



Public Water System & Bottled Water System Permitting

A guide to NNEPA's permitting process

April 2004

NNEPA-Public Water Systems Supervision Program

Preface

This document has been prepared for use by consulting engineers, developers, industries, and public entities dealing with the Public Water Systems Supervision Program (PWSSP) of the Navajo Nation Environmental Protection Agency on design review and permit issues. It provides:

- An overview of the PWSSP's responsibilities
- A summary of regulatory requirements
- Identification of the entities involved in permitting, and
- Highlights of the review and approval procedures

We hope this document will help everyone have a better understanding of the design review and permitting program. Through this understanding, we feel it will be easier to go through the administrative processes, technical reviews, and approval processes of the PWSSP.

This document provides an explanation of the PWSSP's decision making processes. Our decisions are made based on the technical, administrative, and legal aspects of the design review and permit program with the protection of the environment and public health as the goal.

The PWSSP is committed to providing quality service in a reasonable time in all aspects of the permit programs. To do this, we need the cooperation of all parties who deal with us in recognizing our responsibilities and the manner in which we implement them. Therefore, please take the time to read this document carefully. This document is not a replacement for the regulations. If you have any questions, please let us know at the address below. We welcome any comments you may have on this document or suggestions on how we can improve our service to you and the public.

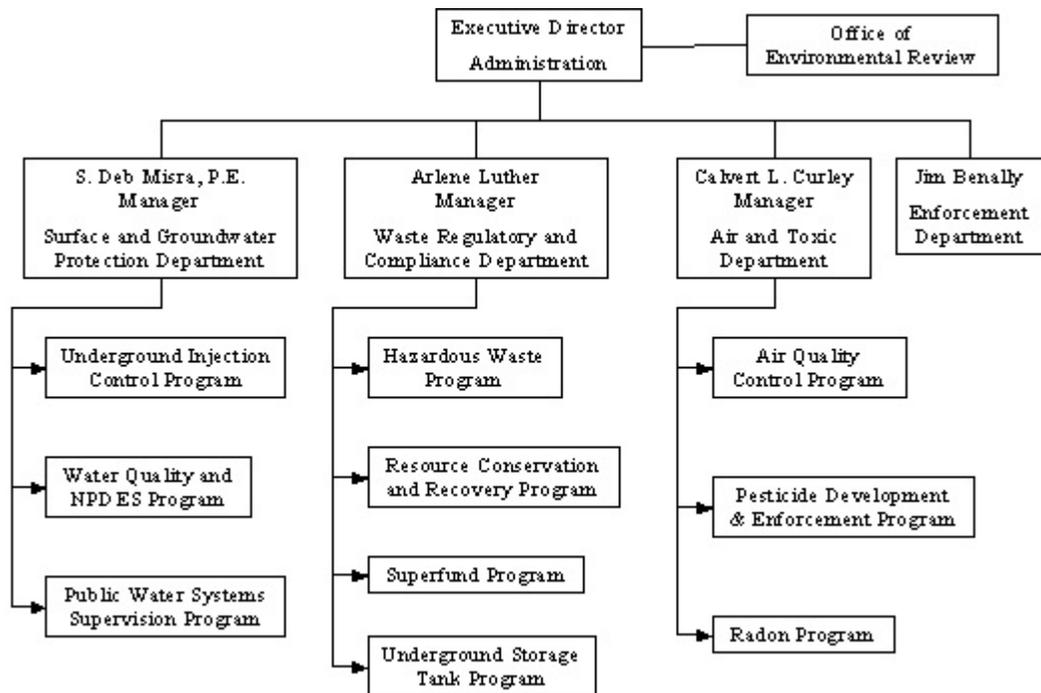
Address:

Public Water Systems Supervision Program
Navajo Nation EPA
P.O. Box 339
Window Rock, AZ 86515
Tel.: (928) 871 7755, Fax: (928) 871 7818

Physical Address:

Hwy 264, Old Museum Building W008-042, Fair Ground, Window Rock, AZ 86515

Navajo Nation Environmental Protection Agency



WHY?

***Q** Why is NNEPA-PWSSP approval needed for the construction of public drinking water facilities?*

***A** It is required by the Navajo Nation law/regulations. NNEPA-PWSSP's review helps insure quality drinking water for the Navajo Nation residents.*

The Navajo Nation's Safe Drinking Water Act and the Primary Drinking Water Regulations provide legal authority and mandate for NNEPA-PWSSP to issue construction permits for proposed new public water systems and for modifications or extensions of existing public water systems, including non-public water systems that will become public water systems after the proposed modifications or extensions and bottled water systems. They also provide for the issuance of operating permits to all public water systems.

NNEPA-PWSSP's construction permitting program helps ensure that the Navajo Nation's public water systems and bottled water systems deliver high quality water. Coupled with PWSSP's compliance oversight and monitoring programs, the permitting program focuses on prevention of water quality problems. A proper design will typically lead to safe drinking water for Navajo Nation residents.

The construction permitting program applies to all public water systems and bottled water systems, whether the source is surface water, groundwater or springs. Whether the project is for a new well for a rural community or a filter upgrade for a large surface water system, the permit process provides NNEPA-PWSSP opportunity to critique the technical and administrative aspects of the proposal.

Public water systems and bottled water systems are also required to obtain operating permits before commencing operation. It provides NNEPA-PWSSP opportunity to look into the operation and maintenance aspects to ensure that the public water systems have certified operators, water quality monitoring program and operation and maintenance procedures.

WHERE?

Q Where do I apply for a permit?

*A NNEPA's Public Water Systems Supervision Program (PWSSP) is responsible for drinking water system permitting:
P.O. Box 339, Window Rock, AZ 86515*

The Public Water Systems Supervision Program (PWSSP) is a program within the Navajo Nation Environmental Protection Agency (NNEPA). The PWSSP is responsible for ensuring safe drinking water for the public. To meet this responsibility, the PWSSP issues permits, approvals, and certifications for public water system and bottled water system projects. The PWSSP also monitors the performance of the systems, provides technical assistance and conducts public education seminars to educate the public and help the systems comply with the Navajo Nation Safe Drinking Water Act and the Navajo Nation Primary Drinking Water Regulations. This booklet explains the permitting procedures of the PWSSP.

A Construction Permit is required for any construction, expansion or modification of public water systems and bottled water systems except for the following regular operation and maintenance procedures:

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 purpose 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).

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.

Construction of public water systems and bottled water systems may also require other permits from the Navajo Nation EPA, which may include the following:

- National Pollutant Discharge Elimination System (NPDES) permit if the project involves surface water discharge of water treatment residuals or wastewater
- No Discharge (ND) permit if the project involves land application of water treatment residuals or wastewater

These permits have to be obtained separately from the Water Quality and NPDES Program of the Navajo Nation EPA. A construction permit can not be issued by the PWSSP unless these permits are obtained.

Also, other Navajo Nation EPA programs and other Navajo Nation departments may have an interest in public water system or bottled water system permitting. The PWSSP will coordinate with these entities by providing basic information on the project to them. If these entities need more information, they will request it from the project engineer. The project engineer will be notified concerning other entities' concerns by the PWSSP during the review of the project.

HOW?

Q How do I apply for a permit?

A An application package consists of a completed permit application form, plans/specifications, engineering report and certain administrative material.

Prior to construction of public water system or bottled water system facilities, an applicant must apply for a NNEPA permit. The application package allows NNEPA-PWSSP staff to review the design of the proposed facilities and to confirm that the proposal fits in with current regulatory directives. Construction permit applications must follow the requirements outlined in the Navajo Nation Primary Drinking Water Regulations (NNPDWR). NNEPA-PWSSP follows the permitting provisions in subpart 2 of the “Uniform Regulations for Permit Review, Administrative Enforcement Orders, Hearings, and Rulemaking under Navajo Nation Environmental Acts”. The time for review and preparation of a draft permit is generally around 30 days. Additional 30-day period is allowed for public comment on the draft permit before a final permit is issued. The actual time for the whole process may be shorter or longer depending upon the complexity of the project and the workload when the project is submitted.

Prior to operation of public water systems and bottled water systems, an applicant must apply to the PWSSP for an operating permit.

NNEPA-PWSSP categorizes public water systems and bottled water systems into two types of facilities, based on the source of water for the system:

- Surface water facilities and ground water under the direct influence of surface water (GWUDI) facilities, and
- Ground water not under the direct influence of surface water facilities.

While the permitting requirements are very similar for both, there are distinct regulatory issues to be addressed for the surface water or GWUDI facilities and the ground water facilities. If springs or shallow ground water wells are used as sources, it must be determined whether they are GWUDI before applying for the construction permit. The GWUDI systems must meet all the requirements of the surface water systems.

Permit Requirements and Procedure:

Before construction, extension or modification of a public water system can begin, both the concept and design must be reviewed and approved by NNEPA-PWSSP. Also note that if the system will be a new system, then this proposed system must demonstrate, to the satisfaction of PWSSP, that it will be a “viable water system” as defined in NNPDWR § 104. That is, the system will be self-sustaining and has the commitment and the financial, managerial and technical capacity to consistently comply with the NNSDWA and NNPDWR. This will include the submittal of both a management plan and a multi-year financial plan.

The project owner/engineer may request review of the project in two phases:

Phase A - The Preliminary Engineering Report, and

Phase B - The Plans and Specifications

or in a single phase. The PWSSP recommends a two phase review process, especially when the project is large or complex. This will expedite the review. The Preliminary Engineering Report should contain all the relevant information described in §1608 of the NNPDWR and must bear the signature and seal of a Professional Engineer registered in Arizona, New Mexico or Utah. If the professional engineer represents a federal government entity, registration with any states can be acceptable. The PWSSP will review the preliminary report and write comments, if any, to the project engineer.

To obtain the construction permit, the package must include all applicable information as described in §1603 of the NNPDWR. The plans and specifications package must include two stamped and signed copies of the plans, two sets of specifications and design calculations, an original application form, a copy of a location map, two copies of wellhead protection area inventories, a copy of right-of-way approval and a construction schedule. The package must be accompanied by an application fee in the amount determined by the Navajo Nation EPA. Check or money order must be made payable to the Navajo Nation EPA-PWSSP.

Once the material has been received and an administrative review has been conducted, the project will be assigned a PWSSP File No. and the project engineer will be notified. The material will then be reviewed. After the review is complete, it will be determined if a review letter is needed or if the project should be issued a construction permit. In the case of a review letter the applicant will be required to address all items in the letter before the project review can continue.

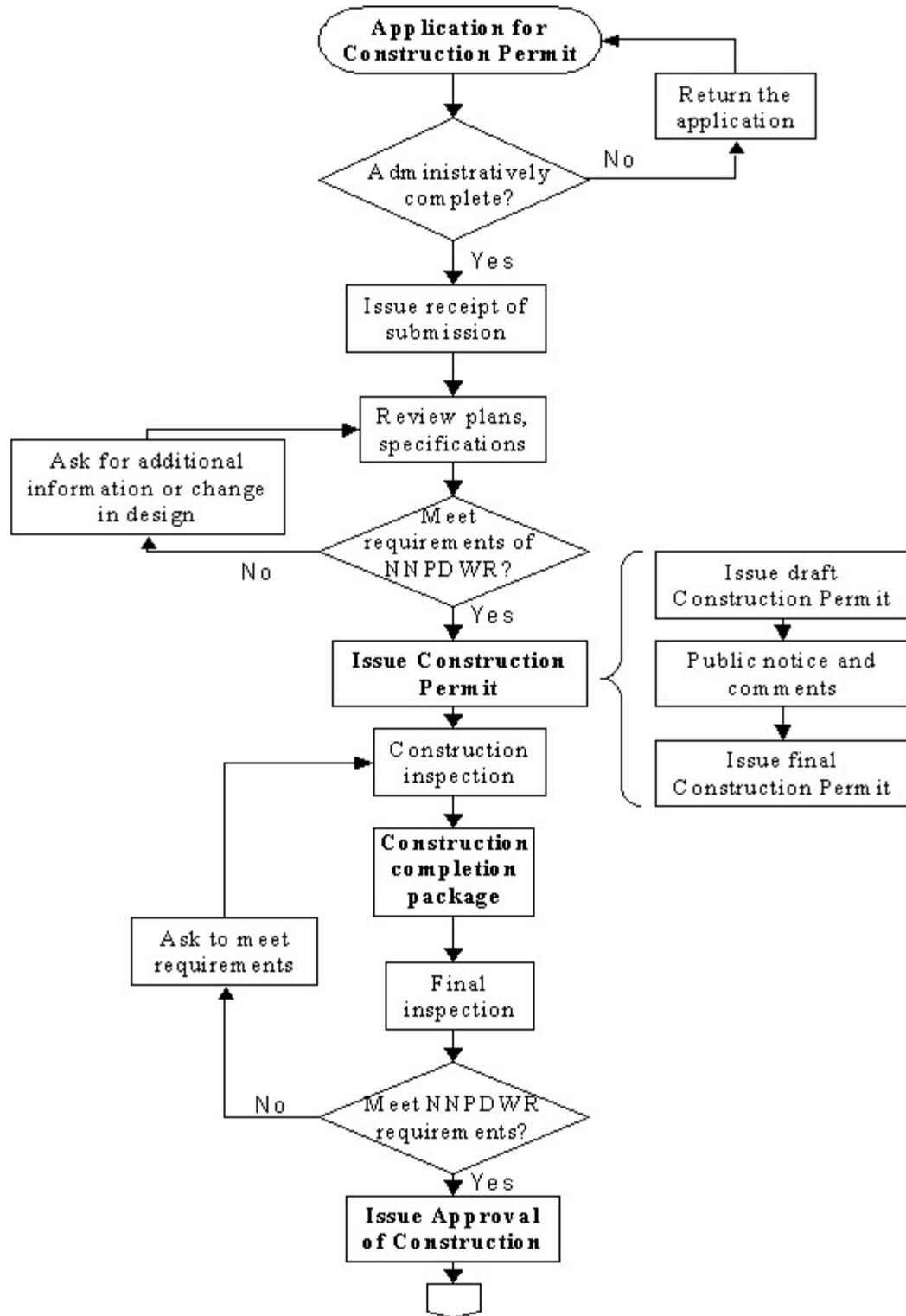
Once the project is approved, a draft permit will be issued. A 30-day period will be allowed for comments on the draft permit by the applicant and public. After all the public comments are addressed, a final construction permit will be issued. The permit remains valid for three years from the date construction starts, but the construction must start within a year from the date of issue, and must not halt for more than a year. A Permit Extension may be obtained from the NNEPA-PWSSP to extend the term of the permit. The construction must take place according to the approved plans and specifications. Any deviation which could potentially affect capacity, hydraulic conditions, operating units, functioning of water treatment process, or the quality of water to be delivered must be approved in advance by the PWSSP

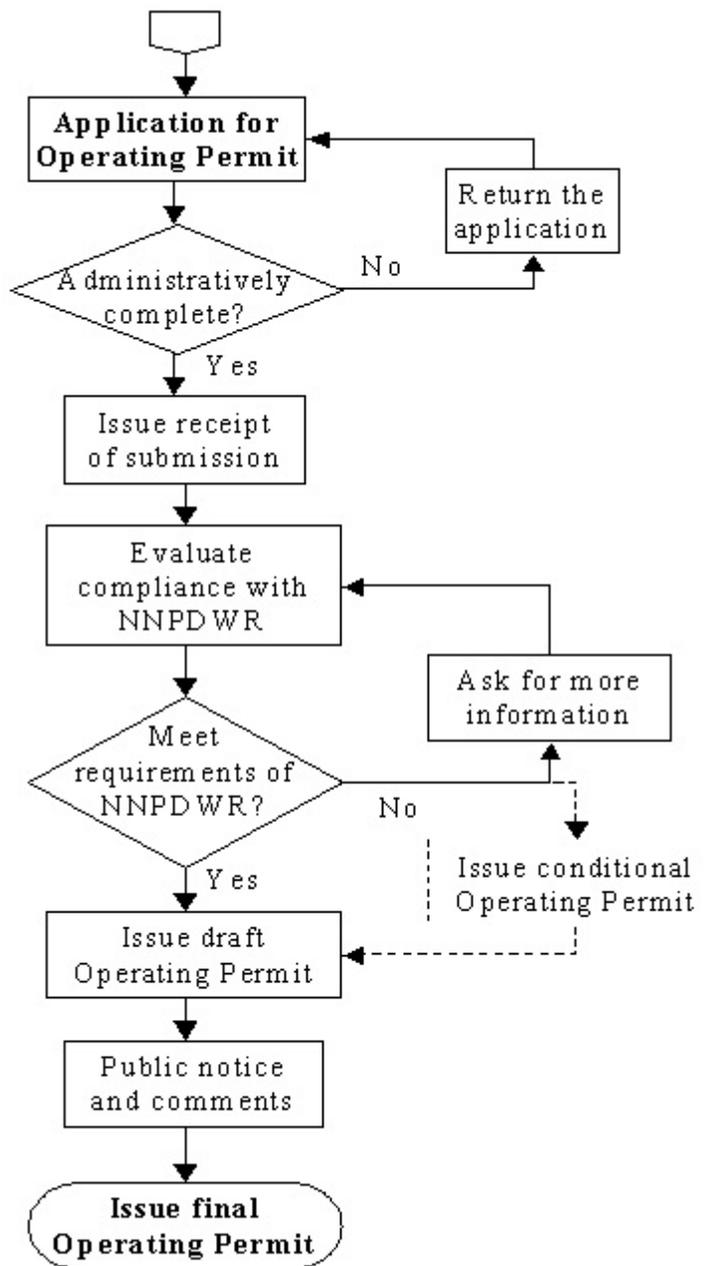
in writing. Minor revisions not affecting water quality, capacity, flow, sanitary features or performance will not require prior approval if as-built plans documenting the changes are submitted to PWSSP.

When the construction is complete, the project engineer is required to submit a Construction Completion Report pursuant to §1610 of the NNPDWR. The report should include as-built plans and specifications indicating deviations from the original plans and specifications. If the well is constructed after the construction permit, well logs, well record forms and water quality information must be included in the report. Susceptibility assessment of the source must be completed and submitted with the report. Results of pressure test and bacteriological test after the line disinfection should also be included in the report. The backflow prevention assemblies installed in the system must be tested after installation by a certified backflow technician. The report should also include an acceptance letter from the entity responsible for O&M, if different from the owner of the project. The project will be given a final inspection and if found acceptable and after all the punch list items are taken care of, the approval of construction will be issued. Then the project owner can apply for an operating permit.

An operating permit must be obtained from the NNEPA-PWSSP before placing the system into operation. The system must assign a certified operator of appropriate level to look after the day to day operation of the system. The operating permit is good for three years and must be renewed before the date of expiration. A particular fee determined by the NNEPA must be paid for the permit and its renewal.

Flowchart for NNEPA-PWSSP Permit Process





CAPACITY

NNEPA's policy is that all public water system and bottled water system owners and operators must have the technical, financial and managerial capacity to properly run their water utilities, meeting requirements of the NNSDWA and the NNPDWR. A system applying for a construction permit must demonstrate these three elements of capacity (NNPDWR §1603C). If utilities do not currently have adequate capacity, system owners and operators must make appropriate changes in operation (management, rate structure, maintenance, consolidation, alternative supplies, etc) to ensure the long term capability of the system. If a system does not have, or will not be able to develop such capacity, it will not be eligible to obtain a construction permit.

Q. What is capacity?

1. **Technical capacity** refers to the physical infrastructure of a system (the capability of the system components to provide water that meets the requirements of the NNPDWR and NNSDWA), and the technical knowledge of the system personnel and their ability to use that knowledge to adequately operate the system. Requirements for adequate technical capacity include:

- a. Employment of a certified operator of appropriate level for the system (see Part XIV of the NNPDWR)
- b. Adequate staff to operate the system, so that the staff has sufficient time to examine the system, conduct preventive maintenance, address problems quickly to avoid loss of pressure, lack of water, etc.
- c. Ability to adequately survey the system

Operating a system requires regular inspections of the facilities (including the inside and outside of storage tanks, pump houses and well heads), flushing gate valves regularly, etc. For this the operator may need a vehicle if the facilities are not located within immediate walking distance.

- d. Availability of the tools and measurement devices necessary to perform routine operation and maintenance on the system (for example, for changing leaky gaskets, flushing valves, fixing chlorinators, measuring chlorine and fluoride levels)
- e. Availability of as-builts, to assist operators to properly conduct necessary maintenance activities such as flushing the system regularly, locating shut-off gate valves to isolate a water line break, and knowing where the system

is for excavation.

f. Participation in training and safety programs

Training programs allow operators to sharpen their skills and better address system operations. Safety programs are necessary because a water system can be a dangerous place: high voltage areas and confined spaces are present, slippery surfaces exist, high structures must be climbed, and potentially dangerous treatment chemicals must be handled.

2. **Financial capacity** includes the ability of the system to maintain sufficient revenue to cover operation and maintenance costs and the effective management of those resources to operate the system. Requirements for financial capacity include:

- a. An adequate written budget (and process in place) to pay for staff, chemicals, power, maintenance and monitoring
- b. A capital replacement plan (or at a minimum, identification of capital replacement needs)

This ensures that money is set aside from the budget to address expected repairs that happen on a regular basis for such things as pump and tank clean-outs.

- c. Funding for budget identified at the beginning of fiscal year (whether through users or general funds)

To ensure continued operation at a reasonable cost, a budget must be developed and funds identified. This allows the system to address expenses in a reasonable manner as opposed to expending greater amounts when emergencies arise.

- d. Record keeping for budget, use, operation and maintenance and equipment.

3. **Managerial capacity** includes such things as ownership accountability; the ability of management to adequately staff the system with qualified personnel; an understanding of the regulatory requirements involved in operating a water system; and the ability to interact well with customers and regulators. Requirements for managerial capacity include:

- a. All monitoring required by the NNSDWA and NNPDWR is consistent and up-to-date
- b. System management

The responsibilities of the managers must be well-defined and in written form. The “checks and balances” on those with responsibility for the system should also be well-defined and in written form.

- c. Development and implementation of source water protection plan

Source water protection is necessary to ensure that once the water source is developed, it remains safe for human consumption.

Q. What if a public water system or a bottled water system does not have adequate technical, financial and managerial capacity? Will the system be able to obtain a construction permit?

If NNEPA-PWSSP determines that the system does not have adequate technical, financial and managerial capacity, the system owner and operator would have to agree to take appropriate steps to ensure that the utility develops the appropriate level of capacity to obtain a construction permit. Appropriate steps may include some or all of the following:

- Training and certifying existing system personnel or hiring trained and certified personnel,
- Developing a source water protection plan,
- Developing an infrastructure replacement plan,
- Instituting a long-term program to provide any needed operation and maintenance,
- Conducting an analysis of the system's financial health,
- Adopting a rate structure that will provide the system with sufficient resources to adequately maintain and operate the system,
- Establishing a reserve fund to replace infrastructure reaching the end of its useful life, or
- Establishing an entity to manage and operate the system.