Appendix 1
SEQRA Full Environmental Assessment Form Parts 1, 2 and 3

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: Gore Mountain Intensive Use Area 2017 Unit Management Plan (UMP) Amendment		
Project Location (describe, and attach a general location map): Peaceful Valley Road, T/O Johnsburg, Warren County		
Brief Description of Proposed Action (include purpose or need): The following new Management Actions will be included in the UMP:Widen Sunway and other green trails served by Lift 3, Widen Headwaters at the bottom of Rumor from Lies to the other side of Hawkeye, Create a beginner/intermediate trail on Echo connecting to the base area in the cut above Gully, Create a beginner/intermediate trail connection in the vicinity of the Abenaki and Barkeater Glades, Reestablish alpine skiing on a portion of Rabbit Pond Trail, Verify current mileage of existing ski trails , Add new triple or quad chair (Lift 9B) from Northwoods Lodge up Lower Sunway to just past the bend in Lower Sunway, Replace and relocate existing Sunway Lift (Lift 3) with a triple or quad to the south along the old Gondola line extending the upper terminal to land past the top of Otter Slide, Modify 1995-approved shuttle lane separated from and independent of main traffic route and circulation route and parking, Expand NYSEF building, Reconfigure 1995-approved maintenance complex to locate groomer garage and fueling adjacent to Sunway trail, Examine the possibility of enlarging the snowmaking reservoir, Install new 24 inch gravity water line from the snowmaking reservoir to the pump house, Construct a single track bike trail loop for Town trail at the top of Little Gore, Develop a hiking center, Land classification exchange between Gore Mountain Intensive Use Area, Vanderwhacker Wild Forest and Siamese Wilderness which could allow the historic Rabbit Pond Trail to be reused winter and summer		
Name of Applicant/Sponsor: NYS Olympic Regional Development Authority	Telephone: (518) 302-5332 E-Mail: bhammond@orda.org	
Address: Olympic Center, 2634 Main Street		
City/PO: Lake Placid	State: NY	Zip Code: 12946
Project Contact (if not same as sponsor; give name and title/role): Robert Hammond, Director of Environmental, Planning and Construction	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): State of New York	Telephone: (518) 402-9405 E-Mail: LF.Lands@dec.ny.gov	
Address: Governor Alfred E Smith Office Building		
City/PO: Albany	State: NY	Zip Code: 12239

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☐Yes ☑No		
c. City Council, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☐Yes ☑No		
f. Regional agencies ☑Yes ☐No	NYS APA - APSLMP Compliance	2017
g. State agencies ☑Yes ☐No	NYSDEC - UMP Approval	2017
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

Adirondack Park State Land Master Plan

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
N/A, lands of NYS

b. Is the use permitted or allowed by a special or conditional use permit? N/A ☐ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site?

C.4. Existing community services.

a. In what school district is the project site located? Johnsburg Central

b. What police or other public protection forces serve the project site?
NYS Police, Warren County Sherriff

c. Which fire protection and emergency medical services serve the project site?
Johnsburg FD

d. What parks serve the project site?
Adirondack State, Town Ski Bowl

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Recreational

b. a. Total acreage of the site of the proposed action? +/-3,766 acres
b. Total acreage to be physically disturbed? +/- 39 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? +/-3,766 acres

c. Is the proposed action an expansion of an existing project or use? ☑ Yes ☐ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % <5 Units:

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed?
iv. Minimum and maximum proposed lot sizes? Minimum Maximum

e. Will proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: 60 months
ii. If Yes:
- Total number of phases anticipated 5
- Anticipated commencement date of phase 1 (including demolition) April month 2018 year
- Anticipated completion date of final phase Nov month 2023 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

Sequence of implementing management actions will be contingent upon funding availability and ORDA construction priorities at the time.

f. Does the project include new residential uses? ☐ Yes ☑ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes, New groomer garage and expansion of NYSEF building

i. Total number of structures 2

ii. Dimensions (in feet) of largest proposed structure: 1 story height; 75 width; and 120 length

iii. Approximate extent of building space to be heated or cooled: 12,125 total square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☑ Yes ☐ No

If Yes, Project includes expansion of an existing reservoir used for snowmaking

i. Purpose of the impoundment: enlarge existing impoundment to store additional water for snowmaking

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☑ Surface water streams ☐ Other specify: upper reaches of Roaring Brook plus pump storage of water withdrawn from the Hudson River

iii. If other than water, identify the type of impounded/contained liquids and their source.

iv. Approximate size of the proposed impoundment. Volume: increase by 11 million gallons; surface area: increase by 7.5 acres

v. Dimensions of the proposed dam or impounding structure: 32, exists height; 100,exist length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): earth (exists)

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☑ Yes ☐ No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)

If Yes:

i .What is the purpose of the excavation or dredging? enlarge snowmaking reservoir

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): 54,000 cy (will remain within the intensive use area)
- Over what duration of time? 6-8 months

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
Soil and rock will be removed. Excavated material will be used as general fill within the intensive use area.

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☑ No
If yes, describe.

v. What is the total area to be dredged or excavated? 7.5 acres

vi. What is the maximum area to be worked at any one time? 1 acres

vii. What would be the maximum depth of excavation or dredging? 30 feet

viii. Will the excavation require blasting? possibly ☑ Yes ☐ No

ix. Summarize site reclamation goals and plan: Reservoir will be drained prior to starting excavation.
Reservoir will allowed to slowly refill after excavation is completed. There will be no outflow from the reservoir until it is full.

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☑ Yes ☐ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Existing snowmaking reservoir at Gore Mountain. Formerly the North Creek Reservoir. Outflow from the reservoir forms Roaring Brook. Wetland impacts avoided.

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
Excavation within the existing reservoir and beyond the existing footprint to increase current storage capacity from 19 Mgal to 30 Mgal.

iii. Will proposed action cause or result in disturbance to bottom sediments? ☐ Yes ☑ No
If Yes, describe: _____

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☑ No
If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____
Gradually refilling the reservoir allowing suspended solids to settle out prior to discharge from the reservoir.

c. Will the proposed action use, or create a new demand for water? ☐ Yes ☑ No
If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐ Yes ☐ No
If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No
- Do existing lines serve the project site? ☐ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☐ No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☐ No
If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

vi. If water supply will be from wells (public or private), maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐ Yes ☑ No
If Yes: Sanitary wastewater generation is not expected to exceed current levels.

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐ Yes ☐ No
If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will line extension within an existing district be necessary to serve the project? ☐Yes ☐No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 1.3 acres (impervious surface)

_____ Square feet or 3766 acres (parcel size)

ii. Describe types of new point sources. N/A

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

on-site stormwater management practices

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify: Fuel combustion is not expected to exceed current levels

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes: Existing sewage treatment plant emissions are not anticipated to increase.

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

_____

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? N/A, not commercial or industrial ☐Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 6:00 - 6:00
- Saturday: 6:00 - 6:00
- Sunday: 6:00-6:00
- Holidays: 6:00-6:00

ii. During Operations:

- Monday - Friday: 6:00-8:00
- Saturday: 6:00-8:00
- Sunday: 6:00-8:00
- Holidays: 6:00-8:00

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Construction noise from vehicles and power equipment. Construction will be during daytime hours and will occur in spring, summer and fall.

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

n.. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Building mounted exterior lighting at the one story groomer garage to light immediate surroundings, nearest occupied structures are outside of the 3,766 acre intensive use area

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☑ Yes ☐ No

If Yes: A new diesel fuel storage tank will be installed near the relocated groomer garage.

i. Product(s) to be stored diesel fuel

ii. Volume(s) 8,000 per unit time week (winter) (e.g., month, year)

iii. Generally describe proposed storage facilities: _____

above ground with containment

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

_____

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☐ No

N/A, not commercial or industrial

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☑ Industrial ☐ Commercial ☐ Residential (suburban) ☑ Rural (non-farm)
☑ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): Town Park

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	34.2	35.5	+1.3
• Forested	2844	2845	-39
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	273.7 (ski trails)	301.0	+27.3
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	19 (reservoir)	30	+11
• Wetlands (freshwater or tidal)	180	180	0
• Non-vegetated (bare rock, earth or fill)	375 (rock)	375 (rock)	0
• Other Describe: _____			

c. Is the project site presently used by members of the community for public recreation? ☑ Yes ☐ No

i. If Yes: explain: 4-season day use recreation area

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No

If Yes,

i. Identify Facilities:

e. Does the project site contain an existing dam? ☑ Yes ☐ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: 32 feet
- Dam length: 100 feet
- Surface area: 5.2 acres
- Volume impounded: 19,100,000 gallons OR acre-feet

ii. Dam's existing hazard classification: B

iii. Provide date and summarize results of last inspection:

10/18/17 inspection - no issues with seepage, wet areas, toe drain, flow, pool level, slides/cracks/rodent activity/vegetation, concrete or vandalism

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation:

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities:

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s):

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s):

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s):

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 0->6 feet

b. Are there bedrock outcroppings on the project site? ☑ Yes ☐ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? 10-20 %

c. Predominant soil type(s) present on project site:

Hermon-Lymon- Rock Outcrop	50 %
Marlow bouldery fine loamy sand	15 %
multiple others	35 %

d. What is the average depth to the water table on the project site? Average: >6 feet

e. Drainage status of project site soils:

☑ Well Drained:	20 % of site
☑ Moderately Well Drained:	20 % of site
☑ Poorly Drained	60 % of site

f. Approximate proportion of proposed action site with slopes:

☑ 0-10%:	<5 % of site
☑ 10-15%:	15 % of site
☑ 15% or greater:	>80 % of site

g. Are there any unique geologic features on the project site? ☑ Yes ☐ No
If Yes, describe: Gore Mountain, Barton Garnet Mine - Gore Mountain

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name 941-1261, 941-759.1, 941-1256, 941-1257, 941-12... Classification C(T), A(T)
- Lakes or Ponds: Name Former North Creek Reservoir Classification _____
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters,... Approximate Size APA Wetland (in a...
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100 year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500 year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑ Yes ☐ No
If Yes:

i. Name of aquifer: Principal Aquifer

m. Identify the predominant wildlife species that occupy or use the project site:

small and large mammals | resident bird species |
migratory bird species | reptiles and amphibians |

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑ No

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☑ Yes ☐ No

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☑ Yes ☐ No

If yes, give a brief description of how the proposed action may affect that use: _____

No affect on recreation on adjoining forest preserve land recreation.

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? If Yes: *i.* Nature of historic/archaeological resource: ☐Archaeological Site ☐Historic Building or District *ii.* Name: ___ *iii.* Brief description of attributes on which listing is based: ___	☐ Yes ☑ No
f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☑ Yes ☐ No
g. Have additional archaeological or historic site(s) or resources been identified on the project site? If Yes: *i.* Describe possible resource(s): ___ *ii.* Basis for identification: ___	☐ Yes ☑ No
h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? If Yes: *i.* Identify resource: NYSAPA Scenic Vistas: (1) Back to Sodom Road, North Creek; Goodman Road, Bakers Mills *ii.* Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): NYSAPA Scenic Vista *iii.* Distance between project and resource: 1 mile, 3 miles respectively miles.	☑ Yes ☐ No
i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? If Yes: *i.* Identify the name of the river and its designation: ___ *ii.* Is the activity consistent with development restrictions contained in 6NYCRR Part 666?	☐ Yes ☑ No ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name ROBERT W HAMMOND Date 11/15/17

Signature [signature] Title DIR. ENV. PLAN. CONT

PRINT FORM

Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	Yes
E.2.g [Unique Geologic Features]	Gore Mountain, Barton Garnet Mine - Gore Mountain
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	941-1261, 941-759.1, 941-1256, 941-1257, 941-1254, 941-1253, 941-764, 941-1270
E.2.h.iv [Surface Water Features - Stream Classification]	C(T), A(T)
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters, APA Wetland

E.2.h.iv [Surface Water Features - Wetlands Size]	APA Wetland (in acres):6.21409633, APA Wetland (in acres):4.01067418, APA Wetland (in acres):0.22157542, APA Wetland (in acres):4.79873642, APA Wetland (in acres):0.97567625, APA Wetland (in acres):0.11314292, APA Wetland (in acres):3.68782457, APA Wetland (in acres):6.65199621, APA Wetland (in acres):0.24311211, APA Wetland (in acres):0.40255622, APA Wetland (in acres):2.75641089, APA Wetland (in acres):0.15746727, APA Wetland (in acres):3.09193233, APA Wetland (in acres):1.34746798, APA Wetland (in acres):0.62714323, APA Wetland (in acres):0.17833215, APA Wetland (in acres):1.51840244, APA Wetland (in acres):0.80906611, APA Wetland (in acres):0.55871848, APA Wetland (in acres):1.24054127, APA Wetland (in acres):0.41207746, APA Wetland (in acres):1.37974599, APA Wetland (in acres):0.29332836, APA Wetland (in acres):15.67060385, APA Wetland (in acres):0.76184601, APA Wetland (in acres):0.56578412, APA Wetland (in acres):1.0484485, APA Wetland (in acres):0.36642493, APA Wetland (in acres):1.589638, APA Wetland (in acres):0.6375525, APA Wetland (in acres):1.2665104, APA Wetland (in acres):1.33784635, APA Wetland (in acres):0.80596187, APA Wetland (in acres):2.31191642, APA Wetland (in acres):0.14664101, APA Wetland (in acres):0.54190766, APA Wetland (in acres):0.37089597, APA Wetland (in acres):0.55721268, APA Wetland (in acres):1.28966872, APA Wetland (in acres):1.83390842, APA Wetland (in acres):0.9355604, APA Wetland (in acres):0.27407738, APA Wetland (in acres):0.41316627, APA Wetland (in acres):0.37432455, APA Wetland (in acres):1.38920545, APA Wetland (in acres):0.35867203, APA Wetland (in acres):0.1619306, APA Wetland (in acres):1.36115911, APA Wetland (in acres):0.73720507, APA Wetland (in acres):0.63016253, APA Wetland (in acres):0.37274925, APA Wetland (in acres):0.1242549, APA Wetland (in acres):0.48752152, APA Wetland (in acres):4.1326897, APA Wetland (in acres):2.81783178, APA Wetland (in acres):0.30088049, APA Wetland (in acres):3.15834936, APA Wetland (in acres):0.45882653, APA Wetland (in acres):1.64958399, APA Wetland (in acres):0.42384581, APA Wetland (in acres):0.24173759, APA Wetland (in acres):0.57013933, APA Wetland (in acres):0.50012385, APA Wetland (in acres):0.33871835, APA Wetland (in acres):0.2844326, APA Wetland (in acres):3.46936112, APA Wetland (in acres):0.51559104, APA Wetland (in acres):1.52953758, APA Wetland (in acres):1.73979253, APA Wetland (in acres):0.62014708, APA Wetland (in acres):0.54571461, APA Wetland (in acres):1.99393168, APA Wetland (in acres):1.12631727, APA Wetland (in acres):1.97217877, APA Wetland (in acres):0.33797703, APA Wetland (in acres):9.61072382, APA Wetland (in acres):1.42821706, APA Wetland (in acres):2.0867271, APA Wetland (in acres):0.76699659, APA Wetland (in acres):0.9157071, APA Wetland (in acres):0.49486516, APA Wetland (in acres):0.33066429, APA Wetland (in acres):0.37044037, APA Wetland (in acres):2.15380822, APA Wetland (in acres):2.50434125, APA Wetland (in acres):0.43595393, APA Wetland (in acres):1.30837915, APA Wetland (in acres):0.36661026, APA Wetland (in acres):0.37403111, APA Wetland (in acres):1.17826324, APA Wetland (in acres):0.79432479, APA Wetland (length in ft):907.29263884, APA Wetland (length in ft):535.72856263
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No

E.2.p. [Rare Plants or Animals]	Yes
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National Register of Historic Places]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Agency Use Only [If applicable]

Project :

Date :

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1) ☐ NO ☑ YES

If "Yes", answer questions a - j. If "No", move on to Section 2.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☑
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☑
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☑	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☑
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☑
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: none identified		☑	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☐ NO ☑ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: Gore Mountain	E2g	☑	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature:	E3c	☑	☐
c. Other impacts: none identified		☑	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☐ NO ☑ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☑	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☑
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☑
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☑	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☑
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☑	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☑	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☑
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☑	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☑	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☑	☐

l. Other impacts: none identified		☑	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☐ NO ☑ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☑	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☑	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☑	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☑	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☑	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☑	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☑	☐
h. Other impacts: none identified		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. ☑ NO ☐ YES
(See Part 1. D.2.f., D,2,h, D.2.g)
If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☐ NO ☑ YES
If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☑	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☑	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☑	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☑

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☑	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☑	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☑
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☑	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☑	☐
j. Other impacts: none identified _____ _____		☑	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	**No, or small impact may occur**	**Moderate to large impact may occur**
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	□	□
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	□	□
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	□	□
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	□	□
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	□	□
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	□	□
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	□	□
h. Other impacts: _____		□	□

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on or has been nominated by the NYS Board of Historic Preservation for inclusion on the State or National Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		□	□
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	□	□
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	□	□
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	□	□

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	□	□
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	□	□
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	□	□
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	□	□
e. Other impacts: _____ _____		□	□

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
c. Other impacts: _____ _____		□	□

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☐ NO ☑ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☑	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☑	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☑	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☑	☐
e. Other Impacts: none identified		☑	☐

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES
(See Part 1. C.1, C.2. and C.3.)
If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES
(See Part 1. C.2, C.3, D.2, E.3)
If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:
To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

(1) Construction on steep slopes for such things as trail construction, trail widening and lift construction has the potential for significant impacts to land (erosional soil loss) and to water (sedimentation). The impact potential is exacerbated by the multi-year, multi-phase construction activities that would be proposed under the pending unit management plan amendment.

(2) Expansion of the snowmaking reservoir has the potential for significantly impacting downstream water quality during and after construction. Use of spoils from the reservoir excavation as fill elsewhere within the intensive use area could cause significant impacts similar to those described in (1) above.

(3) The project site is located over a principal aquifer. Adding additional underground petroleum storage has the potential for causing significant localized impacts to groundwater.

(4) Bicknell's thrush is a species of special concern in New York State and portions of the intensive use area are within a State-designated Bird Conservation Area. Construction activities in and around areas of Bicknell's thrush breeding and/or nesting could have a significant impact on this species.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the NYS Olympic Regional Development Authority as lead agency that:

☐ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.d).

☑ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Gore Mountain Intensive Use Area 2017 Unit Management Plan (UMP) Amendment

Name of Lead Agency: NYS Olympic Regional Development Authority

Name of Responsible Officer in Lead Agency: Robert Hammond

Title of Responsible Officer: Director of Environmental, Planning and Construction

Signature of Responsible Officer in Lead Agency: Date: 11/15/17

Signature of Preparer (if different from Responsible Officer) Date:

For Further Information:

Contact Person: Robert Hammond

Address: Director of Environmental, Planning and Construction

Telephone Number: (518) 302-5332

E-mail: bhammond@orda.org

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

Appendix 2
ORDA/NYSDEC Consolidation Agreement

AGREEMENT CONSOLIDATING THE
MANAGEMENT AGREEMENTS FOR THE GORE MOUNTAIN SKI CENTER, THE WHITEFACE MOUNTAIN SKI CENTER AND MEMORIAL HIGHWAY, AND THE MOUNT VAN HOEVENBERG RECREATION AREA

THIS CONSOLIDATION AGREEMENT is made by and between the NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION ("DEPARTMENT") and the OLYMPIC REGIONAL DEVELOPMENT AUTHORITY ("ORDA").

RECITALS:

A. The DEPARTMENT and ORDA, pursuant to the provisions of Section 2614 of the Public Authorities Law, entered into an agreement dated April 1, 1984, authorizing ORDA to use, operate, maintain and manage the Gore Mountain Ski Center Area, and entered into an agreement dated October 4, 1982, authorizing ORDA to use, operate, maintain and manage the Whiteface Mountain Ski Center and Memorial Highway, and the Mount Van Hoevenberg Recreation Area (hereinafter referred to collectively as "the Agreements");

B. The parties previously amended the Agreements several times, with the last amendment occurring on June 12, 2013;

C. The parties also entered into a Memorandum of Understanding effective December 15, 1984, that established methods and procedures to implement the foregoing Agreements (hereinafter "MOU"), and amended the MOU on March 11, 1991; and

D. The parties find it in their mutual interests to consolidate the Agreements and make other amendments necessary for their implementation.

NOW, THEREFORE, the parties hereby agree as follows:

1. Except as otherwise specified in this Consolidation Agreement, all terms and conditions of the Agreements as amended are hereby ratified and affirmed, and shall remain in full force and effect. Copies of the Agreements are attached hereto as Attachment 1, and a copy of the MOU is attached hereto as Attachment 2. In the event of any conflict between the Agreements and this Consolidated Agreement, this Consolidated Agreement shall control.

2. Section 10 of the April 1, 1984 agreement relating to management of the Gore Mountain Ski Center Area, and Section 11 of the October 4, 1982 agreement relating to management of the Whiteface Mountain Ski Center and Memorial Highway, and the Mount Van Hoevenberg Recreation Area, which pertain to unit management planning are amended to read as follows:

"Unit Management Plans.

A. General Guidelines

(1) In consultation with the DEPARTMENT, ORDA shall prepare and periodically amend Unit Management Plans ("UMP") for the facilities at the Gore Mountain Ski Center Area, Whiteface Mountain Ski Center and Memorial Highway, and the Mount Van Hoevenberg Recreation Area ("Facilities"), which ORDA manages pursuant to this agreement, as outlined in Section I, Introduction, Unit Management Plan Development of the Adirondack Park State Land Master Plan ("APSLMP"). The UMPs will contain an inventory of the natural resources, Facilities and public use of the Facilities; establish goals and objectives for the future use and management of the Facilities; evaluate alternative plans for the provision

and management of public use of the Facilities and an assessment of the environmental impacts of each alternative; establish preferred management options for the Facilities in fulfillment with ORDA's legislative mandate through a procedure involving the participation of interested citizens, user groups and adjacent local governments; describe the specific management goals and policies which are incorporated in the preferred management plan; describe any specific physical development or improvement projects required by the UMP, including a priority schedule for the completion of each project and estimated costs thereof; provide a priority schedule for the removal and/or termination of any non-conforming uses; and describe procedures for the continued monitoring of the UMP's implementation. A UMP cannot amend the APSLMP and as finally adopted shall be in conformance with the general guidelines and criteria of the APSLMP. Any issues with respect to conformance of a proposed UMP with the APSLMP will be resolved and any necessary amendments to the APSLMP acted on prior to ORDA providing the DEPARTMENT with a proposed Final UMP to pass on to Adirondack Park Agency ("Agency") for final review.

(2) Annually, ORDA shall provide the DEPARTMENT with a schedule for the preparation and/or revision of any UMP or UMP amendment proposed to be undertaken by ORDA with respect to any of the Facilities and shall promptly advise the DEPARTMENT of any changes thereto.

(3) To identify significant issues and constraints, scheduling, data needs, and public involvement, ORDA will consult with the DEPARTMENT prior to undertaking the preparation of a UMP or UMP amendment.

B. Staff Consultation

ORDA will consult with the DEPARTMENT in the preparation and/or revision of a UMP as follows:

(1) ORDA will provide written notification to the DEPARTMENT before the development of a written draft of a UMP update and/or amendment is prepared and will not undertake the preparation and/or revision of any UMP without written notice to the DEPARTMENT of the intent to do so.

(2) The Regional Director of the DEPARTMENT's Region 5 office in Ray Brook or the Director's designee shall be the DEPARTMENT's contact for formal communications between ORDA and the DEPARTMENT.

(3) ORDA's President/CEO or the President/CEO's designee will be the contact for formal communications between ORDA and the DEPARTMENT.

(4) ORDA shall request the official designation of a representative of the DEPARTMENT to assist ORDA with preparation and/or revision of UMPs. The DEPARTMENT will ask the Agency to designate a representative to assist ORDA with preparation and/or revision of UMPs.

(5) To assist the planning team in the development of individual UMPs, ORDA shall send drafts to the DEPARTMENT and consult with the DEPARTMENT on conformance issues.

(6) The DEPARTMENT will participate in planning team discussions, review preliminary UMP drafts, and comment on UMP text and proposed management actions.

(7) ORDA staff will consult with the DEPARTMENT during the drafting of UMPs and UMP Amendments. DEPARTMENT staff will review preliminary draft UMPs and provide comment on SLMP conformance issues. This internal, informal, deliberative process is ordinarily exempt from the Freedom of Information Law (FOIL).

(8) DEPARTMENT staff will participate in public information sessions and conduct field inspections with the planning teams.

(9) In the preparation of UMPs, ORDA will normally serve as lead agency for State Environmental Quality Review (SEQR), and the DEPARTMENT and the Agency will participate in the SEQR process as involved agencies.

C. UMP Review

INITIAL DRAFT UMP:

(1) ORDA will provide DEPARTMENT with fourteen review copies of an internal "Initial Draft" of the UMP or UMP amendment for the Facilities, including alternative management objectives, where appropriate, for review and comment, prior to the completion of a draft plan for public review (the "Public Draft"). The DEPARTMENT will provide seven of the drafts to the Agency for review. The DEPARTMENT will work with ORDA to best ensure that the fourteen review copies are distributed on a media such as CD's and Data Sticks, so that ORDA complies with the

intent and the spirit of Executive Order No. 4: Establishing a State Green Procurement and Agency Sustainability Program (2008).

(2) The Initial Draft UMP will contain all the elements specified in the APSLMP, including all required inventories, statement of alternative management objectives, administrative actions, schedules for UMP implementation and all information, text, maps and appendices which are intended for inclusion in the Public Draft.

(3) The DEPARTMENT shall be the primary contact with the Agency, with assistance from ORDA as requested by the DEPARTMENT, with respect to any UMPs for the Facilities, utilizing applicable provisions set forth in the UMP section of the March, 2010 Memorandum of Understanding between the Agency and the DEPARTMENT concerning implementation of the APSLMP or any such subsequent MOU.

PUBLIC DRAFT UMP:

(1) The Public Draft which ORDA provides to the DEPARTMENT for release by the DEPARTMENT for public review and comment will contain appropriate SEQRA documents.

(2) ORDA will provide copies of the Public Draft to the DEPARTMENT for release to Agency members, the Agency's Executive Director and the Agency's State Land staff. Upon release of the Public Draft, DEPARTMENT staff, with assistance from ORDA staff as requested, will

provide a presentation to the Agency on the proposed management actions contained in the Public Draft and provide a written submission to the Agency discussing the DEPARTMENT's position on key APSLMP conformance issues.

(3) If the initially released Public Draft is revised, subsequent drafts will be entitled "Revised Public Draft" and dated appropriately.

FINAL UMP:

(1) After completion of public review and comment on a UMP, ORDA shall prepare a response to public comments, necessary SEQR documentation and a proposed Final UMP, and provide them to the DEPARTMENT. After the Commissioner of the DEPARTMENT ("Commissioner") approves the proposed Final UMP, the DEPARTMENT will transmit the proposed Final UMP to the Agency.

(2) The proposed Final UMP will be in a form proposed for approval by the Commissioner.

(3) DEPARTMENT staff, with such assistance from ORDA staff as may be requested, will make a presentation on the proposed Final UMP to the Agency as a "first reading" and prior to formal approval by the Agency for APSLMP conformance.

(4) Following the conformance determination by the Agency and subsequent approval of a UMP by the Commissioner, the DEPARTMENT shall

publish a notice of approval of the Final UMP in the Environmental Notice Bulletin.

(5) The approved UMP shall contain a copy of the Agency resolution on APSLMP conformance and the Commissioner's approval memorandum. A copy of the Final UMP as approved by the Commissioner will be provided by the DEPARTMENT to ORDA and the Agency for their respective files.

D. UMP Amendments

Any modification involving new or expanded improvements to an adopted UMP prior to the periodic five-year update must be processed as an Amendment to the UMP following the procedure for original UMP preparation set forth above."

3. This Consolidation Agreement shall commence on the date it is signed by both parties and shall remain in effect for a term of twenty years.

4. The MOU as amended on March 11, 1991, shall remain in full force and effect and shall not be affected by this Consolidation Agreement, except that in the case of any inconsistency between this Consolidation Agreement and the MOU concerning unit management planning this Consolidation Agreement shall control.

IN WITNESS WHEREOF, the parties hereto have caused these present to be signed.

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

BY: _____ 10/30/13
Joseph J. Martens
Commissioner
Date

OLYMPIC REGIONAL DEVELOPMENT AUTHORITY

BY: _____ 11-17-13
Ted Blazer
President and CEO
Date

EDMS #471942 v. 7

FIRST AMENDMENT TO CONSOLIDATION AGREEMENT
(DEC No.CA00488)

THIS AGREEMENT is made by and between the NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION ("DEPARTMENT") and the OLYMPIC REGIONAL DEVELOPMENT AUTHORITY ("ORDA").

A. WHEREAS, the DEPARTMENT has administrative jurisdiction over the Gore Mountain Ski Center Area, the Whiteface Mountain Ski Center and Memorial Highway, and the Mount Van Hoevenberg Recreation Area;

B. WHEREAS, pursuant to the provisions of Public Authorities Law Section 2614, the DEPARTMENT entered into various cooperative agreements authorizing ORDA to use, operate, maintain and manage these facilities;

C. WHEREAS, by instrument dated November 11, 2013, the parties consolidated their various agreements concerning ORDA's use, operation, maintenance, and management of Gore Mountain Ski Center Area, Whiteface Mountain Ski Center and Memorial Highway, and the Mount Van Hoevenberg Recreation Area (hereinafter referred to as "Consolidation Agreement");

D. WHEREAS, the Parties may by mutual agreement amend the Consolidation Agreement pursuant to the underlying agreements;

E. WHEREAS, the Consolidation Agreement has a term of 20 years, and will expire November 11, 2033; and

F. WHEREAS, the parties have determined it is in their interest to amend the Consolidation Agreement by extending its term to 25 years.

NOW, THEREFORE, the parties hereby agree as follows:

1. Section three of the Consolidation Agreement is amended to provide that it shall terminate on December 31, 2040, unless modified in writing by the parties.

2. All other terms all terms and conditions of the Consolidation Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused these present to be signed.

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

BY: _____ 6/18/2015
Joseph J. Martens
Commissioner
Date

OLYMPIC REGIONAL DEVELOPMENT AUTHORITY

BY: _____ 6-23-15
Ted Blazer
President and CEO
Date

EDMS #534278

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AND

THE OLYMPIC REGIONAL DEVELOPMENT AUTHORITY

THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION ("DEC") and THE OLYMPIC REGIONAL DEVELOPMENT AUTHORITY ("ORDA") entered into the following agreements in connection with the transfer of the management of certain winter recreational facilities under DEC's care and custody, to ORDA:

1. Agreement dated October 4, 1982, amended November 10, 1982 and amended April 1, 1984, in relation to Whiteface Mountain Ski Center and Memorial Highway, and Mt. Van Hoevenberg Recreation Area, and
2. Agreement dated April 1, 1984, in relation to Gore Mountain Ski Center.

There are a number of provisions in the aforesaid agreements requiring that certain specific actions be taken from time-to-time by the parties, including compliance by ORDA with all applicable laws and implementing regulations, whether federal, state or local, in all its activities relating to the facilities subject to the aforesaid agreements. The purpose of this memorandum is to establish mutually agreeable methods and procedures by which certain managerial requirements contained in the aforesaid agreements

can be fulfilled in an orderly and efficient manner. It is the further purpose of this memorandum to establish the means for the implementation of the Unit Management Plans described in Section VII. hereof.

It shall be the responsibility of the signatories or their designees to generally administer the provisions of this Memorandum of Understanding. This memorandum amends and supersedes that certain existing Memorandum of Understanding between DEC and ORDA effective December 15, 1984, which established mutually agreeable methods and procedures for implementation of the aforesaid agreements between DEC and ORDA relating to Whiteface Mountain Ski Center and Memorial Highway, Mt. Van Hoevenberg Recreation Area and Gore Mountain Ski Center.

The aforesaid requirements contained in the aforesaid agreements are set forth below, together with the methods and procedures to be followed for their implementation. Compliance with this memorandum and the individual Unit Management Plans for the above facilities shall occur immediately.

I. Inspections:

ORDA agrees to conduct a joint inspection of all facilities at least annually with the DEC. The ORDA also agrees that the DEC may conduct unannounced inspections of the facilities at any time in a reasonable manner.

Implementation:

Annually, during the month of July, joint inspections will be held at each of the facilities covered by the aforesaid agreements. The purpose of inspections shall be to document, in writing, compliance with all aspects of the agreements and with the aforesaid unit management plans. While the agreements allow for unannounced inspections, the parties shall enter into this agreement in the spirit of cooperation. DEC shall contact the ORDA Environmental Monitor and the Facility Manager to accompany the DEC staff only in connection with any non-regulatory or non-enforcement inspections of the facilities other than the annual inspection. Such non-regulatory or non-enforcement inspections, however, shall not be delayed due to the unavailability of said ORDA individuals. In the event of an emergency situation involving a non-regulatory or non-enforcement matter, said ORDA personnel shall also be contacted to the extent practicable. In ORDA's case, the annual inspection and non-regulatory or non-enforcement inspections will be conducted by the Facility Manager and ORDA's Environmental Monitor. In DEC's case, all annual joint inspections will be coordinated by the Region 5 Supervisor of Natural Resources; all non-regulatory or non-enforcement inspections shall

be coordinated by the appropriate DEC program supervisor.

II. Maintenance:

ORDA agrees to maintain and keep the facilities, personal property and equipment in good repair. All mechanical equipment shall be maintained and operated in accordance with manufacturers' recommendations and applicable industrial code rules.

Implementation:

This will be discussed during the annual inspection trips. A paragraph in the inspection letter will reference compliance with this section. In the case of personal property and equipment, this provision means such personal property and equipment owned by DEC, and not such personal property and equipment independently acquired by ORDA.

III. Repairs:

ORDA also agrees to undertake any repairs or manner of repairs to the facilities, personal property and equipment which the DEC specifically requests, so long as the funds therefor are made available to ORDA.

Implementation:

Any requests from DEC to ORDA shall be in writing at the time of request. During the annual inspection trip, if there are projects that were requested during the previous year, their completion should be referenced in the inspection letter.

IV. Public Recreation:

ORDA agrees to continue providing the space, facilities and level of public recreation, including youth sports, training, promotion and programming, which were provided by DEC at each facility during calendar year 1981.

Implementation:

The Appendix/Exhibit listing the Recreation Program (See Appendix B of the aforesaid Whiteface Mountain Ski Center/Mt. Van Hoevenberg Recreation Area agreement, and Exhibit 3 of the aforesaid Gore Mountain Ski Center agreement.) will be reviewed during the annual inspection trip and a note of compliance will be placed in the inspection letter.

V. Existing Agreements:

ORDA agrees to comply with all agreements to which DEC is a party concerning the facilities which were in existence on the date on which this Agreement was executed.

Implementation:

Each agreement listed in the Appendix/Exhibit (See Appendix C of the aforesaid Whiteface Mountain Ski Center/Mt. Van Hoevenberg Recreation Area agreement, and Exhibit 4 of the aforesaid Gore Mountain Ski Center agreement.) will be reviewed during the annual inspection trip and will be referenced in the inspection letter.

VI. Capital Improvements:

The DEC agrees that ORDA may undertake capital improvements to the facilities. ORDA agrees to obtain the prior written approval of DEC before undertaking any such improvements, and further agrees, if federal funds are to be sought for such improvement, to obtain the prior written approval of DEC of any application for such funds.

Implementation:

The Commissioner or his designee shall give written approval to each year's capital projects affecting

DEC's facilities before Board approval is obtained. Such action constitutes approval, within budget, to commence the project development process, including planning and design, Unit Management Plan planning, State Environmental Quality Review Act (SEQR) review, obtaining applicable regulatory approvals, and public bidding, etc., as necessary. ORDA shall also request prior written approval from the Commissioner or his designee for any federal funds sought to undertake such capital improvements. During the annual inspection trip, each capital improvement completed shall be listed in the inspection letter.

VII. Unit Management Plans:

Unit Management Plans, together with Final Environmental Impact Statements, were prepared by ORDA and DEC, in consultation with the APA, and adopted by the Commissioner of Environmental Conservation for the Mount Van Hoevenberg Recreation Area on December 2, 1986; the Whiteface Mountain Ski Center on May 19, 1987; and the Gore Mountain Ski Center on November 18, 1987.

Implementation:

A. ORDA will provide DEC with specific notice prior to undertaking any management actions described in a

Unit Management Plan or in an amendment thereto for determination of consistency with the applicable Unit Management Plan. (See Appendix I for Unit Management Plan amendment process). Such notice shall be given at least 30 days prior to the actual undertaking of construction of the management action. Such notice will include a project plan, the appropriate environmental assessment as may be required under SEQR, an erosion control plan for any projects that may result in disturbance of soils, together with the declaration of significance. It is understood that DEC will be an "involved agency" concerning these actions throughout the SEQR process.

B. ORDA shall comply with all formal DEC policies or delegations affecting Unit Management Plan compliance by DEC.

C. The Unit Management Plans provide that the cutting of trees associated with the implementation of management actions will be in accordance with the established policies and procedures of the Commissioner of Environmental Conservation (See Appendix II - Organization and Delegation Memorandum #84-06, as amended). The DEC procedures will be initiated by the Regional Forestry Manager for DEC upon notice by the ORDA facility manager

that tree cutting is contemplated in conjunction with a management action. The Regional Forestry Manager will inform the ORDA facility manager within five working days, in writing, as to whether the cutting may proceed or that notice will be required in the Environmental Notice Bulletin ("ENB") and that the cutting will be reviewed pursuant to the DEC tree cutting policy. Should notice be required, ORDA will provide DEC with the appropriate ENB notice including the designated contact person. The DEC will then complete the notice requirements and inform ORDA as to the decision in writing upon completion of the review process. It is agreed that Environmental Notice Bulletin publication and DEC review will not be required in cases where the tree cutting was specifically described in the detail required by the DEC policy in the Unit Management Plan and noticed in the ENB in the process of adoption of the Unit Management Plan or an amendment thereto. Such notice must include a count of the number of trees to be removed which exceed three inches in diameter and the acreage of land involved. Nor will such notice and review be required where a tree cut could constitute a "Type II Action" under the DEC rules and regulations governing the

implementation of SEQR (6 NYCRR 618.2). Any trees cut in accordance with this section can be removed from the premises in any manner deemed feasible by ORDA so long as such method is consistent with the guidelines of the State Land Master Plan, the Unit Management Plan, Article 8 of the ECL, and Division Direction Memorandum LF-84-2 dated May 31, 1984 and LF-84-2 Supplement dated July 3, 1986. (See Appendix III).

D. A new structure or improvement not described in a Unit Management Plan, or in an amendment to a Unit Management Plan, cannot be undertaken or constructed. This provision, however, does not prevent ORDA from undertaking the construction of the following activities, provided that all conditions in Items A, B, and C above are fully complied with and implemented.

1. Ordinary maintenance, rehabilitation and minor relocation of conforming structures or improvements as defined and interpreted in the DEC-APA Memorandum of Understanding governing implementation of the State Land Master Plan (SLMP), as last amended on April 3, 1985.

2. A change in the use of a structure or improvement as described in a Unit Management Plan that is not inconsistent with the guidelines and criteria of the SLMP for intensive use areas,

3. Any facility or structure that is listed as a Type II Action in the DEC rules and regulations governing the implementation of SEQR (6 NYCRR 618.2) and, in particular, the construction and location of single, small, new or existing facilities or structures where the total area of the structure or expansion does not exceed 400 square feet and the surroundings are returned to their original condition after the construction/installation of the structure or facility.

4. Any project consisting solely of the cutting of not more than ten (10) trees more than 3 inches in diameter at breast height.

5. Any action deemed immediately necessary to insure public health or safety. In such cases DEC will be immediately notified of the situation and what the proposed or ongoing action consists of.

E. The Unit Management Plans will be administered on a day-to-day basis by the Environmental Monitor for ORDA and the Region 5 Supervisor of Natural Resources for DEC. Notification of project

implementation, concerns dealing with potential environmental problems, requests for change in preapproved action plans, need for Unit Management Plan amendment and other similar communication will all take place between the Environmental Monitor for ORDA and the Region 5 Supervisor of Natural Resources for DEC. Agreements made by these individuals will be binding on both agencies. If agreement cannot be reached on a specific issue, the issue will be elevated in the respective agencies for resolution.

VIII. Removal of Property and Equipment:

No part of any facility, nor personal property or equipment of DEC used in connection therewith, shall be sold or removed from the facility without the prior written approval of DEC.

Implementation:

DEC currently maintains a computer program for the inventory of property. All DEC equipment transferred to ORDA is part of that inventory. DEC shall supply appropriate forms to ORDA and ORDA will advise DEC via the forms when equipment is surplused, destroyed or when new DEC equipment is acquired. DEC shall maintain the inventory and shall annually certify with ORDA that the list is

correct. Lead role in DEC for the above items is vested in the Division of Operations Central Office.

This Memorandum of Understanding will become effective upon its execution by each of the parties hereto.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

BY: Thomas C. Jorling

Thomas C. Jorling, Commissioner

Date March 11, 1991

OLYMPIC REGIONAL DEVELOPMENT AUTHORITY

BY: Ned Harkness

Ned Harkness, President, C.E.O.

Date March 8, 1991

APPENDIX I

REVISION/AMENDMENT TO UNIT MANAGEMENT PLANS

1. Any material modification or amendment to the unit management plans is to conform to the guidelines and criteria of the SLMP, and will be made following the same procedure prescribed in the master plan for original unit management plan preparation.

2. A proposed amendment will be presented in its complete form and content, including indication of the specific sections of the existing management plan being amended, and be accompanied by:

   (A) An evaluation of whether or not the proposed amendment will require a reexamination of the inventory and assessment section of the plan.

   (B) If the amendment represents a departure from the goals and objectives stated in the plan, a discussion of impacts of the new objectives on facilities, public use and resources of the unit.

   (C) An assessment of whether or not the proposed amendment is consistent with carrying capacity of the area.

   (D) A schedule for the implementation of proposed management actions.

Any action to amend a unit management plan in connection with a proposed management action is to be initiated no later than the required site-specific environmental assessment pursuant to SEQR.

3. Consistent with the DEC-ORDA management agreements, ORDA and DEC will cooperate and provide such staff assistance as may be necessary in the preparation of amendments to the unit management plans. Both agencies will designate an appropriate representative to be the lead contact person in the matter. Division of Responsibility shall be as follows.

ORDA -

Develop and make appropriate revisions, in response to comments, to all documents. These will include the actual plan and accompanying SEQR.

Provide for public comment including hearings/ meetings. Make a record of comments and responses.

Print and distribute all draft and final documents.

Present draft documents to designated DEC contact for DEC review, including the SEQR committee, posting in the Environmental Notice Bulletin, APA review and DEC Commission's final approval.

DEC -

Provide assistance to designated ORDA representative on format and procedure.

Coordinate APA review and comments.

Coordinate DEC review, comments and final approval.

Coordinate all notices in the ENB.

APPENDIX II

File Ref. 1620

HENRY G. WILLIAMS, Commissioner

New York State
Department of Environmental Conservation

February 16, 1984

TO: Executive Staff, Division and Regional Directors

FROM: Hank Williams

RE: ORGANIZATION AND DELEGATION MEMORANDUM #84-06

Purpose:

To establish a policy regarding the prohibition of cutting, removal or destruction of trees and other vegetation on all Forest Preserve lands pursuant to Article XIV of the Constitution of New York State.

Background:

Article XIV of the Constitution specifically states that the timber on the Forest Preserve shall not "...be sold, removed or destroyed." Over the years it has been necessary to occasionally cut trees in the interest of public safety, overall protection of the Preserve and for the development of facilities. Such cutting has been sanctioned through Consitutional Amendment or by Opinion of the Attorney General, who has interpreted the Constitution as allowing such cutting.

Policy:

Section 9-0105 of the Environmental Conservation Law provides that the Division of Lands and Forests has responsibility for the "care, custody and control" of the Adirondack and the Catskill Forest Preserve. In accordance with this responsibility, all construction of new facilities, expansion or modification of existing facilities and maintenance of facilities, that will result in the cutting, removal or destruction of vegetation on any of the lands constituting the Forest Preserve shall require approval of the Director of the Division of Lands and Forests in accordance with the following Procedure. However, under no circumstances will approval be granted for the cutting of trees for firewood, timber or other forest products purposes.

Procedure:

A. Construction of New Facilities and the Expansion or Modification of Existing Facilities

All projects that involve the cutting, removal or destruction of trees or other vegetation in the Forest Preserve must have approval from the Director of the Division of Lands and Forests to be applied for in the following manner:

1. Regional Facilities

Requests for approval will be submitted by the Regional Director to the Director of the Division of Lands and Forests

2. Non-Regionalized Facilities

Requests for approval will be submitted by the Director of the Division responsible for the facility to the Director of the Division of Lands and Forests

Requests for approval to cut, remove or destroy trees for the purpose of new construction, expansion or modification projects must be submitted in writing and include the following information:

- The location of the project including a map delineating the project
- A description of the project and its purpose
- A count, by species, of all trees to be cut, removed or destroyed
- A delineation of areas where vegetation, in addition to trees three inches or more in diameter, is to be disturbed
- A listing of any protected species of vegetation located within three hundred feet of the area to be disturbed during the project
- A description of measures to be taken to mitigate the impact on and restoration of vegetation, if appropriate, to the area impacted

All decisions to approve any cutting, removal or destruction of trees will be subject to individual SEQR determinations.

B. Routine Maintenance

Responsibility for approval of all routine maintenance projects involving the cutting, removal or destruction of trees or other vegetation is delegated to the Regional Forester for the region in which the project is to occur.

Routine maintenance projects include the following activities:

- Maintenance of foot trails, cross-country ski trails, etc., including "the cutting of the few trees necessary...." (1934 A.G. 268 January 18, 1934.)
- Boundary line surveys and the maintenance of such boundary lines as "an aid to the conservation work of the State...where the number of small trees utilized or removed...appear immaterial (1934 A.G. 309 September 20, 1934.)
- Removal of "dead timber, either standing or fallen...for fuel at the public camp sites...." (1934 A.G. 315 October 30, 1934.)
- Maintenance of scenic vistas along trails when "tree removal may not be sufficient to pass the point of immateriality." (1935 A.G. 27 January 17, 1935.)
- Removal of dead and hazardous trees in developed areas such as campgrounds and ski centers "that endanger people." (1935 A.G. 30 June 26, 1985.)
- Salvage of windfall timber when "such blowdown timber constitutes a fire hazard." (1950 A.G. 154 December 28, 1950.)

1. Regional Facilities

   Requests for approval of routine maintenance projects will be made to the Regional Supervisor for Natural Resources who will direct them to the Regional Forester.

2. Non-Regionalized Facilities

   Requests for approval of routine maintenance projects will be made by the facility manager to the Regional Director of the Region in which the facility is located, who will direct them to the Regional Forester.

Requests for approval of routine maintenance projects should be submitted in writing as soon in advance of the date of beginning of the maintenance work as possible and include a description of the project and its location. If prior written or verbal approval cannot be obtained, hazardous trees involving imminent danger to human safety or damage to facilities may be removed without prior approval. However, such action must be reported within 24 hours following removal of the tree(s).

File Ref: 1620

MEMORANDUM FROM:
HENRY G. WILLIAMS, Commissioner
New York State
Department of Environmental Conservation

July 29, 1986

TO: Executive Staff, Division and Regional Directors

FROM: Hank Williams

SUBJECT: Organization and Delegation Memorandum #84-06: Addendum

---

Background:

The above memorandum was promulgated on February 16, 1984 "To establish a policy regarding the prohibition of cutting, removal or destruction of trees and other vegetation on all Forest Preserve lands pursuant to Article XIV of the Constitution of New York State."

Since that time it has come to our attention that the procedures established in the memorandum do not include provision for adequate notice to the public as to the number of trees proposed to be cut and the size of the land area involved on specific projects.

Amendment:

Therefore, Part A. under Procedure of Memorandum #84-06 is amended and expanded by the addition of the following paragraph at the end of such Part A. on page 2. of such Memorandum.

> Any construction or reconstruction activity involving land under the jurisdiction of the Department of Environmental Conservation within the Adirondack or the Catskill Park--regardless of the classification of such land--that is a Type I action or otherwise requires notice in the Environmental Notice Bulletin will include information in such notice as to the (1) acreage or extent of the land area proposed to be involved and (2) number of trees in excess of three inches stump diameter proposed to be cut, removed or destroyed. A copy of such notice as it appeared in such Bulletin (with the date of the Bulletin noted) will be included and made a part of the information constituting the "request for approval" just above described.

APPENDIX III

M E M O R A N D U M

July 3, 1986

TO: Chief, Bureau of Preserve Protection and Management
Regional Supervisors for Natural Resources

FROM: Norman J. VanValkenburgh

SUBJECT: DIVISION DIRECTION -- LF-84-2 Supplement
TOPIC: Cutting, Removal or Destruction of Trees and Other Vegetation on Forest Preserve Lands

As you will recall, Commissioner Williams promulgated Organization and Delegation Memorandum #84-06 on February 16, 1984 for the purpose of "...establish(ing) a policy regarding the prohibition of cutting, removal or destruction of trees and other vegetation on all Forest Preserve lands pursuant to Article XIV of the Constitution of New York State." In order to implement the provisions of #84-06, this Division issued procedures on May 31, 1984 under designation LF-84-2.

However, the question of whether or not live-standing trees could be cut and used for maintenance of trails including "the construction of structures such as foot bridges, dry treed and water bars" remained. Accordingly, an opinion on this question was formally requested of the Attorney General on November 8, 1985. A copy of such request is attached hereto for information and clarification purposes.

A reply from the Attorney General under date of June 24, 1986 has now been received. A copy of such Formal Opinion No. 86-F3, which allows for the "supervised selective cutting...of only those few scattered trees necessary for the maintenance of popular and steep trails to lessen soil compaction, erosion and the destruction of vegetation" within other specified constraints and parameters, is attached and made a part of this memorandum.

With Formal Opinion No. 86-F3 in hand, it is appropriate to now revise Division Direction-LF-84-2 to incorporate those added authorities. Accordingly, paragraph 1 (page 4) of Part II of LF-84-2 is hereby deleted and the following substituted therefor:

1. Maintenance of foot trails, snowmobile trails, cross-country ski trails, horse trails.

This includes projects that involve blowdown removal, hazard tree elimination (3" or more in diameter), problem tree removal (3" or more in diameter), mowing, etc.

Applications may be submitted by Area if appropriate (i.e., High Peaks Wilderness Area, St. Regis Canoe Area, Saranac Lake Wild Forest, Whiteface Mountain Intensive Use Area, etc.). Trails should be listed separately with the total length of the trail covered by a single Application, if appropriate, and in priority order of needed maintenance.

Live-standing trees may be cut or used for the construction of bridges, dry tread, waterbars or other minor trail structures only after considering the following alternatives and in accordance with the following conditions:

A. Alternatives to any type of trail hardening or structural development must be considered, especially in wilderness areas where such structures diminish the character of the area. Such alternatives include the closing or limitation of use of a trail where the impact of such use is leading to degradation of the other resources and the character of the Forest Preserve. A second alternative is to relocate the trail in such a way that trail hardening would not be necessary.

B. If, after considering the above alternatives, it is determined that structures are needed to protect the surface of the trail or the safety of the public, the following materials should be considered in order of priority:

   1. Native rock or stone from near the site.

   2. Native rock or stone from another location brought to the site.

   3. Peeled, but untreated timber or logs from another location brought to the site.

4. On-site trees in accordance with the conditions under C. following.

C. If on-site trees are to be used, such use must be in accordance with the following conditions:

1. The Regional Forester or his designated representative must approve all trees to be cut, after considering any other previous cutting that has been done in the area.

2. Cutting must be discreet with tops fully lopped and dispersed out of sight of the trails, and with stumps cut flush to the ground.

3. Live trees must be between three to twelve inches in diameter (DBH), and must be at least 100 feet apart.

4. Structures requiring the use of live on-site trees are not to be replaced more frequently than 7-10 years, which is the range of normal life expectancy.

Dead and downed material may be used for such purposes although consideration must be given to human safety and the longevity or life of such structures when such material is used.

Director of Lands and Forests

Attachments

cc: D. Grant
H. Doig
J. Corr
G. Colvin
G. Sovas
K. Wich
R. Bernhard
Regional Directors
Bureaus of Fish and Wildlife
Bureaus of Lands and Forests
Bureaus of Marine Resources
Bureaus of Mineral Resources

MEMORANDUM

May 31, 1984

TO: Chief, Bureau of Preserve Protection and Management
Regional Supervisors for Natural Resources

FROM: Norman J. VanValkenburgh

SUBJECT: DIVISION DIRECTION — LP-84-2
TOPIC: Cutting, Removal or Destruction of Trees and Other Vegetation on Forest Preserve Lands

PURPOSE: The purpose of this memorandum is to establish administrative procedures for the implementation of Commissioner Williams' Organization and Delegation Memorandum #84-06 relating to the construction of new facilities, the expansion or modification of existing facilities and routine maintenance projects on lands of the Forest Preserve.

BACKGROUND: Such Organization and Delegation Memorandum states, in part: "Section 9-0105 of the Environmental Conservation Law provices that the Division of Lands and Forests has responsibility for the 'care, custody and control' of the Adirondack and the Catskill Forest Preserve. In accordance with this responsibility, all construction of new facilities, expansion or modification of existing facilities and maintenance of facilities, that will result in the cutting, removal or destruction of vegetation on any of the lands constituting the Forest Preserve shall require approval of the Director of the Division of Lands and Forests...." In order to carry out this direction and policy, the succeeding procedures will be followed by regional and non-regionalized personnel in requesting approval for such projects on lands of the Forest Preserve that involve the cutting, removal and/or destruction of vegetation. In all cases, the provisions and constraints of the Organization and Delegation Memorandum will be recognized and complied with.

PART I - Construction of New Facilities and the Expansion or Modification of Existing Facilities

PROCESS AND CALENDAR

October-November

Regional Operations Supervisor or Manager of Non-Regionalized Facility	1. Following conceptual approval of the project by the Regional and/or appropriate Central Divisional Offices, prepares a

October-November (Cont'd)	Forest Preserve Project Work Plan in the form attached hereto as Appendix A for each proposed project. Each such Plan shall include: (1) A description of the project and its purpose, (2) A sketch map delineating the project and showing its location, (3) A count by species and size class, of all trees to be cut, removed or destroyed, (4) Identification of any protected species of vegetation within 300' of the area to be disturbed, (5) A description of measures to be taken to mitigate the impact on vegetative cover, and (6) Proposed use of motorized equipment or motor vehicles, if any.
	2. Submits completed Work Plan to the Regional Supervisor for Natural Resources.
Regional Supervisor for Natural Resources	3. Reviews Work Plan for completeness and conformance to Delegation Memorandum #84-06 and forwards to the Regional Forester.
December	
Regional Forester	4. Enters receipt of Work Plan in Regional Log of Forest Preserve Projects (See Appendix B attached).
	5. Reviews Forest Preserve Project Work Plan to determine if project is appropriate taking into consideration Forest Preserve land classification, Unit Management Plan goals and management objectives for the land area involved.
	6. Makes on-site field inspections as necessary and appropriate.
	7. Insures that SEQR requirements for each project have been addressed.
	8. Consults with Operations Supervisor or Facility Manager to effect any changes or modification to Work Plan.
	9. Signs Work Plan signifying approval or indicates disapproval by stating reasons in Comments Section. If approved, forwards Work Plan through Regional Supervisor for Natural Resources to Regional Director or appropriate Division Director, in the case of non-regionalized facil-

December (cont'd)	ities. If disapproved, returns Work Plan to originator.
	10. Completes Regional Log.
January	
Regional Director or Director of Division responsible for Facility	11. Reviews Forest Preserve Project Work Plan.
	12. Signs Work Plan signifying approval or indicates disapproval by stating reasons in Comments section.
	13. If approved, forwards Work Plan to Director of Lands and Forests. If disapproved, returns Work Plan through Regional Supervisor for Natural Resources and Regional Forester to originator.
February	
Director of Lands and Forests	14. Effects review of Work Plan by appropriate Central Office staff to determine that Plan conforms to Division goals and is in keeping with responsibility for care, custody and control of lands of the Forest Preserve.
	15. Signs Work Plan signifying approval or indicates disapproval by stating reasons in Comments section.
	16. Returns Work Plan to Regional Director or appropriate Division Director.
March	
Regional Director or Director of Division responsible for Facility	17. Distributes Work Plan through Regional Supervisor for Natural Resources and Regional Forester to originator.
Current Fiscal Year	
Regional Operations Supervisor or Manager of Non-Regionalized Facility	18. Implements project in accordance with Work Plan approvals and conditions.
Regional Forester	19. Monitors implementation of Work Plan to insure conformance to approvals and conditions.

Current Fiscal Year (cont'd) 20. On completion of project, completes Inspection Report (See Appendix C attached) and retains in Project file.

PART II - Routine Maintenance Projects

PROCESS

Application for routine maintenance projects on lands of the Forest Preserve shall be submitted on the form attached hereto as Appendix D as soon as possible in advance of the starting date of the project. The Application should be directed to the Regional Supervisor for Natural Resources who will forward it to the Regional Forester. The Application will be reviewed as rapidly as possible by the Regional Forester and a determination made as to approval or disapproval.

When approvals have been granted, a copy of the Application will be forwarded to appropriate Regional Lands and Forests personnel to assure proper notification and provide for monitoring of the project.

Applicants should consider the following guidelines when submitting project requests:

1. Maintenance of foot trails, snowmobile trails, cross-country ski trails, horse trails, etc.

This includes projects that involve blowdown removal, hazard tree elimination (3" or more in diameter), problem tree removal (3" or more in diameter), mowing, etc.

Applications may be submitted by Area if appropriate (i.e., High Peaks Wilderness Area, St. Regis Canoe Area, Saranac Lake Wild Forest, Whiteface Mountain Intensive Use Area, etc.). Trails should be listed separately with the total length of the trail covered by a single Application, if appropriate and in priority order of needed maintenance. It is clearly understood that live standing trees are not to be cut or used for construction of bridges, dry tread, water bars or other structures. Dead and downed material may be used for such purposes although consideration must be given to human safety and the longevity or life of such structures when such material is used.

2. Maintenance of roads, 'phone lines, power lines, ski lifts, downhill ski trails, canoe carrys, parking areas, openings around buildings, scenic vistas, etc.

This includes projects that involve the removal of hazardous, problem or edge trees 3" or more in diameter.

Projects should be listed individually but, several may be submitted on a single Application if they are similar in nature (i.e., 'phone lines A, B, & C). Tree counts are advisable where more than an occasional live tree

must be cut to avoid potential damage to the facility in question. Felled trees may not be utilized for any purpose and should be scattered near the site so as not to interfere with the facility and to be unobtrusive.

3. Removal of dead and hazardous trees in developed areas, such as campgrounds and ski centers that potentially endanger people.

This includes projects involving removal of dead and/or hazardous trees in developed or intensive use areas.

Applications should be submitted separately for each facility. However, all projects for a specific facility can be included on a single Application. Tree counts should be included with the Application. Trees that are proposed to be removed should be flagged. Trees that are felled may be cut up and used for fuel at the facility, but for no other purposes.

4. Boundary line surveys and maintenance.

This includes all projects on lands of the Forest Preserve whether done by Department employees or by others under contract to the Department.

More than one survey project may be included on a single Application but, separate applications should be submitted for survey projects geographically distant from each other.

5. Salvage of windfall timber when such blowdown timber constitutes a fire hazard.

This includes projects of fire hazard circumstances and should be submitted on Applications for each Area involved.

In any of the above situations, projects will be checked and monitored by the Regional Forester.

Director of Lands and Forests

Attachments

cc: D. Grant
H. Loiy
G. Colvin
G. Govas
K. Wich
R. Bernhard
Regional Directors
Bureaus of Fish and Wildlife
Bureaus of Lands and Forests
Bureaus of Marine Resources
Bureaus of Mineral Resources

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF LANDS AND FORESTS

Forest Preserve Project Work Plan
for
Construction of New Facilities and the Expansion or Modification of Existing Facilities

FY 19__ - ____

Region/Facility	Project Title & Location	Land Classification	Project No.

Description & Justification (Attach Sketch Map Showing Location and other Required Supporting Documents):

Description of Use of Motorized Equipment or Motor Vehicles, if any:

Prepared By: Date:

APPROVALS OR DISAPPROVALS

Comments:

Date:

Regional Forester

Date:

Regional Supervisor for Natural Resources

Date:

Regional Director or Division Director

Date:

Director of Lands and Forests

APPENDIX A

REGIONAL LOG
FOREST PRESERVE PROJECTS

REGION ____ F.Y. ____

Plan ived	Originator	Project Description	Project: Maintenance	Project: Facility	Dates of Inspection	Date of Approval or Disapproval	Comments, including Approval or Disapproval Action

INSPECTION REPORT

FOREST PRESERVE PROJECT

REGION: ____ INSPECTED BY: _____ DATE: _____

PROJECT NO.: _____

PROJECT LOCATION:

_____

_____

_____

PROJECT DESCRIPTION:

_____

_____

_____

TREES CUT (NO. & SPECIES):

_____

_____

_____

VEGETATION DISTURBED AND MITIGATING ACTIONS TAKEN:

_____

_____

_____

COMMENTS:

_____

_____

_____

APPENDIX C

APPLICATION FOR ROUTINE MAINTENANCE PROJECT

REGION: _____ PROJECT: #_____

APPLICANT NAME: _____ DATE OF APPLICATION: _____

ADDRESS: _____ OTHER CONTACT PERSON:

_____ _____

_____

LOCATION OF PROJECT/S: _____

_____

_____

_____

DESCRIPTION OF PROJECT/S: (Attached additional sheets if necessary)

_____

_____

_____

_____

WHO IS TO DO WORK: _____

ESTIMATED STARTING DATE: _____ ESTIMATED COMPLETION DATE: _____

APPLICANT SIGNATURE:

_____

_____

PROJECT ACTION:

APPROVED _____ DISAPPROVED _____ _____

REGIONAL FORESTER

REMARKS: _____ DATE: _____

_____

_____

Appendix 3
Correspondence

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

September 26, 2017

Robert Fraser
NYS Olympic Regional Development Authority
40 Long Alley
Saratoga Springs, NY 12866

Re: Gore Mountain Ski Center
County: Warren Town/City: Johnsburg

Dear Mr. Fraser:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare animals that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 5 Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Colleen Lutz
Assistant Biologist
New York Natural Heritage Program

1162

The following rare animal has been documented at the project site.

We recommend that potential onsite and offsite impacts of the proposed project on these species or communities be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process, such as reviews conducted under SEQR. Field surveys of the project site may be necessary to determine the status of a species at the site, particularly for sites that are currently undeveloped and may still contain suitable habitat. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The following animal, while not listed by New York State as Endangered or Threatened, is of conservation concern to the state, and considered rare by the New York Natural Heritage Program.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*
Bicknell's Thrush	*Catharus bicknelli*	Special Concern	Imperiled in NYS

Breeding

Gore Mountain, on the project site, 0.25 mile northeast of the State Fire Tower, 2005-su: The birds were encountered in spruce/fir forest with a canopy height of 5 to 7 meters.

12171

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at www.natureserve.org/explorer, and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

November 09, 2017

Mr. Robert Fraser
Environmental Scientist
The LA Group, P.C.
40 Long Alley
Saratoga Springs, NY 12866

Re: APA
Gore Mountain Ski Center
793 Peaceful Valley Rd, Johnsburg, Warren County, NY
17PR07541

Dear Mr. Fraser:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Based upon this review, it is the New York State Office of Parks, Recreation and Historic Preservation's opinion that your project will have no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Michael F. Lynch, P.E., AIA

Director, Division for Historic Preservation

Appendix 4
Adirondack Sub-alpine Forest Bird Conservation Area Description

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Adirondack Sub-Alpine Forest Bird Conservation Area

General Site Information: This BCA includes Adirondack Mountain summits above 2,800 feet - more specifically, those with dense subalpine coniferous forests favored by Bicknell's thrush. Bicknell's thrush prefers dense thickets of stunted or young growth of balsam fir and red spruce. Found less frequently in other young or stunted conifers, and heavy second growth of fir, cherry and birch.

Adirondack Sub-Alpine Forest BCA Management Guidance Summary

Site Name: Adirondack Sub-Alpine Forest Bird Conservation Area

State Ownership and Managing Agency: Department of Environmental Conservation

Location: Adirondack Mountain summits above 2,800 feet in Clinton, Essex, Franklin, Hamilton, and Warren counties. Surveyed and confirmed nesting locations for Bicknell's thrush (Atwood and Rimmer, et al. 1996) include: Mount Marcy, Algonquin Peak, Blue Mountain, Cascade Mountain, Giant Mountain, Kilburn Mountain, Hurricane Mountain, Lower Wolfjaw Mountain, Lyon Mountain, Mount Haystack, Phelps Mountain, Porter Mountain, Rocky Ridge Peak, Santanoni Peak, Snowy Mountain, Vanderwhacker Mountain, Wakely Mountain, Whiteface Mountain, and Wright Peak.

Size of Area: Approximately 69,000 acres

DEC Region: 5

Vision Statement: Continue to maintain the wilderness quality of the area, while facilitating recreational opportunities in a manner consistent with conservation of the unique bird species present.

Key BCA Criteria: Diverse species concentration site; individual species concentration site; species at risk site (ECL §11-2001, 3.f, g, and h). Peaks over 2,800 feet with dense subalpine thickets provide habitat for a distinctive bird community, which includes Bicknell's thrush (special concern), blackpoll warbler and Swainson's thrush.

Critical Habitat Types: Dense subalpine coniferous thickets. To a lesser degree, young or stunted and heavy second growth of cherry or birch.

Operation and Management Considerations:

- *Identify habitat management activities needed to maintain site as a BCA.*
  None identified for certain, although human access and acid rain could be impacting.

- *Identify seasonal sensitivities; adjust routine operations accordingly.*
  The BCA is comprised of lands that are within the Adirondack High Peaks Wilderness Area, and other lands within the broader Adirondack Forest Preserve. The Adirondack High Peaks Wilderness Area portion is subject to relatively stringent regulations and use limitations. Portions of the BCA that are not within the High Peaks Wilderness Area may have less stringent use limitations.

  Access to wilderness areas is completely limited to foot trails and non-motorized access, including horse trails. Access in wild forest and intensive use areas may include motorized forms of access. Examples include a road up Blue Mountain to transmitters, and a road up Whiteface. The road up Blue Mountain is used largely for administrative access to the transmitter towers. Whenever possible, routine maintenance on these towers or the access road should be scheduled outside the nesting season for Bicknell's thrush (May through July). The road up Whiteface sees considerable use by the public.

  Trail and road maintenance activities have the potential to disturb nesting activities of high altitude birds (in particular, Bicknell's thrush). Whenever possible, routine maintenance should be planned so that it can be completed outside of the normal nesting season. Should maintenance be needed during the nesting season, the use of non-motorized equipment would help to minimize the impacts.

- *Identify state activities or operations which may pose a threat to the critical habitat types identified above; recommend alternatives to existing and future operations which may pose threats to those habitats.*
  Ensure that bird conservation concerns are addressed in the Adirondack Park State Land Master Plan, individual unit management plans, and other planning efforts. For those areas where plans have already been completed, incorporate concerns for subalpine bird communities at the earliest opportunity.

  On May 18, 2000, Emergency Regulations were adopted for the High Peaks Wilderness Area, which comprises part of the BCA. These regulations prohibit camping above 4,000 feet; limit camping between 3,500 and 4,000 feet to designated areas; prohibit campfires above 4,000 feet, and require the leashing of pets above 4,000 feet.

- *Identify any existing or potential use impacts; recommend new management strategies to address those impacts.*
  There has been little research on what effect normal use of hiking trails has on nesting birds. Recreational use in some areas of the BCA is relatively high. More research is needed on whether there is a significant impact to bird populations from the current level of human visitation. The Adirondack High Peaks Wilderness portions of the BCA are remote locations and access is largely limited to foot trails. Motorized vehicles are not normally allowed. Those areas of the BCA outside of the High Peaks Wilderness Area allow the use of motorized vehicles and have fewer restrictions on other uses. The Unit Management Planning process for these areas should assess the effects of current levels of recreational use, and the need for new trails (including placement, timing, and construction method) on subalpine bird species (in particular, Bicknell's thrush). Consideration should be given to prohibiting motorized vehicle access to subalpine forests above 2,800 feet.

Education, Outreach, and Research Considerations:

- *Assess current access; recommend enhanced access, if feasible.*
  Recreational use in some areas of the BCA is relatively high. Further study or research would help to assess impacts of recreational activities on nesting high altitude species. The need for protective measures will be discussed and incorporated as part of the planning process for the Adirondack Forest Preserve and Wilderness Areas that form the BCA, or at the earliest opportunity.

- *Determine education and outreach needs; recommend strategies and materials.*
  There is a need to identify to the public the distinctive bird community present in subalpine forests over 2,800 feet. The potential impacts of human intrusion need to be portrayed to the public, and a "please stay on the trails" approach may be beneficial. Continue partnerships with the National Audubon Society, High Peaks Audubon Society, Adirondack Mountain Club and other groups involved in education and conservation of birds of the Adirondack High Peaks.

- *Identify research needs; prioritize and recommend specific projects or studies.*
  Acid rain deposition may be having an impact on nesting success of songbirds at high elevations by causing die-offs of high altitude conifer forests, and killing snails and other sources of calcium needed for egg production. More research is needed on this. The curtailment of sulphur dioxide emissions and the reduction of acid rain is currently

a significant New York State initiative.

A detailed inventory and standardized monitoring of special concern species is needed for the area. In particular, all peaks above 2,800 feet should be surveyed for Bicknell's thrush.

The impact of the current levels of human use on nesting success needs to be assessed.

Contacts:
DEC Region 5 Wildlife Manager, 518-897-1291

DEC Region 5 Forester, 518-897-1276

Sources:
Atwood, J. L., C. C. Rimmer, K. P. McFarland, S. H. Tsai, and L. R. Nagy. 1996. *Distribution of Bicknell's thrush in New England and New York.* Wilson Bulletin 108(4):650-661.

Bull, John L. 1998. *Bull's Birds of New York State*. Comstock Publishing Associates, Ithaca, NY.

NYSDEC Division of Lands and Forests. 1999. *High Peaks Wilderness Complex Unit Management Plan*. NYSDEC, Albany, NY.

Rimmer, C. C., Atwood, J., and L. R. Nagy. 1993. *Bicknell's Thrush - a Northeastern Songbird in Trouble?* Vermont Institute of Natural Science, Woodstock, VT.

State of New York Endangered Species Working Group. 1996. *Species Dossier for Bicknell's Thrush.* New York State Department of Environmental Conservation.

Wells, J. V. 1998. *Important Bird Areas in New York State*. National Audubon Society, Albany, NY.

Date BCA Designated: 11/16/01

Date MGS Prepared: 12/6/01

Appendix 5
Trail Inventory and Analysis

Trail Inventory and Analysis

GORE MOUNTAIN

November, 2017
Updated Feb 23, 2018
Updated April 10, 2018

Prepared for:

NEW YORK STATE OF OPPORTUNITY. | Olympic Regional Development Authority

NYS Olympic Regional Development Authority
2634 Main Street
Lake Placid, NY 12946

Prepared by:

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Introduction

The following Trail Inventory and Analysis was performed as part of ORDA's and Gore Mountain's ongoing efforts to update and maintain the calculated ski trail mileage that currently exists on the mountain. The inventory examines only existing and previously approved trails, and does not contemplate potential future trail improvements. Potential future trail improvements are evaluated in the 2018 UMP proper, using this inventory as a baseline.

The last update to the ongoing trail inventory was performed in 2005 and since that time improved technology and high definition aerial photography has been made readily available. This provides the opportunity for a more detailed refinement of the trail mileage calculations that were presented in previous Unit Management Plans (UMP's). A similar update is being performed for Whiteface Mountain and it is anticipated the same update will be performed for Belleayre Mountain when that UMP is next amended.

The analysis below calculates trail width in accordance with existing legislation and documents the methodology used. A brief summary of previous calculations found in existing Unit Management Plans and related amendments is provided, along with additional description of all ski area appurtenances considered as part of this effort. Findings are summarized at the end of the analysis.

1.0 Background: New York State Constitution, Article XIV (Conservation)

1.1 History of Legislation Pertaining to Gore Mountain

Article 14, Section 1 of the New York State Constitution is the "forever wild" clause protecting state Forest Preserve lands. On November 4, 1941, the clause was amended by a vote of the People of the State of New York authorizing the:

"constructing and maintaining [of] not more than twenty miles of ski trails thirty to eighty feet wide on the north, east and northwest slopes of Whiteface Mt. in Essex County."

In 1944 the New York State Legislature created the Whiteface Mountain Authority from the Whiteface Mountain Highway Commission (Chapter 691 of the Laws of 1944). The new Authority assumed the responsibility for the Whiteface Mountain Memorial Highway and was additionally given the authority to:

> "Acquire, construct, reconstruct, equip, improve, extend, operate and maintain ski trail developments"

at Whiteface Mountain, Gore Mountain and Old Forge. As such, "ski trail development" was further defined to mean:

> "ski trails, ski tows, open slopes made available for skiing, and all such appurtenances, facilities and related developments as in the judgment of the Authority may be necessary for the promotion, use and enjoyment of the ski trails." (Laws of 1944 ch. 691, §1; Public Authorities Law §101 (repealed 1974).

In 1960 the Whiteface Mountain Authority was renamed the Adirondack Mountain Authority. In 1968 the Adirondack Mountain Authority ceased to exist and the New York State Department of Environmental Conservation was given the responsibility to continue development, maintenance and operation of the ski areas. Following the 1980 Winter Olympics in Lake Placid, the Olympic Regional Development Authority (ORDA) was created in 1982 and assumed the responsibility to continue development, maintenance and operation of Whiteface and the other remaining Olympic venues. A DEC/ORDA MOU in 1984 transferred Gore Mountain to ORDA's Management. Although ORDA has day to day management authority over Gore and Whiteface, DEC retains ultimate jurisdiction over both facilities.

The original authorization to develop Gore Mountain allowed for constructing, maintaining and operating not more than 30 miles of ski trails thirty to eighty feet wide on Gore and Pete Gay Mountains. In 1987 the "forever wild" clause of the New York State Constitution was again amended authorizing Gore Mountain to construct, maintain and operate:

> "Not more than forty miles of ski trails thirty to two hundred feet wide, together with appurtenances thereto, provided that no more than eight miles of such trails shall be in excess of one hundred twenty feet wide, on the slopes of Gore and Pete Gay Mountains . . ."

1.2 Collaboration and Consultation with State Agencies

In addition to the enabling legislation found in Article 14, Section 1 of the New York State Constitution and the several amendments to that document that were approved by the People of the State of New York, interpretations and actual application of legislation pertaining to the development, maintenance and operation of ski trails on "forever wild" lands have been made which are

pertinent to understanding what is allowed. The single most comprehensive interpretation of the legislation was made by New York State Department of Environmental Conservation (DEC) attorney Philip H. Gitlen in a February 17, 1977 memorandum pertaining to the proposed expansion and improvements to Whiteface Mountain in anticipation of hosting the 1980 Winter Olympics.

In this memorandum Mr. Gitlen opined extensively on the calculation procedure for allowed trail widths at Whiteface Mountain as allowed by the legislation and as historically developed at the ski area.

The first condition in this memorandum relates to trail width where two or more trails join together. In this instance Mr. Gitlen observed that "where two or more trails join together they were often developed so as to be a multiple of allowable 80 ft. width . . ." Several trails were found to be 200 to 300 feet wide. From this observation Mr. Gitlen concluded that "where two or more trails join together a multiple of the constitutionally imposed width limitation may be allowable."

Secondly, Mr. Gitlen observed that "trails which have lifts associated with them are often considerably wider than the constitutionally stated maximum width of 80 feet." From this observation Mr. Gitlen concluded that "where a chair lift bisects a trail, an allowance for the width of the chair lift may be allowed in addition to the constitutional requirements for trail widths." He further justified this conclusion stating that "this has the beneficial effect of limiting the amount of new clearing required for chair lifts and enhancing the visual appearance of the ski center. (NYS DEC) staff has advised that clearing for a chair lift would be at least thirty to fifty feet".

With respect to the constitutional limitation which limits the total mileage of trails, when discussing the construction of the new Giant Slalom trail at Whiteface Mr. Gitlen stated that "…the construction of this ski trail will not violate the express limitation on the allowable length of trails to be developed. This is so even if one considers areas where two trails join together as separate trails for the mileage computation".

Lastly, Mr. Gitlen recognized the fact that snowmaking pipelines and grooming equipment are necessities of a modern ski area. As such, he opined that an allowance in trail width should be made. ". . . for access by modern snow grooming machinery without creating an unsafe condition for the recreational skier, and provision of adequate means of access for use and maintenance of the snow making systems to be installed without decreasing the safety afforded the recreational skier."

In conclusion, Mr. Gitlen found that "several working rules may be derived from both the past history of Whiteface Mountain and the requirements attendant with the development of a modern ski center." They are:

1. Where a lift bisects a trail, an allowance for the clearing required for the lift must be made. In such cases, a minimum of 30 additional feet of clearing is required for the lift line.

2. Where trails join together or at the junction of two trails a multiple of the 80 foot width is allowable; and

3. Sufficient clearing adjacent to ski trails can be allowed for the purposes of installing and maintaining snowmaking systems, an appurtenance to a modern ski center.

With the creation of the Adirondack Park Agency, (APA) the Adirondack Park State Land Master Plan, (APSLMP) adopted in 1971, provided guidelines for the preservation, management and use of State-owned lands by State agencies in the Adirondack Park. The Gore Mountain Ski Center land is classified under the APSLMP as an "Intensive Use Area." The APSLMP provides that the primary management guideline for Intensive Use Areas is to provide the public opportunities for a variety of outdoor recreational pursuits in a setting and on a scale in harmony with the relatively wild and undeveloped character of the Adirondack Park.

The Adirondack Park Agency Act (Section 816) directs the NYSDEC to develop, in consultation with the APA, individual Unit Management Plans (UMPs) for each unit of land under its jurisdiction that is classified in the Adirondack Park State Land Master Plan. Unit Management Plans must conform to the guidelines and criteria set forth in the State Land Master Plan.

Gore Mountain Ski Center opened in 1964 and early management was under the direction of the NYSDEC. Management was delegated to the Olympic Regional Development Authority (ORDA) on April 1, 1984, through an agreement with NYSDEC which was authorized by Chapter 99 of the Laws of 1984 (Article 8, title 28, Section 2614, Public Authorities Law). This agreement transferred to ORDA the responsibility for the use, operation, maintenance and management of the ski area. Under the agreement, ORDA is to cooperate with NYSDEC to complete and periodically update the UMP for the ski area. A UMP for Gore was completed in 1987 and subsequently amended three times. A major re-write of the UMP was completed in 1994/1995 which included an extensive "Master Plan" for the expansion of Gore Mountain. It has subsequently been updated in

a UMP for years 2002-2007. The most recent amendment to the 2002-2007 UMP was in 2005.

Concurrent with the preparation of each UMP has been the preparation of a Generic Environmental Impact Statement (GEIS). Each UMP/GEIS has been publically noticed and made available for Agency and public comment. Public hearings were held on each UMP/GEIS.

All previous UMP/GEIS documents included proposed new ski trail development. Mileage calculations were included in each document and the increase in approved trail mileage was reviewed and approved by the DEC and APA for each UMP/GEIS.

2.0 Trail Width and Length Guidance Established for Gore Mountain

ORDA has maintained a calculation of trail widths and overall length of trails at Gore Mountain since it began managing the mountain in 1984. These trail widths and lengths have been reported in each UMP since the original 1987 version and have subsequently been approved, each time, by the DEC and APA.

As previously stated, Gore Mountain is authorized, at this time, to maintain and operate "not more than forty miles of ski trails thirty to two hundred feet wide, together with appurtenances thereto, provided that no more than eight miles of such trails shall be in excess of one hundred twenty feet wide . . ."

Based on an understanding of Article 14, Section 1 of the New York State Constitution, the "forever wild" clause, and Amendments as approved by the People of the State of New York and interpretations made by DEC, especially NYSDEC Attorney Mr. Philip Gitlen, Esq., and actual historic practice of implementing the legislation, Gore Mountain has applied the following guidance for the measurement of trail widths and length:

1. Where a lift bisects a trail, allowances for the clearing required for the lift can be made. These clearing allowances are not included in the trail width calculation. Based on today's lift safety standards, Gore Mountain should apply a clearing allowance of forty feet for a double chair lift and surface lift and sixty feet for a triple chair lift, quad chair lift and gondola to accommodate chair/cab swing due to wind and avoid hazardous trees in case of a tree blow down. This is in accordance with Mr. Gitlen's guidance that ". . . a minimum of 30 additional feet clearing is required for the lift line."

2. For the purpose of calculating width, where two or more trails join together to create a wider, single open slope, the slope may be counted as a single trail, or

as a multiple of the constitutionally imposed width limitation. At the time of Mr. Gitlen's conclusion the constitutionally imposed width limitation was 80 feet. As a result of the 1987 Amendment to the NYS Constitution the current width limitation is both 120 feet and 200 feet. Therefore if an area where two or more trails join together exceeds 120 feet in width but is less than 200 feet, Gore Mountain may elect to count this as a single trail segment within the allowable 8 miles of trails over 120 feet in width, or as multiple trails, each with the 120 feet width limitation. In the case where it is counted as multiple trails, the mileage of each trail shall count toward the maximum allowable trail length. This is in accordance with Mr. Gitlen's conclusions.

3. Where snowmaking systems exist on a ski trail, a clearing allowance of 10 feet can be applied to allow for the installation and operation of snowmaking systems. This clearing allowance does not get included in the width calculation for trails with snowmaking systems. This is in accordance with Mr. Gitlen's guidance …"sufficient clearing adjacent to ski trails can be allowed for the purposes of installing and maintaining snowmaking systems, an appurtenance to a modern ski center." Based on discussion presented by Mr. Gitlen, a 10' width allowance for snowmaking was proposed as a suitable width at that time. In previous UMP documents, a 15' clearing allowance for snowmaking was determined to be sufficient and applied where applicable. For the purpose of this analysis, the more conservative 10' allowance is applied. The same allowance could be applied to similar infrastructure adjacent to trails such as power lines, for the same reasons; to allow room for safe installation and maintenance of an appurtenance, with the realized benefit of consolidating clearing for both trails and utilities in a single location.

4. This Inventory takes no position on the issue of whether the length and width of glades should be applied against constitutionally authorized trail lengths and widths. The Gitlen memo does not discuss the issue of whether glades should be counted, and there have been no court cases on the issue. Even if glades are counted, however, the total mileage and width of ski trails at Gore Mountain are within the constitutional limits.

5. "Work Roads" are not included in trail length computations since they are not maintained for skiing, but are used for trail maintenance and grooming access. Similarly, areas adjacent to trails where snowmaking equipment is staged or temporarily stored shall not be included in calculated trail width.

6. "Queuing/Trail Access areas" are not included in the trail length computation since they are not defined ski trails. These areas are typically adjacent to lodges, ski patrol buildings and other appurtenant buildings and lift terminals. They are used by skiers to take their skis on or off, adjust their gear, or wait in line to load

lifts or unload from lifts. They are also used by mountain staff and maintenance crews for access and maintenance to appurtenant structures. These areas are considered 'appurtenant' areas.

7. Only ski trails on "intensive use area" lands are included in the trail length computations. Trails in the Historic North Creek Ski Bowl that are on Town of Johnsburg controlled lands are not subject to inclusion in the trail length calculations, since they are not located on State owned Forest Preserve Lands.

3.0 Ski Trail Inventory

3.1 Summary of Previous Trail Development/Approval by UMP

Gore Mountain has been in a continuous mode of upgrading its trail system since 1984 when ORDA began managing the ski area. This included simple safety and widening improvements that did not increase trail length, as well as the development of new trails.

A review of past UMP's indicates the following progress in trail development at Gore Mountain. The 1987 UMP reported a total of 41 existing trails with a total length of 16.5 miles on 172 acres of terrain. Between 1987 and 1995, 3.05 miles of new trails were developed bringing the total trail length to 19.55 miles and 46 trails on 187.7 acres of terrain.

The 1995 UMP approved the construction of up to 28.5 miles of trails, an increase of 8.95 miles. Between 1995 and the issuance of the 2002-2007 UMP a total of 5.55 miles of new trails were constructed. This brought the total constructed trail length to 25.1 miles, existing as 50 trails on 249.5 acres of terrain.

The 2002-2007 UMP approved an additional 5.4 miles of trails bringing the total approved trail length to 33.9 miles. The 2005 UMP Amendment approved a net increase of 1.5 additional miles, bringing the total length of trails approved for construction under Gore's UMP to 35.4 miles.

3.2 Trail Length Calculation Methodology

Technological advances including the utilization of high resolution aerial photography that is available today, along with the application of the guidance and criteria established in Section 2, allows for a more detailed refinement of the trail mileage calculations that were presented in previous Unit Management Plans.

Current trail mileage of developed ski trails was calculated for Gore Mountain using the most recently available aerial photography. This includes aerials provided by the NY Statewide Digital Orthoimagry Program and NYS Office of Cyber Security, Spring 2013 natural color imagery (image pixel size of 2' and horizontal accuracy within 4' at the 95% confidence level), and High Definition (4K UHD) natural color imagery available from Google Earth, imagery date September 2015. The aerial imagery was imported into both GIS and AutoCAD software allowing spatial data such as length and width of each trail to be collected not only for historically built trails, but also for the most recent improvements. Active ski trails were identified and verified using current Gore Mountain trail map guides which promote and advertise the skiable terrain at Gore Mountain, information from the Gore Mountain General Manager and first-hand knowledge of the mountain gained through site visits. Ski lifts, work roads, snowmaking and other appurtenances were also identified and accounted for using the same sources noted above, along with background information and mapping included in previous UMPs and Amendments.

Building on the inventory above, trails were then measured and categorized as being less than 30 feet wide, 30 to 120 feet wide and 120 to 200 feet wide. The guidance noted in Section 2.0 above was used as the baseline criteria for this effort. While applying this guidance, the following assumptions and/or determinations were made in regard to the measurement and categorization of each trail.

1. While the presence of a ski lift and/or snowmaking apparatus on a trail would allow clearing widths in excess of the 120' and 200' limit, (a width allowance) to accommodate a "safety and maintenance zone", analysis indicated that applying a width allowance did not affect or change the width categorization of a trail.

2. In accordance with Guidance 7 in Section 2.0 above, only trails on Forest Preserve lands classified as Intensive Use were included in the final mileage calculation. Trails in the historic North Creek Ski Bowl on Town Park lands are excluded from the mileage total.

3. In accordance with Guidance 6 in Section 2.0 above, skier queuing areas were identified, mapped and excluded from the mileage calculation.

4. In accordance with Guidance 5 in Section 2.0 above, work roads and/or areas that remain open for grooming access, work or emergency access and not offered for skiing by the public were excluded from the mileage calculation. A good example of this is the abandoned ski trail Lower

Tannery, which remains in use as a work road and emergency egress route for the ski patrol but is not available for the public to ski.

5. Appurtenant cleared areas that are independent of ski trails such as electric line routes, other utility line routes and the abandoned gondola route were excluded from the mileage calculation since they are not maintained and offered for skiing. Appurtenant cleared areas that include the infrastructure above and are offered for skiing are included in the calculations.

4.0 Trail Length Summary

Drawing 1, "Gore Mountain, Ski Trail and Glade Inventory," illustrates the existing ski trails and glades at Gore Mountain for the Winter 2016/2017 ski season. Drawings 2, 2a, 2b and 2c, "Existing and Approved Ski Trails and Glade Inventory", provide additional detail illustrating trail width and locations where appurtenant width allowances were applied. These drawings also illustrate trails that were approved in previous UMP's that have not yet been constructed.

Table 1, "Gore Mountain Trail and Glade Inventory," presents the results of the inventory and mileage measurement for each trail as shown on the drawings. The Table lists each trail by name, indicates if a ski lift and/or snowmaking exists on a trail, and presents lengths of each trail by width (less than 30 feet wide, 30 feet to 120 feet wide and 120 feet to 200 feet wide. Table 1 also tabulates the glades at Gore Mountain, and the trails that were approved in previous UMP's but are not yet constructed. Key totals are summarized below:

1. Total constructed trail length 0-200 feet in width at Gore Mountain, including the Ski Bowl trails on Town Lands is 29.9 miles.

2. Net constructed trail length for trails 0-200 feet wide on "Intensive Use" lands (excluding trails on town park lands in the North Creek Ski Bowl) is 27.43 miles.

3. Total trail length by width on "Intensive Use" lands is as follows:
   a) Under 30 feet wide 1.31 miles
   b) 30 feet to 120 feet wide 25.69 miles
   c) 120 feet to 200 feet wide 0.42 miles

4. Total calculated length of previously approved, but not yet constructed trails on Intensive Use lands is 5.52 miles.

5. Total calculated length of Glades on Intensive Use lands at Gore Mountain is 4.85 miles.

TABLE 1

Gore Mountain Trail and Glade Inventory
April, 2018

GORE MOUNTAIN

Trails

Trail Pod #	Trail Name	Gross Trail Length (LF)	Trail Length on "Intensive Use" Lands	Trail Length on Town Lands	Width Allowances	Trail Length on "Intensive Use" Lands (under 30' wide)	Trail Length on "Intensive Use" Lands (30'-120' wide)	Trail Length on "Intensive Use" Lands (120'-200' wide)
1H	1A	825	825	0	S	0	825	0
1E	2B	357	357	0	S,L1	0	357	0
3F	3B	1,952	1,952	0	S	0	1,952	0
12F	46ER	3,260	0	3,260	L1	0	0	0
9A Lower	Bear Cub Run	608	608	0	-	0	608	0
WORKRD	Cedar's Traverse	3,514	3,514	0	S	0	3,514	0
7A	Chatiemac	3,119	3,119	0	S	100	3,019	0
6B-UP, 2K	Cloud	3,486	3,486	0	S	0	3,486	0
N/A	Crystal	157	157	0	-	157	0	0
3C-UP	Cutoff	922	922	0	-	0	922	0
7E	Dell	344	344	0	-	0	344	0
7N-Q(b)	Double Barrel (Looker's Right)	780	780	0	-	0	780	0
11N	Eagle's Nest Crossover	4,082	4,082	0	S	0	4,082	0
11A, 1N-P	Echo	5,735	5,735	0	S	0	5,320	415
C4	Farview	965	965	0	S	0	846	119
10G-Upper, C6	Foxlair	1,870	1,870	0	S	0	1,747	123
7B	Hawkeye	1,939	1,939	0	S	0	1,939	0
7F	Headwaters	2,740	2,740	0	S	0	2,740	0
11B-UP, M8	Hedges	1,489	1,489	0	-	1,000	489	0
12G Lower	Hudson	2,403	0	2,403	S	0	0	0
6H	Hullabloo	1,173	1,173	0	S	0	1,173	0
3G	Jamboree	1,619	1,619	0	S	0	1,619	0
N/A	Jibland	318	318	0	-	0	0	318
N/A	Jug Handle	434	434	0	-	175	259	0
7N-M	Lies	1,109	1,109	0	S	0	1,109	0
6K	Little Cloud	364	364	0	S	0	364	0
3C-LOW	Little Dipper	993	993	0	S	0	993	0
N/A	Little Gore Crossover	770	0	770	-	0	0	0
2K	Lower Cloud Traverse	655	655	0	S	0	655	0
6G	Lower Darby	1,019	1,019	0	S	0	1,019	0
1C (1D-1NR)	Lower Sleighride	1,817	1,817	0	S	0	1,817	0
6F	Lower Steilhang	1,246	1,246	0	S	0	1,246	0
3A	Lower Sunway	3,769	3,769	0	S	0	3,769	0
10C-LOW	Lower Uncus	794	794	0	S	0	794	0
2J-UP	Lower Wood In Traverse	1,115	1,115	0	-	450	665	0
M2	Mica	444	444	0	-	219	225	0
12D	Moxham	2,877	368	2,509	-	0	368	0
2D	North Star	1,803	1,803	0	S	0	1,803	0
6E, 7N-O	Open Pit	972	972	0	S	0	972	0
3I	Otter Slide	407	407	0	S	0	407	0
12C, 12A	Peaceful Valley	6,010	3,173	2,837	S	0	3,173	0
2E UP, LOW	Pete Gay	3,976	3,976	0	S	0	3,976	0
10A, 10B LOW	Pine Knot	2,455	2,455	0	S	0	2,455	0
N/A	Pipeline Traverse	5,419	5,419	0	-	0	5,419	0
1C (1NR-3F)	Pot Luck	723	723	0	S	0	723	0
2C	Powder Pass	3,580	3,580	0	S,L	0	3,580	0
1B	Quicksilver	2,036	2,036	0	-	0	2,036	0
C7	Ruby Run	2,563	2,563	0	S	0	2,563	0
11K	Sagamore	6,037	6,037	0	S,L1	0	6,037	0
6B-LOW (2K-6K)	Santanoni	180	133	47	S	0	133	0
1C (1A-1D), 1D	Showcase	5,950	5,928	22	S,L1	0	5,928	0
1K	Showoff	188	188	0	-	188	0	0
2B, 2I	Sleeping Bear	2,796	2,796	0	S	0	2,796	0
N/A	Starting Gate	359	359	0	-	0	0	359
1C (1C-1A), 1A	Sunway	5,047	5,047	0	S	0	4,142	905
2A	Tahawus	4,184	4,184	0	S	0	4,184	0
C1	Tannery	2,768	2,768	0	S	0	2,768	0
1C (FROM 1NR)	The Arena	991	991	0	S,L1	0	991	0
7H	The Glen	433	433	0	-	0	433	0
N/A	The Gully	730	730	0	S	0	730	0
2F (2J-2E)	The Loop	850	850	0	-	348	502	0
12B	The Oak Ridge Trail	1,984	1,984	0	S	0	1,984	0
N/A	The Peace Pipe	918	918	0	-	0	918	0
7N-L	The Rumor	1,260	1,260	0	S	0	1,260	0
10E	Topridge	3,900	3,900	0	S	0	3,900	0
1K	Tower 6	118	118	0	-	118	0	0
3E	Twin Fawns	1,094	1,094	0	S,L2	0	1,094	0
1F	Twister	6,603	6,603	0	S	0	6,603	0
N/A	Twister's Little Sister	121	121	0	-	121	0	0
10C-UP	Uncas	1,833	1,833	0	S	0	1,833	0
12c	Eagles Nest Bridge	620	620	0	-	620	0	0
6D	Upper Darby	808	808	0	-	281	527	0
1G	Upper Sleighride	1,727	1,727	0	-	0	1,727	0
6C	Upper Steilhang	1,739	1,739	0	S	0	1,739	0
2F (TO 2J)	Upper Wood In	973	973	0	S	210	763	0
13A	Village Slopes	1,260	0	1,260	L1	0	0	0
3B	Ward Hill	874	874	0	-	0	874	0
1N-Q-1NR, 1N-R	Wildair	4,980	4,980	0	S,G	0	4,980	0
6J	Wood Lot North	924	924	0	S,L1	0	924	0
6B-LOW(FROM 6K)	Wood Lot South	1,163	1,163	0	S	0	1,163	0
2J (FROM 6B)	Wood Out	2,340	2,340	0	-	1,769	571	0
M1	Woodchuck	1,163	1,163	0	-	1,163	0	0
	Totals (LF)	**157,922**	**144,814**	**13,108**		**6,919**	**135,656**	**2,239**
	Totals (MILEAGE)	**29.91**	**27.43**	**2.48**		**1.31**	**25.69**	**0.42**

Appurtenant Width Allowances:
1. S=Snowmaking (15', maintenance and safety)
2. L1=Chairlift (60', Quad, Triple, or Gondola)
3. L2=Chairlift (40', Double chair, Surface lift)

Limitations:
1. Up to 40 miles of trails 30'-200' wide
2. No more than 8 miles of trails 120'-200' wide
3. No trails over 200' wide - unless area is counted as two trails side by side

The LA GROUP

Glades

Pod #	Glade Name	Gross Length (LF)	Length on "Intensive Use" Lands	Length on Town Lands	Length within Previously Approved Trails[1]	Net Calculated Length on "Intensive Use" Lands (LF)
11E	Abenaki Glades	2,724	2,724	0		2,724
11G, 11M	Barkeater Glades	3,645	3,645	0	3,645	0
No #	Birch Bark Alley Glades	853	853	0		853
No #	Boreas Glades	3,135	3,135	0		3,135
No #	Cave Glades	1,017	1,017	0		1,017
No #	Chatiemac Glades	635	635	0		635
No #	Chatterbox Glades	3,388	3,388	0		3,388
11J	Cirque Glades	5,607	5,607	0	4,085	1,522
No #	Darby Woods Glades	325	325	0		325
No #	Darkside Glades	848	848	0		848
7N-Q(a)	Double Barrel Glades	495	495	0	495	0
No #	Forever Wild Glades	1,877	1,877	0		1,877
No #	Half 'N' Half Glades	585	305	280		305
10F-LOW	High Pines Glades	2,345	2,345	0	2,345	0
10B-UPPER	Kill Kare Glades	1,147	1,147	0		1,147
No #	MacIntyre Glades	485	485	0		485
No #	Mineshaft Glades	271	271	0		271
No #	Otter Slide Glades	947	947	0		947
No #	Pinebrook Glades	944	944	0		944
No #	Rabbit Run	840	840	0		840
12D UPPER	Ridge Runner Glades	740	540	200		540
No #	Sagamore Glades	2,029	2,029	0		2,029
No #	Ski Bowl Glades	4,000	0	4,000		0
7N-P	Straight Brook Glades	1,725	1,725	0	1,170	555
11B	Tahawus Glades	1,480	1,480	0	1,480	0
No #	The Narrows Glades	1,209	1,209	0		1,209
1N-O	Twister Glades	2,850	2,850	0	2,850	0
	Totals (LF)	46,146	41,666	4,480	16,070	25,596
	Totals (Mileage)	**8.74**	**7.89**	**0.85**	**3.04**	**4.85**

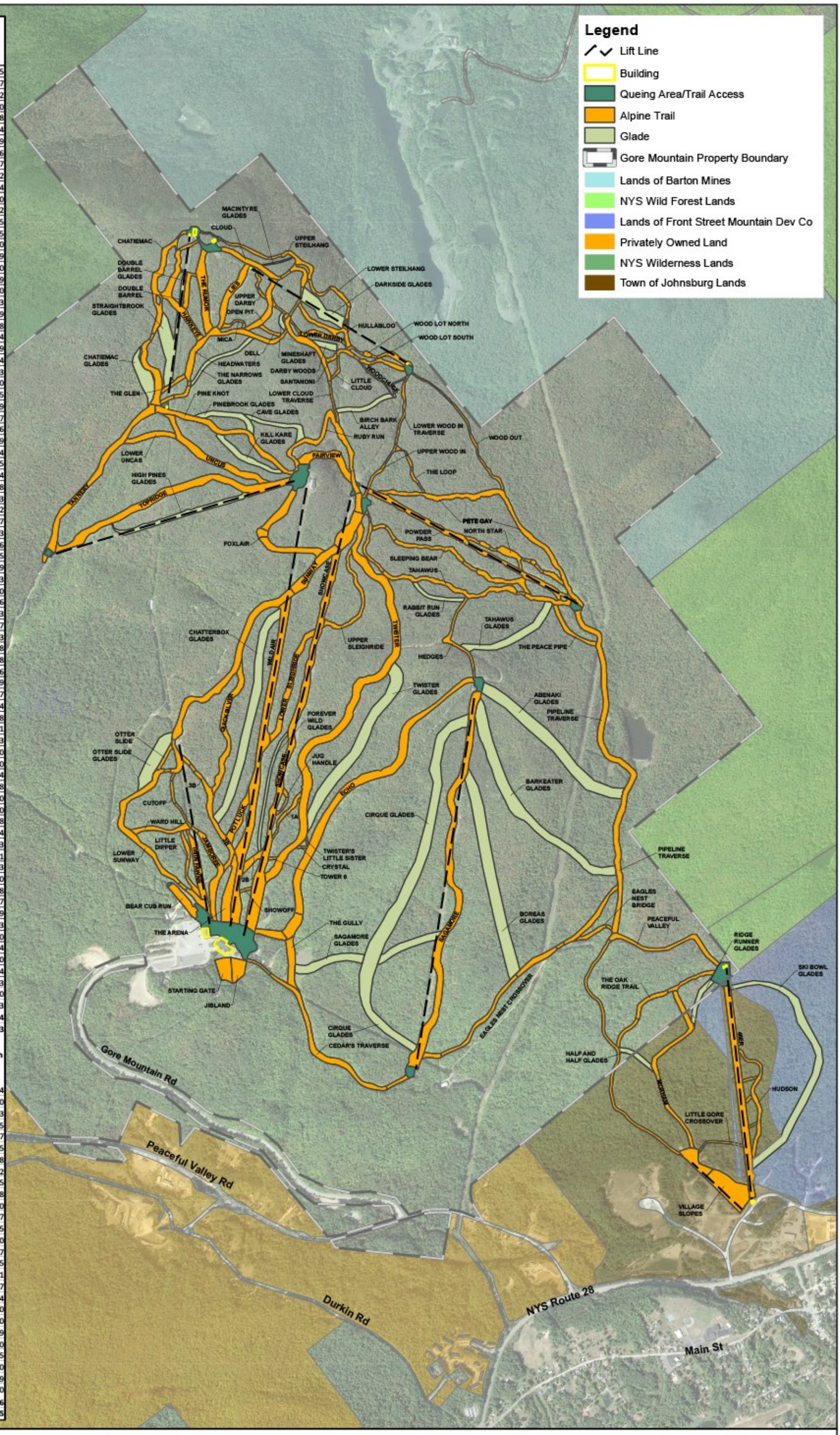
[1]If including the glades in a comparison against total trail mileage, this column must be subtracted from the Total Length of glades on IU Lands, since the lengths in this column are already included under the "Approved, Not Yet Constructed" trail length category.

Approved Trails, Not Yet Constructed

1N-O	Approved, not yet constructed	2,850	2,850	0
2N-L	Approved, not yet constructed	600	600	0
6N-O	Approved, not yet constructed	362	362	0
7N-P	Approved, not yet constructed	1,170	1,170	0
9A Upper	Approved, not yet constructed	925	925	0
9B	Approved, not yet constructed	1,250	1,250	0
10F	Approved, not yet constructed	2,345	2,345	0
10H	Approved, not yet constructed	3,848	3,848	0
11B Lower	Approved, not yet constructed	1,480	1,480	0
11G	Approved, not yet constructed	1,720	1,720	0
11M	Approved, not yet constructed	1,925	1,925	0
11L	Approved, not yet constructed	4,095	4,095	0
11I	Approved, not yet constructed	2,495	2,495	0
11J	Approved, not yet constructed	4,085	4,085	0
12E	Approved, not yet constructed	1,605	0	1,605
12G Upper	Approved, not yet constructed	1,580	0	1,580
12H	Approved, not yet constructed	3,067	0	3,067
12I	Approved, not yet constructed	6,410	0	6,410
12J	Approved, not yet constructed	2,140	0	2,140
	Totals (LF)	**43,952**	**29,150**	**14,802**
	Totals (MILEAGE)	**8.32**	**5.52**	**2.80**

Trail Name	Trail Length on "Intensive Use" Lands
1A	825
2B	357
3B	1,952
46ER	0
Bear Cub Run	608
Cedar's Traverse	3,514
Chatiemac	3,119
Cloud	3,486
Crystal	157
Cutoff	922
Dell	344
Double Barrel (Looker's Right)	780
Eagle's Nest Crossover	4,082
Echo	5,735
Farview	965
Foxlair	1,870
Hawkeye	1,939
Headwaters	2,740
Hedges	1,489
Hudson	0
Hullabloo	1,173
Jamboree	1,619
Jibland	318
Jug Handle	434
Lies	1,109
Little Cloud	364
Little Dipper	993
Little Gore Crossover	0
Lower Cloud Traverse	655
Lower Darby	1,019
Lower Sleighride	1,817
Lower Steilhang	1,246
Lower Sunway	3,769
Lower Uncas	794
Lower Wood In Traverse	1,115
Mica	444
Moxham	368
North Star	1,803
Open Pit	972
Otter Slide	407
Peaceful Valley	3,173
Pete Gay	3,976
Pine Knot	2,455
Pipeline Traverse	5,419
Pot Luck	723
Powder Pass	3,580
Quicksilver	2,036
Ruby Run	2,563
Sagamore	6,037
Santanoni	133
Showcase	5,928
Showoff	188
Sleeping Bear	2,796
Starting Gate	359
Sunway	5,047
Tahawus	4,184
Tannery	2,768
The Arena	991
The Glen	433
The Gully	730
The Loop	850
The Oak Ridge Trail	1,984
The Peace Pipe	918
The Rumor	1,260
Topridge	3,900
Tower 6	118
Twin Fawns	1,094
Twister	6,603
Twister's Little Sister	121
Uncas	1,833
Eagles Nest Bridge	620
Upper Darby	808
Upper Sleighride	1,727
Upper Steilhang	1,739
Upper Wood In	973
Village Slopes	0
Ward Hill	874
Wildair	4,980
Wood Lot North	924
Wood Lot South	1,163
Wood Out	2,340
Woodchuck	1,163
Totals (LF)	**144,814**
Totals (MILEAGE)	**27.43**

Glade Name	Calculated Length on "Intensive Use" Lands
Abenaki Glades	2,724
Barkeater Glades	0
Birch Bark Alley Glades	853
Boreas Glades	3,135
Cave Glades	1,017
Chatiemac Glades	635
Chatterbox Glades	3,388
Cirque Glades	1,522
Darby Woods Glades	325
Darkside Glades	848
Double Barrel Glades	0
Forever Wild Glades	1,877
Half 'N' Half Glades	305
High Pines Glades	0
Kill Kare Glades	1,147
MacIntyre Glades	485
Mineshaft Glades	271
Otter Slide Glades	947
Pinebrook Glades	944
Rabbit Run	840
Ridge Runner Glades	540
Sagamore Glades	2,029
Ski Bowl Glades	0
Straight Brook Glades	555
Tahawus Glades	0
The Narrows Glades	1,209
Twister Glades	0
Totals (LF)	**25,596**
Totals (Mileage)	**4.85**



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Olympic Regional Development Authority
2634 Main Street
Lake Placid, New York 12946

GORE MOUNTAIN

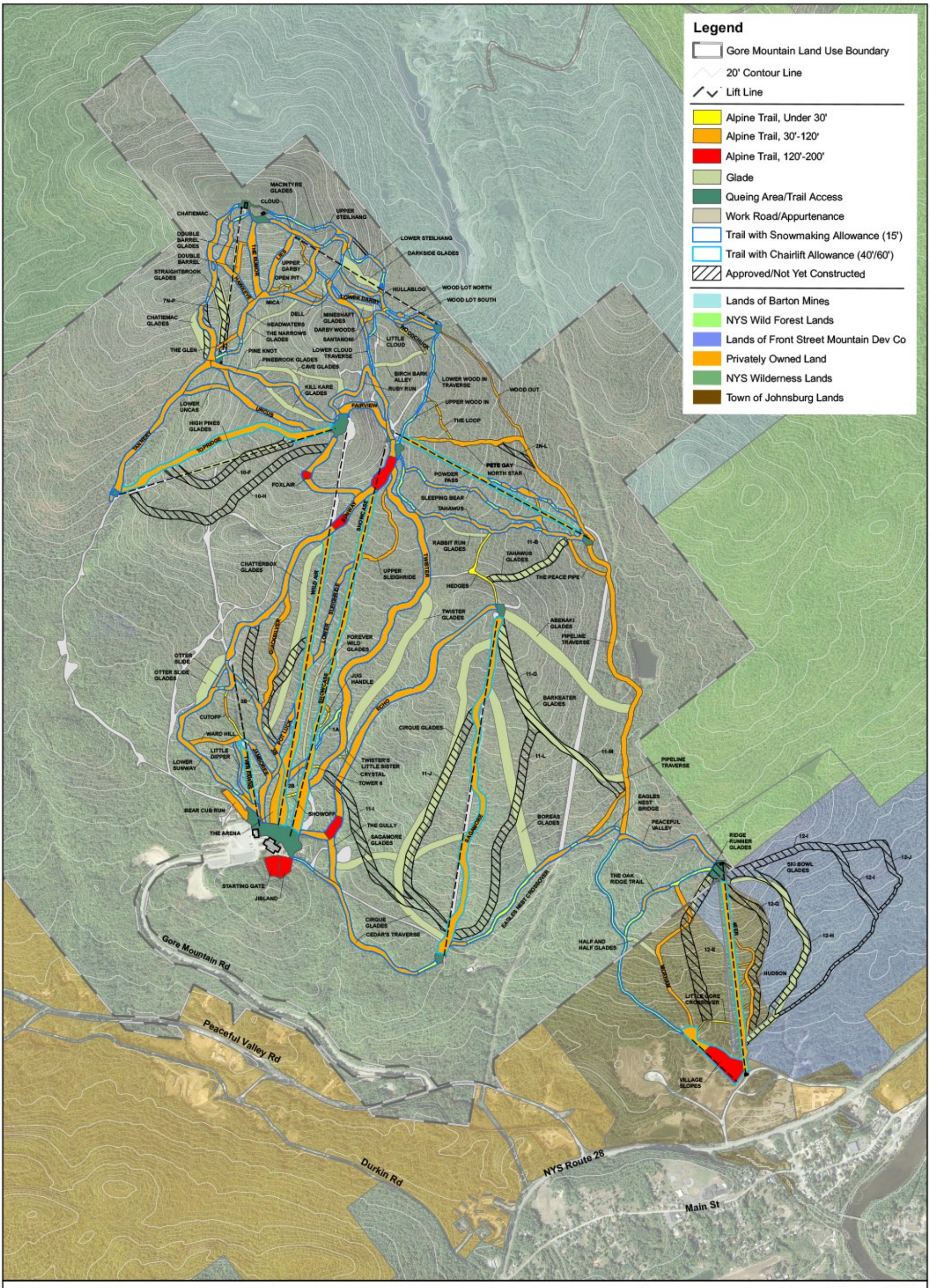
Project Title:
Gore Mountain: 2018 Unit Management Plan Amendment & Final Generic Environmental Impact Statement

Drawing Title
Gore Mountain, Ski Trail and Glade Inventory

1 inch = 1,500 feet
0 750 1,500
Feet

Date: 04/10/2018
Project No: 201537

Drawing No:
1



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GORE MOUNTAIN

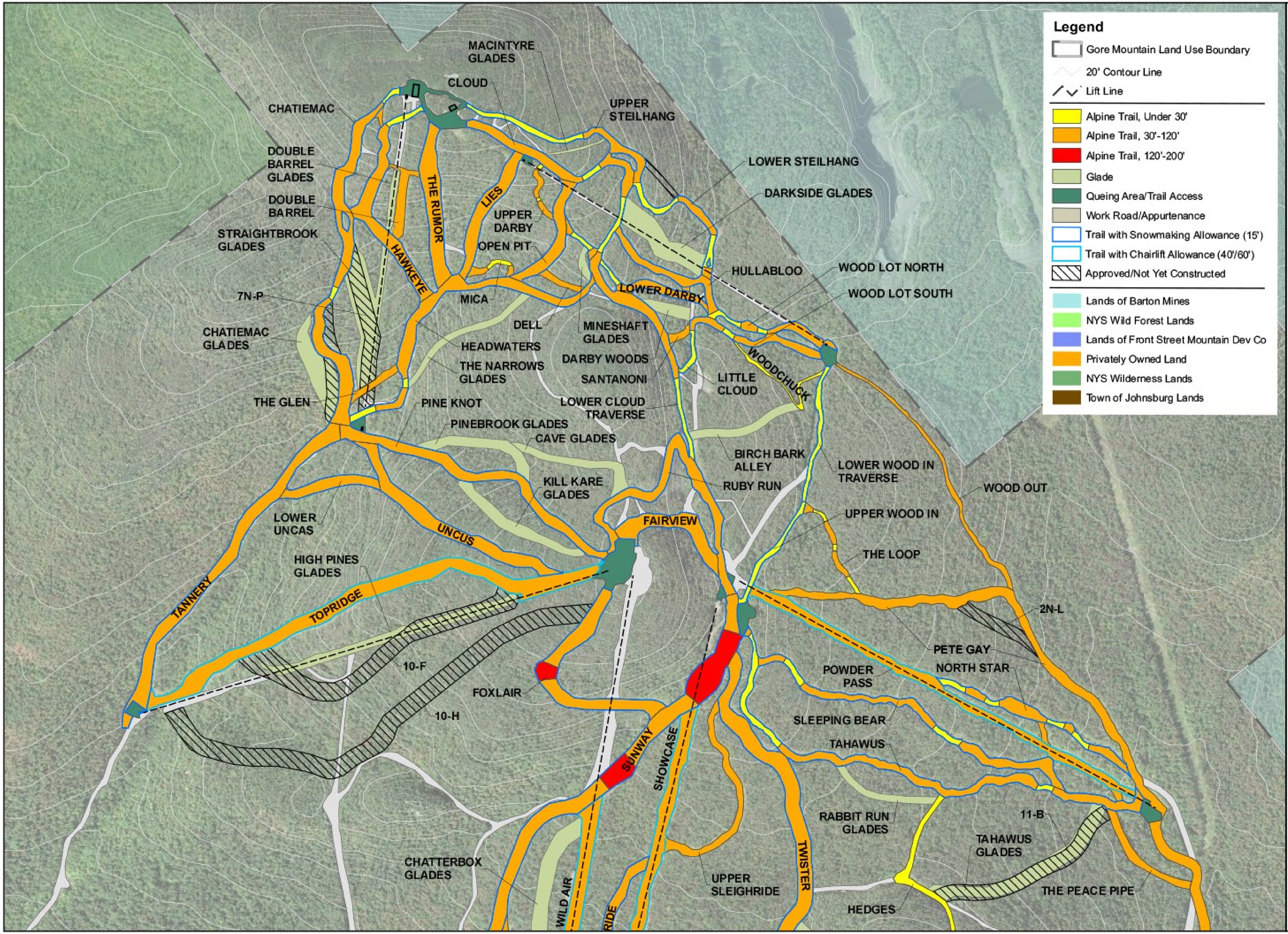
Project Title:
Gore Mountain: 2018 Unit Management Plan Amendment & Final Generic Environmental Impact Statement

Drawing Title
Existing and Approved Ski Trails and Glade Inventory

1 inch = 1,500 feet
0 750 1,500
Feet

Date: 04/10/2018
Project No: 201537

Drawing No:
2


Legend
Gore Mountain Land Use Boundary
20' Contour Line
Lift Line
Alpine Trail, Under 30'
Alpine Trail, 30'-120'
Alpine Trail, 120'-200'
Glade
Queing Area/Trail Access
Work Road/Appurtenance
Trail with Snowmaking Allowance (15')
Trail with Chairlift Allowance (40'/60')
Approved/Not Yet Constructed
Lands of Barton Mines
NYS Wild Forest Lands
Lands of Front Street Mountain Dev Co
Privately Owned Land
NYS Wilderness Lands
Town of Johnsburg Lands
MACINTYRE GLADES
CLOUD
CHATIEMAC
UPPER STEILHANG
LOWER STEILHANG
DOUBLE BARREL GLADES
DARKSIDE GLADES
DOUBLE BARREL
THE RUMOR
LIES
UPPER DARBY
STRAIGHTBROOK GLADES
OPEN PIT
HAWKEYE
HULLABLOO
WOOD LOT NORTH
LOWER DARBY
WOOD LOT SOUTH
7N-P
MICA
DELL
MINESHAFT GLADES
CHATIEMAC GLADES
HEADWATERS
WOODCHUCK
THE NARROWS GLADES
DARBY WOODS
SANTANONI
LITTLE CLOUD
THE GLEN
PINE KNOT
LOWER CLOUD TRAVERSE
PINEBROOK GLADES
CAVE GLADES
BIRCH BARK ALLEY
LOWER WOOD IN TRAVERSE
KILL KARE GLADES
RUBY RUN
WOOD OUT
LOWER UNCAS
FAIRVIEW
UPPER WOOD IN
UNCUS
HIGH PINES GLADES
THE LOOP
TANNERY
TOPRIDGE
2N-L
PETE GAY
10-F
POWDER PASS
NORTH STAR
FOXLAIR
10-H
SLEEPING BEAR
SUNWAY
SHOWCASE
TAHAWUS
RABBIT RUN GLADES
11-B
TAHAWUS GLADES
CHATTERBOX GLADES
UPPER SLEIGHRIDE
TWISTER
WILD AIR
RIDE
HEDGES
THE PEACE PIPE

Date: 04/10/2018
Project No: 201537
Drawing No: 2a

Drawing Title:
Existing and Approved Ski Trails and Glade Inventory - Bear Mountain

1 Inch = 700 feet
0 350 700
Feet

GORE MOUNTAIN

Project Title:
Gore Mountain: 2018 Unit Management Plan Amendment & Final Generic Environmental Impact Statement

Prepared for:
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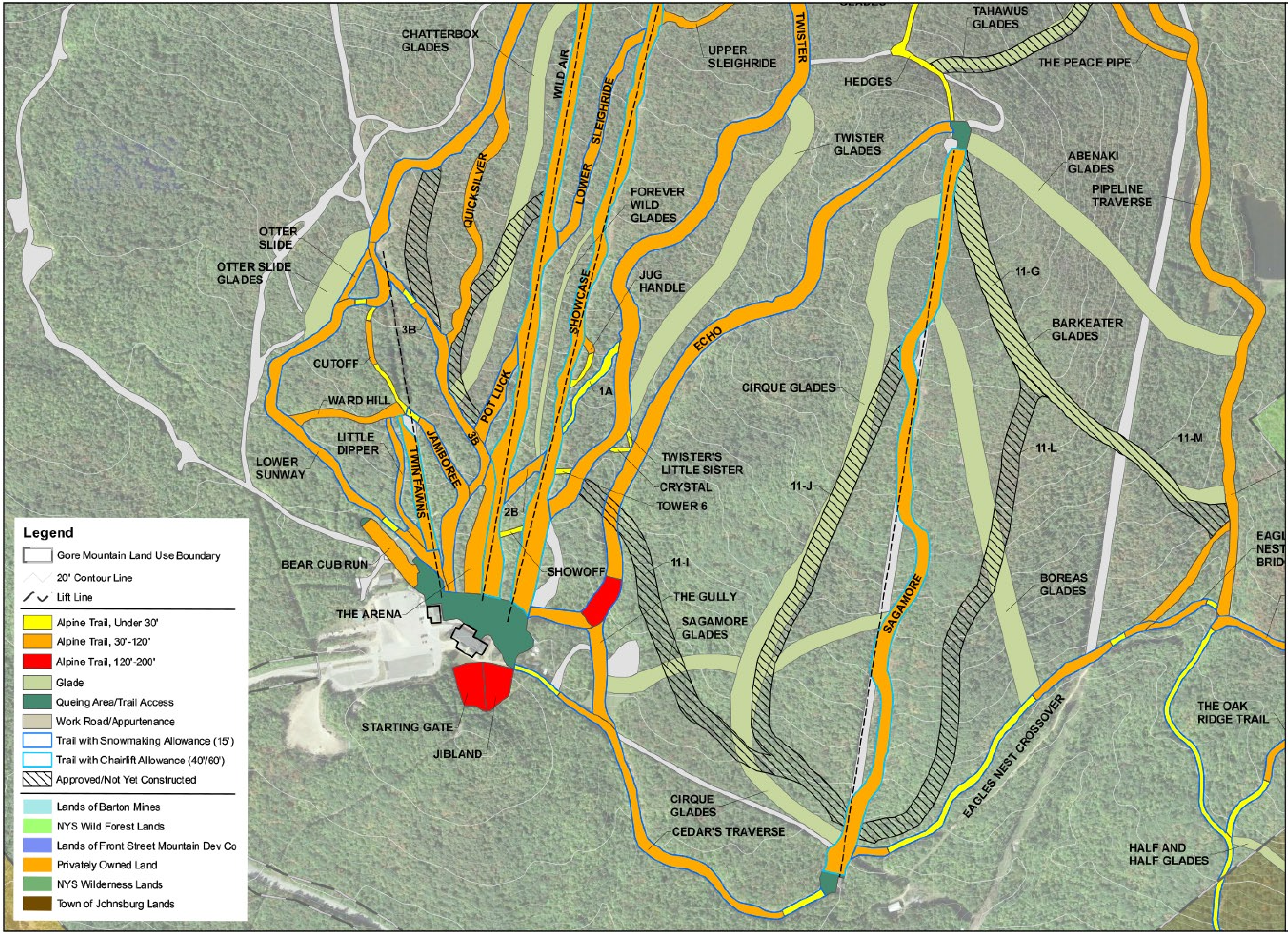
CHATTERBOX GLADES
WILD AIR
UPPER SLEIGHRIDE
TWISTER
TAHAWUS GLADES
THE PEACE PIPE
HEDGES
TWISTER GLADES
ABENAKI GLADES
PIPELINE TRAVERSE
SLEIGHRIDE
LOWER
QUICKSILVER
FOREVER WILD GLADES
OTTER SLIDE
OTTER SLIDE GLADES
JUG HANDLE
SHOWCASE
11-G
BARKEATER GLADES
3B
ECHO
CUTOFF
1A
CIRQUE GLADES
WARD HILL
POT LUCK
LITTLE DIPPER
JAMBOREE
3B
TWIN FAWNS
TWISTER'S LITTLE SISTER
11-L
11-M
LOWER SUNWAY
CRYSTAL
11-J
TOWER 6
2B
BEAR CUB RUN
11-I
SHOWOFF
BOREAS GLADES
EAGLE NEST BRID
THE GULLY
THE ARENA
SAGAMORE GLADES
SAGAMORE
STARTING GATE
THE OAK RIDGE TRAIL
JIBLAND
EAGLES NEST CROSSOVER
CIRQUE GLADES
CEDAR'S TRAVERSE
HALF AND HALF GLADES
Legend
Gore Mountain Land Use Boundary
20' Contour Line
Lift Line
Alpine Trail, Under 30'
Alpine Trail, 30'-120'
Alpine Trail, 120'-200'
Glade
Queing Area/Trail Access
Work Road/Appurtenance
Trail with Snowmaking Allowance (15')
Trail with Chairlift Allowance (40'/60')
Approved/Not Yet Constructed
Lands of Barton Mines
NYS Wild Forest Lands
Lands of Front Street Mountain Dev Co
Privately Owned Land
NYS Wilderness Lands
Town of Johnsburg Lands

Drawing Title: Existing and Approved Ski Trails and Glade Inventory - Northwoods and Burnt Ridge

1 inch = 700 feet

Drawing No: 2b

Project Title: Gore Mountain: 2018 Unit Management Plan Amendment & Final Generic Environmental Impact Statement

GORE MOUNTAIN

Prepared for: Olympic Regional Development Authority
2634 Main Street
Lake Placid, New York 12946

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TWISTER'S
LITTLE SISTER
CRYSTAL
TOWER 6
11-J
11-L
PIPELINE
TRAVERSE
11-I
OFF
THE GULLY
SAGAMORE
GLADES
SAGAMORE
BOREAS
GLADES
EAGLES
NEST
BRIDGE
PEACEFUL
VALLEY
RIDGE
RUNNER
GLADES
12-I
12-J
SKI BOWL
GLADES
12-I
THE OAK
RIDGE TRAIL
EAGLES NEST CROSSOVER
CIRQUE
GLADES
CEDAR'S TRAVERSE
12-G
46ER
12-H
HALF AND
HALF GLADES
12-E
MOXHAM
HUDSON
LITTLE GORE
CROSSOVER
VILLAGE
SLOPES
NYS Route 28

Legend

- Gore Mountain Land Use Boundary
- 20' Contour Line
- Lift Line
- Alpine Trail, Under 30'
- Alpine Trail, 30'-120'
- Alpine Trail, 120'-200'
- Glade
- Queing Area/Trail Access
- Work Road/Appurtenance
- Trail with Snowmaking Allowance (15')
- Trail with Chairlift Allowance (40'/60')
- Approved/Not Yet Constructed
- Lands of Barton Mines
- NYS Wild Forest Lands
- Lands of Front Street Mountain Dev Co
- Privately Owned Land
- NYS Wilderness Lands
- Town of Johnsburg Lands

Date: 04/10/2018
Project No: 201537

Drawing No: 2c

Drawing Title
Existing and Approved Ski Trails and Glade Inventory - Little Gore/Ski Bowl

1 inch = 700 feet
0 350 700
Feet

GORE MOUNTAIN

Project Title:
Gore Mountain: 2018 Unit Management Plan Amendment & Final Generic Environmental Impact Statement

Prepared for:
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A-99

15 (12/75)

New York State Department of Environmental Conservation

MEMORANDUM

TO: Olympic Files
FROM: Philip H. Gitlen
SUBJECT: Whiteface Mountain Ski Center - Expansion of Trails

DATE: February 17, 1977

Creation of the Whiteface Mt. Ski Center

On November 4, 1941 the People of the State of New York passed an Amendment to Article 14, Section 1 of the New York State Constitution, the "forever wild" clause authorizing the:

> "constructing and maintaining [of] not more than twenty miles of ski trails thirty to eighty feet wide on the North, East and Northwest slopes of Whiteface Mt. in Essex County."

Chapter 691 of the Laws of 1944 created the Whiteface Mt. Authority from the Whiteface Mt. Highway Commission. The new Authority assumed the responsibility of the Memorial Highway and was further given the authority to "acquire, construct, reconstruct, equip, improve, extend, operate and maintain ski trail developments" at Whiteface Mt., Gore Mt. and Old Forge (Laws of 1944, ch. 691 §1). The term "ski trail development" was defined as meaning;

> "ski trails, ski tows, open slopes made available for skiing, and all such appurtenances, facilities and related developments as in the judgment of the Authority may be necessary for the promotion, use and enjoyment of the ski trails." (Laws of 1944 ch. 691, §1; Public Authorities Law §101 [repealed 1974])

The use of the language underlined above, is of considerable interest because in 1947 an additional Amendment to the "forever wild" clause of the New York Constitution authorized the construction of ski trails at Belleayre and Gore Mountains together with "appurtenances thereto". The absence of the term "appurtenances" in the Amendment authorizing the development of the Whiteface Mt. Ski Center had caused some to argue that Whiteface Mt. was not to be developed as a commercial ski center, complete with lodges, lifts, parking facilities, etc. but was to solely consist of ski trails between thirty and eighty feet wide.

Apparently, however, the Legislature in 1944 was of a different view and authorized the Adirondack Mt. Authority not only to develop ski trails at Whiteface Mt. but to undertake "ski trail development" which was defined to include "ski tows, open slopes made available for skiing, and such appurtenances, facilities and related developments as in the judgment of the Authority may be necessary for the promotion, use and enjoyment of the ski trails."

The limitations, if any, to the development of the Whiteface Mt. Ski Center was further made the subject of an Attorney General's opinion in 1957. In that opinion, the current Attorney General opined that the Amendment to the Constitution authorizing the development of the Whiteface Mt. Ski Center "was intended and must be interpreted to authorize a ski trail development in the full extent as it is defined in Section 101, subd. 4, of the Public Authorities Law (see definition of "ski trail development" cited above).

Accordingly, not only has the Legislature authorized the development of Whiteface Mt. as a modern ski center including "open slopes", "ski tows" and related facilities, but the New York State Attorney General has agreed that the Legislature correctly interpreted the limitations contained in the New York State Constitution when it created the Whiteface Mt. Authority (see report of Attorney General 1957 pp.197 et seq.)

In 1960 the Whiteface Mt. Authority was renamed the "Adirondack Mt. Authority" (Laws of 1960; ch. 958). In 1974 the Adirondack Mt. Authority ceased to exist and the New York State Department of Environmental Conservation assumed responsibility for the continued development, maintenance and operation of the Whiteface Mt. Ski Center.

Existing Conditions at Whiteface Mt. Ski Center

The only significant improvements which have occurred at the Whiteface Mt. Ski Center since the Department of Environmental Conservation assumed jurisdiction over the operation, maintenance and development of that Center, has been the addition of a small building at the Easy Acres area housing the Alpine Training Center and the construction this past Summer of a new "Quad" lift replacing the former chairlift No.1. All other aspects of the facility as it currently exists are as a result of it's development by the Adirondack Mt. Authority and its predecessor. Certain aspects of this development warrant further development here to provide a basis for the discussion of proposed improvements which follows.

Approximately twelve miles of ski trails were developed by the Adirondack Mt. Authority. These ski trails range in width from approximately thirty feet to a maximum where two trails join together of 400 ft. ("Deer" and "Lower Valley Run") and a maximum for a single trail or "slope" of 250 ft. ("Deer"). A review of other trails at the Whiteface Mt. Ski Center indicates that where two or more trails join together they were often developed so as to be a multiple of allowable 80 ft. width, e.g. where "Cloudspin" and "Downhill" join together they are of a combined width of approximately 200 ft., and where "McKenzie", "Wilderness" and "Approach" join together they are of a common width of approximately 300 feet.

There are two conclusions which can be drawn from this pattern of development. The first is that where two or more trails join together a multiple of the constitutionally imposed width limitation may be allowable. The second is that "slopes" may be provided pursuant to the legislation authorizing development of Whiteface Mt. and the Attorney General's opinion, both cited above. The latter conclusion, however, appears to be of doubtful constitutionality, particularly considering the fact that the 1944 legislation has since been repealed.

In addition, trails which have lifts associated with them are often considerably wider than the constitutionally stated maximum width of 80 feet. For example, "Appleknocker" is bisected by chairlift #5 and is as wide as 200 feet in certain places; Valley Run is bisected by chairlift #1 and is 125 feet wide in certain places. Cloudspin, which is bisected in places by chairlift #6, is 150 feet wide in certain places.

From this one can conclude that where a chairlift bisects a trail, an allowance for the width of the chairlift may be allowed in addition to the constitutional requirement for trail widths. This has the beneficial effect of limiting the amount of new clearing required for chairlifts and enhancing the visual appearance of the ski center. Staff have advised that the clearing for a chairlift would be at least thirty to fifty feet.

Whiteface Mt. Ski Center, of course, also contains the normal appurtenances to any modern ski center including a large base lodge, considerable parking facilities and snow-making facilities over a portion of the lower mountain. Each appurtenance has required clearing of forested areas.

Proposed Developments

In connection with the Department's implementation of it's long range plan for further development of the Whiteface Mt. Ski Center for the recreational skiier as well as to provide appropriate facilities for the Alpine events which are part of the 1980 Winter Olympic Games, the following improvements are planned:

1. Expansion of the existing base lodge;
2. The installation of a significant additional amount of snow-making;
3. Construction of a new warehouse and competitor's building;
4. The construction of a new giant slalom trail;
5. The relocation of former chairlift #1 to serve the giant slalom trails;
6. The replacement of a portion of existing chairlift #6 with a surface lift to provide better access to the summit of Whiteface Mt.; and
7. The limited widening of existing trails and the addition of certain safety "run-outs" on "Downhill" and "Cloudspin".

The expansion of the base lodge, installation of snow-making, relocation and modification to lifts, and construction of additional buildings all appear to be in conformance with the earlier legislative interpretation of the Amendment to the New York State Constitution authorizing the development of the ski center by the Whiteface Mt. Authority as further interpreted by the aforementioned opinion of the New York State Attorney General. The aspect of the Department's development plans which have received considerable attention here have revolved around the construction of the new giant slalom trail and the widening of existing trails due to the more explicit limitations contained in the aforementioned Constitutional Amendment with respect to the allowable mileage and width of ski trail.

With respect to the constitutional limitation which authorizes the development of "not more than twenty miles" of ski trails, the addition of the new giant slalom trail will result in a total of 16 miles of ski trails at the Whiteface Mt. Ski Center. Accordingly, the construction of this ski trail will not violate the express limitation on the allowable length of trails to be developed. This is so even if one considers areas where two trails join together as separate trails for the mileage computation.

The more difficult issue is the allowable width of trails at Whiteface Mt. Ski Center. As noted earlier, there already exist trails or perhaps more properly called "slopes" which greatly exceed the 80 ft. limitation contained in the New York State Constitution. In addition, existing "trails" are, in places, considerably wider than 80 feet. This may be a result of original construction of the trails or may be a result of the natural forces which are present whenever one clears an area on a mountain noted for it's high winds and excessive snow cover. More likely, the portions of the trails which are greater than the 80 ft. limitation are probably a combination of man-made and natural (e.g. windthrow) forces. Nevertheless, the New York State Constitution expressly limits the width of ski trails to a maximum of 80 feet.

With this background, this memorandum will examine the need and reasons for the proposed widening of existing ski trails as well as the parameters which ought be established for the construction of the new giant slalom trail.

There are several reasons for widening the existing ski trails at Whiteface Mt. These include: providing a measure of safety for the recreational skier on relatively steep and winding trails, compliance with the FIS rules which require a minimum trail width of thirty meters for FIS approval, adequate provision for access by modern snow grooming machinery without creating an unsafe condition for the recreational skiier, and provision of adequate means of access for use and maintenance of the snow making systems to be installed without decreasing the safety afforded the recreational skiier.

As is apparent from the prior development of Whiteface Mt., where lifts (an "appurtenance") bisect trails, an additional width allowance has been utilized to provide a safe skiing area. Additionally, where trails have joined together it has apparently been assumed that a multiple of the 80 ft. width limitation has been allowed.

Accordingly, several working rules may be derived from both the past history of Whiteface Mt. and the requirements attendant with the development of a modern ski center:

1. Where a lift bisects a trail, an allowance for the clearing required for the lift must be made. In such cases, a minimum of 30 additional feet of clearing is required for the lift line.

2. Where trails join together or at the junction of two trails a multiple of the 80 ft. width is allowable; and

3. Sufficient clearing adjacent to ski trails can be allowed for the purposes of installing and maintaining snow-making systems, an appurtenance to a modern ski center.

The Department staff has prepared a map of all the ski trails to be used during the 1980 Winter Olympics and has indicated thereon all of the areas which are currently less than 30 meters in width and the extent of clearing which would otherwise be required for FIS approval (areas which the FIS has requested be cleared to insure a safe finish area). The Department has considered these drawings in connection with it's proposed plans for expanding the lift and snow-making capacities at Whiteface Mt. and the legal justification for widening each area in order to meet FIS specifications, accommodate the new snow-making system, and provide a reasonably safe skiing environment considering the location of lifts, the topography and similar considerations. The following is a discussion keyed to the map prepared by the Department's staff of each proposed area of widening and/or clearing:

Cloudspin (Women's downhill)

Area 1. This 400 ft. section of trail is relatively steep and is currently as narrow as 50 ft. While the installation of snow-making piping can be accomplished within the trees on the edge of the trail, adequate room for maintenance and operation while maintaining a safe skiing area requires that certain widening of the trail occur. In addition, the use of grooming equipment on this area will require widening so that grooming can be conducted without obstructing the trail or creating a hazard for the recreational skiier. Accordingly, it is proposed that the trail be widened to approximately 90 (plus or minus) feet taking into account the 80 ft. limitation contained in the Constitution and an allowance for 10 feet of clearing for the provision of a suitable area for the maintenance and operation of snow-making equipment as well as to provide adequate room for grooming of the trails without creating an unsafe condition for the skiier. In this connection it should be noted that the grooming machinery to be used by the Department is approximately 15 feet wide and is capable of using implements for snow-grooming which may be as much as 20 feet wide. The area to be cleared contains birch, balsam and spruce averaging 3 inches in width.

Area 2. This 100 ft. section of trail is at the end of a steep curving run which is currently 70 feet in width. The Department proposes to widen this area to approximately 90 feet which is considerably less than the width of the trail just down hill from this area. This widening is necessitated by the installation of the snow-making equipment and the use of snow-grooming equipment as noted above. In addition, chairlift #6 bisects this trail in this area.

Area 3. This 200 ft. section of trail is between two sections which are considerably in excess of 80 feet wide. The trail here is currently approximately 50 feet wide and it is proposed to widen it to approximately 90 feet to accommodate the installation of the snow-making equipment, the maintenance and grooming vehicles as well as to accommodate the installation of a new overhead electric system. This trail section is also bisected by chairlift #6.

Area 4. This 100 ft. section is at the junction of a crossover from "Downhill" which is currently 70 feet wide. The Department proposes to widen this section of trail to approximately 90 feet, to allow for the installation of the snow-making piping and access thereto, and to accommodate maintenance vehicles. Chairlift #6 currently bisects this section of trail.

Areas 5, 6 and 7. These areas encompass approximately 2300 ft. of trail where the current width ranges from 50 to 70 feet. Although snow-making will be installed in these areas, the trail at these locations is relatively straight and not as steep as in the upper mountain area and accordingly, there is no compelling need to widen these sections beyond the 80 ft. limitation contained in the New York State Constitution.

Area 8. This is an extremely small area at the junction of three ski trails with a current width of approximately 180 feet. The proposed widening will not result in the three trails being wider than a combined total of 240 ft. and accordingly is apparently in conformance with the Constitution. In addition, although snow-making will be installed on this trail, the width provided by the three common trails does not necessitate any additional clearing.

Downhill (Men's downhill)

Area 9. This is a 300 ft. section of steep, twisting trail which is currently 50 feet wide in which the Department proposes to widen to approximately 90 feet. The need and justification for this widening is the same as with area #1 with the addition that a snow-making pumphouse (#4) is proposed for installation in this area.

Areas 10 and 11. These encompass approximately 800 feet of trail where the current width is approximately 70 feet. The Department proposes to widen these sections to approximately 90 feet for the same reasons as given with respect to area #1.

Area 12. This is a 400 ft. section of relatively steep, twisting trail which is currently approximately 40 feet wide. FIS has required that this particular section of trail be widened to provide safety for the competitive skiier. In addition, for the reasons given with respect to area #1, widening is needed for safety for the recreational skiier. This will require a certain amount of clearing as well as the construction of a minor structure to bridge a narrow gorge area to make a trail approximately 90 ft. wide.

Areas 13, 14 and 15. These areas comprise approximately 1,000 feet of trail which are currently 50 to 75 feet in width which are located in a relatively flat straight area. Accordingly, although the Department will be installing snow-making in these areas and will be utilizing snow grooming machinery in these areas, no widening in excess of the 80 ft. limitation contained in the Constitution is required.

Areas 16 and 16a. These are relatively small areas at the junction of "Cloudspin", "Downhill" and the giant slalom trail. The clearing required will not result in a maximum width in excess of the 240 feet, the allowable limit for three merged trails.

Wilderness (Slalom)

Area 18. This section of trail is currently approximately 60 feet wide and the Department proposes to widen it to 90 feet. This area will be the subject of the installation of underground snow-making pipes and accordingly, additional clearing is required to prevent tree roots from interfering with the snow-making pipes and to provide adequate room for maintenance and operation of the snow-making system.

Area 18a. This is actually not a ski trail, but a work road which is currently 20 to 30 feet wide and which will be widened to accommodate maintenance equipment.

Area 18b. This area is approximately 1,000 ft. long and is currently 60 feet wide. The Department proposes to widen this trail to 90 feet for the reasons given for area #18.

Giant Slalom

Area 18c. This area is at the junction of the existing giant slalom and the proposed giant slalom trails as well as the beginning of the slalom trail. In addition, chairlift #2 bisects the existing giant slalom trail. The Department proposes to widen this area to approximately 250 feet wide, taking into account the existence of the three trails and the lift.

Area 19. No cutting is apparently required in this area.

Area 20. This area will be widened from approximately 50 feet to approximately 90 feet to accommodate underground snow-making equipment.

Area 21. This area, over 1,000 feet in length is approximately 50 feet wide and will be widened to approximately 80 feet. Although underground snow-making will be installed in this section, it is relatively straight and not quite as steep as other areas and accordingly the installation of pipes and access for maintenance and operation can be accomplished within an 80 ft. trail width.

Finish Area

Area 17a. This is the confluence of four trails bisected by lift #1 and is currently 120 feet wide. The Department proposes to widen this area to 300 feet well within the allowable limitation for a multiple of four trails.

Area 17. This is below the finish area and can be considered an extension of the above mentioned four trails. Accordingly, the proposed widening to 250 feet from the current 150 feet is, again, well within the multiple allowed for four merged trails.

Area 17b. The Department staff does not see any particular reason for this clearing and accordingly it is not now being proposed.

PHG/jlb

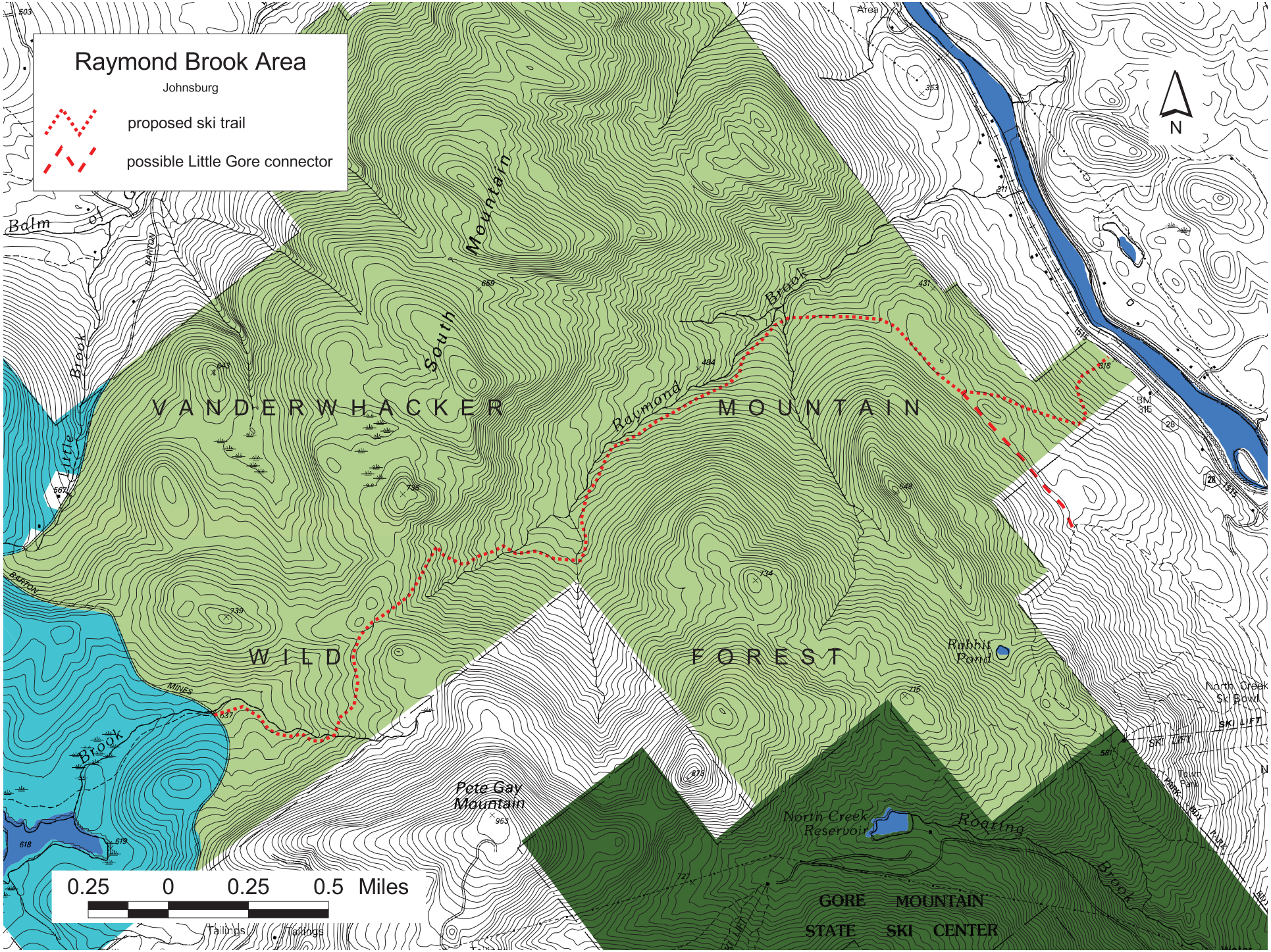
Appendix 6
Vanderwhacker Mountain Wild Forest 2005 UMP Excerpts

Raymond Brook nordic ski trail (Town of Johnsburg)

In the middle of the twentieth century, a network of ski trails was operated on and around Gore Mountain and Pete Gay Mountain on state and private land. Some of these trails on private land were eventually closed, others became part of Little Gore (also known as the North Creek Ski Bowl), and still others on state land became a part of what is now Gore Mountain Ski Area. An unmarked ski trail that exists in the vicinity of Balm-of-Gilead Mountain in the Siamese Ponds Wilderness Area (SPWA) may also have been a part of this network. This trail connects the Old Farm Clearing trailhead in SPWA to Barton Mines Road and receives moderate winter use. The SPWA UMP proposes designation of this herdpath as a marked DEC trail.

A continuation of this trail, which runs through the Raymond Brook drainage, will be partially re-opened. The new complete trail will run from SPWA, across Barton Mines Road, and eventually connect with State Route 28N just north of the hamlet of North Creek. If an agreement can be reached with the neighboring private owner(s), a short trail will connect from Forest Preserve to existing ski trails on Little Gore (See map). The Town of Johnsburg has indicated that they have arranged for permission to cut and mark ski/hiking trails from the North Creek Ski Bowl across this private land to the state boundary. In this way, the new trail will connect the existing unmarked ski trail in Siamese Ponds Wilderness Area with the hamlet of North Creek. There will also be the opportunity to drive up Barton Mines Road and ski down.

The section from Barton Mines Road to the old trail in the vicinity of an old ski shed, will be comprised of new construction for a distance of approximately 1.5 miles. The middle section will follow the old trail and will require blowdown removal and installation of erosion control devices. The lower section will be a combination of new construction and upgrade of existing paths and skid roads on recently purchased property. A parking lot will be constructed adjacent to Barton Mines Road, and an existing clearing along Route 28N will be utilized for parking at the lower end of the trail.


Raymond Brook Area
Johnsburg
proposed ski trail
possible Little Gore connector
N
VANDERWHACKER MOUNTAIN
WILD FOREST
South Mountain
Raymond Brook
Little Balm Brook
Pete Gay Mountain
953
Rabbit Pond
North Creek Reservoir
Roaring Brook
North Creek Ski Bowl
SKI LIFT
GORE MOUNTAIN
STATE SKI CENTER
0.25 0 0.25 0.5 Miles
Tailings
Tailings

Appendix 7
Stormwater Management Report

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Landscape Architecture & Engineering P.C.

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for:

Gore Mountain UMP
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Warren County

Owner/Operator(s):

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Project No. 2016006

Preparation Date:

11/7/2017

Table of Contents

Attachment

A Soil Investigations
Soil Survey
Natural Resource Map

B Existing Conditions Watershed Map and HydroCAD Calculations

C Proposed Conditions Watershed Map and HydroCAD Calculations

D Storm Data

1.0 INTRODUCTION

The following is a Stormwater Management Report (SWM Report) developed for the Operator, Olympic Regional Development Authority (ORDA), for Gore Mountain UMP, herein referred to as the "Project." It is prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC) Stormwater Management Design Manual, dated January, 2015.

The Project has been designed in accordance with Chapter 4 of the NYSDEC Stormwater Management Design Manual (SWMDM), and NYSDEC's General Permit GP-0-15-002 for construction activities. Stormwater calculations were performed utilizing widely accepted engineering methodologies, including TR-55, and the stormwater modeling computer program HydroCAD (version 10.00) produced by HydroCAD Software Solutions, LLC.

2.0 PROJECT DESCRIPTION

2.1 Site Location

The Project is located off Gore Mountain Road in the Town of North Creek, Warren County, NY 12853. Access to the site is off of Peaceful Valley Road.

2.2 Project Description

The Project includes the construction of a new groomer garage and dedicated shuttle loop. The remainder of the proposed site improvements includes site grading, landscaping and stormwater controls. The project is considered a new development project per Chapter 4 of the SWMDM. The Project Site represents the area that will be disturbed as a result of the Project.

2.3 Soil Conditions/Soil Testing

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, the area surrounding the Project Site is comprised of Marlow very boulder fine sandy loam. The hydrological soil group classification for this soil type is 'C'.

2.4 Curve Numbers and Rainfall Data

The surface cover for the project area is meadow non-grazed, grass, woods and impervious buildings and parking lot. The curve numbers utilized in the modeling were assigned based on cover type and HSG soil classification.

The design storms used for the pre-development versus post-development comparison were the 1, 10, and 100-year, 24-hour duration, SCS Type II events. The rainfall amounts for these storms are 2.10, 3.50, and 5.50 inches, respectively.

3.0 EXISTING CONDITIONS

The Project area existing condition, for which this stormwater management plan is based, consists of meadows, woods, roofs, and grass. Under the watershed's Existing Condition, the watershed is broken into five (5) subcatchments. Runoff from the site flows to two separate analysis points (Analysis Points 1 & 2). Analysis Points 1 is located to the north east the project area and represents runoff entering North Creek. Analysis Points 2 is located to the south east of the project area and represents runoff entering Straight Brook. Analysis Points 1 & 2 were utilized in comparing all pre- versus post-runoff conditions. Refer to drawing "W-1 Existing Conditions Watershed Map," located in Attachment B for more information.

Table 3-1 below provides a summary of the existing conditions peak discharge rates for the Project's watershed.

Table 3-1
Existing Conditions Peak Discharge Rates

Analysis Point	**AP-1**	**AP-2**
Design Storm	(cfs)	(cfs)
10-Year	190.47	40.46
100-Year	455.12	122.47

Refer to Attachment B for more information on the existing conditions watershed modeling.

4.0 PROPOSED CONDITIONS

Under the watershed's Proposed Condition, all stormwater from the Project will continue to discharge to the same point as in the Existing Condition (Analysis Points 1 & 2). The total watershed has generally remained unchanged, as is shown on the drawing "W-2 Proposed Conditions Watershed Map" contained in Attachment C. To meet NYSDEC requirements (see Section 5.0 NYSDEC Design Criteria of this report) a bioretention basin and wet swale have been incorporated into the stormwater management design to mitigate the quality and quantity of stormwater runoff discharged from the Project Site.

Table 4-1 below provides a summary of the existing conditions versus proposed conditions peak discharge rates for the Project's watershed.

Table 4-1 Existing Conditions Versus Proposed Conditions Peak Discharge Rates				
Analysis Point	**AP-1**		**AP-2**	
	Existing	Proposed	Existing	Proposed
Design Storm	(cfs)	(cfs)	(cfs)	(cfs)
10-Year	200.44	197.68	40.46	40.46
100-Year	468.63	468.61	122.47	122.47

Refer to Attachment C for more information on the proposed conditions watershed modeling.

5.0 NYSDEC DESIGN CRITERIA

The New York State Stormwater Management Design Manual, dated January 2015 (The Manual) has been utilized to develop the stormwater management plan. The Manual includes a five-step process that involves site planning and stormwater management practice selection. The five steps include;

- Site planning to preserve natural features and reduce impervious cover,
- Calculation of the Water Quality Volume (WQv) for the Site,
- Incorporation of green infrastructure techniques and standard SMPs with Runoff Reduction Volume (RRv) capacity,
- Use of standard SMPs where applicable, to treat the portion of WQv not addressed by green infrastructure techniques and standard SMPs with RRv capacity, and
- Design of volume and peak rate control (where required)

The approach of the stormwater management plan was to address the stormwater requirements separately. The five steps were reduced to Site Planning to Preserve Natural Features, Water Quality Volume, Runoff Reduction Volume, Channel Protection Volume, and Overbank Flood and Extreme Storm Attenuation, as discussed in the following sections.

Attachment D of this report contains detailed calculations for determining and summarizing the required and provided volumes for Water Quality and Runoff Reduction. In general, the required design criteria (WQv and RRv) were calculated for all areas where site disturbance or green infrastructure techniques are proposed.

5.1 Site Planning to Preserve Natural Features

Within Chapter 3 of The Manual, Table 3.1 Green Infrastructure Planning General Categories and Specific Practices includes a list of planning practices utilized in the planning and design of

a project. There are two categories, Preservation of Natural Resources and Reduction of Imperious Cover.

Preservation of Natural Resources includes:

- Preservation of Undisturbed Areas
- Preservation of Buffers
- Reduction of Clearing and Grading
- Locating Development in Less Sensitive Areas
- Open Space Design
- Soil Restoration

Reduction of Impervious Cover includes:

- Roadway Reduction
- Sidewalk Reduction
- Driveway Reduction
- Cul-de-sac Reduction
- Building Footprint Reduction
- Parking Reduction

A Natural Resource Map for Green Infrastructure Planning has been developed which indicates natural resource areas and critical environmental areas to be protected (where feasible). As required in Section 3.6 of The Manual, the map includes (where applicable):

- Jurisdictional Wetlands
  - There are wetlands located near the project site. These wetlands will not be impacted as part of this project.
- Waterways
  - No waterways are impacted by the Project.
- Wetland Adjacent Area
  - There are wetlands located near the project site. The development does not impact NYSDEC wetland buffer areas.
- Floodplains
  - The project is not within the flood plain.
- Forest, vegetative cover
  - Project is designed to maintain as much of the woods as feasible.
- Topography/Steep slopes
  - There are no steep slopes located throughout the project.
- Existing soils, including hydrologic soil groups and soil erodibility
  - See Section 2.3 of this Report.
- Drainage Patterns
  - See Section 3.0 of this Report.

- Bedrock/Significant geological features
    - See Section 2.3 of this Report.

The Natural Resource Plan indicates the areas to be avoided and depicts the area most suitable for development.

5.2 Water Quality Volume (WQv)

The Water Quality Volume (WQv) requirement is designed to improve water quality sizing to capture and treat 90% of the average annual stormwater runoff volumes. The WQv is directly related to the amount of impervious cover created at a site. The following equation is used to determine the water quality storage volume.

$$WQv = \frac{(P)(Rv)(A)}{12}$$

Where:

WQv = Water quality volume (acre/feet)
P = 90% Rainfall Event (1.1" for North Creek)
Rv = 0.05 + 0.009(I) where I is percent impervious cover
A = Site area in acres

The required WQv will be provided by bioretention basins and a wet swale designed in accordance with the SWMDM. Refer to Table 5-1 for a summary of the required versus provided water quality volumes for the Project.

Table 5-1
Water Quality Volume (WQv) Summary

SMP	Type	Required	Provided
		(ac-ft)	(ac-ft)
SMP1	Wet Swale		0.194
SMP2	Bioretention Basin		0.032
SMP3	Bioretention Basin		0.105
TOTAL		**0.138**	**0.331**

Refer to Attachment D for detailed WQv calculations.

5.3 Runoff Reduction Volume (RRv)

Section 4.3 of the Manual states, "Runoff reduction shall be achieved by infiltration, groundwater recharge, reuse, recycle, evaporation/evapotranspiration of 100 percent of the post-

development water quality volumes to replicate pre-development hydrology by maintaining pre-construction infiltration, peak runoff flow, discharge volume, as well as minimizing concentrated flow by using runoff control techniques to provide treatment in a distributed manner before runoff reaches the collection system."

The project does not achieve 100% reduction of the on-site WQv; however, through the use of green infrastructure the minimum required RRv of 0.041 ac-ft is reduced.

Table 5-2
Runoff Reduction Volume (RRv) Summary

SMP	Provided
	(unit)
5.3.1 Conservation of Natural Areas	-
5.3.2 Sheetflow to Riparian Buffers/Filter Strips	-
5.3.3 Wet Open Swales	-
5.3.4 Tree Planting/Tree Box	-
5.3.5 Disconnection of Rooftop Runoff	-
5.3.6 Stream Daylighting	-
5.3.7 Rain Garden	-
5.3.8 Green Roof	-
5.3.9 Stormwater Planters	-
5.3.10 Rain Tanks/Cisterns	-
5.3.11 Porous Pavement	-
Bioretention Basin (SMP2)	0.013
Bioretention Basin (SMP3)	0.048
TOTAL	**0.061 (ac-ft)**

Refer to Attachment D for detailed RRv calculations.

5.4 Channel Protection Volume (CPv)

Channel Protection Volume (Cpv) is achieved by a combination of volume reduction through green infrastructure practices.

5.5 Overbank Flood (Qp) and Extreme Flood (Qf) Attenuation

The primary purpose of the Overbank Flood (Qp) control sizing criterion is to prevent an increase in the frequency and magnitude of out-of-bank flooding generated by urban

development. It requires storage and attenuation of the 10-year, 24-hour storm to ensure post-development peak discharge rates do not exceed the pre-development condition.

The intent of the Extreme Flood (Qf) criteria is to (a) prevent the increased risk of flood damage from large storm events, (b) maintain the boundaries of the pre-development 100-year floodplain, and (c) protect the physical integrity of stormwater management practices. It requires storage and attenuation of the 100-year, 24-hour storm to ensure post-development peak discharge rates do not exceed the pre-development condition.

During the 10-year and 100-year 24-hour storm the post-development peak discharge rates do not exceed the pre-development rates. See Table 4-1 of this Report for detailed comparison of pre- and post-development peak rates.

6.0 PROPOSED STORMWATER FACILITIES

The Project is proposing the installation of two bioretention basins and a wet swale to address stormwater requirements for the project. The stormwater facilities have been indicated on the plans and HydroCAD reports as SMP1 through SMP3. SMP1 is a wet swale located to the east of the new dedicated shuttle loop will treat runoff from the proposed shuttle loop as well as the existing roadway SMP2 is a bioretention basin located adjacent to the proposed groomer garage and will treat the roof runoff from the building. SMP3 is a bioretention basin located adjacent to the entrance of Lot E and will treat runoff from nearby impervious areas. The Stormwater facilities have been designed to provide the necessary pretreatment, treatment, and peak rate attenuation for stormwater runoff, for the project, as required by NYSDEC.

7.0 POST-CONSTRUCTION MAINTENANCE REQUIREMENTS

Gore Mountain will be responsible for the continuous upkeep and maintenance of all stormwater management facilities. Maintenance includes, but is not limited to, cleaning of sediment from drainage inlet sumps, removal of sediment from SMPs, cleaning conveyance piping and channels of obstructions, inspection and repair as required of any outlet control mechanisms, and repairing any other detriments in the design that is resulting in the facilities to not function as intended in the design.

8.0 REFERENCES

1. Urban Hydrology for Small Watersheds. Published by the U.S. Soil Conservation Service, Washington, D.C., June 1986.
2. HydroCAD 10.00 Computer Program, by HydroCAD Software Solutions, LLC.

3. NYSDEC Stormwater Management Design Manual. Published by the New York State Department of Environmental Conservation, Updated January 2015.

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Attachment A

Soil Investigations
Soil Survey
Natural Resource Map

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Warren County, New York

October 18, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

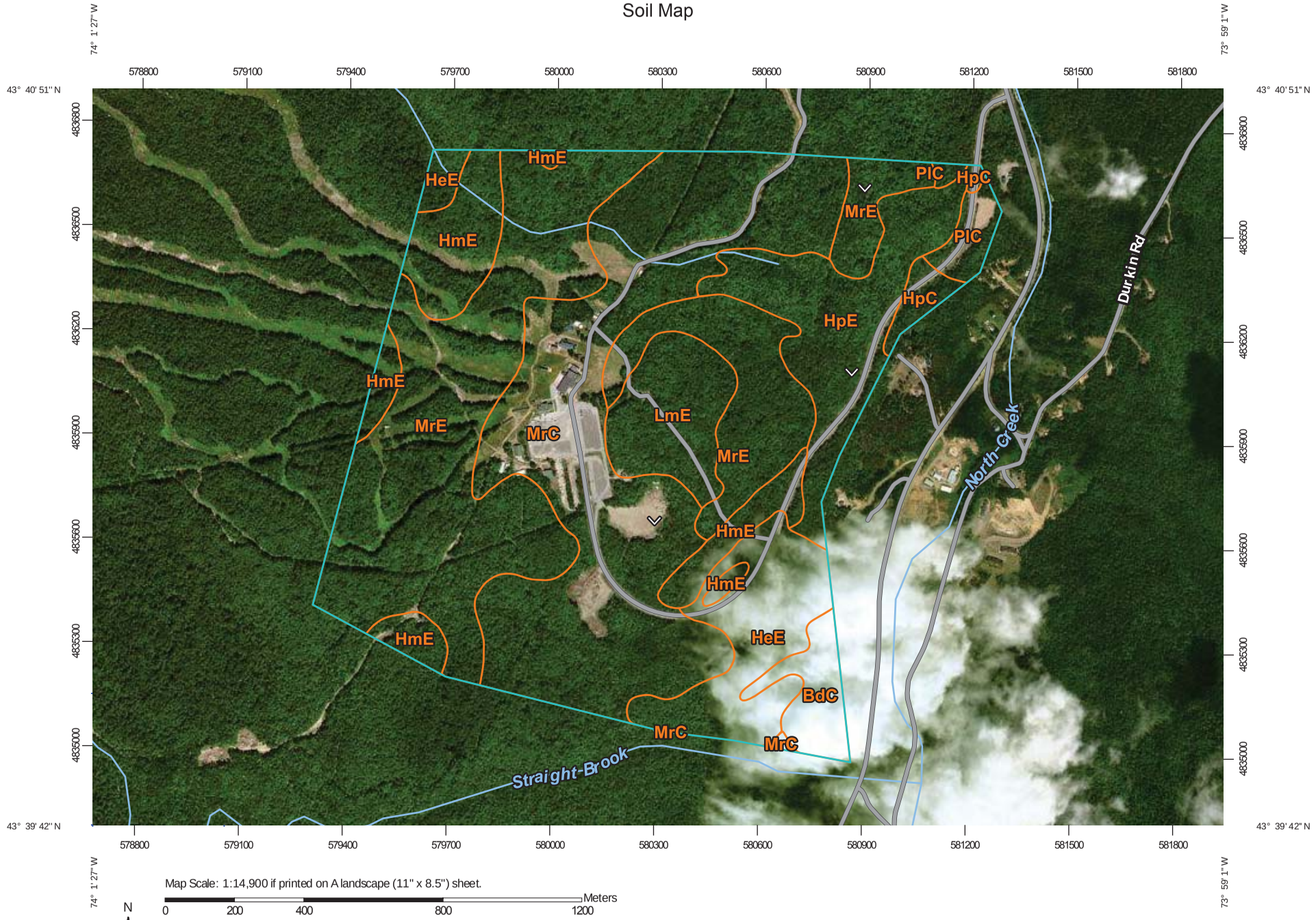
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:14,900 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Warren County, New York
Survey Area Data: Version 16, Sep 24, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 30, 2014—Mar 29, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BdC	Bice very bouldery fine sandy loam, sloping	15.2	2.6%
HeE	Hermon very bouldery fine sandy loam, steep	48.4	8.1%
HmE	Hermon-Lyman-Rock outcrop complex, steep	47.0	7.9%
HpC	Hinckley-Plainfield complex, sloping	6.6	1.1%
HpE	Hinckley-Plainfield complex, steep	57.1	9.6%
LmE	Lyman-Rock outcrop complex, steep	31.5	5.3%
MrC	Marlow very bouldery fine sandy loam, sloping	184.0	31.0%
MrE	Marlow very bouldery fine sandy loam, steep	195.2	32.9%
PlC	Plainfield loamy sand, 8 to 15 percent slopes	9.2	1.6%
Totals for Area of Interest		**594.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They

generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Warren County, New York

BdC—Bice very bouldery fine sandy loam, sloping

Map Unit Setting

National map unit symbol: 9xw2
Elevation: 800 to 1,800 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 100 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Bice and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bice

Setting

Landform: Ridges, hills, till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived mainly from granite and gneiss with variable components of sandstone and shale

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
H2 - 2 to 5 inches: fine sandy loam
H3 - 5 to 24 inches: fine sandy loam
H4 - 24 to 60 inches: fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Schroon

Percent of map unit: 5 percent

Hydric soil rating: No

Lyme

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Stowe

Percent of map unit: 4 percent
Hydric soil rating: No

Woodstock

Percent of map unit: 4 percent
Hydric soil rating: No

Plainfield

Percent of map unit: 4 percent
Hydric soil rating: No

Hinckley

Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 4 percent
Hydric soil rating: No

HeE—Hermon very bouldery fine sandy loam, steep

Map Unit Setting

National map unit symbol: 9xwq
Elevation: 10 to 2,800 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 100 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Hermon and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hermon

Setting

Landform: Valley sides, moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly till derived mainly from crystalline rock

Typical profile

H1 - 0 to 5 inches: gravelly fine sandy loam
H2 - 5 to 18 inches: gravelly fine sandy loam
H3 - 18 to 25 inches: very gravelly sandy loam
H4 - 25 to 65 inches: very gravelly loamy sand

Properties and qualities

Slope: 25 to 35 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Marlow

Percent of map unit: 9 percent
Hydric soil rating: No

Peru

Percent of map unit: 9 percent
Hydric soil rating: No

Bice

Percent of map unit: 9 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 3 percent
Hydric soil rating: Unranked

HmE—Hermon-Lyman-Rock outcrop complex, steep

Map Unit Setting

National map unit symbol: 9xws
Elevation: 10 to 2,800 feet
Mean annual precipitation: 37 to 50 inches
Mean annual air temperature: 41 to 48 degrees F
Frost-free period: 100 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Hermon and similar soils: 40 percent
Lyman and similar soils: 20 percent
Rock outcrop: 20 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hermon

Setting

Landform: Valley sides, moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly till derived mainly from crystalline rock

Typical profile

H1 - 0 to 5 inches: gravelly fine sandy loam
H2 - 5 to 18 inches: gravelly fine sandy loam
H3 - 18 to 25 inches: very gravelly sandy loam
H4 - 25 to 65 inches: very gravelly loamy sand

Properties and qualities

Slope: 25 to 35 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Lyman

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived mainly from crystalline rock

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
H2 - 2 to 4 inches: fine sandy loam
H3 - 4 to 10 inches: fine sandy loam
H4 - 10 to 19 inches: fine sandy loam

H5 - 19 to 23 inches: bedrock

Properties and qualities

Slope: 25 to 35 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Rock Outcrop

Typical profile

R - 0 to 10 inches: bedrock

Properties and qualities

Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Minor Components

Peru

Percent of map unit: 8 percent
Hydric soil rating: No

Marlow

Percent of map unit: 8 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 4 percent
Hydric soil rating: Unranked

HpC—Hinckley-Plainfield complex, sloping

Map Unit Setting

National map unit symbol: 9xwy
Elevation: 0 to 1,150 feet
Mean annual precipitation: 37 to 46 inches

Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 45 percent
Plainfield and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glaciofluvial deposits derived principally from granite, gneiss, and schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
H2 - 1 to 5 inches: cobbly sandy loam
H3 - 5 to 28 inches: very gravelly loamy sand
H4 - 28 to 64 inches: stratified very gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Plainfield

Setting

Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy glaciofluvial or deltaic deposits

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
H1 - 1 to 11 inches: loamy sand

H2 - 11 to 26 inches: sand
H3 - 26 to 60 inches: sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Castile

Percent of map unit: 5 percent
Hydric soil rating: No

Pits, sand, gravel

Percent of map unit: 5 percent
Hydric soil rating: Unranked

Unnamed soils

Percent of map unit: 5 percent
Hydric soil rating: Yes

Wareham

Percent of map unit: 3 percent
Hydric soil rating: No

Wareham

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

HpE—Hinckley-Plainfield complex, steep

Map Unit Setting

National map unit symbol: 9xwz
Elevation: 0 to 1,150 feet
Mean annual precipitation: 37 to 46 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 160 days

Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 45 percent
Plainfield and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glaciofluvial deposits derived principally from granite, gneiss, and schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
H2 - 1 to 5 inches: cobbly sandy loam
H3 - 5 to 28 inches: very gravelly loamy sand
H4 - 28 to 64 inches: stratified very gravelly sand

Properties and qualities

Slope: 25 to 35 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Plainfield

Setting

Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy glaciofluvial or deltaic deposits

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
H1 - 1 to 11 inches: loamy sand
H2 - 11 to 26 inches: sand
H3 - 26 to 60 inches: sand

Properties and qualities

Slope: 25 to 35 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Castile

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent
Hydric soil rating: No

Pits, sand, gravel

Percent of map unit: 5 percent
Hydric soil rating: No

Wareham

Percent of map unit: 3 percent
Hydric soil rating: No

Wareham

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

LmE—Lyman-Rock outcrop complex, steep

Map Unit Setting

National map unit symbol: 9xx3
Mean annual precipitation: 37 to 50 inches
Mean annual air temperature: 41 to 48 degrees F
Frost-free period: 100 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Lyman and similar soils: 55 percent
Rock outcrop: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived mainly from crystalline rock

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
H2 - 2 to 4 inches: fine sandy loam
H3 - 4 to 10 inches: fine sandy loam
H4 - 10 to 19 inches: fine sandy loam
H5 - 19 to 23 inches: bedrock

Properties and qualities

Slope: 25 to 35 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Rock Outcrop

Typical profile

R - 0 to 10 inches: bedrock

Properties and qualities

Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Minor Components

Peru

Percent of map unit: 4 percent
Hydric soil rating: No

Marlow
Percent of map unit: 4 percent
Hydric soil rating: No

Hermon
Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed soils
Percent of map unit: 3 percent
Hydric soil rating: No

MrC—Marlow very bouldery fine sandy loam, sloping

Map Unit Setting
National map unit symbol: 9xx7
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 100 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition
Marlow and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Marlow

Setting
Landform: Hillsides or mountainsides
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy dense till derived mainly from crystalline rock

Typical profile
Oa - 0 to 2 inches: highly decomposed plant material
H2 - 2 to 8 inches: fine sandy loam
H3 - 8 to 14 inches: gravelly fine sandy loam
H4 - 14 to 30 inches: gravelly fine sandy loam
H5 - 30 to 60 inches: gravelly sandy loam

Properties and qualities
Slope: 8 to 15 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: 18 to 36 inches to densic material
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)

Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.9 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Hermon
Percent of map unit: 4 percent
Hydric soil rating: No

Lyman
Percent of map unit: 4 percent
Hydric soil rating: No

Woodstock
Percent of map unit: 4 percent
Hydric soil rating: No

Bice
Percent of map unit: 4 percent
Hydric soil rating: No

Peru
Percent of map unit: 4 percent
Hydric soil rating: No

Lyme
Percent of map unit: 4 percent
Landform: Depressions
Hydric soil rating: Yes

Stowe
Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed soils
Percent of map unit: 2 percent
Hydric soil rating: No

MrE—Marlow very bouldery fine sandy loam, steep

Map Unit Setting
National map unit symbol: 9xx8
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 100 to 130 days

Farmland classification: Not prime farmland

Map Unit Composition

Marlow and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Marlow

Setting

Landform: Hillsides or mountainsides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy dense till derived mainly from crystalline rock

Typical profile

Oa - 0 to 2 inches: highly decomposed plant material
H2 - 2 to 8 inches: fine sandy loam
H3 - 8 to 14 inches: gravelly fine sandy loam
H4 - 14 to 30 inches: gravelly fine sandy loam
H5 - 30 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 25 to 35 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: 18 to 36 inches to densic material
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 4 percent
Hydric soil rating: No

Peru

Percent of map unit: 3 percent
Hydric soil rating: No

Hermon

Percent of map unit: 3 percent
Hydric soil rating: No

Lyman

Percent of map unit: 3 percent

Hydric soil rating: No

Woodstock

Percent of map unit: 3 percent
Hydric soil rating: No

Lyme

Percent of map unit: 3 percent
Landform: Depressions
Hydric soil rating: Yes

Bice

Percent of map unit: 3 percent
Hydric soil rating: No

Stowe

Percent of map unit: 3 percent
Hydric soil rating: No

PIC—Plainfield loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9xxq
Elevation: 720 to 1,150 feet
Mean annual precipitation: 37 to 46 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Plainfield and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Plainfield

Setting

Landform: Deltas, outwash plains, terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy glaciofluvial or deltaic deposits

Typical profile

H1 - 0 to 10 inches: loamy sand
H2 - 10 to 25 inches: sand
H3 - 25 to 60 inches: sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches

Natural drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Elnora

Percent of map unit: 4 percent
Hydric soil rating: No

Hinckley

Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed soils, similar to plainfield, reddish

Percent of map unit: 2 percent
Hydric soil rating: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

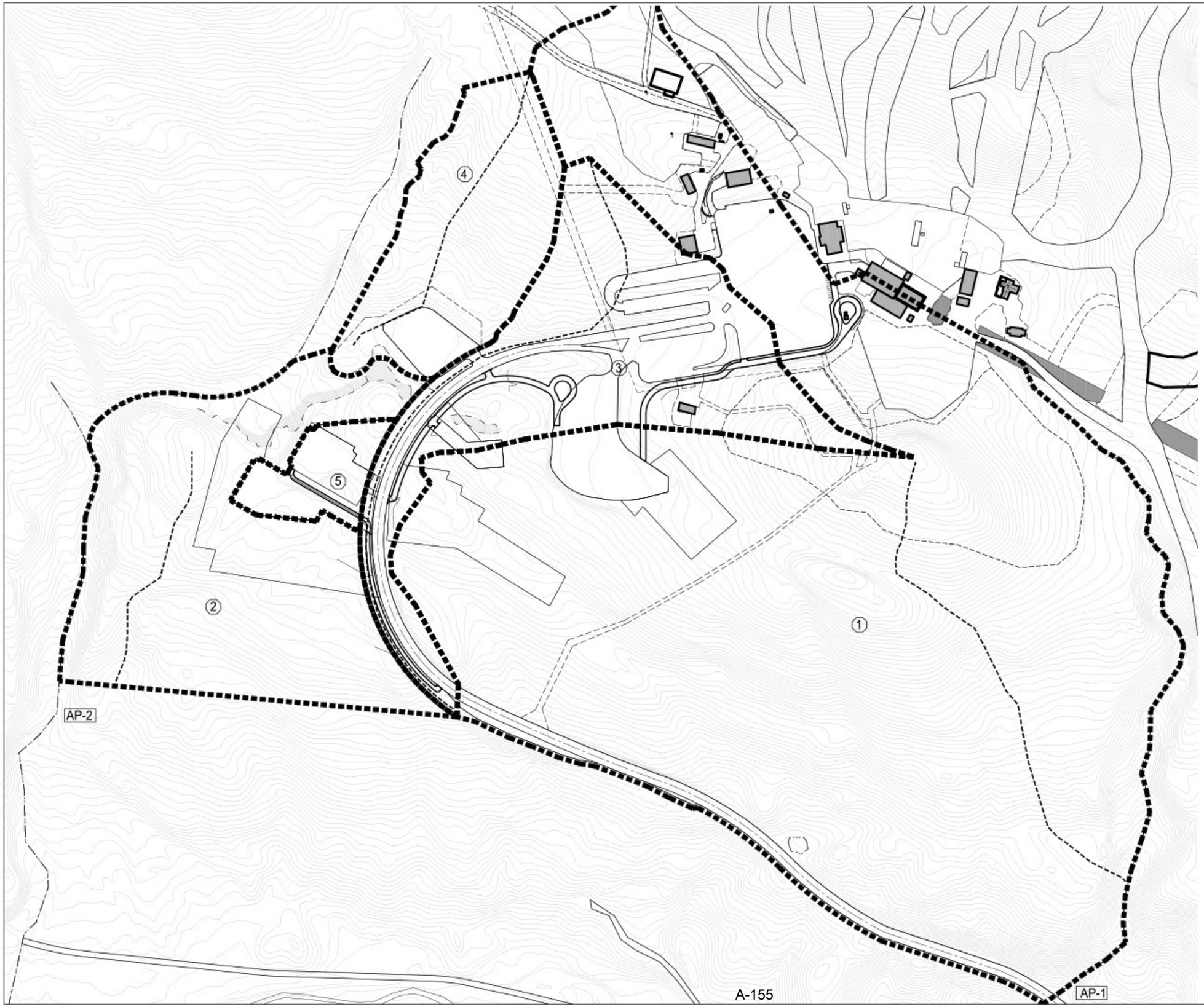
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Attachment B

Existing Conditions Watershed Map and HydroCAD Calculations



LEGEND

- SUBCATCHMENT BOUNDARY
- TIME OF CONCENTRATION
- (1) SUBCATCHMENT ID
- SMP-1 STORMWATER FACILITY
- AP-1 ANALYSIS POINT

GRAPHIC SCALE

200 0 100 200 400

1 inch = 200 feet

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2634 Main Street
Lake Placid, New York 12946

Project Title:

Gore Mountain: 2017 Unit Management Plan Draft Amendment & Draft Generic Environmental Impact Statement

Project No.:	2015037
Design:	BCS
Drawn: BCS	Ch'k'd: DBH
Scale:	1" = 200'

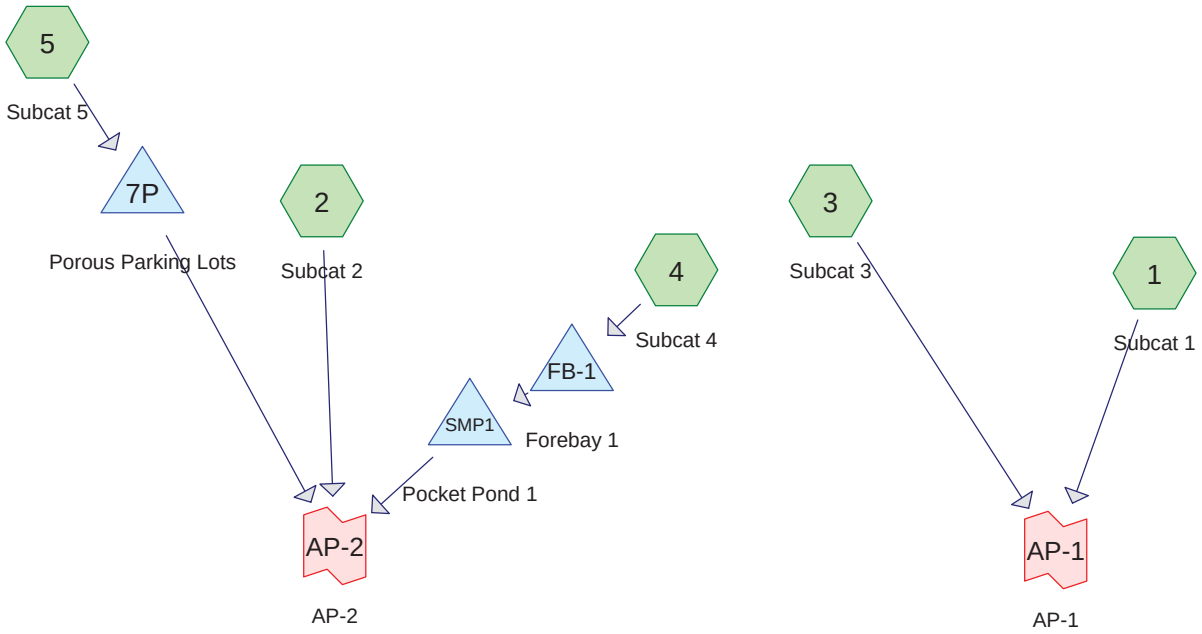
Description:	Date:

Drawing Title

Existing Conditions Watershed Map

Drawing No.

W-1



Subcat Reach Pond Link

Routing Diagram for Gore Pre Development
Prepared by The LA Group, Printed 11/7/2017
HydroCAD® 10.00-19 s/n 00439 © 2016 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.942	74	>75% Grass cover, Good, HSG C (3)
25.010	98	Paved parking, HSG C (1, 3, 4)
224.805	70	Woods, Good, HSG C (1, 2, 3, 4, 5)
250.757	**73**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
250.757	HSG C	1, 2, 3, 4, 5
0.000	HSG D	
0.000	Other	
250.757		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.942	0.000	0.000	0.942	>75% Grass cover, Good	3
0.000	0.000	25.010	0.000	0.000	25.010	Paved parking	1, 3, 4
0.000	0.000	224.805	0.000	0.000	224.805	Woods, Good	1, 2, 3, 4, 5
0.000	**0.000**	**250.757**	**0.000**	**0.000**	**250.757**	**TOTAL AREA**	

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=164.691 ac 8.95% Impervious Runoff Depth>0.31"
Flow Length=2,229' Tc=29.6 min CN=73 Runoff=38.44 cfs 4.316 af

Subcatchment 2: Subcat 2 Runoff Area=35.807 ac 0.00% Impervious Runoff Depth>0.24"
Flow Length=1,112' Tc=25.5 min CN=70 Runoff=5.99 cfs 0.705 af

Subcatchment 3: Subcat 3 Runoff Area=28.794 ac 30.03% Impervious Runoff Depth>0.52"
Flow Length=3,110' Tc=24.7 min CN=79 Runoff=14.79 cfs 1.238 af

Subcatchment 4: Subcat 4 Runoff Area=17.152 ac 9.44% Impervious Runoff Depth>0.31"
Flow Length=1,452' Tc=27.4 min CN=73 Runoff=4.24 cfs 0.450 af

Subcatchment 5: Subcat 5 Runoff Area=4.312 ac 0.00% Impervious Runoff Depth>0.24"
Tc=6.0 min CN=70 Runoff=1.63 cfs 0.086 af

Pond 7P: Porous Parking Lots Peak Elev=1,425.00' Storage=28 cf Inflow=1.63 cfs 0.086 af
Outflow=1.62 cfs 0.086 af

Pond FB-1: Forebay 1 Peak Elev=1,428.19' Storage=4,471 cf Inflow=4.24 cfs 0.450 af
Outflow=3.99 cfs 0.355 af

Pond SMP1: Pocket Pond 1 Peak Elev=1,428.02' Storage=12,634 cf Inflow=3.99 cfs 0.355 af
Outflow=0.31 cfs 0.066 af

Link AP-1: AP-1 Inflow=52.02 cfs 5.554 af
Primary=52.02 cfs 5.554 af

Link AP-2: AP-2 Inflow=5.99 cfs 0.771 af
Primary=5.99 cfs 0.771 af

Total Runoff Area = 250.757 ac Runoff Volume = 6.795 af Average Runoff Depth = 0.33"
90.03% Pervious = 225.747 ac 9.97% Impervious = 25.010 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=164.691 ac 8.95% Impervious Runoff Depth>1.05"
Flow Length=2,229' Tc=29.6 min CN=73 Runoff=159.47 cfs 14.475 af

Subcatchment 2: Subcat 2 Runoff Area=35.807 ac 0.00% Impervious Runoff Depth>0.90"
Flow Length=1,112' Tc=25.5 min CN=70 Runoff=31.53 cfs 2.672 af

Subcatchment 3: Subcat 3 Runoff Area=28.794 ac 30.03% Impervious Runoff Depth>1.42"
Flow Length=3,110' Tc=24.7 min CN=79 Runoff=43.50 cfs 3.416 af

Subcatchment 4: Subcat 4 Runoff Area=17.152 ac 9.44% Impervious Runoff Depth>1.06"
Flow Length=1,452' Tc=27.4 min CN=73 Runoff=17.49 cfs 1.509 af

Subcatchment 5: Subcat 5 Runoff Area=4.312 ac 0.00% Impervious Runoff Depth>0.90"
Tc=6.0 min CN=70 Runoff=7.41 cfs 0.325 af

Pond 7P: Porous Parking Lots Peak Elev=1,425.00' Storage=128 cf Inflow=7.41 cfs 0.325 af
Outflow=7.41 cfs 0.325 af

Pond FB-1: Forebay 1 Peak Elev=1,428.48' Storage=5,100 cf Inflow=17.49 cfs 1.509 af
Outflow=17.43 cfs 1.413 af

Pond SMP1: Pocket Pond 1 Peak Elev=1,428.36' Storage=14,548 cf Inflow=17.43 cfs 1.413 af
Outflow=16.44 cfs 1.121 af

Link AP-1: AP-1 Inflow=200.44 cfs 17.891 af
Primary=200.44 cfs 17.891 af

Link AP-2: AP-2 Inflow=40.46 cfs 3.793 af
Primary=40.46 cfs 3.793 af

Total Runoff Area = 250.757 ac Runoff Volume = 22.397 af Average Runoff Depth = 1.07"
90.03% Pervious = 225.747 ac 9.97% Impervious = 25.010 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=164.691 ac 8.95% Impervious Runoff Depth>2.44"
Flow Length=2,229' Tc=29.6 min CN=73 Runoff=382.14 cfs 33.502 af

Subcatchment 2: Subcat 2 Runoff Area=35.807 ac 0.00% Impervious Runoff Depth>2.19"
Flow Length=1,112' Tc=25.5 min CN=70 Runoff=81.61 cfs 6.541 af

Subcatchment 3: Subcat 3 Runoff Area=28.794 ac 30.03% Impervious Runoff Depth>2.98"
Flow Length=3,110' Tc=24.7 min CN=79 Runoff=91.09 cfs 7.157 af

Subcatchment 4: Subcat 4 Runoff Area=17.152 ac 9.44% Impervious Runoff Depth>2.44"
Flow Length=1,452' Tc=27.4 min CN=73 Runoff=41.92 cfs 3.492 af

Subcatchment 5: Subcat 5 Runoff Area=4.312 ac 0.00% Impervious Runoff Depth>2.21"
Tc=6.0 min CN=70 Runoff=18.13 cfs 0.794 af

Pond 7P: Porous Parking Lots Peak Elev=1,425.00' Storage=313 cf Inflow=18.13 cfs 0.794 af
Outflow=18.14 cfs 0.794 af

Pond FB-1: Forebay 1 Peak Elev=1,428.85' Storage=5,953 cf Inflow=41.92 cfs 3.492 af
Outflow=41.80 cfs 3.395 af

Pond SMP1: Pocket Pond 1 Peak Elev=1,428.65' Storage=16,221 cf Inflow=41.80 cfs 3.395 af
Outflow=41.66 cfs 3.100 af

Link AP-1: AP-1 Inflow=468.63 cfs 40.659 af
Primary=468.63 cfs 40.659 af

Link AP-2: AP-2 Inflow=122.47 cfs 9.641 af
Primary=122.47 cfs 9.641 af

Total Runoff Area = 250.757 ac Runoff Volume = 51.486 af Average Runoff Depth = 2.46"
90.03% Pervious = 225.747 ac 9.97% Impervious = 25.010 ac

Summary for Subcatchment 1: Subcat 1

Runoff = 382.14 cfs @ 12.24 hrs, Volume= 33.502 af, Depth> 2.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
14.745	98	Paved parking, HSG C
149.946	70	Woods, Good, HSG C
164.691	73	Weighted Average
149.946		91.05% Pervious Area
14.745		8.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8	100	0.1000	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
16.8	2,129	0.1790	2.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
29.6	2,229	Total			

Summary for Subcatchment 2: Subcat 2

Runoff = 81.61 cfs @ 12.20 hrs, Volume= 6.541 af, Depth> 2.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
35.807	70	Woods, Good, HSG C
35.807		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
8.7	1,012	0.1500	1.94		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.5	1,112	Total			

Summary for Subcatchment 3: Subcat 3

Runoff = 91.09 cfs @ 12.18 hrs, Volume= 7.157 af, Depth> 2.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
0.942	74	>75% Grass cover, Good, HSG C
8.646	98	Paved parking, HSG C
19.207	70	Woods, Good, HSG C
28.794	79	Weighted Average
20.149		69.97% Pervious Area
8.646		30.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2	100	0.1400	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
2.3	315	0.2000	2.24		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.6	160	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
10.6	2,535	0.0700	3.97		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
24.7	3,110	Total			

Summary for Subcatchment 4: Subcat 4

Runoff = 41.92 cfs @ 12.22 hrs, Volume= 3.492 af, Depth> 2.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
1.619	98	Paved parking, HSG C
15.533	70	Woods, Good, HSG C
17.152	73	Weighted Average
15.533		90.56% Pervious Area
1.619		9.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0700	0.11		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
12.7	1,352	0.1257	1.77		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
27.4	1,452	Total			

Summary for Subcatchment 5: Subcat 5

Runoff = 18.13 cfs @ 11.98 hrs, Volume= 0.794 af, Depth> 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
4.312	70	Woods, Good, HSG C
4.312		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond 7P: Porous Parking Lots

Inflow Area = 4.312 ac, 0.00% Impervious, Inflow Depth > 2.21" for 100-YR event
Inflow = 18.13 cfs @ 11.98 hrs, Volume= 0.794 af
Outflow = 18.14 cfs @ 11.98 hrs, Volume= 0.794 af, Atten= 0%, Lag= 0.4 min
Discarded = 18.14 cfs @ 11.98 hrs, Volume= 0.794 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,425.00' @ 11.98 hrs Surf.Area= 145,040 sf Storage= 313 cf

Plug-Flow detention time= 0.3 min calculated for 0.794 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (794.9 - 794.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,425.00'	145,040 cf	**Custom Stage Data (Irregular)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,425.00	145,040	2,721.0	0	0	145,040
1,426.00	145,040	2,721.0	145,040	145,040	147,761

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,425.00'	**25.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=83.94 cfs @ 11.98 hrs HW=1,425.00' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 83.94 cfs)

Summary for Pond FB-1: Forebay 1

Inflow Area = 17.152 ac, 9.44% Impervious, Inflow Depth > 2.44" for 100-YR event
Inflow = 41.92 cfs @ 12.22 hrs, Volume= 3.492 af
Outflow = 41.80 cfs @ 12.23 hrs, Volume= 3.395 af, Atten= 0%, Lag= 0.6 min
Primary = 41.80 cfs @ 12.23 hrs, Volume= 3.395 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Starting Elev= 323.00' Surf.Area= 0 sf Storage= 0 cf
Peak Elev= 1,428.85' @ 12.23 hrs Surf.Area= 2,432 sf Storage= 5,953 cf

Plug-Flow detention time= 15.5 min calculated for 3.384 af (97% of inflow)
Center-of-Mass det. time= 5.4 min (811.2 - 805.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,425.00'	9,130 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,425.00	805	104.0	0	0	805
1,426.00	1,147	123.0	971	971	1,166
1,427.00	1,546	142.0	1,342	2,313	1,589
1,428.00	2,002	161.0	1,769	4,082	2,071
1,429.00	2,515	180.0	2,254	6,335	2,614
1,430.00	3,085	200.0	2,795	9,130	3,248

Device	Routing	Invert	Outlet Devices
#1	Primary	1,428.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=41.47 cfs @ 12.23 hrs HW=1,428.84' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 41.47 cfs @ 2.47 fps)

Summary for Pond SMP1: Pocket Pond 1

Inflow Area = 17.152 ac, 9.44% Impervious, Inflow Depth > 2.38" for 100-YR event
Inflow = 41.80 cfs @ 12.23 hrs, Volume= 3.395 af
Outflow = 41.66 cfs @ 12.25 hrs, Volume= 3.100 af, Atten= 0%, Lag= 1.1 min
Primary = 41.66 cfs @ 12.25 hrs, Volume= 3.100 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,428.65' @ 12.25 hrs Surf.Area= 5,994 sf Storage= 16,221 cf

Plug-Flow detention time= 39.8 min calculated for 3.100 af (91% of inflow)
Center-of-Mass det. time= 11.0 min (822.3 - 811.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,425.00'	25,197 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,425.00	3,031	236.0	0	0	3,031
1,426.00	3,768	255.0	3,393	3,393	3,813
1,427.00	4,563	274.0	4,159	7,552	4,655
1,428.00	5,414	293.0	4,982	12,534	5,558
1,429.00	6,323	312.0	5,863	18,397	6,522
1,430.00	7,288	331.0	6,800	25,197	7,546

Device	Routing	Invert	Outlet Devices
#1	Device 2	1,428.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	1,425.00'	**24.0" Round Culvert** L= 100.0' Ke= 0.500 Inlet / Outlet Invert= 1,425.00' / 1,424.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

#3 Primary 1,428.00' **20.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=41.56 cfs @ 12.25 hrs HW=1,428.65' (Free Discharge)
└**2=Culvert** (Passes 13.57 cfs of 24.60 cfs potential flow)
└**1=Orifice/Grate** (Weir Controls 13.57 cfs @ 2.63 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 27.99 cfs @ 2.17 fps)

Summary for Link AP-1: AP-1

Inflow Area = 193.486 ac, 12.09% Impervious, Inflow Depth > 2.52" for 100-YR event
Inflow = 468.63 cfs @ 12.23 hrs, Volume= 40.659 af
Primary = 468.63 cfs @ 12.23 hrs, Volume= 40.659 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Link AP-2: AP-2

Inflow Area = 57.271 ac, 2.83% Impervious, Inflow Depth > 2.02" for 100-YR event
Inflow = 122.47 cfs @ 12.21 hrs, Volume= 9.641 af
Primary = 122.47 cfs @ 12.21 hrs, Volume= 9.641 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Attachment C

Proposed Conditions Watershed Map and HydroCAD Calculations

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Project Title:

Gore Mountain: 2017 Unit Management Plan Draft Amendment & Draft Generic Environmental Impact Statement

Project No.:			2015037
Design:			BCS
Drawn:	BCS	Chk'd:	DBH
		Scale:	1" = 200'

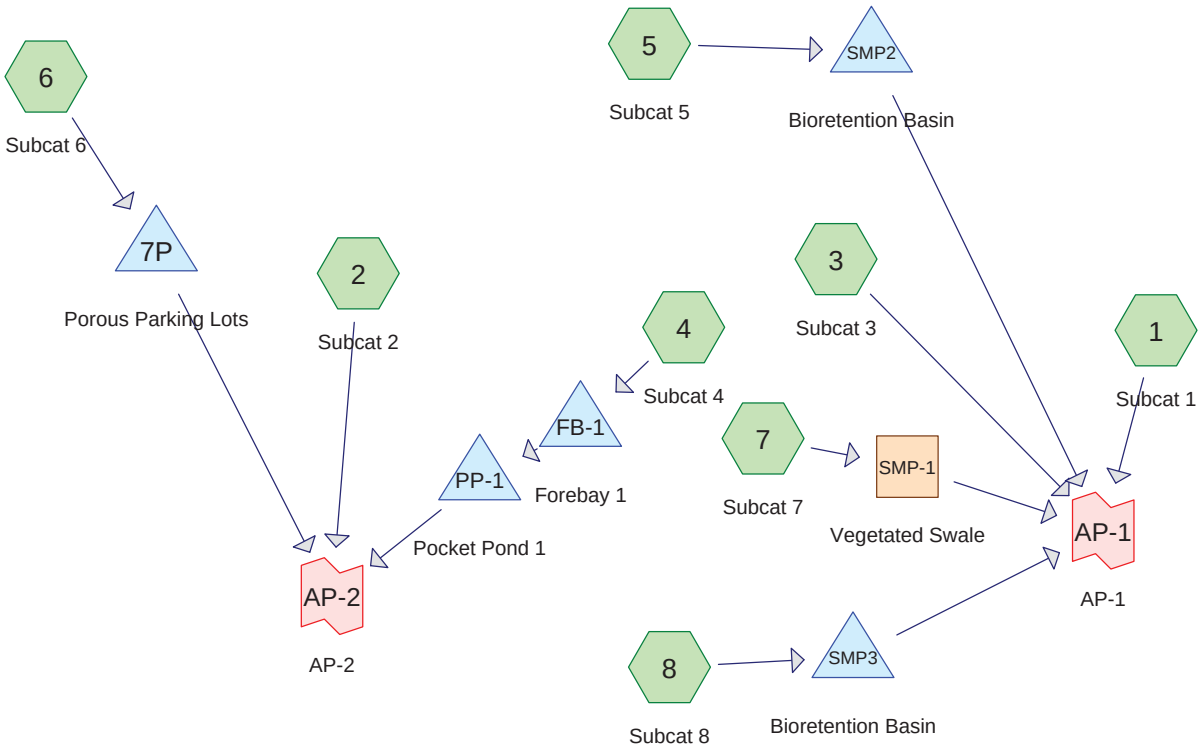
Description:	Date:

Drawing Title

Proposed Conditions Watershed map

Drawing No.

W-2



Subcat Reach Pond Link

Routing Diagram for Gore Post Development
Prepared by The LA Group, Printed 11/7/2017
HydroCAD® 10.00-19 s/n 00439 © 2016 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.479	74	>75% Grass cover, Good, HSG C (1, 3, 7, 8)
26.675	98	Paved parking, HSG C (1, 3, 4, 5, 7, 8)
221.578	70	Woods, Good, HSG C (1, 2, 3, 4, 5, 6, 7, 8)
250.732	**73**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
250.732	HSG C	1, 2, 3, 4, 5, 6, 7, 8
0.000	HSG D	
0.000	Other	
250.732		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	2.479	0.000	0.000	2.479	>75% Grass cover, Good	1, 3, 7, 8
0.000	0.000	26.675	0.000	0.000	26.675	Paved parking	1, 3, 4, 5, 7, 8
0.000	0.000	221.578	0.000	0.000	221.578	Woods, Good	1, 2, 3, 4, 5, 6, 7, 8
0.000	**0.000**	**250.732**	**0.000**	**0.000**	**250.732**	**TOTAL AREA**	

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=163.668 ac 9.12% Impervious Runoff Depth>0.31"
Flow Length=2,229' Tc=29.6 min CN=73 Runoff=38.20 cfs 4.289 af

Subcatchment 2: Subcat 2 Runoff Area=35.807 ac 0.00% Impervious Runoff Depth>0.24"
Flow Length=1,112' Tc=25.5 min CN=70 Runoff=5.99 cfs 0.705 af

Subcatchment 3: Subcat 3 Runoff Area=19.014 ac 35.43% Impervious Runoff Depth>0.56"
Flow Length=3,110' Tc=24.7 min CN=80 Runoff=10.68 cfs 0.881 af

Subcatchment 4: Subcat 4 Runoff Area=17.152 ac 9.44% Impervious Runoff Depth>0.31"
Flow Length=1,452' Tc=27.4 min CN=73 Runoff=4.24 cfs 0.450 af

Subcatchment 5: Subcat 5 Runoff Area=1.075 ac 28.40% Impervious Runoff Depth>0.48"
Flow Length=324' Tc=18.5 min CN=78 Runoff=0.60 cfs 0.043 af

Subcatchment 6: Subcat 6 Runoff Area=4.312 ac 0.00% Impervious Runoff Depth>0.24"
Tc=6.0 min CN=70 Runoff=1.63 cfs 0.086 af

Subcatchment 7: Subcat 7 Runoff Area=214,383 sf 42.27% Impervious Runoff Depth>0.65"
Flow Length=1,411' Tc=12.2 min CN=82 Runoff=4.85 cfs 0.265 af

Subcatchment 8: Subcat 8 Runoff Area=4.782 ac 21.00% Impervious Runoff Depth>0.41"
Flow Length=1,380' Tc=20.9 min CN=76 Runoff=2.04 cfs 0.163 af

Reach SMP-1: Vegetated Swale Avg. Flow Depth=0.33' Max Vel=1.01 fps Inflow=4.85 cfs 0.265 af
n=0.150 L=1,317.0' S=0.0580 '/' Capacity=77.31 cfs Outflow=2.40 cfs 0.252 af

Pond 7P: Porous Parking Lots Peak Elev=1,425.00' Storage=28 cf Inflow=1.63 cfs 0.086 af
Outflow=1.62 cfs 0.086 af

Pond FB-1: Forebay 1 Peak Elev=1,428.19' Storage=4,471 cf Inflow=4.24 cfs 0.450 af
Outflow=3.99 cfs 0.355 af

Pond PP-1: Pocket Pond 1 Peak Elev=1,428.02' Storage=12,634 cf Inflow=3.99 cfs 0.355 af
Outflow=0.31 cfs 0.066 af

Pond SMP2: Bioretention Basin Peak Elev=1,570.19' Storage=550 cf Inflow=0.60 cfs 0.043 af
Outflow=0.14 cfs 0.043 af

Pond SMP3: Bioretention Basin Peak Elev=1,464.64' Storage=1,548 cf Inflow=2.04 cfs 0.163 af
Outflow=1.46 cfs 0.143 af

Link AP-1: AP-1 Inflow=49.66 cfs 5.607 af
Primary=49.66 cfs 5.607 af

Link AP-2: AP-2 Inflow=5.99 cfs 0.771 af
Primary=5.99 cfs 0.771 af

Total Runoff Area = 250.732 ac Runoff Volume = 6.882 af Average Runoff Depth = 0.33"
89.36% Pervious = 224.057 ac 10.64% Impervious = 26.675 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=163.668 ac 9.12% Impervious Runoff Depth>1.05"
Flow Length=2,229' Tc=29.6 min CN=73 Runoff=158.48 cfs 14.385 af

Subcatchment 2: Subcat 2 Runoff Area=35.807 ac 0.00% Impervious Runoff Depth>0.90"
Flow Length=1,112' Tc=25.5 min CN=70 Runoff=31.53 cfs 2.672 af

Subcatchment 3: Subcat 3 Runoff Area=19.014 ac 35.43% Impervious Runoff Depth>1.49"
Flow Length=3,110' Tc=24.7 min CN=80 Runoff=30.14 cfs 2.363 af

Subcatchment 4: Subcat 4 Runoff Area=17.152 ac 9.44% Impervious Runoff Depth>1.06"
Flow Length=1,452' Tc=27.4 min CN=73 Runoff=17.49 cfs 1.509 af

Subcatchment 5: Subcat 5 Runoff Area=1.075 ac 28.40% Impervious Runoff Depth>1.36"
Flow Length=324' Tc=18.5 min CN=78 Runoff=1.84 cfs 0.122 af

Subcatchment 6: Subcat 6 Runoff Area=4.312 ac 0.00% Impervious Runoff Depth>0.90"
Tc=6.0 min CN=70 Runoff=7.41 cfs 0.325 af

Subcatchment 7: Subcat 7 Runoff Area=214,383 sf 42.27% Impervious Runoff Depth>1.64"
Flow Length=1,411' Tc=12.2 min CN=82 Runoff=12.38 cfs 0.672 af

Subcatchment 8: Subcat 8 Runoff Area=4.782 ac 21.00% Impervious Runoff Depth>1.23"
Flow Length=1,380' Tc=20.9 min CN=76 Runoff=6.88 cfs 0.492 af

Reach SMP-1: Vegetated Swale Avg. Flow Depth=0.63' Max Vel=1.46 fps Inflow=12.38 cfs 0.672 af
n=0.150 L=1,317.0' S=0.0580 '/' Capacity=77.31 cfs Outflow=7.88 cfs 0.653 af

Pond 7P: Porous Parking Lots Peak Elev=1,425.00' Storage=128 cf Inflow=7.41 cfs 0.325 af
Outflow=7.41 cfs 0.325 af

Pond FB-1: Forebay 1 Peak Elev=1,428.48' Storage=5,100 cf Inflow=17.49 cfs 1.509 af
Outflow=17.43 cfs 1.413 af

Pond PP-1: Pocket Pond 1 Peak Elev=1,428.36' Storage=14,548 cf Inflow=17.43 cfs 1.413 af
Outflow=16.44 cfs 1.121 af

Pond SMP2: Bioretention Basin Peak Elev=1,570.58' Storage=1,858 cf Inflow=1.84 cfs 0.122 af
Outflow=0.77 cfs 0.122 af

Pond SMP3: Bioretention Basin Peak Elev=1,464.90' Storage=2,260 cf Inflow=6.88 cfs 0.492 af
Outflow=6.66 cfs 0.464 af

Link AP-1: AP-1 Inflow=197.68 cfs 17.986 af
Primary=197.68 cfs 17.986 af

Link AP-2: AP-2 Inflow=40.46 cfs 3.793 af
Primary=40.46 cfs 3.793 af

Total Runoff Area = 250.732 ac Runoff Volume = 22.539 af Average Runoff Depth = 1.08"
89.36% Pervious = 224.057 ac 10.64% Impervious = 26.675 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=163.668 ac 9.12% Impervious Runoff Depth>2.44"
Flow Length=2,229' Tc=29.6 min CN=73 Runoff=379.77 cfs 33.294 af

Subcatchment 2: Subcat 2 Runoff Area=35.807 ac 0.00% Impervious Runoff Depth>2.19"
Flow Length=1,112' Tc=25.5 min CN=70 Runoff=81.61 cfs 6.541 af

Subcatchment 3: Subcat 3 Runoff Area=19.014 ac 35.43% Impervious Runoff Depth>3.08"
Flow Length=3,110' Tc=24.7 min CN=80 Runoff=61.92 cfs 4.875 af

Subcatchment 4: Subcat 4 Runoff Area=17.152 ac 9.44% Impervious Runoff Depth>2.44"
Flow Length=1,452' Tc=27.4 min CN=73 Runoff=41.92 cfs 3.492 af

Subcatchment 5: Subcat 5 Runoff Area=1.075 ac 28.40% Impervious Runoff Depth>2.90"
Flow Length=324' Tc=18.5 min CN=78 Runoff=3.90 cfs 0.260 af

Subcatchment 6: Subcat 6 Runoff Area=4.312 ac 0.00% Impervious Runoff Depth>2.21"
Tc=6.0 min CN=70 Runoff=18.13 cfs 0.794 af

Subcatchment 7: Subcat 7 Runoff Area=214,383 sf 42.27% Impervious Runoff Depth>3.28"
Flow Length=1,411' Tc=12.2 min CN=82 Runoff=24.19 cfs 1.345 af

Subcatchment 8: Subcat 8 Runoff Area=4.782 ac 21.00% Impervious Runoff Depth>2.71"
Flow Length=1,380' Tc=20.9 min CN=76 Runoff=15.24 cfs 1.081 af

Reach SMP-1: Vegetated Swale Avg. Flow Depth=0.95' Max Vel=1.83 fps Inflow=24.19 cfs 1.345 af
n=0.150 L=1,317.0' S=0.0580 '/' Capacity=77.31 cfs Outflow=17.10 cfs 1.318 af

Pond 7P: Porous Parking Lots Peak Elev=1,425.00' Storage=313 cf Inflow=18.13 cfs 0.794 af
Outflow=18.14 cfs 0.794 af

Pond FB-1: Forebay 1 Peak Elev=1,428.85' Storage=5,953 cf Inflow=41.92 cfs 3.492 af
Outflow=41.80 cfs 3.395 af

Pond PP-1: Pocket Pond 1 Peak Elev=1,428.65' Storage=16,221 cf Inflow=41.80 cfs 3.395 af
Outflow=41.66 cfs 3.100 af

Pond SMP2: Bioretention Basin Peak Elev=1,570.75' Storage=2,505 cf Inflow=3.90 cfs 0.260 af
Outflow=3.34 cfs 0.245 af

Pond SMP3: Bioretention Basin Peak Elev=1,465.21' Storage=2,543 cf Inflow=15.24 cfs 1.081 af
Outflow=16.10 cfs 1.073 af

Link AP-1: AP-1 Inflow=468.61 cfs 40.805 af
Primary=468.61 cfs 40.805 af

Link AP-2: AP-2 Inflow=122.47 cfs 9.641 af
Primary=122.47 cfs 9.641 af

Total Runoff Area = 250.732 ac Runoff Volume = 51.682 af Average Runoff Depth = 2.47"
89.36% Pervious = 224.057 ac 10.64% Impervious = 26.675 ac

Summary for Subcatchment 1: Subcat 1

Runoff = 379.77 cfs @ 12.24 hrs, Volume= 33.294 af, Depth> 2.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
0.109	74	>75% Grass cover, Good, HSG C
14.928	98	Paved parking, HSG C
148.631	70	Woods, Good, HSG C
163.668	73	Weighted Average
148.740		90.88% Pervious Area
14.928		9.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8	100	0.1000	0.13		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
16.8	2,129	0.1790	2.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
29.6	2,229	Total			

Summary for Subcatchment 2: Subcat 2

Runoff = 81.61 cfs @ 12.20 hrs, Volume= 6.541 af, Depth> 2.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
35.807	70	Woods, Good, HSG C
35.807		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
8.7	1,012	0.1500	1.94		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.5	1,112	Total			

Summary for Subcatchment 3: Subcat 3

Runoff = 61.92 cfs @ 12.18 hrs, Volume= 4.875 af, Depth> 3.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
1.256	74	>75% Grass cover, Good, HSG C
6.737	98	Paved parking, HSG C
11.022	70	Woods, Good, HSG C
19.014	80	Weighted Average
12.277		64.57% Pervious Area
6.737		35.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2	100	0.1400	0.15		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
2.3	315	0.2000	2.24		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.6	160	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
10.6	2,535	0.0700	3.97		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
24.7	3,110	Total			

Summary for Subcatchment 4: Subcat 4

Runoff = 41.92 cfs @ 12.22 hrs, Volume= 3.492 af, Depth> 2.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
1.619	98	Paved parking, HSG C
15.533	70	Woods, Good, HSG C
17.152	73	Weighted Average
15.533		90.56% Pervious Area
1.619		9.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0700	0.11		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
12.7	1,352	0.1257	1.77		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
27.4	1,452	Total			

Summary for Subcatchment 5: Subcat 5

Runoff = 3.90 cfs @ 12.11 hrs, Volume= 0.260 af, Depth> 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
0.305	98	Paved parking, HSG C
0.770	70	Woods, Good, HSG C
1.075	78	Weighted Average
0.770		71.60% Pervious Area
0.305		28.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
1.7	224	0.1000	2.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
18.5	324	Total			

Summary for Subcatchment 6: Subcat 6

Runoff = 18.13 cfs @ 11.98 hrs, Volume= 0.794 af, Depth> 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
4.312	70	Woods, Good, HSG C
4.312		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 7: Subcat 7

Runoff = 24.19 cfs @ 12.04 hrs, Volume= 1.345 af, Depth> 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (sf)	CN	Description
30,438	74	>75% Grass cover, Good, HSG C
90,629	98	Paved parking, HSG C
93,317	70	Woods, Good, HSG C
214,383	82	Weighted Average
123,755		57.73% Pervious Area
90,629		42.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	100	0.0800	0.26		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.50"
2.1	404	0.0470	3.25		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.7	190	0.0470	4.40		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.0	717	0.0700	3.97		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
12.2	1,411	Total			

Summary for Subcatchment 8: Subcat 8

Runoff = 15.24 cfs @ 12.14 hrs, Volume= 1.081 af, Depth> 2.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YR Rainfall=5.50"

Area (ac)	CN	Description
0.416	74	>75% Grass cover, Good, HSG C
1.004	98	Paved parking, HSG C
3.362	70	Woods, Good, HSG C
4.782	76	Weighted Average
3.778		79.00% Pervious Area
1.004		21.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.1100	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
7.0	749	0.1290	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.6	531	0.0790	5.71		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
20.9	1,380	Total			

Summary for Reach SMP-1: Vegetated Swale

Inflow Area = 4.922 ac, 42.27% Impervious, Inflow Depth > 3.28" for 100-YR event
Inflow = 24.19 cfs @ 12.04 hrs, Volume= 1.345 af
Outflow = 17.10 cfs @ 12.33 hrs, Volume= 1.318 af, Atten= 29%, Lag= 17.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.83 fps, Min. Travel Time= 12.0 min
Avg. Velocity = 0.61 fps, Avg. Travel Time= 36.2 min

Peak Storage= 12,285 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.95'
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 77.31 cfs

6.00' x 2.00' deep channel, n= 0.150
Side Slope Z-value= 4.0 '/' Top Width= 22.00'
Length= 1,317.0' Slope= 0.0580 '/'
Inlet Invert= 1,465.00', Outlet Invert= 1,388.61'

‡

Summary for Pond 7P: Porous Parking Lots

Inflow Area = 4.312 ac, 0.00% Impervious, Inflow Depth > 2.21" for 100-YR event
Inflow = 18.13 cfs @ 11.98 hrs, Volume= 0.794 af
Outflow = 18.14 cfs @ 11.98 hrs, Volume= 0.794 af, Atten= 0%, Lag= 0.4 min
Discarded = 18.14 cfs @ 11.98 hrs, Volume= 0.794 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,425.00' @ 11.98 hrs Surf.Area= 145,040 sf Storage= 313 cf

Plug-Flow detention time= 0.3 min calculated for 0.794 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (794.9 - 794.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,425.00'	145,040 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,425.00	145,040	2,721.0	0	0	145,040
1,426.00	145,040	2,721.0	145,040	145,040	147,761

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,425.00'	**25.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=83.94 cfs @ 11.98 hrs HW=1,425.00' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 83.94 cfs)

Summary for Pond FB-1: Forebay 1

Inflow Area = 17.152 ac, 9.44% Impervious, Inflow Depth > 2.44" for 100-YR event
Inflow = 41.92 cfs @ 12.22 hrs, Volume= 3.492 af
Outflow = 41.80 cfs @ 12.23 hrs, Volume= 3.395 af, Atten= 0%, Lag= 0.6 min
Primary = 41.80 cfs @ 12.23 hrs, Volume= 3.395 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Starting Elev= 323.00' Surf.Area= 0 sf Storage= 0 cf
Peak Elev= 1,428.85' @ 12.23 hrs Surf.Area= 2,432 sf Storage= 5,953 cf

Plug-Flow detention time= 15.5 min calculated for 3.384 af (97% of inflow)

Center-of-Mass det. time= 5.4 min (811.2 - 805.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,425.00'	9,130 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,425.00	805	104.0	0	0	805
1,426.00	1,147	123.0	971	971	1,166
1,427.00	1,546	142.0	1,342	2,313	1,589
1,428.00	2,002	161.0	1,769	4,082	2,071
1,429.00	2,515	180.0	2,254	6,335	2,614
1,430.00	3,085	200.0	2,795	9,130	3,248

Device	Routing	Invert	Outlet Devices
#1	Primary	1,428.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=41.47 cfs @ 12.23 hrs HW=1,428.84' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 41.47 cfs @ 2.47 fps)

Summary for Pond PP-1: Pocket Pond 1

Inflow Area = 17.152 ac, 9.44% Impervious, Inflow Depth > 2.38" for 100-YR event
Inflow = 41.80 cfs @ 12.23 hrs, Volume= 3.395 af
Outflow = 41.66 cfs @ 12.25 hrs, Volume= 3.100 af, Atten= 0%, Lag= 1.1 min
Primary = 41.66 cfs @ 12.25 hrs, Volume= 3.100 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,428.65' @ 12.25 hrs Surf.Area= 5,994 sf Storage= 16,221 cf

Plug-Flow detention time= 39.8 min calculated for 3.100 af (91% of inflow)
Center-of-Mass det. time= 11.0 min (822.3 - 811.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,425.00'	25,197 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,425.00	3,031	236.0	0	0	3,031
1,426.00	3,768	255.0	3,393	3,393	3,813
1,427.00	4,563	274.0	4,159	7,552	4,655
1,428.00	5,414	293.0	4,982	12,534	5,558
1,429.00	6,323	312.0	5,863	18,397	6,522
1,430.00	7,288	331.0	6,800	25,197	7,546

Device	Routing	Invert	Outlet Devices
#1	Device 2	1,428.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	1,425.00'	**24.0" Round Culvert** L= 100.0' Ke= 0.500

			Inlet / Outlet Invert= 1,425.00' / 1,424.00' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#3	Primary	1,428.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=41.56 cfs @ 12.25 hrs HW=1,428.65' (Free Discharge)
- **2=Culvert** (Passes 13.57 cfs of 24.60 cfs potential flow)
  - **1=Orifice/Grate** (Weir Controls 13.57 cfs @ 2.63 fps)
- **3=Broad-Crested Rectangular Weir** (Weir Controls 27.99 cfs @ 2.17 fps)

Summary for Pond SMP2: Bioretention Basin

Inflow Area = 1.075 ac, 28.40% Impervious, Inflow Depth > 2.90" for 100-YR event
Inflow = 3.90 cfs @ 12.11 hrs, Volume= 0.260 af
Outflow = 3.34 cfs @ 12.19 hrs, Volume= 0.245 af, Atten= 15%, Lag= 5.1 min
Primary = 3.34 cfs @ 12.19 hrs, Volume= 0.245 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 1,570.75' @ 12.19 hrs Surf.Area= 4,026 sf Storage= 2,505 cf

Plug-Flow detention time= 60.5 min calculated for 0.245 af (94% of inflow)
Center-of-Mass det. time= 39.9 min (829.6 - 789.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,570.00'	4,518 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,570.00	2,691	275.0	0	0	2,691
1,571.20	4,953	308.0	4,518	4,518	4,261

Device	Routing	Invert	Outlet Devices
#1	Device 3	1,570.00'	**2.000 in/hr Exfiltration over Surface area**
#2	Primary	1,570.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Primary	1,566.75'	**6.0" Round Culvert** L= 30.0' Ke= 0.500
			Inlet / Outlet Invert= 1,566.75' / 1,565.00' S= 0.0583 '/' Cc= 0.900
			n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=3.31 cfs @ 12.19 hrs HW=1,570.75' (Free Discharge)
- **2=Broad-Crested Rectangular Weir** (Weir Controls 3.13 cfs @ 1.25 fps)
- **3=Culvert** (Passes 0.19 cfs of 1.83 cfs potential flow)
  - **1=Exfiltration** (Exfiltration Controls 0.19 cfs)

Summary for Pond SMP3: Bioretention Basin

Inflow Area = 4.782 ac, 21.00% Impervious, Inflow Depth > 2.71" for 100-YR event
Inflow = 15.24 cfs @ 12.14 hrs, Volume= 1.081 af
Outflow = 16.10 cfs @ 12.14 hrs, Volume= 1.073 af, Atten= 0%, Lag= 0.0 min
Primary = 16.10 cfs @ 12.14 hrs, Volume= 1.073 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 1,465.21' @ 12.14 hrs Surf.Area= 2,928 sf Storage= 2,543 cf

Plug-Flow detention time= 7.6 min calculated for 1.070 af (99% of inflow)
Center-of-Mass det. time= 4.7 min (800.1 - 795.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,464.00'	2,543 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,464.00	2,177	175.0	0	0	2,177
1,465.00	2,928	200.0	2,543	2,543	2,946

Device	Routing	Invert	Outlet Devices
#1	Device 3	1,464.00'	**2.000 in/hr Exfiltration over Surface area**
#2	Primary	1,464.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Primary	1,460.75'	**6.0" Round Culvert** L= 35.0' Ke= 0.500 Inlet / Outlet Invert= 1,460.75' / 1,460.00' S= 0.0214 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=15.97 cfs @ 12.14 hrs HW=1,465.20' (Free Discharge)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 15.84 cfs @ 2.26 fps)
└─**3=Culvert** (Passes 0.14 cfs of 1.74 cfs potential flow)
└─**1=Exfiltration** (Exfiltration Controls 0.14 cfs)

Summary for Link AP-1: AP-1

Inflow Area = 193.461 ac, 12.95% Impervious, Inflow Depth > 2.53" for 100-YR event
Inflow = 468.61 cfs @ 12.24 hrs, Volume= 40.805 af
Primary = 468.61 cfs @ 12.24 hrs, Volume= 40.805 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Link AP-2: AP-2

Inflow Area = 57.271 ac, 2.83% Impervious, Inflow Depth > 2.02" for 100-YR event
Inflow = 122.47 cfs @ 12.21 hrs, Volume= 9.641 af
Primary = 122.47 cfs @ 12.21 hrs, Volume= 9.641 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Attachment D

Storm Data

Job Name and # Gore Mountain

Minimum Runoff Reduction Volume

11/7/2017

RRv = [(P)(Rv*)(Ai)]/12

Where:

Ai = (S)(Aic)

Rv = 0.05 + 0.009(I) where I is 100% impervious

Ai = impervious cover targeted for runoff reduction

Aic = Total area of new impervious cover

P = 90% rainfall (see Figure 4.1 in NYS Stormwater Management Design Manual)

S = Hydrologic Soil Group (HSG) Specific Reduction Factor (S)

A=0.55, B=0.40, C=0.30, D=0.20

S (HSG C)	0.30	
Aic	1.58	acres
Rv	0.95	
90% Rainfall	1.10	
Ai	0.474	

RRv = **0.041** acre feet = 1,799 ft^3

Stormwater Practice Sizing

Job Name and # Gore Mountain

Water Quality Volume Calculation
11/7/2017
WQv = [(P)(Rv)(A)]/12

Where:
Rv = 0.05 + 0.009(I)
I = impervious cover in percent
P = 90% rainfall (see Figure 4.1 in NYS Stormwater Management Design Manual)
A = Area in acres

New Impervious

% Impervious	100.00%		
Rv	0.95		
90% Rainfall	1.10		
Area in Square Feet	68868		
WQv Required =	**5997**	ft^3	**0.138** ac-ft

SMP-1: Wet Swale

% Impervious	42.27%		
Rv	0.43		
90% Rainfall	1.10		
Area in Square Feet	214402		
WQv Required =	**8459**	ft^3	**0.194** ac-ft

SMP-2: Bioretention Basin

% Impervious	21.48%		
Rv	0.24		
90% Rainfall	1.10		
Area in Square Feet	62204		
WQv Required =	**1387**	ft^3	**0.032** ac-ft

SMP-3: Bioretention Basin

% Impervious	21.00%		
Rv	0.24		
90% Rainfall	1.10		
Area in Square Feet	208304		
WQv Required =	**4564**	ft^3	**0.105** ac-ft

BIORETENTION WORKSHEET

(See Section 6.4.4 of the NYSDEC Stormwater Management Design Manual 2015)

1.	**Underlying soil permeability** *(if no underdrains proposed, must infiltrate within 48 hours, HSG A and B Soils)*	=	0.50	in/hr
2.	**Calculate WQv:**			
	DA (maximum 5 acres)	=	62,210	ft^2
	Percent Impervious Area, I	=	21.48	%
	Rv = .05 + .009 (I) (Minimum 0.2)	=	0.243	
	P (90% Rainfall)	=	1.10	in.
	WQv = P Rv A/12	=	1,388	ft^3
	75% of WQv		1,040.7	
3.	**Bioretention Details:**			
	Material		Planting Soil Mix	
	Filter bed depth (d_f) (2.5 - 4.0 ft)	=	2.50	ft
	Coefficient of permeability of filter media (k)	=	1.00	ft/day
	Avg. height of water above filter media (h_f) (max. 0.5 ft	=	0.50	ft
	Design filter bed drain time (t_f)	=	2	days

4. **Calculate required bioretention surface area (A_f):**

$$\text{Surface area } (A_f) = \frac{WQv \times d_f}{k\,(h_f + d_f)\,(t_f)}$$

Required Surface Area (A_f) = 578 ft^2

5.	**Bioretention surface area provided**	=	600	ft^2 (design)
6.	**Water Quality Volume provided**	=	1440	ft3 (design)
7.	**Is Bioretention Basin Lined or in HSG C/D Soils**		Yes	
8.	**Runoff Reduction Volume provided**	=	576	ft3 (design)

BIORETENTION WORKSHEET- SMP-3

(See Section 6.4.4 of the NYSDEC Stormwater Management Design Manual 2015)

1.	**Underlying soil permeability** *(if no underdrains proposed, must infiltrate within 48 hours, HSG A and B Soils)*	=	0.50	in/hr
2.	**Calculate WQv:**			
	DA (maximum 5 acres)	=	208,303	ft^2
	Percent Impervious Area, I	=	21.00	%
	Rv = .05 + .009 (I) (Minimum 0.2)	=	0.239	
	P (90% Rainfall)	=	1.10	in.
	WQv = P Rv A/12	=	4,564	ft^3
	75% of WQv		3,422.7	
3.	**Bioretention Details:**			
	Material		Planting Soil Mix	
	Filter bed depth (d_f) (2.5 - 4.0 ft)	=	2.50	ft
	Coefficient of permeability of filter media (k)	=	1.00	ft/day
	Avg. height of water above filter media (h_f) (max. 0.5 ft	=	0.50	ft
	Design filter bed drain time (t_f)	=	2	days

4. **Calculate required bioretention surface area (A_f):**

$$\text{Surface area } (A_f) = \frac{WQv \times d_f}{k\,(h_f + d_f)\,(t_f)}$$

Required Surface Area (A_f) = 1,901 ft^2

5.	**Bioretention surface area provided**	=	2177	ft^2 (design)
6.	**Water Quality Volume provided**	=	5225	ft3 (design)
7.	**Is Bioretention Basin Lined or in HSG C/D Soils**		Yes	
8.	**Runoff Reduction Volume provided**	=	2090	ft3 (design)

Appendix 8
Tree Counts

	Community	A		B		C		D		E	
		Pioneer HW		Mixed HW		North HW		Mixed HW		Mixed HW	
		3-4" dbh	>4" dbh	3-4" dbh	>4" dbh	3-4" dbh	>4" dbh	3-4" dbh	>4" dbh	3-4" dbh	>4" dbh
Sugar Maple		0	9.9	81	125.1	22	119.1	94.7	63.4	76.5	63
Beech		0	0.5	8.2	20.2	39.2	22.2	18.2	25.8	189.2	197.2
Yellow birch		0	1.7		4.9		16.8	12.1	27.4	10.5	11
White birch		29	130.2		24.4		6		24.5		33.5
White ash		0	0				8.9	12.1	7.4		
Black cherry		0	0		6.5		0.4		2.7		
Ironwood		0	0			7	4.3	6.1			
Red Spruce		0	1.9		10.4		0.4				
Red Maple		0	0	14.6	27.7		4.4	6.1	20.9		28.4
Basswood		0	0				0.6		9.2		
Red Oak		0	0	30.9	11.8		9.9			10.5	14.7
Hemlock		0	0.6				0.1		5.4		
Balsam Fir		39.4	22		6.8			27.6	4.9		
Striped Maple		68.5	11.2								6.6
Aspen		0	0						19.7		3.4
Mountain Ash		0	0								
Total		136.9	178	134.7	237.8	68.2	193.1	176.9	211.3	286.7	357.8

	Community	F		G		H		I		J	
		Spruce-Fir		Pioneer HW		North HW		Not Used		SF & PH	
		3-4" dbh	>4" dbh	3-4" dbh	>4" dbh	3-4" dbh	>4" dbh	3-4" dbh	>4" dbh	3-4" dbh	>4" dbh
Sugar Maple				34		86.8	129.7				
Beech						40.8	40.4				
Yellow birch			22.6		18.6		38.7				
White birch					110.9		1.9			109.8	150.2
White ash											
Black cherry											
Ironwood											
Red Spruce		727	237.2		31.7					11.5	17.7
Red Maple					1.4		13.9				
Basswood											
Red Oak											
Hemlock											
Balsam Fir		204		193.5	89.9		10			237.4	165.8
Striped Maple											
Aspen											
Mountain Ash										11.5	29.9
Total		931	259.8	227.5	252.5	127.6	234.6			370.2	363.6

	Community	K		L		M		N		O	
		Spruce Fir		Not used		SF & PH		North HW		Not used	
		3-4" dbh	>4" dbh	3-4" dbh	>4" dbh	3-4" dbh	>4" dbh	3-4" dbh	>4" dbh	3-4" dbh	>4" dbh
Sugar Maple							39.8	68	280.1		
Beech								144.7	72.1		
Yellow birch											
White birch		109.2	53			217	78				
White ash								68	3.1		
Black cherry											
Ironwood											
Red Spruce		12.8	14.9				38.4		9.5		
Red Maple											
Basswood											
Red Oak											
Hemlock											
Balsam Fir		263.8	337.4			159.5	101.8				
Striped Maple						57.5	44.2				
Aspen							18.3				
Mountain Ash		12.8	5.7								
Total		398.6	411	0	0	434	320.5	280.7	364.8	0	0

	Community	P		Q		R					
		North HW		Pioneer HW		North HW					
		3-4" dbh	>4" dbh	3-4" dbh	>4" dbh	3-4" dbh	>4" dbh				
Sugar Maple		15.3	105.6			28.8	191.3				
Beech		15.3	39.7			28.8	25.1				
Yellow birch			10.6	14.4	31.3		16.2				
White birch			0.6	28.8	108.4						
White ash			4								
Black cherry											
Ironwood		7.7	6.8								
Red Spruce					32.9		1.8				
Red Maple			0.4		24.1						
Basswood			5.9								
Red Oak			0.9								
Hemlock											
Balsam Fir				43.1	38.9						
Striped Maple			2.5	28.8	17.4	28.8					
Aspen											
Mountain Ash					9.2						
Total		38.3	177	115.1	262.2	86.4	234.4				

Table ____ 2017 Management Actions Tree Cutting by Community Type and Location							
GORE IUA							
	Community	**B**		**Trail 11-O**	**Trail 11-O**	**Trail 11-O**	
		Mixed HW		**4.2 acres**	**4.2 acres**	**4.2 Acres**	
		3-4" dbh	**>4" dbh**	**3-4" dbh**	**>4" dbh**	**Total**	
Sugar Maple		81	125.1	340.2	525.42	865.62	
Beech		8.2	20.2	34.44	84.84	119.28	
Yellow birch			4.9	0	20.58	20.58	
White birch			24.4	0	102.48	102.48	
White ash				0	0	0	
Black cherry			6.5	0	27.3	27.3	
Ironwood				0	0	0	
Red Spruce			10.4	0	43.68	43.68	
Red Maple		14.6	27.7	61.32	116.34	177.66	
Basswood				0	0	0	
Red Oak		30.9	11.8	129.78	49.56	179.34	
Hemlock				0	0	0	
Balsam Fir			6.8	0	28.56	28.56	
Striped Maple				0	0	0	
Aspen				0	0	0	
Mountain Ash				0	0	0	
				565.74	998.76		
					SUBTOTAL	**1564.5**	

GORE IUA							
	Community	**E**		**Trails 11O,11A, 1N-P**	**Trails 11O,11A, 1N-P**	**Trails 11O,11A, 1N-P**	
		Mixed HW		**6.9 acres**	**6.9 acres**	**6.9 Acres**	
		3-4" dbh	**>4" dbh**	**3-4" dbh**	**>4" dbh**	**Total**	
Sugar Maple		76.5	63	527.85	434.7	962.55	
Beech		189.2	197.2	1305.48	1360.68	2666.16	
Yellow birch		10.5	11	72.45	75.9	148.35	
White birch			33.5	0	231.15	231.15	
White ash				0	0	0	
Black cherry				0	0	0	
Ironwood				0	0	0	
Red Spruce				0	0	0	
Red Maple			28.4	0	195.96	195.96	
Basswood				0	0	0	
Red Oak		10.5	14.7	72.45	101.43	173.88	
Hemlock				0	0	0	
Balsam Fir				0	0	0	
Striped Maple			6.6	0	45.54	45.54	
Aspen			3.4	0	23.46	23.46	
Mountain Ash				0	0	0	
				1978.23	2468.82		
					SUBTOTAL	**4447.05**	

GORE IUA							
	Community	**Q**		**Twister Widen**	**Twister Widen**	**Twister Widen**	
		Pioneer HW		**1.1 acres**	**1.1 acres**	**1.1 acres**	
		3-4" dbh	**>4" dbh**	**3-4" dbh**	**>4" dbh**	**Total**	
Sugar Maple				0	0	0	
Beech				0	0	0	
Yellow birch		14.4	31.3	15.84	34.43	50.27	
White birch		28.8	108.4	31.68	119.24	150.92	
White ash				0	0	0	
Black cherry				0	0	0	
Ironwood				0	0	0	
Red Spruce			32.9	0	36.19	36.19	
Red Maple			24.1	0	26.51	26.51	
Basswood				0	0	0	
Red Oak				0	0	0	
Hemlock				0	0	0	
Balsam Fir		43.1	38.9	47.41	42.79	90.2	
Striped Maple		28.8	17.4	31.68	19.14	50.82	
Aspen				0	0	0	
Mountain Ash			9.2	0	10.12	10.12	
				126.61	288.42		
					SUBTOTAL	**415.03**	

GORE IUA							
	Community	**P**		**Various (net)***	**Various (net)**	**Various (net)**	
		North HW		**15.4 acres**	**15.4 acres**	**15.4 acres**	
		3-4" dbh	**>4" dbh**	**3-4" dbh**	**>4" dbh**	**Total**	
Sugar Maple		15.3	105.6	235.62	1626.24	1861.86	
Beech		15.3	39.7	235.62	611.38	847	
Yellow birch			10.6	0	163.24	163.24	
White birch			0.6	0	9.24	9.24	
White ash			4	0	61.6	61.6	
Black cherry				0	0	0	
Ironwood		7.7	6.8	118.58	104.72	223.3	
Red Spruce				0	0	0	
Red Maple			0.4	0	6.16	6.16	
Basswood			5.9	0	90.86	90.86	
Red Oak			0.9	0	13.86	13.86	
Hemlock				0	0	0	
Balsam Fir				0	0	0	
Striped Maple			2.5	0	38.5	38.5	
Aspen				0	0	0	
Mountain Ash				0	0	0	
				589.82	2725.8		
					SUBTOTAL	**3315.62**	
*Community N = Various locations totaling 22.7 acres - 7.3 acres of abandoned cutting from 1995 Maintenance Area and Lifts 9A and 9B							

Land Swap Addition							
	Community	**E**		**Lift and Trails 12**	**Lift and Trails 12**	**Lift and Trails 12**	
		Mixed HW		**10.2 acres**	**10.2 acres**	**10.2 acres**	
		3-4" dbh	**>4" dbh**	**3-4" dbh**	**>4" dbh**	**Total**	
Sugar Maple		76.5	63	780.3	642.6	1422.9	
Beech		189.2	197.2	1929.84	2011.44	3941.28	
Yellow birch		10.5	11	107.1	112.2	219.3	
White birch			33.5	0	341.7	341.7	
White ash				0	0	0	
Black cherry				0	0	0	
Ironwood				0	0	0	
Red Spruce				0	0	0	
Red Maple			28.4	0	289.68	289.68	
Basswood				0	0	0	
Red Oak		10.5	14.7	107.1	149.94	257.04	
Hemlock				0	0	0	
Balsam Fir				0	0	0	
Striped Maple			6.6	0	67.32	67.32	
Aspen			3.4	0	34.68	34.68	
Mountain Ash				0	0	0	
				2924.34	3649.56		
					SUBTOTAL	**6573.9**	