drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.

T. Storm Water Discharges Associated With Industrial Activity From Treatment Works

## 1. Discharges Covered Under this Section

On November 16, 1990 (55 FR 47990), the U.S. Environmental Protection Agency (EPA) promulgated the regulatory definition of "storm water discharges associated with industrial activity." This definition includes point source discharges of storm water from eleven categories of facilities, including "\* \* \* (ix) treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 M.G.D. or more or required to have an approved pretreatment program under 40 CFR part 403.'

This section establishes special conditions for storm water discharges associated with industrial activity from treatment works treating domestic sewage with a design flow of 1.0 M.G.D. or more, or for treatment works that are required to have an approved pretreatment program under 40 CFR Part 403, or for those having land dedicated to the disposal of sewage sludge within the confines of the facility. Please note that storm water discharges from farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the Clean Water Act (CWA), are not currently regulated under the Federal storm water regulations.

When an industrial facility, described by the above coverage provisions of this section, has industrial activities being conducted onsite that meet the description(s) of industrial activities in

another section(s), that industrial facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to all applicable requirements in this section. The monitoring and pollution prevention plan terms and conditions of this multi-sector permit are additive for industrial activities being conducted at the same industrial facility (co-located industrial activities). The operator of the facility shall determine which other monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.

## 2. Industry Profile

Wastewater treatment plants remove organic and inorganic contaminants from domestic sewage and sludge. This section provides a description of the treatment processes for reducing pollutants in domestic sewage. The operations are basically the same at all treatment plants and may be categorized by three general processes: primary treatment, secondary treatment, and tertiary treatment.

Primary Treatment—The objective of primary treatment is the removal of settleable and suspended organic pollutants. This typically involves at least one of the following operations: screening, grit removal, and sedimentation. Chemical processes, such as disinfection, may also occur during primary treatment operations.

Secondary Treatment—The objective of secondary treatment is further removal of settleable solids and soluble organic matter. The operations employed during secondary treatment include biological oxidation via suspended growth or fixed film processes, such as activated sludge, rotating biological contractors or trickling filters.

Tertiary Treatment—The objectives of tertiary treatment include further treatment of wastewater, such as removal of suspended solids by filtration; removal of nutrients, such as phosphorus and nitrogen, typically through chemical additions and biological processes, or by selective ion exchange; and further removal of pollutants through activated carbon treatment.

Prior to discharge into a receiving water body, treated wastewater is disinfected using chlorination followed by dechlorination. Sludge produced during primary and secondary treatment is commonly combined, thickened, stabilized, and then mechanically dewatered. Sludge is aerobically or anaerobically stabilized by adjusting the pH with lime. This is followed by dewatering process where a polymer is added to condition the sludge for dewatering. Sludge is often stored onsite in piles exposed to weather, until final disposal (e.g., surface disposal, or incineration). When sludge is to be land applied, sludge drying beds or composting piles may be exposed to precipitation. In cases where sludge is incinerated onsite of the treatment plant, ash piles or impoundments may be exposed to precipitation.

## 3. Pollutants Found in Storm Water Discharges From Treatment Works

The impact of industrial activities at treatment works on storm water discharges will vary. Factors at a site which influence the water quality include geographic location, hydrogeology, the industrial activities exposed to storm water discharges, the facility's size, the types of pollution prevention measures/best management practices in place, and the type, duration, and intensity of storm events. Taken together or separately, these factors determine how polluted the storm water discharges will be at a given facility. For example, caustic soda may be significant source of pollutants at some facilities, while incinerator ash may be the primary pollutant source at others. Additionally, pollutant sources other than storm water, such as illicit connections, spills, and other improperly dumped materials, may increase the pollutant loading discharged into Waters of the United States.

Table T-1 lists industrial activities that commonly occur at treatment works, common pollutant sources at these facilities, and pollutants that are associated with these sources. Table T-1 identifies parameters as potential pollutants of concern associated with facilities covered by this section.

TABLE T-1.—DESCRIPTION OF INDUSTRIAL ACTIVITIES, POTENTIAL POLLUTANT SOURCES, AND POSSIBLE POLLUTANTS

Activity	Pollutant source	Pollutant
Preparation of biological and physical treatment processes.	Spills and leaks of process chemicals	Disinfectants, polymers and coagulants, alum, ferric chloride, soda ash, lime, sodium aluminate, sodium hypochlorite, caustic soda.