

SNOWBASIN 5 YEAR DEVELOPMENT PLAN



Prepared by:
Snowbasin Resort Company
Four MTN Advisors
Cirrus Solutions

Snowbasin Resort 2014
Five Year Mountain Projects Planning
November 11, 2014

INTRODUCTION

A major update to the Snowbasin Resort Mountain Master Plan was created in 1995 to incorporate planning and development for the 2002 Olympic Winter Games, new road access and land exchanges. The Little Cat lift was replaced with a high-speed detachable lift in 2008. The Mountain Master Plan was updated again in 2009 and incorporated changes in operations resulting from the major projects completed for the Olympics. These projects included the current base lodges, Strawberry Gondola, John Paul lift, Mt. Ogden Tram, snowmaking and water supply and new parking areas.

The following projects have been identified as the next set of projects within the Master Plan to meet the goals and objectives of the resort over the next five year period. The projects are generally consistent with the previous ski area master plans and are organized to increase operational efficiency and guest enjoyment. Snowbasin Resort operations are on private lands and on National Forest lands under a Special Use Permit. The projects are located within the Special Use Permit Boundary and on the private lands.

1. **SNOWMAKING STORAGE POND CONSTRUCTION**
2. **WILDCAT LIFT REPLACEMENT**
3. **WILDCAT SNOWMAKING**
4. **MT. OGDEN ROAD SKI RUN IMPROVEMENTS**
5. **STRAWBERRY LIFT INSTALLATION**
6. **UPPER PORKY FACE ACCESS ROAD REHABILITATION**
7. **LOWER PENNY LANE SKI RUN IMPROVEMENTS**

1. SNOWMAKING STORAGE POND CONSTRUCTION

Purpose and Need

Snowbasin supplements natural snowfall during early season and maintains quality snow conditions on areas of wear with an extensive snowmaking system. The water supply for the snowmaking system is from the existing water well system. Typically, the wells pump directly to the snowmaking system and to the existing water storage tanks from which a portion of the snowmaking water supply can be delivered. The current system requires that the well system pump high volumes of water to supply the system causing high electrical power use and wear on the pump and well system. During extended periods of cold weather the water supply from the wells cannot provide

enough water to run the snowmaking system at maximum capacity. Well pumping in conjunction with the storage tanks only provides enough water supply to run the system at maximum capacity for approximately 8 hours. After that time, assuming temperatures remain cold, the supply from just the wells only allows the system to run at 55% of capacity. The purpose of the proposed reservoir is to provide the required water storage for snowmaking at maximum efficiency to achieve the required snow coverage in the least amount of time. This will reduce required water supply pumping rates, electrical power use and allow the snowmaking system to operate at maximum efficiency during cold periods.

Project Description

A Snowmaking Reservoir Feasibility Study was completed by Aqua Engineering and Loughlin Water Associates in 2014. As proposed in the feasibility study, the proposed snowmaking water storage reservoir is located within the current Snowbasin Resort operations boundaries at 8,300 feet elevation. The site is approximately 1,500 feet west of the existing snowmaking pump house and 1,300 feet southeast of the existing Needles Lodge within the Special Use Permit boundary on National Forest system lands. The project includes the construction of the necessary pipeline from the reservoir to the existing pump house.

The reservoir will have a surface area of approximately 2.6 acres and have a capacity of approximately 11.5 million gallons. The total site area after construction would be approximately 3.5 acres plus approximately .7 acres of construction to install the pipeline. The reservoir is planned to take advantage of an existing surface depression and reduce the volume of excavation and fill placement. The reservoir would be 29 feet deep at its deepest point. The total depth is comprised of an approximately 3 to 5 foot deep excavation at the bottom of the pond and an approximately 10 foot high berm including a 3 foot allowance of freeboard. The reservoir would be constructed with an engineered liner system. Revegetation and erosion control on the construction site and pipeline route would be accomplished after completion. The reservoir would be filled via the snowmaking system wells and surface water runoff.

2. WILDCAT LIFT REPLACEMENT

Purpose and Need

Wildcat lift is a fixed- grip triple chair installed in 1973 with a design capacity of 1,200 persons per hour. It was a part of the original ski area operation providing access to the Middle Bowl and Porcupine lifts. It is now operated as a redundancy to the Needles Express gondola and Becker lifts and during busy periods to alleviate early morning crowding in the base area for access to the upper mountain. Replacing Wildcat with a

high-speed lift and in conjunction with improved snowmaking would allow for significantly improved ability to open for skiing in this area without delays for upper mountain snowmaking to be completed. The lift would improve traffic flow to other areas of the mountain and provide additional capacity for race and training programs. Both previous master plans identified this lift for replacement to achieve the stated objectives.

Project Description

The existing Wildcat Lift would be replaced, on the same alignment, with a new 4 person high speed detachable grip chairlift. The bottom terminal may be moved slightly to the north to improve ski routes exiting from Wildcat Bowl. The top terminal would remain in the same area at an elevation of 7,920 feet. The 4,800 foot length would remain the same, with the lift ride time reduced from approximately 12 minutes to approximately 5 minutes depending on rope speed. Lift capacity of 2,400 persons per hour is consistent with planned overall ski area capacities. The project would be accomplished on approximately 4 acres of National Forest Service lands.

3. WILDCAT SNOWMAKING

Purpose and Need

The Wildcat area is one of three main return routes to the base area. Blue Grouse and City Hill along with Bear Hollow and School Hill carry the majority of the base area return skiing and repeat skiing on the Needles Express Gondola. These areas are congested during busy periods and end-of-day. The Wildcat area is a popular area for races and can be easily isolated from other runs on race days. The bowl and adjacent runs are also difficult to groom when snow is thin, especially at the lower end where the run crosses the summer road. Snowmaking in Wildcat Bowl along with access runs, Herbert's, Stewarts, Steins and upper Blue Grouse will allow for improved snow surfaces and an additional route for skier return to the base area. Snowmaking will allow the Wildcat area to open earlier and quicker in the season without having to complete snowmaking or operate lifts on the upper portions of the mountain. This project would allow for a more consistent and reliable early opening. Snowmaking will also allow for improved operations of race and training activities.

Project Description

The existing snowmaking system would be extended from approximately the base of the Middle Bowl chairlift to the following runs:

Run Name	Length (feet) est.	Snowmaking Coverage Area (acres) est.
Herbert's	1,827	7.8
Eas-A-Long	2,391	4
Stewarts	1,731	2.8
Stein's	1,475	3.1
Wildcat Bowl	5,223	17.2
Upper Blue Grouse	2,100	4.5
TOTALS	14,747	39.4

Dimensions of the projects are derived from the previous master planning and updated maps. The final areas of the projects will be refined by Snowbasin. The construction of the system as outlined would be on approximately 7 acres of National Forest Lands.

As part of the snowmaking construction, Wildcat Bowl run would have minor regrading to eliminate side hills and improve fall-line routes.

4. MT. OGDEN ROAD SKI RUN IMPROVEMENTS

Purpose and Need

Mt. Ogden Road ski run is the only intermediate level ski access route from the John Paul lift and restaurant. The run is fashioned with snow to cover the existing summer access road to the John Paul top terminal area. The run is approximately 20 feet wide, in several places on the ground surface and extended by grooming operations 5 to 10 feet depending on snow conditions. The width of the ski run limits the use of the area by intermediate level skiers, and is further limited when visibility is low. Sharp corners in the road and ski run reduce skiability and increase congestion. The ski run functions as the main intermediate access to the skiing off of the John Paul Lift. During early season conditions there is currently no access on this run due to the rough, rocky terrain and narrow roadway. Even when there is sufficient snow cover there is often conflict between faster skiers on the upper sections of the run frequently overtaking slower skiers.

Project Description

To improve the skiing conditions on the upper section of the Mt. Ogden ski run, surface grading and rock removal would be performed to create an intermediate level ski run of approximately 100 to 150 feet wide along the existing ski run route. The sharp corners would be blended into the overall fall line route. The construction would be completed with a balance of cut and fill material onsite. Cut slopes would be completed to allow for continuation of the skiing from the top of John Paul. Snowmaking would be extended from the Blue Grouse area as part of this project. The run construction project would be approximately 1,500 feet long. Preliminary designs from Alpentech (2014) indicate a project of less than 5 acres on National Forest Service lands.

5. STRAWBERRY LIFT INSTALLATION

Purpose and Need

The Strawberry area of Snowbasin is currently served by the Strawberry Express Gondola. The 8 passenger gondola has a design capacity of 2,400 person per hour. The lift top terminal is on the ridgeline at an elevation of approximately 9,250 feet. Access to the main skiing areas from the top is along a constructed ski run on the west side of the ridge. The top of the lift and ski runs are constrained by wind and visibility during difficult weather conditions. The Elk Ridge ski run can be too steep for intermediates to use during low visibility or low snow conditions. The gondola is the main access lift for return to the Snowbasin base area. With difficult weather, this access is reduced especially for lower ability skiers. The 1995 and 2009 master plans identify a location for a high-speed chair with a top terminal below the ridge in a protected location that would alleviate the current issues during low snow and low visibility conditions and improve accessibility for intermediate level skiers. The project received approvals from The Forest Service and Morgan County in 2009.

Project Description

A new 4 person high speed lift with a capacity of 2,400 persons per hour would be constructed from the Strawberry base area to an elevation in a protected location approximately 600 feet north of the existing gondola at an approximate elevation of 8,575 feet or approximately 675 vertical feet below the ridge. The location is designed to allow for user-friendly access to over 95% of the Strawberry terrain, and significantly improve the ability of lower ability guests to access this terrain. The top terminal is placed to allow for easy access to the base area via Dan's Run or the Main Street/Trappers bypass to Penny Lane, reducing the need to utilize the gondola to return to the main base area. The proposed lift would be approximately 8,500 feet long, with a vertical rise of 1,970 feet. The project area is approximately 1 acre on National Forest lands and approximately 3 acres on private lands.

6. UPPER PORKY FACE ACCESS ROAD REHABILITATION

Purpose and Need

Several work and access routes were constructed over the years to provide access to the Porcupine and John Paul lifts. The road section known as Upper Porky Face crosses several fall line ski runs. This section of road is located on Snowbasin lands under the Porcupine lift between 8,400 feet and 8,100 feet elevation. The steep cut and fill slopes of the road interfere with snow grooming operations and slows the ability to open the area for skiing during early season or low snow conditions. With the improvement of the sewer line road this road section would no longer be required for operations.

Project Description

The project consists of re-grading the approximately 1,600 feet of road to blend the road platform back into the ski run slopes. Material would be moved from the uphill and downhill slopes of the roadbed to approximate the desired slope contours. After grading, the entire area would receive erosion control and revegetation. Access to the John Paul area from the Porky area along the existing sewer alignment would be improved with minor grading. The entire project would take place on approximately 4 acres of private lands and 1 acre of National Forest land.

7. LOWER PENNY LANE IMPROVEMENTS

Purpose and Need

Penny Lane is the lowest elevation ski run that provides access from the Strawberry area to the main base area. It functions as the only means of ski return from Strawberry if the top of Strawberry bowl is closed. The lowest section of the run, just prior to entering the main base area intersects with the Snowshoe run in an area with low visibility and a sharp corner. The purpose of the project would be to re-grade this section of the run to improve visibility and reduce steep and narrow sections for beginners.

Project Description

Approximately 600 feet of the lowest section of Penny Lane and Snowshoe runs would be reshaped to achieve project purposes. The switchback section of Penny Lane would be reshaped and the access road abandoned and reclaimed. All areas would receive erosion control and revegetation.

SNOWBASIN 5-YEAR MOUNTAIN PROJECTS MAP

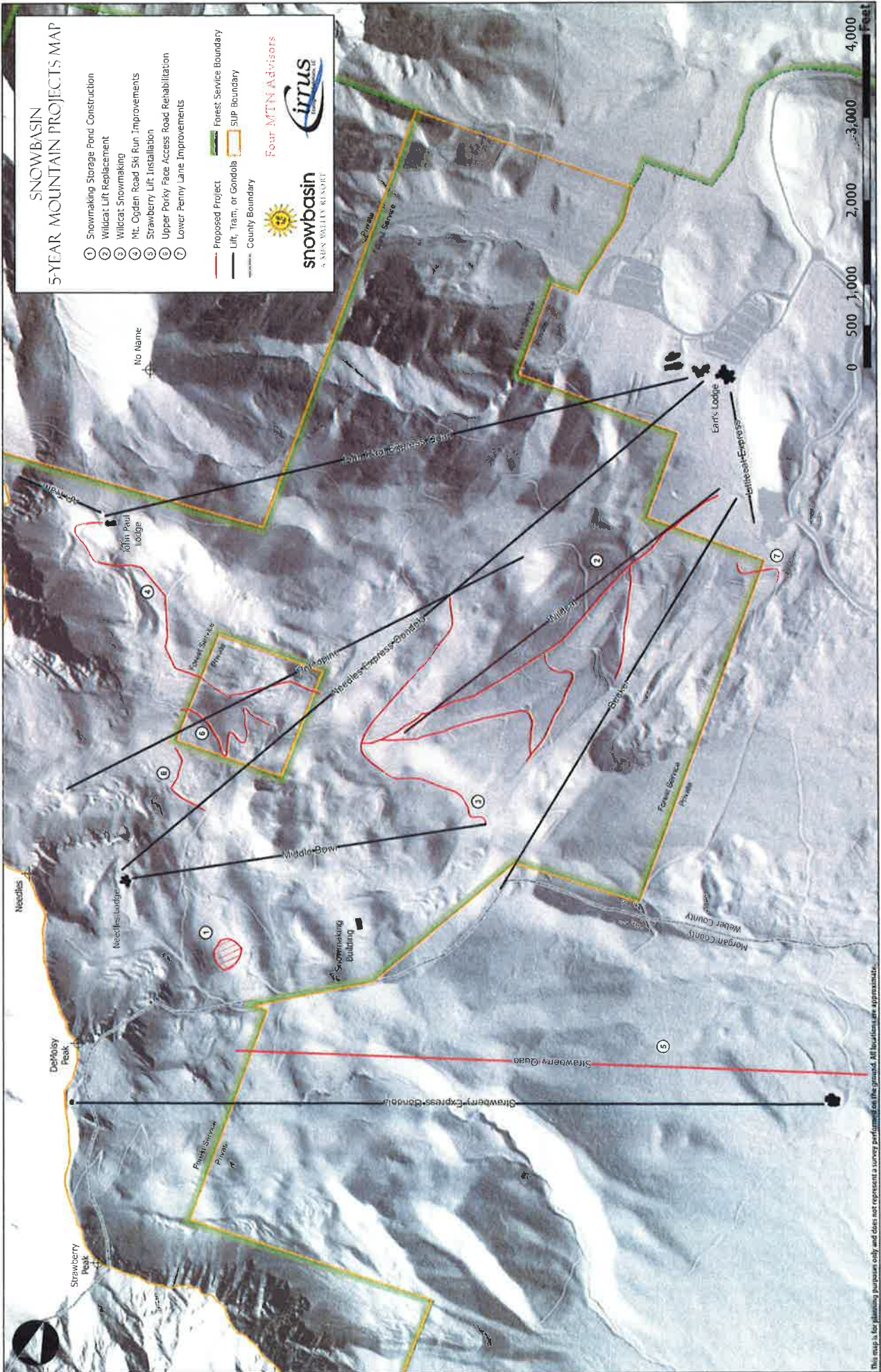
- ① Snowmaking Storage Pond Construction
- ② Wildcat Lift Replacement
- ③ Wildcat Snowmaking
- ④ Mt. Ogden Road Ski Run Improvements
- ⑤ Strawberry Lift Installation
- ⑥ Upper Porky Face Access Road Rehabilitation
- ⑦ Lower Penny Lane Improvements

- Proposed Project
- Lift, Tram, or Gondola
- Forest Service Boundary
- SJP Boundary
- County Boundary



snowbasin
A SKI RESORT

Four MTN Advisors



This map is for planning purposes only and does not represent a survey performed on the ground. All locations are approximate.