

Chapter NR 854

WATER SUPPLY SERVICE AREA PLANS

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NR 854.01 Purpose. The purpose of this chapter is to establish procedures and requirements for the preparation of water supply service area plans in compliance with the requirements under s. 281.348, Stats., and to establish additional procedures and requirements to ensure that the requirements under ss. 281.343 and 281.346, Stats., are met when department approval of a water supply service area plan is required.

History: CR 23-049; cr. Register June 2024 No. 822, eff. 7-1-24.

NR 854.02 Applicability. This chapter applies to any person who owns or operates a public water supply system that is required to prepare a water supply service area plan under s. NR 854.04.

History: CR 23-049; cr. Register June 2024 No. 822, eff. 7-1-24.

NR 854.03 Definitions. In this chapter:

(1) “Areawide water quality planning agency” means an agency designated by the governor to prepare an areawide water quality management plan under ch. NR 121.

(2) “Consecutive water system” has the meaning specified under s. NR 809.04 (11).

(3) “Cost-effectiveness analysis” has the meaning specified under s. 281.348 (1) (b), Stats.

(4) “Department” means the department of natural resources.

(5) “Diversion” has the meaning specified under s. 281.346 (1) (h), Stats.

(6) “Great Lakes basin” means the watershed of the Great Lakes and the St. Lawrence River upstream from Trois-Rivières, Quebec, within the jurisdiction of the parties. The boundary of the Great Lakes basin is derived from the subbasin (8-digit) 4th level hydrologic units from the digital Watershed Boundary Dataset for the State of Wisconsin, consisting of geo-referenced digital data and associated attributes created in accordance with the “FGDC Proposal, Version 1.0 – Federal Standards for Delineation of Hydrologic Unit Boundaries 3/01/02.”

Note: A copy of the Great Lakes basin boundary dataset is available as the “Major Basins” layer in the Wisconsin Department of Natural Resources GIS Open Data Portal, available at <https://data-wi-dnr.opendata.arcgis.com>.

(7) “Great Lakes council” has the meaning specified under s. 281.348 (1) (cm), Stats.

(8) “New or increased withdrawal” means a proposal for a new withdrawal or a proposal to increase the amount of a withdrawal over the permitted withdrawal amount that requires department approval under s. 281.346 (4g), (4s), or (5), Stats., for a water use general permit or individual permit.

(9) “Non-revenue water” has the meaning specified under s. PSC 185.85 (1) (c).

(10) “Peak daily withdrawal” means a public water supply system’s highest daily water withdrawal in a year.

(11) “Person” has the meaning specified under s. 281.346 (1) (nm), Stats.

(12) “Planning period” means the period covered by the water supply service area plan.

(13) “Population” means the population of a specified area as shown by the last federal census or by any subsequent population estimate under s. 16.96, Stats.

(14) “Projected growth area” means the area in which the public water supply system anticipates providing water to the public during the period covered by the water supply service area plan.

(15) “Projected water demand” means the total water demand forecasted in the public water supply system’s existing service area, the public water supply system’s projected growth area over the planning period, and any water sold to consecutive water systems.

(16) “Public water supply” has the meaning specified under s. 281.348 (1) (d), Stats.

(17) “Public water supply system” means a physically connected system of treatment, storage, and distribution facilities that distributes public water supply that is treated for human consumption and that is owned by a city, village, county, town, town sanitary district, utility district, public inland lake and rehabilitation district, or municipal water district, joint local water authorities, or a privately owned water utility serving any of these entities.

(18) “Retail customer” means a person who purchases water directly from a public water supply system, except a consecutive water system.

(19) “Schematic” means a diagram that represents the elements of a public water supply system using general locations and graphic symbols rather than scaled maps.

(20) (a) “Source” means an individual location where water is withdrawn from groundwater or surface water.

(b) “Source” may include a well, spring, lake, river, or pond.

(21) “Straddling community” has the meaning specified under s. 281.346 (1) (t), Stats.

(22) “Total resources costs” has the meaning specified under s. 281.348 (1) (e), Stats.

(23) “Water supply service area” means an area in which the public water supply system provides water or may provide water to the public during the planning period covered by the water supply service area plan.

(24) “Water supply service area plan” or “plan” means a document developed in compliance with this chapter.

(25) “Waters of the state” has the meaning specified under s. 281.01 (18), Stats.

(26) “Well” has the meaning specified under s. 281.34 (1) (h), Stats.

(27) “Withdraw” has the meaning specified under s. 281.348 (1) (f), Stats.

(28) “Withdrawal” has the meaning specified under s. 281.348 (1) (g), Stats.

History: CR 23-049; cr. Register June 2024 No. 822, eff. 7-1-24; correction in (17) made under s. 35.17, Stats., Register June 2024.

NR 854.04 Persons required to prepare a plan.

(1) A person owning or operating a public water supply system that serves a population of 10,000 or more, and that withdraws water from the waters of the state, shall prepare a water supply service area plan on or before December 31, 2025.

(2) A person owning or operating a public water supply system that serves or is expected to serve a population of 10,000 or more shall prepare and obtain department approval of a water supply service area plan before the department may issue a general or individual permit under s. 281.346 (4s) and (5), Stats.

(3) A person owning or operating a public water supply system that requests a new or increased diversion of Great Lakes water under s. 281.346 (4), Stats., shall prepare and obtain department approval for a water supply service area plan before the department may grant approval of any new or increased diversion, regardless of the size of the population served by the public water supply system, unless the diversion proposal includes providing water to a straddling community that includes an electronics and information technology manufacturing zone designated under s. 238.396 (1m), Stats.

(4) After December 31, 2025, any person owning or operating a public water supply system that serves a population of less than 10,000 but is expected to serve a population of 10,000 or more in the future shall prepare a water supply service area plan before the date when the public water supply system begins to serve a population of 10,000 or more.

(5) A person owning or operating a public water supply system with a plan that does not require department approval shall review the plan every 5 years and update the plan as needed. A new plan shall be prepared on or before the expiration date of the plan.

(6) A person owning or operating a public water supply system that has an approved water supply service area plan shall submit a new water supply service area plan to the department for approval at least 180 calendar days before the expiration of an approved water supply service area plan.

History: CR 23-049; cr. Register June 2024 No. 822, eff. 7-1-24.

NR 854.05 Content of a water supply service area plan. A person required to prepare a plan under s. NR 854.04 shall prepare a plan that includes all of the following:

(1) **ESTABLISHMENT OF PLANNING PERIOD.** The plan shall identify the planning period covered by the plan. The planning period shall be at least 10 years and no more than 20 years. The plan shall include an expiration date that coincides with the end of the planning period.

(2) **DELINEATION OF THE AREA.** (a) The plan shall delineate the area for which the plan is being prepared, including all areas to which the public water supply system currently serves retail customers and the projected growth area for the system within the planning period under sub. (1). Identifying an area as a projected growth area for planning purposes does not obligate the public water supply system to provide water to the projected growth area.

(b) The water supply service area may be limited as provided under s. 66.0813 (3) (a), Stats.

(c) A plan submitted to the department for approval under s. NR 854.04 (2) or (3) is subject to all of the following requirements:

1. An areawide water quality planning agency may delineate the water supply service area for the public water supply systems within its designated planning area.

2. The plan shall include a map of the water supply service area.

3. If the Great Lakes council approves a diversion area for a public water supply system proposing to make a diversion from the Great Lakes basin under s. 281.346 (4) (e), Stats., that diversion area shall be the delineated water supply service area for the plan.

(3) **DESCRIPTION OF THE PUBLIC WATER SUPPLY SYSTEM.** A plan shall include a description of the public water supply system using schematics, as appropriate. The description shall include all of the following, as applicable:

(a) A description of the existing sources serving the system, including all wells, surface water intakes, and any water purchased from any other water system.

(b) A description of any identified or documented water quality issues relative to existing sources.

(c) An identification of all consecutive water systems currently purchasing water from the public water supply system and all consecutive water systems anticipated to purchase water from the public water supply system during the planning period.

(d) A plan requiring department approval under s. NR 854.04 (2) or (3) shall also include in the description of the public water supply system all of the following, as applicable:

1. A description or schematic identifying the general location of existing water treatment facilities including a description of the type and size of the treatment facilities and related equipment. The description shall also indicate the final disposition of the wastewater and sludge from the treatment processes.

2. A description and schematic of the existing water storage and distribution facilities including, as applicable: the location of water mains; water pressure booster stations; water pressure reducing stations; metering stations; storage reservoirs; and any connections with other water utilities.

3. A map showing the location of the Great Lakes basin in relation to its public water supply facilities.

(4) **DESCRIPTION OF EXISTING SOURCES AND WITHDRAWALS.** (a) The plan shall describe the public water supply system’s sources and withdrawals including all of the following:

1. A statement identifying the withdrawals used to supply water to the system.

2. The average daily withdrawal amount for each source in each of the last 10 years preceding the planning period.

3. The maximum withdrawal capacity of each source.

4. For any consecutive water system that purchases a portion of its public water supply, the public water supply system’s average daily public water supply obtained from each water supplier for each of the 10 years preceding the planning period.

(b) For a plan requiring department approval under s. NR 854.04 (2) or (3), the plan shall include all of the following:

1. A description of the methods used to measure or estimate the amount of withdrawal and amount of non-revenue water.

2. A description of water quality treatment required or expected to be required relating to existing sources.

(c) For a plan including a diversion, the plan shall include all of the following:

1. A description and schematic of the location and method of return flow to the Great Lakes basin.

2. A table showing the public water supply system’s proposed or existing diversion amounts and corresponding return flow amounts.

3. A description of the methods used to measure diversion and return flow amounts.

(5) **DESCRIPTION OF EXISTING WATER USE.** The plan shall describe the existing water use of the public water supply system, including all of the following:

(a) The population and population density of the public water supply system’s existing service area.

(b) A table or summary of the number of retail customers purchasing water for residential use, commercial use, industrial use, and public authority use for each year in the 10 years preceding the planning period.

(c) A table or summary of sales of water for residential use, commercial use, industrial use, and public authority use for each year in the 10 years preceding the planning period.

(d) A list of the public water supply system's 10 largest retail customers, other than consecutive water systems, and its water use for each year in the 10 years preceding the planning period.

(e) A table and summary of the sales of water to consecutive water systems for the 10 years preceding the planning period, if applicable.

(6) PROJECTED WATER DEMAND. The plan shall project water demands for the planning period and shall include the projected water demand for the existing service area and proposed growth area of the public water supply system, along with any anticipated sales to consecutive water systems served by the public water supply system. The plan shall include all of the following:

(a) The projected water demand including the projected growth area over the planning period.

(b) A description of the methods used to derive the water demand projections.

(c) Forecasts of the expected population for the projected growth area during the planning period based on population projections for the existing service area and projected growth area and municipally planned population densities. Population projections shall consider department of administration projections made under s. 16.96, Stats., and shall consider any applicable approved regional or areawide water supply plans or regional water needs assessments and other applicable regional water supply information. The plan shall include a description of the methods used to derive the population forecasts.

(d) A summary of projected sales of water to any consecutive water systems, if applicable.

(e) A plan requiring department approval under s. NR 854.04 (2) or (3) shall also include in its projected water demand all of the following:

1. A table showing the projected water demand over the planning period, divided into 5-year increments.

2. A table showing the projection of total annual daily average and total peak daily withdrawal. The table shall include water demand estimates for the existing service area and projected growth area of the public water supply system, categorized by residential use, commercial use, industrial use, and public authority use.

3. An estimate of the non-revenue water associated with the projected water demand over the planning period.

4. An analysis of how the projected water demand is consistent with the public water supply system's past 10 years of water use provided under sub. (5) or a description of how the demand estimate is reasonable based on the purposes for which the demand is forecasted.

5. The projected water use reductions related to the implementation of any of the applicable public water supply system's water conservation alternatives identified under s. NR 854.06 (1) and, if applicable, implementation of the water conservation plan under ch. NR 852.

(7) INVENTORY AND IDENTIFICATION OF THE SOURCES AND QUANTITIES OF WATER SUPPLIES IN THE REGION. A plan shall identify possible water supply alternatives available to the public water supply system, including all of the following:

(a) An inventory of alternative existing groundwater and surface water sources available in the region.

(b) Identification of alternative options for supplying water within the planning area that are approvable under other applica-

ble statutes and rules, and a discussion of the viability and limitations of those options.

(8) PLAN RECOMMENDATIONS. The plan shall include recommendations on how to meet the projected water demand of the public water supply system over the planning period, including all of the following:

(a) An analysis of whether to use existing sources, enlargement of existing sources, development of new sources, or the purchase of new or increased water supply to meet projected water demand described under s. NR 854.05 (6).

(b) A demonstration that the plan effectively utilizes the existing public water supply system, wastewater infrastructure, and water storage, treatment, and distribution facilities, to the extent practicable.

(c) If the plan recommendations include the developments of new sources, enlargement of existing sources, or the purchase of new or increased water supply, the plan shall include all of the following as applicable:

1. A description of the potential water withdrawal facilities, including the number of wells and surface water intakes and general locations and capacity.

2. A description or schematic of any potential public water supply system facilities including the general locations of transmission mains, and any water pressure booster stations, water pressure reducing stations, metering stations, and storage reservoirs needed as a result of new or enlarged water withdrawal facilities.

3. Documentation of a consecutive water system's ability to purchase new or increased water supply over the planning period. Documentation may include a copy of letters or resolutions that provide evidence of support from the public water supply system that will provide water to the consecutive water system.

4. An assessment of potential environmental impacts of carrying out the recommendations of the plan. Factors to consider in evaluating potential environmental impacts may include the following, as applicable:

a. Geologic setting, including regional hydrogeology and any unique geologic formations or conditions.

b. General groundwater or surface water quantity and quality conditions.

c. Analysis of available area aquifer drawdown data.

d. Identification and description of surface water resources.

e. Aquifer drawdown and groundwater quantity and quality conditions as a result of projected groundwater withdrawals.

f. Analysis and summary of any regional hydrogeological studies or assessments and other regional water supply information.

g. Relevant information in other plans listed under s. NR 854.06 (9).

h. Land use trends.

i. Impacts to wetlands.

j. Floodplains.

k. Impacts to environmentally sensitive areas.

5. An assessment of anticipated economic impacts and costs associated with carrying out the recommendations in the plan.

(9) ANALYSIS OF CONSISTENCY WITH OTHER PLANS AND AGREEMENTS. The plan shall include a description and analysis of the plan's consistency with all of the following, as applicable:

(a) Approved comprehensive plans, as defined under s. 66.1001 (1) (a), Stats.

(b) Approved areawide water quality management plans under s. 283.83, Stats., and ch. NR 121.

(c) Existing land use agreements between the person who owns or operates the public water supply system and any city, village, or town included within the projected growth area.

(d) Existing wholesale or retail customer sales agreements between the person who owns or operates the public water supply system and any city, village, or town included within the projected growth area.

(e) Any other existing agreements or approvals obtained from a governing body related to the implementation of the projected growth area.

(10) PUBLIC PARTICIPATION. The plan shall include a description of the public participation process implemented under s. NR 854.08, including a summary of the comments received.

(11) SUBMISSION OF PLAN TO LOCAL GOVERNMENTS. The plan shall include documentation that the plan has been submitted to the governing body of each city, village, and town whose public water supply is addressed by the plan.

(12) PROCEDURES FOR IMPLEMENTING AND UPDATING THE PLAN. The plan shall identify procedures to be used to implement and update the plan and a commitment to using those procedures.

Note: The department advises that the plan uses public service commission data when applicable throughout this section.

History: CR 23-049; cr. Register June 2024 No. 822, eff. 7-1-24; correction in (5) (e) made under s. 35.17, Stats., Register June 2024 No. 822.

NR 854.06 Cost-effectiveness analyses of water supply alternatives for plans requiring department approval. If department approval is required under s. NR 854.04 (2) or (3), a plan shall include a cost-effectiveness analysis of identified water supply alternatives for meeting the water demand for the planning period. A cost-effectiveness analysis shall include all of the following:

(1) Identification and analysis of potential water supply alternatives, which shall include the sources identified under s. NR 854.05 (7).

(2) A summary of the expected water demand reduction associated with implementing water conservation and efficiency measures as identified in the public water supply system's water conservation plan developed under s. NR 852.07, including a summary of the cost savings as determined under s. NR 852.09 or 852.10.

(3) A description of the sustainability of each water supply alternative in consideration of existing regional water need assessments and the extent to which each alternative identified under s. NR 854.05 (7) is consistent with existing plans under s. NR 854.05 (8).

(4) An evaluation of existing and anticipated costs associated with each water supply alternative identified under s. NR 854.05 (7). Factors to consider in evaluating costs include: construction; operation and maintenance of wells; surface water intakes; treatment plants; chemical feed equipment; pumping facilities; water mains; storage facilities; and purchase of water from a contract supplier.

(5) Conclusions on the identified water supply alternatives and a comparative analysis of the alternatives based on the cost-effectiveness analysis.

History: CR 23-049; cr. Register June 2024 No. 822, eff. 7-1-24; correction in (intro.) made under s. 35.17, Stats., Register June 2024 No. 822.

NR 854.07 Department review and approval process for a water supply service area plan requiring department approval. (1) If department approval is required under s. NR 854.04 (2) or (3), the plan shall be submitted to the department for approval. The department shall issue a written decision on the plan prior to the issuance of any approvals required under s. 281.346 (4), Stats., or permits under s. 281.346 (4s) or (5), Stats.

(2) The department may not approve a water supply service area plan unless all of the following apply:

(a) The diversion or withdrawal proposal that is submitted with the plan meets the requirements under s. 281.346 (4), (4g), (4s), or (5), Stats., or the department finds the plan complies with an

existing approved diversion or withdrawal permit issued under s. 281.346 (4), (4g), (4s), or (5), Stats.

(b) The plan provides for a public water supply system that meets the requirements under this chapter based on a cost-effectiveness analysis of regional and individual water supply and water conservation alternatives under s. NR 854.06.

(c) The plan effectively utilizes existing water supply storage and distribution facilities and wastewater infrastructure to the extent practicable.

(d) The plan is consistent with applicable comprehensive plans as defined under s. 66.1001 (1) (a), Stats.

(e) The projected water demand over the planning period is consistent with the public water supply system's previous 10 years of water use or the department determines the projected water demand is reasonable based on the purposes and uses of the projected water demand.

(f) The plan has undergone the public participation process specified under ss. NR 854.08 and 854.09.

(g) The plan meets the requirements under this chapter.

(3) If a plan includes a new or increased withdrawal from the Great Lakes basin, the department shall specify a withdrawal amount for the public water supply system that is equal to the greatest of the following:

(a) The amount needed for the public water supply system to provide a public water supply in the water supply service area in the plan during the period covered by the plan, as determined using the population and related service projections in the plan.

(b) If the withdrawal is covered by an individual permit issued under s. 281.344 (5) or 281.346 (5), Stats., when the department approves the plan, the withdrawal amount in that permit when the department approves the plan or, if the withdrawal is covered by a general permit issued under s. 281.344 (4s) or 281.346 (4s), Stats., when the department approves the plan, the withdrawal amount for the public water supply system in the database under s. 281.346 (4s) (i), Stats., when the department approves the plan.

(4) If the department determines that a plan does not contain the information specified under ss. NR 854.05 and 854.06 or additional information is necessary for review or approval, the department shall provide the person submitting the plan with written notification of the additional information necessary and allow the applicant to submit additional information or revisions to the plan.

(5) The department shall specify a water supply service area in its approval of a plan. The department may not limit water supply service areas based on jurisdictional boundaries, except as necessary to prevent waters of the Great Lakes basin from being transferred from a county that lies completely or partly within the Great Lakes basin into a county that lies entirely outside the Great Lakes basin, or except where the water supply service area is delineated by a diversion area approved by the Great Lakes council under s. 281.348 (3) (cr), Stats.

(6) The department's approval of a water supply service area plan shall not constitute department approval of the final design of new or enlarged water withdrawal facilities, water supply treatment facilities, or water transmission facilities, including any water pressure booster stations, water pressure reducing stations, or storage reservoirs identified or discussed in the plan. Department approval of new or enlarged facilities shall be obtained in accordance with other applicable statutes and rules.

History: CR 23-049; cr. Register June 2024 No. 822, eff. 7-1-24; correction in (3) (b), (5) made under s. 35.17, Stats., Register June 2024.

NR 854.08 Public participation process for persons developing a water supply service area plan. (1) A person developing a plan, including a plan requiring department approval, shall undertake a public participation process including public notice of the proposed plan, a minimum of one public hearing on the proposed plan, and an opportunity to provide written comment on the proposed plan.

(2) A person who owns or operates the public water supply system shall make the water supply service area plan, any public comments received on the plan, and any approval of the plan available for public inspection.

History: CR 23-049: cr. Register June 2024 No. 822, eff. 7-1-24.

NR 854.09 Public notice and comment for plans submitted to the department for approval. (1) The department shall satisfy public notice and comment requirements under s. NR 851.72 in its review of a water supply service area plan submitted to the department for approval under s. NR 854.04 (3).

(2) The department shall satisfy public notice and comment requirements under subch. IV of ch. NR 860 in its review of a water supply service area plan submitted to the department for approval under s. NR 854.04 (2).

History: CR 23-049: cr. Register June 2024 No. 822, eff. 7-1-24.

NR 854.10 Revisions and department reconsideration of an approved water supply service area plan.

(1) A person who owns or operates a public water supply system with an approved plan shall submit revisions of the plan to the department for review and approval. The department shall review the revised water supply service area plan and issue a decision on the plan using the process under s. NR 854.07. Proposed plan revisions are subject to the public participation process under ss. NR 854.08 and 854.09. Revisions that require department approval include any of the following:

- (a) Expansion of an approved water supply service area.
- (b) Changes to source.
- (c) Increased projected demand for the water supply area.

(2) A person seeking to revise an approved water supply service area plan that includes a diversion that was approved by the Great Lakes council shall contact the department to discuss the scope of the revision. The person seeking a revision to the plan

shall submit to the department the proposed revision. The department shall work with the applicant to follow regional body and Great Lake council procedures where necessary for review and approval of the revised water supply service area plan.

(3) The department may reconsider an approval of a water supply service area plan or a portion of a water supply service area plan in any of the following situations:

- (a) When necessary to reflect state law or administrative rules or changes to state law or administrative rules.
- (b) When the department finds the plan or portion of the plan conflicts with the department's responsibility to protect, maintain, and improve the quality and management of the waters of the state, ground or surface, public and private.
- (c) When the plan or a portion of the plan is not in the public interest.

History: CR 23-049: cr. Register June 2024 No. 822, eff. 7-1-24.

NR 854.11 Open records requests. The department may consider domestic security concerns when determining whether public records provided to or obtained by the department under this chapter warrant confidential treatment, as allowed under s. 281.346 (3) (cm) and (9) (e), Stats.

History: CR 23-049: cr. Register June 2024 No. 822, eff. 7-1-24; correction made under s. 35.17, Stats., Register June 2024 No. 822.

NR 854.12 Enforcement. (1) Violations of this chapter are enforceable under ch. 281, Stats., and may result in penalties, forfeitures, costs of investigation and prosecution, or orders to abate any nuisance, restore a natural resource, or take or refrain from taking any other action necessary to eliminate or minimize any environmental damage.

(2) The department may withdraw its approval of a plan based on substantial noncompliance with the plan or the requirements under this chapter.

History: CR 23-049: cr. Register June 2024 No. 822, eff. 7-1-24.