Map 10 ▶ Northville & Caroga Lake
Kallen Trek

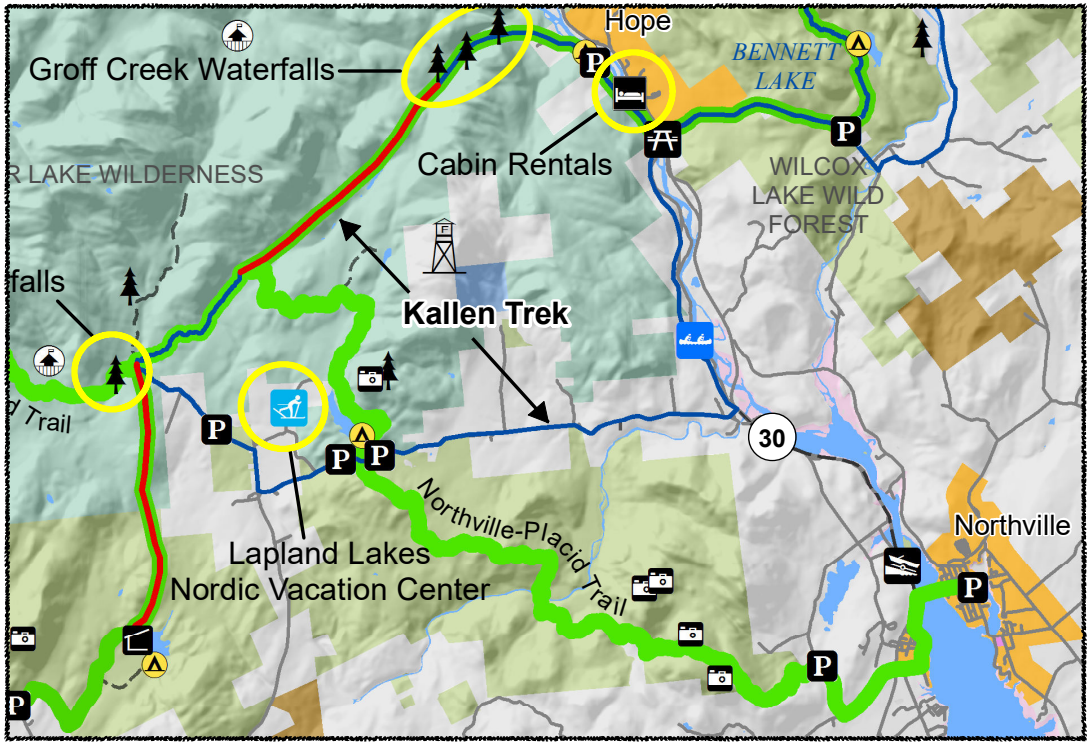
Access: Loop route passes through Silver Lake, Shaker Mountain, and Wilcox Lake units. New section (just over 3 miles) would complete the loop, extending access along Abner Brook, past waterfalls, and joining existing trail near the Sacandaga River.

Connectivity: Follows Sacandaga River on the opposite bank from Hope, accessed from Northville and Benson. Follows a section of the NPT and connects to Hopewell Network, over the Sacandaga River near Hope.

Stewardship: Junction signs required at NPT, and directing over the river toward Hope and the Hopewell Network feature. New trail constructed through Wilderness requires careful attention.

Destination: Hike, bike and paddle the weekend away on scenic but less traveled paths in southern Adirondacks. Points of interest include: Lapland Lake Ski Center, Groff Creek Falls, Sacandaga River, Abner Brook, and Woods Lake. Hikely largely in or near Wilderness, the almost 20 mile loop offers an ideal overnight along Sacangada River, at a campsite or commercial lodging. Taking an interior cutoff (NPT), spur trails access Grant Lake and Little Cathead Mtn. with its cliff views.

Partnerships: Cathead Mtn Fire Tower is located in the center of this loop on private land. Public Access and stewardship maintenance could be negotiated (maybe with the town of Hope) as part of this process.



Kallen Trek is an exciting multi-modal loop, with biking out of the parking area in Hope heading south on Route 30 along the Sacandaga River, then turning west on Benson Road (the old Northville-Placid Trail route) to the old NPT trailhead in Benson. Trading the bike for boots, hikers can trek through the Abner Brook-Groff Creek valley (3 miles of new trail required) in the Silver Lake Wilderness and visit a series of waterfalls before returning to Hope. Take an optional shortcut through the Trek on the newly-routed NPT that passes Woods Lake, Little Cathead Mountain, and Grant Lake.

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KEY RECOMMENDATIONS ORGANIZED BY CORE THEMES

The following sections expand upon the GSW Recommendations for each of the Strategy core themes. As needed, examples of Local Network features in the GSW Recommendations (R-17 to R-59) are referenced, as well as information collected during the participatory planning process.

ACCESS

The GSW Strategy recommends leveraging existing trail infrastructure and unique regional assets, while also creating additional infrastructure that establishes a network of recreation destinations across the regional landscape.

LEVERAGING EXISTING INFRASTRUCTURE AND UNIQUE REGIONAL ASSETS

The following Local Network features leverage existing DEC trails and related recreation assets. Circuits Out of 'Dead-End' Trails are examples of where out-and-back trails have been transformed into circuits, in many cases connecting more than one point of interest. Nested Networks for Recreation are examples of where existing loop trails have been transformed into networks, providing multiple route options for arriving at one or more destinations (Table 3).

Table 3: Local Network features that leverage existing infrastructure.

Circuits Out of 'Dead-End' Trails	Nested Networks for Recreation
Black River Loop	Black Bear Circuit
French Louie Loops	Black River Loop
Hopewell Network	French Louie Loops
Kallen Trek	Hopewell Network
OK Slip Falls Loop	Limekiln Loop
Potter Bike Trail	"N" Lake Network
Three Rivers Circuit	North Creek Network
Waterfall Way	South Raquette Circuit

The GSW Strategy offers unique opportunities for enhancing recreation by utilizing existing DEC easements and the Hudson River Corridor (Table 4). The GSW Strategy also recommends maintaining or improving access to historic sites and hunting camps on easement lands.

Table 4: Local Network features that leverage unique regional assets.

DEC Easements	Hudson River Corridor
Blue Finch Loop	Hudson Bend Circuit
Holmes Loop	North Creek Network
West Indian Lake Network	OK Slip Falls Loop
	Three Rivers Circuit

CREATING ADDITIONAL INFRASTRUCTURE

Overall, as conceptualized here, the GSW Local Network requires 191.9 miles to be constructed to established 105 new trail segments (Table 11). Most of these segments are small connector trails that convert spurs into loops, or loops into networks. Many Local Network features that require new trail construction would provide novel access routes to iconic destinations, or will establish access routes to previously inaccessible points of interest across the GSW (Table 5).

Table 5: Local Network features requiring trail construction to enhance access.

Feature Requiring Construction	Destination (miles to construct)
Blue Mtn. Circuit	From Blue Mtn. summit to NPT (2), then from NPT along Bluestone Trail back to Blue Mtn. Lake Hamlet (2).
Ferris Fifty	Close loop and pass by scenic waterfalls (3.3)
French Louie Loops	Close major loop along Little Moose Wilderness ridgeline, including scenic overlooks on Little Moose Mtn. (2.8).
Hudson Bend Circuit	Along Hudson and Boreas Rivers (32.7), and a spur trail connecting to the Vanderwhacker Mtn. trail (3.4).
OK Slip Falls Loop	Connect trail ends along scenic Hudson River and link OK Slip Falls and Blue Ledges (2.5).
Sabattis Mtn. Ski Circuit	Create double loop for skiing from Town of Long Lake (9.3).
Severance Hill Circuit	NCNST miles into Hoffman Notch Wilderness (4.2) then new western access up Severance Hill (2.4).
The Notch	NCNST miles into Hoffman Notch Wilderness for a back-country Wilderness traverse (4.2).
Vanderwhacker Circuit	Close double loop and provide eastern access to Vanderwhacker Mtn. trail (12.7).
Wakely Way	Close loop route to summit from Cedar River Rd and New western access to Wakely Mtn. from Sagamore area (3.2).
West Indian Lake Network	Access out of Wakely Pond/Dam area over Little Great Range, summiting Snowy Mtn. from northwest and taking new trail down to NYS 30 (7.4).

Additional key points of lodging are required along certain features, such as the lean-to at Blue Ledges along the OK Slip Falls Loop. Similarly, lodging arrangements must be made at Kings Flow, Garnet Hill, and near Indian Lake for the North Creek Network in order to establish a hut-to-hut recreation experience.

CONNECTIVITY

The GSW Recommendations attempt to create a network of connections among communities and both new and existing recreation destinations in the Forest Preserve.

The primary objective of designing the GSW Regional Network was to provide a system of long-distance recreation routes that established connections between communities across State lands and DEC easements (See Map Narrative pages R-1 to R-13). GSW Local Network features were designed to 'fit' within the Regional Network and effectively link it with communities as well as recreation destinations on the Forest Preserve that are not accessed via the Regional Network. Some of these features were specifically designed to provide access directly out of a community or to center around the community and its main streets (Table 6). Such a configuration allows for community planning that capitalizes on the feature, designing local events that draw in visitors, coordinating support services such as ferries or shuttles for hikers, boats or bikes, and encouraging local use along the feature.

Table 6: Local Network features that directly connect to communities.

Local Network Feature	Direct Town Connection
Black Bear Circuit	Inlet
Blue Mtn. Circuit	Blue Mtn. Lake
Kallen Trek	Hope
Moffit's Pack-and-Paddle Circuit	Lake Pleasant, Speculator
North Creek Network	Indian Lake, North Creek, North River
Potter Bike Trail	Inlet
Sabbatis Mtn. Ski Circuit	Long Lake
TOBIE Trail Connection	Thendara, Old Forge, Big Moose, Inlet, Eagle Bay
West Indian Lake Network	Indian Lake, Sabael
Woodhull Lake Loop	McKeever, Otter Lake, Woodgate

HIGH QUALITY RECREATION DESTINATIONS

To draw visitors to the Great South Woods for recreation and tourism, the GSW Strategy prioritizes the establishment of trails and other infrastructure that create high-quality and unique recreation experiences.

Planning to create high-quality recreation destinations focused on producing a functional network for moving recreation visitors around the GSW region. The resulting GSW Regional and Local Networks have the potential to create high-quality destinations for a variety of modes of recreation use across the GSW region (see Table 7 for examples).

Table 7: Examples of GSW Local Network features that can support high-quality destinations for different modes of recreation. Note: list below is not exhaustive.

Recreation Mode	Local Network Destination
Back-country camping	French Louie Loops
Long distance hiking	West Indian Lake Network
Day hiking with families	Black Bear Circuit
'Hut-to-Hut' Trekking	North Creek Network
Mountain Biking	Potter Bike Trail
Road Biking	TOBIE Trail Connection
Nature & Scenery	Waterfall Way, OK Slip Falls Loop
Cross-Country Skiing	Sabattis Mtn. Ski Circuit

GENERAL POINTS FOR RECREATION PLANNING

The following points were synthesized from various GSW Project meetings and workshops as general planning points for designing high quality recreation destinations across the GSW.

- Route construction/maintenance
  - Designate a use-specific representative to involve in planning, i.e., for designing mountain biking opportunities.
  - Maintain road shoulders for biking.
  - Construct and designate hiking trails to rock climbing destinations.
  - Keep access roads open for aging populations, as well as for hunting opportunities.
  - Trail diversity (i.e. difficulty, length, time frame of trail) for hiking is important to incentivize more hikers to use the area.
  - Challenging, specialized trails for mountain biking are needed if GSW wants this population in the Park.
  - Multi-use trails are not desirable, but seasonal use trails (i.e., summer hiking, winter skiing) increase use without increasing infrastructure or even impact on the resource.
- Enhance Forest Preserve lodging options
  - Create Temporary Revocable Permits that allow for winter yurts.
  - Classify locations where structures were burned or destroyed when private land was purchased by the State, as Intensive Use to support back-country lodging.
- Expand access for family-oriented recreation. A single point of access for multiple trails reduces travel time, and provides all ages and experience levels a variety of choices.
- Rate or classify trails according to difficulty levels or attraction of the area, considering:
  - Trail characteristics (length, elevation change, impacts of seasonality).
  - Composition of user group (family with young kids, novice hiker, experienced hiker).
  - Possible use-types.
  - Use ski trail categories (green circle, blue square, black diamond, double diamond).

MULTI-MODAL TRAILS

An important GSW Recommendation for designing high quality recreation destinations is to abandon the 'multi-use' trail mentality. Often, multi-use opportunities that attempt to satisfy multiple use-types and user groups with one set of trail infrastructure and assets, fails to satisfy any of the interested users. Instead, GSW Recommendations include Local Network features that offer multi-modal trail opportunities, or the combination of uses along different segments to complete a packaged destination experience. These features are described in more detail in the Maps and Narratives section, but are summarized in Table 8 according to the most common combination of modes. Many of these recreation experiences will need to leverage support from local communities in order to provide and shuttle equipment and users along the feature.

Table 8: Examples of Local Network features that function as multi-modal trails.

Pack-and-Paddle	Hike-and-Bike
Hudson Bend Circuit	Cedar River Circuit
Lake Durant Loop	Hudson Bend Circuit
Moffitt's Pack-and-Paddle	Kallen Trek
"N" Lake Network	Limekiln Loop
Three Rivers Circuit	TOBIE Trail Connection
TOBIE Trail Connection	

PUBLIC-PRIVATE PARTNERSHIPS

The GSW Strategy is based on input and information gathered over a series of public meetings and workshops. Subsequent implementation stages will require public-private partnerships to ensure the Strategy benefits local communities and to assist with the design, maintenance, and promotion of the GSW Recommended Features.

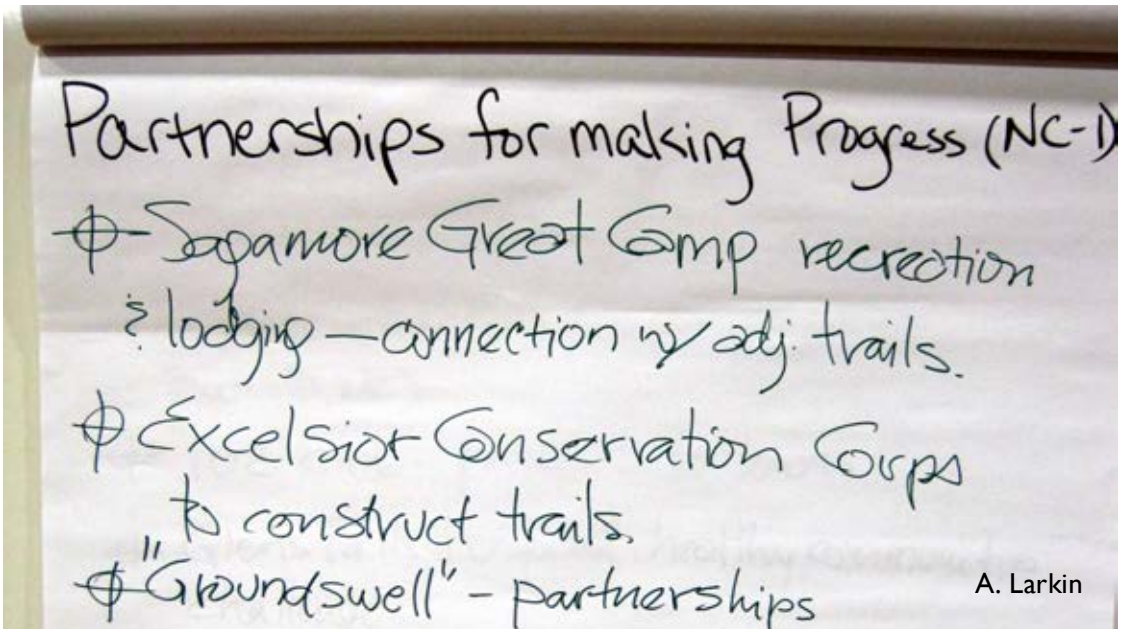
The following points were synthesized from various GSW Project meetings and workshops as relevant to developing public-private partnerships to implement aspects of the GSW Strategy.

- How partnerships and involvement may benefit local communities
  - Communities influence design (see Data Collection Workshops, Appendix II).
  - Communities prioritize projects for implementation.
  - Serve local communities, while attracting a loyal contingent of (repeat) visitors.

- Marketing is KEY
  - Organize information identifying lodging (include state campgrounds).
  - Centralize website/database/app of trail data: uses, conditions, difficulty, rating system, key features, hunting.

- Packaging experiences
  - Adirondack Trail Passport, similar to US National Parks visitor passport or Camino de Santiago Compostela passport.
  - 102 Club passport to visit Adirondack towns, can be further categorized.
  - Adirondack Heritage Pass: great camps, museums, other cultural attractions.
  - Great Adirondack Bike Tour.
  - Low-cost outdoor skills training and equipment rental for first-time visitors.
  - Hospitality training for lodging and restaurant staff, briefings on local natural attractions, trail connections, etc.
  - Supporting and promoting multi-modal trails and experiences.

- Potential partners
  - Adirondack Guides
  - Adirondack Mountain Club local chapters
  - Adirondack Paddle Pursuit
  - Business Alliances
  - Chambers of Commerce
  - Excelsior Conservation Corp
  - Old Forge-Inlet-Long Lake Central Adirondack Association
  - Siamese Pond Trail Improvement Society
  - Snowmobile clubs
  - Student Conservation Association (national)
  - Tri-Lakes Business Alliance of Rotary Clubs
  - Upper Hudson Trail Alliance
  - Volunteer Trail Maintenance Groups



ECOSYSTEM STEWARDSHIP

The GSW Strategy is committed to the responsible planning and sustainable management of enhanced recreation across the GSW region. GSW recommendations for ecosystem stewardship include monitoring recreation use at existing and future recreation destinations, preserving remote areas of the Forest Preserve without trails or maintained recreation infrastructure, leveraging opportunities for interpretation and education when possible, and practicing proactive invasive species management.

MONITORING RECREATION USE

As the GSW Strategy moves towards implementation with the goal of extending and redistributing recreation use across the planning area, managers should keep in mind current recreation use patterns. Trail register data from 2012, compiled by ESF's Adirondack Trail Registry Database (ADK-TReD) project, allows managers to identify the most-visited trails in the region (Table 9). These areas are prime locations for educational efforts, monitoring impacts, and management efforts aimed at protecting the natural resource. Despite any planned enhancement of recreation opportunities, these most-visited trailheads are likely to remain popular with visitors and locals, and should therefore remain a priority for ongoing management.

Table 9: Most commonly hiked trails in the Great South Woods, based on data from 2012.

Trailhead	Users (2012)
1. Hadley Mountain	9,899
2. Panther Mountain	7,154
3. Kings Flow (Chimney/Puffer)	6,131
4. Nine Corners	5,490
5. Kane Mountain	4,893
6. Crane Mountain	3,864
7. Snowy Mountain	3,304
8. Wilcox Lake	2,217
9. Sawyer Mountain	1,958
10. Good Luck Lake/Cliffs	1,822

The GSW Strategy recommends increasing the frequency of trail registers along the Local Network, to continue to monitor recreation use as new recreation destinations are developed (Table 10). An important tradeoff involved in creating a network of recreation destinations, with more points of access and multiple routes to different destinations, is the effort required in tracking users for search and rescue purposes, as well as monitoring recreation impacts and applying the appropriate management response. Installing trail registers is important for back-country destinations (such as Blue Finch Loop), as well as for front-country opportunities (such

as the TOBIE Trail Connection) that serve less-traditional modes of outdoor recreation but are vital for understanding the unique visitor base.

Table 10: Local Network features that will require more effort in trail use monitoring.

Local Network features Needing Additional Trail Registers	
Blue Finch Loop	"N" Lake Network
Cedar River Circuit	Potter Bike Trail
Ferris Fifty	Sabattis Mtn. Ski Circuit
French Louie Loops	South Raquette Circuit
Hillabrandt Vly Circuit	Stark Hills Circuit
Holmes Loop	TOBIE Trail Connection
Hopewell Network	Wakely Way
Hudson Bend Circuit	Waterfall Way
Kallen Trek	West Indian Lake Network
Limekiln Loop	

LEVERAGING EXISTING TRAILS & PRESERVING 'CORE' REMOTE AREAS

The GSW Recommendations include over 30 Local Network features that link to one or more of 12 Regional Network features across the GSW region. In total, these trail networks leverage over 850 miles of existing trail and require only approximately 190 miles of trail to complete all of the Local Network features, and 81 miles to complete all of the Regional Network. By making the most of the existing infrastructure, the GSW Strategy seeks to reduce the overall impact of new trail construction and infrastructure development across the Forest Preserve (Table 11).

Portions of the GSW trail networks that require construction are also segments of the official DEC-proposed NCNST: 27.3 miles over 7 segments in the Local Network, and 12.7 miles over 5 segments for the Regional Network. The segments shared with the NCNST may be considered to be further along in planning and implementation phases, and therefore may receive less critical attention as other "construction-required" components of the GSW Strategy. In addition, some trail segments requiring construction are shared by more than one feature on the Local and/or Regional Network (Table 11; see Appendix III for more detail). The one-to-many relationship of some segments requiring construction indicates the potential to minimize construction and infrastructure investment, while maximizing the additive value of the shared segment to the overall network. The overlapping, or shared features, a majority of which are in Wild Forest, could be important to consider and prioritize when making strategic implementation decisions.

Although the entire GSW landscape was considered for planning, the Strategy aimed to minimize the need to construct new infrastructure in 'core' wilderness areas of the Forest Preserve, in order to minimize impacts in these currently remote trail-less areas. Overall, completing both networks would require constructing 235 miles of trail, over 139 segments,

averaging 0.6 miles per segment (Table 11). Roughly 54% of these miles are in Wild Forest -- 104.4 miles over 52 segments, with 89.4 miles to be constructed in Wilderness over 39 segments (Table 11). Although the full implementation of both Local and Regional networks optimizes recreation potential across the area, the implementation of any number of features short of the full network would still enhance recreation opportunities across the GSW region.

Table 11: Distribution of 'construction required' segments according to land type. Some segments are shared by features on the Local and Regional Networks. This overlap is highlighted at the bottom of the table (see Appendix III for more detail). These statistics do not include the Bluestone or Hamilton County Trails as part of the Regional Network.

	Land Type	Total Miles	% of Total	# Segments	Ave. Miles per Segment	Max. Miles per Segment
Local Network	Easement	15.5	8	5	3.1	8.9
	Private	10.8	6	20	0.5	2.1
	Intensive Use	0.9	<1	3	0.3	0.7
	Primitive	4.7	3	5	0.9	2.2
	Wild Forest	91.6	48	41	2.2	9.6
	Wilderness	68.4	36	31	2.2	11.6
	TOTAL:	191.9		105	0.6	
Regional Network	Easement	7.8	10	4	1.9	4.3
	Private	1.9	2	13	0.1	0.4
	Intensive Use	1.1	1	2	0.6	0.7
	Primitive	<0.1	<1	2	<0.1	<0.1
	Wild Forest	39.5	49	24	1.6	6.8
	Wilderness	31.0	38	15	2.1	5.3
	TOTAL:	81.3		60	0.7	
Network Overlap	Easement	0.1	<1	1	0.1	0.1
	Private	0.7	2	5	3.0	0.4
	Intensive Use	0.7	2	1	0.7	0.7
	Primitive	0	0	0	0	0
	Wild Forest	26.7	70	13	0.5	6.8
	Wilderness	10.0	26	7	0.7	3.2
	TOTAL:	38.2		26	0.7	

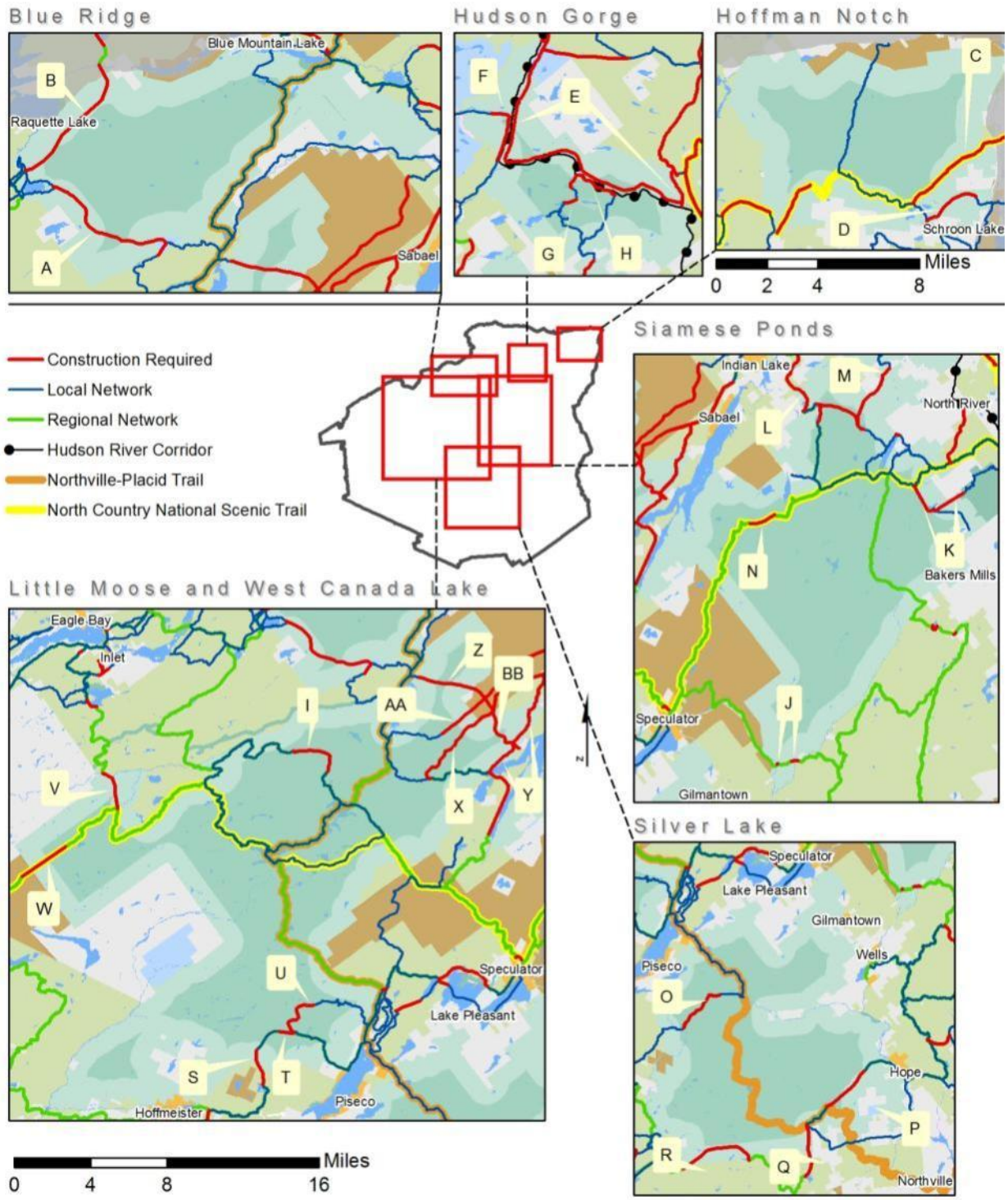


Figure 4: Location of 'construction required' segments in GSW Wilderness areas. Segments are identified by the ID in Appendix IV. Core Wilderness is defined as a mile or greater interior from the Wilderness boundary, and is indicated by the darker shade.

In addition, the GSW Strategy aimed to preserve core interior Wilderness areas by concentrating trail construction to areas within a mile of the Wilderness unit boundary. Of the 89.4 miles of segments requiring construction to complete both GSW Local and Regional Networks that are located in designated Wilderness areas, approximately two-thirds of the required mileage is within a mile of the Wilderness area boundary (Figure 4; see Appendix IV for more detail). Despite the 'construction required' trail segments recommended by the GSW Strategy, many core Wilderness areas would maintain their remote interior areas (Figure 4). *Protecting Core Wilderness* emerged as a theme out of GSW public meetings and engagement efforts.

Categorizing recreation opportunities as front-country or back-country serves to distinguish more remote recreation opportunities available in Wilderness and other Forest Preserve areas, from those that more directly provide connections across communities and State Land. GSW Recommended Local Network features can be classified as front-country or back-country (Table 12), based on criteria that consider, among other factors: a feature's access and connectivity in, out, and among communities; the quality of the recreation experience provided by the feature, such as thru-hiking versus road biking; and the length and extent of the feature through the Forest Preserve and away from road corridors, hamlets and private lands.

Table 12: Examples of Local Network features, classified as either front-country or back-country according to the GSW Core Themes.

Front-country	Back-country
Black Bear Circuit	French Louie Loops
Moffitt's Pack and Paddle	Hopewell Network
Potter's Bike Trail	Hudson Bend Circuit
South Raquette Circuit	North Creek Network
TOBIE Trail Connection	OK Slip Falls Loop
	The Notch
	Wakely Way
	West Indian Lake Network

INTERPRETATION AND EDUCATION

The following points were synthesized from various GSW Project meetings and workshops, and emphasize the importance of interpretation and education in ecosystem stewardship efforts.

- Improve signage for uniformity and consistency
    - Many GSW Recommendations include adding signage at junctions between features.
    - Fire Towers should include accurate, readable observation maps.
    - Historic sites should include educational signage about the historical significance.

- Increase access to education opportunities. Access to learning and training, which promotes safety, collaboration, and tourism would help people appreciate the places they visited (e.g., in private sector, outfitting businesses help tourists learn and enjoy the Adirondacks, while providing business opportunities and growth to communities).
- GSW ecosystems are considered by many to be the best in the Park and should be promoted to draw in visitors and educate them on proper use.
    - Many GSW Recommendations include establishing stewards at popular lean-tos, the Hudson River, and summits.

PROACTIVE INVASIVE SPECIES MANAGEMENT

The *threat of invasive species* emerged as a key concern for stewardship at various GSW public meetings and engagement efforts. In addition to management approaches for invasive species, public comments often referenced interpretation and education as additional measures for raising public awareness and proactively managing invasive species. Suggestions included using boat washing stations at motorized and non-motorized access points, as well as expanding the concept of invasive species mitigation to include boot and bicycle washing stations. With uncertainty surrounding the efficacy or implementation costs of such stations, the educational benefits of the stations were heavily discussed as encouraging low-impact and other leave-no-trace behaviors. Features that might benefit from specialized washing stations are listed in Table 13.

Table 13: Examples of Local Network features that might benefit from invasive species washing stations.

Bike Washing Station	Boat Washing Station (motorized or non-motorized)
Potter Bike Trail	Blue Finch Loop (Fishing Brook)
Cedar River Circuit	Lake Durant Loop
TOBIE Trail Connection	"N" Lake Network (Nick's and Nelson Lake, Nick's Lake Campground)
	Moffitt's Pack & Paddle

Hiking in the Adirondacks is a ubiquitous mode of recreation. Therefore, identifying priority locations for boot washing stations and informational signage, or other methods of invasive species mitigation targeting hikers, is a key GSW recommendation, especially in areas where trail use is expected to significantly increase and/or draw visitors from multiple regions.

Using the existing network of trailheads as access points across the GSW, we conducted a novel spatial analysis to combine register visitor count data with *iMapInvasives* species occurrence data, to calculate an **invasive species exposure score** for each Adirondack trailhead. Using *iMapInvasives* observation records, we considered 7 invasive species included on the New York

State Prohibited Species list (see Appendix V). Figure 5 depicts relative exposure risk for all 7 species, with high exposure risk correlated to the amount of total trail visitation. Individual species risk maps can be found in Appendix V, and suggest different trailheads have varying exposure risks depending on the species.

Trailheads symbolized by red dots, such as Bald Mountain, Great Camp Santanoni, and Hadley Mountain, have a high exposure risk because they attract a high percentage of visitors who reside in areas containing a greater proportion of New York State's invasive species observations. These high exposure risk trailheads are in the vicinity of GSW features including Blue Mtn. Circuit, Severance Hill Circuit, The Notch, TOBIE Trail Connection, North Creek Network, Waterfall Way, and Ferris Fifty. Management actions should focus on trailheads that are generally characterized by a high exposure risk, but should consider species-specific risk patterns for species-specific management efforts (see Appendix V for exposure maps by species). The invasive species exposure analysis is meant to anticipate points of invasion and to manage proactively to monitor the site, prevent invasion, educate the public, and preserve the resource.

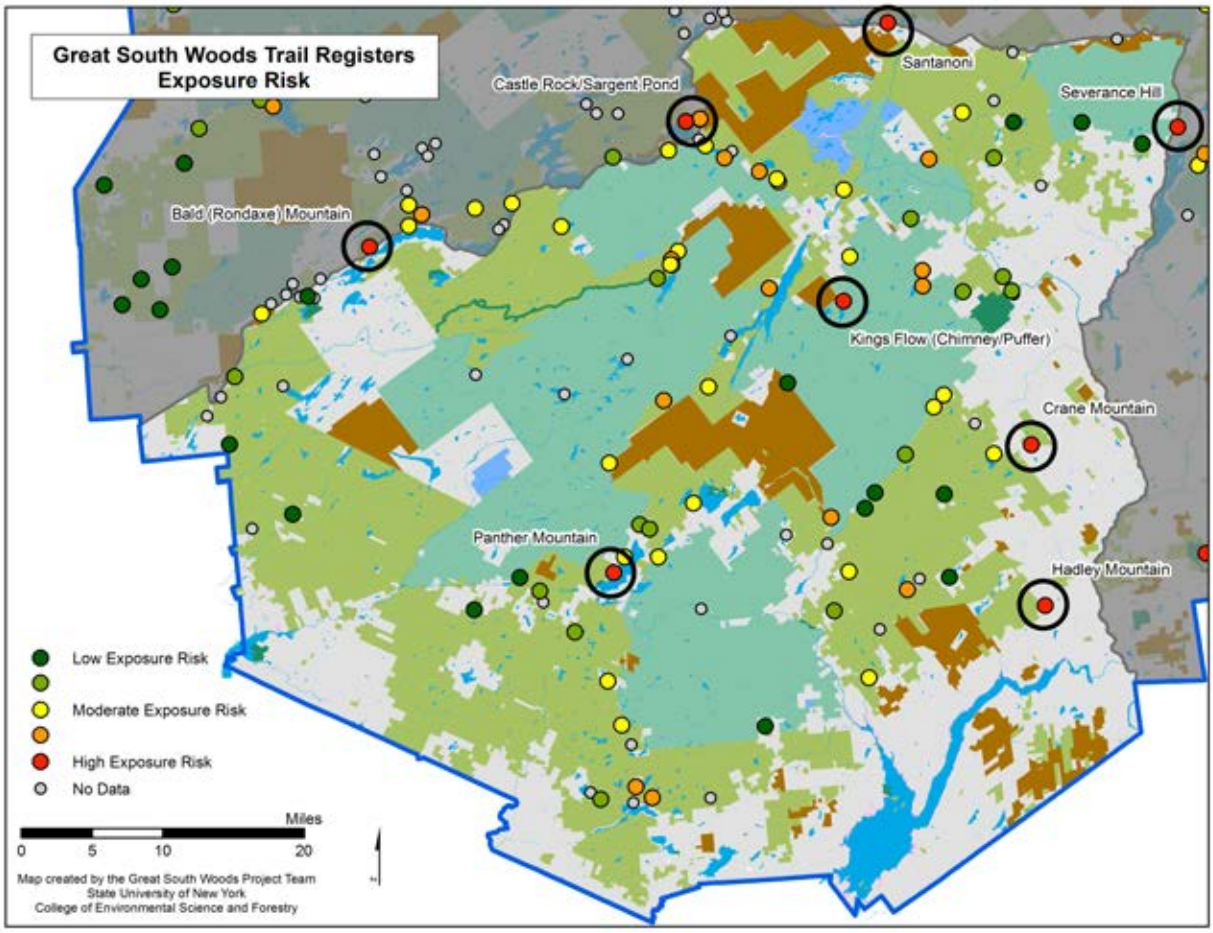


Figure 5: Invasive species exposure risk at Adirondack trailheads. Points of high exposure risk are shown in red and labeled. For species-specific exposure maps, see Appendix V.

PLANNING IMPLICATIONS

The remaining points were synthesized from various GSW Project meetings and workshops as general planning points in relation to ecosystem stewardship in the GSW.

- Field-validation is very important for supporting resource protection during Strategy implementation.
- Manage existing infrastructure, and consolidate when possible to serve multiple users, before creating new infrastructure. But, ensure the creation of new uses does not prevent or replace existing uses.
- Concentrate high-impact uses on perimeter of management units and the broader Park (not just considering Wilderness areas).
- Establish a 'true wilderness area' based on size, limited accessibility, etc.
- New management plans or approach that:
    - Addresses user-created trails (not officially sanctioned or managed by the DEC) and respond accordingly to preserve the resource.
    - Implement recommended feature(s) through a process that complements the existing Unit Management Planning Process, but does not repeat the efforts of ongoing planning (i.e., Environmental Impact Statements), and is not limited to the boundaries of one management unit at a time.
    - Plans across a large region, combining multiple land types and existing management units.

LEVERAGING THE GSW PROCESS & GIS TOOLS FOR ONGOING COMPLEX & UNIT-BASED PLANNING

Geographic information systems (GIS) are powerful tools that manage spatial relationships and analyze spatial features, based on geographic location and related information layers. The GSW project used ArcGIS and Quantum GIS, programs that manage and analyze the GSW data product, as well as the web-map platform, to make the data product visible and accessible for the DEC, APA, GSW communities, and the general public. These platforms are capable of tailoring the extent, scale, symbology, and information provided in each map produced for the GSW, or in each dynamic and interactive view selected by the user on the web-map platform. Beyond visualizing the GSW data product, GIS facilitate analyses important for assessing and implementing the GSW recommendations in future planning steps. A few cases are discussed below using ArcGIS and the Wells-Wilcox Circuit (Figure 6).

SPATIAL ASSESSMENT

Among their many uses, GIS can rapidly generate descriptive and statistical information about features of interest and the spatial relationships among multiple features or components of a landscape. Using the example of the Wells-Wilcox Circuit, highlighted in yellow in Figure 6, the length and travel time is easily calculated as 46 miles, completed in 3-7 days of hiking. Travel distances to other destinations and communities along the full recreation network can be similarly assessed. The *identity* also tool indicates the circuit is almost entirely (95%) located on Wild Forest lands, and is completely within the Wilcox Lake Management Unit.

Similarly, features of interest can be assessed based on proximity to other spatial features. Using the same example of Wells-Wilcox Circuit, the GIS tool *select by location* identifies all existing and proposed assets within 0.5 miles of the circuit. The surrounding features include 3 scenic points of interest, 7 parking areas, 26 campsites, 2 lean-tos, 5 privies, and 1 proposed foot bridge, all of which are important to consider during the planning stage.

GIS-BASED DECISION SUPPORT

In addition to describing features based on statistical information and surrounding features, GIS contain tools for complex analyses such as the *least-cost path* tool. This tool sets a route between two established points by considering weighted input layers. Least-cost path assesses the 'cheapest route' in order to minimize costs or obstacles while maximizing attractive features in route setting. When the route is a recreational trail in a protected landscape, input layers might include sensitive habitats (e.g. moose, endangered species, and wetland habitats), steep slopes, long distances, or the potential to spreading invasive species (Figure 7). Each input layer is assigned a weight, indicating the influence (positive or negative) of that layer over the resulting route. In least cost path analyses, the analyst selects the input layers and weight parameters,

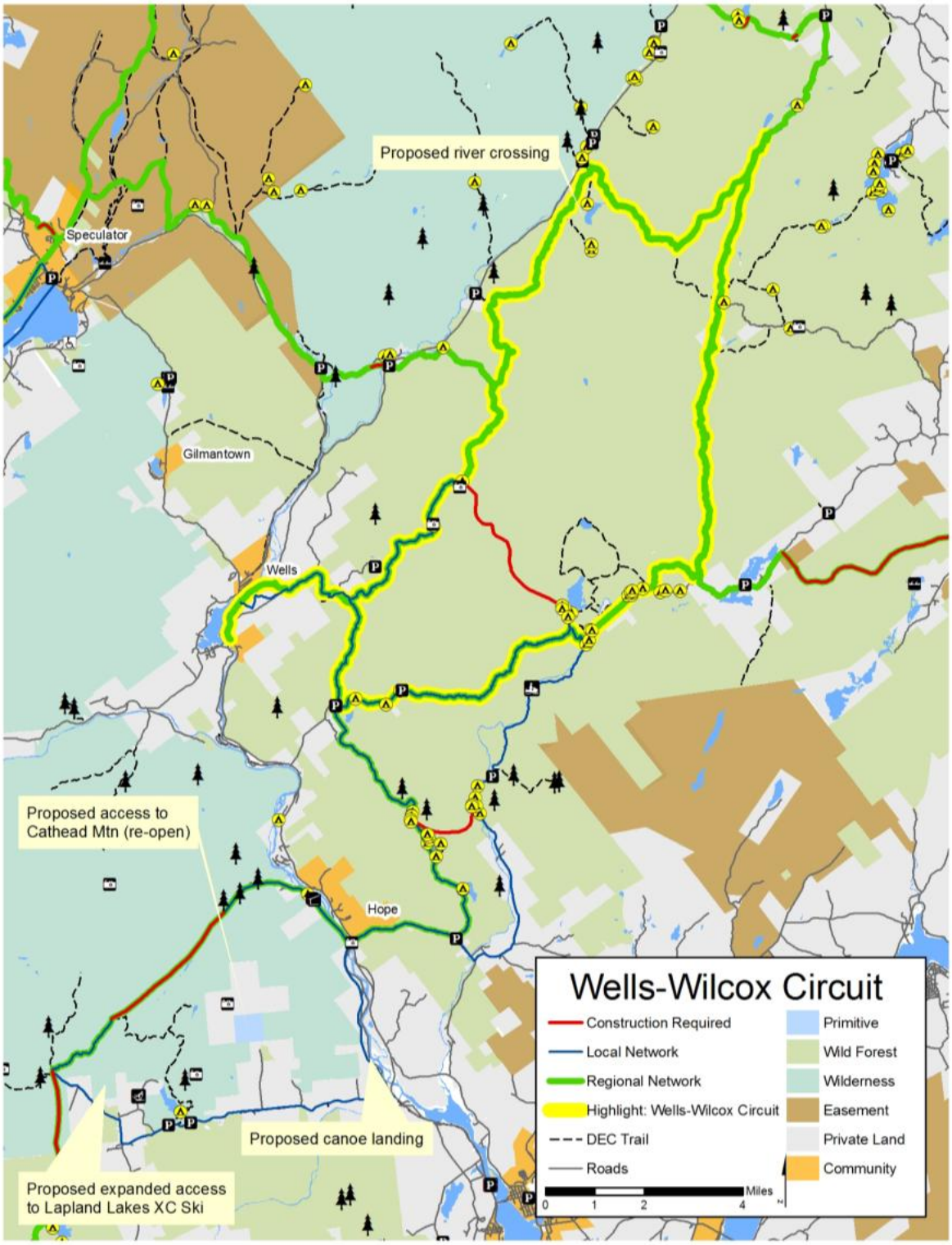


Figure 6: Example of GSW data products and GIS support in the context of the Wilcox Lake draft UMP. A proposed 'Wells-Wilcox Circuit' is highlighted in yellow.

which are subject to available data and knowledge of the system. Cost-path tools can be used to design and evaluate multiple route options by applying different weights to various criteria, such as impact on wetlands, disturbance to sensitive habitats, construction costs, difficulty of use, and many others (Figure 7). Such tools will be particularly useful for bringing existing ARGIS data layers together with the GSW Recommendations to inform design and implementation steps.

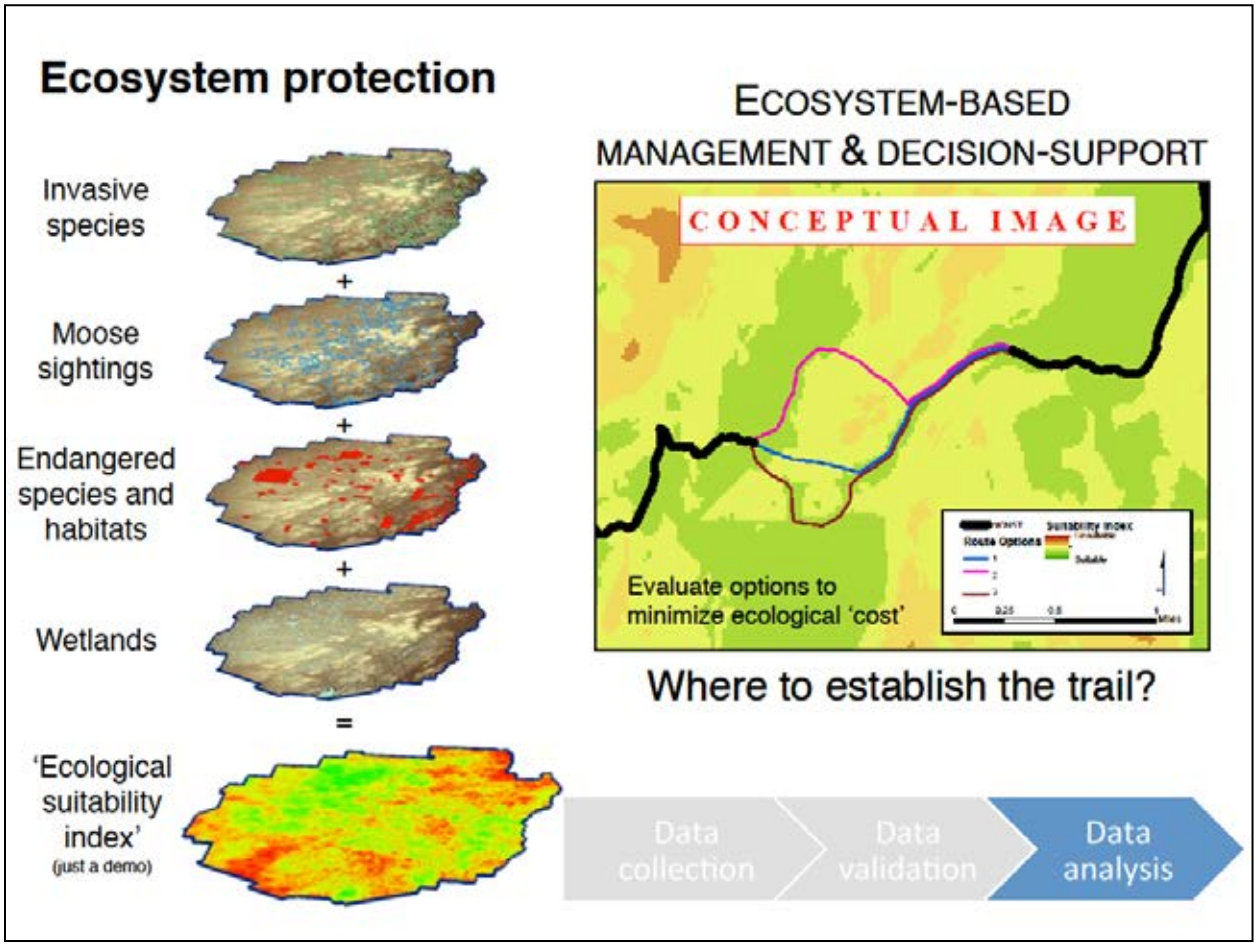


Figure 7: Conceptual illustration of ecosystem-based least-cost path tool.

Another important GIS analysis identified segments of the proposed local and regional networks that would need to be constructed. The GSW Recommendations leverage the existing trail infrastructure when possible, but include gaps that will need to be filled (via construction of trail) in order to close loops and/or open up access in new areas. Using the *erase* tool, sections of the regional and local networks that overlapped with sections from the 1) DEC Assets line layer, 2) NYS Office of Parks and Recreation snowmobile layer, or 3) the NYS roads layer were removed from each network layer. The resulting layer indicated gaps in the trail network that would need to be constructed. These gaps are indicated as red throughout the Maps and Narratives Section, as well as Figure 6. This information is important for assessing the investment in recreational trail planning and development required to implement the GSW Strategy.

LINKING GSW PLANNING TO ONGOING UMP EFFORTS

The GSW Planning Process was designed to be fundamentally different than the current UMP Process, while remaining complementary and supportive of ongoing planning across the Forest Preserve. Key differences were 1) the degree of public engagement and community-driven ideas generated through the GSW process, and 2) the expanded geographic scope that included the full GSW landscape (See Figure 8 in Appendix II: Methodology, for a description of the steps in each planning process). Despite these key differences, GSW Planning process is *not* intended to *replace* the UMP process, or to exist as an *isolated* exercise in planning. In fact, the GSW Planning process often engaged the DEC planners and rangers alongside the public during meetings and workshops, and offered preliminary data results that were considered in active UMP drafts (Figure 8). Throughout the GSW Planning process, a pattern of reciprocity developed with DEC-UMP personnel by engaging them during key GSW events (LKW, DEC Validation, Joint Planning Session, Public Strategy Meetings), incorporating their contributions to the resulting GSW Data Product, Recommendations, and Strategy, and applying the overall GSW Planning Process and results to support active and ongoing UMPs (Figure 8).

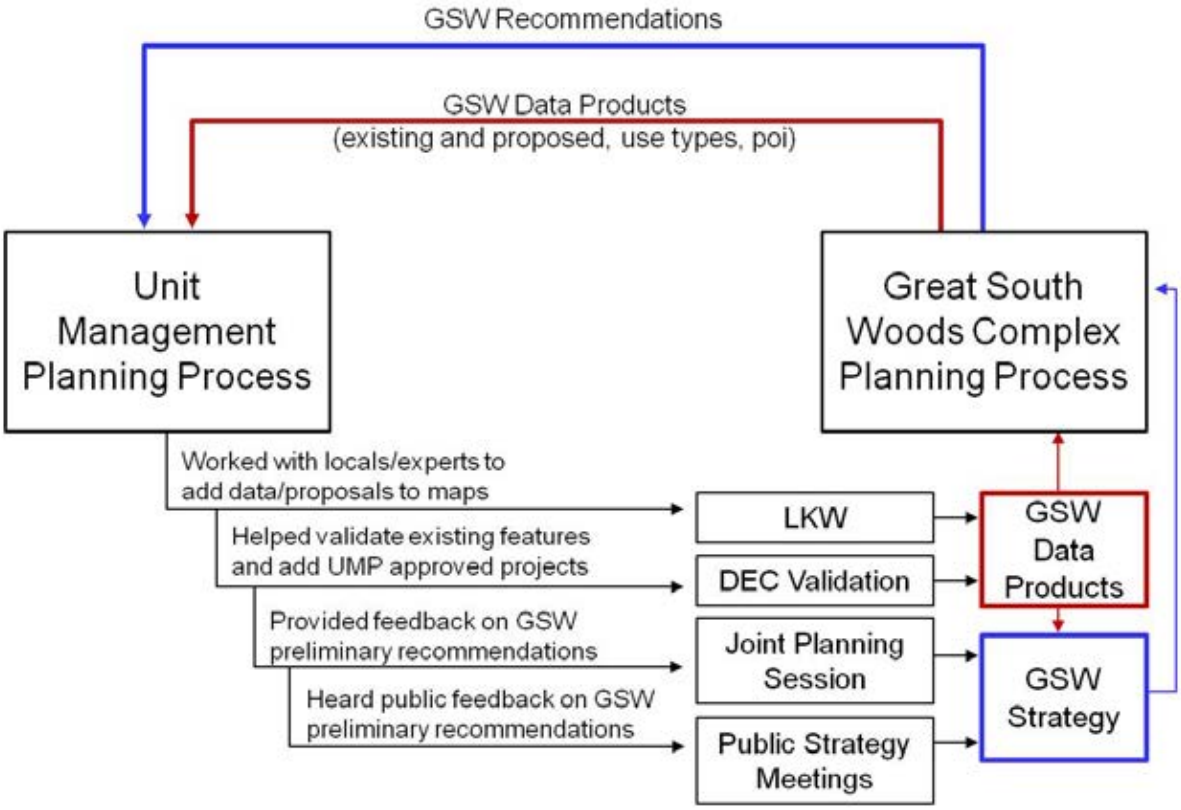


Figure 8: Reciprocal links between the Unit Management Planning process and the GSW Complex Planning process, involving the engagement of DEC personnel at multiple steps in GSW, and the application of GSW products and outcomes in an ongoing UMP. The diagram is generalized from the actual interactions that occurred between the two processes based for the Wilcox Lake Wild Forest draft UMP (see p. 32 and Figure 9).

A case study of how the GSW process can support the existing UMP process is described here for Wilcox Lake Wild Forest. Figure 9 is a map produced by Kirstin Seleen, a DEC planner that is drafting the initial UMP for the Wilcox Lake Management Unit. Ms. Seleen participated in multiple GSW workshops and planning sessions, and demonstrated the first application of how the GSW planning process and deliverables could interface with the UMP draft process. Figure 9 depicts components of the recommended GSW Local and Regional networks (red), combined with existing DEC infrastructure and proposed alternatives (blue lines). Not only do the GSW Recommendations include trails that connect outside the unit, but also suggest smaller-scale connections within existing assets. Ms. Seleen's work demonstrates an initial and conceptual engagement of the GSW process and products within the existing framework for drafting, reviewing, and amending UMPs. More work needs to be done by the DEC to field-validate and assess the utility of the proposed and alternative trail sections, and to assess new infrastructure for universal access opportunities, in the context of the goals and objectives of each UMP.

Aside from Wilcox Lake WF, we envision that the GSW process and products will be made immediately available to inform and support ongoing and future UMP drafts, reviews, and amendments. Data products from GSW can be incorporated directly into GIS-based planning. Aspects of the GSW Recommendations and Strategy can provide guidance on assets to develop, restore, or retire based on information that represents the public knowledge and interest in enhancing local and regional recreation infrastructure. Due to the regional extent of the GSW effort, the data products and recommendations herein can help to identify important connections and points of travel through multiple management units, which can be difficult to conceive or prioritize when planning occurs primarily at the unit (UMP) scale. By considering results from the GSW Planning Process, DEC planners and managers are incorporating public feedback, as expressed through various facilitated meetings and workshops, at a relatively early stage in their planning process, well before an official document is released for public comment. This is an important step as UMPs are reviewed or amended, but may be most important to consider prior to drafting new UMPs. The GSW region includes four management areas that currently lack a UMP, in addition to the UMP for Wilcox Lake Wild Forest, which is currently in the draft stage.

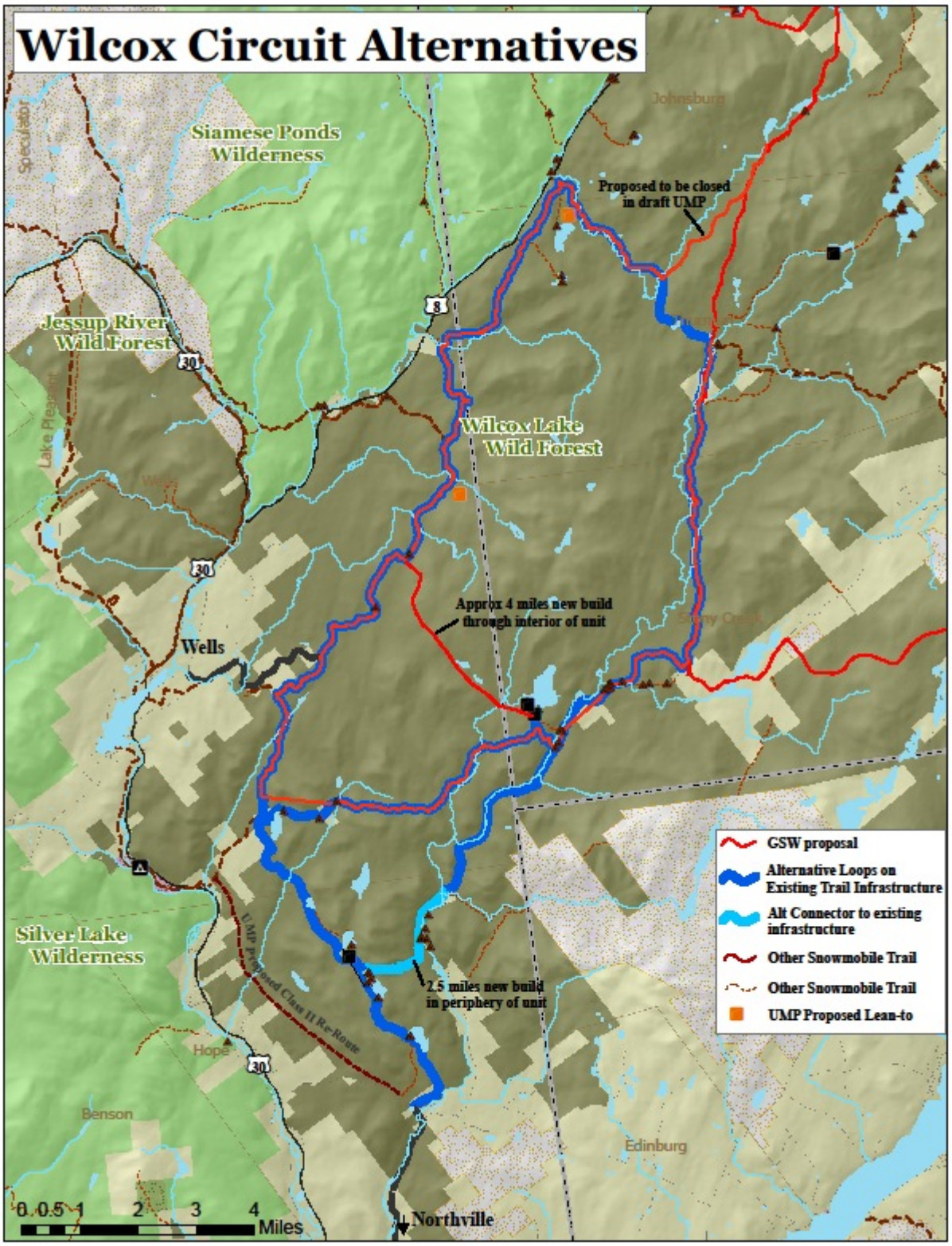


Figure 9: Incorporation of GSW data products in ongoing UMP planning efforts for the Wilcox Lake Wild Forest. Map provided by Kirstin Seleen, DEC Regional Planner.

GSW STRATEGY: IMPLEMENTATION STEPS

Beyond ESF's current scope of work for the GSW project described in its contract with DEC, there are numerous interlocking steps needed to ensure its successful implementation over coming years. To date, ESF has facilitated the GSW project by managing the logistics of community meetings, data collection and synthesis, compilation and revision of maps, curation of the website database, coordination with the DEC team and core group, responses to communities' and organizations' requests for information, etc. With the end of the contract, the GSW project enters the implementation phase and will still need a considerable amount of organizational management and funding if it is to successfully advance.

Beyond the consultative approval process between the DEC and APA which is mandated by the APSLMP and APA Act, local communities will need to play an increasing role in identifying priority projects and forming partnerships with neighboring communities, interested organizations and individuals, and the state agencies to accomplish the concepts described by the strategy. These implementation steps include, but are not necessarily limited to, the following:

ESTABLISH ONGOING MECHANISMS FOR PUBLIC PARTICIPATION AND PROJECT SUPPORT

Perhaps the greatest challenge in implementing the GSW Strategy will be how to maintain the engagement of local communities across the region over the years needed for actual design and construction of the trail network and related community infrastructure. We suggest an organizational configuration that involves multiple communities, comprised of interested organizations and individuals that meet on a regular basis, and maintain a widely collaborative approach. This model would rely heavily upon local leadership. The Adirondack Association of Towns and Villages (AATV) might be a starting point to consider how best to advance the strategy in consultation and collaboration with the DEC regional planners and other personnel.

Throughout the GSW process it was apparent that communities want to promote their assets and are willing to adopt trails or build new trails. There are already numerous trail stewardship groups in the region that may be able to expand their connections to adjacent communities and other groups if proper incentives can be created, such as funding for joint projects. Several groups have been identified (see Potential Partners under Public-Private Partnerships in the Recommendations section) that have well-organized volunteers who can assist in building trails. Many of these groups also understand how to partner with DEC partnerships through Temporary Revocable Permits (TRPs) to build and maintain local trail networks.

The trail network database created by ESF during the GSW project with input from local residents, DEC, APA and others is an important tool for future planning efforts if it is easily accessible and understandable by potential users. There will need to be a mechanism and protocols established to maintain and update the database, as well as to ensure that it is available

to the general public. In addition, DEC planners may need training or orientation to the database as tool to assist them in their work. Transferring this technology to the DEC and APA is still an unresolved issue. Past experience with the ARGIS database indicates that further consideration is needed to establish a home agency for the database and sources of financial support to maintain these important planning tools.

IDENTIFY RESOURCES AND SECURE FUNDING TO SUPPORT PROJECT IMPLEMENTATION BY LOCAL COMMUNITIES

Another key ingredient for the strategy's successful implementation will be the availability of needed human and financial resources. The Environmental Protection Fund (EPF) may be the most readily accessible funding source, and when matched with in-kind labor or other community contributions, is a good mechanism for local project development.

Another potential source of support to build trail networks and related infrastructure may be Governor Cuomo's recently established Excelsior Conservation Corps. If a contingent of the conservation corps could be assigned to priority projects in the GSW, there could be immediate and tangible results in the region.

The Regional Economic Development Councils (REDCs) Consolidated Funding Application (CFA) is another potential source of funding but has a highly competitive process, with less likelihood of success in the more sparsely settled rural communities across the GSW.

IDENTIFY APPROVED UMP PROJECTS NEAR TRAIL NETWORK FEATURES

Portions of the trail network and related infrastructure (e.g., parking areas, trail heads, etc.) are already included within approved UMPs and can be the initial implementation phase for the GSW strategy, if local communities agree. As these first projects are undertaken, projects that require amended UMPs can be prioritized and advanced for approval (see Appendix II, Table 6).

FIELD-VALIDATE NETWORK FEATURES TO ASSESS POTENTIAL ENVIRONMENTAL IMPACTS AND RECREATIONAL CHARACTERISTICS

There is a significant amount of effort needed to actually locate proposed trail networks on the ground. This work may be accomplished with volunteers from the various communities and trail clubs, but will need to be closely coordinated with DEC planners, rangers and other professionals to both maximize the attractiveness of the trail type and protect any fragile ecosystems and species in the area. Due to the size of the GSW, local communities will need to identify priority projects in their vicinity as well as their human resources available to work with the DEC on trail verification and environmental assessments.

Throughout the development of the GSW Strategy, it has been apparent that certain trade-offs may be necessary to accommodate a trail network which may be in conflict with an existing classification or regulatory guideline. During the field-validation work, it will be useful to identify conflicts and trade-offs and open a dialogue to assess potential options. There may be a need to triage certain trails as: "shovel-ready" or easy to proceed; moderately difficult to build due to environmental or other constraints, but still within the regulatory framework (UMP update or amendment may be needed); and difficult, due to the need to amend the APSLMP or some other constraint (e.g., permission to cross private property).

DESIGN DETAILED PLANS FOR TRAIL NETWORKS AND RELATED INFRASTRUCTURE

The GSW strategic goal of creating a world-class tourism destination will require a new level of planning and design to attract savvy global travelers who have particular recreational interests and criteria (e.g., thru-hikers, mountain bikers, canoeists, elder hostel hut-to-hut users, snowmobiler, horse-back riders, 'glampers', bird watchers, history buffs, etc.) Services of experienced professional outdoor recreation designers, landscape architects, architects and engineers will be needed to meet the criteria desired by destination tourism. These professionals can also teach and orient local craftspeople and artisans about the market competition and demands for future services. Special design attention will need to be applied within the communities to create an aesthetic appearance and tourist-friendly atmosphere which also makes easy and visible connections to the adjacent state lands, local amenities (e.g., attractions, food, lodging, gas, etc.), as well as other communities along the trail networks. Consideration of vehicular and pedestrian traffic patterns, sidewalks and street furniture, international symbols, signs and easily accessible information and maps (in several languages) are all part of a tourist and resident friendly community streetscape.

SECURE NECESSARY AGENCY AND LOCAL COMMUNITY APPROVALS

As detailed designs and construction plans are finalized, there are a series of agency (i.e., DEC, APA and DOT) and community (town planning and zoning boards) reviews and approvals that will probably be required as the trail networks move toward implementation across public and private lands. Early consultation with agency representatives should save time and identify any potential problems, especially environmental impacts.

DEVELOP MARKETING AND COMMUNICATION PLANS WITH JOINT PARTICIPATION OF LOCAL COMMUNITIES AND STATE AUTHORITIES

Except for the Old Forge and Fulton Chain areas, the GSW region is a relatively little known portion of the Adirondack Park for many tourists who visit from outside the region and see much more advertisement about Lake Placid, the High Peaks and Lake George. The '*Adirondack Advantage*' report and the concept of '*Trail Towns*' are closely aligned with the possibilities described in the GSW strategy. A key necessity will be to deploy a marketing effort that differentiates the GSW from other better-known areas of the Park, while also attracting new visitors to its recreational opportunities, natural settings, and cultural offerings.

During the GSW workshops, community participants provided numerous ideas for marketing and promotional strategies. Although beyond ESF's scope of work, it is useful to list these ideas as potential elements of the implementation process (see Marketing is KEY and Packaging Experiences under Public-Private Partnerships in the Recommendations section)

The 'I Love NY' campaign and the Regional Office for Sustainable Tourism (ROOST) can be important sources of support. A well-designed internet presence will be critical in attracting international tourists and other visitors from outside New York.

A. Larkin

STATE LAND MASTER PLAN IMPLICATIONS

In general, nearly all aspects of the GSW Recommendations and Strategy can be accomplished within the existing policies and regulations set forth in the Adirondack Park State Land Master Plan (APSLMP) and Adirondack Park Agency Act. However, some new definitions and amendments to specific unit management plans (UMPs), or certain sections of APSLMP, may be needed (see Appendix VI for references). These include, but are not limited to, the following:

DEFINITION OF 'WILD LANDS COMPLEX'

As previously noted, the GSW project has used the concept of a Wild Lands Complex to reflect the interdependence of State lands and adjacent private and municipal lands for achieving multiple concurrent goals, including the protection of the Adirondack Park's natural resources and open space character, the promotion of local economic development through visitor tourism and recreation, and the design and maintenance of recreational infrastructure across both public and private land boundaries. The fundamental interdependence of public and private lands, and the need for stewardship that crosses landowner boundaries and simultaneously considers multiple objectives, is consistent with the intent of both the APSLMP and APA Act.

There is currently no definition or use of the term Wild Lands Complex in either the APSLMP or the APA Act. However, the DEC and APA recently identified five large landscape regions, or planning complexes, that combine multiple land types and management areas into larger planning units (Figure 2). The GSW effort served as the pilot project for enhancing recreational opportunities while also protecting ecological integrity at thelarger scale of the complex, and is intended to serve as a potential model for future complex planning.

As needed and appropriate, the definitions for 'front-country' and 'back-country' might be considered as part of the Wild Lands Complex definition. However, these concepts, while familiar to many people can also vary widely in their meanings for different stakeholders, and therefore require further discussion and elucidation prior to their formal use in Park planning.

DEFINITION OF 'WILD LANDS COMPLEX MANAGEMENT PLAN'

There is no definition or use of this term in either the APSLMP or the APA Act. However, we note that the current definition for UMP development in Section 816 of the Act does not specifically exclude the notion of consolidating contiguous Forest Preserve units for planning and management purposes, nor does it provide guidance on how to incorporate ecosystem-based management principles and achieve other recreational objectives such as regional trail networks that extend across the boundaries of Forest Preserve units and private lands.

Amending certain sections of the APSLMP to include the definition and process steps to design and implement a Wild Lands Complex Management Plan can provide an opportunity to better

engage agencies and local communities in long-term, large-scale comprehensive planning for the Adirondack Park. Such an approach can incorporate both state lands and private lands in a more efficient and effective manner than the current unit-by-unit or public versus private lands divisions.

UMP AMENDMENTS TO ACCOMODATE CERTAIN TRAIL USES

During the GSW project planning sessions, it became apparent that there are several situations that could necessitate amendments to individual UMPs, or specific sections the APSLMP, to accomplish the overall objectives of the Adirondack Park Outdoor Recreation Enhancement Strategy originally described by the DEC. Examples that illustrate such situations may include:

1. Classification of State land as 'Wilderness' that abuts state highways and thereby excludes the possibility of an adjacent snowmobile corridor due to topographical constraints. For example, the proposed snowmobile trail between Speculator and Indian Lake along NYS Route 30 is bounded by the West Canada Lake Wilderness to the west. Although the definition for 'Wilderness' permits in limited instances, snowmobile trails within 500' of a public highway right-of-way, a suitable trail route would need to be located beyond that distance to accommodate a regional connection.

2. Some specialty trails, for example, mountain biking and cross-country skiing, are more attractive for recreational users when designed as use-specific high quality recreation experiences. Certain UMPs may need to be amended to permit mechanized (but non-motorized) uses of state land for mountain biking, or motorized grooming of cross-country ski trails on state land.

3. Hut-to-hut cross-country skiing is a major winter tourist attraction in other northeastern states and northern Europe, and has great potential in the park, but huts on state lands are currently prohibited. Specific UMP amendments, TRPs, or specific amendments to the APSLMP, may be needed to permit the use of temporary yurts or the like to accommodate these uses (see High Quality Recreation Experiences in Recommendations section).

TRAIL USE MODIFICATIONS THAT CROSS MULTIPLE FOREST PRESERVE UNITS

In the community workshops, various ideas were discussed that would require modifications of existing UMPs, and specific sections of the APSLMP, for the creation of specialized mountain biking trails, horse trails or snowmobile trails, or use of motorized tracked groomers for long-distance ski trails. In cases where a long-distance trail crosses multiple Forest Preserve units with different classifications (i.e., Wilderness, Primitive, Wild Forest, etc.), the development of such a network could be accomplished by a singular amendment to the APSLMP, by amending multiple UMPs at the same time, or by introducing a new planning step that considers individual trails or features as whole entities in addition to the existing UMP process.

CHALLENGES OF COMPLEX PLANNING

Many regions of the U.S. have significant experience with large landscape, or complex, planning (see Montgomery, Carleton, 'Regional Planning for a Sustainable America; How Creative Programs Are Promoting Prosperity and Saving the Environment', Rutgers University Press, New Brunswick, NJ, 2010.) Collectively, there have been many lessons learned from these regional planning processes, many of which have guided the GSW process. The following list is taken from regional planning literature and experiences, with more specific examples from the GSW. This section may serve to guide the ongoing efforts in the GSW and across the Adirondack Park as future complex planning projects are undertaken. These challenges include:

WORKING ACROSS JURISDICTIONAL BOUNDARIES WITH PEOPLE THAT HAVE DIVERSE VALUES AND OBJECTIVES, YET SHARE A COMMON PLACE

The GSW project was directed and facilitated by a technical team from SUNY-ESF contracted by the DEC and funded through the EPF. The ESF team included faculty and graduate students from the Syracuse campus and staff from the ESF Adirondack Ecological Center in Newcomb.

The DEC's primary mandate is the care and custody of the nearly 1.3 million acres of the GSW that is part of the Forest Preserve. In addition, the DEC oversees state-financed conservation easements on private forest lands. In the GSW region, DEC personnel are divided between Regions V and VI, as well as between supervisory lines of the Division of Lands and Forests (e.g., UMP planners), and Division of Law Enforcement, and Forest Protection (e.g., environmental conservation officers and forest rangers). A variety of DEC personnel were active in the data gathering, data validation and planning efforts throughout the GSW process.

The APA's primary mandate is to administer the Adirondack Park land use and development plan for private lands. Together, the APA and DEC act in consultation with each other to generate UMPs in compliance with the APSLMP and APA Act. Representatives from the APA state land department also participated throughout the GSW project.

Other state agencies had peripheral connections with the GSW project. The Department of State (DOS) funded the Adirondack Community Trails and Lodging System (ACTLS), which focuses on hut-to-hut and lodge-to-lodge connections among local communities. The Department of Transportation (DOT) has offered assistance on roadside signage, parking, etc.

Other jurisdictional levels within the GSW include NYS counties, including: Hamilton and parts of Herkimer, Fulton, Saratoga, Warren and Essex Counties. Thanks to the active participation by the Chair of the Hamilton County Board of Supervisors, the ESF team was able to maintain key communications with state, county and local town government officials.

Due to the geographic distances, jurisdictional overlaps, logistical and communications challenges, and technical complexities of managing a project of this scope and magnitude, the

key parties (DEC, ESF, APA and Hamilton County) formed a 'core group' which consulted on a regular basis to review progress, adjust activities and schedules, resolve conflicts, etc.

A key ingredient in the GSW project was *local community participation in all phases*, from data gathering and assessment to discussions about how to partner with each others' communities and the state agencies to successfully implement the final strategy. In contrast to a typical UMP process (Figure 12), the GSW project asked for wide-ranging input from local community members on existing and potential trail networks prior to developing a plan. In addition, ESF facilitated the community participation sessions with DEC and APA personnel as participants; this technique reduced tensions around the agencies' mandates which might have constrained conversations about potential trail connections and other recreational uses. Finally, numerous special interest groups also participated in the community sessions. The groups ranged from environmental advocacy non-profits, snowmobile clubs, sportsmen associations, local trail clubs, chambers of commerce, etc.

Despite a high level of public engagement throughout the project, there was still some criticism about who was or was not 'at the table.' This highlights a need for continued access by the public in the design and implementation process, as new voices will seek representation and influence.

FINDING A BALANCE BETWEEN ENVIRONMENTAL QUALITY, COMMUNITY NEEDS, AND ECONOMIC GROWTH

Although there has been a perennial debate over this issue in past decades, the tenor of the conversation is shifting in the Adirondack Park, in large part due to the work of the Common Ground Alliance and its goal of finding solutions that benefit the Park's communities and economies, as well as protecting the environment. The Forest Preserve and environmental quality of the region are often described as the Adirondack's competitive advantage and an important economic asset for local communities. The GSW project appears to be having a positive impact due to its coupling with the DEC's openness in asking for community input, local leaders responding as partners, and a receptive governor who is encouraging appropriate development in the region.

Environmental advocacy groups have, however, raised concerns about the GSW project's primary focus of developing a regional trail network to the perceived detriment of environmental quality. ESF's mission is related to environmental quality and thus ESF has compiled a comprehensive Adirondack Regional Geographic Information System (ARGIS) over the past 10 years containing multiple layers of environmental data for the GSW region. ESF also manages the NYS Natural Heritage Program database. This allows ESF and planners to address ecological sensitivity during implementation stages.

WORKING KNOWLEDGE ABOUT THE ECOLOGICAL STRUCTURE AND FUNCTION OF LARGE LANDSCAPE COMPLEXES

Though the ARGIS and NYS Natural Heritage Program databases exist and are accessible, these resources have been used relatively little by DEC staffers engaged in day-to-day unit management activities and planning. UMPs provide detailed narrative descriptions of natural and cultural features, but this information alone is not adequate. Maps and spatial data are essential to operationalize this knowledge in land planning activities. A key dilemma that continues to persist is how best to transfer that knowledge (and tools for its use) to the DEC, APA, local officials and other decision-makers. For example, it was apparent in a September 2015 GSW workshop with DEC planners that many were unaware that the Adirondack Regional GIS Portal – a web-map (www.argis.org) funded by DEC in partnership with ESF and many other organizations – existed or how it could be accessed to support UMP efforts. Regular professional training opportunities and agency support for ongoing data curation are potential solutions to this dilemma.

CAPACITY TO ORGANIZE, ACHIEVE AND ADVOCATE FOR COMMON GOALS

Beyond the current scope of work and immediate activities of the GSW project, the lack of state agency and local capacity to continue community-level designs and secure funds for the implementation phase is a major challenge. As one community workshop participant aptly stated, "In the past, DEC was going to do it all. Now, DEC is looking for partnerships. These trails will not happen unless organizations and communities collaborate to build and/or maintain them." The DEC's encouragement of local community partnerships combined with the vested interests of those communities may be able to overcome this critical obstacle.

STRATEGY TO FACILITATE COMMUNICATION AND COLLABORATION AMONG DIVERSE INTERESTS AND ACROSS GEOGRAPHIC DISTANCES

The geographic dispersion of the rural Adirondack communities has engendered a laudable historic characteristic of economic self-sufficiency. The GSW project's core them of Connectivity is a significantly different direction for many communities, who sometimes believe they are competing for tourism dollars, rather than competing globally and collectively for those tourists' dollars.

There is growing awareness about the need to collaborate to overcome this challenge, and many potential partnerships and programs were presented throughout the GSW Project (see Public-Private Partnerships in Recommendations section). ROOST and other local Chambers of Commerce are actively developing partnerships to advance these concepts, but are often limited in geographic scope, or their services are out of reach for many Adirondack communities.

IMPROVED POLICY AND MANAGEMENT TOOLS TO IMPLEMENT DESIRED CHANGES

It is commendable that the DEC has embarked on complex planning for the Adirondack Park in collaboration with the APA and local communities. The GSW project is an experiment and has identified potential legal impediments that need to be addressed to allow for the successful implementation of this strategy, either by amending individual UMPs or by amending the APSLMP (see State Land Master Plan Implications section).

FINANCIAL RESOURCES

Beyond the life of the current GSW project, there is no additional funding in place to initiate implementation actions identified by this strategy. This situation has the potential to erode the local communities' enthusiasm and engagement in the process. When DEC accepts the GSW Final Strategy, ongoing conversations with local leaders to secure the necessary resources for implementation are recommended.

Several potential sources of support were identified during community meetings, including: additional EPF funds directed toward the GSW trail network construction, support from Governor Cuomo for Excelsior Conservation Corps to build trails and other infrastructure, Town/DEC partnerships under TRPs to build and maintain trails (e.g., Simonds Pond Trail Improvement Society, Upper Hudson Trail Alliance, local chapters of the Adirondack Mountain Club, snowmobile clubs, etc.).

A. Larkin

ONLINE INTERACTIVE WEB-MAP ACCESS

To facilitate future public engagement with the GSW Strategy, and to promote the critical next steps of design and implementation, ESF has partnered with AdirondackAtlas.org to share the GSW Recommendations and related map data online here:

http://greatsouthwoods.adirondackatlas.org

By opening the above link in a web browser – we *strongly recommend using Chrome, Safari or Firefox* – users can explore the GSW Recommendations and related map data.

In the collapsible sidebar on the left, users can find and access the content in the map. The GSW Recommendations are found in the **Features** tab to the left, by scrolling through the list or by performing a search to filter the results. Hovering the mouse cursor over the name of the feature will highlight (in yellow) that route in the map. Clicking anywhere on the name of the feature will automatically zoom the map to the feature and bring up its narrative description (and map) from this GSW Recommendations document.

Additional map layers, such as hotels, restaurants and points of interest, may be accessed via the **Catalog**. We have provided 'GSW Proposed Networks' as a map layer, which shows the complete regional (green) and local (blue) networks, with red lines indicating where new trail must be constructed.

All other map layers in the **Catalog** are provided by AdirondackAtlas.org, which maintains an extensive regional database. These are **not** GSW data products and therefore neither ESF nor DEC is responsible for their accuracy.

The GSW project has provided the map layers found in the **Features** tab, and the Proposed Networks folder in the **Catalog**. Together these layers include all of the features described in the Maps and Narratives section (pages R-1 through R-59) of this document.

The **Active** tab shows the layers currently visible in the map and provides map controls for reordering (or 're-stacking') the layers, adjusting their opacity, etc. Use the 'trash can' icon to remove the layer from the map.

We note that the online interactive map does not include all of the data collected during the GSW participatory process. The GIS inventory of recreation assets developed by the GSW project is not found here, but may be available upon request from NYS DEC.

Maps are intended to inform future planning, will be subject to revision, and do not necessarily represent current or future priorities. The ideas presented online are conceptual and locations of points and routes are approximate.

APPENDIX I: DEC PROPOSED PLANNING COMPLEXES LAND COVER

The following table describes the land cover area (km^2) for each planning complex, according to the 2011 National Land Cover Database. The analysis was conducted using the Identity and Summary Statistics tools in ArcGIS 10.3.

NLCD Classification	Great South Woods	Battleground Lakes	Cloudsplitter Summits	Northern River Highlands	Oswegatchie -Black Waters
Open Water	371.8	470.0	67.5	252.3	313.0
Developed, Open Space	92.8	102.0	38.6	69.7	16.5
Developed, Low Intensity	12.7	31.4	9.5	9.5	1.9
Developed, Medium Intensity	2.9	9.1	2.6	2.9	0.7
Developed High Intensity	0.6	2.1	0.7	0.8	0.2
Barren Land (Rock/Sand/ Clay)	12.9	2.9	3.9	6.9	5.8
Deciduous Forest	4359.0	908.6	1048.0	2892.3	2294.4
Evergreen Forest	1591.8	941.1	988.0	1238.3	574.6
Mixed Forest	1046.8	468.6	510.0	304.7	248.2
Shrub/Scrub	158.2	32.7	23.1	165.4	181.5
Grassland/ Herbaceous	15.6	10.3	9.3	43.3	5.3
Pasture/Hay	10.5	77.5	4.8	45.7	0.9
Cultivated Crops	7.0	72.0	10.7	17.9	0.5
Woody Wetlands	397.8	119.1	78.5	387.8	228.6
Emergent Herbaceous Wetlands	46.6	11.6	7.4	27.7	33.0
Total Area:	8126.9	3258.9	2802.4	5465.2	3905.1

APPENDIX II: METHODOLOGY

The GSW Complex Planning project represents a different approach to recreation planning that:

- **Facilitates and incorporates a high degree of public engagement to gather local knowledge and community-driven ideas into recreation planning**
- **Expands the geographic scope of planning efforts from small units to larger complexes or landscapes, allowing for a more holistic perspective and the design of high quality recreation infrastructure that meets multiple objectives.**

1. KICKOFF MEETING

The launch of the Great South Woods (GSW) Complex Planning Project occurred during a formal Kickoff Meeting, held 5:30-8:30 pm in the gymnasium of the Lake Pleasant Central School in Speculator. The purpose of this meeting was to introduce and raise awareness about the project by reaching out to various Adirondack stakeholders, in particular local community members and leaders. The meeting began with an introductory presentation that outlined the project objectives, goals, methods, and partners, and was followed by facilitated small-group exercises (Table 1). Participants were organized in small groups based on coded folder colors.

The first exercise asked participants to identify GSW recreation destinations as 1) common or absent, 2) unique, and 3) to describe the infrastructure (i.e., already existing, or in need of re-design or maintenance) associated with each destination. Participants were encouraged to think broadly about activities that constitute recreation and associated destinations, and were given a worksheet and time to record their thoughts privately if they desired. After the break, participants were reshuffled for the second exercise and asked to draw connecting arrows on simplified paper maps indicating existing and potential connections among communities and recreation destinations. During both exercises ESF facilitators recorded group ideas on large notepads. At the end of the meeting, facilitators synthesized and reported key ideas and discussion points back to the larger group. Before the meeting concluded, participants were encouraged to complete an exit survey, which was used to evaluate the meeting activities and overall process. Participants were also given a Perspectives Matrix, which was used to guide a reflection on recreation assets, defining features, opportunities for enhancing, and changes to avoid at the community and regional scales. Participant comments that were important to the project, but outside the scope of the meeting exercises, were recorded at the "Trailhead," a stand-alone station with large notepad.

The Kickoff meeting was instrumental in the success of subsequent GSW public meetings. Many who participated in the Kickoff meeting returned and participated in additional GSW meetings and continued to engage in the broader project. Key decisions regarding the methods and objectives of subsequent meetings were based on feedback gathered across the core team and through exit surveys, including the decision to focus meetings on facilitated, small-group, map-based exercises.

Table 1: Overview of GSW Kickoff Meeting structure and materials.

	Meeting Item	Paper Materials (Appendix I)	Other Materials
1.	Arrival and Registration	• Participant Folders o Agenda o Perspectives matrix o Contact information o Exercise 1 worksheet o Exercise 2 maps o GSW Reference maps (4) o Blank notes sheet o Exit survey • Sign-in sheet	• Name tags • Pens • Folders and colored stickers
2.	Project Introductions - 25 min	None	• GSW, ACTLS, and GIS mapping presentations • Computer/projector
3.	Meeting Outline and General Instructions - 5 min	None	• Presentation on best etiquette for brainstorming and discussions • Computer/projector • Large notepad for "Trailhead"
4.	Exercise 1: Recreation Destinations and Access - 45 min	• Exercise 1 worksheet • Reference maps	• Large notepad • Black markers
5.	Break - 20 min	None	None
6.	Exercise 2: Connections among Communities Via the Forest Preserve - 45 min	• Exercise 2 maps • Reference maps	• Large notepad • Black markers
7.	Facilitators Report Back - 15 min	None	None
8.	Concluding Remarks and Reminders - 10 min	None	None
9.	Exit Survey - 5 min	• Printed Survey	None

2. DATA COLLECTION WORKSHOPS

Workshop design and materials were carefully prepared by SUNY-ESF, in partnership with ACTLS, in order to 1) *gather local knowledge about recreational assets* and 2) *generate ideas regarding potential new trails, lodging, and recreational opportunities*.

The large expanse of the GSW was divided into sub-areas to coordinate 5 Local Knowledge Workshops (LKW). William Farber provided initial contacts in the towns of Blue Mountain Lake, Long Lake, North Creek, Northville, Old Forge, Ohio, and Piseco. Contacts were emailed a project overview and description of the needs for upcoming public workshops. Locations and dates were determined based on the availability of necessary partners, the suitability of the

location for attracting participants, and in order to avoid conflicts with local events (Table 2). For each meeting, different communities were selected in order to disperse workshops across the GSW, while providing access to main population centers. Additional logistics (e.g., room arrangement, building access, and internet) for each location were discussed and finalized through follow-up phone calls and emails. Each meeting was advertised through an official DEC and ESF-approved press release, which was circulated to local news outlets and provided as a link on the project website. Personal invitations were sent through an ESF-maintained email list, which consisted of local town leaders, guides, professional recreation services, and any individual who previously expressed an interest in the GSW Project.

Table 2: GSW meetings scheduled from December 2014 to March 2015

Community	Location	Meeting	Date	Time (pm)
Speculator	Lake Pleasant Central School	Kickoff	12/17/14	5:30-8:30
Piseco	Piseco School Gymnasium	LKW	1/28/15	6-8
Old Forge	Library Community Room	LKW	2/25/15	5:30-7:30
Long Lake	Long Lake Central School Gymnasium	LKW	3/2/15	6-8
North Creek	Tannery Pond Community Center	LKW	3/9/15	6-8
Northville	Northville Central School Cafeteria	LKW	3/16/15	6-8

Following the model developed during the Kickoff meeting, general meeting structure for LKW consisted of introductory presentations and materials, followed by two facilitated exercises that relied on printed maps (Table 3). The first exercise was designed to collect information on additional or erroneous *existing* recreation trails and infrastructure, essentially asking participants to add or edit existing information on the base map. Participants were given a worksheet and the time to respond to this exercise privately, before group notes were recorded by the facilitator(s).

The second exercise allowed participants to identify *proposed* recreation opportunities by constructing new or leveraging existing infrastructure to enhance connections between recreation destinations and communities. For each proposed recreation opportunity, participants were asked to complete a project ‘proposal’ worksheet identifying the mode(s) of use, type of connection, and the destinations and communities associated with the opportunity, along with any other important details. Participants also had the option of providing their contact information on this worksheet.

Both exercises organized participants into small-group stations of 5-10 individuals and allowed them to sketch on large-format printed maps. Exercises occurred under the guidance of 1-2 GSW or ACTLS facilitators, using the mapping guide to sketch features on large-format maps while also recording detailed information on a large notepad. Similar to the Kickoff meeting, LKW utilized a "Trailhead" station to capture broader participant comments, as well as an exit survey to continue to evaluate meeting design and structure.

Paper maps were a key material throughout the GSW Project. During LKW, both small-group exercises relied on a series of base maps to collect and communicate information about recreation infrastructure. The GSW planning area was represented across four regional base maps (1:63,360; 3'x4'; Figure 1) that depicted the planning region and Adirondack Park boundaries, as well as the location of existing recreation infrastructure, communities, state land classifications, and easements. Community maps were initially prepared at a smaller scale (1:30,000; 3'x4') for the Piseco workshop, and were further reduced in size and scale for subsequent LKW (1:10,000-36,358; 8.5"x11"). Community maps focused on the extent of each community in the GSW, and used a topographic layer in addition to the recreation and landscape information depicted on the regional maps.

Table 3: Overview of Local Knowledge Workshop structure and materials.

	Meeting Item	Paper Materials (Appendix II)	Other Materials
1.	Arrival and Registration	• Participant Packet o Agenda o Contact information o Exercise 1 worksheet o Mapping guide o Extent-indicator map o Exit survey • Sign-in sheet	• Name tags • Pens
2.	Project Introductions - 20 min	None	• GSW and ACTLS presentations • Computer/projector
3.	Meeting Outline and General Instructions - 10 min	None	• Presentation on best etiquette for brainstorming and discussions • Computer/projector • Large notepad for "Trailhead"
4.	Exercise 1: Destinations and Assets - 30 min	• 4 Regional maps • Various community maps • Mapping guide • Worksheet	• Large notepad • Black and red markers • Pencils
5.	Break - 10 min	None	None
6.	Exercise 2: Making Connections - 40 min	• 4 Regional maps • Various community maps • Mapping guide • Project proposal worksheets • Project proposal example	• Large notepad • Blue markers • Pencils
7.	Concluding Remarks - 5 min	None	None
8.	Exit Survey - 5 min	• Printed survey	None

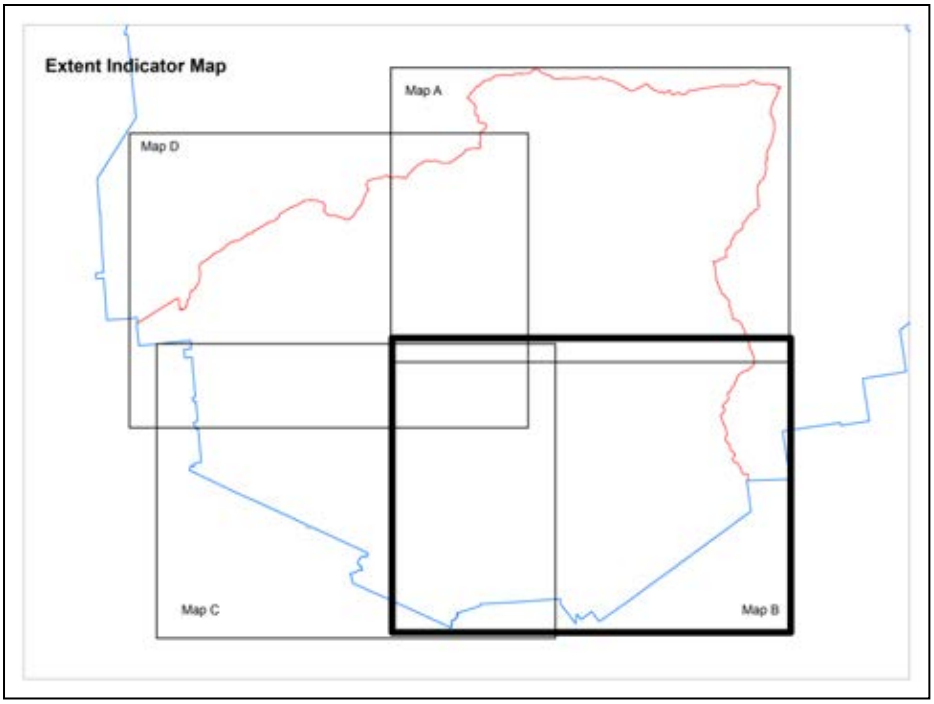


Figure 1: Regional map extents used in GSW workshops. The GSW complex is indicated by the red boundary to the north and east, and by the Adirondack Park boundary (Blue Line) elsewhere. Map B is highlighted for a workshop occurring within this map's extent.

The GSW Project followed an adaptive approach to each meeting structure, and made adjustments to methods and materials as needed. The first workshop organized participants into eight stations, with five stations focused on the most relevant regional map and related large-format community maps, and one station for each of the three remaining regional maps and related community maps. Considering the costs of printing large-format maps and organizing facilitators for stations, and participant's limited interest in community maps, subsequent LKW consisted of five stations focused on the same localized regional map with two maps per station, one station with the three remaining regional maps, and one station with smaller community maps. This adjustment eliminated one full station and the need to print over a dozen 3'x4' color maps. Additional changes included an evolving list of codes, featured on the mapping guide (Appendix II) for recording features both on the map and in detail on notepads, as well as refining our directions (verbal and through reference materials) for marking the paper maps.

Over a four-month period, more than 230 individuals engaged in the GSW planning process and contributed their knowledge about recreation across the region (Table 4). Participants at each meeting largely represented communities from inside the planning region (Figure 2), and actively participated in both exercises. Individuals with a vested interested in recreation across the planning area came forward to specifically engage with the GSW project, including William Ingersoll and advocates for the North Country National Scenic Trail.

Table 4: GSW public meeting attendance and participants from GSW region

Community	ESF Staff	ACTLS Staff	Participants	Residents of GSW Planning Area
Speculator	12	2	76	54%
Piseco	8	3	27	48%
Old Forge	12	3	28	50%
Long Lake	10	3	27	48%
North Creek	9	6	51	67%
Northville	11	6	23	44%
		Total:	232	Average: 51%

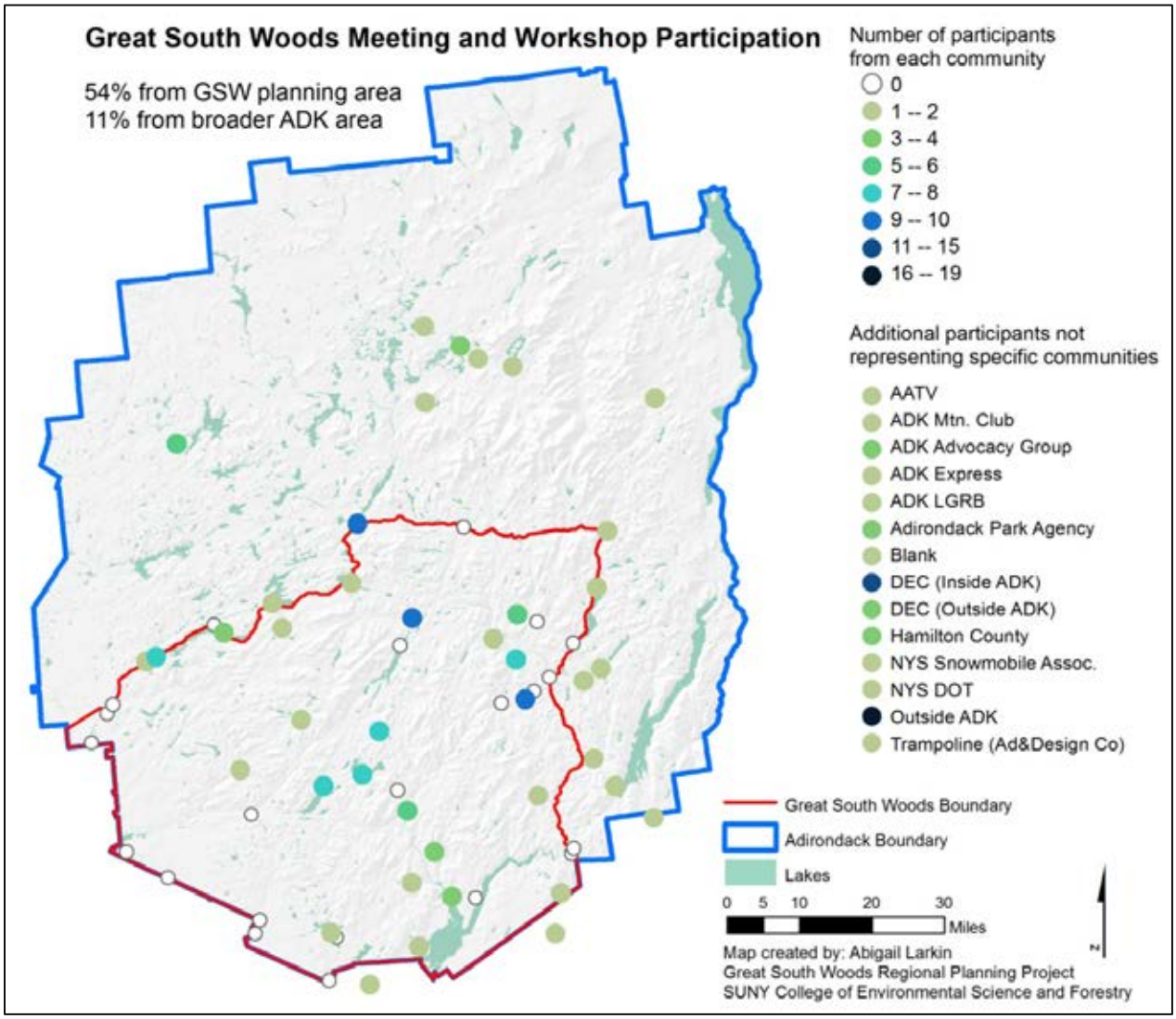


Figure 2: Public participation in GSW Kickoff Meeting and Local Knowledge Workshops.

3. DATA DIGITIZATION

A majority of the information collected during LKW was digitally processed and recorded as GIS data by the GSW-ESF project staff. As the first step in recording information, the GSW-ESF project staff took digital photos of all maps and notepads prior to leaving the workshop location. All handouts, exit surveys and proposal worksheets were digitally scanned.

Each regional and community map that contained sketched information was collected, processed through a large-format scanner and georeferenced using Quantum GIS. The georeferenced map was used as a guide for digitizing, i.e., recording each sketch on the map as a spatial feature in a shapefile layer. Spatial features were recorded as point, line, or polygon geometries resulting in three separate shapefile layers. Polygons were converted to points or lines when possible to reduce spatial overlap across features. Digitization occurred throughout the schedule of LKW and lasted approximately 5-6 weeks. Once digitized, each spatial feature was attributed with the information recorded on the large notepads and worksheets, indicating the use of the feature, specific points of interest, maintenance issues, etc. These notes were sometimes used to validate the location of the feature based on matching guidebook or online descriptions. The integrity of the original sketch was maintained whenever possible, and described to the best of our ability. This sometimes resulted in multiple and overlapping features, as well as unclear features. Any uncertainties regarding the intention of a sketch were discussed with the group's facilitator and with other GSW team members.

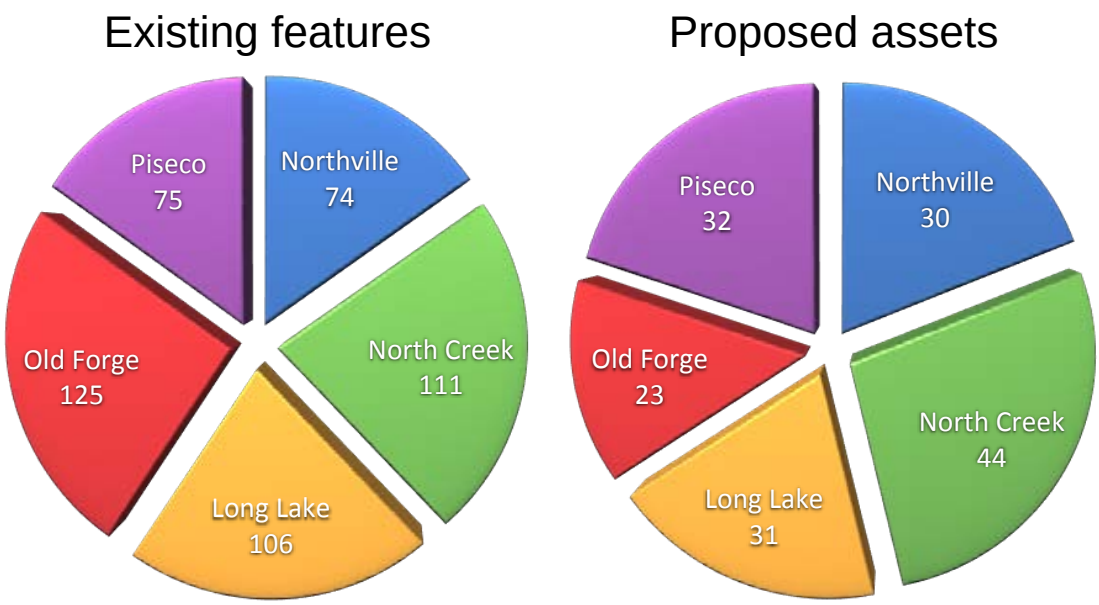


Figure 3: Summary of data collected on existing features and proposed recreation assets at Local Knowledge Workshops held from January-March 2015.

The digitization process resulted in GIS shapefiles containing a total of 650 features that represent existing (491) and proposed (168) recreation points and lines, ranging from long distance hiking trails to hand boat launch sites to community-organized ice skating. The majority of these features represented existing assets (Figure 3) that are not currently represented in the official DEC assets GIS layer. The remaining proposed features supported opportunities for hiking (42%), followed by skiing (20%) or multi-use recreation (14%) (Figure 4). Other categories included snowmobiling, biking, canoeing, parking, camping, horseback riding, fishing, or tobogganing (Figure 4).

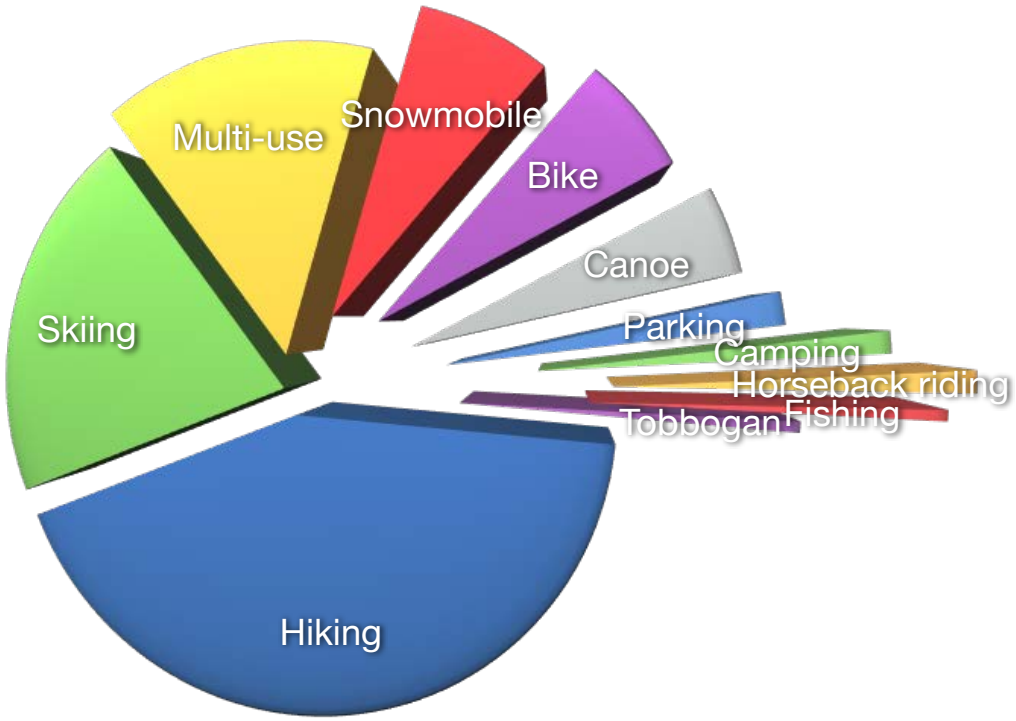


Figure 4: Types of recreation activities proposed by participants in GSW workshops.

4. DATA VALIDATION

All features indicated as existing, but not currently included in official DEC GIS layers, required validation by DEC staff or other recreation experts. Proposed features were *not* subject to validation or DEC / expert review. In April 2015, GSW-ESF project staff met with nine representatives from the Northville, Warrensburg, and Herkimer DEC regional offices and two representatives from the DEC Albany office, at a DEC facility in Indian Lake to implement a validation protocol. The intention was to package enough materials and information for a small group of DEC representatives, who would return to their regional offices and facilitate participation from other staff to complete the activities.

Data validation protocol had three main components or activities for DEC staff to complete: 1) *Review and validate local workshop information*, 2) *Identify additional, existing recreation*

features and points of interest, and 3) *Identify 'proposed' and 'approved' UMP projects*. A validation package (paper and digital copies) included maps of official DEC assets (points and lines) and features digitized by GSW-ESF project staff, as well as tabular data describing each feature digitized by GSW-ESF project staff (Appendix III). Regional staff were encouraged to record changes on the paper maps and provide corresponding details about these or other changes on the tabular data sheets. It was expected that regional staff would provide an authoritative review of the features added/digitized by GSW-ESF project staff, and would indicate any additional features or planned projects (e.g., in current or draft UMPs) that had not yet been included in the GSW inventory.

Any features not reviewed by DEC staff was reviewed by GSW-ESF project staff using internet and guide-book searches, as well as personal experiences and group consensus. The validation process lasted two months, with data digitization requiring an additional week beyond the last date that materials were returned from DEC offices (Table 5). Each regional office was provided the opportunity to review the full extent of DEC assets and features digitized by GSW-ESF project staff, although reviews were likely focused in each office's management area; therefore some efforts may have been duplicated across offices (Table 5). All changes indicated by DEC regional staff were made to the digitized (GIS) features by the GSW-ESF project team, while the original features were maintained as references in a digital audit table.

Table 5: Summary of DEC and ESF data validation efforts for the GSW project.

	Warrensburg	Northville	Herkimer	GSW-ESF	Total
Date Completed	5/20/15	5/29/15	6/19/15	7/9/15	
Features Validated	16	116	19	61	212
Features Removed	8	35	2	38	83
Features Added (total)	43	67	6	0	116
DEC proposed/approved features	6	8	0	0	14

One key benefit to working with DEC staff was the opportunity to identify spatial locations of projects that were officially 'proposed' or 'approved' in Unit Management Plans (UMP). Working with the 'DEC_UMP Approved_Projects Database.xlsx,' GSW-ESF project staff was able to sort and filter the records to only map those projects relevant to the objectives of the GSW effort. By filtering for the uncompleted projects in the Adirondack Park on State land units in the GSW, the database reduced from 1699 records to 363, 44 of which were tentatively geo-located by GSW-ESF project staff (Work Type=Trail). Of the remaining 319 projects, 148 were determined to have the potential for geolocation. It should be noted the most recent "Year Approved" value in this database was 2012, and it did not contain Essex Chain or the Hudson Gorge (and therefore did not reflect potential or approved projects in these draft UMPs).

In order to identify any Proposed Features indicated during LKW that might be associated with DEC officially 'proposed' or 'approved' projects, GSW-ESF project staff conducted a 'Select by Location' analysis in ArcGIS allowing for many-to-many matches (See example in Figure 5). This analysis selected any proposed point or line features, including DEC proposed/approved projects identified during LKW or data validation, within a mile of the 44 geo-located DEC 'proposed' or 'approved' projects. This analysis resulted in 88 'many-to-many' spatial matches, where multiple geo-located DEC projects were within a mile of multiple proposed point or line features. The potential for association was qualitatively categorized based on a similarity of description, use type, or appropriate location. Results indicate as many as six likely matches between proposed features indicated during LKW and geo-located DEC projects (Table 6). For improved accuracy, this analysis and its results should be reviewed by the DEC.

Table 6: Potential for association between features proposed during GSW LKW and geo-located DEC proposed/approved projects.

Match Category	Description	Number of Matches
Yes	LKW proposed feature satisfies geo-located DEC project description (3 out of 6 were explicitly recorded as 'DEC Projects' through LKW or data validation)	6
Partial	LKW proposed feature contributes in some part to the larger geo-located DEC project	12
Possible	LKW proposed feature is loosely related to geo-located DEC project, and could be incorporated.	16
Unlikely	LKW proposed feature and geo-located DEC project appear unrelated, but could potentially relate.	15
No	LKW proposed feature and geo-located DEC project are not related.	39
	TOTAL:	88

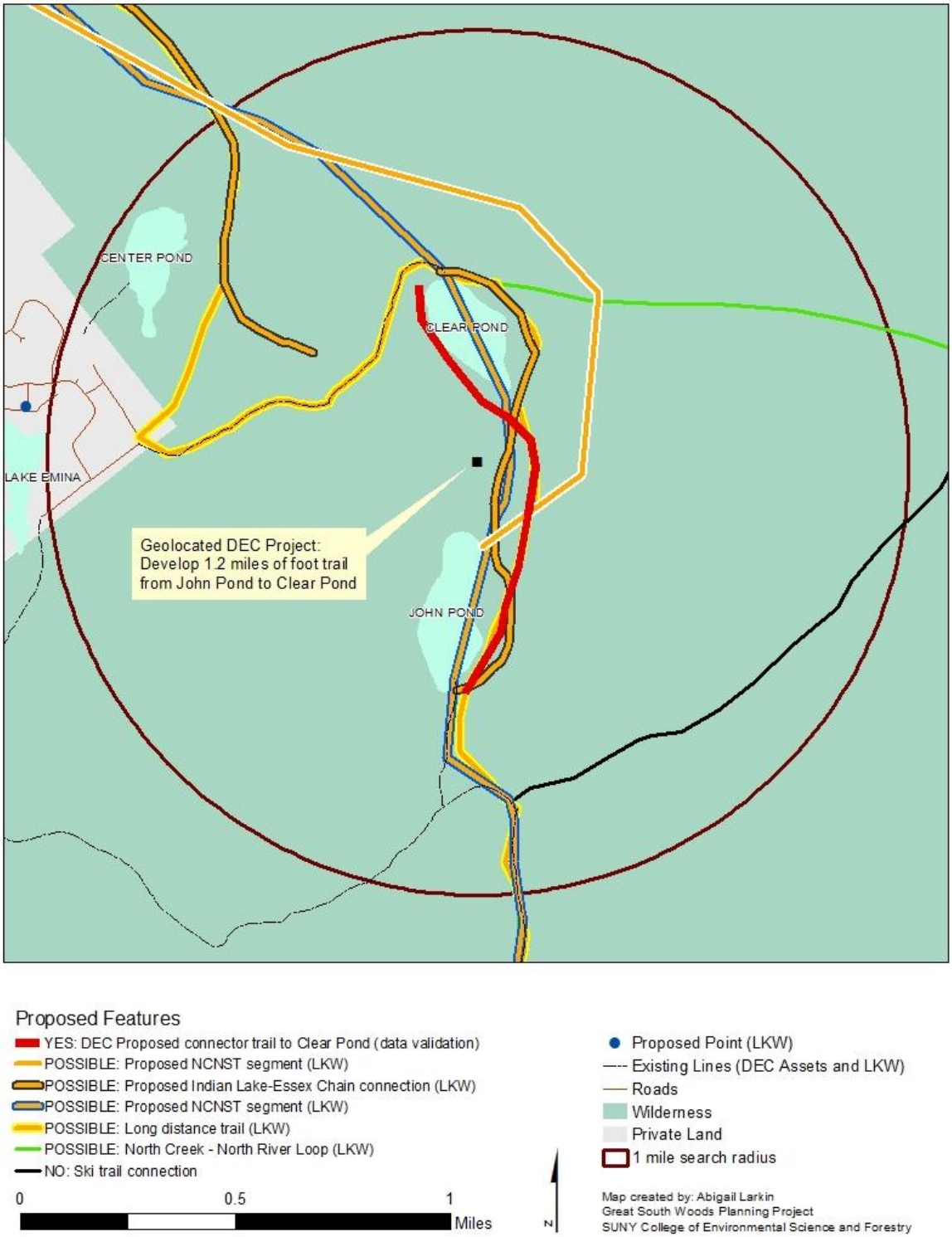


Figure 5: The following map illustrates the '*select by location*' analysis performed between 1) the geo-located DEC proposed/approved projects and 2) proposed features identified during LKW. The circle indicates the search radius around the geo-located DEC project, and selected proposed features are categorized by the potential for association with the geo-located DEC project.

5. DATA PRODUCT GENERATION

The main objectives of conducting LKW were to 1) *gather local knowledge about recreational assets* and 2) *generate ideas regarding potential new trails, lodging, and recreational opportunities*. All workshop-generated information that addressed these objectives was digitized, validated, and compiled as a GIS inventory for the GSW region. This data product contains an immense amount of information with the capacity (using GIS) for technically assessing individual and categorical features based on spatial and relational attributes (Figure 6).

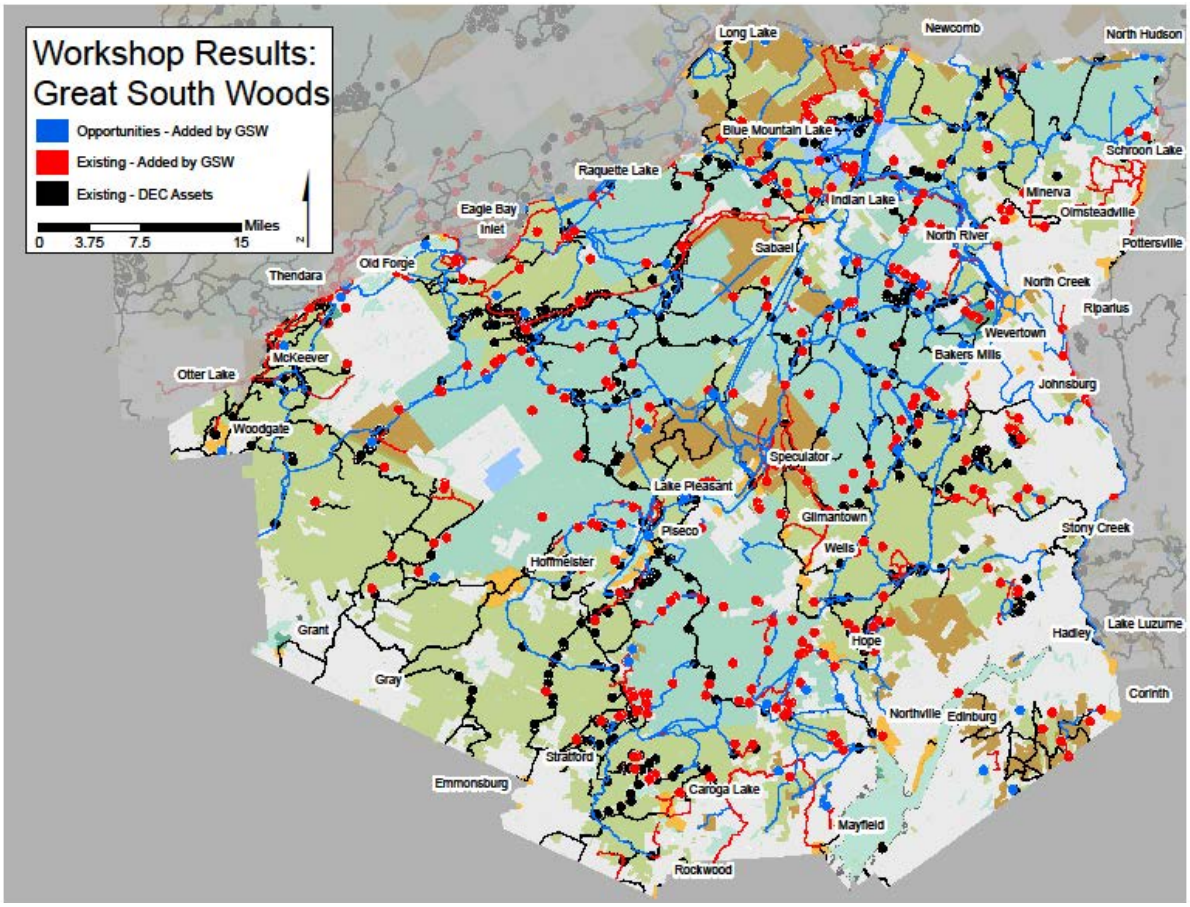


Figure 6: Map representation of GSW data product, depicting three categories of features.

The resulting GSW GIS Inventory consists of 9869 points and line segments (as of 11/30/15), stored and managed as shapefile layers in a relational geodatabase (Table 7). Although information generated at LKW is specific to the GSW region, the GIS Inventory contains all existing DEC recreational assets across New York State. Each point and line segment can be associated various attributes, such as source/author, status, and use-type, as well as detailed descriptions and notes. Each feature has a unique identifier which can be used to relate various attribute tables. Relational and geographic queries can be constructed to assess each feature's length and location, proximity to other features or communities, or association with certain landscape characteristics such as state land classification or unit (See Section: Leveraging the

GSW Process & GIS Tools). Similarly, maps can be designed to specifically display the status, use-type, or data source, as well as query results.

Table7: Main content categories of the GSW data product.

Feature Status	Point (#)	Line Segments (#)	Total Length (mi)	Average Length (mi)
EXISTING DEC Assets	751	401	1573	2.7
EXISTING GSW-added Assets*	287	126	443	3.5
PROPOSED GSW-added Assets**	40	161	1322	8.2
TOTAL	1078	688	3338	

**Includes features with the following status: Verify, Private, Town, Commercial.*
***Includes official DEC Proposed Projects collected through LKW and DEC validation.*

5.1 DATA DELIVERABLES: GIS PRODUCTS

At the conclusion of this project, the GSW data products generated by ESF will be provided to the DEC via the following shapefiles:

- **GSW Inventory: includes all existing DEC Assets, existing features added by the GSW process and validated by the DEC, all non-validated features, and all features proposed through the GSW process (point and line layers).**

- **GSW Recommendations and Strategy: includes components of the local and regional networks, developed by the GSW-ESF project team with Core Team input.**

5.2 DATA DELIVERABLES: ONLINE INTERACTIVE MAP

The GSW Final Strategy will be accessible to the DEC and general public through an online, interactive web-map. Accessing the data product online affords users the ability to select tailored extents, unique combinations of data layers, and to zoom in, out, and around the GSW region.

6. MOVING FROM DATA GENERATION TO REGIONAL PLANNING

As a collaborative project across agencies and institutions, the GSW Project required multiple forms of meetings to review process steps and results, and move forward toward outcomes that would generate regional planning recommendations. A timeline of these meetings can be found in Table 8. Many of these meetings consisted of some or all members of the Core Team via web or phone conferences. In-person meetings were limited due to travel considerations. A few

additional means of engaging within the project team, with the general public, and with specific communities will be described further in the following section.

Table 8: Overview and timeline of additional project engagement.

Date	Location	Topic(s)/Goal	Attendance
9/16/14	Conference Call	Project business	Core Team
10/09/14	Syracuse, NY	Initial project in-person meeting	Core Team
11/07/14	Syracuse, NY	Planning for public meetings	Limited Core Team, ACTLS
12/17/14	Speculator, NY	Kickoff	Core and ESF Team, ACTLS, public
1/09/15	Syracuse, NY	Map layout/design	ESF Team, ACTLS
1/28, 2/25, 3/2, 9, 16/15	Various	Local knowledge workshops	ESF Team, ACTLS, public
3/19/15	Syracuse, NY	Project update	Limited Core Team
4/16/15	Lake Placid, NY	Local Government Day presentation	Limited Core Team, specialized public
4/27/15	Albany, NY	Adirondack Day display	Government officials
4/30/15	Indian Lake, NY	DEC data validation training workshop	Limited ESF Team, DEC regional and Albany staff
5/27/15	Newcomb, NY	Working/data synthesis	Limited Core Team
8/11/15	Albany, NY	Project/contract update	Core Team
8/28/15	Newcomb, NY	FPAC Presentation	FPAC members, public
9/14-15/15	Newcomb, NY	Planning session	Core and ESF Team, invited guests: DEC staff, recreation professionals
10/13/15	Syracuse, NY	Project status	Limited Core Team
10/15-5/16		Bi-weekly conference calls	Limited Core Team
11/12, 19, 23/15	Various	Public strategy meetings	ESF Team, public
12/7/15	Lake George	AATV Meeting	ESF lead, community leaders
TBD	TBD	Draft strategy development	Core and ESF Team

6.1 JOINT PLANNING SESSIONS

In order to review the current status of the data product and to discuss the next steps, limited members of the Core Team held a day-long meeting at the ESF Adirondack Ecological Center (AEC) in Newcomb, NY in May 2015. This meeting explored methods for reviewing and evaluating recreation proposals and synthesizing data collected during LKWs. It was determined that this review, evaluation, and synthesis should involve DEC staff from the central and regional offices, APA staff, and private-sector recreation experts, and would be coordinated by GSW-ESF project staff.

In response, GSW-ESF project staff facilitated a two-day meeting at the AEC to present and receive feedback on recommendations as working concepts, based on the data generated and GSW objectives. Prior to this session, the GSW-ESF team drafted a series of maps indicating

preliminary recommendations for a network of 'trail corridors and connections' across the GSW region. These initial ideas had been presented to the Core Team at DEC Albany offices in August 2015 where they prompted significant discussions and tentative support for sharing with the larger audience involved in the two-day planning meeting at AEC in Newcomb (e.g., DEC planners, APA staff, outside recreation experts).

On September 14-15 2015 at the AEC, ESF provided an introduction to the project, GSW data products, and working concepts, followed by facilitated mapping in small groups. The second day included a review of progress made, followed by deliberation on methods for presenting the project's outcomes as a written document and in upcoming public meetings. The planning session concluded with a reflection on opportunities, obstacles, and lessons learned (See Section: Challenges of Complex Planning). Each session involved approximately 15-20 representatives from the DEC and APA, and participation varied for each activity.

6.2 PUBLIC STRATEGY MEETINGS

Building on the success of the previous LKWs, and to seek input on preliminary recommendations for the GSW strategy, a round of Public Strategy Meetings were scheduled and advertised (Table 9), including an official ESF press release and local outreach to newspapers and community leaders. Meetings began with general instructions and an introductory presentation outlining the preliminary GSW strategy, followed by an open question and answer session. Each presentation was unique to the meeting location, providing highlights of maps and details that were customized specifically for that area (Appendix V).

The remainder of the meeting consisted of participants engaging with ESF facilitators at four thematic stations: 1) *Partnerships for Making Progress*, 2) *Ecosystem Stewardship*, 3) *Access & Connectivity*, and 4) *Creating Recreation Destinations*, each with a GSW facilitator to engage participants and record feedback (Figure 7). Participants self-selected the station(s) they visited and the amount of time spent at each. All stations contained copies of maps featured in the presentation and a worksheet that could be completed privately. The worksheet contained prompting questions, which were included in the participant agenda, the presentation, and utilized by the facilitators to engage participants (Figure 7). No worksheets were completed and returned, indicating most participants felt comfortable with the facilitator and having their feedback recorded publicly. Each meeting attracted an average of 13 new participants that had not attended a previous GSW session, or 41% of the total population of meeting participants.

Table 9: GSW Public Strategy Meeting schedule and outcomes.

Community	Location	Date	Time	ESF Staff	Participants
Old Forge	The View Arts Center	11/12	6-8 pm	7	31
North Creek	Tannery Pond Community Center	11/19	6-8 pm	8	28
Speculator	Oak Mountain Ski Center	11/23	6-8 pm	8	33

Figure 7: Station themes and facilitation prompts for GSW Public Strategy Meetings.

6.3 ADDITIONAL COMMUNITY OUTREACH

The GSW Project was a featured presentation at the Adirondack Association of Towns and Villages (AATV) Membership Meeting in Lake George, NY on December 7 2015. The ESF project lead (Beier) gave the presentation, which was based heavily on the materials prepared for Public Strategy Meetings while providing a more regional perspective appropriate for the audience. The presentation was well-received and stimulated conversations with town leaders regarding future involvement and partnerships to gather further data and planning ideas.

7. COMPLEX PLANNING AND UNIT MANAGEMENT PLANNING

State lands in the Adirondack Park are currently planned and managed at the unit-scale by the DEC and APA. Active planning and ongoing management by the DEC follows individual Unit Management Plans (UMP), which are prepared, revised, and amended as needed through an iterative process between the DEC and APA, which also provides opportunities for public comments (Figure 8). In contrast, the GSW Complex Planning process engaged the public directly and continuously in the creation of new ideas and directions for recreation planning that consider the entire GSW region, which is much larger than the unit-scale. These processes can be complimentary, where both the data product and strategy generated in the GSW process can

inform steps of the UMP process. GSW recommendations are directly based on public ideas and feedback, therefore UMP can benefit from incorporating projects generated through a focused public process that planned across a larger landscape. With the GSW data product and recommendations at their disposal, planners could prioritized or included projects as they see fit, based on the timing and objectives of each unit management planning process.

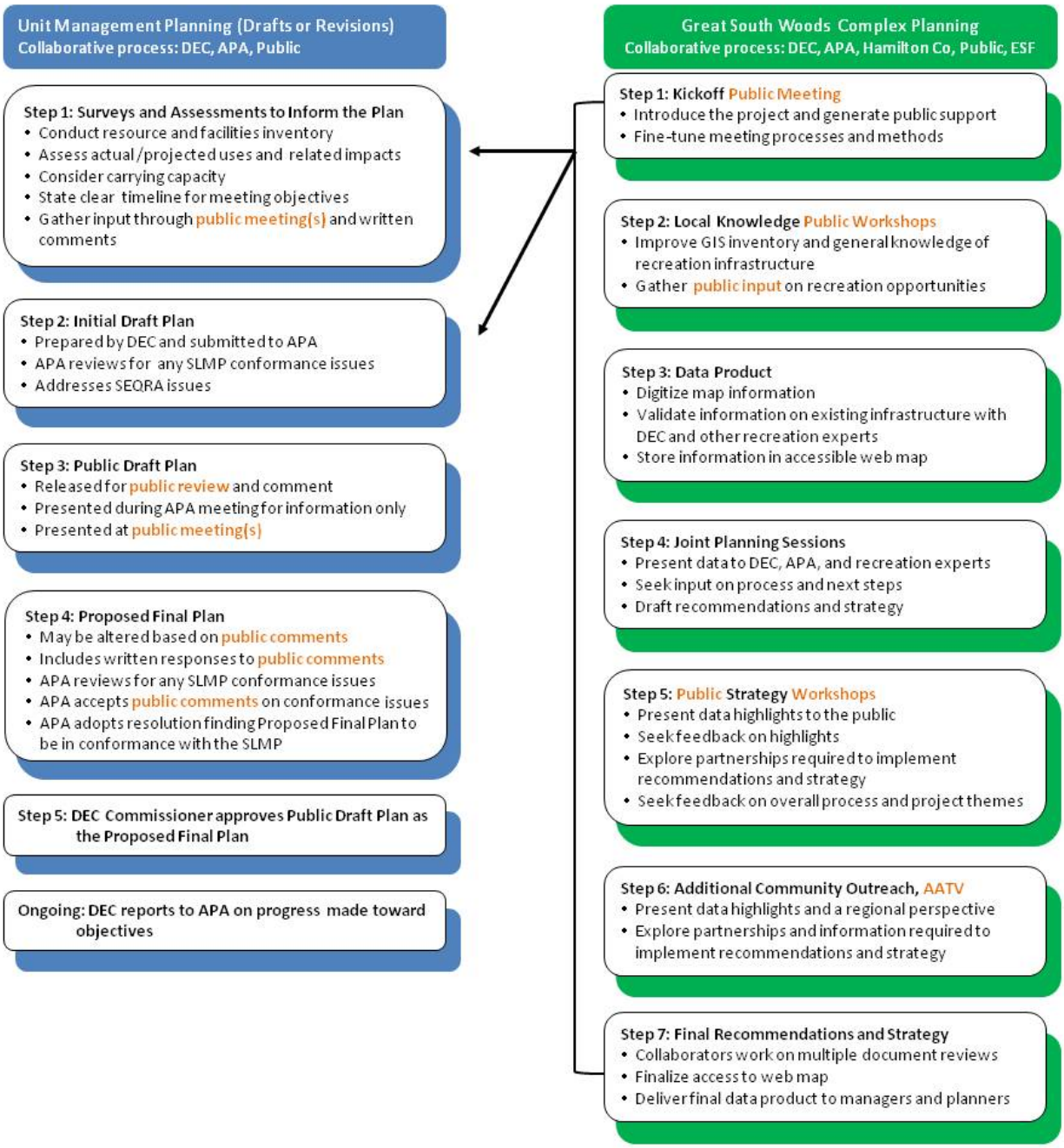


Figure 8: Proposed relationship between the NYS DEC Unit Management Planning process and the Great South Woods Complex Planning Process, emphasizing potential opportunities for public engagement in both processes (yellow text).

APPENDIX III: 'CONSTRUCTION REQUIRED' SEGMENTS SHARED BY FEATURES

The following table identifies 'construction required' segments that are shared across more than one feature. Each row indicates a combination of local and/or regional features with a shared 'construction required' segment, indicating the length and land type of the shared segment.

Local Network Feature	Regional Network Feature	Land Type	Miles
Thirteenth Lake Loop North Creek Network		Private	0.08
Hudson Bend Circuit Vanderwhacker Circuit		Private	0.65
Hudson Bend Circuit Vanderwhacker Circuit		Private	2.09
West Indian Lake Network	Little Great Range Indian Lake Walkabout	Private	0.38
North Creek Network	Infinite North Indian Lake Walkabout	Private	0.07
North Creek Network	Infinite North Indian Lake Walkabout	Private	0.09
Potter Bike Trail	Blue Moose Circuit Infinite North Fulton Seventy	Private	0.14
	Infinite North Indian Lake Walkabout	Private	0.15
	Infinite North Indian Lake Walkabout	Private	0.26
	Little Great Range Loop Indian Lake Walkabout	Easement	4.18
West Indian Lake Network	Little Great Range Indian Lake Walkabout	Easement	0.1
Moffitt's Pack-and-Paddle	Infinite South Infinite North West Canada Way	Intensive Use	0.74
	Little Great Range Indian Lake Walkabout	Intensive Use	0.38
Hudson Bend Circuit Vanderwhacker Circuit		Wild Forest	9.64
French Louie Loops	West Canada Way	Wild Forest	<0.1
Stark Hills Circuit	Infinite North Little Great Range Loop	Wild Forest	2.02
Black River Loop	Fulton Seventy	Wild Forest	3.57
Black River Loop	Fulton Seventy	Wild Forest	1.41
Black River Loop	Fulton Seventy	Wild Forest	0.13
Black River Loop	Fulton Seventy	Wild Forest	0.37

Local Network Feature	Regional Network Feature	Land Type	Miles
Ferris Fifty	Infinite South	Wild Forest	3.53
Ferris Fifty	Infinite South	Wild Forest	6.78
Ferris Fifty	Infinite South	Wild Forest	1.08
North Creek Network	Infinite North Indian Lake Walkabout	Wild Forest	2.44
Moffitt's Pack-and-Paddle	Infinite North Infinite South West Canada Way	Wild Forest	0.22
Moffitt's Pack-and-Paddle	Infinite South Infinite North West Canada Way	Wild Forest	2.48
West Indian Lake Network	Little Great Range Loop Indian Lake Walkabout	Wild Forest	2.7
	Little Great Range Loop Indian Lake Walkabout	Wild Forest	3.59
	Little Great Range Loop Indian Lake Walkabout	Wild Forest	0.57
	Infinite North Fulton Seventy Blue Moose Circuit	Wild Forest	0.68
	Infinite North Fulton Seventy Blue Moose Circuit	Wild Forest	0.42
	Infinite North Blue Moose Circuit	Wild Forest	<0.01
French Louie Loops	West Canada Way	Wilderness	2.83
Kallen Trek	Infinite South	Wilderness	3.17
Ferris Fifty	Infinite South	Wilderness	0.83
Ferris Fifty	Infinite South	Wilderness	0.75
North Creek Network	Indian Lake Walkabout Infinite North	Wilderness	1.27
North Creek Network	Infinite North Indian Lake Walkabout	Wilderness	1.15
	Infinite North Blue Moose Circuit	Wilderness	5.26
	Little Great Range Loop Indian Lake Walkabout	Wilderness	4.5
	Infinite North Fulton Seventy Blue Moose Circuit	Wilderness	1.73
	Infinite North Indian Lake Walkabout	Wilderness	1.39

APPENDIX IV: 'CONSTRUCTION REQUIRED' IN WILDERNESS AREAS

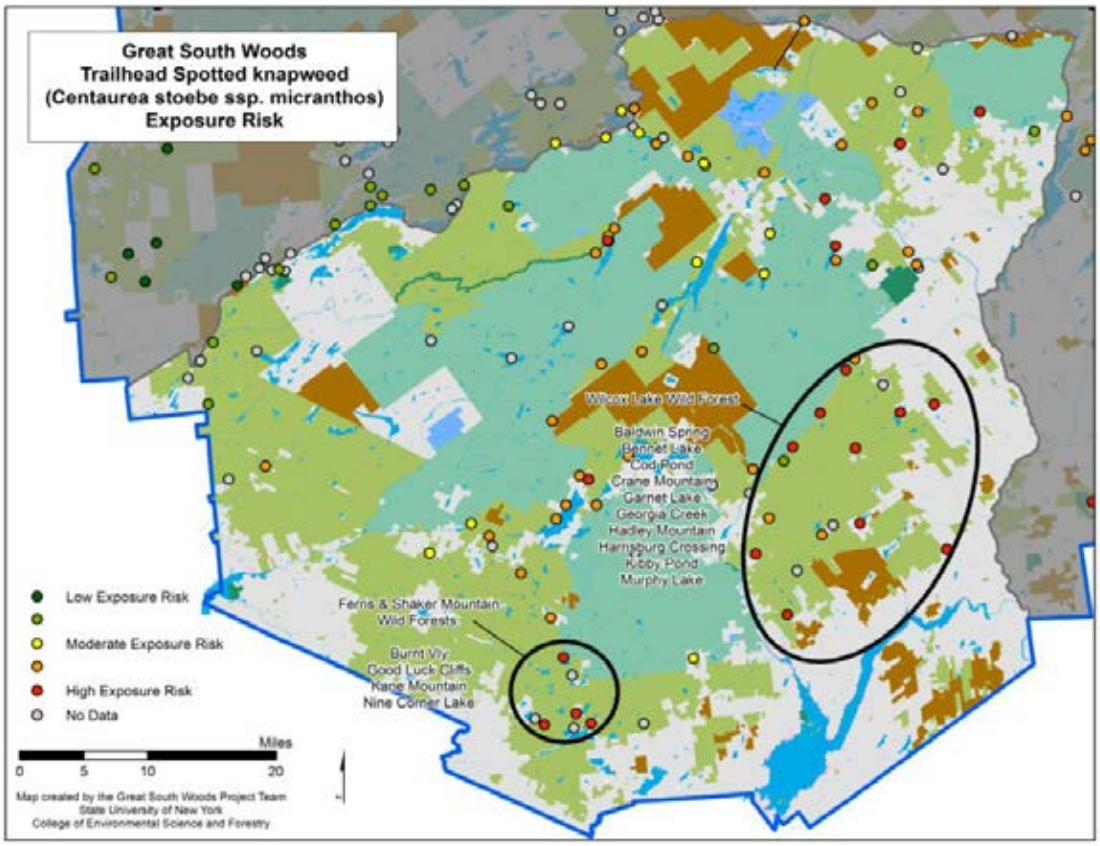
The following table details an examination of 'construction required' segments that considered distance from the Wilderness boundary: within a mile, or greater than a mile away. Some segments cross the mile boundary, and are measured in both distance categories. * indicates a segment of the DEC Proposed NCNST.

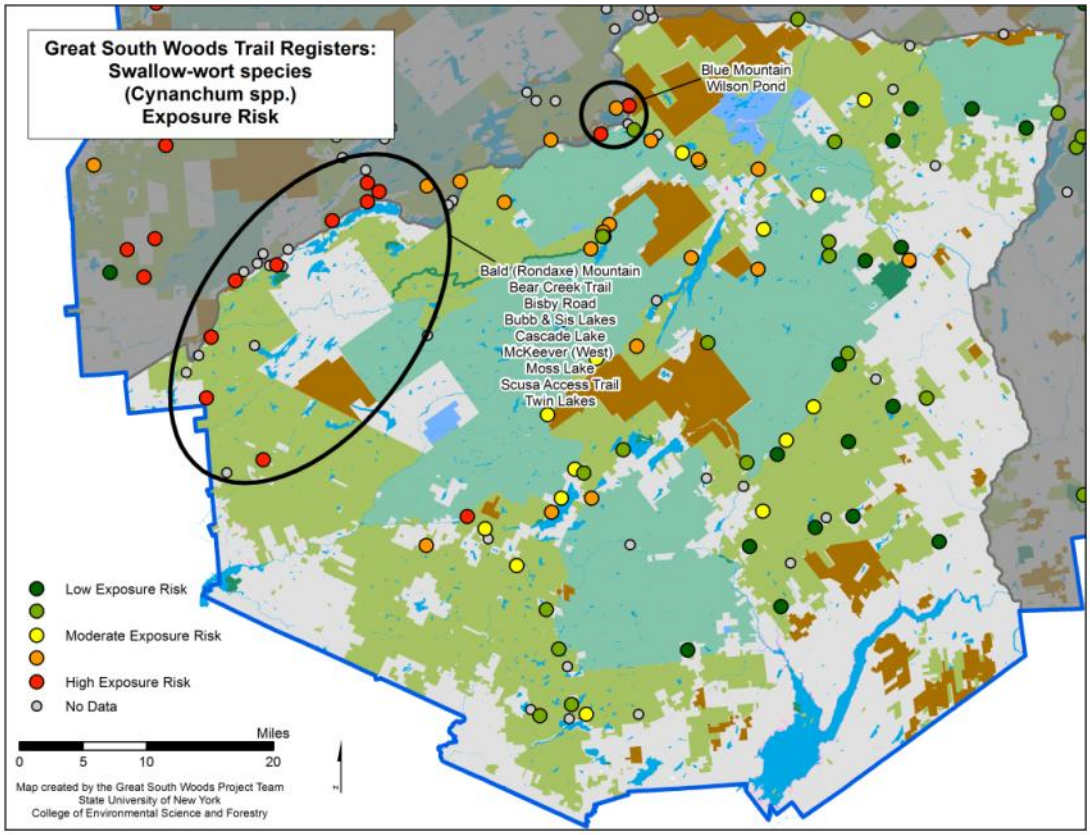
Wilderness Area	ID	Feature (L=local, R=regional)	Within a mile	More than a mile
Blue Ridge	A	Wakely Way (L)	5.4	0.8
	B	Infinite North (R) Blue Moose Circuit (R)	5.3	
Hoffman Notch	C	The Notch (L) Severance Hill Circuit (L)	3.4 *	0.8 *
	D	Severance Hill Circuit (L)	2.4	
Hudson Gorge	E	Hudson Bend Circuit (L)	8.9	2.7
	F	Three Rivers Circuit (L)	2.4	0.2
	G	OK Slip Falls Circuit (L)		0.5
	H	OK Slip Falls Circuit (L)	0.5	2
Little Moose	I	French Louie Loops (L) West Canada Way (R)		2.8
Siamese Ponds	J	Infinite South (R)	0.4	
	K	North Creek Network (L)	1.3	1.7
	L	North Creek Network (L)	1.4	
	M	North Creek Network (L) and OK Slip-North Creek Network Connector	4.2	3.2
	N	Indian Lake Walkabout (R) Infinite North (R)		1.4 *
Silver Lake	O	Ferris Fifty (L)		3.3
	P	Kallen Trek (L) Infinite South (R)	2.1	1.1
	Q	Infinite South (R)	1.7	
	R	Infinite South (R)	4.2	
West Canada LK	S	Ferris Fifty (L) Infinite South (R)	0.6	
	T	Ferris Fifty (L) Infinite South (R)		0.8
	U	Waterfall Way (L)		2.7
	V	Blue Moose Circuit (R) Infinite North (R) Fulton Seventy (R)	1.8	
	W	Fulton Seventy (R)	1 *	1.2 *
	X	Indian Lake Walkabout (R) Little Great Range Loop (R)	1	3.5
	Y	West Indian Lake Network (L)	5	
	Z	West Indian Lake Network (L)	2.4	0.4
	AA	West Indian Lake Network (L)	1	0.9
	BB	West Indian Lake Network (L)	2.5	0.5
		Total Miles:	58.9	30.5
		Percent of Total:	66	34

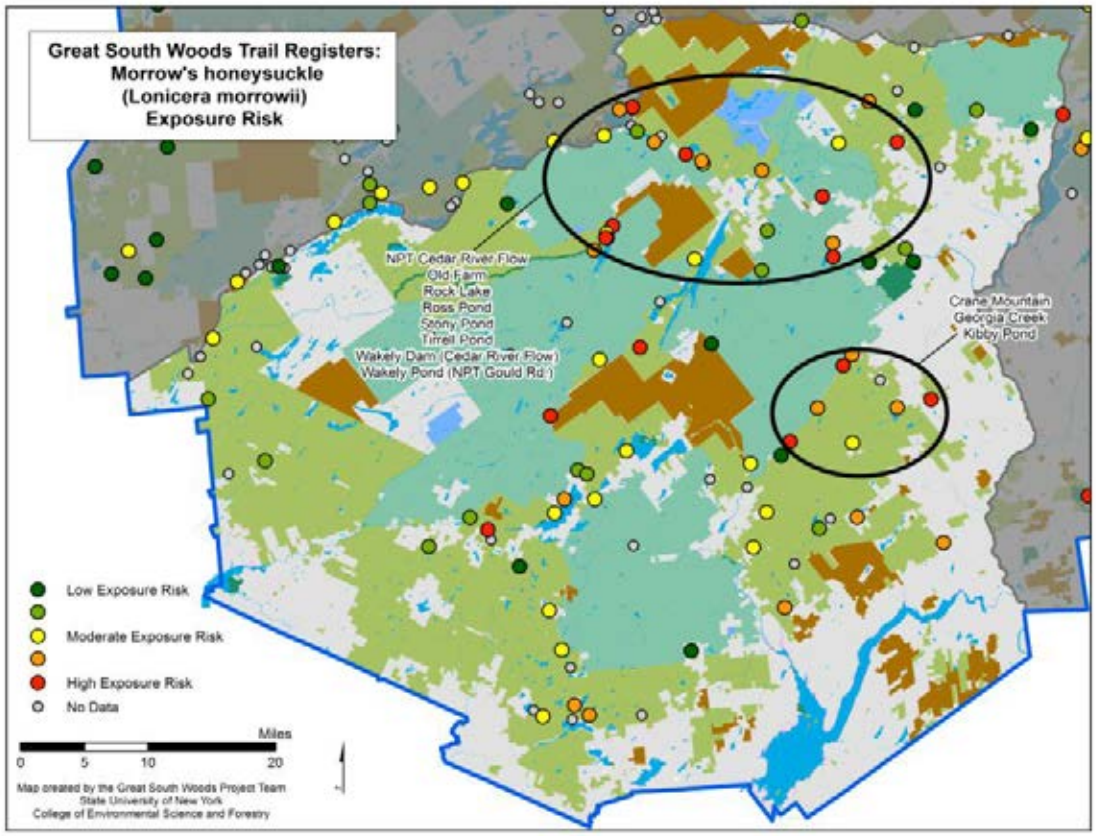
APPENDIX V: SPATIAL ANALYSIS OF INVASIVE SPECIES EXPOSURE RISK

The following individual species maps are based on percent visitation rather than total visitation. Exposure risk was calculated for each trail register by multiplying the percent visitation from each Partnership for Regional Invasive Species Management (PRISM) by the percent of total species observations contained in the corresponding PRISM, and then summing the results. Registers represented in red (high exposure risk) typically received a large percentage of use from PRISMs containing a large percentage of a given species' total NYS observations.

Exposure scores based on total trail visitation suggest that monitoring and management actions should be focused on the most heavily trafficked trailheads regardless of species (species non-specific), while scores based on percent visitation highlight potential management focus areas for each species (species specific). Implementing actions informed by a combination of both calculations allows for the creation of a targeted management approach focusing on heavily used trails as well as trails located within a species' "region of concern" (circled in black). For instance, if a manager is concerned with the potential proliferation of *Cynanchum spp.* they may decide to monitor, more closely, high visitation trailheads as well as those located in the western Adirondacks where exposure risk for this species is high. Management actions may also include increased monitoring, the installation of boot cleaning stations, and targeted public education.




Great South Woods Trail Registers:
Swallow-wort species
(Cynanchum spp.)
Exposure Risk
Blue Mountain
Wilson Pond
Bald (Rondaxe) Mountain
Bear Creek Trail
Bisby Road
Bubb & Sis Lakes
Cascade Lake
McKeever (West)
Moss Lake
Scusa Access Trail
Twin Lakes
Low Exposure Risk
Moderate Exposure Risk
High Exposure Risk
No Data
Miles
0 5 10 20
Map created by the Great South Woods Project Team
State University of New York
College of Environmental Science and Forestry


Great South Woods Trail Registers:
Morrow's honeysuckle
(Lonicera morrowii)
Exposure Risk
NPT Cedar River Flow
Old Farm
Rock Lake
Ross Pond
Stony Pond
Tirrell Pond
Wakely Dam (Cedar River Flow)
Wakely Pond (NPT Gould Rd.)
Crane Mountain
Georgia Creek
Kibby Pond
Low Exposure Risk
Moderate Exposure Risk
High Exposure Risk
No Data
Miles
0 5 10 20
Map created by the Great South Woods Project Team
State University of New York
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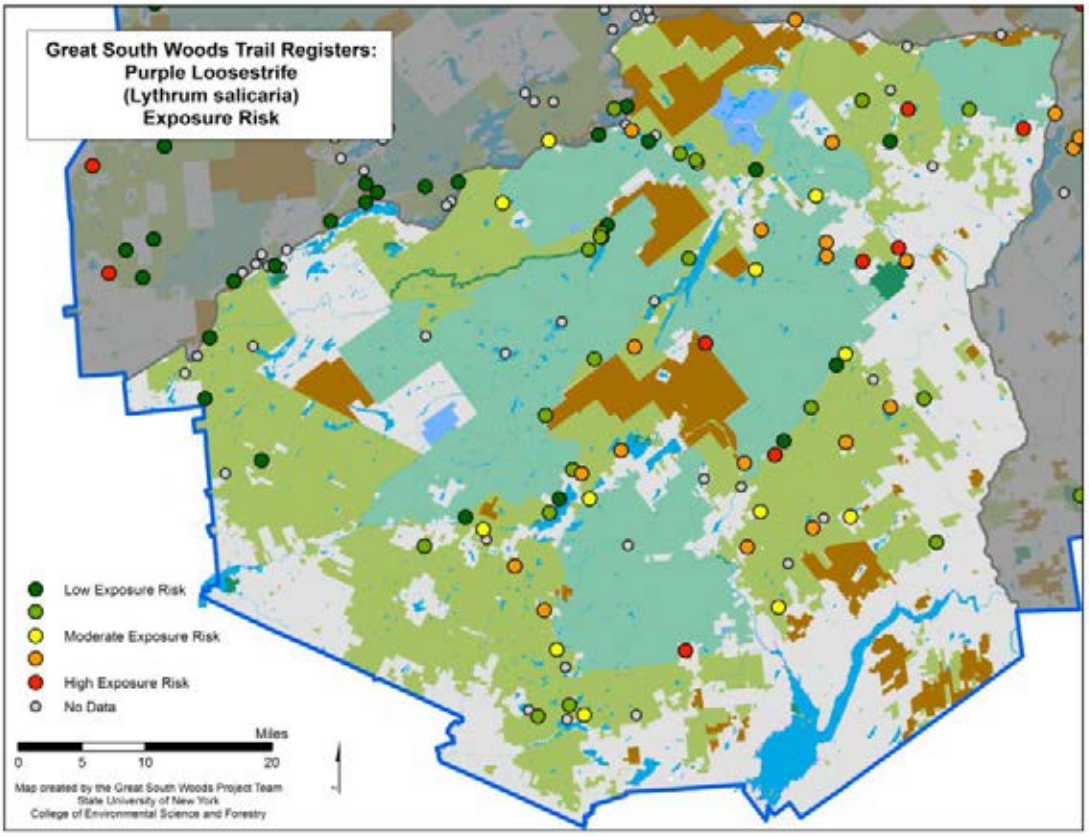
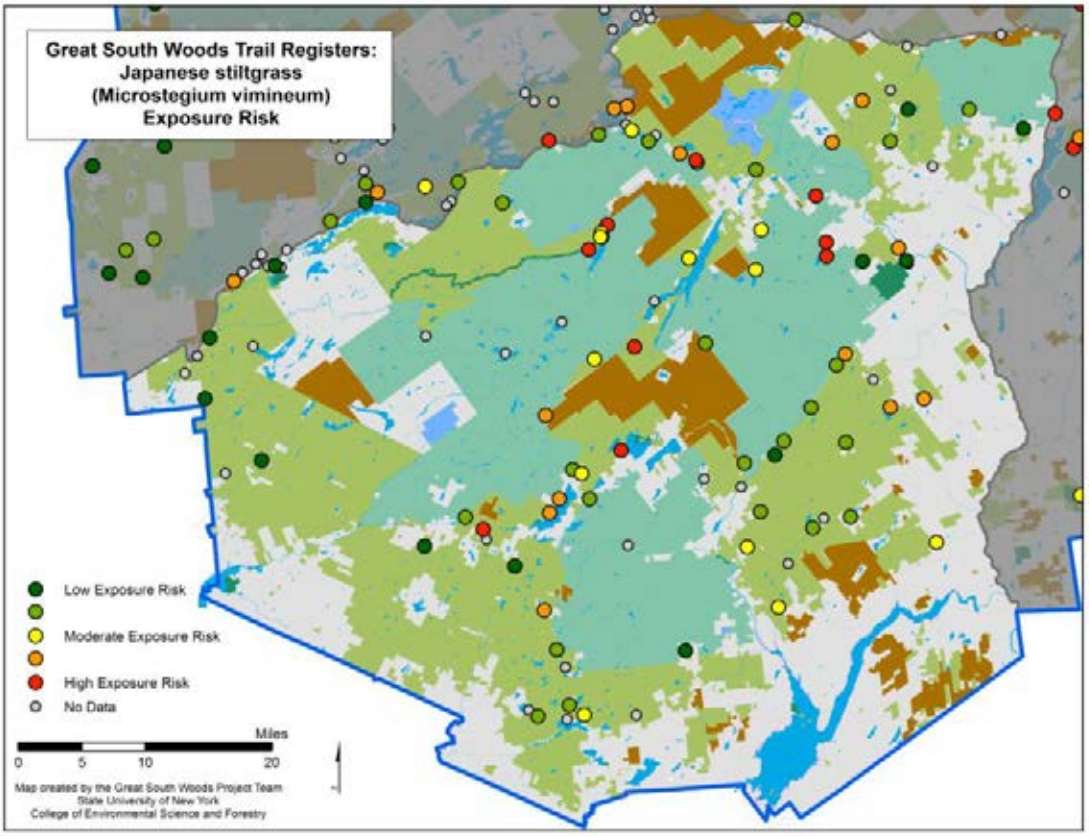
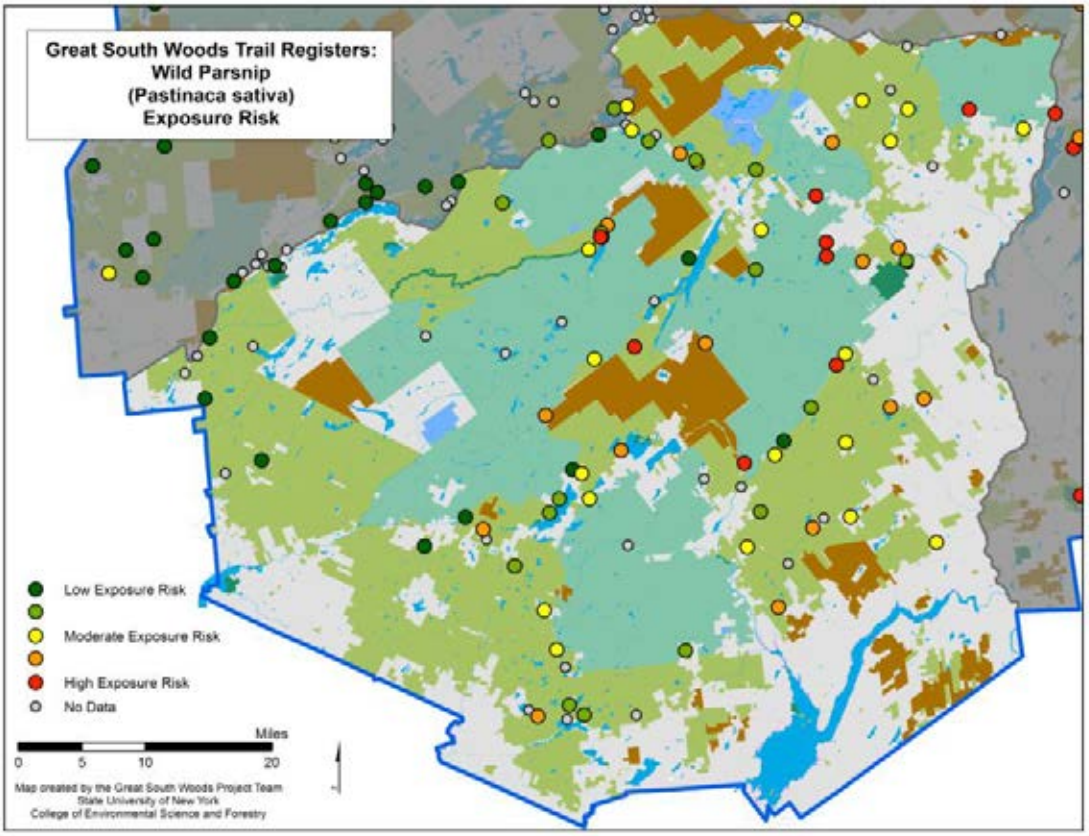

Great South Woods Trail Registers:
Purple Loosestrife
(Lythrum salicaria)
Exposure Risk
Low Exposure Risk
Moderate Exposure Risk
High Exposure Risk
No Data
Miles
0 5 10 20
Map created by the Great South Woods Project Team
State University of New York
College of Environmental Science and Forestry


Great South Woods Trail Registers:
Japanese stiltgrass
(Microstegium vimineum)
Exposure Risk
Low Exposure Risk
Moderate Exposure Risk
High Exposure Risk
No Data
Miles
0 5 10 20
Map created by the Great South Woods Project Team
State University of New York
College of Environmental Science and Forestry


Great South Woods Trail Registers:
Wild Parsnip
(Pastinaca sativa)
Exposure Risk
Low Exposure Risk
Moderate Exposure Risk
High Exposure Risk
No Data
Miles
0 5 10 20
Map created by the Great South Woods Project Team
State University of New York
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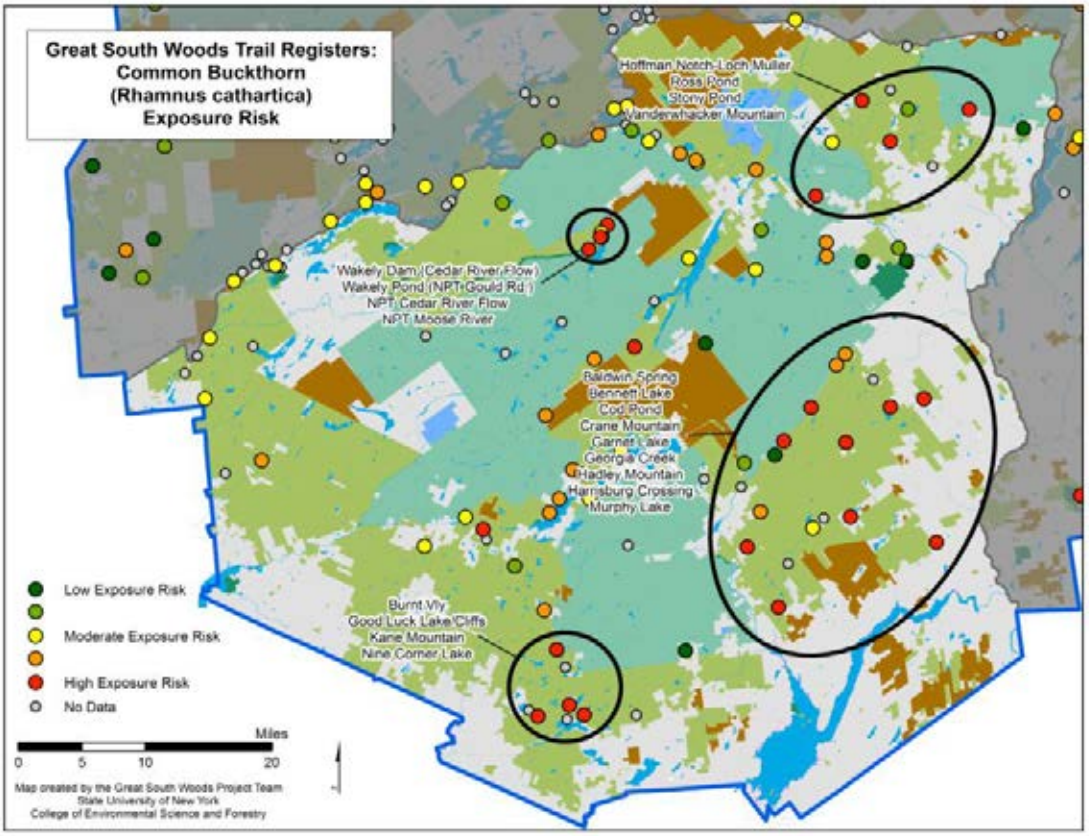
Great South Woods Trail Registers:
Common Buckthorn
(Rhamnus cathartica)
Exposure Risk
Hoffman Notch-Loch Muller
Ross Pond
Stony Pond
Vanderwhacker Mountain
Wakely Dam (Cedar River Flow)
Wakely Pond (NPT-Gould Rd.)
NPT Cedar River Flow
NPT Moose River
Baldwin Spring
Bennett Lake
Cod Pond
Crane Mountain
Garnet Lake
Georgia Creek
Hadley Mountain
Harrisburg Crossing
Murphy Lake
Burnt Vly
Good Luck Lake/Cliffs
Kane Mountain
Nine Corner Lake
Low Exposure Risk
Moderate Exposure Risk
High Exposure Risk
No Data
Miles
0 5 10 20
Map created by the Great South Woods Project Team
State University of New York
College of Environmental Science and Forestry

APPENDIX VI: SLMP AND APA ACT REFERENCES

ADIRONDACK PARK STATE LAND MASTER PLAN

"Unit Management Plan Development: Section 816 of the Act directs the Department of Environmental Conservation to develop, in consultation with the Agency, individual management plans for each unit of land under its jurisdiction classified in the master plan. Due to the widely dispersed nature of certain wild forest areas, the Department may establish for unit management planning purposes, individual sub-units of wild forest units which because of location, physical features, ecological systems and use patterns can be managed as an individual unit. In accordance with statutory mandate, all plans will conform to the guidelines and criteria set forth in the master plan and cannot amend the plan itself. .."

ADIRONDACK PARK AGENCY ACT

"Section 801. Statement of legislative findings and purposes (paragraph 7).

The Adirondack Park land use and development plan set forth in this article recognizes the complementary needs of all people of the State for the preservation of the Park's resources and open space character and of the park's permanent, seasonal and transient populations for growth and service areas, employment, and a strong economic base, as well. In support of the essential interdependence of these needs, the plan represents a sensibly balanced apportionment of land to each. Adoption of the land use and development plan and authorization for its administration and enforcement will complement and assist in the administration of the Adirondack Park master plan for management of state land. Together, they are essential to the achievement of the policies and purposes of this article and will benefit all the people of the state."

"Section 816. Master Plan for the management of State land

1. The Department of Environmental Conservation is hereby authorized and directed to develop, in consultation with the agency, individual management plans for units of land classified in the master plan for management of state lands heretofore prepared by the agency in consultation with the department of environmental conservation and approved by the governor. Such management plans shall conform to the general guidelines and criteria set forth in the master plan. Until amended, the master plan for management of state lands and the individual management plans shall guide the development and management of state lands in the Adirondack Park.
2. The master plan and individual management plans shall be reviewed periodically and may be amended from time to time, and when so amended shall as amended henceforth guide the development and management of state lands in the Adirondack Park. Amendments to the master plan shall be prepared by the agency, in consultation with the department of environmental conservation, and submitted after public hearing to the governor for his approval.
3. The agency and department are hereby authorized to develop rules and regulation necessary, convenient or desirable to effectuate the purposes of this section."

This report was prepared by the State University of New York College of Environmental Science and Forestry (ESF), with input and guidance from the NYS DEC Bureau of Lands and Forests, the Adirondack Park Agency, and local government representatives.