

APPENDIX I—HEADWATERS PROTECTION SUPPLEMENTARY DOCUMENTS

This appendix contains recommendations that have been made in other planning documents for the Wasatch Mountains within Salt Lake County.



City Creek Canyon, Salt Lake City, UT

Table I.1 Recommendation and Implementation Status of Wasatch-Cache National Forest (WCNF) Land and Resource Management Plan

CATEGORY	RECOMMENDATION	IMPLEMENTATION STATUS
<p><i>Soil, Water, Riparian, and Aquatic Resources</i></p>	<p>Restore public waters where water quality does not support beneficial uses. Maintain historically present aquatic species distribution by expanding into previously occupied habitat.</p>	<p>On-going</p>
	<p>Standards for Watershed, Riparian, and Aquatic Habitat Health allow no ground-based skidding and oil and gas surface occupancy on slopes greater than 40%.</p>	<p>On-going</p>
	<p>Apply runoff controls during project implementation to prevent pollutants including fuels, sediment, oils, from reaching surface and groundwater.</p>	<p>On-going</p>
	<p>Unclassified roads and trails will be administratively closed and rehabilitated.</p>	<p>On-going</p>
	<p>Place new sources of chemical and pathogenic pollutants where such pollutants will not reach surface or ground water.</p>	<p>Completed</p>
	<p>Prior to issuance of a permit or license for activities such as mining, hydropower development, snowmaking, or water transmission facilities, in-stream flow determinations will be required of all future permitted and licensed activities.</p>	<p>On-going</p>
	<p>For existing authorized uses and activities, minimum in-stream flows will be established to meet the beneficial use of the stream, and will be a condition of any licensing and permit renewal.</p>	<p>On-going</p>
	<p>Within legal authorities, ensure that new proposed management activities in watersheds containing 303d listed water bodies improve or maintain overall progress toward beneficial use attainment for pollutants which led to listing; and do not allow additions of pollutants in quantities that result in unacceptable adverse effects.</p>	<p>On-going</p>
	<p>Allow management activities to result in no less than 85% of potential ground cover for each vegetation cover type.</p>	<p>On-going</p>
	<p>Projects in watershed with 303(d) listed water bodies should be supported by sufficient analysis to permit an understanding of the implications of the project within the larger watershed context.</p>	<p>On-going</p>
<p>Guidelines for Watershed, Riparian, and Aquatic Habitat Health.</p>	<p>Proposed actions analyzed under NEPA should adhere to the State Non-point Source Management Plan to best achieve consistency with both Sections 313 and 319 of the Federal Water Pollution Control Act.</p>	<p>On-going</p>
	<p>Allow no more than 15% of an activity area to have detrimental soil displacement, puddling, and compaction or be severely burned at the end of an activity.</p>	<p>On-going</p>
	<p>Do not allow activities that could result in water yield increases that would degrade water quality and impact beneficial uses.</p>	<p>On-going</p>
	<p>Retain natural and beneficial volumes of large woody debris when implementing projects in Riparian Habitat Conservation areas. In stream channels, naturally occurring debris shall not be removed, unless it is a threat to life, property, important resource values, or covered by legal agreement.</p>	<p>On-going</p>

Table I.1 Recommendation and Implementation Status of Wasatch-Cache National Forest (WCNF) Land and Resource Management Plan—Continued

CATEGORY	RECOMMENDATION	IMPLEMENTATION STATUS
Watershed Desired Future Conditions	Watersheds and streams will continue to provide high quality water supplies to the Salt Lake Valley. Design uses and developments (ski resort design and development, campgrounds, picnic areas, trailheads and trails) to prevent or fully mitigate impacts, resulting in poorly functioning conditions in these watersheds. Mitigate impacts from historic activities to the greatest extent that is economically feasible.	On-going
	Address concerns about watershed degradation due to OHV use and unauthorized, user created trails in the Corner Canyon preservation areas through cooperation and coordination with other units of government (Draper City, Salt Lake County, the Uinta National Forest, and Alpine City).	On-going
	In Little and Big Cottonwood Canyons the integrity of the stream corridor and side drainages will be emphasized.	On-going
	Consideration to the desired water quality and riparian conditions will be given first priority on decision regarding increasing recreation demand to protect wildlife habitat in those areas.	On-going
	Make provisions for a wide range of recreation uses including access and sanitation facilities that prevent deterioration of watershed conditions.	On-going
	Major trailheads with restrooms will be constructed and maintained in cooperation with partners such as Salt Lake City.	On-going
	Users will be aware of the need to restrict in-water activities affecting water quality and compliance with watershed ordinances will be excellent.	On-going
	In cooperation with other agencies educated the public about appropriate behavior in the watershed. In Mill creek Canyon, the integrity of the stream corridor will continue to improve with developed recreation site hardening and changes in user behavior resulting from effective educational efforts.	On-going
	Concerns about water quality will be important to users as well as managers, and annual monitoring will indicate that conditions are on a steadily improving trend.	On-going
	Efforts to work with adjacent landowners within the canyons will be successful in achieving a stream corridor that is properly functioning along its entire length.	On-going
	In the event that Mill Creek Canyon becomes designated as a culinary watershed by Salt Lake City, management of the area will be adjusted accordingly in full cooperation with the City, State, and local government agencies, residents, businesses, and the recreating public will be imperative in order to meet these growing demands.	On-going

Table I.1 Recommendation and Implementation Status of Wasatch-Cache National Forest (WCNF) Land and Resource Management Plan—Continued

CATEGORY	RECOMMENDATION	STATUS
Watershed Desired Future Conditions	<p>Given the importance of water coming from this area, watershed maintenance, protection and enhancement will be a primary consideration in all management decisions. Watersheds and streams will continue to provide high quality water supplies to the Salt Lake Valley. Design uses and developments (ski resort design and development, campgrounds, picnic areas, trailheads and trails) to prevent or fully mitigate impacts, resulting in poorly functioning conditions in these watersheds. Mitigate impacts from historic activities to the greatest extent that is economically feasible.</p>	On-going
	<p>Address concerns about watershed degradation due to OHV use and unauthorized, user created trails in the Corner Canyon Preservation area through cooperation and coordination with other units of government (Draper City, Salt Lake County, the Uinta National Forest, and Alpine City).</p>	On-going
	<p>In Little and Big Cottonwood Canyons the integrity of the stream corridor and side drainages will be an emphasis given the opportunity that public lands adjoining the stream provides.</p>	On-going
	<p>Decisions responding to increasing recreation demands will give first priority to the desired water quality and riparian conditions, and the limited wildlife habitat here. Make provisions for a wide range of recreation uses including access and sanitation facilities that prevent deterioration of watershed conditions.</p>	On-going
	<p>Educate users regarding the need to restrict in-water activities to protect water quality and compliance with watershed ordinances.</p>	On-going
	<p>In cooperation with other agencies educated the public about appropriate behavior in the watershed. In Mill creek Canyon, the integrity of the stream corridor will continue to improve with developed recreation site hardening and changes in user behavior resulting from effective educational efforts.</p>	On-going
	<p>In Mill creek Canyon, the integrity of the stream corridor will continue to improve with developed recreation site hardening and changes in user behavior resulting from effective educational efforts. Concerns about water quality will be important to users as well as managers, and annual monitoring will indicate that conditions are on a steadily improving trend.</p>	On-going

NOTE: Desired Future Condition (DFC) is described for both Forest-wide and specific Management Areas. DFC is the integrated visualization of what the forest or management area should look like in the future. The DFC is the integrator of goals. Therefore, goals are not mutually exclusive. To varying degrees all goals can be accomplished in any given project or area.

Table I.2 Recommendations and Implementation Status of Salt Lake City Watershed Management Plan

CATEGORY	RECOMMENDATION	IMPLEMENTATION STATUS
Watershed Education	Continue to support existing Watershed Education Programs and increase education efforts throughout the valley. Special Note: A comprehensive place based education program is being implemented in the schools at the fourth and 9 th grade levels.	On-going
Watershed Signage	Current watershed signage is not effective in linking human activities to impacts on water quality. Evaluate current signage, coordinate signage efforts among agencies and develop an easily recognized watershed symbol. Special Note: The City has created a “Keep It Pure” program with extensive signage linking human activities to water quality.	On-going
	Maintenance of existing partnerships	On-going
	Maintain existing partnerships with the Forest Service and Salt Lake County Sheriff.	On-going
Partnerships	Seek additional partnerships with local groups. Special Note: Besides the partnerships with the Forest Service, State, County and Community, the city was instrumental in the development of the Cottonwood Canyons Association.	On-going
	Increase patrols to encourage responsible behavior among users.	On-going
	Study the merits of an overnight, backcountry permit system for the lake Basin.	No Action
Dispersed Recreation	Consider the feasibility of fee or information stations at the mouth of Big and Little Cottonwood Canyons for future management.	No Action
	Evaluated facility availability, operation and maintenance concerns to more effectively serve public users and preserve water quality.	Completed
	Evaluate facilities availability, operation and maintenance concerns to more effectively serve public uses and preserve water quality.	Completed
	Mountain biking off or on trails not designed for mountain biking contributes to watershed degradation. The stream then contributes to stream sedimentation, which may add to total coliform levels in the streams.	No Action
Mountain Biking	Evaluate trails to determine which ones to use for mountain biking and manage them accordingly.	Completed
	Draft a Memorandum of Understanding between the Forest Service and Salt Lake City outlining a policy to manage unanticipated change in recreation use. Address unexpected future recreation activities/trends.	Completed

Table I.2 Recommendations and Implementation Status of Salt Lake City Watershed Management Plan—Continued

CATEGORY	RECOMMENDATION	IMPLEMENTATION STATUS	
Commercial development in the canyons	Salt Lake City will closely monitor variance applications to protect water quality.	On-going	
	Salt Lake City will follow the existing (1991) or modified water sales policy.	On-going	
	Amend the Salt Lake County Wasatch Canyons Master Plan to be more specific in defining the term "Close Proximity".	On-going	
	All affected agencies need to support Salt Lake County's pre-application meetings for developers who wish to build in the watershed.	On-going	
	Draft a new ordinance to regulate herbicides, pesticides, insecticides and fungicides in the watershed.	Completed	
	Support the Foothills and Canyons Site Development and Design Standards, Landscaping and Vegetation for mandatory standards of native plants and trees in the Wasatch Canyons.	On-going	
	Salt Lake City will participate in monitoring the current efforts to manage parking lots (paved/no paved) runoff abatement, snow removal, stream setback and adequate facilities) at ski resorts.	On-going	
	Increase funding and inter-agency coordination efforts.	Completed	
	Lack of inspectors to monitor all development issues.	Increase inspection and enforcement of "bed and breakfast" regulations to ensure they comply with water and sewer regulations.	Completed
		Implement a new ordinance that will preclude residential development if the landowner does not connect to the sewer line.	Completed
Devise a solution to the problem of long term camping on private lands.		Completed	
Continue to support the Utah Division of Oil, Gas and Mining in their abandoned mines discharge monitoring.		On-going	
Impacts to water quality from mining activities.	Mining activities will meet watershed protection ordinances to avoid water quality impacts.	On-going	
	Reclaim problem sites.	Unfinished	
Grazing livestock in the watershed.	Purchase mining rights.	On-going	
	Support Forest Service efforts to phase out grazing.	On-going	
	Increase the enforcement of livestock trespassing in the watershed.	Completed	



Table I.2 Recommendations and Implementation Status of Salt Lake City Watershed Management Plan—Continued

CATEGORY	RECOMMENDATION	IMPLEMENTATION STATUS
Land Acquisition	Increase funding of the Public Utilities Watershed and Water Rights Purchase Fund.	Completed
	Encourage Salt Lake County and Forest Service to increase their watershed property acquisition efforts.	Completed
	Utilize innovative strategies such as conservation easements.	Completed
	Salt Lake City will work with Salt Lake County to purchase tax sale properties for tax value not fair market value.	Completed
Water Rights	Protect current water rights.	On-going
	Acquire water stock.	On-going
	Eliminate irrigation exchange contracts.	On-going
	Continue to preserve water rights in Millcreek Canyon.	On-going
	Maintain the current rate structure to encourage conservation.	On-going
	Salt Lake City will work with Salt Lake County to develop a policy regarding irrigation in the watershed.	Completed
Maintain existing partnerships	All partners should annually monitor watershed management concerns to determine their effectiveness.	On-going
	Update MOUs every two years.	On-going
	Form new partnerships.	On-going
	Encourage Salt Lake County to maintain and improve the current garbage disposal system.	Completed
	Encourage Salt Lake County to provide residents of Big and Little Cottonwood Canyons with a neighborhood clean up.	Completed
	Determine the feasibility of instituting a "Trash Free Watershed".	Completed
Water Quality Monitoring	Continue cooperative efforts between Salt Lake City, Salt Lake County, Forest Service, Salt Lake County Sheriff and Salt Lake Valley Health Department to maintain excellent water quality and continue to strive for superior water quality.	On-going
	Continue to use coliform as the prime indicator of water quality.	On-going
	The City will undertake scientific studies and collect data to document water quality conditions, and the health of the watershed.	On-going
	Eliminate the use of snowmaking additives found to impact water quality.	Unfinished
	Continue to support the current Salt Lake County Sensitive Land Ordinance.	On-going
	Continue to support Salt Lake County Sheriff's enforcement of the watershed.	On-going
Fire Management Plan	Update laws governing watershed protection.	Completed
	Salt Lake City will develop a comprehensive wildfire management plan.	Completed

Table I.3 Recommendations and Implementation Status of Salt Lake City Watershed Management Plan (Canyon by Canyon)

CANYON	RECOMMENDATION	IMPLEMENTATION STATUS
City Creek	Update City Creek Master Plan	Completed
	Explore alternate funding mechanisms to maintain and upgrade canyon toilet and picnic facilities.	Completed
	Construct an amphitheater to promote watershed education.	No Action
Red Butte	Continue to support the Forest Service's management of Red Butte Canyon as a Research Natural Area.	On-going
	Encourage the Forest Service and Salt Lake County Sheriff to increase the number of patrols and ticket individuals who trespass.	Completed
Emigration Canyon	Educate residents regarding watershed regulations	On-going
	Encourage the Forest Service and the Salt Lake County Sheriff to increase patrols.	Unfinished
	Continue to implement the recreation plan for Little Dell Reservoir.	On-going
Parley's Canyon	Continue to monitor the use of fertilizers and pesticides at Mountain Dell Golf Course.	On-going
	Improve city picnic facilities in Affleck Park for public use.	On-going
	Coordinate efforts with the Utah Division of Wildlife Resources to ensure fishing regulations are posted in the proclamation where special regulations are in effect.	On-going
Mill Creek	Support actions taken by the Forest Service to manage the impact of dogs and horses.	On-going

Table I.3 Recommendations and Implementation Status of Salt Lake City Watershed Management Plan (Canyon by Canyon) - Continued

CANYON	RECOMMENDATION	IMPLEMENTATION STATUS
Big Cottonwood Creek	Modify the ordinance allowing residents of the canyon to have dogs to prevent water quality degradation. It is estimated that nearly half the residents are abusing the current permit system.	Completed
	Encourage UDOT to manage the road surface with special attention paid to water quality.	On-going
	Study the idea of developing an overnight, backcountry use permits system for the lake basin to minimize water quality impacts.	No Action
	Monitor proposals to expand ski area interconnect for potential impacts on water quality.	On-going
	Evaluate proposals for improvements to Guardsman Pass Road to prevent adverse impacts on the watershed.	On-going
	Continue to support the Town of Alta's dog permit ordinance.	On-going
	Modify the ordinance that allows canyon residents to have dogs to prevent water quality impacts. It is estimated the current permit system is being abused by nearly half the residents.	Completed
	Encourage UDOT to manage the road surface with special attention paid to water quality.	On-going
Little Cottonwood Canyon	Study the idea of developing an over night, back country use permits system for the lakes basin to minimize water quality impacts.	No Action
	Monitor proposals to expand ski area interconnect for potential impacts on water quality. Salt Lake City Watershed Management Plan, 1999	On-going

Table I.4 Recommendations and Implementation Status of Wasatch Canyons Master Plan

CATEGORY	RECOMMENDATION	IMPLEMENTATION STATUS
Watershed and Water Quality	Salt Lake County will continue to cooperate with Salt Lake Valley Health Department, the Forest Service and Salt Lake City Public Utilities to implement anti-degradation standards, stream setback, monitoring programs, enforcement activities and other canyon watershed policies to maintain excellent water quality in the canyons. Under the Clean Water Act, the State of Utah has designated all stream segments in the plan area as anti-degradation, which means policies must prevent any water quality degradation.	On-going
Inter-governmental Coordination	Establish a coordinating committee consisting of entities with canyon management responsibility to improve coordination, cooperation, and information sharing. (In this case, the committee was organized and functioned for several years after the plan adoption, but disbanded due to poor attendance).	Other
Private Land Acquisition	Salt Lake County, the Town of Alta, Salt Lake City, and the Forest Service should jointly develop criteria for land acquisition setting forth purposes, priorities, and funding options for land purchases. The entities should acquire selected, undeveloped, private land to assure access to existing public land, to provide additional areas for public use, to protect the watershed. Salt Lake County should establish a program for acquisition of private property and investigate potential funding sources.	No Action
Public Safety	The Wasatch Canyons Coordinating committee should serve as a catalyst to work with the appropriate entities to develop a comprehensive canyon safety program.	No Action

Table I.4 Recommendations and Implementation Status of Wasatch Canyons Master Plan—Continued

CATEGORY	RECOMMENDATION	IMPLEMENTATION STATUS
Land Exchanges	Land exchanges should be studied as a way of consolidating land ownership patterns and of improving land management opportunities.	No Action
Canyon Use Education	Affected governmental jurisdiction need to cooperate to educate all canyon users to preserve the canyon environment.	No Action
Ski Area Expansion	Retain Salt Lake County ski resort boundaries within existing Forest Service permit areas. Resort may expand within boundaries established by the 1985, National Forest Plan. No additional parking lots are allowed at ski areas, unless they contribute to solving transportation problems and improve the physical environment.	On-going
Single Family Residential Development	Salt Lake County will limit new residential lots, subdivisions, and permits to the most suitable, subject to compliance with established suitability standards. Planned Unit Developments are encouraged for any subdivision larger than one acre. Encourage retention of existing large lot zoning and consolidation of small standard lots.	On-going
Location and Development of Commercial Enterprises	For Big and Little Cottonwood Canyons, all commercial development should be consolidated at existing commercial areas having suitable terrain in the immediate vicinity of ski resorts to preserve the natural appearance and avoid the proliferation of commercial areas in the canyons. For other canyons, commercial development will be limited to existing commercially zoned areas.	On-going

Table I.4 Recommendations and Implementation Status of Wasatch Canyons Master Plan—Continued

CATEGORY	RECOMMENDATION	IMPLEMENTATION STATUS
Camping and Picnicking	<p>Shortages of camping and picnicking facilities will become more severe as demand increase in the canyons. The plan recommends existing sites be rehabilitated, connected to sewer service when and where feasible, and be subject to user fees and group reservation.</p> <p>To meet future demand, construct new facilities on the limited suitable terrain, which is available. Develop new sites outside of the plan area to accommodate demand.</p>	On-going
Hiking and Backpacking	<p>Preserve quality hiking opportunities by monitoring and maintaining the existing trail system, assuring access to trails, providing better user information on trails and trail courtesy.</p>	On-going
Off-highway Vehicle Use	<p>Intensive management of off-highway vehicle use areas need stringent enforcement in prohibiting off-highway vehicle use in non-designated areas is essential.</p>	On-going
Domestic Livestock Grazing	<p>Continue existing Forest Service grazing permits through their term. It is recommended to the Forest Service that existing grazing be phased out over time as permits expire, particularly in canyons used for water supply, to eliminate conflicts with recreational users and to further protect the watershed.</p>	Unfinished
Highway Transportation	<p>The highway transportation goal of the plan is to reduce private vehicular traffic in the Cottonwood Canyons during peak periods. The County should implement measures to achieve this goal, and discourage private automobile use and encourage the use of mass transit.</p> <p>Establishing park and ride facilities to serve Big and Little Cottonwood Canyons should occur immediately.</p>	On-going

Table I.5 Recommendations and Implementation Status of Wasatch Canyons Master Plan (Canyon by Canyon)

CANYON	RECOMMENDATION	IMPLEMENTATION STATUS
City Creek Canyon	The plan does not address activities or land use within City Creek Canyon-wide policies may apply in some instances. The Salt Lake City, City Creek Master Plan and Watershed Management Plan are applicable to the canyon. (This is outside Salt Lake County's jurisdiction).	Other
Red Butte Canyon	The Plan does not address land use within Red Butte Canyon. The plan supports continued management as a pristine canyon with limited human use and access. (This is outside the scope of the plan).	Other
Emigration Canyon	New commercial enterprises should be limited to the commercially zoned areas in the canyon. The Emigration Canyon General Plan guides land use in the canyon.	On-going
Parley's Canyon	The plan supports recreation site development at Little Dell Reservoir. The uses include; picnic sites, hiking and jogging trails, fishing and non-motorized boating.	Completed
	Implement measures to rehabilitate the canyon's heavy use areas, to assure protection of the natural features, to maintain a quality user experience and anticipate use of the stream for culinary water supply.	Completed
	Picnicking, hiking and dispersed recreation should continue to be the major uses in the canyon.	On-going
	Pursue acquisition of the privately owned section of land at the head of the canyon for watershed protection and public recreation.	Completed
Mill Creek	The Plan recommends that the Forest Service impose fees for use of picnic sites and require reservations for their use by groups. Fees and group reservation systems will better control the duration, nature and availability of canyon picnic sites.	On-going
	Provide improved public information on the status of Millcreek Canyon regarding the impacts from overuse at intensely used areas and on seeking public cooperation in rehabilitation of the canyon's picnic site and heavy-use areas.	On-going
	Improve existing parking and limit additional parking to provide for existing picnic sites.	On-going
	Water managers should carefully review horseback riding, which may affect designation of Millcreek as a watershed.	Unfinished

Table I.5 Recommendations and Implementation Status of Wasatch Canyons Master Plan (Canyon by Canyon) - Continued

CANYON	RECOMMENDATION	IMPLEMENTATION STATUS
Big Cottonwood Creek	Construction of a sewer line in Big Cottonwood Canyon is endorsed. All commercial operations must connect.	On-going
	Consolidation of sub-standard lots, which are deficient due to size, slope, soils, etc., into larger lots is encouraged.	On-going
	Selective acquisition of private lands within the Canyon is encouraged to assure public access to trails, backcountry areas, and public land in general. Acquisition will improve watershed protection, reduce user and property own conflicts and maintain sensitive canyon terrain in its natural state.	No Action
	Donut Falls is a high priority for acquisition. The area has suffered significant degradation due to off-highway vehicle use.	Completed
	Eliminating off-highway vehicle use will protect the watershed.	On-going
	Retain existing large lot zoning.	On-going
	Future commercial development will be consolidated in close proximity to ski resort.	On-going
	Fees need to be placed on picnic site by the Forest Service to rehabilitate those areas.	On-going

Table I.5 Recommendations and Implementation Status of Wasatch Canyons Master Plan (Canyon by Canyon) - Continued

CANYON	RECOMMENDATION	IMPLEMENTATION STATUS
Little Cottonwood Creek	Construct small parking lots for dispersed recreation and mass transit use.	Unfinished
	Retain existing large lot zoning.	Unfinished
	Consolidate future commercial development in closed proximity to the resorts.	On-going
	The dewatering of Little Cottonwood Creek near the mouth of the Canyon is regrettable. Salt Lake County supports provision for maintenance of water flows in Canyon streams in future decisions affecting canyon water use and recommends that owners of water rights review the potential for committing water rights to in-streams flows on a canyon-by-canyon and case-by-case basis.	No Action
	Salt Lake County will initiate the formation of the Wasatch Canyons Coordinating Committee to coordinate watershed, water quality and water planning activities that will complement existing organizational structures. Member entities retain their respective responsibilities and authorities.	Other
	The County will establish a program for land acquisitions including guidelines for acquisition and determine a source of funding.	Unfinished
	Salt Lake City and the Salt Lake Valley Board of Health have primary responsibility for maintenance of the watershed and water quality in the Plan Area.	On-going
	Salt Lake County will continue cooperating with other entities in maintaining excellent water quality of the Canyon streams. Salt Lake County, Wasatch Canyons Master Plan, 1989	On-going

Table I.6 Recommendation and Implementation Status of Sandy City Watershed Management Plan

CATEGORY	RECOMMENDATION
Partnerships	<p>Educate the public on acceptable watershed usage,</p> <p>Enforce regulations on usage</p> <p>Coordinate and manage watershed resources</p> <p>Fund watershed management and improvement projects.</p>
Watershed Education	<p>Educate Sandy City residents, community leaders, partnering agencies, property owners, developers, and watershed users concerning watershed issues, management objectives, and policy implementation partnerships and programs.</p>
Water Quality Monitoring	<p>Establish a water quality-monitoring program for the Sandy City Watershed. This effort includes completing a comprehensive baseline report reflecting current conditions and developing/implementing an ongoing monitoring program.</p>
Watershed Land Use and development	<p>Ensure that development occurring within the watershed does not adversely affect watershed resources or water quality.</p>
Dispersed Recreation	<p>Provide a framework that allows recreational usage in the watershed area without adversely impacting water quality.</p>
Recreation Trails and Facilities	<p>Accommodate public recreational trails and facilities within the watershed as long as doing so does not compromise the City's primary watershed management priorities, i.e., protecting water resources and maintaining water quality. All trails and recreation facilities within the watershed will be sited, constructed, and maintained in a manner consistent with these objectives.</p>
Wildfire Prevention, Management and Mitigation	<p>Coordinate with resources management entities and private property owners to protect watershed resources and decrease wildfire potential with the project area.</p>
Floodwater Management and Mitigation	<p>Coordinate with resource management agencies and watershed property owners to protect water quality through appropriate floodwater management and impact mitigation planning.</p>

Table I.7 Recommendation and Implementation Status of Sandy City Watershed Management Plan (Canyon by Canyon)

CANYON	RECOMMENDATION	IMPLEMENTATION STATUS
Little Cottonwood	<p>Continue support of Alta Town's dog permit ordinance.</p> <p>Work with Salt Lake City to revise and adopt an ordinance covering resident domestic pets outside of Alta Town limits (unincorporated area).</p> <p>Work with Salt Lake City, the USFS, and the Town of Alta to develop an overnight, backcountry permit system for the lake basin. Associated guidelines would be consistent with USFS best management practices covering group size, appropriate use areas, and "no trace" camping practices.</p> <p>Monitor proposals to expand ski area interconnect and respond to potential impacts on watershed resources.</p> <p>Participate in Salt Lake City's land acquisition program for Little Cottonwood properties.</p> <p>Coordinate with the Town of Alta to monitor their review and approval of development proposals and building permits.</p> <p>Lower Bell Canyon permit camping, hiking, fish and picnicking on approved trails and site. Watershed resource management objectives may include improving sites and trails, mitigate impacts, and preserve water quality.</p>	<p>On-going</p> <p>No Action</p> <p>Unfinished</p> <p>On-going</p> <p>On-going</p> <p>On-going</p> <p>On-going</p>
Bell Canyon	<p>Upper Bell Canyon (lower falls to watershed boundary including upper falls, upper Bell Canyon Reservoir and Lone Peak Wilderness) permitted uses include hiking, climbing, and short-term permit-based, backcountry camping.</p> <p>Extend the reservoir's existing "no domestic pet", "no horse" policy to include all areas/trails above any drinking water sources diversion point.</p> <p>Support the Utah Division of Oil, Gas and Mining in their abandoned mine discharge monitoring. Solicit DOGM monitoring of existing sites.</p> <p>Coordinate with Salt Lake County to review development proposals and building permits in unincorporated areas.</p>	<p>On-going</p> <p>On-going</p> <p>On-going</p> <p>On-going</p>



Table I.7 Recommendation and Implementation Status of Sandy City Watershed Management Plan (Canyon by Canyon) - Continued

CANYON	RECOMMENDATION	IMPLEMENTATION STATUS
Middle and South Fork of Dry Creek	Manage lands within Middle Fork and South Fork as “day use” only areas. Hiking and picnicking would be allowed in approved areas and trails. Consistent with existing Water Pro policies; no camping, campfires, horses, or domestic pets will be allowed on Water Pro owned properties.	Unfinished
	Allow hiking and rock climbing on USFS properties.	Unfinished
	Improve trails facilities as necessary and feasible to accommodate anticipated uses and use levels.	Unfinished
	Secure and maintain adequate and convenient public access through private holding and development. Include public access as a consideration of development approval.	Unfinished
	Work with private property owners to implement sensitive lands and watershed development regulations when these areas proposed for development.	On-going
	Work with private property owner to address and mitigate water quality/resource impacts related to existing development and land uses.	On-going
	Coordinate with Salt Lake County to review development proposals and building permits in adjacent unincorporated areas.	On-going
	Manage lower Rocky Mouth as a “day use” only area. Hiking and picnicking would be allowed on approved trails and sites. Horses and domestic pets are not permitted in the area.	On-going
	Improve existing trail and facilities to/at the lower falls to accommodate use levels and decrease turbidity to improve water quality.	Unfinished
	Allow hiking, rock climbing and short-term permit based camping (as regulated by USFS “best management and leave no trace practices) on National Forest land.	On-going
Rocky Mouth Canyon	Work with private property owners to implement sensitive lands and watershed development regulations when these areas proposed for development.	Unfinished

Table I.7 Recommendation and Implementation Status of Sandy City Watershed Management Plan (Canyon by Canyon) - Continued

CANYON	RECOMMENDATION	IMPLEMENTATION STATUS
Rocky Mouth Canyon	<p>Work with private property owner to address and mitigate water quality/resource impacts related to existing development and land uses (waste water, drainage, waste disposal, etc.).</p> <p>Coordinate with Salt Lake County to review development proposals and building permits in adjacent unincorporated areas.</p> <p>Continue monitoring of naturally occurring contaminants (bat caves).</p>	<p>Unfinished</p> <p>On-going</p> <p>On-going</p>
Big Willow Canyon	<p>Manage lower (Water Pro entrance gate to diversion Big Willow as “day use” only areas. Hiking and picnicking would be allowed in approved areas and trails. Consistent with existing Water Pro policies; no camping, campfires, horses, or domestic pets will be allowed on Water Pro owned properties.</p> <p>Improve trails facilities as necessary and feasible to accommodate anticipated uses and use levels.</p> <p>Allow hiking, rock climbing and short-term permit based camping (as regulated by USFS “best management and leave no trace practices) on National Forest land.</p> <p>Work with private property owners to implement sensitive lands and watershed development regulations when these areas proposed for development.</p> <p>Coordinate with Salt Lake County to review development proposals and building permits in adjacent unincorporated areas.</p>	<p>On-going</p> <p>Unfinished</p> <p>On-going</p> <p>On-going</p> <p>On-going</p>

Table I.7 Recommendation and Implementation Status of Sandy City Watershed Management Plan (Canyon by Canyon) - Continued

CANYON	RECOMMENDATION	IMPLEMENTATION STATUS
Little Willow	Maintain quality of Little Willow water resources for potential culinary use.	On-going
	Manage lower Little Willow (Bonneville Shoreline Trail to Water Pro diversion point) as “day use” only areas. Hiking and picnicking would be allowed in approved areas and trails. Consistent with existing Water Pro policies; no camping, campfires, horses, or domestic pets will be allowed on Water Pro owned properties.	On-going
	Allow hiking, rock climbing and short-term permit based camping (as regulated by USFS “best management and leave no trace practices) on National Forest land.	On-going
	Coordinate with Salt Lake County to review development proposals and building permits in adjacent unincorporated areas.	On-going
Provo River	Educate community leaders and citizens to recognize the Provo River drainage as a legitimate Sand City watershed interest.	On-going
	Identify and foster Provo River watershed interests, management agencies, and potential collaborative partnerships.	Unfinished
	Actively participate in Provo River watershed planning and decision-making processes. This effort includes ensuring adequate representation and participation on applicable boards and committees.	On-going
	Assist Mountainlands Association of Governments in their implementation of the Provo River Scenic Byway and Watershed Management Plan.	On-going
	Encouraging periodic reviews of the plan and associated objectives to evaluate progress and revise as appropriate (Sandy City Public Utilities Department, Watershed/Water Quality Management Plan, 2002).	On-going



Table I.8 Water Quality and Watershed Related Recommendations from the Draper City General Plan

CATEGORY	RECOMMENDATION
Soil Erosion	<p>Restricted where the soil conditions pose problems to foundations or impact subsurface water quality.</p> <p>Protect life and property from the increased risk of flooding or damaging stream or drainage channels through the application of stream setbacks and FEMA flood zone requirements.</p> <p>Encouraging identification and protection of wetland areas by requiring an investigation of impacts prior to development near or surrounding water facilities.</p> <p>Acquire additional water rights as they become available.</p>
Hydrology and Flooding	<p>Maximize the potential to use reclaimed water for irrigation and groundwater recharge.</p> <p>Aggressively pursue new sources of water.</p> <p>Update the city's assured water supply as new sources of water supply are acquired.</p> <p>Recognize the value of water and wastewater as resources to manage in order to contribute to a sustainable community.</p> <p>Make sure that new service delivery costs are borne by those desiring the service without costing or adversely affecting existing customers.</p> <p>Use appropriate fees to ensure that new growth pays for itself when extending the water and wastewater systems.</p>

Water Resources - Draper receives its culinary water from Water Pro and Draper City Water. To ensure renewable, long-term water supplies for the community, the plan recommends the following actions.

Table I.8 Water Quality and Watershed Related Recommendations from the Draper City General Plan—Continued

CATEGORY	RECOMMENDATION
<p>Encourage the conservation of water and the reuse of wastewater.</p>	<p>Do not extend water distribution into undeveloped areas unless wastewater collection facilities are also extended to recapture effluent.</p> <p>Develop new ways to irrigate new golf courses, landscaping, and park turf areas with non-drinkable water to the greatest extent possible.</p> <p>Use treated wastewater for irrigation. The excess will be recharged and recovered through the city's existing system.</p> <p>Provide information and education to Draper citizens on all aspects of water conservation</p> <p>Work with regional providers to meet or surpass all applicable water quality standards for domestic, commercial, and industrial uses.</p> <p>Maintain a safe and healthy environment for our citizens and visitors using water treatment and distribution system and the wastewater collection system.</p> <p>Provide a water system that achieves the highest level of customer satisfaction, focusing on the reliability of the system in the planning, construction, and operation of the system.</p> <p>Identify potential sources of contamination and ultimately preserve water for the use of future generations.</p> <p>Ensure that Draper drinking water always complies with Safe Drinking Water Act standards.</p> <p>Partner with other jurisdictions and agencies to achieve maximum efficiency in city service delivery.</p> <p>Encourage partnerships to seek effective solutions to shared problems and community service needs.</p> <p>Cooperate with neighboring communities in providing municipal services such</p> <p>When the city updates its General Plan and open space zone, it should consider adding watershed protection measures and Best Management Practices to preserve and strengthen watershed protection. The area in Salt Lake County is covered by Foothills Canyons Overlay Zone, is zoned FR-20 and is part of the Salt Lake City Watershed. http://www.draper.ut.us/</p>



FCOZ Provisions recommended for inclusion in an Oquirrh Planned Community Zone.

Development Standards.

Slope Protection Standards.

1. Prohibition of Development on Steep Slopes. With the exception of permitted minor ski resort improvements and as otherwise expressly allowed in this chapter, no development, including clearing, excavation, and grading shall be allowed on slopes greater than thirty percent.
2. Structure Clearance from Steep Slopes. Structure clearance from ascending or descending slopes greater than thirty percent shall conform to the requirements set forth in applicable building code provisions.
3. Prohibition of Development on Designated Ridge Lines.
 - a. With the exception of permitted minor ski resort improvements, which may cross but not follow designated ridge lines, and with the further exception of instances where a waiver has been granted pursuant to this chapter, no development shall intrude into any ridge line protection area that has been identified and designated as part of an adopted county or township plan (e.g., the Emigration Canyon plan) or has been identified and designated by the county during the development review and approval process set forth in Section 19.72.050 of this chapter.
 - b. For the purposes of this chapter, designated ridgeline protection areas shall consist of prominent ridge lines that are highly visible from public rights-of-way or trails, and shall include the crest of any designated hill or slope, plus the land located within one-hundred feet horizontally (map distance) on either side of the crest. (See Figures 3 and 4 below)
4. Steep Slopes--Open Space. One hundred percent of areas with slope greater than thirty percent shall remain in natural private or public open space, except as expressly allowed in this

chapter.

Grading Standards.

1. Grading Prohibited Without Prior approvals/ Permits. No grading, excavation, or tree/vegetation removal shall be permitted, whether to provide for a building site, for on-site utilities or services, or for any roads or driveways, prior to issuance of a building permit in accordance with a grading and excavation plan and report for the site approved by the development services engineer.
2. Cutting to Create Benches. Cutting and grading to create benches or pads for additional or larger building sites shall be avoided to the maximum extent feasible. (See Figures 5 and 6)
3. Limits on Changing Natural Grade. The original, natural grade of a lot shall not be raised or lowered more than four feet at any point for construction of any structure or improvement, except:
 - a. The site's original grade may be raised or lowered six feet if a retaining wall is used to reduce the steepness of man-made slopes, provided that the retaining wall complies with the requirements set forth in this section. The site's original grade may be raised or lowered more than six feet with terracing, as specified in subsection (C)(8)(b) of this section.
4. Grading for Accessory Building Pads Discouraged. Separate building pads for accessory buildings and structures other than garages, such as tennis courts, swimming pools, outbuildings, and similar facilities, shall be discouraged except where the natural slope is twenty percent or less.
5. Limits on Graded or Filled Man-Made Slopes.
 - a. Slopes of twenty-five percent or less are greatly encouraged wherever possible.
 - b. Graded or filled man-made slopes shall not exceed a slope of fifty percent.
 - c. Cut man-made surfaces or slopes shall not exceed a slope of fifty percent unless it is



substantiated, on the basis of a site investigation and submittal of a soils engineering or geotechnical report prepared and certified by a qualified professional, that a cut at a steeper slope will be stable and will not create a hazard to public or private property.

- d. All cut, filled, and graded slopes shall be re-contoured to the natural, varied contour of the surrounding terrain.
- 6. Re-vegetation Required. Any slope exposed or created in new development shall be landscaped or re-vegetated pursuant to the standards and provisions of subsection H of this section, "Tree and Vegetation Protection."
- 7. Excavation. Excavation for footings and foundations shall be minimized to the maximum extent feasible in order to lessen site disturbance and ensure compatibility with hillside and sloped terrain. Intended excavation must be supported by detailed engineering plans submitted as part of the application for site development plan approval.
- 8. Retaining Walls. Use of retaining walls is encouraged to reduce the steepness of man-made slopes and to provide planting pockets conducive to re-vegetation. (See Figure 7)

- a. Retaining walls may be permitted to support steep slopes but shall not exceed six feet in height from the finished grade, except as used in conjunction with the development of minor ski resort improvements, or where terraced as specified in subsection (C)(8)(b) of this section.
- b. Except as used in conjunction with the development of minor ski resort improvements, terracing shall be limited to two tiers. The width of the terrace between any two four-foot vertical retaining walls shall be at least three feet. Retaining walls higher than four feet shall be separated from any other retaining wall by a minimum of five horizontal feet. Terraces created between retaining walls shall be permanently landscaped or re-vegetated.

- c. Retaining walls shall be faced with stone or earth-colored materials similar to the surrounding natural landscape. (See Chapter 19.73, "Foothills and Canyons Site Development and Design Standards.")
- d. All retaining walls shall comply with the Uniform Building Code, except that when any provision of this section conflicts with any provision set forth in the U.B.C., the more restrictive provision shall apply.
- e. Filling or Dredging of Waterways Prohibited. Filling or dredging of water courses, wetlands, gullies, stream beds, or storm water runoff channels is prohibited, except that bridge construction is allowed pursuant to the standards set forth in subsection (J)(7) of this section.
- 10. Detention/Stormwater Facilities. Where detention basins and other storm and erosion control facilities may be required, any negative visual and aesthetic impacts on the natural landscape and topography shall be minimized to the maximum extent feasible. slopes in excess of twenty-five percent, only the cartway right-of-way shall be

Tree and Vegetation Protection.

Purposes. Protection of existing tree and vegetation cover is intended to:

- a. Preserve the visual and aesthetic qualities of the County's foothills and canyons;
- b. Encourage site design techniques that preserve the natural environment and enhance the developed environment;
- c. Control erosion, slippage, and sediment runoff into streams and waterways;
- d. Increase slope stability;
- e. Protect wildlife habitat and migration corridors; and
- f. Conserve energy, in proximity to structures, by reducing building heating and cooling costs.

2. Application and Exemptions. The provisions of this section shall apply to all development on real property that is located in the foothills and canyons overlay zone, except that the following developments and activities shall be exempt from this section:
 - a. The removal of dead or naturally fallen trees or vegetation, or such that the county finds to be a threat to the public health, safety, or welfare;
 - b. The selective and limited removal of trees or vegetation necessary to obtain clear visibility at driveways, intersections, or for the purpose of performing authorized field survey work;
 - c. The removal of trees or vegetation on land zoned or lawfully used for agricultural and forestry activities, including tree farms and approved forestry management practices. In the event a site is substantially cleared of trees pursuant to such legitimate activities, however, no development or site plan applications for other types of development shall be accepted by the county for thirty-six months from the date the clearing is completed;
 - d. The selective and limited removal of trees and vegetation in conjunction with permitted minor ski resort improvements.
 3. Tree/Vegetation Removal.
 - a. Outside the Limits of Disturbance, No trees or vegetation shall be removed outside the approved limits of disturbance except as specifically exempted in this section or chapter.
 - b. Within the Limits of Disturbance. Significant removed from within the limits of disturbance shall be replaced as set forth in subsection (H)(4) of this section.
 - c. Wildfire Hazards and Tree/Vegetation Removal. In areas determined by County Fire Prevention officials as being highly susceptible to fire hazards, vegetation up to thirty feet from the perimeter of a structure shall be selectively pruned and thinned for fire protection purposes.
 - d. Tree/Vegetation Removal for Views Prohibited. No trees or vegetation shall be removed for the purpose of providing open views to or from structures on a site.
- Stream Corridor and Wetlands Protection.
1. Purposes. The following requirements and standards are intended to promote, preserve, and enhance the important hydrologic, biological, ecological, aesthetic, recreational, and educational functions that stream corridors, associated riparian areas, and wetlands provide.
 2. Boundary Delineation. Unless previously delineated by Salt Lake County, boundaries for stream corridors and wetland areas shall be delineated according to the following provisions:
 - a. Stream corridor and wetland area delineation shall be performed by a qualified professional that has demonstrated experience necessary to conduct site analysis. Delineations shall be subject to the approval of the development services director.
 - b. Stream corridors shall be delineated at the ordinary high-water mark as defined in Section 19.72.070. Stream corridors shall not include ephemeral streams or ditches that are commonly known to be irrigation ditches and that do not contribute to the preservation and enhancement of fisheries or wildlife.
 - c. Boundary delineation of wetlands shall be established using the Federal Manual for Identifying and Delineating Jurisdictional Wetlands, dated January 10, 1989, and jointly published by the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the U.S. Soil Conservation Service. Subsequent revisions of the federal manual shall not be incorporated into this delineation methodology. Although the federal manual may change in the future, the county will use this referenced manual



as a basis for wetland determination.

3. Prohibited Activities. No person shall engage in any activity that will disturb, remove, fill, dredge, clear, destroy, or alter any area, including vegetation, within stream corridors, wetlands, and their setbacks as set forth below, except as may be expressly allowed in this chapter.
4. Minimum Setbacks. Except where the city of Salt Lake, pursuant to its recognized extraterritorial jurisdiction, has defined a greater setback from watershed resources (including stream corridors and wetland areas), the following minimum setbacks shall be required:
 - a. Stream Corridors. All buildings, accessory structures, leach fields, and parking lots shall be set back at least one hundred feet horizontally, (plan view) from the ordinary high-water mark of stream corridors.
5. Wetlands. All buildings, accessory structures, leach fields, and parking areas or lots shall be set back at least fifty feet horizontally (map distance), from the delineated edge of a wetland.

Ephemeral Streams.

1. Prohibited Activities. Development shall not be permitted within the channel of an ephemeral stream, as defined by its ordinary high water mark, except that the planning commission upon the recommendation of the development services director may grant waivers or modifications from this prohibition upon a finding that the development will have no adverse environmental impacts, or that such impacts will be substantially mitigated.
2. Preservation of Vegetation.—All existing vegetation within the stream corridor or wetland setback area shall be preserved, and where necessary to provide adequate screening or to repair damaged riparian areas, supplemented with additional native or adapted planting and landscaping.

Bridges.

The construction of bridges over a stream corridor and within the stream setback area is permitted provided such bridges are planned and constructed to minimize impacts on the stream corridor.

Establishment of limits of disturbance.

1. For every development subject to this chapter, the development services director shall establish “limits of disturbance” that indicate the specific area(s) of a site in which construction and development activity must be contained. For single-family residential development, limits of disturbance shall include that area required for the principal structure, an accessory structure(s), utilities, services, drainage facilities, and a septic tank. Areas required for driveways and leach fields are not included.
2. Criteria for Establishing the Limits of Disturbance. In establishing limits of disturbance, the following criteria and standards shall be considered and applied:
 - a. Minimize visual impacts from the development, including but not limited to screening from adjacent and downhill properties, ridgeline area protection, and protection of scenic views.
 2. Erosion prevention and control, including but not limited to protection of steep slopes and natural drainage channels.
 3. Fire prevention and safety, including but not limited to location of trees and vegetation near structures.
 4. Conservation of water including but not limited to preservation of existing native vegetation, reduction in amounts of irrigated areas, and similar considerations;
 5. Wildlife habitat protection, including but not limited to preservation of critical

wildlife habitat and identified migration corridors and routes.

accordance with state regulations for individual wastewater systems.

6. Stream corridor and wetland protection and buffering.

Maximum Limits of Disturbance.

1. Single-Family Residential Uses: For lots or parcels less than one acre in size, the limits of disturbance for an individual single-family use and any accessory structure shall not exceed ten thousand square feet, unless:
 - a. Significant existing site vegetation is retained, or
 - b. Remedial re-vegetation and land reclamation improvements which substantially advance the purposes of this chapter have been proposed and will be implemented on the site in accordance with a re-vegetation and land reclamation plan reviewed and approved by the development services director.
 - c. In such cases, the limits of disturbance for lots or parcels less than one acre in size may be increased up to but not to exceed fifteen thousand square feet. For lots or parcels one acre in size or greater, the limits of disturbance for an individual single-family use and any accessory structure shall not exceed twelve thousand square feet unless the aforementioned conditions (retention of significant existing site vegetation or submittal and implementation of an approved re-vegetation and land reclamation plan) are provided, in which case the limits of disturbance may be increased up to but not to exceed eighteen thousand square feet.
 - d. All Other Land Uses. The maximum limits of disturbance, including parking areas and accessory buildings and structures, shall be determined on a case-by-case basis. Areas for leach fields constructed in connection with an on-site sewer system shall not be included in the determination of limits of disturbance, but must be re-vegetated with native vegetation in