

## Vermont Department of Environmental Conservation Response to Comments on Petitions to Reclassify Alder Brook, Blue Bank Brook, and Goshen Brook

March 22, 2022

The Vermont Department of Environmental Conservation (DEC) received comments in response to the stream reclassification petitions submitted by the Ripton Conservation Commission. These are [posted online](#) in their original form. Below are excerpts from comments received, organized under summary statements. In some cases, a single response addresses similar comments that are grouped together. These responses address comments and questions about the reclassification process and its implications received during the spring and fall public comment periods.

### Several comments expressed concern about DEC's imperative to reclassify streams.

1. **Comment:** When we were first presented with the petition materials, it was our assumption that the petitioners and DEC were proposing reclassification of the Goshen Brook because there was some perceived existential threat to the water quality of the stream that required greater restrictions be placed on the surrounding land to protect the aqua biota and habitats. To this end, we were willing to be supportive in principle. What we discovered instead at the public meeting was that DEC and the petitioners assert that the reason to reclassify these streams in Ripton was “because they can”; that the streams already meet the metrics of “1A”, therefore “it is easy to reclassify them”. The fact that the surrounding landowners have preserved the streams in “excellent” condition is NO reason to add restrictions and expense to their future use of the land, which is, in fact, the ONLY net effect of the proposed reclassification. This is a punitive action placed on these historically good stewards of the land, with no improvement to the health of the waterways, and no public benefit arising from the actions. It is an egregious example of regulatory overreach. [Brooks Family, landowners]

**Comment:** Reclassification of a stream is an unprecedented request made to DEC, which reinforces that reclassifying these watersheds and potentially harming the landowners is truly a whimsical regulatory action, unnecessary with regards to stream water quality and public benefit, and now, apparently, outside the bounds of regulatory precedent. Yet one more reason to deny this petition. [Toby Brooks, landowner]

**Response:** The Agency's authority to reclassify waters as A(1) derives from 10 V.S.A. § 1253, which states: “on its own motion, or on receipt of a written request that the Secretary adopt, amend, or repeal a reclassification rule, the Secretary shall comply with 3 V.S.A. § 806 and may initiate a rulemaking proceeding to reclassify one or more uses of all or any portion of the affected waters in the public interest. In the course of this proceeding, the Secretary shall comply with the provisions of 3 V.S.A. chapter 25, and may hold a public hearing convenient to the waters in question.” Pursuant to 3 V.S.A. § 806, the Agency must respond to a petition filed and initiate rulemaking for reclassification if it's determined that that the reclassification is in the public interest (10 V.S.A. § 1253(f)). Class A(1) waters are those waters in a natural condition that have significant ecological value (10 V.S.A. § 1252(a)). Numerous waters in the state have

been classified as A(1) (See Vermont Water Quality Standards Appendix F). The purpose of reclassification is to provide regulatory assurance that waters meeting A(1) criteria will be managed to protect their ecological value and biological integrity. This action is consistent with federal regulations requiring the Agency to maintain existing instream water uses and the level of water quality necessary to protect those existing uses (40 C.F.R. § 131.12(a)(1)).

2. **Comment:** The fact that the land is in the Use Value Program is not a reason to reclassify the stream to a higher classification. Quite the contrary. It is a reason to keep the existing stream classification because land will be used. It will not remain as wilderness. [Ellen Forshaw, landowner]

**Response:** Whether the land is enrolled in the Use Value Appraisal (UVA) Program has no bearing on reclassification. The decision to reclassify a stream is based on an analysis of the biological, chemical, and physical information available for stream, the overall land use in the watershed, and public comments received. If a watershed is reclassified, the land can continue to be enrolled in the UVA Program. Maintenance of the biological integrity of Class A(1) streams does not require a wilderness setting. Instead, A(1) streams are to be "managed to achieve and maintain excellent biological integrity and aquatic biota and wildlife in their natural condition." (Vermont Water Quality Standards, § 29A-306). Streams in A(1) condition occur throughout the state, and logging, housing development, and agriculture can occur in their watersheds as long as potential pollution sources are addressed through the use of best management practices, such as the Accepted Management Practices for Maintaining Water Quality on Logging Jobs (AMPs).

3. **Comment:** Since the proposed reclassification of Blue Bank Brook affects our land very directly and the DEC's own testing shows that my family has been good stewards, I don't see any reason why the reclassification needs to be done. [Karen Jeffers, landowner]

**Response:** DEC agrees that the historic land management in the watershed has supported excellent stream conditions, as evidenced by biomonitoring results.

4. **Comment:** Given the water quality of the Goshen Brook and the completely undeveloped surrounding land, why is it necessary to reclass the watershed? What is the source of potential pollution/run-off from the land-owners in the reclassification area that the petitioners and DEC are concerned about? [Brooks Family, landowners]

**Response:** The decision to reclassify is based upon the existing condition of the stream, not potential threats to that condition. The current condition of the stream reflects historic and current land management practices within the watershed. DEC is not aware of any imminent threats to the stream's condition. DEC is obligated under 10 V.S.A. § 1253 to consider and initiate rulemaking for the reclassification of any surface water for specific designated uses that meet a higher classification when it is in the public interest.

**Several comments focused on land use implications of reclassification.**

5. **Comment:** The proposed reclassification may affect both access and use of private land. [John Barrows, landowner]

**Response:** Reclassification of a stream to A(1) does not affect access to or use of private land with the exception of the current Class A prohibitions:

- A direct discharge of any wastes that, prior to treatment, contained organisms pathogenic to human beings. (10 V.S.A. § 1259)
  - New indirect discharge systems (e.g., in-ground septic system) with a design flow greater than 1,000 gallons per day. The design flow of an existing soil-based system that discharges to Class A waters may not be increased if the total design flow will exceed 1,000 gallons per day. In addition, for a permit to be issued, there must be no more than one soil-based disposal system per lot and no more than one lot per application. (10 V.S.A. § 1259)
  - The Solid Waste Management Rules prohibit siting solid waste management facilities (§ 6-702) and application of biosolids or septage (§ 6-1306) in Class A watersheds.
6. **Comment:** If the stream is reclassified, I understand that the buffer zone from the brook will be extended from the current 50 feet to 200 feet...it is not clear if the buffer zone applies just to Blue Bank Brook or also to tributaries. [Ellen Forshaw, landowner]

**Response:** DEC does not require a minimum setback for any stream, including those classified as A(1). However, Act 250 Buffer Guidance suggests a 50-100-foot buffer along any stream for activities that fall under Act 250 jurisdiction, with a recommendation for site-specific consultation with Agency of Natural Resources staff as part of the process to establish recommended buffer widths for Class A(1) streams. Logging above 2,500 feet requires an Act 250 permit and all surface waters above 2,500 feet are classified as A(1), unless specifically designated Class A(2) for use as a public water source.

**Commenters expressed concerns about potential impacts of logging operations and other forest management activities on water quality.**

7. **Comment:** We can comply with all AMPs and still be found to be in violation of the nonpoint source discharge regulations. That determination can be made by whatever methodology, scientific or not, that the Secretary of DEC finds appropriate. [Ellen Forshaw, landowner]

**Response:** The purpose of the acceptable management practices is to provide measures for loggers, foresters, and landowners to utilize, before, during, and after logging operations to comply with the Vermont Water Quality Standards and minimize the potential for a discharge from logging operations in Vermont in accordance with 10 V.S.A. §1259. Pursuant to § 29A-203(b)(1) of the Vermont Water Quality Standards,

there is a presumption that logging operations that are in compliance with the AMPs are also in compliance with the Vermont Water Quality Standards. However, any presumption provided by the Vermont Water Quality Standards shall be negated when a water quality analysis conducted according to § 29A-201(g) of the Vermont Water Quality Standards demonstrates that there is a violation of the Vermont Water Quality Standards.

8. **Comment:** We do not contend that streams are permanently damaged by logging operations...Our contention is that logging may temporarily affect streams as recognized in Vermont's Acceptable Management Practices for logging: "Usually, it is impossible to avoid disturbing some soil or concentrating some flowing water during a harvest."<sup>1</sup> This is especially relevant to us because the DEC is currently sampling Blue Bank Brook in two locations. One is immediately downstream of our property, the other is on our property. DEC's Logging/Stream Study does not at all alleviate this concern. The studied logging projects were considerably smaller than ours would be. None straddled the subject brook as ours will. Most occurred a considerable distance from the sampling point. If the Blue Bank Brook were to be reclassified, our logging operations would be held to a higher standard than other logging operations in the state, thus increasing our costs and potentially making logging uneconomical. While some people might think that underhandedly preventing logging would be a laudable goal of the stream reclassification, we believe that this would be an unlawful taking of our property. [E. Forshaw and Karen Jeffers, landowners]

**Response:** If land is enrolled in Use Value Appraisal Program (also known as Current Use), all logging operations, regardless of a stream's classification, must follow the Acceptable Management Practices for Maintaining Water Quality on Logging Jobs. The acceptable management practices for a logging operation won't change upon reclassification. Biological monitoring integrates stressors over time, so small temporary disturbances are typically unnoticeable in the community and its assessment. However, long-term chronic or significant acute impacts can alter the biological condition and result in an impairment.

9. **Comment:** ...modern sugaring is not without impact on the land. Sugaring involves construction of access roads. It involves installing many miles of sap lines, some above ground and some below ground. It can involve drastic trimming of trees, so much so that a sugared area can resemble a significantly logged area. If Blue Bank Brook were reclassified, buffer zones and stream quality regulations could make sugaring economically unfeasible. [Ellen Forshaw, landowner]

**Response:** Reclassifying a stream to A(1) does not mandate protection of its buffer. Pursuant to 10 V.S.A. §1259, unpermitted discharges to the stream are prohibited, regardless of a stream's classification. Implementing the AMPs when logging, regardless of the purpose of the tree-clearing, will minimize the potential for a discharge from

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<sup>1</sup> [https://fpr.vermont.gov/sites/fpr/files/Forest\\_and\\_Forestry/Forest\\_Management/Library/FullDocument-7.29.pdf](https://fpr.vermont.gov/sites/fpr/files/Forest_and_Forestry/Forest_Management/Library/FullDocument-7.29.pdf), page 17

logging operations.

10. **Comment:** In proposing the stream reclassification, neither Ripton nor the State of Vermont are considering the historical use and state approved future use of the land. [Ellen Forshaw, landowner]

**Response:** DEC agrees that the current condition of the stream reflects historic and current land management practices within the watershed, and that responsible forest management can benefit water quality. DEC is not aware of any imminent threats to the stream's condition, nor would reclassification change allowable land uses within the watershed except for the prohibitions from the Wastewater and Potable Water Supply Rules<sup>2</sup> and the Solid Waste Management Rules<sup>3</sup>. DEC is obligated under 10 V.S.A. § 1253 to consider and initiate rulemaking for the reclassification of any surface water for specific designated uses that meet a higher classification when it is in the public interest.

11. **Comment:** Vermont's wetland regulations mention beaver problems vis a vis silviculture and address these problems at least somewhat, but the A(1) regulations do not. The requirements for A(1) streams mention "natural conditions" several times. What are "natural conditions?" Are they before or after beavers? Are they before or after the forest service road changed the brook? How will the "natural conditions" regulation affect our lumber harvesting? On both parcels, we have to cross Blue Bank Brook to reach sections of our land. Will we be required in limit timber harvesting near the brook? If the "natural conditions" apply to the tributaries, most of our land is affected. [Karen Jeffers, landowner]

**Response:** The aquatic biota and aquatic habitat of reference streams in forested watersheds where little land management is occurring is the basis for application of the term 'natural condition' in the context of A(1) narrative and numeric criteria. Natural condition can be maintained in a stream even with active land management, e.g., logging, when best management practices, such as the AMPs, are utilized.

12. **Comment:** The DEC maintains that logging operations have been undertaken elsewhere near streams classified A(1). However, the DEC does not address where and when this occurred, nor whether the cost of logging was affected. [Ellen Forshaw, landowner]

**Response:** DEC has monitored streams to assess logging impacts to water quality on public and private land. Within the Green Mountain National Forest, Smith brook (monitored from 1997-2020), Bingo brook (monitored from 2003-2020), and Chittenden brook (monitored from 2003-2005) in Rochester all had biological assessment ratings of *Very Good* or higher before and after logging operations.

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<sup>2</sup> <https://dec.vermont.gov/sites/dec/files/dwgwp/rorules/pdf/Wastewater-System-and-Potable-Water-Supply-Rules-April-12-2019.pdf>

<sup>3</sup> [https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/SWRule.final\\_.pdf](https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/SWRule.final_.pdf)

On private land, Kidder brook in Stratton (2008-2018), Bartlett brook in Stockbridge (2006-2016), Fargo brook in Huntington (2015), Holland Pond Trib 3 in Holland (2009), Madison Brook in Ferdinand (2000-2013), and Alder Brook in Ripton (2016-2019) all maintained their biological assessment scores of *Excellent* or *Very Good* after logging occurred. Kidder brook in Stratton is classified as an Class A(1) stream, although the biological assessments of all the streams listed above indicate they meet Class A(1), *Excellent*, or B(1), *Very Good*, criteria for aquatic biota and wildlife.

**Several comments focused on information received in response to a commenter's request for records pertaining to streams that maintained their biological assessment scores of *Very Good* or *Excellent* after logging operations in their watersheds (see response to comment #12). Those comments specific to streams in the petitions – Alder Brook and Blue Bank Brook – are included below. These comments fall outside the scope of the petition for reclassification under review, but for informational purposes, DEC provides the following responses:**

13. **Comment:** The Logging/Stream Study states that streams were selected for their study specifically because they were in excellent or very good condition after logging operations. Such a restricted selection is not scientifically valid.

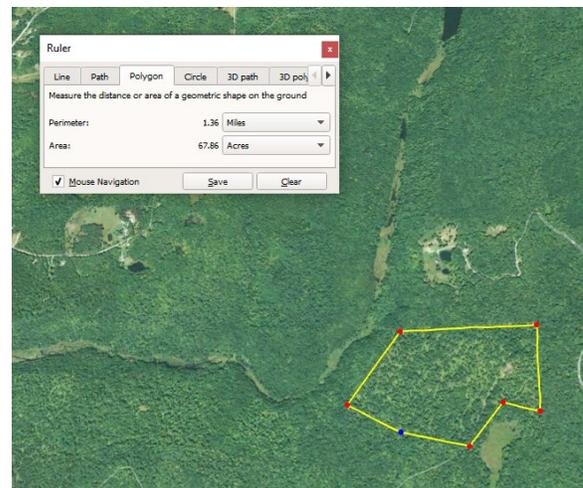
**Response:** DEC did not design and conduct a research study specifically looking at the impact of logging jobs. The document, *2020 Timber Management – Adjacent Streams Meeting A1 criteria.doc*, provided in response to the records request was an internal review of stream sites with macroinvertebrate assessments of *Excellent* or *Very Good* before logging operations occurred. The review was conducted to determine if they maintained that assessment after the logging. To determine if logging impacted a stream's biological condition, DEC concurs with the commenters that it would be inappropriate to select a site because it had *Excellent* or *Very Good* biological condition *after* logging occurred.

14. **Comment:** The imagery provided us by the DEC and used for the Logging/Stream Study was obtained from Google Maps. Some Google Maps imagery is clear; some is not. On a few of images, DEC had drawn areas they apparently believed to have been logged. The DEC did not attempt to quantify the extent of the logging, either in the acres logged or the type of logging done (clear cut, shelterwood, patch cutting, etc.). The extent of logging might well have different impacts to streams. Because of long intervals between the map dates, the DEC was unable to pinpoint years when logging was done.

**Response:** In 2017 when the document referenced above was compiled, Google Earth was used instead of the United States Department of Agriculture's National Agricultural Imagery Program (USDA NAIP) imagery available to DEC. At that time, Google Earth provided imagery at more regular intervals than the NAIP, which allowed DEC to narrow down the timeframe when logging occurred in relationship to the stream sampling. Polygons were rough estimations to draw the eye to the logging sites.

15. **Comment:** DEC’s Logging/Stream Study states that 67 acres of timbering had occurred within the Alder Brook watershed from 2005 to 2009. Their imagery did not designate any timbered areas. We were unable to find any significantly lumbered areas within the Alder Brook watershed. We would like the DEC to clarify where they think this occurred, how much logging occurred, and how far distant such logging may be from their sampling point. Sampling on Alder Brook began in 2016 and has been done annually in each subsequent year. The 2016, 2017, 2018, and one 2019 assessments deemed the brook quality as excellent. A second sampling in 2009 was reported as “unable to assess,” although no explanation was given for this anomaly. The 2020 sampling downgraded the stream to between excellent and very good. No explanation was given as to why this might have occurred. As is true of most of the streams above, the initial Alder Book sampling took place substantially after the logging had been completed, so did not measure any short term effects of logging on stream quality.

**Response:** Imagery of the logged area from 2008 is provided at right. The distance from the logged area to the stream is approximately 0.1 miles. The distance from the lowest logging point to the sampling station is 0.6 miles. The sample dated 05/07/2019 was collected outside of the fall index period needed to determine an assessment, therefore it is reported as “unable to assess.” The Index of Biotic Integrity (IBI) score dropped slightly in 2020, after several consecutive years of near perfect 48-49 scores, likely because of drought conditions, as evidenced in the IBI metrics.



16. **Comment:** We were astounded that DEC’s Logging/Stream Study did not include a very relevant instance of extensive logging close to Blue Bank Brook. One of our previous concerns was that the DEC had not sampled macroinvertebrates or fish near the confluence of Blue Bank Brook and the New Haven River, although chemical analysis had been done there in 2009. (The chemical analysis did not meet standards for A(1) streams.) The DEC responded that the sampling locations on Blue Bank brook and its tributary were selected in 2009 to monitor upstream logging activities by the U.S. Forest Service. Between 2014 and 2015, the U.S. Forest Service clear cut approximately 56 acres within 0.06 miles of Blue Bank Brook and about 0.25 miles upstream of the junction of Blue Bank Brook and the New Haven River. However, the DEC chose to establish two macroinvertebrate/fish sampling locations upstream of the logging area, rather than sampling downstream at the confluence of the brook and the river, a much more relevant sampling location given their stated reason for initiating sampling.

**Response:** As reported in the 2009, 2010 and 2011 Green Mountain National Forest Stream Biomonitoring Reports, Blue Bank Brook RM 1.7 and Blue Bank Brook

Tributary #6 RM 0.2 were selected by the USFS and DEC in order to establish a baseline prior to a planned silvicultural activity in the watershed located above the reach. The planned logging was delayed and has not yet been conducted as of Fall 2021.

**Commenters raised questions and concerns about the petition process, including the initiation of petition development, communication regarding the petitions, and the challenges caused by travel restrictions during the coronavirus pandemic.**

17. **Comment:** We are further disheartened to learn of the allegation that the prime mover behind the reclassification is not the petitioner, but rather DEC itself. At the public meeting, the comment was made that DEC approached the Ripton Conservation Commission and requested that they raise a petition for reclassifying the stream. If this is the case, we are extremely disappointed to learn that this public agency is working against the interests of private landowners for no purpose other than DEC's own agenda. Furthermore, as absentee landowners, our options to resort to elected representatives to support our interests are significantly curtailed. [Brooks Family, landowners; Rosalind and Robert Stowe, landowners]

**Comment:** An email dated March 2, 2021 sent to me by Mr. Nelson stated that the DEC and the Addison County River Watch asked the Ripton Conservation Committee to petition the DEC for the reclassification. I question the fairness of the agency, which is tasked with deciding on the proposed reclassification, also having being the instigator for the petition. I am puzzled as to why the DEC did not involve us, the people most affected, in discussions. [Ellen Forshaw, landowner]

**Comment:** The VT DEC did not request that we submit these petitions. I went back and looked at my presentation for the Public Meeting and it states that VT DEC and Addison County River Watch Collaborative discussed the opportunity to submit the petitions. There was no directive or pressure to submit the petitions. The meeting was to bring the water quality information to our attention and explain the reclassification process to us. [Mark Nelson, Ripton Conservation Commission]

**Response:** Pursuant to 10 V.S.A. § 1253, on its own motion or upon receipt of written request, DEC shall consider and initiate rulemaking for the reclassification of any surface water for specific designated uses that meet a higher classification when it is in the public interest. Through the basin planning process, DEC regularly communicates to the public about the water quality condition of surface waters and opportunities for communities to protect and restore their local water resources.

18. **Comment:** Finally, we are disappointed by the insufficiency of communication with the landowners in developing this petition. It was stated that this petition has been in the works for several years, but our family has barely been contacted regarding the development of the petition and our interests or concerns were never considered. Yet we are the ones immediately effected. Our formal involvement began less than 30 days ago and we have been given little opportunity to present a coherent response, let alone understand comprehensively what the extent of the regulatory requirements of this change are for us as landowners. This is not indicative of an interest in creating a

collaborative relationship with the landowners on the part of the petitioners, nor DEC. [Brooks Family, landowners; Rosalind and Robert Stowe, landowners]

**Comment:** We knew nothing about the proposed stream reclassification until just a month ago, despite being the largest private property owners of land in the Blue Bank Brook basin, by far. [Ellen Forshaw, landowner]

**Comment:** Several of affected properties are owned by persons who were not consulted at all before the petition was submitted. A few would find this petition a complete surprise even now, because they were not included in the DEC notifications about the public hearing and comment period. [Ellen Forshaw, landowner]

**Response:** DEC agrees that communication with landowners and the public is critical in the overall reclassification process. DEC, per its petition evaluation procedure<sup>4</sup>, notified stakeholders, including landowners in the affected watersheds, at least 30 days in advance of the meeting to receive public comment on the petitions.

19. **Comment:** I think it is unfair of Vermont's Department of Environmental Conservation to have comment period during a time period when we cannot access documents or information because of quarantine regulations imposed by the State. I request that the comment period be extended to a reasonable time after the quarantine is lifted so that we may gather additional information. [Ellen Forshaw, landowner]

**Comment:** The process might be paused until it is certain that all interested parties were, in fact, notified and provided full opportunity to comment and present evidence vis-à-vis the reclassification petition, particularly taking into consideration impediments that COVID restrictions may have imposed. [Lincoln Selectboard]

**Comment:** Neither of us knew anything about this before late February of 2021. Unfortunately, due to travel restrictions imposed by Vermont because of COVID, we could not access the information we have at the farm, nor could we research on-site. [Karen Jeffers, landowner]

**Response:** DEC considers all public comments relevant to the stream reclassification petitions in its formulation of a final determination. Because of the travel restrictions and quarantine requirements of the COVID-19 pandemic during winter and spring 2021, DEC postponed action on the petitions until October 2021, at which time a second public comment period and public meeting was held. This will allow out-of-state landowners to travel back to Vermont to gather additional information.

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<sup>4</sup> <https://dec.vermont.gov/sites/dec/files/documents/wsmd-pet-surfacewatersprocedure.pdf>

**Commenters had several questions and concerns about the petition content.**

20. **Comment:** Ripton Conservation Commission Chair is the only signed petitioner. The petition references the “Ripton Conservation Commission” as a co-petitioner but does not list any individuals. This seems like a deficiency in creating a valid petition to me. Without the additional signatories, these “petitions” amount to no more than a request from a single individual to the DEC to reclassify these waterways, with no evidence of public support. [Toby Brooks, landowner]

**Response:** As the Conservation Commission Chair, Mark Nelson is acting as the duly authorized representative of the Ripton Conservation Commission in submitting the petition on behalf of the Ripton Conservation Commission.

21. **Comment:** The petition itself fails to include any data about the current water quality. [Ellen Forshaw, landowner]

**Comment:** The petition is sloppily written. Attachment 3 says there are five Use Value Appraisal parcels within the watershed and refers to attached map 20. Map 20 shows only four parcels in Use Value. One of those four parcels is actually Forest Service land. Several affected property owners in Lincoln were not listed on the petition and presumably were not notified of this meeting. In one place the petition refers to the Blue Bank Brook as Goshen Brook. The petition indicates that numeric water quality criteria were appended. We could not find them. At one point, the petition refers to an existing A(1) watershed in the southeast portion of the Blue Bank Brook watershed. It is actually in the southwest. [Ellen Forshaw, landowner]

**Response:** In evaluating a petition, DEC considers pertinent information, such as state water quality data as well as any relevant data and information submitted during the public comment period. Any extraneous information included in the petition, such as UVA parcels, is not considered in the technical review, therefore its accuracy does not impact DEC’s evaluation.

**Several comments focused on water quality and biomonitoring assessment results for Blue Bank brook relative to numeric criteria in the Vermont Water Quality Standards, as well as access to the biomonitoring sites.**

22. **Comment:** The first sampling, done on October 7, 2009 showed an iron content of 3,260 ug/l (ppb), which is over triple the state’s chronic standard of 1,000 ug/l. That sampling was just upstream of the confluence of Blue Bank Brook with the New Haven River. Curiously, the DEC never sampled the water at that location again, despite the fact that it seems to me that it is the most relevant sampling point. Since then, two points have been sampled. One is in the brook itself, roughly 2/3 of the way from the source to the junction with the New Haven River. The other sampling point is in a tributary to the brook. Vermont’s standard for total phosphorus in small high gradient streams for management of aquatic biota and wildlife, one of the standards proposed for this reclassification, is 10 ppb. (§29A-306.) Various samplings in Blue Bank brook are as follows:

Date	Location	Total phosphorus (ug/l)
10/7/2009	Junction with New Haven River	136
10/14/2009	River mile 1.7	10.1
10/14/2009	Tributary	15.9
10/11/2010	River mile 1.7	9.54
10/11/2010	Tributary	13.9
10/4/2011	River mile 1.7	9.76
10/4/2011	Tributary	17
8/22/2017	River mile 1.7	16.3
8/22/2017	Tributary	16.1
10/2/2019	River mile 1.7	23

As can be seen, of the ten samplings taken of the brook, only two met the total phosphorus standard. [Ellen Forshaw, landowner]

**Response:** Surface waters in their natural condition can contain variable amounts of iron, as iron is normally present in groundwater and easily oxidized when exposed to air. Groundwater entering streams can cause this iron to precipitate out, and cause iron bacteria growth, leading to an orange coloration and precipitate. These sections of stream are generally very localized and of short duration. In this example, water chemistry indicates a high iron concentration but does not pose a significant risk to aquatic biota or human health. Iron, aluminum, and total color (a proxy for dissolved organic carbon) were all elevated at this site and tend to naturally occur at higher concentrations together. Dissolved organic carbon binds with aluminum and iron, which mitigates the potentially toxic impacts of these metals to aquatic biota.

Compliance with nutrient criteria can be achieved either by compliance with the nutrient concentration values (e.g., 10 µg/L of total phosphorus) specified in Table 2 of the Vermont Water Quality Standards or by compliance with all nutrient response conditions (see footnote 1 of Table 2)<sup>5</sup>. As shown in Table 2, the nutrient response conditions are pH, turbidity, dissolved oxygen, and aquatic biota. While individual phosphorus concentrations are above the A(1) nutrient concentrations, Blue Bank brook meets the nutrient response conditions for all parameters and therefore meets the A(1) nutrient criteria. The nutrient criteria are to be applied at low median flow during June through October, and the October 7, 2009 sample was collected under high flow conditions during a freshet event.

23. **Comment:** For some criteria on every sampling, the sensitivity of the sampling was not sufficient to determine whether or not water quality standards were met. For instance, the state's standard for cadmium is a maximum of 0.94 ug/l and an average of 0.43 ug/l. However, the tests run at the Blue Bank Brook sampling sites recorded merely that the result was less than 1 ug/l. Thus, the tests were not sufficiently sensitive to determine whether or not the standard was met. [Ellen Forshaw, landowner]

<sup>5</sup> Vermont Water Quality Standards (2017), p. 27 - [https://dec.vermont.gov/sites/dec/files/documents/wsmnd\\_water\\_quality\\_standards\\_2016.pdf](https://dec.vermont.gov/sites/dec/files/documents/wsmnd_water_quality_standards_2016.pdf)

**Response:** We are aware that detection limit for some parameters, such as cadmium, are above their numeric criteria, and are working with laboratories to achieve the lowest detection limits possible. In the case of cadmium, there is little risk to these waters based on extensive sampling and knowledge of the pollutant and sources statewide, which includes surface water monitoring in urban areas below industrial and municipal discharges.

24. **Comment:** The state has sampled the brook at river mile 1.7 and a tributary of the brook for macroinvertebrates and for fish. However, the brook has never been sampled near the junction of the New Haven river for either criteria. The fish sampling of the tributary contained insufficient numbers of fish to assess the quality of the tributary. (I know the tributary. I've never seen a fish in it.) Of the two fish samplings of the brook at river mile 1.7, one deemed the brook "good" and one "excellent." These samplings are insufficient to reclassify the brook. [Ellen Forshaw, landowner]

**Response:** The sampling locations on Blue Bank brook mainstem and Blue Bank Tributary 6 were selected in 2009 to evaluate the impact from upstream silvicultural activities in partnership with the U.S. Forest Service. Sampling was located below the planned silvicultural activities but above other potential stressors to bracket potential impacts. Initial assessments indicated *Excellent* biological communities in Blue Bank in 2009 and the 2017-2020 assessment confirm those conditions. Numerous stream sites throughout Vermont have been monitored for the impacts of logging and the majority, which scored *Excellent* or *Very Good* prior to logging, maintained this condition during and after silvicultural activities ended.

In 2017, in Blue Bank Tributary 6 over a 76-meter reach, 21 brook trout were collected across multiple age classes. Fish assessments require two species to calculate an Index of Biotic Integrity (IBI) assessment score, so this reach was "*unable to assess*" due to lack of diversity, not insufficient numbers of fish. This density of brook trout is considered robust.

Biological communities integrate the effects of multiple stressors over space and time and are standard indicators of overall stream health. While macroinvertebrate and fish community data are not available between Blue Bank 1.7 and the confluence of the New Haven River, 95.6 % natural land cover supports the maintenance of excellent biological integrity downstream of 1.7.

25. **Comment:** Unless there is a demonstration that the entire brook consistently meets the Class A(1) quality standards during a variety of seasons and over time, it is unreasonable to change the classification. [Ellen Forshaw, landowner]

**Response:** Aquatic biota integrate stream conditions over space and time and as such are the standard method for determining overall aquatic conditions. The Vermont Water Quality Standards specify that nutrient and toxic criteria be applied at critical flow conditions from June through October. Bioassessments occur from late summer to early

fall, typically September to mid-October. As such, sampling is designed to target these flow conditions and this sampling period.

26. **Comment:** When the beavers leave one of their impoundments, either on their own or by human intervention, the dams eventually fail, sometimes slowly and sometimes catastrophically. Catastrophic failure would cause an immediate and significant change to the brook's bed. However, even if the failure is not catastrophic, the ponds will no longer collect silt. Some of that silt, which has been collecting for over ten years, will be washed down the brook. The flow in the brook will be swifter, because it will not be slowed by the ponds. Swifter flow will cause more erosion. Phosphates and nitrates in the brook will rise. The pretty little brook will be changed and the drained ponds will be eyesores. Eventually, the brook will recover. However, it is not realistic to think the brook will remain as it is now. Nor is it reasonable for the DEC to reclassify the brook thinking that it will remain as it is now. [Ellen Forshaw, landowner]

**Comment:** One of our significant concerns continues to be that natural deterioration/destruction of beaver dams can affect the brook quality. Very pertinent to this concern is that an onsite visual inspection in October, 2021, of one of the ponds on our property indicated the beavers may have moved on. The water level is lower than it was in 2019. No recent beaver chew was seen surrounding the pond. We cannot know if the dam will fail catastrophically or gradually. However, we do know that, without beaver maintenance, the dam will fail and such failure will very likely impact the stream quality. If that failure were to occur proximate in time to our logging operations, we are anxious that DEC may assign any degradation in stream quality to our logging operations, rather than failure of the dam. [Ellen Forshaw and Karen Jeffers, landowner]

**Response:** DEC agrees that beavers can have a profound effect on the hydrology, nutrient cycling, and sediment deposition within a watershed. The Vermont Water Quality Standards recognize that natural influences, e.g., beaver activity, can affect water quality conditions in a stream; therefore, in those cases, the stream would still be considered in compliance.

“§ 29A-301 Natural Influences: Waters in which one or more applicable water quality criteria are not met due to natural influences shall not be considered to be in noncompliance with respect to such criteria.”<sup>6</sup>

27. **Comments:** One of our previous comments was a concern that that the DEC sampled a tributary of Blue Bank Brook on our property at location 44.027400970459, - 72.9695281982422, without notifying us, let alone obtaining our permission. The DEC did not address this comment in its replies to our initial comments. However, pursuant to our Public Records request, we received copies of internal DEC e-mail correspondence dated 3 October and 14 October 2019 between Ethan Swift, Aaron Moore, and Jim Deshler. That correspondence stated that Mark Nelson, the petitioner, who had been “championing” (DEC’s wording) the stream reclassification had asked to accompany the

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<sup>6</sup> Vermont Water Quality Standards (2017), p. 18 - [https://dec.vermont.gov/sites/dec/files/documents/wsmnd\\_water\\_quality\\_standards\\_2016.pdf](https://dec.vermont.gov/sites/dec/files/documents/wsmnd_water_quality_standards_2016.pdf)

DEC on the 2019 sampling round. The DEC agreed to “invite” him along. We find it troubling that the DEC invited Mr. Nelson to take part in an activity on our land when they had never told us such activity was taking place.

**Response:** Streams are Waters of the State and can be accessed using public road rights of way, as was done for the site referenced by coordinates in the comment. The site, Blue Bank Trib 6, is located on the corner of two public roads, Forest Service Road 205 and the Natural Turnpike. The stream goes under the Natural Turnpike and DEC accessed the site by walking up the stream channel from the Natural Turnpike. This site was last sampled in October 2011. In 2019, the only Blue Bank site sampled was on U.S. Forest Service land.

**One commenter disagreed with the watershed boundaries delineated by DEC.**

28. **Comment:** In our specific case, we are further dismayed that DEC has included an unnamed tributary of the Crystal Brook, which passes within 10 feet of our home as part of the Goshen Brook watershed. A spring that feeds this tributary has been the source of fresh water on the property since the foundations were laid for this house in the 1930’s. While we are told by DEC that the only restriction on our home and property would apply to the septic system, should that happen to be in the reclassification area, it is not obvious to us that there would not be future regulations and restrictions promulgated once the reclassification takes effect. Further, we are advised by DEC staff that if there was an error in including the unnamed tributary in the Goshen watershed that it will be our expense and responsibility to make the argument for excluding the tributary should this become a problem for us in the future. [Brooks Family, landowners; Robert and Rosalind Stowe, landowners]

**Response:** DEC delineated the watershed boundaries using standard methods and tools for remote sensing-based watershed delineation in ArcGIS, based on the stream reach proposed for reclassification in each petition submitted by the Ripton Conservation Commission. However, if necessary, this delineation could be modified by a site-specific survey when submitting a permit application in future.