

# **Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category**

## Appendix J: Glossary

Full document available at  
<http://www.epa.gov/waterscience/guide/aquaculture>

## Glossary

**Aeration:** The process of bringing air into contact with a liquid by one or more of the following methods: (1) spraying the liquid into the air, (2) bubbling air through the liquid, and (3) agitating the liquid to promote absorption of oxygen through the air-liquid interface.

**Aerobic:** Having or occurring in the presence of free oxygen.

**Agronomic rates:** The land application of animal wastes at rates of application that provide the crop or forage growth with needed nutrients for optimum health and growth.

**Anaerobic:** Characterized by the absence of molecular oxygen, or capable of living and growing in the absence of oxygen, such as *anaerobic bacteria*.

**Aquaculture:** The propagation and rearing of aquatic species in controlled or selected environments.

**Aquatic animal production:** The production of aquatic animals under controlled or semicontrolled conditions.

**Benthic monitoring:** Monitoring conducted to ensure that degradation is not occurring under or around net pens.

**Best Available Technology Economically Achievable (BAT):** Technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. BAT effluent limitations guidelines,

in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

**Best Conventional Pollutant Control Technology (BCT):** Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, oil and grease. The BCT is established in light of a two-part “cost reasonableness” test, which compares the cost for an industry to reduce its pollutant discharge with the cost to a POTW for similar levels of reduction of a pollutant loading. The second test examines the cost-effectiveness of additional industrial treatment beyond BPT. EPA must find limits, which are reasonable under both tests before establishing them as BCT.

**Best management practices:** Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices that prevent or reduce pollution (Title 40 CFR Part 122.2).

**Best Practicable Control Technology Currently Available (BPT):** The first level of technology-based standards established by the CWA to control pollutants discharged to waters of the United States. BPT effluent limitations guidelines are generally based on the average of the best existing performance by plants within an industrial category or subcategory.

**Biosolids:** Waste material from an aquaculture operation, primarily fish manure and uneaten feed.

**Clean Water Act (CWA):** The Clean Water Act is an act passed by the U.S. Congress to control water pollution. It was formerly referred to as the Federal Water Pollution Control Act of 1972 or Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), 33 U.S.C. 1251 et. seq., as amended by: Public Law 96-483; Public Law 97- 117; Public Laws 95-217, 97-117, 97-440, and 100-04.

**Concentrated aquatic animal production (CAAP) facility:** A hatchery, fish farm, or other facility that contains, grows, or holds aquatic animals in either of the following categories, or that the Director designates as such on a case-by-case basis, and must apply for a National Pollutant Discharge Elimination System permit.

Coldwater fish species or other coldwater aquatic animals including, but not limited to, the Salmonidae family of fish (e.g., trout and salmon) in ponds, raceways, or other similar structures that discharge at least 30 days per year but does not include:

- (1) Facilities that produce less than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year and
- (2) Facilities that feed less than 2,272 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.

Warmwater fish species or other warmwater aquatic animals including, but not limited to, the Ameiuridae, Cetrachidae, and the Cyprinidae families of fish (e.g., respectively, catfish, sunfish, and minnows) in ponds, raceways, or similar structures that discharge at least 30 days per year, but does not include:

- (1) Closed ponds that discharge only during periods of excess runoff or
- (2) Facilities that produce less than 45,454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year.

**Drug:** Any substance, including medicated feed, that is added to a production facility to maintain or restore animal health and that subsequently might be discharged to waters of the United States.

**Effluent limitations guidelines (ELGs):** Under the Clean Water Act, section 502(11), any restriction, including schedules of compliance, established by a state or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents that are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean (Clean Water Act sections 301(b) and 304(b)).

**Excess feed:** Feed that is added to a production system, is not consumed, and is not expected to be consumed by the aquatic animals.

**Existing source:** Any facility from which there is or may be a discharge of pollutants, the construction of which is commenced before September 22, 2004.

**Extralabel use:** The use of a drug in any way that is not in accordance with approved labeling. Extralabel use may be allowed under specific conditions.

**Facility:** All contiguous property and equipment owned, operated, leased, or under the control of the same person or entity.

**Feed conversion ratio (FCR):** A measure of feeding efficiency that is calculated as the

ratio of the weight of feed applied to the weight of the fish produced.

**Flow-through systems:** A system designed for a continuous water flow to waters of the United States through chambers used to produce aquatic animals. Flow-through systems typically use either raceways or tank systems. Raceways are fed by nearby rivers or springs and are typically long, rectangular chambers at or below grade, constructed of earth, concrete, plastic, or metal. Tank systems are similarly fed and concentrate aquatic animals in circular or rectangular tanks above grade. The term does not include net pens.

**Groundwater:** Water in a saturated zone or stratum beneath the surface of land or water.

**Indirect discharger:** A facility that discharges or may discharge wastewaters into a publicly owned treatment works.

**National Pollutant Discharge Elimination System (NPDES) permit:** A permit to discharge wastewater into waters of the United States issued under the National Pollutant Discharge Elimination System, authorized by section 402 of the Clean Water Act.

**National Pollutant Discharge Elimination System (NPDES) program:** The NPDES program authorized by sections 307, 318, 402, and 405 of the Clean Water Act. It applies to facilities that discharge wastewater directly to U.S. surface waters.

**Navigable waters:** Traditionally, waters sufficiently deep and wide for navigation by all, or specified vessels; such waters in the United States come under federal jurisdiction and are protected by certain provisions of the Clean Water Act.

**Net pens and cage systems:** A culture system that uses suspended or floating

systems to culture fish or shellfish. These systems may be located along a shore or pier or may be anchored and floating offshore. Net pens and cages rely on tides, currents, and other natural water movement to provide a continual supply of high-quality water to the cultured animals.

**New Source Performance Standards (NSPS):** Technology-based standards for facilities that qualify as new sources under 40 CFR 122.2 and 40 CFR 122.29. Standards consider that the new source facility has an opportunity to design operations to more effectively control pollutant discharges.

**Outfall:** The mouth of the conduit drains and other conduits from which a facility effluent discharges into receiving waters.

**Pass through:** A discharge which exits the POTW into waters of the United States, or state of Washington, in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the city's NPDES permit including an increase in the magnitude or duration of a violation.

**Permitting authority:** The agency authorized to administer the National Pollutant Discharge Elimination System permitting program in a state or territory.

**Point source:** Any discernible, confined, and discrete conveyance from which pollutants are or may be discharged. See Clean Water Act section 502(14).

**Ponds:** Culture systems characterized by hydraulic retention times sufficiently long to allow natural processes to reduce metabolic waste concentrations. Commonly used to culture warm water fish, such as channel catfish.

**Pretreatment standards for existing sources (PSES) of indirect discharges:**

Under section 307(b) of the Clean Water Act, standards applicable (for this rule) to indirect dischargers that commenced construction prior to promulgation of the final rule.

**Pretreatment standards for new sources (PSNS):**

Under section 307(c) of the Clean Water Act, standards applicable to indirect dischargers that commence after promulgation of the final rule.

**Publicly owned treatment works**

**(POTW):** A treatment works as defined by section 212 of the Clean Water Act, which is owned by a state or municipality (as defined by section 502(4) of the Clean Water Act). This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances, only if they convey wastewater to a POTW. The term also means the municipality, as defined in section 502(4) of the Clean Water Act, that has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

**Quiescent zones:** Solids-collection zones placed at the end of a raceway tank to collect the settleable solids swept out of the fish-rearing area. They are the primary means for solids removal in flow-through raceways.

**Raceways:** Culture units in which water flows continuously, making a single pass through the unit before being discharged; these systems are also referred to as flow-through systems.

**Recirculating systems:** A system that filters and reuses water in which aquatic animals

are produced prior to discharge.

Recirculating systems typically use tanks, biological or mechanical filtration, and mechanical support equipment to maintain high-quality water to produce aquatic animals. These systems are highly intensive and require biological treatment within the system to prevent ammonia from accumulating to harmful levels.

**Sludge:** Settled sewage solids combined with varying amounts of water and dissolved materials that are removed from sewage by screening, sedimentation, chemical precipitation, or bacterial digestion.

**Wastewater treatment:** The processing of wastewater by physical, chemical, biological, or other means to remove specific pollutants from the wastewater stream, or to alter the physical or chemical state of specific pollutants in the wastewater stream. Treatment is performed for discharge of treated wastewater, recycle of treated wastewater to the same process that generated the wastewater, or reuse of the treated wastewater in another process.