



Arkansas Capacity Development Strategy

For

New Public Water Systems

**Engineering Section
Arkansas Department of Health**

Revision 1
September 2011

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Basis of Authority

What is the statutory basis for any regulations, policies, or other implementing authorities?

Act 96 of 1913 gives the Arkansas Department of Health (Department) the broad legal authority “to make all necessary and reasonable rules and regulations of a general nature for the protection of the public health.” The Department's Engineering Section (Section) has used this broad authority to implement the *State's Rules and Regulations Pertaining to Public Water Systems*, which contains specific requirements for all public water systems.

Describe the State's regulations, policies, or other implementing authorities.

Section XX of the *Rules and Regulations Pertaining to Public Water Systems* states:

“Before detailed plans and specifications are prepared for the construction of new public water systems or major improvements to existing public water systems, the owner or his authorized agent shall submit to the Arkansas Department of Health a preliminary report containing data and information sufficient for the complete understanding of the proposed work. The “Recommended Standards for Waterworks” by the Great Lakes – Upper Mississippi River Board of State Sanitary Engineers (Ten States Standards) is recommended as a guide. An inspection by Arkansas Department of Health staff of all proposed surface water and all groundwater source locations shall be conducted as part of the review of the preliminary report.

For proposed new systems, the preliminary report shall include sufficient information to demonstrate the system's technical, financial, and managerial capacity to comply with the requirements of the Safe Drinking Water Act. (See Sec. VII.H) The Department shall not approve the construction of any new Community Public Water System or NonTransient NonCommunity Public Water System unless the Department formally concurs that the report demonstrates the system's technical, financial, and managerial capacity to comply with the requirements of the Safe Drinking Water Act.”

Section VII.H of the *Rules and Regulations Pertaining to Public Water Systems* states:

“Each Community and NonTransient NonCommunity Public Water System shall have a written long-range plan. The long-range plan shall address, at a minimum, projected needs for source, treatment, storage and distribution for a planning period of at least ten years and shall demonstrate the system's technical, financial, and managerial capacity to comply with the requirements of the Safe Drinking Water Act.”

The Section has recently established guidelines for long-range plans. A copy of the Guidelines for Long-Range Plans, for both existing and new systems, is enclosed.

Section XXI of the *Rules and Regulations Pertaining to Public Water Systems* states:

“The owner or his authorized agent shall submit two complete sets of engineering plans and specifications to, and receive written approval of, the Arkansas Department of Health, before constructing or entering into contract to construct a water system, source of supply, water purification plant and/or distribution system, or any alteration thereto. Thereafter such engineering plans and specifications must be adhered to unless deviations are submitted to, and receive written approval of, the Arkansas Department of Health.”

An opinion from Reginald A. Rogers, Deputy Counsel, Arkansas Department of Health, is attached referencing existing and draft proposed versions of the *Rules and Regulations Pertaining to Public Water Systems*. The *Rules and Regulations Pertaining to Public Water Systems* cited above are those indicated as "draft proposed" in Mr. Rogers' statement. The draft proposed version was adopted and became effective in early July 1999. Please note Mr. Rogers' statement indicating that this version of the *Rules and Regulations Pertaining to Public Water Systems* "provide the necessary authority to ensure that all new Community water systems and NonTransient NonCommunity water systems demonstrate technical, managerial, and financial capacity after October 1, 1999." Please also see Attachment B, a letter from Mr. Arnold M. Jochums, Assistant Attorney General, concurring with the opinion provided by Mr. Rogers.

Identify the State or sub-State agencies responsible for implementing the regulations, policies, or other activities.

The Section is the chief implementing agency for the *Rules and Regulations Pertaining to Public Water Systems*. The Arkansas Natural Resources Commission (ANRC) will provide as-needed assistance in financial/managerial reviews, especially in regards to evaluating the capacity of those systems seeking a loan from the Drinking Water State Revolving Loan Fund (DWSRF).

Describe the collaborative arrangements (if any) among the various agencies responsible for implementing these regulations, policies, or other authorities. Identify the means (e.g., memoranda of understanding) used to document the collaborative arrangements.

The Section has a verbal agreement with ANRC to provide assistance in financial reviews on a limited as-needed basis. This agreement is supplemental to the signed "Interagency and Sub-Grant Agreement" between the Department and ANRC for implementing activities for the drinking water SRF loan program.

Control Points

Describe each control point outlined in the State program and identify the agency responsible for implementing that control point. Make special note of the control point(s) that permit the State to directly exercise its authority to ensure the demonstration of capacity in new Community and NonTransient NonCommunity water systems.

There are two major control points for assessing new system capacity, both of which are imposed by the Section. The first is the requirement that a preliminary report be submitted, "Before detailed plans and specifications are prepared for the construction of new public water

systems or major improvements to existing public water systems,” and that the report, as determined by the Section, contain, “data and information sufficient for the complete understanding of the proposed work.” This can be found in Section XX of the *Rules and Regulations Pertaining to Public Water Systems*

The second major control point is that of requiring that engineering plans and specifications must be approved by the Section prior to construction of, or entering into contract to construct a new water system. This can be found in Section XXI of the *Rules and Regulations Pertaining to Public Water Systems*.

Either of the above control points permit the State to directly exercise, by the withholding of approval, its authority to ensure the demonstration of capacity in new Community and NonTransient NonCommunity water systems.

Existing systems that have recently become large enough to be classified as Community or NonTransient NonCommunity water systems are required to immediately submit As-Built Plans and Specifications (provided that none were previously submitted and approved or accepted for file). These plans and specifications are reviewed under the same criteria as those for systems being proposed. The Section then requires correction of any significant deficiencies, and field verification of such corrections by the design engineer. Once corrections have been verified to the satisfaction of the Section, the plans and specifications are then accepted for file. Such systems are activated as a Community or NonTransient NonCommunity water systems as soon as they are discovered, and compliance grading, including appropriate enforcement actions, commences immediately.

It should also be noted that Section 17-51-201 of Act 333 of 1957 as Amended in 2003, also known as the *Water Operator Licensing Law*, states the following:

(a) In order to safeguard the public health, all operators of community and certain non-community public water systems, from which water is sold, distributed, or otherwise offered for human consumption, whether such water systems are publicly or privately owned and operated, shall be licensed and certified as competent by the department under the provisions of this chapter and under such rules and regulations as the board may adopt under the provisions of this chapter.

(b) It shall be unlawful for any person, municipality, political subdivision, corporation, partnership, sole proprietorship, or any authority that furnishes water for domestic consumption to operate any type of community public water system, non-transient non-community public water system, or any other non-community public water system utilizing a surface water or surface water influenced source, unless the operator in charge is duly licensed and certified competent by the Department of Health.

(c) It shall be unlawful for any person to perform the duties of an operator without being duly licensed or to falsely represent himself as a licensed operator.

(d) It shall also be unlawful for any public or private official, not duly licensed, to attempt to influence the judgement of a licensed operator in matters where the public health may be involved unless this official is an authorized representative of the Department of Health.

Compliance with the *Water Operator Licensing Law* is judged by district staff, primarily in the sanitary survey process. Sanitary surveys are performed at start-up of a new system, and periodically thereafter. Sanitary surveys are performed once every two years for systems that have a surface water source, and once every three years for systems that have only ground water or purchased water sources.

Describe the aspect(s) of capacity (technical, managerial, or financial) evaluated at each of the control points listed above. Ensure that all aspects of capacity are evaluated.

Preliminary Reports – Preliminary report reviews, as described in the following paragraphs, address all three aspects of capacity.

The *Recommended Standards for Waterworks* by the Great Lakes – Upper Mississippi River Board of State Sanitary Engineers (also known as Ten States Standards) is recommended as a guide for preliminary reports.

An inspection by Arkansas Department of Health staff of all proposed surface water and groundwater source locations shall be conducted as part of the review of the preliminary report.

Referenced in Section XX of the *Rules and Regulations Pertaining to Public Water Systems* regarding preliminary reports is Section VII.H of the *Rules and Regulations Pertaining to Public Water Systems*, which requires water systems to have a long-range plan. As can be seen in the attached Guidelines for Long-Range Plans, all three aspects of capacity are covered.

The National Primary Drinking Water Standards are referenced in numerous places throughout the *Rules and Regulations Pertaining to Public Water Systems*.

Plans and Specifications – Plan and specification reviews primarily address technical capacity. Design criteria for various aspects of a water system are described in general throughout the *Rules and Regulations Pertaining to Public Water Systems*. These items include ground water sources, surface water sources, water treatment plants, potable water storage tanks, disinfection requirement, etc. In addition to the requirements described in general, standards from the American Waterworks Association (AWWA) are referenced as criteria for the following aspects of a water system: unit processes, equipment, chemicals and appurtenances; construction of public water wells; design, inspection, repair and painting of potable water storage tanks; disinfection of potable water storage tanks; and the construction and testing of water distribution systems. Also, *Recommended Standards for Waterworks* is referred as a guide.

At each of the control points listed above, what specific action will the State or sub-State agency take to ensure demonstration of technical, managerial, and financial capacity?

Evaluation of plans, specifications and preliminary reports occurs in the Section's normal review process.

The Section's normal review process consists of three layers, the district engineer, the engineer supervisor, and the chief engineer. The Section has nine district engineers, each responsible for a certain area of the state referred to as a district. Please see Attachment D, organizational charts for the Section. The district engineer is responsible for the major portion of plan/specification/report review for the district. In addition, the technical support staff will review projects for Surface Water Treatment, Corrosion Control for Lead & Copper and Disinfection

Byproduct Control in conjunction with the district engineer. If the documents under review do not meet the appropriate design criteria, comments are then provided by the district engineer, and the review process stops pending response to the comments. A minimal amount of technical assistance is provided in the descriptive element of the comments, but the onus is on the design engineer to make the appropriate changes.

The time frame for review by the district engineer is typically one to three weeks. If comments are provided, response to comments is expected within 45 days of receipt of comments. Once a reply to the comments is received by the Section, another one to three-week time frame is established, and the process starts again. Each time comments are provided, the review process is stopped until a response is received. Once the project appears ready for approval, it is forwarded to the engineer supervisor for concurrence and approval. If the project is considered a major alteration to an existing water system, or if the project is for a new water system, the engineer supervisor will then forward the project to the chief engineer for concurrence and approval.

Again, if the preliminary report, or the plans and specifications, do not demonstrate that a proposed system will be capable of meeting the requirements of the Safe Drinking Water Act upon start-up, the Section will provide comments, the review process will stop, and approval will be withheld. Upon response to the comments, the review process will proceed. If more comments are needed, they will continue to be issued until the Section is satisfied that adequate capacity has been demonstrated.

It is not the intent of the Section to provide assistance, other than what is normally provided through the provision and explanation of review comments, to proposed systems in order for a proposed system to obtain sufficient technical, managerial and financial capacities. That responsibility will fall upon the proposed water system.

If funding is being sought through any State agency, the preliminary report must also go to the Arkansas Water and Wastewater Advisory Committee (WWAC), which consists of representatives from the various funding and regulatory agencies, for review and comment.

Plan for Implementation and Periodic Review

How will the State evaluate the implementation and on-going effectiveness of its new system capacity development program?

The Section tracks the SDWA compliance of all Community and NonTransient NonCommunity water systems, and will pay close attention to new systems during their early years. The main tool that the Section will use to evaluate the effectiveness of its program will be compliance rates. If new system compliance rates are low, the Section will take note of what type of violations are occurring, make assessments of the causes of the violations, and take appropriate actions to address common causes. For example, if the assessment reveals that water systems are not being constructed according the approved plans and specifications, follow-up activity on the part of the Section would be increased. Also, if deficiencies appear to be mainly in financial or managerial areas, the Section will investigate whether the water system merely did not provide managerial and financial capacity as shown in its submittals, or whether the managerial and financial review criteria should be changed.

Sanitary survey results will be used as an indicator of how effective the capacity development program is at ensuring that new systems will have adequate capacity upon start-up. As was stated earlier in this report, sanitary surveys will be performed at start-up of a new system, and periodically thereafter. Sanitary surveys are performed once every two years for systems that have a surface water source, and once every three years for systems that have only ground water or purchased water sources. Also, as stated earlier, adequacy of water operator licensure is evaluated in the sanitary survey process.

For systems that have recently commenced operation and have received funding from public funding agencies, the Section will maintain contact with the funding agencies regarding those systems' ability to repay their debts. If new systems are not consistently able to repay loans, or if funding agencies have found it necessary to significantly restructure the terms of multiple loans, based on new systems' inability to repay, the financial review criteria will be reevaluated.

Also, the Section uses the set-aside funds of its SRF capitalization grant for two technical service contracts. One of the contracts focuses mainly in technical and operational issues, and the other focuses mainly on financial and managerial issues. The contracts function primarily on a "circuit rider" format, with the contractor(s) evaluating systems, providing a strategy for addressing deficiencies, and then providing technical assistance and lastly follow-ups to verify that the systems are implementing improvements. The contractors are provided with a prioritized list, one for each contract, of systems that appear to need help in achieving and/or maintaining technical, managerial, or financial capacity. The lists are prioritized based on factors such as violations, presence/absence of a licensed operator, status with funding agencies, and category of system (surface, ground, purchase, surface influenced well, etc.).

Overall Program Functionality

1. How does the State's proposed program ensure that new systems commencing operations after October 1, 1999 demonstrate technical, managerial, and financial capacity?

The State requires that new systems demonstrate technical, managerial, and financial capacity, by submitting a preliminary report to the Section for review and approval. Following approval of the preliminary report, engineering design plans and specifications must be submitted to the Section for review and approval prior to any construction activity.

Once a new system commences operation, compliance data will act as a measure by which the system is maintaining technical, managerial and financial capacity. If there is a negative trend in compliance data, the system will be inspected to determine what factors are contributing to this poor performance. The water system will then be required to take appropriate corrective actions to address any deficiencies found in the areas of technical, managerial and financial capacity.

As a result of ensuring that all new Community and NonTransient NonCommunity water systems demonstrate adequate technical, managerial and financial capacity, it is expected that there will be a reduction in the number of enforcement cases being pursued by the Section. The Section can then focus additional resources to assist existing systems that have a history of noncompliance. This effort will improve the state's compliance rate with State Federal drinking water regulations.

The State's operator certification program helps ensure that operators are properly trained, thus ensuring successful operation of the water systems, and compliance with State and Federal drinking water regulations.

The mission of the Arkansas Department of Health is to assure conditions which encourage a healthier quality of life for people in the state, by ensuring compliance with public health laws and regulations, providing leadership to help meet needs for disease prevention, community health assessment, health promotion, and service delivery, and by the development of sound public health policy for Arkansas. The implementation of the state's capacity development program will help achieve that mission by helping ensure the following things: that water systems will be able to meet the requirements of the Safe Drinking Water Act, that the citizens of the State of Arkansas will be the recipients of water that is safe to drink, and, since less time will be needed regulating systems in non-compliance, that taxpayer monies will be used more efficiently.

Appendix A

Legal Opinion Letter – Office of General Counsel



Arkansas Department of Health

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MEMORANDUM

To: Trevor Bowman, Engineer
Division of Engineering

From: Reginald A. Rogers, Deputy General Counsel
Arkansas Department of Health

Date: April 19, 1999

Re: Opinion on Capacity Development Program

I have reviewed your memorandum dated March 17, 1999. The 1996 Amendments to the Safe Drinking Water Act (SDWA) require that states have to have "obtained the legal authority or other means to ensure that all new community water systems and new non-transient, non-community water systems commencing operation after October 1, 1999, demonstrate technical, managerial, and financial capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect, on the date of commencement of operations." Section 1420 of the 1996 SDWA Amendments.

You have provided me with a copy of the existing Rules and Regulations Pertaining to Public Water Systems (Rules I) and a copy of the draft proposed Rules and Regulations Pertaining to Public Water Systems. (Rules II).

I have reviewed the above documents. In my opinion, both the present Rules I as well as the draft proposed Rules II, provide the necessary authority to ensure that all new community water systems and new non-transient, non-community water systems demonstrate technical, managerial, and financial capacity after October 1, 1999.

Section I of the Rules I and II provide the authority of the Arkansas State Board of Health to adopt and promulgate the Rules I and II pursuant to Act 96 of 1913, as amended (Arkansas Code Annotated §20-7-109, et seq.) Arkansas Code Ann.

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§20-7-109 states:

(a)(1) Power is conferred on the State Board of Health to make all necessary and reasonable rules and regulations of a general nature for the protection of the public health and safety; for the general amelioration of the sanitary and hygienic conditions within the state; for the suppression and prevention of infectious, contagious, and communicable diseases; for the proper enforcement of quarantine, isolation, and control of such diseases; and for the proper control of chemical exposures that may result in adverse health effects to the public."

Arkansas Code Annotated §20-7-111 provides that:

- (b) "The State Board of Health is designated as the State board for the purpose of carrying into effect the provisions of the Federal acts and this section and shall have all necessary authority to cooperate with the Federal authorities administering the acts of Congress. ..."
- (c) The Director of the Department of Health shall act as executive officer of the board for the purpose of administering the Federal acts and this section.

The director shall carry into effect such rules and regulations as the Federal authorities and the State Board of Health may adopt thereunder."

The above statutes demonstrate the authority of the State Board of Health to adopt and promulgate rules and regulations for the public health concerns of the citizens of the State.

Section II of the Rules I and II state that their purpose is to ensure that the water from a public water system is of ample quantity, safe and palatable, as well as in full compliance with the National Primary Drinking Water Standards.

Section VII of the Rules I and II provides the authority to issue certain orders to the water systems. Section VII requires that each owner must operate the water supply "so as to meet the standards set forth in the National Primary Drinking Water Regulations and take every reasonable precaution to protect the water from contamination." The system must be operated within the operating criteria specified by the Arkansas Department of Health. (Section VII, p. 9)

Section VII, parts 6 and 7, of Rules II provides for the submission of certain reports to document the system's technical, financial, and managerial capacity to comply with the requirements of the Safe Drinking Water Act.

In my opinion, the Rules and Regulations, in both forms, along with the authority granted to the ADH, give the power to effectuate the purpose of providing ample, safe, palatable water to the citizens of this State. The requirement that the water systems demonstrate the technical, managerial, and financial capacity to comply with the drinking water regulations is a natural logical development permitted to ensure safe drinking water.

RAR/ncc

cc: Rick Hogan

Appendix B

Legal Opinion Letter – Attorney General's Office



ATTORNEY GENERAL OF ARKANSAS
Mark Pryor

May 10, 1999

Trevor L. Bowman
SRF Engineer
Arkansas Department of Health
4815 West Markham Street
Little Rock, AR 72205-3867

RE: Eligibility for Capitalization Grants

Dear Mr. Bowman:

It has come to my attention that the Arkansas Department of Health desires to participate in the federal program which provides low interest loans to public water systems. This program is derived from Section 1452 of the 1996 Amendments to the State Drinking Water Act (SDWA).

To be able to fully participate in this program, the state is required to show that it has "obtained the legal authority or other means to insure that all new community water systems and new nontransient, noncommunity water systems commencing operation after October 1, 1999, demonstrate technical, managerial, and financial capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect on the effective date of the commencement of operations . . ."

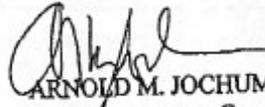
I have reviewed the opinion on Capacity Development Program provided by Reginald A. Rogers, Deputy General Counsel, for the Arkansas Health Department as well as statutory authorities A.C.A. §20-7-109 and A.C.A. §20-7-111 and the current as well as proposed rules pertaining to public water systems and concur in Mr. Rogers' opinion that the State of Arkansas through the Arkansas Department of Health has legal authority to insure that all new community water systems and new nontransient, noncommunity water systems commencing operation after October 1, 1999, demonstrate technical, managerial and financial capacity with respect to each national primary drinking water regulation.

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Trevor L. Bowman
May 10, 1999
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If you have further questions, please contact me.

Sincerely,


ARNOLD M. JOCHUMS
Assistant Attorney General

AMJ/mnd

Appendix C

Guidelines for Long Range Plans

Guidelines for Long-Range Plans Existing Public Water Systems

Under Section VII.H of the Arkansas Rules and Regulations Pertaining to Public Water Systems, each public water system shall have a written Long Range Plan covering a planning period of at least ten years. This plan should be updated at least every 5 years. A Long-Range Plan shall address the following information at a minimum.

Items Pertaining to Technical Capacity:

1. A discussion of the water system's ability to consistently provide an ample quantity of safe drinking water to its customers, including such items as water use data, projected water use, regulatory compliance, etc.
2. A description of all major projects and expansions anticipated within the planning period.
3. A discussion and brief analysis of possible alternatives to the planned projects and expansions; including such items as interconnection with a neighboring system, purchased water arrangements, alternate ownership, and management arrangements.
4. Hydraulic analyses of the distribution system at all pertinent flows and storage tank levels anticipated within the planning period.
5. A discussion of source water adequacy, for both quality and quantity concerns, for the planning period.
6. A discussion of the adequacy of source water protection areas and measures to control potential contaminants, including any applicable legal authority to implement such measures.
7. A discussion of the current adequacy of water treatment processes and their projected performance and adequacy for the planning period.
8. A discussion of how the water system plans to address any waste disposal issues occurring due to water treatment, (e.g. sludge, backwash water, etc.).
9. Documentation that the water system currently has a sufficient number of properly licensed operators, and plans that the water system has for maintaining a sufficient number of properly licensed operators for the planning period.
10. A listing of any laboratory/water quality monitoring needs anticipated within the planning period.
11. A discussion of the water system's planning efforts to insure compliance with applicable state and federal regulations anticipated to be finalized within the planning period.
12. A statement of compliance with section XIV.F of the Rules and Regulations Pertaining to Public Water Systems regarding plumbing inspection and sewage disposal requirements, and a description of the system's legal authority to implement the requirements.
13. A statement of compliance with section VII.E of the Rules and Regulations Pertaining to Public Water Systems regarding the establishment of a cross-connection control program, and a description of the system's legal authority to implement the requirements.
14. A discussion of deficiencies listed in the water system's sanitary survey that would result in major capital expenditures, and how those deficiencies will be addressed.
15. Other items as appropriate for documenting and/or maintaining the water system's Technical Capacity.

Items Pertaining to Managerial Capacity:

1. A clear identification of the owner or other responsible legal body for the water system.
2. A commitment from the owner or controlling body to adhere to and periodically review and update the Long-Range Plan.
3. An organizational chart for the water system, showing all staff and their role in the organization. Also indicate any license or certification requirements of the positions.
4. A discussion of any anticipated or on-going operator training and certification efforts.
5. A general operation and management plan for the water system, addressing such items as: routine inspections, planned equipment replacements, equipment calibration, emergency procedures, record keeping, reporting and similar activities
6. A discussion of the billing and collection procedure to address such items as: Is water use metered or estimated? If estimated, what is the basis for the estimate? If metered, who reads the meters? Are the meters tested periodically? What is the bill collection success rate? Please include any procedures in place to manage delinquent accounts. Are revenues collected sufficient for current and future operation of system?
7. An evaluation of unaccounted for water, and a discussion of plans to address any excessive losses.
8. A listing of any standing O&M contract(s) and the relative responsibilities of the water system and contractor(s) relating to each contract.
9. A statement of compliance with section VII.G of the Rules and Regulations Pertaining to Public Water Systems regarding emergency planning, and a description of the system's legal authority to implement the requirements.
10. A discussion of the adequacy of the spare parts inventory on hand for repairs.
11. A discussion of the adequacy of the chemical supply inventory on hand.
12. A discussion of the water system's existing safety program for chemical handling and other work area activities.
13. Other items as appropriate for documenting and/or maintaining the water system's Managerial Capacity.

Items Pertaining to Financial Capacity:

1. A forecast of all future capital needs and operating expenses to meet SDWA requirements, infrastructure rehabilitation, and system expansion
2. A cash flow analysis to demonstrate revenue sufficiency
3. An operating budget to include such items as: depreciation, reserves, debt service, O&M, salaries, etc.
4. Other items as appropriate for documenting and/or maintaining the water system's Financial Capacity.

Guidelines for Long-Range Plans New Public Water Systems

Under Section VIIH of the Arkansas Rules and Regulations Pertaining to Public Water Systems, each public water system shall have a written Long Range Plan covering a planning period of at least ten years. The plan should be updated every 5 years. New or proposed community and nontransient, noncommunity public water systems shall include a copy of this plan as a part of the preliminary report required under Section XX of the regulations. A Long-Range Plan shall address the following information at a minimum.

Items Pertaining to Technical Capacity:

1. A brief description of the extent of and need for a proposed system.
2. A brief discussion of how the system will maintain an ability to consistently provide an ample quantity of safe drinking water to its customers.
3. A description of all major projects and expansions anticipated within the planning period.
4. A discussion and brief analysis of possible alternatives to the planned project; including interconnection with a neighboring system, purchased water arrangements, alternate ownership, and management arrangements.
5. Water use projections for the planning period.
6. Hydraulic analyses of the proposed distribution system at all pertinent flows and storage tank levels anticipated within the planning period
7. A description of source water adequacy, for both quality and quantity concerns, for the planning period.
8. A brief discussion of the adequacy of source water protection areas, and measures to control potential contaminants, including any applicable legal authority to implement such measures.
9. A brief description of proposed treatment processes, the rationale behind their being chosen and their projected performance/adequacy for the planning period.
10. A discussion of how the water system plans to address any waste disposal issues occurring due to water treatment, (e.g.; sludge, backwash water, etc.).
11. A discussion of the operational needs of a proposed system, including the expected number of licensed operators required.
12. Address any laboratory/water quality monitoring needs anticipated within the planning period.
13. Address the water system's plans for complying with applicable state and federal regulations anticipated to be finalized within the planning period.
14. A statement of intent to comply with section XIV.F of the Rules and Regulations Pertaining to Public Water Systems regarding plumbing inspection and sewage disposal requirements, and a description of the system's legal authority to implement the requirements.
15. A statement of intent to comply with section VII.E of the Rules and Regulations Pertaining to Public Water Systems regarding the establishment of a cross-connection control program, and a description of the system's legal authority to implement the requirements.
16. Other items as appropriate for documenting and/or maintaining the water system's Technical Capacity.

Items Pertaining to Managerial Capacity;

1. A clear identification of the owner or other responsible legal body for the water system.
2. A commitment from the owner or other controlling body to adhere to and periodically review and update the Long-Range Plan.
3. An organizational chart for the water system, showing all anticipated staff and their role in the organization. Also indicate any license or certification requirements of the positions.
4. A discussion of any anticipated operator training and certification efforts.
5. A general operation and management plan for the water system, including such items as: routine inspections, planned equipment replacements, equipment calibration, emergency procedures, record keeping, reporting and similar activities.
6. A description of the proposed billing and collection procedures, along with adequacy of revenues for system operation.
7. A statement of intent to comply with section VII.G of the Rules and Regulations Pertaining to Public Water Systems pertaining to emergency planning, and a description of the system's legal authority to implement the requirements.
8. A discussion of the adequacy of the spare parts inventory to be on hand for repairs.
9. A discussion of the adequacy of the chemical supply inventory to be on hand.
10. A brief discussion of the owner's and chief operator's public water system operation experience and compliance history (if such exists).
11. A brief discussion of the water system's anticipated safety program for chemical handling and other work area activities.
12. Other items as appropriate for documenting and/or maintaining the water system's Managerial Capacity.

Items Pertaining to Financial Capacity:

1. A forecast of all future capital needs and operating expenses to meet SDWA requirements, infrastructure rehabilitation, and system expansion.
2. A cash flow analysis to demonstrate revenue sufficiency.
3. A proposed operating budget to address items such as: depreciation, reserves, debt service, O&M, salaries, etc.
4. Other items as appropriate for documenting and/or maintaining the water system's Financial Capacity.

Appendix D

Water Operator Licensing Law

Water Operator Licensing Law

Act 333 of 1957



Arkansas Department of Health

Bureau of Environmental Health Services

Division of Engineering

1997

ACT 333 OF 1957 (As Amended)

AN ACT TO PROVIDE FOR LICENSING OF PUBLIC WATER SUPPLY OPERATORS

Act 333 of 1957 has been amended by Act 1001 Of 1991, Act 787 of 1995 and Act 494 of 1997. (Title 17, Chapter 51, Sections 1 and 2,of the Arkansas Code of 1987Annotated (1995 Supp.).

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

17-51-101. Definitions. As used in this chapter, unless the context otherwise requires:

- (a) 'Water system operator' means any person who, during the performance of his regular duties at a community public water system, a non-transient non-community public water system, or any other noncommunity public water system which utilizes a surface water or surface water influenced source, exercises individual judgment by which, whether directly or indirectly, the safety, quality, and quantity of water delivered from the water system might be affected;
- (b) 'Board' means the State Board of Health;
- (c) 'Committee' means the Drinking Water Advisory and Operator Licensing Committee;
- (d) 'Public Water System' means all sources and their surroundings from which water is derived for drinking or domestic purposes by the public, and all structures, conduits, and appurtenances in connection therewith by which water for such use is obtained, treated, conditioned, stored and delivered to the public;
- (e) 'Community public water system' means any public water system which serves at least fifteen (15) connections or twenty-five (25) persons who are year-round residents;
- (f) 'Non-Community public water system' means a public water system that serves fifteen (15) service connections or twenty-five (25) persons, at least sixty (60) days per year, that is not a community public water system;

- (g) 'Late renewal' means an application for renewal when the application for renewal or the associated fee is received more than thirty (30) days following the beginning of a renewal period;
- (h) 'Department' means the Arkansas Department of Health;
- (i) 'Treatment' means the application of physical processes and/or the addition of chemicals to water which a public water system provides to the public, for the purposes of improving the quality of the water, except that the addition of gaseous chlorine, sodium hypochlorite, or calcium hypochlorite alone shall not be defined as treatment;
- (j) Non-transient non-community public water system means a public water system that is not a community water system and that regularly serves at least twenty-five (25) of the same persons over six (6) months per year.
- (k) Drinking Water Operator Certification Program means those activities conducted by the Department of Health and the Drinking Water Advisory and Operator Licensing Committee related to the training, examination, and licensing and certification of public water system operators.

17-51-102 Penalties.

- (a) Any person or persons, representing a firm, corporation, municipality, or other political authority who violates any of the provisions of this chapter shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not less than one hundred dollars (\$100) nor more than five hundred (\$500) or by imprisonment in the county jail for not more than thirty (30) days, or by both such fine and imprisonment. Each day during which a violation continues shall be a separate offense.
- (b) Every firm, person, or corporation who violates this act or any of the rules or regulations issued or promulgated by the State Board of Health, or who violates any condition of a license, permit, certificate, or any other type of registration issued by the board may be assessed a civil penalty by the board. The penalty shall not exceed one thousand dollars (\$1,000) for each violation. Each day of a continuing violation may be deemed a separate violation for purposes of penalty calculation.

- (c) All fines collected under this section shall be deposited in the State Treasury and credited to the Waterworks Operators Licensing fund to defray the costs of administering this section.
- (d) Subject to such rules and regulations as may be implemented by the Chief Fiscal Officer of the State, the disbursing officer of the Department of Health is authorized to transfer all unexpended funds relative to fines collected under this subsection, as certified by the Chief Fiscal Officer of the State, to be carried forward and made available for expenditures for the same purpose for any following year.

17-51-103. Powers and duties of the Board.

- (a) The board shall have the authority to:
 - (1) Adopt rules and regulation in accordance with this chapter as may be necessary for the administration and enforcement of this chapter;
 - (2) Set fees to cover the cost of the administration of this chapter;
 - (3) Revoke a water system operator's license for cause;
 - (4) Establish minimum educational standards for all applicants for licensure.

17-51-104. Drinking Water Advisory and Operator Licensing Committee Creation - Members.

- (a) There is created the Drinking Water Advisory and Operator Licensing Committee to consist of seven (7) members to be appointed by the board;
 - (1) One (1) shall be a member of the staff of the Division of Engineering of the Department of Health who shall be a registered engineer and who shall act as executive secretary for the board for water system operator licensing activities, and also act as executive secretary for the committee;
 - (2) One (1) shall be an engineer on the teaching staff of any state-supported institution of higher education who shall be either a sanitary engineer, civil engineer, environmental engineer, or chemical engineer with expertise in the drinking water field;

- (3) Four (4) members shall be active water system operators who shall hold the highest grade licenses;
 - (4) One (1) member shall be a consulting engineer specializing in drinking water systems design;
- (b) Initial appointments shall be as follows:
- (1) One (1) member shall serve a term of one (1) year;
 - (2) One (1) member shall serve for two (2) years;
 - (3) One (1) member shall serve for three(3) years;
 - (4) One (1) member shall serve for four (4) years;
 - (5) One (1) member shall serve for five (5) years;
 - (6) One (1) member shall serve for six (6) years; and
 - (7) Each subsequent regular appointment shall be for a term of six (6) years, provided that no person shall be appointed to serve more than one (1) full six year term.
- (c) In event of vacancy, a new member shall be appointed by the board to serve out the unexpired term.
- (d) A member of the committee may be removed for cause only after the board has made an investigation at which the accused has had an opportunity to defend himself against any and all charges.
- (e) The committee shall serve without remuneration, but shall be entitled to reimbursement for actual expenses incurred in the performance of their duties.
- (f) All members of the committee shall be residents of the State of Arkansas. All members of the Water Operator Licensing Committee at the time of the effective date of this chapter shall be automatically appointed to terms on the committee which correspond to their remaining terms on the Water Operator Licensing Committee.
- (g) The member of the committee who is a member of the staff of the Division of Engineering of the department shall serve at the pleasure of the Director of the Department of Health.

17-51-105. Drinking Water Advisory and Operator Licensing Committee - Duties.

- (a) The duties of the committee shall be as follows:

- (1) to assist the department in examining applicants for water system operator licenses;
- (2) to advise the department as to the fitness of the applicant for licensing and certification;
- (3) to advise the board in cases of suspension and revocation of license;
- (4) to advise the board and department in all matters, upon request by the board or department, or upon its own motion, relating to the operations of, and the development of regulations for, the Public Water System Supervision Program operated by the Division of Engineering of the Department; and
- (5) to advise the board or department in all matters, upon request by the board or department, relating to training programs for water system operators.

17-51-106. Fees.

(a) The board shall have the authority to:

- (1) Set fees to cover only the cost of the administration of this chapter;
- (2) Establish fees for:
 - (A) Examination;
 - (B) Licensing;
 - (C) Renewal of license;
 - (D) Penalty for late renewal;
 - (E) Evaluation for reciprocity; and
 - (F) Temporary permit issuance or renewal.

(b) Fees shall not exceed:

- (1) Fifty dollars (\$50.00) for examination;
- (2) Twenty-five dollars (\$25.00) for licensing;
- (3) Fifty dollars (\$50.00) for renewal of license;
- (4) Ten dollars (\$10.00) for penalty for late renewal;
- (5) Fifty dollars (\$50.00) for evaluation for reciprocity; and
- (6) Twenty-five dollars (\$25.00) for temporary permits or renewal of temporary permits.

- (c) Disposition of funds.
 - (1) All fees collected under this chapter are declared special revenues and shall be deposited in the State Treasury to the credit of the Public Health Fund, and such monies shall be expended only for the administration of this chapter.
 - (2) Subject to such rules and regulations as may be implemented by the Chief Fiscal Officer of the State, the disbursing officer for the Department of Health is authorized to transfer all unexpended funds relative to the Drinking Water Operator Certification Program that pertain to fees collected, as certified by the Chief Fiscal Officer of the State, to be carried forward and made available for expenditures for the same purpose in any following fiscal year.

17-51-201. License required.

- (a) In order to safeguard the public health, all operators of community and certain non-community public water systems, from which water is sold, distributed, or otherwise offered for human consumption, whether such water systems are publicly or privately owned and operated, shall be licensed and certified as competent by the department under the provisions of this chapter and under such rules and regulations as the board may adopt under the provisions of this chapter.
- (b) It shall be unlawful for any person, municipality, political subdivision, corporation, partnership, sole proprietorship, or any authority that furnishes water for domestic consumption to operate any type of community public water system, non-transient non-community public water system, or any other non-community public water system utilizing a surface water or surface water influenced source, unless the operator in charge is duly licensed and certified competent by the Department of Health.
- (c) It shall be unlawful for any person to perform the duties of an operator without being duly licensed or to falsely represent himself as a licensed operator.
- (d) It shall also be unlawful for any public or private official, not duly licensed, to attempt to influence the judgment of a licensed operator in matters where the public health may be involved unless this official is an authorized representative of the Department of Health.

17-51-202. Classifications - Examinations.

- (a) Water system operators shall be licensed in appropriate grades according to responsibilities and in accordance with classifications designated by the board which consider both the population served and the level of treatment required to produce an acceptable quality water.
- (b) Applicants for examination for licensing shall be examined in the various phases of water system operation as designated by the board.
- (c) At its discretion the committee may delete or modify any of the adopted requirements where they are not applicable, but the licenses granted shall be limited and valid only under the conditions described.
- (d) The committee at its discretion may waive the requirements, or any part of the requirements, for formal examination of an applicant for a license if the applicant holds a valid license or certificate from another state in which the requirements for license in the appropriate grade are at least equal to the requirements set forth by the board.

17-51-203. Issuance - Temporary Permits

- (a) The department shall license and certify all applicants for licenses under this chapter who satisfy the requirements of this chapter. Licenses shall be granted according to classifications set forth by the board.
- (b) In an emergency, the department at its discretion may grant temporary permits for operation of a water system when and only when the public health and safety are not jeopardized. The temporary permit shall be valid for a period of not more than one (1) calendar year, and may be renewed only once, with the approval of the department.

17-51-204. Renewal - Standing

- (a) Licenses shall be valid for a period of two (2) years and shall be renewable by the department upon application without examination, provided the applicant is in good standing.
- (b) The licensee, in order to remain in good standing, shall demonstrate his interest in the technical developments of water system operation by fulfilling requirements as the board may direct.

17-51-205. Suspension - Revocation - Reinstatement

- (a) The department shall suspend the license of an operator for cause.
- (b) The suspension shall remain in effect until the case can be reviewed by the committee, where the licensee shall have the opportunity to present his defense.
- (c) After the committee has reported its findings to the board, the board shall uphold the department's suspension of the license, reinstate the licensee, or revoke the license.
- (d) A license so revoked may be reinstated only if all the conditions that caused revocation have been removed.

17-51-206. All rules and regulations promulgated pursuant to this act shall be reviewed by the Joint Interim Committee on Public Health, Welfare, and Labor or an appropriate subcommittee thereof.

17-51-207. All provisions of this act of a general and permanent nature are amendatory to the Arkansas Code of 1987 Annotated and the Arkansas Code Revision Commission shall incorporate the same in the Code.

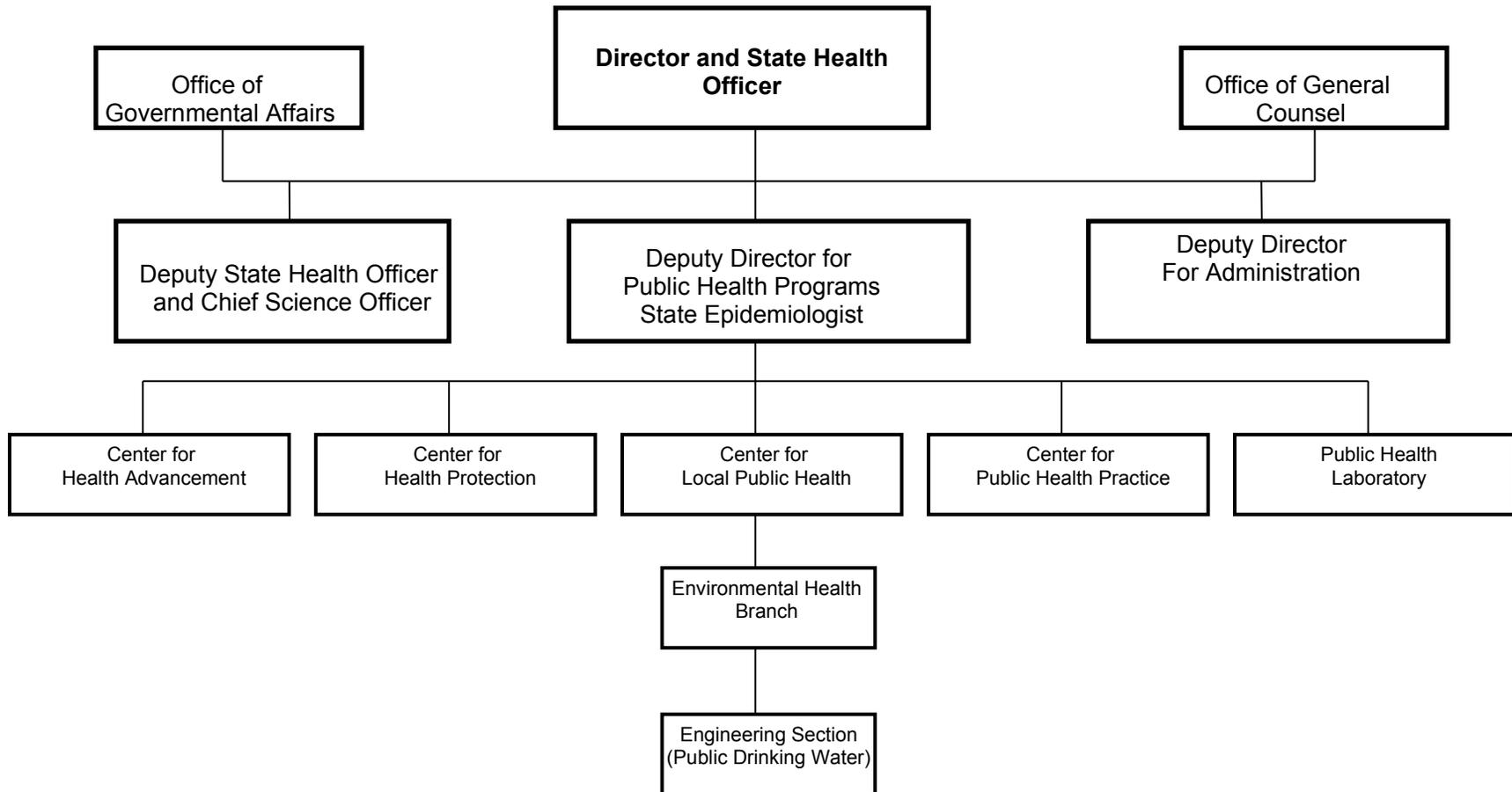
17-51-208. If any provision of this act or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of the act which can be given effect without the invalid provision or application, and to this end the provisions of this act are declared to be severable.

17-51-209. All laws and parts of laws in conflict with this act are hereby repealed.

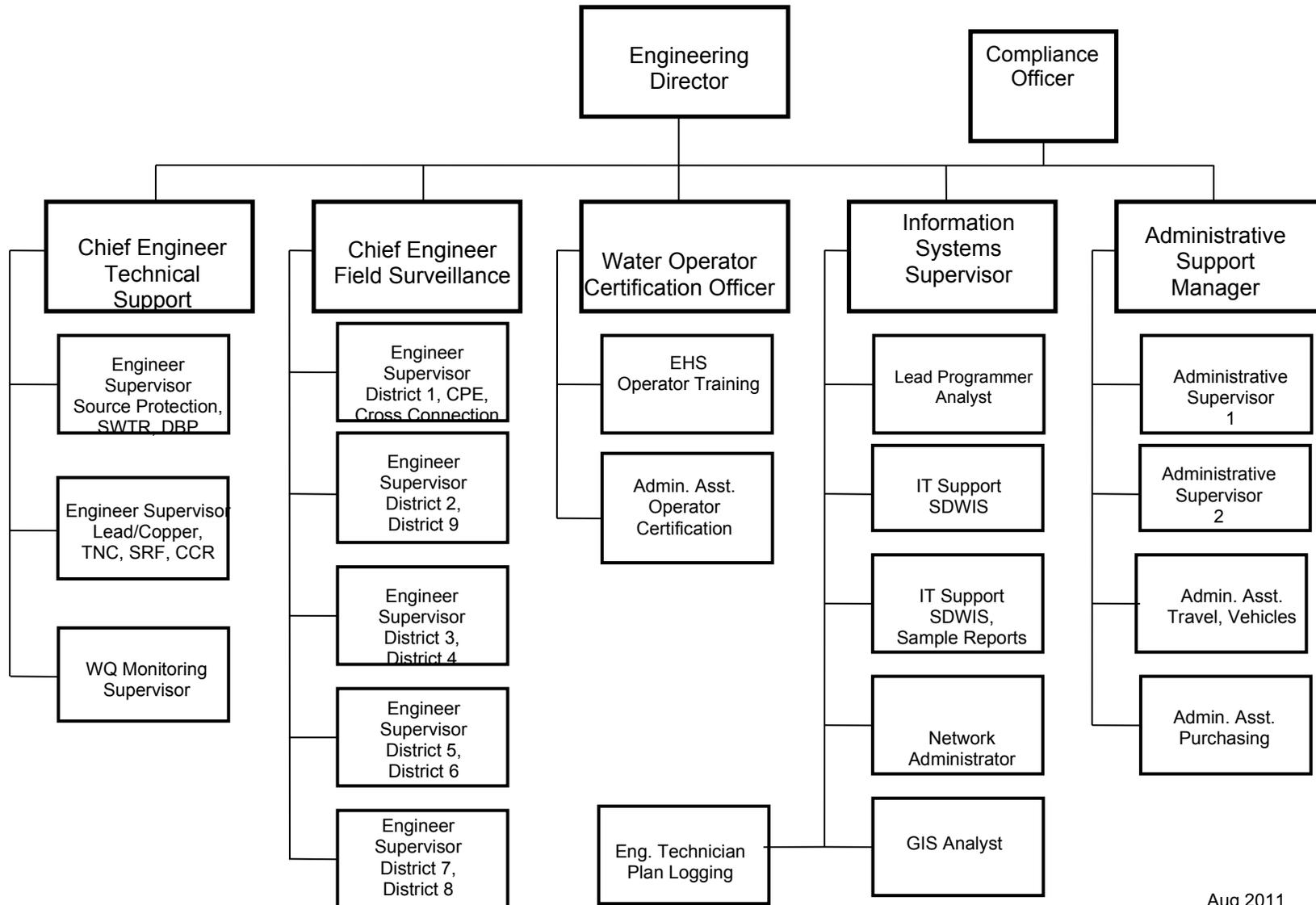
Appendix E

Organizational Charts

Arkansas Department of Health



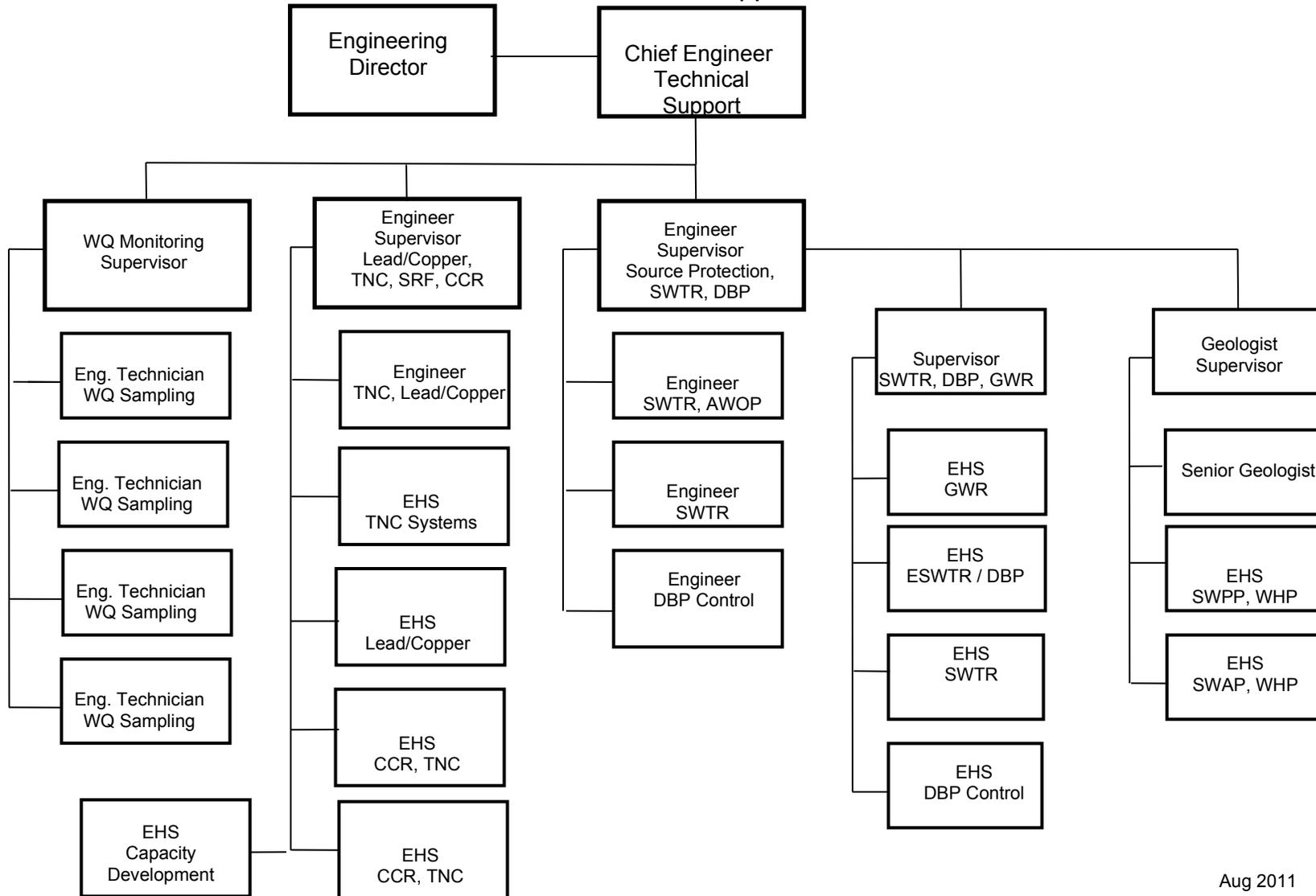
Engineering Section, Arkansas Department of Health



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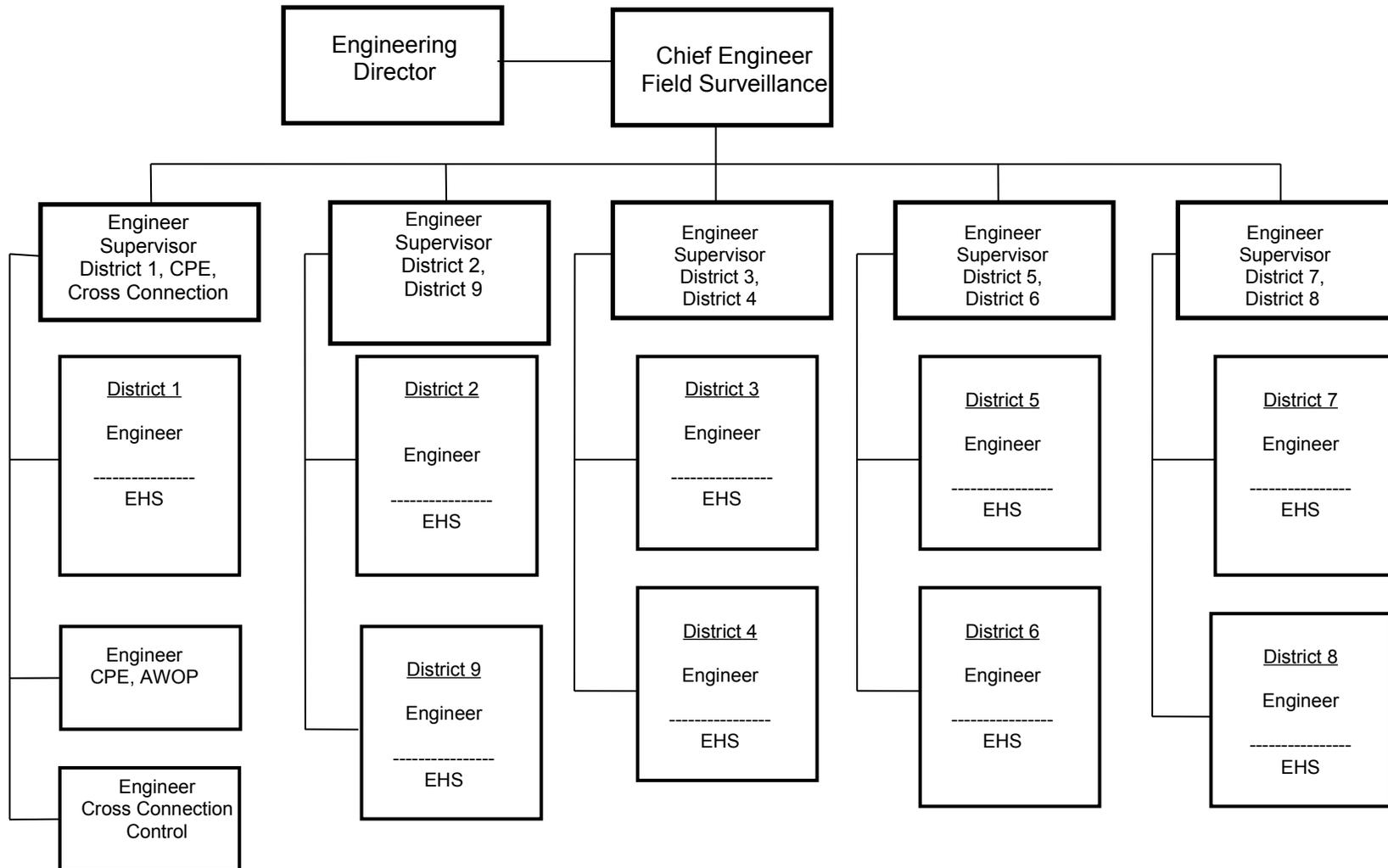
Technical Support



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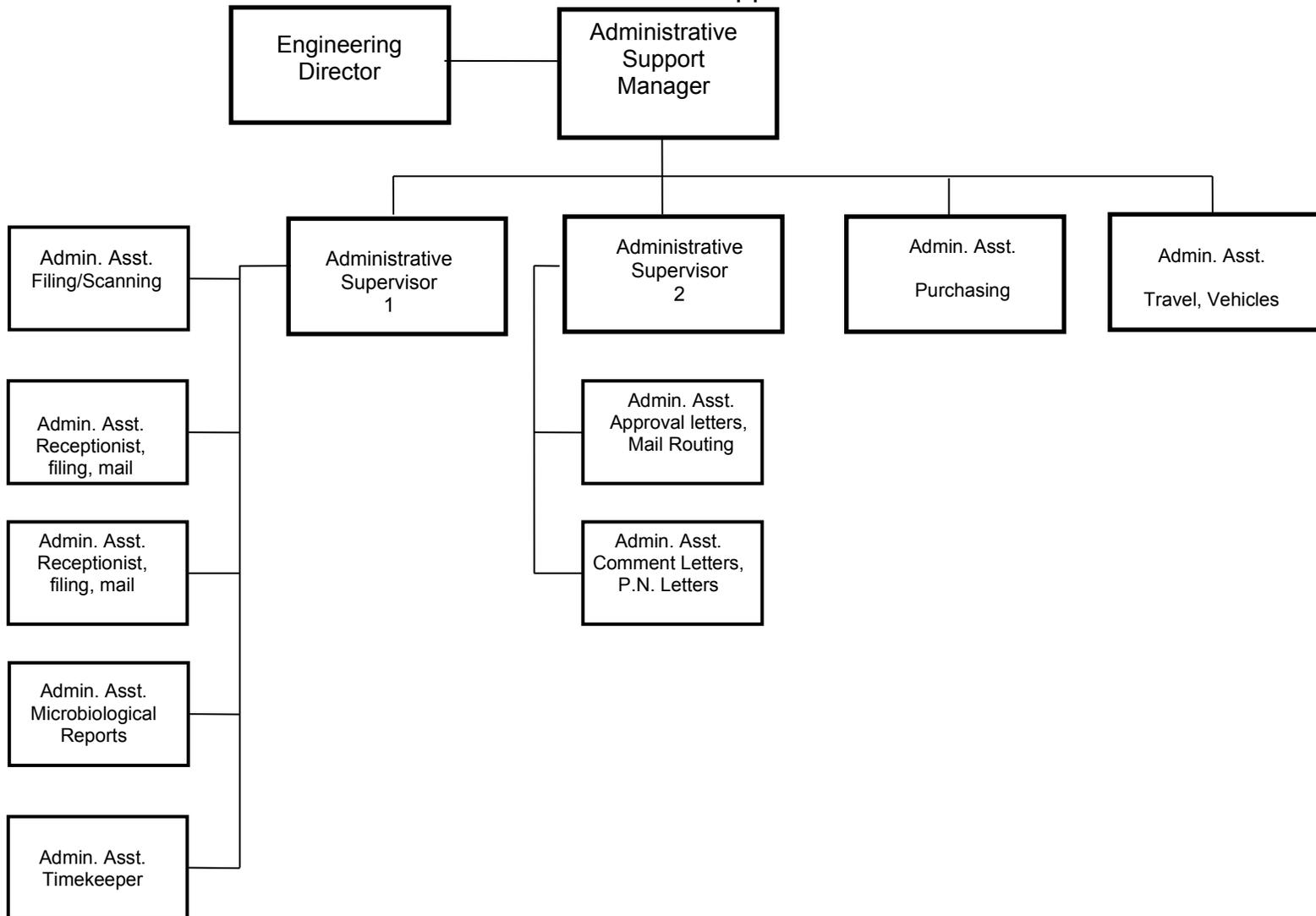
Field Surveillance



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Administrative Support



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