

# Chapter 173-240 WAC

## SUBMISSION OF PLANS AND REPORTS FOR CONSTRUCTION OF WASTEWATER FACILITIES

### WAC

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173-240-105 Form—Certificate of construction of water pollution control facilities. [Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-105, filed 1/23/79. Formerly chapter 372-20 WAC.] Repealed by WSR 83-23-063 (Order DE 83-30), filed 11/16/83. Statutory Authority: Chapters 43.21A and 90.48 RCW.

**WAC 173-240-010 Purpose and scope.** The purpose of this chapter is to implement RCW 90.48.110. The department interprets "plans and specifications" as mentioned in RCW 90.48.110 as including "engineering reports," "plans and specifications," and "general sewer plans," all as defined in WAC 173-240-020. This chapter also includes provisions for review and approval of proposed methods of operation and maintenance.

[Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-010, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-010, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-020 Definitions.** (1) "Approval" means written approval.

(2) "Construction quality assurance plan" means a plan describing the methods by which the professional engineer in responsible charge of inspection of the project will determine that the facilities were constructed without significant change from the department approved plans and specifications.

(3) "Department" means the Washington state department of ecology.

(4) "Domestic wastewater" means water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments or other places, together with the groundwater infiltration or surface waters that may be present.

(5) "Domestic wastewater facility" means all structures, equipment, or processes required to collect, carry away, treat, reclaim or dispose of domestic wastewater together with the industrial waste that may be present. In the case of subsurface sewage treatment and disposal, the term is restricted to mean those facilities treating and disposing of domestic wastewater only from:

(a) A septic tank system with subsurface sewage treatment and disposal and an ultimate design capacity exceeding fourteen thousand five hundred gallons per day at any common point; or

(b) A mechanical treatment system or lagoon followed by subsurface disposal with an ultimate design capacity exceeding three thousand five hundred gallons per day at any common point.

Where the proposed system using subsurface disposal has received a state construction grant or a federal construction grant under the Federal Water Pollution Control Act as amended, such a system is a "domestic wastewater facility" regardless of size.

(6) "Engineering report" means a document that thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130. In the case of a domestic wastewater facility project, the report describes the recommended financing method.

The facility plan described in federal regulation 40 C.F.R. 35 is an "engineering report." This federal regulation describes the Environmental Protection Agency's municipal wastewater construction grants program.

(7) "General sewer plan" means the:

(a) Sewerage general plan adopted by counties under chapter 36.94 RCW; or

(b) Comprehensive plan for a system of sewers adopted by sewer districts under chapter 56.08 RCW; or

(c) Plan for a system of sewerage adopted by cities under chapter 35.67 RCW; or

(d) Comprehensive plan for a system of sewers adopted by water districts under chapter 57.08 RCW; or

(e) Plan for sewer systems adopted by public utility districts under chapter 54.16 RCW and by port districts under chapter 53.08 RCW.

(f) The "general sewer plan" is a comprehensive plan for a system of sewers adopted by a local government entity. The

plan includes the items specified in each respective statute. It includes the general location and description of treatment and disposal facilities, trunk and interceptor sewers, pumping stations, monitoring and control facilities, local service areas and a general description of the collection system to serve those areas. The plan also includes preliminary engineering in adequate detail to assure technical feasibility, provides for the method of distributing the cost and expense of the sewer system, and indicates the financial feasibility of plan implementation.

(8) "Industrial wastewater" means the water or liquid that carries waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feedlots, poultry houses, or dairies. The term includes contaminated stormwater and also leachate from solid waste facilities.

(9) "Industrial wastewater facility" means all structures, equipment, or processes required to collect, carry away, treat, reclaim or dispose of industrial wastewater.

(10) "Owner" means the state, county, city, town, federal agency, corporation, firm, company, institution, person or persons, or any other entity owning a domestic or industrial wastewater facility.

(11) "Plans and specifications" means the detailed drawings and specifications used in the construction or modification of domestic or industrial wastewater facilities. Except as otherwise allowed, plans and specifications are preceded by an approved engineering report. For some industrial facilities final conceptual drawings for all or parts of the system may be substituted for plans and specifications with the permission of the department.

(12) "Sewerage system" means a system of sewers and appurtenances for the collection, transportation, pumping, treatment and disposal of domestic wastewater together with industrial waste that may be present. By definition a sewerage system is a "domestic wastewater facility."

(13) "Sewer line extension" means any pipe added or connected to an existing sewerage system, together with any pump stations: Provided, That the term does not include gravity side sewers that connect individual building or dwelling units to the sewer system when these side sewers are less than one hundred fifty feet in length and not over six inches in diameter.

(14) "Subsurface sewage treatment and disposal" means the physical, chemical, or bacteriological treatment and disposal of domestic wastewater within the soil profile by placement beneath the soil surface in trenches, beds, seepage pits, mounds, or fills.

(15) "Waters of the state" means all lakes, rivers, ponds, streams, inland waters, groundwaters, salt waters, and all other waters and watercourses within the jurisdiction of the state of Washington.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-020, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-020, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-020, filed 1/23/79. Formerly WAC 372-20-010.]

## DOMESTIC WASTEWATER FACILITIES

### WAC 173-240-030 Submission of plans and reports.

(1) Before constructing or modifying domestic wastewater facilities, engineering reports and plans and specifications for the project must be submitted to and approved by the department, except as noted in WAC 173-240-030(5).

(2) All reports and plans and specifications must be submitted by the owner or the owner's authorized representative consistent with a compliance schedule issued by the department or at least sixty days before the time approval is desired.

(3) Construction or modification of domestic wastewater facilities shall conform to the following schedule of tasks unless otherwise modified by these rules:

(a) Submission and approval of engineering report;

(b) Submission and approval of plans and specifications;

(c) Submission and approval of construction quality assurance plan;

(d) Submission and approval of draft operation and maintenance manual;

(e) Declaration of completion of construction by the project engineer; and

(f) Submission of complete operation and maintenance manual.

(4) Where two or more years has lapsed since approval of the engineering report or plans and specifications and construction has not begun, it may be necessary to update that document to reflect changed conditions such as: Water quality, services availability, regulatory requirements, or engineering technology.

(5) If the local government entity has received department approval of a general sewer plan and standard design criteria, engineering reports and plans and specifications for sewer line extensions, including pump stations, are not required to be submitted for approval. In this case the entity need only provide a description of the project and written assurance that the extension is in conformance with the general sewer plan. However, in the following situations specific department approval is necessary for sewer line extensions before construction:

(a) The proposed sewers, or pump stations involve installation of overflows or bypasses; or

(b) The proposed sewers, pump or lift stations discharge to an overloaded treatment, collection, or disposal facility.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-030, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-030, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-030, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-035 Restrictions—Subsurface disposal systems.** Domestic wastewater facilities using subsurface sewage treatment and disposal, as defined in WAC 173-240-020(5), are prohibited except under those extraordinary circumstances where no other reasonable alternatives exist and: Providing that

(1) The facility is owned, operated, and maintained by a public entity, except as noted in WAC 173-240-104; and

(2) Adequate facility construction oversight is provided by the public entity; and

(3) The proposed project is consistent with local health and land use rules; and

(4) Loading rates do not exceed 1,570 gallons per day per acre of gross land area in medium sands or finer grained soils and may not exceed 900 gallons per day per acre of gross land in coarser grained soils or other soils where conditions do not provide for adequate treatment. For the purposes of this section gross land area is defined as the contiguous land area of a proposed development that might include the centerline of adjoining road or street right-of-ways.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-035, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-035, filed 11/16/83.]

**WAC 173-240-040 Review standards.** (1) The department will review general sewer plans, engineering reports, plans and specifications, and operation and maintenance manuals for domestic wastewater facilities to determine whether the proposed facilities will be designed, constructed, operated, and maintained to meet effluent limitations and other requirements of an NPDES or state waste discharge permit, if applicable, and to meet the policies and requirements of chapters 90.48 and 90.54 RCW pertaining to prevention and control of pollution of waters of the state.

(2) In addition to the above, the department will review documents submitted under this chapter to determine whether they are reasonably consistent with the appropriate sections of the state of Washington, "Criteria for sewage works design." Additional references may include, but are not limited to, the following:

(a) Manuals of Practice, Water Pollution Control Federation.

(b) Manuals of Engineering Practice, American Society of Civil Engineering.

(c) Standard Specifications for Municipal Public Works Construction, American Public Works Association.

(d) Considerations for Preparation of Operation and Maintenance Manuals, United States Environmental Protection Agency.

(e) Process Design Manuals, United States Environmental Protection Agency.

(f) Design Criteria for Mechanical, Electric, and Fluid System and Component Reliability, United States Environmental Protection Agency.

(g) Design Manual: Onsite Wastewater Treatment and Disposal Systems, U.S.E.P.A. October 1980.

(h) Guidelines for Larger On-Site Sewage Disposal Systems, Washington State Department of Social and Health Services and Department of Ecology.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-040, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-040, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-040, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-050 General sewer plan.** (1) All general sewer plans required of any governmental agency before providing sewer service are "plans" within the requirements of RCW 90.48.110. Three copies of the proposed general sewer plan and each amendment to it must be submitted to

and approved by the department before implementing the plan.

(2) The general sewer plan must be sufficiently complete so that engineering reports can be developed from it without substantial alterations of concept and basic considerations.

(3) The general sewer plan shall include the following information together with any other relevant data as requested by the department. To satisfy the requirements of the local government jurisdiction, additional information may be necessary.

(a) The purpose and need for the proposed plan.

(b) A discussion of who will own, operate, and maintain the systems.

(c) The existing and proposed service boundaries.

(d) Layout map including the following:

(i) Boundaries. The boundary lines of the municipality or special district to be sewered, including a vicinity map;

(ii) Existing sewers. The location, size, slope, capacity, direction of flow of all existing trunk sewers, and the boundaries of the areas served by each;

(iii) Proposed sewers. The location, size, slope, capacity, direction of flow of all proposed trunk sewers, and the boundaries of the areas to be served by each;

(iv) Existing and proposed pump stations and force mains. The location of all existing and proposed pumping stations and force mains, designated to distinguish between those existing and proposed;

(v) Topography and elevations. Topography showing pertinent ground elevations and surface drainage must be included, as well as proposed and existing streets;

(vi) Streams, lakes, and other bodies of water. The location and direction of flow of major streams, the high and low elevations of water surfaces at sewer outlets, and controlled overflows, if any. All existing and potential discharge locations should be noted; and

(vii) Water systems. The location of wells or other sources of water supply, water storage reservoirs and treatment plants, and water transmission facilities.

(e) The population trend as indicated by available records, and the estimated future population for the stated design period. Briefly describe the method used to determine future population trends and the concurrence of any applicable local or regional planning agencies.

(f) Any existing domestic or industrial wastewater facilities within twenty miles of the general plan area and within the same topographical drainage basin containing the general plan area.

(g) A discussion of any infiltration and inflow problems and a discussion of actions that will alleviate these problems in the future.

(h) A statement regarding provisions for treatment and discussion of the adequacy of the treatment.

(i) List of all establishments producing industrial wastewater, the quantity of wastewater and periods of production, and the character of the industrial wastewater insofar as it may affect the sewer system or treatment plant. Consideration must be given to future industrial expansion.

(j) Discussion of the location of all existing private and public wells, or other sources of water supply, and distribution structures as they are related to both existing and proposed domestic wastewater treatment facilities.

(k) Discussion of the various alternatives evaluated, and a determination of the alternative chosen, if applicable.

(l) A discussion, including a table, that shows the cost per service in terms of both debt service and operation and maintenance costs, of all facilities (existing and proposed) during the planning period.

(m) A statement regarding compliance with any adopted water quality management plan under the Federal Water Pollution Control Act as amended.

(n) A statement regarding compliance with the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA), if applicable.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-050, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-050, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-050, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-060 Engineering report.** (1) The engineering report for a domestic wastewater facility shall include each appropriate (as determined by the department) item required in WAC 173-240-050 for general sewer plans unless an up-to-date general sewer plan is on file with the department. Normally, an engineering report is not required for sewer line extensions or pump stations. See WAC 173-240-020(13) and 173-240-030(5). The facility plan described in federal rule 40 C.F.R. 35 is an "engineering report."

(2) The engineering report must be sufficiently complete so that plans and specifications can be developed from it without substantial changes. Three copies of the report must be submitted to the department for approval, except as waived under WAC 173-240-030(5).

(3) The engineering report shall include the following information together with any other relevant data as requested by the department:

(a) The name, address, and telephone number of the owner of the proposed facilities, and the owner's authorized representative.

(b) A project description that includes a location map and a map of the present and proposed service area.

(c) A statement of the present and expected future quantity and quality of wastewater, including any industrial wastes that may be present or expected in the sewer system.

(d) The degree of treatment required based upon applicable permits and rules, the receiving body of water, the amount and strength of wastewater to be treated, and other influencing factors.

(e) A description of the receiving water, applicable water quality standards, and how water quality standards will be met outside any applicable dilution zone.

(f) The type of treatment process proposed, based upon the character of the wastewater to be handled, the method of disposal, the degree of treatment required, and a discussion of the alternatives evaluated and the reasons they are unacceptable.

(g) The basic design data and sizing calculations of each unit of the treatment works. Expected efficiencies of each unit and also of the entire plant, and character of effluent anticipated.

(h) Discussion of the various sites available and the advantages and disadvantages of the site or sites recommended. The proximity of residences or developed areas to any treatment works. The relationship of the twenty-five-year and one hundred-year flood to the treatment plant site and the various plant units.

(i) A flow diagram that shows general layout of the various units, the location of the effluent discharge, and a hydraulic profile of the system that is the subject of the engineering report and any hydraulically related portions.

(j) A discussion of infiltration and inflow problems, overflows and bypasses, and proposed corrections and controls.

(k) A discussion of any special provisions for treating industrial wastes, including any pretreatment requirements for significant industrial sources.

(l) Detailed outfall analysis or other disposal method selected.

(m) A discussion of the method of final sludge disposal and any alternatives considered.

(n) Provision for future needs.

(o) Staffing and testing requirements for the facilities.

(p) An estimate of the costs and expenses of the proposed facilities and the method of assessing costs and expenses. The total amount shall include both capital costs and also operation and maintenance costs for the life of the project, and must be presented in terms of total annual cost and present worth.

(q) A statement regarding compliance with any applicable state or local water quality management plan or any plan adopted under the Federal Water Pollution Control Act as amended.

(r) A statement regarding compliance with the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA), if applicable.

(4) The engineering report for projects that use land application, including seepage lagoons, irrigation, and subsurface disposal, shall include information on the following together with appropriate parts of subsection (3) of this section, as determined by the department:

(a) Soils and their permeability;

(b) Geohydrologic evaluation of factors such as:

(i) Depth to groundwater and groundwater movement during different times of the year;

(ii) Water balance analysis of the proposed discharge area;

(iii) Overall effects of the proposed facility upon the groundwater in conjunction with any other land application facilities that may be present;

(c) Availability of public sewers;

(d) Reserve areas for additional subsurface disposal.

(5) The engineering report for projects funded by the Environmental Protection Agency shall, in addition to the requirements of subsection (3) or (4) of this section, follow EPA facility plan guidelines contained in the EPA publication, "Guidance for Preparing a Facility Plan" (MCD-46), and shall indicate how the special requirements contained in 40 C.F.R. 35.719-1 will be met.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-060, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-060,

filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-060, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-070 Plans and specifications.** (1) The plans and specifications for a domestic wastewater facility are the detailed construction documents by which the owner or his or her contractor bid and construct the facility. The content and format of the plans and specifications must be as stated in the state of Washington, "Criteria for sewage works design," and shall include a list of the facility design criteria and a plan for interim operation of facilities during construction.

(2) Plans and specifications for sewer line extensions shall include, as a separate report, an analysis of the existing collection and treatment system's ability to transport and treat additional flow and loading.

(3) Two copies of the plans and specifications must be submitted to the department for approval before starting construction, except as waived under WAC 173-240-030(5).

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-070, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-070, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-070, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-075 Construction quality assurance plan.** (1) Before construction a detailed plan must be submitted to the department that shows how adequate and competent construction inspection will be provided.

(2) The construction quality assurance plan shall include a:

(a) Construction schedule with a summary of planned construction activities, their sequence, interrelationships, durations, and terminations.

(b) Description of the construction management organization, management procedures, lines of communication, and responsibility.

(c) Description of anticipated quality control testing that includes type of test, frequency, and who will perform the tests.

(d) Description of the change order process that includes who will initiate change orders, as well as who will review, negotiate, and approve change orders.

(e) Description of the technical records handling methodology that includes where plans and specifications, as-built drawings, field orders, and change orders will be kept.

(f) Description of the construction inspection program that includes inspection responsibility, anticipated inspection frequency, deficiency resolution, and inspector qualifications.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-075, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-075, filed 11/16/83.]

**WAC 173-240-080 Operation and maintenance manual.** (1) The proposed method of operation and maintenance of the domestic wastewater facility must be stated in the engineering report or plans and specifications and must be approved by the department. The statement must be a discus-

(7/11/00)

sion of who will own, operate, and maintain the facility and what the staffing and testing requirements are. The owner shall follow the approved method of operation after the facility is constructed, unless changes have been approved by the department.

(2) In those cases where the facility includes mechanical components, a detailed operation and maintenance manual must be prepared before completing the construction. The purpose of the manual is to present technical guidance and regulatory requirements to the operator to enhance operation under both normal and emergency conditions. Two copies of the manual must be submitted to the department for approval before completing the construction.

(3) In order to assure proper operation during construction and timely review and approval of the final operation and maintenance manual, a draft manual must be submitted in the early stages of the construction of a facility. In addition, manufacturer's information on equipment must be available to the plant operator before unit start up.

(4) The operation and maintenance manual shall include the following list of topics. For those projects funded by the Environmental Protection Agency the manual shall also follow the requirements of the EPA publication, "Considerations for Preparation of Operation and Maintenance Manuals."

(a) The assignment of managerial and operational responsibilities, including plant classification and classification of required operators.

(b) A description of plant type, flow pattern, operation, and efficiency expected.

(c) The principal design criteria.

(d) A process description of each plant unit, including function, relationship to other plant units, and schematic diagrams.

(e) A discussion of the detailed operation of each unit and description of various controls, recommended settings, fail-safe features, etc.

(f) A discussion of how the treatment facilities are to be operated during anticipated maintenance procedures, and under less than design loading conditions, if applicable, such as initial loading on a system designed for substantial growth.

(g) A section on laboratory procedures, including sampling techniques, monitoring requirements, and sample analysis.

(h) Recordkeeping procedures and sample forms to be used.

(i) A maintenance schedule that incorporates manufacturer's recommendations, preventative maintenance and housekeeping schedules, and special tools and equipment usage.

(j) A section on safety.

(k) A section that lists the spare parts inventory, address of local suppliers, equipment warranties, and appropriate equipment catalogues.

(l) Emergency plans and procedures.

(5) In those cases where the facility does not include mechanical components, an operation and maintenance manual, which may be less detailed than that described in subsection (4) of this section, must be submitted to the department for approval before completing construction. The manual shall fully describe the treatment and disposal system and

outline routine maintenance procedures needed for proper operation of the system.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-080, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-080, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-080, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-090 Declaration of construction completion.** (1) Within thirty days after acceptance by the owner of the construction or modification of a domestic wastewater facility, the professional engineer in responsible charge of inspection of the project shall submit to the department:

- (a) One complete set of record drawings or as-builts;
- (b) A declaration stating the facilities were constructed in accordance with the provisions of the construction quality assurance plan and without significant change from the department approved plans and specifications.

(2) The declaration will be furnished by the department and will be the same form as WAC 173-240-095, declaration of construction of water pollution control facilities. The submission of the declaration is not necessary for sewer line extensions where the local government entity has received approval of a general sewer plan and standard design criteria.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-090, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-090, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-090, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-095 Form—Declaration of construction of water pollution control facilities.**

DECLARATION OF CONSTRUCTION OF WATER POLLUTION CONTROL FACILITIES

Instructions:

- A. Upon completion, and before using any project or portions thereof, a professional engineer shall complete and sign this form, declaring that the project was constructed in accordance with the provisions of the construction quality assurance plan and with the plans and specifications and major change orders approved by the department of ecology.
- B. If a project is being completed in phased construction, a map must be attached showing that portion of the project to which the declaration applies. A declaration of construction must be submitted for each phase of a project as it is completed. Additional declaration forms are available upon request from the department of ecology offices listed below.

NAME AND BRIEF DESCRIPTION OF PROJECT: .....

NAME OF OWNER ..... DOE PROJECT NO. ....

ADDRESS ..... DATE PROJECT OR PHASE COMPLETED .....

CITY ..... STATE ..... ZIP .....

DOE PLAN AND SPECIFICATION APPROVAL DATE .....

I hereby declare that I am the project engineer of the above identified project and that the project was reviewed and observed by me or my authorized agent in accordance with the provisions of the construction quality assurance plan. I further declare that the project was, to the best of my knowledge and information, constructed and completed in accordance with the plans and specification and major change orders approved by the department of ecology and as shown on the owner's "as-built" plans.

..... SEAL

Signature of Professional Engineer

OF

DATE ..... ENGINEER

Please return completed form to the department of ecology office checked below.

- SW Regional Office  
Department of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600
- Central Regional Office  
Department of Ecology  
15 W. Yakima Ave.,  
Suite 200  
Yakima, WA 98902-3401
- NW Regional Office  
Department of Ecology  
3190 160th Ave. S.E.  
Bellevue, WA 98008-5452
- Eastern Regional Office  
Department of Ecology  
N. 4601 Monroe,  
Ste. 100  
Spokane, WA 99205-1295
- Water Quality Program  
Department of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-095, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-095, filed 11/16/83.]

**WAC 173-240-100 Requirement for certified operator.** Each owner of a domestic wastewater treatment facility is required by chapter 70.95B RCW to have an operator, certified by the state, in responsible charge of the day to day operation of the facility. This requirement does not apply to a septic tank using subsurface disposal. The certification procedures are set forth in chapter 173-230 WAC.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-100, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-100, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-100, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-104 Ownership and operation and maintenance.** (1) Except as provided in subsections (2) and (3) of this section, domestic sewage facilities will not be approved unless ownership and responsibility for operation

and maintenance is by a public entity. If a waste discharge permit is required it must be issued to the public entity. Nothing in this rule precludes a public entity from contracting operation and maintenance of domestic sewage facilities.

(2) Ownership by nonpublic entities may be approved if the department determines the ownership is in the public interest: Provided, That there is an enforceable contract, approved by the department, between the nonpublic entity and a public entity with an approved sewer general plan that will assure immediate assumption of the system under the following conditions:

(a) Treatment efficiency is unsatisfactory either as a result of plant capacity or physical operation; or

(b) If such an assumption is necessary for the implementation of a general sewer plan.

(3) The following domestic wastewater facilities would not require public entity ownership, operation, and maintenance:

(a) Those facilities existing or approved for construction as of the effective date of this section, until such a time the facility is expanded to accommodate additional development.

(b) Those facilities which serve a single nonresidential, industrial, or commercial establishment. Commercial/industrial complexes serving multiple owners or tenants and multiple residential dwelling facilities such as mobile home parks, apartments, and condominiums are not considered commercial establishments for the purpose of this section.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-104, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-104, filed 11/16/83.]

## INDUSTRIAL WASTEWATER FACILITIES

### WAC 173-240-110 Submission of plans and reports.

(1) Before constructing or modifying industrial wastewater facilities, engineering reports and plans and specifications for the project must be submitted to and approved by the department.

(2) All engineering reports and plans and specifications should be submitted by the owner consistent with a compliance schedule issued by the department or at least thirty days before the time approval is desired. The department will generally review and either approve (or conditionally approve), comment on, or disapprove those plans and reports within the thirty-day period unless circumstances prevent, in which case the owner will be notified and informed of the reason for the delay.

(3) Construction or modification of industrial wastewater facilities shall conform to the following schedule of tasks unless waived in accordance with subsection (5).

(a) Submission and approval of an engineering report;

(b) Submission and approval of plans and specifications;

(c) Submission of an operation and maintenance manual.

(4) Where two or more years has elapsed since approval of the engineering report or plans and specifications, it may be necessary to update that document to reflect changed water quality conditions, regulatory requirements, or engineering technology.

(5) Upon request by the owner, the department may waive the requirement for a three step submission of docu-

ments for industrial facilities. In such a case the department will require instead conceptual plans that also include the appropriate (as determined by the department) information from the engineering report and an operation and maintenance manual.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-110, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-110, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-110, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-120 Review standards.** The department will review engineering reports, plans and specifications, and operation and maintenance manuals for industrial wastewater facilities to:

(1) Determine whether the proposed facilities will be designed, constructed, operated and maintained to meet effluent limitations and other requirements of an NPDES or state waste discharge permit, if applicable; and

(2) To meet the policies and requirements of chapters 90.48 and 90.54 RCW pertaining to prevention and control of pollution of waters of the state; and

(3) To determine whether the facility will be designed, constructed, and operated consistent with good engineering practices.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-120, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-120, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-120, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-130 Engineering report.** (1) The engineering report for an industrial wastewater facility must be sufficiently complete so that plans and specifications can be developed from it without substantial changes. Two copies of the report must be submitted to the department for approval.

(2) The engineering report shall include the following information together with any other relevant data as requested by the department:

(a) Type of industry or business;

(b) The kind and quantity of finished product;

(c) The quantity and quality of water used by the industry and a description of how it is consumed or disposed of, including:

(i) The quantity and quality of all process wastewater and method of disposal;

(ii) The quantity of domestic wastewater and how it is disposed of;

(iii) The quantity and quality of noncontact cooling water (including air conditioning) and how it is disposed of; and

(iv) The quantity of water consumed or lost to evaporation.

(d) The amount and kind of chemicals used in the treatment process, if any;

(e) The basic design data and sizing calculations of the treatment units;

(f) A discussion of the suitability of the proposed site for the facility;

- (g) A description of the treatment process and operation, including a flow diagram;
- (h) All necessary maps and layout sketches;
- (i) Provisions for bypass, if any;
- (j) Physical provision for oil and hazardous material spill control or accidental discharge prevention or both;
- (k) Results to be expected from the treatment process including the predicted wastewater characteristics, as shown in the waste discharge permit, where applicable;
- (l) A description of the receiving water, location of the point of discharge, applicable water quality standards, and how water quality standards will be met outside of any applicable dilution zone;
- (m) Detailed outfall analysis;
- (n) The relationship to existing treatment facilities, if any;
- (o) Where discharge is to a municipal sewerage system, a discussion of that system's ability to transport and treat the proposed industrial waste discharge without exceeding the municipality's allocated industrial capacity. Also, a discussion on the effects of the proposed industrial discharge on the use or disposal of municipal sludge;
- (p) Where discharge is through land application, including seepage lagoons, irrigation, and subsurface disposal, a geohydrologic evaluation of factors such as:
  - (i) Depth to groundwater and groundwater movement during different times of the year;
  - (ii) Water balance analysis of the proposed discharge area;
  - (iii) Overall effects of the proposed facility upon the groundwater in conjunction with any other land application facilities that may be present;
- (q) A statement expressing sound engineering justification through the use of pilot plant data, results from other similar installations, or scientific evidence from the literature, or both, that the effluent from the proposed facility will meet applicable permit effluent limitations or pretreatment standards or both;
- (r) A discussion of the method of final sludge disposal selected and any alternatives considered with reasons for rejection;
- (s) A statement regarding who will own, operate, and maintain the system after construction;
- (t) A statement regarding compliance with any state or local water quality management plan or any plan adopted under the Federal Water Pollution Control Act as amended;
- (u) Provisions for any committed future plans;
- (v) A discussion of the various alternatives evaluated, if any, and reasons they are unacceptable;
- (w) A timetable for final design and construction;
- (x) A statement regarding compliance with the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA), if applicable;
- (y) Additional items to be included in an engineering report for a solid waste leachate treatment system are:
  - (i) A vicinity map and also a site map that shows topography, location of utilities, and location of the leachate collection network, treatment systems, and disposal;
  - (ii) Discussion of the solid waste site, working areas, soil profile, rainfall data, and groundwater movement and usage;

(ii) A statement of the capital costs and the annual operation and maintenance costs;

(iv) A description of all sources of water supply within two thousand feet of the proposed disposal site. Particular attention should be given to showing impact on usable or potentially usable aquifers.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-130, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-130, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-130, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-140 Plans and specifications.** (1) Upon request of the owner the department may, at its discretion, allow submission of conceptual plans for industrial facilities, as noted in WAC 173-240-110(5). Two copies of the plans and specifications must be submitted to the department for approval before the start of construction.

(2) The plans and specifications shall include the following information together with any other relevant data as requested by the department:

(a) Repeat presentation of the basic engineering design criteria from the engineering report.

(b) If there are any deviations from the concepts of the engineering report, an explanation of the changes that includes as much detail as would have been provided in an engineering report.

(c) The plan and section drawings of major components, such as the treatment units, pump stations, flow measuring devices, sludge handling equipment, and influent and effluent piping. Foundations or soil preparation or both should be shown for major structures.

(d) A general site drawing that shows the location with respect to the entire plant site and a detailed site drawing that shows the component siting.

(e) A schematic drawing that shows flows that include: In plant collection, and wastewater pumping, treatment, and discharge.

(f) A hydraulic profile that shows head under maximum flows. This requirement may be waived where the three step submission of documents has been waived under WAC 173-240-110(5).

(g) Instrumentation, controls, and sampling schematics.

(h) General operating procedures, such as startup, shut-down, spills, etc.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-140, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-140, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-140, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-150 Operation and maintenance manual.** (1) A detailed operation and maintenance manual must be prepared for an industrial wastewater facility that includes mechanical components before completing the construction. The manual is to be submitted to the department for review and approval. The purpose of the manual is to present technical guidance and regulatory requirements to the operator to enhance operation under both normal and emergency conditions.



(2) The operation and maintenance manual shall include the following topics:

(a) The names and phone numbers of the responsible individuals.

(b) A description of plant type, flow pattern, operation, and efficiency expected.

(c) The principal design criteria.

(d) A process description of each plant unit, that includes function, relationship to other plant units, and schematic diagrams.

(e) An explanation of the operational objectives for the various wastewater parameters, such as sludge age, settleability, etc.

(f) A discussion of the detailed operation of each unit and a description of various controls, recommended settings, fail-safe features, etc.

(g) A discussion of how the facilities are to be operated during anticipated startups and shutdowns, maintenance procedures, and less than design loading conditions, so as to maintain efficient treatment.

(h) A section on laboratory procedures that includes sampling techniques, monitoring requirements, and sample analysis.

(i) Recordkeeping procedures and sample forms to be used.

(j) A maintenance schedule that incorporates manufacturer's recommendations, preventative maintenance and housekeeping schedules, and special tools and equipment usage.

(k) A section on safety.

(l) A section that contains the spare parts inventory, address of local suppliers, equipment warranties, and appropriate equipment catalogues.

(m) Emergency plans and procedures.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-150, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-150, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-150, filed 1/23/79. Formerly chapter 372-20 WAC.]

## DOMESTIC AND INDUSTRIAL WASTEWATER FACILITIES

**WAC 173-240-160 Requirement for professional engineer.** (1) All required engineering reports, and plans and specifications for the construction or modification of wastewater facilities must be prepared under the supervision of a professional engineer licensed in accordance with chapter 18.43 RCW. All copies of these documents submitted to the department for review shall bear the seal of the professional engineer under whose supervision they have been prepared.

(2) Upon request of the owner, the department may waive the above requirement for construction or modification at industrial wastewater facilities.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-160, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-160, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-160, filed 1/23/79. Formerly chapter 372-20 WAC.]

(7/11/00)

**WAC 173-240-170 Right of inspection.** Under RCW 90.48.090, the department or its authorized representative has the right to enter at all reasonable times in or upon any property, public or private, for the purposes of inspection or investigation relating to the pollution or possible pollution of the waters of the state, including the inspection of construction activities related to domestic or industrial wastewater facilities.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-170, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-170, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-170, filed 1/23/79. Formerly chapter 372-20 WAC.]

**WAC 173-240-180 Approval of construction changes.** All wastewater facilities subject to the provisions of this rule must be constructed in accordance with the plans and specifications approved by the department. Any contemplated changes during construction, which are significant deviations from the approved plans, must first be submitted to the department for approval.

[Statutory Authority: RCW 90.48.110. WSR 00-15-021 (Order 00-09), § 173-240-180, filed 7/11/00, effective 8/11/00. Statutory Authority: Chapters 43.21A and 90.48 RCW. WSR 83-23-063 (Order DE 83-30), § 173-240-180, filed 11/16/83. Statutory Authority: RCW 90.48.110. WSR 79-02-033 (Order DE 78-10), § 173-240-180, filed 1/23/79. Formerly chapter 372-20 WAC.]