Little Cottonwood Canyon
Scenic Byway

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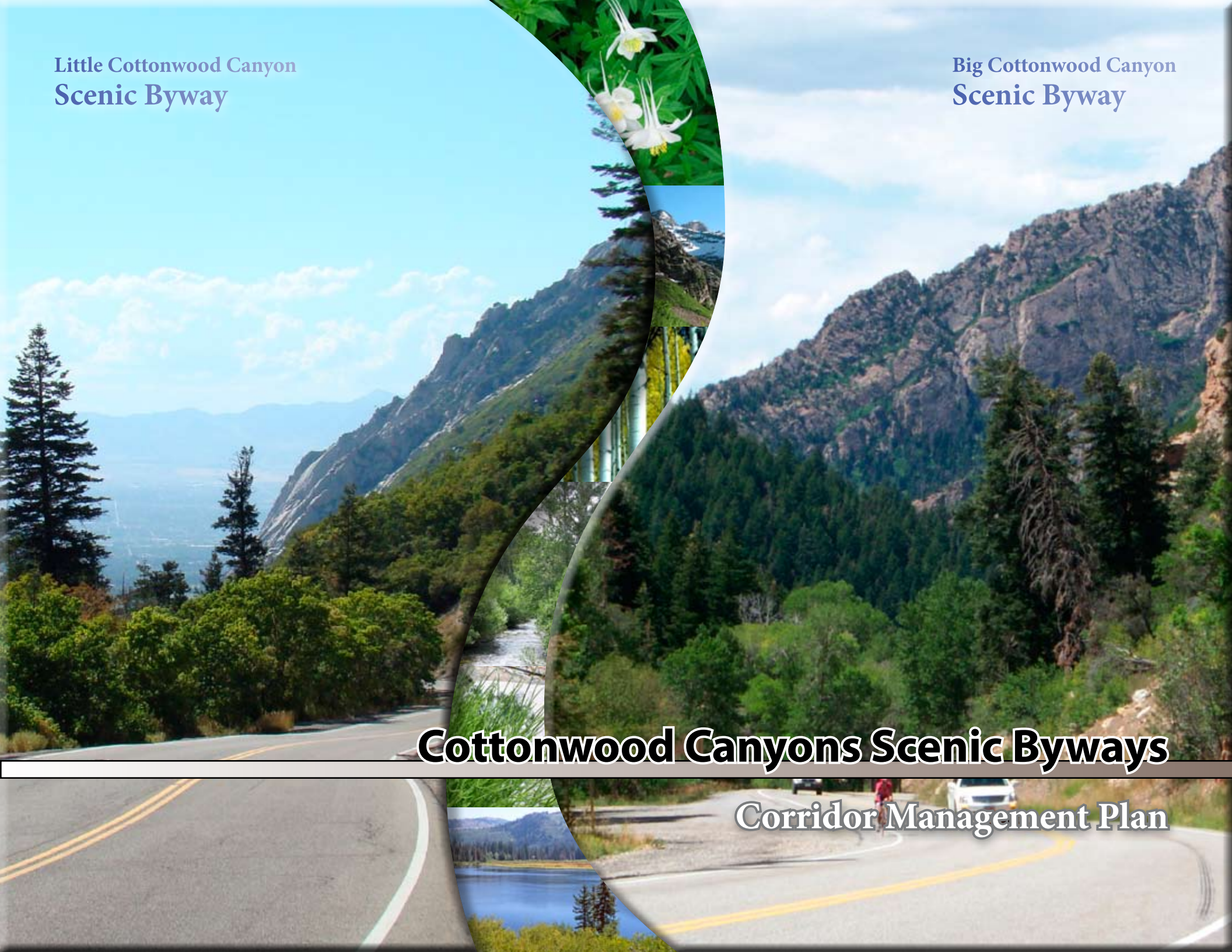

Cottonwood Canyons Scenic Byways

Corridor Management Plan

Cottonwood Canyons
Corridor Management Plan
2008

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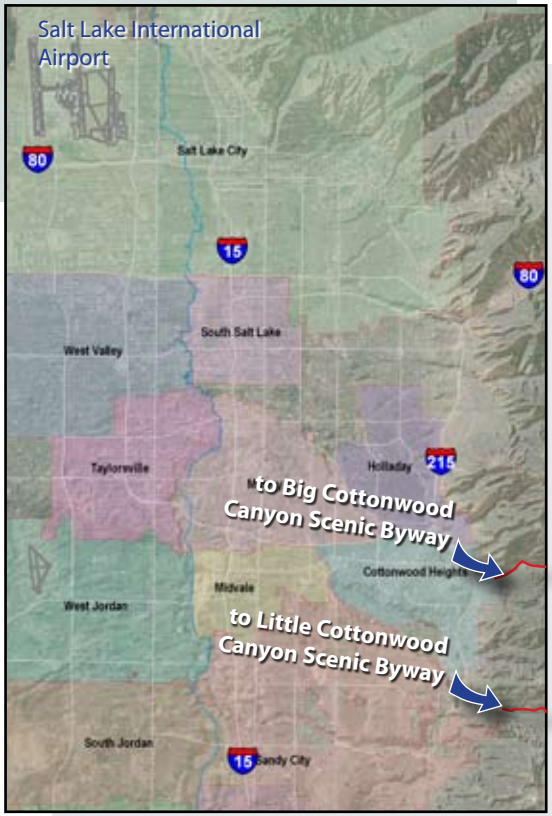
Chapter 1 : Introduction

A Corridor Management Plan is a written plan developed by the communities and stakeholders in a byway area that outlines how to define and enhance the byway's intrinsic qualities and character.

Utah is a state of contrast, where red rock gorges meet snow capped peaks. Among the most scenic and visited locations in the state, the Wasatch Mountains in northern Utah are a collection of special places that draw residents and visitors in quantity. At the base of these mountains, the Wasatch Front region is home to thousands of outdoor enthusiasts, many of whom choose to live in the Salt Lake City region for its abundant recreation opportunities. In past years, the population has boomed and now is home to approximately two million residents. In the heart of the Wasatch Mountains are Big and Little Cottonwood Canyons. Over one million people live within a 30 minute drive from these Canyons. The airport is 30 minutes away, as is downtown Salt Lake City. These Canyons are a marvel of accessibility, and they are loved by residents and visitors.

Given the close proximity to a major population center, Big and Little Cottonwood Canyons draw millions of visitors each year; peak days can generate over 10,000 vehicles in each canyon. There exists a fine balance between visitors and environment. Mountain run-off provides drinking water for the metropolitan area below, and Big and Little Cottonwood Canyons must be managed for the health of the watershed. This challenge has been addressed by a highly functioning multi-jurisdictional team, all with the charge to protect the vital ecosystem while maintaining recreational opportunities and local economies that have existed since the turn of the century.



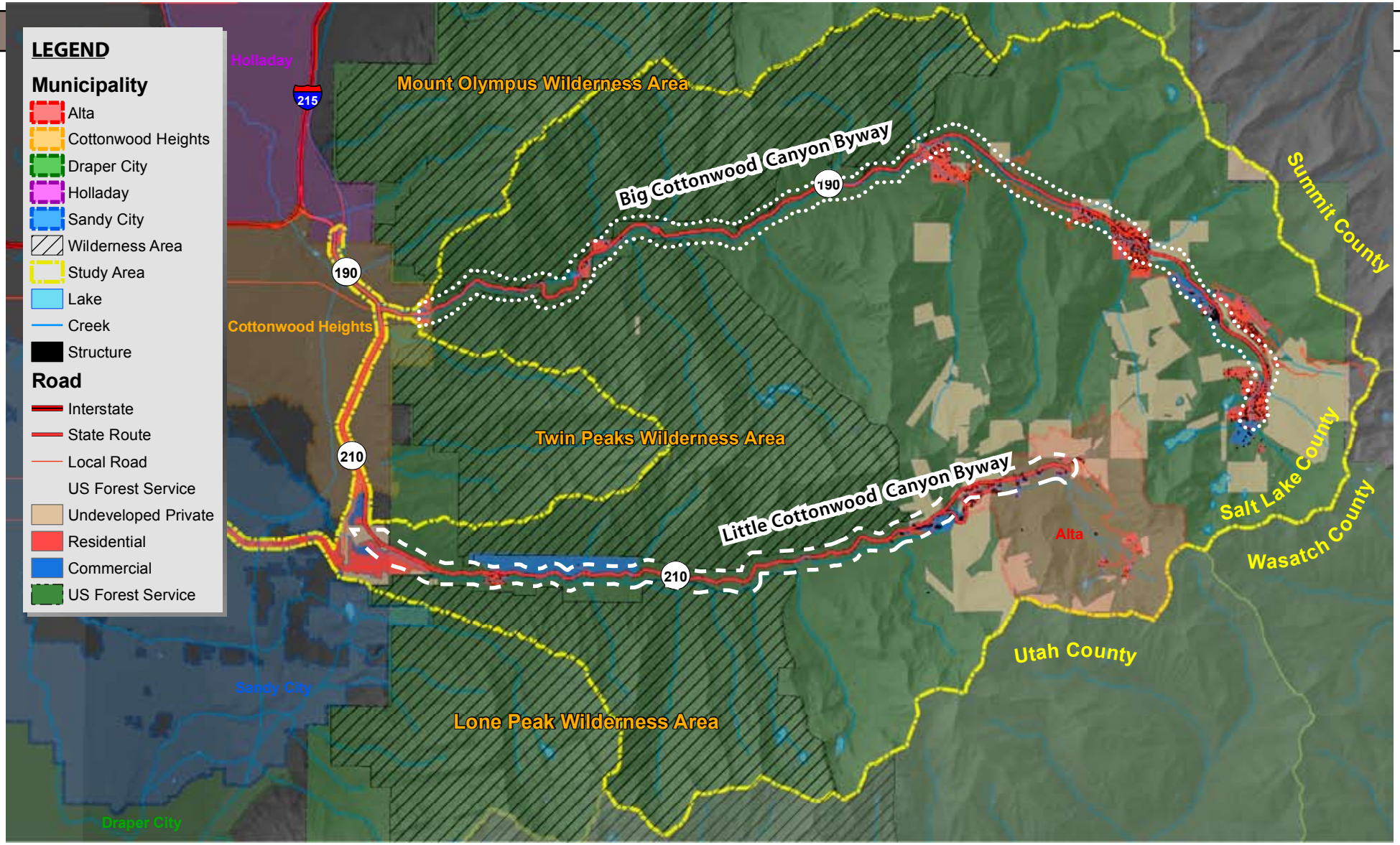
Two distinct roadways, Big Cottonwood Canyon Road, or SR-190, and Little Cottonwood Canyon Road, or SR-210, provide access to the Town of Alta, four ski resorts, and numerous Forest Service recreation sites, as well as homes and businesses. Both roads are state highways with operation and maintenance under the jurisdiction of the Utah Department of Transportation (UDOT). In 1990, SR-190 and SR-210 were designated as State Scenic Byways, though no Scenic Byways planning or projects had been conducted to date. The critical theme of watershed inevitably ties these two Byways together with a unique commonality found very rarely in the Scenic Byways program. For this reason, and their adjacency, this Corridor Management Plan addresses both Byways, however, unique opportunities for each are presented.

Because both roads are State Scenic Byways, funding through the National Scenic Byway Program is available to study issues and prepare a long term guidance document. Under the National Scenic Byway Program, a local agency must coordinate this planning effort and administer any resulting projects. The Town of Alta, with assistance from the United States Forest Service (USFS), prepared a grant application for funding for this Corridor Management Plan (CMP) and Interpretive Plan (IP). The grant was approved in 2005; with matching funds provided by USFS, UDOT, the Town of Alta, Salt Lake County, Salt Lake City Department of Public Utilities, Alta Ski Lifts, Snowbird Corporation, and the Big Cottonwood Canyon Community Association. The results of this study is a Corridor Management Plan and an Interpretive Plan for each Byway. The study also includes a recommendation, driven by the stakeholders, whether or not to pursue National Scenic Byway designation. The National Scenic Byways Program is focused on recognizing special roadways in America, and does not impose any regulation.

A CMP is a written plan developed by the communities and stakeholders in a byway area that outlines how to define and enhance the byway's intrinsic qualities and character. The plan typically addresses issues such as: tourism, historic and natural preservation, roadway safety, and economic development. The CMP is a guide that addresses issues but does not necessarily offer solutions for every problem. It is important to recognize that a CMP is not a regulatory document, and it is not a substitute and does not supersede existing land and resource management plans. The CMP and IP together simply outline a plan that will protect and enhance the unique qualities of the Byways, and give sound information in an appealing and effective way.

Study Area

The study area for the CMP encompasses the entire lengths of both Big and Little Cottonwood Canyon Roads, located in Salt Lake County. Big Cottonwood Canyon Road (SR-190) is 15 miles long, starting at the mouth of the Canyon and ending at the community of Brighton. Little Cottonwood Canyon Road (SR-210) is seven miles long, beginning at the mouth of the Canyon and ending at the Town of Alta. Both similarities and differences draw these Byways together and distinguish them. Big Cottonwood Canyon Road and Little Cottonwood Canyon Road are included in this Corridor Management Plan though they are each separate Byways. Figure 1 shows the study area boundary as well as jurisdictional boundaries and general land use. Because viewshed is an important quality for Byway travel, the study area extends to the ridge-line since much of it is visible from the roadway. In addition, the critical issue of watershed in these Canyons is inherently tied to Canyon health, therefore the study area must extend beyond the roadway to adequately discuss this multi-jurisdictional issue.



Cottonwood Canyons Scenic Byways Study

Miles
0 0.5 1 2 3 4 5

Figure 1 - Study Area, Land Use and Jurisdictional Boundaries

1:115,000

Public and Stakeholder Involvement

Public involvement efforts for the Corridor Management Plan included an open house and mobile outreach efforts, as well as an extensive and inclusive stakeholder involvement process. The objectives of the public outreach where to present elements of the plan, and obtain visioning input.

The stakeholder group represented a large cross-section of interests and were an integral part of decision-making for this process. Stakeholders met six times throughout the project. At each meeting, they were asked to think critically about issues, solutions, and the future of the Byways. Feedback from these meetings creates the fabric from which this CMP is developed. The group consisted of representatives from:

- Alta Ski Lifts Company
- Big Cottonwood Canyon Community Association
- Brighton Ski Resort
- Cottonwood Canyons Foundation
- City of Cottonwood Heights
- Federal Highway Administration
- Granite Construction
- Rocky Mountain Power
- Salt Lake City
- Salt Lake Climber's Alliance
- Salt Lake County (Mayor's Office, Bicycle Advisory Committee, Planning, Sheriff, and Engineering departments)
- Sandy City
- Save Our Canyons
- Sierra Club
- Silver Fork Lodge
- Snowbird Ski Resort
- Solitude Mountain Resort
- Utah State History Division
- The Church of Jesus Christ of Latter-day Saints
- Town of Alta
- Utah Department of Transportation
- Unified Fire Authority
- United States Forest Service, Wasatch-Cache National Forest
- Utah Transit Authority
- Wasatch Front Regional Council
- Wasatch Mountain Club
- Salt Lake Convention and Visitors Bureau
- Utah Office of Tourism

Chapter 2 : Travel Conditions Along the Byways

"… to the extent that… a proposed development or activity… poses an actual or potential impact to the watershed or water quality, Salt Lake City will seek to …. eliminate or mitigate potential impacts."

The transportation system in the Cottonwood Canyons is an inter-related network of roadway infrastructure and traffic, transit service and facilities, parking, and bicycle and pedestrian activities. The transportation system is of concern in this CMP, as it is the primary means for access and enjoyment for the byway traveler.

Roads and Traffic

Big and Little Cottonwood Canyon Roads are characterized by steep grades, sharp bends, and few passing zones. They are dead-end roads. Drivers are the primary users of the roadways. However, cyclists and hikers are also present in summer months. Traffic is most often attributed to recreation activities as well as the services supporting tourism, but both roadways also serve residential areas in each of the Canyons. UDOT is responsible for managing and maintaining the roadways in the Cottonwood Canyons.

Traffic conditions in the Cottonwood Canyons are highly dependent on seasonal and weather factors. The predominant destinations - natural recreation and resort attractions - experience the highest use during the summer seasons (June-September) and the winter season (December-March). Traffic congestion in the Canyons is a problem on peak days and peak times. Traffic volumes on the canyon roads sometimes exceeds capacity during the ski season, and the steep grades and winter driving conditions can cause "bumper to bumper" traffic that requires several hours to clear. Road closures due to weather conditions and avalanche danger cause significant congestion on the roads approaching the Byways. During non-peak and dry roadway conditions, vehicles can travel the speed limit for most of the corridor. Figures 2 and 3 illustrate the seasonal trends that define traffic along the Byways. The information shown in these figures was measured by UDOT's automatic traffic recorders from 2003 to 2005.

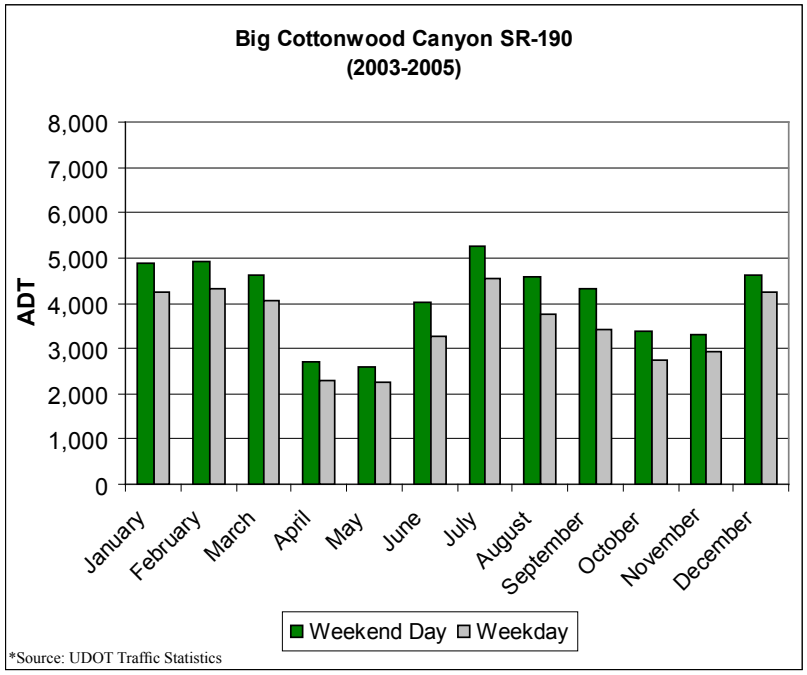


Figure 2: Average Annual Weekday and Weekend Traffic for SR-190

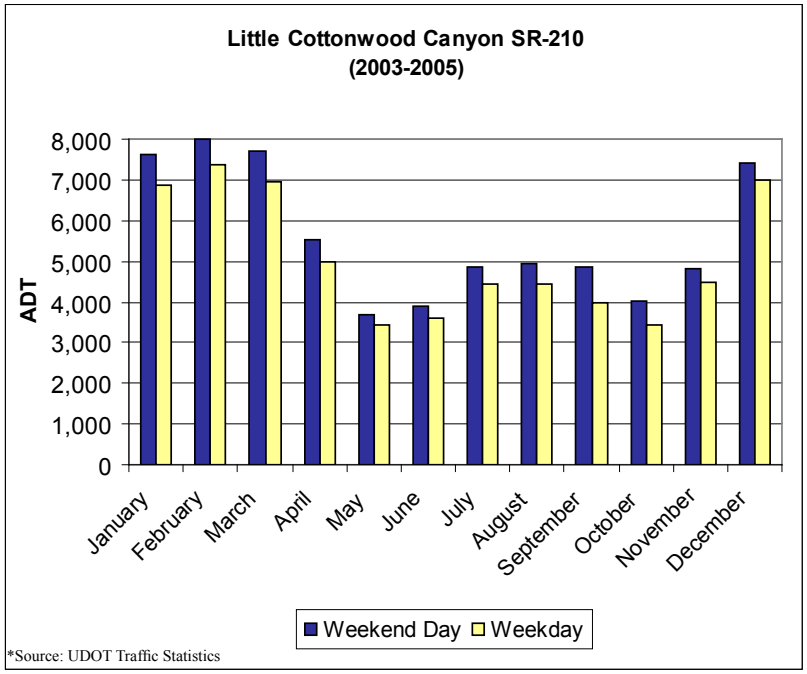


Figure 3: Average Annual Weekday and Weekend Traffic for SR-210

Figure 2 demonstrates two important traffic characteristics: seasonal demand and high weekend volumes. As mentioned above, the summer and winter months tend to draw the most visitors to the Byways. Historical data suggests that the busiest days in Big Cottonwood Canyon are more likely to occur during the summer, however summer traffic is more dispersed through the day. The recreational character of the Canyons attracts more visitors during the weekends when people are off work and school. Based on traffic statistics from 2003-2005, weekend traffic in Big Cottonwood Canyon exceeds weekday traffic by 12% during the ski season and 17% during the warmer summer months.

As shown in Figure 3, Little Cottonwood Canyon has similar seasonal and weekend characteristics to that of Big Cottonwood Canyon. However, Little Cottonwood Canyon clearly generates higher traffic volumes than Big Cottonwood Canyon, especially during the winter ski season.

Analysis of UDOT's available crash data from 2003-2005 indicates that crashes happen more frequently in the Cottonwood Canyons than is typical for roadways with similar characteristics. Crash rates are a function of annually-occurring crashes, daily traffic volumes, and the overall roadway length. Crash severity is measured and averaged also, indicating on a scale of one to five how severe each crash is (a score of one indicates only property damage, whereas a score of five indicates a fatality).

Crash statistics are shown in Table 1. Select locations in the Cottonwood Canyons experience higher rates of crashes than others. Overall the highest concentration of accidents are at the park-and-ride lots at the base of each canyon.

Table1: Expected vs. Actual Crash and Severity Rates

Route	Mileposts	Expected Crash Rate	Actual Crash Rate	Expected Severity	Actual Severity
SR-190	1.83 - 19.93	3.33	5.19	1.64	1.75
SR-210	0 - 13.62	3.02	4.80	1.66	1.64
Source: UDOT Traffic and Safety Division					

Transit

The Utah Transit Authority (UTA) provides seasonal bus service to Alta and Snowbird Ski Resorts in Little Cottonwood Canyon, to Solitude and Brighton Ski Resorts in Big Cottonwood Canyon, and to limited trailheads. Winter service generally operates from November to April, and buses are often at capacity during the morning and evening peak hours. Ridership data indicates that during 2004-2005 approximately 67% of transit users traveled to a destination in Little Cottonwood Canyon and 33% of riders went to a destination in Big Cottonwood Canyon.

The ski buses provide frequent service up the Byways during the morning and down the Byways in the evening. These peak demand times correspond with skier travel patterns. Buses serving the Cottonwood Canyons generally run on half-hour headways during the morning (6:30–10:00 am) and late-afternoon peaks (3:00–5:00 p.m.), with one hour headways during the off-peak (10 am–3 p.m.). Because each canyon is served by multiple routes, bus routes overlap and the waiting times are usually less than anticipated.

Figure 4 illustrates an overall trend of increasing bus ridership over the past five years. Consistent ridership can be partially attributed to transit subsidies provided by the ski resorts. The ski resorts in the Cottonwood Canyons purchase transit passes for employees and season pass holders. The ski resorts pay UTA 80% of the standard fare on a per person basis.

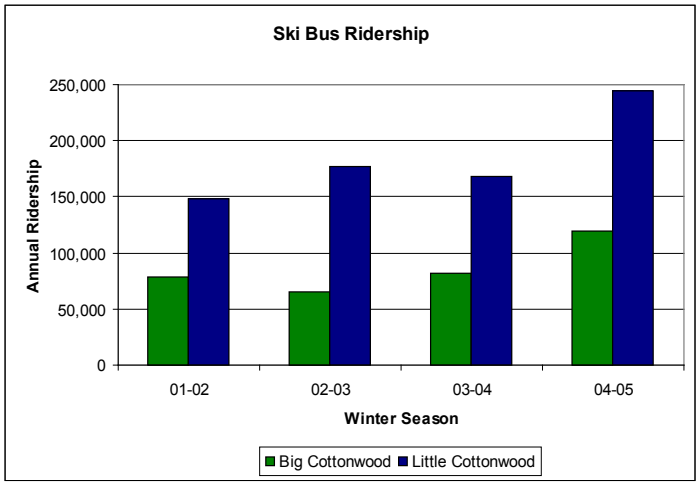


Figure 4: UTA Cottonwood Canyon Annual Ridership 2001 – 2005

Bicycle Use

Cyclists frequent the Byways in the summer months. Safety has been a concern in recent years as usage has jumped sharply and more cyclists report concerns for their safety. UDOT is adding an uphill striped shoulder which is used by cyclists in Big Cottonwood Canyon and will complete this lane over the course of the next few summers. Though none exist now, bikeway improvements are also being considered in Little Cottonwood Canyon.

Counts, conducted on a typical weekend morning in August, recorded almost 90 cyclists in a three-hour period in Big Cottonwood Canyon, and approximately 60 in Little Cottonwood Canyon. Additionally, 63 vehicles in Big Cottonwood Canyon were observed transporting bicycles; these are likely cyclists using mountain bikes on soft trails. Table 2 shows bicycle activity.

Table 2: Bicycle Activity Saturday August 4, 2007

	Going Up	Going Down	Bikes on Cars Going Up	Bikes on Cars Going Down
BCC a.m.	88	83	63	6
BCC p.m.	14	19	-	-
LCC a.m.	56	60	-	-

Source: Fehr & Peers Bicycle Counts, August, 2007

Parking

Parking is available at several locations in each of the Cottonwood Canyons and is provided by Salt Lake County, UTA, the ski areas, and at Forest Service recreation areas. During peak recreation times, parking is insufficient, overflowing onto roadway shoulders creating conflicts on the roadway. Numerous recreation access points, including user-created trailheads, are located adjacent to SR-190 and SR-210. At these locations, limited parking on the shoulders is utilized by visitors. Table 3 summarizes parking spaces available at the resorts in the Cottonwood Canyons. Forest Service policy does not support any expansion of parking in the Canyons with the exception of watershed protection or facilitation of transit. Table 4 shows jurisdictions operating winter use lots outside of the canyons, although the 3500 East lot is informally used for park and ride, the primary use is stormwater detention for Cottonwood Heights. In the future the City would like to replace this parking with another location. This location is currently being studied.

Table 3: Parking at Ski Resorts

Parking Location	Number of Spaces
Snowbird	2,722
Alta	2,446
Brighton	1,090
Solitude	1,162
Total	**7,420**

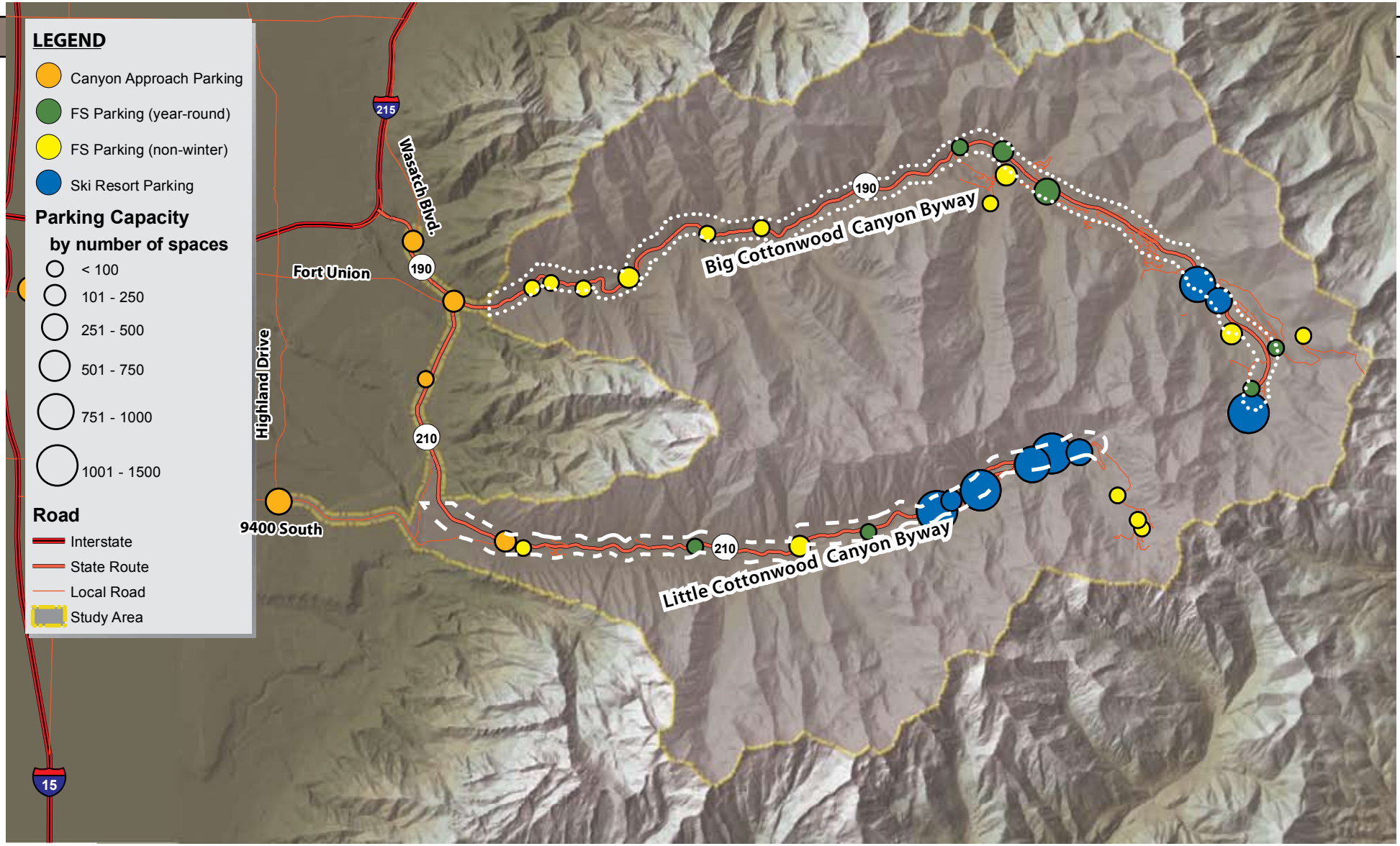
Source: Final Environmental Impact Statements for Master Development Plans for Snowbird, Alta, Brighton, and Solitude

For transit users, several park-and-ride locations are dispersed throughout the southeast end of the valley. UTA operates TRAX light rail, which provides a transit artery through the valley, with several associated park-and-ride lots. These park-and-ride lots also serve people who carpool up and down the canyon. Table 4 shows the park-and-ride lots servicing ski bus routes and the typical utilization of those lots. Figure 5 illustrates transportation infrastructure, including road alignment and locations of parking provided by the Forest Service, ski resorts, and UTA.

Table 4: Winter Use at Park & Ride Lots

Location	Owner	Spaces	Average Weekday Usage	Percent Full
Midvale Fort Union TRAX Station	UTA	266	219	82%
6200 South Wasatch	Salt Lake County	182	51	28%
Mouth of Big Cottonwood Canyon	Salt Lake County	102	87	85%
950 East 6600 South	Salt Lake County	130	26	20%
9400 South 2000 East	UTA	401	109	27%
Mouth of Little Cottonwood Canyon	Salt Lake County	162	156	96%
*3500 East Wasatch	Salt Lake County	56	39	70%

Source: UTA, 2005



Cottonwood Canyons Scenic Byways Study

Figure 5
Parking Capacity and Locations

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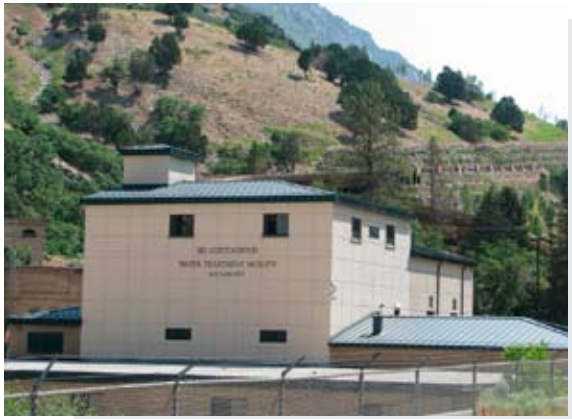
Regulatory Conditions

The regulation of land uses in the Cottonwood Canyons is administered by several entities. Although Salt Lake County, USFS, and the Town of Alta are the primary land use agencies, Salt Lake City and the Salt Lake Valley Health Department also play a role in land use decisions and certain activities due to the Canyons' status as watersheds providing culinary water to communities in the Salt Lake Valley.

Nationwide, the Forest Service has an active role in the National Scenic Byways program because many byways wind through National Forests. The Cottonwood Canyons are located within the Central Wasatch Management Area of the Wasatch-Cache National Forest. 78% of the land in Big Cottonwood Canyon and 81% of the land in Little Cottonwood Canyon is National Forest land. Management is guided by the Wasatch-Cache National Forest Revised Forest Plan, which was last updated in February 2003. The Revised Forest Plan describes desired future conditions, management prescriptions, and standards and guidelines for decisions affecting the forest. The plan identifies watershed preservation as a primary factor in managing the Central Wasatch Management Area and states that the Forest Service will not permit expansion of parking beyond current levels with the exception of watershed protection or facilitation of transit.. Nationwide, and through collaboration with stakeholders, the Forest Service has actively evaluated Scenic Byway designation on many roads through National Forest lands to assist with the protection of resources.

Lone Peak Wilderness Area and the Twin Peaks Wilderness Area are bounded by Big and Little Cottonwood Canyon Byways. These areas are congressionally designated as wilderness, which restricts the activities that can occur within their boundaries. Generally, no motorized vehicles or roads are allowed in wilderness areas.



Protecting water quality is a primary concern for many of the agencies responsible for managing activities in the Cottonwood Canyons. Reflecting this, Salt Lake City's Watershed Management Plan "prioritizes water quality first and multiple use of the watershed second," and it states "to the extent that, in the reasonable judgment of the City, a proposed development or activity, either individually or collectively, poses an actual or potential impact to the watershed or water quality Salt Lake City will either oppose, or seek to modify, manage, control, regulate or otherwise influence such proposed development or activity so as to eliminate or mitigate potential impacts".

With the exception of the Town of Alta, which has its own Zoning Ordinance, the Salt Lake County Zoning Ordinance regulates land use in the unincorporated areas of the Cottonwood Canyons. The Cottonwood Canyons are part of the Foothills and Canyons Overlay Zone (FCOZ) and are subject to the Natural Hazard Areas regulations. FCOZ establishes standards for development in the foothills and Canyons, in order to preserve their natural character. FCOZ goals are consistent with the desire to preserve visual character in Big and Little Cottonwood Canyons and include:

- Preserve the aesthetic qualities of the foothills and canyons, including ridge lines
- Encourage design that will reduce the risk of natural hazards and maximize residents' safety
- Provide adequate vehicle and pedestrian circulation
- Minimize construction impacts on sensitive lands
- Prohibit activities that would degrade fragile soils, steep slopes, and water quality
- Preserve environmentally sensitive areas through clustering
- Protect streams, drainage channels, absorption areas, and floodplains

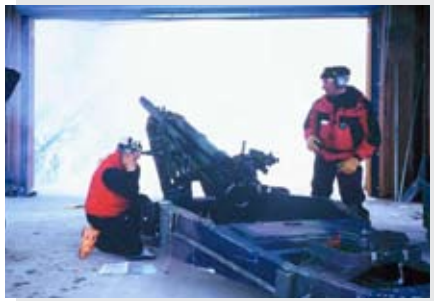
Safety

The Cottonwood Canyons Scenic Byways are managed by several agencies that work collaboratively to ensure safe and efficient travel in the Wasatch Canyons. The UDOT Traffic Operations Center (TOC) and Alta Central Dispatch monitor traffic and roadway conditions, coordinate with emergency responders through a computer-aided dispatch system, and disseminate traveler information. Outside of the Canyons, Cottonwood Heights and UDOT provide enforcement.

The Salt Lake County Sheriff's Office provides law enforcement throughout the Cottonwood Canyons. However, the Town of Alta is locally governed and is, therefore, under the jurisdiction of Alta Marshal's Office. Alta's municipal call center, known as Alta Central, serves as dispatcher for the Marshal's Office. Because Alta Central is continually staffed, they are able to facilitate communication and coordination for emergencies and search and rescue operations. Unified Fire Authority serves the Cottonwood Canyons fire protection needs as well as emergency response. The Forest Service also provides safety and law enforcement.

UDOT has a six-person maintenance crew (Station 233) responsible for the Cottonwood Canyons as well as part of I-215. UDOT also has four avalanche forecasters stationed in the Canyons. These forecasters work closely with the snow safety departments at the local ski areas to make highway-related avalanche decisions. These Canyons are among the most avalanche prone in the world, and avalanche science here is state of the art. Due to the topography of the Canyons and the alignment of the roads, Little Cottonwood Canyon is significantly more prone to avalanches than Big Cottonwood Canyon with 35 slide paths and 6 slide paths respectively. Over the past 50 years, an average of 33 avalanches hit Little Cottonwood Canyon Scenic Byway annually. The intent of UDOT's avalanche control work focuses on initiating small and medium avalanches under controlled conditions rather than to allow large and destructive avalanches. Figure 6 illustrates the slide paths and avalanche activity in both Canyons. While fewer slide paths threaten SR-190 in Big Cottonwood Canyon, slides have reached the road in recent years.

Avalanche control work for the Byways is implemented primarily through the use of military artillery, and to a much lesser extent by in-situ devices, hand charges, and hand thrown explosives from helicopters. Roadway avalanche control work requires temporary road closure and interlodge travel restrictions.



UDOT contracts with the local helicopter ski operators to supplement the use of artillery. Changes in the avalanche program are on the horizon as artillery may no longer be an acceptable use in some areas along the roadways. A separate study occurred on this subject, and this plan recognizes the importance of finding a solution to avalanche control that maintains access to Big and Little Cottonwood Canyons.

Auto congestion under Superior slide path during peak times. It is a frequent occurrence known as "red snake" describing heavy braking.

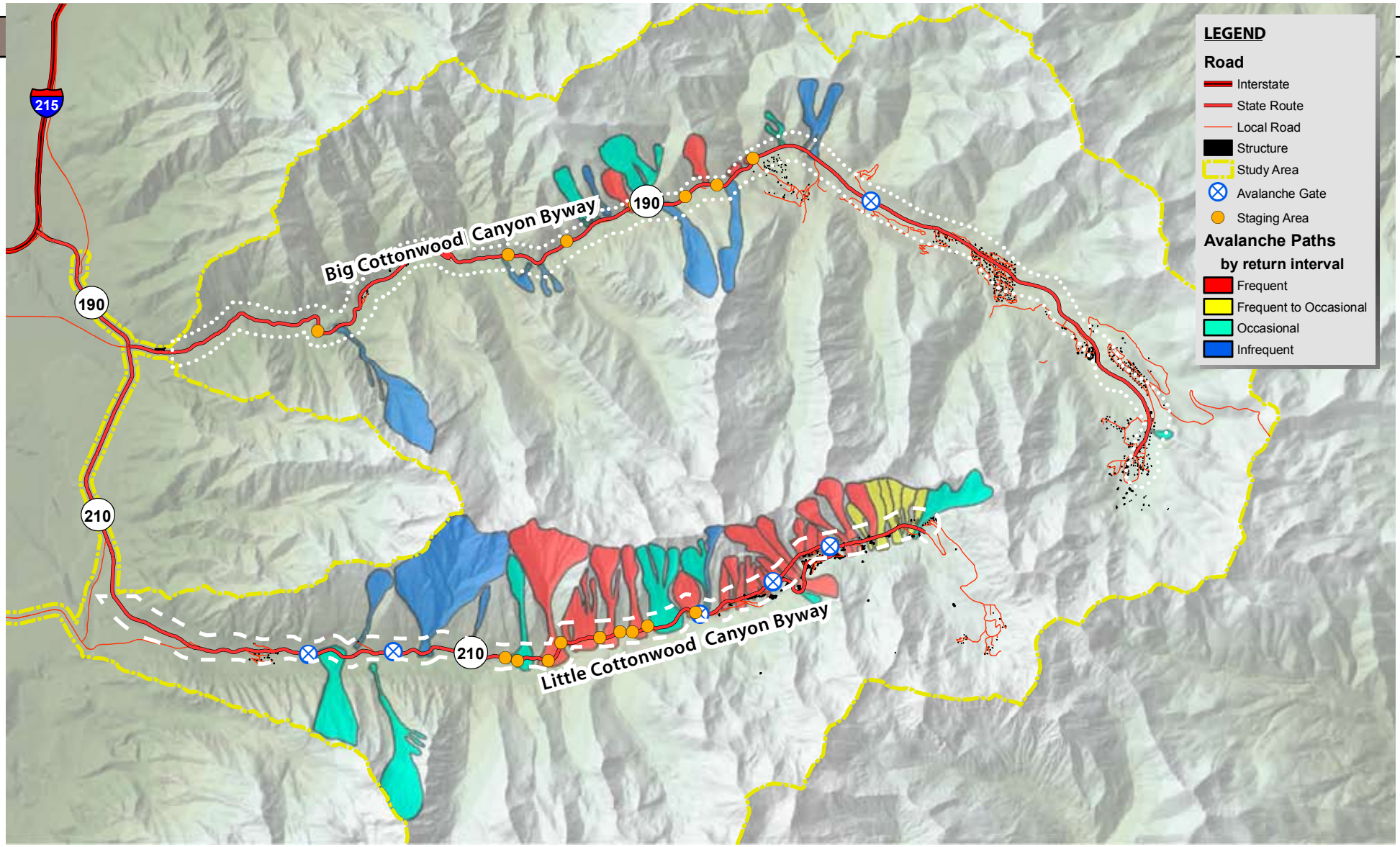


Figure 6 - Slide Paths and Avalanche Activity Big and Little Cottonwood Canyons

Chapter 3 : Intrinsic Qualities of the Cottonwood Canyons

"In no other state in the west is the question so vital or are the reserves so important, for all the irrigation streams rise in the forest reserves, while here in Salt Lake your water for domestic purposes has its origin in the Salt Lake Reserve" -Gifford Pinchot

The Cottonwood Canyons embody a unique character, defined by the people and places within the rugged canyon walls: rural mountain cabins, destination resorts, and outdoor enthusiasts. There is a balance between development and wilderness that makes the Canyons feel hospitable yet remote.

A critical part of designating a Scenic Byway is identifying what makes it special—its intrinsic qualities. There are six categories of intrinsic qualities, as defined by the Federal Highways Administration (FHWA):

- **Scenic**: Visual beauty or interest, including features either natural or human-made. A feature's quality is measured by how memorable, distinctive, uninterrupted, or unified it is.
- **Natural**: Landscapes and ecological systems, as well as diverse wildlife habitat. High-quality natural features will have minimal evidence of human disturbance.
- **Historic**: The legacy of human past as evidenced in landscapes, buildings, structures, or other items. Whether indicating concrete objects like structures or burial sites, or less tangible artifacts such as pioneering development patterns, the feature must still be able to be seen.
- **Cultural**: Unique features of the local community. These can include traditionally recognized features such as public art, museums, or libraries; a historic industry or resource responsible for a place's identity; or a continuation of traditional ways of life. Cultural quality is measured by visual evidence of the unique customs or traditions of a currently existing community.
- **Archaeological**: Visual evidence of the unique customs or traditions of a no-longer existing human society. This includes things like artifacts, buildings, ruins, and trails.
- **Recreational**: Outdoor recreational features, such as nature-based activities like canoeing or camping or road-based activities like jogging, biking, or roadside picnics. Recreational quality is measured by how the road corridor itself is used for recreation or for direct access to recreational sites.

The Cottonwood Canyons Scenic Byways have strong components of each of these intrinsic qualities. They are described below and in the Interpretive Plan.

Scenic

Among all of the intrinsic qualities along the Byways in Big and Little Cottonwood Canyons, scenic vistas are the most accessible and most striking to every visitor. Immediately upon entering each of the Canyons, the traveler is greeted with a sense of massive wonder as sheer cliffs and thick vegetation envelope both roadways. The scenic quality in each Canyon is continuous and unified, and both roadways have particular highlights that are popular among visitors. Along Little Cottonwood Canyon Road, the uphill traveler has an opportunity to see mountain goats wending their way on sheer cliffs. A tribute to the multitude of recreation activities, travelers catch a glimpse of ice climbers on a frozen waterfall. Towards the end of the journey, stands of aspens tell the visitor that their destination is approaching. At the end of this canyon, Mount Superior towers over the roadway, and summer wildflowers blanket Albion Basin. The journey down Little Cottonwood Canyon presents stunning and often breathtaking views of the Salt Lake Valley from the Seven Sisters, with the Oquirrh Mountains in the distance.

In Big Cottonwood Canyon, the rushing Big Cottonwood Creek is adjacent to the roadway almost the entire journey, enhancing the sense of the importance of water in these Canyons. At Storm Mountain the road twists and turns through folded rock formations, with an occasional glimpse of a climber on towering rock faces. At Reynolds Flat, wetland meadows open up to show a meandering stream, wildlife, and views of Cardiff Fork to the high peaks of the Wasatch Mountains.

Natural

The Wasatch Mountains are part of the Basin and Range landscape. The contrast between mountains and valley is stark. Moving up in elevation is like a layer cake of biological zones, each with its own microcosm of temperature, water, geology, and sun aspect. The Cottonwood Canyons are named for the enormous cottonwood trees that grow near the creek bottoms, and they are known today for the aspen forests that change colors on the slopes each fall. Subalpine fir, Douglas fir, and Engelmann spruce are the main evergreens, while limber pine and bristlecone pine are found in the alpine zone.

Cottonwood trees, willows, and dogwood shrubs give color to the riparian creek corridors. South facing slopes at lower elevations have a mix of gambel oak, rocky mountain and bigtooth maple, mountain mahogany, and sagebrush.

In addition to the tree canopy, these Canyons have an abundance of shrubs, perennial and annual flowers, and grasses (forbs). Many of the smaller forbs evolved to meet this unique alpine system and are endemic. Patches of wetlands, notably in Albion Basin and at Silver Lake, contain rare, unique vegetation and are tremendously important to wildlife and the hydrology of the Canyons. Wildflowers that burst to life each summer are a famous draw for thousands of summer visitors. Cracks and crevices in rocks also are host to many unique plant species and at risk of damage from recreation in some locations.

The unique environment and ruggedness of these mountains provide refuge for a surprising diversity of wildlife so close to an urban environment. Resident species include large mammals such as mule deer, elk, moose, mountain goat, mountain lion, and bear. Small mammals include coyote, fox, lynx, beaver, badger, ferret, rabbit, mice, marmot, and others. Bird sightings include a range of raptors from hawks to eagles, as well as owls and migratory birds. Reptiles, amphibians, and fish live in and around areas with water. In fact, the best place to spot canyon wildlife is along the water's edge at dusk or dawn. One of the most accessible wildlife experiences is spotting mountain goats on the rocks near the Little Cottonwood Canyon park-and-ride. A full species list of the unique canyon plants and wildlife can be found in the Interpretive Plan.

In addition to the flora and fauna, geology is a major focus of interest in the Cottonwood Canyons. Even the casual tourist is struck by the dramatic Wasatch Mountains rising sharply from the valley floor. The Wasatch Mountains reach over 11,000 feet, and the picturesque winding canyon roads access communities as high as 8,500 feet. The high mountains and flat valleys were formed by tectonic activity: restless movement of forces deep within the earth's crust that create the faults and elevate some crustal blocks while dropping others. The Wasatch Fault is one such fault that parallels the mountain front - upward movement east of the fault elevated the range while the valley west of the fault dropped. Big Cottonwood Canyon was consequent of this uplift, carved by hydrologic activity resulting in a distinct "V" shape. Adjacent Little Cottonwood Canyon was formed by glacial activity resulting in a distinct "U" shape. Other major geologic features are the terraced shorelines of ancient Lake Bonneville, which are visible along the foothills. The lake was once more than 1000' deep, extending up into the canyons from the Salt Lake Valley. Sand, gravel, and rock debris was deposited in the lake at the mouth of the Cottonwood Canyons, forming broad alluvial fans. These have become gravel pits, providing much of the construction material for the valley today.

The Cottonwood Canyons function as watersheds for the Salt Lake Valley: both are major suppliers of drinking water to more than 400,000 people (at the time this plan was written), and the population is expected to grow. From the days of exploration to pioneer settlement, the availability of water defined where people lived as well as who prospered. Water comes primarily in the form of snow as mountain peaks trap storms moving in from the west, dropping 20 to 50 feet of world-famous powder snow each winter. The water is of high quality, and watershed protection informs the most critical policy and regulatory issues in the Cottonwood Canyons. Salt Lake City, Salt Lake County, the Town of Alta, the USFS, and other regulatory agencies deserve credit for their strong vision and devotion to protecting this watershed. However, watershed quality is continually threatened by increased development and recreation pressures.

Historic

Utes and Northwestern Shoshone lived in and near the Cottonwood Canyons prior to white settlement. Mormon Pioneers came to the Salt Lake Valley in the mid-1800s and immediately began establishing outposts throughout the region. Pioneer settlers to the Salt Lake Valley faced shortages of trees soon after arriving in the grassy valley. They harvested Douglas fir trees from the higher elevations rather than the weaker wood cottonwoods. Roughly 22 sawmills were established in Big Cottonwood Canyon in the mid-1800s. Notable mill sites include Birches Campground, Whipple Fork, Harpers Pit Mill, Butler Fork, Bear Trap Fork, Silver Fork and Mill A through Mill F. In the early 1900s federal land in these Canyons was designated as a Forest Reserve with the purpose of watershed protection and forest health. The first forest service chief, Gifford Pinchot, visited the canyons in 1905 and established the Wasatch Nursery for the purpose of reforestation in the entire Salt Lake City watershed.

A mining boom transformed the landscape in the 1870s because of silver, lead, and gold hidden in the Wasatch Mountains. In Alta's rowdy heyday of the 1870s, several thousand people lived there seasonally. By 1872, over 650 mining claims were made in Big Cottonwood Canyon alone. Famous mines included the Big Emma silver mine at Alta, the "Regulator" Johnson gold mine at Mineral Fork, the Prince of Wales silver mine above Silver Fork, Cardiff and Maxfield silver mine, and the Solitude tunnel. Mining brought a new wave of settlers to Utah: non-Mormons who worked in the mines where Mormon leaders forbade their followers to toil. It also left a legacy of hidden shafts and tunnels, waste rock piles, rusty abandoned equipment, crumbling buildings, and vivid memories of towns and times that are no more. At the base of Little Cottonwood Canyon are the remains of beehive-shaped kilns used for smelting ore.

By the end of the 1800s, people were enjoying the amenities of the Canyons more than its rich mining resources. Camped at the mouth of Big Cottonwood Canyon, the Civilian Conservation Corps built several recreation facilities, including the Spruces ranger buildings and amphitheater. Ski resorts emerged in the early 1940's where mines once thrived. Alta ski legends, such as Alf Engen and Joe Quinney, shaped the nation's ski industry.

Cultural

The layers of cultures in the Cottonwood Canyons reflect the evolving ways in which we experience our environment. Pre-historic cultures evolved world views and economic systems based on the realities of survival. The first pioneers to Utah imported a distinctly different culture. Entrepreneurs in the mining, timber, and railway industries quickly followed, bringing their own ethnic traditions, shaping a culture that became one of the hallmarks of the "Wild West." The evolution of the ski industry, the advent of modern mountaineering, modern environmentalism, and today's lifestyle-driven resort development have created the canyon culture recognizable today. This cultural pattern has its own unique manifestations including a seasonal workforce, second home ownership, a variety of recreational subcultures, and increased concern about overcrowding and environmental impacts.

Modern culture is reflected by the communities along the Byways. There are full-time, seasonal, and second homes throughout the Cottonwood Canyons. Due to topography, development is not suitable for the majority of Little Cottonwood Canyon. The Town of Alta is the predominant population center in Little Cottonwood

Canyon, with a 2000 census population of 370 residents. The general topography in Big Cottonwood Canyon is more conducive to residential development. As such, there are several distinct communities dispersed throughout Big Cottonwood Canyon with a total of 559 housing structures. Because most of these dwellings are secondary homes, the full-time population in Big Cottonwood Canyon is roughly 260 in and around the unincorporated community of Brighton. The Big Cottonwood Community Council takes an active role preserving the inherent qualities of the canyon.

In addition to residential communities, there are numerous organizations and associations that consider the Cottonwood Canyons to be a focal point of their interests. Here a community is not a conglomeration of homes, but rather a collective interest in the natural and majestic qualities of the landscape.

Archaeological

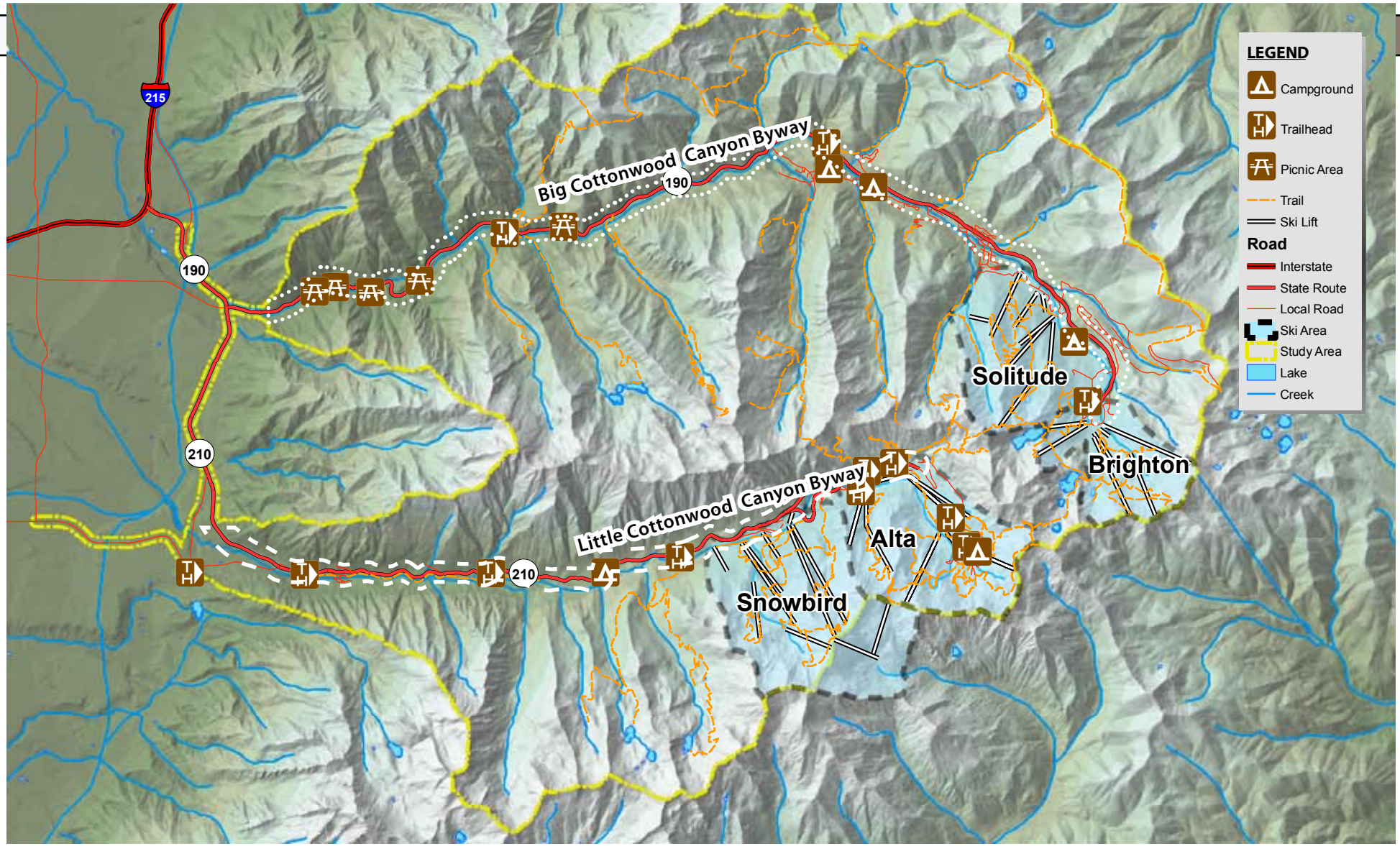
The first people to enter the Continental United States arrived sometime after the last glacial era 14,000 years ago. At that time, the Great Basin was full of shallow lakes with large mammals and edible plants along the shores. Lake Bonneville was the largest of these ancient lakes and extended up into Big and Little Cottonwood Canyon. Around 8,500 years ago, the climate changed and later Native American tribes took root. Artifacts typically found from this era include pottery, basketry, projectile points, cave dwellings and storage areas, and occasional rock art. During the Late Prehistoric period that followed (2,000 years ago to 175 years ago) the population grew; more substantial and sophisticated artifacts were developed. One well-studied culture of this period, the Fremont, was known for its semi-sedentary villages and maize production. Identified by their granaries, rock art, and maize artifacts, Fremont sites are found throughout the Salt Lake area.

Recreation

Recreation abounds in the Cottonwood Canyons, with four ski resorts as well as numerous opportunities for other recreational activities. The Byways are used year-round by myriad recreationists and are home to four ski resorts. The roads themselves (SR-210 and SR-190) are recreational amenities for sightseers, recreational drivers, road cyclists, and other users.

Among the most popular summertime activities, hiking in the Cottonwood Canyons provides access to remote and undisturbed areas. There are designated hiking trailheads in each canyon. Although the nature of recreational use changes in the winter months, recreationists are present on trails and other back country areas year-round. Trailheads that offer summer hiking become major back country skiing access points for winter recreation.

Skiing and snowboarding are the signature winter recreation activities, with four resorts offering lift-access riding. Cross-country skiing, back country skiing, and snowshoeing are also very popular activities. Solitude (Silver Lake) and Alta have established cross-country tracks, while back country skiers access terrain both off of resort lifts and from roadside points. The "Ski with the Ranger" program administered by the Cottonwood Canyons Foundation and USFS is an educational and interpretive service to skiers. A full range of interpretive offerings are designated in the IP.


LEGEND
Campground
Trailhead
Picnic Area
Trail
Ski Lift
Road
Interstate
State Route
Local Road
Ski Area
Study Area
Lake
Creek
Big Cottonwood Canyon Byway
Little Cottonwood Canyon Byway
215
190
210
Solitude
Brighton
Alta
Snowbird
Miles
0 0.5 1 2 3 4 5
Figure 7
Recreational Uses
1:115,000

Developed camping and day use facilities are available along the Byways. These developed sites provide picnic tables, concrete fire pits, and bathrooms. Most of these areas require a user fee ranging between $5 and $15. Though officially owned by USFS, fee sites are managed by private concessionaire that operate under special use permit. Wilderness back country camping is accessed from several trailheads along the Byways. Figure 7 is an overview of major recreational points accessed from the Byways.

The Cottonwood Canyons are internationally recognized as a rock climbing destination. The variety of terrain and rock type accessible from the Byways offer tremendous opportunity for exploration and challenge for climbers of all abilities. There are no "official" climbing areas; climbers rely on published guides and word-of-mouth to access climbing terrain. Some areas are very popular and draw dozens of people, who often park on the road shoulders.

Hunting and fishing opportunities attract some visitors to the Cottonwood Canyons area, however, smaller in number than other recreational uses. These activities are regulated by the State of Utah Division of Wildlife Resources (DWR) and require the appropriate licenses or permits. People hunting and fishing in the Cottonwood Canyons are subject to special restrictions outlined in the DWR proclamations. Motorized recreation, primarily ATV touring, is permitted only at Mineral Fork. Motorcycle touring is also very popular. Recreation in the Canyon also includes outdoor education, wildlife watching, photography, pleasure driving, and simply enjoying the scenery.

Recreation along the Byways drives the economy. The Cottonwood Canyons and the ski industry are a significant factor in the state's economy. According to the 2007 Economic Report to the Governor, there were over four million skier and snowboarder days in Utah during the 2005-2006 season. This was an increase of roughly 4% over the previous winter season. Spending related to skiing and snowboarding equated to $692 million in Utah for the 2005-2006 season, about 80% of which came from out-of-state visitors.

Of that 80%, roughly two-thirds is spent off-mountain on items such as food, lodging, clothing, and entertainment. Spending by visitors and locals contributes to increased employment for ski-and-snowboard related businesses. The 2007 Economic Report to the Governor estimated that 12,700 jobs are supported by the ski and snowboard industry in Utah.

Other studies have attempted to pinpoint dollars spent at the resorts on any given day. One such study, published in 1994 by two researchers with the University of Utah *("Road Closure: Combining Data and Expert Opinion",* Blattenberger and Fowles*),* sought to establish dollars lost due to road closures forced by avalanche activity. The 1994 study estimated that road closure cost Little Cottonwood Canyon resorts $1.4 million per day in lost revenue from ticket sales, meals, lodging, and other sources. The study data has not been updated to reflect current statistics on visitation and dollars spent, but would be considerably higher for 2007, given increased numbers of visitors and economic inflation.

Chapter 4 : Byway Issues

"Your city can have a superb supply from the Big Cottonwood but the watershed must be covered with trees and the greatest care must be used to protect the stream from pollution from the ranches, camps, and mines in the canyon." -Gifford Pinchot

The identification of issues is an important step in understanding the gap between the desired end state of the vision, and the steps that must be outlined to reach the vision. The unique and hazardous terrain in the Cottonwood Canyons and along the Byways is a challenge, raising issues associated with the canyon lands and with the roadway. Other issues arise from increased usage and pressure on the Byways, due to population growth in the Salt Lake Valley and the region. These issues can be grouped into three main categories: issues associated with the terrain and features surrounding the Byways, issues related to the roadway, and issues that are a factor of regional population growth.

Terrain and Features of the Byways and Canyons

The Cottonwood Canyons (and Little Cottonwood Canyon in particular) are frequent centers of avalanche activity. UDOT provides avalanche control for Big and Little Cottonwood Canyons, for the purpose of reducing avalanche hazard to vehicles on the road. The ski resorts conduct their own avalanche control programs for the property within the ski area boundaries. UDOT conducts avalanche hazard mitigation through a combination of road closures and explosives. Roadway avalanche hazard is a function of four distinct factors: traffic volumes, steep terrain, considerable amounts of snow, and roadway proximity to avalanche paths. In the Cottonwood Canyons, the simplest avoidance of risk is to reduce traffic volumes. More vehicles lead to increased traffic congestion on the roads, which in turn decreases travel speeds and causes vehicles to spend more and more time exposed to avalanche danger. A reduction in overall traffic volumes could have a considerable impact on avalanche hazards, particularly in Little Cottonwood Canyon. Fire is also a potential hazard in the Cottonwood Canyons.

Roadway Issues

The twisting, turning, and narrow canyon features of SR-190 (Big Cottonwood Canyon Road) and SR-210 (Little Cottonwood Canyon Road) present their own challenges. The geometry of the roadways, and the accesses onto them, can be hazardous in many locations. Road geometry refers to the slope, width, and curve of a roadway, all of which are affected by the need to fit a roadway into a narrow margin between rock and river. At many locations, curves are tighter than what would allow drivers to comfortably negotiate them at the posted speed limit. At these locations, speed advisory signs warn the motorist to slow down. The terrain also results in many steep sections of roadway. Shoulders are important for safety and roadway maintenance. A paved shoulder allows disabled vehicles to pull off the road, errant vehicles to recover, and also improves safety for bicyclists. However, there are locations where the existing shoulder is less than one foot wide.

Black ice is another hazard related to road geometry and terrain. It forms especially along the lower reaches of both Canyons (for instance, below Cardiff Fork in Big Cottonwood Canyon), as the roads twist around crags of rock. The shadows cast by the mountains cause a difference of temperature on the road surface, leading to icy conditions. It misleads drivers particularly on sunny, warming days when snow is melting elsewhere but forming ice on the roadway at lower elevations, sometimes due to an inversion of colder air in the lower reaches of the Canyons. Unsuspecting drivers traveling down-canyon at high speeds are most vulnerable and most dangerous.

As can be expected, drivers are themselves a hazard in the Cottonwood Canyons. Skiing and snowboarding are vital parts of Utah's economy, attracting a sizable contingency of out-of-town tourists. Many new visitors are not accustomed to the challenges posted by canyon driving: steep climbs and descents, burning brakes, sharp curves, slick surfaces, and wildlife. Many repeat visitors are poor canyon drivers as well. Drivers attempting to travel slowly in summer to enjoy the scenery cause congestion behind them and would be well served by viewing area pullouts or other shoulder facilities.

Growth Issues

Increases in development can degrade water sources and diminish the scenic quality of the canyons and leads to additional demands on infrastructure. The Wasatch Canyons Master Plan, which was completed in 1989, is the most current land use management plan for the unincorporated areas of the Canyons. As the time of this CMP there are discussions underway tor the county to update this Master Plan. The Town of Alta's General Plan is the land use management for the incorporated municipality of Alta, and was most recently revised in 2002.

Alongside the increase of use and development pressures in the Cottonwood Canyons (and growth in the Salt Lake region) comes an increase in demand on transportation networks. Transit provides an important mode of transportation to access the ski resorts and other recreation destinations. Winter ski service is popular, and some park-and-ride lots near the mouths of the canyon reach capacity on a regular basis. Unfortunately, this sometimes encourages canyon users to drive their vehicles up the canyon. Demand is increasing for longer ski bus service periods and greater bus frequency during the ski season, to allow more flexibility in accessing the resorts throughout the day. The ski resorts have made a model effort through provision of ski bus service, which has reduced traffic. However, no canyon bus service is available during the summer months.

Parking is also a significant issue along the Byways. The USFS's 2003 Forest Plan calls for no net increase of parking in the Canyons with the exception of watershed protection or facilitation of transit. This policy applies to all Forest Service lands in the Canyons, including those under special use permits by the ski resorts. This policy will encourage mass transit and increase demand on the park-and-ride facilities at the Canyons' mouths. Overflow parking on neighboring Cottonwood Heights residential streets is a problem, particularly on days when roads need plowing. Overflow is a problem in the summer as well; at prime trailhead locations (such as Mill B in Big Cottonwood Canyon or White Pine in Little Cottonwood Canyon) parking supply is inadequate so recreationists park on the shoulder. Crossing the busy roads to reach the trailheads is dangerous for both drivers and pedestrians. Crossings of particular concern include

Mill D, Storm Mountain, Mill B, and Silver Lake in Big Cottonwood Canyon, the ski resorts in both Canyons, and the climbing sites in lower Little Cottonwood Canyon.

Increased population in the Salt Lake Valley and surrounding region translates to more people taking advantage of the wondrous scenery and solitude found in the Cottonwood Canyons. Unfortunately, solitude becomes harder to come by as more people discover the Wasatch Range. Many recreation sites in the Cottonwood Canyons are managed by the USFS. With limited funds, the agency is responsible for trail maintenance, provision of trailhead amenities, vegetation management, protecting historic resources, parking, camping, fire suppression, and signage and interpretation. Many trailheads need year-round facilities such as toilets, drinking water, and waste facilities, but funding for construction and maintenance is limited. At the same time, improvised trailheads are being created by recreationists and are contributing to erosion, trampled vegetation, and weeds, in addition to parking problems.

The Cottonwood Canyons function as watersheds for the Salt Lake Valley: both are major suppliers of drinking water for the communities along the Wasatch Front. Ongoing enforcement of watershed protection is an issue for the USFS and Salt Lake City Public Utilities, as well as for all residents of the Salt Lake Valley. Increased use of the Byways has lead to some unique issues pertaining to watershed, for example, infrequent accidents into creeks leave hazardous materials in the water supply.

The Cottonwood Canyons also have many sensitive environments: steep slopes, unstable soils, riparian corridors, wildlife habitat, wetlands, and alpine meadows to name a few. Local ordinances attempt to protect these resources, but development can sometimes supersede the best intentions to preserve. Other concerns relate to wildlife: people coming to the Cottonwood Canyons enjoy the experiences of wildlife viewing, and many animals can be seen: deer, moose, mountain lions, and bears. However, wildlife will need increased protection from human populations and vehicles as growth pressures increase.

In addition to identifying the broad issues discussed above, the planning process requires the consideration of the features within a corridor that may detract from the intrinsic qualities. These detracting uses are anomalous intrusions on the visitor's scenic byway experience. The following detracting uses were identified for the Cottonwood Canyons:

- Overhead power lines
- Above ground water pipeline (Big Cottonwood Canyon)
- Clutter from numerous signs at the beginning of both Byways
- Dilapidated older signs
- Lack of consistency in informational and interpretive signs
- Run-down structures (e.g., the old grit mill in Little Cottonwood Canyon)
- Concrete Jersey barriers
- Chain link fences
- Dilapidated facilities at park and ride lots (e.g., graffiti on rest room facilities or run down bus shelters)
- Light pollution (bright lights that make stars less visible)
- Straight pipe motorcycles, modified mufflers, etc.
- Traffic
- Burning brake smell
- Dumpsters

Chapter 5: Vision

"Optimal performance rests on the existence of a powerful shared vision that evolves through wide participation to which the key leader contributed, but which the use of authority cannot shape... The test of greatness of a dream is that is has the energy to lift people out of their moribund ways to a level of being and relating from which the future can be faced with more hope than most of us can summon today." -Robert Greenleaf

The Big and Little Cottonwood Canyons Scenic Byways are distinct road corridors traveling through spectacularly carved canyons in the heart of the scenic Wasatch-Cache National Forest. Both corridors travel through the critical culinary watershed for the Salt Lake Valley. Popular recreation sites are found along the Byways, including access to the world-class ski resorts of Alta, Brighton, Snowbird, and Solitude, many miles of trails, dramatic climbing areas, designated Wilderness, picnic areas, campgrounds, and dispersed natural settings. The Byways themselves are popular for cycling and sight-seeing. When asked about thoughts or feelings regarding the special places in Utah's Big and Little Cottonwood Canyons, many locals and visitors alike respond with excitement and reverence about the world-famous deep powder skiing in the winter, the rugged alpine beauty of the mountains year round, the high alpine display of wildflowers in summer, and the vibrant yellows of the aspen forests in the fall. It is clear from these responses that these Canyons are cherished, and that many feel a deep soulful connection to these places. It is also clear that many visitors do not realize the rich social history and the importance of the Canyons as watersheds for the valley below.

Vision for Big and Little Cottonwood Canyons Scenic Byways
The Big and Little Cottonwood Canyons Scenic Byways will offer outstanding scenery, access to year-round developed and undeveloped recreation, and visitor education and information, creating an enjoyable and satisfying experience for visitors to the Byways and their destinations.

To sustain the excitement and reverence found in Big and Little Cottonwood Canyons, and to provide enhanced experiences with an educational component, the Scenic Byways will support and consider the following:

- Protection of the watershed and natural resources of each canyon
- Sustaining and enhancing the scenery of natural areas
- Increased public education about the outstanding qualities of each canyon
- Safe and enjoyable Byway travel for all users, including drivers, cyclists, and pedestrians
- Preservation and enhancement of the cultural resources of each canyon
- Economic sustainability of the communities along the Byways
- Efficient and convenient transit and alternative transportation connecting Byway destinations, as well as the Byways to the Salt Lake Valley
- High quality well-maintained recreation facilities

The management of the Big and Little Cottonwood Canyons Scenic Byways will be collaborative and will include federal, state, and local governments, businesses, residents, and the general public. This collaboration will nurture a central theme of shared responsibility and stewardship of each road corridor, as well as the public lands, watershed, and cultural contexts in which the corridors are contained.

Chapter 6: Goals and Strategies

"Our responsibility to the Nation is to be more than careful stewards of the land, we must be constant catalysts for positive change." -Gifford Pinchot

The focus of this Corridor Management Plan are the goals and management strategies for the Byways. These goals and management strategies were generated through the planning process and the public outreach for the Cottonwood Canyons Scenic Byways Study. The goals and management strategies are intended to address issues and concerns raised during the process. They can be implemented through the projects proposed in this section. Overarching goals and strategies for both Byways are stated below, and support the Vision Statement from Chapter 5. Establishing a Byways Committee is vital to the success of implementing these goals and strategies, and this should be established in the immediate term.

Goal: Improve travel conditions on the Byways

Strategy: Use transportation demand management (TDM) strategies to reduce congestion along the Byways, while still providing access to recreation amenities.

Reducing auto trips while still maintaining access to recreation areas along each of the Byways is a central component to the Corridor Management Plan. A suite of strategies should be implemented to improve the options for travel, and manage the overall demand for autos along the Byways. Strategies include providing information to drivers on areas where carpooling can occur, as well as a 'casual carpooler' program available online. Transit service should be expanded, as discussed below, and transit amenities should make travel by bus comfortable and convenient. Outlying parking can be used to promote additional carpooling or transit use at the mouth of each canyon, and school districts should be approached for their interest in shared use parking on weekends. Resorts and businesses should encourage employees to carpool and take transit. The Byways Committee should discuss with resorts the possibility of implementing parking pricing strategies to discourage single occupant driving.

Strategy: Create a year-round transit system as an alternative to driving and parking in the Cottonwood Canyons.

Demand exists now for summer transit service in the Cottonwood Canyons. As the resort areas continue to develop and diversify, parking resources will become more and more limited while demand on the transportation networks will simultaneously increase. A year-round transit system in both Canyons can provide access both to resort area visitors and recreationists utilizing public lands. An increase in transit service should be accompanied by improvements to transit facilities: better user comfort and aesthetics at transit stops, bus priority infrastructure, increased safety and security, and park-and-ride facilities. Express buses to Cottonwood Canyons destinations from select locations in the Salt Lake Valley should be considered.

Strategy: Create a Parking Management Plan.

A comprehensive year-round Parking Management Plan will address parking issues at both developed and informal activity sites in the Cottonwood Canyons. The goal of the parking management plan should be to improve access to parking while enhancing user safety and protecting natural resources. The parking management plan should address USFS's stated intent of no net parking increases on National Forest System lands, and how additional parking demand generated by canyon activities can be met elsewhere. Components of the parking management plan should include enforcement of existing parking restrictions (particularly along SR-210 and the Alta Bypass Road); official evaluation of currently informal parking areas at trailheads; parking pricing strategies at the resorts; capacity study and possible expansion of park-and-ride lots; and utilization of technology to provide drivers with accurate real-time information about parking resources. Parking Management Plan efforts should be coordinated with the year-round transit system plans to ensure cohesive and sensible connections between parking and transit.

Strategy: Promote and monitor cyclist and pedestrian safety.

The Cottonwood Canyons Scenic Byways should offer safe recreation opportunities for bicyclists and pedestrians in addition to drivers. The Byways are already popular destinations for cyclists, and additional actions can be taken to increase cyclist accommodations. Debris should be cleared from the roadway more frequently, as it poses a hazard to cyclists traveling downhill at high speeds. Interpretive materials for Byway users could provide "share the road" information, such as the local law requiring a three-foot clearance between cyclists and passing cars. Bicycle paths (as opposed to bicycle lanes) should be considered in the Cottonwood Canyons where feasible, to provide cycling opportunities for novice cyclists and others that are uncomfortable riding directly in traffic. Pedestrian safety at high-activity areas should be improved through enhanced crossings and signage for drivers.

Goal: Disseminate important information through a variety of outlets to improve the traveler experience

Strategy: Create a Scenic Byways Visitor/Transit Center.

A visitor/transit center should be established for the Cottonwood Canyons Scenic Byways. The center's location should be easily accessible to visitors and have adequate space to act as a major transit hub and parking facility. The visitor/transit center should act as a welcoming place and could offer roadway information and regulations, historic background of the Byways, and interpretive guides. The visitor/transit center should provide enhanced transit amenities; ideally, visitors to the Cottonwood Canyons would stop at the visitor center prior to reaching the Byways and opt to utilize transit services instead of driving. The visitor/transit center can also provide information for visitors on wildlife viewing and watershed protection.

Strategy: Develop interpretive materials that foster a sense of stewardship and increase awareness of travel conditions.

Interpretive materials can be used to guide visitors through the Cottonwood Canyons and provide educational takeaway materials for future reference. Interpretive materials could also include audio tours (via podcast or tour bus, for example), a Cottonwood Canyons Scenic Byways website, a CD/DVD package, or other published materials. The materials should be available online or at the visitor center. Interpretive maps and other information should be provided at key locations throughout the Cottonwood Canyons.

Strategy: Establish a Byways Committee to further the efforts of this plan.

In the past, a patchwork of agencies has been responsible for various policies in the Cottonwood Canyons. A stewardship group, comprised of representatives from these agencies, should be created for the purpose of achieving the goals and management strategies outlined in this CMP. The stewardship group should also work to further community education about the Cottonwood Canyons and the resources they provide to people in the Salt Lake area.

Goal: Protect the watershed and natural resources

Strategy: Encourage responsible recreation and personal responsibility for protecting resources.

Natural resource protection is a vital component of this CMP. Elements of protection include eliminating user-created trails, preparing a Vegetation Management Plan, study of appropriate trail accesses for climbing areas, and identifying land conservation opportunities to preserve viewshed and watershed resources. Particular areas of concern are Storm Mountain, Moss Ledge, Reynolds Flat, and Silver Lake in Big Cottonwood Canyon; and Albion Basin in Little Cottonwood Canyon.

Strategy: Protect scenic vistas.

Scenery is one of the most important features along each of the Byways and steps should be taken to ensure its protection. Two strategies should be undertaken: a scenery management plan and a signage plan. The scenery management plan will manage detracting uses, considering utility lines, tree trimming, and road cuts. A signage plan will improve signage effectiveness, minimize clutter, and enhance canyon appearance. It should also establish protocol for approving new signage along the Byways.

Strategy: Improve visitor facilities.

Watershed quality is the most critical natural resource protection issue. Further efforts in the Cottonwood Canyons should study the need for additional public restrooms and identify funds for operation and maintenance of the facilities.

Chapter 7 : Byway Specific Plans

"I am determined to do everything in my power to protect the watershed from which Salt Lake City draws its water supply..." -Gifford Pinchot

Years of development have created an eclectic mix of features and design styles in the different recreation sites. Use has also worn many sites down, and changing uses have made some features obsolete or overtaxed. A fundamental part of this CMP is analyzing existing visitor sites and proposing changes to improve the visitor experience while further protecting the natural resource. This chapter includes a summary of desired visitor amenities, an analysis of existing sites, and suggestions for improving them to enhance the Byway experience. Suggestions for designing these sites and further detailed design is included in the Interpretive Plan.

Visitor Services

The visitor sites along the Byways serve a variety of purposes. They are points of interest to a byway traveler; a recreation gateway and meeting point for the hiker, climber or skier; an interpretive opportunity to the interested audience; and a place to park, use a rest room, catch a bus, and plan your trip. Each site has its own purpose and this plan recommends the highest and best use for each site and the amenities and improvements needed to support these uses.

Visitor amenities can be described as either functional or experiential in nature. Functional amenities provide for the basic needs, while experiential features make a trip memorable or more enjoyable. Amenities include, but are not limited to:

Functional

1. Parking
2. Transit stop
3. Rest rooms
4. Benches
5. Phones, emergency phones
6. Information signs and bulletin boards
7. Wayfinding signs
8. Regulation signs

Experiential

1. Interpretation
2. Viewpoints
3. Aesthetics
4. Sensory experiences
5. Route planning information
6. Gateway feature

Many visitor sites already include many of these amenities while several new sites are proposed. Amenities could be upgraded at many sites to meet the increasing demands on them and to raise the level of service to that desired along the Byways. New amenities may include:

- Heated and enclosed transit stops
- Avalanche beacon testing centers
- Avalanche center information
- Road closure information

New interpretation is also proposed for most visitor sites. As discussed in the Interpretive Plan, some of these experiences will be on the ground (signs, interpretive trails, wildflower hikes, and live programs), while others will be in other media, such as the web or books for sale. There is a hierarchy of interpretive sites from the most visible, highest visited attractions to the most remote and low-key. The hierarchy of interpretive sites and what they offer includes:

- Visitor/ Transit center
- Gateway
  Kiosk, interactive media, gateway feature
- Destination
  Indoor and outdoor exhibits, kiosks, trails
- Major Site
  Kiosks, trails
- Minor Site
  Stand alone sign panel
- Wayside
  Stand alone sign panel
- Recreation site
  Sign panel attached to trailhead sign

Visitor Sites

Many of the recommendations of this Corridor Management Plan are improvements to specific visitor sites to improve safety and diversify the experiences available in the Canyon. The maps, illustrations, and photos that follow show a site-by-site approach to improving the visitor experience and better protecting the Canyon's natural resources. These site re-design projects are listed here as either major or minor improvements, based on the extent of the project. (See Figure 8 and 9 for locations)

Cottonwood Canyons Visitor Center *(Future)*

Big Cottonwood Canyon

Major

1) Big Cottonwood Canyon Gateway
2) Storm Mountain Area
3) Mill B / S-Curve Trailheads
4) Mill D / Cardiff Area
5) Silver Lake Visitor Center
6) Community Bike Trail

Minor

a) Oak Grove Trailhead
b) Argenta Pullout
c) Spruces Campground

Little Cottonwood Canyon

Major

1) Little Cottonwood Canyon Gateway
2) Grit Mill Recreation Site
3) White Pine Trailhead
4) Alta / Albion Area

Minor

a) Chain-up area
b) Valley View Pullout
c) China Wall Pullout

Future Transit and Visitor/ Transit Center

Site Goal: Transit and Visitor Center and transportation hub.

Issues and Opportunities:

1. *Create centralized canyon transit and information center*
Canyon travel conditions, watershed regulations, recreation options, public lands, transit, and parking.

Park City transit center

2. *Enhance the visitor experience*
Offer guidebooks, souvenirs, ticket sales, and sundries.

3. *Encourage transit use*
Create first-rate transit station, park-and-ride, and employee parking.

4. *Improve canyon closure procedures*
Create waiting area, canyon information center, and queueing system to reduce vehicle congestion during canyon closures.

5. *Provide trip planning information*
Wayfinding maps for summer and winter destinations.

6. *Continue to work with the City of Cottonwood Heights*
Redevelopment plans that incorporate a Visitor/ Transit Center. Through the appropriate process, secure development rights on important parcels of property.

Concept Site Design:

Interpretation:

- *Goal:* Introduce Byway themes, provide trip planning and traveler information and distribute materials and souvenirs.
- *Facilities:* Byway transportation and information center.
- *Themes:* Orientation (safe travel, recreation, resource protection), Byway themes (watershed, wilderness).

Big Cottonwood Canyon Scenic Byway

Twenty-seven visitor sites and numerous other shoulder pullouts are found along the Big Cottonwood Canyon Scenic Byway. This corridor is generally characterized by long stretches of free-flowing road, punctuated by visitor areas that are often cluttered, and confusing. The road is winding with short lines of sight, yet visitors will pull off the road and cross wherever they please. A marked bike shoulder has recently been established and signed on the road.

The road is adjacent to Big Cottonwood Canyon Creek and several sensitive wetland and riparian zones where wildlife frequent. Several stretches of road have steep banks down to the creek with overhanging vegetation.

Existing Road Safety Concerns:
Major crash sites (Big Cottonwood Canyon park-and-ride), major pedestrian congestion areas (Storm Mountain, Mill B/"S-Curve", Cardiff). Winter time hazards (avalanche closures).

Recommended Corridor Improvements:
The Byway visitor experience can be improved with a few overarching efforts, including:

1. Add gateway feature to give visitors a feeling that they have arrived someplace special.
2. Direct people to visitor centers, official waysides, and recreation areas with the capacity to handle more visitors and to avoid sensitive resource areas.
3. Add pullouts for slower drivers at key locations. Provide a defined chain up area at the canyon entrance. Pursue strategies with UTA, UDOT, and canyon entities to reduce traffic congestion.
4. Foster a year-round, first-rate transit system and encourage carpooling to mitigate parking congestion.
5. Continue to encourage stewardship and responsible recreation through interpretation, sensitive design, and proactive resource preservation.

6. Formalize pullouts and parking areas where stopping is desired. Remove pavement or gravel at undesirable areas.
7. Refine procedures for emergencies and canyon closures to minimize risk.
8. Reduce number of signs and eliminate non-essential signs.
9. Continue improvement of cycling conditions.

Recommended Road Signage:
Simplify signage at canyon mouth. Add road advisory signs at sharp curves. Reduce number of bike warning signs to key problem areas. Add pedestrian warning signs at congested areas. Add roadside signs for points of interest, including geologic features, visible peaks, and avalanche paths.

Recommended Road Improvements:
Add pullouts for slower drivers at key locations. Enhance the defined chain up area at the Canyon entrance. Pursue strategies with UTA, UDOT and canyon entities to reduce traffic congestion. Evaluate turning movements and circulation at park-and-rides.

Existing Interpretation:
Programs: Amphitheater at Storm Mountain, snowshoeing, Spruces Campground, and the resorts
Signs: Watershed signs, USFS Geology Tour, interpretive signs at Argenta, Silver Lake outdoor interpretive signs

Recommended Corridor Interpretation:
Using the Watershed theme as a framework, add interpretation as outlined in the Cottonwood Canyons Interpretive Plan. Remove existing interpretation that has reached the end of its life-cycle. Work with Cottonwood Canyons Foundation to continue to provide interpretive programs and stewardship opportunities. Work with Wasatch Mountain Club, resident historians, and others to interpret canyon history.

BIG COTTONWOOD CANYON

Major Sites

1) Big Cottonwood Canyon Gateway

Redesign park-and-ride to create canyon gateway center and first-rate transit station. Add gateway signage, interpretation, byway information, transit enhancements, rideshare and, chain-up area.

2) Storm Mountain Area

Study possibilities for site redesign to enhance picnicking, fishing, interpretation, and access to climbing. Study roadside parking and provide enhanced pedestrian facilities and transit stop.

3) Mill B "S-Curve" Trailheads

Provide enhanced pedestrian and transit facilities to discourage roadside parking. Use visitor information to redirect high use to other sites.

4) Mill D / Cardiff

Redesign site to organize parking, buffer site from roadway, add an enhanced transit stop, and create an interpretive area with overlook.

5) Silver Lake Center

Enhance site by creating an enhanced bus stop and winter-time interpretation.

6) Community Bike Trail

Study feasibility of a year-round, continuous trail connecting Brighton to Cardiff as an alternative to roadway for cyclists and pedestrians, with stops at major destinations and communities. Provide transit access at trailheads.

Minor Sites

a) Oak Grove Trailhead

Biking and hiking information and amenities, interpretation, and transit stop. Study possible connection to Bonneville Shoreline Trail.

b) Argenta

Wildlife watching, natural history with overlook viewpoints, signs, and spotting scope.

c) Spruces Campground

Enhance interpretation and programs, and improve transit access.

Winter
Summer
Year Round

Figure 8
Visitor Site Locations

Cottonwood Canyons Scenic Byways Study

0 0.5 1 2 3 4 Miles

1:22,085

1 Big Cottonwood Canyon Gateway

Site Goal: Canyon Gateway and transportation node

Issues and Opportunities:

1. *Establish a sense of arrival*
Create Byway Gateway, establish canyon style through landscape, stone wall and, appropriate signage.

2. *Encourage transit use*
Create first-class transit stop and amenities.

3. *Improve safety and circulation efficiency*
Simplify parking and bus circulation, and add chain-up area. Create pedestrian friendly visitor area. Evaluate turn lanes.

Interpretation:

- *Goal:* Introduce Byway themes, provide trip planning and traveler information, and add site specific interpretation.
- *Facilities:* Byway information center, interpretive kiosk, and trail / viewpoint along creek.
- *Themes:* Orientation (safe travel, recreation, resource protection), Byway themes (watershed, wilderness), and site-specific interpretation (water development).

Concept Site Design:

2 Storm Mountain Picnic Area

Site Goal: Recreation site and major interpretive area.

Issues and Opportunities:

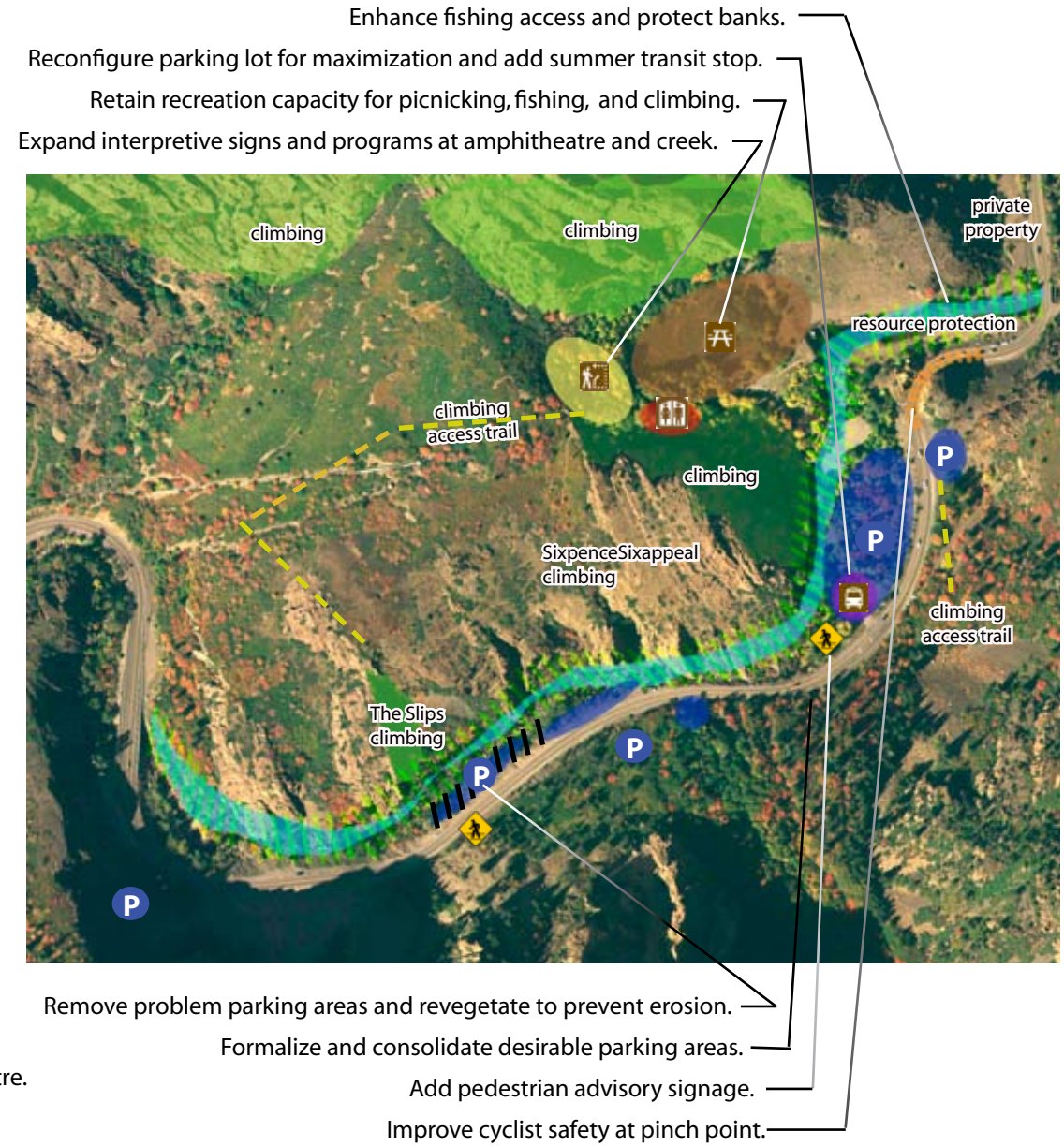
1. *Improve recreation behavior and resource protection*
Protect historic features. Provide incentives and ways to direct activity and encourage stewardship. Reclaim eroded areas.

2. *Encourage transit use and carpooling*
Reconfigure site to accomodate transit stop with no net loss of parking. Study possible transit and carpooling incentives.

3. *Improve parking efficiency*
Reconfigure parking lot and roadside parking to improve safety and availability. Eliminate problematic parking.

4. *Study improved safety*
Formalize trails to climbing areas, add pedestian warning signage, address cycling pinch spots, and add roadside warning signs.

Concept Site Design:



Interpretation:

- *Goal:* Major interpretive area and programs.
- *Facilities:* Interpretive kiosks, trail, and programs at the amphitheatre.
- *Themes:* Canyon history (roadway, vacationing, logging), CCC, water, and historic resources on site.

3 Mill B "S-Curve" Trailheads

Site Goal: Recreation site.

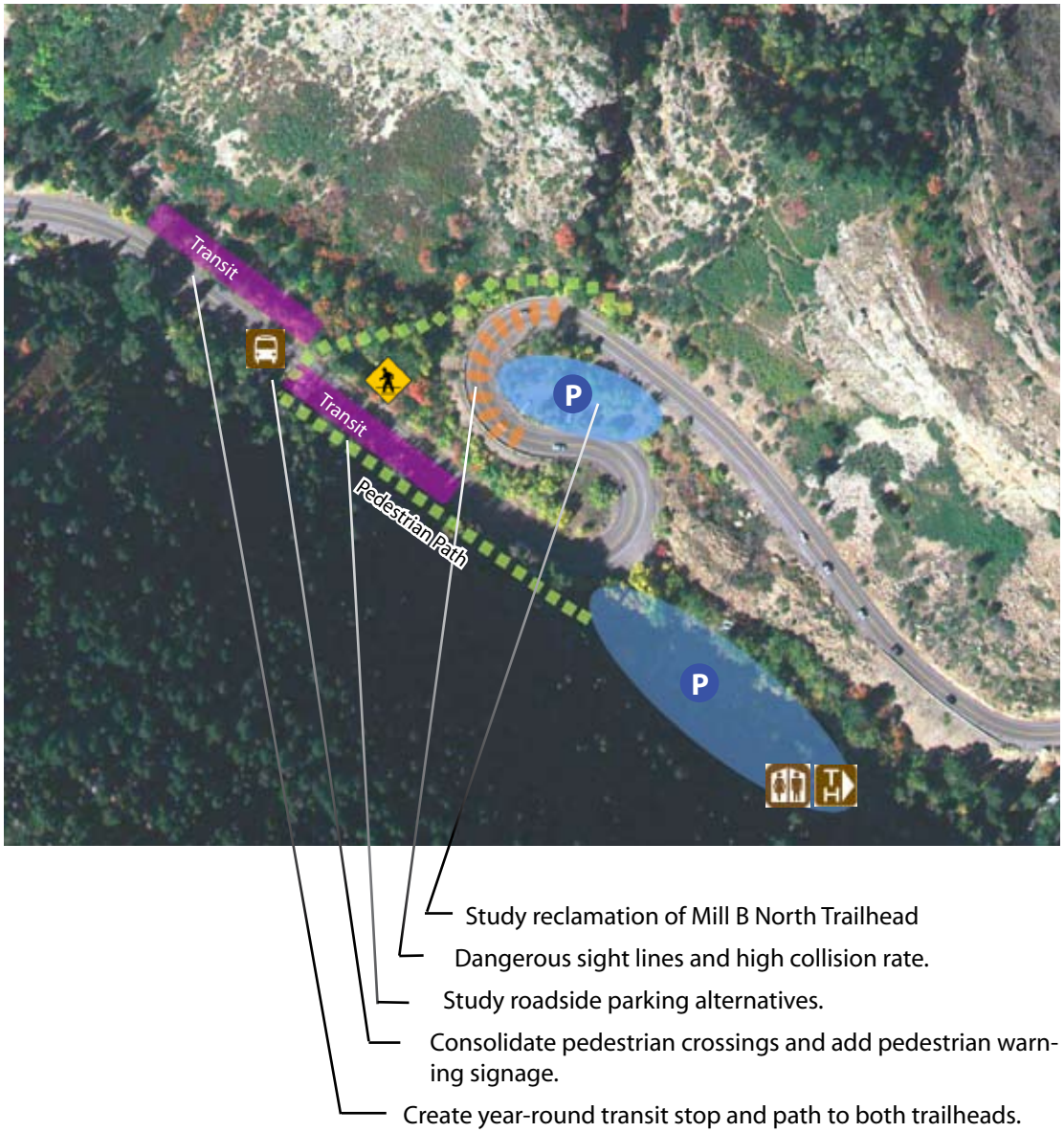
Issues and Opportunities:

1. *Overcrowded parking and roadway congestion*
Maintain trailhead, but redirect users to other areas. Reconfigure parking for no net loss of parking, but safer vehicle and pedestrian circulation.

2. *Encourage transit use and carpooling*
Create transit stop and study possible transit and carpooling incentives to maximize parking.

3. *Improve roadside safety*
Address high collision rates and difficult sight lines by minimizing unsafe roadside parking, reconfiguring Mill B North trailhead, and adding road advisory signs. Add pedestrian warning signage. Study winter parking and snow plowing.

Concept Site Design:



Interpretation:

- *Goal:* Interpretation and information for recreationists.
- *Facilities:* Interpretive panel adjacent to trailhead information.
- *Themes:* Site-specific themes (logging, water, and wilderness).

4 Cardiff/Mill D/Reynolds Flat Recreation site

Site Goal: Recreation site and major interpretive area.

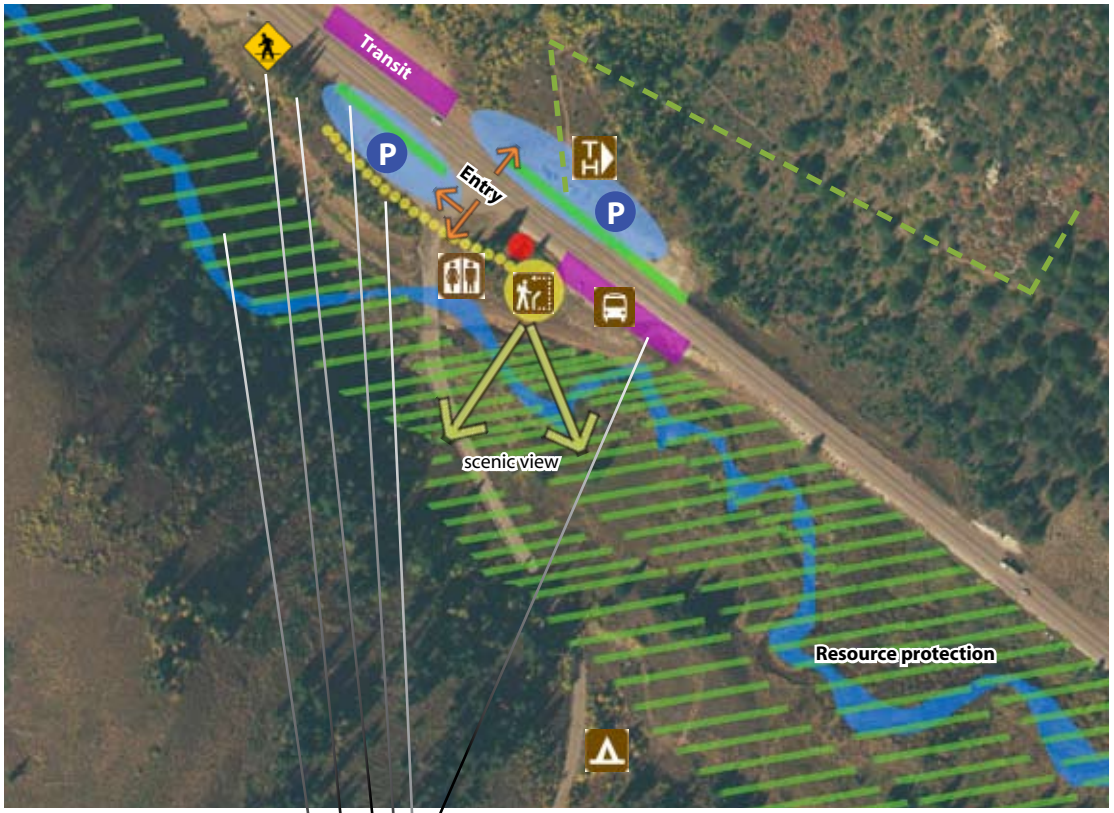
Issues and Opportunities:

1. *Better define site*
Organize parking and create one entry to each lot. Define road shoulder for safety and aesthetics. Designate resource protection areas along the creek. Consolidate pedestrian crossings.

2. *Encourage transit use and carpooling*
Enhance the transit stop and study possible transit and carpooling incentives to maximize parking.

3. *Enhanced recreation facilities*
Maintain year-round restroom, create interpretive area and path to overlook area. Restore old road grade into designated path to protect sensitive wetland and riparian areas from recreation use.

Concept Site Design:



Enhanced transit stop.

Interpretive path and overlook.

Designate parking lot entries and Cardiff road turnoff. Separate parking areas from the road with landscaped swale.

Determine feasibility of designated snow storage areas.

Consolidate pedestrian crossings and add pedestrian warning signage.

Protect sensitive wetland and riparian areas from recreation use.

Interpretation:

- *Goal:* Major interpretive site.
- *Facilities:* Interpretive path and overlook with panels.
- *Themes:* Site-specific themes (geology, glaciers, mining, wildlife and wetlands).

5 Silver Lake Center

Site Goal: Recreation site and interpretive destination.

Issues and Opportunities:

1. *Create summer and winter interpretive exhibits*
Create high quality indoor exhibits and add byway information.

2. *Parking exceeds capacity*
Formalize shared parking agreement and use signs to point to overflow parking.

3. *Encourage transit use*
Create first-class transit stop and amenities.

4. *Resource protection*
Protect wetlands, uplands, and riparian areas. Preserve the lake's viewshed.

Concept Site Design:

Interpretation:

- *Goal:* Destination, multi-media interpretation, Byway information, sales of interpretive materials and souvenirs. Expand School programs.
- *Faclities:* Interpretive trail, exhibits and outdoor kiosk.
- *Themes:* Byway themes and orientation. Continue existing and proposed themes. Consider additional location for interpreting Brighton history.

6 Brighton Community Trail (study feasibility)

Site Goal: Study feasibility of accessible recreation trail.

Issues and Opportunities:

1. *Disconnected trail system in canyon*
Study possibility of creating a unified trail system separate from the road with potential for all-season activity.

2. *Provide an easier, more accessible trail to canyon visitors*
Study an alternative to hiking steep trails. Possibility for interpretive experience.

3. *Study an alternative to bicycling the road*
Separated trail provides a challenge in a safer environment and encourages canyon residents to bicycle commute.

Interpretation:

- *Goal:* Interpretation and information for recreationists.
- *Facilities:* Interpretive kiosk at trailheads and along trail at key features.
- *Themes:* Site-specific themes (logging, water, mining, and history of Big Cottonwood communities).

Concept Site Design:

Study ways to create a continuous trail by connecting existing trails, back roads, and paths.

Begin/end trail at major trailheads and transit stops to create a loop.

a Oak Grove Trailhead

Site Goal: Develop trailhead.

Issues and Opportunities:

1. *Create recreation opportunity at currently closed site*
Create trailhead for Bonneville Shoreline Trail hikers with restroom, parking, and interpretation to relieve pressure on other canyon trails and trailheads.

2. *Encourage transit use*
Consider transit stop to facilitate tri-canyon recreation loops or one-way Bonneville Shoreline Trail travel.

3. *Protect wilderness area*
Make users aware they are entering USFS and wilderness area and that no bikes are permitted on trails here.

Concept Site Design:

Interpretation:

- *Goal:* Interpretation and information for recreationists.
- *Facilities:* Interpretive panel adjacent to trailhead information.
- *Themes:* Site-specific themes (foothills zone, wildlife and winter range and geology (Bonneville Shoreline)).

b Argenta

Site Goal: Create minor interpretive site.

Issues and Opportunities:

1. *Established, but lightly used pullout*
Consolidate two separate but adjacent sites to create a more complete interpretive site. Designate parking area to allow snow removal for winter use. Establish safe access onto SR-190 with adequate sight distance.

2. *Establish a wildlife watching area to eliminate unsafe parking*
Moose, beaver, and other wildlife are often sighted here. Add spotting scopes and a barrier to discourage people from approaching wildlife.

3. *Provide emergency staging area*
Provide emergency staging and turnaround areas.

Concept Site Design:

Interpretation:

- *Goal:* Minor interpretive site.
- *Facilities:* Interpretive panels along a path and overlook.
- *Themes:* Site-specific themes (wildlife, habitat types, mining).

Spruces Campground

Site Goal: Recreation site and interpretive area.

Issues and Opportunities:

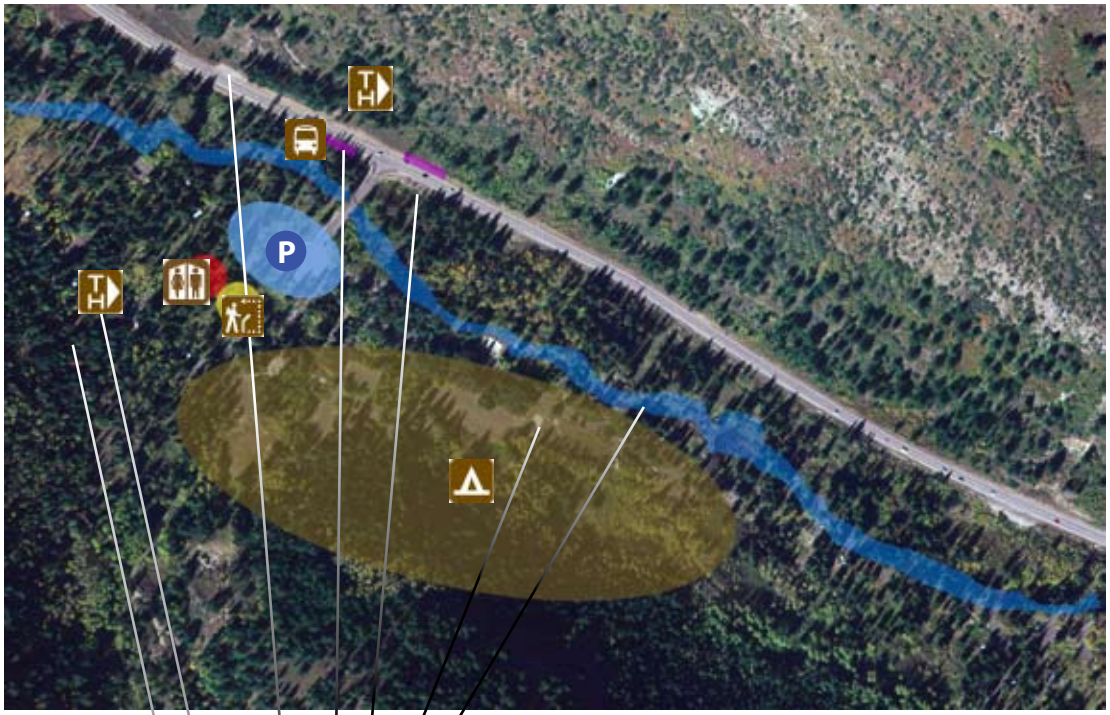
1. *Encourage transit use and carpooling*
Provide transit stop and study possible transit and carpooling incentives to maximize parking and address roadside parking problems.

2. *Enhance interpretation*
Interpret historic resources and natural resources for the captive audience here.

Interpretation:

- *Goal:* Interpretive materials and programs for recreationists.
- *Facilities:* Interpretive kiosk and programs at pavilion and camp ground.
- *Themes:* Site-specific interpretation (USFS history, tree nursery, watershed, wildlife, historic buildings, and site.)

Concept Site Design:



d Stairs Power Plant

Site Goal: Protect and interpret historic resource.

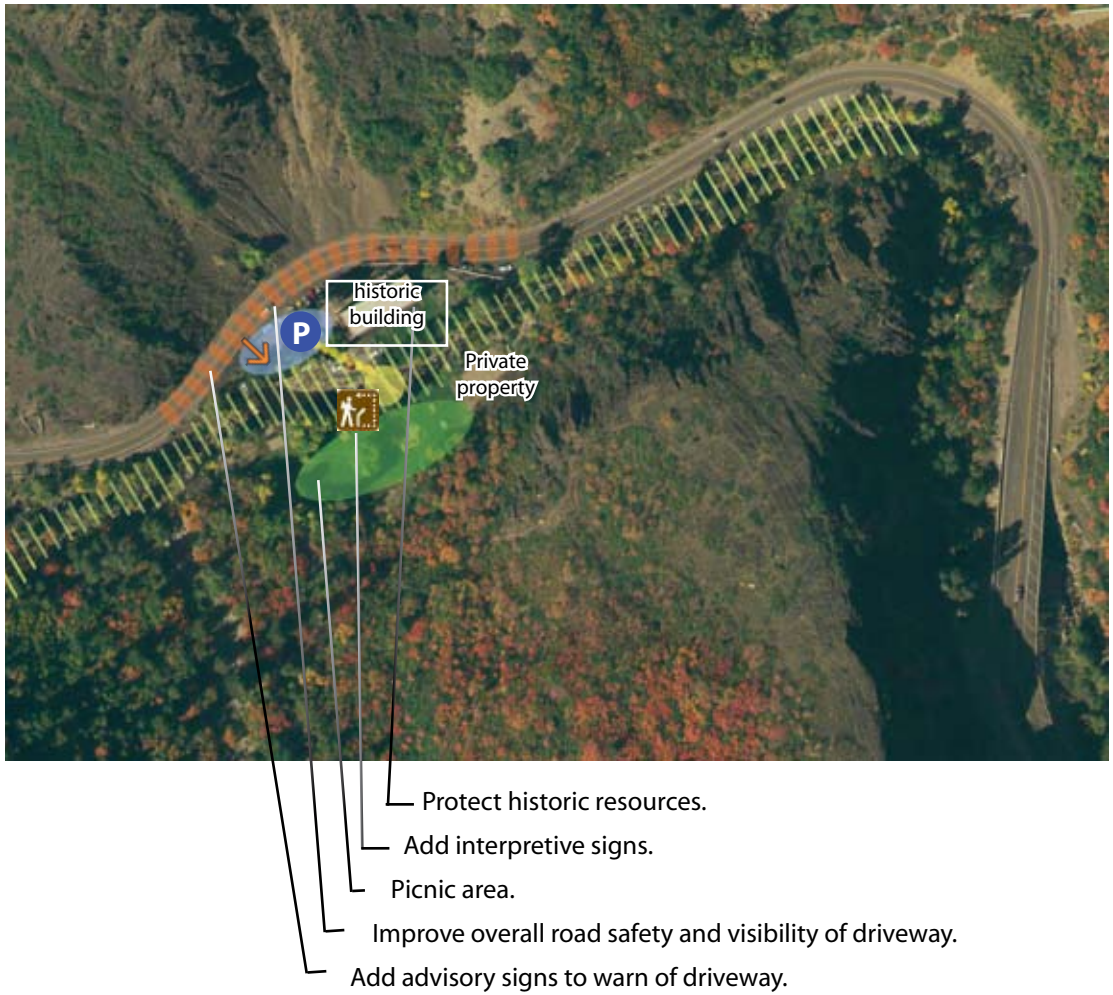
Issues and Opportunities:

1. *Protect and interpret important historic resource*
Continue to research, record, and preserve the historic building, site, and waterworks. Find suitable location for off-site interpretation.

2. *Private site available to public by appointment*
Currently rented out for private events. Provide interpretation for the captive audience here.

3. *Improve an unsafe turnout*
No advance signage or road safety signs for the driveway.

Concept Site Design:



Interpretation:

- *Goal:* Interpretation geared toward invited visitors.
- *Facilities:* Interpretive panels and viewpoint in coordination with property owner. Historic tours and interpretive programs by appointment.
- *Themes:* Site-specific themes (watershed, water development, historic site, and roadway history.)

Little Cottonwood Canyon Scenic Byway

There are twenty-one visitor sites and numerous shoulder pullouts adjacent to Little Cottonwood Canyon Scenic Byway. This corridor is generally characterized by a steep, tight road corridor with few pullouts, short sight distances, and few opportunities to pass.

Existing Road Safety Concerns:
Major crash sites, major pedestrian congestion areas (park-and-ride, Grit Mill, roadside parking for visitors) and wintertime hazards (avalanche zones, road closures).

Recommended Corridor Improvements:
The Byway visitor experience can be improved with a few over-arching efforts, including:

1. Add a gateway feature to give visitors a feeling they have arrived someplace special.
2. Direct people to visitor centers, official waysides, and recreation areas with the capacity to handle more visitors and avoid sensitive resource areas.
3. Foster a year-round, first-rate transit system, and encourage carpooling to mitigate parking congestion and allow for loop trips.
4. Continue to encourage stewardship and responsible recreation through interpretation, sensitive design, and proactive resource preservation.
5. Formalize pullouts and parking areas where stopping is desired. Remove pavement or gravel pullout at undesirable areas.
6. Refine procedures for emergencies and canyon closures to minimize risk.
7. Reduce number of signs and eliminate non-essential signs.
8. See additional comments in the Site Inventory in the Appendix.

Recommended Road Signage:
Add scenic byway signage at gateway. Remove unnecessary signs. Add road warning signs at key crash problem areas. Reduce number of bike warning signs to key problem areas. Add pedestrian warning signs and road markings at pedestrian congestion areas. Add roadside signs pointing to points of interest, including geologic features, visible peaks, and avalanche paths. Clarify where passing is allowed.

Recommended Road Improvements:
Add pullouts for slower drivers at key locations. Enhance the defined chain up area at the canyon entrance. Pursue strategies with UTA, UDOT, and canyon entities to reduce traffic congestion. Redesign park-and-ride jointly with Temple Quarry Trailhead to improve circulation and canyon closure efficiency.

Existing Interpretation:
Programs: At Snowbird, Alta, and Temple Quarry Trailhead.
Signs: Watershed signs, Temple Quarry Trailhead, Town of Alta, Snowbird and lookout at park-and-ride.

Recommended Corridor Interpretation:
Using the watershed theme as a framework, add interpretation as outlined in the Cottonwood Canyons Interpretive Plan. Remove existing interpretation that has reached the end of its life-cycle. Work with Cottonwood Canyons Foundation to provide interpretive programs and stewardship opportunities.

LITTLE COTTONWOOD CANYON

Major Sites

1) Little Cottonwood Canyon Gateway

Redesign park-and-ride and Temple Quarry Trailhead to add gateway signage, interpretation, byway information, transit enhancements, and rideshare area. Improve circulation and provide recreation information.

2) Grit Mill

Study a climbing trailhead and bus stop. Add restrooms, formalize or designate trails to climbing areas.

3) White Pine Trailhead

Redesign the entrance to improve roadway safety, study parking to maximize existing space, add a year round transit stop, and interpretation.

4) Alta / Albion Area

Study potential Little Cottonwood Canyon visitor, transit and interpretive center. Enhance interpretation and study transit operations for Albion Basin access.

Minor Sites

a) Formalize driver pull-out and chain up area

b) Possible valley view pullout, viewpoint, and interpretive site

c) China Wall pullout, viewpoint and interpretive site

d) Enhance interpretation at trailheads, campgrounds, and within resorts

Winter

Summer

Year Round

Figure 9
Visitor Site Locations

Cottonwood Canyons Scenic Byways Study

Miles
0 0.5 1 2 3 4
1:20,000

1 Little Cottonwood Canyon Gateway

Site Goal: Canyon gateway and transportation node.

Issues and Opportunities:

1. *Redesign gateway area*
Address traffic flow problems and canyon closures, and accomodate more parking and better transit.

2. *Limited sense of arrival*
Create gateway and establish canyon style through landscape, stone wall and appropriate signage.

3. *Encourage transit use*
Create first-class transit stop and priority bus queuing.

4. *Enhance interpretation*
Create interpretive gateway to introduce Byway themes, provide trip planning and traveler information and add site specific interpretation.

5. *Accomodate hikers*
Formalize access to trails and parking to eliminate roadside parking. Create first-class transit stop and priority bus parking.

Interpretation:

- *Goal:* Introduce Byway themes, provide trip planning and traveler information, and add site specific interpretation
- *Facilities:* Byway information center, interpretive kiosk and trail / viewpoint up to overlook and at Quarry Trail.
- *Themes:* Orientation (safe travel, recreation, resource protection), Byway themes (watershed, wilderness) and site-specific interpretation (quarry, geology, wildlife).

Concept Site Design:

2 Grit Mill Trailhead

Site Goal: Recreation site and interpretation.

Issues and Opportunities:

1. *Open site to the public to reduce vandalism and dangerous activity*
Demolish grit mill, create historic record of building.

2. *Establish climbing trailhead*
Create destination for climbing. Emergency phone, rest rooms, trails to climbing spots. Reconfigure parking away from road.

3. *Encourage transit use*
Create on-demand summer transit stop.

Concept Site Design:

Interpretation:

- *Goal:* Interpretation and information geared toward recreationists.
- *Facilities:* Interpretive panels at view area.
- *Themes:* Site-specific interpretation: geology, quarrying, climbing history, and safe climbing.

3 White Pine Trailhead

Site Goal: Major recreation and interpretation site.

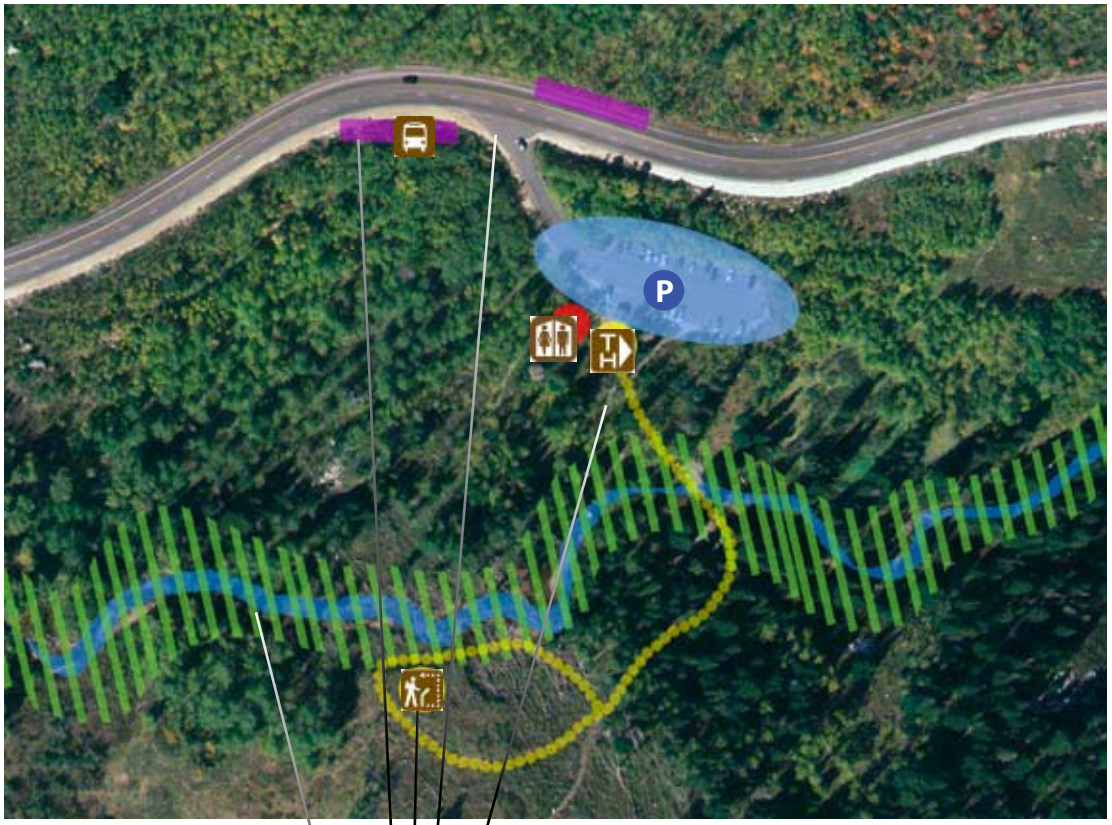
Issues and Opportunities:

1. *Improve safety*
Address unsafe sight distance, roadside parking.

2. *Encourage transit use and carpooling*
Enhance the transit stop and study possible transit and carpooling incentives to maximize parking.

3. *Enhance interpretation*
Study interpretive trail experience (summer outside wilderness boundary) and add interpretive kiosk (year-round) in parking lot.

Concept Site Design:



Interpretation:

- *Goal:* Major interpretive experience.
- *Facilities:* Interpretive trail and trailhead interpretive kiosk.
- *Themes:* Site-specific interpretation: avalanche, ecological succession, watershed, and wilderness.

4 Alta Albion Area

Site Goal: Develop visitor and transportation node.

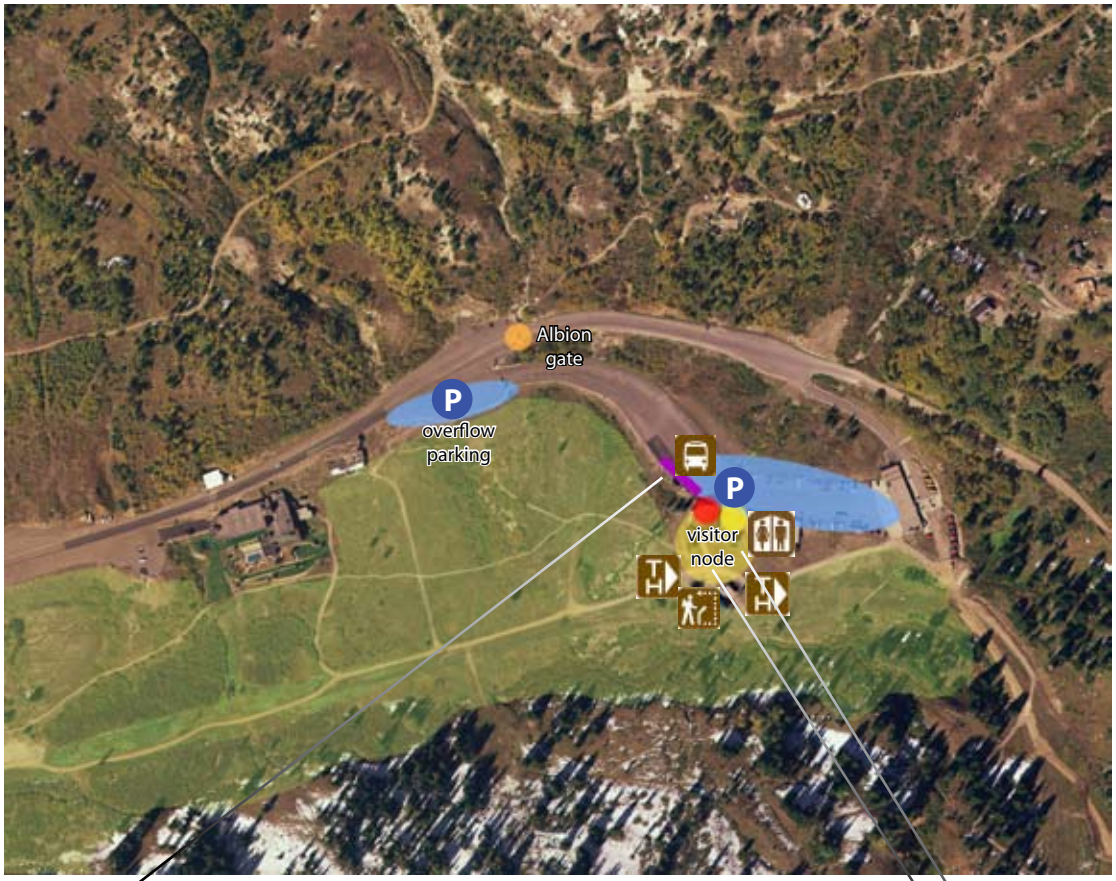
Issues and Opportunities:

1. *No summer destination at Alta and no "town center"* Create interpretive destination and visitor area with trailheads, interpretation, dining, and visitor services.

2. *Encourage transit use* Create year-round transit station and study summer transit options to reduce automobile traffic on Albion Basin Road.

3. *Resource protection* Protect sensitive areas in the Albion Basin by concentrating use at base area and encouraging use of alternate trails.

Concept Site Design:



Create year-round transit stop for canyon transit.

Create destination interpretation with indoor exhibits, outdoor plaza and panels, and connection to interpretive Town Trail.

Create visitor node with transit center, trailhead, restroom, and services.
Short term: Partner to provide visitor services at existing facilities.
Long term: Seek site and funding for new building.

Interpretation:

- *Goal:* Destination, multi-media interpretation, Byway information, interpretive materials and souvenirs.
- *Facilities:* Indoor and outdoor exhibits and interpretive trail.
- *Themes:* Byway themes and orientation. Site-specific interpretation: Alta Town history, ski history, watershed, wildflowers, wildlife and avalanche control history.

a Little Cottonwood Chain-up Area

Site Goal: Chain-up area and travel information.

Issues and Opportunities:

1. *Under-utilized site*
Signed as chain-up area, but past the flashing 4x4 sign. and is not well-used.

2. *Possible gateway feature site*
Gateway feature and photo opportunity.

3. *Road information sign*
Advance warning of canyon closures and chain restrictions.

Concept Site Design:

Interpretation:

- *Goal:* Traveller information
- *Facility:* Panel sign
- *Themes:* Safe travel, canyon closure, instructions for chain installation.

b City Viewpoint Pullout

Site Goal: Viewpoint and interpretive pullout.

Issues and Opportunities:

1. *Existing informal pulloff*
Popular pulloff for photographs of valley and of waterfall across canyon, but unmarked pulloff is a traffic hazard. Create formal pull-off with advance signage, paved pulloff and designated viewpoint.

2. *Safe pulloff for year-round use.*
Accommodate snow storage and safe winter pulloffs. Locate pullouts to double as emergency staging areas during winter. Evaluate westbound only pull-off.

3. *Enhance interpretation*
Currently no information available. Add interpretive signs at viewpoint area.

Concept Site Design:

Interpretation:

- *Goal:* Interpretive pulloff.
- *Facilities:* Interpretive signs at viewpoint.
- *Themes:* Site-specific interpretation (air quality, glaciation, and wilderness).

C China Wall Pullout

Site Goal: Interpretive pullout.

Issues and Opportunities:

1. *Existing informal pulloff*
People pulloff for photographs and unmarked pull-off is a traffic hazard. Create formal pulloff with advance directionals, paved pulloff and designated viewpoint.

2. *Avalanche Path*
Situated in avalanche path, winter use prohibited. Opportunity for summer interpretation.

3. *Enhanced preservation*
Opportunity to further preserve and interpret this historic artifact. Continue cultural resource inventory.

Concept Site Design:

Interpretation:

- *Goal:* Interpretive pulloff.
- *Facility:* Interpretive signs at viewpoint.
- *Themes:* Site-specific interpretation (transportation history, China Wall and avalanches).

Chapter 8 : Implementation

"For the plan to be successful, securing funding from a variety of sources is critical."

Implementation of the CMP will be an ongoing process guided by the Scenic Byways Committee. For the plan to be successful, securing funding from a variety of sources is critical. In addition to funding for capital projects, funding must also be secured for ongoing operations and maintenance. Sources may include the National Scenic Byways Program, UDOT, the Federal Transit Administration (FTA), the Federal Highways Administration (FHWA), Utah Trails and Pathways, the Land and Water Conservation Fund, Robert Wood Johnson Foundation, and the Utah Riverway Enhancements Program.

The implementation plan below reflects a desire to protect resources and enhance the visitor experience. Projects are listed according to the goals and strategies set out through the Corridor Management Plan and are arranged by the following categories:

- Additional Plans and Studies
- Ongoing Byway Improvements
- Interpretation and Communication

Byway Plans and Studies

Project	Description	Priority	Cost	Responsibility
Establish a Scenic Byway Committee	Establish Scenic Byway Committee to implement these plans	Immediate	$	SB Committee
Economic study for summer transit Improve transit service Prepare a transit plan	Increase winter bus frequencies Extend service hours to transport employees to resorts Establish express bus service from locations in the Valley to ski resorts in winter Perform an economic study for summer transit Provide stops at key areas noted in the CMP	Short term	$$	SB Committee, USFS, UDOT, SL County, WFRC, Ski Resorts
Prepare a Transportation Demand Management Plan	Further strategies to reduce single occupant auto travel Approach school districts to use their parking lots for park-and-ride lots on weekends Disseminate better information on the internet or through text messaging about driving conditions, bus arrivals Establish a 511 service where all Canyon information can be disseminated to drivers Improve amenities at park-and-ride lots to encourage transit use Expand park-and-ride opportunities where possible Add more variable message signing to disseminate Canyon information	Short term	$$	UDOT, SB Committee, USFS, Ski Resorts, SL County, WFRC
Improve parking efficiency Prepare a parking management plan	Install real-time parking information and availability at approaches to park-and-ride lots Build in to the plan ways to reduce demand for parking Reconfigure existing areas to optimize parking Work with ski resorts on possibilities for parking pricing strategies Study roadside parking for safety and resource protection	Short term	$$	UDOT, SB Committee, Ski Resorts, USFS, SL County

Project	Description	Priority	Cost	Responsibility
Prepare a signage plan	Develop plan to improve signage effectiveness, minimize clutter, and enhance canyon appearance Establish protocol for approving new signage along the Byways	Medium term	$	SB Committee, USFS, UDOT, Salt Lake County
Prepare a scenery management plan	Develop plan to manage detracting uses, considering utility lines, tree trimming, and road cuts	Long term	$	SB Committee, USFS, UDOT, Salt Lake County
Develop specific area plans to improve circulation at gateways	Improve access and circulation at the mouth of Big and Little Cottonwood Canyons Redesign parking sites at the mouth of each Canyon Study and improve safety at the intersection of Big Cottonwood Canyon Road and Wasatch Boulevard Study and design a queue-jump lane at the mouth of Big and Little Cottonwood Canyon Consider HOV lanes at the mouth of Little Cottonwood Canyon	Short term	$$	UDOT, SB Committee, USFS, Ski Resorts, Salt Lake County, Sandy City, City of Cottonwood Heights
Destination center plan	Develop plan for new destination interpretation / visitor hub at the end of each Byway	Medium term	$	SB Committee, USFS, UDOT, Ski Resorts, Town of Alta, Brighton Community
Complete a Brighton Community Trail study	Prepare a feasibility study for possible Brighton Community Trail	Long term	$	SB Committee, USFS, UDOT, Solitude and Brighton

Ongoing Byway Improvements

Project	Description	Priority	Cost	Responsibility
Improve cyclist conditions	Clear debris from roadway frequently Implement signage at key areas Complete expanded shoulder up Big Cottonwood Canyon Explore ways to improve cyclist safety in Little Cottonwood Canyon Provide driver education through interpretive materials	Short term	$	UDOT, SB Committee
Improve pedestrian areas	Implement pedestrian safety measures at congested areas.	Short term	$	SB Committee, UDOT
Enhance gateways to Byways	Develop gateway features to mark a transition point Develop visitor information for gateways Install gateway signage Improve amenities at park-and-ride lots	Medium term	$$	SB Committee, USFS, UDOT
Pursue a location to develop a Byways Visitor/ Transit Center	Develop indoor visitor center to serve both canyons Provide consolidated transit service and amenities Provide driver education and interpretation on-site Continue to work with Cottonwood Heights to further opportunities for complementary development on-site	Long term	$$$	SB Committee, UTA, City of Cottonwood Heights, Ski Resorts, Salt Lake County, USFS, Salt Lake CVB
Construct or formalize waysides	Build new interpretive sites and waysides at major and minor sites along the Byways, as noted in the CMP and IP	Medium term	$$$	SB Committee, USFS, UDOT
Continue visitor site improvements	Redesign and rebuild major and minor interpretive sites as noted in the CMP and IP	Medium term	$$$$	SB Committee, USFS, UDOT
Secure funding for basic needs	Plowing Toilet maintenance Bike lane clearing Additional rangers Education programs	Short/Mid/ Long Term	$$$	SB Committee, USFS, Salt Lake County, UDOT

Interpretation and Communication

Project	Description	Priority	Cost	Responsibility
Develop a Virtual Visitor Center	Compile information on Canyon conditions, park-and-ride availability, carpooling options Compile information on recreation opportunities and interpretive experiences Develop website to serve as virtual visitor center	Short term	$$	SB Committee, USFS, UDOT, SL County, SL City Watershed
Interpretive training	Train visitor service staff (front desk, reservations, servers, ski instructors, bus drivers, etc.) on canyon stories and responsible recreation.	Short term	$	SB Committee, resorts, SL City Watershed, USFS
Community identity signs	Design and install signs marking the entrance of Alta, Brighton, and Silver Fork. (Snowbird and Solitude)	Short term	$	SB Committee, community councils
Support interpretive programs	Snowshoeing, Ski with a Ranger, etc.	Short term	$	SB Committee, stewardship groups, SL City Watershed
Support interpretive events	Wasatch Wildflower Festival, etc.	Short term	$	SB Committee, stewardship groups, SL City Watershed
Support volunteer stewardship	Expand Cottonwood Canyons Foundation ability to provide interpretive programs.	Medium term	$	SB Committee, stewardship groups
Support multi-media interpretation	Support efforts to create audio guide, souvenir books, hiking guide, bus interpretation	Long term, and ongoing as opportunity arises	$	SB Committee, interpretive groups, SL City Watershed, USFS
Historic preservation program	Work with historic interest groups (Alta Historical Society, etc) to record oral histories and historic sites and to promote stewardship	Short term	$	SB Committee, historic groups, State History
Enhance Silver Lake as an Interpretive Center	Fabricate new indoor exhibits	Short Term	$$	SB Committee, USFS, SLC Watershed, Cottonwood Canyons Foundation