

Part XVI
CONSTRUCTION PERMITS

§1601 PURPOSE

Pursuant to subchapter 5 of NNSDWA, the Director shall review plans, specifications, and other pertinent data to ensure proper design and construction of new public water systems and of substantial modifications to existing public water systems. This part of the NNPDR establishes procedures and requirements for obtaining construction permits from the NNEPA to enable such review.

§1602 APPLICABILITY

These regulations apply to all new public water systems, substantial modifications to existing public water systems, and bottled water systems within the jurisdiction of the Navajo Nation.

§1603 REQUIREMENTS FOR CONSTRUCTION PERMITS

- A. Before the construction of any new public water system or bottled water system or of any substantial modification to an existing public water system begins, an application for a permit to construct shall be made to, and a permit to construct obtained from, the Director. In addition, the PWSSP must be notified of the construction start date at least seven (7) days in advance of that date. Failure to obtain a permit to construct is a violation of the NNSDWA (Subchapter 7) and is subject to an enforcement action by the Director.
- B. The application for a permit to construct shall include the following:
1. A completed application form obtained from the Director;
 2. Appropriate fee, as determined by the Director;
 3. Two (2) sets of detailed plans, as required in §1606;
 4. Two (2) sets of material and construction specifications, as required in §1607;
 5. Engineering Report, as required in §1608;
 6. Two (2) copies of wellhead/watershed protection area inventory;
 7. A copy of Right-of-way approval;
 8. Construction Schedule;
 9. If the owner of the project is different from the utility supplying water, a letter from the utility supplying water stating its willingness and ability to serve the project; and,
 10. If the owner of the project is different from the utility that will be responsible for operating and maintaining the project, a letter from that utility acknowledging such responsibility.
- C. Before a permit to construct can be issued for a new public water system, the applicant shall demonstrate to the satisfaction of the Director that the new system will be a "viable water system". A "viable water system" is one that is self-sustaining and has the commitment and the financial, managerial and technical capacity to consistently comply with the NNSDWA and NNPDR. In addition to the documentation required in §1603 (B), an application for a permit to construct a new public water system shall include a management plan and a multi-year financial plan. These plans will not be required from new systems when their only source of water is an existing water system approved by the Director and the new system does not provide additional treatment to the water or sell the water. If the application proposes that the new system has its own source of water (i.e., its own well(s) or surface water treatment plant), the applicant shall evaluate the feasibility of connecting to an existing public water system as part of the demonstration of viability. This evaluation shall include, but not be limited to, a determination of the willingness and ability of an existing system to serve the project, water quality, capital cost of constructing the line extension versus constructing a new source and the operation and maintenance costs of both alternatives. Any cost comparisons between creating a new water system with its own source of water and connecting to an existing water system shall not be based on any subsidized monitoring. Also any financing of the new system shall not utilize a loan amortization schedule which exceeds the useful life of the facility or its components. This demonstration of viability may be included in the engineering report when applying for a permit to construct.
- D. For projects involving a surface water discharge of water treatment residuals or wastewater, a

National Pollutant Discharge Elimination System (NPDES) permit must be obtained from the NNEPA/NPDES Permit Program or from U.S. EPA Region 9, if NNEPA does not yet have an approved NPDES program. For projects involving land application of water treatment residuals or wastewater, a No Discharge (ND) permit must be obtained from the NNEPA or U.S. EPA, as the case may be. No construction permit can be issued for such projects until a valid NPDES or ND permit is obtained.

§1604 PERMIT ISSUANCE

- A. The Director will review the permit application for completeness and will issue the construction permit pursuant to the permitting provisions in subpart 2 of the Uniform Rules.
- B. A construction permit shall be valid for three years from the date of issuance, unless a permit extension is obtained.
- C. A construction permit will become void if:
 - 1. Construction does not begin within one year after the date the Construction Permit is issued; or
 - 2. There is a halt in construction of more than one year; or
 - 3. Construction is not completed within three years after the date construction begins, unless a permit extension is obtained. The professional engineer of record for the project must apply for the permit extension.
- D. A permit extension must be applied for at least fifteen (15) days prior to expiration of the construction permit. If a permit extension is not obtained from the Director within thirty (30) days after the expiration of the construction permit, then all construction must terminate until further notice from the Director.
- E. A permit to construct may be denied when:
 - 1. The project does not comply with the minimum design regulations specified in the NNPDWR;
 - 2. The water quality fails to comply with the drinking water standards specified in the NNPDWR; or
 - 3. The owner of a proposed new system fails to prove to the Director's satisfaction that the system will be a "viable water system" as defined in §1603 (C).
- F. Any deviation from the plans and specifications approved by the PWSSP which could potentially affect capacity, hydraulic conditions, operating units, functioning of water treatment process, or the quality of water to be delivered is grounds for revocation of the permit pursuant to § 204 of the Uniform Rules, unless a permit modification is obtained pursuant to that section. Minor revisions not affecting water quality, capacity, flow, sanitary features or performance will be permitted during construction without further approval, provided as-built plans documenting these changes are submitted to the Director as required.

§1605 EXCEPTIONS FROM PERMITTING REQUIREMENTS

- A. Piping associated with a service connection will not require a construction permit if the following conditions are met:
 - 1. All piping associated with the connection is dedicated strictly for use by a single customer being served water;
 - 2. The customer consists of only a single house, single mobile home or single building; and
 - 3. The customer is not a shopping mall or multiple building complex.
- B. The following regular operation and maintenance procedures will not require permits:
 - 1. Pipeline leak repair;
 - 2. Replacement of existing deteriorated pipeline where the new pipeline segment is the same size as the old pipeline;
 - 3. Entry into a drinking water storage facility for the purposes of cleaning and maintenance; and,
 - 4. Replacement of equipment or pipeline appurtenances with the same type, size and rated

capacity (fire hydrants, valves, pressure regulators, meters, service laterals, chemical feeders and booster pumps including deep well pumps).

§1606 CONSTRUCTION PLANS

- A. Construction plans shall be dated, shall carry the seal and signature of a professional engineer and, where applicable, shall provide the following:
1. General layout drawn to scale on plan sheets no larger than thirty (30) inches by forty-two (42) inches, including:
 - a. suitable title;
 - b. name of utility or owner;
 - c. area or institution to be served;
 - d. scale, in feet;
 - e. north reference point;
 - f. any physical or political boundaries within the area to be served including utility easements;
 - g. sufficient number of elevations (Mean Sea Level) to characterize terrain in the area;
 - h. address and name of the professional engineer responsible for the design;
 - i. legible prints;
 - j. location and size of existing water mains;
 - k. location and nature of existing water works structures and appurtenances affecting the proposed improvements, noted on one sheet;
 - l. for water systems supplied by wells, the location of all existing wells within the system; and,
 - m. site location map.
 2. Detailed plans, including:
 - a. Construction drawings of distribution system drawn to a scale of no smaller than one inch to four hundred feet (1in : 400 ft) showing location of all appurtenances referenced to fixed above-ground objects, including size, length, identity, and location of sewers, drains, water mains, plant structures, and petroleum storage facilities, and, for new well projects any other pollution source. The Director may grant a variance to the 400 feet/inch scale on a case by case basis if the drawings adequately show all necessary physical features mentioned in this item;
 - b. Profiles including hydraulic gradients for lines six (6) inches and larger in diameter having a horizontal scale of not more than one hundred (100) feet to the inch and a vertical scale of not more than ten (10) feet to the inch, with both scales clearly indicated. Profiles for lines smaller in diameter may be submitted at the discretion of the engineer or upon request by the Director;
 - c. Stream crossings, providing profiles with elevations (MSL) of the stream bed and the normal and extreme high and low water levels
 - d. Schematic drawing of proposed well construction, showing diameter and depth of drill hole(s), casing diameters and depths, grouting depths, elevations and designations of geological formations, water levels, screen lengths, gravel packing and other details to describe the proposed well completely;
 - e. Drawing(s) of wellhead construction showing the concrete pad, sanitary seal, screened vent, check valve, pressure gauge, flow meter, blowoff, sample tap, gate valve(s), air line and gauge for measuring water level in the well, protective cover for wellhead, and well identification plate;
 - f. Topography and arrangement of present or planned wells or structures, with appropriate contour interval to show runoff directions clearly (not greater than two feet in a

relatively flat area) for a minimum one hundred (100) foot radius;

- g. Elevation drawings of structures showing the one hundred (100) year flood plain (MSL), or the highest flood elevation if the 100-year flood plain has not been defined, and elevations of floor, bottom, overflows, etc. within the structure;
- h. Location and size of property to be used for groundwater development with respect to known references;
- i. Location of pollution sources found in the wellhead/watershed protection area inventory as per Part XVII of the NNPDWR;
- j. Schematic flow diagrams and hydraulic profiles showing flow through various plant units drawn on plan sheets the same size as the construction drawings;
- k. Location, dimensions, and elevations of all proposed plant facilities;
- l. Location of all plant piping in sufficient detail to show flow through plant including waste lines;
- m. Location of all chemical feeding equipment, points of application, and sample taps following chemical injection points;
- n. Location of sanitary or other facilities, such as lavatories, showers, toilets, lockers, etc.;
- o. All appurtenances, specific structures, and equipment pertinent to the project, such as water plant structures (air relief valves, altitude valves, blowoffs, hydrants, service connections, etc.);
- p. Erosion control structures for wellhead blowoff and elevated and ground storage tank drains;
- q. Adequately detailed drawing of any feature or piece of equipment not otherwise covered or adequately described by the specifications; and,
- r. Protection of the water source, structures, and appurtenances, to include, but not be limited to, fencing, protective housing, or comparable form of security.

§1607 SPECIFICATIONS

- A. The title page or cover of the specifications must carry the seal and signature of a professional engineer. Complete, detailed, technical specifications shall be supplied for each proposed project, and shall include, but not be limited to, the following:
 - 1. Construction specifications, including:
 - a. A detailed written program for maintaining normal operation of existing facilities during construction with minimal interruption of service;
 - b. Laying methods and conditions including depth of cover, type of bedding and reaction blocking, and special structural details for water lines installed under storm drains;
 - c. Pressure and leakage test procedures for new water mains including method of determining maximum allowable leakage;
 - d. Disinfection procedure for all new or affected water system components to include disinfectant, dosage, contact time, and method for testing the results of the procedure;
 - e. Well construction method and procedure;
 - f. Chlorination room construction; and
 - g. Other chemical feeding facilities construction.
 - 2. Material specifications, including:
 - a. Laboratory facilities and equipment, including sampling taps and their location;
 - b. Number and design of chemical feeding equipment including make and model, if

available;

- c. Equipment for sanitary or other facilities including any necessary backflow or back-siphonage protection;
- d. Water main and appurtenances schedule and class, including approval status by testing and certification organizations;
- e. Make, model, horsepower and performance curves of all pumping equipment; and
- f. Paint coatings.

3. Testing and development procedure for new sources.

B. Standard Specifications:

If a water system or professional engineering firm uses a set of its own standard specifications, such specifications may be submitted to the Director, in duplicate, for approval. Following this approval, no specifications will be required on future project submittals as long as no changes are made. If there are any additions, deletions, or revisions to the approved standard specifications for a particular project submitted, the professional engineer shall either submit three (3) copies of an addendum to the standard specifications covering the changes only, or shall submit three (3) complete copies of specifications for the project in question. Each professional engineer that will be using a standard specification must place his seal and signature on the title page and must place his seal and signature on any revisions.

§1608 ENGINEERING REPORT

A. An engineering report explaining design criteria and calculations shall be submitted for each proposed project along with the application for the construction permit. The engineering report shall carry the seal and signature of a professional engineer and shall, where pertinent, present the following information:

1. General Information:

- a. Name, address, phone number of owner, corporation, town or utility as well as name of responsible officer;
- b. Name, address, phone number of engineering firm and name of engineer responsible for design;
- c. General description of service area and surroundings (type of economy, estimated percent residential, estimated percent industrial, terrain, location, possible rate of development);
- d. Number and type of customers to be served, (i.e., domestic, industrial, commercial, agricultural, etc.); and
- e. Approval of any land use and development by the appropriate authority having jurisdiction.

2. General Design Data:

- a. Pumping capacity of the source(s);
- b. Average daily water consumption;
- c. Number and type(s) of proposed service connections;
- d. Fire flow requirements;
- e. The results of a flow test conducted at a location near the proposed connection to the existing system. The results of this flow test shall include static pressure and residual pressure when a known flow, in excess of the demand for the proposed extension, is flowing. The time and date the flow test was conducted, the pipe size, type of pipe, elevation and distance between the test point and connection site shall also be included;
- f. System pressures at maximum instantaneous demand or fire flow in addition to peak hourly flow, whichever is the worst case;

- g. Details of hydraulic analyses and sizing of pipes and appurtenances;
 - h. Ground storage and transfer pump capacity;
 - i. System storage capacities; and
3. Ground Water Sources:
- a. Location details including latitude and longitude of the well
 - b. Well record form
 - c. Ground profile
 - d. Casing material and size including details of well head
 - e. Details of pumping equipment
 - f. Results of pumping test
 - g. Results of physical, chemical, radiological and bacteriological analyses of raw water from a certified laboratory.
4. Surface Water Sources:
- a. Location map including latitude and longitude of intake;
 - b. Name of source(s) and type (river, lake, etc.);
 - c. Watershed area;
 - d. Expected flow and the lowest flow of record of the source(s);
 - e. Name and type of discharges within ten (10) miles upstream (industrial, agricultural, municipal and other);
 - f. Distance from raw water supply to reservoir or plant; and
 - g. General description of intake and pump house.
5. Water Treatment Plants:
- a. Projected maximum volume of water to be treated;
 - b. Year when plant is expected to operate at its maximum capacity;
 - c. If existing, present operating capacity;
 - d. Location map of plant;
 - e. Height above the one hundred (100) year flood plain based on the best information available;
 - f. Land available for future plant expansion;
 - g. Proposed treatment scheme shown in block diagram;
 - h. Proposed design criteria (retention times, velocities, weir overflow rates, filtration rates, etc.);
 - i. Description of proposed method of handling, treating, and disposing of wastewater from plant (includes clarification of sludge, filter backwash water, brines, etc.);
 - j. Name(s) and grade(s) of operator(s);
 - k. For modifications to existing treatment plant, report must include: Present capacity of raw water pumps, and a brief description of what effect proposed modification will have on existing facilities including velocities and retention times through plant; and
 - l. Detailed description of pilot testing to be performed, if any.

§1609 NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION

The Director shall be notified at least seven days in advance of the beginning of construction on the site so that the Director may schedule an inspection. The Director may inspect the construction site any time to evaluate compliance with the approved plans and specifications, and shall be given access to the site for that purpose.

§1610 APPROVAL OF CONSTRUCTION

A. New facilities and substantial modifications to existing facilities shall not be placed into operation until written "approval of construction" is issued by the Director, unless a waiver of this requirement is issued by the Director. Upon completion of permitted construction, the professional engineer shall make arrangements with the Director for final inspection. Prior to this inspection, the professional engineer shall submit to the Director a letter certifying that construction is complete and in accordance with the approved plans and specifications. This letter must specifically identify the project by permit number. If the project was not completed in accordance with the approved plans and specifications, the professional engineer shall so state and shall outline any deviations to the permitted project. No written approval shall be issued to place a drinking water construction project into operation until written approval is obtained to place any associated wastewater construction into operation. In the absence of an appropriate NNEPA permit program for wastewater, the readiness of the wastewater construction to go into operation shall be deemed sufficient. The following information, where applicable, shall be submitted with the professional engineer's letter of certification:

1. Results of physical, chemical, radiological, and bacteriological analyses of new sources and/or treated water. These analyses shall be performed by a certified laboratory;
2. Results of bacteriological analyses following disinfection, including chlorine residuals at the time of collection. These analyses shall be performed by a certified laboratory;
3. Results of pressure/leakage test conducted on water lines;
4. As-built drawings of construction;
5. Completed Water Well Record form;
6. Geophysical/mechanical well logs;
7. Results of pumping test;
8. Paint coating(s) used for water storage tank(s);
9. Susceptibility assessment report showing wellhead/watershed protection area delineation along with the inventory of the potential sources of contamination to the well and the aquifer being utilized;
10. Proof of testing of all backflow prevention assemblies installed;
11. Letter of acceptance from organization responsible for operation and maintenance (must be the same as shown on the Application for Approval to Construct Drinking Water Facilities); and
12. Copies of any information specified as a special condition of a construction permit issued by the Director.

B. Failure to obtain written approval of construction from the Director prior to placing a new drinking water facility or a substantial modification to an existing facility into operation is a violation of the NNSDWA (Subchapter 7) and is subject to an enforcement action by the Director.

§1611 JUDICIAL REVIEW OF PERMIT DECISIONS

An applicant may appeal a final construction permit decision of the Director to the Navajo Nation Supreme Court, pursuant to §2586 of the NNSDWA.