STREAM SUMMARY

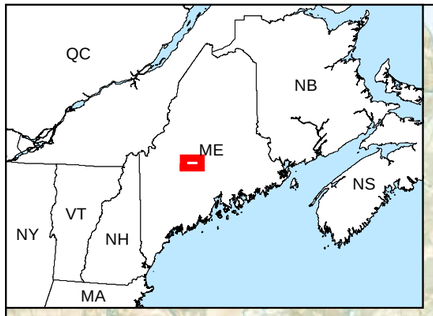
INTRODUCTION

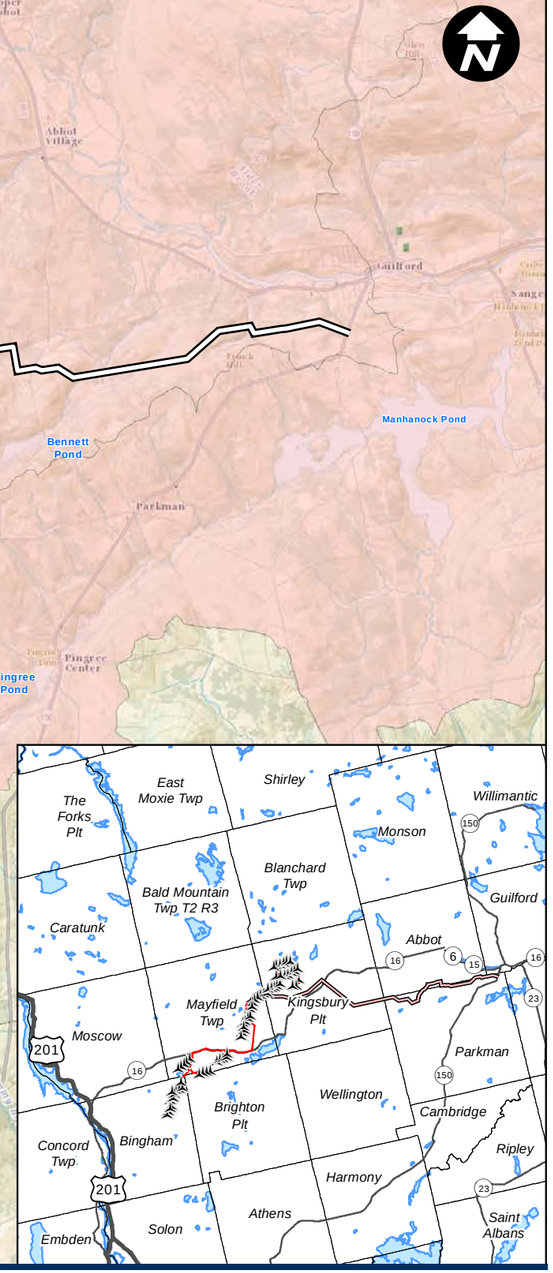
In the course of project development, Stantec Consulting (Stantec) conducted a variety of ecological surveys within the Bingham Wind Project (project) area, including wetland and stream delineations. Much of the project area occurs within the Piscataquis River watershed (HUC 0102000401), which is designated as critical habitat for Atlantic salmon (*Salmo salar*) (Figure 1). In addition, many of the delineated perennial streams provide potential habitat and, in the case of one stream, documented habitat for the northern spring salamander (*Gyrinophilus porphyriticus*), a State Species of Special Concern. The Applicants, Blue Sky West, LLC and Blue Sky West II, LLC, have made efforts to minimize stream impacts by avoiding direct stream work and proposing managed buffers along the delineated streams. For those streams identified as potential or documented habitat for northern spring salamander, the proposed management buffer will be 250 feet as measured from each stream bank. Those streams within the designated critical habitat for Atlantic salmon will receive a 100-foot buffer unless the more restrictive 250-foot buffer applies. All other streams within the project area will receive a minimum 25-foot vegetation management buffer. The following documents provide a summary of the delineated stream resources and the proposed stream buffer management. Note that the "project area" includes all of the streams located within approximately 300 feet of proposed edge of gravel surfaces and those resources located within the approximately 100-foot wide electrical corridors:

- Summary of perennial streams within the project area;
- Detailed discussion of each perennial stream within the project area and proposed stream buffer management;
- Summary of intermittent streams within the project area; and
- Available photographs of intermittent streams within the project area.

Note that natural resource maps showing the location of the delineated streams with proposed project components are provided in Exhibit B-1 of this permit application.

Figure 1





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Legend

- Turbine Location
- Permanent MET Tower
- O&M Building
- Substation
- Electrical Generator Lead
- Edge of Gravel
- Overhead Collector
- Underground Collector
- Critical Habitat by HUC 10

0 8,000
Feet

Client/Project
Bingham Wind Project

Figure No.
1

Title
Bingham Wind Project Location

5/21/2013

195600539

Perennial Stream Summary Table

Stream ID	Associated Wetland ID	Town or Township	NR Map Number	Latitude	Longitude	Perennial or Intermittent	Approximate Bankfull Width (Ft.)	Stream Name	Within Designated Critical Habitat for Atlantic Salmon	Stream Buffer Width (Ft.)*	Number of Poles within 100 Ft. of Stream
S007	MAY_W112	Mayfield Township	8	45.104905	-69.758385	Perennial	10.5	Unnamed tributary of Rift Brook	No	25	1
S009	MAY_W116	Mayfield Township	8	45.107667	-69.740848	Perennial	5.5	Unnamed perennial stream	No	250	1
S010	MAY_W118	Mayfield Township	8	45.106556	-69.736204	Perennial	5	Unnamed perennial stream	No	25	1
S014	MAY_W129	Mayfield Township	9	45.106267	-69.725472	Perennial	6.5	Unnamed perennial stream	Yes	250	1
S021	No associated wetland	Mayfield Township	9	45.095207	-69.729712	Perennial	0.5-5	Unnamed tributary of Rift Brook	No	250	0
S022	MAY_W155, MAY_W156, MAY_W157	Mayfield Township	10	45.103547	-69.701785	Perennial	7.5	Unnamed perennial stream	Yes	250	2
S023	No associated wetland	Mayfield Township	10	45.104509	-69.693014	Perennial	40	Bigelow Brook	Yes	250	2
S024	MAY_W161	Mayfield Township	10	45.105147	-69.688184	Perennial	8	Unnamed perennial stream	Yes	250	2
S025	MAY_W164	Mayfield Township	10	45.111006	-69.68572	Perennial	6.5	Unnamed tributary of Kingsbury Pond	Yes	250	1
S027	MAY_W170, MAY_W171, MAY_W176	Mayfield Township	11	45.126437	-69.683998	Perennial	6	Unnamed tributary of Kingsbury Pond	Yes	250	2

Stream ID	Associated Wetland ID	Town or Township	NR Map Number	Latitude	Longitude	Perennial or Intermittent	Approximate Bankfull Width (Ft.)	Stream Name	Within Designated Critical Habitat for Atlantic Salmon	Stream Buffer Width (Ft.)*	Number of Poles within 100 Ft. of Stream
S033	MAY_W189	Mayfield Township	14	45.141713	-69.693075	Perennial	5	Headwater of Bigelow Brook	Yes	125	0
S036	MAY_W208	Mayfield Township	14	45.152789	-69.67561	Perennial	4.5	Unnamed tributary of Kingsley Bog	No	25	0
S041	KING_W252, KING_W254	Kingsbury Plantation	16	45.176305	-69.652165	Perennial	10.5	Unnamed tributary of Bog Brook	Yes	250	0
S043	No associated wetland	Kingsbury Plantation	19	45.149692	-69.648223	Perennial	4.5	Unnamed tributary of Kingsbury Stream	Yes	250	1
S045	No associated wetland	Kingsbury Plantation	20	45.14918	-69.63325	Perennial	17.5	Bottle Brook	Yes	250	0
S046	No associated wetland	Kingsbury Plantation	20	45.150564	-69.626459	Perennial	3	Unnamed perennial stream	Yes	250	0
S047	No associated wetland	Kingsbury Plantation	21	45.151476	-69.621637	Perennial	2	Unnamed perennial stream	Yes	250	1
S048	No associated wetland	Kingsbury Plantation	21	45.152905	-69.615917	Perennial	6	Unnamed tributary of Kingsbury Stream	Yes	250	0
S049	No associated wetland	Kingsbury Plantation	21	45.157892	-69.608567	Perennial	6.5	Bear Brook	Yes	250	1
S050	No associated wetland	Kingsbury Plantation	21	45.161467	-69.602722	Perennial	20	Unnamed Tributary of Bear Brook	Yes	250	0

Stream ID	Associated Wetland ID	Town or Township	NR Map Number	Latitude	Longitude	Perennial or Intermittent	Approximate Bankfull Width (Ft.)	Stream Name	Within Designated Critical Habitat for Atlantic Salmon	Stream Buffer Width (Ft.)*	Number of Poles within 100 Ft. of Stream
S051	No associated wetland	Kingsbury Plantation	22	45.152711	-69.584255	Perennial	4	Unnamed Tributary of Bear Brook	Yes	250	2
S052	No associated wetland	Kingsbury Plantation	23	45.143298	-69.569581	Perennial	40	Kingsbury Stream	Yes	250	0
S056	KING_W354	Kingsbury Plantation	24	45.143299	-69.540067	Perennial	4	Unnamed perennial stream	Yes	100	0
S057	KING_W355	Kingsbury Plantation	25	45.144271	-69.530114	Perennial	4	Unnamed tributary of Carlton Stream	Yes	250	0
S058	PARK_W356	Kingsbury Plantation	25	45.144801	-69.52614	Perennial	7.5	Unnamed tributary of Carlton Stream	Yes	250	1
S060	PARK_W363	Parkman	26	45.143136	-69.506123	Perennial	6	Unnamed tributary of Carlton Stream	Yes	100	0
S062	PARK_W370	Parkman	26	45.141865	-69.488637	Perennial	37.5	Carlton Stream	Yes	250	1
S063	No associated wetland	Parkman	26	45.141913	-69.4873032	Perennial	11	Unnamed tributary of Carlton Stream	Yes	250	1
S065	No associated wetland	Parkman	26	45.147123	-69.484222	Perennial	7	Unnamed tributary of Carlton Stream	Yes	250	1
S066	ABB_W376	Parkman	27	45.152116	-69.476821	Perennial	8.5	Unnamed stream	Yes	250	1

Stream ID	Associated Wetland ID	Town or Township	NR Map Number	Latitude	Longitude	Perennial or Intermittent	Approximate Bankfull Width (Ft.)	Stream Name	Within Designated Critical Habitat for Atlantic Salmon	Stream Buffer Width (Ft.)*	Number of Poles within 100 Ft. of Stream
S069	ABB_W384, ABB_W385, ABB_W386	Abbot	27 & 28	45.157197	-69.458304	Perennial	6	Gales Brook	Yes	100	0
S070	ABB_W387	Abbot	28	45.154675	-69.457675	Perennial	5	Unnamed tributary of Gales Brook	Yes	250	1
S071	PARK_W396	Parkman	28	45.154075	-69.439012	Perennial	11	Unnamed tributary of Gales Brook	Yes	250	1
S074	ABB_W404	Abbott	29	45.16057	-69.410835	Perennial	3.5	Unnamed tributary of Piscataquis River	Yes	100	0
S075	PARK_W411	Parkman	30	45.160194	-69.390637	Perennial	9	Unnamed tributary of Piscataquis River	Yes	100	2

Perennial Stream Descriptions and Buffer Management

1. S007 – Unnamed Tributary of Rift Brook, Mayfield Township
HUC 10 Watershed: Austin Stream, 0103000302

General Landscape Information

Stream S007 occurs within a scrub shrub/forested wetland. The stream and associated wetlands have been heavily impacted by beaver (*Castor canadensis*) activity. The stream originates at a beaver impoundment and flows north and northeast through a box culvert under Route 16 in Mayfield.

Stream Characteristics

- Perennial stream impacted by beaver activity.
- Channel substrate is primarily bedrock and cobble with some gravel, sand and muck.
- Aquatic mosses and macro invertebrates occur throughout the stream channel.
- Small fish (1 to 3 inches) observed in stream.
- Physical characteristics (**Photo 1**):
    - Bankfull width is 6-15 feet (Average 10.5 feet);
    - Water depth in August of 2010 was 3-6 inches;
    - Low gradient riffle, run, pool sequence;
    - Overhanging vegetation present.

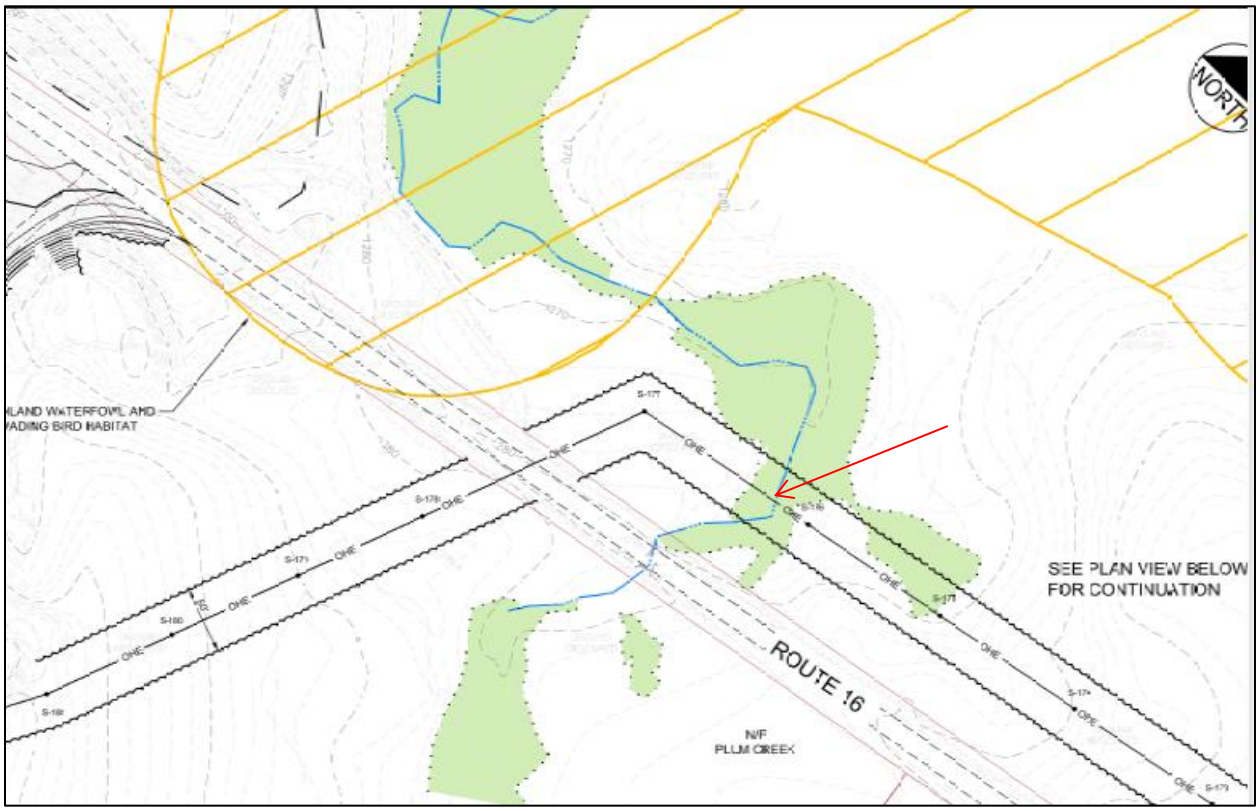
Associated Wetland

A scrub shrub wetland dominated by speckled alder (*Alnus incana*), balsam fir (*Abies balsamea*) and willow species (*Salix spp.)* borders the stream. The larger wetland beyond the stream banks is forested and dominated by balsam fir, yellow birch (*Betula alleghaniensis*), and northern white cedar (*Thuja occidentalis*). Floodplain soils are present in proximity to the stream. Beaver activity has impacted this area significantly.

Construction and Maintenance

The stream and associated wetland will be crossed by the aboveground portion of the electrical collector. One pole (structure) will be located within 100-feet of this stream. A 25-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer. Construction and maintenance access will occur via existing access from adjacent Route 16; therefore, there will be no temporary or permanent access road crossing of the stream or its associated wetland.

Photo 1: Perennial stream S007.
Stantec Consulting, October 1, 2012.



Proposed aboveground collector line crossing of stream S007.
From Sheet CL-1.01, Collector Line Plan prepared by DeLuca-Hoffman Associates, Inc.

2. S009 – Unnamed Perennial Stream, Mayfield Township
HUC 10 Watershed: Austin Stream, 0103000302

General Landscape Information

Stream 009 occurs within a forested/scrub shrub/emergent wetland. Within the project corridor, the low gradient stream flows north from Route 16. There is some evidence of disturbance from past harvesting activities within the associated wetland and adjacent uplands.

Stream Characteristics

- Perennial stream occurring in a forested wetland.
- Channel substrate is a combination of cobble, gravel, sand and muck.
- Silt is embedded at 25 percent.
- Aquatic mosses and macro-invertebrates occur throughout the stream channel.
- Physical characteristics (**Photo 2**):
    - Bankfull width is 3-8 feet (Average 5.5 feet);
    - Water depth in October of 2012 was 3-18 inches;
    - Low gradient with only riffles;
    - Overhanging vegetation creates 100 percent cover.

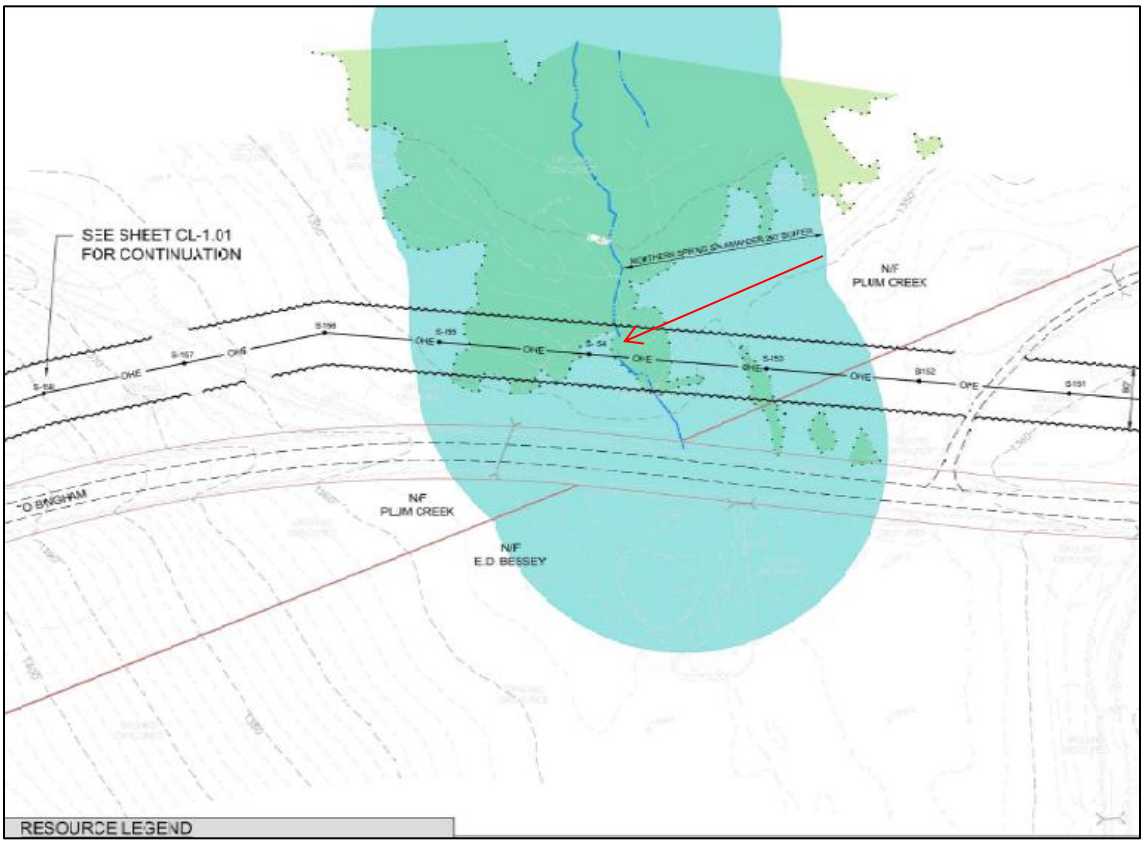
Associated Wetland

The forested/scrub shrub/emergent wetland associated with S009 has areas of inundation and soils with 8-10 inches of organic matter on the surface. The dominant trees within the wetland include balsam fir, yellow birch, northern white cedar, and red maple (*Acer rubrum)*. Balsam fir, speckled alder, sugar maple (*Acer saccharum*), and black ash (*Fraxinus nigra*) occur within the shrub layer. Herbaceous vegetation includes sensitive fern (*Onoclea sensibilis*), cinnamon fern (*Osmunda cinnamomea*), three-seed sedge (*Carex trisperma*), and fowl manna grass (*Glyceria striata*).

Construction and Maintenance

The stream and associated wetland will be crossed by the aboveground portion of the electrical collector. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders (*Gyrinophilus porphyriticus*), and a 250-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer. Construction and maintenance access will occur via existing access from adjacent Route 16; therefore, there will be no temporary or permanent access road crossing of the stream or its associated wetland.

Photo 2: Perennial stream S009.
Stantec Consulting, October 1, 2012.



Proposed aboveground collector line crossing of stream S009.
From Sheet CL-1.02, Collector Line Plan prepared by DeLuca-Hoffman Associates, Inc.

3. S010 – Unnamed Perennial Stream, Mayfield Township
HUC 10 Watershed: Austin Stream, 0103000302

General Landscape Information

Stream S010 occurs within forested uplands within the project corridor and within a forested wetland north of the project corridor. It originates from a ditch and culvert along Route 16. The stream flows north and northeast before dissipating within the forested wetland. There is some evidence of disturbance from past harvesting activities within the wetland and adjacent uplands. This stream likely sees heavy flow from the road during high rain events.

Stream Characteristics

- Perennial stream occurring in forested upland and a forested wetland.
- Channel substrate is primarily gravel with silt embedded at 50 percent.
- Aquatic mosses and macro invertebrates occur throughout the stream channel.
- Physical characteristics (**Photo 3**):
    - Bankfull width is 4-6 feet (Average 5 feet) and depth is 30 inches;
    - Water depth in October of 2012 was 2-4 inches;
    - Low gradient with riffles dominating the flow structure;
    - Canopy cover is 90 percent.

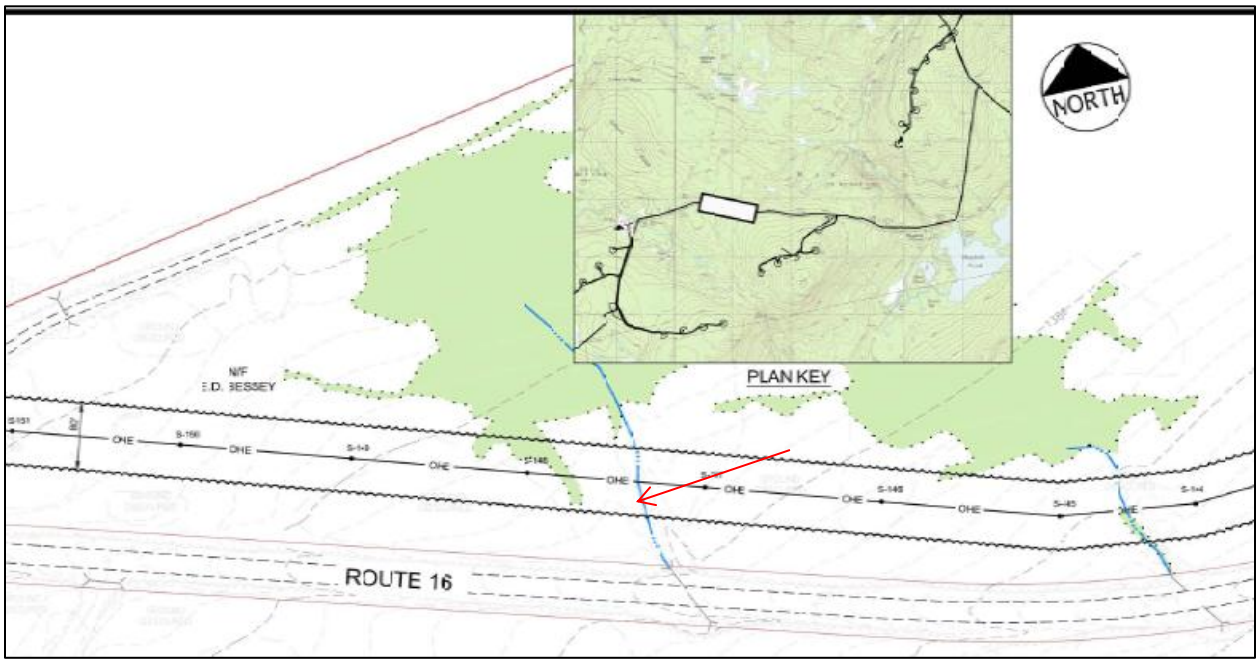
Associated Wetland

The associated forested wetland is characterized by balsam fir, yellow birch, red maple, and black ash in the canopy. The shrubs that occur here are speckled alder, wild raisin (*Viburnum nudum*), red maple, and balsam fir. The herbaceous layer contains bluejoint (*Calamagrostis canadensis*), cinnamon fern, sensitive fern, cottongrass bulrush (*Scirpus cyperinus*) and fowl manna grass. Soils are characterized by a thick organic layer over depleted mineral soils. Areas closer to Route 16 have a higher occurrence of disturbed soils. Observed hydrology includes soil saturation to the surface and inundation in ruts created by skidder trails.

Construction and Maintenance

The stream and associated wetland will be crossed by the aboveground portion of the electrical collector. One pole (structure) will be located within 100 feet of this stream. A 25-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer. Construction and maintenance access will occur via existing access from adjacent Route 16; therefore, there will be no temporary or permanent access road crossing of the stream or its associated wetland.

Photo 3: Perennial Stream S010
Stantec Consulting, October 1, 2012



Proposed aboveground collector line crossing of stream S010.
From Sheet CL-1.02, Collector Line Plan prepared by DeLuca-Hoffman Associates, Inc.

4. S014 – Unnamed Perennial Stream, Mayfield Township
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S014 occurs within a narrow but clearly defined valley. Within the project corridor, the stream occurs within deciduous forested uplands that show relatively little disturbance from harvesting. North of the project corridor, the stream is associated with two small forested wetlands. The stream flows north from Route 16 and has two small forested wetlands occurring along the banks.

Stream Characteristics

- Perennial stream occurring in a forested upland.
- Channel substrate is primarily sand, gravel and cobble.
- Macro-invertebrates are present.
- Moderate erosion characterized by vertical to undercut banks.
- Physical characteristics (**Photo 4**):
    - Bankfull width is 6-7 feet (Average 6.5 feet);
    - Water depth in October 2012 was 4-12 inches;
    - Moderate gradient with riffles and occasional pools.

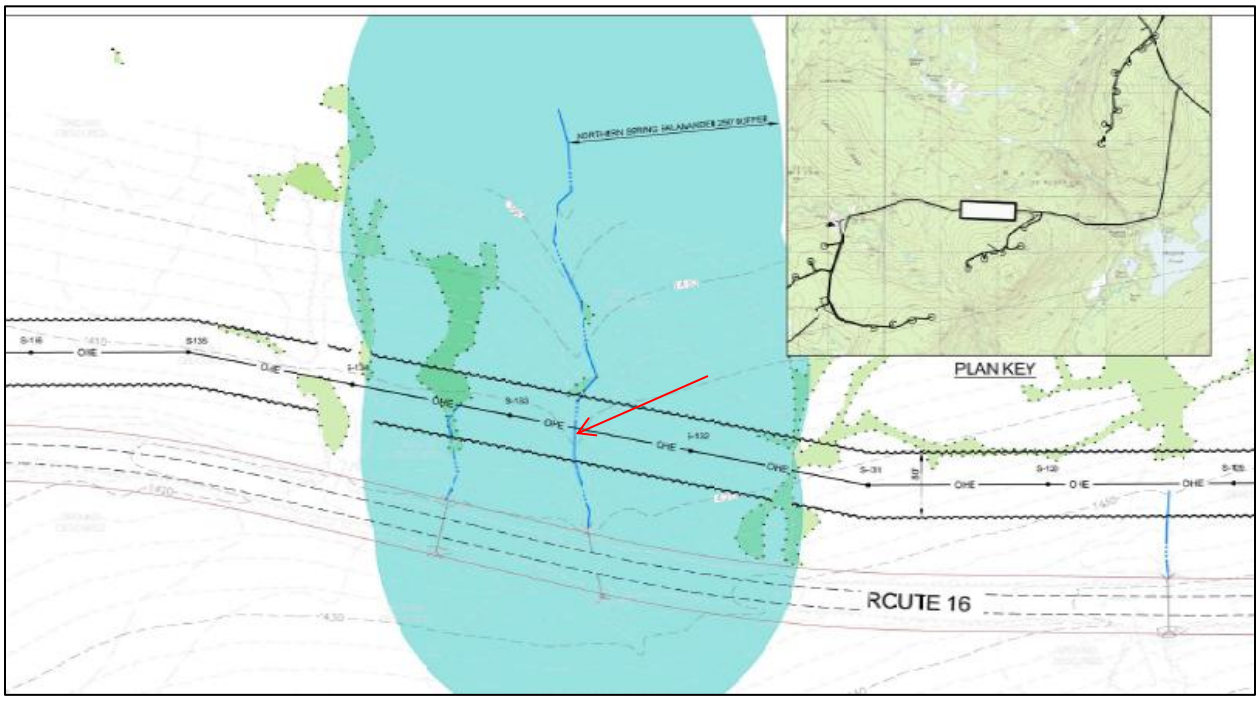
Associated Wetland

The two small forested wetlands associated with this stream are both characterized by yellow birch in the canopy and red maple, green ash (*Fraxinus pennsylvanica*), and yellow birch within the sapling/shrub layer. Herbaceous vegetation includes sensitive fern, fowl manna grass, cinnamon fern, and woodland horsetail (*Equisetum sylvaticum*). The wetlands have thick organic soils that are frequently flooded by the stream.

Construction and Maintenance

The stream and associated wetland will be crossed by the aboveground portion of the electrical collector. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer. Construction and maintenance access will occur via existing access from adjacent Route 16; therefore, there will be no temporary or permanent access road crossing of the stream or its associated wetland.

Photo 4: Perennial stream S014.
Stantec Consulting, October 2, 2012.



Proposed aboveground collector line crossing of stream S014.
From Sheet CL-1.02, Collector Line Plan prepared by DeLuca-Hoffman Associates, Inc.

5. S021 – Unnamed Tributary of Rift Brook, Mayfield Township
HUC 10 Watershed: Austin Stream, 0103000302

General Landscape Information

Stream S021 occurs on a moderate slope within deciduous forested uplands. The stream has two small associated wetlands located south of the project area. Surveys documented northern spring salamanders within this stream. The stream generally flows northeast to southwest.

Stream Characteristics

- Perennial stream occurs within a forested upland.
- Channel substrate is primarily rock and cobble with gravel and sand and embedded silt.
- Aquatic invertebrates and aquatic fauna observed.
- Physical characteristics (**Photo 5**):
    - Bankfull width is 0.5-5 feet;
    - Water depth in September 2011 was 3-6 inches;
    - Low to moderate gradient with riffles and pools.

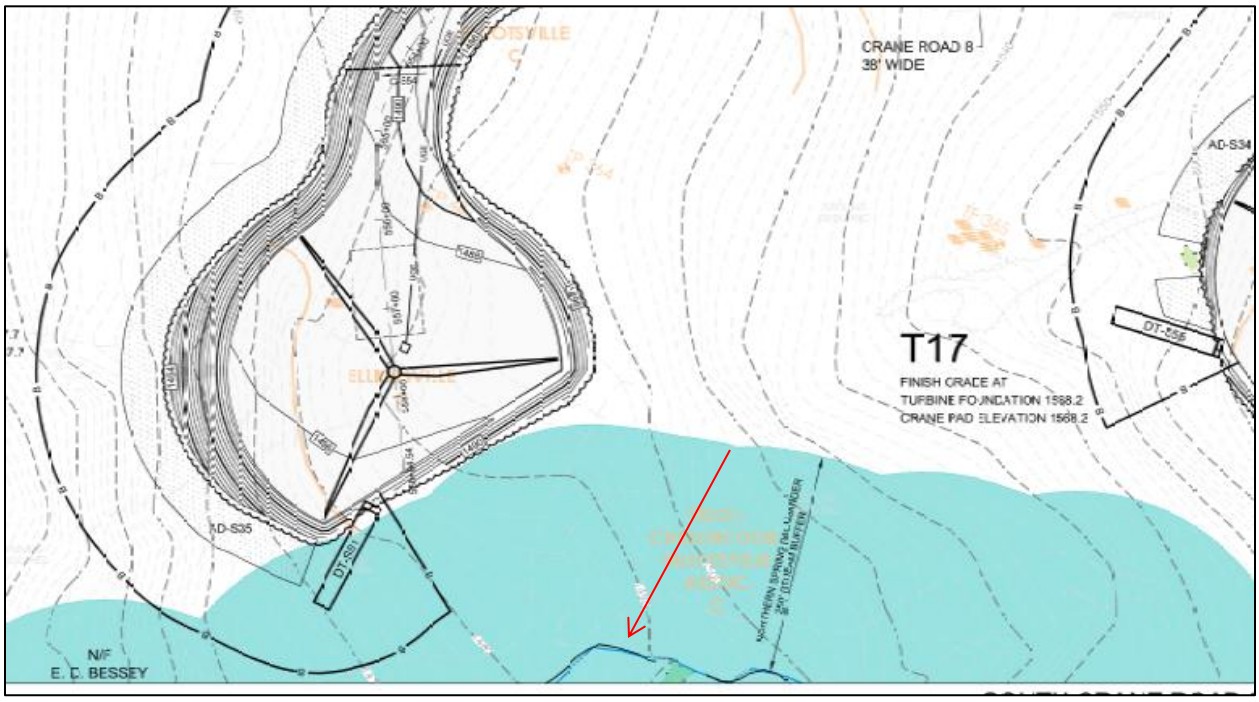
Associated Wetland

The small forested wetland associated with this stream and located southeast of the project area has been disturbed by a recreational vehicle trail. The trees that occur in this wetland are red maple, red spruce (*Picea rubens*), and yellow birch. Balsam fir, green ash, red maple, and yellow birch dominate the shrub layer, and nodding sedge (*Carex gynandra*) and melic manna grass (*Glyceria melicaria*) dominate the herbaceous layer. Soils are sandy and somewhat disturbed.

Construction and Maintenance

There is no proposed clearing or impacts within 250 feet of this stream.

Photo 5: Perennial stream S021
Stantec Consulting, July 27, 2010.



Proposed turbines in relation to stream S021.
From Sheet C-S1.23, Crane Road 8 Plan and Profile prepared by DeLuca-Hoffman Associates, Inc.

6. S022 – Unnamed Perennial Stream, Mayfield Township
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S022 occurs on a moderate slope within a coniferous-dominated forest. Within the project corridor, the stream is associated with three principally emergent wetlands. There are other associated wetlands and intermittent tributaries located north and south of the project corridor. The stream flows northwest to southeast toward Route 16.

Stream Characteristics

- Perennial stream with several associated wetlands.
- Channel substrate is primarily cobble and boulder.
- Stream is fed by groundwater and smaller tributaries.
- Physical characteristics (**Photo 6**):
    - Bankfull width is 5-10 feet (Average 7.5 feet);
    - Well-defined banks;
    - Moderate gradient.

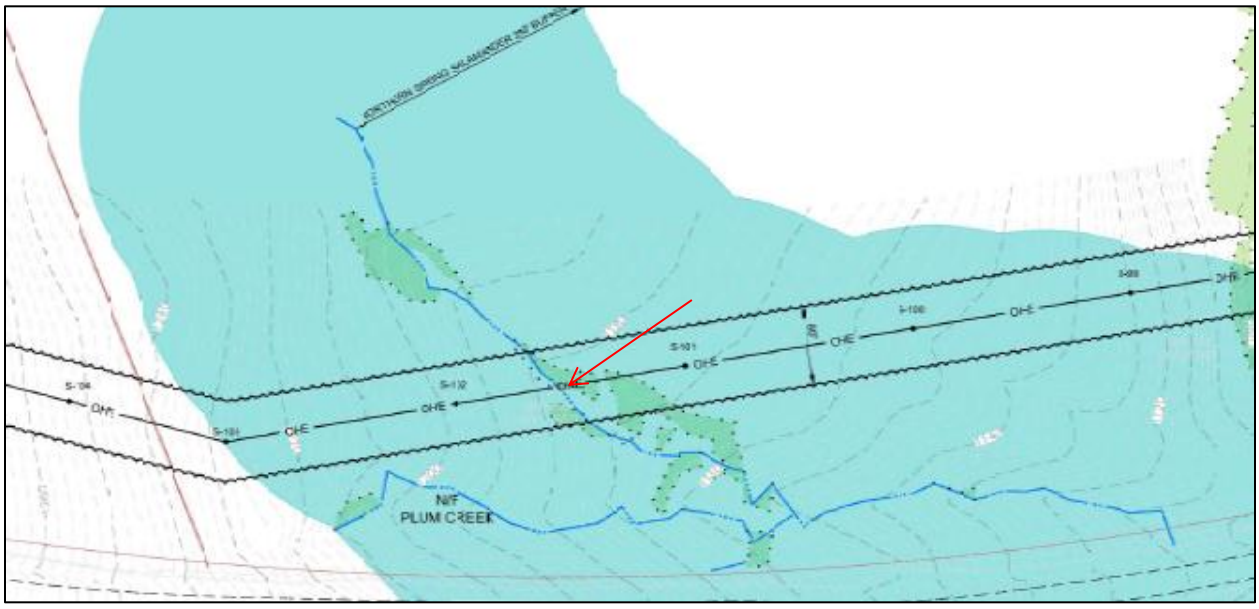
Associated Wetland

The emergent wetlands are generally characterized by melic manna grass, sensitive fern, fringed sedge (*Carex crinita*), and cinnamon fern. A few balsam fir saplings also occur within these wetlands. The scrub-shrub wetland is dominated by balsam fir with fowl manna grass, melic manna grass, and fringed sedge in the herbaceous layer. The soils are variable and include layers of depleted mucky sand with organic coating.

Construction and Maintenance

The stream and associated wetland will be crossed by the aboveground portion of the electrical collector. Two poles (structures) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the poles (structures) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the poles to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer. Construction and maintenance access will occur via existing access from adjacent Route 16; therefore, there will be no temporary or permanent access road crossing of the stream or its associated wetland.

Photo 6: Perennial stream S022.
Stantec Consulting, October 3, 2012.



Proposed aboveground collector line crossing of stream S022.
From Sheet CL-1.03, Collector Line Plan prepared by DeLuca-Hoffman Associates, Inc.

7. S023 – Bigelow Brook, Mayfield Township
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Within the project corridor, stream S023, Bigelow Brook, is relatively low gradient. The surrounding landscape is generally mixed second growth forests with some disturbance from past timber harvesting. There are no wetlands directly associated with the stream in the vicinity of the project corridor. The stream flows northwest to southeast toward Route 16 and through an existing culvert under the road. There is an existing fish passage in the culvert under Route 16.

Stream Characteristics

- Perennial stream that occurs within a forested upland.
- Substrate consists of boulders, slate, cobble, gravel, and sand.
- Aquatic invertebrates and brook trout (*Salvelinus fontinalis*) are present.
- Physical characteristics (**Photo 7**):
    - Bankfull width is 30-50 feet (Average 40 feet);
    - Water depth in October of 2012 was 5-10 feet;
    - Low to moderate gradient with riffles, runs and pools.

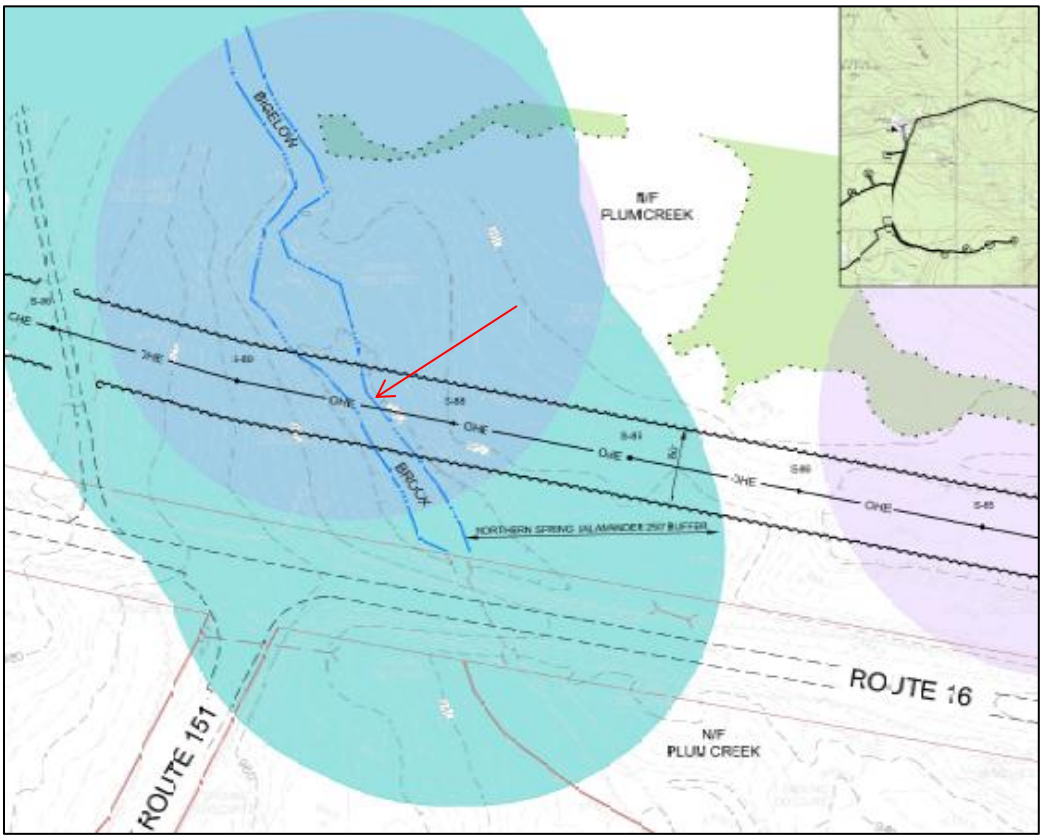
Associated Wetland

There are no wetlands directly associated with this stream.

Construction and Maintenance

The stream will be crossed by the aboveground portion of the electrical collector. Two poles (structures) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer. Construction and maintenance access will occur via existing access from adjacent Route 16; therefore, there will be no temporary or permanent access road crossing of the stream or its associated wetland.

Photo 7: Perennial stream S023.
Stantec Consulting, October 4, 2012.



Proposed aboveground collector line crossing of stream S023.
From Sheet CL-1.04, Collector Line Plan prepared by DeLuca-Hoffman Associates, Inc.

8. S024 – Unnamed Perennial Stream, Mayfield Township
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Perennial stream S024 originates in a forested/scrub shrub wetland located north of the project corridor and flows northwest to southeast toward Mayfield and Kingsbury ponds. This low gradient stream occurs in a deep topographic drainage surrounded by mixed second growth forest. There is one emergent wetland associated with the stream within the project collector corridor.

Stream Characteristics

- Perennial stream occurs within a forested setting.
- Channel substrate consists of gravel and cobble.
- No aquatic invertebrates observed.
- Physical characteristics (**Photo 8**):
    - Bankfull width is 8 feet;
    - Water depth in October of 2012 was 2-4 feet:
    - Undercut banks and drift deposits present.

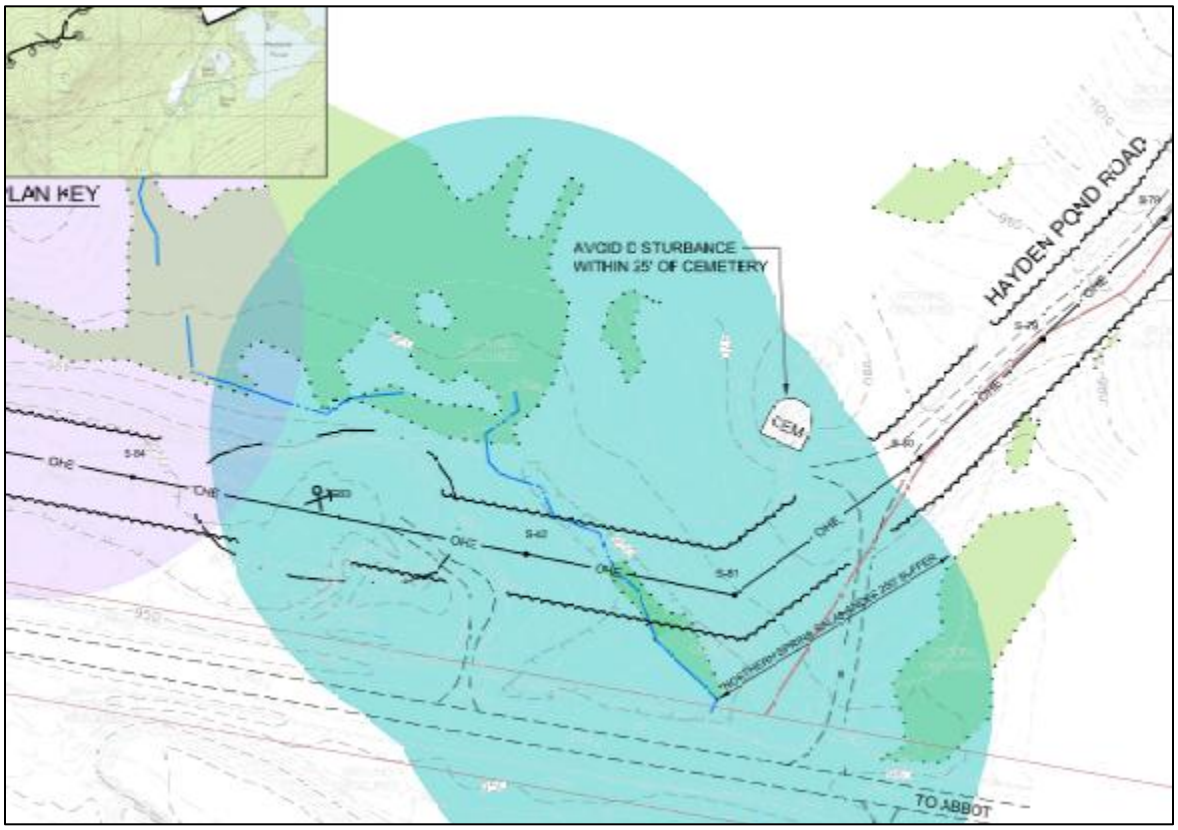
Associated Wetland

The emergent wetland that occurs along the eastern bank of the stream is characterized by American hog-peanut (*Amphicarpaea bracteata*), jewelweed (*Impatiens capensis*), American golden-saxifrage (*Chrysosplenium americanum*), sensitive fern, and fowl manna grass. Soils consist of dark alluvial deposits in the top 12 inches. Drift deposits from S024 are present within the wetland.

Construction and Maintenance

The stream and associated wetland will be crossed by the aboveground portion of the electrical collector. Two poles (structures) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the poles (structures) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the poles to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer. Construction and maintenance access will occur via existing access from adjacent Route 16; therefore, there will be no temporary or permanent access road crossing of the stream or its associated wetland.

Photo 8: Perennial stream S024.
Stantec Consulting, October 4, 2012.



Proposed aboveground collector line crossing of stream S024.
From Sheet CL-1.04, Collector Line Plan prepared by DeLuca-Hoffman Associates, Inc.

9. S025 – Unnamed Tributary to Kingsbury Pond, Mayfield Township
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Perennial stream S025 flows northwest to southeast through deciduous forest that has some disturbance from past timber harvesting. A recreational vehicle trail crosses the stream next to an old stone bridge that has washed out. This trail causes some disturbance within the stream channel. Within the project corridor, there is one small forested wetland associated with the stream, and there are several other small stream associated wetlands located west and east of the project corridor.

Stream Characteristics

- Perennial stream occurring in a deciduous forest.
- Channel substrate consists of boulders, cobble, gravel, and woody debris.
- Aquatic mosses and brook trout observed.
- Physical characteristics (**Photo 9**):
    - Bankfull width is 5-8 feet (Average 6.5 feet);
    - Water depth in October of 2012 was 3-12 inches;
    - Low to moderate gradient with riffles and pools.

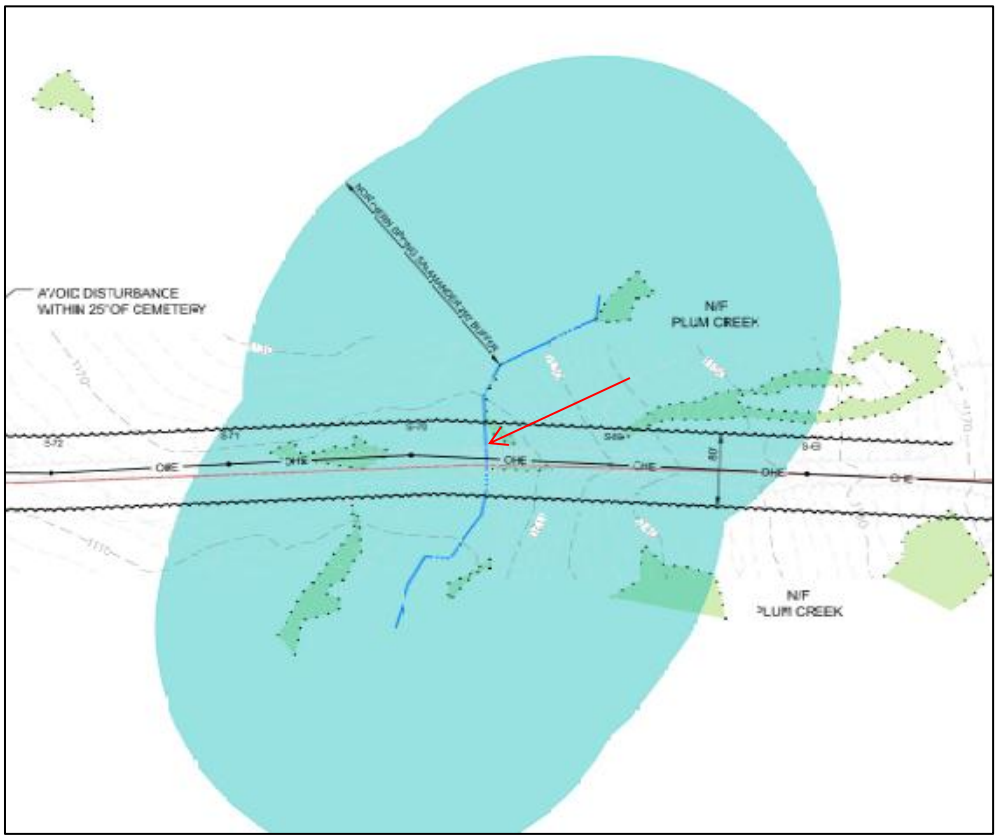
Associated Wetland

The forested wetland associated with the stream is dominated by green ash, red maple, and balsam fir in the canopy. Yellow birch is present in the sapling/shrub layer. Melic manna grass, sensitive fern, bluejoint, tall meadow-rue (*Thalictrum pubescens*), and nodding sedge are present in the herbaceous layer. Soils have 10-12 inches of organics over a depleted matrix.

Construction and Maintenance

The stream and associated wetland will be crossed by the aboveground portion of the electrical collector. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer. Construction and maintenance access will occur via existing access roads; therefore, there will be no temporary or permanent access road crossing of the stream or its associated wetland.

Photo 9: Perennial stream S025.
Stantec Consulting, October 3, 2012.



Proposed aboveground collector line crossing of stream S025.
From Sheet CL-1.04, Collector Line Plan prepared by DeLuca-Hoffman Associates, Inc.

10. S027 – Unnamed Tributary of Kingsbury Pond, Mayfield Township
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S027 flows generally southeast through moderately sloping mixed second growth forest. There are three stream associated wetlands and an intermittent tributary to stream S027 within the project corridor.

Stream Characteristics

- Perennial stream occurring in a mixed forest.
- Channel substrate consists of cobble, boulder, bedrock and gravel.
- Aquatic invertebrates and mosses are present.
- Physical characteristics (**Photos 10 and 11**):
    - Bankfull width is 5-7 feet (Average 6 feet);
    - Water depth in October of 2012 was 2-10 inches;
    - Moderate gradient dominated by riffles with some small pools.

Associated Wetland

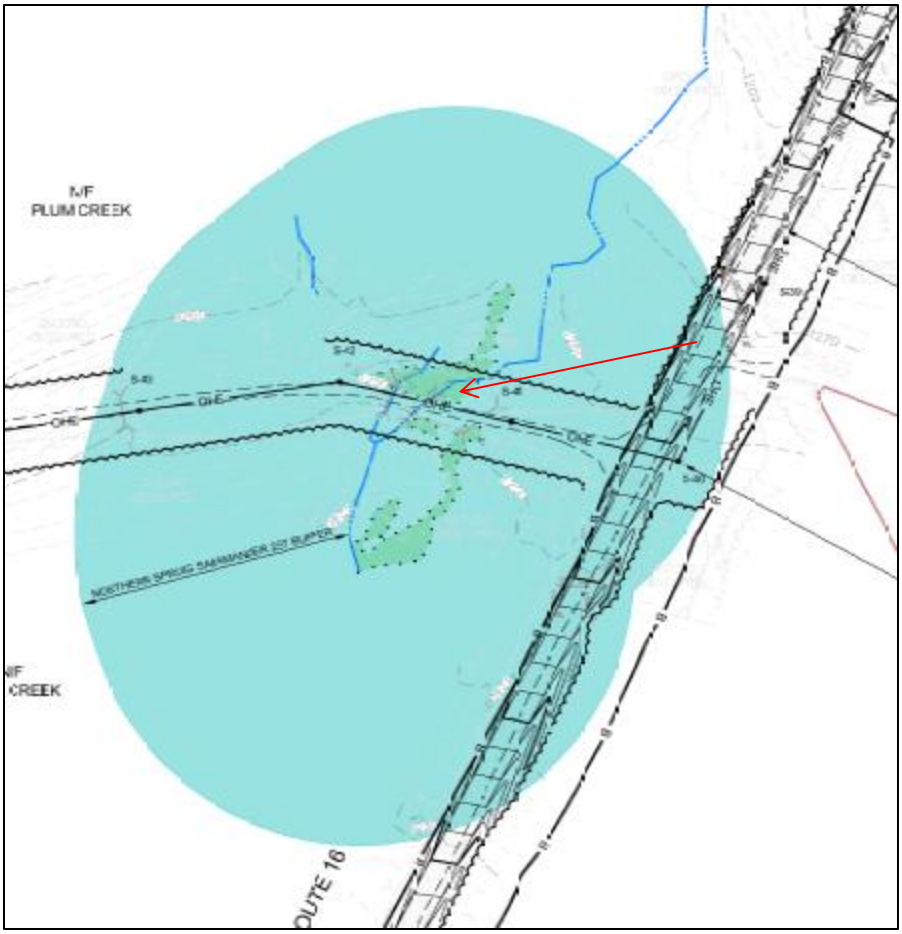
The wetlands associated with stream S027 are forested/emergent and scrub-shrub/emergent communities that show some evidence of disturbance from past timber harvesting. Trees in the forested component include yellow birch, green ash, red maple, and balsam fir. The shrub layer includes speckled alder, yellow birch, black ash, and bebb's willow (*Salix bebbiana*). The emergent areas, which occur mostly in old skidder trails, are characterized by bluejoint, fowl manna grass, melic manna grass, wrinkle-leaf goldenrod (*Solidago rugosa*), and lady fern (*Athyrium filix-femina*). Soils are variable and include alluvial deposits over a depleted matrix and dark horizon over a depleted matrix.

Construction and Maintenance

The stream and associated wetland will be crossed by the aboveground portion of the electrical collector. In addition, this stream is crossed by an existing logging road and flows through a 24-inch culvert. No improvements are proposed for this road or culvert. Two poles (structures) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and (exclusive of existing roads and proposed poles) a 250-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. With regard to the poles (structures) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the poles to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 10: Perennial stream S027.
Stantec Consulting, September 28, 2010.

Photo 11: Perennial stream S027.
Stantec Consulting, October 3, 2012.



Proposed aboveground collector line crossing of stream S026.
From Sheet CL-1.05, Collector Line Plan prepared by DeLuca-Hoffman Associates, Inc.

11. S033 – Headwater of Bigelow Brook, Mayfield Township
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S033 is a moderate gradient stream that flows southwest from a scrub-shrub wetland. The surrounding mixed forest is disturbed from previous timber harvesting.

Stream Characteristics

- Perennial stream occurring in a mixed forest.
- Channel substrate consists of gravel, cobble, and boulder.
- Aquatic fauna observed.
- Physical characteristics (**Photo 12**):
    - Bankfull width is 5 feet;
    - Very low flow in September of 2012;
    - Moderate slope.

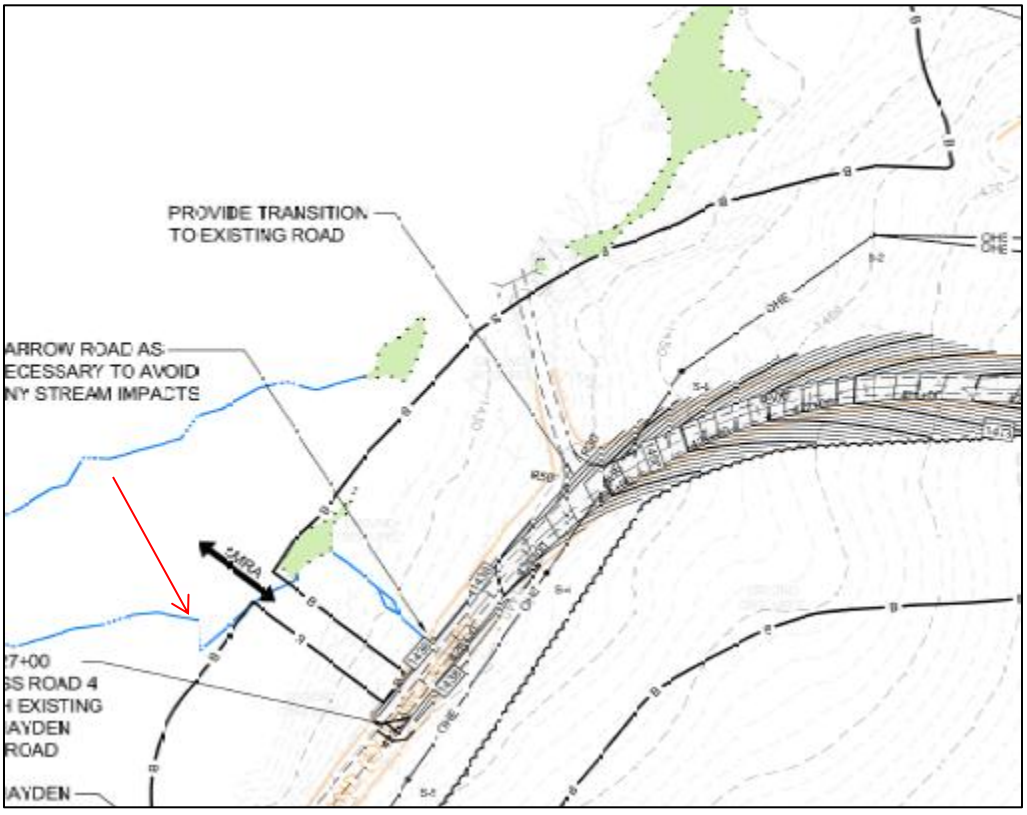
Associated Wetland

The scrub-shrub wetland that is associated with this stream is characterized by yellow birch and beaked hazelnut (*Corylus cornuta*) in the shrub layer and melic manna grass, and jewelweed in the herbaceous layer. This wetland appears to be a groundwater seep that contributes water to the stream.

Construction and Maintenance

There are no proposed impacts to this stream or associated wetland. An existing gravel access road and the proposed aboveground collector line are approximately 125 feet east of the stream.

Photo 12: Perennial stream S033
Stantec Consulting, September 25, 2012



Proposed aboveground collector line in proximity to stream S033.
From Sheet C-N1.15, Crane Road 4 Plan and Profile prepared by DeLuca-Hoffman Associates, Inc.

12. S036 – Unnamed Tributary of Kingsley Bog, Mayfield Township
HUC 10 Watershed: Austin Stream, 0103000302

General Landscape Information

Stream S036 occurs within a large forested/scrub-shrub/emergent wetland complex. This area has been heavily disturbed by past timber harvesting. The stream generally flows northwest and is likely fed by groundwater from the wetland complex.

Stream Characteristics

- Perennial stream occurring in a large wetland complex.
- Channel substrate consists of bedrock, cobble gravel, and mostly muck.
- Aquatic vegetation and invertebrates are present.
- Canopy cover is 100 percent.
- Physical characteristics (**Photo 13**):
    - Bankfull width is 4-5 feet (Average 4.5 feet);
    - The flow is predominated riffles and runs with a few pools and glides.

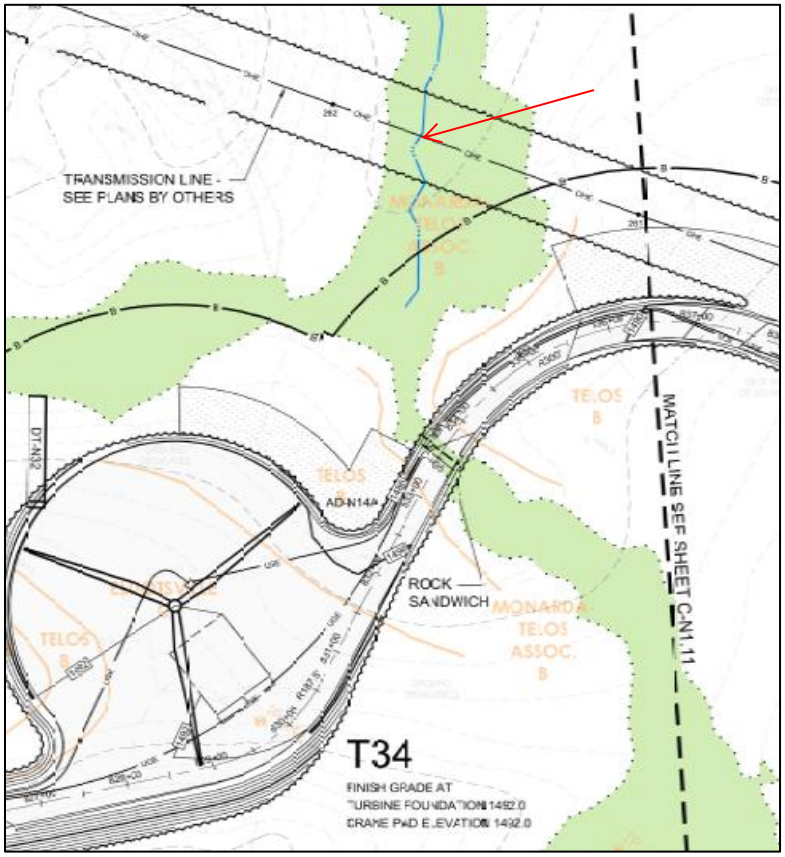
Associated Wetland

The associated wetland complex has been disturbed by timber harvesting. The canopy includes black ash, yellow birch, balsam fir, and red maple. The shrub layer includes speckled alder, steeplebush (*Spiraea tomentosa*), and yellow birch. Emergent vegetation is dominated by fowl manna grass, melic manna grass, sensitive fern, jewelweed, nodding sedge, and lamp rush (*Juncus effusus*). The soil throughout the wetland is generally a shallow organic horizon over a depleted matrix or glacial till.

Construction and Maintenance

The stream will be crossed by the electrical generator lead, and a permanent access road will cross the stream-associated wetland upslope of the stream. A 25-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 13: Perennial stream S036
Stantec Consulting, July 14, 2010



Proposed aboveground collector line crossing of stream S036.
From Sheet C-N1.10, Crane Road 11 Plan and Profile prepared by DeLuca-Hoffman Associates, Inc.

13. S041 – Unnamed Tributary of Bog Brook, Kingsbury Plantation HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S041 is a perennial stream that flows north out of a beaver impoundment. The stream occurs within a deciduous forested upland and forested wetlands. Within its headwater wetland, this stream is relatively low gradient, but it becomes moderate to high gradient after it exits this wetland. This area has been disturbed by beaver activity and timber harvesting. The stream was previously crossed by an existing gravel road, but the road washed out when the upstream beaver dam failed.

Stream Characteristics

- Perennial stream that flows out of beaver impoundment.
- Channel substrate consists of rock, cobble, gravel, and sand.
- Aquatic mosses, invertebrates, dusky salamanders (*Desmoganthus fuscus*), and two-lined salamanders (*Eurycea bislineata*) are present.
- Canopy cover is 75 percent.
- Physical characteristics (**Photo 14**):
    - Bankfull width is 8-12 feet (Average 10 feet)
    - Water depth in October of 2012 was 3-5 inches;
    - Flow structure is dominated by riffles with a few pools;
    - Low to high gradient.

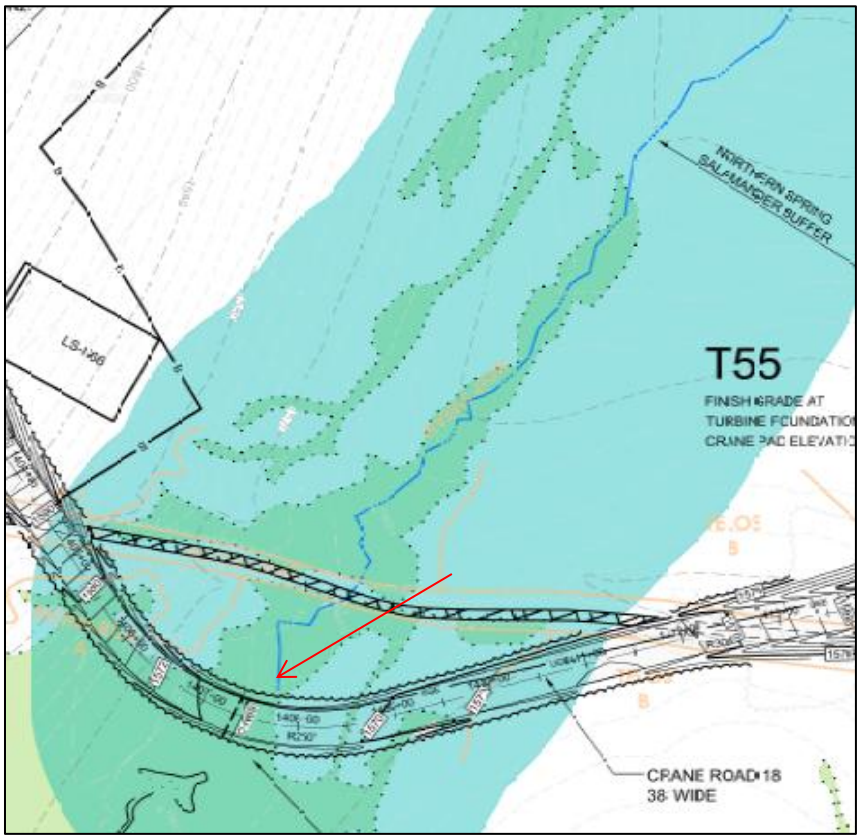
Associated Wetland

The forested headwater wetland has been altered by beaver activity and construction of a gravel access road. A second forested wetland occurs to the northwest of the headwater wetland. It is likely that these two wetlands formed a single resource prior to construction of the gravel access road. The canopy of these wetlands includes red maple, red spruce, yellow birch, and green ash. The shrub layer includes speckled alder and the above mentioned tree species. The herbaceous vegetation in these wetlands includes sensitive fern, cinnamon fern, manna grass, nodding sedge, and tall meadow-rue. Soils have either an organic or dark mineral horizon over depleted sandy loam.

Construction and Maintenance

The proposed access road will cross the headwater wetland above the stream, and there will be no direct impact to the stream. A 250-foot buffer will be maintained on the stream outside of the proposed access road crossing. Former access road that was washed out after the failure of an upstream beaver dam will be revegetated.

Photo 14: Perennial stream S041.
Stantec Consulting, September 13, 2011.



Proposed access road in proximity to stream S041.
From Sheet C-N1.27, Crane Road 18 Plan and Profile prepared by DeLuca-Hoffman Associates, Inc.

14. S043 – Unnamed Tributary of Kingsbury Stream, Kingsbury Plantation HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S043 is an unnamed perennial tributary to Kingsbury Stream. This stream flows southeast to Route 16 and converges with Kingsbury Stream approximately two miles southeast of the proposed project corridor. The stream is located in a steep valley and is bordered by upland hardwood forest that is dominated by American beech (*Fagus grandifolia*), sugar maple, and yellow birch. Much of the area surrounding the stream has been disturbed by recent timber harvesting activities. The stream is crossed by an old, unmaintained logging road near the proposed generator lead centerline. There is no existing culvert or bridge associated with this crossing.

Stream Characteristics

- Perennial stream in steep valley.
- Channel substrate is primarily boulder, cobble, and gravel.
- Aquatic mosses occur throughout the stream channel.
- Physical characteristics (**Photo 15**):
    - Bankfull width 3-6 feet (Average 4.5 feet);
    - Water depth in November of 2010 was 1-6 inches;
    - Moderate gradient riffle complexes;
    - Overhanging hardwood trees present.

Associated Wetland

There are no stream-associated wetlands within the surveyed limits of the proposed generator lead corridor.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. There will be no direct impact to the stream channel. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 15: Perennial stream S043.
Stantec Consulting, November 10, 2010.

Proposed generator lead crossing of stream S043.
From Figure 19, Delineated Natural Resource Map by Stantec Consulting.

15. S045 – Bottle Brook, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S045, Bottle Brook, is a perennial stream and tributary to Kingsbury Stream. This stream flows southeast to Route 16 and converges with Kingsbury Stream approximately 1.5 miles southeast of the proposed project corridor. The stream is located in a small valley and is bordered by mixed upland forest dominated by American beech, sugar maple, and eastern hemlock (*Tsuga canadensis*). Much of the area surrounding the stream has been disturbed by recent timber harvesting activities.

Stream Characteristics

- Perennial stream in small valley.
- Channel substrate is primarily boulder, cobble, and gravel.
- Aquatic mosses and macro- invertebrates occur throughout the stream channel.
- Physical characteristics (**Photo 16**):
    - Bankfull width 15-20 feet (Average 17.5 feet);
    - Water depth in November of 2010 was 6-12 inches;
    - Low gradient riffle and run sequences;
    - Overhanging mixed forest trees present.

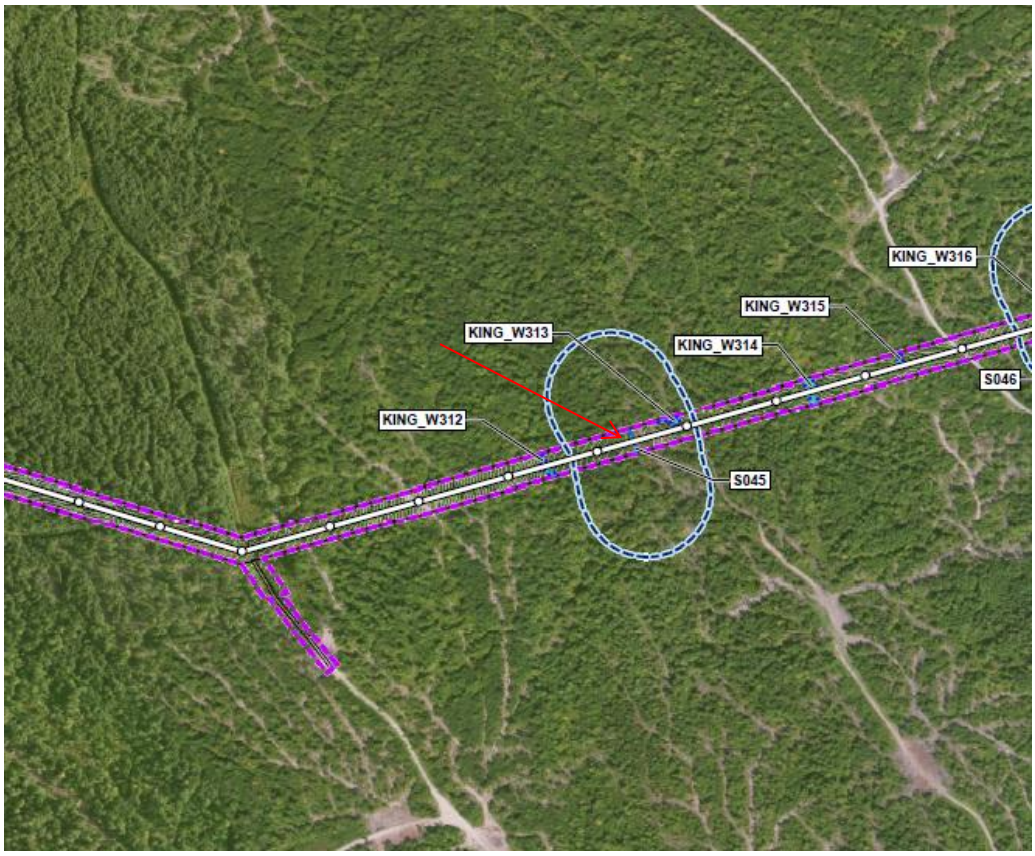
Associated Wetland

There are no wetlands associated with Bottle Brook within the surveyed limits of the proposed generator lead.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. There will be no direct impact to the stream channel. This stream has the potential to contain northern spring salamanders, and a 250-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 16: Perennial stream S045.
Stantec Consulting, November 10, 2010.



Proposed generator lead crossing of stream S045.
From Figure 20, Delineated Natural Resource Map by Stantec Consulting.

16. S046 – Unnamed Perennial Stream, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S046 is an unnamed perennial stream that flows south towards Route 16. The stream is bordered by upland hardwood forest that is dominated by American beech, sugar maple, and yellow birch. A forested wetland is located east of the stream, and an emergent wetland is present to the west. These wetlands do not directly abut the stream. The area surrounding the stream has been disturbed by recent timber harvesting activities.

Stream Characteristics

- Perennial stream.
- Channel substrate is primarily boulder, cobble, gravel, and sand.
- Aquatic mosses and macro-invertebrates occur throughout the stream channel.
- Physical characteristics (**Photo 17**):
    - Bankfull width 2-4 feet (Average 3 feet);
    - Water depth in November of 2010 was 2-5 inches;
    - Low gradient riffle and small plunge sequences;
    - Overhanging hardwood trees present.

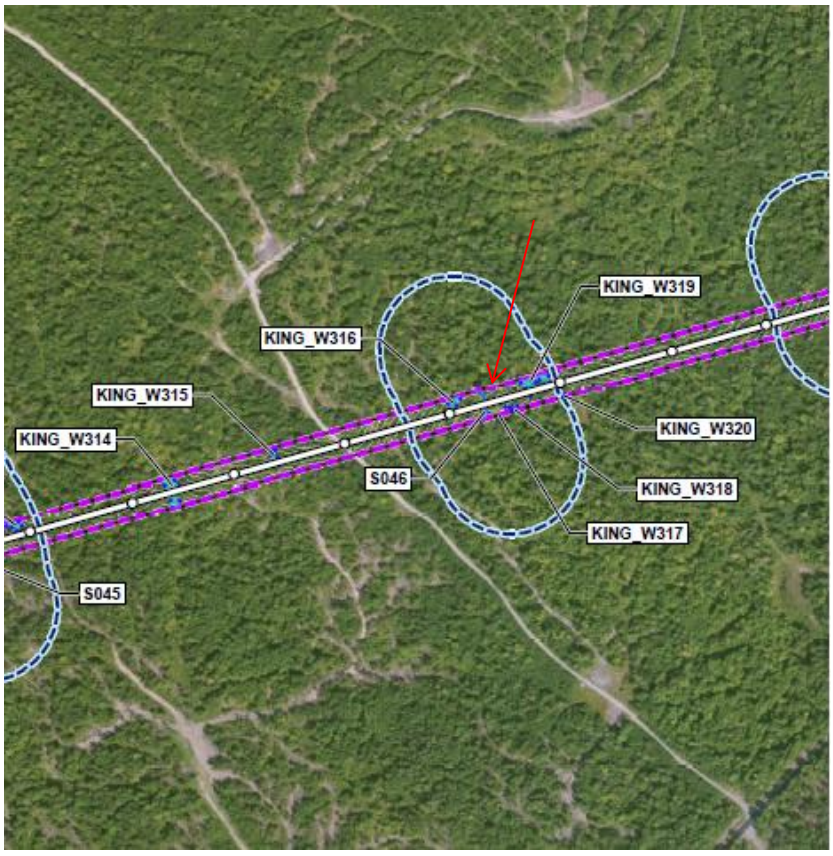
Associated Wetland

A forested wetland dominated by yellow birch, balsam fir, and eastern hemlock is located east of the stream but does not directly abut the stream. An emergent wetland dominated by fowl manna grass, melic manna grass, and cottongrass bulrush is located west of the stream, but does not directly abut the stream. Both wetlands have been disturbed by recent timber harvesting activities.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. There will be no direct impact to the stream channel. This stream has the potential to contain northern spring salamanders, and a 250-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 17: Perennial stream S046.
Stantec Consulting, November 10, 2010.



Proposed generator lead crossing of stream S046.
From Figure 20, Delineated Natural Resource Map by Stantec Consulting.

17. S047 – Unnamed Perennial Stream, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S047 is an unnamed perennial stream that flows south toward Route 16 and is likely a tributary of Kingsbury Stream. The stream is bordered by upland hardwood forest that is dominated by American beech, sugar maple, and yellow birch. A forested wetland is present to the east of the stream but does not directly abut the stream. The area surrounding the stream has been disturbed by recent timber harvesting activities.

Stream Characteristics

- Perennial stream.
- Channel substrate is primarily boulder, cobble, and gravel.
- Aquatic mosses occur throughout the stream channel.
- Physical characteristics (**Photo 18**):
    - Bankfull width 1.5-2.5 feet (Average 2 feet);
    - Water depth in November of 2010 was 2-20 inches;
    - Low gradient riffle and small plunge sequences;
    - Overhanging hardwood trees present.

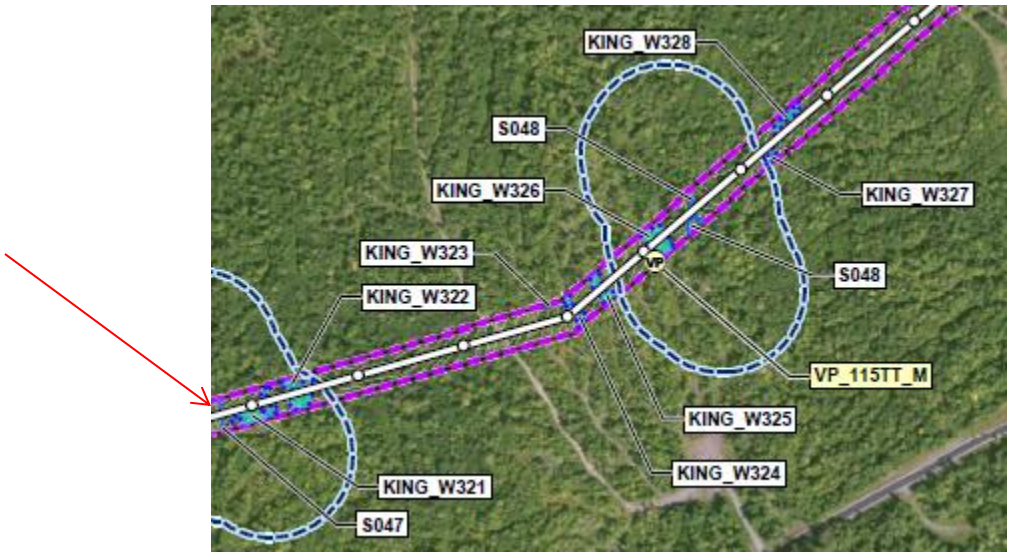
Associated Wetland

A forested wetland dominated by red maple, green ash, black ash, and yellow birch is located east of the stream, but does not directly abut the stream. The wetland has been disturbed by recent timber harvesting activities.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. There will be no direct impact to the stream channel. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 18: Perennial stream S047.
Stantec Consulting, November 10, 2010.



Proposed generator lead crossing of stream S047.
From Figure 21 Delineated Natural Resource Map by Stantec Consulting.

18. S048 – Unnamed Tributary of Kingsbury Stream, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S048 is an unnamed perennial tributary of Kingsbury Stream. This stream flows southeast to Route 16 and converges with Kingsbury Stream approximately 1.4 miles to the southeast of the proposed project corridor. The stream splits into two channels, each perennial, just north of the proposed clearing limits for the generator lead. The two channels then rejoin approximately 230 feet to the south. The stream is bordered by upland mixed forest that is dominated by yellow birch, sugar maple, and red spruce. An emergent wetland is present to the west of the stream but does not directly abut the stream bank. The area surrounding the stream including the nearby emergent wetland has been disturbed by recent timber harvesting activities.

Stream Characteristics

- Perennial stream.
- Channel substrate is primarily boulder, cobble, and gravel with some woody debris.
- Aquatic mosses and macro invertebrates occur throughout the stream channel.
- Physical characteristics (**Photo 19**):
    - Bankfull width 4-8 feet (Average 6 feet);
    - Water depth in November of 2010 was 4-8 inches;
    - Low gradient riffle complexes;
    - Overhanging mixed forest trees present.

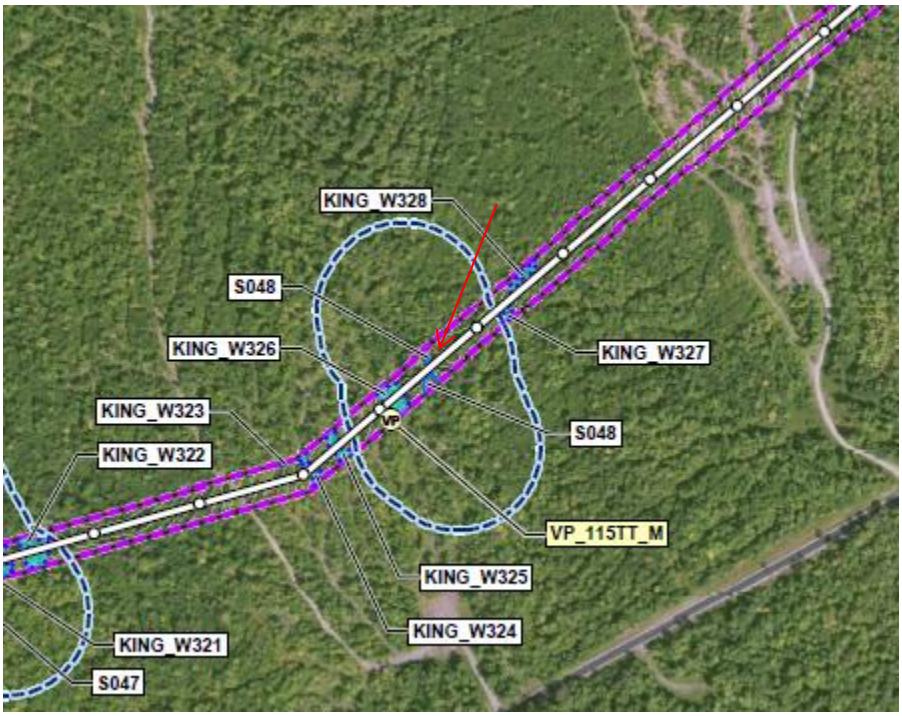
Associated Wetland

An emergent wetland that has developed within a network of skidder trails is located west but does not directly abut the stream. Fowl manna grass, melic manna grass, nodding sedge, and cottongrass bulrush dominate this wetland.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. There will be no direct impact to the stream channel. This stream has the potential to contain northern spring salamanders, and a 250-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 19: Perennial stream S048.
Stantec Consulting, November 11, 2010.



Proposed generator lead crossing of stream S048.
From Figure 21 Delineated Natural Resource Map by Stantec Consulting.

19. S049 – Bear Brook, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S049, Bear Brook, is a perennial tributary of Kingsbury Stream. This stream flows southeast to Route 16 and converges with Kingsbury Stream approximately 1.3 miles to the southeast of the proposed project corridor. The stream is bordered by upland mixed forest that is dominated by yellow birch, sugar maple, and red spruce. A large forested wetland is located west of the stream but does not directly abut the stream. Much of the area surrounding the stream has been disturbed by recent timber harvesting activities.

Stream Characteristics

- Perennial stream.
- Channel substrate is primarily boulder, cobble, and gravel.
- Aquatic mosses occur throughout the stream channel.
- Physical characteristics (**Photo 20**):
    - Bankfull width 5-10 feet (Average 6.5 feet);
    - Water depth in November of 2010 was 6 inches;
    - Low gradient riffle, run, and pool sequences;
    - Overhanging mixed forest trees present.

Associated Wetland

A forested wetland is located to the west but does not directly abut the stream. This wetland is dominated by balsam fir, red maple, black ash and, speckled alder. The wetland has been disturbed by recent timber harvesting activities.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. There will be no direct impact to the stream channel. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 20: Perennial stream S049.
Stantec Consulting, November 11, 2010.

Proposed generator lead crossing of stream S049.
From Figure 21 Delineated Natural Resource Map by Stantec Consulting.

20. S050 – Unnamed Tributary of Bear Brook, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S050 is an unnamed perennial tributary to Bear Brook. This stream flows southeast to Route 16 and converges with Bear Brook approximately 1.6 miles southeast of the proposed project corridor. The stream is located in a small valley and is bordered by upland mixed forest dominated by yellow birch, sugar maple, and red spruce. Forested wetlands are present to the east and west of the stream but do not directly abut the stream. Much of the area surrounding the stream has been disturbed by recent timber harvesting activities.

Stream Characteristics

- Perennial stream in small valley.
- Channel substrate is primarily boulder, cobble, and gravel with some woody debris.
- Aquatic mosses occur throughout the stream channel.
- Physical characteristics (**Photo 21**):
    - Bankfull width 20-25 feet (Average 20′);
    - Water depth in November of 2010 was 6-20 inches;
    - Low gradient riffle, run, and pool sequences;
    - Overhanging mixed forest trees present.

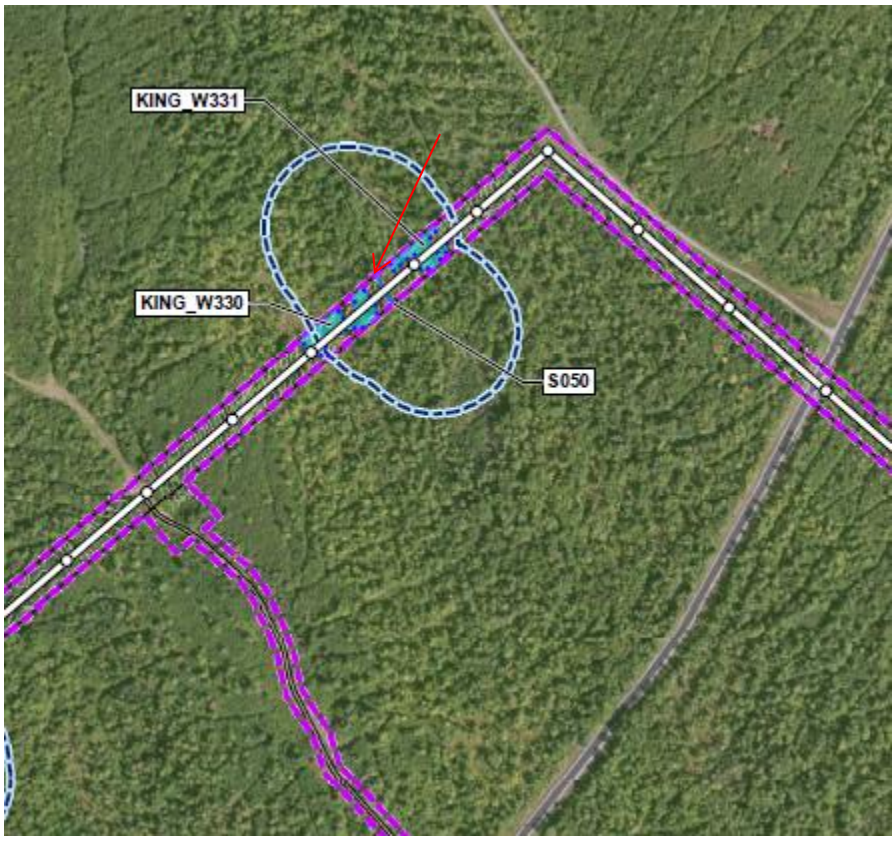
Associated Wetland

Forested wetlands are located to the east and west of the stream but do not directly abut the stream. These wetlands are dominated by yellow birch, red maple, and balsam fir. The wetlands have been disturbed by recent timber harvesting activities.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge may be used to allow movement of construction equipment across the stream, or existing access may be used. There will be no direct impact to the stream channel. This stream has the potential to contain northern spring salamanders, and a 250-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 21: Perennial stream S050.
Stantec Consulting, November 11, 2010.



Proposed generator lead crossing of stream S050.
From Figure 21 Delineated Natural Resource Map by Stantec Consulting.

21. S051 – Unnamed Tributary of Bear Brook, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S051 is an unnamed perennial stream that originates at a small, unnamed pond located north of the proposed project corridor. From the project corridor, the stream flows south approximately 0.8 mile where it converges with Bear Brook. The stream is bordered by upland hardwood forest dominated by yellow birch, sugar maple, and red spruce. Much of the area surrounding the stream has been disturbed by recent timber harvesting activities.

Stream Characteristics

- Perennial stream.
- Channel substrate is primarily gravel.
- Aquatic mosses occur throughout the stream channel.
- Physical characteristics (**Photo 22**):
    - Bankfull width 4 feet;
    - Water depth in December of 2010 was 4 inches;
    - Low gradient riffle complexes;
    - Overhanging hardwood trees present.

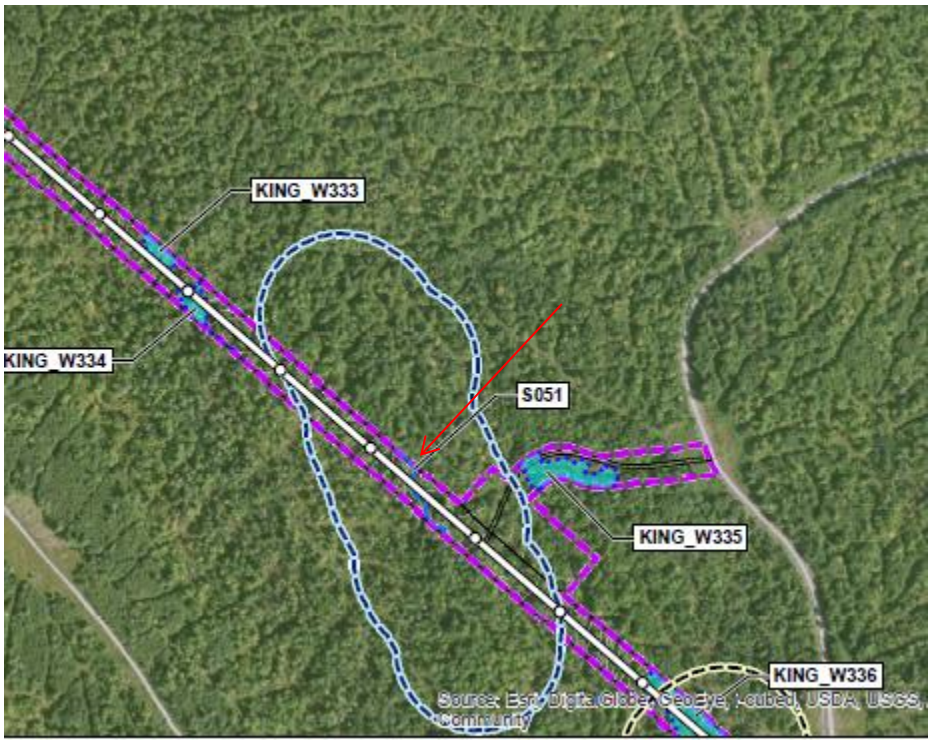
Associated Wetland

No wetlands are associated with the stream within the surveyed limits of the proposed generator lead.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. There will be no direct impact to the stream channel. Two poles (structures) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the poles (structures) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the poles to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 22: Perennial stream S051.
Stantec Consulting, December 6, 2010.



Proposed generator lead crossing of stream S051.
From Figure 22 Delineated Natural Resource Map by Stantec Consulting.

22. S052 –Kingsbury Stream, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S052, Kingsbury Stream, is a perennial stream that originates at the spillway on the western end of Kingsbury Pond and flows easterly to the Piscataquis River in Abbot. The area immediately adjacent to the stream is second growth, upland mixed forest dominated by yellow birch, sugar maple, and red spruce. Beyond this forested buffer, the surrounding area has recently undergone timber harvesting. An existing gravel road, 2500 Road, crosses Kingsbury Stream approximately 300 feet south of the proposed generator lead corridor. A metal and wooden bridge is located at this existing road crossing.

Stream Characteristics

- Perennial stream with bridge crossing.
- Channel substrate is primarily boulder, cobble, and gravel.
- Aquatic mosses and macro-invertebrates occur throughout the stream channel.
- Physical characteristics (**Photo 23**):
    - Bankfull width 30-50 feet (Average 40 feet);
    - Water depth in December of 2010 was 0-20 inches;
    - Low gradient riffle, run, pool, and glide sequences;
    - Sparse overhanging mixed forest trees present.

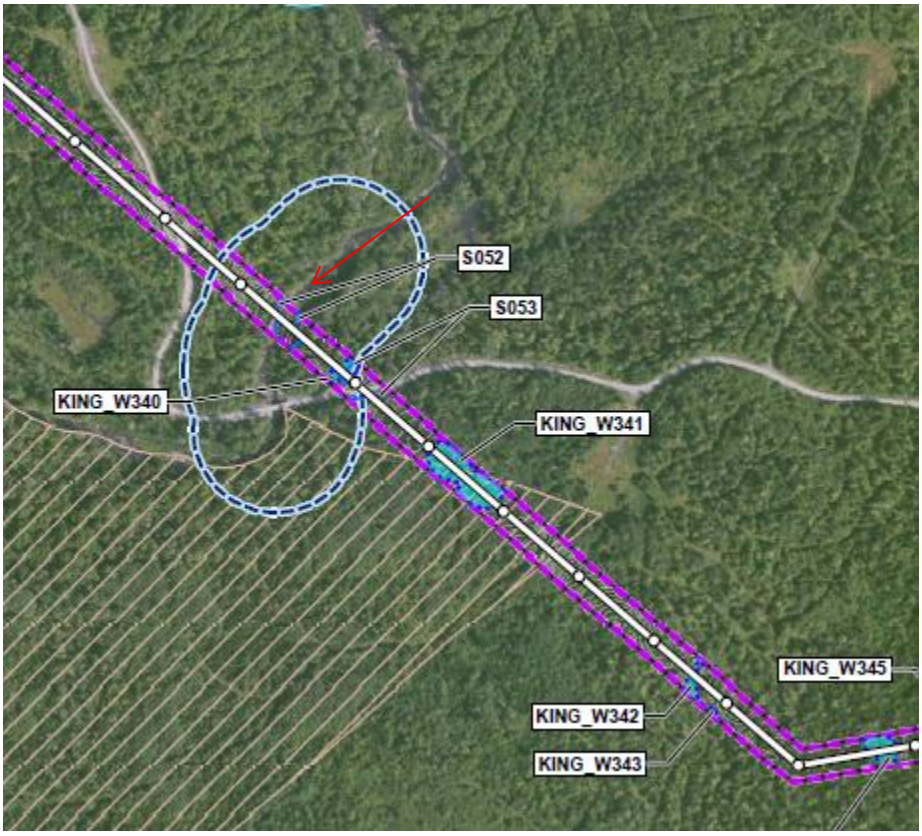
Associated Wetland

A large, floodplain wetland borders Kingsbury Stream to the northwest of the surveyed limits for the proposed generator lead.

Construction and Maintenance

Construction activities will utilize the existing road to transport construction equipment. This stream has the potential to contain northern spring salamanders, and a 250-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 23: Perennial stream S052, Kingsbury Stream.
Stantec Consulting, May 19, 2010.



Proposed generator lead crossing of stream S052.
From Figure 23 Delineated Natural Resource Map by Stantec Consulting.

23. S056 – Unnamed Perennial Stream, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S056 is an unnamed perennial stream. The stream is bordered on both sides by a forested wetland.

Stream Characteristics

- Perennial stream.
- Channel substrate is primarily cobble, gravel, and sand.
- Aquatic mosses occur throughout the stream channel.
- Physical characteristics (**Photo 24**):
    - Bankfull width 4 feet;
    - Water depth in December of 2012 was 12 inches;
    - Low gradient riffle complexes;
    - Overhanging mixed forest trees present.

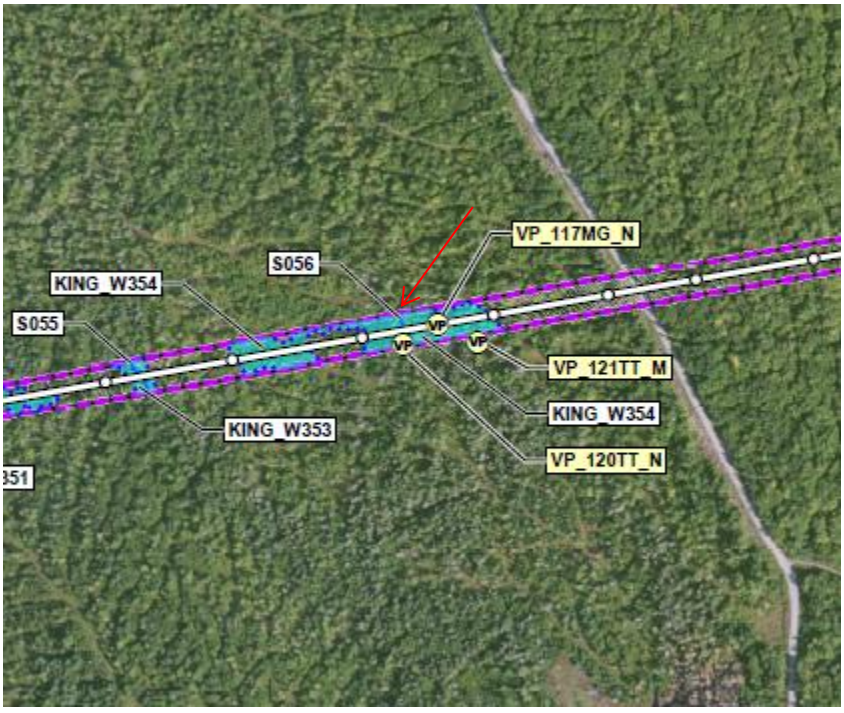
Associated Wetland

A forested wetland dominated by red maple, northern white cedar, and balsam fir borders both sides of the stream. During high-flow events, the stream floods into the wetland. The wetland has been disturbed by recent timber harvesting activities.

Construction and Maintenance

The stream and associate wetland will be crossed by the electrical generator lead corridor. Because this stream does not cross the entire width of the corridor, temporary construction crossing of this resource may not be necessary. If crossing of this stream is necessary during construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. There will be no direct impact to the stream channel. A 100-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 24: Perennial stream S056.
Stantec Consluting, December 8, 2010.



Proposed generator lead crossing of stream S056.
From Figure 24 Delineated Natural Resource Map by Stantec Consulting.

24. S057 – Unnamed Tributary of Carlton Stream, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S057 is an unnamed perennial stream that flows southeast into stream S058 as mapped by the United States Geological Survey (USGS). The stream is bordered on both sides by forested wetland.

Stream Characteristics

- Perennial stream.
- Channel substrate is primarily cobble, gravel, sand and muck.
- Aquatic mosses occur throughout the stream channel.
- Physical characteristics (**Photo 25**):
    - Bankfull width 4 feet;
    - Water depth in December of 2012 was 3 inches;
    - Low gradient riffle complexes;
    - Overhanging mixed forest trees present.

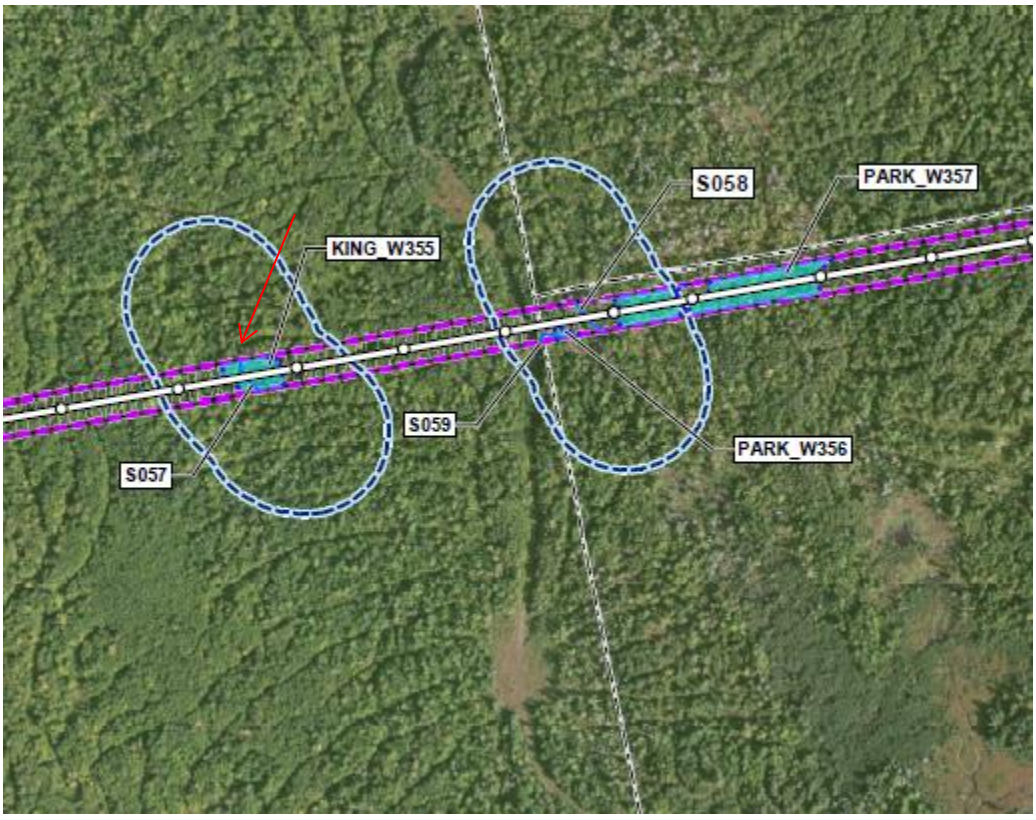
Associated Wetland

A forested wetland dominated by red maple, black ash, northern white cedar, and speckled alder borders both sides of the stream. During high-flow events, the stream floods into the wetland. The wetland has been disturbed by recent timber harvesting activities.

Construction and Maintenance

The stream and associated wetlands will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. There will be no direct impact to the stream channel. This stream has the potential to contain northern spring salamanders, and a 250-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 25: Perennial stream S057.
Stantec Consulting, December 9, 2010.



Proposed generator lead crossing of stream S057.
From Figure 25 Delineated Natural Resource Map by Stantec Consulting.

25. S058 – Unnamed Tributary of Carlton Stream, Kingsbury Plantation
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S058 is an unnamed perennial stream that flows south into Carlton Stream as mapped by the USGS. The stream is bordered principally by upland forest with a small forested wetland along its western bank. The forested upland is dominated by American beech, yellow birch, and sugar maple. A discontinued logging road is located approximately 175 feet west of the stream.

Stream Characteristics

- Perennial stream.
- Channel substrate is primarily boulder, cobble, and gravel.
- Aquatic mosses occur throughout the stream channel.
- Physical characteristics (**Photo 26**):
    - Bankfull width 7.5 feet;
    - Water depth in December of 2012 was 2 inches;
    - Low gradient riffle complexes;
    - Overhanging hardwood trees present.

Associated Wetland

A small, forested wetland borders the west bank of the stream. The wetland is dominated by red maple, black ash, and northern white cedar. This wetland has been disturbed by recent timber harvesting activities.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. There will be no direct impact to the stream channel. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 26: Perennial stream S058.
Stantec Consulting, December 17, 2010.

Proposed generator lead crossing of stream S058.
From Figure 25 Delineated Natural Resource Map by Stantec Consulting.

26. S060 – Unnamed Tributary of Carlton Stream, Parkman
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S060 is an unnamed perennial stream. From the project corridor, it flows southeast and crosses under 2500 Road before converging with Carlton Stream approximately one mile to the south and east. The stream is bordered on both sides by a large scrub-shrub wetland that has been impacted by beaver activity.

Stream Characteristics

- Perennial stream through large wetland.
- Channel substrate is primarily muck.
- Aquatic vegetation, macro-invertebrates, and fish likely occur throughout the stream channel.
- Physical characteristics (**Photo 27**):
    - Bankfull width 5-7 feet (Average 6 feet);
    - Water depth in December of 2010 was 12-20 inches;
    - Low gradient riffle and run sequences;
    - No overhanging vegetation present.

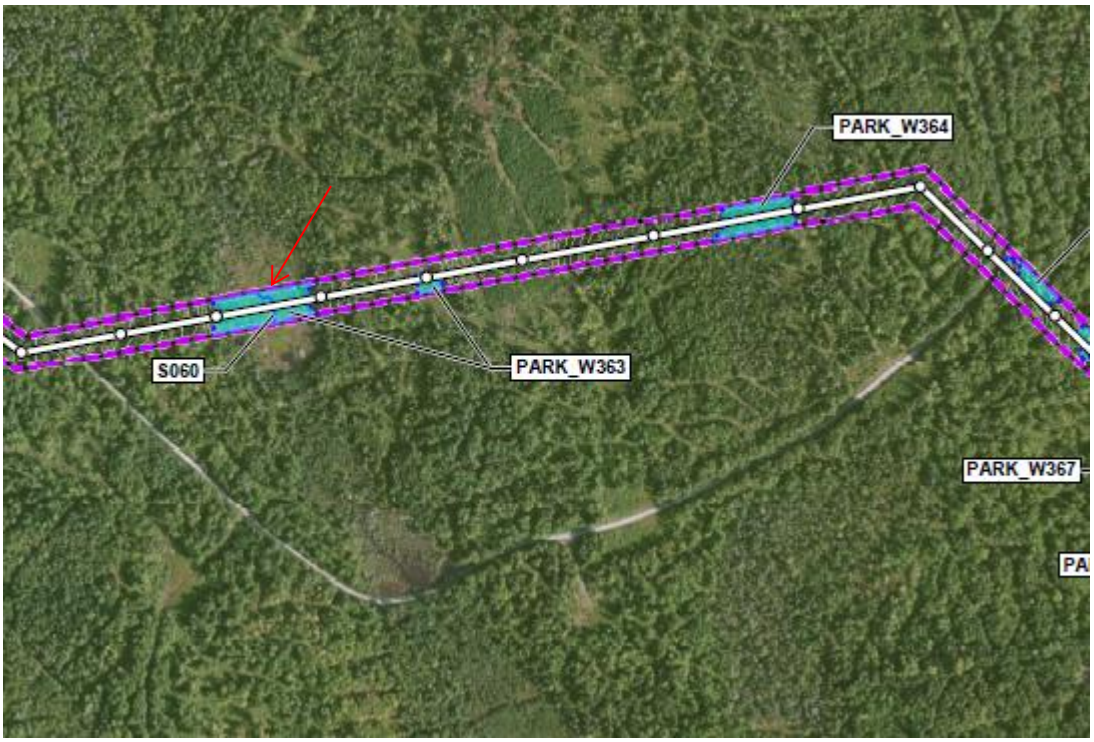
Associated Wetland

A large, scrub-shrub wetland borders both sides of the stream. The wetland is dominated by speckled alder, northern white cedar, steeplebush, and fowl manna grass. Standing dead trees are present throughout the wetland. There is evidence of recent beaver activity along the stream and throughout the wetland. As a result of the beaver activity, the stream often floods the surrounding wetland during high-flow events.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. It is likely that construction of the generator lead will not involve a temporary crossing of this stream, but that access will occur from either side of the stream. If crossing of this stream is necessary during construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream and adjacent wetland. There will be no direct impact to the stream channel. A 100-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15-feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 27: Perennial stream S060
Stantec Consulting, December 17, 2010.



Proposed generator lead crossing of stream S060.
From Figure 26 Delineated Natural Resource Map by Stantec Consulting.

27. S062 –Carlton Stream, Parkman
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S062, Carlton Stream, is a perennial stream that flows north to Kingsbury Stream, which is located approximately 0.7 mile north of the generator lead corridor. The stream is crossed by Pease Bridge Road. An approximately 35-foot long wooden bridge with cement walls spans the stream channel at the Pease Bridge Road crossing. South of Pease Bridge Road, a large, forested floodplain wetland borders the west side of stream.

Stream Characteristics

- Perennial stream with bridge crossing.
- Channel substrate is primarily boulder and cobble.
- Fish and macro-invertebrates likely occur throughout the stream channel.
- Physical characteristics (**Photo 28**):
    - Bankfull width 35-40 feet (Average 37.5 feet);
    - Water depth in January of 2013 was 3-5 feet;
    - Low to moderate gradient riffle, run, pool, and glide sequences;
    - Sparse overhanging hardwood trees present.

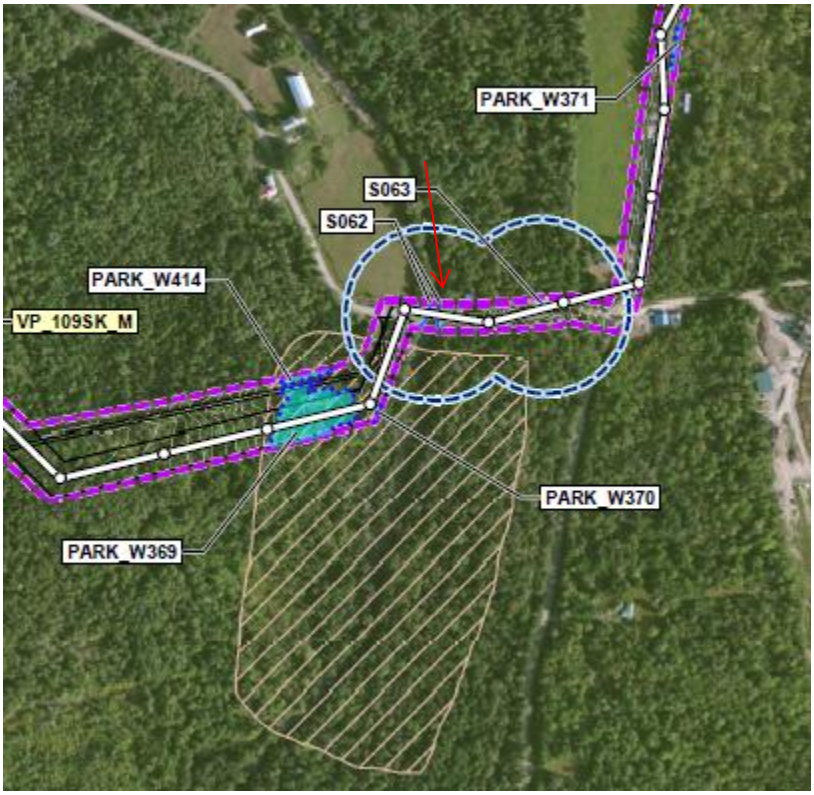
Associated Wetland

A large, forested floodplain wetland dominated by balsam fir, yellow birch, and red spruce is associated with the west side of the stream. During spring run-off and high flow events, the stream floods into the wetland.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor along Pease Bridge Road. Pease Bridge Road will be used for construction access so there will be no direct impact to the stream channel. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 28: Perennial stream S062, Carlton Stream.
Stantec Consulting, January 31, 2013.



Proposed generator lead crossing of stream S062.
From Figure 26 Delineated Natural Resource Map by Stantec Consulting.

28. S063 – Unnamed Tributary of Carlton Stream, Parkman
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S063 is a perennial tributary to Carlton Stream. It originates to the southeast of the project corridor and flows northwest crossing under Welts Road and then under Pease Bridge Road. At Pease Bridge Road, the stream is conveyed through a 48-inch corrugated plastic pipe and flows a short distance before its confluence with Carlton Stream. The stream is located in a small valley with steep sides on the north side of Pease Bridge Road. A small forested wetland, between Welts Road and Pease Bridge Road, borders the wetland off-site to the southeast.

Stream Characteristics

- Perennial stream crossing under Pease Bridge Road.
- Channel substrate is primarily boulder, cobble and gravel.
- Physical characteristics (**Photo 29**):
    - Bankfull width 10-12 feet (Average 11 feet);
    - Water depth in January of 2013 was 4-6 inches;
    - Moderate gradient with riffle, run, pool, and small plunge sequences;
    - Overhanging mixed forest trees present.

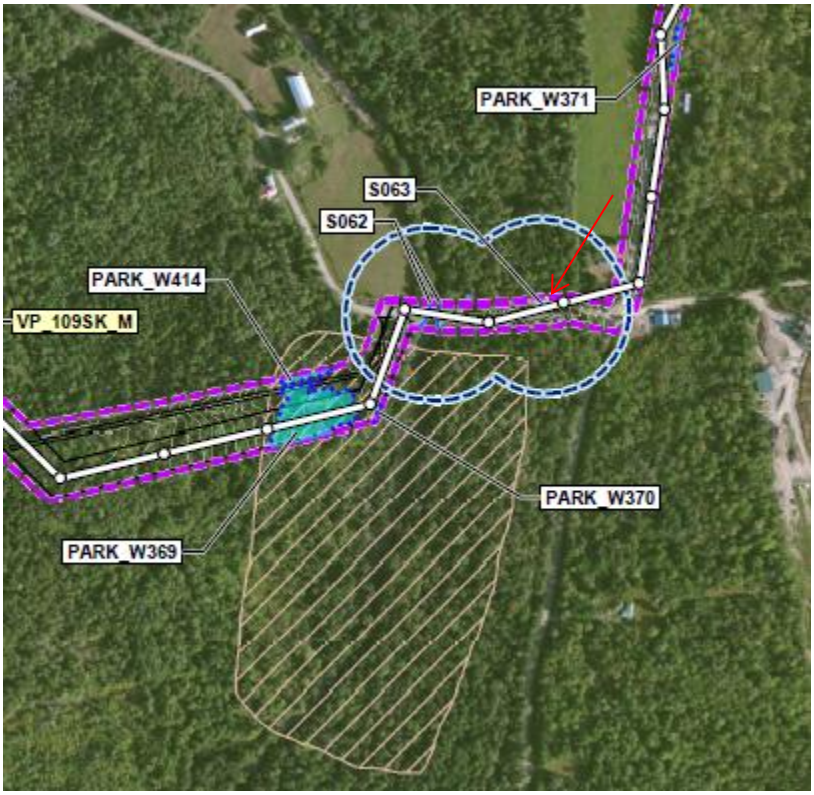
Associated Wetland

A small, forested wetland is associated with the stream, upslope between Welts Road and Pease Bridge Road. This wetland is located off-site and not within the surveyed limits of the proposed generator lead.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor along Pease Bridge Road. Pease Bridge Road will be used for construction access; therefore, there will be no direct impact to the stream channel. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 29: Perennial stream S063.
Stantec Consulting, January 31, 2013.



Proposed generator lead crossing of stream S063.
From Figure 26 Delineated Natural Resource Map by Stantec Consulting.

29. S065 – Unnamed Tributary of Carlton Stream, Parkman
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S065 is a perennial stream that flows northwest to Carlton Stream as mapped by the USGS. The stream crosses under Gales Road, a gravel road maintained by the towns of Abbot and Parkman, through a corrugated metal pipe. It converges with Carlton Stream approximately 800 feet northwest of Gales Road and the electrical generator lead corridor. The stream has an associated forested wetland located off-site east of Gales Road.

Stream Characteristics

- Perennial stream crossing under Gales Road.
- Channel substrate is primarily boulder and cobble.
- Physical characteristics (**Photo 30**):
    - Bankfull width 6-8 feet (Average 7 feet);
    - Water depth in January of 2013 was 3-5 inches;
    - Moderate gradient riffle complexes;
    - Overhanging hardwood trees present.

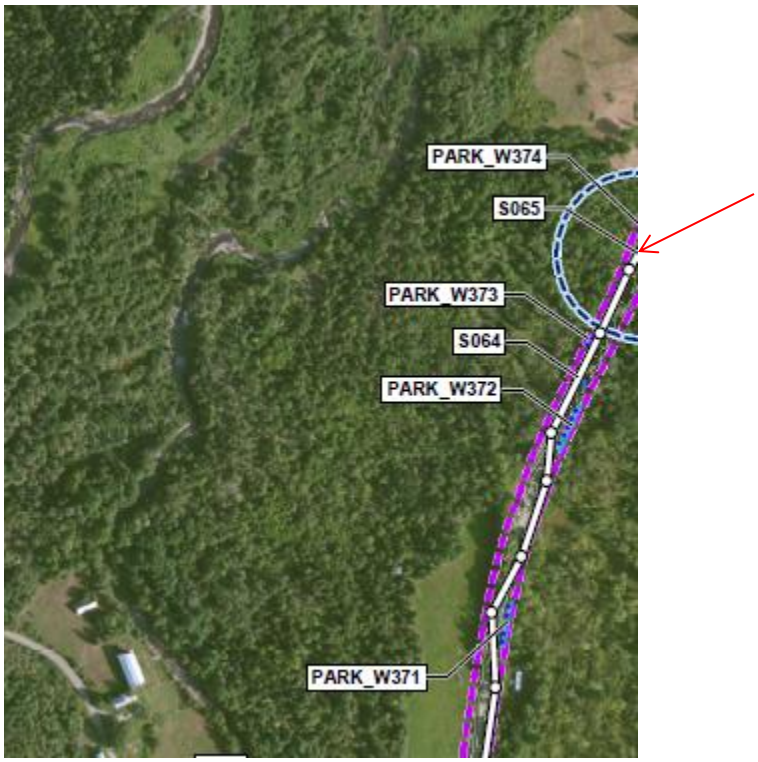
Associated Wetland

A forested wetland is associated with the stream is located east of Gales Road. This wetland is not located within the surveyed limits for the proposed generator lead.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor along Gales Road. Construction activities will utilize the existing road corridor for the transportation of construction equipment. There are no proposed upgrades to the footprint of the road. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 30: Perennial stream S065.
Stantec Consulting, January 30, 2013.



Proposed generator lead crossing of stream S065.
From Figure 26 Delineated Natural Resource Map by Stantec Consulting.

30. S066 – Unnamed Perennial Stream, Abbot
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S066 is an unnamed perennial stream that flows north towards Kingsbury Stream. The stream crosses under Gales Road, a dirt road maintained by the towns of Abbot and Parkman, through a 24-inch corrugated metal pipe. The stream flows through a maintained roadside ditch for approximately 40 feet on the south side of Gales Road where these is an associated forested wetland.

Stream Characteristics

- Perennial stream crossing under Gales Road.
- Channel substrate is primarily boulder and cobble.
- Physical characteristics (**Photo 31**):
    - Bankfull width 6-15 feet (Average 8.5 feet);
    - Water depth in January of 2013 was 2-3 inches;
    - Moderate gradient riffle complexes;
    - Overhanging mixed forest trees present.

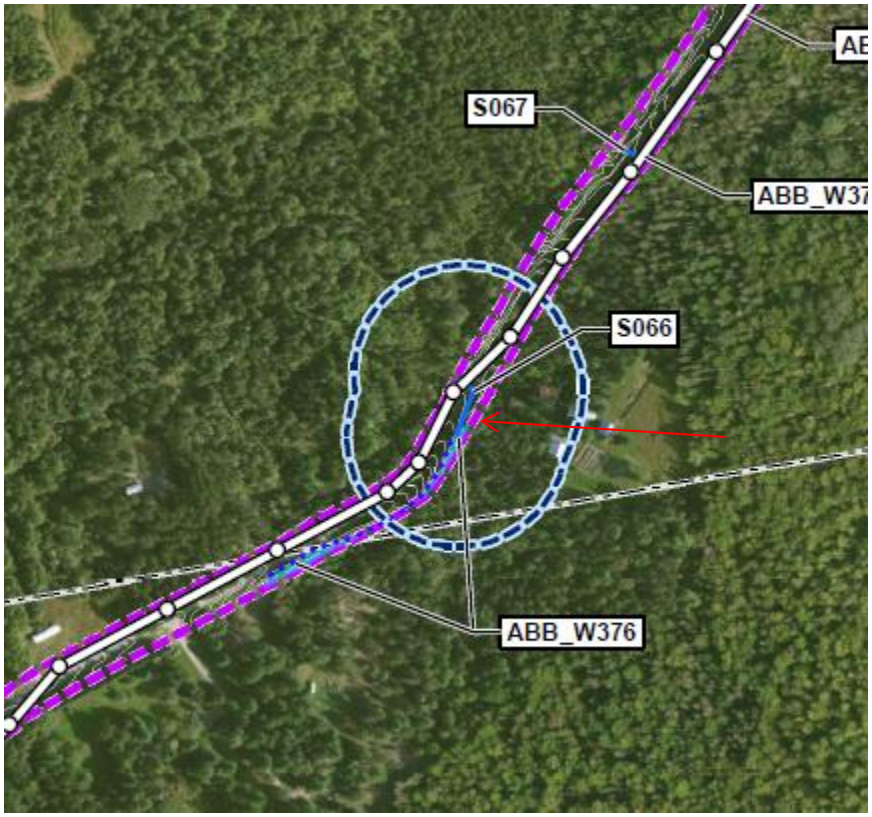
Associated Wetland

The forested wetland associated with this stream is dominated by northern white cedar, balsam fir, and speckled alder. Surface ice indicates the wetland periodically floods during periods of high water. Flooding is likely the result of impoundment cause by the road.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor along Gales Road. Construction activities will utilize the existing road for the transportation of construction equipment. There are no proposed upgrades to the footprint of the road. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 31: Perennial stream S066.
Stantec Consulting, January 30, 2013.



Proposed generator lead crossing of stream S066.
From Figure 27 Delineated Natural Resource Map by Stantec Consulting.

31. S069 – Gales Brook, Abbot
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S069, Gales Brook, is a perennial stream that flows generally to the north and northeast. The stream is conveyed under Gales Road, a gravel road maintained by the towns of Abbot and Parkman, through a corrugated metal pipe. South of Gales Road the stream is conveyed under a narrow all-terrain vehicle (ATV) trail through an 18-inch corrugated metal pipe. The stream is bordered by a large forested wetland.

Stream Characteristics

- Perennial stream crossing under Gales Road and ATV trail.
- Channel substrate is primarily cobble, gravel, and muck.
- Aquatic mosses occur throughout the stream channel.
- Physical characteristics (**Photo 32**):
    - Bankfull width 5-7 feet (Average 6 feet);
    - Water depth in December of 2012 was 2-3 inches;
    - Low gradient riffle and run;
    - Overhanging softwood standing and overturned trees present.

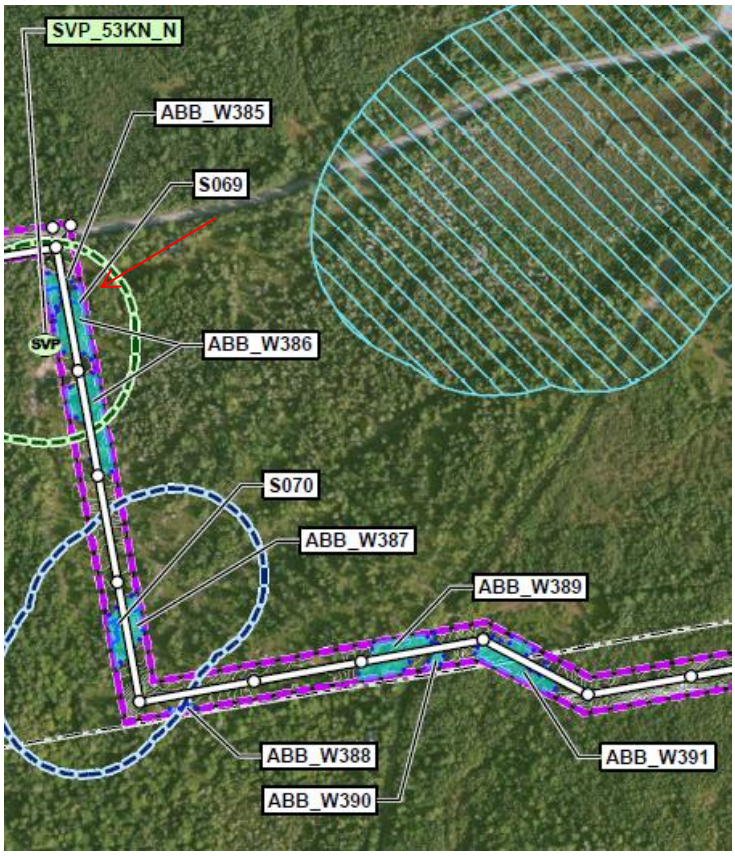
Associated Wetland

The forested wetland associated with this stream is dominated by northern white cedar, balsam fir, and yellow birch and has deep organic soils. The wetland has been disturbed by recent timber harvesting activities and is crossed by a narrow ATV trail.

Construction and Maintenance

The stream will be crossed twice by the electrical generator lead corridor, once along Gales Road and once south of Gales Road. Where possible, construction activities will utilize the existing road for transportation of construction equipment. South of Gales Road, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream. A 100-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 32: Perennial stream, S069.
Stantec Consulting, December 12, 2012.



Proposed generator lead crossing of stream S069.
From Figure 28 Delineated Natural Resource Map by Stantec Consulting.

32. S070 – Unnamed Tributary of Gales Brook, Abbot
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S070 is an unnamed perennial stream. Topography suggests that it flows northeast to Gales Brook. A narrow ATV trail crosses over the stream. There is no bridge or culvert present at this location, and the stream has washed out a portion of the trail. The stream is bordered by a forested wetland.

Stream Characteristics

- Perennial stream with narrow ATV trail crossing.
- Channel substrate is primarily cobble and gravel.
- Aquatic mosses and macro-invertebrates occur throughout the stream channel.
- Physical characteristics (**Photo 33**):
    - Bankfull width 5-7 feet (Average 5 feet);
    - Water depth in December of 2012 was 1-3 inches;
    - Low to moderate gradient riffle complexes;
    - Overhanging softwood standing and wind-thrown trees present.

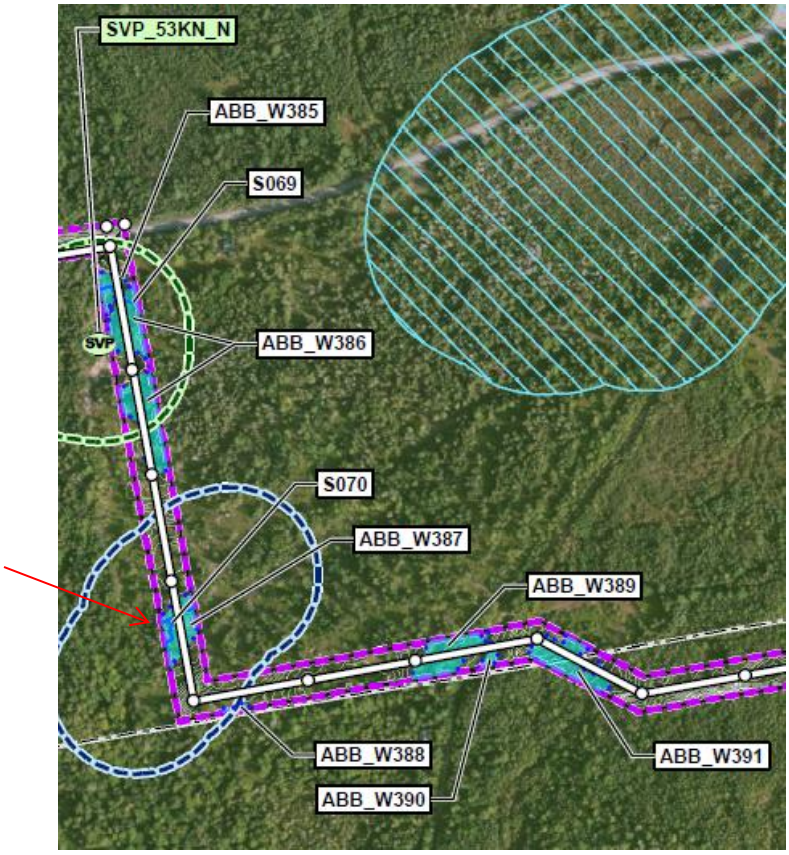
Associated Wetland

A forested wetland dominated by northern white cedar, balsam fir, and black ash borders the stream. The area surrounding the wetland was recently disturbed by timber harvesting activities and is crossed by the narrow ATV trail.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream and adjacent wetland. There will be no direct impact to the stream channel. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 33: Perennial stream S70.
Stantec Consulting, December 12, 2012.



Proposed generator lead crossing of stream S070.
From Figure 28 Delineated Natural Resource Map by Stantec Consulting.

33. S071 – Unnamed Tributary of Gales Brook, Parkman
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S071 is an unnamed perennial stream. Topography suggests it flows north to Gales Brook. Within the project generator lead corridor, the stream occurs principally within a defined topographic drainage that is bordered by upland forest. Beyond this drainage, the stream is associated with a forested wetland.

Stream Characteristics

- Perennial stream with steep banks.
- Channel substrate is primarily bedrock, boulder, cobble, slate, and gravel.
- Aquatic mosses and macro-invertebrates occur throughout the stream channel.
- Physical characteristics (**Photo 34**):
    - Bankfull width 8-14 feet (Average 11 feet);
    - Water depth in December of 2012 was 2-6 inches;
    - Moderate gradient riffle, run, and pool sequences;
    - Overhanging mixed forest trees present.

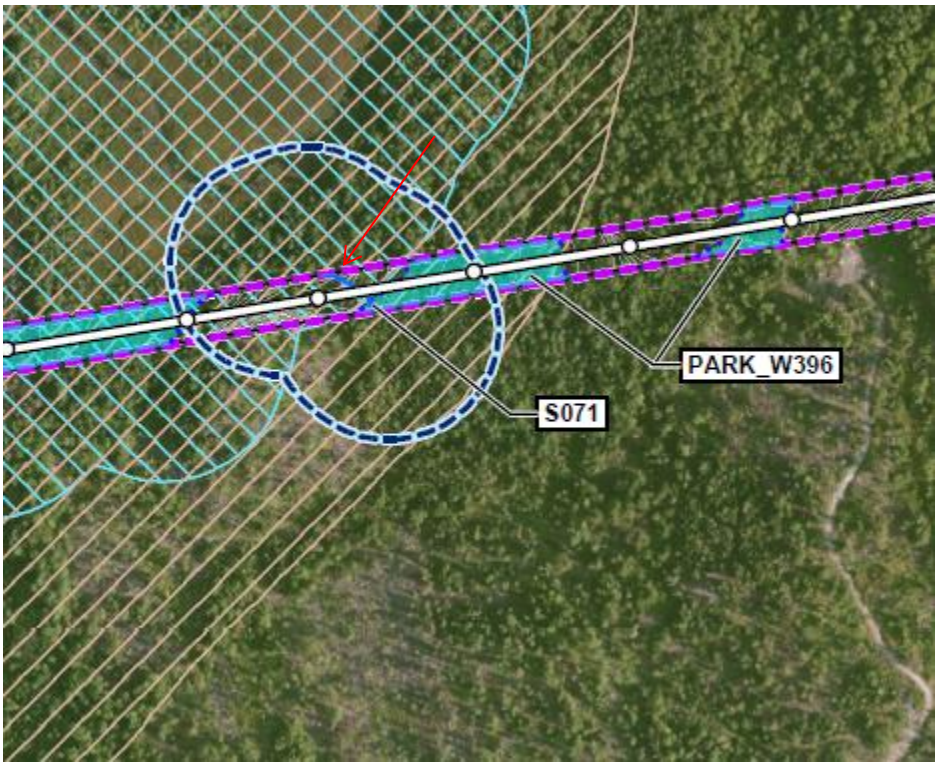
Associated Wetland

Forested wetlands dominated by northern white cedar, balsam fir, and black ash border the stream. The area surrounding the wetlands and stream has been recently disturbed by timber harvesting activities.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream and adjacent wetland. There will be no direct impact to the stream channel. One pole (structure) will be located within 100 feet of this stream. This stream has the potential to contain northern spring salamanders, and to the extent practicable a 250-foot foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the pole (structure) located within the 250-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the pole to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 34: Perennial stream S071.
Stantec Consulting, December 12, 2012.



Proposed generator lead crossing of stream S071.
From Figure 28 Delineated Natural Resource Map by Stantec Consulting.

34. S074 – Unnamed Tributary of the Piscataquis River, Abbot
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S074 is an unnamed perennial stream that originates at a man-made impoundment and flows north to the Piscataquis River. The stream is located within a defined topographic drainage with a scrub-shrub wetland bordering it to the east.

Stream Characteristics

- Perennial stream originating at man-made impoundment.
- Channel substrate is primarily gravel and muck.
- Aquatic vegetation occurs throughout the stream channel.
- Physical characteristics (**Photo 35**):
    - Bankfull width 3-4 feet (Average 3.5 feet);
    - Water depth in December of 2012 was 3-4 inches;
    - Low gradient, slow riffle complexes;
    - Minimal overhanging shrubs present.

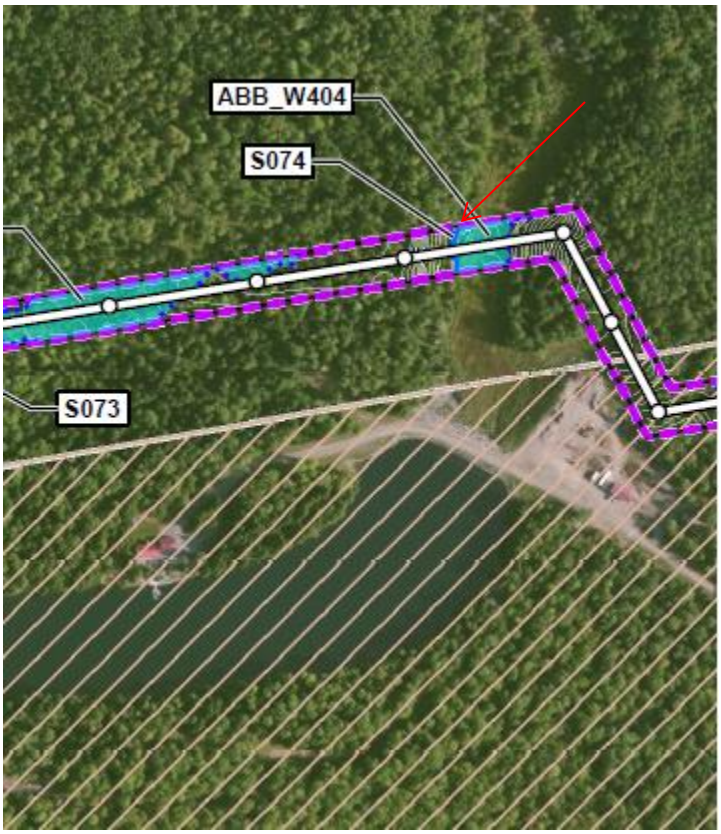
Associated Wetland

A scrub-shrub wetland dominated by red maple, speckled alder, and larch (*Larix laricina*) borders the stream to the east. The wetland abuts a man-made impoundment to the south, and the hydrology and vegetation within the wetland have been altered by construction activities associated with the impoundment.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. It is likely that construction of the generator lead will not involve a temporary crossing of this stream, but that access will occur from either side of the stream. If crossing of this stream is necessary during construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream and adjacent wetland. There will be no direct impact to the stream channel. A 100-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. Herbicide use will not be allowed within this buffer.

Photo 35: Perennial stream S074.
Stantec Consulting, December 11, 2012.



Proposed generator lead crossing of stream S074.
From Figure 29 Delineated Natural Resource Map by Stantec Consulting.

35. S075 – Unnamed Tributary of the Piscataquis River, Parkman
HUC 10 Watershed: Piscataquis River (1), 0102000401

General Landscape Information

Stream S075 is an unnamed perennial stream that originates at a culvert outlet under Route 150 and flows north to the Piscataquis River. A large forested wetland borders the stream. An agricultural field is located off-site to the south, and an existing Central Maine Power Company (CMP) transmission line is located to the northeast.

Stream Characteristics

- Perennial stream originating at culvert outlet.
- Channel substrate is primarily boulder, cobble and muck.
- Aquatic vegetation occurs throughout the stream channel.
- Physical characteristics (**Photo 36**):
    - Bankfull width 7-10 feet (Average 9 feet);
    - Water depth in December of 2012 was 6-12 inches;
    - Low gradient, slow riffle complexes;
    - Overhanging softwood standing and wind-thrown trees present.

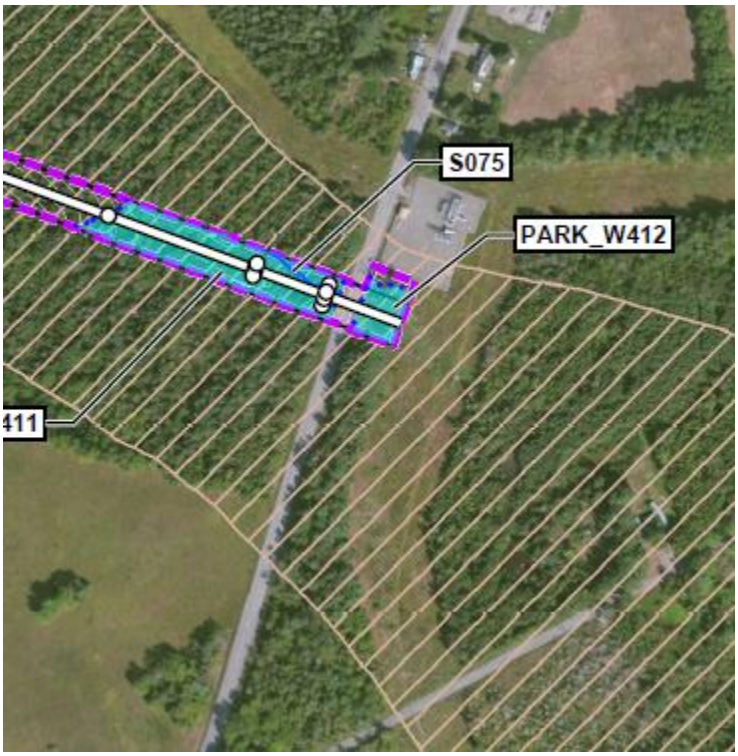
Associated Wetland

A dense cedar wetland dominated by northern white cedar borders the stream. The wetland has been cleared to northeast along the existing CMP transmission line corridor.

Construction and Maintenance

The stream will be crossed by the electrical generator lead corridor. During construction, a temporary timber mat bridge will be used to allow movement of construction equipment across the stream and adjacent wetland. There will be no direct impact to the stream channel. Two poles (structures) will be located within 100 feet of this stream. To the extent practicable, a 100-foot buffer will be maintained on each side of the stream. During construction and maintenance, capable trees (i.e., those that could grow to within 15 feet of a conductor within 3-4 years) will be topped, but no other vegetation will be cut. If topping individual trees will not leave sufficient foliage to sustain the tree, the tree will be cut at ground level. With regard to the poles (structures) located within the 100-foot buffer, the maximum height of vegetation within the corridor is a function of conductor height. The proximity of the poles to this stream will provide a conductor height that will allow for the establishment of taller vegetation near the stream, which will provide maximum shading of the stream. Herbicide use will not be allowed within this buffer.

Photo 36: Perennial stream S075.
Stantec Consulting, December 10, 2012.



Proposed generator lead crossing of stream S075.
From Figure 30 Delineated Natural Resource Map by Stantec Consulting.

Intermittent Stream Summary Table

Stream ID	Associated Wetland ID	Town or Township	NR Map Number	Latitude	Longitude	Perennial or Intermittent	Approximate Bankfull Width (Ft.)	Estimated Distance to Nearest Perennial Stream (Ft.)	Nearest Perennial Stream Name	Within Designated Critical Habitat for Atlantic Salmon	Description of Proposed Impact Activity
S003	BING_W045	Bingham	3	45.078144	-69.773495	Intermittent	4	2,900	Unnamed tributary of Fall Brook	No	New proposed road crossing of wetland adjacent to stream. Edge of grading ~10' from stream.
S004	MOS_W050	Moscow	5	45.09328	-69.795291	Intermittent	4.5	800	Unnamed tributary of Gulf Stream	No	There are no proposed road improvements. The existing bridge will remain in place.
S005	No associated wetland	Moscow	5	45.094097	-69.795912	Intermittent	4	715	Unnamed tributary of Gulf Stream	No	There are no proposed road improvements. The existing culvert will remain in place.
S006	MAY_W085	Mayfield Township	6	45.102835	-69.763949	Intermittent	1.25	1,356	Unnamed tributary of Rift Brook	No	There are no proposed impacts to this stream or its 25' buffer.
S011	MAY_W118	Mayfield Township	8	45.105988	-69.734117	Intermittent	3.5	490	Unnamed perennial stream	No	Best management practices (BMPs) will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S012	MAY_W122	Mayfield Township	9	45.106086	-69.730309	Intermittent	1.5	160	Unnamed perennial stream	Yes	No proposed changes to the existing culvert. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S013	MAY_W128	Mayfield Township	9	45.10586	-69.726100	Intermittent	1	140	Unnamed perennial stream	Yes	No proposed changes to the existing culvert. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S015	No associated wetland	Mayfield Township	9	45.105507	-69.722845	Intermittent	1	665	Unnamed perennial stream	Yes	No proposed changes to the existing culvert. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S016	No associated wetland	Mayfield Township	9	45.105673	-69.720056	Intermittent	1	1,380	Unnamed perennial stream	Yes	No proposed changes to the existing culvert. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S019	MAY_W137	Mayfield Township	9	45.105391	-69.708762	Intermittent	4	1,475	Unnamed perennial stream	Yes	BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S020	MAY_W137	Mayfield Township	9	45.105178	-69.707916	Intermittent	4	1,260	Unnamed perennial stream	Yes	No proposed changes to the existing culvert. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S026	MAY_W170	Mayfield Township	11	45.125485	-69.683193	Intermittent	4	0	Unnamed tributary of Kingsbury Pond	Yes	No proposed improvements will be made to the existing 24" culvert. A 25' buffer will be maintained around the stream (removal of capable species).

Stream ID	Associated Wetland ID	Town or Township	NR Map Number	Latitude	Longitude	Perennial or Intermittent	Approximate Bankfull Width (Ft.)	Estimated Distance to Nearest Perennial Stream (Ft.)	Nearest Perennial Stream Name	Within Designated Critical Habitat for Atlantic Salmon	Description of Proposed Impact Activity
S028	MAY_W175	Mayfield Township	11	45.122933	-69.678500	Intermittent	4	365	Unnamed tributary of Kingsbury Pond	Yes	Limited proposed changes to existing road. Some fill of associated wetland. No proposed impacts to the stream.
S029	No associated wetland	Mayfield Township	11	45.121708	-69.674937	Intermittent	3.5	1,000	Unnamed tributary of Kingsbury Pond	Yes	Limited proposed changes to the existing road,~75' wide restricted clearing buffer along northeast side of road. No impacts are proposed to this stream.
S031	No associated wetland	Mayfield Township	13	45.139101	-69.692031	Intermittent	5	994	Unnamed perennial stream	Yes	No proposed improvements will be made to the existing 24" culvert. A 25' buffer will be maintained around the stream (removal of capable species).
S032	MAY_W188	Mayfield Township	14	45.142124	-69.693324	Intermittent	3.5	85	Headwater of Bigelow Brook	Yes	No proposed impact to stream and no proposed project activity within 25' of stream.
S034	MAY_W189	Mayfield Township	14	45.142122	-69.692287	Intermittent	3.5	40	Headwater of Bigelow Brook	Yes	No changes will be made to the excising culvert. No upgrades to existing road to avoid stream impacts.
S037	KING_W219, KING_W220	Kingsbury Plantation	15	45.153566	-69.665235	Intermittent	3	2,500	Unnamed tributary of Kingsley Bog	Yes	No proposed impact to stream. No proposed project component within 25' of stream.
S038	KING_W245, KING_W246	Kingsbury Plantation	16	45.168343	-69.655803	Intermittent	4	1,170	Unnamed tributary of Bog Brook	Yes	No proposed impacts to stream. Improvements to existing road will impact wetland upslope of stream. Restricted clearing buffer along west side of road.
S039	KING_W247	Kingsbury Plantation	15	45.166617	-69.656514	Intermittent	1	1,600	Unnamed tributary of Bog Brook	Yes	No proposed change to existing culvert. Stream occurs downslope of proposed turbine location. Restricted clearing buffer area around turbine overlaps with stream.
S040	KING_W252	Kingsbury Plantation	16	45.169237	-69.651608	Intermittent	1.75	1,880	Unnamed tributary of Bog Brook	Yes	No proposed impact to this stream. Restricted clearing buffer area along access road overlaps with stream.
S042	KING_W279, KING_W280, KING_W281	Kingsbury Plantation	17	45.180239	-69.638742	Intermittent	3	2,080	Bog Brook	Yes	No proposed impacts to this stream. Stream occurs north of proposed turbine location. Restricted clearing buffer area around turbine overlaps with a portion of the stream.
S044	No associated wetland	Kingsbury Plantation	20	45.148967	-69.646544	Intermittent	4	205	Unnamed tributary of Kingsbury Stream	Yes	Stream occurs at edge of corridor, temporary construction crossing not likely needed. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S053	KING_W340	Kingsbury Plantation	23	45.143469	-69.568375	Intermittent	2	150	Kingsbury Stream	Yes	There are no proposed improvements to the existing road. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).

Stream ID	Associated Wetland ID	Town or Township	NR Map Number	Latitude	Longitude	Perennial or Intermittent	Approximate Bankfull Width (Ft.)	Estimated Distance to Nearest Perennial Stream (Ft.)	Nearest Perennial Stream Name	Within Designated Critical Habitat for Atlantic Salmon	**Description of Proposed Impact** Activity
S054	KING_W346	Kingsbury Plantation	24	45.141094	-69.553216	Intermittent	3.5	800	Cook Brook	Yes	Temporary timber mat crossing proposed for stream and associated wetland. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S055	KING_W353	Kingsbury Plantation	24	45.142687	-69.542987	Intermittent	6	850	Unnamed tributary of Carlton Stream	Yes	Temporary timber mat crossing proposed for stream and associated wetland. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S059	PARK_W356	Kingsbury Plantation	25	45.144644	-69.526427	Intermittent	2.5	30	Unnamed tributary of Carlton Stream	Yes	Stream occurs at edge of corridor, temporary construction crossing not likely needed. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S061	PARK_W367	Parkman	26	45.142306	-69.49541	Intermittent	4.5	970	Kingsbury Stream	Yes	Temporary timber mat crossing proposed for stream and associated wetland. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).
S064	PARK_W372, PARK_W373	Parkman	26	45.146078	-69.484923	Intermittent	3.5	425	Unnamed tributary of Carlton Stream	Yes	There are no proposed improvements to the existing road or 24" culvert. Generator lead will parallel west side of existing road.
S067	ABB_W377	Abbot	27	45.153685	-69.475387	Intermittent	4.5	640	Unnamed tributary of Kingsbury Stream	Yes	There are no proposed improvements to the existing road or 24" culvert. Generator lead will parallel east side of existing road.
S068	ABB_W383	Abbot	27	45.15696	-69.463698	Intermittent	4.5	1,090	Gales Brook	Yes	There are no proposed improvements to the existing road or 24" culvert. Generator lead will parallel north side of existing road.
S073	ABB_W402, ABB_W403	Abbott	29	45.159968	-69.415486	Intermittent	2.5	1,145	Unnamed tributary of Piscataquis River	Yes	Temporary timber mat crossing proposed associated wetland. Stream occurs at edge of corridor, temporary construction crossing not likely needed. BMPs will be applied and a 25' buffer will be maintained around the stream (removal of capable species).

Intermittent Stream Photos

Photo 37: Intermittent stream S003.
Stantec Consulting, November 6, 2012.

Photo 38: Intermittent stream S004.
Stantec Consulting, August 19, 2010.

Photo 39: Intermittent stream S005.
Stantec Consulting, August 18, 2010.

Photo 40: Intermittent stream S006.
Stantec Consulting, September 25, 2012.

Photo 41: Intermittent stream S011.
Stantec Consulting, October 2, 2012.

Photo 42: Intermittent stream S012.
Stantec Consulting, October 2, 2012.

Photo 43: Intermittent stream S013.
Stantec Consulting, October 2, 2012.

Photo 44: Intermittent stream S015.
Stantec Consulting, October 2, 2012.

Photo 45: Intermittent stream S016.
Stantec Consulting, October 2, 2012.

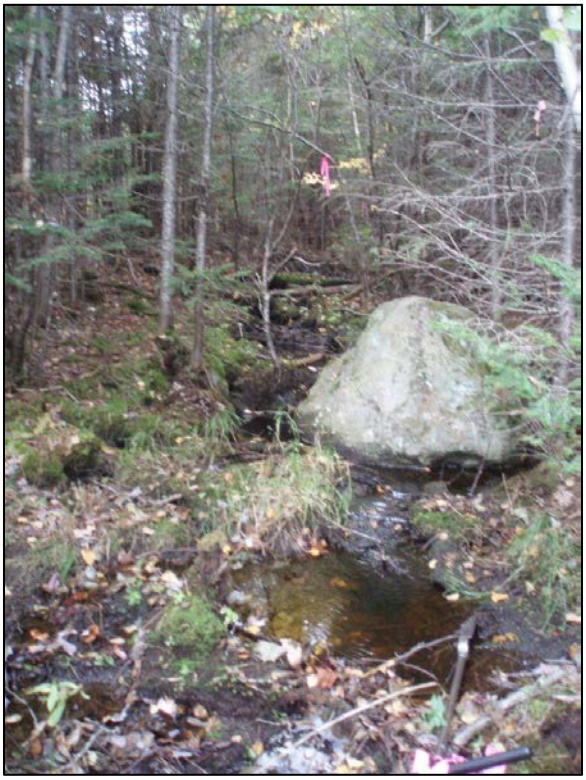


Photo 46: Intermittent stream S019.
Stantec Consulting, October 3, 2012.

Photo 47: Intermittent stream S020.
Stantec Consulting, October 27, 2010.

Photo 48: Intermittent stream S026.
Stantec Consulting, October 3, 2012.

Photo 49: Intermittent stream S028.
Stantec Consulting, January 29, 2013.

Photo 50: Intermittent stream S029.
Stantec Consulting, August 24, 2010.

Photo 51: Intermittent stream S031.
Stantec Consulting, September 22, 2010.

Photo 52: Intermittent stream S032.
Stantec Consulting, September 25, 2012.

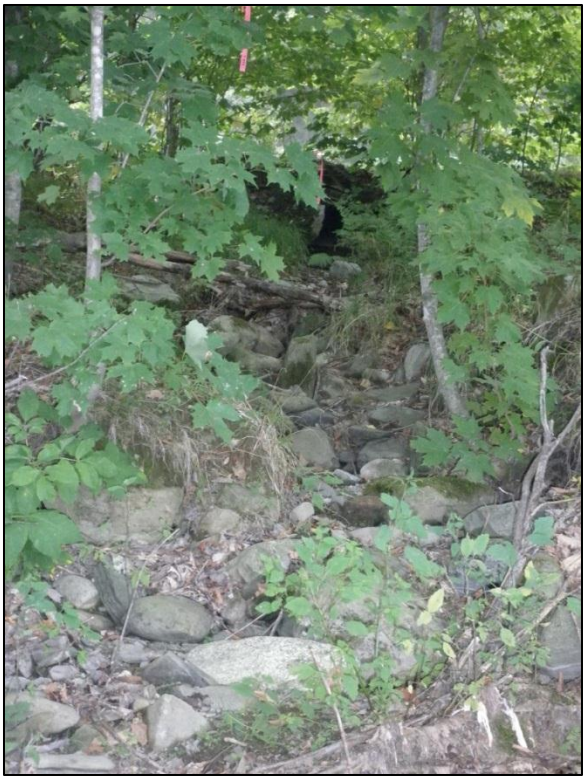


Photo 53: Intermittent stream S034.
Stantec Consulting, September 22, 2010.

Photo 54: Intermittent stream S037.
Stantec Consulting, May 24, 2011.

Photo 55: Intermittent stream S038.
Stantec Consulting, January 30, 2013.

Photo 56: Intermittent stream S039.
Stantec Consulting, June 2, 2011.

Photo 57: Intermittent stream S042.
Stantec Consulting, June 32, 2011.

Photo 58: Intermittent stream S044.
Stantec Consulting, November 10, 2010.

Photo 59: Intermittent stream S053.
Stantec Consulting, December 13, 2012.

Photo 60: Intermittent stream S054.
Stantec Consulting, December 8, 2010.

Photo 61: Intermittent stream S055.
Stantec Consulting, December 8, 2010.

Photo 62: Intermittent stream S059.
Stantec Consulting, December 17, 2010.

Photo 63: Intermittent stream S061.
Stantec Consulting, February 12, 1013.

Photo 64: Intermittent stream S064.
Stantec Consulting, January 31, 2013.

Photo 65: Intermittent stream S067.
Stantec Consulting, January 30, 2013.

Photo 66: Intermittent stream S068.
Stantec Consulting, January 29, 2013.

Photo 67: Intermittent stream S073.
Stantec Consulting, December 11, 2012.