

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES

IN SUPPORT OF RENEWAL UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
(NPDES)

**FACT SHEET FOR
GENERAL PERMIT NCG550000**

DISCHARGE OF DOMESTIC WASTEWATER FROM SINGLE FAMILY RESIDENCES
AND OTHER 100% DOMESTIC DISCHARGES WITH SIMILAR CHARACTERISTICS

April 1, 2025

1. Basic Facility Information – Permit Coverage, Types of Wastewater, Facility Description:

A. Activities Covered by this General Permit:

Point source discharges of single-family residences and any other domestic wastewater discharge of similar characteristics as decided by the Division. For Eligibility of Coverage see Part I, Section A. (2.):

- Single Pass Discharge Systems discharging less than 1,000 gallons per day (applicable to existing facilities only).
- Multi-Phase Filter Systems (Primary & Secondary Single Pass, Recirculating Sand Filters as well as other alternative technologies that provide treatment equivalent to, or greater than, recirculating sand filters) discharging less than 1,000 gallons per day.

B. Transfer of Coverage from other permits (See Part I, Section 3):

- Notwithstanding Part I, Section A. (1.), upon issuance of this general permit, all existing discharges previously covered under general permit NCG550000 issued on November 1, 2020 and have paid all associated permit fees, will be renewed for coverage under this permit.
- Upon issuance of this general permit, all existing and active individual permits previously issued for discharge of domestic wastewater from single family residences and other 100% domestic discharges with similar characteristics will be eligible for coverage under this permit.
- This permit does not affect the legal requirements to obtain other permits that may be required by the North Carolina Department of Environmental Quality, or any other federal or local government permit.

C. Geographic Area(s) Covered by this General Permit:

Discharges covered by this General permit are located at any place within the political boundary of the State of North Carolina (discharges located on the Cherokee Indian Tribal Reservation are

subject to permitting by the US Environmental Protection Agency and are not covered by this General Permit). Waters located in the Randleman Lake Watershed are excluded.

D. Types of Wastewater Discharged:

Wastewater discharged from single family residence treatment facilities or other similar domestic treated wastewater at flows not exceeding 1,000 gallons per day.

E. Description of Typical Treatment Facilities:

See Treatment System Requirements Part I, Section B.

- Existing systems (built prior to August 1, 2007):

- Septic Tank
- Sand or media filter component (single pass filter systems, Multi-Phase Filter Systems)
- Disinfection (All adding chlorination after August 1, 2007 will also be required to add dechlorination. If a system had chlorination before August 1, 2007, then the addition of dechlorination is not required.)

- New (or expanding) and existing systems (built after August 1, 2007):

- Septic Tank (with riser)
- Filter media
- Recirculating pump tank(s) per approved design (Multi-Phase Filter Systems only)
- Filter media component per approved design
- Disinfection unit (Chlorination/dechlorination, or equivalent means of disinfection)
- Effluent pipe/outfall
- Aeration/erosion control (rip rap).

- Failed or failing systems that require replacement:

For purposes of this permit, failed or failing systems that require replacement will be subject to requirements of new systems built after August 1, 2007.

- Systems that are constructed prior to August 1, 2007 that did not have a valid permit:

For purposes of this permit, systems that are constructed prior to August 1, 2007 that did not have a valid permit shall be required to get a valid permit. They will not be required to replace or upgrade systems installed prior to August 1, 2007 unless they are failing and require replacement.

F. All new applicants will be required to meet buffer requirements specified in 15A NCAC 02T.0506.

2. Receiving Waterbodies – Exclusions from and limitations of Coverage:

All surface waters of the State of North Carolina or municipal separate storm sewer systems conveying water to surface waters. For exclusions and limitations see Part I, Section A. (1.) and A. (2.) in the permit.

Exclusions from Coverage:

This permit authorizes discharges (pursuant to the conditions described in this permit) to all waters of the state unless otherwise excluded in this section. Discharges to the following waters are excluded from permit coverage and will require an individual permit to discharge:

- Waters classified as WS-I (Water Supply I)
- Waters classified SA (Market Shellfishing, Salt Water)
- Waters classified as ORW (Outstanding Resource Waters)
- Waters located in the Randleman Lake Watershed.
- New facilities discharging to zero-flow streams.

Limitations from coverage:

Issuance of this general permit does not relieve the permittee from obtaining all necessary right-of-way or easement rights to discharge wastewater on or across another property. The following may require a drainage easement:

- a. For proposed discharges into a privately owned lake, new domestic wastewater discharges may be prohibited, and an easement may be required.
- b. Hydrologic trespass or right-of-way infringement on any neighboring property will require drainage easements. Hydrologic trespass refers to any discharge that crosses a property other than the applicant's before joining with a waters of the State.

3. Water Quality-Based Effluent Limitations (WQBELs):**Total Residual Chlorine Limitations:**

Limitations for Total Residual Chlorine (TRC) are based on the NC water quality standard for protection of aquatic life (17 µg/l) and capped at 28 µg/l (acute impacts). Chlorine limits are governed by 15A NCAC 2B.0211 (3). Due to analytical issues, all TRC values reported below 50 µg/l are considered compliant with their permit limit.

A TRC limit of 13 µg/l was added for discharges to SB and SC. This limit is based on the acute value for the EPA Nationally Recommended Water Quality Criteria for Aquatic Life & Human Health.

Other WQBEL Considerations

Fecal coliform limits are governed by 15A NCAC 2B.0211 (7).

Enterococci monitoring, which is applicable for discharges to SB and SC water only, has been given a monthly average (geometric mean) limit of 35 / 100 mL. This limit is in accordance with the water quality standard 15A NCAC 02B .0220 (6).

4. Technology-Based Effluent Limitations (TBELs):

The conditions of this General Permit have been designed using the best judgment of the NPDES Permitting Programs to achieve water quality protection through compliance with the technology-based standards of the Clean Water Act (Best Available Technology [BAT] and Best Conventional Pollutant Control Technology [BCT]). Where the Director determines that a water quality violation is occurring and water quality-based controls (or effluent limitations) are

required to protect the receiving waters, coverage under the General Permit shall be terminated and an individual permit will be required. Based on a consideration of the appropriate factors for BAT and BCT requirements, and a consideration of the factors discussed below for controlling pollutants, the General Permit defines specific requirements for limiting, monitoring and reporting of this type of discharge.

The General Permit conditions reflect the Environmental Protection Agency and the North Carolina pollution prevention approach to single family residence permitting. Each individual limitation and monitoring requirement is derived from a combination of EPA requirements, State guidelines and water quality standards. For this General Permit, BOD, total suspended solids, fecal coliform & total residual chlorine are being limited and monitored to determine the discharge's effect on the receiving stream (Please note WQBEL for fecal coliform and total residual chlorine are discussed above).

- BOD5 and TSS limits are governed by minimum federal requirements for treatment to secondary effluent standards (40 CFR 133.102). New discharges are not allowed into zero flow streams.
- The water quality standards for total residual chlorine, fecal coliform, total suspended solids and BOD5 have been chosen because they offer the best protection available for these characteristics. Monitoring is determined by 15A NCAC 2B.0505 and by the need to know effects on the receiving stream.

5. Antidegradation Review (New/Expanding Discharge):

The objective of an antidegradation review is to ensure that a new or increased pollutant loading will not degrade water quality. Permitting actions for new or expanding discharges require an antidegradation review in accordance with 15A NCAC 2B.0201. Each applicant for a new/expanding NPDES permit must document an effort to consider non-discharge alternatives per 15A NCAC 2H.0105 (c)(2). In all cases, existing instream water uses and the level of water quality necessary to protect the existing use is maintained and protected.

New applicants for a Certificate of Coverage (CoC) under general permit NCG550000 are required to submit an Engineering Alternatives Analysis (EAA).

6. Antibacksliding Review:

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding of effluent limitations in NPDES permits. These provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed (e.g., based on new information, increases in production may warrant less stringent TBEL limits, or WQBELs may be less stringent based on updated RPA or dilution).

There are no effluent limitations less stringent than previous permit.

7. Monitoring Requirements:

Monitoring frequencies for NPDES permitting are established in accordance with the following regulations and guidance:

- 1) State Regulation for Surface Water Monitoring, 15A NCAC 2B.0500;
- 2) NPDES Guidance, Monitoring Frequency for Toxic Substances (7/15/2010 Memo);
- 3) NPDES Guidance, Reduced Monitoring Frequencies for Facilities with Superior Compliance (10/22/2012 Memo);
- 4) Best Professional Judgement (BPJ). Per US EPA (Interim Guidance, 1996), monitoring requirements are not considered effluent limitations under Section 402(o) of the Clean Water Act, and therefore anti-backsliding prohibitions would not be triggered by reductions in monitoring frequencies.

8. Summary of Proposed Permitting Actions:

Changes to the general permit for this renewal include the following:

1. Added language under Section D. OPERATION, MAINTENANCE, & RECORDS to clarify operator and permit renewal expirations
 - a. Part I section D (7.) Permit Renewal – added language to clarify that submitting a renewal application is not required for NCG550000, this section supersedes Part II Section B. (9.) where it specifies a renewal application is required.
 - b. Part I section D (8.) Certified Operator – designation of a certified operator is not required for NCG550000 as it is cost prohibitive for single family residences. This section supersedes the certified operator requirement specified under Part II, section
2. Added question 8. (e.) to NCG550000 application, allows for permittees to consider if the proposed facility location is within the set boundaries.
3. Added section A (2.) Limitations from Coverage in the general permit in order to specify drainage easement requirements.
4. Added new bullet point under exclusions from coverage (Part I A. (1.)) stating new discharges to zero-flow streams cannot be permitted under NCG550000 per 15A NCAC 02B .0206
5. Updated maintenance timelines under Part I D.(3.) to every three years for septic tank maintenance.

A. Table. Current Permit Conditions and Proposed Changes – Discharges to Freshwater (Class B and C waters only)

Parameter	Current Permit	Proposed Change	Basis for Condition/Change
Flow	DM 1000 gpd	No change	15A NCAC 2B .0505
BOD5	MA 30.0 mg/L DM 45.0 mg/L	No change	TBEL. Secondary treatment standards/40 CFR 133 / 15A NCAC 2B .0406
TSS	MA 30 mg/L DM 45 mg/L	No change	TBEL. Secondary treatment standards/40 CFR 133 / 15A NCAC 2B .0406
Fecal coliform	MA 200 /100ml DM 400 /100ml	No change	WQBEL. State WQ standard, 15A Class C: NCAC 2B .0211 (7) Class B: NCAC 2B .0219 (3) (b)

Total Residual Chlorine (TRC)	For receiving stream Freshwater DM 17µg/L	No change	Freshwater QBEL. State WQ standard, 15A NCAC 2B.0211 (3).
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ATC – Authorization to Construct, MGD – Million gallons per day, MA – Monthly Average, DM – Daily Max

B. Table. Current Permit Conditions and Proposed Changes – Discharges to Saltwater (Class SB and SC waters only)

Parameter	Current Permit	Proposed Change	Basis for Condition/Change
Flow	DM 1000 gpd	No change	15A NCAC 2B .0505
BOD5	MA 30.0 mg/L DM 45.0 mg/L	No change	TBEL. Secondary treatment standards/40 CFR 133 / 15A NCAC 2B .0406
TSS	MA 30 mg/L DM 45 mg/L	No change	TBEL. Secondary treatment standards/40 CFR 133 / 15A NCAC 2B .0406
Enterococci	MA 35 / 100 mL	No change	SB and SC waters QBEL. State WQ standard, Class SC: 15A NCAC 02B .0220 (6) Class SB: 15A NCAC 2B .02122 (3) (b)
Total Residual Chlorine (TRC)	For receiving stream Saltwater DM 13µg/L	No change	Saltwater EPA Criterion for Aquatic Life & Human Health

ATC – Authorization to Construct, MGD – Million gallons per day, MA – Monthly Average, DM – Daily Max

C. Table. Current Permit Conditions and Proposed Changes – Freshwater Discharges to High Quality Waters (HQW) and Nutrient Sensitive Waters (NSW) (including Water Supply Waters (WS-II, WS-III, WS-IV, and WS-V)

Parameter	Current Permit	Proposed Change	Basis for Condition/Change
Flow	MA Limited by ATC DM 1000 gpd	No change	15A NCAC 2B .0505
BOD5	MA 30.0 mg/L DM 45.0 mg/L	No change	TBEL. Secondary treatment standards/40 CFR 133 / 15A NCAC 2B .0406
TSS	MA 30 mg/L DM 45 mg/L	No change	TBEL. Secondary treatment standards/40 CFR 133 / 15A NCAC 2B .0406

Fecal coliform	MA 200 /100ml DM 400 /100ml	No change	WQBEL. State WQ standard, 15A Class C, WS-II, WS-III, WS-IV, and WS-V: NCAC 2B .0211 (7) Class B: NCAC 2B .0219 (3) (b)
Total Residual Chlorine (TRC)	For receiving stream Freshwater DM 17µg/L	No change	Freshwater WQBEL. State WQ standard, 15A NCAC 2B.0211 (3).
Total Nitrogen	Monitor Only	No change	To comply with NC chl-a WQS. 15A NCAC 2B.0200
NH3-N	Monitor Only	No change	WQBEL. Based on protection of State WQ criteria. 15A NCAC 2B.0200
Total Phosphorus	Monitor Only	No change	To comply with NC chl-a WQS, 15A NCAC 2B.0200.

ATC – Authorization to Construct, MGD – Million gallons per day, MA – Monthly Average, DM – Daily Max

9. Public Notice Schedule:

The draft General permit to be sent to public notice: 05/23/2025.
Permit scheduled for Issuance: November 1, 2025.

Per 15A NCAC 2H .0109 & .0111, The Division will receive comments for a period of 30 days following the publication date of the public notice. Any request for a public hearing shall be submitted to the Director within the 30 days comment period indicating the interest of the party filing such request and the reasons why a hearing is warranted.

10. Fact Sheet Attachments (list in order of reference):