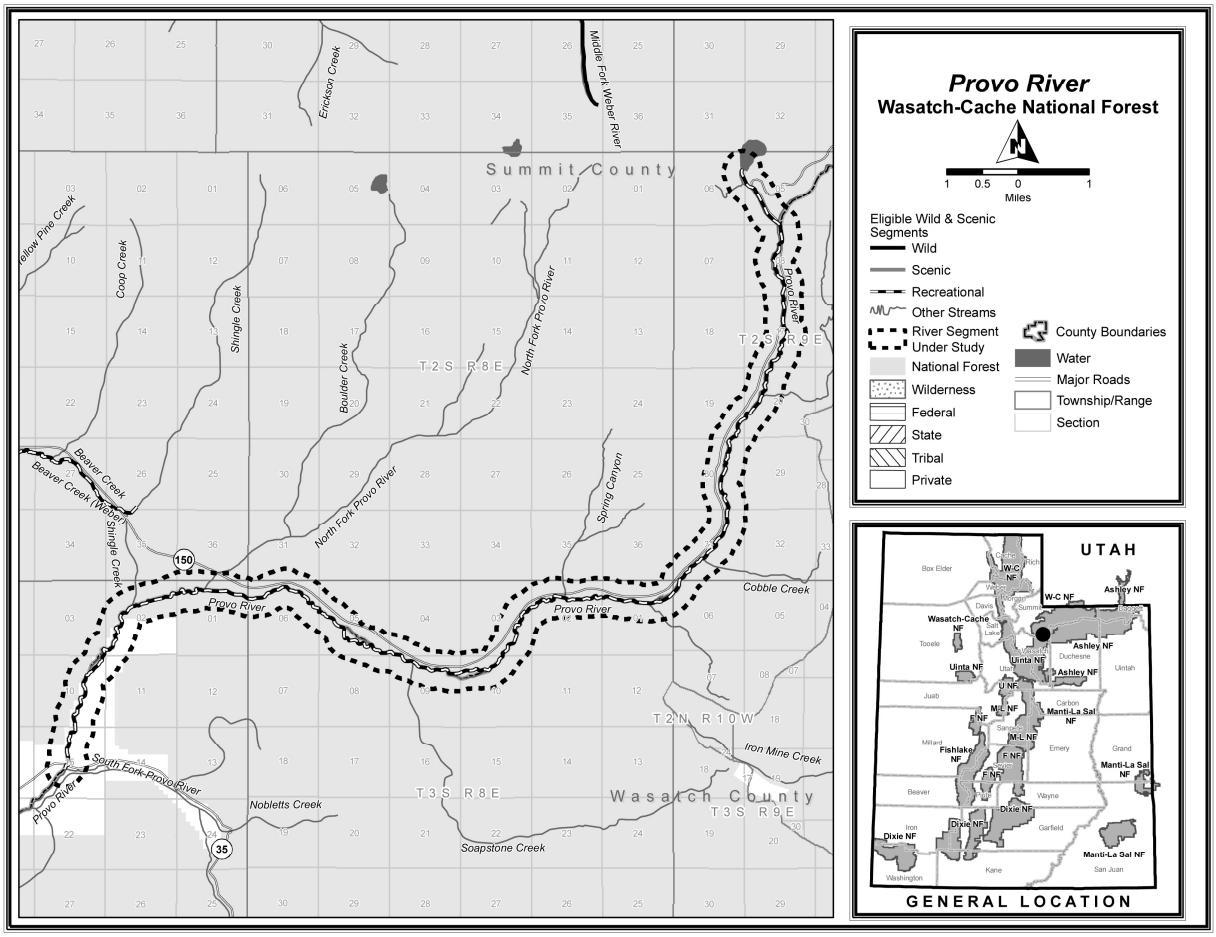
Provo River
Suitability Evaluation Report (SER)



STUDY AREA SUMMARY

Name of River: Provo River
River Mileage:
Studied: 19.8 miles, from Trial Lake to U35 Bridge
Eligible: Same

Location:

Provo River	Wasatch-Cache National Forest, Kamas Ranger District, Summit County, Utah		Congressional District 1	
	Start	End	Classification	Miles
Segment 1	NE ¼ NE ¼ Sect. 6, T 2 S, R 9 W, Uintah Meridian	NE ¼ SW ¼ Sect. 15, T 3 S, R 7 E, SLM	Recreational	19.8

Physical Description of River Segment:
Elevations range from 8,700 to 9,500 feet. The channel is generally confined in a narrow valley. Some floodplains and low wet terraces exist. The gradient and energy are moderate. The channel is incised somewhat into glacial and alluvial outwash materials with large substrate. The channel and floodplains are severely scoured and permanent vegetation and structure are often lacking as a result of the Trial Lake dam failure in 1985. The upper portion of this segment is dominated by lodgepole pine with mixed

conifer (lodgepole pine, subalpine fir, and spruce). Further downstream upland vegetation is dominated by lodgepole pine and aspen with openings of sagebrush. Riparian communities generally occur as narrow stringers with conifers, willows, and alder dominating. The area is more or less natural in appearance with some localized dispersed recreation and grazing impacts. No threatened, endangered, or sensitive plant, fish or animal species occur in this area. It does contain some prime moose habitat. The State of Utah classifies the upper reach of the river as Class II, of great importance to the state fishery. The remaining portion is ranked as Class III, an important fishery.

ELIGIBILITY

Name and Date of Eligibility Document: Revised Forest Plan, Wasatch-Cache National Forest 2003, Appendix VIII, USDA Forest Service; Draft Inventory of Rivers on Wasatch-Cache National Forest, Eligible for Inclusion in the national Wild and Scenic Rivers System 1999.

Determination of Free-flowing Condition: The segment is free from major channel modifications and structures. The natural stream flow of the river is not significantly impaired. This segment is free-flowing.

Summary of Outstandingly Remarkable Values (ORV):
Scenery – While resource damage is still evident from the Trial Lake Dam failure, views in the corridor are still very pleasing and enjoyable. Two outstanding scenic views are located within the corridor. The Provo River Falls is an unusual feature that is particularly memorable. Autumn views along the river are spectacular. The scenic value is outstandingly remarkable.

Recreation – Recreation along this segment of the Provo River is very popular. The river is the focal point for many dispersed campers. Many developed facilities provide retreats for campers and picnickers. A full spectrum of recreation opportunities is available year round. This recreation value is outstandingly remarkable.

CLASSIFICATION

Basis for the Classification of River – Recreational
This segment of the Provo River is eligible for the National Wild and Scenic River System. The stream is classified as a recreational river because the stream and stream corridor is or has:

- Some existing impoundment or diversion. The existence of low dams, diversions or other modifications of the waterway is acceptable, provided the waterway remains free-flowing and generally natural and riverine in appearance.
- Some developments. Substantial evidence of human activity.
- The presence of extensive residential development and a few commercial structures is acceptable.
- Lands may have been developed for the full range of agricultural uses.
- Lands may have been developed for the full range of forestry uses.
- Readily accessible by road or railroad.
- The existence of parallel roads or railroads on one or both banks as well as bridge crossings and other river access points is acceptable.
- Water quality sufficient to maintain outstandingly remarkable values.

SUITABILITY REPORT

Landownership and Land Uses – This segment of the Provo River is from Trial Lake to the U35 Bridge. This segment is on the Kamas Ranger District and is in Summit County. The segment is primarily on National Forest. The lower portion of the stream, along both banks is privately owned.

River Mile	Ownership	Acres

0-17.1	Wasatch-Cache National Forest	5914
17.1-19.8	Private Land	320
	Total:	**6234 acres**

This private land is zoned for Agriculture-Grazing 160 (AG-160) by Summit County, Utah.

Mineral and Energy Resource Activities – There are no known locatable mineral deposits of economic value on the forest and there are no known valuable deposits known on patented mining claims that now appear as private land in-holdings on the forest. Presently, there are no significant mining activities on the Forest. This area is in a high oil and gas potential area, but there are no current active leases.

Water Resources Development – The stream itself is not impounded or significantly diverted in this reach. The presence of road encroachments, four bridge crossings and a few diversions have a minor affect on the natural flow of the stream. There is water imported into the stream at the Duchesne Tunnel west portal that adds water to the system.

The Central Utah Water Project (CUWP) has a dam on Trial Lake. CUWP operations are generally "fill and spill" where their gates are closed in the fall or winter and the lakes are allowed to fill up. Once filled, the streams below return to natural flows as the reservoirs spill freely over their spillways. Upstream reservoir operations store low flow water that is released for irrigation throughout the summer. This artificial discharge does not mimic natural snowmelt runoff. During the summer, the water users control discharge from Washington, Trial, and Lost Lake reservoirs releasing unusually high flows in the local streams until the storage capacity is emptied.

The Duchesne Tunnel diversion also has a considerable effect on natural stream flows. The tunnel delivers all of the water from the Duchesne River into the Provo River below the portal, thus artificially increasing flows in the summer where natural flows would be tapering off.

The Forest Service recognizes that the Department of Interior withdrew lands for purposes of the Provo River Project and recognizes the right of the Provo River project to operate its lands and facilities from the Duchesne Tunnel to the Forest boundary.

Designation into the Wild and Scenic river system does not affect existing, valid water rights.

Transportation, Facilities, and Other Developments – Parallel access is provided by State Highway 150, which is a two lane asphalt road, receiving heavy use. The highway carries the designation of a State Scenic Byway. Sightseeing and short hikes are popular at Upper Provo River Falls and Slate Gorge Overlook. The Soapstone Summer Home Association includes 41 summer homes located away from the Provo River frontage, and is outside the ¼ mile corridor. Access to the homes is gated, there is a shared water system, and all of the homes have pit toilets and many have upgraded to septic systems. The YMCA Camp Roger is also located within this stream corridor that has a main lodge, outbuildings, and a stable. There is also a historic Forest Service Administrative Site (Ranger Station).

Recreation Activities – A variety of recreational opportunities are present, including developed campgrounds, a hiking/ATV trail (used in winter for cross country skiing), and moderate to good fishing. In the winter visitors enjoy cross-country skiing and snowmobiling along groomed trails. The area is an excellent setting for outdoor recreation. People use the river for fishing and some water sports play and to provide a relaxing environment. In many places along the river, the adjacent highway overlooks of the river or nearby scenes are very enjoyable and offer a pleasing contrast of landforms and vegetation. There is no commercial recreation provided locally.

Grazing Activities – The area is in the Kamas Valley Cattle Allotment. The river corridor itself is used

by permitted livestock for short periods while trailing or herding and occasionally by recreation stock. The grazing allotment permittee must operate in compliance with an Allotment Management Plan (AMP) and Annual Operating Instructions (AOI) administered by the Wasatch-Cache National Forest.

Other Resource Activities – The area around the Upper Setting Road on the north side of the segment has had many past timber harvests. There are three vegetation/fuels treatments planned for this area: the Ponderosa Restoration Prescribed Burn and the Roadside Salvage that are located along the Mirror Lake Highway, and the Murdock Basin Fuels Treatment.

Special Designations – The Provo River is a fish bearing stream and is managed by the Wasatch-Cache National Forest as a Category 1 Fish-Bearing Stream Riparian Habitat Conservation Areas (RHCA). A RHCA include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems by (1) influencing the delivery of coarse sediment, organic matter, and woody debris to streams, (2) providing root strength for channel stability, (3) shading the stream, and (4) protecting water quality. This designation still allows for a full range of activities but it emphasis the achievement of riparian management objectives that are identified on a site-by-site basis. These objectives should include riparian vegetation and instream habitat conditions consist of the stream and the area on either side of the stream extending from the edges of the active stream channel to 300 feet slope distance (600 feet, including both sides of the stream channel).

The entire stream corridor is within an area recognized by the State of Utah as a Drinking Water Source Protection Zone (DWSPZ). This designation defines the area where contaminants are limited from the surface and subsurface areas surrounding a surface source of drinking water supplying a public water system (PWS), over which or through which contaminants are reasonably likely to move toward and reach the source. Surface water means all water which is open to the atmosphere and subject to surface runoff, and subsurface water relates to any well, spring, tunnel, adit, or other underground opening from or through which ground-water flows or is pumped from subsurface water-bearing formations.

Approximately 9.4 miles of this stream corridor fall within a Wasatch-Cache National Forest inventoried roadless area. These are areas that do not have developed and maintained roads, and that are substantially natural.

Approximately 15.1 miles of this stream is adjacent to a State Scenic Byway, the Mirror Lake Highway.

Land management direction for Wasatch-Cache National Forest land adjacent to the Scenic Byway:

Management Prescription 2.5 Scenic Byways: Manage Scenic Byways to protect and maintain their outstanding scenic quality. Scenic Byway Corridor Management Plans may be developed for designated Byways to further define desired conditions and tailor management direction.

> (G2.5-1) Timber harvest, vegetation/fuel treatments, prescribed fire and wildland fire use are allowed when these activities are necessary to maintain or enhance the scenic setting for the long term.
> (G2.5-2) Grazing is allowed and managed for compatibility with other elements of Scenic Byway Corridor Management Plans.
> (G2.5-3) Road building, new recreation development, and new trail construction are allowed for purposes of enhancing use and enjoyment of the scenic byway corridor, while maintaining or enhancing the scenic setting.

Land management direction for Wasatch-Cache National Forest land at the very start of the stream corridor:

Management Prescription 2.6 Undeveloped Areas: Manage to protect undeveloped landscapes in a

manner other than formal recommended wilderness. Although other uses and activities may occur, the primary emphasis is protection to assure the values and unique qualities associated with undeveloped areas are recognized and preserved. No new developments or activity that would alter the landscape or character are allowed, however use of motorized equipment (such as chainsaws for trail clearing) is allowed.

(S2.6) Timber harvest, vegetation/fuel treatment, road construction, new recreation development, and new trail construction are not allowed.

(G2.6-1) Motorized uses, including snowmobiling, are allowed as shown on Winter Recreation and Travel Management Maps.

(G2.6-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G2.6-3) Wildland fire use and prescribed fire are allowed to mimic conditions within the historic range of variability and to protect property in the wildland urban interface.

Land management direction for Wasatch-Cache National Forest land along the stream:

Management Prescription 3.1a consists of the stream and adjacent riparian areas (or 300 feet either side of the stream whichever is greater). Because of the large number of existing facilities (roads, developed recreation sites, trails), already located within areas mapped as 3.1A, and because of their relatively high value and small proportion of the landscape, development outside already developed areas within this prescription is to be avoided. Protect or restore proper hydrologic functioning.

(S3.1A-1) New recreation facility development is not allowed.

(S3.1A-2) Cutting fuelwood larger than 5 inches in diameter is not allowed.

(G3.1A-1) Timber harvest, vegetation/fuel treatments, prescribed fire, and wildland fire use are allowed only for the purposes of maintaining, improving or restoring riparian and aquatic habitat to desired conditions or to protect property in the wildland urban interface.

(G3.1A-2) Livestock grazing is allowed with the utilization standard for Riparian Class 1, and to meet site-specifically developed desired conditions.

(G3.1A-3) Road construction is not allowed except for road crossings.

(G3.1A-4) New trail construction is allowed if consistent with site specifically defined riparian management objectives.

Land management direction for Wasatch-Cache National Forest land along the south bank in the lower portion of the stream:

Management Prescription 3.2 Terrestrial Habitats (3.2U Undeveloped/3.2D Developed) Emphasis: Manage upland habitats to provide for sustaining and/or recovering desired plant and animal species and/or communities. Maintain or restore lands to meet desired conditions of habitat for threatened, endangered, and sensitive species. Considerations for these areas include winter ranges and corridors for seasonal migrations as well as movement of genetic materials, individuals, and populations; vegetation composition, structure, and pattern needed for life cycle stages; needs for control or eradication of undesirable non-native species; and protection of special or unique habitats.

Management Prescription 3.2u consists of those terrestrial habitat areas protected from development because of potential impacts to key habitat elements.

(S-3.2U) Timber harvest, road construction, and new recreation developments are not allowed.

(G3.2U-1) Vegetation/fuel treatment, prescribed fire and wildland fire use are allowed for the purposes of maintaining, improving or restoring terrestrial habitat, for hazardous fuel reduction, and to protect property in the wildland urban interface.

(G3.2U-2) New trail construction is allowed with consideration of existing road/trail densities and site-specifically developed habitat objectives.

Land management direction for Wasatch-Cache National Forest land along the north and west bank for the lower portion of the segment:

Management Prescription 3.2d consists of those terrestrial habitat areas where development is allowed for the purpose of maintaining, improving, or restoring key habitat elements.

> (G3.2D-1) Timber harvest, road construction, vegetation/fuel treatment, prescribed fire and wildland fire use are allowed for the purposes of maintaining, improving or restoring terrestrial habitat, for oil and gas exploration, for hazardous fuel reduction, and to protect property in the wildland urban interface.
> (G3.2D-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.
> (G3.2D-3) New recreation development and new trail construction are allowed with consideration of existing road/trail densities and site specifically defined terrestrial habitat desired conditions.

Land management direction for Wasatch-Cache National Forest land at the outer edge of the corridor along the south bank in the middle portion of the segment:

Management Prescription 4.3 Emphasis on Backcountry Motorized Settings: These areas provide recreation opportunities in a more remote and isolated setting where visitors can obtain a higher degree of solitude and the environment is in a near natural setting. Access to and within these areas is primarily through the use of motorized trails and roads. Sights of other visitors are low and sounds of other users are low to moderate. Visitors are largely managed off-site, with signs and regulations posted at area boundaries. Management of recreation impacts is of a semi-primitive nature with regulation of use a priority management tool over site modification. Visitor self-reliance is high. Management visibility is low with backcountry ranger patrols focusing on monitoring and maintaining natural conditions and processes.

> (S4.3) New recreation development is not allowed.
> (G4.3-1) Timber harvest, vegetation/fuels treatment, road construction, prescribed fire and wildland fire use are allowed to mimic historic conditions and to restore ecosystem functioning as compatible with the backcountry recreation opportunity and natural setting desired.
> (G4.3-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.
> (G4.3-3) New trail construction is allowed.

Land management direction for Wasatch-Cache National Forest land along the northern bank for the upper half of the segment and along the upper portion of the south bank:

Management Prescription 4.4 Emphasis on Recreation Motorized Settings: These areas provide recreation opportunities within a range of semi-primitive to rural settings. Visitors may be able to obtain a moderate degree of solitude, but this prescription area provides opportunities for increased social interaction. Access to and within these areas is primarily through the use of motorized trails and roads. Sights and sounds of others may be noticeable throughout the area. Management of recreation impacts range from semi-primitive to rural depending on the ROS category at the specific area and visitor desires for convenience. Impacts to natural resources are dealt with through various management techniques and regulations. Management visibility is moderate to high with ranger patrols focusing on education, user ethics, and enforcement.

> (G4.4-1) Timber harvest, vegetation/fuel treatment, road construction, prescribed fire and wildland fire use are allowed to mimic historic conditions, to restore ecosystem functioning, and to protect property in the wildland urban interface, and are designed to be compatible with motorized recreation, but must not detract from the recreation setting over the long-term.
> (G4.4-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

(G4.4-3) New recreation development and new trail construction are allowed.

Socio-Economic Environment – This stream is located in Summit County, an area that occupies a rugged and mountainous area and was so named because it includes 39 of the highest mountain peaks in Utah. As of 2000 the population was 29,736 and by 2005 was estimated at 35,001. Its county seat is Coalville and the largest city is Park City. The resort city of Park City, being close to Salt Lake City, has made tremendous growth as an upscale getaway from the city, bringing surprising development to the area. There area a wide range of industries that influence the economy of Summit County. The main industries are cattle ranching and tourism in the rural communities and in the Park City area the economy shifts toward the ski industry, support services for tourism, and resort and residential development.

The National Forest land in Summit County is fast becoming a four-season destination. The mountainous terrain and abundant lakes invite visitors to the Scenic Byway to hike, camp, fish, ride mountain bikes, backpack and ride off-highway vehicles in the summer. During the winter, the quality snow draws legions of backcountry skiers, dog sledders and snowmobilers.

Current Administration and Funding Needs if Designated – The current administering agencies for lands along this segment are the Wasatch-Cache National Forest and Summit County. The National Forest System lands along the segment are managed under the direction of the Revised Forest Plan, Wasatch Cache-National Forest, 2003. The private lands located at the end of the segment at the Forest boundary are subject to regulations proposed by the Eastern Summit County Planning District in the development plan and codes. The Eastern Summit County Development Code serves the interests and goals of the eastern side of the county, including the unincorporated areas surrounding, but not including, the towns of Henefer, Coalville, Kamas, Oakley and Francis.

The following information is based on 2001 data, which doesn't account for inflation over the past six years, but is the best available data. If a river is designated as Wild, Scenic, or Recreational, the actual cost of preparing the comprehensive river management plan would average $200,000 per plan for 86 segments, which would cost approximately $17.2 million the first two to three years following designation. It was estimated that annual management costs for a high complexity river would be $200,000; a moderate complexity river would be $50,000; and a low complexity river at $25,000. Using an average of complexity costs, it would cost the Forest Service around $7.8 million annually for 86 segments. (Estimated Costs of Wild and Scenic Rivers Program - V. 091104)

SUITABILITY FACTOR ASSESSMENT:

(1) **The extent and determination of the degree to which the agency proposes or a State or its political subdivisions might participate in the shared preservation and administration of the river, including the costs thereof, should it be proposed for inclusion in the System**

Eligible rivers are protected and managed by the Forest Service according to standards included in Appendix VIII of this Revised Forest Plan until designated by Congress, or otherwise directed by other legal means. The Wasatch-Cache National Forest Revised Plan provides direction to implement Management Prescriptions for stream segments that are suitable for Wild and Scenic River designation by Congress. Once designated, the Wasatch-Cache National Forest will apply Management Prescriptions numbers to the designated Wild (2.1), Scenic (2.2), and Recreational (2.3) Rivers on Forest, which include land corridors that extend 1/4 mile from each bank.

The State of Utah has not demonstrated interest or disinterest in sharing of the costs.

(2) **The state/local government's ability to manage and protect the outstandingly remarkable values on non-federal lands. Include any conflicting local zoning and/or land use controls that could occur.**

The majority of this stream segment is on Wasatch-Cache National Forest land and will be managed to

maintain the integrity of the stream corridor. The level of development allowed on the private land within the corridor is managed by the Eastern Summit County Planning and Zoning regulations for AG-160.

(3) **Support or opposition to designation.**
One comment for the Provo River received during the 1999 Draft Inventory of Rivers on the Wasatch-Cache National Forest Eligible for Inclusion in the National Wild and Scenic Rivers System related to eligibility. It said that the amount of development in the stream corridor was too high for WSR status. The Forest found this segment eligible for recreational classification based on the level of development and road access.

Comments received during the scoping period reflected a concern from water users and water conservancy districts that there are agreements and water rights in place and that any designation must not conflict with operation of the Duchesne Tunnel and reservoirs at the top of the Provo segment. The Bureau of Reclamation was concerned about the effect designation could have on future water development projects. Utah Department of Transportation

The Provo River has received both support and opposition during the public comment period for the Draft EIS. General support for designation of the Provo River was expressed with a desire for more protection of the river. Of the three organized campaign responses all three supported a positive suitability finding for the Provo River. The Provo River Water User Association was concerned that designation would adversely affect their ability to deliver water in a timely and effective manner. The State of Utah expressed concerns that designation would impact the state's ability to maintain or expand the highway.

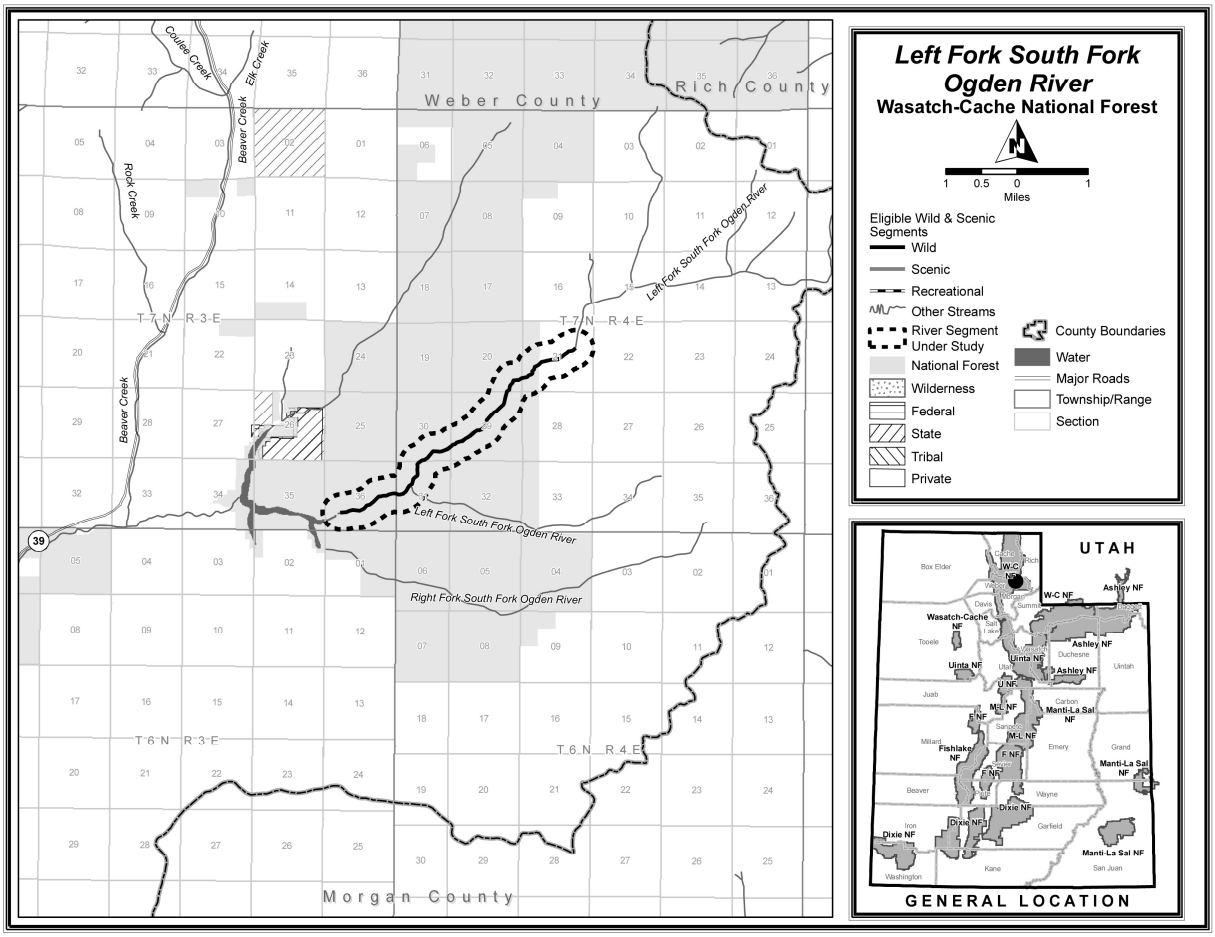
(4) **The consistency of designation with other agency plans, programs or policies and in meeting regional objectives**.
Designation of the Provo River supports current management of the stream corridor by the Wasatch-Cache National Forest, and for the Scenic Byway, and the State of Utah's management for drinking water source protection.

Designation of the Provo River may conflict with current water rights of the Provo Water Users Association. The Provo Water Users Association has an easement along the Provo River from the Duchesne Tunnel outlet to Jordanelle Reservoir to provide water to their constituents.

(5) **Contribution to river system or basin integrity**.
Designation of this segment would contribute some benefit to basin integrity as it encompasses almost 20 miles of the Provo River; however, the Provo River Basin has been altered by water development projects.

(6) **Demonstrated or potential commitment for public volunteers, partnerships, and/or stewardship commitments for management and/or funding of the river segment.**
There has been demonstrated volunteer involvement with managing the stream corridor, where groups routinely pick up trash in accordance with the Adopt a Highway program on Highway 150, and there have been occasional dispersed campsite clean-ups by local Boy and Girl Scout groups.

Left Fork South Fork Ogden River
Suitability Evaluation Form (SER)



STUDY AREA SUMMARY

Name of River: Left Fork South Fork Ogden River
River Mileage:
Studied: 4.5 miles, from the Frost Canyon/Bear Canyon confluence to the confluence to Causey Reservoir
Eligible: Same

Location:

Left Fork South Fork Ogden River	Wasatch-Cache National Forest, Ogden Ranger District, Weber County, Utah		Congressional District 1	
	Start	End	Classification	Miles
Segment 1	NW ¼ SE ¼ Sect. 15, T 7 N, R 4 E, SLM	SW ¼ SW ¼ Sect. 36, T 7 N, R 3 E, SLM	Wild	4.5

Physical Description of River Segment:
The Left Fork South Fork Ogden River extends from the confluence of Frost Canyon and Bear Canyon to Causey Reservoir. The segment is located on the Ogden Ranger District in Weber County, Utah. Much of this river lies in a steep, narrow canyon, with several cascades and large limestone outcrops. Access is limited to foot access. Near the headwaters, the canyon is wider and less steep. Views out of the canyon

are very limited. Vegetation within the corridor consists of sagebrush and mountain brush pockets, scattered juniper, mountain mahogany, and aspen in the uplands. Some pockets of spruce, fir and Douglas-fir grow on north and east facing slopes. Riparian communities are limited by the narrow canyon. There are no known populations of threatened, endangered, or sensitive plants or animals in the corridor. The privately owned lands near the headwaters of the drainage are grazed. Wildlife is typical for these habitats. The sensitive Bonneville cutthroat trout, which has been petitioned for federal listing is present and its purity confirmed. It carries a State ranking of Class III, of great importance. The population of Bonneville cutthroat trout has value because it is naturally reproducing.

ELIGIBILITY

Name and Date of Eligibility Document: Revised Forest Plan, Wasatch-Cache National Forest 2003, Appendix VIII, USDA Forest Service; Inventory of Rivers on Wasatch-Cache National Forest, Eligible for Inclusion in the national Wild and Scenic Rivers System, 1999.

Determination of Free-flowing Condition: The segment is free from channel modifications and structures. The natural stream flow of the river is unimpaired. The segment is free-flowing.

Summary of Outstandingly Remarkable Values (ORV):
Scenery – The canyon through which Left Fork South Fork Ogden River flows has lush vegetation with visually striking rock outcrops throughout the segment. Its undisturbed character contributes to the visual quality. Cascading water creates pleasing views. The scenic value is outstandingly remarkable.

CLASSIFICATION

Basis for the Classification of River – Wild
The portion of the Left Fork South Fork Ogden River on National Forest is eligible for the National Wild and Scenic River System. The stream is classified as a wild river because the stream and stream corridor is or has:

- Free of impoundment.
- Essentially primitive, little or no evidence of human activity.
- Presence of a few inconspicuous structures, particularly those of historic or cultural value is acceptable.
- Limited amount of domestic grazing or hay production.
- Generally inaccessible except by trail.
- No road, railroads or other provision for vehicular traffic within river area. A few existing roads leading to the boundary of the area are acceptable.

SUITABILITY REPORT

Landownership and Land Uses – The Left Fork South Fork Ogden River extends from the confluence of Frost Canyon and Bear Canyon to Causey Reservoir. The segment is located on the Ogden Ranger District in Weber County, Utah.

River Mile	Ownership	Acres
0-0.6	Private Land (Deseret Land and Livestock)	252
0.6-4.5	Wasatch-Cache National Forest	1278
	Total:	**1530 acres**

Readers Note: The study area boundaries displayed in Appendix A, Suitability Evaluation Reports, do not represent actual Wild and Scenic River boundaries, but the area of interest for eligible river segments. It should be noted that of the eligible rivers studied, 14 of the 86 river segments appear to include portions

of private land, at the end of segments near the National Forest boundary. These typically short river stretches (1/4 to 4 miles long) were included in the eligibility study as part of the river segment length because they brought the river segment to a logical terminus at a confluence with a larger stream, also contained the ORVs of the National Forest portion of the segment, or National Forest land was located within ¼ mile of these segments. These lengths are also included in the tables found in this suitability study. The magnitude of this effect is small, representing approximately 22 miles total over 14 segments, or less than 3 percent of the total mileage in the study. The final decision will apply only to river segments located on National Forest System lands. The dashed lines on the individual river maps represent the approximate 1/4 mile river corridor boundary of the river segment under study. If Congress chooses to add any of the recommended river segments to the National Wild and Scenic River System, the Forest Service would be required to develop Comprehensive River Management Plan (CRMP). Section 3(b) of the Wild and Scenic Rivers Act requires the establishment of detailed boundaries (an average of not more than 320 acres per river mile). At that time, the boundary would be adjusted to exclude private, State, or other Federal agency land located at the end or beginning of the river segment. Congress could include private lands (in holdings) within the boundaries of the designated river area, however, management restrictions would apply only to public lands.

This area is in unincorporated Weber County, local planning and zoning ordinances apply to private land. The Ogden Valley General Plan is intended to provide guidance for future land use decisions by Weber County and other entities affecting Ogden Valley.

Mineral and Energy Resource Activities – There are no known locatable mineral deposits of economic value within the area of the eligible Left Fork South Fork Ogden River segment and there are no known valuable deposits on patented mining claims that now appear as private land in-holdings on the forest. Presently, there are no significant mining activities on the Forest. Also, this area is not a high oil and gas potential area (Revised Forest Plan, Wasatch Cache-National Forest, 2003).

Water Resources Development – There are no dams, diversions, or other channel modifications on this segment. This stream segment does flow into Causey Reservoir that is impounded by Causey Dam. There is no power generation at this dam. This dam project is part of the larger Weber Basin Project. The reservoir provides supplemental irrigation water for mountain valley lands near Huntsville and Eden. Irrigation water released from the reservoir is diverted from the South Fork of Ogden River by the Ogden Valley Diversion Dam and conveyed through the Ogden Valley Canal to lands in the Huntsville-Eden area. Designation into the Wild and Scenic river system does not affect existing, valid water rights.

Transportation, Facilities, and Other Developments – There is limited access to the area. This area is only accessible by the general public by boat, there are no trails accessing this drainage. Roads and trails to the area exist on private property.

Recreation Activities – Fishing use is very light due to the extremely difficult, limited access. Some horseback riders and other hunters use the area during hunting season.

Grazing Activities – There is no grazing along this segment.

Other Resource Activities – There are no commercial recreation activities or opportunities in the segment nor is there any commercial fishing or hunting operations in the area. A small portion of this stream corridor crosses onto private land. Deseret Land and Livestock owns a large parcel of land adjacent to this watershed that is managed as a ranch with grazing and also offers hunting guiding for big game.

Special Designations – Left Fork South Fork Ogden River is a fish bearing stream and is managed by the Wasatch-Cache National Forest as a Category 1 Fish-Bearing Stream Riparian Habitat Conservation

Areas (RHCA). A RHCA includes traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems by (1) influencing the delivery of coarse sediment, organic matter, and woody debris to streams, (2) providing root strength for channel stability, (3) shading the stream, and (4) protecting water quality. This designation still allows for a full range of activities but it emphasis the achievement of riparian management objectives that are identified on a site-by-site basis. These objectives should include riparian vegetation and instream habitat conditions consist of the stream and the area on either side of the stream extending from the edges of the active stream channel to 300 feet slope distance (600 feet, including both sides of the stream channel).

Approximately 4.5 miles of this stream are within Surface Water Drinking Water Source Protection Zones. This designation defines the area where contaminants are limited from the surface and subsurface areas surrounding a surface source of drinking water supplying a public water system (PWS), over which or through which contaminants are reasonably likely to move toward and reach the source. Surface water means all water which is open to the atmosphere and subject to surface runoff, and subsurface water relates to any well, spring, tunnel, adit, or other underground opening from or through which ground-water flows or is pumped from subsurface water-bearing formations.

Approximately 3.9 miles of this stream corridor are within a Wasatch-Cache National Forest inventoried roadless area. These are areas that do not have developed and maintained roads, and that are substantially natural.

Land management direction for Wasatch-Cache National Forest land within the stream corridor:

Management Prescription 1.5 Recommended Wilderness: These are areas recommended for wilderness. They were identified through the Forest Plan revision roadless area inventory, evaluation and recommendation process. This analysis is required by the National Forest Management Act (NFMA) planning regulations and the 1984 Utah Wilderness Act. Congress retains the final authority for designating wilderness areas. For areas recommended as
Wilderness, wilderness characteristics must be protected until Congress takes final action (FSH 1909.12, 7.31). These areas are managed to maintain the characteristics qualifying them as capable and available for wilderness recommendation. Activities must not result in long-term changes to the wilderness character.

> (S1.5) Timber harvest, vegetation/fuel treatment, road building, new recreation development, new trail construction, mountain biking, and use of motorized equipment such as chainsaws and helicopters are not allowed. Exceptions to motorized equipment use may be granted in emergency situations (i.e., wildland fire, search and rescue).
> (G1.5-1) Snowmobiling is allowed as shown on Winter Recreation and
> Travel Management Maps.
> (G1.5-2) Wildland fire use, and prescribed fire are allowed.
> (G1.5-3) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.

Socio-Economic Environment – The stream segment is in Weber County, Utah. The Ogden River flows from Causey Reservoir through Pineview Reservoir in Ogden Valley through Ogden Canyon into Ogden, Utah and then through surrounding valley communities on its way to the Great Salt Lake. The City of Ogden is the Weber County seat and in 2005, estimates placed its population at 78,309 and Weber County totaled 210,750. The 2000 Census reported that Weber River Basin's population was about 472,000. The Governor's Office of Planning and Budget projects this population to increase to 699,000 by 2020, and nearly double to about 939,000 by 2050. Ogden is home to Weber State University. Employment in the agricultural, military, and ski industries are a large part of the economy.

Ogden Valley, Utah, is a rural, mountain valley located on the backside of the Wasatch Range,

approximately 10 miles east of Ogden. Ringed by mountains, its spectacular setting and recreational opportunities coupled with its proximity to the urban Wasatch Front has spawned unprecedented growth pressures. The Ogden Valley totals about 6,500 people in Huntsville, Eden and the surrounding communities. The Ogden Valley is home to the Snowbasin Ski Resort, which hosted the 2002 Winter Olympics. Snowbasin is a year around resort with planned expansion and development of slope side lodging and amenities.

Current Administration and Funding Needs if Designated – This stream segment is located on private and National Forest System lands. These lands are within unincorporated Weber County and administered through the Ogden Valley General Plan and the Ogden Valley Sensitive Lands Overlay, and the Wasatch-Cache National Forest by the Wasatch-Cache National Forest Revised Forest Plan, 2003.

The following information is based on 2001 data, which doesn't account for inflation over the past six years, but is the best available data. If a river is designated as Wild, Scenic, or Recreational, the actual cost of preparing the comprehensive river management plan would average $200,000 per plan for 86 segments, which would cost approximately $17.2 million the first two to three years following designation. It was estimated that annual management costs for a high complexity river would be $200,000; a moderate complexity river would be $50,000; and a low complexity river at $25,000. Using an average of complexity costs, it would cost the Forest Service around $7.8 million annually for 86 segments. (Estimated Costs of Wild and Scenic Rivers Program - V. 091104)

SUITABILITY FACTOR ASSESSMENT:

(1) **The extent and determination of the degree to which the agency proposes or a State or its political subdivisions might participate in the shared preservation and administration of the river, including the costs thereof, should it be proposed for inclusion in the System.**

Eligible rivers are protected and managed by the Forest Service according to standards included in Appendix VIII of the Revised Forest Plan until designated by Congress, or otherwise directed by other legal means. The Wasatch-Cache National Forest Revised Plan provides direction to implement Management Prescriptions for stream segments that are suitable for Wild and Scenic River designation by Congress. Once designated, the Wasatch-Cache National Forest will apply Management Prescriptions numbers to the designated Wild (2.1), Scenic (2.2), and Recreational (2.3) Rivers on Forest, which include land corridors that extend 1/4 mile from each bank.

The State of Utah has not demonstrated interest or disinterest in sharing of the costs. Weber County also has not demonstrated interest or disinterest in sharing of the costs.

(2) **The state/local government's ability to manage and protect the outstandingly remarkable values on non-federal lands. Include any conflicting local zoning and/or land use controls that could occur.**

The private land could be developed in the future. The Ogden Valley General Plan is intended to provide guidance for future land use decisions by Weber County and other entities affecting Ogden Valley. To protect the character of Ogden Valley, a central element of this Plan includes a set of policies to protect sensitive lands in the Valley. These policies affect a variety of resources deemed important by Valley residents: steep slopes (<30%), ridgelines, flood plains, wetlands/cultural resources, agricultural lands, view/entry corridors, historical/cultural resources, riparian areas, watershed, groundwater recharge areas, vegetation, wildlife habitat, and Pineview Reservoir. Section 4.07 adds specific regulations to development within stream corridors; where, in addition to the safety issues surrounding development along stream corridors, Ogden Valley residents desire to see these areas protected for aesthetic, wildlife habitat, and water quality reasons. The County's recommended approach includes the following implementation steps: establishing setbacks of 50 feet on both sides of year round streams for any structures (determined from center of the stream) and establishing setbacks of 75 feet on both sides of North Fork, South Fork and Middle Fork Ogden Rivers for any structures (determined from the center of

the river (Resolution 46-96)).

(3) **Support or opposition to designation.**
There were no comments specific to the Left Fork South Fork Ogden River from the January 1999 Draft Inventory of Rivers on the Wasatch-Cache National Forest Eligible for Inclusion in the National Wild and Scenic Rivers System.

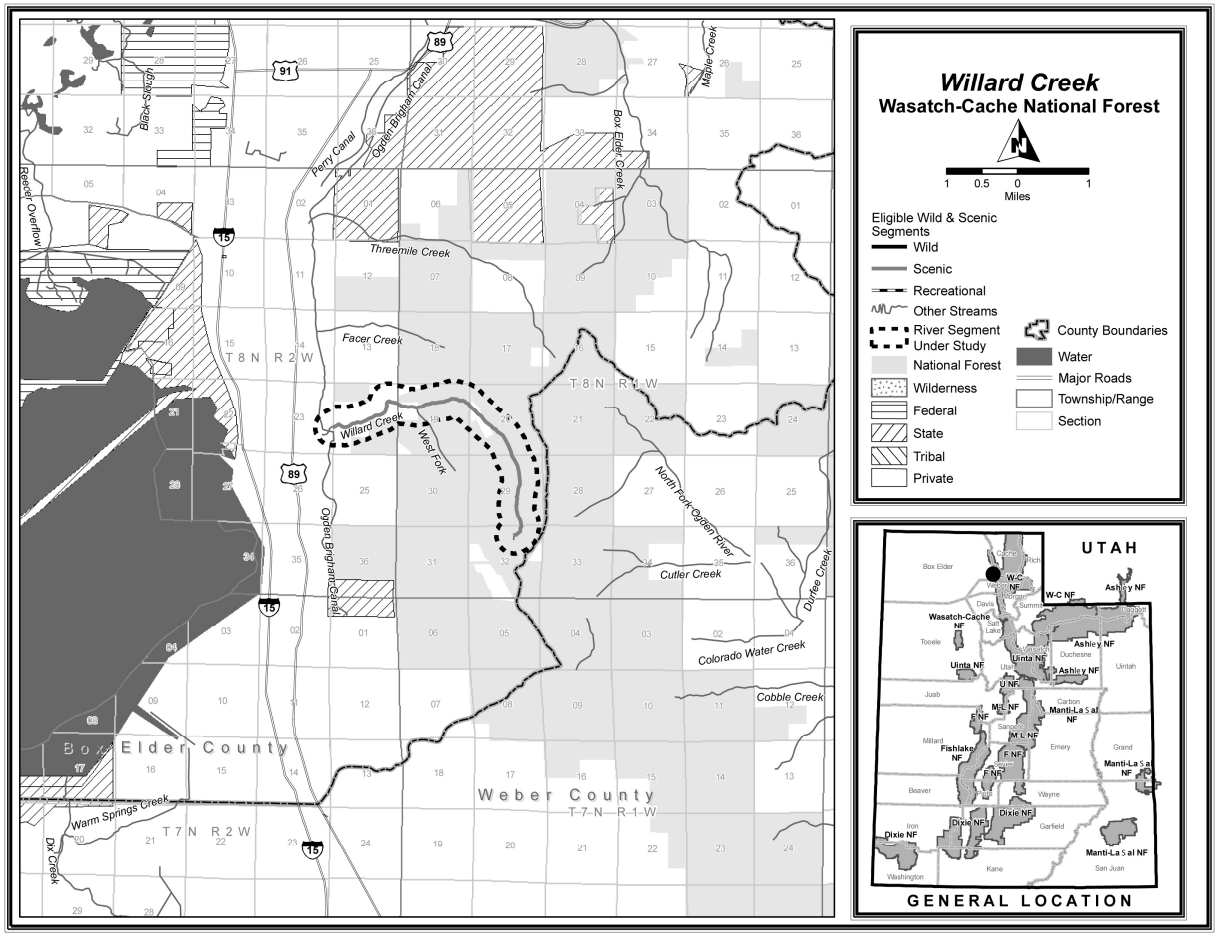
No comments were received specifically for the Left Fork South Fork Ogden River during the public comments period for the Draft EIS.

(4) **The consistency of designation with other agency plans, programs or policies and in meeting regional objectives**.
Designation of this segment of Left Fork South Fork Ogden River complements current Forest management for Recommended Wilderness and also aids in drinking water source protection of the surface water that is used by Ogden City and irrigation needs of Ogden Valley.

(5) **Contribution to river system or basin integrity**.
This segment contributes to the basin integrity because it incorporates the stream from its source to the Forest boundary. Designation would also add to the integrity of the Recommended Wilderness area. This stream enters Causey Reservoir, providing an important volume of water.

(6) **Demonstrated or potential commitment for public volunteers, partnerships, and/or stewardship commitments for management and/or funding of the river segment.**
Deseret Land and Livestock may be interested in funding conservation work for the stream corridor. There are no known user groups in Weber County that have shown an interest in this stream.

Willard Creek
Suitability Evaluation Report (SER)



STUDY AREA SUMMARY

Name of River: Willard Creek
River Mileage:
Studied: 4.4 miles, from source to Forest Boundary
Eligible: Same

Location:

Willard Creek	Wasatch-Cache National Forest, Ogden Ranger District, Box Elder County, Utah		Congressional District 1	
	Start	End	Classification	Miles
Segment 1	NE ¼ NE ¼ Sect. 32, T 8 N, R 1 W, SLM	NW ¼ SW ¼ Sect. 35, T 8 N, R 2 W, SLM	Scenic	4.4

Physical Description of River Segment:
The lower portion lies in a very steep, deep canyon. Two waterfalls flow over a cliff face, which is visible from the highway. The two waterfalls are rare features in the Bear River Basin of the Great Basin hydrologic region. Uplands are dominated primarily by sagebrush and oak-maple. Cottonwood and dogwood grow along the stream. While there are no known populations of threatened, endangered, or sensitive plants adjacent to this segment, Maguires draba, a sensitive species, is expected to occur on some of the cliff faces within the corridor. A stand of mature cottonwood trees at the lower end of the

canyon provides roosting habitat for wintering bald eagles (up to 100 birds). Cliffs along the creek provide peregrine falcon habitat, although no peregrine falcons have been identified to date. Because of Willard Bay and other marshy areas nearby, as well as an abundance of pigeons and other prey, the habitat is high quality. In addition, other wildlife typical for the included habitat types can be found within the corridor.

ELIGIBILITY

Name and Date of Eligibility Document: Revised Forest Plan, Wasatch-Cache National Forest 2003, Appendix VIII, USDA Forest Service; Draft Inventory of Rivers on Wasatch-Cache National Forest, Eligible for Inclusion in the national Wild and Scenic Rivers System, 1999.

Determination of Free-flowing Condition: The segment is free from channel modifications and structures. The natural stream flow of the river is unimpaired. The segment is free-flowing.

Summary of Outstandingly Remarkable Values (ORV):
Scenery – The canyon through which Willard Creek flows has dramatic topographic relief. It is visually striking. The two waterfalls present create a memorable focal point. The scenic value is outstandingly remarkable.

Wildlife – The cottonwoods in the river corridor offer prime habitat for wintering bald eagles, an endangered species. Because of its inaccessibility the habitat can be considered a refuge from human intrusions. The wildlife value is outstandingly remarkable.

CLASSIFICATION

Basis for the Classification of River – Scenic
The portion of Willard Creek on National Forest lands is eligible for the National Wild and Scenic River System. The stream is classified as a scenic river because the stream segment and stream corridor is or has:

- Free of impoundment.
- Essentially primitive, little or no evidence of human activity.
- Presence of a few inconspicuous structures, particularly those of historic or cultural value is acceptable.
- Limited amount of domestic grazing or hay production.
- Generally inaccessible except by trail.
- No road, railroads or other provision for vehicular traffic within river area. A few existing roads leading to the boundary of the area are acceptable.

SUITABILITY REPORT

Landownership and Land Uses – This segment of Willard Creek extends from its source near Willard Basin Campground to the diversion ditch at the Forest boundary. The segment is located on the Ogden Ranger District in Box Elder County, Utah. About 3 miles of this segment flow through National Forest system lands.

River Mile	Ownership	Acres
0-1.7	Wasatch-Cache National Forest	1060
1.7-2.0	Private Land (surrounded by NFS land)	43
2.0-3.0	Wasatch-cache National Forest (acres included above)	N/A
3.0-4.4	Private Land	337
	Total:	**1440 acres**

Readers Note: The study area boundaries displayed in Appendix A, Suitability Evaluation Reports, do

not represent actual Wild and Scenic River boundaries, but the area of interest for eligible river segments. It should be noted that of the eligible rivers studied, 14 of the 86 river segments appear to include portions of private land, at the end of segments near the National Forest boundary. These typically short river stretches (1/4 to 4 miles long) were included in the eligibility study as part of the river segment length because they brought the river segment to a logical terminus at a confluence with a larger stream, also contained the ORVs of the National Forest portion of the segment, or National Forest land was located within ¼ mile of these segments. These lengths are also included in the tables found in this suitability study. The magnitude of this effect is small, representing approximately 22 miles total over 14 segments, or less than 3 percent of the total mileage in the study. The final decision will apply only to river segments located on National Forest System lands. The dashed lines on the individual river maps represent the approximate 1/4 mile river corridor boundary of the river segment under study. If Congress chooses to add any of the recommended river segments to the National Wild and Scenic River System, the Forest Service would be required to develop Comprehensive River Management Plan (CRMP). Section 3(b) of the Wild and Scenic Rivers Act requires the establishment of detailed boundaries (an average of not more than 320 acres per river mile). At that time, the boundary would be adjusted to exclude private, State, or other Federal agency land located at the end or beginning of the river segment. Congress could include private lands (in holdings) within the boundaries of the designated river area, however, management restrictions would apply only to public lands.

Box Elder County has zoned the area around Willard Creek as MU-160. **Multiple Use Districts are zoned for the** purposes of providing a multiple use district is to establish areas in mountain, hillside, canyon mountain valley, desert and other open and generally undeveloped lands where human habitation should be limited in order to protect land and other open space resources; to reduce unreasonable requirements for public utility and service expenditures through uneconomic and unwise dispersal and scattering of population; to encourage use of the land, where appropriate, for forestry, grazing, agriculture, mining, wildlife habitat, and recreation; to avoid excessive damage to watersheds, water pollution, soil erosion, danger from brushland fires, damage to grazing and livestock raising, and to wildlife values; to avoid the premature development of lands by discouraging intensive development until the ultimate best use of the land can be recommended by the Planning Commission to the County Commission; and to promote the health, safety, convenience, order, prosperity, and general welfare of the inhabitants of the community. The minimum Lot Size: 160 acres or one quarter section.

Mineral and Energy Resource Activities – There are no known locatable mineral deposits of economic value on the forest and there are no known valuable deposits on patented mining claims that now appear as private land in-holdings on the forest. Presently, there are no significant mining activities on the Forest. This area is not a high oil and gas potential area.

Water Resources Development – There are no major diversions, dams or other channel modifications on this segment. Watershed improvements from 1930's Civilian Conservation Corps work is still evident in the Willard Peak areas. Below the Forest boundary, the stream passes through the town of Willard and is heavily diverted. Designation into the Wild and Scenic river system does not affect existing, valid water rights.

Transportation, Facilities, and Other Developments – Forest Road 20084 runs near the top of the ridge within the corridor in the upper half mile of this segment. A rough private road provides access to privately owned lands along the lower mile of the segment with no access by road or trail within the National Forest.

Recreation Activities – In the past there has been some panning for gold in the stream and mining for diamonds in strata exposed in the canyon sidewalls. Recreation use within most of the corridor is very light due to the steep terrain and privately controlled access. Some dispersed recreation use from Willard Basin spills over into the corridor.

Vistas from the headwaters provide sweeping views of the drainage. In the lower reaches views from the corridor are of rugged, steep canyon walls. There are no known historic or prehistoric sites in the corridor. There are several mine sites and a gravel pit on the privately owned lands closer to the Forest boundary.

Grazing Activities – There is no grazing along this segment.

Other Resource Activities – There are no current or planned Wasatch-Cache National Forest projects in the Willard Creek corridor.

Special Designations – Approximately 0.2 miles of this stream are within Groundwater Drinking Water Source Protection Zones for three springs on private land and 3 wells below the Forest boundary. This designation defines the area where contaminants are limited from the surface and subsurface areas surrounding a surface source of drinking water supplying a public water system (PWS), over which or through which contaminants are reasonably likely to move toward and reach the source. Surface water means all water which is open to the atmosphere and subject to surface runoff, and subsurface water relates to any well, spring, tunnel, adit, or other underground opening from or through which ground-water flows or is pumped from subsurface water-bearing formations.

Approximately 3.0 miles of this stream corridor are within a Wasatch-Cache National Forest inventoried roadless area. These are areas that do not have developed and maintained roads, and that are substantially natural.

The Wasatch-Cache National Forest recognizes a Special Interest Area in Willard Basin. This area will be managed to protect and/or restore remnant tall forb communities while allowing continued motorized access on designated routes. A tall forb site near Ben Lomond Peak will be evaluated as an alternative to the Willard Basin area for establishment as a Special Interest Area or Research Natural Area.

Land management direction for the Wasatch-Cache National Forest land within the stream corridor except for the area adjacent to Forest Road 20084:

Management Prescription 2.7 Special Interest Areas and Special Areas: Manage to protect particular values or unique qualities of special interest. Objectives for Special Interest Areas is "to protect and, where appropriate, foster public use and enjoyment of areas with scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics. To classify areas that possess unusual recreation and scientific values so that these special values are available for public study, use, or enjoyment" (FSM 2360.2). Objectives for Special Areas are: "To protect and manage for public use and enjoyment, special recreation areas with scenic, geological, botanical, zoological, paleontological, archaeological, or other special characteristics or unique values." (FSM2372.02) Special Interest and Special Areas may have management plans developed to address specific needs and opportunities for the individual area.

(S2.7) Timber harvest, road construction, and new recreation development are not allowed.
(G2.7-1) Vegetation/fuels treatment, prescribed fire and wildland fire use are allowed in circumstances where these activities help perpetuate the unique ecosystem, for hazardous fuel reduction, and to protect property in the wildland urban interface.
(G2.7-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.
(G2.7-3) New trail construction is allowed if associated with resource interpretation and public study, use, or enjoyment.
(G2.7-4) Allow manipulative restoration where needed for scientific study and increased public understanding of the unique values of the area.

Land management direction for the Wasatch-Cache National Forest land area adjacent to Forest Road 20084:

Management Prescription 4.4 Emphasis on Recreation Motorized Settings. These areas provide recreation opportunities within a range of semi-primitive to rural settings. Visitors may be able to obtain a moderate degree of solitude, but this prescription area provides opportunities for increased social interaction. Access to and within these areas is primarily through the use of motorized trails and roads. Sights and sounds of others may be noticeable throughout the area. Management of recreation impacts range from semi-primitive to rural depending on the Recreation Opportunity Spectrum (ROS) category at the specific area and visitor desires for convenience. Impacts to natural resources are dealt with through various management techniques and regulations. Management visibility is moderate to high with ranger patrols focusing on education, user ethics, and enforcement.

(G4.4-1) Timber harvest, vegetation/fuel treatment, road construction, prescribed fire and wildland fire use are allowed to mimic historic conditions, to restore ecosystem functioning, and to protect property in the wildland urban interface, and are designed to be compatible with motorized recreation, but must not detract from the recreation setting over the long-term.
(G4.4-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.
(G4.4-3) New recreation development and new trail construction are allowed.

Socio-Economic Environment – Willard—population approximately 2,000—is the southernmost community in Box Elder County along US 89, and is nestled between majestic Willard Peak in the mountains to the east and the Great Salt Lake to the west. Seven miles north is Brigham City, and Ogden is thirteen miles to the south. The economy of Willard has been centered on agriculture, with fruit crops being the major product. Agriculture is now a secondary source of income. Some businesses are located in Willard, but most people seek employment nearby at Hill Air Force Base, the Internal Revenue Service, Thiokol Corporation and Morton International.

Current Administration and Funding Needs if Designated – This stream segment is located on private and National Forest System lands. The lands within Box Elder County are administered through the Land Use Management & Development Code for Box Elder County and zoning ordinances for the Forest Recreation (MU-160 zone) and Sensitive Lands Overlay. The Wasatch-Cache National Forest lands are managed under the direction of the Wasatch-Cache National Forest Revised Forest Plan, 2003.

The following information is based on 2001 data, which doesn't account for inflation over the past six years, but is the best available data. If a river is designated as Wild, Scenic, or Recreational, the actual cost of preparing the comprehensive river management plan would average $200,000 per plan for 86 segments, which would cost approximately $17.2 million the first two to three years following designation. It was estimated that annual management costs for a high complexity river would be $200,000; a moderate complexity river would be $50,000; and a low complexity river at $25,000. Using an average of complexity costs, it would cost the Forest Service around $7.8 million annually for 86 segments. (Estimated Costs of Wild and Scenic Rivers Program - V. 091104)

SUITABILITY FACTOR ASSESSMENT:

(1) **The extent and determination of the degree to which the agency proposes or a State or its political subdivisions might participate in the shared preservation and administration of the river, including the costs thereof, should it be proposed for inclusion in the System.**

Eligible rivers are protected and managed by the Forest Service according to standards included in Appendix VIII of the Revised Forest Plan until designated by Congress, or otherwise directed by other legal means. The Wasatch-Cache National Forest Revised Plan provides direction to implement Management Prescriptions for stream segments that are suitable for Wild and Scenic River designation by Congress. Once designated, the Wasatch-Cache National Forest will apply Management Prescriptions

numbers to the designated Wild (2.1), Scenic (2.2), and Recreational (2.3) Rivers on Forest, which include land corridors that extend 1/4 mile from each bank.

The State of Utah has not demonstrated interest or disinterest in sharing of the costs.

(2) **The state/local government's ability to manage and protect the outstandingly remarkable values on non-federal lands. Include any conflicting local zoning and/or land use controls that could occur.**
The private land could be developed in the future. This development would be directed by the Land Use Management & Development Code for Box Elder County and zoning ordinances for the Forest Recreation (MU-160 zone); which allows for one seasonal cabin per 160 acres. The Sensitive Areas Overlay applies to this stream corridor and has regulations that only allow agricultural use.

(3) **Support or opposition to designation.**
There were no comments specific to Willard Creek from the January 1999 DRAFT Inventory of Rivers on the Wasatch-Cache National Forest Eligible for Inclusion I the National Wild and Scenic Rivers System.

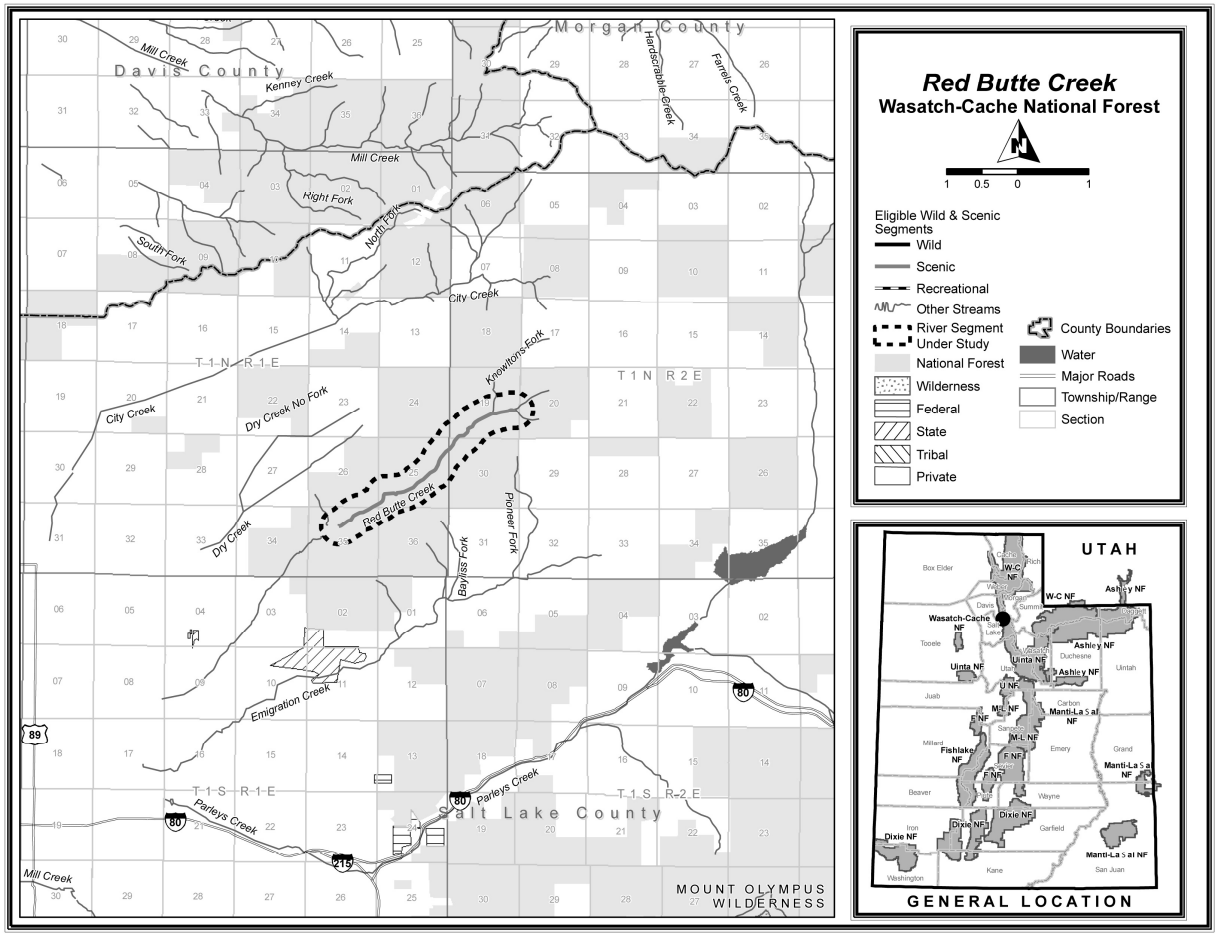
No comments were received specifically for Willard Creek during the public comment period for the Draft EIS.

(4) **The consistency of designation with other agency plans, programs or policies and in meeting regional objectives**.
Designation of this segment of Willard Creek complements current Forest management and also aids in drinking water source protection of the surface and ground water that is used by the of Willard.

(5) **Contribution to river system or basin integrity**.
This segment contributes to the basin integrity because it incorporates the source to the Forest boundary and designation would also further enforce protection to the drinking water source areas.

(6) **Demonstrated or potential commitment for public volunteers, partnerships, and/or stewardship commitments for management and/or funding of the river segment.**
The unique values of Willard Basin may draw interest from groups interested in a conservation partnership.

Red Butte Creek
Suitability Evaluation Report (SER)



STUDY AREA SUMMARY

Name of River: Red Butte Creek
River Mileage:
Studied: 3.2 miles, from source to Red Butte Reservoir
Eligible: Same

Location:

Red Butte Creek	Wasatch-Cache National Forest, Salt Lake Ranger District, Salt Lake County, Utah		Congressional District 2	
Segment 1	Start	End	Classification	Miles
	SW ¼ SE ¼ Sect. 17, T 1 N, R 2 E, SLM	SE ¼ NW ¼ Sect. 35, T 1 N, R 1 E, SLM	Scenic	3.2

Physical Description of River:
The river segment flows between elevations that range from 7,600 and 5,400 feet. Red Butte Creek is a typical moderate to high energy mountain stream. It has a pool-riffle structure in a confined single channel. Stream flow is perennial and reflects a snow-dominated hydrograph. This canyon is a Research Natural Area (RNA). A USGS Hydrologic Benchmark Network station is located just upstream from Red Butte Reservoir.

Uplands are characterized by oak-maple, sagebrush, and grassland communities with some conifers on north-facing slopes at higher elevations. Box elder and cottonwood with tall willows and red-osier dogwood dominate the riparian communities throughout much of the length of the channel. Riparian ecosystems in the lower half of this segment are in the process of recovering from excessive down-cutting of the channel in the early 1980's as a result of high flows. Non-native herbaceous species occur in the undergrowth of the riparian and adjacent communities in this area. Riparian plant communities, while more or less natural in appearance, have been altered from historic conditions as a possible result of beaver removal from the canyon. Upland communities, except along the road corridor, are natural in appearance. No threatened, endangered, or sensitive plant species are known to occur along this segment. One species of interest, Cypripedium calceolus, occurs in Red Butte Canyon within the quarter mile corridor of Red Butte Creek. Only one population of this species occurs in the area and it is the only known natural population in the State of Utah. This species is quite common in the eastern United States but becomes increasingly rare in the West (Atwood 1993).

The population of Bonneville cutthroat trout has value because it is naturally reproducing and provides a potential brood source for restoration efforts. At the terminus of the segment is Red Butte Reservoir, under an agreement with the U.S. Fish and Wildlife Service, the reservoir is being used is a refuge for the "Endangered" June Sucker. Both species spawn upstream to a fish barrier about 200 yards above the reservoir. The Division of Wildlife Resources transports the fish beyond the barrier to assist in their fishery program. The stream is ranked as Class III, an important fishery for spawning and nursery purposes. No endangered, threatened or sensitive wildlife species are present.

ELIGIBILITY

Name and Date of Eligibility Document: Revised Forest Plan, Wasatch-Cache National Forest 2003, Appendix VIII, USDA Forest Service; Draft Inventory of Rivers on Wasatch-Cache National Forest, Eligible for Inclusion in the national Wild and Scenic Rivers System, 1999.

Determination of Free-flowing Condition: The segment is free from major channel modifications and structures. The natural stream flow of the river is unimpaired. This segment is free-flowing.

Summary of Outstandingly Remarkable Values (ORV):
Ecological – The stream through Red Butte Research Natural Area has been protected from impacts and development for over 30 years; it provides an important ecological context for university research. The river and its context in the ecosystem contribute significantly to the research value of the area. The ecological value is outstandingly remarkable.

CLASSIFICATION

Basis for the Classification of River: Scenic
Red Butte Creek is eligible for the National Wild and Scenic River System. The stream is classified as a scenic river because the stream and stream corridor is or has:

- Free of impoundment.
- Largely primitive and undeveloped. No substantial evidence of human activity.
- Presence of small communities or dispersed dwelling or farm structures is acceptable.
- Road goes up stream corridor but access is very limited due to RNA status

SUITABILITY REPORT

Landownership and Land Uses – The segment is located on the Salt Lake Ranger District in Salt Lake County, Utah. The entire segment flows through National Forest system lands.

River Mile	Ownership	Acres

0-3.2	Wasatch-Cache National Forest	1130
	Total	1130 acres

Currently there are no potential changes to land use in this area due to the RNA designation.

Mineral and Energy Resource Activities – There are no known locatable mineral deposits of economic value within the area of the eligible Red Butte Creek segment and there are no known valuable deposits on patented mining claims that now appear as private land in-holdings on the forest. Presently, there are no significant mining activities on the Forest. Also, this area is not a high oil and gas potential area (Revised Forest Plan, Wasatch Cache-National Forest, 2003).

Water Resources Development – The only impediment in the stream is a fish barrier combined with the USGS gauging station low in the reach. Below this segment is the Red Butte Reservoir that stores water for irrigation in the Salt Lake valley. The reservoir is operated and maintained by the CUWCD. Designation into the Wild and Scenic river system does not affect existing, valid water rights.

Transportation, Facilities, and Other Developments – Access is by Forest Road 253 which is a one lane dirt road with turnouts. The road is closed to vehicle traffic by use of a locked gate at the entrance of the Red Butte Research Natural Area (RNA).

Grazing Activities – The area has been excluded from livestock grazing because of its RNA status.

Recreation Activities – General recreation access to the area is not permitted because of its status as a Research Natural Area. The scenery is natural due to the Research Natural Area designation; however this setting is topographically less variable than many adjacent to it near the Salt Lake Valley. It is not a spectacular scenic setting. There are no known archeological or historic sites in the segment.

Other Resource Activities – Since the area is in a Research Natural Area, economic development or use is not allowed. There is not any commercial fishing or hunting operations in the canyon. Land in the canyon was acquired by the Federal Government between 1888 and 1909 and was used as a water source by the U.S. Army at Fort Douglas until 1991. The Army closed the basin to logging and grazing in the early 1900's to protect water quality. The basin has remained closed to the public and has been used primarily as a research site for biologists at the University of Utah.

Special Designations – Red Butte Research Natural Area is part of a national network of ecological areas designated in perpetuity for research and/or education to maintain biological diversity on National Forest System lands. Red Butte RNA will continue to be managed for non-manipulative research, observation, and study, and will continue to provide important research opportunities and baseline information about the ecological composition, structure, and function of plant communities (such as gambel oak, aspen, riparian, and Douglas-fir) that naturally dominate the area. Red Butte RNA will also assist in implementing the Endangered Species Act and the monitoring provisions of the National Forest Management Act. This RNA will continue to provide unique research opportunities in an urban/wildland interface setting. Trails surrounding the Research Natural Area will be realigned to protect against unauthorized public access. As a result of educational efforts, people will understand the value of research natural areas and compliance with the area closure will improve.

The area within the stream corridor is recognized by the State of Utah as a Drinking Water Source Protection Zone for three groundwater sources (wells located off the Forest). This designation defines the area where contaminants are limited from the surface and subsurface areas surrounding a surface source of drinking water supplying a public water system (PWS), over which or through which contaminants are reasonably likely to move toward and reach the source. Surface water means all water which is open to the atmosphere and subject to surface runoff, and subsurface water relates to any well, spring, tunnel, adit, or other underground opening from or through which ground-water flows or is pumped from subsurface water-bearing formations.

Land management direction for Wasatch-Cache National Forest land within the stream corridor:

Management Prescription 3.1A Aquatic Habitat: consists of the stream and adjacent riparian areas (or 300 feet either side of the stream whichever is greater). Because of the large number of existing facilities (roads, developed recreation sites, trails), already located within areas mapped as 3.1A, and because of their relatively high value and small proportion of the landscape, development outside already developed areas within this prescription is to be avoided. Protect or restore proper hydrologic functioning.

(S3.1A-1) New recreation facility development is not allowed.
(S3.1A-2) Cutting fuelwood larger than 5 inches in diameter is not allowed.
(G3.1A-1) Timber harvest, vegetation/fuel treatments, prescribed fire, and wildland fire use are allowed only for the purposes of maintaining, improving or restoring riparian and aquatic habitat to desired conditions or to protect property in the wildland urban interface.
(G3.1A-2) Livestock grazing is allowed with the utilization standard for Riparian Class 1, and to meet site-specifically developed desired conditions.
(G3.1A-3) Road construction is not allowed except for road crossings.
(G3.1A-4) New trail construction is allowed if consistent with site-specifically defined riparian management objectives.

Land management direction for Wasatch-Cache National Forest land outside the 3.1a buffer and within the stream corridor:

Management Prescription 2.4: Research Natural Areas: Manage existing and proposed Research Natural Areas to protect their unique and/or representative qualities. Limit human induced effects as much as possible for the purpose of using the ecotype as a benchmark from which to measure human-induced effects elsewhere. Each designated Research Natural Area may have a management plan developed to provide additional direction specific to that area.

(S2.4) Timber harvest, grazing, road construction, new recreation development and new trail construction are not allowed.
(G2.4-1) Vegetation/fuel treatment, wildland fire use and prescribed fire are allowed to meet specific research objectives and/or to perpetuate the unique or representative ecosystem.

Management Prescription 2.7 Special Interest Areas and Special Areas: Manage to protect particular values or unique qualities of special interest. Objectives for **Special Interest Areas** is "to protect and, where appropriate, foster public use and enjoyment of areas with scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics. To classify areas that possess unusual recreation and scientific values so that these special values are available for public study, use, or enjoyment" (FSM 2360.2). Objectives for **Special Areas** are: "To protect and manage for public use and enjoyment, special recreation areas with scenic, geological, botanical, zoological, paleontological, archaeological, or other special characteristics or unique values." (FSM2372.02) Special Interest and Special Areas may have management plans developed to address specific needs and opportunities for the individual area.

(S2.7) Timber harvest, road construction, and new recreation development are not allowed.
(G2.7-1) Vegetation/fuels treatment, prescribed fire and wildland fire use are allowed in circumstances where these activities help perpetuate the unique ecosystem, for hazardous fuel reduction, and to protect property in the wildland urban interface.
(G2.7-2) Grazing is allowed on open allotments to meet site-specifically defined desired conditions.
(G2.7-3) New trail construction is allowed if associated with resource interpretation and public study, use, or enjoyment.
(G2.7-4) Allow manipulative restoration where needed for scientific study and increased public understanding of the unique values of the area.

Socio-Economic Environment – Currently, eighty-five percent of Utah's population lives within 15 miles of the Wasatch Range. This concentration is commonly known as the Wasatch Front urban area and has a population of just over 2,000,000 residents. Salt Lake County is home to 15 unincorporated cities and has a population of 898,387. Salt Lake City is home to the University of Utah and Westminster College, and is the center for Utah's economy.

The Wasatch-Cache National Forest borders the metropolitan area and is recognized as an urban forest and ranks within the top five mostly visited National Forests in the nation. The proximity to outdoor recreation opportunities and variety of available activities is unparalleled. There are 13 world class ski resorts in Utah with the majority within and hour and a half drive from Salt Lake City. The Wasatch Mountains offer hundreds of miles of mountain biking and hiking trails that offer back country access to alpine canyons in very close proximity to a large metropolitan area. The Big and Little Cottonwood Canyons offer world class skiing, rock climbing and fishing opportunities in the area's alpine lakes and streams. These two canyons are home to ski resorts that offer year around recreation opportunities, where many valley residents visit the canyons in the summer to retreat from valley heat.

Current Administration and Funding Needs if Designated – The Red Butte Creek segment is located on National Forest System lands and is administered by the Wasatch-Cache National Forest as directed by the Revised Forest Plan, Wasatch-Cache National Forest 2003.

The following information is based on 2001 data, which doesn't account for inflation over the past six years, but is the best available data. If a river is designated as Wild, Scenic, or Recreational, the actual cost of preparing the comprehensive river management plan would average $200,000 per plan for 86 segments, which would cost approximately $17.2 million the first two to three years following designation. It was estimated that annual management costs for a high complexity river would be $200,000; a moderate complexity river would be $50,000; and a low complexity river at $25,000. Using an average of complexity costs, it would cost the Forest Service around $7.8 million annually for 86 segments. (Estimated Costs of Wild and Scenic Rivers Program - V. 091104)

SUITABILITY FACTOR ASSESSMENT:

(1) **The extent to which the State or its political subdivisions might participate in the shared preservation and administration of the river, including costs, should it be proposed for inclusion in the National System.**

Eligible rivers are protected and managed by the Forest Service according to standards included in Appendix VIII of the Revised Forest Plan until designated by Congress, or otherwise directed by other legal means. The Wasatch-Cache National Forest Revised Plan provides direction to implement Management Prescriptions for stream segments that are suitable for Wild and Scenic River designation by Congress. Once designated, the Wasatch-Cache National Forest will apply Management Prescriptions numbers to the designated Wild (2.1), Scenic (2.2), and Recreational (2.3) Rivers on Forest, which include land corridors that extend 1/4 mile from each bank.

This segment is located entirely within a Research Natural Area where public access is prohibited and few people visit. The University of Utah uses portions of the area for research. There would likely be quite limited support by the County or City for shared preservation work or administration. However, there is no private land in the basin and almost no public use, so the need for shared administration is probably not a big concern.

The State of Utah has not demonstrated interest or disinterest in sharing of the costs.

(2) **The state/local government's ability to manage and protect the outstandingly remarkable values on non-federal lands. Include any local zoning and/or land use controls that appear to conflict with**

protection of river values.
This segment is entirely on the Wasatch-Cache National Forest. Currently, there is no road access to this area and the threat of development seems low, due to RNA status and management of National Forest land. The only non-federal land in the Red Butte drainage above the reservoir appears to be in the upper (eastern) basin and is not within the ¼ mile stream corridor. Currently, there is no road access to this area and the threat of development seems low. If development were proposed there, it would be subject to Salt Lake County planning and zoning requirements for Forestry Recreation 20.

(3) **Support or opposition to designation**
One public comment on the eligibility process during Forest Plan revision supported Red Butte Creek's eligibility and suggested that the reservoir be stabilized and made an integral part of the ecosystem.

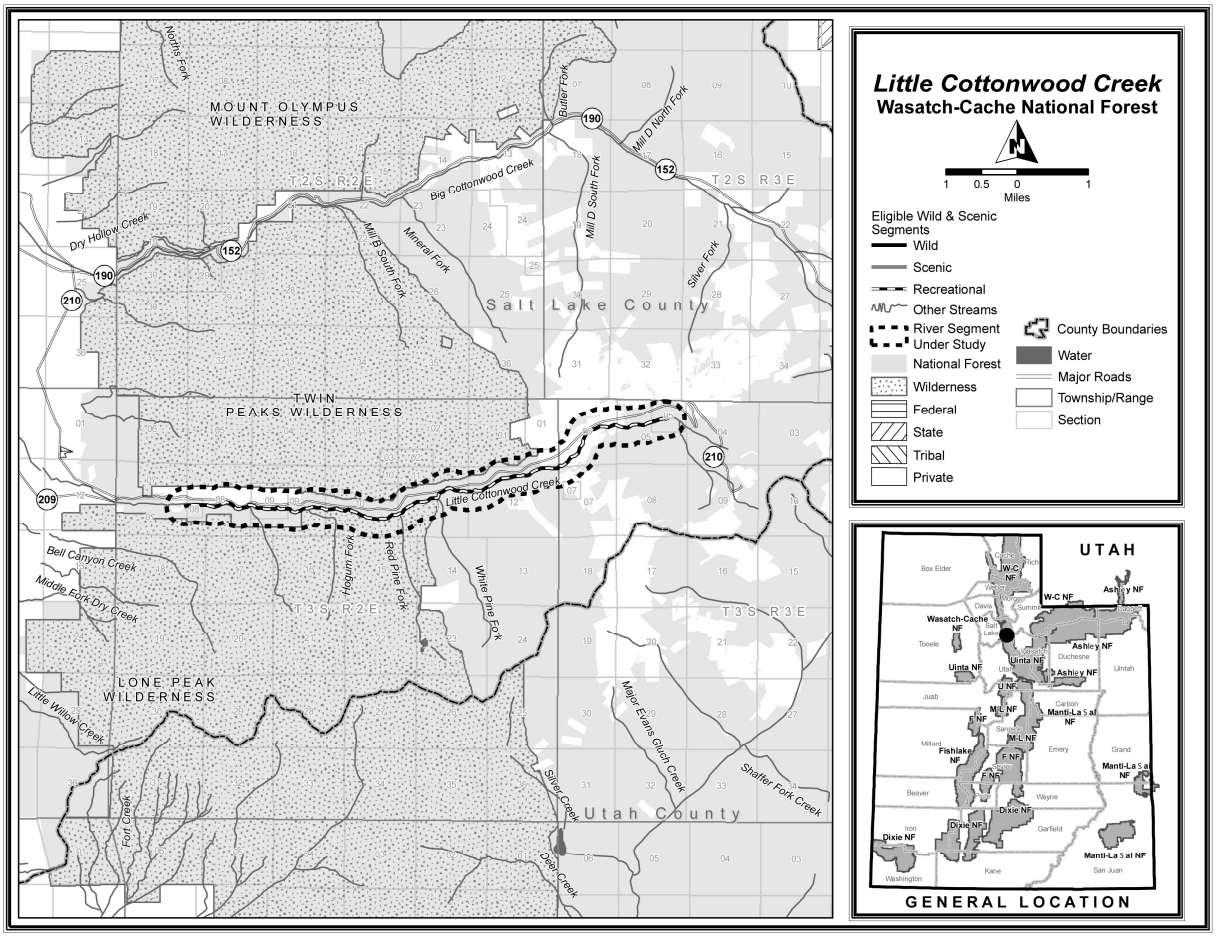
During scoping the Central Utah Project and Water Conservancy District did not support any designation that would interfere with their property around Red Butte Reservoir. Again during the comment period for the Draft EIS the Central Utah Water Conservation District emphasized designation of Red Butte Creek upstream and outside of their property could be considered.

(4) **The consistency of designation with other agency plans, programs or policies and in meeting regional objectives**.
The reservoir and adjoining land immediately below and surrounding the reservoir is now owned by the Central Utah Water Conservancy District. They manage the reservoir as a rearing area for rare fish species and as a mitigation measure for water diversions in other parts of central Utah. Designation would add protection to the watershed and fishery and benefit the cooperative work between the U.S. Forest Service, U.S. Fish & Wildlife Service (US FWS), and Utah Division of Wildlife Resources (UDWR) to protect the Bonneville cutthroat trout (BCT) population; would aid in work emphasizing on BCT reproduction, streamside incubators; and help maintain natural area bio-diversity.

(5) **Contribution to river system or basin integrity**.
This segment has a minor contribution to the basin integrity. As the stream flows into the urbanized Salt Lake Valley it is diverted for irrigation. Designation of Red Butte Creek would add another layer of protective status to the stream that is already afforded by the RNA designation and as a DWSPZ for groundwater sources.

(6) **Demonstrated or potential commitment for public volunteers, partnerships, and/or stewardship commitments for management and/or funding of the river segment.**
There is good potential for public partnerships and volunteer efforts should Red Butte Creek becomes part of the Wild and Scenic Rivers system. Demonstrated partnerships have been made for this stream currently. This stream is part of the Embrace-A-Stream Program (EAS) administered by Trout Unlimited.

Little Cottonwood Creek
Suitability Evaluation Report (SER)



STUDY AREA SUMMARY

Name of River: Little Cottonwood Creek
River Mileage:
Studied: 9.9 miles, from source to Murray Diversion
Eligible: 7.6 miles, from confluence with Grizzly Gulch to Murray Diversion

Location:

Little Cottonwood Creek	Wasatch-Cache National Forest, Salt Lake Ranger District, Salt Lake County, Utah		Congressional District 2	
	Start	End	Classification	Miles
Segment 1	SW ¼ NE ¼ Sect. 5, T 3 S, R 3 E, SLM	NW ¼ SE ¼ Sect. 7, T 3 S, R 2 E, SLM	Recreational	7.6*

* The project maps shown in the 1999 Draft Inventory and at the public meetings during the scoping period are incorrect. The maps show Little Cottonwood Creek extending up one of the four unnamed headwaters streams, this is incorrect. The correct starting location for Little Cottonwood Creek begins at the confluence with Grizzly Gulch. The maps also incorrectly show the location of the end point at the Murray Diversion. The Murray Diversion is upstream from where the maps indicate (~435840.21 E, 4491201.44 N, UTM 12 NAD 27). The length of the stream will change by approximately 2.3 miles.

Physical Description of River:
This river segment flows between elevations ranging from 8,800 to 5,400 feet. The stream has cut into glacial-fluvial outwash, moraines, and avalanche debris. It has a steep, high energy riffle-run pattern, except for the reach from Tanner Flat to Snowbird which is primarily a pool-riffle-run system. There is some braiding at low flows. Unlike the reaches above and below, it is moderate gradient and energy. Little Cottonwood Creek is a perennial mountain stream that is dominated by snow melt. Mountain goats are visible in some areas and people stop to view them.

Uplands are characterized by aspen with conifers dominating north facing slopes. At lower elevations, oak-maple communities dominate the south facing slopes. The riparian ecosystems are characterized by cottonwood, birch, box elder, and dogwood at lower elevations, giving way to aspen, alder, willows and dogwood at higher portions of this segment. Tall forb communities occur on open slopes at the upper portion of this segment providing spectacular wildflower displays in July and August. Some of the rocky slopes probably support Wasatch jamesia and Garretts bladderpod, both Intermountain Region sensitive species. This vegetation in this segment is more or less natural in appearance, although diversity is not necessarily unique in character. There are no threatened or endangered wildlife species present. There are no threatened or endangered fish species present. Fish species present include stocked and naturally reproducing rainbow trout and brook trout. The stream is ranked by the State of Utah as Class III, an important fishery.

ELIGIBILITY

Name and Date of Eligibility Document: Revised Forest Plan, Wasatch-Cache National Forest 2003, Appendix VIII, USDA Forest Service; Draft Inventory of Rivers on Wasatch-Cache National Forest, Eligible for Inclusion in the national Wild and Scenic Rivers System, 1999.

Determination of Free-flow: The segment is free from major channel modifications and structures. The natural stream flow of the river is generally unimpaired except for the lower mile. This segment is free-flowing to the upper diversion structure.

Summary of Outstandingly Remarkable Values (ORV):
Geology/Hydrology – The geologic landscape in this segment is that of a heavily glaciated valley, with steep grey granite walls. The cirques in the upper basin offer an excellent example of past glaciations. As background views from the corridor, the features reveal an interesting story of earth's history. The geologic value is outstandingly remarkable.

Scenery – Topographic relief is great, and vegetation diversity is very good. Scenes in the upper portion of the segment are very high quality. This kind of valley scene is unique locally and is considered one of the more spectacular viewsheds in the area. Several viewpoints within the corridor offer a spectacular diversity of view. Scenic views from the stream to the rugged cliff faces are very striking. The scenic value is outstandingly remarkable.

Ecology – The upper watershed within the corridor has significant tall forb communities of those remaining along the Wasatch Front. The ecological value is outstandingly remarkable.

CLASSIFICATION

Basis for the Classification of River: Recreational
Little Cottonwood Creek is eligible for the National Wild and Scenic River System above the Murray City diversion. It is classified as a recreational river because:

- Some existing impoundments or diversions are present. The existence of low dams, diversions or

other modifications of the waterway is acceptable, provided the waterway remains free-flowing and generally natural and riverine in appearance.

- While some of the upper portions of Little Cottonwood Creek have development immediately adjacent to the channel, a majority of the stream in relatively undisturbed.

SUITABILITY REPORT

Landownership and Land Uses – This eligible segment of Little Cottonwood Creek extends from its confluence with Grizzly Gulch, through many tracts of private land downstream to the Forest boundary, near the Murray City diversion and the Wasatch Resort community. The stream flows through a mix of private lands and National Forest system lands for the first 2 ½ miles from the Town of Alta and Alta Ski Lifts downstream to the Snowbird Resort. National Forest lands account for the middle portion of the segment and then at the end of the segment there is a mix of ownership, where small private tracts are surrounded by National Forest system land.

<table>
<tr><th>River Mile</th><th>Ownership</th><th colspan="2">Acres</th></tr>
<tr><td>0-0.6</td><td>Wasatch-Cache National Forest</td><td rowspan="4">286 acres</td><td rowspan="7">1930 acres</td></tr>
<tr><td>0.6-0.9</td><td>Private Land</td></tr>
<tr><td>0.9-0.93</td><td>Wasatch-Cache National Forest</td></tr>
<tr><td>0.93-1.76</td><td>Private Land</td></tr>
<tr><td>1.76-7.26</td><td>Wasatch-Cache National Forest</td><td rowspan="3">241 acres</td></tr>
<tr><td>7.26-7.264</td><td>Private Land</td></tr>
<tr><td>7.264-7.6</td><td>Wasatch-Cache National Forest</td></tr>
<tr><td></td><td>Total</td><td colspan="2">2237 acres</td></tr>
</table>

Private property within the Albion Basin owned by homeowners and Alta Ski Lifts, Snowbird and Wasatch Resort is zoned for Forestry Recreation (FR). The purpose of the Forestry Recreation zone is to permit limited residential development as well as utilization and preservation of the natural environment and resources of the canyon areas.

Other sections of private land within the Town of Alta is zoned forestry multifamily (FM). This zone is to permit development of certain areas in the foothill and canyon areas of the county for high-density residential, limited commercial, and other specified uses to the extent that such development is compatible with the protection of the natural and scenic resources of these areas for the continued benefit of future generations.

Readers Note: The study area boundaries displayed in Appendix A, Suitability Evaluation Reports, do not represent actual Wild and Scenic River boundaries, but the area of interest for eligible river segments. It should be noted that of the eligible rivers studied, 14 of the 86 river segments appear to include portions of private land, at the end of segments near the National Forest boundary. These typically short river stretches (1/4 to 4 miles long) were included in the eligibility study as part of the river segment length because they brought the river segment to a logical terminus at a confluence with a larger stream, also contained the ORVs of the National Forest portion of the segment, or National Forest land was located within ¼ mile of these segments. These lengths are also included in the tables found in this suitability study. The magnitude of this effect is small, representing approximately 22 miles total over 14 segments, or less than 3 percent of the total mileage in the study. The final decision will apply only to river segments located on National Forest System lands. The dashed lines on the individual river maps represent the approximate 1/4 mile river corridor boundary of the river segment under study. If Congress chooses to add any of the recommended river segments to the National Wild and Scenic River System, the Forest Service would be required to develop Comprehensive River Management Plan (CRMP). Section 3(b) of the Wild and Scenic Rivers Act requires the establishment of detailed boundaries (an average of not more than 320 acres per river mile). At that time, the boundary would be adjusted to exclude private, State, or other Federal agency land located at the end or beginning of the river segment.

Congress could include private lands (in holdings) within the boundaries of the designated river area, however, management restrictions would apply only to public lands.

Water Resources Development – In the part of Little Cottonwood Creek, from Snowbird to the lower diversion at the Murray City hydroelectric plant near Wasatch Resort, the stream is not significantly impeded or modified. Water from Cecret Lake is regulated by Salt Lake City and there are diversions for snowmaking at Alta and Snowbird Ski Areas. Water that makes up most of the base flow below Snowbird is regulated by the Wasatch Tunnel by Salt Lake County Water Conservation District #3. The average flow discharged into Little Cottonwood Creek is 300-500 gpm; during peak runoff there may be short periods of discharge up to 2,000 gpm.

Salt Lake County Service Area #3 is responsible for providing drinking water and wastewater services to Snowbird Ski Resort and also manages the Town of Alta's water system through an interlocal agreement. Water from the Wasatch Drain Tunnel is used in Snowbird's Co-generation Plant through a non-consumptive use water right, where water from the drain tunnel is diverted through the Co-generation Plant and then returned to Little Cottonwood Creek.

The diversion directly upstream from the Murray City diversion, which was most recently owned by Whitmore Oxygen, is not a significant diversion. Below the Murray City plant and diversion to the Forest boundary and beyond, Little Cottonwood Creek is dewatered for about a mile through most of the year. Off-stream reservoir operations alter stream flows several times throughout the summer. Water from Little Cottonwood Creek provides high-quality drinking water to the large urban population in the Salt Lake Valley.

Transportation, Facilities, and Other Developments – Parallel access provided by State Highway 210 along the eligible segment, a two lane asphalt road is recognized as a state scenic byway. This road provides year around access to the Wasatch Resort subdivision, the Town of Alta, Alta Ski Lifts and adjoining lodges, the Snowbird Resort, and Forest Service trails and campgrounds from the Salt Lake Valley. This road receives very heavy use particularly during the winter from skiers traveling to resorts and trailheads, Alta and Snowbird guests, employees and service industry traffic, and Alta residents. There are large paved parking lots at Snowbird and Alta destination ski areas that are adjacent to the creek. Two Forest Service campgrounds are located in Little Cottonwood Canyon. The Albion Basin campground is located above Segment 1 along a headwater tributary. Tanner Flat Campground is located down the canyon and has developed campsites adjacent to the stream with hardened road surfaces.

In the reach from Snowbird through Alta channel modifications are present. There are no full-scale impoundments in this reach. However, the stream is diverted underground through long culverts at two or more points on the stream. While the upper reach is encroached upon by parking lots, snow storage sites, and other developments, flows are not directly impeded and the natural functions of the channel have been modified only slightly. There are two road/stream crossings where the Alta bypass road crosses the creek. There are many foot bridges spanning the stream within the Snowbird resort, along the Little Cottonwood Creek Trail, at the White Pine Trailhead.

Mineral and Energy Resource Activities – Historically, locatable minerals have been mined and removed from the Forest in years past. Most of the locatable metaliferous minerals were mined from Little Cottonwood Canyon on the Salt Lake Ranger District. The discovery of silver ore in 1860 led to the settlement of the Town of Alta. Mining activity continued through the late 1800's and early 1900's with the last operation of appreciable size closing in 1967. Most of the activity occurred in mining districts in Little Cottonwood Canyon.

The availability of lands open to operations under the 1872 Mining Law can be affected by several factors including withdrawals, special legislation, and outstanding or reserved mineral rights (National Forest

Surface, state or private minerals rights). Special designations allow mining entry but restrict certain types of mining activity. These include the Salt Lake City municipal watershed

Grazing Activities – There are no permitted grazing allotments in Little Cottonwood Canyon.

Recreation Activities – The ski resorts in Little Cottonwood Canyon will continue to serve as hubs of year-round outdoor recreation use of both private and public lands within permit areas. Jogging, hiking, and bike-riding are popular, as are sightseeing along the Little Cottonwood Creek Trail located at the mouth of the canyon. Rock climbing is also very popular, particularly at the Gate Buttress. In the lower reaches of the stream access to the stream is relatively easy from the paved road. Access to the stream is limited in much of its middle reaches because of the road location high above the stream, and steep, forested terrain between stream and road. Much recreation in this segment is hiking to the Lone Peak Wilderness or other upland settings from a trailhead in the canyon bottom. River related recreation is minimal, and water play/swimming in the stream is prohibited by local ordinance. Some fishing is done in the stream, but this is a minor focus of recreation.

Other Resource Activities – People have developed the upper and lower parts of Little Cottonwood Canyon on private land. The Salt Lake Temple granite quarry is present in the lower part of this segment, and it is a developed and interpreted site with a parking lot and picnic opportunities. An old power plant ruin is also present in the segment, just west of Tanner Flats Campground.

Special Designations – Little Cottonwood Creek is a fish bearing stream and is managed by the Wasatch-Cache National Forest as a Category 1 Fish-Bearing Stream Riparian Habitat Conservation Areas (RHCAs). RHCAs include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems by (1) influencing the delivery of coarse sediment, organic matter, and woody debris to streams, (2) providing root strength for channel stability, (3) shading the stream, and (4) protecting water quality. This designation still allows for a full range of activities but it emphasis the achievement of riparian management objectives that are identified on a site-by-site basis. These objectives should include riparian vegetation and instream habitat conditions consist of the stream and the area on either side of the stream extending from the edges of the active stream channel to 300 feet slope distance (600 feet, including both sides of the stream channel).

Approximately 8.7 miles of this stream corridor that flows along State Highway 210 is within the Little Cottonwood Canyon State Scenic Byway.

Salt Lake City owns all or the largest percentage of water rights in Little Cottonwood Canyon, and has congressionally delegated authority to protect the water supply. Congress also directed the Forest Service to administer designated watersheds in cooperation with Salt Lake City for the purpose of storing, conserving and protecting water from pollution. The entire stream corridor for Little Cottonwood Creek is recognized at a surface and groundwater drinking water source protection zone by the State of Utah. Little Cottonwood Canyon is a protected watershed area and is also regulated by the Salt Lake City - County Health Regulation #14 (watersheds) authorized by Utah Code Annotated 26-24-20. Water regulations are enforced by the Salt Lake County Sheriff's Office, the Salt Lake City Water Department, the Salt Lake City - County Health Department, the USDA Forest Service, and the Alta Marshal's Office.

It is unlawful for any person:

- To permit a dog (s) to be taken into the watershed area. This does not apply to seeing eye/hearing dogs or law enforcement dogs.
- To pollute or allow pollution of any water in the watershed area.
- To operate any type of motor vehicle upon the property within the watershed except on a highway or road open for public use, approved roads in residential/cabin areas, official picnic/camp area

roads, and ski area parking lots. Emergency and official government vehicles are exempt when on official business.

- To deposit any human excreta within the watershed area other than into approved toilets. Cesspools are also prohibited.
- To permit a horse or any other domestic animal into the area without a permit.
- To camp overnight except in officially designated campgrounds. This does not apply to backpacking.
- To backpack camp unless the campsite is located over 200 feet from the nearest water source
- To bathe, swim or wash clothes, diapers, eating utensils, or any other object in any spring, marsh, stream, or other water source.
- To throw or break glass.

These regulations apply in the entire canyon area from ridge top to ridge top, not just in the immediate area of surface water.

Approximately 1.1 miles of this stream flows within the Lone Peak Wilderness and management of the stream corridor will be directed by Wilderness regulations. The majority of the Little Cottonwood Creek stream corridor is within the Twin Peak and Lone Peak Wilderness Areas. The following acts are prohibited in the Twin Peak and Lone Peak Wilderness Areas: Group sizes exceeding 10 persons, camping within 200 feet of lakes, trails, or other sources of water, camping for more than 3 days at one site, short cutting a trail switchback, and disposing of garbage, debris, or other waste. No open fires are allowed in the Red Pine Fork and Maybird Gulch drainages within the Lone Peak Wilderness. No open fires are allowed in the Mill B South Fork (Lake Blanche) drainage within the Twin Peaks Wilderness.

Land management direction for Wasatch-Cache National Forest land within the stream corridor outside the 3.1w buffer below Snowbird to the private land near the bottom of the segment:

Management Prescription 1.1 Opportunity Class I: This area in existing wilderness is characterized by an unmodified natural environment. Human induced change is temporary and minor. Outstanding opportunities for solitude and unconfined recreation are available for visitors, who travel in small groups, practice excellent wilderness ethics and spend extra effort to leave no trace. Encounters with others are rare.

Management Prescription 1.3 Opportunity Class III: This area in existing wilderness is characterized by predominately unmodified natural environment, but impacts could persist from year to year. During peak season and in popular areas concentrated use is more common and opportunities for solitude and unconfined recreation more limited.

(S1.1-3-1) Timber harvest, vegetation/fuel treatment, road building, new recreation development, mountain biking, and use of motorized equipment such as chainsaws and helicopters are not allowed. Exceptions to motorized equipment use may be granted in emergency situations (i.e., wildland fire, search and rescue).
(S1.1-3-2) Allow no net increase in miles of trail with the exception of the Bonneville Shoreline Trail.
(G1.1-3-1) Grazing and wildland fire use are allowed; prescribed fire is allowed to meet wilderness fire management objectives (FSM2324.2).

Land management direction for Wasatch-Cache National Forest land within the stream corridor:

Management Prescription 3.1w Watershed Emphasis: consists of uplands identified as important watersheds.

(S3.1W) Timber harvest, road construction and new recreation facility development are not allowed.
(G3.1W-1) Vegetation/fuel treatment, prescribed fire, and wildland fire use are allowed for the

purposes of maintaining, improving or restoring watersheds to desired conditions, and to protect property in the wildland urban interface.
(G3.1W-2) Livestock grazing is allowed on open allotments to meet site-specifically defined desired conditions.
(G3.1W-3) New trail construction is allowed with consideration of existing road/trail densities.

Land management direction for Wasatch-Cache National Forest land outside the 3.1w stream buffer to the extent of the ¼ mile stream corridor:

Management Prescription 2.6 Undeveloped Areas: Manage to protect undeveloped landscapes in a manner other than formal recommended wilderness. Although other uses and activities may occur, the primary emphasis is protection to assure the values and unique qualities associated with undeveloped areas are recognized and preserved. No new developments or activity that would alter the landscape or character are allowed, however use of motorized equipment (such as chainsaws for trail clearing) is allowed.

Approximately 6 miles flows through an inventoried roadless areas. These are areas that do not have developed and maintained roads, and that are substantially natural.

Land management direction for Wasatch-Cache National Forest land within the stream corridor administered as Alta Ski Lifts and Snowbird Resort:

Management Prescription 4.5 Developed Recreation Areas: These areas include developed facilities such as campgrounds, trailheads, boat docks, and resorts under special use permit as well as adjacent areas associated with these sites. High levels of visitor interaction can be expected where sights and sounds of others are noticeable and there are moderate to high opportunities for social interaction. Access to these areas is primarily by motorized roads with some trails. Visitors can expect higher levels of regulation. Signs and visitor information are noticeable throughout the area. Site development tends toward the Roaded Natural to Rural end of the Recreation Opportunity Spectrum (ROS). Facilities vary from rustic using native materials to facilities designed primarily for visitor comfort or convenience and built using synthetic materials. Visitor impacts can be noticeable. Impacts to natural resources are dealt with through various management techniques and regulations. Management visibility is high with managers focusing on public safety, service, education, user ethics, and enforcement. ADA level development is encouraged. Because of the large capitol investments in these areas, site protection is paramount.
(S4.5) Livestock grazing and wildland fire use are not allowed.
(G4.5-1) Timber harvest, road construction, vegetation/fuel treatment, prescribed fire, new recreation development, and new trail construction are allowed for the purposes of providing public enjoyment, safety, and protection of site investments.

Socio-Economic Environment – Currently, eighty-five percent of Utah's population lives within 15 miles of the Wasatch Range. This concentration is commonly known as the Wasatch Front urban area and has a population of just over 2,000,000 residents. Salt Lake County is home to 15 unincorporated cities and has a population of 898,387. Salt Lake City is home to the University of Utah and Westminster College, and is the center of Utah's economy.

The Wasatch-Cache National Forest borders the metropolitan area and is recognized as an urban forest and ranks within the top five mostly visited National Forests in the nation. The proximity to outdoor recreation opportunities and variety of available activities is unparalleled. There are 13 world class ski resorts in Utah with the majority within and hour and a half drive from Salt Lake City. The Wasatch Mountains offer hundreds of miles of mountain biking and hiking trails that offer back country access to alpine canyons in very close proximity to a large metropolitan area. The Big and Little Cottonwood Canyons offer world class skiing, rock climbing and fishing opportunities in the area's alpine lakes and streams. These two canyons are home to ski resorts that offer year around recreation opportunities, where many valley residents visit the canyons in the summer to retreat from valley heat.

Current Administration and Funding Needs if Designated – This segment of stream flows through the private land within the Town of Alta, ski resorts that have a mix of private and Forest system land, Wasatch-Cache National Forest land, and private land in the lower part of the canyon that is administered by Salt Lake County.

National Forest System land along the entire segment is managed by the Wasatch-Cache National Forest, Wasatch-Cache National Forest Revised Forest Plan, 2003. Private lands within this segment are subject to regulations designated by the Town of Alta and by Salt Lake County.

The Town of Alta General Plan recognizes the unique alpine and headwater qualities of their community and has incorporated zoning and strict regulations pertaining development and impacts to wetlands, water quality, steep slopes, avalanche hazards, vegetation, and scenery.

The ski areas along Little Cottonwood Creek are administered through Special Uses Permits from the Wasatch-Cache National Forest. Management for these ski areas is directed through the Ski Area Master Development Plans for Alta Ski Lifts and Snowbird Resort.

The private land near the end of the segment is in unincorporated Salt Lake County and development is directed by the Countywide Land Use Plan and zoning ordinances and the Wasatch Canyons Plan.

The following information is based on 2001 data, which doesn't account for inflation over the past six years, but is the best available data. If a river is designated as Wild, Scenic, or Recreational, the actual cost of preparing the comprehensive river management plan would average $200,000 per plan for 86 segments, which would cost approximately $17.2 million the first two to three years following designation. It was estimated that annual management costs for a high complexity river would be $200,000; a moderate complexity river would be $50,000; and a low complexity river at $25,000. Using an average of complexity costs, it would cost the Forest Service around $7.8 million annually for 86 segments. (Estimated Costs of Wild and Scenic Rivers Program - V. 091104)

SUITABILITY FACTOR ASSESSMENT:

(1) **The extent to which the State or its political subdivisions might participate in the shared preservation and administration of the river, including costs, should it be proposed for inclusion in the National System.**

Eligible rivers are protected and managed by the Forest Service according to standards included in Appendix VIII of the Revised Forest Plan until designated by Congress, or otherwise directed by other legal means. The Wasatch-Cache National Forest Revised Plan provides direction to implement Management Prescriptions for stream segments that are suitable for Wild and Scenic River designation by Congress. Once designated, the Wasatch-Cache National Forest will apply Management Prescriptions numbers to the designated Wild (2.1), Scenic (2.2), and Recreational (2.3) Rivers on Forest, which include land corridors that extend 1/4 mile from each bank.

The State of Utah has not demonstrated interest or disinterest in sharing of the costs.

While Salt Lake City Department of Public Utilities is an active partner in watershed protection with the Forest Service they are not supportive of Little Cottonwood Creek being found suitable.

(2) **The state/local government's ability to manage and protect the outstandingly remarkable values on non-federal lands. Include any local zoning and/or land use controls that appear to conflict with protection of river values.**

The private land could be developed in the future. This development would be directed by the County Comprehensive Plan and zoning ordinances for the Forest Recreation (FR 40) zone, which allows for one seasonal cabin per forty acres. Regulations for sensitive areas, steep slopes, jurisdictional wetlands, natural waterways and areas lying within the floodplain, and areas of wildlife habitat are declared under Title 17.18.020. Title 17.18.060 specifies setbacks for development from natural waterways of 50 ft. for

dwellings, 100 ft. for septic systems, and up to 100 ft. for dwellings if within the FEMA mapped floodplain.

Salt Lake City has adjudicated the water rights to most of the water flowing from Little Cottonwood Canyon and generally refuses to sell water to potential users who would develop their property. Because a property owner cannot obtain a building permit from the County without water right or sales contract, the City feels it is able to protect its water from contamination. This indirectly probably helps to protect WSR values.

The Utah Department of Transportation (UDOT) believes designation would impair its ability to maintain State Road 210 in Little Cottonwood Canyon.

(3) **Support or opposition to designation.**
Comments for Little Cottonwood Creek to the January 1999 Draft Inventory of Rivers on the Wasatch-Cache National Forest Eligible for Inclusion in the National Wild and Scenic Rivers System were mixed for this stream segment.

Letters received during the EIS scoping showed continued support from some individuals. The Town of Alta requested further evaluation. Alta Ski Lifts, UDOT, and Salt Lake City Department of Public Utilities did not support designation. Designation of Little Cottonwood Canyon may complicate the Alta Fen Project that is designed to improve water quality in the headwaters of the stream, which would also complicate the operation of the Wasatch Drain Tunnel by Salt Lake County Service District #3.

No comments were received specifically supporting Little Cottonwood Creek during the public comment period for the Draft EIS. The State of Utah expressed concerns that designation would impact the state's ability to maintain or expand the highway.

(4) **The consistency of designation with other agency plans, programs or policies and in meeting regional objectives**.
Designation of this segment of Little Cottonwood Creek would offer additional protection to the local and State of Utah protections for drinking water sources, the State Scenic Byway, the roadless and Wilderness designation within the corridor, and watershed protection measures identified in the Revised Forest Plan, Wasatch Cache-National Forest, 2003. Management of this watershed is in cooperation between Salt Lake City, Salt Lake County, the Town of Alta, Alta Ski Lifts and Snowbird Resort, and the Wasatch-Cache National Forest.

Salt Lake County Service Area #3 expressed concerns that designation would limit the Alta Fen project and that water from the Wasatch Drain Tunnel would have to be treated at higher costs to the County.

(5) **Contribution to river system or basin integrity**.
Because of the other watershed protection measures and wilderness designations in place, designation would not make a significant contribution to river system or basin integrity.

(6) **Demonstrated or potential commitment for public volunteers, partnerships, and/or stewardship commitments for management and/or funding of the river segment.**
There is good potential for partnerships and volunteer efforts if this segment is designated. The Cottonwood Canyons Foundation, a nonprofit organization with a mission to continuously improve the environment of Big and Little Cottonwood Canyons through stewardship and education programs, has a demonstrated commitment to stewardships programs.