Summary of Proposed Changes to

RIDEM Water Quality Regulations

250-RICR-150-05-1

September 2025

RIDEM is proposing to amend existing state Water Quality Regulations with targeted updates to align with EPA recommendations, adopt site specific criteria, address typographical errors, and remove non-regulatory text.

The proposed changes are below with further narrative description of the changes not considered typographical errors or non-regulatory text following. The narrative description changes detailed following the table are in bold:

Regulation Section	**Change**	**Change Description**	**Rationale**
1.3 Incorporated Materials	1.3(A),(G),(H)	Updated to cite 2024 Federal CFR	Cites most recently reviewed CFR
1.3 Incorporated Materials	1.3(B),(F)	Repealed	No longer necessary
1.3 Incorporated Materials	1.3(C),(G)	Updated	Typo correction
1.4 Definitions	**1.4(A)(10)**	**Updated description of "Background"**	**Clarified existing Department practice when no upstream location is available for determination of turbidity**
1.10 Water Quality Criteria	1.10(D)(1)	Deleted "natural"	Above change to "background" will suffice for both definitions
1.5 Liberal Application	1.5(A)	Repealed	Non-regulatory language
1.6 Severability	1.6(A)	Repealed	Non-regulatory language
1.14 Strategic Plan Consistency	1.14	Added A subsection notation	Regulatory formatting style

Regulation Section	Change	Change Description	Rationale
1.20 Antidegradation	1.20(A)	Updated	Typo correction, removal of repealed notation
1.24 Sampling	1.20(B)	Removed	Removed repealed reference and non-regulatory language
1.25 Water Quality Classifications	1.25(J)(10), 1.25(M)(6)	Updated	Typo corrections
1.25 Water Quality Classifications	**1.25(I)(3),(7), 1.25(J)(8),(11), 1.25(K)(1), 1.25(M)(6)**	**Upgrade classification**	**Historic associated discharge permit terminated**
1.25 Water Quality Classifications	**1.25(M)(1)**	**New segments**	**New segments to reflect shellfishing management. No change to applicable shellfish criteria or management**
1.26 Ambient Water Quality Criteria for Toxic Pollutants	1.26(A), (I)	Updated	Typo correction, removal of non-regulatory language
1.26 Ambient Water Quality Criteria for Toxic Pollutants	**1.26(G)(3), (J)(1),(6),(7)**	**Adoption**	**Adopting site specific criteria for selected waterbodies**
1.26 Ambient Water Quality Criteria for Toxic Pollutants	**1.26(J)(2-6)**	**Adoption or amendment**	**Adopting EPA recommended human health criteria for toxics**
1.26 Ambient Water Quality Criteria for Toxic Pollutants	1.26(G)(1)(b)	Updated	Typo correction
1.26 Ambient Water Quality Criteria for Toxic Pollutants	1.26(J)(1)	Updated	Clarification of footnote and spelling
1.28 Special Resource Protection Waters	**1.28(C)**	**Adoption**	**Six river segments in the Pawcatuck River Basin were added to the table as "Wild and Scenic Rivers"**

Narrative Description of Changes

Update to definition of “Background”

§1.4(A)(10) The Rhode Island Department of Environmental Management (DEM) Office of Water Resources (OWR) and Office of Compliance and Inspection (OCI) identified a need for review and revision of the Rhode Island Water Quality Regulations (WQR), §1.4(A)(10), definition of “background” associated with turbidity criteria. Existing language within the WQR requires clarification, because numeric turbidity data are evaluated against “background” sampling location turbidity data from upstream waters. Scenarios have arisen which prevented collection of direct upstream turbidity samples for evaluation of background turbidity levels.

This proposed revision updates the regulatory definition referenced in the turbidity criteria, specifically “background” to reflect current Department practice when a direct upstream sampling location is not accessible. The intent of the revision is to provide clarity in identifying a representative background location when a sampling location immediately upstream of a discharge is unavailable. No changes to adopted numeric or narrative turbidity criteria are in this proposed revision.

Upgrade to specified waterbody segments

§§1.25(I)(3),(7), 1.25(J)(8),(11), 1.25(K)(1), 1.25(M)(6) Waters are classified for regulatory purposes as described in §1.9. The Class B1 and SB1 waters are segments with approved wastewater discharges. All criteria and designated uses are the same as Class B and SB waters, but Class B1 and Class SB1 waters retain the statement “Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges.” The identified segments have historical approved wastewater discharges that have been eliminated, typically through connection to a sewer system. Therefore, the permit has been terminated, and these waterbodies no long have approved wastewater discharges or permits. Upgrading these segments identifies that primary contact recreation activities will not be impacted due to approved wastewater discharges. No changes to adopted numeric or narrative criteria are in this proposed revision.

New waterbody segments in Point Judith Pond

§**1.25(M)(1)** Two new segments have been designated from the larger RI0010043E-06A Point Judith Pond segment. These segments were created to ensure consistency with current shellfish growing area designations. These changes do not affect any approved,

conditional, or prohibited shellfishing management area designation by the RIDEM Shellfishing Program. These segments match the area and descriptions of Shellfish Growing Areas GA10-8 and GA10-9. No changes to adopted numeric or narrative turbidity criteria are in this proposed revision.

Adoption of site specific metal criteria for specified river segments

§§1.26(G)(3), (J)(1),(6),(7) The Water Quality Regulations (WQR) contain a previously adopted method for adoption of site specific criteria in §1.29. The WQR recognize that national criteria adoption allows for modification to reflect local environmental conditions, and incorporating site specific water quality criteria into discharge permits will still ensure that the aquatic community is adequately protected from the effects of toxic pollutant discharges, while considering the mitigation of toxicity due to characteristics of a local waterbody and effluent.

RIDEM is proposing to adopt site specific metals criteria, as it has done previously for other waterbodies, that are protective of aquatic life and designated uses for the waterbody segments listed below:

WBID	River System	Parameter	Relevant Permit(s)
RI0008039R-18B	Pawcatuck River	Copper, Aluminum	Kenyon Industries, RI0000191
RI0001002R-05D	Clear River	Copper, Aluminum	Burrillville WWTF, RI0100455
RI0006017R-03	Pawtuxet River	Aluminum	West Warwick WWTF, RI0100153 Warwick WWTF, RI0100234 Cranston WWTF, RI010013

Copper

RIDEM issued RIPDES permits to the Burrillville Wastewater Treatment Facility (Burrillville) on February 28, 2020 and to Kenyon Industries, Incorporated (Kenyon) on February 25, 2022. Copper limits in the permits were calculated using current Rhode Island WQS hardness-based water quality criteria. Both facilities subsequently appealed the final copper limits, because, based on effluent data, they would not be able to meet the limits. To resolve these permit appeals, RIDEM and the facilities entered into separate consent agreements that included enforceable compliance schedules. As part of these agreements, both facilities conducted Water Effect Ratio (WER) studies following EPA's Streamlined WER guidance and collected water quality data inputs for EPA's 2007 biotic ligand model (BLM).

After review of the WER and BLM values, RIDEM determined the WER studies were more representative of current conditions, protective of aquatic life and designated uses, and consistent with RIDEM's previously adopted site specific criteria. This was determined, in

part, because the BLM results were heavily dependent upon the input factors, particularly some of the default input values. Additionally, this determination was made because one permitted facility is a textile manufacturing facility that uses a less bioavailable form of copper in their dye and is not the type of wastewater discharge that was used in development of the BLM criteria.

In each case, the calculated WER would result in allowable site specific criteria significantly higher than the effluent copper concentrations already being achieved by the facilities using their existing treatment technologies. Therefore, in consideration of antidegradation/anti-backsliding requirements, RIDEM is proposing to limit the assigned site-specific water quality criteria to ensure that it is protective of existing water quality (i.e., limit the site-specific criteria to a value that would not allow the facilities to increase the resultant in-stream pollutant concentration). By holding the criteria to these anti-backsliding/antidegradation based values, RIDEM will ensure that adverse impacts to aquatic life do not occur.

Proposed Site-Specific WER-based Cooper Criteria

	Acute Criteria µg/L	Chronic Criteria µg/L
Clear River (RI00001002R-05D)	9.97	6.82
Pawcatuck River (RI00008039R-18B)	23.56	20.40

Aluminum

Some Rhode Island RIPDES permittees use aluminum-based chemistry (e.g., alum) as the tertiary treatment ballasted coagulant for phosphorus removal. Due to updated 7Q10 flows, which are used in Rhode Island to determine compliance with the aquatic life criteria and permit limits, some permittees were found to have a reasonable potential to exceed in-stream aluminum criteria and were assigned water quality-based aluminum limits based on the existing 1988 EPA recommended criteria currently required by the Rhode Island Water Quality Regulations.

Since facilities could not immediately comply with these limits, the facilities entered into a consent agreement with RIDEM to evaluate reducing aluminum usage and to implement a water quality study collecting data to evaluate site specific criteria developed using the EPA recommended 2018 aluminum Multiple Linear Regression (MLR) model calculator. Additionally, other facilities have collected sufficient data during other water quality studies allowing RIDEM to run and evaluate site specific criteria developed using the 2018 aluminum MLR calculator.

RIDEM entered the collected water quality data into the Aluminum Criteria Calculator V2.0 to calculate an acute and chronic value for each sampling point from the various facilities. The 10th percentile of all acute and chronic values calculated from the upstream station are used in watersheds without known endangered species. Because the Rhode

Island waters listed below have not been identified as having endangered aquatic species, RIDEM used the same 10th percentile approach to determine criteria that are protective of the waterbody (i.e., its designated use for aquatic life) under a variety of circumstances (e.g., flow differences, seasonal variation, etc.). Proposed acute and chronic water quality criteria are shown in the table below.

While the calculated MLR chronic criteria are higher than the current chronic criterion for all three proposed locations, the acute criterion is lower for two of the three locations. This result is found in other New England states using the MLR calculator.

Proposed Site-Specific MLR Aluminum Criteria

	Acute Criteria µg/L	Chronic Criteria µg/L
Clear River (RI00001002R-05D)	782	360
Pawcatuck River (RI00008039R-18B)	230	146
Pawtuxet River Main Stem (RI0006017R-03)	660	325

Adopting EPA recommend human health criteria for toxics

§1.26(J)(2-6) Under the Federal Clean Water Act, EPA is charged with developing and publishing water quality criteria recommendations that reflect the latest scientific knowledge. States may choose to adopt the criteria that EPA publishes, modify EPA's criteria to reflect site-specific conditions, or adopt different criteria based on other scientifically defensible methods.

In 2015, EPA published final updated ambient water quality criteria for the protection of human health for 94 chemical pollutants. These updated recommendations reflected the latest scientific information and EPA policies at the time, including updated body weight, drinking water consumption rate, fish consumption rate, bioaccumulation factors, health toxicity values, and relative source contributions. Some pollutants are already in the Rhode Island WQR, and some pollutant criteria are newly adopted. For the previously adopted pollutants with updated values, some values became more restrictive (lower) or less restrictive (higher).

Given the necessary data and information to develop human health criteria for toxics, RIDEM has determined that adopting the recommended 2015 human health criteria without modification as the best available science. All 2015 human health criteria values were amended or adopted in the WQR with the exception of benzene. Benzene criteria in the 2015 human health update are presented as a range, and RIDEM needs further guidance from EPA on how a range would be applied in permitting and other regulatory processes.

Adoption of Special Resource Protection Waters (SRPWs)

§1.28(C) Special Resource Protection Waters (SRPWs) are high quality surface waters identified by the Director as having significant ecological or recreational uses, which may include but are not limited to: wildlife refuge or management areas; public drinking water supplies; State and Federal parks; State and Federal designated Estuarine Sanctuary Areas; waterbodies containing critical habitats, which may include but are not limited to waterbodies identified by the RIDEM Natural Heritage Program as critical habitat for rare or endangered species; wetland types or specific wetlands listed as rare, threatened, endangered, or special interest or of special concern by the RI Natural Heritage Program; waterbodies identified by the U.S. Department of the Interior on the Final List of Rivers for potential inclusion in the National Wild and Scenic Rivers System. Under the Antidegradation of Water Quality Standards in §1.20 of the WQR, SRPWs are assigned to Tier 2 ½ protection where no measurable degradation of the existing water quality necessary to protect the characteristic(s) which caused the waterbody to be designated as an SRPW is allowed.

In March 2019, riverine water segments of the Wood-Pawcatuck Watershed were designated as National Wild and Scenic Rivers. Formal listing for potential inclusion into the National Wild and Scenic Rivers (NWSR) is included in the WQR definition of SRPWs. RIDEM has determined that formal inclusion into the program is equivalent to potential listing and is recognizing the federal protection of the Wood-Pawcatuck waters in the program should be included in this technical update. Some Wood-Pawcatuck NWSR waters are already on the SRPW list for other features. The water segments not included in the SPRW list are newly adopted into the table in §1.28(C). The following waters are newly adopted:

Waterbody Name	Waterbody ID Number	Town
Ashaway River	RI0008039R-02A	Hopkinton
Ashaway River	RI0008039R-02B	Hopkinton
Beaver River	RI0008039R-03	Exeter, Richmond
Chipuxet River	RI0008039R-06C	South Kingstown
Pawcatuck River	RI0008039R-18D	Hopkinton, Westerly

One river segment Pawcatuck River (RI0008039R-18B) is included in the National Wild and Scenic Rivers, but it is not in the current update for adoption. The segment is currently under permit development for revised criteria and will be considered for SRPW adoption in future regulatory revisions. The Department recognizes there may be further waters that meet the other categories for inclusion as SRPWs and intends in future regulatory revisions to review the full table for addition of additional waters.