

A. INTRODUCTION AND METHODOLOGY

Wetlands and surface waters on the Project Site have been field-delineated and their boundaries approved by State and Federal regulatory agencies as part of the previous environmental assessment completed for the project areas, including the approximately 1,538-acre EPT Concord Resort Project Site.¹

Descriptions contained in this chapter on the character, species composition, and functions of on-site wetlands and waters are taken from the site-specific wetland studies completed by William Kenny Associates and the LA Group in 2006. The wetland areas located within the Phase 1 Site were re-examined in March/April 2012 to further characterize species composition and to note any qualitative changes to on-site wetland areas. The U.S. Army Corps of Engineers (USACE) examined wetlands within the Phase 1 Site on May 3, 2012. The New York State Department of Environmental Conservation (NYSDEC) examined wetlands within the Phase 1 Site on May 30, 2012.

The presentation of potential wetland and watercourse impacts is based on the latest proposed Comprehensive Development Plan and Phase 1 Development Plan for the EPT Concord Resort project.

REGULATORY CONTEXT

Surface water resources and wetlands are subject to a number of Federal, State, and local laws. Disturbance to regulated wetlands and waters, or their regulated adjacent areas (buffers), requires permitting from the regulating agencies. The purpose of wetland and stream regulation is to protect their unique functions and values. Wetlands, streams, and their associated buffers absorb stormwater runoff and improve water quality. Many species of plants and animals are endemic to wetlands, and many additional animals rely on wetlands as a source of food, shelter, or breeding habitat.

FEDERAL

Wetlands, streams, and other surface water resources are regulated at the Federal level by the USACE if they meet the criteria of “waters of the United States,” pursuant to Section 404 of the Clean Water Act and its implementing regulations. Wetlands are defined at the Federal level as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of

¹ Wetland and Watercourse Assessment Report, The Concord Resort, Kiamesha Lake, NY. William Kenny Associates LLC. March 22, 2006. USACE and NYSDEC wetland JD determinations were obtained in 2008 for the entirety of the Project Site and are included in Appendix F-1.

vegetation typically adapted for life in saturated soil conditions.” Wetlands generally include “swamps, marshes, bogs, and similar areas” (Federal Register, 1982).

As discussed below, results of an on-site wetland delineation confirmed the presence of wetlands and waters regulated at the Federal level by the USACE.

NEW YORK STATE

The NYSDEC regulates freshwater wetlands and streams that have been mapped and classified by the State. The Protection of Waters Permit Program¹ regulates disturbance to surface waters and streams including construction, reconstruction, or repair of dams and other impoundment structures, docking and mooring facilities, and excavation or placement of fill in navigable waters. The NYSDEC also regulates State-mapped freshwater wetlands in accordance with the State’s Freshwater Wetlands Act.² The Act protects those wetlands larger than 12.4 acres (5 hectares) in size, and certain smaller wetlands of unusual local importance. A permit is required for activities that would alter wetlands or land within the 100-foot wetland adjacent area.

In addition to freshwater wetlands, New York State also maps and classifies certain streams, lakes and ponds. All State-classified waters are assigned a class based on existing or expected best usage. Waters that are designated as C(t) or higher (i.e., C(ts), B, or A) are collectively referred to as “protected waters,” and are subject to the protection provisions of the Protection of Waters regulations (Article 15 of the Environmental Conservation Law; 6 NYCRR Part 608).

As discussed below, a number of the wetland and waterbodies on-site are mapped by New York State and are therefore subject to regulation by the NYSDEC Freshwater Wetlands Program.

TOWN OF THOMPSON

The Town of Thompson does not have any inland wetland regulations written into the Town Code. As a result, there is no local jurisdiction of wetland areas, streams, or other water resources on the Project Site. However, Kiamesha Lake is a public water supply. Local health department regulations pertaining to activities within the Lake and adjacent areas exist. Although located off of the Project Site, Kiamesha Lake is subject to the local regulations under “Rules and Regulations for Protection from Contamination of the Public Drinking Water Supply of the Village of Monticello.” These regulations restrict the use of pesticide and herbicide within the lake’s watershed, the use of road salt within 500 feet of the lake, and land clearing within 75 feet of the lake. These regulations apply to those portions of the Project Site located in proximity to Kiamesha Lake. See Chapter 8, “Water Supply,” for information on the provision of drinking water to the Proposed Project and regulations related to drinking water resources.

¹ Article 15, Title 5, New York State Environmental Conservation Law (ECL); Implementing Regulations 6 NYCRR Part 608.

² Article 24, ECL, Implementing Regulations 6 NYCRR Part 662.

B. COMPREHENSIVE DEVELOPMENT PLAN (DGEIS)

EXISTING CONDITIONS

SURFACE WATERS

The Project Site is located within a subwatershed of the Neversink River, which is tributary to the Delaware River. The major drainage feature on the Project Site is Kiamesha Creek, which roughly bisects the Site between higher ground to the east and west occupied by two rounded hillsides. The Site also contains numerous ponds and lakes associated with Kiamesha Creek.

Beginning to the northwest of the Project Site, Kiamesha Lake is the headwater of Kiamesha Creek which discharges to the south and enters the western boundary of the Site via a culvert at Rock Ridge Drive. At the southwestern portion of the site, Kiamesha Creek converges with two other watercourses (Tannery Brook and an unnamed watercourse). From there, the Creek flows north through the central portion of the site and the existing golf course areas. At the northeastern portion of the site, Kiamesha Creek turns east and south where it flows along the eastern boundary of the Project Site adjacent to Heiden Road (Route 161). Once leaving the site, Kiamesha Creek joins with Sheldrake Stream, which flows into the Neversink River, approximately one mile from the Project Site's easternmost boundary.

A stream assessment has been undertaken on representative stream reaches throughout the Project Site and is contained in Appendix F-2. The number and variability of stream reach dynamics on the site provide diverse opportunities for wildlife utilization. The condition of the on-site streams ranges from optimal to marginal depending upon site location. For example, the section of Kiamesha Creek adjacent to the northern Project Site boundary is a forested bedrock controlled stream corridor with a number of features that benefit species diversity including riffles, falls, pools, and a balance of shaded and daylighted areas. In contrast, the portion of Kiamesha Creek in the southern portion of the Project Site that flows through the golf course provides suboptimal to marginal habitat due to lack of vegetation on and adjacent to the stream banks, despite having connection to its floodplain.

Eight lacustrine systems (ponds/lakes) are located on the existing golf courses and in the forested portions of the Site. Most of these are located on the golf course and consist of constructed water features located within the playing boundaries of the golf course, typically within the floodplain of Kiamesha Creek. These ponds range in size from 0.8 to 5.0 acres with a maximum depth of approximately 5 feet and an average depth of 4 feet. The majority of these ponds are connected to Kiamesha Creek by surface ditches or culverts. All of the ponds within the golf course were created through the widening of Kiamesha Creek channel into a pond shape, enlarging smaller water features, or excavating an upland or wetland to create persistent standing water. Shoreline vegetation of the ponds is limited to manicured lawn or herbaceous vegetation that is routinely mowed.

Two waterbodies comprise the vegetated lacustrine (ponds/lakes) habitats on-site. These ponds differ from the golf course ponds in being located in a forested or unmaintained setting. Both were man-made likely through the excavation of wetland areas to encourage fisheries

recreation.¹ Similar to the golf course ponds, dredge spoils are found in mounds or berms around and adjacent to the shorelines of these systems. However, because they are less managed, a more diverse assemblage of vegetation is found around the perimeters of these systems, mostly a red maple-dominated wetland habitat with lacustrine fringe vegetation in the form of non-persistent emergent and submergent vegetation, such as spatterdock, pond lily, and wild celery. The maximum depths of these waterbodies range from 6 to 10 feet, with an average depth of between 3.5 and 6 feet. The two vegetated ponds have both permanent outlets and inlets.

Lacustrine and Stream Habitat Assessments

As a component of the existing conditions survey, baseline surveys of the on-site lacustrine (pond/lake) and stream habitats were conducted. Completed datasheets for each of these areas are included in the complete Wetland and Watercourse Assessment Report (William Kenny Associates, 2006) included in Appendix F-2 of this DGEIS.

In general, each of the stream reaches displayed optimal qualities, but floodplain and buffer zone fragmentation reduced the overall score of these stream systems.

Similar to the stream reach surveys, the ponds display variability in their water quality, extent or lack of lacustrine fringe wetland systems, wildlife habitat potential, recreational capacities, and physical composition.

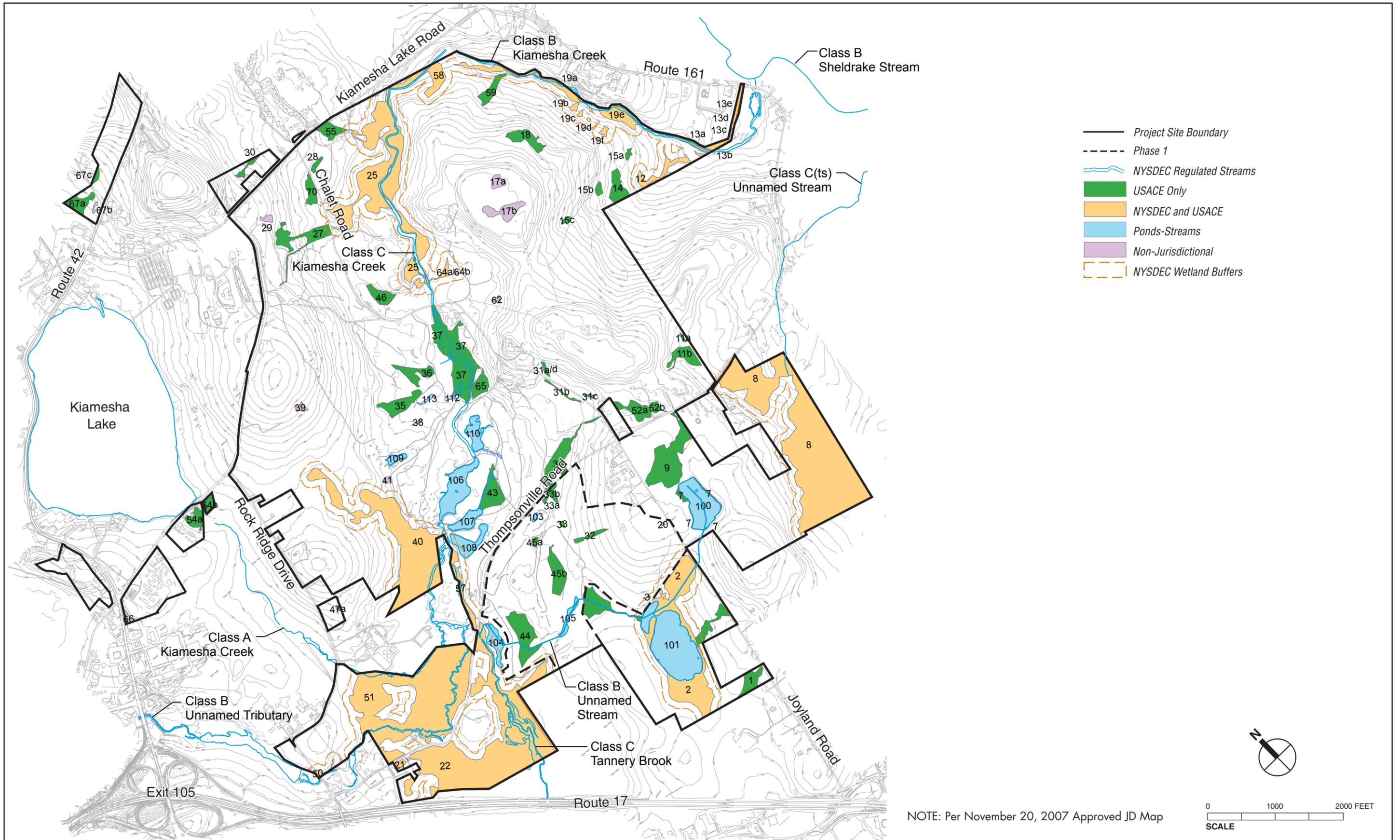
The on-site streams and ponds as mapped and classified by the USACE and NYSDEC are shown in **Figure 6-1**.

AQUIFERS AND FLOODPLAINS

The Project Site is not mapped as a Primary Aquifer by New York State. However, it is mapped as a “Principal Aquifer,” defined as “aquifers known to be highly productive or whose geology suggests abundant potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time.” Areas mapped as “Unconfined Aquifer 10 to 100 gallons per minute” or “Unconfined Aquifer more than 100 gallons per minute” are considered to be Principal Aquifers unless contradictory site specific information is made available to the NYSDEC. An area mapped as “Unconfined Aquifer, 10 to 100 gallons per minute – Sand and gravel with saturated zone generally less than 10 feet thick, or thicker but with less permeable silty sand and gravel” underlies the majority of the Project Site. (TOGS 2.1.3; Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York – Lower Hudson Sheet, Bugliosi, Edward F.; Trudell, Ruth A., 1988).

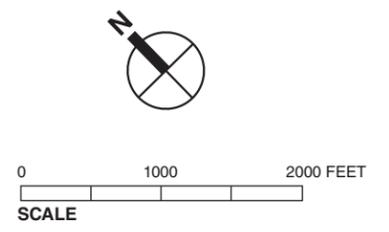
A geotechnical survey was conducted within the Phase 1 Site and along the route of the proposed sanitary sewer line. Stabilized groundwater elevations measured by piezometer in three borings were at levels of 24 to 30 feet below grade. In addition, test pit explorations were performed within the proposed building, parking, and harness horse racetrack locations. Groundwater was found at 1 to 21 feet below grade in most locations, indicative of seasonally saturated conditions and seepage from groundwater perching. At the lower elevations of the Phase 1 Site, within the existing golf course and in proximity to Kiamesha Creek, the observed

¹ Kiamesha Lake is the largest surface waterbody in proximity to the Project Site. This off-site lake is over 100 acres in size and was created during the retreat of the Laurentide Ice Sheet approximately 12,000 years ago.



- Project Site Boundary
- - - Phase 1
- ~ NYSDEC Regulated Streams
- USACE Only
- NYSDEC and USACE
- Ponds-Streams
- Non-Jurisdictional
- - - NYSDEC Wetland Buffers

NOTE: Per November 20, 2007 Approved JD Map



groundwater elevations may be indicative of “true” (stabilized) groundwater elevations. For additional information on the geotechnical study, see Appendix C.

The 100-year FEMA floodplain on the Project Site is shown in **Figure 6-2**. There are no known dam hazard areas on the Project Site.

WETLANDS

On-site wetlands and waters were delineated in accordance with NYSDEC and USACE methodology. The regulatory boundaries of all on-site wetlands were verified by the NYSDEC in 2007 and by the USACE in 2008. Additional wetlands located beyond the original Project Site boundary that are in proximity to the sewage treatment plant (STP) force main connection route and Option A entryway alternative have been examined in May/June 2012 by the NYSDEC and USACE. Additional site visits in June and/or July will be made by State and Federal representatives to confirm wetland boundaries in these areas. A complete Wetlands and Watercourse Assessment Report is included in Appendix F-2 of this DGEIS. The delineated wetlands and their regulatory designation are shown in Figure 6-1. Several wetland areas were found to be outside of the jurisdiction of the NYSDEC and USACE (non-jurisdictional) due to the fact that they have no surface connection to other wetlands or waters. In total, the Project Site contains 282.72 acres of wetlands, of which 4.65 acres are non-jurisdictional.

The on-site wetland areas have been grouped by vegetative structure and type (hydrogeomorphic, or HGM) class, as presented in Table 6-1 below and shown in **Figure 6-3**. Primary vegetated wetland types include Forested Hemlock, Forested Red Maple, Wet Meadow, Scrub-Shrub, and Lacustrine Fringe. The descriptors that precede each of the wetland types relate to the geomorphic position or “class” of the wetland, specifically: slope (S), riverine (R), depression (D), and lacustrine fringe (LF). The vegetation composition of these wetland types is described in more detail in Chapter 5, “Natural Resources,” and in the complete Wetland and Watercourse Assessment Report in Appendix F-2.

**Table 6-1
Vegetated Wetland Types on the Project Site**

Wetland Type	Existing Size (acres)
S - Forested Red Maple	67.6
LGS - Forested Red Maple	12.8
R - Forested Red Maple	25.9
D - Forested Red Maple	11.4
S - Forested Hemlock	94.4
LGS - Forested Hemlock	30.2
R - Forested Hemlock	7.2
D - Forested Hemlock	16.1
S – Wet Meadow	10.3
D - Scrub/Shrub	2.0
LF – Scrub/Shrub	4.5
Total	282.4
Note: S = Slope, LGS = Low-gradient slope, R = Riverine, D = Depressional, LF = Lacustrine fringe	

The HGM classification is a wetland evaluation methodology developed by the USACE that uses geomorphic setting, water source, and hydrodynamics to determine the ability of a wetland to serve various functions, including water quality, flood storage, groundwater recharge, and biological diversity functions. “Slope” wetlands are wetlands on a hillside of any gradient and are typically supported by groundwater. “Depressional” wetlands are found within an area of lower elevation than the surrounding land and may be hydrologically supported by surface flow, groundwater, and direct precipitation. “Riverine” wetlands occur adjacent to a river or stream system and are supported exclusively by overbank flooding from the adjacent riverine system. “Lacustrine fringe” wetlands are directly attached to or border a lacustrine system and are supported by surface water flow.

Wetland Functional Assessment

The on-site wetlands demonstrate the potential to contribute moderately to highly to each of the eight recognized wetland functions of the standard HGM approach¹. The eight wetland functions include:

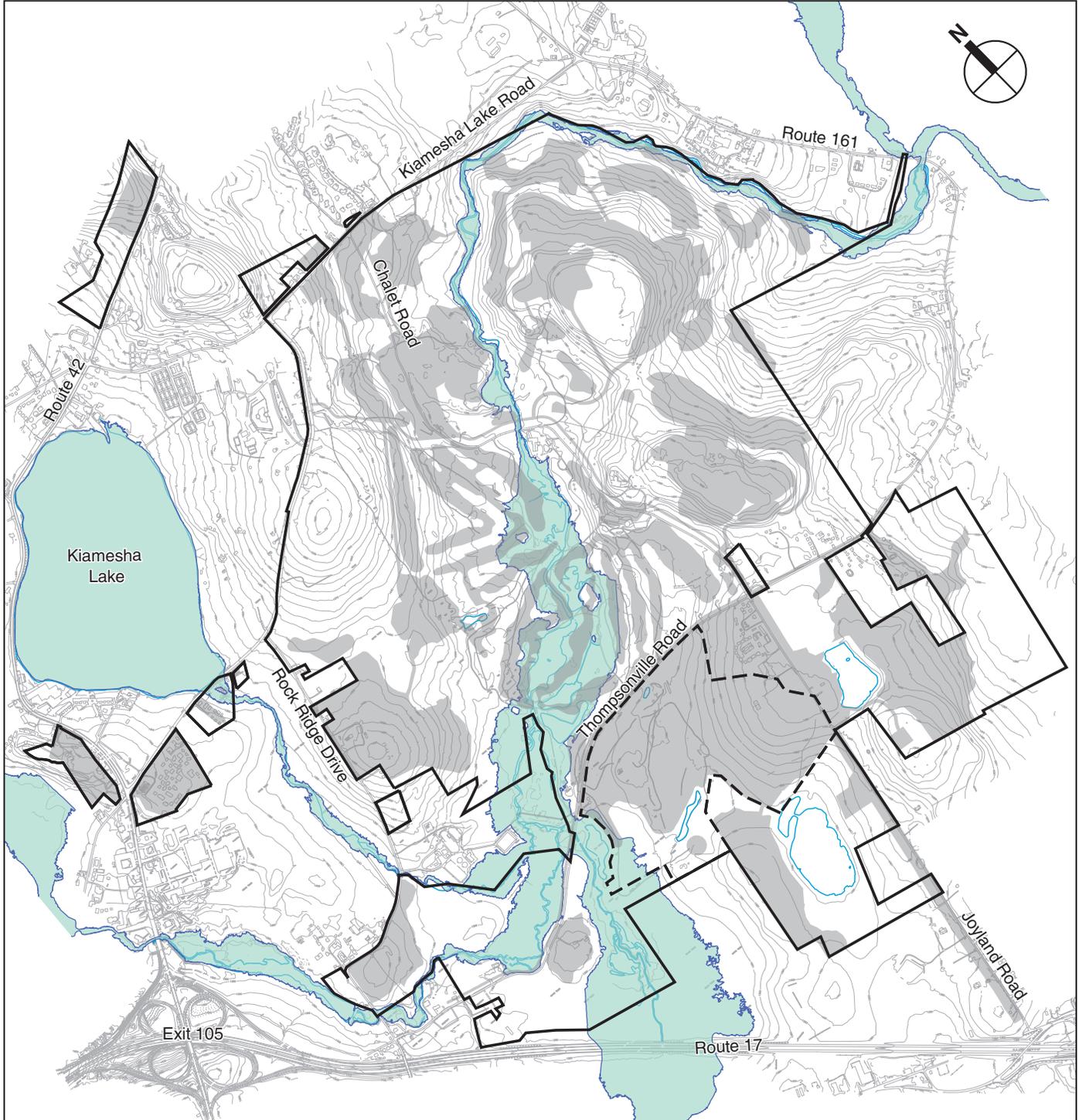
- Modification of Groundwater Discharge
- Modification of Groundwater Recharge
- Storm and Floodwaters Storage
- Modification of Stream Flow
- Modification of Water Quality
- Export of Detritus
- Contribution to Abundance and Diversity of Wetland Vegetation
- Contribution to Abundance and Diversity of Wetland Fauna

A detailed discussion of each of the wetland groups and their capacity to perform the eight wetland functions recognized in the HGM methodology is provided in the Wetland and Watercourse Assessment Report included in Appendix F-2 of this DGEIS. The majority of the on-site wetland groups demonstrate a medium to high capacity to perform the majority of the eight characteristic wetland functions of the HGM system. For the most part, the functional capacity of each of the on-site wetlands is consistent among HGM types regardless of vegetative cover type.

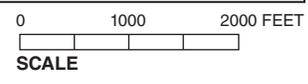
THE FUTURE WITHOUT THE PROPOSED ACTIONS AND PROPOSED PROJECT

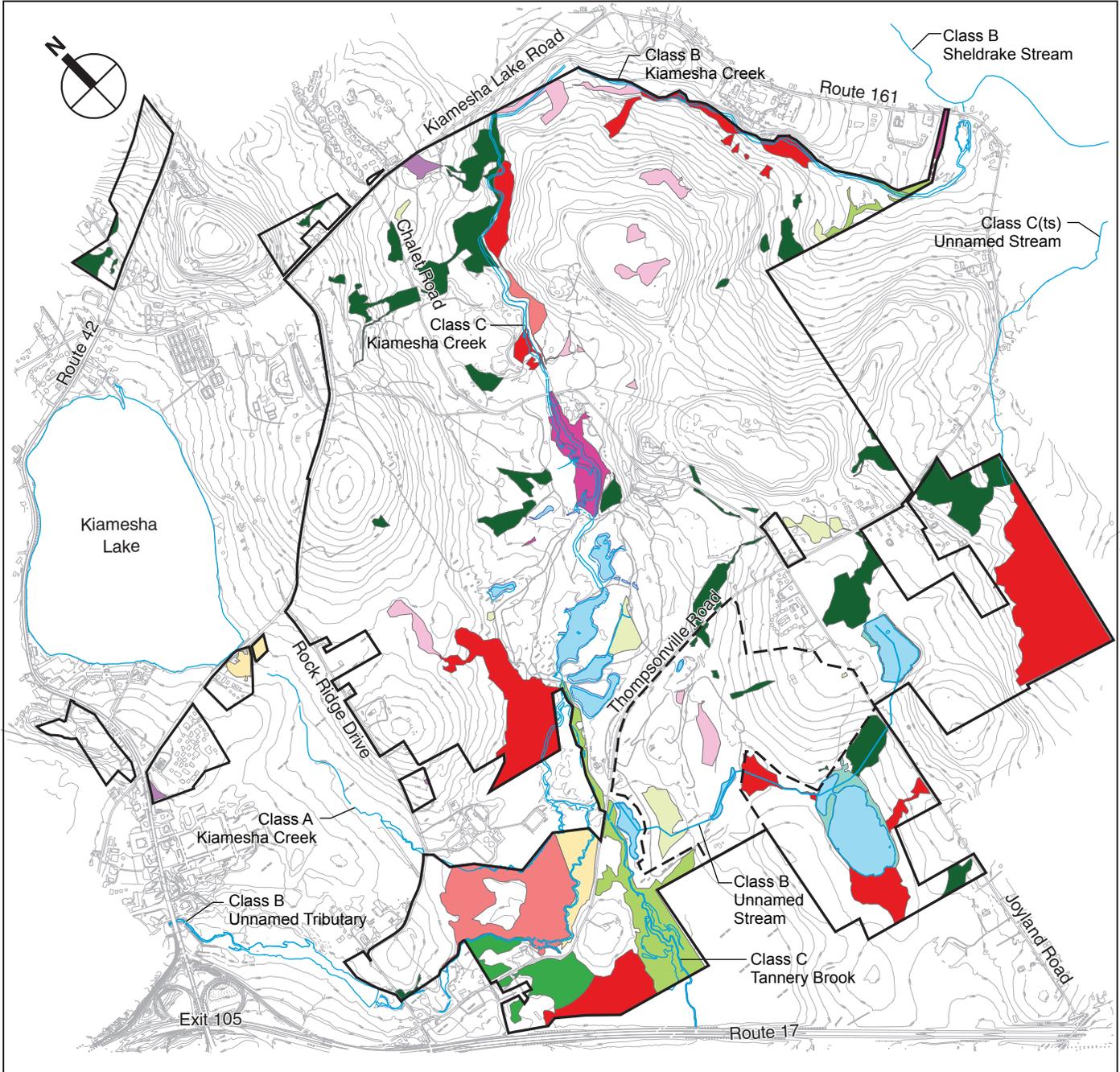
In the future without the Proposed Project, no substantial changes to the on-site wetlands and watercourses are expected to occur. On the Project Site, the existing operational Monster Golf Course will continue to be maintained with no change or improvement in the vegetated condition of the play areas adjacent to wetlands, surface water features or Kiamesha Creek. There has been anecdotal documentation from the golf course superintendent that upstream commercial development on NYS Route 42 has exacerbated the sedimentation of Kiamesha Creek, now evident as sediment piles form islands of sand/silt within the Creek. However, with proper stormwater management implemented for any future off-site development, it is expected

¹ *A Rapid Procedure for Assessing Wetland Functional Capacity based on Hydrogeomorphic (HGM) Classification.* Dennis Magee. 1998.



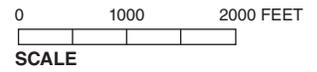
-  Project Site Boundary
-  Phase 1
-  NYSDEC Regulated Streams
-  100-Year Floodplain
-  Limit of Disturbance





SOURCE: Adapted from 2006 DGEIS, Data from William Kenny Associates, LLC

- Project Site Boundary
- Phase 1
- NYSDEC Regulated Streams
- Sloped Forested Red Maple
- Low Gradient Slope Forested Red Maple
- Riverine Forested Red Maple
- Depressional Forested Red Maple
- Depressional Scrub/Shrub
- Pond/Lake
- Sloped Forested Hemlock
- Low Gradient Sloped Forested Hemlock
- Riverine Forested Hemlock
- Depressional Forested Hemlock
- Sloped Wet Meadow
- Lacustine Fringe Scrub/Shrub



that siltation and erosion of Kiamesha Creek will not worsen substantially in the future without the Proposed Project.

PROBABLE IMPACTS OF THE PROPOSED ACTIONS AND PROPOSED PROJECT

Wetland disturbance has been avoided and minimized to the maximum extent practicable. Wetland mitigation (wetland creation) is proposed to offset all adverse impacts caused by the Proposed Project's wetland disturbance. Wetland disturbance and mitigation require review and approval by the USACE and NYSDEC. These components of the Proposed Project are discussed further below.

WETLAND IMPACT AVOIDANCE AND MINIMIZATION

The Comprehensive Development Plan ("CDP") has been designed to avoid wetland and stream areas to the maximum extent practicable. As shown in **Figure 6-4**, most components of the CDP have been arranged on the landscape to avoid wetlands and 100-foot NYSDEC wetland adjacent areas. With the exception of the Phase 1 Site and the proposed revisions to the Monster Golf Course, the only wetland impacts from the Proposed Project are necessitated by proposed improvements to Chalet Road and Thompsonville Road and for access to upland areas proposed for development. Aside from roadway access, none of the residential components of the Proposed Project require wetland or wetland buffer disturbance.

Because primary wetland impacts would be required during Phase 1, a complete discussion of wetland impact avoidance and minimization, including a discussion of alternative layouts for the Proposed Project to minimize wetland disturbance, is provided below under Phase 1.

DIRECT WETLAND IMPACTS

To realize certain components of the Proposed Project, wetland and surface water loss will occur. Wetland loss will result from the placement of fill material within the wetland boundary. Specific areas of wetland impacts are depicted in Figure 6-4. The acreage of wetland impacts by wetland type and jurisdiction is listed below in **Tables 6-2, 6-3, and 6-4**.

The majority of wetland impacts are necessary for construction of the Casino Resort project component during Phase 1, which is described in greater detail below. In addition, design of the new Monster Golf Course requires some wetland fill and areas of hand-clearing of vegetation in regulated wetland areas to facilitate fairway play-over. Areas of wetland disturbance for the remainder of the Proposed Project are relatively small and are required to gain access to viable upland portions of the property.

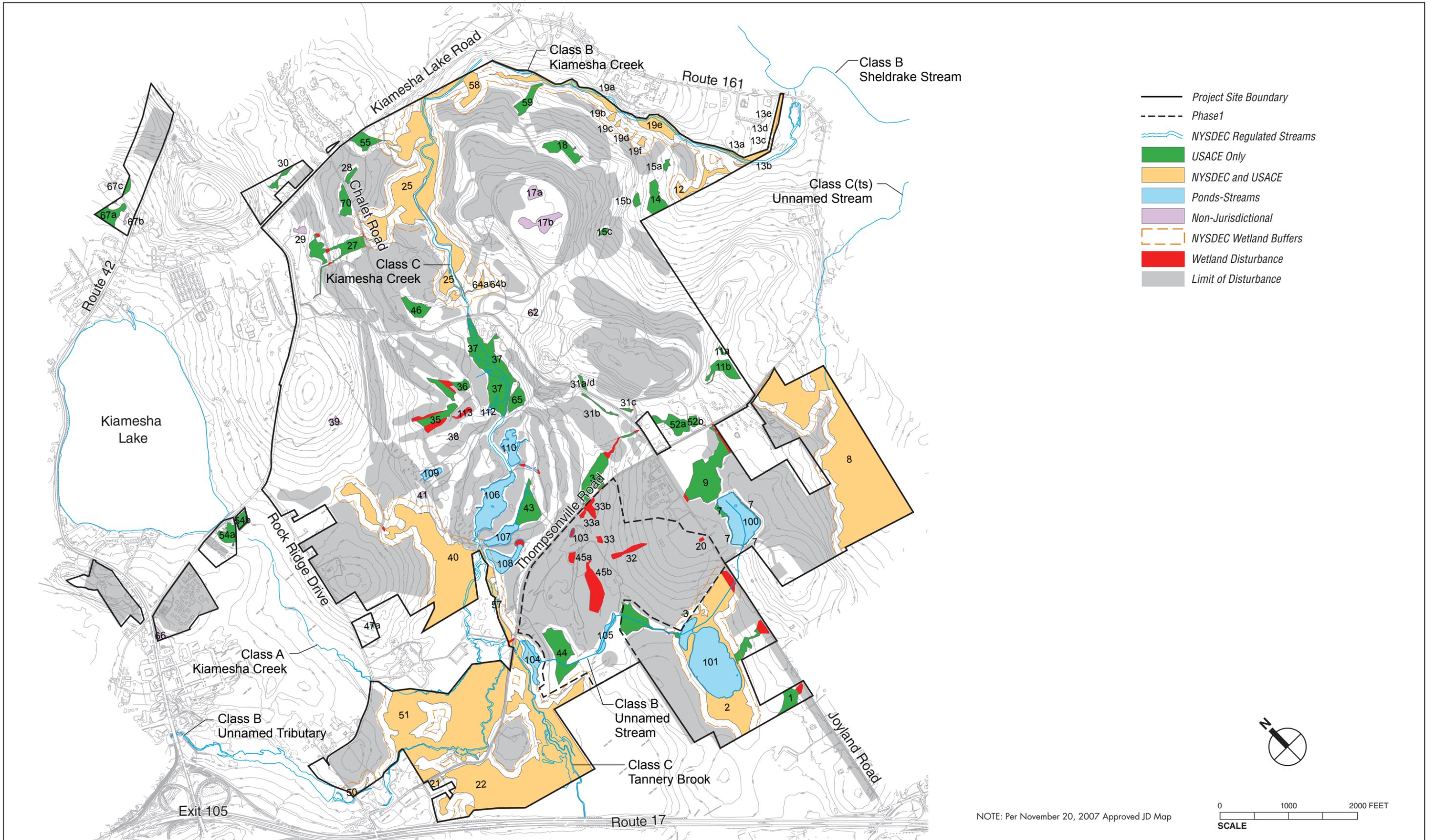
In total, 8.23 acres of regulated wetlands and waters is expected to be disturbed by the Proposed Project. This includes 6.4 acres of direct disturbance (fill) of vegetated wetlands, 0.67 acres of direct disturbance (fill) to unvegetated wetlands (golf course ponds), and 1.15 acres of hand-clearing of vegetated wetlands within the proposed Monster Golf Course to reduce the height of vegetation and facilitate golf course play-over areas.

Table 6-2
Proposed Wetland Disturbance by CDP Project Component

Wetland ID	Disturbed Acreage (Acres)	Project Component	Jurisdiction
103	0.14	Casino Resort - Phase 1	USACE
32	0.64	Casino Resort - Phase 1	USACE
33a	0.12	Casino Resort - Phase 1	USACE
33b	0.55	Casino Resort - Phase 1	USACE
45a	0.27	Casino Resort - Phase 1	USACE
45b	2.67	Casino Resort - Phase 1	USACE
1	0.20	Infrastructure/Access - Phase 1	USACE
2	1.11	Infrastructure/Access - Phase 1	NYSDEC and USACE
20	0.06	Infrastructure/Access - Phase 1	Non-Jurisdictional
34	0.28	Infrastructure/Access - Phase 1	USACE
57	0.04	Infrastructure/Access - Phase 1	NYSDEC and USACE
108	0.20	Golf Course	USACE
110	0.06	Golf Course	USACE
113	0.27	Golf Course	USACE
35	0.86	Golf Course	USACE
36	0.29	Golf Course	USACE
40	0.03	Infrastructure/Access - Future Development	NYSDEC and USACE
7	0.01	Infrastructure/Access - Lake Club Timeshare	USACE
9	0.31	Infrastructure/Access - Lake Club Timeshare	USACE
25	0.00	Infrastructure/Access - Residential Village	NYSDEC and USACE
27	0.10	Infrastructure/Access - Residential Village	USACE
31c	0.00	Infrastructure/Access - Residential Village	USACE
37	0.01	Infrastructure/Access - Residential Village	USACE
Total	8.23		
Notes: In addition, 7.5 acres of NYSDEC-regulated freshwater wetland buffer would be disturbed by the Proposed Project.			

Table 6-3
Proposed Wetland Disturbance Categories – Vegetated, Unvegetated, Hand-Clearing

Wetland Disturbance	
Direct Disturbance (fill) to Vegetated Wetland	6.40 acres
Direct Disturbance (fill) to Unvegetated Wetland (ponds)	0.67 acres
Hand-Clearing of Vegetated Wetland	1.15 acres
Total	8.23 acres



**Table 6-4
Proposed Wetland Disturbance by Wetland Type**

Wetland Type	Wetland Disturbance (acres)
S - Forested Red Maple	4.07
LGS - Forested Red Maple	0.00
R - Forested Red Maple	0.04
D - Forested Red Maple	0.06
S - Forested Hemlock	0.49
LGS - Forested Hemlock	0.00
R - Forested Hemlock	0.01
D - Forested Hemlock	2.88
S - Wet Meadow	0.00
D - Scrub/Shrub	0.00
LF - Scrub/Shrub	0.01
Open Water (Pond Unvegetated)	0.67
Total	8.23
Notes: S = Slope, LGS = Low-gradient slope, R = Riverine, D = Depressional, LF = Lacustrine fringe	

HAND-CLEARING OF VEGETATION IN WETLANDS

The proposed Monster Golf Course would be located on land areas that are currently occupied by the existing golf courses, interspersed with remnant pieces of wetland habitat in the lowlands in the valley of Kiamesha Creek. Design of the proposed Monster Golf Course has avoided wetland impact to the greatest extent feasible. However, rearrangement of the fairways to realize the new plan necessitates some wetland disturbance. This disturbance is primarily hand-clearing of vegetation to facilitate golf course play-over areas. Wetland vegetation, soils, and hydrology would be retained in these areas, allowing wetland functions to remain. As shown in the wetland disturbance Figure 6-4 and Table 6-2 above, a portion of several wetlands in five discrete areas within the proposed golf course would be hand cleared. This will consist of cutting the existing plant material to a height of 18-40” above existing grade, depending on the elevation of the tees at each location. Although these wetland areas would not be lost, these impacts to the vegetation would be mitigated as part of the overall wetland mitigation (wetland creation) plan for the Proposed Project. See “Mitigation” discussion below.

TEMPORARY AND INDIRECT WETLAND AND SURFACE WATER IMPACTS

Potential short-term indirect impacts are primarily soil erosion and sedimentation. To minimize the potential for these impacts to the greatest extent practicable, the installation and maintenance of an erosion and sediment control plan, in accordance with State and Federal requirements, will provide for the control and reduction of sediment discharge from site construction activities. As such, it is expected that these potential short-term indirect impacts will not have significant adverse impacts on jurisdictional wetlands.

Potential long-term indirect impacts to wetlands are primarily stormwater related. Potential increases in stormwater flows and stormwater pollutant loads could adversely impact jurisdictional wetlands and surface waters on and off the Project Site. To minimize the potential for these impacts, the stormwater management plan will use both water quality measures, such

as naturally vegetated swales, as well as standard stormwater features, infiltration, retention and detention facilities for example, as appropriate, in accordance with local, State, and Federal requirements. Indirect temporary impacts also may include those related to noise and activities visible from the wetland that could affect the use of the wetlands and adjacent areas by wildlife. Other indirect impacts may result from loss of wildlife species utilization of the wetlands that result from upland disturbances. The loss or minimization of use by some wildlife species may affect nutrient balances and organic matter decomposition of the wetland areas. Previous investigations conducted as part of the environmental review conducted for the CALP project did not identify any special concern, rare, threatened, or endangered wildlife species or habitats in the area of the Proposed Project.

AQUIFERS AND FLOODPLAIN IMPACTS

Groundwater pumped from wells on-site may be used as the source of drinking water for the Proposed Project. The availability of water supply on-site, its use by the Proposed Project, and potential impacts to groundwater resources from pumping and utilization of groundwater resources is discussed in Chapter 8, "Water Supply," and in the Hydrogeologic Assessment completed for the Proposed Project contained in Appendix F-3.

Based on the preliminary hydrogeologic assessment and water demand projections for the Proposed Project, it is expected that groundwater resources can be a viable source of drinking water to service the project in all phases without causing any detrimental effects to groundwater levels or wetland/water resources on the Project Site. Alternatively, drinking water supplies may be obtained from the Village of Monticello or the Kiamesha Artesian Water Company. Should on-site groundwater resources be pursued as the source of drinking water for the Project Site, pump testing would be undertaken to measure potential effects to on-site groundwater resources including the high-yielding unconsolidated aquifer (Principal Aquifer) mapped on the Project Site. For additional information on water demand and groundwater supply, see Chapter 8, "Water Supply."

Regarding flooding, all areas of the Proposed Project that will be constructed within the 100-year floodplain will be designed to conform to FEMA regulations to meet the National Flood Insurance Program and Chapter 140: Flood Damage Prevention of the Town of Thompson Code. As currently proposed, only non-habitable site improvements will be located within the 100-year floodplain, including the proposed golf course, improvements to existing roadways and stream crossings, stormwater facilities, and new utility connections to access the Town's sewage treatment facility. In addition, all improvements and grading for the proposed golf course placed within Special Flood Hazard Areas or within a designated Floodway will be built to prevent an increase in the surface elevation of the base flood. An engineering study attesting to the Proposed Project's conformity with floodplain regulations will be provided in final design documents for each phase of the project as part of Site Plan Approval.

As shown in Figure 6-2, the majority of the Proposed Project will be located outside the 100-year floodplain.

No adverse impacts related to downstream flooding, or damage caused on-site or off-site as a result of flooding, are expected to occur with the Proposed Project.

MITIGATION

Due to the need for direct and indirect wetland disturbance, the Proposed Project requires permit approval from the USACE pursuant to the Clean Water Act Section 404. As part of permit review and approval, the USACE requires that wetland disturbance be mitigated with the creation or restoration of wetlands as part of a wetland mitigation plan. **Table 6-5** presents the total acreage of wetland impacts and the mitigation acreage that may be required to be constructed on-site. Typically, mitigation for wetland disturbance must create more acres of wetland than would be disturbed in order to ensure that wetland functions and benefits equal or exceed pre-development conditions. For vegetated wetlands, a ratio of 2 acres of mitigation (created) wetlands for every 1 acre of wetland disturbed is contemplated. For unvegetated wetlands (ponds) and those wetlands that would be hand-cleared only, a mitigation ratio of 1 acre of mitigation wetland for every 1 acre disturbed is contemplated. Final mitigation ratios will be determined during the USACE and NYSDEC permitting processes required for disturbance of all State and Federally regulated wetlands.

**Table 6-5
Wetland Impacts and Mitigation**

Wetland Type	Wetland Impacts (acres)	Potential Mitigation Ratio*	Potential Acres of Mitigation*
Vegetated Wetlands	6.40	2:1	12.80
Unvegetated Wetlands (Ponds)	0.67	1:1	0.67
Hand-Clearing in Vegetated Wetlands	1.15	1:1	1.15
Total	8.23		14.62

Notes: * Mitigation ratios will be set by the USACE and NYSDEC.

ON-SITE WETLAND MITIGATION AREAS

In order to mitigate for the proposed wetland impacts, a wetland creation plan is proposed to create wetland habitat in areas of the existing golf course that would be unused with the Proposed Project. By creating one golf course in place of the two courses now existing on-site, a large quantity of lowland in proximity to Kiamesha Creek and its contributing drainageways is made available by the proposed plan. These areas have been examined by project ecologists and the USACE and found to be viable mitigation sites for wetland creation. The location of proposed mitigation sites is shown in **Figure 6-5**. In total, they comprise 36.7 acres, far exceeding the necessary mitigation acreage.

A potential primary wetland mitigation site that will achieve a majority of the necessary 14.62 acres of created wetland has been identified in the southern portion of the Project Site. This area of mitigation would encompass the majority of Hole #3 of the existing Monster Golf Course. This location was chosen because it is within the floodplain of Kiamesha Creek and exhibits proper hydrology for wetland establishment, yet is currently mowed lawn, offering little botanical diversity and limited benefits to stormwater, water quality, and wildlife habitat. In addition, because it is in proximity to Kiamesha Creek and the seasonal groundwater table, the chosen location minimizes the need for excessive excavation to achieve appropriate grade.

This wetland creation area is expected to be established concurrently with the development of Phase 1. By creating a large wetland mitigation area at the outset of the Proposed Project, the progress of the mitigation area can be monitored, adjusted, and refined with supplemental

plantings to ensure that it is functioning as a viable wetland and exhibiting all wetland parameters. As later phases of the project come on-line, the mitigation area has already been established and can be used as a “mitigation bank,” compensating for the incremental wetland encroachments that would come with small wetland crossings in future project phases. This approach was encouraged by the USACE during a pre-application meeting held in April 2012 and is the approach preferred by the Applicant. Although it requires a higher initial investment by the Applicant because all wetland impacts for the Proposed Project would be mitigated up front, it is the most conservative way to mitigate for wetland impacts and provides the greatest assurance of success. This primary wetland creation area was examined by an ecologist for the Applicant and the USACE on May 3, 2012. The USACE agreed that it offers a promising location for the creation of a large wetland mitigation bank to be used for offsetting wetland impacts required by the Proposed Project.

Additional potential mitigation areas have been identified within the floodplain of Kiamesha Creek within existing Monster Golf Course fairways and water features that will not be used in the proposed golf course. These are also shown in Figure 6-5. At present, the majority of golf course adjacent to the Creek contains manicured lawn up to the edge of shallow water features devoid of vegetation. This habitat offers no wetland functions and benefits other than minor stormwater storage during large storm events. With relatively minor adjustments to topography and grading, it is expected that the additional mitigation areas shown can be readily converted from maintained upland habitat or poorly functioning shallow ponded areas to fully vegetated, diverse wetland habitats.

All mitigation areas will be maintained as dedicated wetland mitigation areas, set aside with permanent restrictions to ensure they serve as wetland mitigation for the life of the Proposed Project.

WETLAND MITIGATION/CREATION IMPLEMENTATION

A conceptual sequence for wetland creation in the designated wetland mitigation areas is listed below. The following mitigation plan is expected to be revised/refined as the permitting process moves forward with input from the USACE and NYSDEC:

Installation of Erosion Control Devices

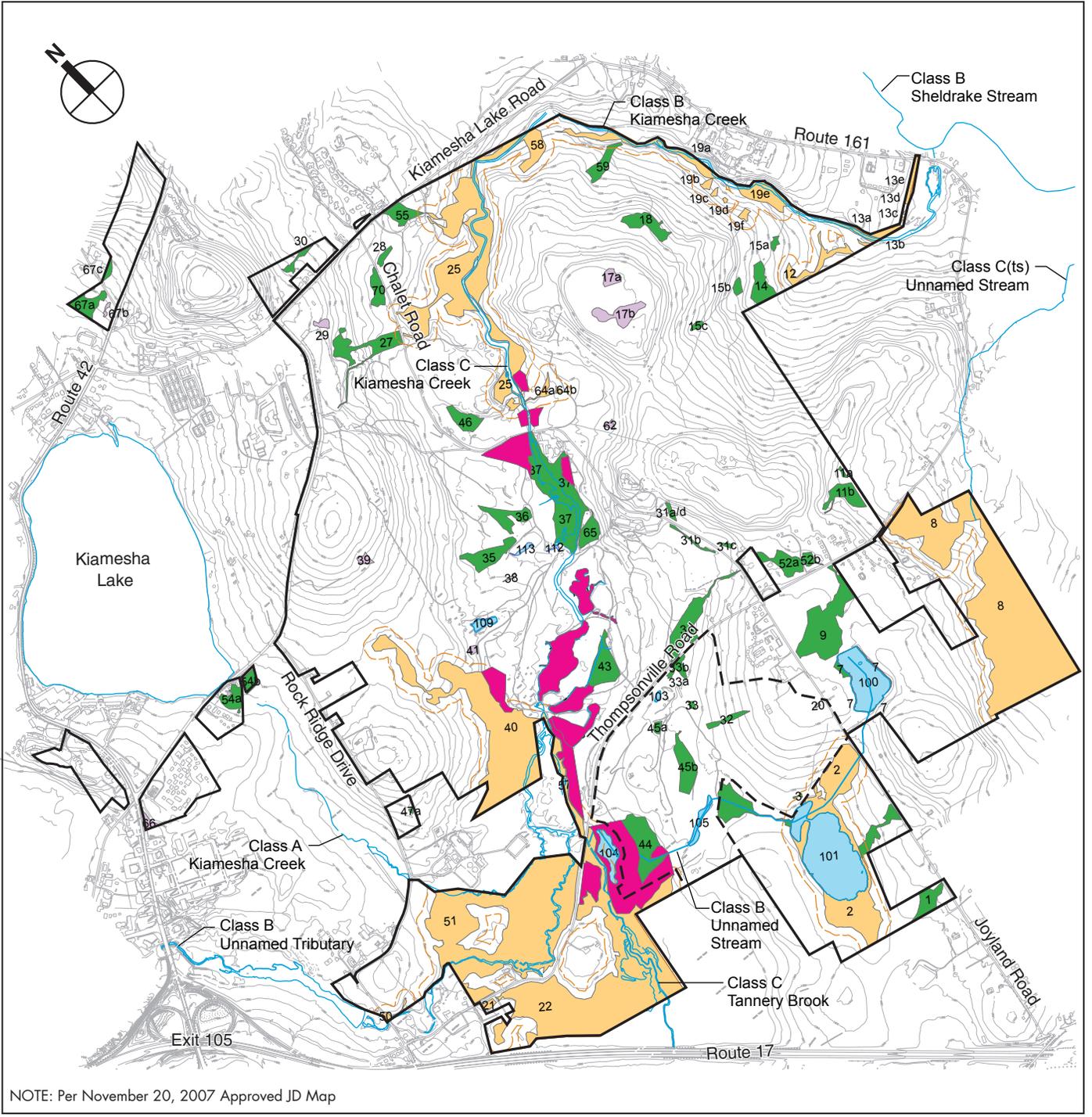
Erosion control devices comprised of silt fence will be installed between the wetland boundary and the proposed areas of wetland creation. This siltation barrier will remain in place until all proposed construction activities have been completed and all areas have been stabilized by vegetation.

Preparation of Replacement/Storage Area

The preparation of an area for wetland creation will involve removal of existing vegetation, excavation to appropriate sub-grades, and introduction of organic soils or loam topsoil as an appropriate planting medium.

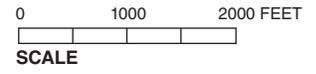
Provision of Wetland Hydrology

Successful establishment of wetland hydrology will be achieved by reducing the existing surface elevation in the mitigation area to intercept ground water. This will be carried out under the supervision of a qualified wetland ecologist. In addition, the mitigation area will be flanked by a surface water pond to the west and a perennial/intermittent drainageway to the east. These



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- NYSDEC Wetland Buffers
- Areas of Potential Mitigation



Wetlands and Waterbodies
Mitigation Areas
Figure 6-5

surface water features will be maintained by the existing golf course management and will be redirected to supplement the groundwater hydrology in the wetland mitigation area.

The on-site pond and drainageway adjacent to the mitigation area will be used to convey flows across the golf course to Kiamesha Creek in a manner that avoids inundation of the existing golf course. As such, they are ideal for use in providing hydrology to the mitigation area. In addition, these water features proximate to the mitigation area can be used for irrigation purposes, and may be supplemented with treated wastewater from the Town's sewage treatment plant. As highly "managed" water features lacking vegetation, they have been habitually modified for many years. As such, they offer fewer ecological resources and benefits than unmanaged surface waters. Their use as sources of hydrology for the mitigation area increases the likelihood of mitigation area success.

Introduction of Planting Medium (Hydric Soil or Loamy Topsoil)

Following the creation of the sub-grade, the area will be back-filled with approximately one foot of hydric soils (a commercially derived loam and peat mixture or soils from on-site). Alternatively, on-site loamy topsoil may be appropriate if there are non-desirable invasive seeds present in stockpiled hydric soils. Final grades are proposed to be similar to those within the wetlands.

Re-Vegetation of Replacement Area

The wetland mitigation area will consist of a level area, intercepting groundwater and inundated with supplemental surface water from the adjacent water features. As such, it presents a wide range of possibilities for creating a diverse, wetland habitat assemblage consisting of wet meadow areas, woody shrub swamp areas, and forested wetland areas.

Woody species to be planted within the proposed wetland replacement areas (obtained from local nursery stock, or salvaged from areas to be altered) will likely include such species as highbush blueberry (*Vaccinium corymbosum*), silky dogwood (*Cornus amomum*), speckled alder (*Alnus rugosa*), arrowwood (*Viburnum dentatum*), meadowsweet (*Spiraea latifolia*), and steplebush (*Spiraea tomentosa*). These species are common in existing wetland areas on-site. In addition, facultative wetland tree species, such as red maple (*Acer rubrum*), yellow birch (*Betula alleghaniensis*), American beech (*Fagus grandifolia*), and others, are expected to be included to create a wooded wetland area with multiple age cohorts and strata to increase plant diversity and improve wildlife habitat.

Portions of the mitigation area may be devoted exclusively to wet meadow areas, by increasing inundation depths and/or performing periodic maintenance (clearing). Herbaceous species will include native hydrophytic herbaceous and grass species. These will be initiated via seed, with a wetland seed mix (such as the New England Wet Mix) and will also be supplemented by the planting of live plugs of cespitose (bunch forming) perennial sedges, rushes, and grasses. This will result in a dense, herbaceous plant community dominated by wetland graminoids and forbs. Such species as fringe sedge (*Carex crinita*), bearded sedge (*Carex comosa*), manna grass (*Glyceria canadensis*), lurid sedge (*Carex lurida*), blue vervain, green bulrush (*Scirpus atrovirens*), woolgrass (*Scirpus cyperinus*), Joe-Pye weed (*Eupatorium maculatum*), chufa (*Cyperus esculentus*), hop sedge (*Carex lupulina*), boneset, and red top panic grass (*Panicum rigidulum*), cinnamon fern (*Osmunda cinnamomea*), sensitive fern (*Onoclea sensibilis*), Cardinal flower (*Lobelia cardinalis*), boneset (*Eupatorium perfoliatum*), blue vervain (*Verbena hastata*), and blue flag (*Iris versicolor*), and others will comprise the wet meadow habitat.

Monitoring and Stewardship

The success of the proposed wetland replacement activities will be monitored bi-annually for two years by a qualified field biologist. During the aforementioned monitoring visits, the biologist(s) will remove, by hand, any exotic species noted, including but not limited to purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites australis*). Furthermore, additional introduction of woody stock will be conducted should the biologist deem it necessary due to plant mortality. These activities are intended to encourage the establishment of native wetland plant species.

C. SITE-SPECIFIC DEVELOPMENT OF PHASE 1 (DEIS)

EXISTING CONDITIONS

The Phase 1 Site contains only vegetated wetlands and several surface drainage channels that connect these wetlands to Kiamesha Creek. It does not contain any perennial streams or rivers. Kiamesha Creek is the closest perennial watercourse and is located immediately west of the Phase 1 Site.

As shown in **Figure 6-6**, wetlands located within the Phase 1 Site include several sloped forested red maple wetlands, a depressional forested hemlock wetland, a depressional forested red maple wetland, and several open water ponds/water features within the existing golf course.

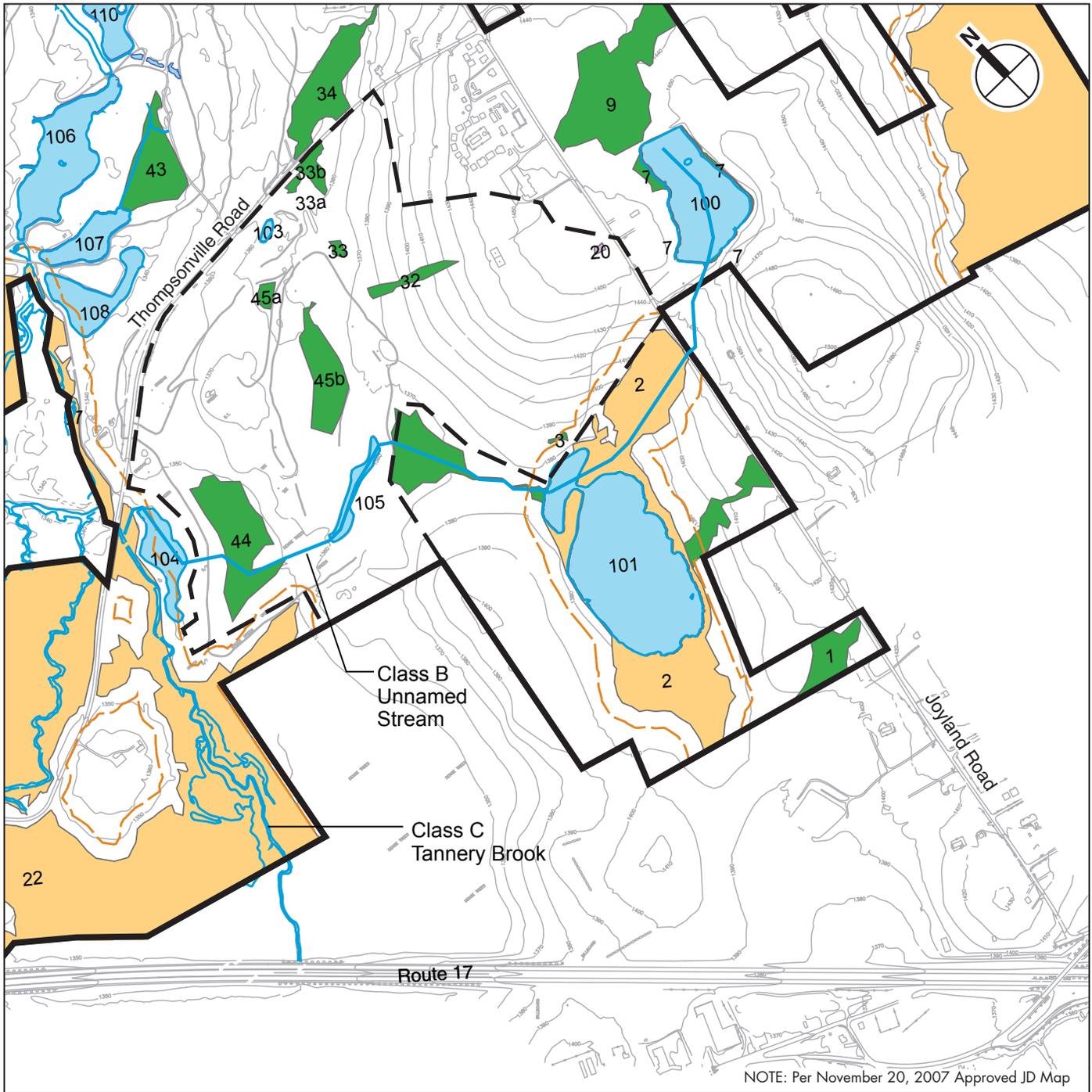
Most of these wetland areas are patches of wetland habitat located in the flat lower elevations of the Site adjacent to Kiamesha Creek. These wetland areas are surrounded by the existing golf course and consist of small forested areas that divide the fairways. The wetlands are interconnected by surface drainage features (ditches) and by culverts that drain the golf course and which eventually discharge downslope to the west towards Kiamesha Creek.

The majority of the Phase 1 Site is upland habitat, either Hemlock forest, Beech-maple forest, or Mowed lawn habitat in the existing golf course fairways. (See Chapter 5, "Natural Resources," for a discussion of habitat types and vegetation).

The Phase 1 Site is underlain by a Primary Aquifer. As described above, groundwater conditions within the Phase 1 area have been investigated by a geotechnical exploration and found to be variable across the Site, with frequent occurrence of saturated conditions suggestive of seasonally perched groundwater conditions. The groundwater elevations were found to be shallower (closer to the surface) within the lower, westernmost portions of the Phase 1 Site, closest to Kiamesha Creek and the existing golf course. For additional information on the geotechnical study, see Appendix C.

THE FUTURE WITHOUT THE DEVELOPMENT OF PHASE 1

In the future without the proposed development of Phase 1, the approximately 125-acre parcel would remain as an undeveloped forested area with several small wetlands and several surface drainage channels. The small portion of the Monster Golf Course that is included in the Phase 1 Site would be maintained as it currently exists. There would be no investment to improve the flooding conditions that exist on the Monster Golf Course.



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0 500 1000 FEET
SCALE

Phase 1 Wetlands and Waterbodies
by Jurisdiction
Figure 6-6

PROBABLE IMPACTS OF THE DEVELOPMENT OF PHASE 1

As shown in **Figure 6-7** and **Table 6-6**, several wetland areas would be disturbed for construction of buildings, parking, roadway improvements, and the racetrack in Phase 1. Specifically, direct wetland impacts (fill) are anticipated to occur at the following wetland areas:

- A 0.64-acre sloped forested red maple wetland (Wetland #32) will be filled for placement of the Casino Resort parking area.
- Two forested red maple wetland areas (Wetland #s 33A and 33B) totaling 0.67 acres will be filled for the roadway improvements (widening) of Thompson Road.
- A small 0.14-acre pond (unvegetated water feature – Wetland #103) within the golf course will be filled for placement of the racetrack.
- Two depressional forested hemlock wetlands, 0.27 and 2.84 acres (Wetland #s 45A and 45B respectively) in size, are located within the interior of the proposed harness horse racetrack. These two wetland areas will be cleared to facilitate viewing the race events. Due to their location, sustaining wetland vegetation and hydrology in these wetlands may not be possible. Therefore, they are included in the total wetland disturbance for Phase 1.

**Table 6-6
Phase 1 Wetland Impacts**

Wetland ID and Type	Direct Disturbance Acreage (fill)
Wetland #32 (Red Maple)	0.64 acres
Wetland #33A (Red Maple)	0.12 acres
Wetland #33B (Red Maple)	0.55 acres
Wetland #103 (Pond)	0.14 acres
Wetland #45A (Hemlock)	0.27 acres
Wetland #45B (Hemlock)	2.84 acres
Wetland #20 (Red Maple)	0.04 acres
Total	4.60 acres

Source: AKRF, Inc., 2012

Infrastructure to implement the Phase 1 project component includes the widening of Joyland and Thompsonville Roads, and construction of utility infrastructure including connection to the off-site Sewage Treatment Plant and construction of the potable drinking water well field and its distribution. In total, 1.42 additional wetland acres is expected to be filled for these infrastructure improvements, as shown in **Table 6-7** below. The majority of the Phase 1 Infrastructure wetland impacts are associated with the widening of the primary Project Site access road – Joyland Road.

**Table 6-7
Phase 1 Infrastructure Wetland Impacts**

Wetland ID and Type	Direct Disturbance Acreage (fill)
Wetland #1 (Red Maple)	0.20 acres
Wetland #2 (Red Maple)	1.09 acres
Wetland #34 (Red Maple)	<0.01 acres
Wetland #57 (Red Maple)	0.04 acres
Wetland #7 (Scrub/Shrub)	<0.01 acres
Wetland #9 (Red Maple)	0.08 acres
Total	1.42 acres

Source: AKRF, Inc., 2012

WETLAND AVOIDANCE AND MINIMIZATION

Due to the large size of Phase 1 and the many wetland areas that occur throughout the overall Project Site, there is no alternative location for the Phase 1 Site anywhere on the Project Site that would result in a reduction in wetland impacts while maintaining the development program needed for the success of the overall project. The primary wetland to be directly disturbed (filled) within Phase 1 for the Casino Resort complex and parking is a hillside seep wetland that derives its hydrology from the effluent of an abandoned water/septic filtration field that formerly served the seasonal community along Joyland Road within the Phase 1 Site. The other principal wetlands requiring disturbance in the Phase 1 Site are two hemlock dominated wetlands that will be located within the proposed harness horse racetrack. Although these wetlands will be cleared of vegetation and their wetland functions/values effectively lost, at present these wetlands are isolated, “islands” of wetland habitat surrounded by golf course fairways on all sides. As such, their vegetative diversity and wildlife habitat values are lower than the majority of wetlands elsewhere on the Project Site. By choosing the proposed location for development of Phase 1, wetland impacts have been avoided to the maximum extent practicable.

Many factors were considered when choosing the approximately 125-acre Phase 1 Site for the Casino Resort project component.

By linking the natural topographic forms of the EPT Concord Resort site with pre-existing drainage ways and infrastructure routings, prime development parcels were subsequently identified. These sites are comprised of forested hilltop sites with prime views of the Catskill Mountains and a stream valley with access to Kiamesha Creek. After a thorough investigation of the opportunities and challenges presented by each location, the most appropriate site for the Casino Resort lies within a 125-acre relatively flat parcel of the southeastern portion of the property, located between Thompsonville Road and Joyland Road. This was the site chosen for Phase 1.

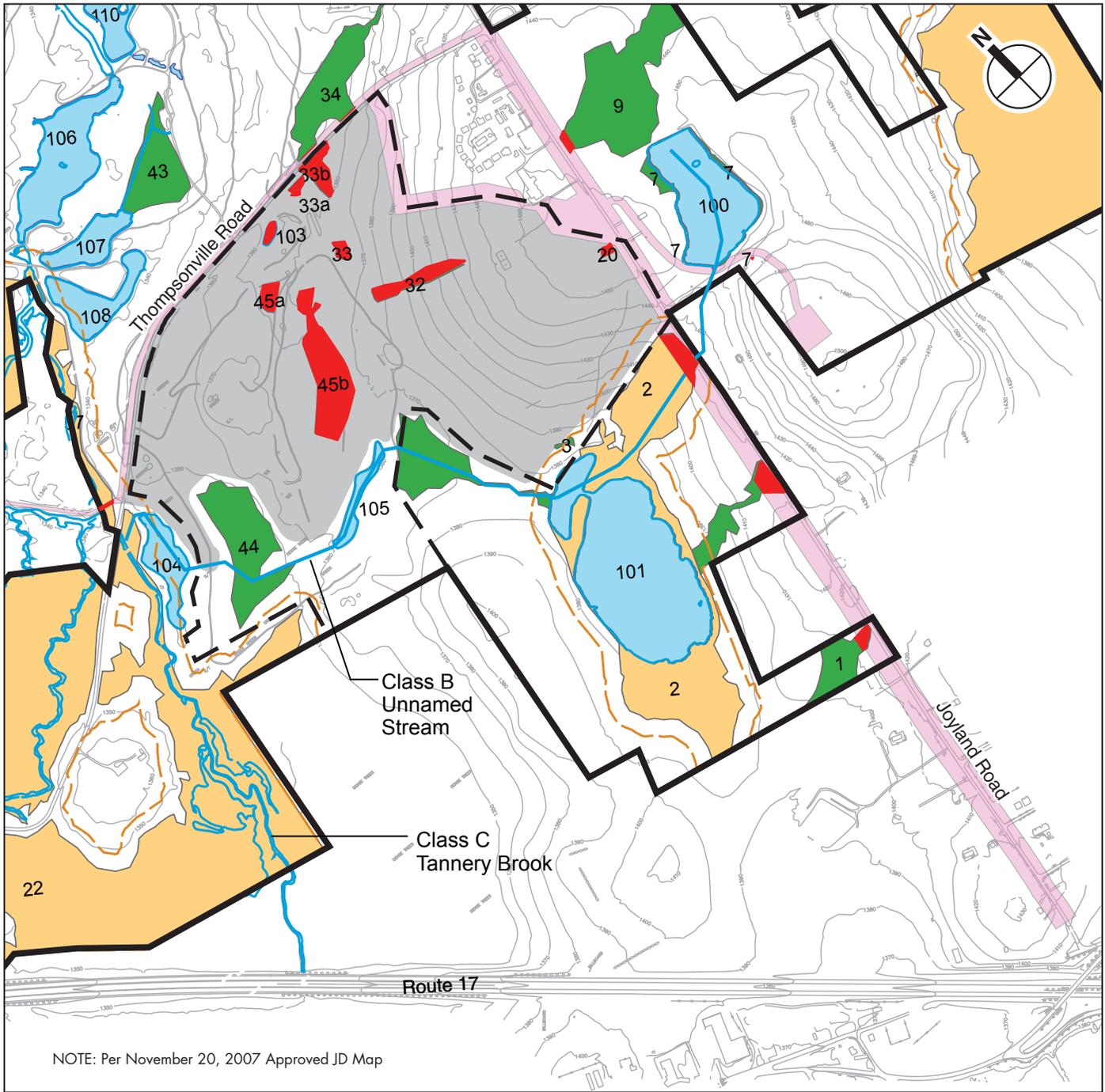
This parcel contains one of the largest contiguous swaths of flat land on the property and could readily accommodate both the Casino Resort program, consisting of the casino, hotel, harness horse racetrack, grandstand/showroom, simulcast facility, banquet event center, restaurants and related facilities, and structured and surface lot parking, along with the retail and dining components found in the Entertainment Village. The sloped land that leads from the hilltop down to Kiamesha Creek and the Monster Golf Course lends itself well to constructing the parking garage into the hillside, reducing the need for costly grading and retaining walls.

This location for the Casino Resort is also served by multiple access points, namely Exit 106 and Exit 107 off of NYS Route 17, as opposed to other possible sites which would be forced to rely on smaller roads less suitable for the increased traffic flow generated by casino visitation. The Exit 106 ramp connects to Joyland Road, which leads motorists north and into both the EPT Concord Resort property itself and to the main entrance to the Casino Resort. Exit 107, while a more circuitous route, provides an alternative access point along the recently re-paved Heiden-Thompsonville Road.

ALTERNATIVE SITES CONSIDERED FOR CASINO RESORT – PHASE 1

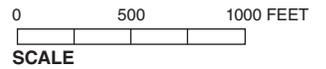
Sporting Club Site

The northeastern hilltop adjacent to Kiamesha Creek was also identified as a possible development site for the Casino Resort. However, upon further investigation, this land is more appropriate for a program with a lighter footprint on the land. With a large amount of flat land



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- Wetland Disturbance
- Phase 1 Disturbance
- Phase 1 Infrastructure Disturbance



Impacts to Phase 1 Wetlands and Waterbodies by Jurisdiction
Figure 6-7

required for the harness horse racetrack, the removal of the hilltop and associated wetlands would be required, eliminating the vibrant natural landscape that makes this piece of the property unique. Development of the Phase 1 program in this area could result in wetland disturbance similar to that under the preferred location.

The Sporting Club that is currently proposed on this site will be thoughtfully merged with the surrounding forested environment and will provide connections to hiking and walking trails throughout the Club and across the entire EPT Concord Resort property. With its proximity to Kiamesha Creek and the former Concord Ski Area, planned as a tubing and biking hill, this particular site naturally lends itself to promoting a wide variety of outdoor pursuits, rather than a Casino Resort.

Residential Village Site

The stream valley to the west of Kiamesha Creek was considered as a second alternate location for the Casino Resort. Apart from the impracticability of accommodating the casino and harness horse racetrack program into the site's steeper topography outside of the existing wetland areas, this location is better suited for a more 'local' use relating back to the Town of Thompson. Development of the Phase 1 program in this area could result in wetland disturbance similar to or greater than under the preferred location.

Since this land is situated near other local uses, the Residential Village, currently proposed in the EPT Concord Resort Comprehensive Development Plan, would provide a stronger relationship to the commercial retail along NYS Route 42 than the Casino Resort. Kiamesha Lake Road, with only one travel lane in either direction, can more readily handle local traffic rather than the high volumes that locating the Casino Resort and accompanying Entertainment Village here would bring. This area should be used to serve the residents of the Town and the Proposed Project and does not make for an ideal resort destination.

Family Resort Hotel Site

A third site that was previously considered was the hilltop directly across Thompsonville Road from where the Casino Resort and Entertainment Village are currently located in the CDP. Due to the lack of an adequate expanse of level land, there is not sufficient flat area to locate proposed roadways or structures outside of the waterbodies and wetlands and the removal of the hilltop would be required. Therefore, development of the Phase 1 program in this area would require a higher impact on the site and necessitate significant grading to accommodate all of the casino uses.

An additional disadvantage to this site is that both Thompsonville Road and the out-parcel located at the northeast corner of the intersection of Thompsonville and Joyland Roads sever the Entertainment Village from the Casino Resort. There is simply not enough land north of Thompsonville Road to include both development programs, and the synergy created by having these two uses side by side would be lost. When visitors are able to move freely from the casino to the Entertainment Village, it not only creates internal trips, therefore reducing the overall number of vehicles traveling within the site, it produces a unique guest experience and fosters the development of the EPT Concord Resort as a destination and an exciting center of activity.

Alternative Arrangement of Structures for the Casino Resort

As described in detail in Chapter 19, "Alternatives," two arrangements of buildings were considered in detail for the Casino Resort and Entertainment Village at the intersection of

Thompsonville Road and Joyland Road. Figures depicting these alternatives are provided in Chapter 19. Compared with the Proposed Project, if the Casino Resort and Entertainment Village were to be located predominantly east of Joyland Road, as shown in Figures 19-1 and 19-2, there would be equal or greater wetland disturbance than the preferred option. This is due to the greater prevalence of wetlands east of these roads. Therefore, from a wetland impact perspective, these alternatives are not preferred. In addition, the building arrangements presented in these alternatives are not preferred for other reasons. These include the lack of a contiguous development area to encourage a pedestrian friendly environment, increased impacts to soils and topography from grading, and traffic/circulation constraints.

AQUIFERS AND FLOODPLAIN IMPACTS

The availability of water supply on-site, its use by the Proposed Project, and potential impacts to groundwater resources from pumping and utilization of groundwater resources is discussed in Chapter 8, “Water Supply,” and in the Hydrogeologic Assessment completed for the Proposed Project contained in Appendix F-3.

Based on the preliminary hydrogeologic assessment and water demand projections for the Proposed Project, it is expected that groundwater resources are a viable source of drinking water to service the project in all phases without causing any detrimental effects to groundwater levels or wetland/water resources on the Project Site. Alternatively, drinking water supplies may be obtained from the Village of Monticello or the Kiamesha Artesian Water Company. Should on-site groundwater resources be pursued as the source of drinking water for the Project Site, pump testing would be undertaken to measure potential effects to on-site groundwater resources including the high-yielding unconsolidated aquifer (Principal Aquifer) mapped for the Project Site. For additional information on water demand and groundwater supply, see Chapter 8, “Water Supply.”

Regarding flooding, the vast majority of the Phase 1 Site improvements are located outside of the 100-year floodplain boundary. All areas of Phase 1 that will be constructed within the 100-year floodplain will be designed to conform to FEMA regulations to meet the National Flood Insurance Program and Chapter 140: Flood Damage Prevention of the Town of Thompson Code. Improvements proposed within the 100-year floodplain include regrading for stormwater facilities, and minor roadway and utility improvements. No habitable structures are proposed within the 100-year floodplain boundary. An engineering study attesting to the Proposed Project’s conformity with floodplain regulations will be provided in final design documents for each phase of the project as part of Site Plan Approval.

As shown in Figure 6-2, the majority of Phase 1, including all habitable structures, will be located outside of the 100-year floodplain.

No adverse impacts to downstream flooding, or damage caused on-site or off-site as a result of flooding, are expected to occur with the Phase 1 project component.

MITIGATION

Wetland mitigation for the development of Phase 1 would be undertaken concurrently with the overall Comprehensive Development Plan wetland mitigation as described above. *