



# **New EPA Regulations for MA & NH Hydros**



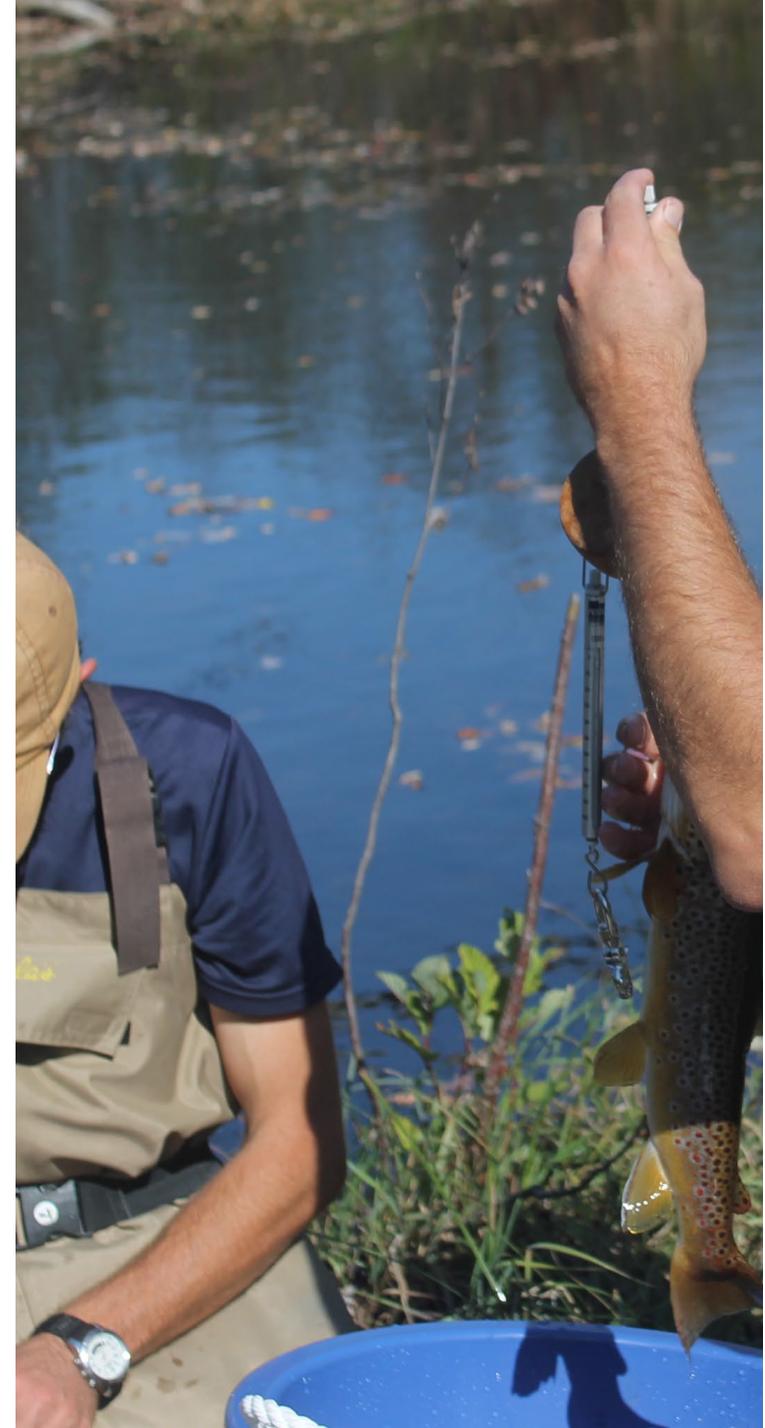
# Notice of Intent (NOI)

- Permit Issuance Date: **February 14, 2023**  
Permit Effective Date: **April 15, 2023**
- Operators seeking authorization to discharge must submit a complete and accurate Notice of Intent (NOI) in accordance as follows:
- Operators that are covered under the 2009 HYDROGP must submit a NOI within *sixty (60) days* of the effective date of this general permit, or by **June 14, 2023**.
- Operators of new discharges must submit a NOI at least *thirty (30) days prior* to the commencement of discharges, or as soon as practicable.



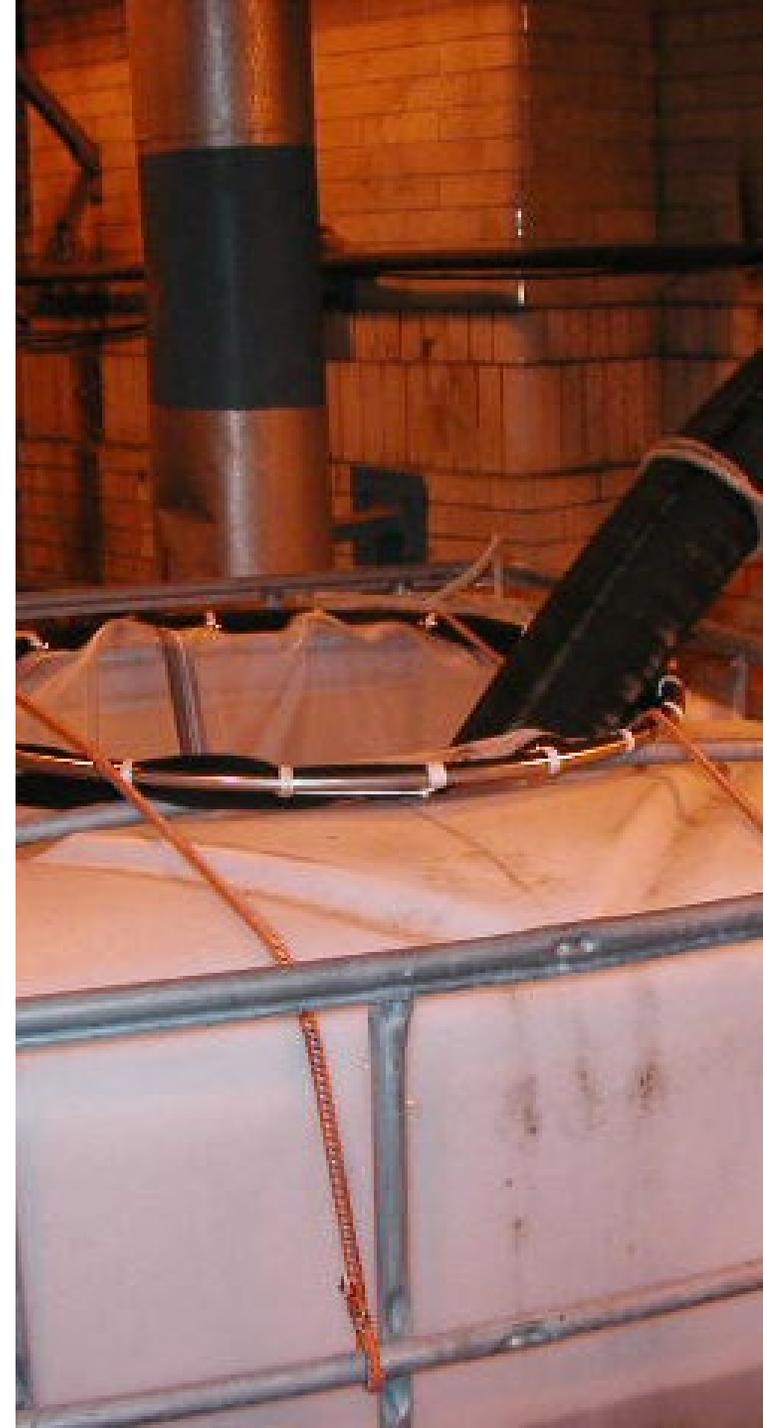
# General Permit

- The new **HYDROGP** addresses effluent characteristic monitoring and includes many parameters already sampled (i.e. flow, pH, temperature) however total suspended solids (TSS) has been added.
- pH and TSS monitoring may be discontinued after the Permittee completes *eight* quarterly *sampling* events.
- New requirements include addressing 316(b) *impingement* and *endangered* species and a Best Practices Management Plan (BMP).
- Requirements for 316(b) impingement, endangered species and BMP are discussed in more detail below.



# 316(b) Requirements

- The permittee must comply with the following requirements. Compliance with these requirements must be implemented within *180 days* of receiving authorization to discharge under this permit. Permittees may request an extension for compliance if installation of a new technology is required.
- The permittee must minimize the volume of cooling water withdrawn. Permittees shall demonstrate compliance with (a) by submitting the following information with their NOI:
  - The maximum daily volume of cooling water withdrawn in gallons per day (GPD) based on monitoring over the previous *five years*;
  - The maximum monthly average volume of cooling water withdrawn (GPD) based on monitoring over the previous *five years*;
  - The volume of cooling water withdrawn as a percentage of: (i) installed capacity of the turbines; (ii) average daily flow through the penstock; and (iii) minimum flow through the penstock calculated as:  $[\text{cooling water (in cubic feet per second (cfs))} / \text{flow through the penstock (cfs)}] * 100$ ;



# 316(b) Requirements

- The source water's annual mean flow and 7-day mean stream low flow with *10-year* recurrence interval (7Q10) if the intake is located on a freshwater river or stream, in cubic feet per second (cfs) based on USGS or other sources (e.g., *MassDEP, NHDES, or FERC licensing applications*); if river flow is managed provide the parameters associated with such an arrangement;
- The maximum daily and average monthly volume of water withdrawn as a percentage of the mean annual flow and 7Q10 flow of the river or stream calculated as:  $[\text{cooling water (cfs)}/\text{stream flow (cfs)}] * 100$ ;
- The volume (in GPD), of cooling water withdrawn that is then reused at the facility prior to discharge, and if so, how it was reused;



# 316(b) Impingement Requirements



- Permittees shall satisfy the BTA for impingement mortality by demonstrating compliance with one of the **four** following options:

## *Option 1:*

An existing exclusion, diversion, or guidance device (e.g., a physical or behavioral barrier or spillway) that provides fish downstream passage and minimizes exposure to a Cooling Water Intake Structure (CWIS). The permittee must describe any technology or combination of technologies implemented for fish protection in the NOI and provide sufficient information to demonstrate that the downstream fish passage effectively transports live fish in a manner that minimizes the likelihood of becoming impinged at the cooling water intake.



# 316(b) Impingement Requirements

- Permittees shall satisfy the BTA for impingement mortality by demonstrating compliance with one of the **four** following options:

## *Option 2:*

An effective intake velocity not to exceed 0.5 fps at the point of cooling water withdrawal, or alternatively, at the point where cooling water enters the penstock (for intakes located within or after the penstock (e.g., in the scroll case or tailrace)). The NOI shall include a demonstration of compliance through observation of live fish in the intake or by calculation. Calculation of the velocity must be based on the maximum volume of cooling water withdrawn if applied at the cooling water intake or maximum volume of intake water if applied at the point where cooling water enters the penstock.

# 316(b) Impingement Requirements



- Permittees shall satisfy the BTA for impingement mortality by demonstrating compliance with one of **four** the following options:

## *Option 3:*

For cooling water withdrawn directly from the source waterbody (i.e., not from within the penstock), a physical screen or other barrier technology with a mesh size no greater than ½-inch) that minimizes the potential for adult and juvenile fish to become entrapped in the CWIS. Alternatively, a Permittee may demonstrate that a screen with a larger mesh size has a sufficiently low intake velocity (e.g., no greater than 0.5 fps) to minimize the risk of impingement. The NOI shall include a description of the barrier technology implemented for fish protection including the mesh size and intake velocity calculated based on the screen dimensions, maximum intake flow, and 7Q10 flow of the source waterbody.



# 316(b) Impingement Requirements

- Permittees shall satisfy the BTA for impingement mortality by demonstrating compliance with one of the **four** following options:

## *Option 4:*

Other aspects of the location, design, construction, and capacity of the intake that minimize impingement mortality. For example, for an intake located within or after the penstock and which is not already subject to fish passage requirements, a Permittee may demonstrate that the volume of water flowing through the penstock relative to the volume of cooling water withdrawn minimizes the risk of impingement at the CWIS. Permittees may also submit a biological evaluation or other studies completed during Federal Energy Regulatory Commission (FERC) licensing or otherwise with the assistance of state or federal agencies that demonstrate that the impacts from impingement are minimized.

# 316(b) Impingement Options

- Existing strainers/screens at the location where the cooling water pipe connects to the penstock/draft tube satisfies 316(b) impingement requirements
- Existing strainers/screens located beyond the location where the cooling water pipe connects to the *penstock/draft tube* will need to be evaluated.
- Fulfill impingement requirements by submitting a *biological evaluation* or other studies completed during FERC licensing (i.e. desk top entrainment studies and swim speed comparisons).





# Best Management Practices Plan (BMP)

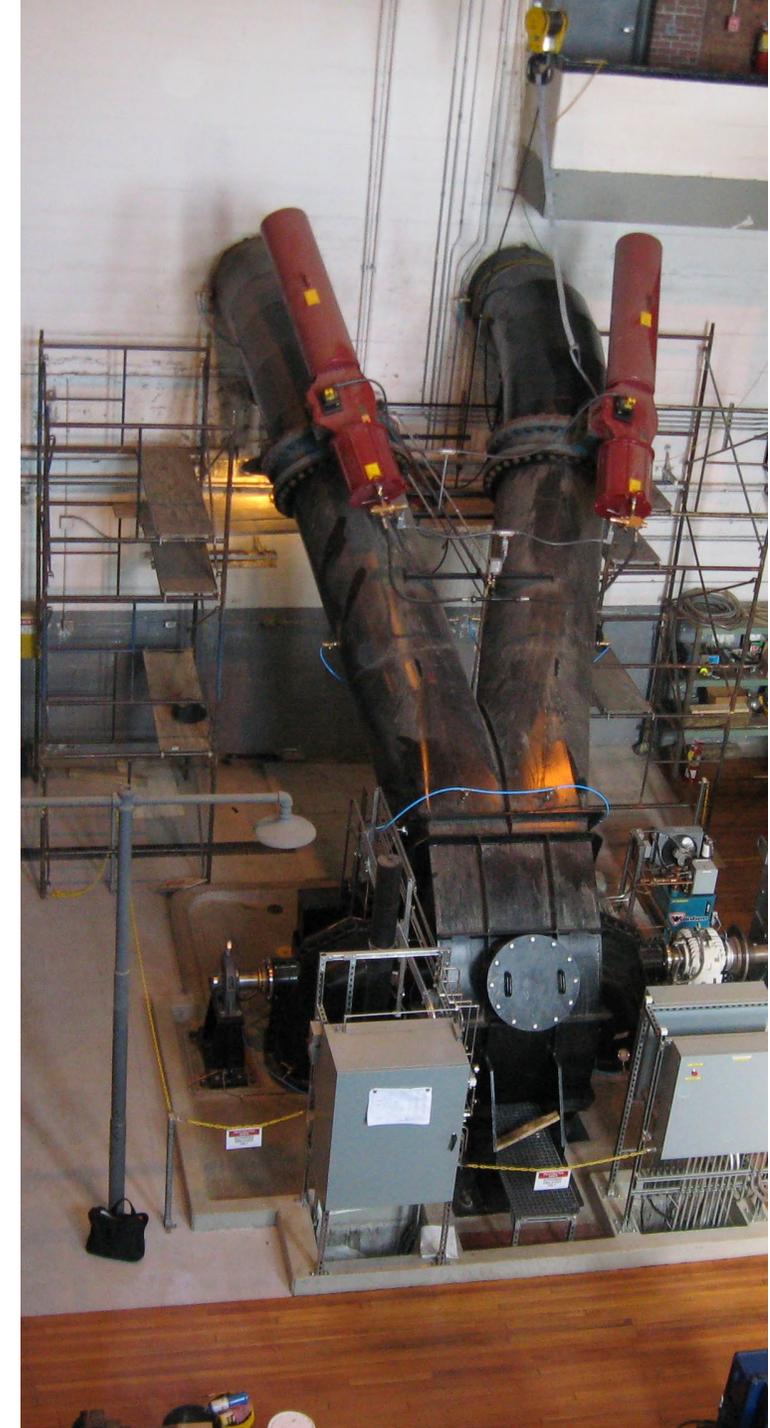
- Permittees shall prepare a BMP plan for compliance with the terms of this permit.
- Existing permittees with a currently implemented BMP plan shall revise such plan as need within *90 days* after the permit authorization date to reflect any changes at the facility and address any new requirements of the final permit.
- New permittees shall develop and implement a BMP plan no later than *180 days* after the permit authorization date.
- The objectives of the BMP plan are to protect the designated water uses of the surface water bodies; to mitigate pollution from materials storage areas, in-plant transfers of hazardous and/or toxic materials, process and material handling areas, loading and unloading operations, and accidental spillage; and to manage the removal and disposal of solid materials, to the extent practicable, from the trash racks or intake screens.





# Best Management Practices Plan (BMP)

- The BMP should identify potential sources of pollution which may reasonably be expected to affect the quality of discharges associated with work activity at the facility.
- The BMP should describe the *implementation of practices* which are to be used to reduce the pollutants in discharges associated with work-related operations at the facility from all discharges and to assure compliance with the terms and conditions of the permit.
- The BMP should describe and provide for implementing practices to remove and to dispose of solid materials, except for naturally occurring materials, from the trash racks or intake screens.
- The BMP plan requires *quarterly inspection* and maintenance procedures for any installed backwash strainer.



# Endangered Species

- When ESA-listed species are present, permit coverage will only be available if EPA determines, or the applicant determines and EPA concurs, that the discharge and related activities will have “*no affect*” on the listed species or critical habitat or are “*not likely to adversely affect*” listed species or critical habitat.
- If the discharges and related activities are “*not likely to adversely affect*” listed species or critical habitat, consultation with the Services must be completed and a written concurrence from the Services must be provided with the NOI.
- Applicants that cannot meet the eligibility criteria must apply for an individual permit.
- EPA strongly encourages applicants to begin this process at the **earliest possible stage** to ensure the notification requirements for general permit coverage are complete upon Notice of Intent (NOI) submission.

