CHAPTER 6

# Bibliography, Glossary of Terms, and List of Acronyms and Abbreviations

## 6.0 BIBLIOGRAPHY


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## 6.1 GLOSSARY OF TERMS

### A

| | |
|---|---|
| Acre-foot | A measure of water volume—1 foot of water covering an acre in area. |
| Active storage | That portion of a reservoir capacity from which releases are made. |
| Activity occasion | Any activity by an individual at a recreation area for any length of time. |
| Alluvium | A deposit of sand and gravel formed by flowing water. |
| Animal unit month (AUM) | The amount of feed necessary to support one cow and her unweaned calf or five sheep for 1 month. |
| Angler day | Any visit by an individual to a fishing area during any part or all of a 24-hour day. |
| Autotrophic | Organisms that are capable of producing organic substances from inorganic materials by means of energy received from outside the organism. |

### B

| | |
|---|---|
| Bedrock | The solid rock that underlies soil, sand, clay, or other loose surface material. |
| Benthos | Organisms living in or on the bottom of a lake or stream. |
| Biomass | The amount of living matter in the form of one or more kinds of organisms present in a particular habitat. |
| Browse | Twigs, leaves, and young shoots of trees and shrubs on which animals feed; in particular, those shrubs that are utilized by big game animals for food. |

### C

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|---|---|
| Carrying capacity | The number of animals that can be maintained in a given habitat through the pinch-period—usually winter. |
| Celsius (Centigrade) | ºC = (ºF-32)5/9. |
| Coldwater fishery | Generally, a water or a water system that has an environment suitable for salmonoid fishes such as trout. |

| | |
|---|---|
| Cubic foot | A measure of a moving volume of water (cfs) per second. |
| Cultural resource | Any building, site, district, structure, or object significant in history, architecture, archeology, culture, or science. |

## D

| | |
|---|---|
| Dead storage | That portion of a reservoir capacity that constitutes the minimum pool. Because this portion of a reservoir is below the outlet works, it cannot be released. It is used for the benefit of recreation, fishery habitat, and silt deposition. |
| Degradation | The geologic process wherein streambeds and flood plains are lowered in elevation by removing material. The opposite of aggradation. |

## E

| | |
|---|---|
| Ecosystem | A complex system composed of a community of fauna and flora, taking into account the chemical and physical environment with which the system is interrelated. |
| Endangered species | A species that is in danger of extinction throughout all or a significant portion of its range. |

## F

| | |
|---|---|
| Fahrenheit | ºF = (9/5 ºC) + 32. |
| Fault | A break in the rocks in which there has been unequal movement of the two sides relative to each other. |
| Fisherman day | An aggregate of 12 hours of fishing use by one or more individuals. |
| Fish stream improvement | Improving a stream channel to make a new fish habitat or to enhance an existing habitat. |
| Forb | An herb other than grass. |
| Fry | Fish between the egg and fingerling stage. |

## G

| | |
|---|---|
| Game fish | Those species of fish classified and managed by the State for sport fishing or angling. |
| Gauging station | A location on a water channel where streamflows are recorded. |

## H

| | |
|---|---|
| Habitat evaluation procedure (HEP) | "HEP" is a "species habitat" approach to impact assessment and habitat quality. |
| Head | The difference in elevation between two bodies of water. |
| Hectare | An area of land or water equal to 2.471 acres. |
| Hunting day | A visit by an individual to an area for the purpose of hunting during any portion or all of a 24-hour day. |

## I

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| Inactive storage | That portion of a reservoir's capacity that is neither dead storage nor active storage. It normally is not released because of the benefits to fish, recreation, and other uses; but it can be since it is above the outlet works in the reservoir's profile. |
| Invader plants | Species, often annuals, which are not part of the climax vegetation that invade land when there is little or no competition from other plant species. |
| Irrigation water management | The art of timing and regulating irrigation water applications in a way that will satisfy the water requirement of the crop with minimum waste of water, soil, or plant nutrients. |

## L

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|---|---|
| Lateral | A small ditch used to deliver water from a canal to irrigation lands. |
| Limnology | The scientific study of physical and chemical conditions in fresh waters. |

## M

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|---|---|
| Macro-invertebrates | Animals lacking a backbone and internal skeleton (i.e., insects, worms, and crayfish). |

| | |
|---|---|
| Mesophyte | A plant growing under medium condition of moisture. |
| Metabolism | The sum total of the chemical transformations occurring in the body of a living organism. |
| Minimum pool | The amount of inactive and dead storage in a reservoir. |
| Mitigation | Actions to avoid, minimize, reduce, eliminate, or rectify the impact of a management practice. |

## N

| | |
|---|---|
| *National Register of Historic Places* (NRHP) | The federally maintained register of significant districts, sites, buildings, structures, architecture, archeology, and culture. |
| Nongame fish | Those species of fish not classified as sport fish by the State. |

## P

| | |
|---|---|
| Palustrine | Living or thriving in a marshy environment. |
| Periphyton | Organisms that live attached to underwater surfaces. |
| Persons-at-one-time | A recreation capacity measurement term indicating the number of people who can use a facility or area at one time. |
| Phreatophyte | A deep-rooted plant that grows in riparian zones and obtains water from the water table or the soil just above it. |
| Phytoplankton | Passively floating plant life, primarily algae. |
| Pipelines | A means of conveying water from a water source to a farm or group of farms. They also are used to convey water between fields or to sprinkler laterals. |

## R

| | |
|---|---|
| Reach | A finite length of a stream, river, or canal. |
| Recreation day | Twelve visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more persons. |
| Recruitment | The increase in population caused by natural reproduction or immigration. |

| | |
|---|---|
| Redd | The spawning ground or nest of various fishes. |
| Riffle | A shallow water area across a streambed causing broken water. |
| Riparian (vegetation) | Living on the banks of a river or stream. |
| Riprap | Stones placed on the face of a dam or on streambanks or other land surfaces to protect them from erosion. |

## S

| | |
|---|---|
| Salinity | A term referring to the quantity of dissolved mineral salts in solution. |
| Salmonid | Of or related to the Salmonidae, the family of fishes including trout. |
| Salt loading | Term used to express the amount of salt added to streams from any natural or manmade source. |
| Scoping | The public involvement process required by the Council on Environmental Quality regulations to help Federal agencies determine issues and alternatives analyzed in the SDEIS. |
| Sediment | Any usually finely divided organic and/or mineral matter deposited by water in nonturbulent areas. |
| Seismicity | The phenomenon of earth movement that usually results in an earthquake. |
| Sere | A series of ecological (vegetative) communities. |
| Sheep month | Utilization of forage by one mature ewe with lamb at side for 1 month. A sheep month equals 1/5 animal unit month. |
| Sprinkler irrigation | Application of water to the land surface by above ground sprinkler nozzles attached to either stationary, moving, or movable laterals. |
| Supplemental service land | Irrigated land that receives project water in addition to a previous allotment from another source. |
| Surface irrigation | Application of water to the land surface through the use of corrugations, furrows, graded borders, or level borders. |

## T

| | |
|---|---|
| Taxon (plural taxa) | A group of genetically similar organisms. |
| Thermal stratification | A temperature gradient within a body of water caused by warmer water occupying the upper level of the water and colder, denser water occupying the lower level. |
| Threatened species | A species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. |
| Trophic | Related to nutrition, particularly the types of food an organism requires. |
| Trophic level | Place of an organism in the food chain. |
| Trophy fish | In terms of trout, a fish that exceeds 14 inches. |

## V

| | |
|---|---|
| Visitor day | An aggregate of 12 hours of recreation use by one or more individuals. |

## W

| | |
|---|---|
| Water right | A legal permit issued by the State government that allows the holder to divert a specific amount of water for beneficial use. |
| Weighted usable area | An expression of the quantity of fish habitat in feet squared per 1,000 feet of river channel. |
| Wetland | An area characterized by periodic inundation or saturation, hydric soils, and vegetation adapted for life in saturated soil conditions. |
| Wildlife wetland habitat management | Retaining, creating, or managing wetland habitat for wildlife. |
| Winter range (big game) | An area of land that has suitable vegetation and topographic conditions to support big game animals during the winter months when snow depth restricts use in other areas. |

## 6.2 LIST OF ACRONYMS AND ABBREVIATIONS

### A

| | |
|---|---|
| ACHP | Advisory Council on Historic Preservation |
| acre-ft/yr | acre-feet per year |
| ADT | average daily traffic |
| APE | area of potential effects |
| ATV | all terrain vehicle |
| AUM | animal unit months |

### B

| | |
|---|---|
| BMP | best management practice |

### C

| | |
|---|---|
| CEQ | Council on Environmental Quality |
| CFR | Code of Federal Regulations |
| cfs | cubic feet per second |
| CGIC | Cottonwood-Gooseberry Irrigation Company |
| CMP | corrugated metal pipe |
| CRSP | Colorado River Storage Project |
| CRSS | Colorado River Simulation System |
| CUP | Central Utah Project |
| CUPCA | Central Utah Project Completion Act |
| CUWCD | Central Utah Water Conservancy District |

### D

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|---|---|
| DEIS | draft environmental impact statement |
| DO | dissolved oxygen |

### E

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|---|---|
| ECC | Environmental Chemical Corporation |

| | |
|---|---|
| EIS | environmental impact statement |
| EPA | U.S. Environmental Protection Agency |

## F

| | |
|---|---|
| FDR | Forest Development Road |
| FEIS | final environmental impact statement |
| Forest Plan | 1986 Forest Land and Resource Management Plan for the Manti-La Sal National Forest |
| $ft^2$/day | square feet per day |

## G

| | |
|---|---|
| GPCD | gallons per capita per day |

## H

| | |
|---|---|
| HEP | habitat evaluation procedures |
| HSI | Habitat Suitability Index |
| HU | habitat unit |

## I

| | |
|---|---|
| IDC | interest during construction |
| IFIM | instream flow incremental methodology |
| IMPLAN | IMpact Analysis for PLANning |
| Interior | U.S. Department of the Interior |
| ITA | Indian trust assets |

## K

| | |
|---|---|
| kg | kilogram |
| kg/yr | kilogram per year |

## L

| | |
|---|---|
| lb/day | pound per day |
| LRMP | Land and Resource Management Plan |

## M

| | |
|---|---|
| Master Plan | Sanpete County Water Resources Master Plan |
| MCE | maximum credible earthquake |
| M&I | municipal and industrial |
| meq/L | milliquivalent per liter |
| mg/L | milligram per liter |
| mm | millimeter |
| MOA | memorandum of agreement |
| MOU | memorandum of understanding |
| msl | mean sea level |

## N

| | |
|---|---|
| NAAQS | National Ambient Air Quality Standards |
| Narrows Project | Narrows Project, Utah |
| NEPA | National Environmental Policy Act |
| NHPA | National Historic Preservation Act of 1966 |
| NOI | notice of intent |
| NRHP | *National Register of Historic Places* |

## O

| | |
|---|---|
| O&M | operation and maintenance |
| ORV | Outstanding Remarkable Values |

## P

| | |
|---|---|
| P&G | *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies* |
| PEM | palustrine emergent wetland cover (herbaceous wetlands) |
| ppm | parts per million |
| $PM_{10}$ | Particulate matter of 10 microns in diameter or smaller. |

| | |
|---|---|
| PSS | palustrine scrub/shrub cover (shrubby wetlands) |
| PVC | polyvinyl chloride |

## R

| | |
|---|---|
| Reclamation | Bureau of Reclamation |
| Recovery Program | Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin |
| *Research Report 145* | *Consumptive Use of Irrigated Crops in Utah*, October 1994 |
| RIP | Recovery Implementation Program |
| ROD | Record of Decision |
| ROS | Recreation Opportunity Spectrum |
| ROW | rights-of-way |
| RPA | Reasonable and prudent alternatives |
| RVD | recreation visitor day |

## S

| | |
|---|---|
| SCORP | 1992 Utah State Comprehensive Recreation Plan |
| SDEIS | supplemental draft environmental impact statement |
| Service | U.S. Fish and Wildlife Service |
| SHPO | State Historic Preservation Office |
| SR | State Route |
| SRPA | Small Reclamation Projects Act |
| Stat. | Statute |
| SWCD | Sanpete Water Conservancy District |
| SWWF | southwestern willow flycatcher |

## T

| | |
|---|---|
| TCP | traditional cultural properties |
| TDS | total dissolved solids |
| TMDL | total maximum daily load |

| | |
|---|---|
| Tripartite Agreement | The October 11, 1943, reconstruction and repayment contract on Scofield Reservoir between the Federal Government and local sponsors |
| TSI | Trophic State Index |

## U

| | |
|---|---|
| UDEQ | Utah Department of Environmental Quality |
| UDOT | Utah Department of Transportation |
| UDWR | Utah Division of Wildlife Resources |
| USACE | U.S. Army Corps of Engineers |
| U.S.C. | United States Code |
| USDA Forest Service | U.S. Department of Agriculture Forest Service |
| USGS | U.S. Geological Survey |
| USHE | shrub cover |

## V

| | |
|---|---|
| VMS | Visual Management System |
| VQO | Visual Quality Objective |

## W

| | |
|---|---|
| WUA | weighted usable area |

## Y

| | |
|---|---|
| YOY | young-of-the-year |
| 1995 FEIS | January 1995 final environmental impact statement |
| 1998 DEIS | *Draft Environmental Impact Statement, Narrows Project* (DES-98-10), published in March 1998 |
| °C | degree Celsius |
| °F | degree Fahrenheit |
| < | less than |
| µg/L | micrograms per liter |
| $\mu g/m^3$ | micrograms per cubic meter |

| | |
|---|---|
| % | percent |
| § | section |