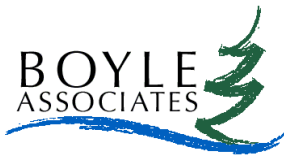


# Natural Resources Report

## Sewall Infrastructure – Moosehead Marina and Ski Resort Redevelopment Project

Prepared by Boyle Associates – February 19, 2021





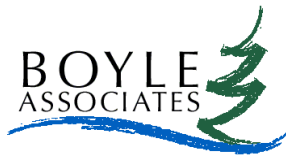
## TABLE OF CONTENTS

1. INTRODUCTION.....	3
2. SITE CHARACTERIZATION.....	3
3. METHODS.....	4
3.1. WETLANDS .....	4
3.2. RIVERS & STREAMS .....	4
3.3. VERNAL POOLS.....	4
4. RESULTS .....	6
4.1. SOILS.....	6
4.2. UPLAND HABITATS .....	6
4.3. WETLAND & STREAM HABITATS .....	7
4.4. VERNAL POOLS.....	13
4.5. WILDLIFE & FISHERIES.....	14
5. SUMMARY.....	15

## EXHIBITS

EXHIBIT A – NATURAL RESOURCES MAP

EXHIBIT B – PHOTOGRAPHS



## 1. INTRODUCTION

Boyle Associates (Boyle) was retained by Sewell Infrastructure (Sewell) to complete wetland and waterbody delineations and vernal pool surveys on approximately 320 acres located off Maine Route 6 in Greenville, Maine (Site), shown in Figure 1. Boyle was responsible for only this portion of the larger Site, as the Project was split up between contractors. This report summarizes the findings of the natural resources survey work completed by Boyle, in January 2021.

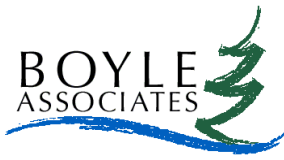
## 2. SITE CHARACTERIZATION

The Site includes Moose Mountain, a marina, and roadside area off Route 6 (50 feet from the centerline on both side). The Site can be broadly characterized as a mixture of upland forest with streams and wetlands. Large portions of the Site have been actively used as a downhill ski resort and a review of historic aerial photos shows that logging has occurred as well. The Site is surrounded by forested uplands off Maine Route 6. The Site is broken up into two parts: The marina and the ski resort/sewer line. The Marina is located east off Mountain View road and encapsulates a point surrounded by Moosehead Lake. The ski resort/sewer line includes Moose Mountain and areas adjacent to Maine Route 6.

The Site falls primarily within the US Environmental Protection Agency's Eco-region of the Northeastern Highlands and more specifically the Moosehead-Churchill Lakes. "The Moosehead-Churchill Lakes ecoregion is an area of rolling plains with a few low hills and numerous large lakes. Moosehead and Chesuncook lakes in the southern part of the region drain to the Kennebec River and West Branch Penobscot River respectively, while the northern lakes drain to the Allagash River. At about 35 miles long and 10 miles wide, Moosehead Lake is the largest lake in New England east of Lake Champlain. While there are some similarities in ecological characteristics with the Saint John Uplands, the Moosehead-Churchill Lakes region has lower elevations and less relief than the surrounding Ecoregions the Saint John Uplands and the Quebec/New England Boundary Mountains, and slightly milder annual temperatures. Elevations are mostly 900 to 1400 feet with 300 feet of relief. There are some soil differences from hillier uplands in adjacent ecoregions, with more poorly drained soils. Some areas of the region have intensive forestry activities, while real estate and timber investment organizations have subdivision and resort development plans in southern parts of the region."<sup>1</sup>

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<sup>1</sup> Ecoregions of New England  
[http://ecologicalregions.info/data/vt/new\\_eng\\_front.pdf](http://ecologicalregions.info/data/vt/new_eng_front.pdf)



### 3. METHODS

#### 3.1. WETLANDS

Prior to the initial site visit, Boyle conducted a desktop review of existing data, which included the National Wetlands Inventory (NWI), Natural Resources Conservation Service (NRCS) soil survey, topographic maps, Beginning with Habitat data, agency correspondence, and aerial photos. Following this review, Boyle visited the Site and performed a formal wetland and waterbody delineation and natural resources assessment.

The Site was inspected for the presence of wetlands based on three parameters required for an area to be considered a jurisdictional wetland: evidence of hydrology, a predominance of hydrophytic vegetation, and the presence of hydric soils. The survey techniques and aforementioned factors are described in the *1987 US Army Corps of Engineers Wetland Delineation Manual*<sup>2</sup> and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, v2.0*.<sup>3</sup> In areas where evidence of hydrology or hydrophytic plants were observed, samples of the soil profile were observed to further investigate evidence of saturated conditions within the upper part of the soil profile. Pink survey flags labeled with “WETLAND DELINEATION” were hung along the wetland-upland boundaries. The flags were labeled with a unique alpha-numeric code and sequence denoting the wetland number and flag number (e.g., W-MR-01-1, W-MR-02-1 etc.).

#### 3.2. RIVERS & STREAMS

The Site was reviewed for features that meet the definition of river, stream, or brook, as defined in the Natural Resources Protection Act (NRPA), under Maine Statute Title 38, Chapter 3, subchapter 1, Article 5-A, §480-B<sup>4</sup>. Watercourses which met this definition were flagged with blue flagging and a numeric sequence denoting the resource number and flag number that were collected in the field via Boyle’s GPS equipment (S-MR-1-1, etc.).

#### 3.3. VERNAL POOLS

Vernal pools are dynamic habitats that vary in water level, vegetative cover, and other physical characteristics throughout the year, as well as from year to year. In addition, the breeding activity of amphibians, particularly the initiation of breeding, is dependent upon seasonal environmental

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<sup>2</sup> US Army Corps of Engineers Wetland Delineation Manual (1987)

<https://www.nae.usace.army.mil/Portals/74/docs/regulatory/JurisdictionalLimits/wlman87.pdf>

<sup>3</sup>US Army Corps of Engineers *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, v2.0*

<https://www.nae.usace.army.mil/Portals/74/docs/regulatory/JurisdictionalLimits/RegionalSupplement2012.pdf>

<sup>4</sup> Natural Resource Protection Act, Maine Statute Title 38, Chapter 3, subchapter 1, Article 5-A, §480-B

<http://www.mainelegislature.org/legis/statutes/38/title38sec480-B.html>



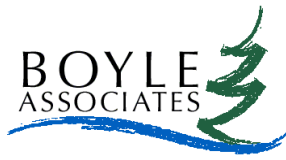
parameters such as temperature and precipitation. Due to this variability, the presence and number of egg masses may differ between breeding seasons and during a given breeding season.

The criteria used for identifying a Significant Vernal Pool are described in detail in the *April 2014 Maine Association of Wetland Scientists Vernal Pool Technical Committee Vernal Pool Survey protocol*<sup>5</sup>.

As the visit to the Site fell outside of the vernal pool season, only identification of potentially significant vernal pools (NRPA Regulated) was included in the wetland delineation. When a resource appeared to meet the definition of a significant vernal pool (i.e., those pools that are of natural origin and may support significance criteria) during the delineation, scientists recorded GPS position center of the pool. These pools would be considered significant for permitting purposes under the NRPA until formal vernal pool assessments are conducted under appropriate spring conditions.

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<sup>5</sup>April 2014 Maine Association of Wetland Scientists Vernal Pool Technical Committee Vernal Pool Survey Protocol [https://static1.squarespace.com/static/5113deede4b0a785ada17b27/t/537415c4e4b003ad4653fb5a/1400116676556/Complete+MAWS+2014+VP+Survey+Protocol\\_v3\\_05.14.2014.pdf](https://static1.squarespace.com/static/5113deede4b0a785ada17b27/t/537415c4e4b003ad4653fb5a/1400116676556/Complete+MAWS+2014+VP+Survey+Protocol_v3_05.14.2014.pdf)



## 4. RESULTS

Field work was completed on January 12-15 and 18-21, 2021. Weather during field work was sunny to partly cloudy with approximately one foot of snow on the ground. Exhibit A includes a map of the natural resources identified onsite and Exhibit B includes photographs of all mapped natural resources identified onsite.

### 4.1. SOILS

Most of the site is dominated by two soil types, including the Telos-Chesuncook association and the Monson-Elliotsville-Knob Lock association. The Telos-Chesuncook association consists of somewhat poorly drained- moderately well drained silt loam derived from loamy lodgement till and dense glacial till on drumlinoid ridges. The Monson-Elliotsville-Knob Lock association ranges from very deep and moderately well drained to very shallow and well drained silt loam. This association is derived from loamy subglacial till formed on mountains.

The observed hydric soil indicator for wetlands identified onsite are Depleted Matrix (F3) and Loamy Mucky Mineral (F1). The general soil profile for wetlands observed onsite includes 0-3" 7.5YR 3/2 sandy loam, 3-12" 7.5Y 5/2 loam, and 12-22" 5Y 5/2 silt loam with distinct redoximorphic features of 7.5YR 5/8 (30% in the matrix). Mucky soils were characterized by 0-6" of 7.5 YR 3/1 muck underlain by reduced 7.5YR 5/2 silt loam with redox concentrations. Mucky soils were commonly observed in hillside seeps along steeper sections of the Site. Upland soils were variable and range from deep to shallow to bedrock, generally upland soils were characterized by 0-6" 7.5YR 3/4 sandy loam, 6-16" 7.5 YR 5/4 fine sandy loam.

### 4.2. UPLAND HABITATS

Forested uplands are most prevalent onsite, and most uplands are dominated by coniferous or deciduous trees and saplings. Common species include American hop-hornbeam (*Ostrya virginiana*), sugar maple (*Acer saccharum*), eastern hemlock (*Tsuga canadensis*), American beech (*Fagus grandifolia*), balsam fir (*Abies balsamea*), red maple (*Acer rubrum*). The understory in higher elevations is dominated by shrubby growth of balsam fir and red spruce (*Picea rubens*) while lower elevations include saplings of balsam fir, beech, and maple, along with shrubs such as hobblebush (*Viburnum lantanoides*). Herbaceous understory in upland areas includes common bracken fern (*Pteridium aquilinum*), however due to winter conditions, no other upland herbs were identified. Photo 1 shows a representative view of dominant forested upland habitats observed onsite.

**Photo 1. Representative Photo of a Forested Upland (January 18, 2021)**



#### 4.3. WETLAND & STREAM HABITATS

Thirty-nine streams and forty-four wetlands were identified onsite. The streams located in the ski resort portion typically run northeast, while those on the sewer line typically run east/northeast. Seven streams (S-MR-01, S-MR-03, S-MR-05, S-MR-12, S-MR-14, S-MR-17, and S-MR-19) are depicted as a solid line on recent U.S. Geological Survey topographic maps. Table 1 describes the characteristics of each identified stream and their qualifying criteria. Photo 2 shows a representative view of a stream.

Table 1. Stream Summary Table

Stream ID	Substrate Type	Avg. Width (Ft.)	Avg. Depth (in.)	Stream Criteria <sup>6</sup>
S-MR-01	Sand/Rocks	3	4	1. Scoured Mineral Bed 2. Aquatic Vegetation 3. On USGS Topo Map
S-MR-02	Sand/Gravel	1	2	1. Scoured Mineral Bed

<sup>6</sup> Title 38 §480-B. Definitions

Stream ID	Substrate Type	Avg. Width (Ft.)	Avg. Depth (in.)	Stream Criteria <sup>6</sup>
				2. Macroinvertebrates 3. Aquatic Vegetation
S-MR-03	Sand/Rocks	5	6	1. Scoured Mineral Bed 2. Aquatic Vegetation 3. On USGS Topo Map
S-MR-04	Sand/Gravel	2	0	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-MR-05	Sand/Gravel/ Rocks	10	12	1. Scoured Mineral Bed 2. Aquatic Vegetation 3. On USGS Topo Map
S-MR-06	Sand/Cobble	3	5	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-MR-07	Sand/Cobble	2	3	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-MR-08	Sand/Cobble	2	3	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-MR-09	Sand/Cobble	4	4	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-MR-10	Sand/Cobble	3	3	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-MR-11	Sand/Cobble	2	4	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-MR-12	Sand/Rocks	5	8	1. Scoured Mineral Bed 2. Aquatic Vegetation 3. On USGS Topo Map
S-MR-13	Sand/Cobble	3	6	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-MR-14	Cobble/Rocks	20	24	1. Scoured Mineral Bed 2. Aquatic Vegetation 3. On USGS Topo Map
S-MR-15	Sand/Cobble	2	3	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-MR-16	Sand/Cobble	1	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-MR-17	Sand/Cobble	2	3	1. Scoured Mineral Bed 2. Aquatic Vegetation



Stream ID	Substrate Type	Avg. Width (Ft.)	Avg. Depth (in.)	Stream Criteria <sup>6</sup>
				3. On USGS Topo Map
S-MR-18	Sand/Cobble	3	4	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-MR-19	Cobble/Rock	8	12	1. Scoured Mineral Bed 2. Aquatic Vegetation 3. On USGS Topo Map
S-MR-20	Sand/Cobble	3	3	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-MR-21	Sand/Cobble	1	1	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-MR-22	Sand/Cobble	2	4	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-MR-23	Sand/Cobble	2	4	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-MR-24	Sand/Cobble	1	2	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-SK-01	Cobble/boulder	3	6	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-SK-03	Sand/Cobble	2	2	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-SK-04	Gravel/Cobble	2	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-SK-05	Gravel/Cobble	2	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-SK-06	Cobble/Boulder	8	12	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation
S-SK-07	Sand/Cobble	2	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-SK-08	Sand/Cobble	2	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-SK-09	Sand/Cobble	2	2	1. Scoured Mineral Bed

Stream ID	Substrate Type	Avg. Width (Ft.)	Avg. Depth (in.)	Stream Criteria <sup>6</sup>
				2. Aquatic Vegetation
S-SK-10	Sand/Cobble	2	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-SK-11	Sand/Cobble	2	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-SK-12	Sand/Cobble	2	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-SK-13	Sand/Cobble	2	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-SK-14	Sand/Cobble	2	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-SK-15	Sand/Cobble	2	2	1. Scoured Mineral Bed 2. Aquatic Vegetation
S-SK-16	Gravel/Cobble	6	8	1. Scoured Mineral Bed 2. Macroinvertebrates 3. Aquatic Vegetation

**Photo 2. Representative Photo of a stream (S-MR-05, January 15, 2021)**





Identified wetlands were typically forested and shrub dominated. The majority of the shrub dominated wetlands are in the sewer line survey area. However, W-MR-31 includes a pond and W-MR-10 and W-MR-24 are both dominated by emergent vegetation. Table 2 includes summary information for the wetlands identified onsite.

Table 2. Wetland Summary Table

Wetland ID	Wetland Type <sup>7</sup>	WOSS <sup>8</sup>	Total Area (Sq. ft)
W-MR-01	PFO	No	12173.1
W-MR-02	PFO	No	792.8
W-MR-03	PFO	No	1100.0
W-MR-04	PFO	Yes-Within 25 ft of stream	5808.8
W-MR-05	PFO	Yes-Within 25 ft of stream	660.5
W-MR-06	PFO	Yes-Within 25 ft of stream	20831.9
W-MR-07/ W-MR-36	PFO	No	19812.1
W-MR-08	PSS/PEM	Yes-Stream within wetland	909.2
W-MR-09	PFO/PSS	No	2150.9
W-MR-10	PEM	No	2003.7
W-MR-11	PFO	No	0.1
W-MR-12	PFO	No	103.5
W-MR-13	PFO	No	3251.0
W-MR-14	PFO	No	2108.6
W-MR-15	PSS	No	9.8
W-MR-16	PFO	No	6521.2
W-MR-17	PFO	No	3882.4
W-MR-18	PFO	No	4046.6
W-MR-19	PFO	No	6126.7
W-MR-20	PFO/PSS	No	2899.7
W-MR-21	PSS/PFO	No	977.2
W-MR-22	PFO/PSS	Yes-Stream within wetland	774.7
W-MR-23	PFO	No	103.7
W-MR-24	PEM	No	336.4
W-MR-25	PSS/PFO	No	1128.8
W-MR-26	PFO	No	304.4
W-MR-27	PFO	No	1598.5
W-MR-28	PFO	No	180.9
W-MR-29	PFO	Yes-Within 25 ft of stream	814.8

<sup>7</sup> PFO-Palustrine Forested Wetland, PSS-Palustrine Scrub-Shrub Wetland, PEM-Palustrine Emergent Wetland, Palustrine Unconsolidated Bottom (Cowardin et al 1979)

<sup>8</sup> WOSS-Wetland of Special Significance

Wetland ID	Wetland Type <sup>7</sup>	WOSS <sup>8</sup>	Total Area (Sq. ft)
W-MR-30	PFO	No	558.8
W-MR-31	PFO/PUB	Yes- Within 75 ft of pond	6226.1
W-MR-32	PFO	No	6718.4
W-MR-33	PSS/PFO	No	515.8
W-MR-34	PFO	No	42.0
W-MR-35	PFO	No	30.7
W-SK-01	PFO/PEM	Yes-Within 25 ft of stream	24677.9
W-SK-02	PEM/PSS	Yes-Within 25 ft of stream/greater than 20,000 sq.ft. of open water and emergent vegetation	11591.6
W-SK-03	PFO	No	3229.4
W-SK-04	PFO	No	920.1
W-SK-05	PFO	Yes-Within 25 ft of stream	672.7
W-SK-06	PFO	No	574.0
W-SK-10	PFO	No	1207.9
W-SK-11	PFO	No	713.5
W-SK-12	PFO	No	1637.2

Hydric soils onsite are dominated by a depleted matrix. Forested wetland vegetation includes red maple (*Acer rubrum*), black ash (*Fraxinus nigra*), yellow birch (*Betula alleghaniensis*), eastern hemlock (*Tsuga canadensis*), northern white cedar (*Thuja occidentalis*), balsam fir, black spruce (*Picea mariana*), and gray birch (*Betula populifolia*). Speckled alder (*Alnus incana*), winterberry (*Ilex verticillata*), gray birch, and red maple are found in the shrub and sapling communities. The herbaceous understory is dominated by cinnamon fern (*Osmunda cinnamomea*), sensitive fern (*Onoclea sensibilis*), ostrich fern (*Matteuccia struthiopteris*), white meadowsweet (*Spiraea alba*), steeplebush (*Spiraea tomentosa*), and broadleaf cattail (*Typha latifolia*). In addition to photos of each wetland included in Exhibit B, Photo 3 shows a representative view of dominant forested. Wetlands were delineated during the winter months, a follow-up verification of wetlands should be completed during the growing season to confirm wetlands lines.

**Photo 3. Representative Photo of a Forested (W-MR-11, January 19, 2021)**

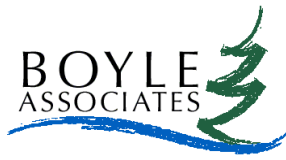


Boyle preliminarily evaluated wetland functions and values using the USACE Highway Methodology. Functions and values are assessed based on characteristics observed within the field as well as a review of pertinent desktop and publicly available information. Functions provided by all wetlands onsite include sediment and toxicant retention and nutrient removal and retention. Wetlands on site, which are associated with streams, provide sediment and shoreline stabilization. Some wetland seeps likely result from groundwater discharge. All wetlands provide wildlife habitat, as evidenced by wildlife signs (i.e., tracks and scat) as well as observations of wildlife.

Wetland services (i.e., visual quality, education, or aesthetics) onsite are limited as the wetlands occur on privately owned property, which is outside of the ski resort, and therefore public access is limited. Wetland habitats do provide some limited visual quality by maintaining the natural landscape in the area surrounding the resort.

#### 4.4. VERNAL POOLS

During fieldwork completed on January 12-15 and 18-21, 2021, the area was screened for topographic depressions that may function as vernal pools, as field work was not completed



within the recommended vernal pool survey window. While a formal vernal pool survey was not completed, no potential vernal pools were identified on Site. We recommend a formal vernal pool survey for the Site be completed during the 2021 breeding season as much of the site was obscured by snow cover.

#### 4.5. WILDLIFE & FISHERIES

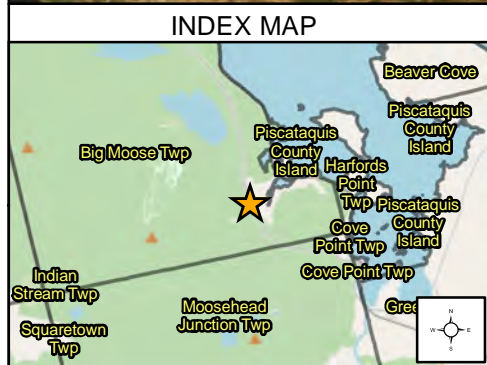
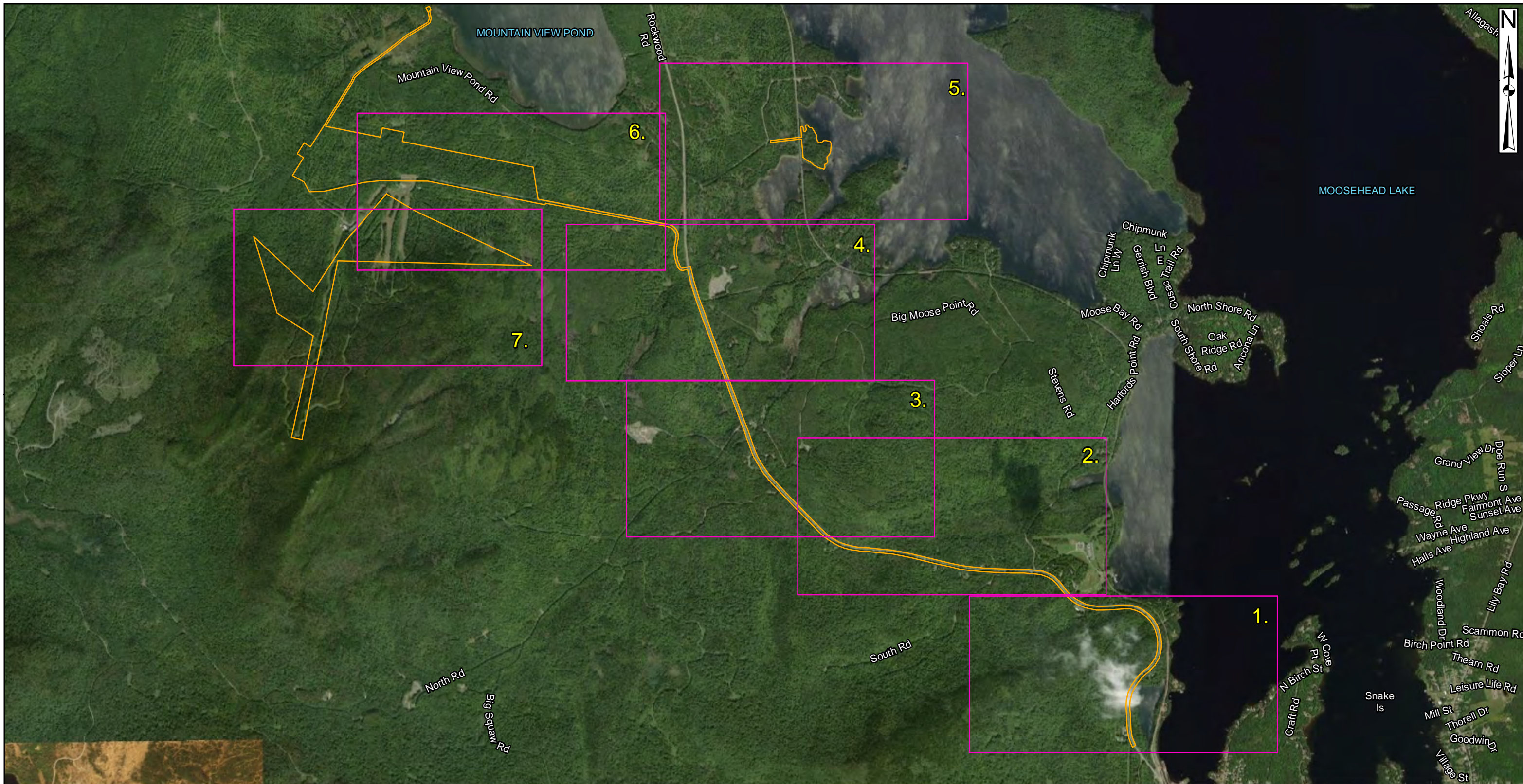
The Site includes both upland and wetland habitats, which are likely to be utilized by a wide variety of birds and wildlife. The Site is in an expansive area of intact forested habitat, particularly in the steeper portions of the Site. Gradual slopes more commonly include cleared areas associated with ski trails and resort infrastructure. Large mammals such as moose (*Alces alces*), whitetail deer (*Odocoileus virginianus*), and black bear (*Ursus americanus*) are likely resident within portions of the Site. Species such as coyote (*Canis latrans*), and bobcat (*Lynx rufus*) Based on the proximity of development and disturbance (i.e., logging and ski trails), most wildlife present are likely habitat generalists which are accustomed to disturbance. Species including grey squirrel (*Sciurus carolinensis*), porcupine (*Erethizon dorsatum*), and red fox (*Vulpes vulpes*) are likely all present onsite as well. Beaver (*Castor canadensis*) activity has been noted along the eastern tip of the ski resort survey area.

It is also likely that many bat species are also likely present during the breeding and pupping season, including the endangered northern long-eared bat (*Myotis septentrionalis*). This is based on the habitat present onsite, which includes large diameter trees for roosting and breeding as well as open and edge habitat for feeding.

Herptiles onsite include common species such as garter snake (*Thamnophis sirtalis*), which are likely in forested areas and edge habitat.

A wide variety of bird species are likely present. Examples of potential birds onsite include, black-throated green warbler (*Setophaga virens*), black-capped chickadee (*Poecile atricapillus*), European starling (*Sturnus vulgaris*), white-throated sparrow (*Zonotrichia albicollis*), downy woodpecker (*Picoides pubescens*), red-tailed hawk (*Buteo jamaicensis*), ruffed grouse (*Bonasa umbellus*), wild turkey (*Meleagris gallopavo*), and American woodcock (*Scolopax minor*).

## EXHIBIT A – NATURAL RESOURCES MAP



**LEGEND**

— Project Survey Boundary

**BOYLE ASSOCIATES**

**SCALE:**

0 2,500 5,000 Feet

1 inch = 2,500 feet

**Sewal**

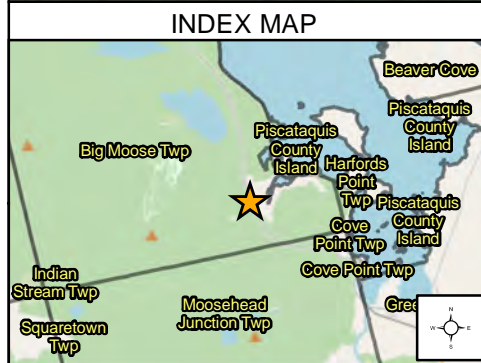
The evolution of expertise  
Since 1880 ATRC COMPANY

**NATURAL RESOURCES LOCATOR MAP  
MOOSEHEAD MARINA AND SKI RE-DEVELOPMENT PROJECT,  
BIG MOOSE TWP, MAINE**





PROJECT NUMBER: 656      FEBRUARY 08, 2020




1.



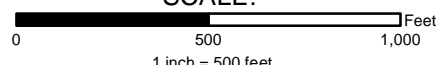
**LEGEND**

-  Boyle Delinated Wetlands
-  Boyle Delinated Streams
-  Area Delinated by Others
-  Project Survey Boundary

**BOYLE ASSOCIATES**



**SCALE:**



1 inch = 500 feet

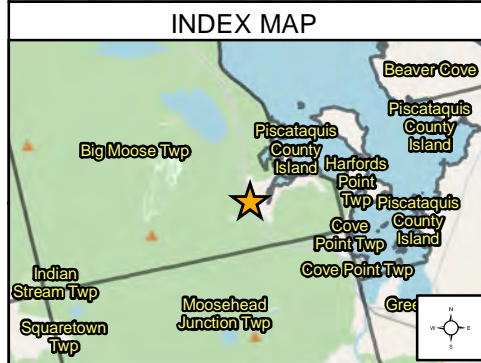
**Sewal**

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**NATURAL RESOURCES MAP  
MOOSEHEAD MARINA AND SKI RE-DEVELOPMENT PROJECT,  
BIG MOOSE TWP, MAINE**

PROJECT NUMBER: 694      FEBRUARY 12, 2021


2.



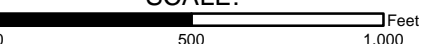
**LEGEND**

-  Boyle Delineated Wetlands
-  Boyle Delineated Streams
-  Area Delineated by Others
-  Project Survey Boundary

**BOYLE ASSOCIATES**



**SCALE:**



1 inch = 500 feet

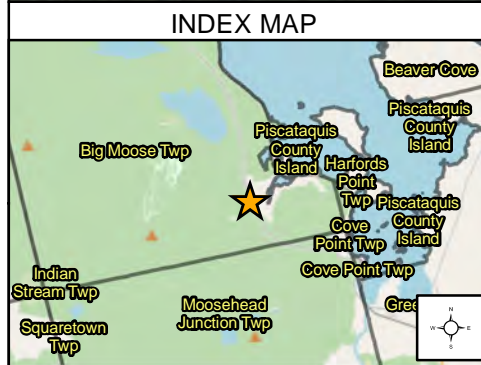
**Sewal**

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**NATURAL RESOURCES MAP  
MOOSEHEAD MARINA AND SKI RE-DEVELOPMENT PROJECT,  
BIG MOOSE TWP, MAINE**

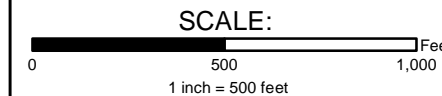
PROJECT NUMBER: 694      FEBRUARY 12, 2021

3.



**LEGEND**

-  Boyle Delineated Wetlands
-  Boyle Delineated Streams
-  Area Delineated by Others
-  Project Survey Boundary

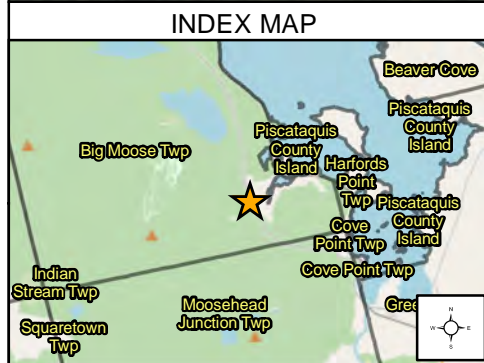


**NATURAL RESOURCES MAP  
MOOSEHEAD MARINA AND SKI RE-DEVELOPMENT PROJECT,  
BIG MOOSE TWP, MAINE**





PROJECT NUMBER: 694

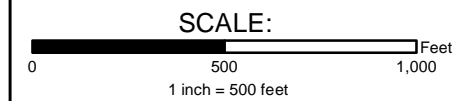
FEBRUARY 12, 2021

4.



**LEGEND**

-  Boyle Delineated Wetlands
-  Boyle Delineated Streams
-  Area Delineated by Others
-  Project Survey Boundary

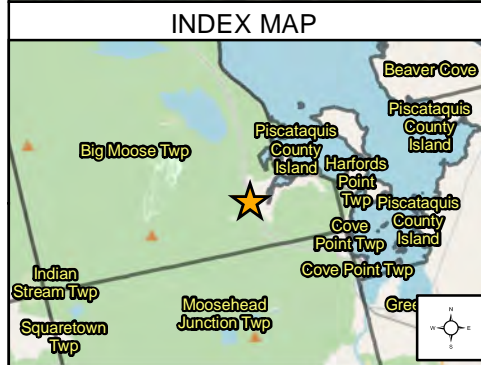
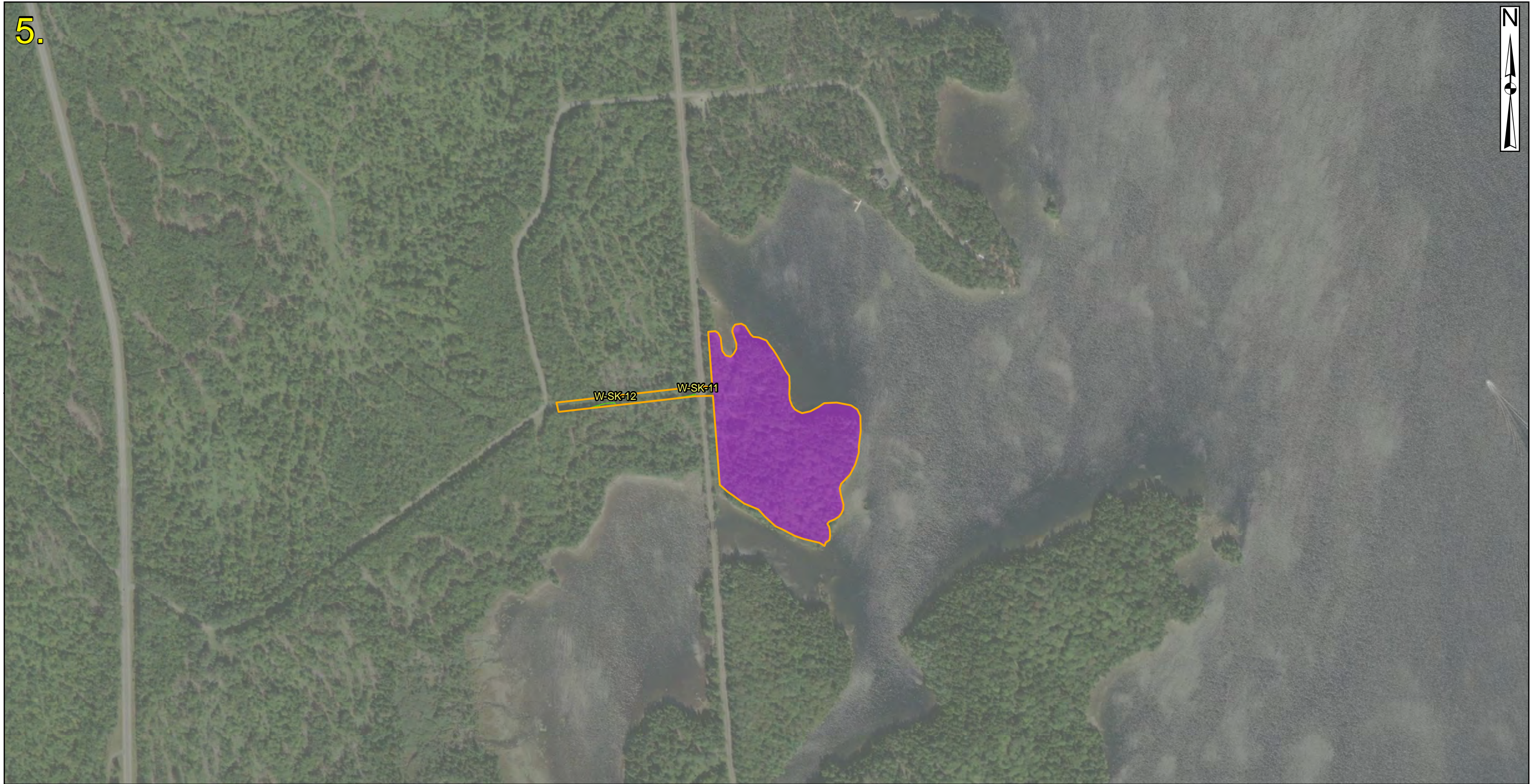


**NATURAL RESOURCES MAP  
MOOSEHEAD MARINA AND SKI RE-DEVELOPMENT PROJECT,  
BIG MOOSE TWP, MAINE**





PROJECT NUMBER: 694

FEBRUARY 12, 2021


5.



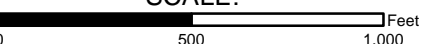
**LEGEND**

-  Boyle Delineated Wetlands
-  Boyle Delineated Streams
-  Area Delineated by Others
-  Project Survey Boundary

**BOYLE ASSOCIATES**



**SCALE:**



1 inch = 500 feet

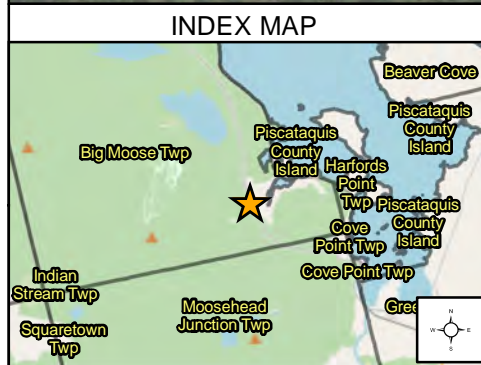
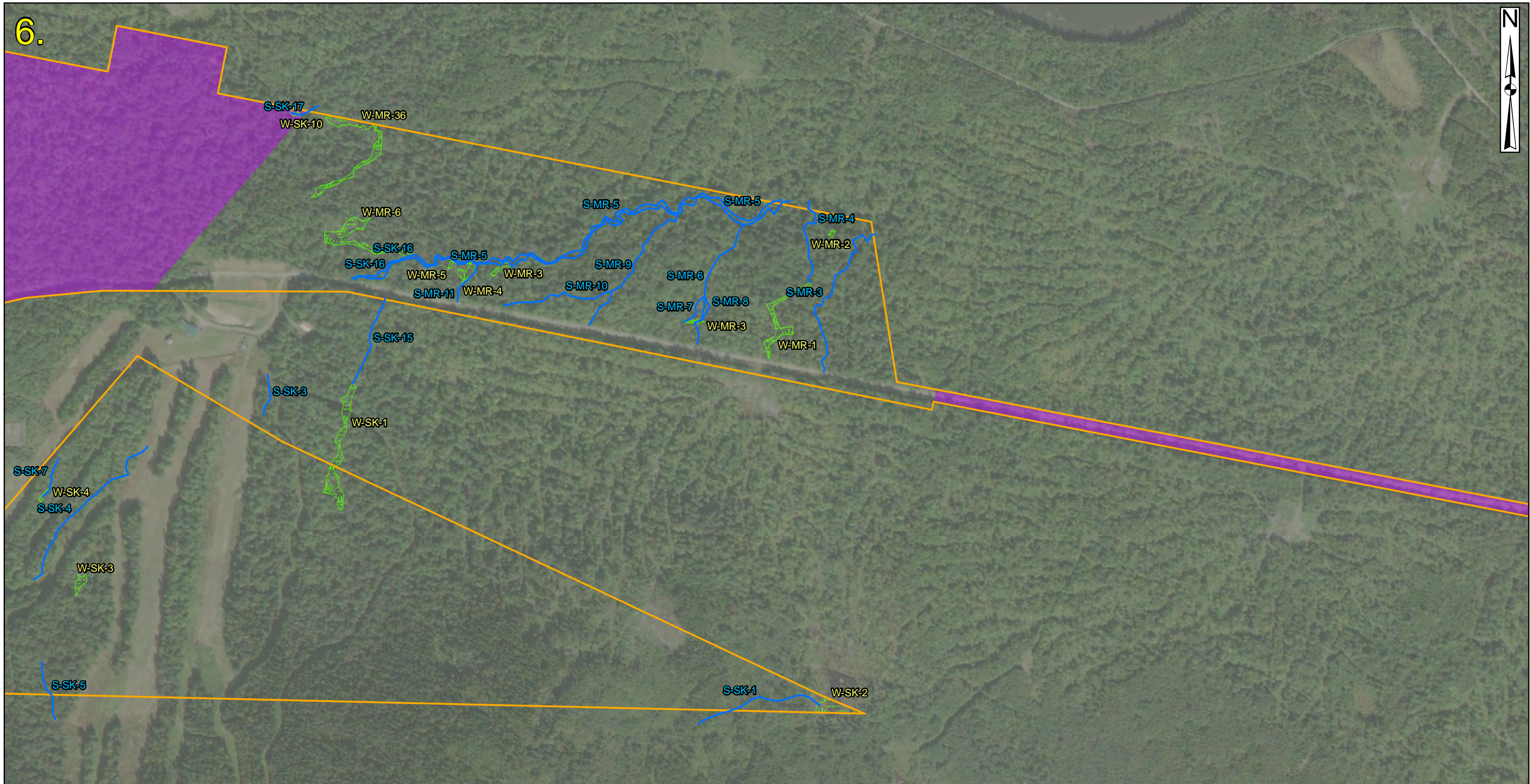
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**NATURAL RESOURCES MAP  
MOOSEHEAD MARINA AND SKI RE-DEVELOPMENT PROJECT,  
BIG MOOSE TWP, MAINE**

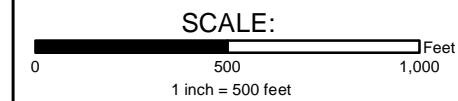
PROJECT NUMBER: 694      FEBRUARY 12, 2021

6.



**LEGEND**

-  Boyle Delineated Wetlands
-  Boyle Delineated Streams
-  Area Delineated by Others
-  Project Survey Boundary

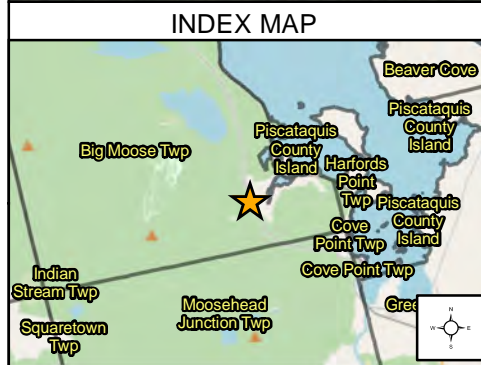
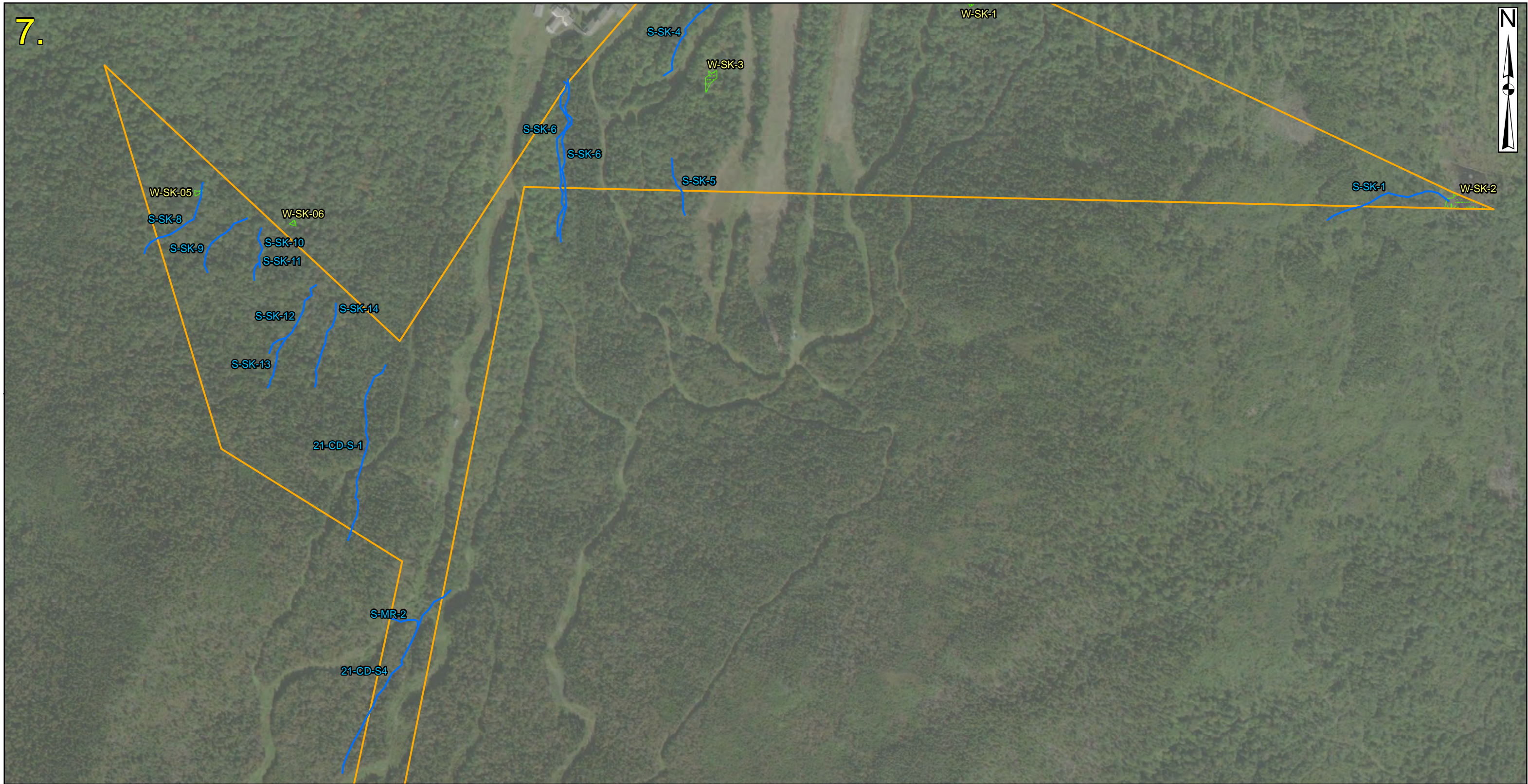


**NATURAL RESOURCES MAP**  
**MOOSEHEAD MARINA AND SKI RE-DEVELOPMENT PROJECT,**  
**BIG MOOSE TWP, MAINE**





PROJECT NUMBER: 694

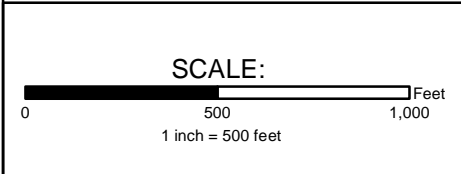
FEBRUARY 12, 2021

7.



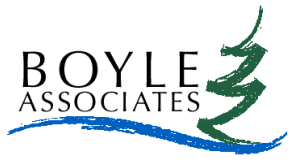
**LEGEND**

-  Boyle Delineated Wetlands
-  Boyle Delineated Streams
-  Area Delineated by Others
-  Project Survey Boundary



**NATURAL RESOURCES MAP**  
**MOOSEHEAD MARINA AND SKI RE-DEVELOPMENT PROJECT,**  
**BIG MOOSE TWP, MAINE**

PROJECT NUMBER: 694      FEBRUARY 12, 2021



## EXHIBIT B – PHOTOGRAPHS



**Photo 1: View of Wetland W-MR-1 (January 15, 2021)**



**Photo 2: View of Wetland W-MR-2 (January 15, 2021)**



**Photo 3: View of Wetland W-MR-3 (January 18, 2021)**



**Photo 4: View of Wetland W-MR-4 (January 18, 2021)**



**Photo 5: View of Wetland W-MR-5 (January 18, 2021)**



**Photo 6: View of Wetland W-MR-6 (January 18, 2021)**



**Photo 7: View of Wetland W-MR-7 (January 19, 2021)**



**Photo 8: View of Wetland W-MR-8 (January 19, 2021)**



**Photo 9: View of Wetland W-MR-9 (January 19, 2021)**



**Photo 10: View of Wetland W-MR-10 (January 19, 2021)**



**Photo 11: View of Wetland W-MR-11 (January 19, 2021)**



**Photo 12: View of Wetland W-MR-12 (January 19, 2021)**



**Photo 13: View of Wetland W-MR-13 (January 19, 2021)**



**Photo 14: View of Wetland W-MR-14 (January 19, 2021)**



**Photo 15: View of Wetland W-MR-15 (January 19, 2021)**



**Photo 16: View of Wetland W-MR-16 (January 20, 2021)**





**Photo 17: View of Wetland W-MR-17 (January 20, 2021)**



**Photo 18: View of Wetland W-MR-18 (January 20, 2021)**



**Photo 19: View of Wetland W-MR-19 (January 20, 2021)**



**Photo 20: View of Wetland W-MR-20 (January 20, 2021)**



**Photo 21: View of Wetland W-MR-21 (January 20, 2021)**



**Photo 22: View of Wetland W-MR-22 (January 20, 2021)**



**Photo 23: View of Wetland W-MR-23 (January 20, 2021)**



**Photo 24: View of Wetland W-MR-24 (January 20, 2021)**



**Photo 25: View of Wetland W-MR-25 (January 20, 2021)**



**Photo 26: View of Wetland W-MR-26 (January 20, 2021)**



**Photo 27: View of Wetland W-MR-27 (January 20, 2021)**



**Photo 28: View of Wetland W-MR-28 (January 20, 2021)**



**Photo 29: View of Wetland W-MR-29 (January 20, 2021)**



**Photo 30: View of Wetland W-MR-30 (January 20, 2021)**



**Photo 31: View of Wetland W-MR-31 (January 20, 2021)**



**Photo 32: View of Wetland W-MR-32 (January 20, 2021)**





**Photo 33: View of Wetland W-MR-33 (January 20, 2021)**



**Photo 34: View of Wetland W-MR-34 (January 20, 2021)**



**Photo 35: View of Wetland W-MR-35 (January 20, 2021)**



**Photo 36: View of Wetland W-SK-01 (January 12, 2021)**



**Photo 37: View of Wetland W-SK-02 (January 12, 2021)**



**Photo 38: View of Wetland W-SK-06 (January 14, 2021)**



**Photo 39: View of Wetland W-SK-10 (January 21, 2021)**



**Photo 40: View of Stream S-MR-01 (January 22, 2021)**



**Photo 41: View of Stream S-MR-02 (January 14, 2021)**



**Photo 42: View of Stream S-MR-03 (January 15, 2021)**



**Photo 43: View of Stream S-MR-04 (January 15, 2021)**



**Photo 44: View of Stream S-MR-05 (January 15, 2021)**



**Photo 45: View of Stream S-MR-06 (January 15, 2021)**



**Photo 46: View of Stream S-MR-07 (January 15, 2021)**



**Photo 47: View of Stream S-MR-08 (January 15, 2021)**



**Photo 48: View of Stream S-MR-09 (January 15, 2021)**





**Photo 49: View of Stream S-MR-10 (January 15, 2021)**



**Photo 50: View of Stream S-MR-11 (January 18, 2021)**



**Photo 51: View of Stream S-MR-12 (January 19, 2021)**



**Photo 52: View of Stream S-MR-13 (January 19, 2021)**



**Photo 53: View of Stream S-MR-14 (January 19, 2021)**



**Photo 54: View of Stream S-MR-15 (January 20, 2021)**



**Photo 55: View of Stream S-MR-16 (January 20, 2021)**



**Photo 56: View of Stream S-MR-17 (January 20, 2021)**



**Photo 57: View of Stream S-MR-18 (January 20, 2021)**



**Photo 58: View of Stream S-MR-19 (January 20, 2021)**



**Photo 59: View of Stream S-MR-20 (January 20, 2021)**



**Photo 60: View of Stream S-MR-21 (January 20, 2021)**



**Photo 61: View of Stream S-MR-22 (January 20, 2021)**



**Photo 62: View of Stream S-MR-23 (January 20, 2021)**



**Photo 63: View of Stream S-MR-24 (January 20, 2021)**



**Photo 64: View of Stream S-SK-1 (January 12, 2021)**





**Photo 65: View of Stream S-SK-4 (January 12, 2021)**



**Photo 66: View of Stream S-SK-7 (January 13, 2021)**



**Photo 67: View of Stream S-SK-8 (January 13, 2021)**



**Photo 68: View of Stream S-SK-9 (January 14, 2021)**



**Photo 69: View of Stream S-SK-10 (January 14, 2021)**



**Photo 70: View of Stream S-SK-11 (January 14, 2021)**



**Photo 71: View of Stream S-SK-12 (January 14, 2021)**



**Photo 72: View of Stream S-SK-17 (January 21, 2021)**

