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2019 VT 84

No. 2018-339

In re Morrisville Hydroelectric Project Water Quality
(Vermont Natural Resources Council,
Vermont Council of Trout Unlimited, and
Agency of Natural Resources, Appellants)

Supreme Court
On Appeal from
Superior Court,
Environmental Division

March Term, 2019

Thomas G. Walsh, J.

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PRESENT: Reiber, C.J., Skoglund, Robinson, Eaton and Carroll, JJ.

¶ 1. **CARROLL, J.** This appeal involves a state water-quality certification pursuant to the federal Clean Water Act (CWA) issued by the Vermont Agency of Natural Resources (ANR) for the operation of hydroelectric dams. ANR certified three dams operated by Morrisville Water and Light (MWL) and imposed conditions, including those to control the minimum amount of

water released from each dam to support habitat for fish. MWL appealed these conditions to the Environmental Division. American Whitewater and Vermont Paddlers' Club (collectively the Paddlers) also appealed, arguing that the conditions at one facility did not allow for whitewater boating. The Environmental Division rejected ANR's flow rates and imposed MWL's proposed flow rates, affirmed ANR's conditions regarding a winter drawdown for one site, and imposed scheduled releases of water as requested by the Paddlers. ANR appeals and MWL cross appeals. We conclude that the Environmental Division erred in rejecting ANR's interpretation of its antidegradation policy and methodology for calculating flow rate, and affirm the Environmental Division on the winter drawdown and timed releases for the Paddlers at the Green River facility. Therefore, we affirm in part and reverse and remand in part.

I. Statutory and Regulatory Framework

¶ 2. This appeal involves three hydroelectric facilities operated by MWL on the Lamoille River and its tributaries: the Morrisville, Cadys Falls, and Green River facilities. These facilities were constructed between the 1890s and 1940s. In 1981, the Federal Energy Regulatory Commission (FERC) issued the facilities' original license, which expired in April 2015. To renew its license with FERC, MWL applied for a state water-quality certification from the State of Vermont. See 10 V.S.A. § 1004 (indicating that ANR is certifying agency for CWA).

¶ 3. We begin with an overview of the federal and state regulatory framework underlying this certification process. The main objective of the Clean Water Act "is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). To reach that goal, the CWA requires states to develop water-quality standards that include designated uses for a waterbody and the water-quality criteria necessary to support those uses. *Id.* § 1313(c)(2)(A). An applicant for a federal license for any activity that may cause a discharge into navigable waters must obtain state certification, known as § 401 certification, that the activity will comply with provisions of the CWA and state law. *Id.* § 1341(a)(1), (d). The

operation of a hydroelectric dam must receive state certification because dams potentially result in a discharge, as that term is used in § 401 of the CWA. S.D. Warren Co. v. Me. Bd. of Env'tl. Prot., 547 U.S. 370, 373 (2006).

¶ 4. The Vermont Legislature delegated to ANR the responsibility to provide water-quality certification pursuant to § 401 of the CWA. 10 V.S.A. § 1004. ANR also has authority to adopt procedures for certifying hydroelectric projects. Id. § 1006(b). Pursuant to this authority, ANR has adopted the Vermont Water Quality Standards. Agency of Natural Resources, Vermont Water Quality Standards, Code of Vt. Rules 12 030 025 [hereinafter VWQS], <http://www.lexisnexis.com/hottopics/codeofvtrules>.¹ Any hydroelectric project seeking ANR certification must comply with the VWQS. In re Clyde River Hydroelectric Project, 2006 VT 11, ¶ 3, 179 Vt. 606, 895 A.2d 736 (mem.). As the agency tasked with granting § 401 compliance, ANR may impose reasonable conditions on a permit. PUD No. 1 of Jefferson Cty. v. Wash. Dep't of Ecology, 511 U.S. 700, 712 (1994). These conditions can regulate the quantity of water because stream flow impacts a waterbody's water quality. Id. at 719 (recognizing that "water quantity is closely related to water quality; a sufficient lowering of the water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, navigation or, as here, as a fishery").

¶ 5. The CWA and VWQS require water bodies "to achieve and maintain a level of quality that fully supports" the "designated uses" of those waters. VWQS § 3-04(A); see also 40 C.F.R. § 131.10(a). Designated uses are "those uses specified in water quality standards for each water body or segment whether or not they are being attained." 40 C.F.R. § 131.3(f). In Vermont, designated uses are identified for each class of water. See VWQS § 1-01(B)(14) (defining designated use as "any value or use, whether presently occurring or not, that is specified in the management objectives for each class of water"). The waters at issue in this appeal are Class B

¹ The parties agree that the 2014 version of the VWQS governs this case.

waters, and the designated use that was the primary focus in this case is the preservation of aquatic biota and wildlife through the establishment and maintenance of “high quality aquatic habitat.”² VWQS § 3-04(A)(1). The VWQS require “[n]o change from the reference condition that would prevent the full support of aquatic biota, wildlife, or aquatic habitat uses” and protection of “[a]ll life-cycle functions.” Id. § 3-04(B)(4).

¶ 6. The VWQS also protect existing uses, which are uses that have occurred in the waterbody on or before November 28, 1975. VWQS § 1-01(B)(18). To identify existing uses, ANR must consider at least five factors:

- a. Aquatic biota and wildlife that utilize or are present in the waters;
- b. Habitat that supports existing aquatic biota, wildlife, or plant life;
- c. The use of the waters for recreation or fishing;
- d. The use of the water for water supply, or commercial activity that depends directly on the preservation of an existing high level of water quality; and
- e. . . . under paragraphs (a) and (b) above, evidence of the use’s ecological significance in the function of the ecosystem or evidence of the use’s rarity.

Id. § 1-03(B)(1). The VWQS include an antidegradation policy, which requires that waters be managed “to protect, maintain, and improve water quality.” VWQS § 1-03(A). The meaning of the antidegradation policy, the definition of habitat “that supports existing aquatic biota, wildlife, or plant life,” and the protection to be afforded designated and existing uses are central issues in this case.

II. Factual and Procedural Background

¶ 7. The Environmental Division found the following. MWL’s hydroelectric facilities impact three Vermont waters: the Lamoille River, the Green River, and the Green River Reservoir. The rivers support several fish species including brook trout, brown trout, and rainbow trout.

² Class B waters must also be managed to maintain the designated use of aesthetics, which includes “water character, flows, water level, bed and channel characteristics, exhibiting good aesthetic value.” VWQS § 3-04(A)(2). For this reason, ANR’s conditions included minimum spill requirements to provide good aesthetic value.

Several more species of fish live in the Green River Reservoir. The Reservoir provides habitat for two to three nesting loon pairs. The Morrisville and Cadys Falls facilities are on the Lamoille River. They divert water from the river to generate electricity. The dams at Morrisville and Cadys Falls create bypass reaches, which are parts of the river where water would naturally flow if not diverted to the facilities. 10 V.S.A. § 1006(a)(1) (defining bypass reach). Once the facility has used the water, it returns it to the river downstream at the end of the bypass reach.³ The Green River facility operates in a store-and-release mode. The Green River Reservoir is upstream of the dam. To generate electricity, the facility draws water from the reservoir and passes it through the facility and down to the Green River, which flows into the Lamoille River.

¶ 8. To prepare for the recertification process, MWL hired a consulting firm, Gomez and Sullivan, to study the Morrisville, Cadys Falls, and Green River facilities. ANR and MWL agreed on the study's scope and goals in advance as part of the FERC relicensing. One of the goals was to determine the flow of water necessary to support aquatic habitat. In general, for the Morrisville and Cadys Falls facilities, the study considered how different flows in the bypass reach affected downstream passage, habitat connectivity, water movement, and availability of cover. For the Green River facility, Gomez and Sullivan conducted a habitat flow study in the Green River to assess the relationship between flow and habitat for target species at different life stages. From the data, the study produced habitat flow curves showing the amount of habitat observed under different flows for each life stage of each target species. The researchers converted the habitat information into percentages of the maximum habitat observed in the studies. Both ANR and MWL used these habitat-flow curves to reach their recommended flow regimes for the three facilities.

³ Both the Morrisville and Cadys Falls facilities are transitioning to a true run-of-river operation, which means that the outflow equals the inflow on an instantaneous basis.

¶ 9. ANR used the data to perform a most-limiting habitat analysis, which shows the flow at which 80% of the maximum habitat is achieved for the most-limiting species at that facility. ANR set a flow rate of 70 cubic feet per second (cfs) at the Morrisville facility to provide 80% of the maximum habitat observed for brook trout, the most-limiting species at that facility. At Cadys Falls, ANR set a flow rate of 100 cfs to provide 80% of the maximum habitat observed for adult rainbow trout, the most-limiting species at that location. At the Green River facility, ANR used a dual-flow analysis to account for rapid-flow fluctuations that can impact fish populations in a variety of ways, including causing dewatering, stranding, disruption of spawning or migration, and habitat loss. The dual-flow analysis identified the percentage of maximum habitat available in different base-peak flow combinations for different life stages of target species. ANR imposed seasonal-flow and reservoir-elevation requirements to assure habitat protection for vulnerable species.⁴ ANR set a maximum fluctuation of 0.25 feet from June 1 to December 15 and a winter drawdown limit of 1.5 feet to be refilled by May 1. ANR did not include timed releases for whitewater boating but required natural high flows to be passed downstream from spring to fall to allow for boating.

¶ 10. In August 2016, ANR issued a certification with the conditions recited above. Multiple parties appealed ANR's certification to the Environmental Division. MWL appealed, primarily seeking lower flow rates. The Paddlers argued that ANR had committed a legal error by

⁴ ANR's flow conditions for the Green River facility were as follows. From June 1 to September 30, a minimum downstream flow of inflow, 5.5 cfs, or 7 cfs, based on drawdown. From October 1 to December 15, a minimum downstream flow of inflow, 7 cfs, or 10 cfs based on drawdown. From December 16 to March 31, flows of inflow, 6 cfs, or 8 cfs based on drawdown. From April 1 to May 31, flows of 15 cfs, 30 cfs, 60 cfs, or inflow based on the refilling of the reservoir. ANR also set maximum generation flow conditions.

MWL proposed alternative conditions both at the reservoir and downstream. MWL's flow conditions were as follows. From June 1 to September 30, a downstream flow of 7 cfs. From October 1 to December 15, a flow of 10 cfs. From April 1 to May 31, a minimum flow of 60/30 cfs. If inflows are less than the enumerated flow, then downstream flows match inflow. MWL also proposed maximum reservoir fluctuations and maximum generation flows for each seasonable period.

concluding that whitewater boating was not an “existing use” entitled to protection under VWQS. The Vermont Natural Resources Council and Vermont Council of Trout Unlimited argued that ANR’s proposed flow rates were too low.

¶ 11. Before the Environmental Division, MWL argued that ANR’s conditions were in error in part because ANR had not considered the economic and social impacts of the project and how the conditions would impact those concerns. MWL and ANR both moved for summary judgment on whether ANR was required to consider the social and economic impact of the project. The Environmental Division concluded that in a § 401 certification ANR was not required to consider social or economic factors to set conditions that did not meet water-quality standards.

¶ 12. The case proceeded to trial, which lasted eight days. The trial centered around whether ANR’s conditions were necessary to protect high-quality aquatic habitat and to what extent water quality could be decreased to accommodate operation of the hydroelectric facilities. MWL did not dispute that ANR’s flow conditions would fully support the designated use of aquatic biota, wildlife, and aquatic habitat, but argued that the conditions were overly protective. MWL hired a consultant, who created a flow-energy model to evaluate habitat under different flow scenarios compared to a modeled natural flow regime. MWL determined available habitat under different flow regimes by averaging together all species and life stages over time. MWL’s proposal included lower minimum bypass flows for the Morrisville and Cadys Falls facilities and a different set of conditions for the Green River facility. Although MWL argued that these lower flows supported high-quality aquatic habitat for the Morrisville and Green River facilities, MWL conceded that the lower flows did not comply with the VWQS for the Cadys Falls facility. Nonetheless, MWL argued that the lower flows at Cadys Falls were necessary to protect the existing use of hydroelectric operation.

¶ 13. In a written order, the court rejected the conditions imposed by ANR regarding minimum flow rates and imposed MWL’s proposed conditions. The court affirmed ANR’s 1.5-

foot limit for the winter drawdown of the Green River Reservoir. Finally, the court found that whitewater boating was an existing use and included three scheduled releases per year from the Green River Facility for whitewater boating. A summary of the current conditions, the parties' proposals, and the Environmental Division decision is as follows:

Location	Current	ANR Condition	MWL Proposal	Environmental Division Decision
Morrisville	12 cfs	70 cfs One-inch spill	43 cfs No aesthetic flow	43 cfs No spill required
Cadys Falls	No minimum flow	100 cfs One-inch spill	65.5 cfs No aesthetic flow	65.5 cfs No spill required
Green River	5.5 cfs 10-foot winter drawdown	Seasonal regime 1.5-foot limit for winter drawdown No scheduled releases	Seasonal regime 6-foot limit for winter drawdown No scheduled releases	MWL regime 1.5-foot limit for winter drawdown 3 annual scheduled releases

¶ 14. ANR appeals, arguing that the Environmental Division failed to afford proper deference to ANR's interpretation of the antidegradation provision of the VWQS and the definition of high-quality aquatic habitat.⁵ MWL cross appeals, arguing that the Environmental Division erred by ruling at summary judgment that social and economic issues cannot be considered when issuing a water quality certification. MWL also challenges the court's determination of a 1.5-foot winter drawdown at the Green River Reservoir. Finally, ANR argues that the court erred in setting scheduled releases for whitewater boating.

¶ 15. We affirm in part and reverse and remand in part. We conclude that the Environmental Division erred in failing to give deference to ANR's interpretation of the antidegradation provision of the VWQS and ANR's definition of high-quality aquatic habitat and consequently reverse and remand as to the proper flow rates for each facility. We affirm the

⁵ The arguments by Vermont Natural Resources Council and Vermont Council of Trout Unlimited are not addressed separately because they are similar to those raised by ANR.

Environmental Division's conditions related to the winter drawdown. We conclude that ANR was not required to take economic or social factors into account when setting limits or conditions to ensure compliance with the VWQS. Finally, we affirm the Environmental Division's condition regarding timed releases for the Green River facility.

III. Antidegradation Policy

¶ 16. We first address Vermont's antidegradation policy, and the Environmental Division's interpretation that it provides protection for existing uses. The Environmental Division concluded that the VWQS standards require maintaining a quality of water that supports existing uses even if that means reducing water quality needed for designated uses and not meeting water-quality standards. ANR argues that the Environmental Division erred in interpreting the antidegradation provision of the VWQS to allow conditions that support existing uses but degrade water quality. ANR submits that the antidegradation provision does not protect existing uses or allow an allocation of water to a use that degrades water below minimum levels required by the CWA.

¶ 17. As a threshold issue, we address MWL's argument that because ANR did not cite the CWA below to support its interpretation of Vermont's antidegradation policy, ANR cannot now make this argument on appeal.⁶ ANR sufficiently preserved the issue for appeal. To preserve an argument for appeal, "a party must present an argument with specificity and clarity." Rutland Herald v. Vt. State Police, 2012 VT 24, ¶ 33, 191 Vt. 357, 49 A.3d 91 (quotation omitted). Here, ANR presented its interpretation of the antidegradation provision and argued its interpretation was entitled to deference. The Environmental Division had a fair opportunity to analyze this argument and ruled on it. Therefore, the issue was adequately preserved for appeal. That ANR's argument

⁶ MWL also contends that several documents relied on by ANR on appeal were not introduced as evidence below and therefore are not part of the record on appeal. See V.R.A.P. 10(a) (limiting record on appeal to those items introduced in the trial court). ANR contends that the sources are properly before this Court because they are legal authorities and not evidence. We need not reach this question because we do not rely on these items to resolve the appeal.

is more complex or well researched on appeal does not make it unpreserved below. See *id.* ¶ 35 (concluding that argument sufficiently raised in trial court even though presented with more specificity on appeal).

¶ 18. The Environmental Division determined that the antidegradation provision in the VWQS requires maintaining water conditions necessary to support existing uses. See VWQS § 1-03(B)(1) (stating that “[e]xisting uses of waters and the level of water quality necessary to protect those existing uses shall be maintained and protected regardless of the water’s classification”). The court concluded that hydroelectric power generation at the facilities was an “existing use” under VWQS § 1-03(B)(1)(d) and therefore entitled to “protection.”⁷

¶ 19. This interpretation affected the court’s decision regarding the conditions imposed at the Cadys Falls facility. MWL acknowledged that its proposed flow requirements for Cadys Falls did not support the designated use of providing high-quality aquatic habitat. The court found that ANR’s flow of 100 cfs would provide high-quality aquatic habitat but would result in a 21% decrease in energy generation. The court rejected ANR’s argument that the antidegradation provision required setting water-quality conditions to protect sensitive designated uses and did not allow degrading these conditions to support existing uses. The court concluded that MWL’s proposed flow of 65.5 cfs reasonably balanced the existing use of generating hydroelectric power with the designated use of protecting aquatic biota, habitat, and wildlife. On appeal, ANR argues

⁷ On appeal, we do not reach the question of whether the hydroelectric facilities are existing uses in the context of certification relative to those very facilities because we conclude that even assuming they are, the VWQS and the CWA require ANR to impose conditions that maintain water quality for the highest and best use. In this case, that is the designated use of high-quality aquatic habitat. The Environmental Division used the existing-use label as a grandfather provision, essentially mandating that water quality be decreased to whatever extent necessary to “protect” that existing use. This construct is contrary to the entire purpose of requiring a recertification of the facility, which does not recognize a right to continue past operation. As the U.S. Supreme Court explained in *S.D. Warren Co.*, 547 U.S. at 386, state water-quality certification is important in relicensing a hydroelectric facility so that industry cannot use a past operation license as an excuse for violating water-quality standards. The recertification process entails deciding what conditions will maintain or improve water quality. It does not allow a facility to keep operating in violation of water-quality standards simply because it has done so in the past.

that the Environmental Division’s decision was in error because it failed to give ANR proper deference in defining the antidegradation provision of the VWQS.

¶ 20. On appeal, we review the Environmental Division’s legal conclusions de novo. In re Lathrop Ltd. P’ship I, 2015 VT 49, ¶ 21, 199 Vt. 19, 121 A.3d 630. Where the Environmental Division’s decision involves interpreting an agency’s regulations, “we employ a deferential standard of review of an agency’s interpretation of its own regulations, which may be overcome only by compelling indications of error.” In re Musto Wastewater Sys., 2014 VT 103, ¶ 10, 197 Vt. 514, 106 A.3d 929 (quotation and alteration omitted).

¶ 21. We begin with the language of the antidegradation policy. The antidegradation policy in the VWQS is designed “to protect, maintain, and improve water quality.” VWQS § 1-03(A). Under the antidegradation provision, “[e]xisting uses of waters and the level of water quality necessary to protect those existing uses shall be maintained and protected regardless of the water’s classification.” VWQS § 1-03(B)(1). ANR has interpreted the policy to mean that water quality necessary to support the water’s highest and best use must be protected and that conditions cannot be imposed to “protect” an existing use if those conditions will not provide water quality for the highest and best use.⁸

¶ 22. Absent “compelling indications of error,” ANR is entitled to deference as to the interpretation of its own regulations, including the antidegradation policy in the VWQS. See In re Musto Wastewater, 2014 VT 103, ¶ 10 (quotation omitted). ANR’s interpretation of the meaning of the antidegradation policy in the VWQS is consistent with the purposes of the VWQS, state water-quality law, and the CWA, and accords with the rationale of the U.S. Supreme Court. Its interpretation is rational and reasonable and entitled to deference.

⁸ ANR also contends that under the antidegradation policy, conditions may be imposed related to an existing use only if that use requires a higher water quality. We need not reach that portion of ANR’s interpretation of the antidegradation policy to resolve the question of whether conditions can be imposed in furtherance of existing uses when those conditions degrade water quality necessary for designated uses.

¶ 23. The VWQS and the CWA support ANR’s interpretation and do not support the type of balancing engaged in by the Environmental Division. ANR interpreted the antidegradation policy to require that conditions must be designed to attain the water quality necessary to support the highest and best use, which in this case is the “aquatic biota, wildlife, and aquatic habitat” designated use. ANR’s interpretation is consistent with the state’s overall water-quality policy, which seeks to both protect and enhance or improve water quality. See 10 V.S.A. § 1250 (providing that state water quality policy is to, among other things, “protect and enhance the quality, character and usefulness of its surface waters,” “assure the maintenance of water quality necessary to sustain existing aquatic communities,” and “seek over the long term to upgrade the quality of waters and to reduce existing risks to water quality”). This policy also furthers the overall goal of the CWA that state water-quality standards “be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter.” 33 U.S.C. § 1313(c)(2)(A). It also complies with the CWA’s implementing regulatory language requiring uses “to be achieved and protected” and to protect the most sensitive use. See 40 C.F.R. § 131.10(a); *id.* § 131.11(a)(1) (requiring water-quality criteria to “protect the designated use” and for water with multiple use designations to “support the most sensitive use”).

¶ 24. ANR’s interpretation is also supported by reasoning used by the U.S. Supreme Court, which has highlighted the importance of protecting designated uses, even if it means a reduction in hydroelectric power generation. In PUD No. 1 of Jefferson County, 511 U.S. 700, a utility district appealed a state’s imposition of minimum stream flow rates as part of a CWA certification. The Court held that the state could impose restrictions on the facility to ensure compliance with the state’s water-quality standards adopted pursuant to the CWA. *Id.* at 712. The Court explained that a state could impose restrictions aimed at protecting designated uses because “a project that does not comply with a designated use of the water does not comply with the applicable water quality standards.” *Id.* at 715. The Court held that the state could impose

minimum stream flow conditions as “a proper application of the state and federal antidegradation regulations” to protect and maintain existing instream water uses. *Id.* at 719. The Court held that “the State may include minimum stream flow requirements in a certification issued pursuant to § 401 of the Clean Water Act insofar as necessary to enforce a designated use contained in a state water quality standard.” *Id.* at 723.

¶ 25. Moreover, the structure and purpose of the CWA also supports ANR’s position. The CWA delineates only limited circumstances when the water quality necessary for the highest and best use is not required. The CWA has a strong preference for fishable/swimmable use designations and if a state seeks to remove one of these uses, it must conduct a “use attainability analysis” demonstrating the use is not attainable for one of six specified reasons. See 40 C.F.R. § 131.10(g), (j). The CWA allows downgrading permitting standards only when water quality already meets levels necessary to protect designated uses, 33 U.S.C. § 1313(d)(4)(B), which all parties agreed was not the case here. Other limited exceptions are not applicable in this case. Given that the statute delineates specific circumstances when water quality can be degraded, ANR’s position—that the statute did not intend to allow degradation generally in support of existing uses—is reasonable.

¶ 26. In support of the balancing approach, the Environmental Division cited to a case from Maine involving recertification of a dam, interpreting it to hold that water-quality conditions can be diminished to ensure protection of a minimum percentage of energy generation. See S.D. Warren Co. v. Me. Dep’t of Env’tl. Prot., No. CIV.A. AP-03-70, 2004 WL 1433675, at *5 (Me. Super. Ct. May 4, 2004) (rejecting argument that state environmental agency failed to consider impact of conditions on hydroelectric power generation), aff’d sub nom. S.D. Warren Co. v. Bd. of Env’tl. Prot., 2005 ME 27, 868 A.2d 210, aff’d on other grounds sub nom. S.D. Warren Co. v. Me. Bd. of Env’tl. Prot., 547 U.S. 370 (2006). The Environmental Division’s reliance on S.D. Warren Co. is misplaced. Nothing in S.D. Warren Co. suggests that conditions that protect

hydroelectric power generation and degrade water quality are proper. To the contrary, the case explains that hydroelectric power generation may be reduced to protect water quality. The court affirmed the state's ability to impose minimum flows to restore previously expired fish species and increase the habitat of existing species. *Id.* at *4.

¶ 27. The Environmental Division rejected ANR's interpretation as "irrational and unreasonable," reasoning that it would result in "existing uses going unsupported," thereby rendering the antidegradation policy unnecessary. However, the antidegradation policy is not undermined by ANR's interpretation if it is properly viewed as protecting water quality rather than protecting uses. Existing uses are supported but cannot be maintained in a manner that degrades water quality.

¶ 28. We agree with ANR that the CWA and the VWQS do not allow promoting or protecting a use that degrades water quality. Here, the highest and best use at issue is the "aquatic biota, wildlife, and aquatic habitat" designated use. Therefore, regardless of whether hydroelectric generation is an existing use, the water quality necessary to maintain this designated use had to be protected. Because the Environmental Division erred by declining to defer to ANR's reasonable interpretation of its regulations and instead balancing the conditions necessary to meet water-quality standards against those requested for energy generation, the conditions imposed for the Cadys Falls facility are in error. That portion of the order is reversed, and ANR's flow condition of 100 cfs for Cadys Falls is reinstated.⁹

IV. High-Quality Aquatic Habitat

¶ 29. For the Morrisville and Green River facilities, the Environmental Division struck the flow conditions imposed by ANR and imposed the flow conditions advanced by MWL. The

⁹ Although we ordinarily would remand for the Environmental Division, as fact finder, to impose conditions that accord with the proper standard, in this case, the Environmental Division found that ANR's condition of 100 cfs would support high-quality aquatic habitat. The Environmental Division found that there was not enough data to support MWL's expert's testimony that 90 cfs would provide high-quality aquatic habitat.

court found that ANR's conditions were overly protective of water quality and that ANR's interpretation of high-quality aquatic habitat was not entitled to deference because it was unwritten, ANR did not produce literature to support it, and the methodology was not shown to be an established practice. We conclude that ANR's interpretation was entitled to deference and reverse the Environmental Division. Therefore, we strike the conditions imposed by the Environmental Division and remand to impose conditions that comply with the VWQS and ANR's interpretation of high-quality aquatic habitat.

¶ 30. ANR's conditions regarding flow requirements stemmed from the language of the VWQS. All waters at issue in this case are Class B waters, which must be managed to achieve and maintain a level of quality that fully supports the designated use of aquatic biota, wildlife, and aquatic habitat. VWQS § 3-04(A)(1). This designated use requires establishing and maintaining "high quality aquatic habitat." *Id.* High-quality aquatic habitat is not defined within VWQS. ANR and MWL presented different views of how to measure high-quality aquatic habitat to ensure compliance with the VWQS.

¶ 31. ANR determined that maintaining high-quality aquatic habitat required setting flow at a level that would maintain 80% of the maximum habitat observed for the most limiting species and life stages. ANR explained that if less than 80% of the maximum habitat value is provided, species may experience various stressors, leading to a decline in fish populations. ANR argues that its use of the most-limiting-species methodology—in which 80% of usable habitat must be maintained for the most vulnerable species studied to determine the proper flow rate for a hydroelectric dam—is a reasonable interpretation of the term high-quality aquatic habitat.

¶ 32. MWL offered a "time series analysis," which combined the Gomez and Sullivan habitat study results with a flow-energy model to evaluate habitat under different flow scenarios compared to a modeled natural flow regime over time. MWL then determined the available habitat under different flows by averaging all species and life stages. ANR argued that MWL's time-

series analysis was not adequate because the averaging resulted in not considering the most limiting species and life stages. In addition, the flow-energy model included uncontrolled high flows and assumed that habitat did not decline as flows got higher, thus artificially inflating the habitat available.

¶ 33. The Environmental Division concluded that ANR’s definition of the term high-quality aquatic habitat was arbitrary and capricious because the term was not defined in a formal agency document and ANR did not provide scientific literature to support its definition. Accordingly, the Environmental Division did not defer to ANR’s interpretation and imposed MWL’s proposed conditions.

¶ 34. On appeal, we defer to the Environmental Division’s factual findings unless they are clearly erroneous. In re Vill. Assocs. Act 250 Land Use Permit, 2010 VT 42A, ¶ 7, 188 Vt. 113, 998 A.2d 712. However, “[w]e review issues of law or statutory interpretation de novo.” Id.

¶ 35. The question of whether ANR’s interpretation of the term high-quality aquatic habitat is entitled to deference is a legal question that we review de novo. As explained above, an agency’s interpretation of its own regulations is entitled to deference and can be “overcome only by compelling indications of error.” Conservation Law Found. v. Burke, 162 Vt. 115, 121, 645 A.2d 495, 499 (1993). An agency is entitled to deference in interpreting its own policy or terms “when: (1) that agency is statutorily authorized to provide such guidance; (2) complex methodologies are applied; or (3) such decisions are within the agency’s area of expertise.” In re Korrow Real Estate, LLC Act 250 Permit Amend. App., 2018 VT 39, ¶ 20, 207 Vt. 274, 187 A.3d 1125 (quotation omitted). A party arguing that an agency is not due deference has “the burden to show [the agency interpretation] was wholly irrational and unreasonable in relation to its intended purpose.” Plum Creek Me. Timberlands, LLC v. Vt. Dep’t of Forests, Parks & Recreation, 2016 VT 103, ¶ 28, 203 Vt. 197, 155 A.3d 694 (quotation omitted).

¶ 36. Here, all factors indicate that deference is due. First, there is no dispute that ANR has statutory authority to both certify compliance with the CWA and to enact regulations to maintain water quality. The Legislature designated ANR to serve as “the agent to coordinate the State interest before the Federal Energy Regulatory Commission” for any issue “involving water quality and regulation or control of natural stream flow through the use of dams situated on streams within the boundaries of the State.” 10 V.S.A. § 1004. ANR has the responsibility of “advis[ing] the Federal Energy Regulatory Commission of the amount of flow considered necessary in each stream under consideration [for § 401 licensing].” *Id.* And the Legislature gave ANR the power to “adopt by procedure an application process for the certification of hydroelectric projects in Vermont under Section 401 of the federal Clean Water Act.” *Id.* § 1006(b). ANR is statutorily authorized to be the state’s agent for the § 401 certification process, to adopt water-quality standards, and implement those standards during the certification process.¹⁰ *Id.* §§ 1004, 1251a, 1252(e). Consequently, ANR is entitled to deference in both interpreting the VWQS and in determining how to measure compliance with those standards. See *Plum Creek*, 2016 VT 103, ¶ 29 (explaining that where agency has broad statutory authority and relevant expertise, agency’s methodology is entitled to deference unless it is unreasonable or irrational).

¶ 37. Second, the calculation of what amounts to high-quality aquatic habitat is a complex methodology. The Environmental Division found otherwise, stating that ANR had not asserted that reaching its definition required the application of complex methodologies. This misses the point. Deference is due to agencies where the issue requires specialized expertise in an area of which the agency has statutory authorization. *Id.* Therefore, the relevant question is

¹⁰ MWL contends that it is unreasonable for ANR to claim that the Environmental Division’s position was inconsistent with the CWA because the Environmental Protection Agency (EPA) approved the VWQS standards and the VWQS were adopted to achieve the objectives of the CWA. EPA’s approval of the VWQS has no bearing on the meaning of “high-quality aquatic habitat” in the VWQS. ANR’s interpretation is consistent with both the CWA and state water-quality standards.

whether calculating high-quality aquatic habitat for a particular area requires applying complex methodologies. On this point, there is little dispute.

¶ 38. Third, ANR’s interpretation has been applied consistently by the agency. We will find error on appeal if a regulation is interpreted in a fashion inconsistent with the authorizing statute or if the regulation is “inconsistently applied.” In re Stowe Cady Hill Solar, LLC, 2018 VT 3, ¶ 21, 206 Vt. 430, 182 A.3d 53. Here, there is no evidence that ANR applied the policy inconsistently.¹¹ The Environmental Division found that “ANR has often looked to the most limiting habitat approach . . . on the basis that this method is recommended in the relevant scientific literature.” Indeed, a scientist who worked at ANR for thirty years on nearly every hydroelectric dam certification project in Vermont during that time—approximately seventy such projects—testified that ANR has used this methodology to determine flow rate “for years.”

¶ 39. Finally, ANR’s interpretation is entirely consistent with the statutory and regulatory scheme. We “defer to an agency’s interpretation of its own regulation, as long as that interpretation is consistent with the statute that authorized promulgation of the regulation in question.” Id. ¶ 20. ANR’s definition of high-quality aquatic habitat is consistent with the statutory purpose of protecting designated uses and maintaining and improving the quality of the state’s water. Moreover, this methodology is consistent with the VWQS, which indicate that high-quality aquatic habitat requires that “all life-cycle functions” be protected and maintained. VWQS § 3-04(B)(4). ANR’s decision to define high-quality aquatic habitat in a manner that protects all life stages of the most sensitive species by requiring 80% of the maximum habitat was reasonable.

¶ 40. The Environmental Division provided an insufficient basis to decline to give ANR deference. The court concluded that ANR’s interpretation was “arbitrary and capricious” because

¹¹ We reject MWL’s assertion that the Environmental Division effectively found that ANR applied the policy inconsistently because the court found that “ANR has often looked to the most limiting habitat approach.” (Emphasis added.) There was no evidence and no finding that ANR used this method inconsistently.

(1) it was not contained in a rule or agency writing; (2) ANR did not produce literature to support using this methodology; and (3) the methodology is “not considered an established practice of determining high quality aquatic habitat.” None of these are adequate bases for rejecting ANR’s definition of its own regulatory term.

¶ 41. An agency’s decision is not arbitrary or capricious simply because it is not formalized in a rule or in a written policy. See Plum Creek, 2016 VT 103, ¶ 28 (according deference to agency methodology that was not included in formal agency rule or written policy). Further, ANR was not required to produce literature to support its methodology or show that its interpretation was the best one. Decisions of an agency within its expertise “are presumed correct, valid and reasonable.” Id. ¶ 31 (quotation omitted). An agency does not have the burden of proving that its interpretation or methodology is the best one. See id. ¶ 30 (cautioning that court is not higher environmental agency and that court’s role is to ensure ANR’s decision made in accordance with law). All that is required is that the agency has a reasonable basis for its action, and the burden rests on the party challenging the interpretation to show that it is unreasonable. Id. ¶¶ 28, 31. Here, ANR provided a reasonable basis for its definition, explaining that levels below 80% create stress for aquatic life and that its policy is designed to protect the most limiting species at all life stages.

¶ 42. MWL’s arguments on appeal against deference are unavailing. MWL argues that no deference is owed to ANR on a policy that is not included in a declaratory ruling by the ANR Secretary. This argument is based on the VWQS, which state that the ANR Secretary “may issue declaratory rulings regarding the water quality standards.” VWQS § 1-05. Allowing the ANR Secretary to make a declaratory ruling is not equivalent to requiring the ANR Secretary to make such a ruling or forfeit any deference that would otherwise be due. Such an interpretation would undermine the policy behind according deference to administrative agencies. Agencies are entitled to deference because the agency has technical expertise in the area and the Legislature has

delegated authority to it over that subject matter. See Town of Killington v. Dep't of Taxes, 2003 VT 88, ¶ 5, 176 Vt. 70, 838 A.2d 91 (explaining that courts give deference to administrative agencies particularly when “a decision involves highly complicated valuation and equalization methodologies within the agency’s area of expertise”). Absent a clear indication otherwise—which is not present in the clean-water statutes or the VWQS—deference is due to ANR.

¶ 43. MWL also contends that ANR’s use of the 80%-of-available-habitat standard is arbitrary and capricious because it is based solely on one ANR employee’s “personal judgment” that it was a “reasonable number.” This misconstrues the evidence and the findings. The ANR representative testified that this methodology “has been recommended and published in the scientific literature in a number of locations.” He also stated that this figure had been identified in scientific literature “as the beginning of a stress level.” On cross-examination, he testified he “felt” 80% was a “reasonable number” and that this was based on his “personal judgment,” but he also emphasized that this threshold was based on “literature.” This evidence indicates that the policy was based on more than one employee’s personal feeling. In any event, the Environmental Division did not find that this policy was made ad hoc by one employee. Overall, ANR provided “a reasonable basis sufficient to satisfy review.” Plum Creek, 2016 VT 103, ¶ 32. ANR explained that if habitat less than 80% of the maximum habitat value observed is provided, species may experience various stressors. The Environmental Division essentially found that ANR’s definition was reasonable, noting it “might be reasonably representative of high quality habitat based on professional judgment.” This is exactly the type of professional judgment for which agencies are afforded deference. Given that ANR’s definition was reasonable, there was no basis to reject it for something else.

¶ 44. MWL also contends that VWQS § 3-01(C)(1)(c) does not allow the type of study ANR used because the regulation prefers “flow studies to be site-specific” and identifies Instream Flow Incremental Methodology, used by MWL, as an acceptable method. There is nothing about

this regulation that precludes ANR's use of the 80%-of-available habitat methodology. ANR relied on site-specific flow studies conducted by MWL's consulting firm, which was designed to determine the flows necessary to support aquatic habitat. Although ANR did not use one of the listed methods in the regulation, the list is not exclusive. Moreover, ANR explained why MWL's method was not appropriate in this case. MWL's flow analysis averaged all species and life stages, which did not adequately protect the most limiting species or life stages, and MWL included uncontrolled high flows in its model, which created unrealistic inflated available habitat.

¶ 45. Because ANR's methodology was reasonable and MWL has not demonstrated that ANR's approach was "standardless, unsupported by the evidence, or contrary to law," we conclude that ANR was entitled to deference. Plum Creek, 2016 VT 103, ¶ 35 (quotation omitted). Therefore, we strike the flow conditions that the Environmental Division imposed at the Morrisville and Green River facilities and remand for the court to reinstate the flow conditions that are consistent with the VWQS and ANR's definition of high-quality aquatic habitat.

V. Winter Drawdown

¶ 46. In its cross-appeal, MWL first argues that the Environmental Division erred in imposing a condition limiting the winter drawdown—the amount of water that can be removed from the reservoir—at Green River Reservoir to 1.5 feet.

¶ 47. The Environmental Division found the following related to the Green River facility. The facility is operated in a store-and-release mode. The dam maintains and uses water stored in the Green River Reservoir. The reservoir is approximately 653 acres and has an average depth of thirty-five feet and a normal maximum water elevation of 1220 feet. ANR imposed conditions on the facility's conservation flows, maximum generation flows, and maximum reservoir drawdown levels.

¶ 48. Conditions for the reservoir are designed to protect habitat for the existing fishery—from spawning fish, eggs, and fry—and to maintain the ecological integrity of the littoral zones

and their habitat value for fish populations. Littoral zones are the areas where light penetrates to the bottom; they serve a vital role in lake ecosystems because light produces plant growth and enables diverse species composition. Drawdowns cause dewatering of the littoral zones. In the winter, the drawdown can prevent the establishment of healthy near-shore communities which provide habitat for eating and reproduction for small organisms serving as food sources for larger fish and wildlife. Dewatering exposes aquatic plants to drying and freezing conditions and reduces abundance and richness of larger, longer-lived macroinvertebrates. The Green River Reservoir's natural fluctuation is 1.7 feet.

¶ 49. ANR imposed a maximum reservoir fluctuation of 0.25 feet from June 1 to December 15 and a 1.5-foot maximum winter drawdown from December 16 to March 31. ANR required the drawdown to be refilled by May 1. ANR's conditions were based on a littoral habitat assessment of the Green River Reservoir from 2014. The assessment sampled seventeen sites and compared the habitat to those of eight naturally occurring mesotrophic lakes, which have conditions similar to those in the Green River Reservoir. The assessment concluded that the reservoir's littoral zone had many areas that were highly suitable for aquatic macrophyte growth but lacked such growth. The reservoir had less aquatic plant cover and odonate exuviae (dragonfly skins) than the comparable sites and the assessment concluded that this was due to water-level fluctuation.

¶ 50. MWL proposed a six-foot drawdown. MWL hired consultants to conduct a study in 2017 to assess the appropriateness of a 1.5-foot limit for the winter drawdown. This study involved a qualitative review of the reservoir but no quantitative assessment and did not compare results from Green River Reservoir to that present in other similar waterbodies. No data was collected on macroinvertebrates.

¶ 51. The Environmental Division imposed ANR's 1.5-foot requirement. The court explained that MWL failed to demonstrate that its proposal would support high-quality aquatic

habitat within the reservoir. It further noted that MWL did not provide a persuasive justification for why ANR's 1.5-foot drawdown did not comply with the VWQS. The Environmental Division found that MWL's proposed six-foot winter drawdown would result in dewatering of approximately 80 acres of near-shore habitat at the reservoir whereas the 1.5-foot drawdown imposed by ANR would result in dewatering consistent with the limits of the reservoir's natural fluctuation. The Environmental Division further found MWL's observation study lacking in that it did not quantify plant presence, substrate composition, fish populations, macroinvertebrate richness, or other wildlife presence.

¶ 52. On appeal, MWL argues that ANR's winter drawdown of 1.5 feet was arbitrary and capricious because there was no evidence that the existing 10-foot drawdown causes undue adverse impacts. MWL further asserts that the study relied on by ANR was not reliable because it was designed for a different purpose and compared Green River Reservoir to naturally formed lakes.

¶ 53. As to ANR's methodology for measuring compliance with the VWQS, we defer to the agency's decision as explained above. Our review of the Environmental Division's factual determinations is deferential. The Environmental Division "determines the credibility of witnesses and weighs the persuasive effect of evidence, and we will not overturn its factual findings unless, taking them in the light most favorable to the prevailing party, they are clearly erroneous." In re Entergy Nuclear Vt. Yankee Discharge Permit 3-1199, 2009 VT 124, ¶ 15, 187 Vt. 142, 989 A.2d 563 (quotation omitted).

¶ 54. On appeal, MWL first contends that ANR's drawdown condition was in error because there was no evidence that the current drawdown causes adverse impacts. The evidence supports the Environmental Division's finding that the Green River Reservoir currently had significantly less aquatic plant growth and dragonfly skins than comparable waterbodies despite having highly suitable areas for aquatic growth. The court credited ANR's study on this point and was not persuaded by MWL's observation method. Further, the court credited ANR's

determination that these impacts were consistent with water-level fluctuations. Moreover, the Environmental Division found that MWL's proposed six-foot winter drawdown would result in dewatering of approximately 80 acres of near-shore habitat while the 1.5-foot drawdown imposed by ANR would result in dewatering consistent with the limits of the reservoir's natural fluctuation. These findings demonstrate that the current winter drawdown did not protect high-quality aquatic habitat.

¶ 55. MWL also argues that ANR's methodology was not rational because ANR compared the samples from Green River Reservoir to those from naturally occurring waterbodies. MWL asserts that a natural waterbody is not a valid reference condition under the VWQS. See VWQS 1-01(B)(39) (defining "Reference condition" as characteristics of water "minimally affected by human influences" and explaining that "reference condition establishes attainable chemical, physical, and biological conditions for specific water body types against which the condition of waters of similar water body type is evaluated"). Given that the VWQS do not differentiate between natural and human-created bodies of water, ANR's decision to compare the water quality in the reservoir to other waterbodies with similar characteristics was rational and within its discretion. See Plum Creek, 2016 VT 103, ¶ 28 (explaining that agency's decision on methodology is entitled to deference unless it is "wholly irrational and unreasonable in relation to its intended purpose" (quotation omitted)).

¶ 56. Finally, MWL contends that ANR's study is not entitled to deference because it was not designed with the purpose of assessing the effect of winter drawdowns. MWL has not demonstrated how the original purpose of the study compromised the quality of the evidence produced. The Environmental Division credited the reliability of ANR's data. It also accorded the data weight based on the scope and extent of the study. Because the methodology was reasonable and the findings were supported by the evidence, we affirm.

VI. Social and Economic Factors

¶ 57. MWL also appeals the Environmental Division’s order granting ANR partial summary judgment and concluding that social and economic considerations are not relevant to the water-quality certification and cannot be used to derogate conditions designed to achieve water-quality standards. MWL argued that ANR should consider a document entitled “Agency Procedure for Determining Acceptable Minimum Stream Flows,”¹² and 10 V.S.A. §§ 1421 and 1423(b)(3).¹³ The court denied MWL’s motion and granted ANR’s cross motion, concluding that ANR was not required to take the streamflow procedure into account in a § 401 certification because the procedure had not been formally adopted as a regulation and therefore was not a “requirement of state law.” 33 U.S.C. § 1341(d). Although it was a written ANR policy, it had not been formally adopted as a rule and therefore did not qualify as a law. See 3 V.S.A. § 801(9) (defining rule as agency statement “of general applicability that implements, interprets, or prescribes law or policy and that has been adopted in the manner provided by sections 836-844 of this title”). Moreover, the court concluded that neither state nor federal water-quality laws allowed consideration of economic or social factors. The court further concluded that 10 V.S.A. §§ 1421

¹² The document referred to is dated July 1993 and entitled “Agency Procedure for Determining Acceptable Minimum Stream Flows.” Agency of Natural Resources, Agency Procedure for Determining Acceptable Minimum Stream Flows (July 14, 1993), https://dec.vermont.gov/sites/dec/files/wsm/rivers/docs/rv_flowprocedure.pdf [<https://perma.cc/938M-6S92>]. The introduction states that the policy is adopted to protect and enhance the quality of water and that it is applicable to ANR issuance of water-quality certificates pursuant to § 401 of the CWA. The document was not adopted into the VWQS as part of an official rulemaking process. MWL cites language from the streamflow procedure as authorizing lower flows, if necessary, to support competing water uses and to allow consideration of social and economic factors in setting water-quality standards.

¹³ Section 1421 provides a general statement on the state’s policy regarding protection of navigable waters and shorelands. Section 1423 authorizes ANR to prepare a shoreland use plan and to consider “Areas in which the existing or potential economic value of public, recreational or similar uses exceeds the existing or potential economic value of any other use shall be classified primarily on the basis of the higher economic use value.” 10 V.S.A. § 1423(b)(3).

and 1423(b)(3) were not applicable in the state certification process because, unlike the VWQS, they are not referred to in federal law and are general policies rather than water-quality standards.

¶ 58. On appeal, MWL argues that the Environmental Division decision was in error. On appeal from a summary-judgment ruling, we review the issue “de novo.” In re Beliveau NOV, 2013 VT 41, ¶ 7, 194 Vt. 1, 72 A.3d 918. Summary judgment is appropriate if there is no material dispute of fact and the movant is entitled to judgment as a matter of law. V.R.C.P. 56(a); see V.R.E.C.P. 5(a)(2) (making civil rule applicable in environmental proceeding).

¶ 59. MWL asserts that states have the authority to impose conditions beyond those required by state water-quality standards because under the CWA, certification must comply with certain criteria and “any other appropriate requirement of State law.” 33 U.S.C. § 1341(d); see PUD No. 1, 511 U.S. at 712-13 (explaining that state’s authority to impose restrictions in § 401(d) certification is “not unbounded” but includes ensuring compliance with water-quality standards and declining to “speculate on what additional state laws, if any, might be incorporated”). MWL reasons that, pursuant to this provision, the state may consider social and economic factors. MWL urges that ANR apply its existing Streamflow Procedure and 10 V.S.A. §§ 1421 and 1423(b)(3) in setting the conditions for the certification. MWL asserts that if these other sources are considered, the conditions would have to reflect economic and social concerns—such as economic development or impact on flood control—which would make the conditions less stringent.

¶ 60. We need not define the extent to which ANR can consider other sources of law under the phrase “any other appropriate requirement of State law.” 33 U.S.C. § 1341(d). Assuming that the state can consider state laws other than the VWQS, this consideration could not result in derogating the conditions necessary to meet water-quality standards. See In re Entergy Nuclear Vt., 2009 VT 124, ¶ 46 (“Federal requirements for the content of state water quality standards represent a floor; state standards may, therefore, be stricter.” (citing 33 U.S.C. § 1370; 40 C.F.R. § 131.4(a))). Here, that is exactly what MWL seeks. MWL urges ANR to consider

other sources of law and policy to set conditions in derogation of those required to achieve the water-quality standards.

¶ 61. Moreover, to the extent 33 U.S.C. § 1341(d) provides ANR with authority to impose additional conditions based on other sources of state law, this is an authorization, not a requirement. See PUD No. 1, 511 U.S. 712-13 (explaining that there may be additional state laws that could be considered included in statutory phrase). ANR was not obligated to consider those other sources, especially to undermine conditions imposed to protect or enhance water quality. Therefore, we agree with the Environmental Division that ANR was not required to consider social and economic factors—derived from the state Streamflow Procedure and 10 V.S.A. §§ 1421 and 1423(b)(3)—in setting the water-quality conditions in the permit.

^VII. Timed Releases

¶ 62. The final issue on appeal is whether the Environmental Division erred in adding a condition to the permit requiring three scheduled releases per year from the Green River Reservoir to accommodate whitewater boating. We conclude that the Environmental Division did not err in imposing this condition.

¶ 63. The Environmental Division found the following facts related to whitewater boating on the Green River. The Green River includes bedrock gorges, confined riffle pools, confined step-pools, unconfined riffle pools, and wetland channels. Whitewater boating on scheduled releases is an existing use of the Green River. Whitewater boating occurs year-round on both naturally occurring high-flow events and scheduled releases. MWL has provided two or three scheduled releases annually to support whitewater boating on the Green River. The releases last at least five hours. An MWL study concluded that the minimum flow required to safely support whitewater boating is between 128 cfs and 140 cfs. Natural flows of 128 cfs or above have historically occurred within the Green River. Time shifting allows naturally occurring high

flows to be stored and released at a time when whitewater boating is more likely to occur, such as daylight hours on the weekend.

¶ 64. The Environmental Division concluded that whitewater boating was an “existing use” under the regulations. It found that the Paddlers “provided credible evidence that the conditions imposed in the 2016 water quality certification would likely provide no actual whitewater boating opportunities.” It also found that, by time shifting the release of high flows, the Paddlers could continue the existing use of whitewater boating without significantly disrupting the natural flow regime. Consequently, the Environmental Division mandated three scheduled releases per year for whitewater boating.

¶ 65. On appeal, ANR does not dispute that whitewater boating is an existing use on the Green River. It contends, however, that the use is entitled to protection only to the extent it requires higher water-quality standards than the designated use of aquatic biota, wildlife, and aquatic habitat. ANR contends that the CWA does not require states to provide manufactured recreational opportunities. ANR concedes that it might be permissible to impose conditions related to existing uses if the condition did not degrade aquatic biota, wildlife, and aquatic habitat.

¶ 66. The Environmental Division credited the Paddler’s evidence that the conditions imposed by ANR would likely provide no actual whitewater boating opportunities. The court found that merely passing naturally occurring high flow was not enough to support whitewater use and that only scheduled releases would sufficiently support this existing use. These findings are supported by the evidence and therefore we do not disturb them on appeal.

¶ 67. We conclude that the condition was appropriate here because it was aimed at a use that qualified as both an existing and designated use and there was no evidence to demonstrate that accommodating this use would degrade the water quality necessary for maintaining high-quality aquatic habitat. The parties agree that whitewater boating is an existing use. In addition to qualifying as an existing use, whitewater boating also fits into the definition of a designated use

because the VWQS include “Boating, fishing and other recreational uses” as designated uses. VWQS § 3-04(A)(6).

¶ 68. Under the VWQS, waters must be managed to achieve the level of water quality necessary to support designated uses. VWQS § 3-04(A). Under the CWA, water-quality criteria must protect designated uses and when waters have more than one use designation, “the criteria shall support the most sensitive use.” 40 C.F.R. § 131.11(a)(1). In the absence of a conflict between the uses, water quality for each designated use should be maintained.

¶ 69. The Paddlers contend that the existing use of whitewater boating can be protected without lowering water-quality standards imposed to protect the designated use of aquatic biota, wildlife, and aquatic habitat. ANR counters that there is no showing here that the timed releases will not degrade aquatic biota, wildlife, and aquatic habitat.

¶ 70. This issue is largely controlled by which side bears the burden of proof. The burden of establishing the invalidity of an agency action is on the party asserting the invalidity. See Plum Creek, 2016 VT 103, ¶ 28. Here, ANR initially concluded that whitewater boating was not an existing use and therefore did not include any conditions related to the use. The Paddlers have met their burden of establishing that ANR’s decision that whitewater boating was not an existing use was not reasonable and not entitled to deference. In fact, on appeal, ANR concedes that whitewater boating is an existing use.

¶ 71. Because ANR did not identify whitewater boating as an existing use, it did not consider the impact of accommodating whitewater boating in its studies or evaluate whether timed releases would impact water-quality standards, leaving a vacuum in the evidence. ANR asserts that the lack of evidence operates against the Paddlers and it is the Paddler’s burden to show that accommodating its use will not degrade aquatic biota, wildlife, and aquatic habitat. On the other hand, the Paddlers assert that ANR had the burden of producing evidence to show that timed releases of water would have a detrimental impact. We conclude that the lack of evidence on this

issue operates against ANR. To the extent ANR determined that timed releases would deteriorate water quality, it was up to ANR to create a record to support that. Given the record before it, the Environmental Division did not err in adding a condition providing for scheduled releases to support whitewater boating. Therefore, we affirm.

The Environmental Division's summary judgment decision to exclude social and economic factors is affirmed. The conditions related to the winter drawdown and timed releases for the Green River facility are affirmed. The flow-rate conditions for the Cadys Falls facility are reversed and ANR's conditions are reinstated. The flow-rate conditions for Morrisville and Green River facilities are reversed and the matter is remanded to the Environmental Division.

FOR THE COURT:

Associate Justice