



City of Keene, New Hampshire

AMENDED AGENDA

CONSERVATION COMMISSION

Monday March 19, 2018

4:30 PM

**2nd Floor Conference Room
City Hall**

Commission Members

Thomas P. Haynes, Chair
Brian Reilly
Councilor George Hansel
Alexander Von Plinsky IV

Andrew Madison
Denise Burchsted
Art Walker
Eloise Clark, Alternate
Kenneth Bergman, Alternate

- 1. Call to Order**
- 2. Minutes** – February 20, 2018
- 3. Communication & Notifications**
 - a) Wetlands Permit Application – City of Keene Maintenance of Drainage Ditches
- 4. Land Prioritization Criteria**
- 5. Aquatic Resource Mitigation Fund**
- 6. Conservation Master Plan Discussion**
- 7. Updates**
 - a) **Greater Goose Pond Forest Stewardship Plan**
 - b) **Commission Functions/Roles**
 - c) **City Staff Support to Commission**
- 8. New or Other Business**
- 9. Adjournment** - Next meeting date Monday, April 16, 2018

City of Keene
New Hampshire

CONSERVATION COMMISSION
MEETING MINUTES

Tuesday, February 20, 2018

4:30 PM

2nd Floor Conference Room,
City Hall

Members Present:

Thomas Haynes, Chair
Andrew Madison (Left at 5:40 pm)
Councilor George Hansel
Brian Reilly
Alexander Von Plinsky IV
Ken Bergman, Alternate

Staff Present:

Tara Kessler, Planner
Brett Rusnock, Civil Engineer

Members Not Present:

Denise Burchsted
Art Walker
Eloise Clark, Alternate

1) Call to Order

Chair Haynes called the meeting to order at 4:30 PM.

2) Minutes – January 16, 2018

Councilor Hansel made a motion to approve the minutes of January 16, 2018, which was seconded by Mr. Madison.

Dr. Reilly noted on page two, in the first line of the third paragraph, the phrase, “asked if the,” was repeated twice.

The motion to approve the minutes of January 16, 2018 as amended carried unanimously.

3) Communications & Notifications

a. Wetlands Permit Application – Goose Pond Dam Rehabilitation

Chair Haynes welcomed Brett Rusnock, Civil Engineer for the City of Keene, and Charlotte Brody, Wetland Scientist with Dubois & King (dam reconstruction consultants). Mr. Rusnock said they were at the meeting to explain the wetlands dredge and fill permit the City submitted to NH Department of Environmental Services (DES) the previous week. He explained the history of this project. In 2009, the City received a letter of deficiency for the Goose Pond dam and dike from the Dam Bureau of NH DES. The Dam Bureau inspects dams throughout the state to ensure they are safe and operational; if there are dam components that need repair, they send a letter of deficiency

to the dam owner, which is the City of Keene in this instance. The City is responsible for fixing those deficiencies or they will face a fine of up to \$2,000/day. As long as the Dam Bureau sees that there is a plan in place to move repairs forward, they usually do not impose those fines. Repairs are required for safety depending on the risk of harm the public faces if the dam were to fail (high risk, medium risk, low risk, and no significant hazard).

In 2010, the City hired Dubois & King to create a Dams Master Plan for all of dams for which the City received letters of deficiency. That plan helped the City to budget for those eventual improvements. Money for improvements of the Goose Pond dam and dike have now been appropriated by Council. This project involves essentially rebuilding both the dam and dike (the two regulatory structures of the pond). The dam is approximately 37' high and the dike is approximately 12' high. This reconstruction project will provide additional stability, top width, and controlled seepage through both the dam and dike.

Dr. Bergman asked if the spillway is a part of this project. Mr. Rusnock replied no because it is a separate structure made of native material that is not easy to erode. To clarify questions from the Commission, Mr. Rusnock demonstrated the location of all structures on a map.

Mr. Rusnock continued that this project is anticipated to impact some natural resources, so Ms. Brody visited the site twice to delineate wetlands and assess the access roads to both the dam and dike. Ms. Brody found the following impacts:

- The Dam
 - Open water on upstream side will cause impacts to pond bank and bottom
 - Permanent channel downstream will impact channel bank and bottom
- The Dike
 - Temporary and permanent impacts to the emergent wetland downstream of the dike
 - Boardwalk upstream of the dike will keep the walking trails accessible

Ms. Brody continued that the original plan proposed a 4' drawdown of pond water for reconstruction. However, with further consideration of construction of the gate house, it was clear that an 8'-10' drawdown is more advantageous. This more substantial drawdown will allow for a smaller coffer dam, safer conditions, and less equipment. They will be presenting this to the Wetlands Bureau to amend the application. All of this information, with the exception of the 8'-10' drawdown, was presented to and approved by the U.S. Army Corps of Engineers, NH DES, U.S. EPA, and NH Fish and Wildlife Service during a pre-application meeting. During that meeting, it was determined that work on the upstream faces of the dam and dike are within the limits of previous dam construction and therefore no mitigation is required. Still, they will add some stone on the upstream side of both the dam and dike to improve erosion control (stones approximately 1.5' in diameter, similar to riprap).

Ms. Brody continued that the access roads to the dam and dike will be improved with gravel where necessary to limit erosion. The access road to the dike will require gravel,

except in two locations, where there are small vernal pools. While these small areas meet the technical definition of a vernal pool (includes indicator species; salamander eggs in this instance), the water levels are insufficient to meet the life cycle of these species. Still, to ensure species can cross these pools the locations will not be filled with gravel, but granite stones will be placed (24" long, 18" wide, and 12"-18" deep; will remain a few inches above the road surface). These stones will be situated in two rows to allow for vehicle and maintenance traffic, while still allowing water and species to pass in either direction.

Dr. Bergman asked if the construction will occur during high vernal pool activity. Ms. Brody replied no, construction is anticipated to begin August 1. Dr. Bergman said one year of interruption at this small vernal pool will likely not be detrimental to the species.

Dr. Reilly asked how an 8'-10' drawdown of the pond will affect wildlife in the pond. Mr. Rusnock replied he is unsure currently because he does not know the exact depth of the pond. He said this is a recent change because it became apparent that additional lowering may be necessary to adequately reconstruct the gate structure. Ms. Brody said they will be looking further into the ratio of dewatering to depth of the pond; NH DES has rules about the speed at which dewatering can occur to avoid impacts to wildlife. Mr. Rusnock added the reconstruction is expected to last three months, and they will have a more specific timeframe as Dubois & King finalize their design and cost estimates.

Mr. Von Plinsky said the pond is shallow along most of the shoreline and asked for more details on why 8'-10' dewatering is necessary because it seems like a significant impact. Mr. Rusnock indicated a low level drain pipe cross section in the plans that showed the existing gate house for the dam. Historically the dam and gate house, built in 1868, were used for City water supply; this resulted in a 16" waterline and 8" drain line from the bottom of the dam. DES requires that dam owners have the ability to drain ponds in a controlled fashion as much as possible if there is a damage related safety risk or a storm is coming. Mr. Rusnock listed the following details:

- The current low level outlet is at approximate elevation 619'
- Normal water elevation is approximately 634.53'; between 630'-632'

Material must be excavated in front of the gate structure to allow dry conditions for reconstruction and use of a temporary coffer dam; the original dewatering depth of 4' is insufficient for this. If the 4' dewatering depth is maintained, a more expensive temporary dam would be required. Mr. Madison said the average depth of the pond at the dam is 15' based on the drawings. Mr. Rusnock replied yes but he is unsure if that is the true low level outlet or just the lowest point at that location; he suspects there are lower points in the lake itself. Mr. Von Plinsky said it would be nice to know what the pond surface will look like with 10' of water missing. Ms. Brody replied it does seem like a lot of water to drawdown but practicable alternatives are limited and this is only temporary. Mr. Von Plinsky agreed the reason is a good one; he asked how equipment will actually access the dyke. Ms. Brody replied the lower branch of the access road goes to the dike and some improvements will be made to that path to be accessible to construction equipment, as she demonstrated on the map. Despite stabilizing the surface with gravel,

they will not be changing the horizontal or vertical alignment of the roadway. All existing roadways will be utilized; no new roadways will be created.

Dr. Bergman asked if there will be any tree clearing. Mr. Rusnock replied there will be some but not a significant amount. The Dam Bureau requires tree clearing within 15' of the limits of any dam structure. Chair Haynes asked about the parking expansion. Mr. Rusnock replied the original plan was to provide spaces for the contractors to lay gravel and concrete mixing materials, etc. This expanded as a design idea to be a reusable parking area; the new plans will double the amount of parking spaces. Ms. Kessler said Mr. Littleton and the consultants for the Greater Goose Pond Forest Stewardship Plan Project are aware of this change and are incorporating the new parking area into their recommendations. Mr. Rusnock added that the Bauer Property, owners of the conservation easement near the proposed parking lot, is amenable to the changes.

Mr. Von Plinsky asked how long it has been since there was work on the dam or dike. Mr. Rusnock replied the most recent work was in 1946. He thinks with a quality plan and contractor, 50-75 years of longevity are reasonable to expect for the dam and dike with annual maintenance. However, the Dam Bureau could change their standards and requirements in the future.

Ms. Kessler said the applicants are not seeking expedited review so the Commission can provide comments to DES but a signature on the permit from the Conservation Commission Chair is not required. The Commission had no comments for DES at this point but provided an idea for the consultants to consider:

- Detailed signage while the water level is down so the public is informed and to warn people not to walk on the muddy banks.

b. Wetlands Utility Maintenance Notification – Eversource Energy

Ms. Kessler said this is a standard notification for maintenance work in the right of ways. Chair Haynes noted there is a large main line that goes through that part of tenant swamp. They will likely be weed whacking vegetation; Dr. Bergman said he has seen the results of this in the past.

c. Routine Roadway and Railway Maintenance Activities Notification – NH Department of Transportation

Ms. Kessler said this is a notice that NH DOT is doing vegetative clearing and infrastructure improvements on drainage ditches and culverts in the western Monadnock region. The outlets of the drainage areas identified on the map in the agenda packet are considered wetlands, so the Commission is notified of this work. All locations in Keene are along RT-101.

4) Review of Commission Role, Functions, and Staff Support

Ms. Kessler recalled the previous City Manager had implemented a survey of all committees about their work, time commitment, and staff roles. The new City Manager asked all committees to review their charge, roles, and functions as defined in Chapter 2 of the City Code. Ms. Kessler shared this section of City Code on the Conservation

Commission functions and roles with the Commission. These roles in the City Code are associated with NH RSA 36 that governs Conservation Commissions. She said it is a long list of powers, duties, and guidelines. The Commission agreed it could likely be edited and condensed. Councilor Hansel agreed to edit this document for review at the March meeting.

Ms. Kessler said she learned from previous discussions around the survey that the role of City staff support to the Commission is unclear. In an effort to frame a discussion on staff support, she shared a document that outlines her estimated annual time dedicated to supporting the Conservation Commission. Time supporting the Commission comprises approximately 10% of her monthly workload. Much of her time is spent supporting activities like preparing and issuing agenda packets, reviewing the agenda with the Chair, attending meetings, posting meeting notices, reviewing minutes, etc. This total is unlikely to change. She also provides technical assistance to the Committee like research and analysis, coordinating presenters, and managing contracts and grants. Technical assistance can consume a significant amount of staff time, especially, as there is not a defined amount of time or projects for this task area. The estimate of technical assistance time provided by staff for this year include support managing the Greater Goose Pond Forest Stewardship Plan project, which came out of the Conservation Commission.

Ms. Kessler noted this list is a starting point to discuss how staff is currently providing support, and how to further define staff's role in supporting the Commission. She noted that she is unsure of whether she will continue to staff this Commission in the future but this can, at a minimum, help to provide a guideline for scheduling Commission projects that involve staff. She suggested discussing the projects the Commission would like to schedule in the next year. She can take list back to the Planning Department, so City staff can compare how these projects align with the Department's annual priorities. There may be areas of overlap between the Commission's proposed projects and the Planning Departments. Staff may be able to dedicate more time to projects that overlap with Department Priorities. This exercise would also be an opportunity to identify where there is not overlap between what the Planning Department is working on and what the Conservation Commission is proposing to take on for projects. It may make more sense for the Commission to dedicate more of their volunteer effort towards the areas or projects the Planning Department is not working on directly.

Councilor Hansel asked if the City Manager plans to implement a new system to account for staff time devoted to Committees. Ms. Kessler replied that there is no direction from the City Manager yet on how much time staff should give to Committees. Planning Department staff met and listed Committee projects they anticipate in the next year to determine which align with department priorities and should be budgeted as a part of staff time. This can also help determine projects where other Committees or community members are taking the lead to generate partnerships with those already doing similar work.

Dr. Bergman asked if the RISD/West Street Dam project is listed on the Commission agenda for this year. Ms. Kessler said that depends on what the Commission wants to

prioritize for the year. Councilor Hansel said moving forward he thinks it makes sense to have a specific number of hours allocated for Ms. Kessler and the Commission members can make up the difference. Dr. Reilly noted Ms. Kessler listed 75 hours she will contribute to the Goose Pond Forest Stewardship Plan; he asked if a Commission member had the expertise to do so, if they could serve as a liaison. Ms. Kessler said staff has to be involved with respect to managing a contract but there could be a combined approach with a Commission liaison as long as that person does not abandon the commitment. She thinks it is a great suggestion and it may be helpful as the Commission thinks about bringing on a consultant for the Master Plan. The only things Commission members are less able to oversee is the selection and management of consultant contract and overseeing grants. The Commission listed their primary projects for the next year:

- West Street Dam (and the RISD research project)
- ARM fund projects
- Standalone NRI (that will eventually contribute to creating the Master Plan)
- Goose Pond Forest Stewardship Plan
- Public outreach and education
- Land Prioritization (Mr. Von Plinsky can contribute his skills for creating GIS maps)
- Stream Passage Improvement Program (SPIP) – collaboration between DES and DOT for cities to rank their stream crossings so DOT is aware of them. Should be a simple task but could be valuable and coincide with the ARM projects.

5) Land Prioritization Criteria

Ms. Kessler presented a handout of the draft criteria the Commission discussed at the last meeting. The Commission has not yet formally adopted this list; the Commission will vote on this list in March once all members have had a chance to review it. Ms. Kessler will reschedule the subcommittee meeting.

6) Conservation Master Plan Discussion

Dr. Reilly has been working to gather information from previous working groups for a NRI. He has begun defining why a NRI is necessary and listing already available data that can be gathered for GIS mapping without getting too advanced. He has easily found listings of what could be included in the GIS maps from NH Granit (statewide GIS mapping agency), and NH DES (resources from the National Heritage Bureau). Dr. Reilly suggested the next step should be looking at the land prioritization criteria and working backward from those to decide what should be included in the NRI. Dr. Bergman suggested also including actual documented occurrences of wildlife activity as an appendix to the NRI, for which there is a lot of available data for the past 20 years. Dr. Reilly said the NRI should be composed of a series of maps, some overlays, and narratives, tables, and charts to explain those maps; it could also potentially include prioritization recommendations. He will coordinate with the land prioritization criteria working group.

7) Updates

a. Greater Goose Pond Forest Stewardship Plan Update

There is a walking tour of the Forest scheduled for March 4 from 1:00 PM to 3:00 PM on winter mammal tracking to be led by Jeff Littleton. There are three spaces left. There will be additional walks in the coming months.

b. Aquatic Resource Mitigation Update

Mr. Von Plinsky attended a presentation about the Aquatic Resource Mitigation (ARM) fund by NH DES in January. He shared a report on the presentation via email, which outlines the entire process of applying for ARM funds.

The ARM fund is a pool of money derived from payments in lieu of wetland restoration/creation/preservation for projects that involved a certain level of impact (e.g. dredging, filling and/or construction) to jurisdictional wetlands and/or surface water resources. This money is pooled and redistributed at the watershed level. Keene is eligible to apply for ARM funding from the Lower Connecticut River watershed. The ARM fund accepts proposals biannually for use of those funds on ARM projects. This year, there is \$1.7 million available for projects in the Lower Connecticut River watershed. To apply for funds the Commission must complete a preproposal (two pages) by April 30. If the preproposal passes, then the final application deadline is August 31. The ARM fund likes proposals for projects that have matching funds and outside contributions. For example, the City provided in-kind match for ARM funds used for the wetland restoration in Woodlawn Cemetery. Mr. Von Plinsky thinks the City has many projects that would qualify for these funds and he hopes to continue being a part of that process. The ARM subcommittee will meet again to further prioritize projects in an effort to complete a preproposal by April 30.

8) Society for the Protection of NH Forests Membership

Ms. Kessler said the Commission has never been a member of the Society for the Protection of NH Forests, so this is a new request. Membership requires a donation from \$50 - \$5,000. Chair Haynes said the Commission should be a member because the Society holds an easement for Goose Pond and there will likely be further interaction in the future; he suggested a donation of \$50.

Dr. Reilly made a motion for the Commission to join the Society for the Protection of NH Forests with a \$50 donation, which was seconded by Mr. Von Plinsky and carried unanimously.

9) New or Other Business

10) Adjournment – Next meeting date Monday, March 18, 2018

Hearing no further business, Chair Haynes adjourned the meeting at 6:09 PM.

Respectfully submitted by,
Katie Kibler, Minute Taker

Reviewed and edited by,
Tara Kessler, Planner



WETLANDS PERMIT BY NOTIFICATION (PBN)

Land Resources Management

Check the status of your submitted notification: www.des.nh.gov/onestop/index.htm



RSA/Rule: RSA 482-A/ Env-Wt 100-900

1. PROJECT TYPES

The PBN process is limited to the 14 project types listed below. Using the [Project Specific Criteria Documents](#), confirm your project proposal qualifies to use this Permit by Notification process and check the qualifying project type(s) listed below:

<input type="checkbox"/> 1	Freshwater Seasonal Dock: Construction or modification of a seasonal pier or wharf (dock), located on a non-tidal stream or river or in a lake or pond.	<input type="checkbox"/> 8	Culvert/Bridge Replacement: The replacement of a culvert/bridge on a watercourse with a contributing watershed less than or equal to 25 acres to permit vehicular access to one single family lot or for noncommercial recreational use.
<input type="checkbox"/> 2	Retaining Wall Repair and Replacement: Repair or replacement in-kind of a retaining wall (<i>in the dry during draw down</i>).	<input type="checkbox"/> 9	Beach Replenishment: Replenishment of an existing non-tidal beach with less than 10 cubic yards of sand.
<input checked="" type="checkbox"/> 3	Maintenance Dredge: Maintenance dredging, when necessary to provide continued usefulness of nontidal drainage ditches, man-made ponds, and spillways <i>Stormwater detention ponds, fire ponds, or agricultural ponds may be exempt from permitting pursuant to RSA 482-A:3, IV-b. See the project specific criteria document for further information.</i>	<input type="checkbox"/> 10	Seasonal Dock Anchoring Pad: Construction of an anchoring pad for a seasonal dock in non-tidal waters.
<input type="checkbox"/> 4	Temporary Cofferdams: Temporary cofferdams and other water control devices constructed in flowing water or adjacent to dams in conjunction with the repair or maintenance of existing structures. All work must be designed, and supervised by a professional engineer (PE).	<input type="checkbox"/> 11	Boatlift: Installation of <i>one</i> seasonal boatlift in non-tidal waters and not within 20 feet of abutter's property line.
<input type="checkbox"/> 5	Docking Structure Repair: Repair of <u>existing</u> tidal docking structures or repair of non-tidal docking structures.	<input type="checkbox"/> 12	Watercraft Lift: Installation of <i>one or two</i> personal watercraft lift(s) in non-tidal waters adjacent to a dock.
<input type="checkbox"/> 6	Dry Hydrant: For a dry hydrant ONLY, excavation of less than 10 linear feet within the bank and bed of a surface water that does not exceed 200 square feet in total jurisdictional impact to the bed.	<input type="checkbox"/> 13	Residential Utilities: Installation of a residential utility line. Stream impacts limited to a contributing watershed of 25 acres.
<input type="checkbox"/> 7	Maintenance of a Non-Docking Structure: Maintenance, repair or replacement of a non-docking structure.	<input type="checkbox"/> 14	Utility Right-of-Ways: Temporary impacts associated with the inspection, maintenance and repair of existing utility lines within an existing utility right of way. <i>Use the Utility Maintenance Notification form for this project type.</i>

2. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:

Please indicate if any of the following permit applications are required and, if required, the status of the application.

To determine if other Land Resources Management Permits are required, refer to the [Land Resources Management Web Page](#).

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Individual Sewerage Disposal per RSA 485-A:2	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Subdivision Approval Per RSA 485-A	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Shoreland Permit Per RSA 483-B	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

3. PROJECT LOCATION

A separate application must be filed with each municipality that jurisdictional impacts will occur in.

ADDRESS: Production Ave		TOWN/CITY: Keene	
TAX MAP:	BLOCK:	LOT:	UNIT:
US GEOLOGICAL SURVEY TOPO MAP WATERBODY NAME:			
LOCATION COORDINATES (if known): 42.921458, -72.305611 <input checked="" type="checkbox"/> Latitude/Longitude <input type="checkbox"/> UTM <input type="checkbox"/> State Plane			

4. PROJECT DESCRIPTION:

Provide a brief description of the project, outlining the scope of work to be performed, including a narrative that describes the sequence of construction including pre-construction through post-construction activities and the relative timing and progression of all work. Do not write "see attached."

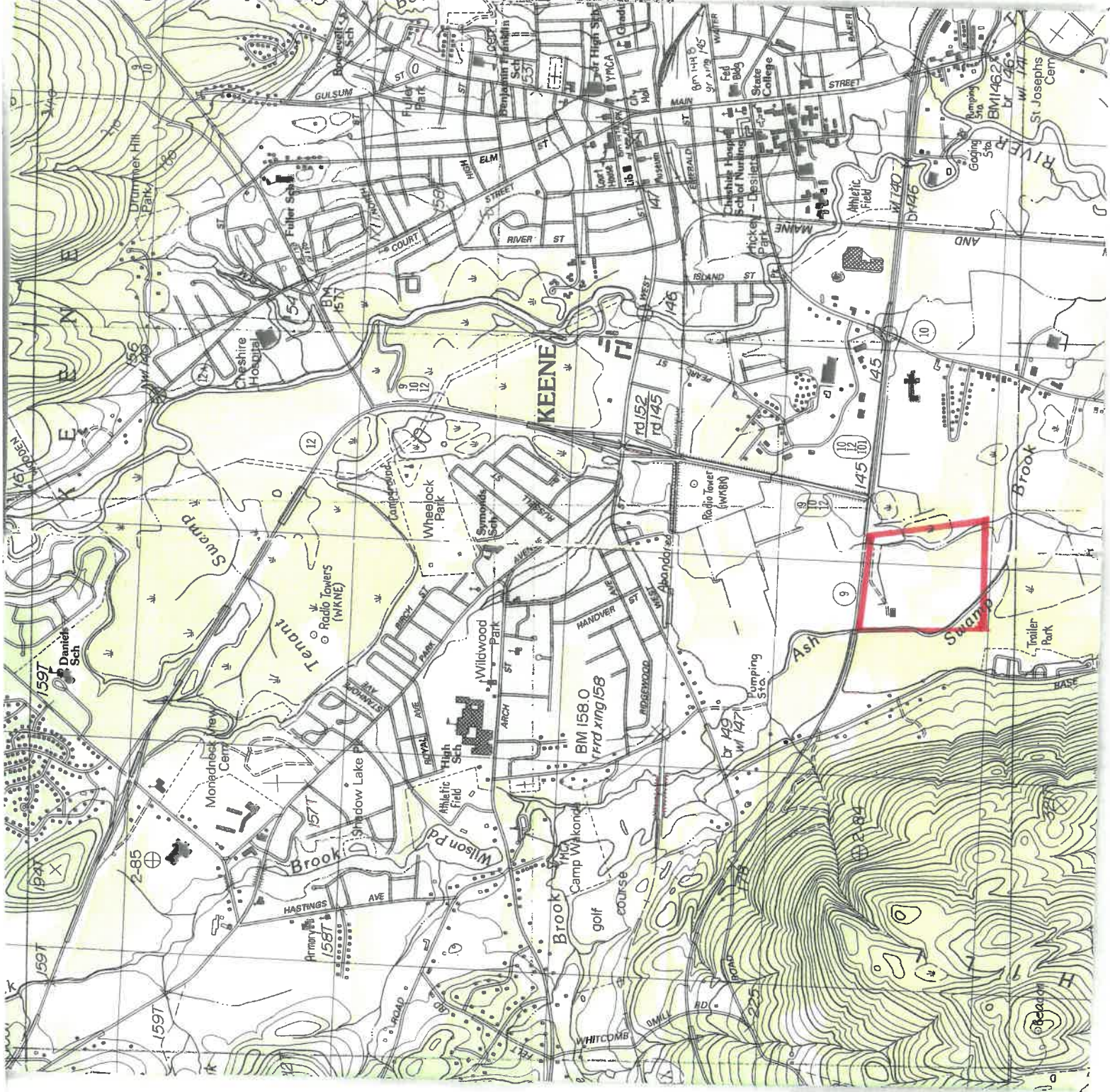
Man-made drainage ditch maintenance including; cutting/removing trees, cutting/removing brush, mowing, debris removal, stream bank stablization, and sediment removal as recommended in the March 2017 "Keene City-Wide Stream inventory and Maintenance Program" by Weston and Sampson

5. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact
Temporary = impacts not intended to remain (and will be fully restored to pre-construction conditions) after the project is completed

Jurisdictional Area	Permanent Sq. Ft.	Temporary Sq. Ft.	Jurisdictional Area	Permanent Sq. Ft.	Temporary Sq. Ft.
Forested wetland			Lake		
Emergent wetland			Pond		
Wet meadow			Tidal water		
Intermittent stream		70,000	Previously-developed upland in TBZ		
Perennial stream / river			Other		

NHDES-W-06-027





To: Ryan Kaulbach
350 Marlboro St
Keene, NH 03431

Date: 1/25/2018

From: NH Natural Heritage Bureau

Re: Review by NH Natural Heritage Bureau of request dated 1/25/2018

VALID ONLY FOR NOTIFICATION OR MINIMUM EXPEDITED APPLICATIONS SUBMITTED TO
THE NHDES WETLANDS BUREAU

NHB File ID: NHB18-0337

Applicant: Kurt Blomquist

Location: Tax Map(s)/Lot(s):
Keene

Project Description: Tax ditch maintenance

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

This report is valid through 1/24/2019.



INDEX DIAGRAM
 MAP NO. **242**

PROPERTY MAPS
KEENE
 NEW HAMPSHIRE

SCALE: 1" = 200'
 REVISIONS TO APRIL 1, 2017

LEGEND
 UNDEVELOPED
 AC
 BUILDING
 SUBDIVISION
 SCALED/UNSCALED
 M.L. 100
 WELLS

PRODUCED IN 2017 BY
CAI Technologies
 17 Pleasant Street, Keene, NH 03401
 TEL: 603.351.1000 WWW.CAITECH.COM

THIS MAP IS FOR ASSESSMENT PURPOSES. IT IS NOT VALID FOR LEGAL, RECREATIONAL OR CONFORMANCE. THE PROJECTED SYSTEM IS THE NEW HAMPSHIRE STATE PLANE. PARTICIPANTS DATE: APRIL 1, 2017. COMPLETION DATE: SEPTEMBER 28, 2017.

List of Abutters

11 Production Ave - Willco Realty Corporation
591 Monadnock Hwy
Swanzey, NH 03446

14 Production Ave – Fentco Realty Corporation
591 Monadnock Hwy
Swanzey, NH 03446

18 Production Ave – 18 Production Ave, LLC
18 Production Ave
Keene, NH 03431

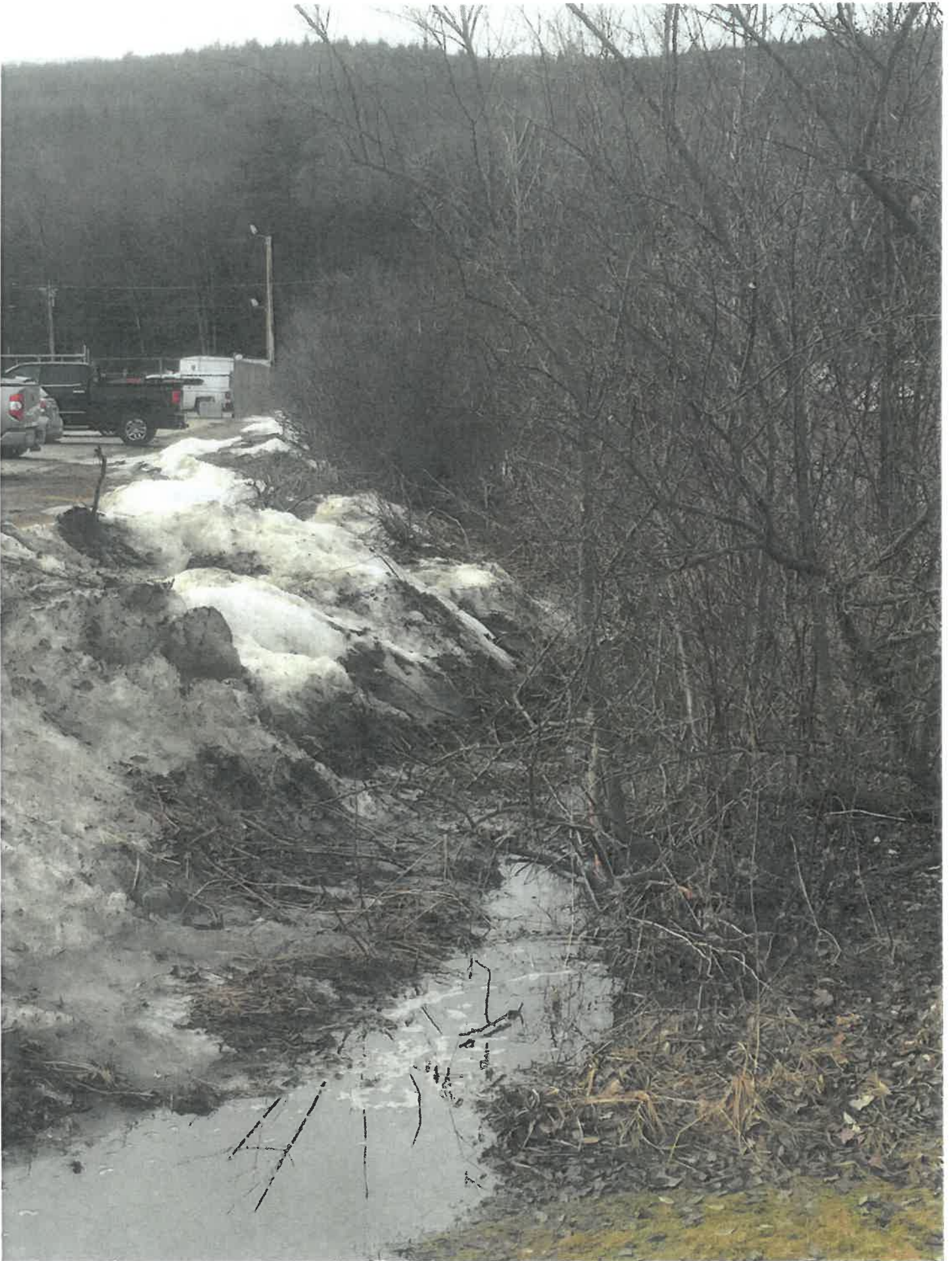
19 Production Ave – PSNH Eversource Energy
780 North Commercial St
Manchester, NH 03101

22-24 Production Ave – AR-GE Properties
117 West St
Keene, NH 03431

25 Production Ave – MEDC Production Ave, LLC
51 Railroad St. Suite 101
Keene, NH 03431

30-42 Production Ave – Curran A. Ranger Jr.
117 West St.
Keene, NH 03431

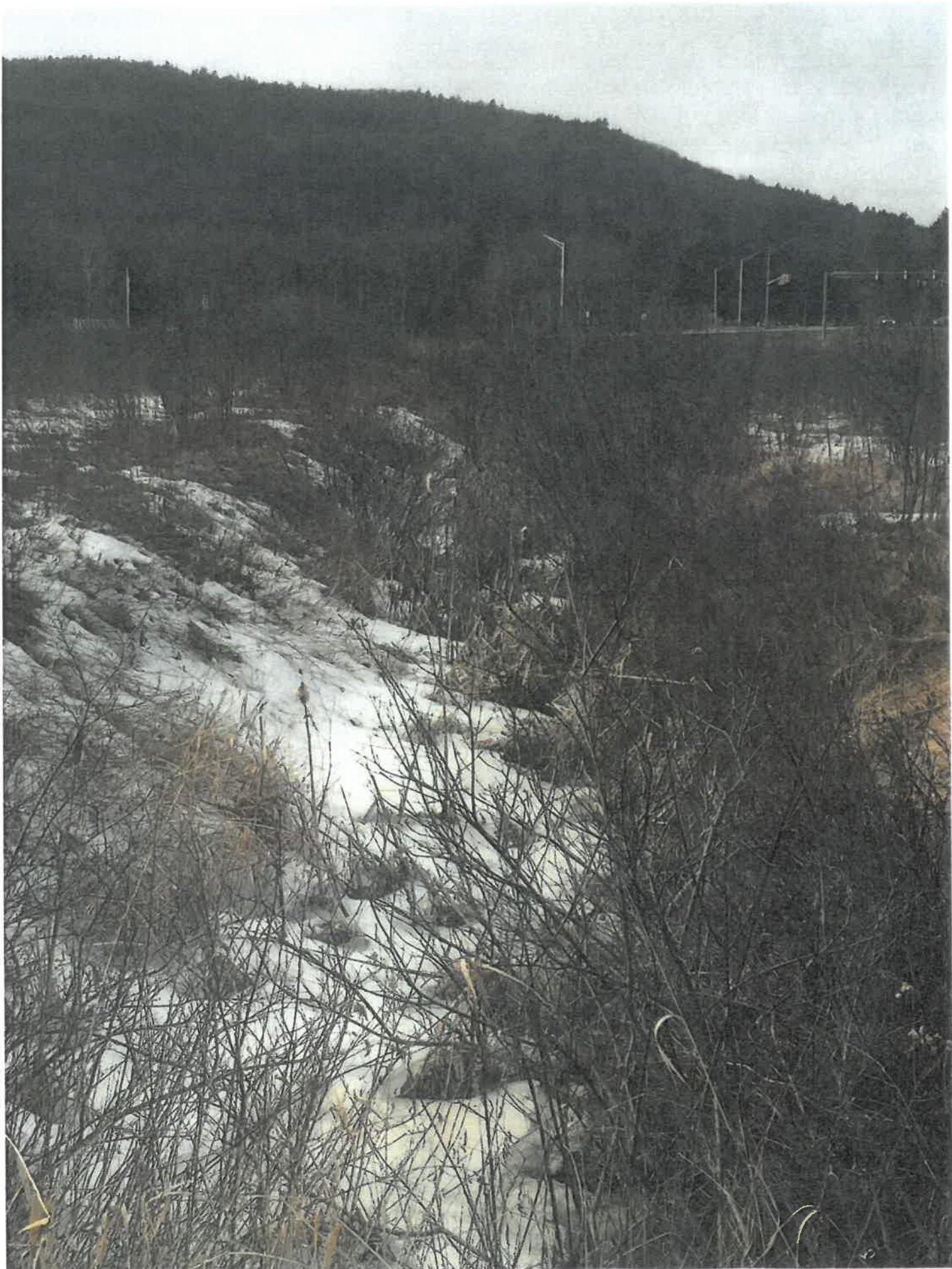
43 Production Ave – New Hampshire Gas Corporation
PO BOX 438
Keene, NH 03431



2/20/2018.



2/20/2018



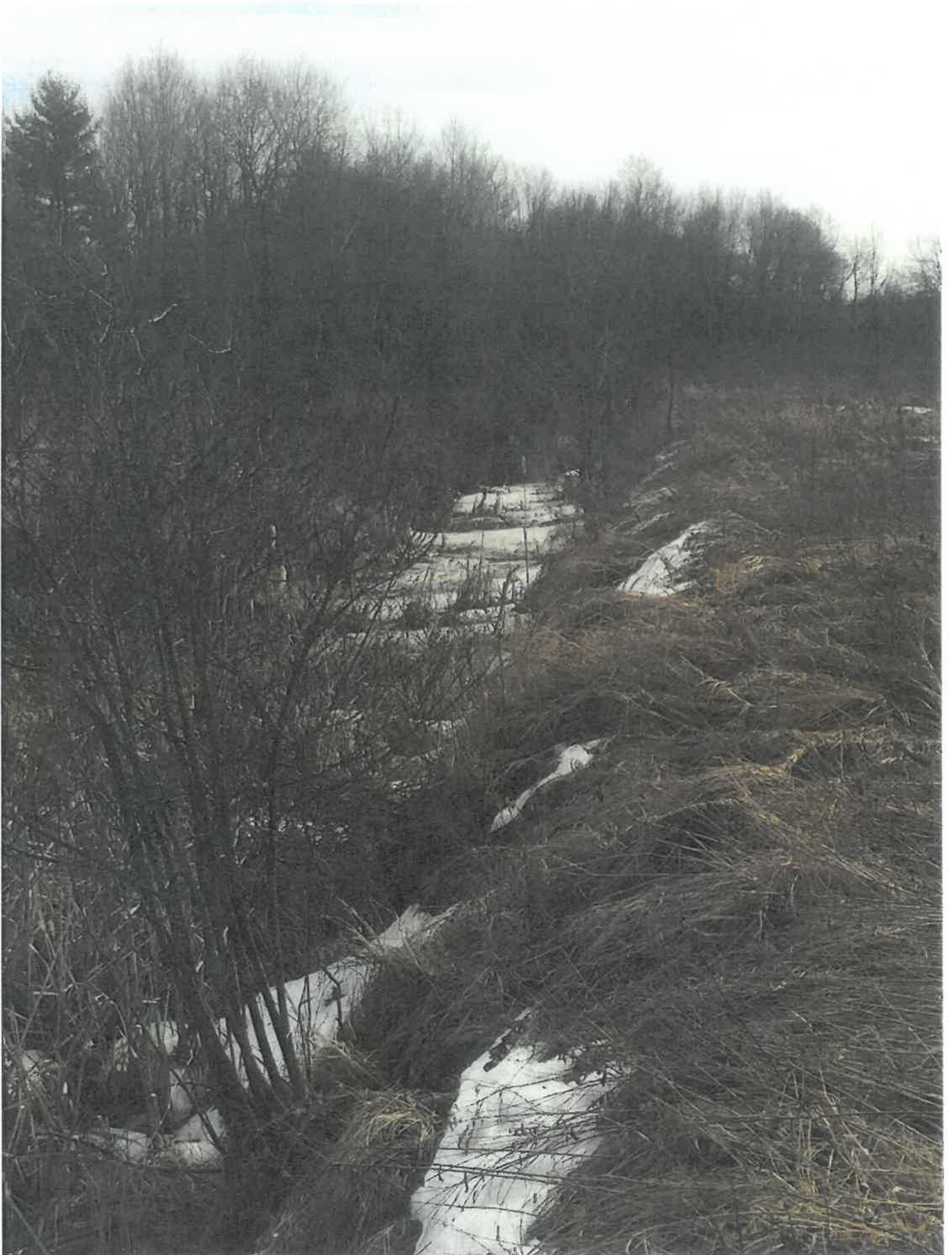
2/20/2018



2/20/2018.



2/20/2018

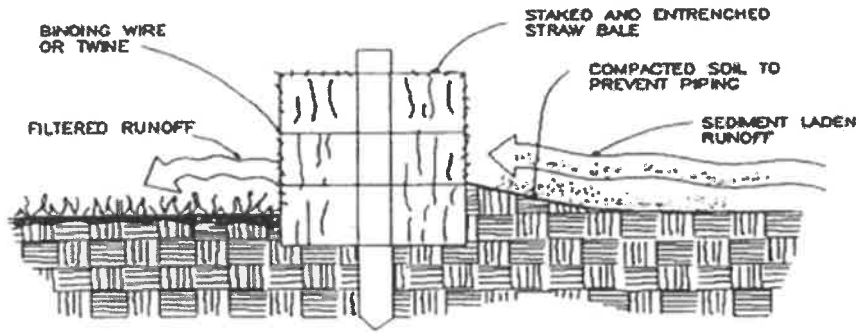


2/20/2018.

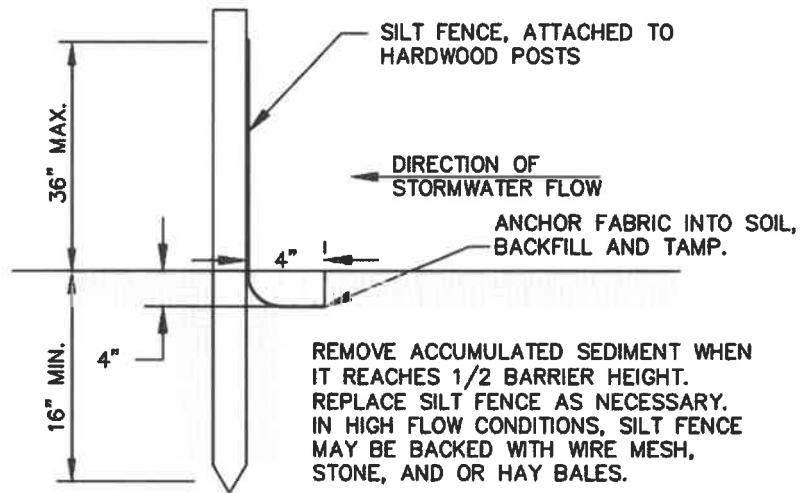


2/20/2018

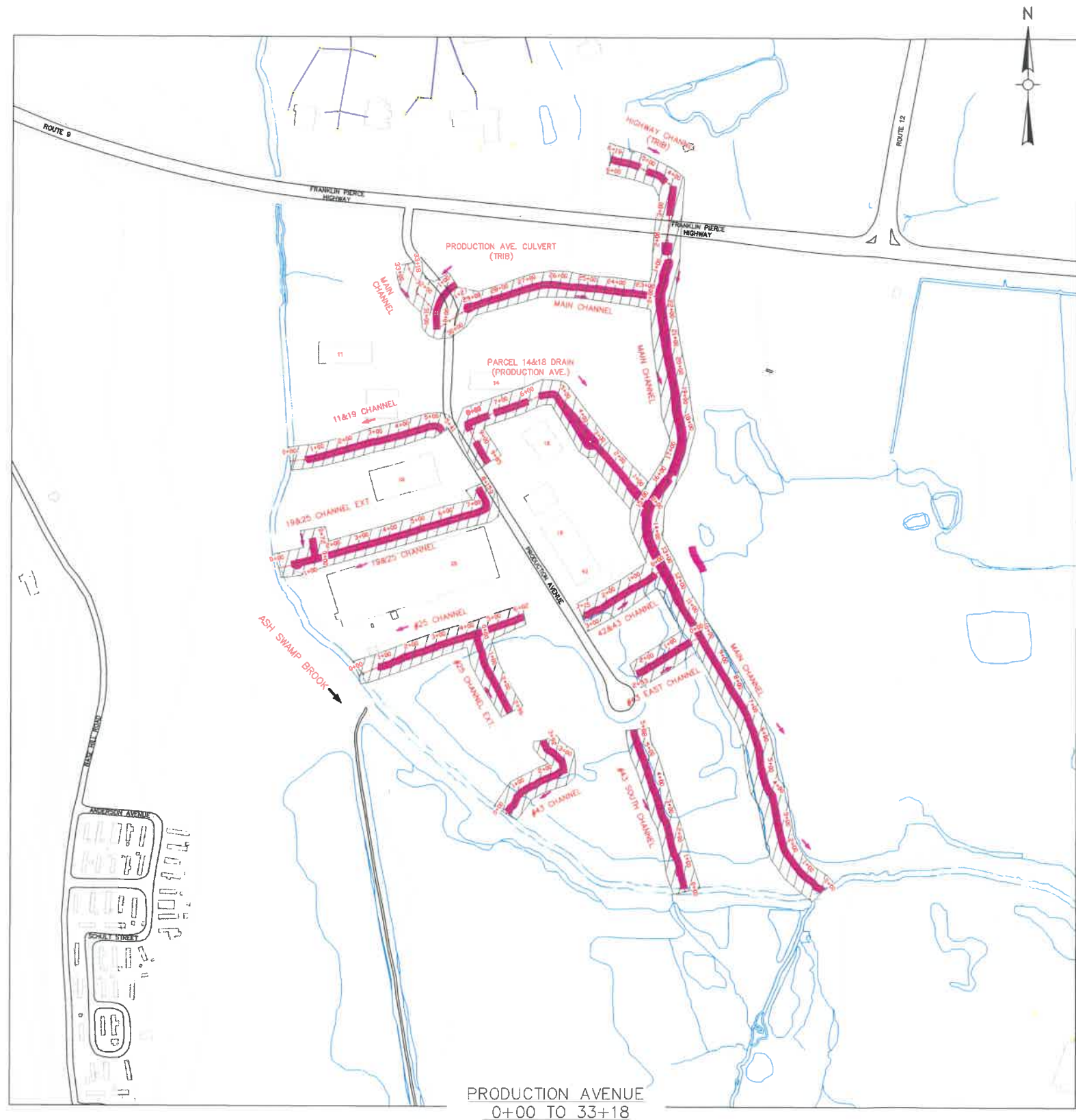
Erosion Control Methods



STRAW BALE CHECK DAM



SILT FENCE



PRODUCTION AVENUE
0+00 TO 33+18

NOTES:

1. LOCATIONS OF EXISTING PIPES, UTILITIES, PROPERTY LINE INFORMATION, TOPOGRAPHIC INFORMATION, LOCATIONS OF EXISTING ABOVE GROUND STRUCTURES, EDGE OF PAVEMENT, AND OTHER UNDERGROUND OBJECTS ARE WERE PROVIDED BY THE CITY OF KEENE GIS DEPARTMENT.

MAINTENANCE ACTIVITIES:

THE FOLLOWING DESCRIPTIONS PROVIDES A BRIEF SUMMARY OF THE PROPOSED STREAM MAINTENANCE ACTIVITIES. REFER TO THE PROJECT MANUAL FOR PROCEDURES AND DETAILS OF EACH ACTIVITY.

1. DEBRIS REMOVAL – DEBRIS THAT IMPEDES THE FLOW OF CHANNELS AND INCREASES THE RISK OF FLOODING SHALL BE REMOVED FROM CHANNELS. NATURAL OCCURRING DEBRIS INCLUDES FALLEN TREES, STUMPS, LARGE ROCK, BEAVER DAMS AND OTHER LOOSE VEGETATION. MANMADE DEBRIS INCLUDES LOOSE TIRES, SHOPPING CARTS, TRASH, FURNITURE, AND UNAUTHORIZED DAMS/STRUCTURES. IN GENERAL, DEBRIS SHALL BE REMOVED BY HAND. EQUIPMENT MAY BE USED FROM THE TOP OF BANKS WITHOUT DISTURBING CHANNEL BEDS OR BANKS. NO DISTURBANCE TO SOILS OR SEDIMENTS SHALL OCCUR DURING THIS ACTIVITY.
2. STREAM ACCESS MAINTENANCE – ONE OR BOTH SIDES OF THE STREAMS SHALL BE MAINTAINED FOR ACCESS WHERE INDICATED. ACCESS IS REQUIRED IN AREAS SO OTHER MAINTENANCE ACTIVITIES CAN OCCUR AS NEEDED. ACCESS MAINTENANCE INCLUDES MOWING GRASS/VEGETATION, CUTTING BRUSH, PRUNING TREE/BRUSH AND SELECTIVE TREE CUTTING. ALSO, VEGETATION MAY BE PRUNED IF IT IS IMPEDING STREAM FLOW. BRUSH/TREE CUTTING SHALL BE DONE AT GROUND LEVEL AND THE ROOTS SHALL BE LEFT IN PLACE. NO DISTURBANCE TO SOILS OR SEDIMENTS SHALL OCCUR DURING THIS ACTIVITY.
3. BANK REPAIR/STABILIZATION – REPAIRS TO STREAM BANKS SHALL BE COMPLETED ON AN AS NEEDED BASIS TO PREVENT FURTHER EROSION OF BANKS. STABILIZATION MAY INCLUDE INSTALLATION OR REPLACEMENT OF SOILS, CONCRETE ARMAMENT, RIPRAP AND OTHER STABILIZATION MATERIALS. REFER TO THE PROJECT MANUAL FOR PROPER EROSION CONTROL, SEDIMENT BARRIERS, AND BANK RESTORATION DURING THIS ACTIVITY.
4. SEDIMENT REMOVAL – SEDIMENT DEPOSITS MAY IMPEDE CHANNEL FLOW AND INCREASE THE LIKELIHOOD OF FLOODING. SEDIMENT REMOVAL SHALL BE A THOROUGHLY PLANNED ACTIVITY AND IN ACCORDANCE TO THE PROJECT MANUAL. SEDIMENT REMOVAL SHALL ONLY OCCUR DURING STREAM LOW FLOW CONDITIONS. REFER TO THE PROJECT MANUAL FOR PROPER EROSION CONTROL, SEDIMENT REMOVAL, SEDIMENT BARRIERS, SEDIMENT DEWATERING, SEDIMENT DISPOSAL AND BANK RESTORATION DURING THIS ACTIVITY.
5. INVASIVE SPECIES CONTROL – INVASIVE SPECIES CONTROL SHALL BE CONDUCTED TO PREVENT UNCONTROLLED GROWTH OF UNWANTED NON-NATIVE VEGETATIVE SPECIES. CONTROL SHALL BE CONDUCTED THROUGH ANNUAL MOWING, HERBICIDE APPLICATIONS OR COMPLETE PLANT/ROOT REMOVAL. HERBICIDE APPLICATIONS REQUIRE STATE AND LOCAL PERMITS AND SHALL ONLY BE APPLIED BY AUTHORIZED PERSONNEL. COMPLETE PLANT/ROOT REMOVAL SHALL ONLY BE CONDUCTED DURING SEDIMENT REMOVAL OR BANK STABILIZATION ACTIVITIES WITH PROPER EROSION CONTROL AND RESTORATION. PLANT MATERIAL SHALL BE PROPERLY DISPOSED OR DESTROYED.

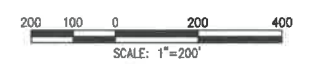
MAINTENANCE ACTIVITY SCHEDULE:

ACTIVITY	CHANNEL	LOCATION
ALL ACTIVITIES: • DEBRIS REMOVAL • STREAM ACCESS MAINTENANCE • BANK REPAIR/STABILIZATION • SEDIMENT REMOVAL • INVASIVE SPECIES CONTROL	ENTIRE CHANNEL SYSTEM	



TRIBUTARY WATERWAYS INCLUDED ON THIS SHEET:

NAME:	LENGTH:
#43 EAST CHANNEL	2+50
42&43 CHANNEL	3+00
14&18 CHANNEL	10+00
11&19 CHANNEL	5+50
19&25 CHANNEL EXT.	0+70
19&25 CHANNEL	8+00
#25 CHANNEL	6+00
#25 CHANNEL EXT.	3+00
#43 CHANNEL	4+00
#43 SOUTH CHANNEL	6+00
PRODUCTION AVE. CULVERT	1+30
HIGHWAY CHANNEL	6+20



CITY OF KEENE, NEW HAMPSHIRE
CITY WIDE STREAM INVENTORY

PRODUCTION AVENUE
STATION 0+00 TO 33+50

DESIGNED BY: EMD CHECKED BY: MER DATE: MARCH, 2017



SHEET
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**CITY OF KEENE CONSERVATION COMMISSION
LAND PROTECTION CRITERIA**

Land that supports or enhances the following resources/features should be a priority for the City of Keene Conservation Commission as it makes recommendations to the City Council on land protection and conservation.

1. Water Resources
 - a. Frontage on rivers, streams, lakes, ponds, and reservoirs
 - b. Land overlying aquifers and aquifer recharge areas
 - c. Wetlands, floodplains, buffer areas, and riparian zones

2. Forest Resources
 - a. Tracts of woodland with sufficient size, appropriate soils, and other attributes that support responsible forest management, including the production of timber and other forest products.
 - b. Steep slopes (slopes with grades greater than 15%)
 - c. Urban forests
 - d. Large un-fragmented blocks of forests

3. Agricultural Resources
 - a. Farmlands and open fields with prime soils and other attributes that support agriculture or have the potential to support agriculture.
 - b. Land well suitable for agriculture that do not have prime soils
 - c. Urban agriculture

4. Wildlife and Natural Areas
 - a. Large tracts of undeveloped habitat and corridors important for wildlife
 - b. Land containing ecologically significant or rare natural communities or species
 - c. Priority land as identified in the New Hampshire Wildlife Action Plan, Natural Resource Inventories, or existing Land Management Plans
 - d. Other lands which increase the diversity and viability of wildlife populations, including fields, riparian areas, land contiguous to existing protected natural areas, and land that can serve as a buffer to developed areas

5. Cultural, Recreational, and Scenic Value
 - a. Land that offers opportunities for appropriate outdoor recreation by the public
 - b. Scenic views, ridgelines, and other aesthetic areas
 - c. Landscapes that preserve the region's cultural and historic heritage
 - d. Land that promotes connectivity of recreational networks

6. Collaboration and Leverage
 - a. Land where there are multiple entities (e.g. surrounding towns or local organizations) willing to collaborate on protection/conservation efforts
 - b. Land that is vulnerable to development pressure
 - c. Land where there are landowners willing to support conservation and protection