

Legislative Regulation Review Committee

2010-047a

Department of Environmental Protection

**STREAM FLOW STANDARDS &
REGULATIONS**

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

Section 1. The Regulations of Connecticut State Agencies are amended by adding section 26-141b-1 as follows:

(NEW) **Section 26-141b-1. Short title.** Sections 26-141b-1 to 26-141b-8, inclusive, shall be known as the department's Stream Flow Standards and Regulations.

Sec. 2. The Regulations of Connecticut State Agencies are amended by adding section 26-141b-2 as follows:

(NEW) **Sec. 26-141b-2. Definitions.** As used in sections 26-141b-1 to 26-141b-8, inclusive, of the Regulations of Connecticut State Agencies:

- (1) "Agricultural" or "agriculture" means "agriculture" or "farming" as defined in section 1-1 of the Connecticut General Statutes;
- (2) "Anadromous" means a species of aquatic life that spawns in freshwater and migrates to salt water to complete its life cycle as an adult;
- (3) "Antecedent period" means the fourteen consecutive days immediately preceding the date the required release is calculated pursuant to section 26-141b-6(a) of the Regulations of Connecticut State Agencies;
- (4) "Best management practices" means those practices, facilities or procedures which reduce the impact of human activity on natural stream flow;
- (5) "Bioperiod" means the period during which certain biological processes dependent on stream flow rates occurs or is likely to occur;
- (6) "Bioperiod Q25" means the naturally occurring daily stream flow that is predicted to be equaled or exceeded on 25 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;
- (7) "Bioperiod Q50" means the naturally occurring daily stream flow that is predicted to be equaled or exceeded on 50 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;
- (8) "Bioperiod Q80" means the naturally occurring daily stream flow that is predicted to be equaled or exceeded on 80 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;
- (9) "Bioperiod Q90" means the naturally occurring daily stream flow that is predicted to be equaled or exceeded on 90 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;
- (10) "Bioperiod Q95" means the naturally occurring daily stream flow that is predicted to be equaled or exceeded on 95 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;
- (11) "Bioperiod Q99" means the naturally occurring daily stream flow that is predicted to be equaled or exceeded on 99 percent of days in a bioperiod calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (12) "Clupeid spawning bioperiod" means that period from May 1 to May 31, inclusive, of each year;
- (13) "Commissioner" means the Commissioner of the Department of Environmental Protection or such commissioner's designated agent or representative;
- (14) "Community water system" means a "community water system" as defined in section 19-13-B102 of the Regulations of Connecticut State Agencies;
- (15) "Dam" means "dam" as defined in section 22a-409-1 of the Regulations of Connecticut State Agencies;
- (16) "Department" means the Department of Environmental Protection;
- (17) "Diversion" means "diversion" as defined in section 22a-367 of the Connecticut General Statutes;
- (18) "Divert" means "divert" as defined in section 22a-367 of the Connecticut General Statutes;
- (19) "Geomorphic" means those landforms resulting from geologic processes;
- (20) "Habitat forming bioperiod" means that period from March 1 to April 30, inclusive, of each year;
- (21) "Interbasin transfer" means "interbasin transfer" as defined in section 22a-367 of the Connecticut General Statutes;
- (22) "Margin of safety" means "margin of safety" as defined in section 25-32d-1a of the Regulations of Connecticut State Agencies;
- (23) "Maximum extent practicable" means able to be constructed or implemented consistent with sound science and engineering principles; and economically and otherwise reasonable in light of the social and environmental benefits to be gained;
- (24) "Median natural flow" means the naturally occurring daily stream flow that is predicted to be equaled or exceeded on fifty percent of days in a period of record calculated using methods developed by the U.S. Geological Survey or otherwise acceptable to the commissioner;
- (25) "Overwinter bioperiod" means that period from December 1 to February 28 or February 29, inclusive, of each year;
- (26) "Person" means "person" and "municipality" as these terms are defined in section 22a-423 of the Connecticut General Statutes;
- (27) "Public water supply" means any surface or groundwater resource that provides water for a community water system;
- (28) "Rearing and growth bioperiod" means that period from July 1 to October 31, inclusive, of each year;
- (29) "Registration" means a document filed by a person in accordance with section 22a-368(a) of the Connecticut General Statutes that establishes the location of a diversion of surface

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

or groundwater from a river or stream system in existence prior to 1982, the amount of that diversion, and the use of water diverted at that location;

- (30) "Release" means the release of water from a dam to provide for the preservation, protection, and propagation of fish and other forms of aquatic life and includes dam leakage, spillage return flow, and discharge from outlet works;
- (31) "Resident spawning bioperiod" means that period from June 1 to June 30, inclusive, of each year;
- (32) "River or stream segment" means a discrete, contiguous reach of river or stream channel for which a uniform classification has been adopted;
- (33) "River or stream system" means the water in a river or stream channel, including all tributary streams that drain into and any groundwater that contributes flow to such river or stream;
- (34) "Salmonid spawning bioperiod" means that period from November 1 to November 30, inclusive, of each year;
- (35) "Source" or "source of supply" means any well, spring, reservoir, stream, river or other location where water is siphoned, pumped, channeled, or withdrawn for water supply purposes, including interconnections with other water companies;
- (36) "Usable storage" means the difference between total storage volume of a water supply reservoir and the remaining volume below the minimum operational level, intake pipe elevation, or water elevation above which water can be treated to meet drinking water quality standards, whichever is less;
- (37) "Water conservation" means measures designed to promote efficient use of water, to eliminate waste of water, and to encourage the reuse of water; and
- (38) "Water supply plan" means a plan filed and approved pursuant to section 25-32d of the Connecticut General Statutes.

Sec. 3. The Regulations of Connecticut State Agencies are amended by adding section 26-141b-3 as follows:

(NEW) Sec. 26-141b-3. Applicability.

- (a) The Stream Flow Standards and Regulations shall apply to all river or stream systems in this state.
- (b) Any person owning or operating a dam that impounds or diverts the waters of a river or stream system or that affects the flow of water in such a system shall comply with the Stream Flow Standards and Regulations. Prior to any minimum release compliance deadline prescribed in or pursuant to section 26-141b-6 of the Regulations of Connecticut State Agencies, the minimum stream flow standards established in sections 26-141a-1 to 26-141a-8, inclusive, of the Regulations of Connecticut State Agencies shall remain in effect.

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (c) Notwithstanding subsection (b) of this section, any person owning or operating a dam shall be exempt from the provisions of the Stream Flow Standards and Regulations when such dam is used for:
- (1) Hydroelectric power generation, provided such operation represents the principal purpose of the dam and operation is subject to the jurisdiction of the Federal Energy Regulatory Commission;
 - (2) Temporary inspection, maintenance, repair or modification to a dam, provided all federal, state and local authorizations have been obtained and are complied with;
 - (3) Diversion of water for fire emergency purposes;
 - (4) Diversion of water for an agricultural operation, provided such operation follows generally accepted agricultural practices, and inspection and approval of such operation by the Commissioner of Agriculture shall be prima facie evidence that such operation follows generally accepted agricultural practices;
 - (5) Diversion of water for a golf course, provided the owner or operator of any such golf course:
 - (A) certifies, on a form provided by the commissioner, that the golf course's operation is in compliance and will maintain compliance with the department- and advisory committee-developed "Best Management Practices For Golf Course Water Use" manual, as amended from time to time; and
 - (B) complies with the recordkeeping and reporting requirements of subsections (a) and (b) of section 26-141b-7 of the Regulations of Connecticut State Agencies;
 - (6) Operation of a government-maintained flood control dam for the protection of property;
 - (7) Operation of a dam that is not constructed on a river, stream or brook, and collects and temporarily stores stormwater runoff during storm events;
 - (8) Operation of a dam at the base of which the waters are tidally-influenced;
 - (9) Diversion of water authorized by the commissioner pursuant to 33 U.S.C. § 1326;
 - (10) Diversion of water in a manner and degree that is specified by order of the commissioner for the abatement of pollution pursuant to sections 22a-133e, 22a-424, 22a-428, 22a-430, 22a-431, 22a-432, 22a-449 or 22a-451 of the Connecticut General Statutes, or as specified in approved plans submitted pursuant to such an order;
 - (11) Diversion of water caused by drawing down the surface elevation of an impoundment and subsequent refilling for the purpose of aquatic weed control, water quality control, seasonal drawdown, or inspection or maintenance of a dam, gate house, outlet works, reservoir, shoreline or dock, provided:

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (A) the surface elevation of the impoundment is lowered only to the elevation and for the amount of time necessary for aquatic weed control, water quality control, or inspection or maintenance of dam, gate house, outlet works, reservoir, shoreline or dock; and
 - (B) during drawdown and refilling periods, water is continuously released in an amount no less than the minimum of either the rearing and growth bioperiod Q80 or the natural inflow of water;
- (12) Diversion operated in compliance with a diversion permit issued by the commissioner pursuant to sections 22a-368 or 22a-378a of the Connecticut General Statutes;
- (13) Diversion subject to a flow management plan contained in a resolution, agreement or stipulated judgment to which the state, acting through the commissioner, is a party, or the management plan developed pursuant to section 3 of Public Act 00-152;
- (14) Operation of a dam designed and constructed for the primary purpose of providing temporary detention of stormwater during and immediately following a storm event;
- (15) Operation of a dam such that, unless the Commissioner of Public Health determines that a water supply emergency exists, no active manipulation of the storage of water occurs behind the dam and no withdrawal of water occurs from within the impoundment, and only if such dam complies with the recordkeeping and reporting requirements of subsections (a) and (b) of section 26-141b-7 of the Regulations of Connecticut State Agencies; or
- (16) Operation of a public water supply dam during periods when no active manipulation of the storage of water occurs behind the dam and no withdrawal of water occurs from within the impoundment, provided:
- (A) such dam complies with the recordkeeping and reporting requirements of subsections (a) and (b) of section 26-141b-7 of the Regulations of Connecticut State Agencies; and
 - (B) during any period when active manipulation of storage occurs behind the dam and subsequent refilling periods: (i) water is continuously released as required pursuant to section 26-141b-6 of the Regulations of Connecticut State Agencies; and (ii) such dam also complies with subsections (c) and (d) of section 26-141b-7 of the Regulations of Connecticut State Agencies.

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

Sec. 4. The Regulations of Connecticut State Agencies are amended by adding section 26-141b-4 as follows:

(NEW) Sec. 26-141b-4. Narrative standards.

- (a) A river or stream segment classified as "Class 1" pursuant to the Stream Flow Standards and Regulations shall exhibit, at all times, the depth, volume, velocity and variation of stream flow and water levels necessary to support and maintain habitat conditions supportive of an aquatic, biological community characteristic of that typically present in free-flowing river or stream systems of similar size and geomorphic characteristics under the prevailing climatic conditions.
- (b) A river or stream segment classified as "Class 2" pursuant to the Stream Flow Standards and Regulations shall exhibit, at all times, the depth, volume, velocity and variation of stream flow and water levels necessary to support and maintain habitat conditions supportive of an aquatic, biological community minimally altered from that typically present in free-flowing river or stream systems of similar size and geomorphic characteristics under the prevailing climatic conditions.
- (c) A river or stream segment classified as "Class 3" pursuant to the Stream Flow Standards and Regulations shall exhibit, at all times, the depth, volume, velocity and variation of stream flow and water levels necessary to support and maintain habitat conditions supportive of an aquatic, biological community moderately altered from that typically present in free-flowing river or stream systems of similar size and geomorphic characteristics under the prevailing climatic conditions.
- (d) A river or stream segment classified as "Class 4" pursuant to the Stream Flow Standards and Regulations may exhibit substantially altered stream flow conditions caused by human activity to provide for the legitimate needs and requirements of public health and safety, flood control, industry, public utilities, water supply, agriculture and other lawful uses; and shall exhibit to the maximum extent practicable the depth, volume, velocity and variation of stream flow and water levels characteristic of river and stream systems that have been altered by human activity giving consideration to the social needs, economic costs, and environmental impacts associated with achieving and maintaining consistency with the narrative standard for Class 3 river and stream segments. The social needs, economic costs, and environmental impacts to be considered shall include:
 - (1) Extent of prior channel modification;
 - (2) Current impact of development and impervious cover in the watershed;
 - (3) Overriding social needs that cannot otherwise be met;
 - (4) Economic impact that would substantially impair or otherwise detrimentally affect the economy of the community in which the segment is located or of the state;
 - (5) Associated environmental impacts to other river or stream segments;
 - (6) Existing biological community; and

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (7) The margin of safety of the community water system utilizing the river or stream segment as an existing public water supply source.

Sec. 5. The Regulations of Connecticut State Agencies are amended by adding section 26-141b-5 as follows:

(NEW) Sec. 26-141b-5. Adoption of river or stream system classifications.

- (a) The commissioner, after consultation with the Commissioner of Public Health, shall prepare a map of proposed classifications indicative of the degree of human alteration of natural stream flow after consideration of the following factors:
- (1) A river or stream segment that is immediately downstream of an existing dam that impounds a public water supply reservoir shall not be classified as Class 1 or 2;
 - (2) Size and location of permitted and registered diversions within the watershed, to the extent that these diversions, if operated to the maximum extent allowed in accordance with the provisions of the permit or registration, may affect the physical characteristics of flow, volume or velocity of water in the stream channel or may alter the daily, seasonal or inter-annual flow characteristics of the river or stream system;
 - (3) Size and location of dams, reservoirs and other impoundments within the watershed, to the extent that these dams, reservoirs and other impoundments may affect the physical characteristics of flow, volume or velocity of water in the stream channel or may alter the daily, seasonal or inter-annual flow characteristics of the river or stream system;
 - (4) Size and location of return flows of water within the watershed, to the extent that these return flows may affect the physical characteristics of flow, volume or velocity of water in the stream channel or may alter the daily, seasonal or inter-annual flow characteristics of the river or stream system;
 - (5) Existing land cover in the upstream watershed, to the extent that human development and associated impervious land cover may affect the physical characteristics of flow, volume or velocity of water in the stream channel or may alter the daily, seasonal or inter-annual flow characteristics of the river or stream system;
 - (6) Planned land use in the upstream watershed, as contained in a local or state plan, including the state plan of conservation and development, to the extent that future human development and associated impervious land cover may affect the physical characteristics of flow, volume or velocity of water in the stream channel or may alter the daily, seasonal or inter-annual flow characteristics of the river or stream system;
 - (7) Available data related to the distribution and abundance of plant and animal species, such as wild trout, which are dependent upon stream and riparian habitat;

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (8) Available data related to the presence of anadromous fish runs or where anadromous fish are actively being restored or are targeted for restoration;
 - (9) Existence of trout management areas and other recreational resources;
 - (10) The location of stream gages operated and maintained by the U.S. Geological Survey that have been identified by the commissioner in consultation with the U.S. Geological Survey as hydrologic index reference gages;
 - (11) Wild or scenic water designation by the state or federal government, or waters predominately within state forests, wildlife management areas, natural heritage areas or other large contiguous areas protected for conservation purposes, including protection for public water supply purposes;
 - (12) River or stream systems or segments thereof that have been identified as a potential source of water supply in a coordinated water system plan prepared in accordance with section 25-33h of the Connecticut General Statutes or a current water supply plan approved by the Commissioner of Public Health, to the extent that these potential water supply sources, if developed, may affect the physical characteristics of flow, volume or velocity of water in the stream channel or may alter the daily, seasonal or inter-annual flow characteristics of the river or stream system;
 - (13) Practicality of, and potential for, restoring stream flow patterns to achieve consistency with Stream Flow Standards and Regulations due to the extent of prior channel modification or current impact of development and impervious land cover in the watershed;
 - (14) Publicly available data regarding the impact of stream classification on a public water supply's margin of safety; and
 - (15) Any other factor indicative of the degree of human alteration of natural stream flow.
- (b) Public participation. After development of a map of proposed classifications, the commissioner shall provide notice to the public of the proposed classifications of such river or stream segments and offer opportunity for public comment.
- (1) Notice of the proposed classifications and opportunity to comment shall be published in a newspaper with general circulation in the area within which the river or stream system is located, and on the department's web site.
 - (2) Notice shall also be provided to the following:
 - (A) The chief elected official in those municipalities within which the river or stream system is located;
 - (B) The executive director of the Council of Environmental Quality;
 - (C) The commissioners of the Department of Public Health, Department of Agriculture, Department of Economic and Community Development, and Department of Public Utility Control;

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (D) The Secretary of the Office of Policy and Management;
 - (E) Persons, at any such person's last known address as filed with the department, holding a registration or permit issued by the department authorizing activities that are known or suspected to alter the flow of water in the system for which classifications have been proposed; and
 - (F) Regional planning organizations, as defined in section 4-124i of the Connecticut General Statutes.
- (3) Procedure for submitting comments
- (A) The public shall have no fewer than 90 days from the date of newspaper publication of notice to submit comments on the proposed classification of any river or stream segment identified in such notice.
 - (B) To the extent reasonable, all comments received by the commissioner shall be posted on the department's website.
- (4) Following the timely submission of public comments pursuant to subdivision (3) of this subsection, the commissioner shall: (A) consider such comments and adopt classifications for the river or stream system or segment thereof as identified in the newspaper notice; and (B) prepare a document, to be published on the department's website, summarizing the principal reasons in support of the classifications, the principal considerations raised in opposition to the classifications and the reasons for rejecting or modifying a proposed classification.
- (5) Notice of the adopted classification of any river or stream system or segment shall be published in the Connecticut Law Journal.
- (c) Petition to change classification. After the date of publication of a river or stream system or segment's classification, the commissioner may at any time consider from any person a written petition to change the classification of a river or stream system or segment thereof or on the commissioner's own initiative, review whether current classifications continue to be appropriate and, if not, propose any classification changes as necessary.
- (1) Demonstration of need for classification change
- (A) Any petition to change the classification of a river or stream system or segment thereof from a more altered to a less altered classification shall include a demonstration that:
 - (i) one or more of those factors identified in subsection (a) of this section as having relevance with respect to the original classification of that river or stream system have changed or were mischaracterized at the time of the original classification by the commissioner; and
 - (ii) the river or stream system currently exhibits a pattern of flow that is consistent with the narrative stream flow standard for the proposed classification.

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (B) Any petition to change the classification of a river or stream system or segment thereof from a less altered to a more altered classification shall include a demonstration that:
- (i) such change is necessary to accommodate the legitimate needs and requirements of public health and safety, flood control, industry, public utilities, water supply, agriculture, or other lawful uses and that those needs and requirements cannot be satisfied while maintaining consistency with the narrative stream flow standard for the current classification;
 - (ii) one or more of those factors identified in subsection (a) of this section as having relevance with respect to the original classification of that river or stream system have changed or were mischaracterized at the time of the original classification by the commissioner;
 - (iii) alteration of the stream flow pattern has been and will continue to be minimized to the maximum extent practicable through the application of best management practices, including but not limited to water conservation practices and water reuse;
 - (iv) alternative sources of water, including interbasin transfers, have been and will continue to be utilized to the maximum extent practicable; and
 - (v) the development of new sources of water currently not utilized will be utilized to the maximum extent practicable.
- (C) For a river or stream system currently exhibiting a stream flow pattern consistent with the stream flow standard for its current classification, the petition shall, in addition to those items enumerated in subparagraphs (A) or (B) of this subdivision, as applicable, include a copy of any completed application for each new or expanded activity proposed in the river or stream system for which a diversion permit is required under Chapter 446i of the Connecticut General Statutes if the proposed change in classification is required to accommodate such activities.
- (D) For river or stream system or segment thereof for which a change in classification to Class 4 is sought, the petition shall, in addition to those items enumerated in subparagraph (B) of this subdivision, include a demonstration that there is overriding social or economic justification for changing the classification of the river or stream system or segment, including identification of the following:
- (i) the specific social needs of the municipality or municipalities within which the river or stream system is located that would not be met should the change in classification not be approved and which can not otherwise be satisfied; and

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (ii) the specific economic impacts likely to substantially impair or otherwise detrimentally affect the economy of the community or the state that would occur should the change in classification not be approved.
- (2) Commissioner action on petitions; opportunity for public hearing
 - (A) The commissioner shall deem incomplete and reject for insufficiency any petition that does not include a prima facie demonstration as required by subdivision (1) of this subsection. Such rejection for insufficiency shall not be subject to public hearing.
 - (B) The commissioner shall review any petition that includes a prima facie demonstration as required by subdivision (1) of this subsection except if such petition is submitted less than three years after the last date of publication of a river or stream system or segment's classification, the commissioner may reject such petition without prejudice. Such rejection without prejudice shall not be subject to public hearing.
 - (C) In consultation with the Commissioner of Public Health, the commissioner shall determine whether the applicable provisions of subdivision (1) of this subsection are met for the change in classification, request additional information as needed to satisfy such provisions, propose to tentatively grant or deny a petition to change classification, and provide a summary of the reasons for such tentative determination.
 - (D) The commissioner shall publish notice of such tentative determination in a newspaper with general circulation in the area within which the river or stream system is located and on the department's website. The commissioner shall also provide notice to the persons listed in section 26-141b-5(b)(2) of the Regulations of Connecticut State Agencies.
 - (E) The commissioner shall hold a public hearing on such tentative determination, if no later than thirty days after publication of the tentative determination: (i) the petitioner requesting the change in classification requests such a hearing or (ii) the commissioner receives a petition, signed by at least twenty-five persons, requesting such a hearing.
 - (F) Prior to holding a public hearing, the commissioner shall publish notice of such public hearing in a newspaper with general circulation in the area within which the river or stream system is located and on the department's website. Such notice shall include the date, time and location for such public hearing, provided the hearing date shall be not more than thirty days and not fewer than ten days after the date of such published notice; a description of the location of the river or stream segment at issue; and a summary of the reasons for the tentative determination.
 - (G) If no public hearing is requested thirty days after publication of the tentative determination, the tentative determination shall be a final decision and such final decision, including any change to an existing

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

classification, shall be published in the Connecticut Law Journal. Any final decision issued after a public hearing shall also be published in the Connecticut Law Journal.

- (H) Any public hearing pursuant to this subdivision shall be governed by section 22a-3a-6 of the Regulation of Connecticut State Agencies and the applicable provisions of sections 4-166 to 4-189, inclusive, of the Connecticut General Statutes.

Sec. 6. The Regulations of Connecticut State Agencies are amended by adding section 26-141b-6 as follows:

(NEW) Sec. 26-141b-6. Release requirements.

- (a) Not later than ten years after the date of publication of a river or stream system or segment's classification, a dam owner or operator shall comply with the following:
- (1) Operate all dams such that, unless the Commissioner of Public Health determines that a water supply emergency exists, no active manipulation of the storage of water occurs behind the dam and no withdrawal of water occurs from within the impoundment, if the release is into a river or stream segment designated as Class 1.
 - (2) Release a continuous seventy-five percent of the river or stream system's natural inflow if the release is into a river or stream segment designated as Class 2. Such release shall be calculated and the release rate adjusted, if necessary, on the first day and the fifteenth day of every month unless such day falls on a weekend or holiday in which case the required release shall be calculated and the release rate adjusted on the next business day.
 - (3) Release the following minimum continuous flow if the release is into a river or stream segment designated as Class 3:

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	

- (A) The required release shall be calculated and the release rate adjusted, if necessary, on the first day and the fifteenth day of every month unless such day falls on a weekend or holiday in which case the required release shall be calculated and the release rate adjusted on the next business day.

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (B) The wet period release is required when the median natural flow during the antecedent period equals or exceeds the bioperiod Q25.
 - (C) The dry period release is required when the median natural flow during the antecedent period is less than the bioperiod Q25.
- (4) To the maximum extent practicable, release the following minimum continuous flow if the release is into a river or stream segment designated as Class 4:

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	

- (A) The required release shall be calculated and the release rate adjusted, if necessary, on the first day and the fifteenth day of every month unless such day falls on a weekend or holiday in which case the required release shall be calculated and the release rate adjusted on the next business day.
 - (B) The wet period release is required when the median natural flow during the antecedent period equals or exceeds the bioperiod Q25.
 - (C) The dry period release is required when the median natural flow during the antecedent period is less than the bioperiod Q25.
- (5) Notwithstanding subdivisions (2) and (3) of this subsection:
- (A) Release a minimum of the rearing and growth bioperiod Q80 or the natural inflow of water, whichever is less, for a dam that impounds a river or stream system with an upstream, natural drainage area of three square miles or less;
 - (B) Release a minimum of the rearing and growth bioperiod Q80 or the natural inflow of water, whichever is less, for a dam that releases to a river or stream system that flows for a distance of one and one-half miles or less before discharging into an impoundment, and provided releases from the downstream dam, or the most downstream dam if in a series, comply with subdivision (3) of subsection (a) of this section; or
 - (C) Release a minimum of the rearing and growth bioperiod Q80 or the natural inflow of water, whichever is less, for a dam that impounds a reservoir with usable storage of 100 million gallons or less.
- (6) May reduce the minimum release required pursuant to subdivisions (2), (3) or (5) of this subsection, as applicable, during certain drought phases, if such dam owner

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

or operator is subject to section 25-32d of the Connecticut General Statutes and regulations adopted pursuant to said section. These drought phases, as defined in the dam owner or operator's water supply plan, shall trigger the following reduced releases:

Water Supply Plan Trigger	Percentage of Required Dry Release	
	Rearing & Growth Bioperiod	All Other Bioperiods
Drought Advisory	100%	75%
Drought Watch	50%	50%
Drought Warning	25%	25%
Drought Emergency	No Release Required	No Release Required

- (7) May request from the commissioner an extension of time to comply with the provisions of subsection (a) of this section at any time after the date of publication of a river or stream system or segment's classification, if such dam owner or operator is subject to section 25-32d of the Connecticut General Statutes and regulations adopted pursuant to said section, and if the following conditions are met:
- (A) Such extension of time, beyond the time when compliance is required pursuant to the provisions of this subsection, is no greater than the amount of time remaining at the time of such request, before compliance is required pursuant to the provisions of this subsection.
- (B) If owning or operating a dam where the community water system's margin of safety, as determined by the Department of Public Health, is less than 1.15, the following best efforts to minimize stream flow impacts are utilized:
- (i) The community water system is in compliance with its diversion registration or permit;
 - (ii) The community water system is complying with the minimum stream flow pursuant to sections 26-141a-1 to 26-141a-8, inclusive, of the Regulations of Connecticut State Agencies;
 - (iii) The community water system has instituted, as appropriate, the following mechanisms:
 - (a) Water conservation;
 - (b) A plan to manage service growth;
 - (c) Balancing use of different sources of supply, including interconnections, that may impact a river or stream segment differently;
 - (d) All sources of supply and customers are metered; and
 - (e) Active pursuit of additional sources of supply; and
 - (iv) Any additional water supplies developed by the community water system shall be applied toward the margin of safety until a margin of safety of 1.15 is achieved.

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (C) Such request for a time extension shall be made in writing to the commissioner and shall contain information sufficient for the commissioner to give adequate consideration to the required conditions in subparagraph (B) of this subdivision. The commissioner may require additional information prior to acting on such a request.
- (b) Alternative release requirements
- (1) The commissioner, after consultation with the Commissioner of Public Health, may approve an alternative release requirement that modifies the minimum release required pursuant to subsection (a) of this section if requested by:
- (A) The Governor;
- (B) The commissioner of any state agency; or
- (C) The owner or operator of a dam.
- (2) A request for an alternative release requirement under this subsection shall contain information sufficient to allow the commissioner to give adequate consideration to the effect of the operation of the dam under such an alternative release on the river or stream system in question. The commissioner may require additional information prior to acting on such a request. If the requested alternative release is for a period longer than 90 days, the requester shall, at the same time a request is submitted to the commissioner and in a form as prescribed by the commissioner: (A) publish notice of the request in a newspaper of general circulation in the area of the river or stream system that will be affected by the alternative release; and (B) notify the chief elected official of each municipality that will be affected by the alternative release.
- (3) In determining whether to grant the requested alternative release under this section, the commissioner shall evaluate consistency of the proposed alternative release with the appropriate narrative standard for the river or stream system in accordance with section 26-141b-4 of the Regulations of Connecticut State Agencies. The commissioner may also consider the following factors:
- (A) Recent runoff or rainfall statistics for the period in question as compared with average runoff or rainfall over preceding years;
- (B) Impoundment levels or volume of diversion as compared with levels or volumes at the same season in previous years;
- (C) Peculiar or unusual demand situations or requirements to protect water quality;
- (D) Peculiar or unusual water capture problems;
- (E) Unusual health, safety, power, or other crises imposing increased demands on water supplies; and

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (F) If notice was published by the requester, any comments received in response to such notice.
- (4) The commissioner may grant the requested alternative release in whole or in part, and may make any individual, basin-wide or state-wide adjustments to release requirements. The commissioner may include any condition, such as time limitations, that the commissioner deems necessary in granting any such alternative release.
- (c) Notwithstanding the provisions of subsection (a) of this section, any change in release requirements that is a result of a re-classification of a river or stream system or segment, pursuant to subsection (c) of section 26-141b-5 of the Regulations of Connecticut State Agencies, shall be effective (1) immediately upon publication in the Connecticut Law Journal if such publication occurs ten years after the publication of the first classification of such system or segment in the Connecticut Law Journal, or (2) ten years after the date of publication of the first classification of such system or segment in the Connecticut Law Journal if publication of the change in classification occurs within the ten years after the publication of the first classification.

Sec. 7. The Regulations of Connecticut State Agencies are amended by adding section 26-141b-7 as follows:

(NEW) Sec. 26-141b-7. Record keeping and reporting requirements.

- (a) Any person owning or operating a dam subject to the Stream Flow Standards and Regulations shall, not later than one year after the date of publication of classification for a river or stream segment on which such owner's dam is located, submit to the department on a form prescribed by the commissioner the following information:
- (1) The name of the dam;
 - (2) The permit or registration number assigned to the dam pursuant to section 22a-368 of the Connecticut General Statutes;
 - (3) The geographical location of the dam in latitude and longitude (degrees, minutes, seconds);
 - (4) The affected river or stream system or segment thereof and their classifications;
 - (5) The name, address and telephone number of the owner or operator of the dam;
 - (6) A certification that the owner or operator will continue to meet sections 26-141a-1 to 26-141a-8, inclusive, of the Regulations of Connecticut State Agencies, if applicable; and
 - (7) A statement that the owner or operator has a plan for making those infrastructure changes necessary to comply with the ten-year timeframe established in subsection (a) of section 26-141b-6 of the Regulations of Connecticut State Agencies, if such timeframe is applicable.

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (b) Any person owning or operating a dam that is exempted pursuant to subdivision (5), (15) or (16) of subsection (c) of section 26-141b-3 of the Regulations of Connecticut State Agencies shall submit to the department a certification that such dam is operating and will continue to operate pursuant to the requirements of such exemption, not later than: (1) ten years after the date of publication of a classification of the river or stream segment on which such owner's or operator's dam is located; (2) if changing a dam's operation to meet such exemption ten years after such date of publication, six months after such dam's change of operation; or (3) if dam ownership changes, six months after the date of ownership change.
- (c) Any person subject to the Stream Flow Standards and Regulations shall, not later than nine years after the date of publication of classification for the river or stream segment on which such owner's or operator's dam is located, maintain the following information:
- (1) A written description of methods used to calculate release flows and comply with release flow requirements. Such description shall include management practices used to optimize the water quality of the release to the maximum extent practicable for the protection of downstream resources;
 - (2) An operating log that documents:
 - (A) Release flow adjustments;
 - (B) Results of monthly inspections of any mechanism used to release flow; and
 - (C) Actions or planned actions to correct any deficiencies identified during inspections of any such mechanism, with notification to the commissioner if the time needed to complete such actions will be more than seven days after discovery of a deficiency; and
 - (3) The total volume of water released from the dam on each day during the previous calendar year, or an alternative method of documenting compliance acceptable to the commissioner.
- (d) All operating records shall be maintained for a minimum of fifteen years and such records shall be submitted to the commissioner not later than thirty days following a written request for such records. Upon notification by the department that an electronic reporting system is available for use, operators and owners shall commence the annual submittal of data electronically as prescribed by the commissioner.

Sec. 8. The Regulations of Connecticut State Agencies are amended by adding section 26-141b-8 as follows:

(NEW) Sec. 26-141b-8. Conflict and severance.

- (a) Where there is a conflict between the provisions of the Stream Flow Standards and Regulations and those of any other applicable ordinance, regulation or permit, the provisions of the ordinance, regulation or permit that imposes the most stringent requirements shall govern.

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (b) The invalidity of any word, clause, sentence, section, part or provision of the Stream Flow Standards and Regulations shall not affect the validity of any other part that can be given effect without such invalid part or parts.

Statement of Purpose:

The purpose of the proposed regulations is to provide for the protection of Connecticut's river and stream systems by establishing stream flow standards that apply to all river and stream systems in the state through a classification process and requiring minimum releases from dams. These proposed rules add to and eventually replace the existing requirements found in the Minimum Stream Flow Standards and Regulations of the Connecticut Department of Environmental Protection, sections 26-141a-1 to 26-141a-8, inclusive, of the Regulations of Connecticut State Agencies.

The proposed regulations balance the needs of humans to use 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 provide a framework considering the best available science to balance the human and ecological needs for water both through classification and operational rules, provide for public notice and input into the process, and provide a phased implementation of regulatory requirements to encourage and support water planning and conservation efforts. Finally, these rules protect Connecticut's river and stream systems by promoting better, more efficient management of our water supplies, so that all needs, both human and ecological, can be met both today and in the future.

The proposed regulations include the following provisions:

- (1) Section 26-141b-1 – Short title for the proposed regulations;
- (2) Section 26-141b-2 – Definitions. These include terms such as “bioperiod,” “dam,” “river or stream segment,” and “river or stream system”;
- (3) Section 26-141b-3 – Applicability and exemptions. There are exemptions for safety, such as fire or drought emergencies and dam inspections; limited or short term water use, such as temporary stormwater detention; and other activities such as pollution abatement;
- (4) Section 26-141b-4 – Narrative standards. This section establishes stream flow classifications and the narrative goals for those stream classes, based on the natural variation of stream flows, and on the existing and planned degree of human alteration to the streams. The proposed stream flow standards incorporate the concept of balancing human and ecological needs for water by establishing different flow standards for each of four categories or classes of waters. In Class 1 waters, priority is given to protecting ecological health. In Class 4 waters, support of human activities is weighted most heavily, but with the goal of eventually achieving Class 3 waters. Class 2 and Class 3 waters have intermediate balance points between ecological and 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;

State of Connecticut
REGULATION
OF
The Department of Environmental Protection
Stream Flow Standards and Regulations

- (5) Section 26-141b-5 – Adoption of river or stream system classifications. This section sets out the adoption process for stream flow classifications, including the physical, natural and human factors for classification, the public participation process, and the petition process for changes. The factors the commissioner, in consultation with the Commissioner of Public Health, will consider when determining a classification for a river or stream segment include, but are not limited to, the following: size and location of surface and groundwater withdrawals; size and location of planned future withdrawals, including potential sources for public water supply; size and location of dams and impoundments; size and location of water and wastewater discharges; existing and proposed development; presence of flow-sensitive aquatic life; anadromous fish runs, trout management areas, and other recreational resources; location of US Geological Survey natural reference stream gages; designated open space protected areas; and physical habitat restoration potential. A map of the proposed classifications will be publicly noticed and ample opportunity for public comment is incorporated into the requirements. The commissioner will take such comments into consideration before finalizing the classifications, which will then be published. A petition process to request changes to the classification (to either a more altered or less altered class) is included, along with factors for consideration and opportunity for a public hearing;
- (6) Section 26-141b-6 – Release requirements. This section sets out numeric flow standards for dams based on seasonable flow criteria and type of flow altering activity. This includes specific release requirements for dams to maintain a minimum stream flow. Implementation timeframes, drought relief, time extension to meet the required margin of safety, and alternative release provisions are also included;
- (7) Section 26-141b-7 – Record keeping and reporting requirements. This section sets out requirements to submit to the department basic information on the dam, such as name of owner and location, within one year of adoption of the regulations. Beginning nine years after adoption, data on the daily amount of water diverted and any amounts returned to the river or stream system should be maintained and, upon a request, submitted to the commissioner; and
- (8) Section 26-141b-8 – Conflict and severance. A conflict and severance section is included in case of conflicting legal requirements.

CERTIFICATION

Be it known that the foregoing (check one) Regulations Emergency Regulations
 are (check all that apply) Adopted Amended as hereinabove stated Repealed
 by the aforesaid agency pursuant to section(s) 4-168 and 22a-6 of the *General Statutes* and/or Public Act
 number(s) 26-141b-1 to 26-141b-10,

(If applicable) after publication of notice of intent in the *Connecticut Law Journal* on October 13, 2009.

(If applicable) and the holding of an advertised public hearing on January 21, 2010

WHEREFORE, the foregoing regulations are hereby (check all that apply)

Adopted Amended as hereinabove stated Repealed

EFFECTIVE: (check one, and complete as applicable)

When filed with the Secretary of the State

OR (insert date) _____

In Witness Whereof:	DATE <u>12/7/10</u>	SIGNED (Head of Board, Agency or Commission) <i>Amey Manella</i>	OFFICIAL TITLE, DULY AUTHORIZED Commissioner
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APPROVED by the Attorney General as to legal sufficiency in accordance with CGS Section 4-169, as amended

DATE <u>12/7/10</u>	SIGNED (Attorney General or AG's designated representative) <i>[Signature]</i>	OFFICIAL TITLE, DULY AUTHORIZED Assoc. Att. Gen.
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Or **DEEMED APPROVED** by the Attorney General in accordance with CGS Section 4-169, as amended, due to failure to give notice to the agency of any legal insufficiency within thirty (30) days of the receipt of the proposed regulation.

DATE	SIGNED (Head of Board, Agency or Commission)	OFFICIAL TITLE, DULY AUTHORIZED
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(For Regulation Review Committee Use ONLY)

- Approved Rejected without prejudice
 Approved with technical corrections Disapproved in part, (Indicate Section Numbers disapproved only)
 Deemed approved pursuant to CGS 4-170(c) as amended

By the Legislative Regulation Review Committee in accordance with CGS Section 4-170, as amended	DATE	SIGNED (Administrator, Legislative Regulation Review Committee)
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Two certified copies received and filed and one such copy forwarded to the Commission on Official Legal Publications in accordance with CGS Section 4-172, as amended.

DATE	SIGNED (Secretary of the State)	BY
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INSTRUCTIONS

- All regulations proposed for adoption, amendment or repeal, *except* emergency regulations, must be presented to the Attorney General for his/her determination of legal sufficiency. (See CGS Section 4-169.)
- After approval by the Attorney General, original and eighteen (18) copies of all regulations proposed for adoption, amendment or repeal must be presented to the standing Legislative Regulation Review Committee for its action. (See CGS Section 4-170.)
- Each proposed regulation must be in the form intended for publication and each section must include the appropriate regulation section number and section heading. (See CGS Section 4-172.)
- New language added to an existing regulation must be in underlining or CAPITAL LETTERS, as determined by the Regulation Review Committee. (See CGS 4-170(b).)
- Language to be deleted must be enclosed in brackets []. (See CGS 4-170(b).)
- A new regulation or new section of a regulation must be preceded by the word "(NEW)" in capital letters. (See CGS Section 4-170(b).)
- The proposed regulation must have a statement of its purpose following the final section of the regulation. (See CGS Section 4-170(b).)
- Additional information regarding rules and procedures of the Legislative Regulation Review Committee can be found on the Committee's web site: <http://www.cga.ct.gov/rr/>.
- A copy of the Legislative Commissioners' Regulations Drafting Manual is located on the LCO website at <http://www.cga.ct.gov/lco/LCODraftRegu.asp>.