5 Unavoidable Adverse Environmental Impacts

Some of the potential environmental impacts of the proposed project cannot be prevented or reasonably avoided. This section describes the unavoidable impacts that might occur as a result of the implementation of one of the alternatives set forth in Section 6 in this Belleayre Mountain UMP which provide for further modernization, improvement and expansion of the facility.

5.1 Construction Phase

Construction activities inevitably result in temporary impacts including: visual, noise, vibrations, dust, fumes and odors.

During construction, while vegetation is disturbed there is an increased risk of erosion during stormwater events and a resulting adverse impact in surface water quality. As a result, the water quality in the adjacent streams may be impacted during the course of construction due to possible erosion of excavated areas. The implementation of the Stormwater Pollution Prevention Plan (SWPPP) as detailed in Section 4.2.2.2 and outlined in Appendix E will minimize these impacts.

Construction will involve clearing of vegetation for the construction of trails, parking areas and other proposed facilities. Clearing results in habitat loss that could increase runoff and adversely impact wildlife. (See Section 4 for a full explanation of the Environmental Setting, Potential Impacts and Mitigation Measures, and specifically Section 4.3 for Surface Waters including Aquatic Habitat and Section 4.5 Terrestrial and Aquatic Ecology) While there will be tree cutting required for ski trails, tree cutting is minimized to the extent feasible and the footprint of the proposed trails are within State constitutional limits. Careful planning has included the use of some already existing ski trails at the site of the former Highmount Ski Area to further minimize tree cutting.

There may be an impact to air quality during construction, however, this potential impact will be temporary and will be minimized to the extent practical by implementing measures indicated in the analysis of the Environmental Settings, Potential Impacts and Mitigation Measures related to air quality found in Section 4.8.

Although noise impacts associated with construction are temporary in nature, these impacts may be mitigated but cannot be avoided. As discussed in Section 4.10.5 proposed noise mitigation measures may be implemented during construction so that there are no significant impacts on residences or wildlife.

5.2 Operational Phase

There will be an increased use of groundwater resources for potable water supply. The projected use will be well within the allowable yield of the existing well supply, and will not result in damage to the groundwater aquifer. The inclusion of water conservation measures at existing and proposed facilities will minimize the increase in water use.

Wildlife may be impacted as a result of permanent removal of vegetation. As previously stated, tree cutting required for the construction of new ski trails and other facilities is within constitutional limits, and careful planning includes the use of already existing ski trails at the site of the former Highmount Ski Area to minimize disturbance.

Although the new ski trails will be visible from several publically accessible vantage points, there will be no significant negative visual impact due to this project, as the new ski trails are adjacent to the existing trails and do not represent a significant change to the visual character of the mountainside.

Increased attendance and operational activities as a result of the project will cause an increase in peak hour traffic. Increased traffic will be minimized to the extent practical by pursuing incentives for carpooling and using mass transit.

While there will be a short term impact due to construction, the long term noise impacts resulting from the continued operations of the Ski Center is insignificant.

Although carbon dioxide emissions will increase, the Green House Gas analysis indicates that there will be no negative impact to climate change as a result of this project.

6 Alternatives

This Section 6 describes and evaluates several alternative plans beginning with the proposed Full Build-Out plan, the West Alternative and the Core Alternative. The remaining alternatives include Classification Alternative, East Alternative (Conceptual Only), and the No Action Alternative. Alternatives were developed and evaluated to minimize or avoid environmental impact. Development of any particular alternative in the UMP which includes the construction of new infrastructure is contingent upon fiscal appropriation and availability of funding.

6.1 Full Build Out Alternative

The Belleayre Mountain Ski Center UMP/DEIS describes the details of the proposed projects set forth in the Full Build-Out alternative which would provide for the expansion and modernization of the Belleayre Mountain Ski Center in an effort to fulfill the public need for the development and management of the Ski Center consistent within the Constitutional limitations. In a broader sense, this goal includes managing the ski area in a manner which insures protection of the natural resource base and the forever wild nature of the Catskill Park while, at the same time, offering public recreational opportunities for leisure time enjoyment and supporting the economy in the region which may result in increased job creation. Finally, the Full Build-Out alternative was selected due to the fact that the resultant skiable terrain best balances the mix of available trails by degree of difficulty to meet current industry standards.

The construction schedule for the Full Build-Out alternative can be found in Section 3.7 related to *Phasing and Scheduling* in Table 3.7-1. This alternative is expected to have the largest impact to the environmental setting of the facility and site disturbance. However, it is important to note that the construction schedule will be affected by factors such as actual public attendance, acquisition of the site of the former Highmount ski area and the availability of funding. Each of these may have an impact on the actual future phasing schedule. For instance, Table 3.7-1 UMP Project Schedule indicates that the first parking facility is scheduled to be built in year 2 and subsequent facilities in years 3 and 4. However, as a result of the actual need which may fluctuate due to the availability of public transportation and the level of development at the Ski Center, the Facility Operator may determine that only one parking area is required at any given point in time, and there is not an immediate need to construct the additionally proposed lots.

6.2 West Alternative

The West Alternative Plan is shown on the UMP Drawing G4.2. In comparison to the Full Build-Out plan, the West Alternative does not include the acquisition of the site of the former Highmount ski center and the proposed development of the associated lift and trails, the Tomahawk Lodge, and the East Parking Lots. The West Alternative includes the construction of the following facilities:

Lifts

- Discovery Lift
- Belleayre West Lift
- Novice Lift Replacement
- Beginner Lift Replacement

Trails

- West Trails
- Deer Run Extension w/ Skier Bridge

Guest Services Buildings

- Discovery Lodge Expansion
- Sunset Lodge Expansion
- Overlook Public Assembly Area
- Information Booth

Parking

- Upper Discovery Parking
- North Parking

Infrastructure

- Snowmaking Pond
- Snowmaking Piping
- Lower Pumphouse
- Main Compressor Building
- Primary Electric Replacement
- Modify Existing Pumphouses
- Salt Storage Building

6.3 Core Alternative

The Core Alternative Plan is shown on the UMP Drawing G4.3. In comparison to the Full Build-Out plan, the Core Alternative does not include the Highmount Lift and Trails, West Lift and Trails, Tomahawk Lodge, Sunset Lodge Expansion, East Parking Lots, and North Parking Lots. The Core Alternative includes the construction of the following facilities:

Lifts

- Discovery Lift
- Novice Lift Replacement
- Beginner Lift Replacement

Trails

- Deer Run Extension w/ Skier Bridge

Guest Services Buildings

- Discovery Lodge Expansion
- Overlook Public Assembly Area
- Information Booth

Parking

- Upper Discovery Parking

Infrastructure

- Snowmaking Pond
- Snowmaking Piping
- Lower Pumphouse
- Main Compressor Building
- Primary Electric Replacement
- Modify Existing Pumphouses
- Salt Storage Building

6.4 Classification Alternative

The Classification Alternative proposes for the classification of approximately 263 acres acquired by the State as part of the Big Indian acquisition, and the reclassification of approximately 163 acres from the southerly corner of the Intensive Use Area to a wilderness classification and as an addition to the Big Indian Wilderness Area. Any future development proposed for these newly classified lands is subject to an amendment to the existing UMPs for the respective management plans and related environmental review.

6.5 East Alternative (Conceptual Only)

The East Alternative (Cathedral Glen) is conceptual in nature, and would require a UMP amendment and further review under the State Environmental Quality Review Act prior to implementation. In the advent that the land required for the Full Build-Out plan cannot be acquired, the trails proposed for the former Highmount Ski area could be developed on lands currently owned by the state situated to the east of the existing Belleayre Mountain Ski Center. In this plan, the East Lift and trails would be constructed in place of the Highmount Lift and Trails. This conceptual alternative could be developed into a plan that would provide approximately the same overall ski area carrying capacity as in the Full Build-Out plan. The guest services buildings, parking, and general infrastructure would be the same as in the Full Build-Out plan.

6.6 No Action Alternative

The no action alternative involves operating the ski center "as is" without providing any new improvements, modernizations or expansions.

The no action alternative would have a negative impact on the enjoyment, reliability and safety of the skiing public. Without upgrading the infrastructure with more efficient equipment, the infrastructure, such as the lifts, snowmaking equipment, water supply pumps or lighting may become unreliable. If equipment is not reliable, and breaks down, the waiting time to get on a lift or find a seat in the lodge may increase, thereby further reducing the enjoyment and positive experience of the public while skiing at Belleayre, and will ultimately deter the skiing population. As the number of skier visits declines, revenue will be lost which could result in personnel layoffs and a continuing down spiral of the Ski Center until it becomes uneconomical for the facility to remain in operation.

The no action alternative would result in little up front capital construction costs, however, if no action is taken, existing equipment will continue to deteriorate, and many skiers may chose to ski at more modern and better maintained ski areas that provide improved amenities. Over time, this choice could be expected to result in declining revenues for the ski area. The lack of replacement of certain lifts and infrastructure could also be expected to result in unreliable operation, safety

concerns, and higher operational costs – akin to any situation where capital facilities are not updated and properly maintained. Relatively higher emissions from diesel powered snowmaking equipment and the associated burden of maintaining petroleum bulk storage to store the fuel for this equipment will continue, which also means higher energy costs for the facility.

6.7 Comparison of Alternatives

Table 6.5-1 below summarizes some of the key operational statistics of the Full Build-Out Plan and the other Alternative Plans as compared to the No Action Alternative. The No Action Alternative represents no change to the existing conditions. Table 5.5-1 below indicates the change and increase resulting from each respective alternative. The Table 5.5-2 chart reflects the total values after construction is completed of the improvements included in each respective alternative plan.

Plan	Increase to Existing Ski Trail & Connector Length (mi)	Increase in Existing Skiable Area (ac)	Increase to Existing Trail & Lift Capacity	Increase to Existing Guest Services Building Capacity	Increase to Parking Capacity
Full Build-Out	5.3	46.5	3093	4440	4498
West Alternative	2.4	23.7	1976	4090	3940
Core Alternative	0.4	2.8	518	3840	3390
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	-	-	-	-	-
No Action Alternative or Classification Alternative	0	0	0	0	0

Table 6.5-1 Increase to Existing Facility Statistics of Alternative Plans

Plan	Additions Ski Trail & Connector Length (mi)	Skiable Area (ac)	Trail & Lift Capacity	Guest Services Building Capacity	Parking Capacity
Full Build-Out	23.1	193.1	8691	8940	8998
West Alternative	20.2	170.3	7574	8590	8440
Core Alternative	18.2	149.4	6116	8340	7890
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	-	-	-	8940	8998
No Action Alternative (existing conditions) or Classification Alternative	17.8	146.6	5598	4500	4500

Table 6.5-2 Comparison of Total Facility Statistics after Construction Proposed in Alternative Plans

The following charts, identified as Table Nos. 6.5-3 to 6.5-16 below summarize key environmental impacts of the Full Build-Out and Alternative Plans:

Plan	Tree Cutting (ac)	Earthwork Cut (cys)	Earthwork Fill (cys)	Sewer & Water Peak (gpd)
Full Build-Out	101	223066	231180	60000
West Alternative	82.6	199978	213309	57000
Core Alternative	48.7	181833	199106	53500
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	Unknown	Unknown	Unknown	60000
No Action Alternative or Classification Alternative	0	0	0	38000

Table 6.5-3 Impact Statistics of Alternative Plans

Plan	Land Use & Community Character
Full Build-Out	The expansion to the Belleayre Mountain Ski Center is compatible with local and regional communities' land use and character and would not be expected to preclude existing uses or planned uses in the vicinity of the land use study area. Additionally, the proposed Project facilities have been carefully planned to support the existing ski center and therefore would not be expected to have a significant impact on the current land use and zoning of the land use study area. There will be no change to the land use, zoning, and community character of the land use study area. The project is consistent with the overall goal of the Comprehensive Plans of the Towns of Middletown and Shandaken and Villages of Margaretville and Fleishman's. See Section 4.1 Land Use and Community Character
West Alternative	Consistent with Full Build-Out
Core Alternative	Consistent with Full Build-Out
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	No anticipated additional impact

Table 6.5-4 Comparison of Impacts to Land Use & Community Character by Alternative

Plan	Geologic and Topographic Resources
Full Build-Out	Disturbance of soil on steep slopes for the creation of 5.3 miles of trails and connectors, and the disturbance of land for parking areas, has the potential for impact for run-off and off-site sedimentation. The construction of erosion and sediment control features such as silt fences, sand filters, catchment basins, and the fact the project's stormwater quality design system is subject to water quality controls in accordance with NYS DEC SPDES Individual Permit For Stormwater Discharges Associated with Construction activities will minimize impacts associated with the topography of the project area and potential erosion
West Alternative	Less of a potential impact due to a reduction in proposed additional trails and connectors from 5.3 miles to 2.4 miles and a reduction in impact from parking construction capacity compared to Full build out
Core Alternative	Less of a potential impact due to a reduction in proposed additional trails and connectors from 5.3 miles to.4 miles and a reduction in impact from parking construction capacity, compared to both the Full build out and the West Alternative
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	No anticipated additional impact

Table 6.5-5 Comparison of Impacts to Geologic and Topographic Resources by Alternative

Plan	Surface Waters
Full Build-Out	Ski area plans call for improvements that may have an impact on surface waters and aquatic habitats. During construction runoff from stormwater may impact receiving waters. The proper design and implementation of a Stormwater Pollution Prevention Plan (SWPPP) will minimize the potential of erosion during construction and treat stormwater runoff from proposed impervious areas to minimize potential impacts to receiving surface waters. During the operational stage, water to be used for snowmaking during a typical year will increase from 155 MG to 206 MG, an increase of 34%. To meet this additional water demand it is proposed to increase the volume of withdrawal of surface water from the existing Pine Hill Lake. Mitigation of potential impacts to surface water includes increasing the minimum pass-by flows in Birch Creek at Pine Hill Lake from 5 cfs to 8 cfs, to improve stream habitat. Plans for snowmaking at the Belleayre site would require the diversion of Birch Creek to Pine Hill Lake and Crystal Spring Brook into a proposed Lower Reservoir. Both these diversions have been compared with historical base flows to assure that the removals are in compliance with minimum base-flow requirements. The impacts on the temperatures of the streams and water quality were also evaluated. These potential impacts were determined to not be significant.
West Alternative	Less potential impact to surface waters during construction due to reduced stormwater runoff compared to full build-out,. This includes the elimination of the East Parking Lot and construction associated with this infrastructure.
Core Alternative	Less potential impact to surface waters during construction due to stormwater runoff compared to full build-out and the West Alternative
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	There will be no construction that creates stormwater runoff causing surface water impacts. However, the beneficial impacts of increasing the minimum pass-by flows in Birch Creek, and the attenuating effects on the flow in Crystal Brook due to the proposed snowmaking reservoir would be eliminated.

Table 6.5-6 Comparison of Impacts to Surface Waters by Alternative

Plan	Groundwater Resources
Full Build-Out	Existing groundwater wells supply potable water for the Belleayre facility. The capacity of the existing wells is sufficient to meet the increased demand of the proposed expanded facility.
West Alternative	Less carrying capacity would result in slightly less use of groundwater for potable water supply.
Core Alternative	Less carrying capacity would result in slightly less use of groundwater for potable water supply.
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	Less carrying capacity would result in a reduction in demand for groundwater for use as a potable water supply

Table 6.5-7 Comparison of Impacts to Groundwater Resources by Alternative

Plan	Terrestrial and Aquatic Ecology
Full Build-Out	During field investigations, no federally or state listed endangered or threatened plant or animal species, species of concern, or critical habitat were identified. During field investigations, no endangered species of birds were identified. The project will result in some temporary and permanent impacts on the terrestrial and aquatic ecology of the Project Area. These impacts will primarily be the result of clearing vegetation and grading necessary to build ski lifts and trails, buildings, and parking lots. The potential impacts have been minimized/ mitigated by careful placement of planned facilities to avoid and buffer sensitive areas. Existing ski trails at the former Highmount Ski Area are going to be used to the extent practical to minimize the clearing of forest areas for new trails.
West Alternative	Potential impacts due to clearing vegetation and grading would be reduced compared to the Full build Out. Tree cutting area would be reduced from 101 acres to 82.6 acres.
Core Alternative	Potential impacts due to clearing vegetation and grading would be reduced compared to Full Build-Out and the West Alternative. Tree cutting area would be reduced from 101 acres for full build out to 48.7 acres.
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	Potential impacts due to clearing vegetation and grading would be eliminated.

Table 6.5-8 Comparison of Impacts to Terrestrial and Aquatic Ecology by Alternative

Plan	Traffic
Full Build-Out	All of the analyzed roadway segments are estimated to operate at LOS D for the conditions analyzed using criteria set forth in the Highway Capacity Manual 2000 published by the Transportation Research Board. Descriptions of the LOS criteria can be found in Appendix AD. It is estimated to operate at LOS E for the Build condition, during the peak hour of the peak day. However, it still operates with reserve capacity, and delay during off peak hours is expected to be much less. No improvements are recommended. For the year of opening, it is recommended that a right-turn lane be installed on the northbound approach of CR 49A to NY Route 28. This will bring operations to the same level as the No-Build condition. It is also recommended that event management strategies are implemented to help control and direct traffic during the peak hour. An expanded shuttle service and transit services to BMSC could also reduce the impacts to the Project Area intersections.
West Alternative	Reduced trail and lift capacity of 8590 compared to 9940 for the Full Build-Out alternative would result in a potentially lower peak hour traffic volume
Core Alternative	Reduced carrying capacity of 8340 compared to both the Full Build-Out and West Alternative would potentially result in a slightly lower peak hour traffic volume compared to Full Build-Out and the West Alternative
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	No increase in trail and lift capacity would result in lower peak and non-peak hour traffic volume compared to Full Build-Out

Table 6.5-9 Comparison of Impacts to Traffic by Alternative

Plan	Visual Resources
Full Build-Out	The proposed changes to BMSC will be blocked from view by topography and vegetation from most locations within the study area. Seasonal changes in vegetation will often prevent viewers from recognizing built structures from locations where visibility is possible. The proposed additional ski slopes, similar to the existing ones, will be visible from some locations in the winter months due to the white groomed snow providing a high contrast with the forested areas of the Mountain. Since Belleayre currently includes existing ski slopes and the new slopes are of similar length and width, there will be a cumulative impact, however, the proposed expansion of trails is compatible with the existing visual resource conditions. Access to and public enjoyment of surrounding historical, recreational, and commercial land uses will not be impacted by the visual character or visibility of the Project.
West Alternative	Compared to the Full Build-Out, and with the elimination of the Highmount Lift and Trails, Tomahawk Lodge and the East Parking Lots, there will be less visibility and potential aesthetic impact associated with the proposed changes.
Core Alternative	Compared to the Full Build-Out, and the West Alternative and with the elimination of the west lift and trails, sunset lodge expansion and North Parking Lot, there will be less visibility and potential aesthetic impact associated with o the proposed changes.
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	No additional impact on visual resources

Table 6.5-10 Comparison of Impacts to Visual Resources by Alternative

Plan	Air Quality
Full Build-Out	The air quality in the vicinity of the project would be impacted by the increase in air emissions caused by additional vehicular traffic , increased space heating equipment, and temporary impacts from construction. Construction emissions can be mitigated using best management practices. Impacts from operations currently are mostly from diesel air compression equipment that will be removed and replaced with electric motor- driven air compression equipment, thus lowering emissions. Emissions from the space heating additions are very minor and do not require a detailed analysis. The CO screening-level microscale mobile source air quality analysis indicates that the proposed project will not cause traffic changes requiring a detailed microscale modeling analysis. As a result of passing the screening-level test, traffic associated with the project will not cause exceedances of air quality standards.
West Alternative	Compared to the Full Build-Out,, the likelihood of impact from emissions associated with vehicular traffic and construction would be reduced and will not exceed air quality standards
Core Alternative	Compared to the Full Build-Out, and the West Alternative the likelihood of impact from emissions associated with vehicular traffic and construction would be reduced and will not exceed air quality standards.
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	No Impact of emissions due to increased vehicular traffic. No impact of emissions during construction. However, the positive impact of reducing emissions during operation by elimination of diesel powered snowmaking equipment would be eliminated in the No Action Alternative.

Table 6.5-11 Comparison of Impacts to Air Quality by Alternative

Plan	Climate Change
Full Build-Out	Assessment of GHG emissions indicate that as a result of the project Direct emissions (on-site fuel combustion) of GHGs will be reduced from 3,651 to 661 metric tons/year of Carbon Dioxide Equivalent. Indirect emissions (electric consumption, visitor and employee travel, and landfill waste) of GHGs as a result of the project are estimated to increase from 4,075 to 6,918 metric tons/year of Carbon Dioxide Equivalent. Overall Total emissions of GHGs (Direct + Indirect) as a result of the project will be reduced from 7,671 to 7,482 metric tons/year.
West Alternative	Compared to the Full build out, GHG emissions would be reduced due to a smaller skiable area and a reduction in associated snowmaking. The Skiable area would be reduced from 193.1 acres to 170.3 acres.
Core Alternative	Compared to the Full Build-Out and West Alternative, GHG emissions would be reduced due to a smaller skiable area and a reduction in associated snowmaking. The skiable area would be reduced to 149.4 acres.
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	GHG emissions associated with snowmaking will be unaffected since the conversion of diesel driven snowmaking equipment to electrically driven equipment will not occur.

Table 6.5-12 Comparison of Impacts to Climate Change by Alternative

Plan	Noise
Full Build-Out	During the construction phase, maximum noise impacts from construction vehicle traffic are expected to occur along CR 49A because of the proximity of residences and relatively low volumes of existing traffic. The residences near the Green Hill Road and Old Schoolhouse Road monitoring locations will experience some nuisance-level noise in daytime during the construction phase of the new parking lots. Construction vehicles would be using the road during the construction season and during daytime periods only. During operations, the expanded snowmaking system will result in a maximum increase in sound levels of less than 2 dBA, which is not considered to be perceptible by the human ear. This increase is much less than the NYSDEC guideline of 6 dBA maximum increase. In addition, the noise level from operation would range from 39.5 to 48.1 dBA and would not exceed the Town of Shandaken noise limit of 53 dBA for a receiving residential property during the evening. Potential impacts of noise due to increased traffic were modeled. The results indicated an increase in traffic noise of slightly more than 3dBA and would likely be unnoticeable. NYSDEC guidelines state that an increase of less than 5 dBA is considered unnoticeable to tolerable. Noise mitigation is recommended for the construction phase only, and includes several typical best management practices to minimize the impacts.
West Alternative	Compared to the Full Build-Out and the elimination of several project elements including trails, lifts and parking lots, this alternative will have less potential noise impact during construction
Core Alternative	Compared to the Full Build-Out and West Alternative, and the elimination of several additional project elements including trails, lifts and parking lots, this alternative will have less potential noise impact during construction
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	No additional impact

Table 6.5-13 Comparison of Impacts to Noise by Alternative

Plan	Socioeconomic
Full Build-Out	The proposed expansion of the Belleayre Ski Center would have a significant positive, long-term economic impact on the Tri-County region. As a result of the proposed facility improvements, the number of total daily lift tickets purchased throughout an average season is expected to more than double over the current figures and reach a total annual attendance of approximately 320,000 skiers. As a result of the expansion, total expenditures at the ski center are predicted to increase from $7.5 million to $13.2 million. It is anticipated that the expansion of the facility will create an average of 12 to 16 temporary jobs during the construction phase, and 32 new full time positions and 245 seasonal positions during the operational phase of the expanded facility. As the employees at the ski center and local vendors spend a portion of their income from Belleayre in the regional economy, they in turn support other merchants and suppliers in the area. As a result, the original economic value of this injection of funds is increased or "multiplied." Approximately 20 additional indirect jobs are expected to be created in the region as a result of the increase in employment and attendance at the expanded Belleayre Mountain Ski Center. It is estimated that due to the increased expenditures at Belleayre Mountain Ski Center, state and local sales taxes revenues would increase by $220,000.
West Alternative	Compared to the Full Build-Out, the positive economic impact due to the increased carrying capacity would be reduced proportionally to the reduced carrying capacity of the facility under this alternative.
Core Alternative	Compared to Full Build out and the West Alternative, the positive economic impact due to the increased carrying capacity would be reduced proportionally to the reduced carrying capacity under this alternative.
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	No additional impact

Table 6.5-14 Comparison of Socioeconomic Impacts by Alternative

Plan	Cultural Resources
Full Build-Out	Research conducted at OPRHP did not produce any evidence of prehistoric archaeological resources within a 1-mile radius of the project site. OPRHP files showed evidence of 14 historic archeological sites within a 1-mile radius of the project site. Subsequent field investigations determined that the only site in an area of proposed disturbance that may be eligible for listing in the NRHP (National Register of Historic Places) is the Whispell House located near the proposed Upper Discovery Parking Lots. The project was redesigned to avoid disturbance of this site. Two other sites which are adjacent to, but not in areas of proposed disturbance include the Cemetery (on Co. Rte 49A), and the Springhouse Ruin #2 (near the proposed Highmount Lift). It is recommended that these areas be flagged and fenced off during construction to protect the cultural resource. The proposed construction activities for the Belleayre UMP Project will have no effect on historic archaeological sites
West Alternative	Consistent with Full Build-Out, the proposed construction activities for the Belleayre UMP Project will have no effect on historic archaeological sites
Core Alternative	Consistent with Full Build-Out and West Alternative, the proposed construction activities for the Belleayre UMP Project will have no effect on historic archaeological sites
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	No additional impact

Table 6.5-15 Comparison of Impacts to Cultural Resources by Alternative

Plan	Catskill Forest Preserve
Full Build-Out	The impact of the overall project, as described in this unit management plan, to use of the surrounding Forest Preserve lands is not expected to be significant. This is in large part due to the fact that the nature of the proposals in the revised plan supports recreational opportunities unique to the ski center property. None of the proposals are designed or intended to increase access to adjacent forest preserve lands. There is the potential for these projects to foster a greater interest in the surrounding area, but the analysis suggests that the likelihood of this causing a significant increase in public use of the surrounding forest preserve lands is quite low. In making this determination the Department reviewed visitor use data from trail registers at trailheads throughout the Catskill Forest Preserve during periods of previous expansions at the Belleayre Ski Center. This review included registers for the adjacent Big Indian Wilderness Area and nearby Slide Mountain Wilderness Area for a five year period prior to and after the 1999 expansion at Belleayre. This 1999 expansion included new trails and lifts that resulted in a significant increase in skier attendance, while no significant change in use of surrounding Forest Preserve lands use was observed.
West Alternative	Consistent with Full Build-Out, the proposed for the Belleayre UMP Project will have no effect on
Core Alternative	Consistent with Full Build-Out and The West Alternative, the proposed for the Belleayre UMP Project will have no effect on
East Alternative (Conceptual) or Development of Lands subject to Classification Alternative	An additional environmental review subject to the State Environmental Quality Review Act, and an amendment to the UMP, will be required if plans are proposed for the development of the lands subject to the East Alternative or the any lands classified in this UMP Revision as an addition to the Belleayre Mountain Ski Center Intensive Use Area
No Action Alternative or Classification Alternative	No additional impact.

Table 6.5-16 Comparison of Impacts to Catskill Forest Preserve by Alternative

Conclusion

The Full Build-Out alternative for this Unit Management Plan is a comprehensive design plan that provides the Facility Operator with the greatest flexibility and discretion to implement the components of the plan as deemed necessary at any given time to address the actual demands at the time. These proposed improvements may or may not be built during the lifetime of the UMP. The alternatives that require less construction would have incrementally lower impacts for those parameters that directly vary with the areas and extent of the associated impacts, such as tree cutting. In particular, this applies to the provision of parking spaces and the associated impact. However, In addition to the alternatives identified, and their associated reduced impact, the sequencing of construction for the entire facility allows flexibility depending upon public attendance, available funding and future management needs at this facility as deemed appropriate at future points in time by the Facility Operator.

7 Irreversible and Irretrievable Commitments of Resources

The extent to which a proposed action may cause permanent loss of one or more environmental resources should be identified as specifically as possible based upon available information. Resources which should be considered include natural and man-made resources that would be consumed, converted or made unavailable for further uses due to construction, operation, or use of the proposed project, whether those losses would occur in the immediate future, or over the long term.

The expansion of the facilities at Belleayre Mountain Ski Center does not involve any significant, irreversible or irretrievable commitment of natural resources under the footprint of the proposed new ski trails. The footprint of the new buildings represents a small commitment of these areas to built structures.

Site work would involve the removal of existing vegetation and would disturb on-site soils. The Department does not believe that such impacts are significant. No rare, threatened or endangered species are known to inhabit the site.

There would be a commitment of raw materials for construction of the structures, including concrete, steel, gravel, and wood. Energy resources would be required for the construction, operation and maintenance of the expanded facility.

8 Growth Inducing and Secondary Impacts

This section evaluates the effects of the proposed ski center modernization, improvement and expansion as it relates to the potential of such an expansion of an outdoor recreational facility to stimulate secondary impacts including an increase in local population, demand for support facilities and commercial and residential development. These secondary impacts would occur if the economic stimuli from the project generated economic activity that would result in significant growth in local populations, labor pools or demands on local services.

While the economic benefits from this project are expected to be significant as described in Section 4.11 of this UMP which addresses "Socioeconomic, Community Services and Resources", growth inducing and secondary impacts are expected to be minimal. Spending in the local community by an increased number of patrons at the Belleayre Mountain Ski Center will provide a positive economic stimulus, but since most of the skiers will be day-visitors, the level of spending would not be sufficient to support many new businesses and other signs of growth inducement.

Since construction employment is expected to peak at 35 workers and operations are expected to generate no more than 32 full-time jobs and only 250 seasonal jobs, it is expected that the majority of these jobs will be filled by individuals currently living in the tri-county area of Ulster, Delaware and Greene counties or by those who are willing to commute into region. The local communities have relatively high unemployment, which would permit the projected increases in jobs to be absorbed by the community which would result in a decrease in chronic unemployment. Much of this work is seasonal, and part of the labor pool that is seasonally employed during the summer will be available to take on this type of additional work in the winter. A decrease in the local unemployment rates, together with an increase in the annual income of workers, will result in a significant economic benefit to the region, but it will not necessarily be a significant growth inducement since the size of the local population is not likely to change very much.

Housing market impacts are expected to be minimal as well. Since the majority of the employment opportunities created by the expansion of the Belleayre Mountain Ski Center are expected to be filled either by commuters or residents of the Delaware, Ulster, and Greene county region, there will be no significant in-migration into the region as a result of this project. Since there is no in-migration anticipated as a result of this project, there will be no change in the demand for housing or change to the price of housing in the region as a result of the completion of the expansion to the Ski Center.

All of the schools located within the study corridor have capacity to absorb additional students. It is expected that the new full-time workers would be largely drawn from the existing residents. The children of such residents would not be expected to add to the population of the schools within the region. The small number of children from the new workers who move to the study area could be expected to be absorbed without any new construction on the part of the schools.

New electric service is proposed to support this growth, but the new service would be developed from an existing sub-station along Route 28. This would not provide electric service to any residential areas that might be stimulated by the availability of an electric supply in areas that are currently off the grid.

The proposed project may have some minor influence on the second home market in the nearby towns. The improvements at the Ski Center will create more recreational amenities in the area and may improve the desirability of second homes in the area. This increase in desirability may translate to a slight increase in demand for, and price of, vacation homes in the area. However, this increase in demand is expected to be very minor because the Ski Center has already been in operation for many years and the incremental change in recreational facilities as a result of this project will be relatively small.

9 Effects on the Use and Conservation of Energy

The proposed project will have a positive effect on the use and conservation of energy.

In the construction phase, additional energy will be consumed primarily in the form of fossil fuels to power the required construction equipment and to transport construction workers to and from the site. This will result in a temporary increase in the use of energy.

The Energy Audit Report attached to this UMP as Appendix G identified the energy usage from the existing snowmaking system totals 72% of the energy consumed at the Ski Center. Upon completion of construction, the increased energy used by the Ski Center will be minimized as a result of the implementation of energy efficient equipment for snowmaking and green building techniques for building expansion.

The existing snowmaking system uses inefficient fuel oil-driven rental air compressors and older pumping equipment to make snow on approximately 150 acres of terrain. The existing system will be converted to one which utilizes electrically-driven high efficiency compressors and electrically-driven fan gun units resulting in a snowmaking capacity on a total of 203 acres. Older pumps will be replaced with higher efficiency units with improved controls. The addition of the "Proposed Lower Reservoir", as shown on UMP Drawing SM2, will allow runoff to be collected at a higher elevation, thereby minimizing the amount of energy needed to pump water up the mountain for snowmaking. The annual cost of energy for the expanded snowmaking system is projected to be less than or equal to the energy costs of the existing snowmaking system. The proposed snowmaking equipment will be electrically powered in order to achieve higher efficiencies and to reduce onsite emissions from fossil burning fuels. The local electric utility will have to upgrade its service to the facility to meet this increased electrical demand. It is estimated by the utility company that the electric demand will increase from 2,997 kW to 14,730kW as a result of the facility expansion. See Section 4.8.3 for a discussion on Potential Impacts to Air Quality and Section 4.8.4 for Proposed Air Quality Mitigation Measures. Also, See Section 4.9.2 for information on the Carbon Footprint and Assessing GHG Emissions.

Proposed building expansions will require additional electrical energy in the operational phase. This increased usage is minimized by the use of green building techniques in construction. The proposed Discovery Lodge Expansion is designed to be a LEED Gold certifiable building. These building design techniques will minimize any additional energy use by the building facilities.

An increase in attendance at the Belleayre Mountain Ski Center due to the expansion, modernization and improvements to the Ski Center as set forth in this UMP may cause an increase in traffic. Any increase in traffic will result in an increased use of fossil fuels, These increases will be minimized by providing incentives to patrons to carpool, and to use alternative methods of transportation such as shuttle buses.