Pretreatment Program Document

Chapter 1 notes that subsection 62-625.500(1), F.A.C. dictates which public utilities must develop and implement pretreatment programs. A public utility owning or operating a WWF that DEP identifies as needing a pretreatment program must develop and submit to DEP a pretreatment program for approval within one year after written notification from DEP of such identification. Notification from DEP will be provided in the form of language in a new, reissued, or revised permit as exemplified in Exhibit 1-1. As specified in subsection 62-625.500(4), F.A.C., the pretreatment program submission from the public utility must contain, at a minimum, the following four elements:

Legal Authority to:
- Deny or condition new or increased pollutants
- Require compliance with applicable standards and requirements
- Control through permit, order, etc. the contribution of pollutants
- Require compliance schedules
- Carry out inspection and monitoring
- Obtain remedies for noncompliance
- Comply with confidentiality requirements
- Use general control mechanisms (permits)

[Paragraph 62-625.500(2)(a), F.A.C.]

Procedures to:
- Identify and locate all possible IUs
- Identify the character and volume of pollutants contributed by IUs
- Notify IUs of applicable requirements
- Receive and analyze self-monitoring reports and other notices from IUs
- Randomly sample and analyze IU effluent, including inspections
- Evaluate the need for slug control plans
- Investigate instances of noncompliance
- Comply with public participation requirements in the enforcement of national pretreatment standards

[Paragraph 62-625.500(2)(b), F.A.C.]

Local Limits:
- Develop and update as necessary

[Paragraph 62-625.500(2)(c), F.A.C.]

Enforcement Response Plan
- Develop and implement

[Paragraph 62-625.500(2)(d), F.A.C.]

List of Significant Industrial Users (SIUs)
- Maintain a list of SIUs

[Paragraph 62-625.500(2)(e), F.A.C.]

1. A statement from the solicitor or an official acting in a comparable capacity (or the attorney for those public utilities that have independent legal counsel) that the public utility has authority adequate to carry out the required program elements described in subsection 62-625.500(2), F.A.C. This statement must identify:

   - the specific provision of the legal authority that provides the basis for each program procedure;

   - the manner in which the public utility will implement the program requirements, including the means by which pretreatment standards will be applied to individual industrial users (e.g., by order, permit, ordinance, etc.); and

   - how the public utility will ensure compliance with pretreatment standards and requirements, and to enforce them in the event of noncompliance by industrial users.

2. A copy of any statutes, ordinances, regulations, agreements, or other authorities that will be relied upon by the public utility for its administration of the pretreatment program. This submission must

include a statement reflecting the endorsement or approval of the local boards or bodies responsible for supervising or funding the pretreatment program if approved;

3. A brief description (including organization charts) of the organization that will administer the pretreatment program. If more than one agency is responsible for administration of the program, the responsible agencies must be identified, their respective responsibilities delineated, and their procedures for coordination set forth; and

4. A description of the funding levels and full and part-time manpower available to implement the program

As noted in subsection 62-625.500(2), F.A.C., the pretreatment program submission must describe local program procedures and authorities for the five elements presented in Exhibit 2-1. Specifics of these five elements are discussed in greater detail in Chapters 3 through 10.

While the ability to develop and implement a successful pretreatment program requires adequate legal authority, sound technical information, proper procedures, sufficient resources and funding are also necessary. Specifically, as noted in subsection 62-625.500(3), F.A.C., an approvable submission must demonstrate that the public utility has a workable organization to integrate program elements, a staff of appropriate size and training to carry out program requirements, necessary equipment to fulfill monitoring and other program needs, and adequate funds to support the proposed program.

Organization and staffing requirements will vary according to the complexity and comprehensiveness of the proposed program. Whether the staff is large or small, it must be organized in a way that facilitates the successful completion of program responsibilities. The adequacy of the program's organization and staffing is based not only on whether essential functions are covered, but also on whether the number and type of staff are appropriate to implement program requirements. As such, the submission should include:

- Clear and appropriate lines of authority
- Identification of staff responsibilities
- Qualifications of staff
- Staffing levels related to required work effort
- Coordination with other departments
- Contract management (if required)

A description of the public utility organization is needed, including functional departments that will carry out the program. This description may include the titles and numbers of employees within each functional department, and the employees (or department) within the public utility that will coordinate with each service district in interjurisdictional programs. It is recommended that the functional

departments identify services such as administration, engineering, sampling/inspection, laboratory analysis, legal work, accounting, and billing.

A public utility must submit either an organization chart for the entire wastewater treatment program or a chart specifically structured for the pretreatment program. If the entire public utility organization is shown, notations on the chart or an accompanying text should indicate where pretreatment responsibility rests. In particular, responsibility for procedural functions such as notifying IUs of applicable standards, receiving and reviewing self-monitoring reports, conducting sampling and analysis of industrial effluents, and initiating enforcement actions should be clearly identified. If the pretreatment organization is provided, the relationship to the overall public utility organization should be provided.

As mentioned above, organization will vary according to the complexity and comprehensiveness of the proposed program and size of the public utility. Examples of differences in organization structures for small, medium, and large public utilities are presented in Appendix 2-A. Most importantly, authorities and responsibilities must be clearly designated, supervisors should have direct responsibility for an appropriate number of employees (usually no more than 6-8 staff members), and the program should be effectively integrated with remaining public utility activities.

Supporting text to the organizational chart should identify the responsibilities and duties of each staff member or department involved in the proposed program, to include:

- Technical assistance. A staff member or department should have the responsibility of evaluating IU reports and for reviewing pretreatment program monitoring and sample results and for conducting inspections.
- Industrial monitoring. The submission should designate a staff member or department with responsibility for staffing and supervising field monitoring personnel. It should also specify the number and qualifications of personnel who will be assigned to the field monitoring crews.
- Laboratory analysis. Staff should be identified for analyses proposed to be conducted “in-house”.
- Legal assistance. The person(s) providing legal assistance to the public utility will interpret regulations and other legal documents that affect pretreatment program operations and prepare contracts or other agreements. This person(s) also will initiate formal legal actions against violators, including injunctive relief when necessary.
- Administration. The program administrator and administrative staff should have responsibility for data management, communication with IUs, program finances and accounting, personnel, and the public participation program.

A small public utility may have one person performing the duties associated with several of these general work areas, while a large public utility may have several people assigned to each functional group. In addition, a large public utility may opt to separate functions that are grouped together under

administration. Responsibility for some of the work areas may be assigned to contractors or other local agencies, but all areas of work and corresponding staff should be identified in the submission.

The submission should include the qualifications for all key staff positions. The education and experience should match the functions to be performed. Tradeoffs between education and experience are acceptable and certification in an appropriate discipline is desirable but not necessarily required. Key disciplines one would expect to see are engineering (environmental, civil, sanitary, chemical), chemistry, biology, public administration, business administration, and law.

The level of staff needed to implement a program depends on the size of the WWF and the number of IUs under the pretreatment program. Small public utilities with few IUs may be able to implement a pretreatment program satisfactorily using only a portion of one person's time. Large public utilities with many IUs may need a pretreatment program staff with 10 people or more depending on the number of samples and measurements to be obtained, the frequency of monitoring, and the number and complexity of analyses to be performed. Public utility staff requirements will also vary significantly if work is performed by outside personnel.

A quantitative estimate of the level-of-effort, including outside support, should be provided in the submission for each staff position or function. Such estimates may be in the form of labor hours per year, person-years, or percent involvement of a person in pretreatment program activities. The number of staff will vary based on WWF size and the relative number of regulated users.

The submission should also detail interaction between groups within the pretreatment program and other public utility departments to facilitate the program's smooth operation. A flow chart of routine program operations may be included that, for example, details who receives and reviews self-monitoring reports, what happens when the reports are acceptable, and what happens when the reports indicate violations.

Program Costs

Pretreatment program costs, e.g., labor, annualized capital costs, operation and maintenance costs, overhead, debt service, etc., must be included as part of the pretreatment program submission. Further, the submission should provide an account of the revenue sources to be used to cover the annual costs of the pretreatment program. This account may be descriptive, or may be an itemization of each revenue source and amount. Further, a system for continuous revenue generation should be detailed.

The public utility should provide an estimate of the annual cost (i.e., capital and operating) of implementing the proposed pretreatment program. The capital cost of purchasing equipment represents a single cash outlay, while labor, O&M, and other items represent operating expenses that must be recovered yearly. Equipment may be purchased directly out of the public utility's budget if sufficient reserve cash is available; it may also be financed or leased and then repaid annually as an ongoing cost in the operating budget.

A major financial decision for a public utility implementing a program involves the procurement of sampling and analysis equipment. A public utility may purchase or lease equipment, use contractor services, or use a combination of the above. Depending upon the level of monitoring required for the program, a public utility should determine which of these options is the most cost-effective. It may be most feasible for small- or medium- sized public utilities to buy equipment for sampling and conventional pollutant analysis, while using a commercial laboratory for metals and organic analyses. Larger public utilities may choose to purchase equipment for full in-house sampling and analysis capability. Since sampling and analytical equipment can be expensive to purchase and maintain, the public utility should determine what the impact of these costs would be on sewer and monitoring charges to IUs and whether purchase is warranted. The public utility should attempt to identify all equipment necessary for activities not contracted out, which include the types of equipment listed in Exhibit 2-2.

- **Sampling crew vehicle** (e.g., van with 2 way radio/mobile phone)
- **Automatic samplers with supplies,** e.g.:
  - ◊ bottles-glass and polyethylene
  - ◊ tubing-tygon and teflon
  - ◊ power supply
  - ◊ interface capabilities (interface cable, splitter cables (i.e., Y-connectors))
  - ◊ actuator
- **Flow metering equipment**
- **Safety equipment,** e.g.:
  - ◊ harness
  - ◊ PPE- gloves, boots, uniforms, safety glasses, hard hats
  - ◊ gas detectors
  - ◊ SCBA (self-contained breathing apparatus)
- **Portable analytical equipment,** e.g.:
  - ◊ pH meter
  - ◊ temperature
  - ◊ residual chlorine testing
- **Miscellaneous tools,** e.g.:
  - ◊ ice machine
  - ◊ lap top and field printers (download sampler and/or metering data)
- **Laboratory equipment,** e.g.:
  - ◊ AA/ICP and GCMS
  - ◊ microwave and hot/stir plates distillation units (ammonia, cyanide, Kjeldahls)
  - ◊ auto analyzers and balances
  - ◊ fume hoods and benches
  - ◊ incubators, ovens, pumps, and chemical storage cabinets
  - ◊ DI system
  - ◊ glass ware, chemicals and other basic support supplies
  - ◊ service contracts
  - ◊ safety program

Exhibit 2-2: Optional Pretreatment Program Equipment

Annual operating costs will generally be based on the level of effort estimated to conduct various tasks within the program. While the majority of operating costs may be attributed to labor, other significant costs may result from equipment, O&M, overhead, and debt repayment. For simplicity, some public utilities estimate labor hours for each program task and then scaling up the associated costs to include overhead and ancillary costs. By combining labor costs with other direct and indirect costs, the total annual burden for the program can be calculated.

The means for recovering program costs should also be presented in the submission. Major capital expenditures, such as equipment purchase, may be financed by municipal bonds (e.g., general obligation bond, revenue bond, small denomination bond) or with surplus capital improvement revenues, if available. Leasing and contract operations are viable options that avoid large cash outlays.

Several sources of revenues, including general municipal taxes (i.e., ad valorem taxes), special assessments and fees, and user charges can be used to recover the operating costs of your pretreatment program. In choosing the cost recovery method most suitable for the public utility, it may be desirable that the majority of the pretreatment program's cost be paid by the public utilities IUs.

The ad valorem tax can be used to recover equitably the cost of pretreatment by adjusting the tax rate with certain surcharges and rebates to ensure that each IU's charge represents its respective share of the costs. Special assessments, hook-up fees, and septic tank disposal fees can also be applied to collect revenue from IUs to offset program costs.

The most equitable methods for recovering pretreatment costs is a user charge system. User charge systems are widely used for recovering wastewater treatment costs and providing a method for proportionally allocating and recovering a project's cost among the public utility system users. If the public utility already has an established user charge system, the system may be modified to recover the additional cost of pretreatment program implementation. Such a system can also be developed specifically to fund the pretreatment program.

Developing a user charge system requires estimating program costs, designing a cost allocation scheme, allocating the costs proportionately across the user groups designated in the cost allocation scheme, and calculating the user charge. Three possible allocation schemes are described below. Note that other options or combinations of these options may be appropriate.

- Service charge. IUs are charged based on the amount of sampling and analysis performed by the public utility for the particular IU (or group of IUs). The service charge provides an equitable way to recover pretreatment costs because monitoring costs are a significant portion of overall pretreatment program implementation costs.

  Calculating the service charge begins by dividing IUs into groups based on those demanding high costs (i.e., labor or equipment intensive), or low costs (i.e. grab) sampling procedures, and the types of analyses required (metals, organics, or conventional pollutants). The total program

costs are then distributed proportionally to these groups, based on the number of IUs which fall into each group and their contribution to the total costs. The total cost allocated to each group is divided by the frequency of sampling and analysis events for that group to obtain the service charge for each individual type of sampling and analysis event.

The total charge for each IU is calculated by multiplying the number of events by the appropriate service charge.

$UC_i = S_c S_i + A_c A_i$

UC_i	=	Pretreatment monitoring charge for a particular IU
S_c	=	Service charge for sampling event (high or low cost)
S_i	=	Number of sampling activities for a particular IU
A_c	=	Service charge for laboratory analysis event (metals, organics, or conventional)
A_i	=	Number of analyses required for a particular IU.

These charges are applied in addition to existing user charges and may be charged to the IU for each site visit or annualized and applied on a periodic basis (e.g., monthly, quarterly). The difference between the actual and estimated public utility costs should be corrected by charge adjustments at the end of the year.

The service charge is easily implemented since monitoring is a major pretreatment cost and is conducted as a normal, routine implementation function. In a city with few IUs, the service charge can be relatively simple to calculate. If monitoring is contracted out to a commercial firm, the costs may be charged directly to the IU. Conversely, in a city with many IUs, sampling and analysis equipment may be purchased and these costs, along with labor and O&M, allocated and recovered in the service charge model. Accurate (as possible) assessment of monitoring projections and sampling and analysis schedules for each IU is necessary for applying this charge model.

- Industry surcharge. Each class (or industrial group) of IUs is charged proportionally based on their relative impact on the pretreatment program costs. This is accomplished by calculating a surcharge factor that is applied to the IU's base sewer use charge.

  The total pretreatment costs attributable to an IU class is divided by the total sewer use charge for the IU class to generate a pretreatment surcharge factor (P_i). The base sewer use charge for each IU class is then increased by this factor.

  $UC_i^* = UC_i (1 + P_i)$

UC_i^*	=	Sewer and pretreatment charge for a given IU
UC_i	=	Sewer charge for a given IU
P_i	=	Pretreatment surcharge factor for IU class

(annualized pretreatment program operating costs (e.g., administration, industrial monitoring, laboratory analysis, other direct costs, overhead) divided by total annual sewer revenue generated by the IU class)

In most cases the industry surcharge system is easy to develop and implement because it is based on an existing user charge system and is simply an increase in sewer charges.

- Pollutant strength charge. These charges distribute program costs based on the types and/or amounts of pollutants discharged (e.g., conventionals, metals, toxic organics) by an IU. Costs are assigned to pollutant groups by determining the number of IUs and the costs of monitoring activities for each pollutant or pollutant group.

  The charge rate per pound of pollutant (P_C) is calculated by dividing the total costs associated with that type of pollutant (i.e., conventionals) by the amount of pollutant discharged (i.e., BOD).

  $UC_i = V_c V_i + P_c P_i$

UC_i	=	Pollutant strength charge for a given IU
V_c	=	Charge rate per gallon of wastewater discharged
V_i	=	Volume of wastewater discharged
P_c	=	Charge rate per pound of pollutant "P" discharged (total operating costs (i.e., administration, IU monitoring, laboratory analysis, ODCs, overhead) divided by total pollutant "P" loading)
P_i	=	Pound(s) of pollutant ("P") discharged.

  Note that cost recovery, be it through service charges or pollutant strength surcharges, are not considered pretreatment enforcement actions. Public utilities are expected to take enforcement action against IUs that violate discharge standards irrespective of whether surcharges are incurred for excess discharges.

Continuous revenue sources from fees, charges, or interest are necessary to recover annual operating costs, which include debt service payments on outstanding loans. Ideally, revenues should be generated from the IUs serviced by the program in proportion to their relative use. However, any means of generating continuous revenues adequate to recover costs is acceptable. Issues of equity, ease of administration and implementation, and coordination with existing user charge systems will determine the appropriate charge system to be used.

Program Approval

Public utilities must submit a pretreatment program (2 copies) for approval within one year after written notification from DEP. Specific pretreatment program review and approval procedures are detailed in Rule 62-625.510, F.A.C., as described below and summarized in Exhibit 2-3. Within 60 days of

receiving a request for approval of a pretreatment program, DEP must determine if the submission meets the requirements of paragraph 62-625.500(4)(a), F.A.C. If DEP determines that the submission meets these requirements, DEP must notify the public utility that the submission has been received and is under review and commence public notice and evaluation activities. If DEP determines that the submission is incomplete, written notice must be provided to the public utility and each person who has requested individual notice, identifying any deficiencies in the submission and advising the means by which the public utility can correct the deficiencies.

Within 20 working days after making a determination that a submission meets the requirements of paragraph 62-625.500(4)(a), F.A.C., DEP must provide the public utility with a copy of a notice of request for approval of a pretreatment program. The public utility shall publish the notice in a daily newspaper with the largest circulation within the jurisdiction served by the WWF within 14 days of receipt of the request for publication. Proof of publication must be provided to DEP by the public utility, at the address specified in the request for publication, within 7 days of publication. DEP is responsible for mailing the notice of request for approval to all Federal and State agencies with jurisdiction over fish, shellfish and wildlife resources, and over coastal zone management plans. Those agencies include U.S. Advisory Council on Historic Preservation, U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Florida Department of State Division of Historical Resources, the Florida Fish and Wildlife Conservation Commission, the Florida Department of Community Affairs, the unit of local government having jurisdiction over the area where the WWF is located, and any other person or group who has requested individual notice, including those on appropriate mailing lists.

A period of not less than 30 days following the date of the public notice should be provided during which time interested persons may submit their written views on the submission. All written comments submitted during the 30 day comment period must be retained by DEP and considered in the decision on whether or not to approve the submission to DEP.

The public utility, any affected State, any interested State or Federal agency, person or group of persons may request a public hearing with respect to the submission. This request for public hearing shall be filed within the comment period described above and must indicate the interest of the person filing such request and the reasons why a hearing is warranted. A hearing may also be held where there is significant public interest in issues relating to whether or not the submission should be approved. Notice of a hearing is provided by DEP and published by the public utility in the same newspaper as the notice of the original request for approval of the submission. In addition, the notice of a hearing shall be sent by the DEP to those persons requesting individual notice.

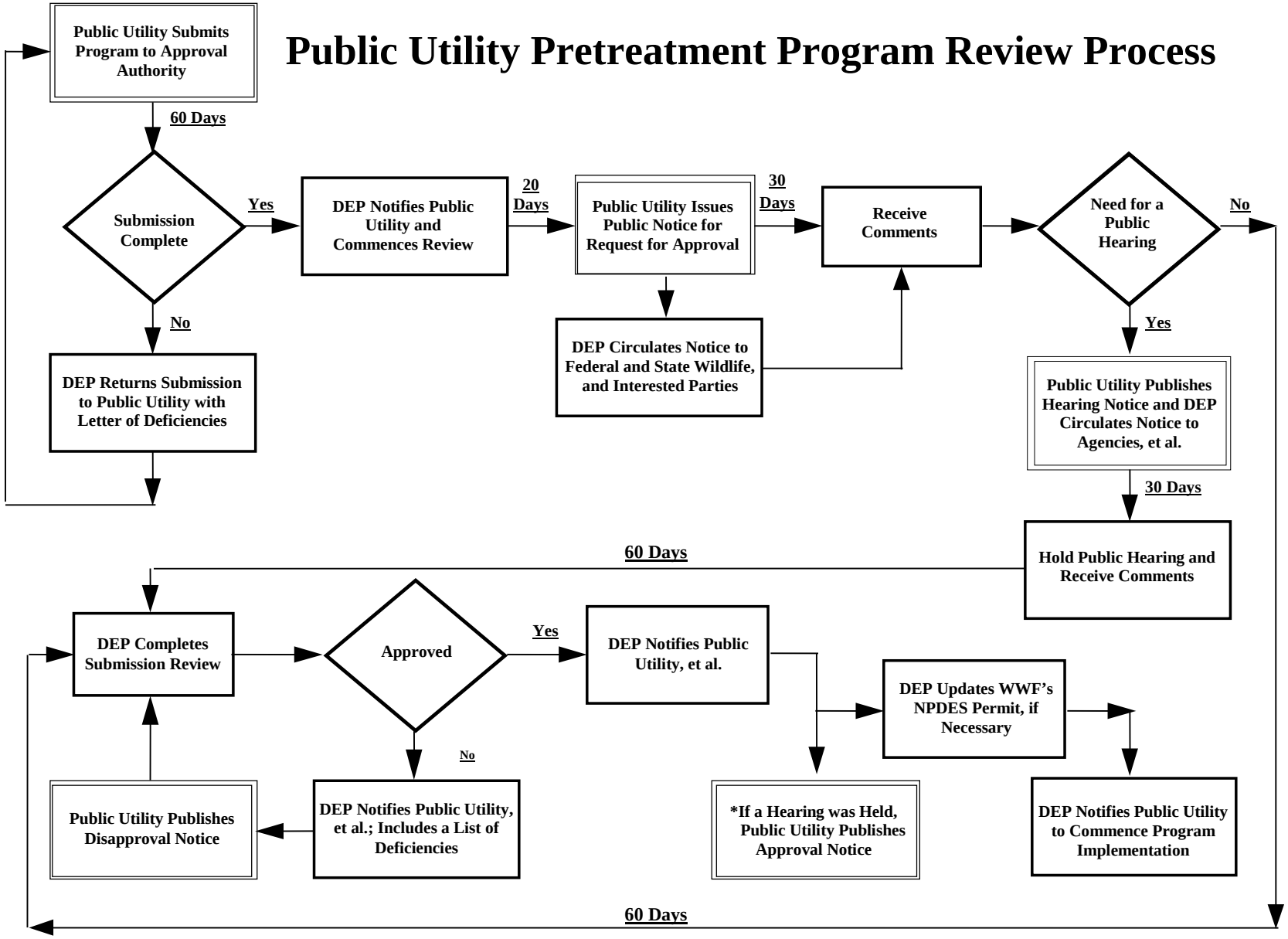

Exhibit 2-3, Florida DEP Approval Process for a Public Utility Pretreatment Program

DEP has 90 days from the date of public notice to review and evaluate any complete submission for adequacy of legal authority, procedures, and funding. DEP has up to an additional 90 days to complete the evaluation of the submission if the public comment period is extended beyond 30 days or if a public hearing is held. In no event, however, shall DEP's time for evaluation of the submission exceed a total of 180 days from the date of public notice of a complete submission.

At the end of the review period, DEP must approve or deny the submission based upon the evaluation and taking into consideration comments submitted during the comment period and the record of the public hearing, if held. Where a determination is made to deny the request, DEP must notify the public utility and each person who has requested individual notice. The notification must include suggested modifications and must allow the public utility additional time to bring the submission into compliance with applicable requirements.

Where, following the allowed evaluation period and any hearing held, the EPA Regional Administrator sets forth, in writing, objections to the approval of such submission and the reasons for such objections, program approval shall be denied.

- **Changes** to the Control Authority's legal authority
- **Modifications** that result in less stringent local limits, except for pH and reallocations that do not increase total industrial loading for a pollutant;
- **Changes** to control mechanism (e.g., IU permit);
- A **decrease** in the frequency of IU self-monitoring or reporting;
- A **decrease** in the frequency of IU inspections or sampling by the Control Authority;
- **Changes** to the Control Authority's confidentiality procedures; and

Any other modification designated as substantial by DEP if the modification would have a significant impact on the operation of the Control Authority's pretreatment program, could result in an increase in pollutant loadings at the WWF, or could result in less stringent requirements being imposed on IUs.

Exhibit 2-4: Subsection 62-625.540(3), F.A.C. - Substantial Public Utility Pretreatment Program Modifications.

A copy of the EPA Regional Administrator's objections will be provided to the public utility and each person who has requested individual notice. The EPA Regional Administrator will provide an opportunity for written comments and may convene a public hearing on his or her objections. Unless retracted, the EPA Regional Administrator's objections shall result in a final ruling to deny approval of a pretreatment program 90 days after the date the objections are issued.

DEP is responsible for notifying those persons who submitted comments and participated in the public hearing, if held, of the approval or disapproval of the submission. In addition, the public utility must publish a notice of approval or disapproval, prepared by DEP, in the same newspaper as the original notice of request for approval of the submission.

Where a pretreatment program submission is approved, DEP must revise, or alternatively revoke and reissue, a WWF's permit to incorporate the approved pretreatment program as enforceable conditions of the permit, if the program requirements are not already stated in the WWF's permit. The revision of a

WWF's permit for the purpose of incorporating an approved pretreatment program shall be deemed a minor permit revision subject to the procedures in subsection 62-620.325(2), F.A.C.

The DEP program submission checklists regarding program completeness, program implementation procedures, and program attorney statements are provided as Appendices 2-B through 2-D.

Program Modifications

Approved pretreatment program modifications are also subject to DEP approval. Either DEP or a Control Authority may initiate program modification at any time to reflect changing conditions at the WWF. Program modification is necessary whenever there is a significant change in the operation of a pretreatment program that differs from the information in the public utility's submission, as approved under Rule 62-625.510, F.A.C.

For substantial program modifications, as defined in subsection 62-625.540(3), F.A.C., and presented in Exhibit 2-4, the Control Authority must submit a statement of the basis for the desired modification, a modified program description in accordance with paragraph 62-625.500(4)(a), F.A.C., and such other documents DEP determines to be necessary. An approved modification must be incorporated into the WWF's NPDES permit, if necessary. Notice of approval of the program modification, may not be necessary if no substantive comments are received by the date specified in the notice of request for approval and the request is approved without change.

Non-substantial program modifications require the Control Authority to provide notification to DEP at least 45 days prior to implementation of the modification(s). Unlike substantial modifications, non-substantial program modifications are deemed to be approved by the DEP 45 days after the submission of the Control Authority's statement unless DEP determines that a modification submitted is a substantial modification. Following such "approval" by DEP, such non-substantial modifications shall be incorporated into the Control Authority's WWF's permit in accordance with subsection 62-620.325(2), F.A.C., if necessary. If DEP determines that a modification reported by a Control Authority is in fact a substantial modification, DEP must notify the Control Authority and initiate the substantial program modification procedures.