



Environmental Permitting and Datacenters

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Applicable Permit Programs



- Alteration of Terrain (LRM)
- Wetlands/Shoreland
- Subsurface System

**SITE DESIGN /
DEVELOPMENT /
CONSTRUCTION**

- Groundwater Withdrawals
- Surface Water Withdrawals
- Public Water System Connection
- Water Conservation / Water Use Registration and Reporting

**Ongoing
Operations –
WATER SUPPLY**

- Groundwater Discharges
- Surface Water Discharges
- Sewer Connection

**Ongoing
Operations –
WASTEWATER
DISCHARGE**

- Air Discharge

Ongoing Operations – POWER GENERATION

Which programs apply to a new site is highly dependent on site features and available public utilities.

Program permit requirements and criteria are applied the same way for all sites regardless of the type of project.

Alteration of Terrain [AOT]– Land Resources Mgt



- Permit required for land disturbance of greater than 100,000 sq. ft (50,000 sf within protected shoreland).
- Goal to limit erosion and transport of sediment in stormwater runoff during and following construction.
- Required to infiltrate same/similar stormwater volumes on the site pre- and post-development
- Focus is on stormwater management design elements at newly developed sites.
- Design elements include drainage swales, retention/detention ponds, underground storage facilities and infiltration galleries.

Wetlands and Shoreland – Land Resources Mgt

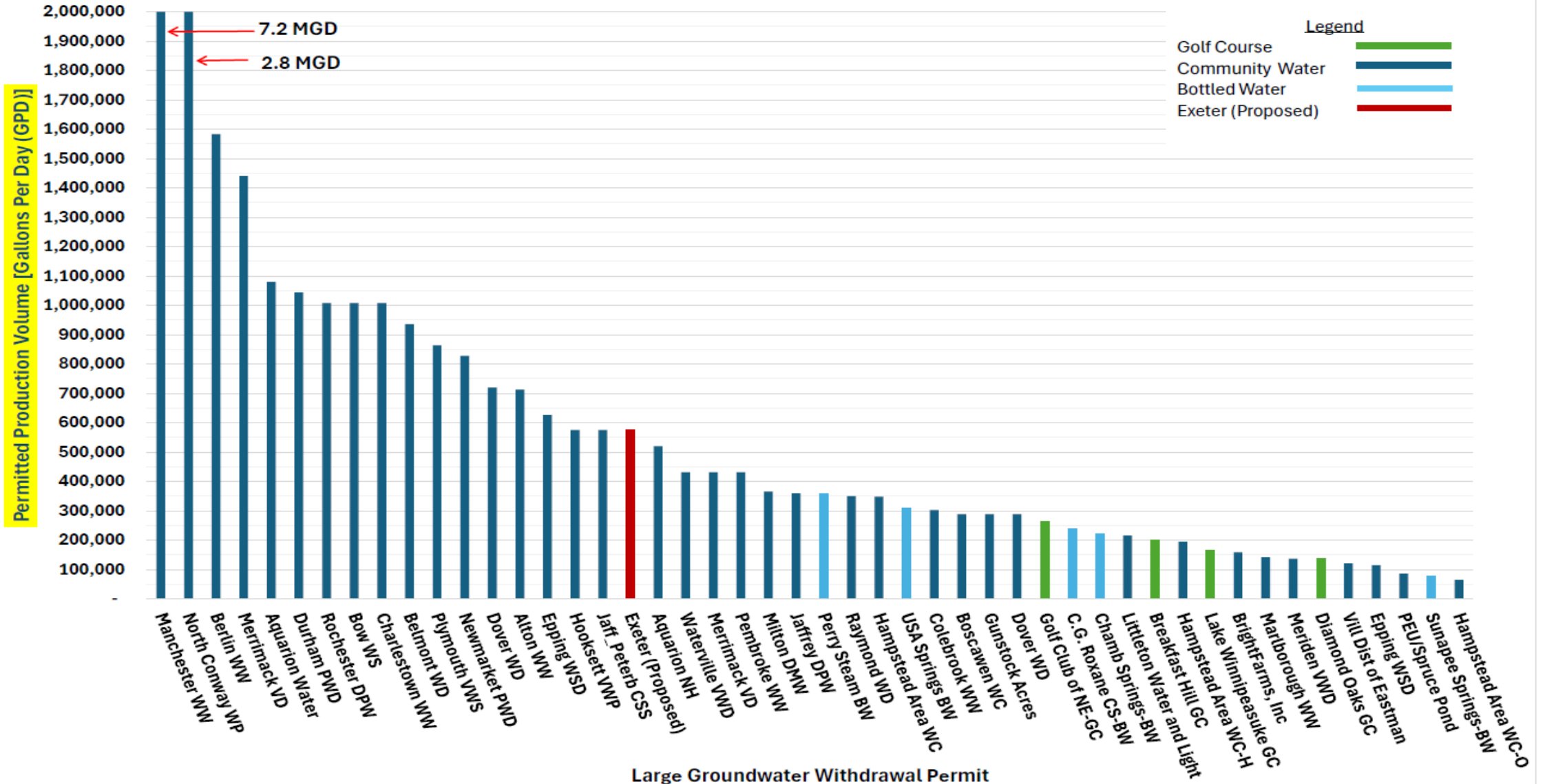


- **Permit required for direct impact (dredge or fill) to WETLANDS.**
 - Army Corps (USACOE) involvement under Fed. 404 Permit process.
 - Goal : avoid impacts if feasible, minimize impacts if avoidance is infeasible.
 - Compensatory mitigation is option under standard program.
 - Monetary-based compensatory mitigation is option under ARM program.
 - General focus is on preserving wetland function and associated habitat.
- **Permit required for work within the protected SHORELAND (250 ft upland of HWL)**
 - Reduce excavation, steep slopes and development along shoreline.
 - Maintain minimum density of understory/tree growth along shoreline to minimize erosion.
 - Maintain vegetated buffer to retain stable soil on bank of rivers/ponds/lakes for nutrient retention.
 - General focus on preserving surface water quality and shoreline habitat.

Groundwater Withdrawal– Water Division

- Large Groundwater Withdrawal Permit required for any groundwater withdrawal greater than 57,600 gpd (40 gpm) over any 24-hour period.
- Long term pumping test required to assess effects of withdrawal.
- Assessment of potential impacts to water resources and water users required.
- Implement mitigation plans for adversely impacted resources and users required.
- Permit can contain long term monitoring and reporting program.
- Permit conditions contain environmental triggers that reduce withdrawals.
- Also required to follow:
 - Water Conservation Program plan rules
 - Water Use Registration and Reporting rules

Large Groundwater Withdrawal Permitted Production Volume (Gallons Per Day)



Surface Water Withdrawal– Water Division

- Surface Water Withdrawal water quality certificate required for any surface water withdrawal greater than 20,000 gpd (14 gpm) either by state or USACOE.
- Assessment of potential impacts to designated users of surface water required.
- Evaluation of impacts to surface water flows or levels required.
- Goal is to maintain water quality and supportive habitats for designated uses.
- Allowable withdrawal volumes commonly vary by season/time of year.
- Permit conditions can contain environmental triggers that reduce withdrawals.
- Permit can contain long term monitoring and reporting program.
- Also required to follow:
 - Water Conservation Program plan rules
 - Water Use Registration and Reporting rules

Groundwater Discharge – Water Division

- Groundwater Discharge Permit required for any discharge of wastewater to the ground or groundwater greater than 20,000 gpd.
- Development of hydrogeologic WW loading model for site required.
- Completion of wastewater quality transport study required.
- Groundwater monitoring network established around discharge zone.
- Permit contains long term monitoring and reporting program.
- Compliance tracked in groundwater at the property boundary (AGQS).
- Also required to follow:
 - Water Use Registration and Reporting rules

Surface Water Discharge – Water Division

- Surface Water Discharges permitted under authority of EPA/NPDES program.
- NHDES co-permits and enforces discharge conditions.
- Applicant conducts “mixing zone” model and transport study.
- Assessments completed for impacts to designated surface water users.
- Assessment establishes wastewater treatment requirements.
- Permit contains long term monitoring and reporting program.
- Compliance tracked in the treated effluent at the end of discharge pipe.
- Also required to follow:
 - **Water Use Registration and Reporting rules**

Public Water and Sewer Utilities

- Water supply or wastewater service needs are met by regulated public utility.
- Utility assesses new demand or load against its infrastructure service capacity.
- Utility rate set based on fixed model or negotiated.
- Utility may set terms of use or limits.
- Utility may require infrastructure upgrades.
- Utility may need to develop additional plant capacity.
- Also required to follow:
 - **Water Use Registration and Reporting rules**

Air Discharge – Air Division

- Air Discharge Permit required for auxiliary boilers and emergency generators (depending on number of devices, fuel type, and size, etc.).
- Permit required for cooling tower emissions that are part of standalone power generation facility (usually only part of very large sites).
- Large cooling towers used for server temperature control may require a permit.
- Air discharging modelling analysis may be required for larger sites.
- Permits contain long term monitoring and reporting program.
- Compliance tracked at discharge stack/or fenceline.

Related Programs

- **Resource Conservation and Recovery Act (RCRA) facility permits**
 - Generation, handling, storage, transport of waste - primarily E-waste
- **Subsurface system permit – Septic system**
 - Primarily for domestic wastewater for operations staff
- **Water Use, Registration and Reporting program (WURR)**
 - Record and report all water use to state's water use database
- **Water Conservation Program and Plan (WCP)**
 - Identify and implement industry-specific efficient water use practices

NHDES contact websites

Land Resource Management

Alteration of Terrain: <https://www.des.nh.gov/land/land-development>

Wetlands: <https://www.des.nh.gov/water/wetlands>

Shorelands: <https://www.des.nh.gov/land/waterfront-development/protected-shoreland>

Water Division

Large Groundwater Withdrawal : <https://www.des.nh.gov/water/groundwater/water-use-and-withdrawal/large-groundwater-withdrawal>

Water Quality Certification : <https://www.des.nh.gov/water/rivers-and-lakes/water-quality-certification>

Groundwater Discharge: <https://www.des.nh.gov/waste/wastewater/groundwater-discharge>

Surface Water Discharge/NPDES: <https://www.des.nh.gov/waste/wastewater/npdes-permits-and-compliance>

Water Use, Registration, Reporting: <https://www.des.nh.gov/water/groundwater/water-use-and-withdrawal/registration-and-reporting>

Water Conservation: <https://www.des.nh.gov/climate-and-sustainability/conservation-mitigation-and-restoration/water-conservation>

Air Division

Air Discharges : <https://www.des.nh.gov/air/industrial-sources>

Large Groundwater Withdrawal Permitted Production Volume (Gallons Per Day)

