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High Peaks Back - country Trails Plan

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High Peaks Back-country Trails Plan

Capstone Project for the Community Planning and Development
Master's program, Muskie School for Public Service,
University of Southern Maine

By Ben Godsoe
12/10/2013

Capstone Advisor: Dr. Charles Colgan

The High Peaks Trails Plan is a regional vision for back-country trails in Maine's High Peaks region in Northern Franklin County. The plan identifies challenges and opportunities which face the back-country trails community, and outlines several strategies for trails groups to move forward together to overcome mutual challenges.

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Authored by Ben Godsoe, a Community Planning and Development graduate student at the Muskie School for Public Service, University of Southern Maine.

On behalf of: High Peaks Alliance, a 501c3 Non-profit in Franklin County whose mission is to “Ensure and enhance public access to recreation in Maine’s High Peaks”.

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EXECUTIVE SUMMARY

INTRODUCTION

The High Peaks Region hosts a wonderful collection of back-country trail systems, each providing a unique selection of “Big Mountain” experiences for Appalachian Trail thru-hikers, day hikers, ATV and snowmobile riders, paddlers, mountain bikers, and cross-country skiers. Existing trail systems are possible through hard work by dedicated volunteers who plan, build and organize. The net result is a world class destination for trails-based recreation which is well worth celebrating.

PURPOSE

The High Peaks Trails Plan is a regional vision for back-country trails in Maine’s High Peaks region. The plan identifies challenges and opportunities which face the trails community, and outlines several strategies for trails groups to move forward together to overcome mutual challenges.

TRAILS REPORT

Each back-country trail system offers “Big Mountain” experiences to the trail user. Whether touring cross-country on ATV or snowmobile, pedaling through the woods on flowing single track, paddling on a lazy river, or thru-hiking the Appalachian Trail; high mountain peaks, broad valleys, and rural mountain villages frame the experience. These back-country trail systems appeal to the adventurous. They create a feeling of remoteness. Trail users enjoy back-country trails because they impart a sense of solitude as one travels through seemingly wild, open spaces. Experiences in rural mountain villages bordering the High Peaks region are part of any back-country adventure. The “Big Mountain” experience is a lifestyle for local residents, and an attraction to visitors.

There are many different kinds of trails in the High Peaks including:

- Existing, longstanding trail systems such as the Appalachian National Scenic Trail; alpine skiing on trails at Sugarloaf and Saddleback; cross-country ski trails at the Outdoor Center in Carrabassett Valley, Maine Huts & Trails, and the Rangeley Trails Center in Sandy River PLT; local access, Interconnected Trail System, and Black Fly Loop snowmobile trails; and numerous day hiking trails, as well as “herd paths,” or off-trail hiking experiences.
- New single purpose back-country trails such as local access, and Moose Loop ATV trails; and mountain biking single-track, woods road and shared-use trails, in Carrabassett Valley and at the Rangeley Trails Center.
- New multi-purpose back-country trail systems such as Maine Huts and Trails, a new initiative to connect Moose Head Lake to the Mahoosuc Mountains, with a system featuring back-country hut stays interconnected by shared-use, non-motorized trails.
- New Community back-country trail systems such as the Northern Forest Canoe Trail; and the Fly Rod Crosby Trail.

Existing regional trail infrastructure includes bridges, multi-use trail corridors, trail heads, parking areas, downtown-access trails, rescue zones, landing zones, gates, and online mapping resources (e.g. Maine Trail Finder). The existing land base for the most part remains privately owned.

CHALLENGES & OPPORTUNITIES

Back-country trail systems in the High Peaks face significant challenges in the future including changing property ownership patterns, and the reduced capacity of volunteer-based trail groups due to demographic and socio-economic changes in the High Peaks and across the Maine Woods. In the future there will be more public and private land owners with diverse interests which do not necessarily include traditional public access to land for recreation. The population will increase but grow older, and the regional economy will continue to morph into a balanced mix of recreation services, natural resources extraction, and manufacturing. Trail organizations will have to adapt in order to maintain extensive back-country systems in the future.

The High Peaks are well placed to take advantage of opportunities to transition into a brighter future. The High Peaks are home to world class terrain for a variety of different, complimentary recreational uses. The physical region is unique in Maine and has the largest contiguous area above 2,700 feet (MNAP, Beginning with Habitat, 2010); eight of Maine's fourteen 4,000 foot mountains; and is adjacent to some of Maine's finest public lands like the Mount Abraham Ecological Reserve, Rangeley Lakes State Park, Chain of Ponds, and the Bigelow Preserve.

STRATEGIES

Strategy #1: Enhance regional connectivity for all back-country trail systems by working together. A successful future network of trail systems would emphasize a regional balance of uses with optimal system connectivity, and trails stewarded by resilient organizations. Such a network of back-country trail systems would provide something for everyone; offer winter and summer trail systems which encourage regional connectivity in a few key locations through utilization of multi-use or shared-use trail design; ensure permanent regional connector trails through land conservation; promote balanced, diverse recreational use; be cooperatively managed and maintained by trail organizations and clubs; and have an accessible process through which trail use disputes and conflicts can be resolved.

Strategy #2: Enhance the capacity of all trail groups managing back-country trail systems through a shared investment in the regional system. Trails organizations can increase capacity to maintain and develop trail systems in the High Peaks by working

together to: share investment in sustainable regional infrastructure such as bridges and permanent connecting trails; facilitate efficient emergency response; maintain shared trail corridors; and support rural economic development by better connecting back-country trail systems to communities.

Strategy #3: Increase youth engagement. Existing youth engagement efforts offer a base on which to develop future approaches to develop new, positive, outdoor experiences for local and visiting youth, and to create meaningful summer jobs for youth working on back-country trail projects. Increased youth engagement in back-country trails and outdoor recreation in general can be obtained by: improving communication between trail groups and youth engagement organizations; development of youth events, or youth specific components of existing events; and development of a High Peaks Youth Conservation Corps, which would employ local youth to work on back-country trails in the region.

Strategy #4: Creation of a Trails Council or Network to collaboratively continue development of the regional vision. The High Peaks trails community can and should work together to overcome regional challenges and take advantage of every opportunity to improve the regional trail network, not just the fortunes of each individual trail system. The proposed network would not be a new organization, but rather a way for existing trail groups to work together to meet common challenges. Shared investment in infrastructure, improving relationships with landowners (and between user groups) through clear efficient communication, and collaboration to meet common goals will strengthen back-country trail groups in the region.

CONCLUSION

The High Peaks Trails Plan is based on the assumption that all trail users and maintainers share a passion for back-country recreation and the natural landscape of Maine's High Peaks. Put in other words, if we can agree on 80% of what we have in common, then the 20% which divides us can be overcome. Together we can ensure future generations of residents and visitors will be able to enjoy the traditional access to the outdoors, which makes western Maine such a special place to live and play.

INTRODUCTION

The High Peaks Region hosts a wonderful collection of back-country¹ trail systems, each providing a unique selection of “Big Mountain” experiences for Appalachian Trail thru-hikers, day hikers, ATV and snowmobile riders, paddlers, mountain bikers, and cross-country skiers. Existing trail systems are possible through hard work by dedicated volunteers who plan, build and organize. The net result is a world class destination for trails-based recreation which is well worth celebrating.

The purpose of the High Peaks Trails Plan is to begin collaborative development of a regional vision for back-country trails. The plan identifies challenges and opportunities facing the trails community, and outlines several strategies for trails groups to move forward.

The Plan is organized into three parts:

1. The *Trails Report* introduces the planning context & methodology used by High Peaks Alliance, discusses established, and new trail systems;
2. *Challenges and Opportunities* describes issues facing the trails community, including regional connectivity, capacity, and collaboration; and
3. *Collaborative Strategies* present ways to move forward together.

The High Peaks Trails Plan is based on the assumption that all trail users and maintainers share a passion for back-country recreation and the natural landscape of Maine’s High Peaks. Put in other words, if we can agree on 80% of what we have in common, then the 20% which divides us can be overcome. Together we can ensure future generations of residents and visitors will be able to enjoy the traditional access to the outdoors, which makes western Maine such a special place to live and play.

METHODOLOGY

The Plan was developed in 2013-14 by Ben Godsoe, a Community Planning and Development graduate student at the Muskie School for Public Service, University of Southern Maine, on behalf of High Peaks Alliance, a 501C3 non-profit operating in Franklin County. Generous financial and technical support for the plan was provided by the Maine Community Foundation, Franklin County TIF Fund, Trust for Public Land, and the National Park Service Rivers, Trails, and Conservation Assistance Program.

High Peaks Alliance (HPA) is a small non-profit whose mission is to ‘ensure and enhance public access to recreation in Maine’s High Peaks’.² The volunteer organization is made up of local people who participate in a variety of different kinds of recreation including but not limited to: hunting, fishing, ATV riding, snowmobile riding, hiking, biking,

¹ Back-country refers to a trail system which traverses a remote, undeveloped rural area. Back-country experiences inspired by this terrain include a sense of solitude, enjoyment of pristine waters, a perception of “wild” forests and open spaces.

² www.highpeaksalliance.org

paddling, cross-country, and alpine skiing. The Alliance acts as a local partner in land conservation and economic development projects which feature public access to recreation. HPA is best known for developing a new heritage-hiking trail called the Fly Rod Crosby Trail, based on Maine's first registered guide; and for working with partners to raise broad-based local support for working forest, wildlife, and other forms of conservation which feature public access.

The High Peaks Back-country Trails Plan project included extensive qualitative data collection and analysis, data coordination and map development throughout the summer of 2013. In September a preliminary version of the plan was written and shared with stakeholders at the All Trails Summit event, held in Kingfield at Webster Community Hall (9/24/2013). Enhanced Connectivity strategies were tested for efficiency using Beta and Gamma Index network analysis tests. Participant comments and concerns, along with other comments gathered from those who could not attend, were then incorporated into the Draft High Peaks Trails Plan in fall/winter of 2013.

PLANNING CONTEXT

The trails plan was written within the context of numerous regional plans and public policies which apply to the High Peaks Region of the Western Maine Mountains, and is meant to complement existing management plans and policies. These include:

- The Bureau of Parks and Lands (BPL) *Integrated Resources Policy (IRP)*, which “provides direction to BPL as it relates to management of various resources on public reserved and non-reserved lands, state parks, and historic sites”;
- Management plans for Flagstaff Area and Western Mountains Public Lands Management Districts;
- Land Use Planning Commission (LUPC) Comprehensive Plan;
- LUPC Prospective Zoning for the Rangeley Region;
- Androscoggin Valley Council of Governments (AVCOG) Draft Open Space Policy;
- High Peaks Cultural Council Regional Economic Development Plan; and
- Various other plans including the Maine Appalachian Trail Club (MATC) Management Plan.

The High Peaks Trails Plan differs from other regional plans significantly. It addresses proposed and existing back-country trails on public and private land which would improve the entire regional trail system, instead of only trails on a particular piece of property, or a single trail system. The Plan proposes strategies to improve inter-regional connectivity, connecting the High Peaks Region to other parts of the state and Quebec, as

well as intra-regional connectivity between towns. However, specific trail proposals cannot go forward without cooperation between trail groups and express permission from private landowners and/or public land managers.³

TRAILS REPORT

Each back-country trail system offers “Big Mountain” experiences to the trail user. Whether touring cross-country on ATV or snowmobile, pedaling through the woods on flowing single track, paddling on a lazy river, or thru-hiking the Appalachian Trail; high mountain peaks, broad valleys, and rural mountain villages frame the experience. These back-country trail systems appeal to the adventurous. They create a feeling of remoteness. Trail users enjoy back-country trails because they impart a sense of solitude as one travels through seemingly wild, open spaces. Experiences in rural mountain villages bordering the High Peaks region are part of any back-country adventure. The “Big Mountain” experience is a lifestyle for local residents, and an attraction to visitors.

EXISTING, LONG-STANDING TRAIL SYSTEMS

APPALACHIAN NATIONAL SCENIC TRAIL

The route of the Appalachian Trail in Maine was developed in 1933 on existing hiking trails, logging roads, and planned connecting trails. Over the course of the next two years, dedicated volunteers cleared and began construction of the trail. The Civilian Conservation Corps completed the final section of the entire trail on August 14th, 1937 between Spaulding and Sugarloaf (MATC Local Management Plan).

The passage of the National Trails System Act in 1968 ensured the Appalachian Trail permanent protection as part of the National Park System. The result was an iconic back-country trail experience for hikers, and “thru-hikers” traveling through western Maine from Georgia to Kahtahdin. In 1987, federal and state resource agency partners signed a memorandum of understanding committing each partner to protection of the Appalachian Trail in Maine as a special recreational resource for future generations to enjoy.

The AT traverses the High Peaks for approximately 32 miles from route 4 to route 27, includes 3 primary shelters and several campsites. The trail corridor is 4-6 feet wide with a primitive tread or footpath and features steep climbs and descents over several rugged peaks along the Saddleback and Longfellow ranges. Trail users follow rugged,



Figure 1: Hiker enjoying Saddleback Junior on a nice summer day (photo courtesy of Lloyd Griscom)

³ Many relevant terms and definitions were taken from existing regional plans and policies (Appendix B).

mountainous ridges and stay in remote, primitive camping facilities, gathering after a long day of walking to socialize and prepare meals.

The AT is a valuable resource of national significance. It is the product of hard work by individuals, organizations, federal and state resource agencies. The AT clearly provides a “Big Mountain” experience, and adds tremendous value to the region as a renowned back-country trail system (MATC Local Plan).

ALPINE SKIING

The first downhill ski trail was cut on Sugarloaf Mountain in 1950, and the mountain was opened for skiing one year later. Development of downhill skiing opportunities in



Figure 2: Back-country Alpine skiing has become increasingly popular in the High Peaks.

Rangeley followed almost 10 years later. Sugarloaf and Saddleback have worked hard to develop successful back-country trail systems for cross-country skiing, as well as lift serviced alpine glade skiing where alpine skiers follow a general route or herd path through prepared glades. Casablanca Glades at Saddleback, and Bracket Basin at Sugarloaf, provide lift serviced back-country skiing opportunities for advanced downhill skiers. These off-trail, “Big Mountain” experiences offer users the opportunity to glade ski away from crowded trails and experience a sense of solitude and remoteness, even as they meet

the challenge of skiing steep, technical terrain.

Both ski resorts offer numerous trails events, and provide a livelihood for many local people. Sugarloaf currently offers 2,820 feet of “vertical” skiable downhill trails which include everything from trails designed for racing, to bump runs, terrain parks, and glades or back-country areas. This translates into 54 miles of trails and glades (approximately 35% of skiable area is existing or planned back-country glades), accessible by 14 ski lifts and supported by resort infrastructure. Saddleback includes 2,000 vertical feet of skiing on an extensive system of 66 trails and back-country areas (approximately 20% of Saddleback trails are glades), accessible by 5 ski lifts.

Downhill skiing has played an important role in the overall development of recreation in the High Peaks. Resorts have brought visitors and attracted new residents to experience the challenging terrain, scenic beauty, and unique culture of the High Peaks. Carrabassett Valley, an organized town since 1971, has developed largely in parallel to trails-based recreation in the High Peaks. The community remains the largest municipality (in acreage), in the state of Maine, most of which is devoted to some aspect of recreation including seasonal housing. The town continues to invest in all kinds of trail infrastructure supporting the set of recreational services demanded by residents.

NORDIC SKIING

Nordic skiing experiences include classic, skate, and back-country skiing. Each method requires different kinds of trails. Classic trails are narrower and groomed with “tracks” for each ski to follow, skate trails are wide and groomed to have a flat surface, back-country trails are not groomed and also tend to be narrow trails or even areas without trails, where skiers move through untracked woods to get to a destination.

Local clubs, schools, businesses, and organizations in the High Peaks have worked hard to establish significant opportunities for cross-country skiing. The Outdoor Center in Carrabassett Valley and the Rangeley Trails Center both maintain extensive trail systems offering a variety of experiences to skiers of all abilities. The Outdoor Center, which is the largest Nordic center in the state, has approximately 90 kilometers of groomed and back-country⁴ trails, of varying difficulty, for classic and skate skiing. The Rangeley Trails Center, operated by the Rangeley X-country Ski Club, has 55 kilometers of trails dedicated to skate & classic skiing, snowshoeing, hiking and mountain biking. The Trails Center is soon to be branded the snowshoeing capital of the east with a significant portion of their winter trails dedicated to foot traffic only. Both facilities host races, and other community events such as the Rangeley Lakes Loppet Race, and RSU58 Ski/Skate program.



Figure 3: Cross-country skiers approach MHT Flagstaff Lake Hut (www.mht.org)

SNOWMOBILING

Maine has a long history of snowmobiling. Some of the first modern machines were tested in the northern part of the state with long, back-country rides in the Allagash region (Snowmobile Museum, Millinocket).

Snowmobiling in the High Peaks started almost 50 years ago, with local enthusiasts and clubs working hard to connect trails and build a system with a variety of back-country riding experiences. Over the years local people

have built one of Maine’s premier destinations for snowmobiling. The Arnold Trail and Rangeley Snowmobile Clubs, two of the largest in the state, are part of an extensive trail system which extends as far north as the Canadian border, east to the Forks, west to the New Hampshire border, and south into the Sandy and Carrabassett river valleys.



Figure 4: Rangeley Snodeo, 2012 (courtesy of Lloyd Griscom)

⁴ Back-country Nordic trails are generally narrower in design, and usually the surface is not groomed.

The existing system offers world class trails groomed and maintained by active volunteers, memorable scenic vistas, wide-open spaces, and access to unique events such as the Rangeley Snodeo. The High Peaks contains long sections of the Maine Inter-connected Trail System (ITS), as well as the Black Fly Loop, a regional effort to link local club trail systems, and get snowmobilers from village to village on high quality back-country trails.

All snowmobile trail clubs are active in their communities. For example, the Kingfield Sno Wanderers groom a public sledding hill and recess area at the elementary school, and the North Franklin snowmobile club administers a scholarship to help local families pay for higher education.

DAY HIKING

Hiking trails have existed informally in the High Peaks since early settlement of the area. As early as 1839, a documented ascent of Saddleback Mountain suggests the presence of some sort of path or trail (Swift & Hatch, Appalachia Magazine). Back-country hiking trails are generally 2-3 foot wide rough surface trails designed for foot traffic.

Hiking trails in the High Peaks are maintained by local user groups such as Trails for Rangeley Area Coalition (TRAC), land managers like the Bureau of Public Lands (BPL), the Rangeley Lakes Heritage Trust (RLHT), MATC, and others. There are approximately 55 miles of hiking trails in the region which access eight of Maine's ten 4,000' summits, numerous waterfalls, remote ponds, views, and other points of interest.

Many hiking trails connect to other trail systems such as the AT or Maine Huts and Trails (MHT). A few are interpretive trails such as the Perham Stream Birding Trail in Madrid TWP. Volunteers and organizations work hard to build and maintain these trails.



Figure 5: Hiking on the Fly Rod Crosby Trail (courtesy of Kate Nadeau)

NEW SINGLE PURPOSE BACK-COUNTRY TRAIL SYSTEMS

ATV TRAILS

All-Terrain Vehicle (ATV) trails have grown increasingly popular in the High Peaks and across the Maine Woods. Organized trails for ATV use have come a long way in the last 10-15 years. Formerly considered an "outlaw" use by many land owners and public agencies, with machines which damaged soils, washed out roads and created a lot of noise, ATV trail riding is now an organized trail activity sponsored and funded by the state, developed and maintained by local trail clubs, and enjoyed by families, young people, hunters, anglers, and many others. This growth and acceptance of the sport in the High



Figure 6: ATV Riders enjoying the view on Quill Hill

Peaks region mirrors the development of the system of snowmobile trails in the 1960s-70s. The successful growth of a regional ATV trail system in spite of significant challenges is a credit to local clubs and enthusiasts who have worked hard to solve user conflicts and establish trust with land owners.

The High Peaks offers some of the most extensive trail riding in New England. Approximately 35% of the statewide ATV trail system is located in the “Maine Highlands.” The High Peaks Region offers approximately 435 miles of trail, most of which has been developed in the last 10-15 years. ATV use will continue to grow and evolve in coming years and the demand for high-quality back-country trail systems will also continue to increase (SCORP, 2009).

The High Peaks is home to the Moose Loop ATV system: an interconnected regional trail system modeled after the snowmobile Black Fly Loop, which gets users from one village to another on high-quality back-country trails. This system was made possible through the development of the West Saddleback Connector, a multi-use/shared-use⁵, state-owned trail corridor crossing the Appalachian Trail on the western shoulder of Saddleback mountain. Local ATV clubs worked with the MATC, High Peaks Alliance, and other partners to establish an official connector trail which linked the Rangeley Lakes region to the High Peaks and completed the Moose Loop. The Moose Loop offers challenging long distance back-country trail riding.

All ATV clubs are involved in their communities and assist with community celebrations. For example: the Narrow Gauge Riders worked with the state to clean up illegal dump sites as part of a state-wide effort to improve landowner relations; and the Sandy River Riders administer a youth scholarship.

MOUNTAIN BIKING

Mountain biking first came on the scene in the late 80s, and has continued to gain in popularity. Trail systems have sprung up around the country in recent years, most notably at ski areas in North America as an off-season attraction.

Back-country mountain bike trails have recently been developed



Figure 7: Mountain Bikers meet up with hikers along the Sandy River (courtesy of Kate Nadeau)

⁵ “Multi-use” refers to a trail which has multiple uses in the same season.

in the High Peaks and now extend more than 40 miles. Mountain bike specific trails, or “single track,” are narrow tread-ways on rough surfaces with moderate to steep pitches designed to provide a challenging experience for users with all-terrain bicycles (IMBA, Trail Solutions, 2007).

Extensive trail systems have been developed within the last five years at the Outdoor Center in Carrabassett Valley, and the Rangeley Trails Center in Sandy River PLT and include more than 40 miles of mountain bike trails. The Carrabassett Region New England Mountain Biking Association (CRNEMBA) Chapter was formed in 2010 and is responsible for management and maintenance of the trail system at the Outdoor Center, while the Rangeley Trails Center maintains mountain biking opportunities in Sandy River PLT. Local volunteers are enthusiastic, have a lot of energy, passion for building sustainable trails, and a tremendous vision for a destination back-country mountain biking trail system in the High Peaks.

NEW, MULTI-PURPOSE BACK-COUNTRY TRAIL SYSTEMS

MAINE HUTS AND TRAILS (MHT)

MHT is a back-country trail system for cross-country skiers, mountain bikers, hikers, and paddlers. Designed also as an economic development engine, MHT brings visitors to western Maine to experience the Maine Woods in all seasons. Users stay in four eco-lodges connected by a 65+ mile back-country trail system which is free, open to the public, and stretches from the Forks to Carrabassett Valley. MHT trails are groomed, classic x-country ski trail in the winter, and a shared-use mountain bike/hiking trail in the summer.



Figure 8: MHT Eco-lodges serve meals and offer comfortable back-country accommodations.

MHT recently celebrated completion of their first phase of development, and now plans to focus on building its business, enhancing visitor trail experiences around each hut, and continue to raise funds for new huts and future trails. The organization is poised to enter the High Peaks region and will enhance the region’s growing collection of trail uses with a multi-purpose system. MHT’s future route is a challenge to other trail groups as they must accommodate a new system with multiple uses.

NEW, COMMUNITY-BASED BACK-COUNTRY TRAIL SYSTEMS

THE NORTHERN FOREST CANOE TRAIL (NFCT)

The NFCT is a 740 mile paddle trail from Old Forge New York, to Fort Kent in northern Maine. It was officially completed in 2006 with publication of a series of maps and an accompanying trail guide which provides paddlers with camping, portage and other access information. The trail links historic waterways used by early residents of the north woods as major transportation corridors and passes through the High Peaks Region on Rangeley and Flagstaff Lakes and along the South Branch of the Dead River. The NFCT maintains campsites, signage, and portage trails which make it easier for paddlers to access the rivers and lakes of the Northern Forest.



Figure 9: Fishing along the NFCT
(courtesy of Devin Littlefield)

NFCT connects trail users to the heritage of the region with extensive interpretive programming including maps and a comprehensive guide. Paddlers are encouraged to not only stop in each village to pick up necessities, but also to experience the trail in sections and explore each “mini-region” through which it passes; going to museums, participating in other recreational activities, and attending community events (NFCT Guidebook, 2010).

THE FLY ROD CROSBY TRAIL (FRCT)

The FRCT is a project of the High Peaks Alliance and will eventually be a 45-mile community trail, built and maintained by local volunteers to give trail users a unique look at the historic, natural and cultural landscape of the High Peaks region, as told to them by Maine’s first registered guide and local heroine: Cornelia “Fly Rod” Crosby. The goal of the trail is to help residents and visitors take an active interest in preserving the unique character of High Peak’s communities and natural resources.



Figure 10: Volunteers build the FRC Trail in Madrid TWP

Currently the trail is about 20 miles and stretches from downtown Phillips to Saddleback Mountain Resort. The first phase was completed by volunteers in the fall of 2012. Similar to the NFCT, the FRCT has an interpretive program with panel signage in Madrid TWP, self-guided nature and history tours in Phillips. Similar to the original AT, it links many existing routes; woods roads ATV and snowmobile trails, as well as newly constructed foot paths.

EXISTING REGIONAL TRAIL INFRASTRUCTURE

Regional back-country trail systems in the High Peaks are knit together with different kinds of infrastructure including bridges to transport users over major rivers and streams, erosion control mechanisms to ensure the trail does not wash out, and clear signage to efficiently guide people to their destination and warn them of other trail users or hazards. Trail systems require major trail management and maintenance. Gating systems can control user access during unsafe or unseasonable trail conditions (mud season), and prevent illegal recreational uses. Club houses and other facilities close to the trail system house tools for volunteers, trail building materials and other equipment.

Successful trail systems require some way for users to find or access the trails. Marketing infrastructure includes information provided by the state, regional economic development networks, and each trail organization.



Figure 11: Volunteers working on the Appalachian Trail in Sandy River PLT

High Peaks Trails: Trail Infrastructure

Disclaimer: Trail locations are approximate. Data is for planning purposes only. Not for public distribution.

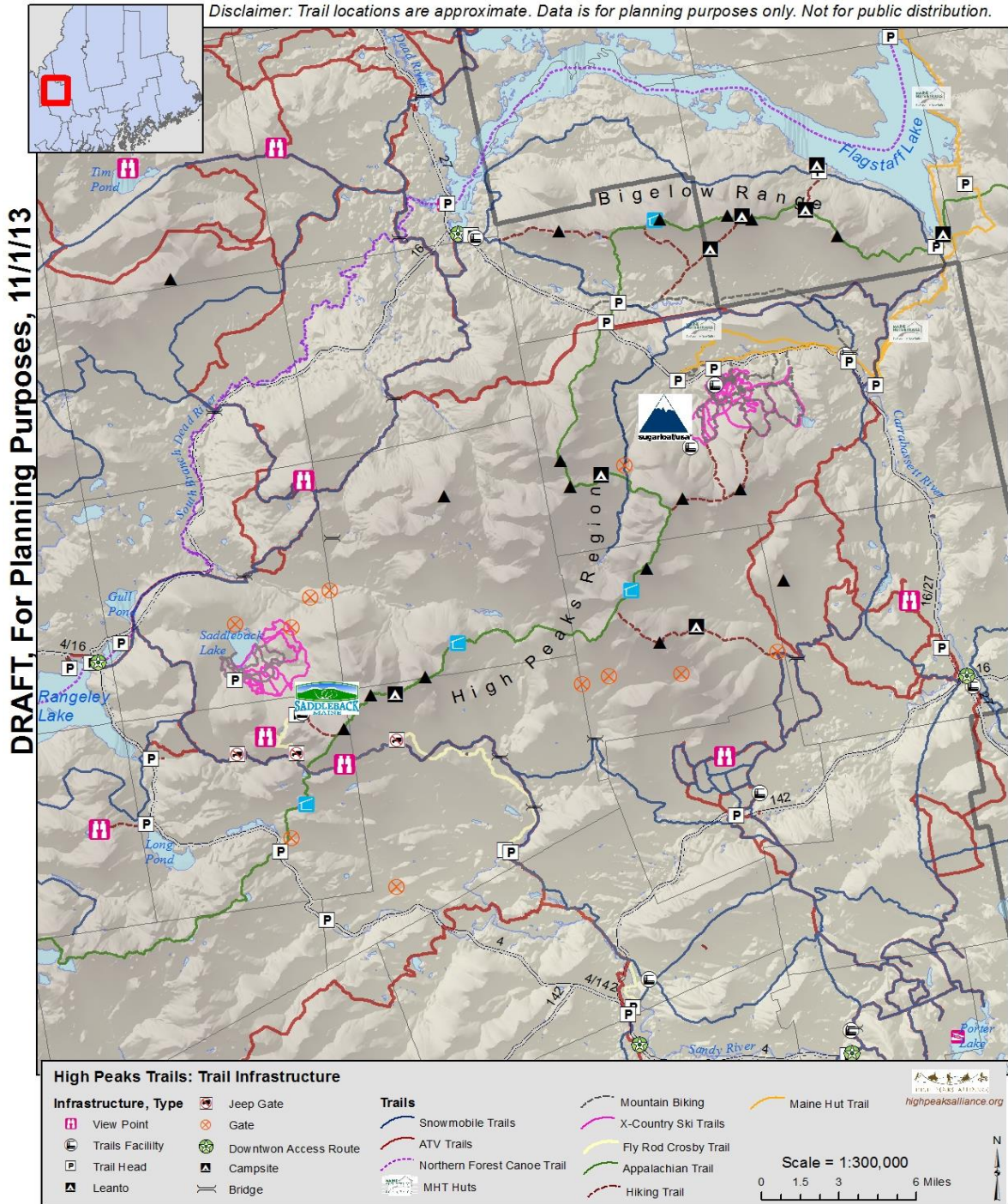


Figure 12: Map; Existing Shared Infrastructure

EXISTING LAND OWNERSHIP

Trails in the High Peaks region are generously hosted by private and public landowners. In total, over 700 private land owners host trail systems in the High Peaks. Maine's Landowner Liability law (Title 14, M.R.S.A. Section 159-A) makes it easier for private land owners to let the public recreate on their land without assuming liability. Public lands with trails in the High Peaks include the State of Maine Bureau of Parks and Lands (BPL), National Park Service (NPS), and local municipalities. Private land trusts such as the Rangeley Lakes Heritage Trust (RLHT), who own land for the benefit of local communities, also host significant trail systems.

There are a few permanent, owned trail corridors in the High Peaks. These include: the AT, West Saddleback Connector, and other official trails on state or federally owned public lands. Some trails owned and operated by municipalities and non-profits, and have more permanent status. Another unique form of permanency is the former narrow gauge railroad bed. Sections of which are owned and managed by trail clubs and municipalities.



Figure 13: Local landowners presented with an award by trail club representatives at the All Trails Celebration, 2011 (courtesy of Tony Barrett)

High Peaks Trails: Existing Landownership, All Seasons

Disclaimer: Trail locations are approximate. Data is for planning use only. Not for public Distribution.

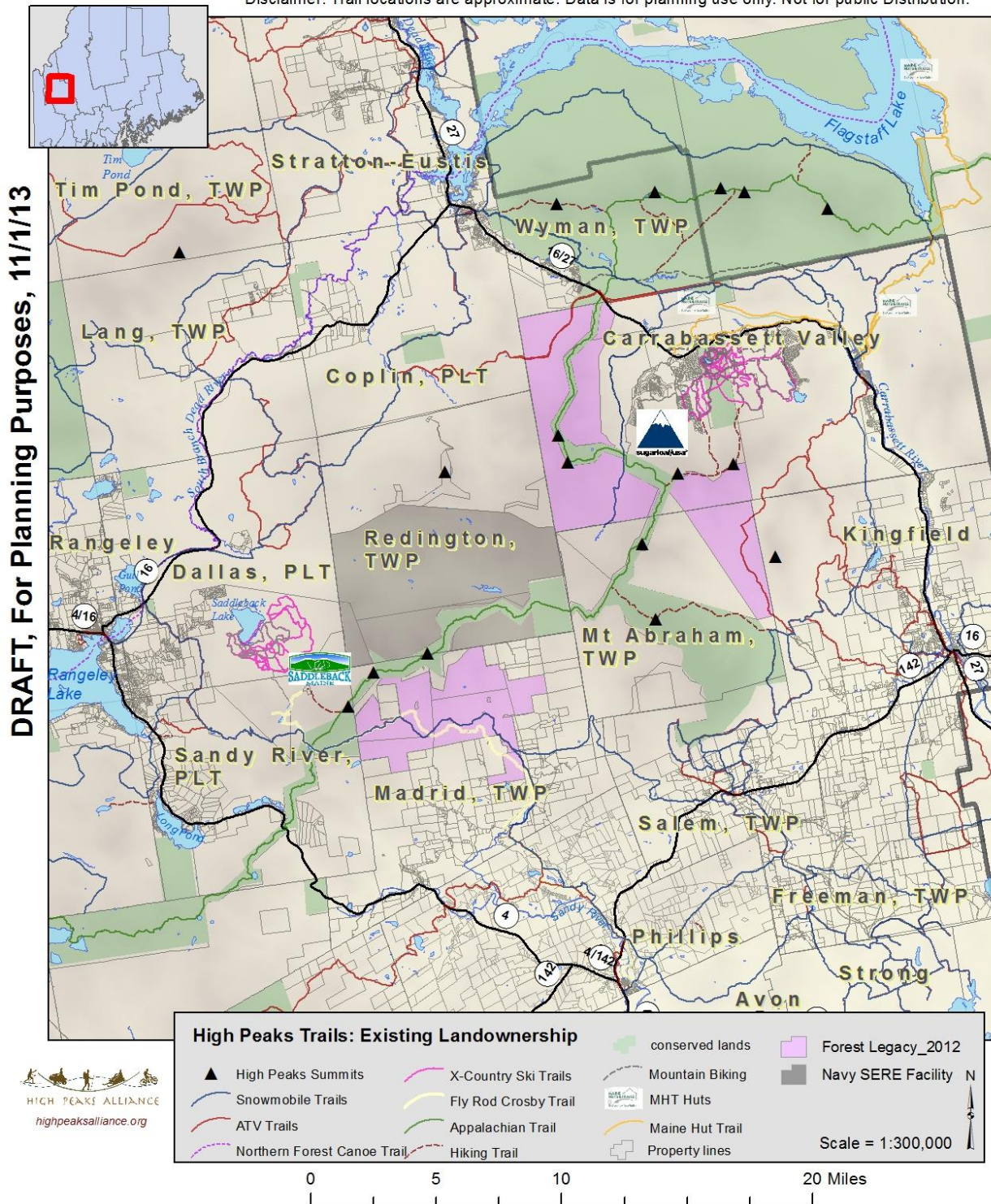


Figure 14: Map; Existing Land Ownership

CHALLENGES AND OPPORTUNITIES FOR THE TRAILS PLAN

CHALLENGES

Back-country trail systems in the High Peaks face significant challenges in the future including changing in property ownership patterns, and the reduced capacity of volunteer-based trail groups due to demographic and socio-economic changes in the High Peaks and across the Maine Woods. In the future there will be more public and private land owners with diverse interests which do not necessarily include traditional public access to land for recreation. The population will increase but grow older, and the regional economy will continue to morph into a mix of recreation services, natural resources extraction, and manufacturing. Trail organizations will have to adapt in order to maintain extensive back-country systems in the future.

Land ownership and public access in the High Peaks region has changed in the last 25-30 years. For much of the 20th century, a small number of vertically integrated forest product companies owned much of the land in the High Peaks. These companies managed it as a long term source of material for wood products and paper mills located all over the state. Industrial forest owners allowed public access to their land for recreation as long as it did not negatively impact operations. Globalization combined with other industry pressures led these large landowners to quickly divest forest land to several new kinds of owners beginning in the 1980s.

New kinds of land owners include:

- Timber Investment Management Organizations (TIMOs) & Real Estate Investment Trusts (REITs);
- “kingdom owners” and smaller buyers investing in land for residential or recreational development purposes; and
- Public entities such as the Maine Department of Agriculture, Forestry & Conservation & non-profit land trusts.

Current property owners have a more diverse set of values than their predecessors, and often buy forest land as part of a long-term investment strategy, or to make a profit by subdivision and development of the land.

The tremendous pace of change in land ownership patterns continues today. Between 1990 and 2005, 17.5 million acres changed hands in the unorganized territories. The volume of transactions involving land between 10,000 and 99,000 acres in the first half of the 2000s was more than all transactions which occurred in the 1990s. This trend is anticipated to intensify in the future (LUPC Comp Plan, Development, 2010).

Systemic change in land ownership patterns, combined with increased use of private land for recreation has implications for both trail groups and private land owners. The

increasing number of new land owners makes it more complicated to maintain large interconnected trail systems. Some new landowners do not share Maine's tradition of allowing the public to recreate on private land, and gate or post their property. Reasons for restricting public access to private land vary. For example, a landowner may not want to be held liable for any injuries sustained while users recreate on their property⁶. Some landowners restrict access to their land for certain uses such as ATVs or snowmobiles. They believe the use to damage roads, woods, and wetlands. Others insist on complicated management agreements where local clubs of volunteers are asked to take on management of forest roads on their property in return for hosting trail systems. Trail systems on private land see more use every year and are harder for maintainers and managers to patrol for litter, unauthorized use or camping, and other abuse of private property.

Public land holdings continue to increase in the High Peaks. Within the last year 12,000 acres around Crocker Mountain was acquired by the state of Maine. A conservation easement on an additional 6,000 acres near Orbeton Stream is likely to close in 2014. The region has been identified as a priority landscape for land conservation by national and state agencies such as US fish and Wildlife Service, and Maine Natural Areas Program, as well as local and regional non-profits including the Rangeley Lakes and Maine Appalachian Trail Land Trusts, Trust for Public Land, and the Nature Conservancy (McKinley, 2007). Landscape level conservation of high elevation property in the High Peaks would provide important ecological and wildlife habitat connectivity corridors.

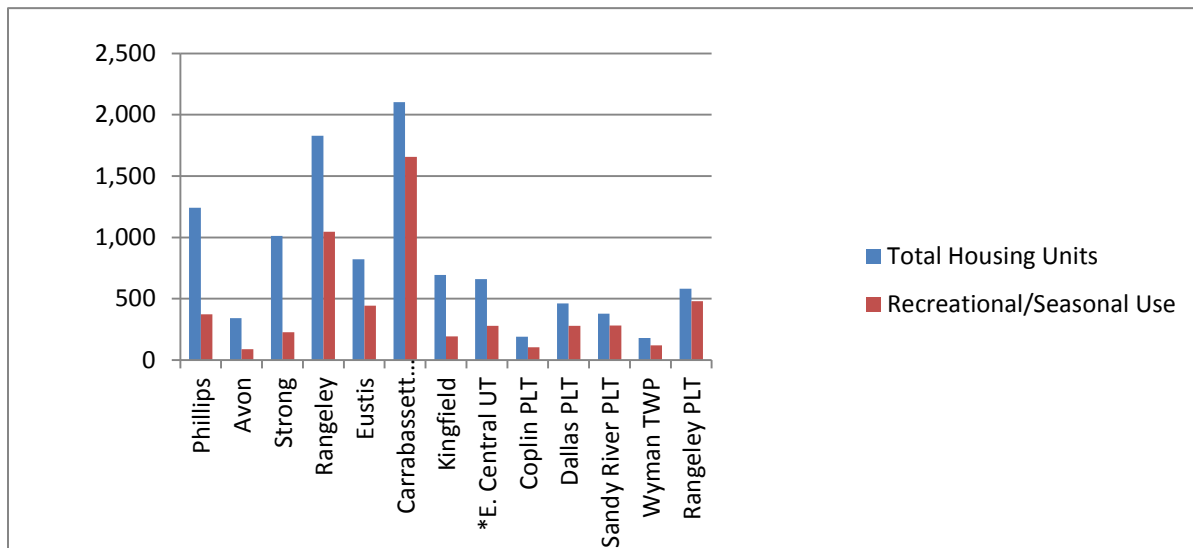
Additional public lands which host back-country trail systems will mean trails organizations must build or strengthen relationships with public land managers and negotiate public processes in order to establish new trails and change existing routes or uses. A public planning process is required whenever the state of Maine acquires land which will be included in the existing system of parks and public lands. Public lands in Maine are managed for multiple uses. Management plans establish where and how people will be able to access public properties for recreation, and create a process through which future uses can be accommodated. Public land managers use management plans to guide decisions about new trails, uses, and changing existing conditions. Diverse interests must be balanced to ensure everyone gets what they need out of a management plan. Individual trail groups can have a hard time navigating the planning process and making their voices heard.

Even as ownership of the land base changes, demand for back-country trails and other recreational infrastructure will gradually increase as new residents move to the High Peaks, and the eco-tourism industry continues to evolve. New seasonal and recreational residential growth, particularly in the unorganized territories and plantations, is in part spurred by ready access to recreation. According to the Land Use Planning Commission

⁶ Maine's Landowner Liability law: Title 14, M.R.S.A, Section 159-A, provides some protection to landowners but does not make them immune to a lawsuit.

(LUPC), for each additional year-round resident, 23 new camps or homes were permitted in Rangeley, Sandy River and Dallas Plantations between 1980 and 2000. Newly permitted buildings were more likely to be winterized homes used for recreation, and located in the plantations or unorganized territories (LUPC Prospective Zoning Plan for the Rangeley Region, 2000).

Figure 15: Recreational/Seasonal Housing vs. Total Housing in the High Peaks, 2010 (Source US Census)



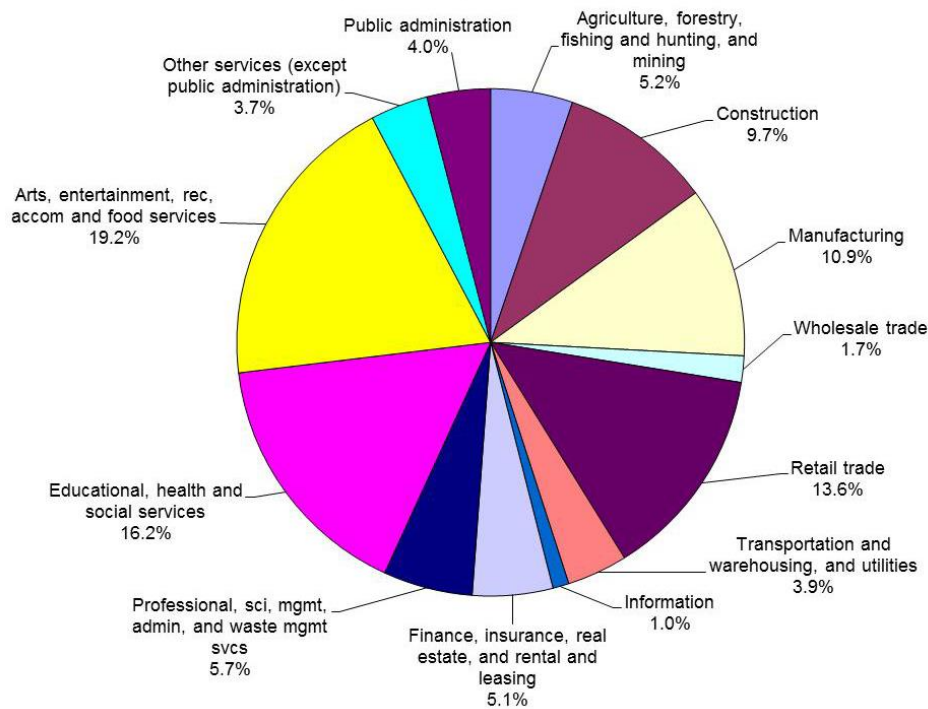
The regional economy has been semi-dependent on recreation and seasonal tourism for the last century, and in more recent times, with the shrinking manufacturing sector in the Maine Woods, recreation has become more important than ever. A significant proportion of housing in the High Peaks is classified by the US Census as *seasonal or recreational* in nature and remains focused around the two recreational service centers of Carrabassett Valley and Rangeley. Across the entire Androscoggin Valley Council of Governments region, 16% of all housing is seasonal or recreational, with the majority of the stock in Franklin and Oxford counties (AVCOG, 2009). In the High Peaks, the organized towns of Carrabassett Valley (79%), Rangeley (83%), and Eustis (54%), have the highest percentage, while Strong (15%), Phillips (23%), Avon (26%), and Kingfield (28%), have smaller proportions of total housing stock classified as seasonal or recreational. In Dallas, Sandy River, Rangeley, and Coplin Plantations (PLT), 71% of total housing stock is recreational or seasonal, while in the unorganized territories it is 67% of total. Seasonal housing rates remained fairly static in the last 10 years with small increases in the unorganized territories after growing significantly in the 90s (LUPC, 2000). This may in part be due to the great recession starting in 2008 (US Census, 2010).

Seasonal residents highly value recreation and want camps or summer homes located close to opportunities for biking, paddling, ATV riding, snowmobiling, hiking, and skiing. However, the increased subdivision of large parcels necessary for more residential

development makes it increasingly difficult for volunteer trail groups to maintain and interconnect large trail systems on private land. In some cases, new residents have moved to the High Peaks for perceived proximity to trail systems and then come into conflict with other landowners and volunteer trail clubs when they ride, bike or walk on private property.

Economic and demographic changes in northern Franklin County mean demand for high quality back-country trails will likely increase, and the number of available volunteers to maintain increasingly complex trail systems will likely decrease. Over time, the economy in northern Franklin County has transitioned from reliance on the harvest and manufacturing of forest resources, to a more diverse mix of retail, recreational services, and manufacturing. The economy in the southern part of the county has similarly diversified, but focused more on retail, health and education services. Approximately 33% of total businesses in the High Peaks region deliver services associated with the recreation industry, such as retail, lodging, and dining (ESRI Business Analyst, 2010⁷).

Figure 16: Jobs by industry, High Peaks Region Towns, 2000 (USFW, 2012)

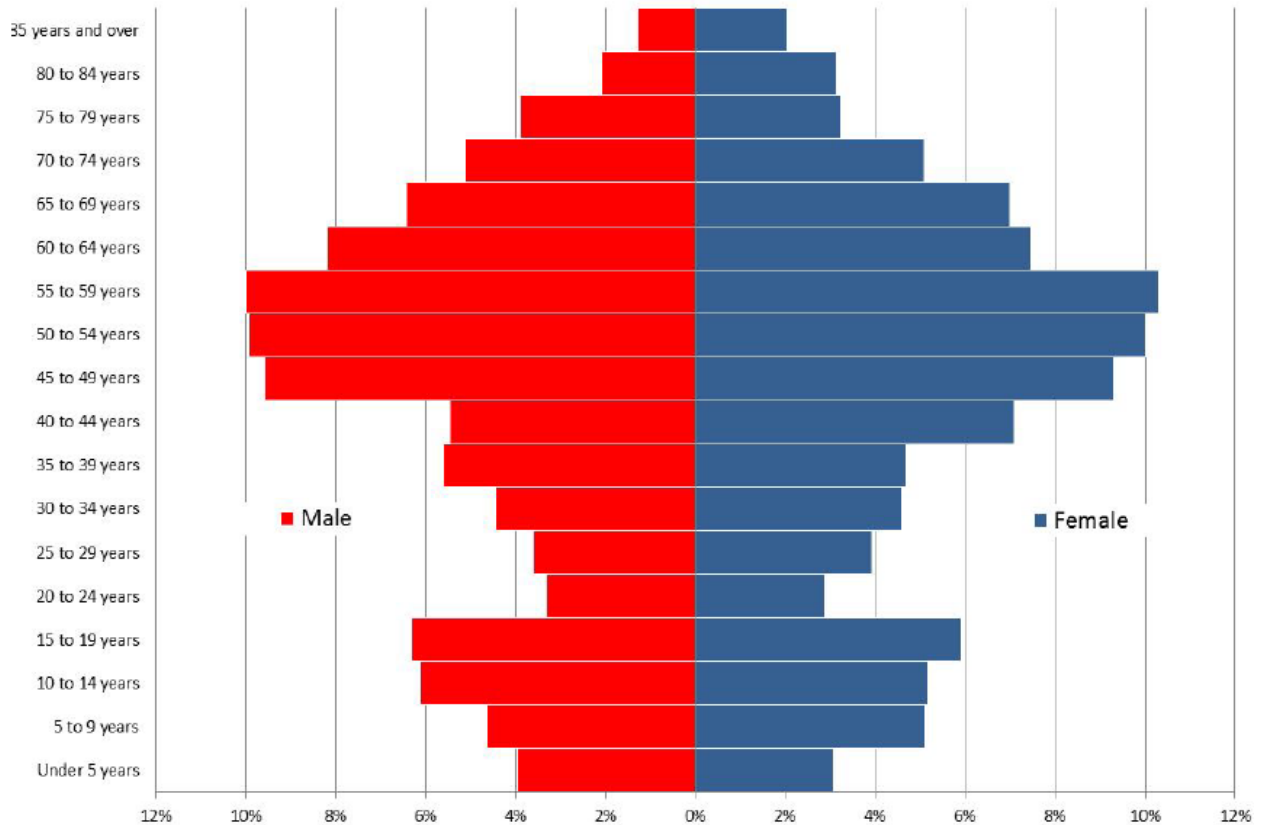


The overall population of the High Peaks is increasing, but in coming years will grow older. This has serious implications for the trails community which relies on volunteers to organize, develop, and maintain trail systems. Household sizes are shrinking, and the

⁷ ESRI Geography for the High Peaks Region includes the towns of Kingfield, Salem, Freeman TWP, Strong, Avon, Phillips, Madrid, Sandy River PLT, Dallas PLT, Rangeley, Rangeley PLT, Coplin PLT, Land TWP, Stratton-Eustis, Wyman TWP, and Carrabassett Valley

average age of residents is increasing (see figure 3). Employment in the region increasingly features services for an older, retired population (USFW, 2011). The lack of an available, younger work force makes it difficult for new businesses to consider locations in the High Peaks.

Figure 17: Population by Age Cohort, 2010 US CENSUS (USFW, 2011)



An aging pool of volunteers means it will be difficult to find people who want to do the very physical work required to build and maintain back-country trail systems. Volunteerism and youth engagement in local trail clubs and organizations continues to decrease, even as trails see increased use. Local ATV and snowmobile clubs report that while memberships are steady or even increasing, volunteer recruitment is stagnant or decreasing. Regional trail systems such as the Appalachian Trail and Northern Forest Canoe Trail have less difficulty attracting volunteers because they can draw from a larger region. However, new volunteers tend to be older and as a result will have a shorter tenure. Membership includes many residents from out of state, often the majority of members in clubs are not from the High Peaks. The same local volunteers show up regularly to maintain the trail system.

The capacity of emergency responders must increase to keep up with the character and quantity of future incidents as trails see increased use. Advances in cell phone and Global Positioning Systems (GPS) technology mean that people out on trails are more likely to take risks and potentially could get into situations which require an organized rescue. Adults ages 25-34 use a smart phone (equipped with GPS) 39% of the time when engaged in recreational activities (OIF, 2012). Use of this and other technology creates a false sense of security for trail users and is likely to increase risky behavior, such as under-preparedness, in the back-country.

The Maine Warden Service and other professional emergency response personnel often rely on volunteer groups such as Franklin Search and Rescue (FSAR), and local knowledge from the trails community, when they mount a search and rescue operation. The aging population and declining volunteerism in trail clubs and organizations affect volunteer groups like FSAR, and the ability of emergency responders to quickly and effectively respond to an event. Recent notable emergencies illustrate the kinds of response situations occurring in the High Peaks. For example, incidents in 2013 include: many lost back-country skiers and snowboarders continually showed up “out of bounds” at Sugarloaf and Saddleback, an AT thru-hiker went missing without a trace near Spaulding Mountain, and snowmobilers fatally crashed through the ice on Rangeley Lake.

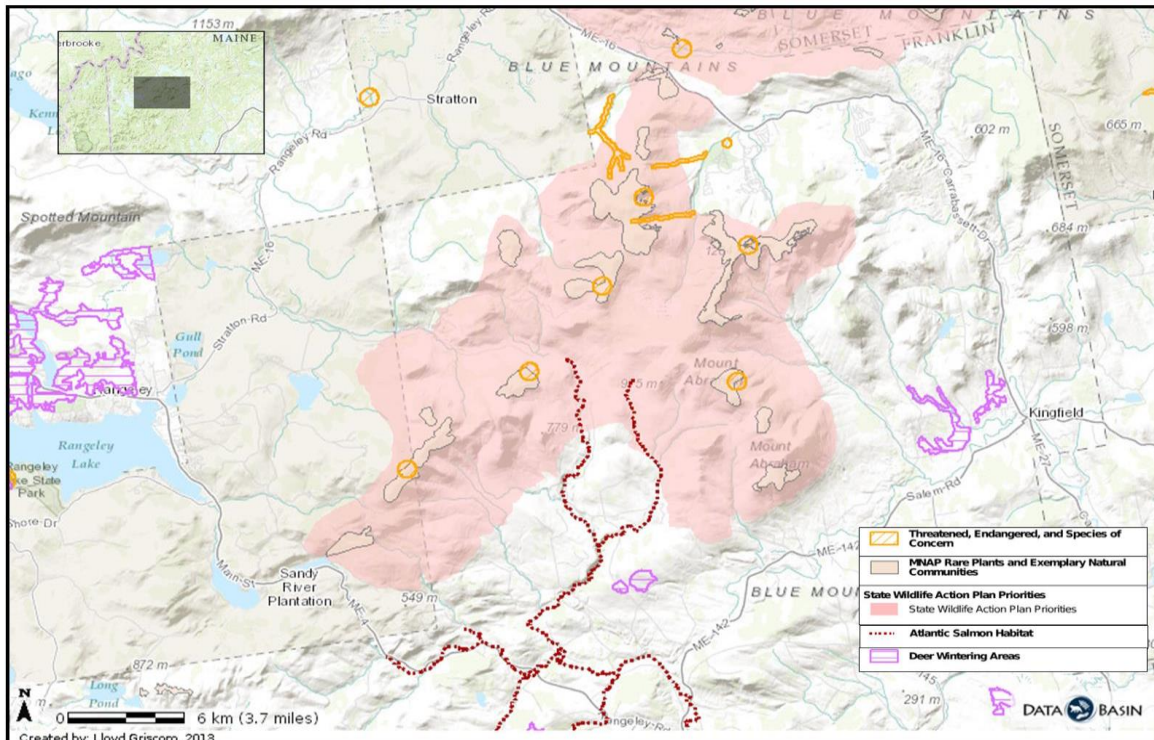
OPPORTUNITIES

The High Peaks are well placed to take advantage of opportunities which will allow transition into a bright future with high quality of life. The High Peaks region is home to world class terrain for a variety of different, complimentary recreational uses. The physical region is unique in Maine and the largest contiguous area above 2,700 feet (MNAP, Beginning with Habitat, 2010). It has eight of Maine’s fourteen 4,000 foot mountains, and is adjacent to some of Maine’s finest public lands like the Mount Abraham Ecological Reserve, Rangeley Lakes State Park, Chain of Ponds, and the Bigelow Preserve. The area has a wide variety of back-country trail systems for ATV and snowmobile riding, hiking, back-packing, paddling, cross-country skiing and mountain biking, and hosts one of the most difficult and scenic sections of the Appalachian Trail in Maine. Sugarloaf and Saddleback are two of Maine’s largest ski areas, and Maine Huts and Trails continues to grow into a burgeoning back-country trails and hospitality business, attracting visitors from all over the world.

Retirees and other new residents are attracted to the High Peaks region because of beautiful scenery, ready access to trails and other forms of recreation. Trails are now viewed as the number one amenity influencing home-buyers over the age of 55 (Morton and Lindahl, 2008). Trails and recreation will account for the majority of in-migration in the High Peaks in coming years and are worth investing human and financial capital today. The region is well placed to compete with other parts of the state and New England to

attract new residents because of the high quality of life. New residents will be an important resource for volunteer managed trail systems, as well as strengthen local towns by broadening the tax base, participating in civic and community life.

Figure 18: High Peaks Conservation Priorities (Data Basin, 2013)

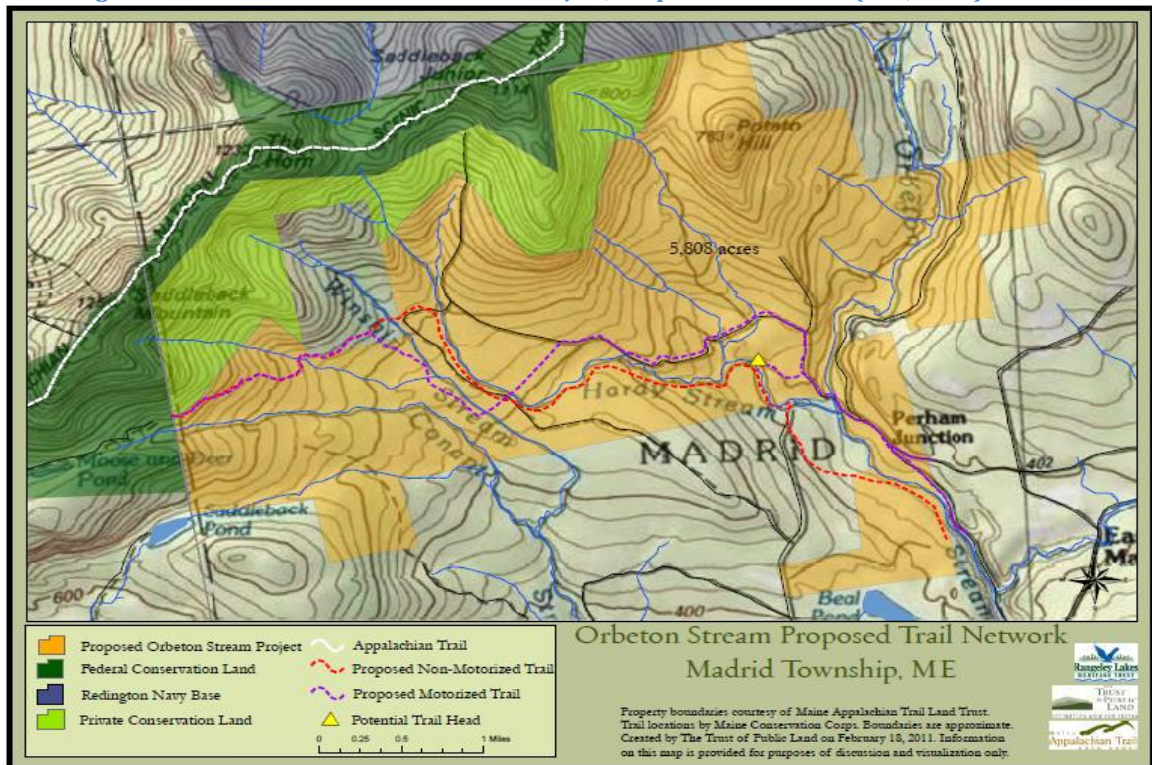


The High peaks Region is of special significance to national , state, and local land conservation interests.

The High Peaks Region has high land conservation value including: diverse wildlife habitat for birds, fish, and mammals; provision of ecological connectivity within the northern forest due to its high elevation and strategic position between boreal and southern mixed hardwood forests; and educational opportunities to better connect visitors and residents to wildlife, ecology, and conservation through public access.

Continued land conservation in the High Peaks will create opportunities for permanent, regional trail corridors. For example, the proposed Orbeton Stream Working Forest Conservation Easement project in Madrid TWP would feature permanent motorized and non-motorized trail corridors for ATV, snowmobile and hiking trail systems, as well as ensure the land remains a productive industrial forest, and is not subdivided for development.

Figure 19: Orbeton Stream Conservation Project; Proposed Recreation (TPL, 2012)



Future economic development in the High Peaks region will remain closely linked with the natural environment. The region has the opportunity to deliver Maine’s premier “Big Mountain Experience” through a well-organized system of back-country trails which integrate rural mountain villages into the experience. Natural resources including timber, water, wind, and mineral resources will continue to present opportunities for future growth and development. Modernizing telecommunications infrastructure such as cell phone coverage and high-speed internet service will enable the region to attract younger in-migrants who can work remotely and are looking for a high quality of life. In sum, ensuring ready access to unique, back-country recreational experiences will build a strong foundation for tomorrow’s economy in the High Peaks.

Perhaps the most significant opportunity for trail groups is the *chance to work together to collaboratively develop a regional vision for trails* in the High Peaks Region. Trail groups have the ability to meet challenges and transition into a future with successful trail systems for all user groups, but in order to do so must first come together as a community.

STRATEGIES TO MOVE FORWARD TOGETHER AS A REGION

STRATEGY # 1: ENHANCE REGIONAL CONNECTIVITY FOR ALL BACK-COUNTRY TRAIL SYSTEMS BY WORKING TOGETHER.

A successful future High Peaks network of trail systems would feature a regional balance of uses with optimal system connectivity, that is, collaboratively maintained and operated trails stewarded by resilient trails clubs and organizations.

A regional network of back-country trail systems would:

- Provide something for everyone,
- Offer winter and summer trail systems that encourage regional connectivity in a few key locations through utilization of multi-use or shared-use trail design,
- Ensure permanent regional connector trails through land conservation,
- Promote balanced, diverse recreational use, -including back-country recreation which does not utilize maintained trails-,
- Be cooperatively managed and maintained by trail organizations and clubs, and
- Have an accessible process through which trail use disputes and conflicts can be resolved.

MOVING FROM LEGACY TRAILS TO PLANNED TRAILS

The existing trail systems in the High Peaks include many legacy trails which have been in place for a long time and were developed in part because they were used by local residents for transportation and recreation. However, these trails can be poorly sited, prone to erosion, and need a high level of annual maintenance. Planned trail systems, which also exist in the High Peaks, consist of a system of sustainably designed trails which need minimal maintenance, manage potential user conflicts well, and adequately meet user demand by providing diverse trail experiences.

New trails in the High Peaks should be sustainably designed, and take into account the trail's impact on wildlife and the environment, user demand, as well as a broad array of different uses. Any time a new trail is built in a back-country area, it brings people into closer contact with wildlife and changes natural patterns. Planned, sustainably designed trails should account for negative externalities associated with getting people out into remote settings, fit within a diverse system which provides something for each user, and ensure adequate use (IMBA, Trails Solutions, 2004).

Shared-use trails, which host different user groups in the same season, make a lot of sense in a few key locations where geographical and other constraints make it difficult to have separate trails. Shared-use trails are cost effective and best manage the needs of the most users. They promote community building between user groups and empower

responsible users, while exposing “outlaw” use and encouraging more peer regulation (Trail Solutions, 2004).

Developing greater trail density and complexity in the High Peaks, where it makes sense to do so, would create a diversity of back-country trail experiences for residents and visitors. Stacked loop summer and winter systems interconnected by linear trails would create a regional system accessible from any High Peaks community.⁸

The following suggestions would improve regional connectivity and represent efficient on-the-ground projects which could best interconnect existing winter and summer regional trail systems.

WINTER TRAILS: ENHANCED REGIONAL CONNECTIVITY

Potential Snowmobile Trail System

The High Peaks snowmobile trail system contains a series of stacked loops surrounding each town, interconnected by the regional Black Fly loop system (made up of ITS routes 84, 89, & 115). The existing regional system meets most user needs. Snowmobilers can access each town, miles of back-country and challenging terrain on trails which are well designed, well-traveled, safe, and fun.

Connectivity within the region could be enhanced by an additional regional connector trail, which would bisect the regional loop and extend from Carrabassett Valley south to Salem and Phillips through Mt Abraham TWP. The route is on an existing gravel road which has seen significant use by snowmobilers for many years. However, for it to become an authorized trail, local snowmobile clubs, landowners, and managers must agree on a route, acceptable trail uses, and a process to resolve user conflicts. An authentic north/south connecting trail would give the region a stacked loop system, offering riders a choice between loops of different length and difficulty, accessible from any High Peaks Community.

Non-pedestrian trail crossings of the Appalachian Trail (AT) occur in the High Peaks. Any such trail crossing must be designed to cross the Appalachian Trail at 90 degrees, and care should be taken by all user groups to provide safety for hikers and riders, protect the Appalachian Trail experience, and minimize potential negative impacts on natural resources within the National Park Service corridor.

Connecting the High Peaks Region to other regions in the state could be improved through development of:

⁸ Stacked Loops are interconnected loops of varying distances and times, which bring the user back to their point of origin. Linear trails deliver the user from point A to Point B by way of the most efficient and appealing route (FMI: please see Appendix B).

- A recreational crossing of the Carrabassett River in Kingfield (Currently, use of the Route 16 bridge downtown is dangerous because of proximity to truck traffic and crossings on river ice are treacherous and unpredictable), and
- A recreational crossing of the Sandy River in Strong (currently use of Main Street bridge is dangerous because of traffic. However, abutments from previous road bridge may be usable, or adapting the existing bridge to accommodate recreational traffic – similar to the multi-use recreational bridge project in Bethel-may be more feasible than constructing a new standalone bridge).

Potential river crossings would bridge significant spans and benefit from multiple-use, including but not limited to: ATVs, bikes, x-country skiers, hikers, and snowmobilers.

Potential Cross-country Ski Trail System

The cross-country ski trail system in the High Peaks consists of two stacked loop systems at the Sugarloaf Outdoor Center and Rangeley Trails Center, as well as the linear Maine Huts & Trails (MHT) back-country trails and hospitality system. These three permanent systems are on land owned or leased long term for recreation.

Connectivity for skiing could be enhanced by a linear regional connector trail such as the Maine Hut Trail. MHT's long term goal is to connect Moose Head Lake to the Mahoosuc Mountains in Oxford County. Currently the trail runs from Carrabassett Valley to the Forks. MHT route options in the High Peaks brings the system into Caribou Valley, and then either north of the Saddleback Mountain range, through Redington TWP, or south of the range, through Madrid TWP. The suggested MHT thru-route would cross the AT 1-2 times, and should be designed at a 90 degree angle to the Appalachian Trail, and share use with other trail systems in order to reduce the total number of AT crossings in the region.

The potential regional cross-country ski trail system would result in a diverse selection of experiences for skiers including:

- Back-country hospitality (Eco-hut stays),
- 2 Stacked loop systems at established x-country ski resorts, and
- A linear back-country trail system through the remote and challenging terrain between the two resorts.

Another recent proposal would connect the High Peaks to Quebec. The proposed Western Maine People-Powered Trail would feature snowshoeing and cross-country skiing in the winter, and connect the MHT system in Carrabassett Valley to Coburn Gore. Users would be able to ski or snowshoe the historic Arnold Trail Corridor from the Bigelow Preserve to Quebec (and vice versa).

Multi-use and shared-use Opportunities for Winter Trails

Residents have multiple opportunities over the course of a season to get out and use the trails, but visitors have a much narrower window. Creating a variety of experiences

available to visitors during the winter will help alleviate frustrations brought on by unpredictable weather and surface conditions.

The proximity of high-quality back-country trail systems to winter resorts offer visitors options if their primary recreational activity is unavailable for some reason. Downhill and x-country skiers at Sugarloaf and Saddleback look for other things to do when there are high winds or unusable trails. Snowmobiling or Nordic skiing are attractive alternatives.

Maine Huts and Trails (MHT) would benefit from closer ties to the snowmobile trail system in addition to their already strong ties to area ski resorts. Sales to snowmobilers would provide additional income which could be put back into operations. MHT already does this with paddlers using the Northern Forest Canoe Trail. MHT works closely with CRNEMBA to provide opportunities for mountain bikers to utilize their trail system (and huts) in the summer. Well-designed access points for snowmobilers should minimize potential conflicts between sleds and skiers. This could be done through development of satellite parking areas for machines with short walking routes to huts and other points of interest.⁹

SUMMER TRAILS; ENHANCED REGIONAL CONNECTIVITY

Potential Hiking System (Summer & Winter)

Adding more planned, sustainably built hiking trails to the regional system would provide a higher density of interconnected trails, and higher connectivity within the region, adding a diversity of experiences for residents and visitors. Potential hiking additions include:

- The proposed Berry Picker's Trail, an official AT side trail which would connect to the Fly Rod Crosby Trail in Madrid TWP, on the south side of Saddleback Mountain, and provide a stacked loop using the Fly Rod Crosby Trail, West Saddleback Connector, Saddleback Alpine Ski trails, and the AT;
- The proposed Orbeton Stream Trail, an official AT side trail which would connect the Fly Rod Crosby Trail to the AT in Madrid TWP, on the western bank of Orbeton Stream, and provide a multi-day backpacking opportunity featuring the AT & the Fly Rod Crosby Trail, as well as day hiking opportunities along Orbeton Stream;
- The proposed Mt Abraham Ridge trail, connecting Mt Abram High School to the AT via the ridgeline would provide day hiking and increase multi-day backpacking opportunities in Kingfield, Salem and Mt Abraham);

⁹ Please see Map #5 in Appendix A for more information.

- Completion of the Fly Rod Crosby Trail, connecting the communities of Strong, Avon, Phillips, Madrid TWP, Sandy River PLT, Dallas PLT, and Rangeley with a regional linear trail system;
- Development of the Western Mountains People-powered Trail which would include hiking, biking, and cross-country skiing, and eventually stretch from Kingfield to Coburn Gore (Completion of this trail would create an, international 350+ mile backpacking loop connecting the Appalachian, Coos County, and Sentiers Frontaliers trail systems); and
- Additional access to off-trail hiking opportunities such as bushwhacking or *herd paths*¹⁰ (For example, Redington Mountain is a popular hike for peak-baggers attempting to conquer all the 4,000 foot mountains in Maine.).

Any new hiking trail connecting to the Appalachian Trail must be for foot traffic only and go through a lengthy approval process to ensure the new trail provides significant access to the AT or point of interest on NPS land, and that it minimizes any adverse environmental or other impacts on the Appalachian Trail experience, or NPS land. New side trails in the High Peaks must be approved by the MATC, NPS, BPL, Appalachian Trail Conservancy Regional Partnership Committee, and the Appalachian Trail Conservancy (ATC Policy on Side and Connecting Trails, 1988).

Potential ATV System

Short and long ATV loop trails exist in the High Peaks and include local-access trail systems in each town, and the 138 mile Moose Loop which connects the communities of Stratton, Rangeley, Phillips, Avon, Strong, Salem, and Kingfield. These opportunities provide access to stores and other amenities in towns, and a challenging adventure for advanced riders who want to experience the Moose Loop. Day trips or medium length loops would appeal to a much larger cross-section of ATV riders including many local riders, who often are out for a limited period of time.

There are several places where greater connectivity would increase opportunities for users to access more back-country trail riding and return to their point of departure in the same day. These connectivity corridors would create medium length loops, as part of stacked loop systems accessible from multiple High Peaks communities. However, for any trail to be developed in these locations, landowners and trail managers would have to agree on the route, acceptable uses, and a way to resolve potential use conflicts. Optimal connectivity corridors include:

¹⁰ “Herd Paths” are informal, unmaintained footpaths which go up mountains without official or authorized hiking trails. Herd paths are only appropriate in situations where there is limited demand for a hiking trail. Increased traffic can quickly erode “herd paths,” which are not planned or sustainably constructed, but rather are legacy trails which follow the path of least resistance (APA Adirondack Park Management Plan, 2000 - http://apa.ny.gov/State_Land, accessed on 9/30/2013).

- *North/South connection between Phillips and Carrabassett Valley by way of Caribou Valley and Barnjum*: this would create medium length loops for users originating in Carrabassett Valley, Kingfield, Stratton-Eustis, Salem, and Phillips,
- *East/West connection between Phillips and Salem*: currently the only east/west connection in the High Peaks exists in Strong. A more efficient system would include a connecting route from Phillips to Salem either through Phillips or Mt Abraham TWP, and would create efficient stacked loop options for users from Kingfield, Phillips, Salem, and Strong. In conjunction with a north/south connecting trail to Carrabassett Valley, it would create stacked-loop options for users from the north as well.
- *East/West connection between Stratton-Eustis and Carrabassett Valley through Caribou Valley* would create medium length loops for users in Stratton, and Carrabassett Valley. In conjunction with a N/S trail through Caribou Valley, it would also allow stacked-loop options for users originating in Phillips, Salem, & Kingfield.

Summer non-pedestrian trail crossings of the AT in the High Peaks region already occur on state route 27, the Caribou Pond Road, and on the West Saddleback Connector. All are multiple use, featuring snowmobiling in the winter and ATV riding in the summer. The West Saddleback Connector also allows for mountain biking, hiking, and cross-country skiing. A minimal number of safe, well-designed crossings can accomplish regional connectivity goals, and still allow for the sense of solitude and remoteness integral to the Appalachian Trail experience. Appalachian Trail crossings should be multiple-use, sited to provide the highest connectivity possible for each system (and at 90 degrees to the AT), sustainably designed, and minimize potential user conflict.

Potential Mountain Bike Network

Existing mountain biking trail systems include two separate systems in Rangeley and Carrabassett Valley. Both are works in progress and continue to grow each year. The most efficient design would link these two stacked loop systems with a linear connecting trail.

Potential mountain biking connectivity enhancement projects include:

- Establishment of additional trails in the Bigelow preserve, including a connector trail to MHT Stratton Brook Hut, and a multi-use loop trail on the existing snowmobile route which circumnavigates the ridge and utilizes the MHT system to bring riders back to their point of origin in Carrabassett Valley,
- Appropriately sited and sustainably built new single track and other authorized mountain biking trails on the new Crocker Mountain public reserved land,
- Increased trail density within the MHT system, featuring more single track opportunities throughout the system and better quality connector trails between

single track options (avoiding wet areas which are fine for winter recreation but problematic in other seasons).

Carrabassett Valley is quickly becoming a mountain biking destination for riders from all over New England. Bikers choose to ride in the High Peaks because of the high-quality trails, challenging terrain, and fantastic scenery. The trail system in Carrabassett Valley has a lot to offer to experienced riders. Trail managers and volunteers are working to establish more opportunities for moderate and easy riding. Mountain biking connectivity projects would result in more diverse user experiences including:

- Easy, family-friendly riding on woods roads, shared-use pathways such as the Narrow Gauge in Carrabassett Valley, as well as multi-use trails such as rolling single track retro-fitted on to existing ski trails at the Outdoor Center,
- More difficult stacked loop rides with access to different kinds of single track, and
- Most difficult single-track and long back-country loop rides with specific destinations and points of interest, such as circumnavigating the Bigelow Preserve.

Summer Trail Multiple-use and Shared-Use Opportunities

There are opportunities in the High Peaks to establish efficient, exemplary multi-use, and shared-use trails through development of:

- “Park and Hike” back-country trail experiences: destination trail experiences, where ATV riders and Mt Bikers could ride to an appropriately sited parking area for their machines/bikes, and then walk to a scenic view, waterfall, lunch spot, or other point of interest, and
- Efficient, sustainably designed shared-use trails where it makes sense to combine all back-country trail uses for a short period of time. For example, Appalachian Trail crossings should be sustainably designed shared-use trails which cross perpendicular to the AT.

Maine Huts and Trails system which offers eco-lodge stays and meals for non-motorized trail users could, through establishment or signage of short connecting trails, attract visitors from nearby motorized trail systems. MHT already works with NFCT and CRNEMBA to attract paddlers and bikers for overnight stays. Similarly, a motorized trail user could park their machine in satellite parking areas, and access scenic view points, waterfalls, historic sites, and other points of interest along the Appalachian, Maine Hut, and Fly Rod Crosby Trails.

STRATEGY # 2: ENHANCE THE CAPACITY OF ALL TRAIL GROUPS MANAGING BACK-COUNTRY TRAIL SYSTEMS THROUGH A SHARED INVESTMENT IN THE REGIONAL SYSTEM.

Trails organizations can increase capacity to maintain and develop trail systems in the High Peaks by working together:

- To share investment in sustainable regional infrastructure such as bridges and permanent connecting trails,
- To facilitate efficient emergency response,
- To maintain shared trail corridors, and
- To support rural economic development by better connecting back-country trail systems to communities.

Trail groups should work together to develop and maintain shared infrastructure such as trailheads, bridges, permanent trail corridors, maps, and signage. When topography and natural choke points restrict routing options for important connective trails, it makes sense for different user groups to share the same route. For example, an intersection with the Appalachian Trail or river crossings should be designed and managed for multiple uses (ATV, snowmobile, mountain biking, pedestrian, etc).

Trail groups can increase their capacity to build and maintain extensive back-country infrastructure by working together to:

- Design and build multiple use bridges;
- Establish and maintain consistent signage and access information (maps, web-based information); and
- Work together to design trail heads and address high-use areas which sensitively meet the needs of all trail users.

Working together on shared-use signage and trail design will make projects more competitive for funding. For example, the Carrabbasset River multi-use bridge, shared by multiple trail groups, was successful in attracting public funding because it had such broad support. Development of multi-use signage on the Fly Rod Crosby Trail was done in consultation with MATC, local snowmobile and ATV clubs. The result was a program which worked for each group of trail users.

In a few cases where two or more trail groups share multiple resources, it makes sense to combine forces. For example, the Strong ATV and snowmobile clubs now share a trail network, equipment, and volunteers. ATV and snowmobile clubs in Rangeley have not combined but share some signage and multi-use sections of trail. They have combined efforts to efficiently sign trails and provide consistent access information to users.

Trail groups should work together to support land conservation which can establish permanent public access. If all groups are at the table, there is a better chance that each group's needs will be met. For example, snowmobile club support from around the state for establishment of the Bigelow Preserve provided much needed public support for land conservation, and also ensured that snowmobiling would be among the acceptable uses allowed within the preserve. Broad support by trail groups for the Crocker Mountain and Orbeton Stream conservation projects made both nationally competitive for federal

funding, and ultimately secured money to conserve almost 12,000 acres in Carrabassett Valley.¹¹ Support for these projects was forthcoming because each trail group stood to gain significantly by working together to figure out trail routing and user conflict issues.

Creating permanent corridors for important intra-regional connector trails would ensure back-country trails continue to support rural economic development in the High Peaks by providing useful trail systems for current and future residents, as well as a draw for visitors seeking a variety of Big Mountain experiences. A common vision and plan for the future of back-country trails in the region, endorsed by stakeholders, would be a powerful statement to conservation and economic development funders.

STRATEGY 3: INCREASE YOUTH ENGAGEMENT

The next generation of trail users and maintainers, needs must be engaged as back-country trail systems continue to grow in the High Peaks. Successful existing, youth engagement programs in the region have been the result of partnerships between trail groups and schools or organizations such as Teens to Trails, the Chewonkee Foundation, Scout Troops, and others.

There is growing concern in the region that children are not interested in outdoor activities and will grow into adults who do not value outdoor experiences and are less likely to volunteer for back-country trail systems. Findings in the Maine, and the Maine Market Region Report (2009), show that kids overwhelmingly say they engage in recreational activities outside because it is fun. Kids are most likely to engage in outdoor recreation with friends and family (ME SCORP, 2009). High Peaks trail groups should focus on making activities fun and accessibly for local families and kids.

Existing youth engagement efforts offer a base on which to develop future approaches to develop new, and promote existing positive outdoor experiences for local and visiting youth, and to create meaningful summer jobs for youth working on back-country trail projects.

Existing efforts in the High Peaks to engage local kids in trails include:

- The Maine Appalachian Trail Club hosts work groups from a summer camp in Quebec. The groups work on specific trail projects on the Appalachian Trail, learn about the natural environment, how to work as a team and other important skills;
- The Rangeley Snowmobile club has made a special effort to engage local high school kids to work on snowmobile trails. Participants get a free membership and often help out with events and other activities besides trail work;
- The Carrabassett Valley Recreation Department works with partners to put on a mountain biking camp for teens at the Outdoor Center in Carrabassett Valley. Youth

¹¹ Orbeton Stream Conservation Project is still pending at the time of writing for this plan.

learn to share the trail, respect the environment and how to be responsible riders (rentals available for teens without bikes);

- The Narrow Gauge Riders ATV Club (NGR) and High Peaks Alliance have both successfully engaged Mt Abram high school students to do trail work to fulfill community service graduation requirements;
- The Northern Forest Canoe Trail hires a youth trail crew each summer. The crew is often in Maine and has worked most recently on a new portage trail in Rangeley on Haley Pond; and
- CRNEMBA includes a kid's race when they hold mountain bike races and events in the summer. Club members actively recruit kids to participate hoping that they will have a positive experience and grow to love the sport.

Partnerships between trail groups and youth engagement organizations make these efforts successful. Strengthening partnerships between trail groups could improve experiences for kids, leverage limited resources to create more youth programming, and more efficiently engage energetic young volunteers.

Ways to improve collaborative partnerships to enhance youth engagement include:

- Increasing communication between trail groups, through use of technology and/or social media about opportunities to engage youth to work on trails, such as visiting camps or school groups who are looking for trail work opportunities;
- Better utilize school and camp youth programming such as the Mt Abram Maine Guide class, Mt Blue YETI program, UMF Outdoor Club, UMF Civic Engagement Program, public and private school community service requirements, camp trips/groups, and Scout troops; and
- Work with partners to create events with youth components, such as races or tours.

One way to make outdoor recreation fun and attractive to kids is to increase outreach efforts through use of social media and the internet. Technology can be used to:

- More efficiently share information about groups looking for volunteer opportunities in the region; and
- Establish a social media presence (Facebook, twitter, etc.), making it easier to share information about trails (Social media is only effective if trail groups participate regularly, and may not be the ideal tool for the High Peaks region. However, it is easily navigable by young people and a very efficient way to share information about volunteer opportunities. Social media may be a good way to make trails and outdoor experiences easily sharable and maybe even "cool.")

Local schools and UMF have existing youth programming which could be better utilized to increase youth engagement in outdoor recreation. Some examples of such programming include:

- The Youth Expeditions to Ignite (YETI) program at Mt Blue high school in Farmington,

- The Rangeley School Outdoor Club, and
- Maine Guide class at Mt Abram in Salem TWP.

These programs encourage students to extend their education outside the classroom, and learn from the natural environment through outdoor recreation. Classes and clubs could incorporate service learning hosted by local trail clubs into their plan for the academic year. The UMF civic engagement program places college students as interns with local businesses and non-profits where they gain valuable experience and perform useful work in the community.

High school students in the High Peaks struggle to find part-time summer jobs. Creation of meaningful part-time work for youth on local trail projects would get kids outdoors, while providing necessary labor for local trail projects. The High Peaks Region should consider establishing a High Peaks Youth Conservation Corps (HPYCC) which would create opportunities for local high school age youth to work on all trails in the region.¹² The HPYCC would work with trail groups to establish projects for youth to work on each year. Projects could include bridge work on ATV and snowmobile trails, tread work and erosion control on single track and hiking trails, brushing on all trails, trail head construction and signage maintenance, event staffing, historical research for interpretive programing, and others.

Students who participate in the HPYCC would benefit by:

- Developing an appreciation of the region’s natural environment and heritage resources,
- Learning work ethic and interpersonal communication skills in a dynamic “outdoor classroom” setting, and
- Making new friends with youth from other towns and schools in the region.

The trail crew would consist of a crew leader who would oversee field work, and involve partners such as the UMF Civic Engagement Program, local towns, schools, and non-profits. Conservation Corps programs in other parts of the country generally are hosted by federal land management entities such as USF&W or the US Forest Service. The HPYCC would be facilitated by HPA, a similar organization or even a partnership of several organizations, who could administer the program, recruit participants and coordinate logistics for completing trail work each season. For example, perhaps the coordinator position could be jointly supported by non-profits, trail groups, and even municipalities where trail work would be completed.

STRATEGY # 4: CREATION OF A TRAILS COUNCIL, OR NETWORK, TO COLLABORATIVELY CONTINUE DEVELOPMENT OF THE REGIONAL VISION.

The High Peaks trails community can and should work together to overcome regional challenges and take advantage of every opportunity to improve the regional trail

¹² FMI on Youth Conservation Corps please see Acadia Youth Conservation Corps Case Study in Appendix ____.

network, not just the fortunes of each individual trail system. Shared investment in infrastructure, relationships with landowners and between user groups, clear efficient communication and collaboration to meet common goals will strengthen back-country trail groups in the region.

Working together to accomplish common tasks can be efficient and productive. In summer of 2010, ATV clubs transported bog bridging materials to a construction site on a remote section of the AT near Eddy Pond. From there a volunteer crew including MATC, ATV club representatives and HPA volunteers worked together to prepare and install the bridges. CR NEMBA and MHT worked together as part of Trails Fest, in summer 2013 to build single track mountain biking trails near Stratton Brook Hut in Carrabassett Valley. MHT offered free food and lodging to volunteers in their new hut and helped generate a great turnout. Lots of new trail was constructed by enthusiastic volunteers.

Collaboration between trail groups is essential to interconnect the regional trail system(s). Trail routes and uses must be complementary and well designed to minimize conflict on the trails and between stakeholders. The trails community should work together through an official network, to improve the regional trail system, and more efficiently serve the needs of trail users.

The network or council would be facilitated by HPA and meet formally as a group 1-2 times per year to share information, network, and identify collaborative projects. Work groups would form around these projects and meet as needed. The network would include an e-mail list serve or Facebook group page through which participants could communicate and share information throughout the year.

A network or council is a strategy to get together and efficiently share information, as well as to work together to overcome common challenges. Following are a few examples of projects a trails network or council could work on.

- A network could *assist trail groups as they continue to work with private land owners and public land managers* to ensure new and existing back-country trails are safe, sustainable, minimally impact the environment, and are fun. For example, a network could approach large industrial landowners who host multiple back-country trails, and facilitate efficient communication about management issues such as trail relocations/closures due to forest operations.
- A network or council could approach municipalities about better connecting back-country trails to towns, and *represent trail interests in local and regional planning processes*. Currently, trail groups work with town planning boards to plan for retaining public access to recreation on public land. For example, the Rangeley Lakes Snowmobile Club has recently approached the Rangeley Planning Board to discuss including a required plan for public access into the town's subdivision ordinance. If successful, this effort would ensure developers seeking subdivision of their land provide a plan to provide public access to existing and future trails on

their property. A network or regional trail groups lends individual groups more significance in their ongoing negotiations with municipalities or regional planning entities.

- A High Peaks Trails Council or network would vastly improve communication between trail groups, and *facilitate resolution of user conflicts*. For example, off-season use of snowmobile trails by hikers and mountain bikers is steadily increasing. Snowmobile trails sometimes traverse wet areas and are not always suitable for other uses in the summer when the ground is not frozen. Increased off-season use can create additional maintenance burdens for snowmobile clubs unless user groups are willing to work together to address the problem. Trail groups benefit from sharing information about volunteer recruitment, successful trail development and construction strategies, landowner and land manager relations, and other issues.
- A network could work to *cooperatively market trail systems* and available experiences for visitors as well as residents. For example, packaging different activities for visitors such as snowmobiling, cross-country, and alpine skiing, to ensure a diverse range of opportunities throughout the region.
- The network could work to *enhance regional signage*, providing some degree of uniformity and consistency. Way-finding on all back-country trail systems is integral to user safety and enjoyment. For example, the network could work to develop appropriate multi-use signage for shared sections of trail.
- Trail Groups should *work together with local emergency services providers* to ensure trails are safe for users, and also accessible to emergency personnel in an emergency. By forming a network, trail groups can efficiently transfer vital contact information and trail conditions/changes to responders, so that they have the most up-to-date information in an emergency situation.

Collaboration is not easy. Trail user conflicts are social conflicts and rooted in a “disagreement of perceived values” (IMBA, 2007). This has been referred to as “goal interference” in trail conflict literature. Generally there are three types of user conflict including:

1. The perception that a use causes excessive trail damage and negatively impacts the *environment*,
2. The perception that a use threatens the *safety* of the user and others, and

3. The perception that users have goals and *values* which are incompatible with other trail users (IMBA 2007).

Different users have different needs, and conflict will continue to arise between trail users, landowners, trail clubs and organizations. In high-traffic areas, trail groups should work together to figure out how to address problems associated with increased use. For example, the improvement of the West Saddleback Connector trail led to increased use by hikers, ATV riders and anglers. Infrastructure common to all of these uses such as construction of a privy would benefit everyone and is an opportunity for trail groups to work together to improve the experience for all uses.

The State of Maine has developed a recreational conflict resolution policy which helps establish a process through which conflicts can be resolved.

BPL Recreational User Conflict Resolution Policy

“The resolution of potential or existing user conflicts will be addressed by the following principles. These principles may be applied during the process of preparing Resource Management Plans as well as to resolve issues as they occur in the field.

A. *Recognize conflict as goal interference.* Do not treat conflicts as an inherent incompatibility among different activities, but goal interference attributed to another’s behavior.

B. *Provide adequate opportunities.* Offer adequate facilities and opportunities for a variety of recreation experiences. This will help reduce congestion and allow users to choose the conditions that are best suited to the experiences they desire.

C. *Minimize the number of contacts in problem areas.* Each contact among users has the potential to result in conflict. As a general rule, reduce the number of user contacts whenever possible. Disperse use and provide separate trails or facilities where necessary after careful consideration of the additional environmental impact and lost opportunities for positive interactions this may cause (IRP, 2000).”

These collaborative strategies are achievable if trail groups can learn to work together. Pursuing a strategy to enhance regional back-country trail system connectivity will help establish new, efficient back-country connector trails and ensure important existing trails are maintained and improved. Enhancing the capacity of trail groups and organizations to maintain and manage trail systems by sharing investment in multiple-use infrastructure and engaging volunteers is integral to the future success of a regional system. The next generation of trail maintainers and land managers must be engaged in back-country recreation to ensure youth grow up to be good stewards of trails and the land they cross. Finally, a trails council or network should be formed to create a mechanism through which existing organizations can work together to resolve conflicts and work on some of these strategies.

CONCLUSION

The High Peaks Back-country Trails Plan is a unique regional planning initiative sponsored by a High Peaks Alliance, a local grass-roots organization, and done in partnership with local trails groups, organizations, and the State of Maine. This partnership is a new approach to regional planning in the Maine Woods, and represents a useful model which could be applied throughout the state to collaboratively tackle a host of different challenges, and take advantage of opportunities for Maine Communities. However, in order for this model to work, both local and regional entities must be able to “break out of the valley,” or the mental models within which regional planning has been done so far.

The tension between local and regional entities is alive and well in northern New England. This regional plan is only possible because local groups are willing to think outside the geographic constraints of individual towns and identify mutual challenges and opportunities facing the entire region. Breaking out of “the valley”, or thinking regionally, can only be done by cashing in significant bridging social capital, which in turn means there must be a way to generate that capital. This project shows that local grass-roots alliances, initiatives, or partnerships can establish and strengthen regional relationships with diverse and disparate interests, and then turn those relationships into productive regional action.

Development of a back-country trails plan in Maine’s High Peaks region is only possible because trail groups were willing to come together to build social capital on a variety of regional projects initiated by High Peaks Alliance. For example, in 2011 local ATV clubs transported bog bridging to a remote location on the Appalachian Trail where a joint work crew installed the new infrastructure. This seminal event indirectly led to resolution of a longstanding conflict between motorized and non-motorized trail clubs, Saddleback Ski Area, and the larger Rangeley community, through development of the West Saddleback Connector Multi-use Trail. Working together on a trail project allowed entrenched representatives of various interests to get to know one another and discuss issues outside of the, often confrontational, context of a meeting.

A Trails Council or Network will enable local groups to continue to build social capital and work together, as well as partner with the state as it continues to do regional trails planning in western Maine. Regional planning entities do not have the resources to do the community organizing work necessary for this model to be successful. However, in partnership with local networks, alliances or other grass-roots partners regional planning can yield greatly enhanced outcomes for everyone.

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7. State of Maine, *Integrated Resource Policy (IRP)*, 2000
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12. Sustainable Economy Initiative, *Economic Resurgence in the Northern Forest*, 2008
13. United States Fish and Wildlife Service, A Draft Report: *The High Peaks Region; the Natural and Socio-economic Environment*, 2011

Interviews & Meetings

The HPA Assistant Project Coordinator conducted interviews with representatives of the following Trail Clubs, land managers, and Organizations:

Maine Appalachian Trail Club
Division of Parks and Public Lands
Maine Huts and Trails
Carrabassett Valley ATV Club
JV Wing Snowmobile Club
Carrabassett Valley Recreation Department
Northern Forest Canoe Trail
Carrabassett Region New England
Mountain Biking Association Chapter
Arnold Trail Snowmobile Club

Rangeley Snowmobile Club
Flagstaff Area ATV Club
North Franklin Snowmobile Club
Narrow Gauge Riders ATV Club
Mt Abram Riders ATV Club
Kingfield Quad Runners
Kingfield Sno Drifters
Fly Rod Crosby Trail (High Peaks Alliance)
Trails for Rangeley Area Coalition

Community Outreach Events

The Assistant Project Coordinator interviewed many trail users at community events including: skiers, mountain bikers, paddlers, ATV riders, snowmobilers, and hikers. Community events included:

Phillips Old Home Days

Phillips Farmers Markets (twice)

Strong Pierpole Days

Kingfield Days

The Kingfield Pops

Kingfield Art Walk

Trails Fest (CV)

MHT Annual Membership BBQ (CV)

The Madrid Picnic

Stratton Family Fun Days

Rangeley Logging Days

The Strawberry Festival (Oquossoc)

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3. Crosen, Jane et. al., *The Northern Forest Canoe Trail Official Guide Book*, NFCT, Waitsfield VT
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5. Maine Policy Review, Winter 2007, Vol.16, No. 2, Margaret Chase Smith Policy Center, University of Maine
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APPENDIX A: MAPS

Maps:

1. Existing Conditions: All Seasons
2. Existing Conditions: Summer Trails
3. Existing Conditions: Winter Trails
4. Summer Trails: Enhanced Connectivity
5. Winter Trails: Enhanced Connectivity

Existing Conditions maps were generated through conversations with each trail group, and an update of the High Peaks Emergency Services Pre-planning map, a project of the High peaks Alliance and resource for local back-country emergency responders.

Connectivity maps were generated through conversations with each trail group and generally show where groups would like to see additional connectivity in the future. Trail proposals were tested for efficiency and balance using transportation network (see Appendix C). These maps depict projects which are only possible if all landowners, trail managers and users can come to agreement on routes, trail uses, and a way to resolve potential future conflicts.

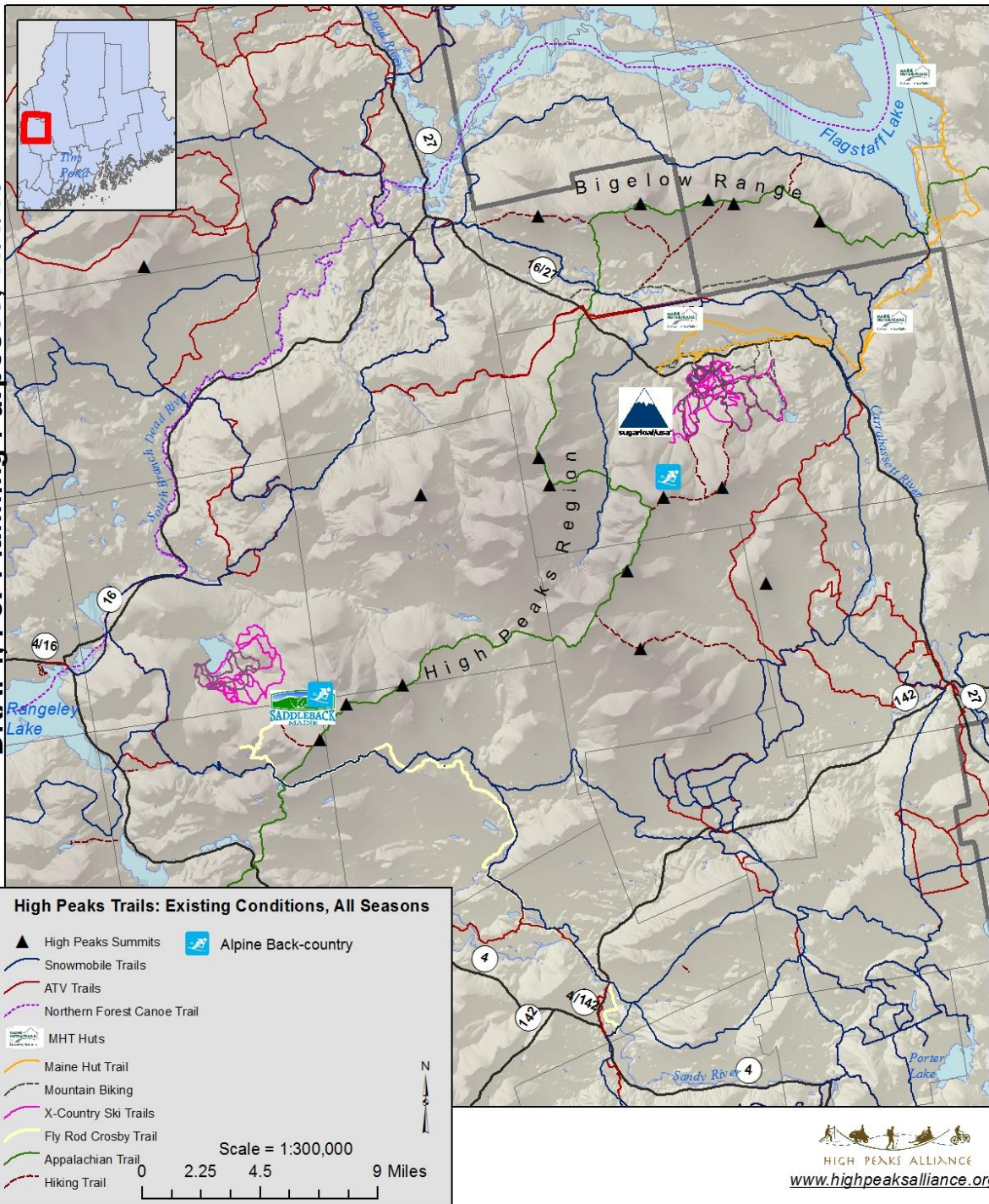
Trail data shown on these maps are approximate and for planning purposes only. The maps are not meant to be distributed for public consumption beyond the scope of this plan. Use of maps to access depicted recreational resources is discouraged and entirely at the user's own risk. To access trails and amenities depicted in this plan please contact the appropriate trail manager or club to obtain accurate, up-to-date information.

High Peaks Alliance is not responsible for any incident as a result of use of any map within this document for recreational pursuits.

Data Sources: HPA, Maine Office of GIS, Club & Organization Maps and Interviews, Center for Community GIS, Pligsa & Day Surveying, Eric Copeland, the Conservation Biology Institute Data-Basin online mapping program, and Wright-Pierce Environmental Engineering.

High Peaks Trails: Existing Conditions, All Seasons

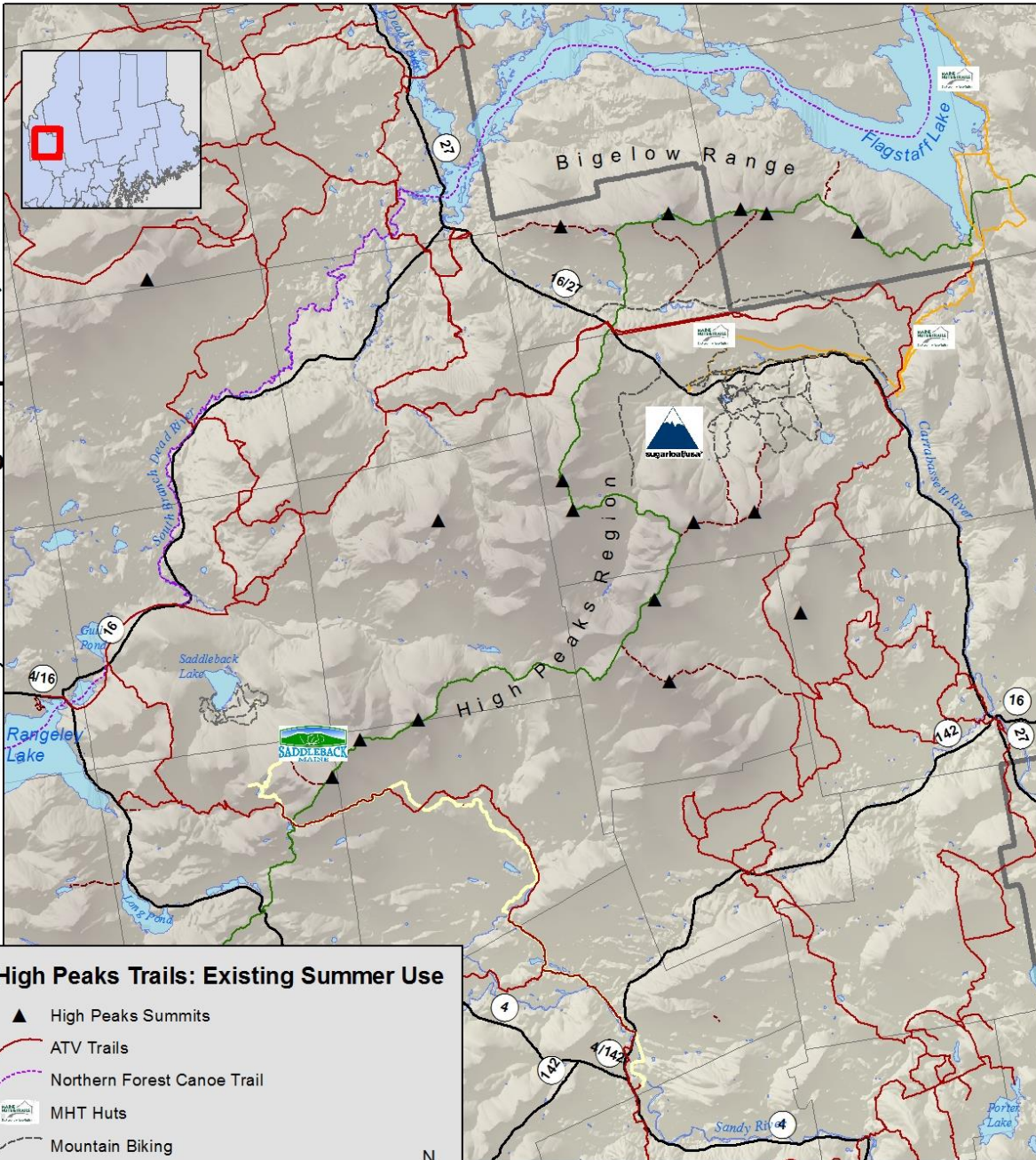
DRAFT, For Planning Purposes, 11/1/13



Disclaimer: Trail localations are approximate. Data is for planning purposes only. Not for public distribution.

High Peaks Trails: Existing Summer Use

DRAFT, For Planning Purposes, 11/11/13



High Peaks Trails: Existing Summer Use

- ▲ High Peaks Summits
- ATV Trails
- Northern Forest Canoe Trail
- MHT Huts
- - - Mountain Biking
- Maine Hut Trail
- Fly Rod Crosby Trail
- Appalachian Trail
- - - Hiking Trail

0 2.5 5 10 Miles

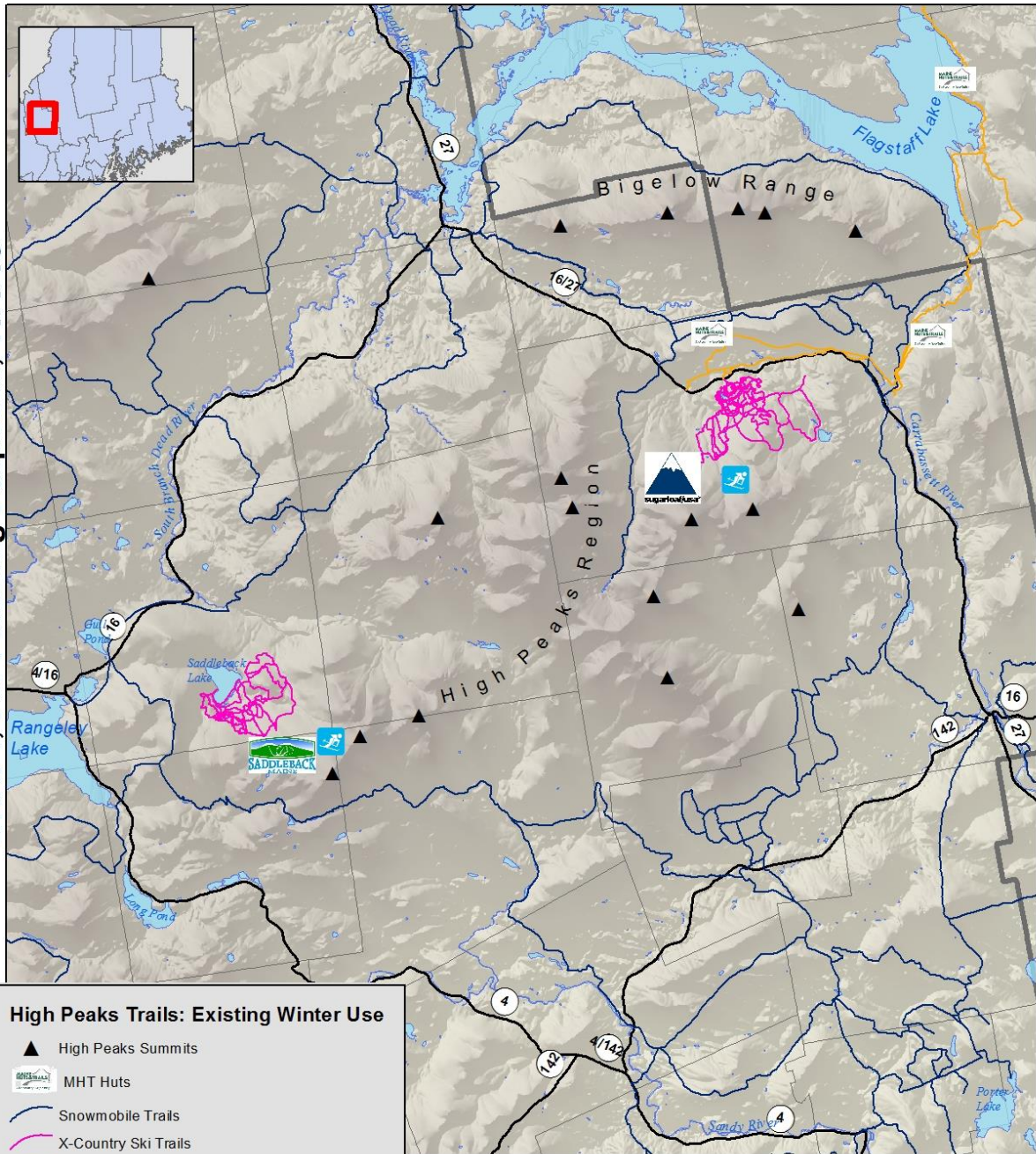
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HIGH PEAKS ALLIANCE
www.highpeaksalliance.org

Disclaimer: Trail locations are approximate. Data for planning purposes only. Not for public distribution

High Peaks Trails: Existing Winter Use

DRAFT, For Planning Purposes, 11/11/13



High Peaks Trails: Existing Winter Use

- ▲ High Peaks Summits
- MHT Huts
- Snowmobile Trails
- X-Country Ski Trails
- Maine Hut Trails
- Alpine Back-country

0 2.5 5 10 Miles

Scale = 1:300,000

N

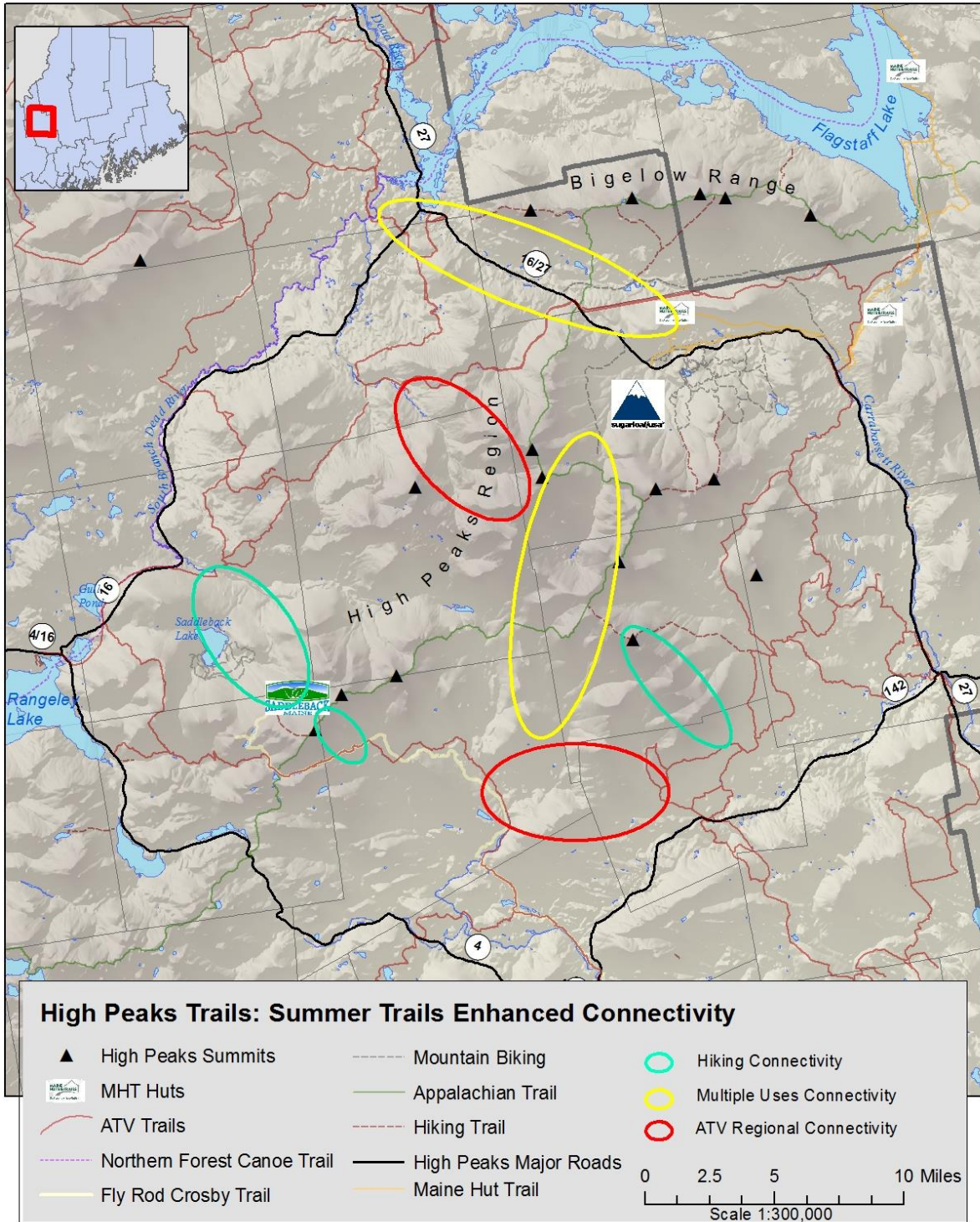
HIGH PEAKS ALLIANCE
www.highpeaksalliance.org

Disclaimer: Trail locations are approximate. Data is for planning purposes only. Not for public distribution.

High Peaks Summer Trails: Enhanced Connectivity

Disclaimer: Trail locations are approximate and shown for planning purposes only. Not for Public Distribution

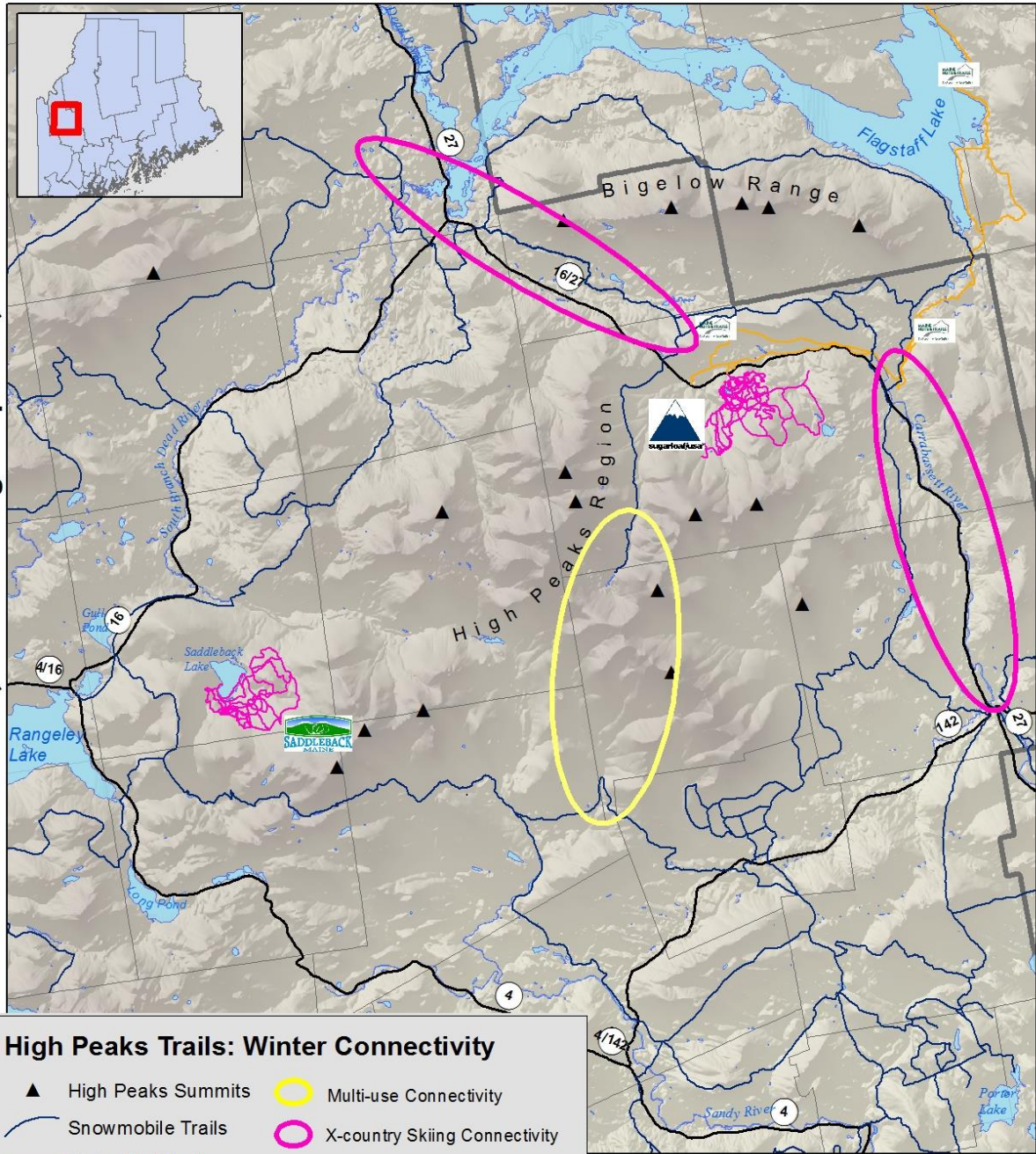
DRAFT, For Planning Purposes, 11/11/13



High Peaks Winter Trails: Connectivity

Disclaimer: Trail locations are approximate. Data is for planning purposes only. Not for public distribution.

DRAFT, For Planning Purposes, 11/11/13



High Peaks Trails: Winter Connectivity


- ▲ High Peaks Summits
- Snowmobile Trails
- Maine Hut Trail
- X-Country Ski Trails
- High Peaks Major Roads
- Multi-use Connectivity
- X-country Skiing Connectivity



highpeaksalliance.org

Scale = 1:300,000

0 2.5 5 10 Miles



APPENDIX B: DEFINITION OF TERMS

Terms

1. “Big Mountain” Experiences
2. Back-country Recreation
3. Remote Recreation
4. Non-Mechanized Recreation
5. Motorized Recreation
6. Interpretive Trails
7. Trail Systems
 - a. Linear
 - b. Stacked Loop
 - c. Primary and Secondary Loop

1. “Big Mountain” Experiences

High Peaks recreational opportunities are based on the experiential character of “Big Mountains.” Whether you are skiing downhill or cross-country, touring by snowmobile or ATV, hiking, paddling, riding a horse or dogsled, viewing wildlife, hunting, fishing, trapping, or even sitting on a deck overlooking a beautiful mountain vista, high mountains and broad valleys define the landscape.

“Big Mountain” experiences can be had through back-country, or remote recreation, but are also dependent on the ability of users to access small towns bordering the High Peaks region. These characteristically rural villages have economies which are closely tied to natural resources such as the working forest and various forms of eco-tourism. They are tight-knit towns, with strong community ties and traditions of civic engagement.

The state of Maine defines back-country and remote recreation in relation to recreational areas or zones within the system of state lands.

2. “Back-country” Recreation Areas*

Back-country recreation areas:

- Exhibit superior scenic quality, remoteness, wild and pristine character, and the capacity to impart a sense of solitude;
- Generally will encompass more than 1,000 contiguous acres;
- Can be either non-mechanized -roadless areas with outstanding opportunities for solitude and a primitive and unconfined type of dispersed recreation-, or

- Motorized -multiuse areas with significant opportunities for dispersed recreation where trails for motorized activities, timber harvesting on a multi-aged basis, and management roads are allowed if permitted by deed or statute- (IRP,1998).”

3. “Remote Recreation” Areas*

Remote Recreation Areas are allocated to protect natural/scenic values as well as recreation values, and differ from Backcountry Recreation Areas in that:

- They are generally smaller,
- They usually are relatively long corridors rather than broad, expansive areas, and
- Both single-aged and multi-aged management of timber is allowed where permitted by deed or statute.

These areas often have significant opportunities for low-intensity, dispersed, non-motorized recreation and may also contain ecological, geological, or other features of scientific, educational, scenic, wildlife, or historical value (IRP, 1998).”

**For the purpose of the High Peaks Back-Country Trails Plan, we have more broadly defined back-country and remote to reflect the kind of experiences users have on these kinds of trail systems, rather than the permitted uses allowed in each zone.*

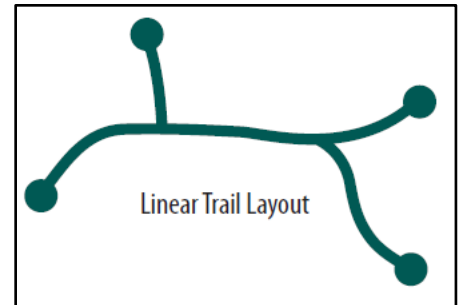
The following defined terms were taken from the state’s Integrated Resource Policy (IRP).

4. “Non-Mechanized” Recreation is a mode of travel across the land base which does not utilize internal combustion, electric, or mechanically powered conveyances; which in itself constitutes a recreational activity, or facilitates participation in a recreational activity. Non-mechanized trails-based uses in the High Peaks include hiking, snowshoeing, and paddling canoe or kayak.
5. “Motorized” Recreation is a mode of travel across the land base which utilizes internal combustion or electric powered conveyances; which in itself constitutes a recreational activity, or facilitates participation in a recreational activity. Organized motorized recreational uses in the High Peaks include snowmobile, ATV, and Off-rod Motorcycles on developed trail systems. Unorganized uses include jeep and other “off-road” use/activities.
6. “Interpretive Trails” are designated trails of short to moderate length designed to provide information regarding natural, historic, or cultural features, or wildlife. Information can be provided using a variety of methods ranging from self-guided trails with numbered posts corresponding to a booklet to those in which staff provides regularly scheduled guided programs.

7. Trail Systems

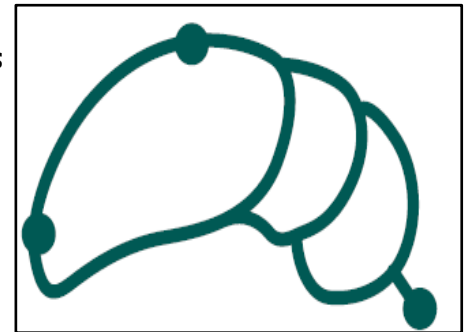
- a. *Linear System:* A linear trail layout has a point of origin and point of destination. It can feature multiple linear trails which intersect but generally serves a transportation purpose of getting the user from one place to another (NOHVCC, 2006). Most hiking trails in the High Peaks are linear Trails.

Figure 20: Linear Trail System (NOHVCC)



- b. *Stacked Loop System:* A stacked Loop System offers the trail user loops of varying difficulty and length, as well as access to points of interest like downtowns, and vistas (NOHVCC, 2006). The Outdoor Center in Carrabassett Valley and the Rangeley Trails Center both are stacked loop cross-country skiing, and mountain biking systems. Stacked loop systems generally provide the greatest diversity of trail experiences.

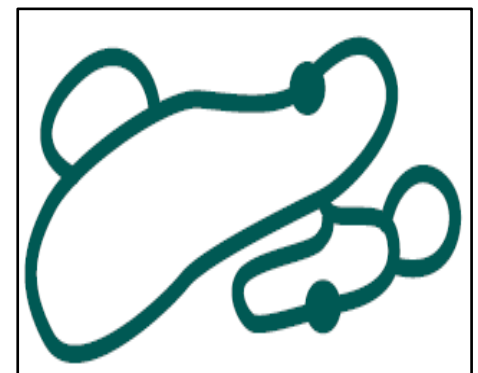
Figure 21: Stacked Loop System (NOHVCC)



- c. *Primary and Secondary Loop Systems:* This kind of system has a primary route of travel which gets users from from their point of origin to multiple destinations and then back again without retracing their steps. Attached to the primary loop are

multiple smaller loops which may offer different difficulty levels, or provide route(s) to particular destinations (NOHVCC, 2006). The Moose Loop ATV system and Black Fly Loop are examples of this kind of system in the High Peaks.

Figure 22: Primary and Secondary Loops (NOHVCC)



APPENDIX C: REGIONAL CONNECTIVITY ENHANCEMENT; EFFICIENCY AND BALANCE TESTS

EFFICIENCY

Beta and *Gamma Indexes* are used to measure the connectivity of transportation networks. The Beta Index measures the ratio of “edges” or line segments, to “nodes” or intersections. The Gamma Index measures the ratio of existing connections between nodes, to the total possible number of connections between nodes. Generally both indexes are used together to determine the efficiency of transportation networks, and whether proposed changes would have a positive or negative effect on efficiency. In the trails plan, both indexes are used to assess the existing trail systems within the study area, as well as changes in connectivity for enhanced trail system scenarios which incorporate suggested, additional trails.

*Stacked loop systems, linear trail systems and primary and secondary loop systems*¹³ are all present within the High Peaks region. This study determined measurable Beta and Gamma Index benchmarks for each system type as described in trail design and construction literature. These benchmarks were then compared to existing trail systems, before and after proposed new trails, to determine the efficiency of the network.

The following Beta and Gamma Index benchmarks were calculated using model trail systems provided in mountain biking, hiking, and OHV trail development guides,¹⁴ and then compared to real trail systems. For example, to determine the optimal benchmark for a stacked loop system, the study first calculated the model system (taken from OHV and Mountain Bike trail design literature), and then compared that calculation to a similar assessment of the Carriage Trails on Mt Desert Island – one of the most famous stacked loop system of multiple use trails in New England. These benchmarks are based on model trail systems and are not meant to provide a strict rubric to measure connectivity, but rather a guideline through which trail system connectivity can be assessed.

Generally a score of 1.0 – 2.0 is good for the Beta Index and a score between .1 - .5 is considered good for the Gamma Index.

Trail Systems	Beta Index BM	Gamma Index BM
Stacked Loop System	1.33	0.67
Linear Trail System	0.83	0.42
Primary and Secondary Loop System	1.60	0.89

¹³ Definitions of each system can be found in Appendix B: Definition of Terms.

¹⁴ Comprehensive list of the guidelines used for this analysis can be found under “Sources” – Literature.

Existing & Enhanced Back-country Trail Systems: Winter

<u>Snowmobile by Town</u>	<u>Mode</u>	<u>Edges</u>	<u>Nodes</u>	<u>Beta</u>	<u>Gama</u>
Stratton	Snowmobile	9.00	10.00	0.90	0.38
Rangeley	Snowmobile	9.00	11.00	0.82	0.33
Phillips	Snowmobile	16.00	15.00	1.07	0.44
Strong	Snowmobile	31.00	20.00	1.55	0.57
Kingfield	Snowmobile	10.00	8.00	1.25	0.56
Salem	Snowmobile	22.00	19.00	1.16	0.43
CV	Snowmobile	11.00	11.00	1.00	0.41
Total:	Snowmobile	108.00	94.00	1.15	0.39
Enhanced Total:	Snowmobile	109.00	96.00	1.14	0.39

<u>Cross-country Skiing</u>	<u>Mode</u>	<u>Edges</u>	<u>Nodes</u>	<u>Beta</u>	<u>Gamma</u>
SOC	Nordic	174.00	140.00	1.24	0.42
RLTC	Nordic	112.00	74.00	1.51	0.52
MHT	Nordic	18	16	1.13	0.43
Total:	Nordic	304.00	230.00	1.32	0.44
WMT (proposed)	Nordic	20.00	18.00	1.11	0.42
Enhanced Total:	Nordic	324.00	248.00	1.31	0.44

Existing and Enhanced Back-country Trail Systems: Summer

<u>OHV by Town</u>	<u>Mode</u>	<u>Edges</u>	<u>Nodes</u>	<u>Beta</u>	<u>Gama</u>
Stratton	OHV	34	17	2.00	0.76
Rangeley	OHV	14	13	1.08	0.42
Phillips	OHV	5	4	1.25	0.83
Strong	OHV	31	20	1.55	0.57
Kingfield	OHV	17	14	1.21	0.47
Salem	OHV	17	12	1.42	0.57
CV	OHV	5	6	0.83	0.42
Total:	OHV	123	86	1.43	0.49

<u>Non-motorized trails</u>	<u>Mode</u>	<u>Edges</u>	<u>Nodes</u>	<u>Beta</u>	<u>Gama</u>
FRC	Hiking	10	9	1.11	0.48
AT	Hiking	12	13	0.92	0.36
NFCT	Paddling	6	7	0.86	0.40
SOC	Mt Biking	65	55	1.18	0.41
RTC	Mt Biking	25	19	1.32	0.49
Other Hiking	Hiking	47	45	1.04	0.36

MHT	Hike/Bike	18	16	1.13	0.43
Regional Trails Systems Enhanced Efficiency					
	<u>Mode</u>	<u>Edges</u>	<u>Nodes</u>	<u>Beta</u>	<u>Gama</u>
Existing ATV System	OHV	123	86	1.43	0.49
Enhanced ATV System	OHV	128	92	1.39	0.47
Existing Moose Loop	OHV	7	5	1.40	0.78
Enhanced Moose Loop	OHV	13	12	1.1	0.37
Existing AT	Hiking	12	13	0.92	0.36
AT Enhanced by side trails	Hiking	56	49	1.14	0.40
FRC	Hiking	10	9	1.11	0.48
Enhanced FRC	Hiking	56	44	1.27	0.44
Existing MHT	Hiking, Biking	18	16	1.13	0.43
WMT (proposed)	Hiking, Biking	20.00	18.00	1.11	0.42
Enhanced MHT	Hiking, Biking	106	98	1.08	0.37

BALANCE

Trail proposals were generally evaluated for regional balance using three criteria:

1. Provision or retention of a sense of remoteness and solitude with minimal impact on other trails systems {does the proposed system enhancement add feelings of remoteness to the existing system for each user group (mode)?};
2. Access to High Peaks Communities (does the proposed system enhancement add or create access to local towns and and/or residential developments?), and
3. Adds significantly to the diversity of trail experiences in the overall regional system (Does the proposed enhancement add different kinds of opportunities to the existing system – scenic, challenging trails, stacked loops, etc.).

Enhancement Project	Mode/season	Remoteness/Solitude	Access to Towns	Diversity
N/S Connector	Snowmobile/Winter	High	High	High
Car. River crossing (Kingfield)	Snowmobile/Winter	Low	High	High
S. River crossing (Strong)	Snowmobile/Winter	Low	High	High
WMPP Trail	Nordic/Winter	High	High	High
E/W MHT	Nordic/Winter	High	Low	High
E/W FRC	Hiking/summer	High	High	High
Berry Picker's Trail	Hiking/Summer	High	Low	High
Orbeton Stream Trail	Hiking/Summer	High	Low	High
Mt Abraham Ridge Trail	Hiking/Summer	High	High	High
Herd Paths (access)	Hiking/Summer	High	N/A	High
N/S Caribou Valley Connector	ATV/Summer	High	High	High
E/W Connector (CV – Stratton)	ATV/Summer	High	High	High
E/W Connector (Phillips – Salem)	ATV/Summer	High	High	High
Bigelow Preserve	Mt Biking/Summer	High	Low	High
Crocker Mountain PRL	Mt Biking/Summer	High	Low	High
MHT – Density Project	Mt Biking/Summer	High	High	High