a. All BADCT Technology shall be equipped with a visual or audible alarm as well as a telemetric alarm that alerts the owner and service provider in the event of system malfunction.
- b. BADCT Technology shall provide for 24-hour wastewater storage based on design flow to minimize pollution in the event of a facility malfunction or power outage.
- c. No BADCT Technology shall bypass raw untreated effluent.
- d. The RME or Licensed Authority shall respond to any alert within 12 hours.

- e. A report shall be filled out and submitted to the permitting authority with a detailed description of the cause of the alert within 5 business days of each occurrence.
- f. The permitting authority shall have right of access to any installation of a BADCT Technology at any time upon 24 hour notice given to the Certified Service Provider. Upon such 24 hour notice, the Certified Service Provider shall accompany the permitting authority as necessary.
- g. The telemetric monitoring system shall be capable of continuously assessing the performance of the “definite barrier” to assure no passage of fecal coliform in excess of 2 MPN (Maximum Probable Number).
- h. The owner or operator of any source utilizing BADCT Technology shall be provided: the name, address, telephone number of the Licensed Authority and or RME.
- i. The permitting agency shall be provided with monitoring equipment by the Licensed Authority to enable agency to monitor the BADCT Technology installations of the Licensed Authority.
- j. All BADCT Technology installations shall be monitored by NSF International 24/7. Upon any failure, NSF International shall notify the RME. Upon correction of failure, the RME shall notify NSF International immediately of such correction of failure.

CGR 3.2.5 Reporting Requirements

- a. It shall be a required best business practice for the Responsible Management Entity of a BADCT Technology to maintain a complete record of the history of operation and maintenance of a SAWS for the life of the SAWS. It shall be available to any public entity upon request in writing.
- b. Any spills which may occur as a result of failure shall be reported within 24 hours to the permitting agency.

CGR 3.2.6 Compliance Requirements For New Installations

- a. All new SAWS installations shall comply with the following requirements:
 - 1. Access openings shall have watertight risers and shall be set at finished grade.
 - 2. Access openings shall be secured to prevent unauthorized access.
 - 3. For all new source applications, dual plumbing shall be required to provide for, at a minimum, toilet flushing.

CGR 3.2.7 Easement Requirements

- a. The legal parcel owner of any source shall deed to the Licensed Authority an easement that shall convey the responsibility and liability of the new water source utility to the Licensed Authority and such deed shall be recorded with the county recorder.
- b. The easement shall provide Licensed Authority or the Responsible Management Entity or any of their authorized assignees access for operation and maintenance services.
- c. The utility easement deed shall be recorded in the name of the National Standards Enforcement Agency.

- d. The easement shall extend 5 feet beyond the outermost part of the works of the BADCT Technology, i.e. facilities.

CGR 3.2.8 Compliance Schedule For Inplace Sources (OWTS)

- a. Any person owning or operating a source having OWTS shall replace the OWTS with a SAWS upon:
 - 1. Failure of the OWTS;
 - 2. Change of ownership of the source;
 - 3. Issuance of any permit pertaining to the source; or
 - 4. If there is a state program initiated to replace the OWTS with SAWS.
- b. All replacements of inplace OWTS at any source shall be retrofitted as practicable to provide for, at a minimum, toilet flushing.

CGR 3.2.9 Design and Performance Responsibility; Liability

- a. The Licensed Authority shall be responsible for providing the proper design flow and performance requirements for the SAWS. The Licensed Authority may employ any professional he may choose to assist in such design.
- b. Upon participating in such design, the professional shall assume liability for performance and shall sign and notarize and be subject to a Performance Guarantee in a priority position to the Licensed Authority.

CGR 3.2.10 Inspections, Violations, and Enforcement (certification revocation)

- a. The CGRs establish minimum requirements for installation, monitoring, and operation of SAWS technology and recycle and reuse of the water.
- b. State and local agencies shall adopt and provide enforcement the CGRs pursuant to 33USC§1370.
- c. All violations of CGRs shall be subject to enforcement as defined pursuant to 33USC§1319 and the United States District Court shall have original jurisdiction.
- d. If any BADCT Technology fails to comply with the minimum requirements of the Green Standards of Performance under the testing and evaluation as defined in the Performance Guarantee and is not brought into compliance within 30 days, the Certified Service Provider shall be subject to suspension of his NSEA Certification and his BADCT Technology shall be removed from the List of Certified BADCT Technologies available and he shall not be allowed to install his BADCT Technology during such suspension. Suspension shall be as follows:
 - 1. First occurrence – 60 day suspension
 - 2. Second occurrence – 6 month suspension
 - 3. Third occurrence – 12 month suspension
 - 4. Each occurrence thereafter – 12 month suspension

CGR 3.3 BADCT Technology Provisions

NSR 3.3.1 Certified BADCT Technology Design

- a. The Licensed Authority shall be responsible for all design and installations of his BADCT Technology.
- b. The BADCT Technology performance shall be guaranteed by the BADCT Technology Licensed Authority to achieve the Green Standards of Performance pursuant to the Process Guarantee.
- c. Where an OWTS fails or must be replaced or expanded, the Licensed Authority shall be solely responsible for design and proper installation of his BADCT Technology.

CGR 3.3.2 Certified BADCT Technology Design and Accountability for High-Strength Waste

- a. As part of the area-wide requirements so established in the Green Standards of Performance, a SAWS Technology shall also be designed and applied to accept other wastewater from sources that exclude hazardous waste and reduce high strength wastewater produced by commercial and industrial sources in compliance with the Green Standards of Performance.
- b. The Licensed Authority shall be responsible for all design and performance of his "Certified BADCT Technology" and shall provide a signed and notarized Performance Guarantee under the requirements of the Green Standards of Performance establishing his accountability for each point source innovative pretreatment or alternative control technology application.

CGR 3.3.3 Certified BADCT Technology Tankage Design; Manufacturing

- a. The Licensed Authority shall be responsible for the design and construction of his SAWS containment/tankage.
- b. All tankage shall comply with all structural criteria and standards previously established for septic tanks by the International Association of Plumbing and Mechanical Officials (IAPMO).
- c. Tankage shall be manufactured in compliance with IAPMO criteria.

CGR 3.3.4 Introduction of Hazardous Substances into BADCT Technology Facilities

- a. It shall be unlawful to introduce non-compatible hazardous substance into BADCT Technology facilities.
- b. Any person introducing any non-compatible hazardous substances shall be liable for all costs incurred for removal and remediation of facilities.
- c. Materials in concentrations that are deleterious and inhibiting to SAWS operations shall not be discharged to any SAWS.

- d. Deleterious and inhibiting materials include any material or constituent inhibitory to the chemical, physical or biological process of a SAWS technology process. The Licensed Authority shall provide the owner and/or operator of the source with a list of such materials.

CGR 3.4 Installation; Operation and Maintenance Requirements

CGR 3.4.1 Installation of a BADCT Technology

- a. The Licensed Authority shall be solely responsible and liable for all installations of his particular BADCT Technology.
- b. A contractor licensed to install onsite systems shall be qualified to become a Certified Installer by a Certified Authority or other "Licensed Certified Installer".
- c. An onsite operations and maintenance provider shall be qualified to become a Licensed Service Provider or RME.
- d. It shall be unlawful for any owner or operator of any source or any other unauthorized person to be involved in any installation operation or maintenance of a SAWS technology at any time.

CGR 3.4.2 Site Investigation For BADCT Technology Facilities Application (setbacks)

- a. The Licensed Authority shall be responsible for all site evaluations for SAWS Technology installations.
- b. Setback requirements, unless otherwise determined, shall be a minimum of five feet from all property boundaries and structure foundations.

CGR 3.4.3 Operation of a BADCT Technology

SAWS shall be operated to accept and treat flows of domestic wastewater, excluding any material not generally associated with household activities (including, but not limited to, toilet and urinal flushing, showers, food preparation, laundry, household cleaning including drain cleaning, etc.) to achieve the Green Standards of Performance criteria.

CGR 3.4.4 Operation and Maintenance Plan

- a. The Licensed Authority shall be responsible for defining a plan suitable for his BADCT Technology.
- b. The operation and maintenance procedures shall provide for best management practices and shall be sufficient to provide for continuing operation of the BADCT Technology.
- c. Such procedures shall require at a minimum bi-annual at-source inspections.

CGR 3.4.5 Certified BADCT Maintenance Requirements

- a. The responsible Licensed Authority or the RME shall provided maintenance in such a manner as to assure optimal performance of each BADCT Technology pretreatment application as necessary.

- b. Site visits shall not be less than that recommended by NSF International, bi-annually.

CGR 3.5 BENEFICIAL REUSE AND WATER CONSERVATION

CGR 3.5.1 Recycle and Reuse Requirements

- a. The Licensed Authority shall be responsible to provide methods for recycle and beneficial reuse applications of the new water at each source.
- b. At a minimum, as feasible, plumbing shall be installed at each source to implement the beneficial reuse application of toilet flushing at each source.
- c. Upon replacement of an existing OWTS with SAWS, plumbing shall be retrofitted, as practicable, to implement the beneficial reuse application of toilet flushing at each source.
- d. All new water not recycled and reused at the source shall be utilized for a beneficial indirect potable reuse application.
- e. All new water shall be metered and recorded (accounted for) by the Licensed Authority.

CGR 3.6 RESTORATION AND MAINTENANCE OF IMPAIRED WATER BODIES INCLUDING BOUNDARY WATERS

CGR 3.6.1 Applicability and Requirements.

- a. All OWTS and publicly owned treatment works within 600 feet of any impaired water bodies and boundary waters or which may be discharging into any impaired water body including boundary waters, such water bodies to be considered a current or potential future source of drinking water, shall require priority and immediate replacement with a SAWS technology by each state at each source's point source so as to as expediently as practicable cease all toxic, poisonous and acidic discharges from such sources' point sources compromising the chemical, physical and biological integrity of our Nation's waters and causing a threat to public health, the propagation of a balanced population of shellfish, fish and wildlife, and recreational activities.
- b. There shall be no toxic, poisonous or acidic discharge into any underground excavation, publicly owned treatment works or body of water by any source, OWTS or a publicly owned treatment works point source.
- c. It shall be a matter of priority that all such occurring discharge(s) into publicly owned treatment works, underground excavations, navigable waters or the "contiguous zone" of any state shall be eliminated as expediently as practicable.

CGR 3.7 ENFORCEMENT (Strict Liability (Civil / Criminal))

CGR 3.7.1 Unlawful Activities; Enforcement Requirements

CGR 3.7.1.1 Effective July 1, 1973, the Following To Be Construed an Unlawful Act:

- a. Discharge by any person pursuant to 33USC§[1311](#)(a) pursuant to 33USC§1365(f) of the Chapter;
- b. Disregard for any effluent limitation or other limitation under section [1311](#) or [1312](#) of the Chapter;
- c. Disregard for any standard of performance under section [1316](#) of the Chapter;
- d. Disregard for any prohibition, effluent standard or pretreatment standards under section [1317](#) of the Chapter;
- e. Disregard for any certification under [1341](#) of the Chapter;
- f. Disregard for a permit or condition thereof issued under section [1342](#) of this title, which is in effect under the Chapter (including a requirement applicable by reason of section [1323](#) of the Chapter);
- g. Disregard for a regulation under section [1345 \(d\)](#) of the Chapter ⁽¹⁾.

CGR 3.7.1.2 Unlawful Acts in Violation of CGR 3.7.1.1 are, But Not Limited to:

- a. Permit use of an OWTS;
- b. Repair or replace an OWTS or any other failed treatment works after the effective date of the CGRs not in compliance with the Green Standards;
- c. For any owner or operator of any source to discharge pollutants outside of their sphere of influence, i.e. boundaries of the legal parcel or the jurisdiction of an owner or operator of a source.
- d. For any owner or operator of any source to discharge pollutants outside of their sphere of influence, i.e. boundaries of a legal parcel or the jurisdiction of an owner or operator of a source and thereby contributing to any nonpoint source of pollution;
- e. For any owner or operator of any source of waste water, to not reclaim and reuse such new water to serve either a direct or indirect beneficial reuse application benefiting the original consumer;
- f. Issuing a permit to allow any discharge of waste or pollutants by any person to discharge into a nonpoint source of pollution, i.e. an underground excavation (OWTS / leachfield) or into a publicly owned treatment works (sewer);
- g. Issue a waiver to allow any discharge of waste or pollutants (including acidic discharges) by any person;
- h. Install, use or operate a new OWTS in any state of the United States of America;
- i. Increase the hydraulic or organic loading or the nature of (e.g., from domestic to commercial) any waste stream entering an existing OWTS or SAWS without consulting NSEA.
- j. Any person, such person being a public official of a State or political subdivision of such State, acting in omission of their authority under US Code Title 33 Chapter 26 § 1370, not supporting adoption and enforcement of the charged discharge any multi-media pollutant not in compliance with these Green

Standards of Performance that would compromise in any way the chemical, physical or biological integrity of State's and/or Nation's waters, shall within 30 days take action to correct such discharge or be construed as impairing State's waters as defined in US Code Title 33 Chapter 26 § 1370 and shall be charged accordingly as criminal pursuant to US Code Title 33 Chapter 26 § 1319 for such impairment violation.

CGR 3.7.1.3 Enforcement Requirements (Strict Liability (Criminal))

The Governor of each State and such States political subdivisions, to include all executive, legislative and judicial branches thereof, shall, pursuant to their authority under 33USC§1370, adopt and require strict enforcement of the CGRs within their jurisdictions and shall charge persons committing unlawful acts in violation of the CGRs and impose penalties for each such violation as defined and pursuant to all requirements under the US Code Title 33 Chapter 26 Subchapter III – Standards and enforcement, Sec. 1319. - Enforcement.

Each violation shall be considered independently and the person(s) responsible for such violation being committing, upon conviction, shall be charged and penalized to the maximum extent allowable by law per each occurrence of each violation committed by such person(s).

No unlawful action by the Administrator of the US EPA or the Secretary (such as unlawfully issuing non-compliant waste discharge permits or allowing application of a non-Certified BADCT Technology) shall affect any person's obligation to comply with any section of this Chapter as defined in 33USC26§1319(g)(7).

The enforcement venue for any civil or criminal complaint to be filed against any violation under this Chapter by any person(s) shall be the United States District Court's jurisdiction pursuant to 33USC26§1319(b) and 33USC26§1365(a).

Any citizen, interested person(s) or State Licensed Authority, assuming authority as a Private Attorney General, shall have right to assign his enforcement rights for any State judiciary district to other third party of authority. Such third party enforcement entity shall be known as an "Environmental Marshal". Environmental Marshals will monitor all permit writers to assure conformance with the requirements of the Chapter. Upon a permit writer issuing any permit to allow any person to discharge any pollutant in violation of the CGRs, such permit writer shall be additionally joined in action taken against the person that is the owner or operator of the source so permitted.

Negligence means when a person is found to be committing an unlawful act without knowing so.

Knowing violation means a person found to be committing an unlawful act with knowledge of doing so and refuses to cease the violation and comply under his own cognizance.

Knowing endangerment means a person is found to be committing an unlawful act with knowledge of doing so and is aware of the endangerment (threat) the unlawful act is posing to public health and welfare and to the human environment and continues to commit the unlawful act with flagrant disregard for law.

CGR 3.8 OFFICIAL COMPARATOR

CGR 3.8.1 Official BADCT Technology Parameters

FACTORS: (33USC26§1314(b))

BADCT Technology

Conventional Pollutant Reduction:
(less than 10/10 BOD/TSS)

Tertiary

Toxic Pollutant Reduction:
Maximum levels:

Total Nitrogen (TN)	less than	8 mg/l
Ammonia (NH3 - N)	less than	2 mg/l
Nitrates (NO3 - N)	less than	4 mg/l
Fecal Coliform	less than	2 MPN

Demonstrated average levels of performance:

Total Nitrogen (TN)	less than	5 mg/l
Ammonia (NH3- N)	less than	2 mg/l
Nitrates (NO3 - N)	less than	2 mg/l
Nitrites (NO2 - N)	less than	1 mg/l
Dissolved Oxygen (DO)	greater than	2 mg/l
pH (base plus)		7.5 – 8.0
Fecal Coliform	less than	2 MPN
Endocrine Disruptors	ZERO	

Cost (per Dwelling Unit Equivalent (DUE))	less than	\$25,000
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Public Right-of-Way Encroachment	ZERO	
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Facilities Environmental Impact**	ZERO	
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Facilities Maximum Environmental Footprint (sq. ft. / Dwelling Unit Equivalent, i.e. source)	less than	100
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Engineering Aspects Required	ZERO	
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Energy Consumption (KWH/lb BOD removed)	less than	1
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* The best available demonstrated control technology currently available and shall be specified by “brand name or equal”.

** Mitigates toxic methane gas (Greenhouse gas) emissions.

4.0. – EFFLUENT LIMITATION GUIDELINES; CATEGORICAL PRETREATMENT STANDARDS

The US EPA's National Primary Drinking Water Regulations (NPDWRs or primary standards) shall be recognized as the Effluent Limitation Guidelines and Categorical Pretreatment Standards of the National Green Standards of Performance. These standards protect public health by limiting the levels of contaminants in water allowed to be discharged from a source. The parameters of the NPDWRs have been adopted and modified to serve as the baseline parameters for the National Green Standards' Code of Green Regulations (CGRs), a stricter standard and stricter regulations. Those parameters below, with the exception of the modified parameters of 1) mandatory definite barrier disinfection, 2) mandatory healthy pH levels of 7.5 and above, 3) mandatory ammonia as nitrogen (NH₃-N) level of less than 2 mg/l, 4) mandatory nitrate as nitrogen ((NO₃-N) level of less than 4 mg/l, 5) mandatory total nitrogen (TN) level of less than 8 mg/l, and 6) mandatory removal of endocrine disruptors, are:

List of Contaminants & their MCLs

[Microorganisms](#)
[Disinfectants](#)
[Disinfection Byproducts](#)
[Inorganic Chemicals](#)
[Organic Chemicals](#)
[Radionuclides](#)

Microorganisms

Contaminant	MCLG ¹ (mg/L) ²	MCL or TT ¹ (mg/L) ²	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Cryptosporidium (pdf file)	zero	TT ³	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste
Giardia lamblia	zero	TT ³	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste
Heterotrophic plate count	n/a	TT ³	HPC has no health effects; it is an analytic method used to measure the variety of bacteria that are common in water. The lower the concentration of bacteria in drinking water, the better maintained the water system is.	HPC measures a range of bacteria that are naturally present in the environment

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Legionella	zero	TT ³	Legionnaire's Disease, a type of pneumonia	Found naturally in water; multiplies in heating systems
Total Coliforms (including fecal coliform and E. Coli)	zero	5.0% ⁴	Not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present ⁵	Coliforms are naturally present in the environment; as well as feces; fecal coliforms and <i>E. coli</i> only come from human and animal fecal waste.
Turbidity	n/a	TT ³	Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing microorganisms such as viruses, parasites and some bacteria. These organisms can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.	Soil runoff
Viruses (enteric)	zero	TT ³	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste

Disinfection Byproducts

Contaminant	MCLG ¹ (mg/L) ²	MCL or TT ¹ (mg/L) ²	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Bromate	zero	0.010	Increased risk of cancer	Byproduct of drinking water disinfection

Chlorite	0.8	1.0	Anemia; infants & young children: nervous system effects	Byproduct of drinking water disinfection
Haloacetic acids (HAA5)	n/a ⁶	0.060 ⁷	Increased risk of cancer	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHMs)	n/a ⁶	0.080 ⁷	Liver, kidney or central nervous system problems; increased risk of cancer	Byproduct of drinking water disinfection

Disinfectants

Contaminant	MRDLG ¹ (mg/L) ²	MRDL ¹ (mg/L) ²	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Chloramines (as Cl₂)	MRDLG=4 ¹	MRDL=4.0 ¹	Eye/nose irritation; stomach discomfort, anemia	Water additive used to control microbes
Chlorine (as Cl₂)	MRDLG=4 ¹	MRDL=4.0 ¹	Eye/nose irritation; stomach discomfort	Water additive used to control microbes
Chlorine dioxide (as ClO₂)	MRDLG=0.8 ¹	MRDL=0.8 ¹	Anemia; infants & young children: nervous system effects	Water additive used to control microbes

Inorganic Chemicals

Contaminant	MCLG ¹ (mg/L) ²	MCL or TT ¹ (mg/L) ²	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
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Antimony	0.006	0.006	Increase in blood cholesterol; decrease in blood sugar	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	0 ^Z	0.010 as of 01/23/06	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Erosion of natural deposits; runoff from orchards, runoff from glass & electronics production wastes
Asbestos (fiber >10 micrometers)	7 million fibers per liter	7 MFL	Increased risk of developing benign intestinal polyps	Decay of asbestos cement in water mains; erosion of natural deposits
Barium	2	2	Increase in blood pressure	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	0.004	0.004	Intestinal lesions	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium	0.005	0.005	Kidney damage	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints

Chromium (total)	0.1	0.1	Allergic dermatitis	Discharge from steel and pulp mills; erosion of natural deposits
Copper	1.3	TT ^g ; Action Level=1.3	Short term exposure: Gastrointestinal distress Long term exposure: Liver or kidney damage People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits
Cyanide (as free cyanide)	0.2	0.2	Nerve damage or thyroid problems	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride	4.0	4.0	Bone disease (pain and tenderness of the bones); Children may get mottled teeth	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories

Lead	zero	TT ⁸ ; Action Level=0.015	<p>Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities</p> <p>Adults: Kidney problems; high blood pressure</p>	Corrosion of household plumbing systems; erosion of natural deposits
Mercury (inorganic)	0.002	0.002	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
Nitrate (measured as Nitrogen)	10	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (measured as Nitrogen)	1	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	0.05	0.05	Hair or fingernail loss; numbness in fingers or toes; circulatory problems	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines

Thallium	0.0005	0.002	Hair loss; changes in blood; kidney, intestine, or liver problems	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
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Organic Chemicals

Contaminant	MCLG ¹ (mg/L) ²	MCL or TT ¹ (mg/L) ²	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Acrylamide	zero	TT ²	Nervous system or blood problems; increased risk of cancer	Added to water during sewage/wastewater treatment
Alachlor	zero	0.002	Eye, liver, kidney or spleen problems; anemia; increased risk of cancer	Runoff from herbicide used on row crops
Atrazine	0.003	0.003	Cardiovascular system or reproductive problems	Runoff from herbicide used on row crops
Benzene	zero	0.005	Anemia; decrease in blood platelets; increased risk of cancer	Discharge from factories; leaching from gas storage tanks and landfills
Benzo(a)pyrene (PAHs)	zero	0.0002	Reproductive difficulties; increased risk of cancer	Leaching from linings of water storage tanks and distribution lines
Carbofuran	0.04	0.04	Problems with blood, nervous system, or reproductive system	Leaching of soil fumigant used on rice and alfalfa

Carbon tetrachloride	zero	0.005	Liver problems; increased risk of cancer	Discharge from chemical plants and other industrial activities
Chlordane	zero	0.002	Liver or nervous system problems; increased risk of cancer	Residue of banned termiticide
Chlorobenzene	0.1	0.1	Liver or kidney problems	Discharge from chemical and agricultural chemical factories
2,4-D	0.07	0.07	Kidney, liver, or adrenal gland problems	Runoff from herbicide used on row crops
Dalapon	0.2	0.2	Minor kidney changes	Runoff from herbicide used on rights of way
1,2-Dibromo-3-chloropropane (DBCP)	zero	0.0002	Reproductive difficulties; increased risk of cancer	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
o-Dichlorobenzene	0.6	0.6	Liver, kidney, or circulatory system problems	Discharge from industrial chemical factories
p-Dichlorobenzene	0.075	0.075	Anemia; liver, kidney or spleen damage; changes in blood	Discharge from industrial chemical factories

1,2-Dichloroethane	zero	0.005	Increased risk of cancer	Discharge from industrial chemical factories
1,1-Dichloroethylene	0.007	0.007	Liver problems	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene	0.07	0.07	Liver problems	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene	0.1	0.1	Liver problems	Discharge from industrial chemical factories
Dichloromethane	zero	0.005	Liver problems; increased risk of cancer	Discharge from drug and chemical factories
1,2-Dichloropropane	zero	0.005	Increased risk of cancer	Discharge from industrial chemical factories
Di(2-ethylhexyl) adipate	0.4	0.4	Weight loss, liver problems, or possible reproductive difficulties.	Discharge from chemical factories
Di(2-ethylhexyl) phthalate	zero	0.006	Reproductive difficulties; liver problems; increased risk of cancer	Discharge from rubber and chemical factories

Dinoseb	0.007	0.007	Reproductive difficulties	Runoff from herbicide used on soybeans and vegetables
Dioxin (2,3,7,8-TCDD)	zero	0.00000003	Reproductive difficulties; increased risk of cancer	Emissions from waste incineration and other combustion; discharge from chemical factories
Diquat	0.02	0.02	Cataracts	Runoff from herbicide use
Endothall	0.1	0.1	Stomach and intestinal problems	Runoff from herbicide use
Endrin	0.002	0.002	Liver problems	Residue of banned insecticide
Epichlorohydrin	zero	TT ⁹	Increased cancer risk, and over a long period of time, stomach problems	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylbenzene	0.7	0.7	Liver or kidneys problems	Discharge from petroleum refineries
Ethylene dibromide	zero	0.00005	Problems with liver, stomach, reproductive system, or kidneys; increased risk of cancer	Discharge from petroleum refineries

Glyphosate	0.7	0.7	Kidney problems; reproductive difficulties	Runoff from herbicide use
Heptachlor	zero	0.0004	Liver damage; increased risk of cancer	Residue of banned termiticide
Heptachlor epoxide	zero	0.0002	Liver damage; increased risk of cancer	Breakdown of heptachlor
Hexachlorobenzene	zero	0.001	Liver or kidney problems; reproductive difficulties; increased risk of cancer	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene	0.05	0.05	Kidney or stomach problems	Discharge from chemical factories
Lindane	0.0002	0.0002	Liver or kidney problems	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	0.04	0.04	Reproductive difficulties	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl (Vydate)	0.2	0.2	Slight nervous system effects	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes

Polychlorinated biphenyls (PCBs)	zero	0.0005	Skin changes; thymus gland problems; immune deficiencies; reproductive or nervous system difficulties; increased risk of cancer	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol	zero	0.001	Liver or kidney problems; increased cancer risk	Discharge from wood preserving factories
Picloram	0.5	0.5	Liver problems	Herbicide runoff
Simazine	0.004	0.004	Problems with blood	Herbicide runoff
Styrene	0.1	0.1	Liver, kidney, or circulatory system problems	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene	zero	0.005	Liver problems; increased risk of cancer	Discharge from factories and dry cleaners
Toluene	1	1	Nervous system, kidney, or liver problems	Discharge from petroleum factories
Toxaphene	zero	0.003	Kidney, liver, or thyroid problems; increased risk of cancer	Runoff/leaching from insecticide used on cotton and cattle
2,4,5-TP (Silvex)	0.05	0.05	Liver problems	Residue of banned herbicide

1,2,4-Trichlorobenzene	0.07	0.07	Changes in adrenal glands	Discharge from textile finishing factories
1,1,1-Trichloroethane	0.20	0.2	Liver, nervous system, or circulatory problems	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane	0.003	0.005	Liver, kidney, or immune system problems	Discharge from industrial chemical factories
Trichloroethylene	zero	0.005	Liver problems; increased risk of cancer	Discharge from metal degreasing sites and other factories
Vinyl chloride	zero	0.002	Increased risk of cancer	Leaching from PVC pipes; discharge from plastic factories
Xylenes (total)	10	10	Nervous system damage	Discharge from petroleum factories; discharge from chemical factories

Radionuclides

Contaminant	MCLG ¹ (mg/L) ²	MCL or TT ¹ (mg/L) ²	Potential Health Effects from Ingestion of Water	Sources of Contaminant in Drinking Water
Alpha particles	none ¹ ----- zero	15 picocuries per Liter (pCi/L)	Increased risk of cancer	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation
Beta particles and photon emitters	none ¹ ----- zero	4 millirems per year	Increased risk of cancer	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation
Radium 226 and Radium 228 (combined)	none ¹ ----- zero	5 pCi/L	Increased risk of cancer	Erosion of natural deposits
Uranium	zero	30 ug/L as of 12/08/03	Increased risk of cancer, kidney toxicity	Erosion of natural deposits

¹ DEFINITIONS:

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no

known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

² Units are in milligrams per liter (mg/L) unless otherwise noted. Milligrams per liter are equivalent to parts per million.

³ EPA's surface water treatment rules require systems using surface water or ground water under the direct influence of surface water to (1) disinfect their water, and (2) filter their water or meet criteria for avoiding filtration so that the following contaminants are controlled at the following levels:

Cryptosporidium: (as of 1/1/02 for systems serving >10,000 and 1/14/05 for systems serving <10,000) 99% removal.

Giardia lamblia: 99.9% removal/inactivation

Viruses: 99.99% removal/inactivation

Legionella: No limit, but EPA believes that if *Giardia* and viruses are removed/inactivated, *Legionella* will also be controlled.

Turbidity: At no time can turbidity (cloudiness of water) go above 5 nephelometric turbidity units (NTU); systems that filter must ensure that the turbidity go no higher than 1 NTU (0.5 NTU for conventional or direct filtration) in at least 95% of the daily samples in any month. As of January 1, 2002, turbidity may never exceed 1 NTU, and must not exceed 0.3 NTU in 95% of daily samples in any month.

HPC: No more than 500 bacterial colonies per milliliter.

Long Term 1 Enhanced Surface Water Treatment (Effective Date: January 14, 2005); Surface water systems or (GWUDI) systems serving fewer than 10,000 people must comply with the applicable Long Term 1 Enhanced Surface Water Treatment Rule provisions (e.g. turbidity standards, individual filter monitoring, Cryptosporidium removal requirements, updated watershed control requirements for unfiltered systems).

Long Term 2 Enhanced Surface Water Treatment Rule (Effective Date: January 4, 2006) - Surface water systems or GWUDI systems must comply with the additional treatment for Cryptosporidium specified in this rule based on their Cryptosporidium bin classification calculated after the completion of source water monitoring.

Filter Backwash Recycling; The Filter Backwash Recycling Rule requires systems that recycle to return specific recycle flows through all processes of the system's existing conventional or direct filtration system or at an alternate location approved by the state.

⁴ more than 5.0% samples total coliform-positive in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive per month.) Every sample that has total coliform must be analyzed for either fecal coliforms or *E. coli* if two consecutive TC-positive samples, and one is also positive for *E. coli* fecal coliforms, system has an acute MCL violation.

⁵ Fecal coliform and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Disease-causing microbes (pathogens) in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. These pathogens may pose a special health risk for infants, young children, and people with severely compromised immune systems.

⁶ Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants:

Trihalomethanes: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L); chloroform (0.07mg/L).
 Haloacetic acids: dichloroacetic acid (zero); trichloroacetic acid (0.02 mg/L); monochloroacetic acid (0.07 mg/L).
 Bromoacetic acid and dibromoacetic acid are regulated with this group but have no MCLGs.

⁷ The MCL values are the same in the Stage 2 DBPR as they were in the Stage 1 DBPR, but compliance with the MCL is based on different calculations. Under Stage 1, compliance is based on a running annual average (RAA). Under Stage 2, compliance is based on a locational running annual average (LRAA), where the annual average at each sampling location in the distribution system is used to determine compliance with the MCLs. The LRAA requirement will become effective April 1, 2012 for systems on schedule 1, October 1, 2012 for systems on schedule 2, and October 1, 2013 for all remaining systems.

⁸ Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is 1.3 mg/L, and for lead is 0.015 mg/L.

⁹ Each water system must certify, in writing, to the state (using third-party or manufacturer's certification) that when acrylamide and epichlorohydrin are used in drinking water systems, the combination (or product) of dose and monomer level does not exceed the levels specified, as follows:

Acrylamide = 0.05% dosed at 1 mg/L (or equivalent)
 Epichlorohydrin = 0.01% dosed at 20 mg/L (or equivalent)

LIST OF NATIONAL SECONDARY DRINKING WATER REGULATIONS

Contaminant	Secondary Standard
Aluminum	0.05 to 0.2 mg/L
Chloride	250 mg/L
Color	15 (color units)
Copper	1.0 mg/L
Corrosivity	noncorrosive
Fluoride	2.0 mg/L
Foaming Agents	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Odor	3 threshold odor number
pH	6.5-8.5
Silver	0.10 mg/L
Sulfate	250 mg/L

Total Dissolved Solids	500 mg/L
Zinc	5 mg/L

5.0 – EFFLUENT LIMITATION GUIDELINES; CATEGORICAL PRETREATMENT STANDARDS; PROHIBITIONS

5.1 INTRODUCTION

The Green Standards of Performance define a waste management method, consistent with the policy of the United States Congress, designed to achieve optimum water quality management, consistent with the public health and water quality goals and requirements of the Clean Water Act pursuant to [33USC26§1296](#).

These standards are developed to protect the public health and welfare of the people and enhance the quality of all State's waters and serve the purposes of the Clean Water Act pursuant to [33USC26§1313\(c\)\(2\)\(A\)](#).

All State agencies shall adopt these Green Standards pursuant to [33USC26§1313\(c\)\(2\)\(B\)](#), promulgate and require compliance with the federally mandated pretreatment requirements as defined in US Code Title 33 Chapter 26 §§ [1311](#), [1312](#), [1313](#), [1314](#), [1316](#), [1317](#) and [1342\(b\)\(8\)](#), otherwise CGRs.

All persons of the United States of America and owners and operators of any source, such source being subject to pretreatment standards and effluent limitation requirements, shall be subject to, at a minimum, these standards of performance herein defined pursuant to the goals and objectives pursuant to [US Code Title 33 Chapter 26 - Water Pollution Prevention and Control](#) as follows:

5.2 LIMITATIONS, STANDARDS AND PROHIBITIONS

The Governor (State) and political subdivisions of all States under nondiscretionary authority pursuant to US Code Title 33 Chapter 26 § 1370 are required to adopt, promulgate and enforce the most strict effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance ("National Green Standards of Performance") under US Code Title 33 Chapter 26, or be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States. Requirement for implementation of these federally mandated innovative and alternative (other than publicly owned treatment works / private) waste management (at-source control) systems and pretreatment requirements in the interest of public health and welfare. (Effective July 1, 1973 pursuant to US Code Title 33 Chapter 26 § 1365(f)).

These Green Standards require application of the best practicable control technology currently available (other than publicly owned treatment works) as is required to be provided at each source point source in compliance with "pretreatment requirements" as defined in US Code Title 33 Chapter 26. The Green Standards shall require application of a Sustainable Alternative Water Source Technology ("SAWS") to achieve the National Goal; eliminating all discharges of all pollutants at each source or group of sources, contain all pollutants at such source(s) to prevent them from migrating to cause water and other environmental pollution, providing for the recycle and reuse of 100% of all source wastewater as a sustainable alternative water source to serve all beneficial reuse applications at such source(s) so as to 1) eliminate all discharges of all pollutants, 2) eliminate sewage flows and associated sewer user fees, and 3) thereby substantially reducing the demand on public drinking water supplies achieving the objectives of the Chapter.

Application of federally mandated pretreatment requirements shall be complied with through implementation of a SAWS Technology that shall be specified by a "brand name or equal" based upon the Green Standards' Official Comparator defining the minimum requirements. The SAWS Technology which qualifies per criteria of the Green Standards' Official Comparator herein provided shall be considered as the Best Available Demonstrated Control Technology ("BADCT") currently available which achieves the National Goal, to eliminate all discharges of all pollutants at their source. A SAWS Technology shall be required, based upon such demonstrated performance and shall be supported by an executed Manufacturer's Performance Guarantee and shall be specified by "brand name or equal" in association with every permit issued by any of the State's permitting agencies in association with any and all sources in compliance with these federally mandated pretreatment minimum requirements.

- 1.0 The Green Standards shall be achieved utilizing the best chemical, physical and biological treatment processes and/or techniques and provide for the following reduction levels of constituents / pollutants per process and/or treatment technique application at the source while containing such constituents / pollutants at same source thereby preventing them from migrating to cause water or other environmental pollution and thereby achieving the National Goal as defined in 33 USC 26, to eliminate all discharges of all pollutants at their source or group of sources.

The Green Standards Process Guarantee shall be required, provided by the BADCT provider, recorded and shall apply to each application.

NOTE: As of January 1, 2009 the “Brand Name” of the BADCT which has established the National Standard of Performance shall be “AES TECHNOLOGY”. It and all equals shall, at a minimum, provide a performance guarantee to achieve the following levels defined herein below:

BIOLOGICAL

The biological process shall be of the latest (newest) biological process technology available and which has been evaluated over a minimum of a six month period by an accredited and nationally recognized third party testing laboratory such as NSF International demonstrating such technology’s performance. The biological process shall provide for industry-wide application, scalable from 250 gpd to 2.5 mgd plus. After the pretreatment facilities (other than publicly owned treatment works) have been placed into continuous service, and have achieved equilibrium operating conditions, the innovative and advanced alternative biological process technology shall biologically achieve the levels herein defined and shall provide the following levels of reduction for the source of the toxic pollutant (“nitrosamine”) listed on the US EPA List of Toxic Pollutant associated with domestic wastewater flows that require application of pretreatment requirements. The biological process shall eliminate acidic discharges (pH of less than 7.4) through inherent biological alkalinity recovery to a base range of 7.5 – 8.0.

The minimum demonstrated performance limits shall be the established specific numerical criteria for toxic pollutants as follows:

- The **maximum levels** have been (third party) demonstrated to be less than the following:

Total Nitrogen (TN)	<8 mg/l
Ammonia (NH3 - N)	<2 mg/l
Nitrates (NO3 - N)	<4 mg/l
Maximum pH level	8

- The **average levels** have been demonstrated not to exceed the following:

Total Nitrogen (TN)	<5 mg/l
Ammonia (NH3 - N)	<2 mg/l
Nitrates (NO3 - N)	<2 mg/l
Nitrites (NO2 - N)	<1 mg/l
Average pH level	7.7

PHYSICAL (“Beyond Tertiary” Effluent Limitations Achieved)

The physical component shall provide a “definite barrier” to disease carrying pathogens (<2.2 MPN/100ml, California Title 22) utilizing physical ultra-filtration (UF) type membrane filtration technology of the spiral wound type back-flushable membrane filtration technology, having 100% integrity, and shall provide a consistent level of reduction of inorganic contaminants to achieve a standard consistently less than the United States Environmental Protection Agency’s Maximum Contaminant Level (MCL) Primary Drinking Water Standards as follows:

Note: All State's "Primary Drinking Water" evaluation standard shall be less than Maximum Contaminant Level, ("MCL"), the highest acceptable concentration of analyte. Levels of contaminants less than the MCL (which comply with the MCLGs) are considered to be non-pollutant. (Source: State of California "Primary Drinking Water" Evaluation Standard)

DISEASE CARRYING PATHOGENS - BACTERIA

<u>BACTERIA</u>	<u>MCL</u>	<u>UNITS</u>
Coliform, Fecal (15 Tube MPN)	< 2	MPN/100ml

PRIMARY STANDARDS – INORGANIC CHEMICALS

<u>ANALYTE</u>	<u>MCL</u>	<u>UNITS</u>
Aluminum	1	mg/L
Antimony	0.0006	mg/L
Arsenic	0.01	mg/L
Barium	1	mg/L
Beryllium	0.004	mg/L
Cadmium	0.005	mg/L
Chromium	0.05	mg/l
Cyanide	0.15	mg/L
Asbestos	7	MFL
Lead	0.015	mg/L
Fluoride	2	mg/L
Mercury	0.002	mg/L
Nickel	0.1	mg/L
Selenium	0.05	mg/L
Thallium	0.002	mg/L

NOTE: The "definite barrier" control component is a best available demonstrated control technology and as such, shall be specified by "brand name or equal" based upon such criteria and demonstrated "definite barrier" performance.

CHEMICAL

The chemical disinfection process (chlorine, ultra violet or ozone) shall consistently achieve the following levels of reduction for total coliform bacteria. Even though it is not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present and shall be controlled to the following level:

<u>BACTERIA</u>	<u>MCL</u>	<u>UNITS</u>
Coliform, Total (15 Tube MPN)	ZERO	MPN/100ml

The herein defined Green Standards of Performance continuously supersedes the Federal Primary Drinking Water Quality Standards and as such achieves the National Goal as defined within 33 USC 26 thereby providing for the maximum degree of effluent reduction and achieving a standard that permits no discharge of pollutants from the source either into a publicly owned treatment works (lateral) or an underground excavation (dispersal/disposal field). (33 USC 26, Sec. 1316)

NOTE: The contaminant levels less than the MCL are in compliance with the US EPA National Primary Drinking Water Regulations (NPDWRs), the previous Maximum Contaminant Level Goal (MCLG) Standard for drinking water quality. The MCLGs allow levels of contaminants in water which are known to pose risk to health (pollutant) and as such are now enforceable. The NCLGs supersede the MCLGs and allow for a margin of safety and are non-enforceable public health goals.

2.0 The biological process (conventional pollutants) shall have been demonstrated to provide / achieve the following:

- Requires only a single basin secondary/tertiary process (environmental footprint)
- Tertiary (average less than 10/10/10 BOD/TSS/TN demonstrated over a six month period)
- Inherent hydraulic flow equalization (controlled decants disallowing washouts)
- Shall be a non-plug flow (not susceptible to washout conditions)
- Anti-washout capabilities (40Xs ADDF (average daily design flow)
- Inherent alkalinity recovery to “non acidic” pH levels (7.5 - 8.0)

3.0 Biological process (non-conventional pollutants) shall have been demonstrated to provide for inherent denitrification to consistently reduce toxic nitrosamine source pollutants to the following non-pollutant, i.e. Zero Discharge, levels:

- Total Nitrogen (TN) discharges to less than 8 mg/l
- Nitrate (NO³-N) discharges to less than 5 mg/l
- Nitrite (NO²-N) discharges to less than 1 mg/l
- pH (base) discharges to a level greater than 7.4

4.0 Beyond Tertiary Benefits: (Objectives of the U.S.C. Title 33 Chapter 26 shall be achieved)

A “definite barrier” is provided to prevent any possibility of pollutants being discharged either into an underground excavation (leach field) or into a publicly owned treatment works (sewer lateral) and:

- provides the “maximum degree” of effluent reduction by totally eliminating all point source “effluent” discharges at the source
- eliminates sewer flows and associated sewer user fees
- provides for ability for future recycle of water at source
- provides a sustainable alternative water source at each private point source at the same or better quality than the current public drinking water supply quality to serve the original water consumer’s beneficial reuse applications
- thereby substantially reducing the demand on our public drinking water supplies
- any water not recycled will remediate and replenish drinking water aquifers with pure water

Eliminates need for publicly owned treatment works and:

- associated discharge into such publicly owned treatment works from private point sources
- eliminates associated energy carbon footprint associated with publicly owned treatment works / collection laterals
- provides for the lowest possible environmental impact requiring no publicly right-of-way encroachment
- contains all pollutants at the source
- therefore preventing pollutants from migrating to cause water and other environmental pollution
- eliminates associated costs for publicly owned treatment works
- qualifies for federal grant assistance as a sustainable alternative water source

Control of PPCPs (“Pharmaceuticals and Personal Care Products”) reflecting the greatest degree of control at the source.

Must compare at least as “better” or “equal” on each and every performance criteria provided pursuant to 33 USC 26 Sec. 1314 as defined in the **“Official Comparator”** herein provided:

5.3 - OFFICIAL COMPARATOR

~ OFFICIAL COMPARATOR ~

DEMONSTRATED "GREEN STANDARDS" OF PERFORMANCE

Determined Achievable by the National Standards Enforcement Agency ("Administrator")

U.S.C. Title 33 Chapter 26 §§ 1311 (b)(1), 1316 (a) and 1317 (b)

Each compared BADCT technology MUST qualify as "Equal" or "Better". Any "Fail" disqualifies.

(Equal/Better/Fail)

FACTORS: (33USC26§1314(b))

AES TECHNOLOGY*

Conventional Pollutant Reduction:
(less than 10/10 BOD/TSS)

Tertiary

Toxic Pollutant Reduction:
Maximum levels:

Total Nitrogen (TN)

<8 mg/l

Ammonia (NH3 - N)

<2 mg/l

Nitrates (NO3 - N)

<4 mg/l

Fecal Coliform

<2 MPN

Endocrine Disruptors

ZERO

Demonstrated average levels of performance:

Total Nitrogen (TN)

<5 mg/l

Ammonia (NH3 - N)

<2 mg/l

Nitrates (NO3 - N)

<2 mg/l

Nitrites (NO2 - N)

<1 mg/l

Dissolved Oxygen (DO)

>2 mg/l

pH (base)

7.5 – 8.0

Fecal Coliform

<2 MPN

Endocrine Disruptors

ZERO

Cost (per Dwelling Unit Equivalent (DUE))

< \$25,000

Public Right-of-Way Encroachment

ZERO

Facilities Environmental Impact**

ZERO

Facilities Maximum Environmental Footprint
(sq. ft. / Dwelling Unit Equivalent, i.e. source)

100

Engineering Aspects Required

ZERO

Energy Consumption (KWH/lb BOD removed)

< 1

* The best available demonstrated control technology currently available and shall be specified by "brand name or equal".

** Mitigates toxic methane gas (Greenhouse gas) emissions.

APPENDIX A

**INDIRECT POTABLE REUSE STANDARD /
CATEGORICAL PRETREATMENT STANDARD
PROMULGATED MARCH 1995
(NSF Standard 40, Report No. 94/01/2015/060)**

APPENDIX B

**DIRECT POTABLE REUSE STANDARD
GREEN STANDARDS OF PERFORMANCE**

EFFLUENT LIMITATION GUIDELINES; CATEGORICAL PRETREATMENT STANDARDS; PROHIBITIONS

INTRODUCTION

The Green Standards of Performance define a waste management method, consistent with the policy of the United States Congress, designed to achieve optimum water quality management, consistent with the public health and water quality goals and requirements of the Clean Water Act pursuant to [33USC26§1296](#).

These standards are developed to protect the public health and welfare of the people and enhance the quality of all State's waters and serve the purposes of the Clean Water Act pursuant to [33USC26§1313\(c\)\(2\)\(A\)](#).

All State agencies shall adopt these Green Standards pursuant to [33USC26§1313\(c\)\(2\)\(B\)](#), promulgate and require compliance with the federally mandated pretreatment requirements as defined in US Code Title 33 Chapter 26 §§ [1311](#), [1312](#), [1313](#), [1314](#), [1316](#), [1317](#) and [1342\(b\)\(8\)](#)), otherwise CGRs.

All persons of the United States of America and owners and operators of any source, such source being subject to pretreatment standards and effluent limitation requirements, shall be subject to, at a minimum, these standards of performance herein defined pursuant to the goals and objectives pursuant to [US Code Title 33 Chapter 26 - Water Pollution Prevention and Control](#) as follows:

LIMITATIONS, STANDARDS AND PROHIBITIONS

- 1.0 Code Title 33 Chapter 26 § 1370 are required to adopt, promulgate and enforce the most strict effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance ("National Green Standards of Performance") under US Code Title 33 Chapter 26, or be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States. Requirement for implementation of these federally mandated innovative and alternative (other than publicly owned treatment works / private) waste management (at-source control) systems and pretreatment requirements in the interest of public health and welfare. (Effective July 1, 1973 pursuant to US Code Title 33 Chapter 26 § 1365(f)).

These Green Standards require application of the best practicable control technology currently available (other than publicly owned treatment works) as is required to be provided at each source point source in compliance with "pretreatment requirements" as defined in US Code Title 33 Chapter 26. The Green Standards shall require application of a Sustainable Alternative Water Source Technology ("SAWS") to achieve the National Goal; eliminating all discharges of all pollutants at each source or group of sources, contain all pollutants at such source(s) to prevent them from migrating to cause water and other environmental pollution, providing for the recycle and reuse of 100% of all source wastewater as a sustainable alternative water source to serve all beneficial reuse applications at such source(s) so as to 1) eliminate all discharges of all pollutants, 2) eliminate sewage flows and associated sewer user fees, and 3) thereby substantially reducing the demand on public drinking water supplies achieving the objectives of the Chapter.

Application of federally mandated pretreatment requirements shall be complied with through implementation of a SAWS Technology that shall be specified by a "brand name or equal" based upon the Green Standards' Official Comparator defining the minimum requirements. The SAWS Technology which qualifies per criteria of the Green Standards' Official Comparator herein provided shall be considered as the Best Available Demonstrated Control Technology ("BADCT") currently available which achieves the National Goal, to eliminate all discharges of all pollutants at their source. A SAWS Technology shall be required, based upon such demonstrated performance and shall be supported by an executed Manufacture's Performance Guarantee and shall be specified by "brand name or equal" in association with every permit issued by any of the State's

permitting agencies in association with any and all sources in compliance with these federally mandated pretreatment minimum requirements.

- 2.0 The Green Standards shall be achieved utilizing the best biological, physical and chemical treatment processes and/or techniques and provide for the following reduction levels of constituents / pollutants per process and/or treatment technique application at the source while containing such constituents / pollutants at same source thereby preventing them from migrating to cause water or other environmental pollution and thereby achieving the National Goal as defined in 33 USC 26, to eliminate all discharges of all pollutants at their source or group of sources.

The Green Standards Process Guarantee shall be required, provided by the BADCT provider, recorded and shall apply to each application.

NOTE: As of January 1, 2009 the “Brand Name” of the BADCT which has established the National Standard of Performance shall be “AES TECHNOLOGY”. It and all equals shall, at a minimum, provide a performance guarantee to achieve the following levels defined herein below:

BIOLOGICAL

The biological process shall be of the latest (newest) biological process technology available and which has been evaluated over a minimum of a six month period by an accredited and nationally recognized third party testing laboratory such as NSF International demonstrating such technology’s performance. The biological process shall provide for industry-wide application, scalable from 250 gpd to 2.5 mgd plus. After the pretreatment facilities (other than publicly owned treatment works) have been placed into continuous service, and have achieved equilibrium operating conditions, the innovative and advanced alternative biological process technology shall biologically achieve the levels herein defined and shall provide the following levels of reduction for the source of the toxic pollutant (“nitrosamine”) listed on the US EPA List of Toxic Pollutant associated with domestic wastewater flows that require application of pretreatment requirements. The biological process shall eliminate acidic discharges (pH of less than 7.4) through inherent biological alkalinity recovery to a base range of 7.5 – 8.0.

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Nitrates (NO3 - N)	<4 mg/l
Maximum pH level	8

- The **average levels** have been demonstrated not to exceed the following:

Total Nitrogen (TN)	<5 mg/l
Ammonia (NH3 - N)	<2 mg/l
Nitrates (NO3 - N)	<2 mg/l
Nitrites (NO2 - N)	<1 mg/l
Average pH level	7.7

PHYSICAL (“Beyond Tertiary” Effluent Limitations Achieved)

The physical component shall provide a “definite barrier” to disease carrying pathogens (<2.2 MPN/100ml, California Title 22) utilizing physical ultra-filtration (UF) type membrane filtration technology of the spiral wound type back-flushable membrane filtration technology, having 100% integrity, and shall provide a consistent level of

reduction of inorganic contaminants to achieve a standard consistently less than the United States Environmental Protection Agency's Maximum Contaminant Level (MCL) Primary Drinking Water Standards as follows:

Note: All State's "Primary Drinking Water" evaluation standard shall be less than Maximum Contaminant Level, ("MCL"), the highest acceptable concentration of analyte. Levels of contaminants less than the MCL (which comply with the MCLGs) are considered to be non-pollutant. (Source: State of California "Primary Drinking Water" Evaluation Standard)

DISEASE CARRYING PATHOGENS - BACTERIA

<u>BACTERIA</u>	<u>MCL</u>	<u>UNITS</u>
Coliform, Fecal (15 Tube MPN)	< 2	MPN/100ml

PRIMARY STANDARDS – INORGANIC CHEMICALS

<u>ANALYTE</u>	<u>MCL</u>	<u>UNITS</u>
Aluminum	1	mg/L
Antimony	0.0006	mg/L
Arsenic	0.01	mg/L
Barium	1	mg/L
Beryllium	0.004	mg/L
Cadmium	0.005	mg/L
Chromium	0.05	mg/l
Cyanide	0.15	mg/L
Asbestos	7	MFL
Lead	0.015	mg/L
Fluoride	2	mg/L
Mercury	0.002	mg/L
Nickel	0.1	mg/L
Selenium	0.05	mg/L
Thallium	0.002	mg/L

NOTE: The "definite barrier" control component is a best available demonstrated control technology and as such, shall be specified by "brand name or equal" based upon such criteria and demonstrated "definite barrier" performance.

CHEMICAL

The chemical disinfection process (chlorine, ultra violet or ozone) shall consistently achieve the following levels of reduction for total coliform bacteria. Even though it is not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present and shall be controlled to the following level:

<u>BACTERIA</u>	<u>MCL</u>	<u>UNITS</u>
Coliform, Total (15 Tube MPN)	ZERO	MPN/100ml

The herein defined Green Standards of Performance continuously supersedes the Federal Primary Drinking Water Quality Standards and as such achieves the National Goal as defined within 33 USC 26 thereby providing for the maximum degree of effluent reduction and achieving a standard that permits no discharge of pollutants from the source either into a publicly owned treatment works (lateral) or an underground excavation (dispersal/disposal field). (33 USC 26, Sec. 1316)

NOTE: The contaminant levels less than the MCL are in compliance with the National Primary Drinking Water Regulations (NPDWRs), the Maximum Contaminant Level Goal (MCLG) Standard for drinking water quality. The

MCLGs define the level of a contaminant in water below which there is no known or expected risk to health (non-pollutant). NCLGs allow for a margin of safety and are non-enforceable public health goals.

4.0 The biological process (conventional pollutants) shall have been demonstrated to provide / achieve the following:

- Requires only a single basin secondary/tertiary process (environmental footprint)
- Tertiary (average less than 10/10/10 BOD/TSS/TN demonstrated over a six month period)
- Inherent hydraulic flow equalization (controlled decants disallowing washouts)
- Shall be a non-plug flow (not susceptible to washout conditions)
- Anti-washout capabilities (40Xs ADDF (average daily design flow)
- Inherent alkalinity recovery to “non acidic” pH levels (7.5 - 8.0)

5.0 Biological process (non-conventional pollutants) shall have been demonstrated to provide for inherent denitrification to consistently reduce toxic nitrosamine source pollutants to the following non-pollutant, i.e. Zero Discharge, levels:

- Total Nitrogen (TN) discharges to less than 8 mg/l
- Nitrate (NO³-N) discharges to less than 5 mg/l
- Nitrite (NO²-N) discharges to less than 1 mg/l
- pH (base) discharges to a level greater than 7.4

6.0 Beyond Tertiary Benefits: (Objectives of the U.S.C. Title 33 Chapter 26 shall be achieved)

A “definite barrier” is provided to prevent any possibility of pollutants being discharged either into an underground excavation (leach field) or into a publicly owned treatment works (sewer lateral) and:

- provides the “maximum degree” of effluent reduction by totally eliminating all point source “effluent” discharges at the source
- eliminates sewer flows and associated sewer user fees
- provides for ability for future recycle of water at source
- provides a sustainable alternative water source at each private point source at the same or better quality than the current public drinking water supply quality to serve the original water consumer’s beneficial reuse applications
- thereby substantially reducing the demand on our public drinking water supplies
- any water not recycled will remediate and replenish drinking water aquifers with pure water

Eliminates need for publicly owned treatment works and:

- associated discharge into such publicly owned treatment works from private point sources
- eliminates associated energy carbon footprint associated with publicly owned treatment works / collection laterals
- provides for the lowest possible environmental impact requiring no publicly right-of-way encroachment
- contains all pollutants at the source
- therefore preventing pollutants from migrating to cause water and other environmental pollution
- eliminates associated costs for publicly owned treatment works
- qualifies for federal grant assistance as a sustainable alternative water source

Control of PPCPs (“Pharmaceuticals and Personal Care Products”) reflecting the greatest degree of control at the source.

Must compare at least as “better” or “equal” on each and every performance criteria provided pursuant to 33 USC 26 Sec. 1314 as defined in the **“Official Comparator”** herein provided:

~ OFFICIAL COMPARATOR ~

DEMONSTRATED “GREEN STANDARDS” OF PERFORMANCE

Determined Achievable by the National Standards Enforcement Agency (“Administrator”)

U.S.C. Title 33 Chapter 26 §§ 1311 [\(b\)\(1\)](#), 1316 [\(a\)](#) and 1317 [\(b\)](#)

Each compared BADCT technology MUST qualify as “Equal” or “Better”. Any “Fail” disqualifies.

(Equal/Better/Fail)

FACTORS: (33USC26§1314(b))

AES TECHNOLOGY*

Conventional Pollutant Reduction:
(less than 10/10 BOD/TSS)

Tertiary

Toxic Pollutant Reduction:
Maximum levels:

Total Nitrogen (TN)

<8 mg/l

Ammonia (NH3 - N)

<2 mg/l

Nitrates (NO3 - N)

<4 mg/l

Fecal Coliform

<2 MPN

Endocrine Disruptors

ZERO

Demonstrated average levels of performance:

Total Nitrogen (TN)

<5 mg/l

Ammonia (NH3 - N)

<2 mg/l

Nitrates (NO3 - N)

<2 mg/l

Nitrites (NO2 - N)

<1 mg/l

Dissolved Oxygen (DO)

>2 mg/l

pH (base)

7.5 – 8.0

Fecal Coliform

<2 MPN

Endocrine Disruptors

ZERO

Cost (per Dwelling Unit Equivalent (DUE))

< \$25,000

Public Right-of-Way Encroachment

ZERO

Facilities Environmental Impact**

ZERO

Facilities Area Requirement

100

(sq. ft. / Dwelling Unit Equivalent, i.e. source)

Engineering Aspects Required

ZERO

Energy Consumption (KWH/lb BOD removed)

< 1

* The best available demonstrated control technology currently available and shall be specified by “brand name or equal”.

** Mitigates toxic methane gas (Greenhouse gas) emissions.