Summary of the DEEP Stream Flow Regulations
Sections 26-141b-1 to 26-141b-8 of the Regulations of Connecticut State Agencies.

Purpose

The purpose of the regulations is to protect Connecticut's river and stream systems by establishing stream flow standards. The standards will apply to all river and stream systems in the state through a classification process and require minimum releases from dams. These rules add to and replace the existing requirements found in the Minimum Stream Flow Standards and Regulations.

Basic Framework

The regulations balance the needs of humans use of water for drinking and domestic purposes, fire and public safety, irrigation, manufacturing, and recreation, with the needs of fish, wildlife and other biota that also rely upon the availability of water to sustain healthy, natural communities. The regulations consider best available science to balance the needs for water. The framework for managing river and stream systems so that both human and ecological needs are met includes:

- a stream flow classification system of four flow classes, ranging from natural flows to substantially human altered flows
- public notice and input into the classification and petition process
- operational release rules for dams in each class
- exemptions
- alternative release rules
- phased and flexible implementation of regulatory requirements to protect safe yields of public water supplies
- sustaining supply planning and water conservation efforts
- monitoring and reporting

Summary and Key Provisions by Section

Section 1- Title of the Regulations

- Stream Flow Standards and Regulations

Section 2- Definitions

- Key and specific terms relative to the regulations include: bioperiods; bioperiod Qs (naturally seasonal occurring flows); dam; river or stream segment; river or stream system; best management practice; diversions; release; public water supply; margin of safety; outlet works; water conservation.

Section 3- Applicability and Exemptions

- **Applicability:** overall, the regulation is applicable to dam owners or operators that impound or divert the waters of a river or stream system or that affect the flow of water in such a system. However there are a number of clarifications and off ramps in the release rules (Section 6) and exemptions to that basic applicability.

- **Exemptions:** There are exemptions for safety, emergencies, limited/short term water use, non-consumptive uses, stormwater detention, small watersheds, certain man-made conveyances, and pollution abatement. **Key exemptions are listed below, note that some may be subject to conditions:**
    - hydropower under FERC
    - fire emergencies
    - flood control dams
    - dams not on streams
    - permitted diversions
    - diversions subject to approved flow management plans
        - such as special act, or wild and scenic designations
    - tidal rivers
    - impoundments with no active manipulation or withdrawal
        - these are typically lakes and ponds used for recreation or other non-consumptive purposes
    - small intermittent withdrawals
    - draw downs for dam inspection and weed control
    - agriculture and golf courses
    - dams with watersheds < 3 square miles or naturally limited flows
    - certain streams between reservoirs
    - man-made conveyances

Section- 4 Narrative Standards

- The stream flow standards incorporate the concept of balancing human and ecological needs for water by establishing different flow standards for each of four classes of waters.
    - **Class 1**- free flowing, priority given to protecting ecological health
    - **Class 2**- minimally altered free flowing stream system
    - **Class 3**- moderately altered, have intermediate balance points between ecological and human uses.
    - **Class 4**- substantially altered, priority is given to human uses
- The flow standards for each class are based on maintaining, to various degrees, the natural variation in flow expected in Connecticut given seasonal climate and rainfall patterns and human use.

Section-5 Adoption of River or Stream System Classifications

- Sets out the adoption process for stream flow classifications, including:
    - the physical, natural and human factors for classification
    - the public participation process
    - the petition process for changes
- The factors the commissioner will consider when determining a classification for a river or stream segment include:
    - surface and groundwater withdrawals
    - planned future withdrawals, including potential sources for public water supply
    - dams and impoundments
    - water and wastewater discharges
    - existing and proposed development

- presence of flow-sensitive aquatic life, anadromous fish runs, trout management areas, and other recreational resources
- US Geological Survey natural reference stream gages
- designated open space protected areas
- physical habitat restoration potential
- other considerations

- DEEP must consult the Department of Public Health, Department of Agriculture, Department of Economic and Community Development, Public Utilities Regulatory Authority and Office of Policy and Management
- A map of the proposed classifications will be publicly noticed and opportunity for public comment.
- Final classifications and a support document will be completed.
- Final classification will be published.
- A petition process is provided to request changes to the classification, including factors for consideration and opportunity for public input.
- **Note: there is no timeframe set in the regulations for the classification process to be completed. DEEP will issue public information and notifications as the river and stream classification process proceeds, which is anticipated to be accomplished on a major drainage basin or watershed basis.**

Section 6- Release Requirements

- This section sets out numeric flow standards for dams for each class based on seasonal flow criteria and type of flow altering activity.
- This includes specific release requirements for dams to maintain a minimum stream flow, the basic release rules by class are as follows:
  - **Class 1**- free flowing
  - **Class 2**- 75% of natural inflow
  - **Class 3**- this class is where the most balancing of human and ecological needs occurs for water, it establishes baseline seasonal flow standards as set in the table below

Bioperiod	**Effective Dates**	**Minimum Required Release**	
		Antecedent Period Dry	**Antecedent Period Wet**
Overwinter	Dec 1- Feb 28/29	Bioperiod Q99*	
Habitat Forming	Mar 1 – Apr 30	Bioperiod Q99	
Clupeid Spawning	May 1 – May 31	Bioperiod Q95	
Resident Spawning	June 1 – June 30	Bioperiod Q90	
Rearing and Growth	July 1- Oct 31	Bioperiod Q80	Bioperiod Q50
Salmonid Spawning	Nov 1 – Nov 30	Bioperiod Q90	

* These are established by DEEP stream statistics (Stream Stats)

  - **For Class 2 and 3**, there are special provisions for a minimum release only (rearing and growth Q80 or natural flow whichever is less):
    - less than 3 square mile watersheds
    - stream segments 1&1/2 miles or less between impoundments

        - reservoirs that have 100 million gallons or less usable storage
        - Note- if the minimum release (rearing and growth Q80) is between .1 and .2 CFS for a public water supply reservoir dam, they may apply for an exemption
    - **Class 4**- releases are approved individually as a "site specific release" taking into account substantially altered conditions given to human uses. Releases must be consistent with the Class 4 narrative standard and consider the impact on human uses and ecological benefit of the releases. The goal is to achieve Class 3 type conditions to the extent practicable
- **There are various operational flexibilities to the Class 3 release rule for public water supplies as follows:**
    - drought relief- progressive triggers to reduce required releases based on drought conditions
    - may reduce spring releases up to 85% to preserve water storage for summer use
    - may reduce releases, subject to certain conditions, to maintain required margin of safety:
        - up to 50% for ten years
        - with DEEP approval- reduce more than 50% or greater than 10 years
- Alternative release provisions- DEEP may approve variances and site specific releases based on the following:
    - variances may be granted for
        - short term (up to 180 days, followed by a renewal of 180 days)
        - longer term (more than 360 days) subject to public notice and considerations of health, safety, resource impacts and others
    - site specific releases
        - may be approved by DEEP subject to public notice, shall be consistent with the narrative class standard for the river or stream and may consider health, safety, ecological benefit and other factors
        - **Note- all Class 4 releases must be approved as site specific releases**
- Compliance timeframes are:
    - generally 10 years from river or stream classification
    - extensions of time may be granted by DEEP subject to conditions based on supply's margin of safety and other considerations

Section 7- Record keeping and reporting requirements

- Sets out requirements to report and submit compliance information
    - **within one year of classification**- dam owners and operators must report, on a form, basic information for the dam, such as name of owner and location
    - **within nine years** (unless another date is approved in writing by the commissioner), submit description of methods and locations to be used to calculate release flows and to demonstrate compliance with release flow requirements.
    - **within ten years** (unless another date is approved in writing by the commissioner)
        - initiate required releases

        - maintain an operating log which documents that the flow releases meet the applicable requirements
    - maintain operating records for a minimum of fifteen years and be available to DEEP not later than thirty days following a written request for such records

Section 8- Conflict and severance

- A conflict and severance section is included in case of conflicting legal requirements.

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