

This resource assessment is designed to gather and display information specific to Wasatch County, Utah. This report will highlight the natural and social resources present in the county, detail specific concerns, and be used to aid in resource planning and target conservation assistance needs. This document is dynamic and will be updated as additional information is available through a multi-agency partnership effort. The general observations and summaries are listed first, followed by the specific resource inventories.

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## Introduction

The county is was historically a major agricultural community. At one time, more sheep where shipped out of the valley that anywhere else in the nation. The high-altitude farming raised peas as a major crop with a cannery in the community. In the 70's many dairies participated in the USDA dairy buyout. There are now 8 active dairies left in the county, major crops are alfalfa and grass hay. Most of the county is under sprinkler irrigation.

The County has experienced incredible residential growth with water quality, water quantity and wise land use is a major concern. The area is a watershed for metropolitan areas along the Wasatch Front and has three very large man-made reservoirs: Jordanelle, Deer Creek, and Strawberry; that serve culinary, irrigation, and recreational needs. The Provo River is a blue-ribbon fishery for fly-fishing. Tourism is a major business in the area. Scenic farmland is an asset that the local people would like to protect. Only one hour from Salt Lake City, and adjacent to Park City, the county was the cross-country and biathlon venue of the 2002 Olympic Winter Games, and has 5 golf courses.. Recreation impacts on natural resources continue to be an issue.

Geologically, the county lies between the Great Basin and the Uintah Basin. The southeastern part of the county drains to the Colorado River by way of the Strawberry River. However most of the water from the Strawberry River drainage is diverted through tunnels from the Current Creek and Strawberry Reservoirs to Utah County. The northern part of the county drains into the Provo River which runs southwestward into Utah County by way of Provo Canyon.

Equal Opportunity Providers and Employers.



Relief within the County varies considerably. Elevations range from a low point of 5,220 feet where the Provo River crosses the Utah County line to a high point of nearly 10,800 feet near Murdock Mountain at the intersection of the Duchesne, Summit and Wasatch County lines. Much of the County's area is mountainous except for Strawberry, Round and Heber Valleys. The high mountain Strawberry Valley has no full time residents and no irrigated lands. Nearly all of the County's population and irrigated agricultural lands are located in the Heber and Round Valleys. Heber Valley contains the incorporated communities of Heber City, Midway and Charleston while Round Valley contains the Town of Wallsburg.

## General Land Use Observations

It should be noted that very little change has occurred in the agriculture use within the Central Planning Area of Heber Valley (North and South Fields and areas along the Provo River) while great changes have occurred in the Eastern Planning of Heber Valley (Center and Lake Creek areas). Most of the changes that occurred in this area are a result of water and sewer infrastructure being extended by the Twin Creeks Special Service District. The extension of the sewer allowed two of the largest developments in the Lake Creek area to occur, Wild Mare Farms which had a high water table problem and Lake Creek Farms which had problems with unacceptable percolation rates and the potential of contamination of the ground water aquifer if septic tank drainfield concentrations were greater than one per five acres. (1)

### Grass / Pasture / Hay Lands

- Most of the alfalfa, grass and hay lands are in the valley bottom or slopes. There are some alfalfa fields on steeper slopes. Most are sprinkler irrigated
- The control of noxious and invasive plants is a local concern, due to the farming, recreation, and because the county has a major transportation thorough fare (Highways 40 and 189). The county is 70% publicly owned and the impact of weed spread from private lands is a concern
- There are several large pieces of contiguous farmland and pasture land that are getting pressured for development
- There are several full time farmers in the area, along with smaller part time farmers. Many farms are being purchased by first-time farm operators. New owners of ranchettes are not familiar with basic natural resource conservation practices.
- There is a large herd of Elk and deer in the area that feeds on the haylands in the winter months.
- Sage grouse projects on private and public grazing lands in the Strawberry Valley are locally supported.
- There are a lot of horse owners, ranch and boarding operators in the county, with large operations that need technical assistance on manure management, range and pasture management, and erosion control into nearby streams.

### Row & Perennial (orchards / vineyards / nurseries) Crops

- Residue, nutrient and pest management are needed to control erosion and to protect water quality.

### Forest

- On private, non-industrial forest there are issues with erosion, water quality and forest productivity
- On non-industrial forest land, landowner objectives often are not on actively managing the land for timber production. Land use constraints and the lack of economic incentives further discourage conservation.
- There are several wildlife urban interface communities that need technical assistance in managing and improving their forested areas for better health. Soil erosion and lack of natural resource protection are concerns. Noxious weeds are spreading to these areas.

**Resource Assessment Summary**

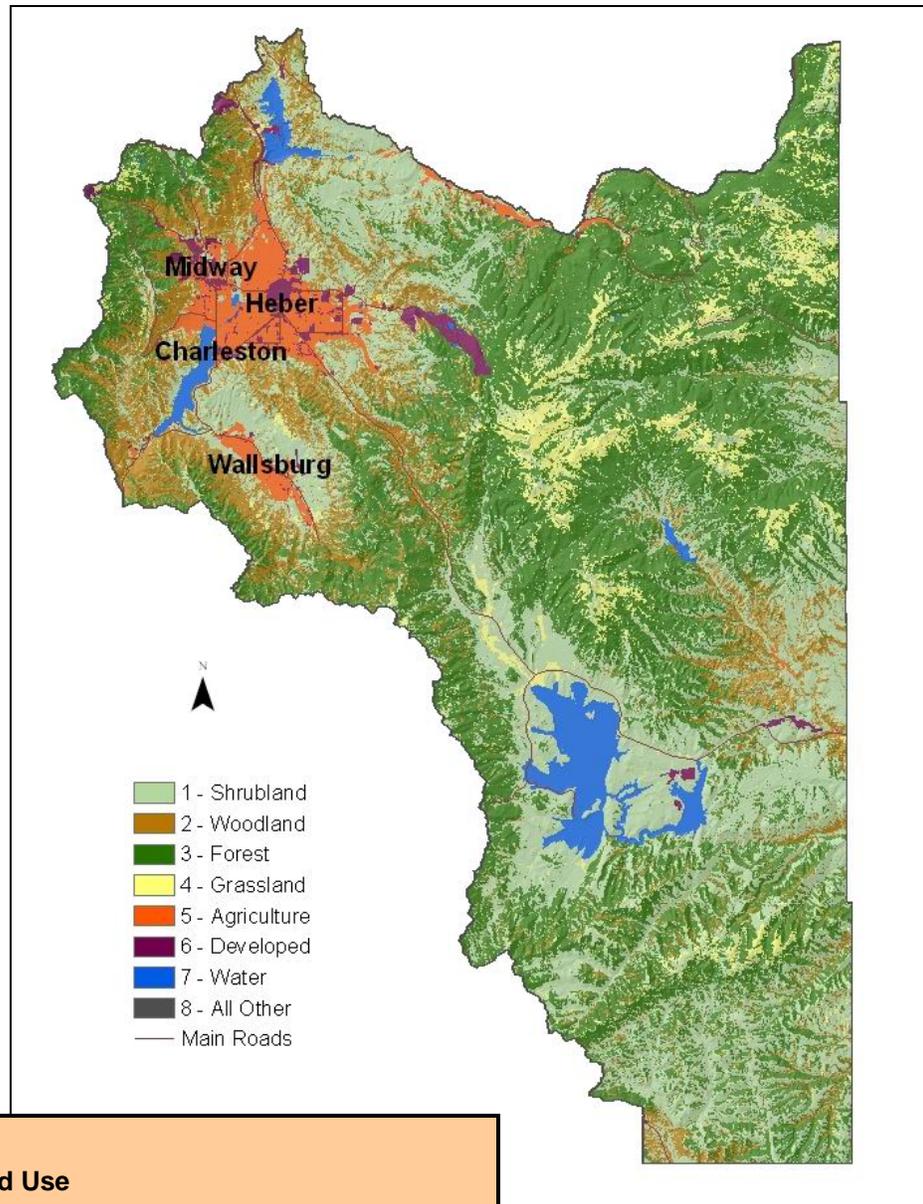
Categories	Concern high, medium, or low	Description and Specific Location (quantify where possible)
Soil	m	
Water Quantity	h	Wise water use continues to be an issue with development impacting the agricultural areas.
Water Quality Ground Water	m	
Water Quality Surface Water	h	storm water runoff, nutrients getting into streams through agricultural operations.
Air Quality	m	lack of small diameter wood utilization has resulted in burning wood waste from cabinet shops and rustic furniture manufacturers
Plant Suitability	m	
Plant Condition	m	
Fish and Wildlife	h	Concern over the sage grouse in the Strawberry Valley, noxious weeds impacting habitat and higher temperatures in the Provo River.
Domestic Animals	m	
Social and Economic	h	Pressure from development and loss of farmland and fragile ecosystem lands in the North Fields.

**Special Considerations for Wasatch County:**

Wasatch County is located in the north-central part of Utah, approximately 40 miles east of Salt Lake City. The County is bordered on the north by Summit County, on the east by Duchesne County, on the south and southwest by Utah County and the northwest by Salt Lake County. Wasatch County is one of the smaller counties in the state with a total surface area of 1,207 square miles of which 70 percent is publicly owned. (1)

- Grass/Pasture/Hay includes approximately:
  - 5768 acres of Alfalfa (16,897 tons)
  - 614 acres small grain hay (1760 tons)
  - 774 tame hay (1469 tons)
- Other crops:
  - 8332 acres of harvested cropland (7714 irrigated)
  - 319 acres of barley for grain (21,728 bushels)
  - 40 acres oats (2951 bushels)

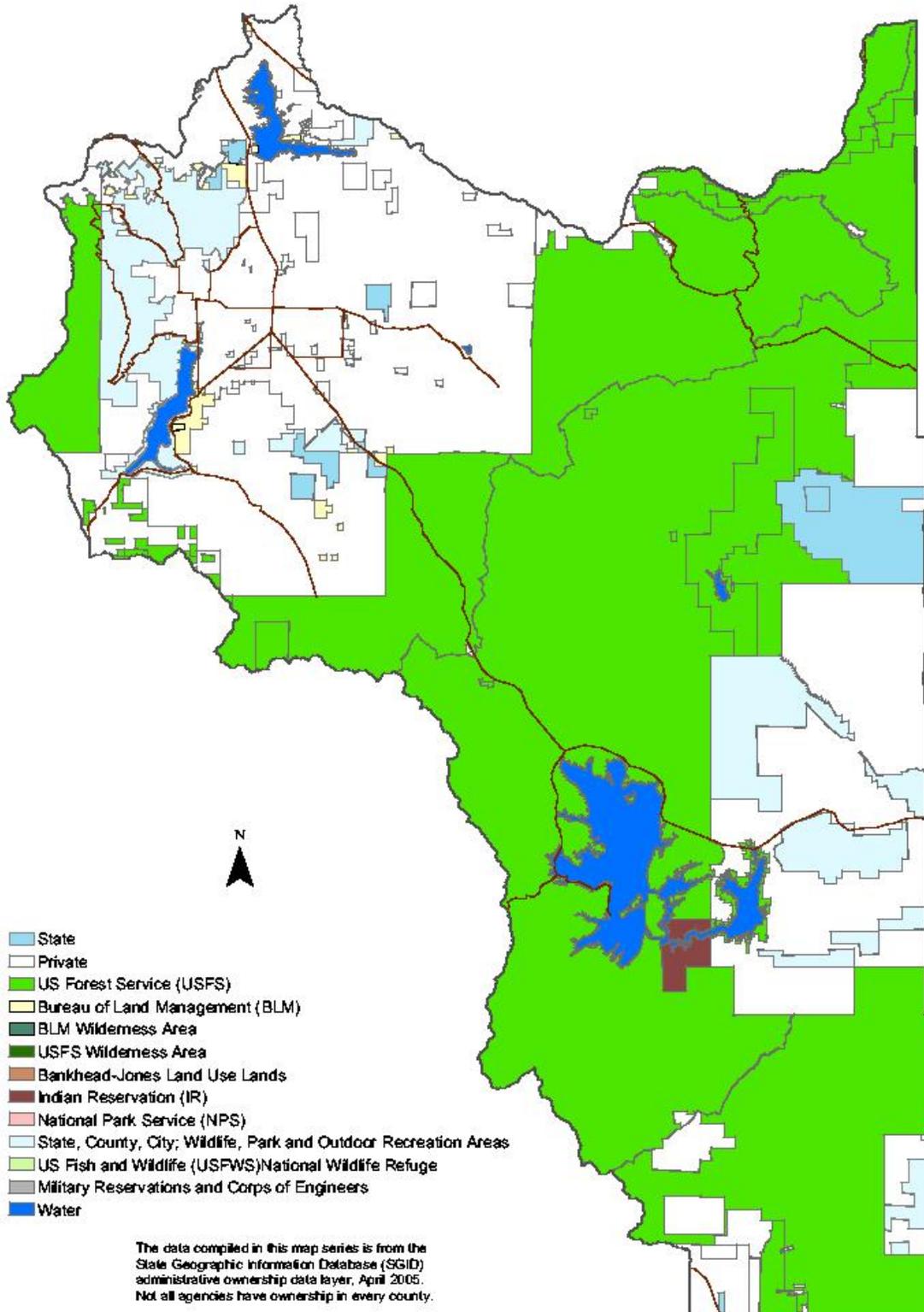
**Land Cover**



Land Cover/Land Use		
	Acres	%
Residential	4,121.09	1%
Vacant Residential	2,166.34	0%
General sales or services	48.55	0%
Manufacturing	54.11	0%
Utilities	795.95	0%
Irrigated agriculture	15,616.65	2%
Grazing	711,969.92	92%
Private Recreation	6,113.45	1%
Public Recreation facilities	2,518.45	0%
Mining	260.35	0%
Cities and Towns	6,222.00	1%
Water bodies	22,598.50	3%
<b>Wasatch County Totals *b</b>	<b>772,485.36</b>	<b>100%</b>

*\*a: Figures from the Wasatch County GIS department.  
\*b: Totals may not add due to rounding and small unknown acreages.*

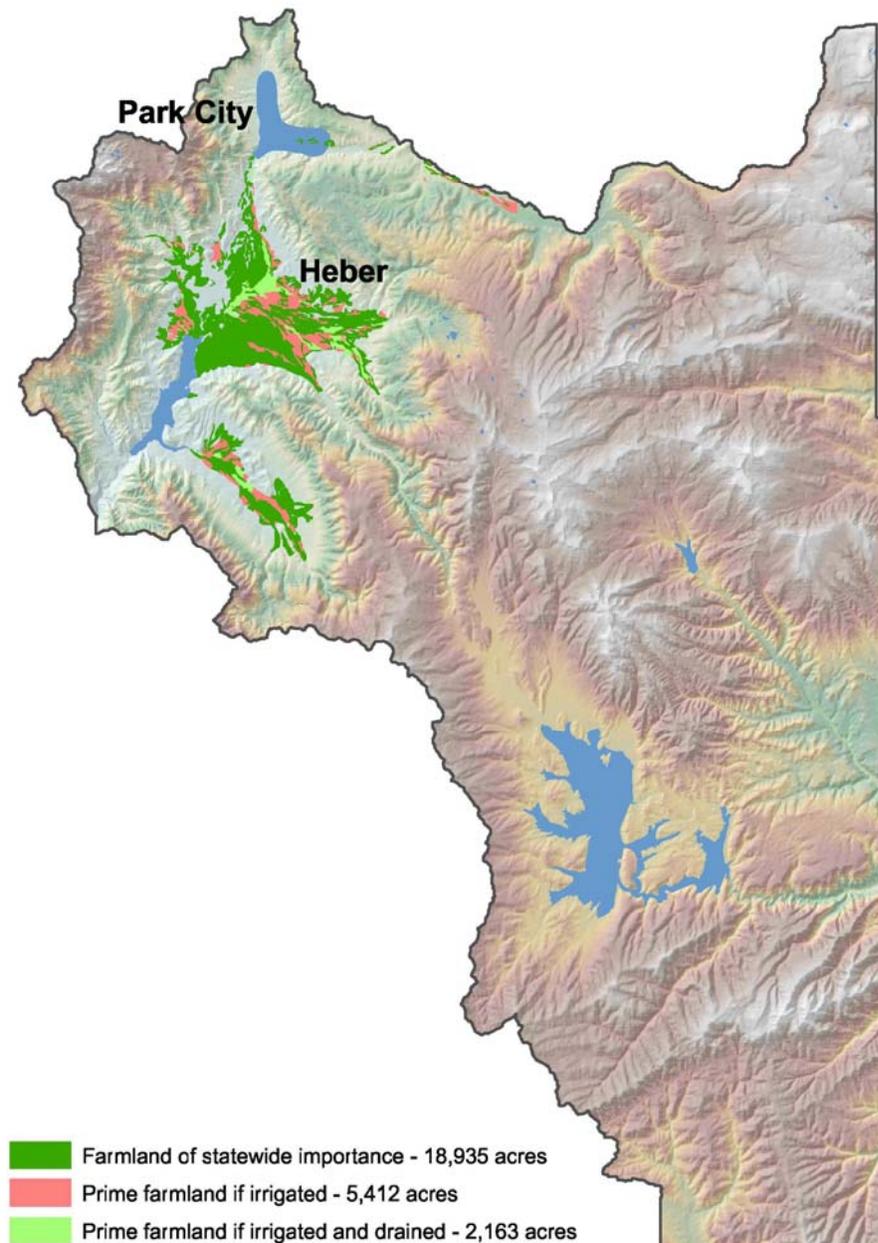
**Land Ownership**



Land Owner	PROPERTY OWNERSHIP	
	Acres	Percent of County
	Total Land	
Forest Service.....	416,495	53.89
Bureau of Land Management .....	3,384	0.43
State Trust Lands.....	19,576	2.54
Ute Indians .....	2,206	0.28
Bureau of Reclamation.....	1,195	0.16
Water Bodies .....	22,598	2.93
State Parks .....	27,262	3.53
Division of Wildlife Resources .....	34,707	4.48
City and Towns .....	6,222	0.81
Private		
less than one acre.....	1,620	0.21
over 1 acre up to 5 acres.....	4,610	0.59
over 5 up to 10 acres .....	4,191	0.54
over 10 up to 20 acres .....	5,883	0.76
over 20 up to 40 acres .....	7,847	1.01
over 40 up to 160 acres .....	5,144	0.67
greater than 160 acres.....	209,995	27.17
<b>TOTAL ACRES</b>	<b>772,835</b>	<b>100.00</b>

Source: Wasatch County GIS Department

## Prime & Unique Farm Land



### Prime farmland

land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion.

### Unique farmland

land other than prime farmland that is used for the production of specific high-value food and fiber crops...such as, citrus, tree nuts, olives, cranberries, fruits, and vegetables

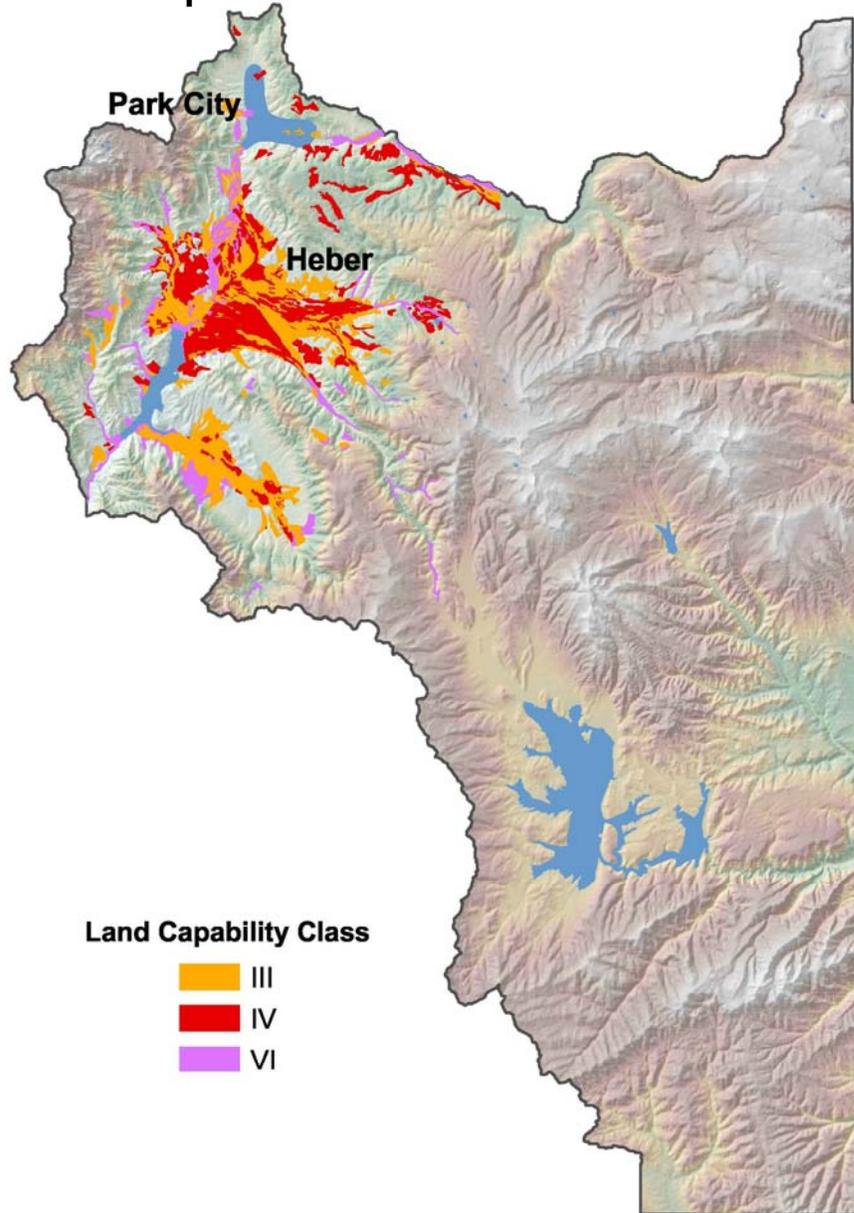
### Additional farmland of statewide or local importance

The County is organizing an Agricultural land and open space protection committee. Designation of locally important farm and range land is a probability.

**Resource Concerns – SOILS**

Categories	Specific Resource Concern / Issue	Crop	Hay	Pasture	Grazed Range	Grazed Forest	Pasture Native/Naturalized	Wildlife	Watershed Protection	Forest	Headquarters	Urban	Recreation	Water	Mined	Natural Area
Soil Erosion	Sheet and Rill															
	Wind															
	Ephemeral Gully															
	Classic Gully							X								
	Streambank								X							
	Shoreline													X		
	Irrigation-induced	X														
	Mass Movement											X	X			
	Road, roadsides and Construction Sites											X	X			
Soil Condition	Organic Matter Depletion															
	Rangeland Site Stability				X			X	X	X						
	Compaction	X	X													
	Subsidence															
	ContaminantsSalts and Other Chemicals															
	Contaminants: Animal Waste and Other OrganicsN														X	
	Contaminants: Animal Waste and Other OrganicsP														X	
	Contaminants: Animal Waste and Other OrganicsK															
	Contaminants : Commercial FertilizerN														X	
	Contaminants : Commercial FertilizerP															
	Contaminants : Commercial FertilizerK															
	ContaminantsResidual Pesticides															
	Damage from Sediment Deposition															

**Land Capability Class on Cropland and Pastureland**

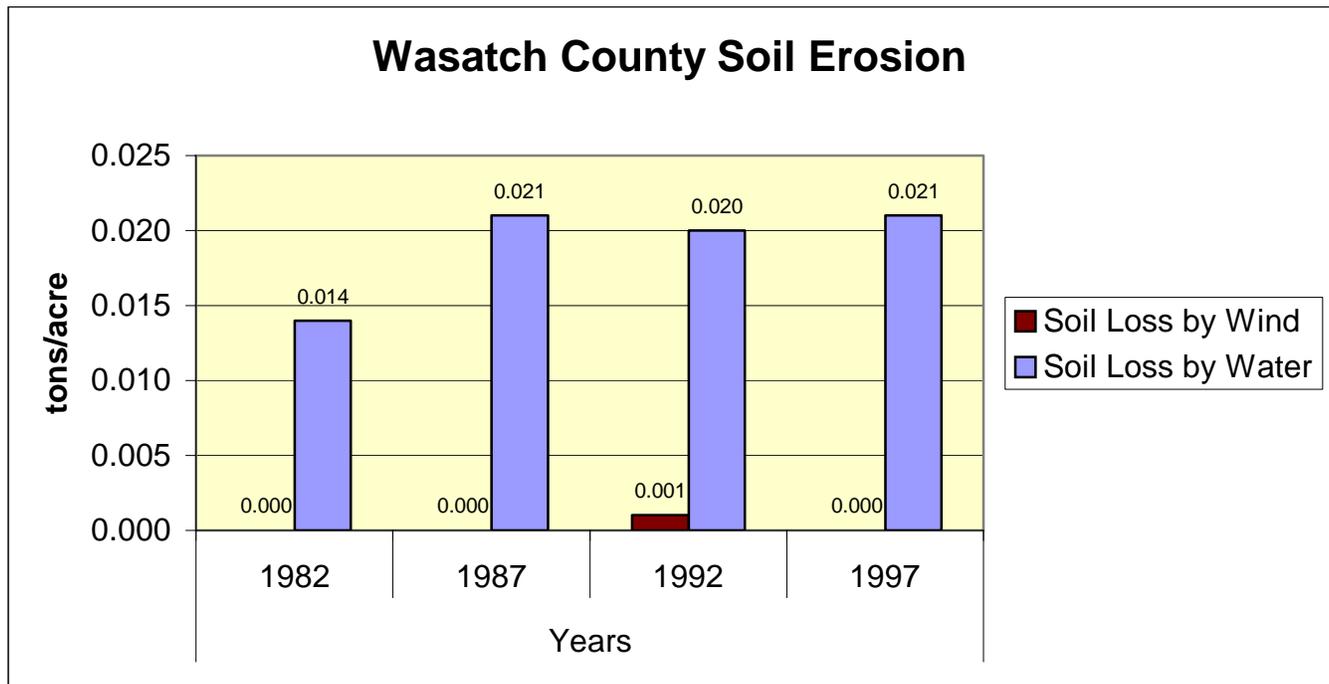


**Land Capability Class**

- III
- IV
- VI

		Acres	Percentage
<b>Land Capability Class</b> (Irrigated Cropland & Pastureland Only)	I - slight limitations	0.00	0%
	II - moderate limitations	0.00	0%
	III - severe limitations	21469.60	44%
	IV - very severe limitations	18524.40	38%
	V - no erosion hazard, but other limitations	0.00	0%
	VI - severe limitations, unsuited for cultivation, limited to pasture, range, forest	8972.10	18%
	VII - very severe limitations, unsuited for cultivation, limited to grazing, forest, wildlife		0%
	VIII - misc areas have limitations, limited to recreation, wildlife, and water supply		0%
	<b>Total Crop &amp; Pasture Lands</b>	<b>48966.10</b>	<b>100%</b>

## Soil Erosion



- ❖ Controlling erosion not only sustains the long-term productivity of the land, but also affects the amount of soil, pesticides, fertilizer, and other substances that move into the nation's waters.

**Resource Concerns – WATER**

Categories	Specific Resource Concern / Issue	Crop	Hay	Pasture	Grazed Range	Grazed Forest	Pasture Native/Naturalized	Wildlife	Watershed Protection	Forest	Headquarters	Urban	Recreation	Water	Mined	Natural Area
Water Quantity	Water Quantity – Rangeland Hydrologic Cycle				X											
	Excessive Seepage															
	Excessive Runoff, Flooding, or Ponding						X									
	Excessive Subsurface Water						X									
	Drifted Snow															
	Inadequate Outlets															
	Inefficient Water Use on Irrigated Land															
	Inefficient Water Use on Non-irrigated Land															
	Reduced Capacity of Conveyances by Sediment Deposition															
	Reduced Storage of Water Bodies by Sediment Accumulation															
	Aquifer Overdraft															
	Insufficient Flows in Watercourses															
Water Quality, Groundwater	Harmful Levels of Pesticides in Groundwater															
	Excessive Nutrients and Organics in Groundwater															
	Excessive Salinity in Groundwater															
	Harmful Levels of Heavy Metals in Groundwater															
	Harmful Levels of Pathogens in Groundwater															
	Harmful Levels of Petroleum in Groundwater															
Water Quality, Surface	Harmful Levels of Pesticides in Surface Water	X														
	Excessive Nutrients and Organics in Surface Water		X	X												
	Excessive Suspended Sediment and Turbidity in Surface Water													X		
	Excessive Salinity in Surface Water															
	Water Quality – Colorado River Excessive Salinity															
	Harmful Levels of Heavy Metals in Surface Water														X	
	Harmful Temperatures of Surface Water							X								
	Harmful Levels of Pathogens in Surface Water															
Harmful Levels of Petroleum in Surface Water																

- The Provo River Restoration project is re-aligning the Provo River to its historic meander. Since the project has been started and the River has been taken out of its man-made channel, water temperatures are increasing due to lack of vegetable and forest cover.
- Dairies in the area have water quality impacts due to animal waste storage and application onto sloped pasture and hayland.
- There is a major tributary to the Deer Creek Reservoir that has excessive soil erosion and is depositing sediment into the reservoir.
- The “North Fields” area of the valley has a high water table that carries contaminants through the fields to the Provo River. The same area is on septic tank zoning with one lot per 20 acres.

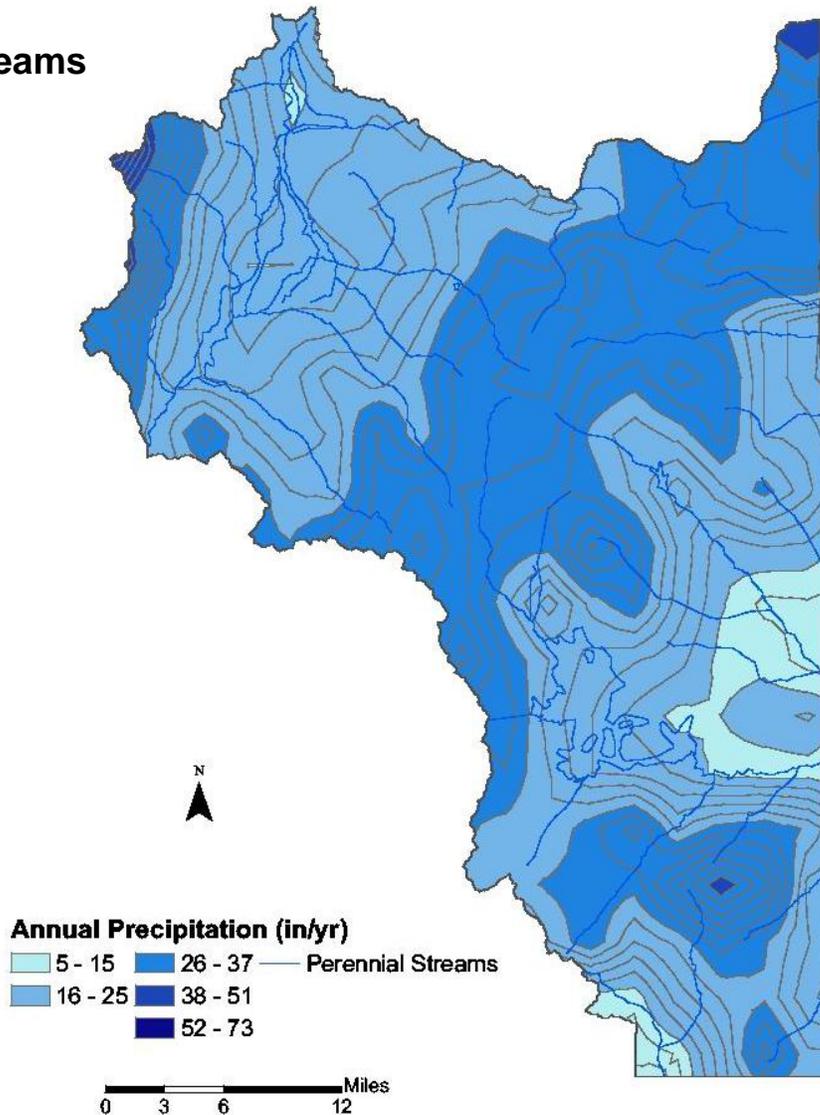
- **Surface Water Quality**

In 1981, because of an eutrophication problem in Deer Creek Reservoir, Governor Scott Matheson established the Jordanelle Reservoir Water Quality Technical Advisory Committee for the purpose of developing a reservoir management plan for Deer Creek Reservoir and the future Jordanelle Reservoir. Wasatch County took the lead in the preparation of the Water Quality Management Plan for Deer Creek and Jordanelle Reservoirs which was completed in 1984. This plan identified various sources of pollution and assigned required reductions from each source to achieve the desired level of water quality in the two reservoirs and their tributary streams. This is an on going planning effort with annual water sampling, evaluations and plan modifications to insure that measures taken are reducing adverse impacts on the surface water quality in the Provo River drainage. One of the identified sources of pollution was agriculture return flows from flood irrigation. The Wasatch County Efficiency Project has resulted in the installation of pressurized irrigation on much of the farm land in the County, limiting most agricultural return flows and soil erosion on cultivated land. This project has also resulted in the conservation of water resources. (1)

- **Ground Water Quality**

Ground water quality also received a great deal of attention during the 1990s. Many homes in the unincorporated area use wells in the unconsolidated valley fill as their source of water. The valley fill also discharges 11,000 acre feet of ground water annually to the Provo River and 42,000 acre feet directly to Deer Creek Reservoir. In order to determine the potential impacts of the use of septic tank drainfields on the water quality of the valley fill aquifer, Wasatch County had a Hydrogeologic/Water Quality Study conducted in 1994. This study recommended that in order to protect the pristine quality of water in the valley fill aquifer, septic tank drainfield use should be limited to a density no greater than one per five acres. (1)

**Precipitation and Streams**



		ACRES	ACRE-FEET
<b>Irrigated Adjudicated Water Rights</b>	Surface		
	Well		
	<b>Total Irrigated Adjudicated Water Rights</b>	0.00	0.00
<b>Stream Flow Data</b>		Total Avg. Yield	
		May-Sept Yield	
<b>Stream Data</b>		<b>MILES</b>	<b>PERCENT</b>
	<b>Total Miles - Major (100K Hydro GIS Layer)</b>		n/a
	303d (DEQ Water Quality Limited Streams)		#DIV/0!

		<b>Irrigation Efficiency:</b>	<b>&lt;40%</b>	<b>40 - 60%</b>	<b>&gt;60%</b>
<b>Percentage of Total Acreage</b>	Cropland				
	Pastureland				

**Watersheds & Total Maximum Daily Load (TMDL)**

<b>Watershed Projects, Plans, Studies and Assessments</b>			
<b>NRCS Watershed Projects</b>		<b>NRCS Watershed Plans, Studies &amp; Assessments</b>	
<b>Name</b>	<b>Status</b>	<b>Name</b>	<b>Status</b>
Rural Clean Water Project	Completed	Tri-Valley Watershed	completed
<b>DEQ TMDL's</b>		<b>NRCS Comprehensive Nutrient Management Plans</b>	
<b>Name</b>	<b>Status</b>	<b>Number</b>	<b>Status</b>
			Planned Implemented

**AFO/CAFO**

<b>Animal Feeding Operations (AFO)</b>						
<b>Animal Type</b>	<b>Dairy</b>	<b>Feed Lot (Cattle)</b>	<b>Poultry</b>	<b>Swine</b>	<b>Mink</b>	<b>Horses</b>
No. of Farms	5	8	0	0	0	9
No. of Animals						

<b>Potential Confined Animal Feeding Operations (PCAFO)</b>						
<b>Animal Type</b>	<b>Dairy</b>	<b>Feed Lot (Cattle)</b>	<b>Poultry</b>	<b>Swine</b>	<b>Mink</b>	<b>Other</b>
No. of Farms		4				
No. of Animals						

<b>Confined Animal Feeding Operations - Utah CAFO Permit</b>					
<b>Animal Type</b>	<b>Dairy</b>	<b>Feed Lot (Cattle)</b>	<b>Poultry</b>	<b>Swine</b>	<b>Other</b>
No. of Permitted Farms	0	0	0	0	0
No. of Permitted Animals					

Resource Concerns – AIR, PLANTS, ANIMALS

- See Noxious Weed concern below
- The lack of small diameter wood utilization impacts air quality. The County is home to eight cabinet companies and several rustic wood furniture manufacturers that have wood waste they burn, increasing the smoke in the valley.
- Forage on rangelands in the higher elevations and pasture and haylands are impacted by wildlife such as Deer and Elk. The County is a wildlife corridor for Elk and Deer along the Provo River, in the public land areas and the mountains surrounding the valleys.
- There is an asphalt plant that is surrounded by agricultural areas where there have been complaints of odors from the plant.

Categories	Specific Resource Concern / Issue															
		Crop	Hay	Pasture	Grazed Range	Grazed Forest	Pasture Native/Naturalized	Wildlife	Watershed Protection	Forest	Headquarters	Urban	Recreation	Water	Mined	Natural Area
Air Quality	Particulate matter less than 10 micrometers in diameter (PM 10)															
	Particulate matter less than 2.5 micrometers in diameter (PM 2.5)															
	Excessive Ozone															
	Excessive Greenhouse Gas: CO2 (carbon dioxide)															
	Excessive Greenhouse Gas: N2O (nitrous oxide)															
	Excessive Greenhouse Gas: CH4 (methane)															
	Ammonia (NH3)															
	Chemical Drift												X			
	Objectionable Odors												X			
	Reduced Visibility															
	Undesirable Air Movement															
Adverse Air Temperature																
Plant Suitability	Plants not adapted or suited															
Plant Condition	Plant Condition – Productivity, Health and Vigor									X						
	Threatened or Endangered Plant Species: Plant Species Listed or Proposed for Listing under the Endangered Species Act															
	Threatened or Endangered Plant Species: Declining Species, Species of Concern															
	Noxious and Invasive Plants	X	X	X	X	X	X	X	X	X		X	X			
	Forage Quality and Palatability															
Plant Condition – Wildfire Hazard					X				X							
Fish and Wildlife	Inadequate Food															
	Inadequate Cover/Shelter															
	Inadequate Water															
	Inadequate Space															
	Habitat Fragmentation															
	Imbalance Among and Within Populations															
Threatened and Endangered Species: Species Listed or Proposed for Listing under the Endangered Species Act				X	X	X	X	X	X							
Domestic Animals	Inadequate Quantities and Quality of Feed and Forage															
	Inadequate Shelter															
	Inadequate Stock Water															
	Stress and Mortality															

## Noxious Weeds

- Noxious weed infestation and spread is a major concern with a combination of public and private interface. The county exhausts its resources trying to treat the major areas of concern. Publicly owned lands have limited resources for treatment. Absentee landowners have difficulty treating the infestations in an effective, consistent manner. The County is a major transportation corridor and weed seeds can spread due to lack of preventative measures. Visitor use in the recreational areas compounds the spread of the weeds to those areas.

### Utah Noxious Weed List

The following weeds are officially designated and published as noxious for the State of Utah, as per the authority vested in the Commissioner of Agriculture under Section 4-17-3, Utah Noxious Weed Act:

- Bermudagrass\*\* (*cynodon dactylon*)
  - Canada thistle (*cirsium arvense*)
  - Diffuse knapweed (*centaurea diffusa*)
  - Dyers woad (*isatis tinctoria* L)
  - Field bindweed (Wild Morning Glory) (*convolvulus arvensis*)
  - Hoary cress (*cardaria drabe*)
  - Johnsongrass (*sorghum halepense*)
  - Leafy spurge (*euphorbia esula*)
  - Medusahead (*taeniatherum caput-medusae*)
  - Musk thistle (*carduus mutans*)
  - Perennial pepperweed (*lepidium latifolium*)
  - Perennial sorghum (*sorghum halepense* L & *sorghum almum*)
  - Purple loosestrife (*lythrum salicaria* L.)
  - Quackgrass (*agropyron repens*)
  - Russian knapweed (*centaurea repens*)
  - Scotch thistle (*onopordum acanthium*)
  - Spotted knapweed (*centaurea maculosa*)
  - Squarrose knapweed (*centaurea squarrosa*)
  - Yellow starthistle (*centaurea solstitialis*)
- 
- Additional noxious weeds declared by Wasatch County (2003): Major weed infestations are Leafy Spurge, Scotch, Musk, and Canadian Thistle, Yellow toadflax, Dalmation toadflax, Houndstongue, and knapweeds.

**Wildlife**

The Utah Comprehensive Wildlife Conservation Strategy (CWCS) prioritizes native animal species according to conservation need. At-risk and declining species in need of conservation were identified by examining species biology and life history, populations, distribution, and threats. The following table lists species of greatest conservation concern in the county.

AT-RISK SPECIES				
	Common Name	Group	Primary Habitat	Secondary Habitat
<b>FEDERALLY-LISTED</b>				
<b>Endangered:</b>	(None)			
<b>Threatened:</b>	Bald Eagle	Bird	Lowland Riparian	Agriculture
	Canada Lynx	Mammal	Sub-Alpine Conifer	Lodgepole Pine
	Brown (Grizzly) Bear (extirpated)	Mammal	Mixed Conifer	Mountain Shrub
<b>Candidate:</b>	Yellow-billed Cuckoo	Bird	Lowland Riparian	Agriculture
<b>Proposed:</b>	(None)			
<b>STATE SENSITIVE</b>				
<b>Conservation Agreement Species:</b>	Columbia Spotted Frog	Amphibian	Wetland	Wet Meadow
	Northern Goshawk	Bird	Mixed Conifer	Aspen
	Bonneville Cutthroat Trout	Fish	Water - Lotic	Mountain Riparian
	Colorado River Cutthroat Trout	Fish	Water - Lotic	Mountain Riparian
	Roundtail Chub	Fish	Water - Lotic	
	Bluehead Sucker	Fish	Water - Lotic	Mountain Riparian
<b>Species of Concern:</b>	Black Swift	Bird	Lowland Riparian	Cliff
	Bobolink	Bird	Wet Meadow	Agriculture
	Ferruginous Hawk	Bird	Pinyon-Juniper	Shrubsteppe
	Fringed Myotis	Mammal	Northern Oak	Pinyon-Juniper
	Greater Sage-grouse	Bird	Shrubsteppe	
	Leatherside Chub	Fish	Water - Lotic	Mountain Riparian
	Lewis's Woodpecker	Bird	Ponderosa Pine	Lowland Riparian
	Long-billed Curlew	Bird	Grassland	Agriculture
	Short-eared Owl	Bird	Wetland	Grassland
	Smooth Greensnake	Reptile	Mountain Riparian	Wet Meadow
	Three-toed Woodpecker	Bird	Sub-Alpine Conifer	Lodgepole Pine
	Townsend's Big-eared Bat	Mammal	Pinyon-Juniper	Mountain Shrub
	Western Toad	Amphibian	Wetland	Mountain Riparian

\*Definitions of habitat categories can be found in the Utah Comprehensive Wildlife Conservation Strategy.

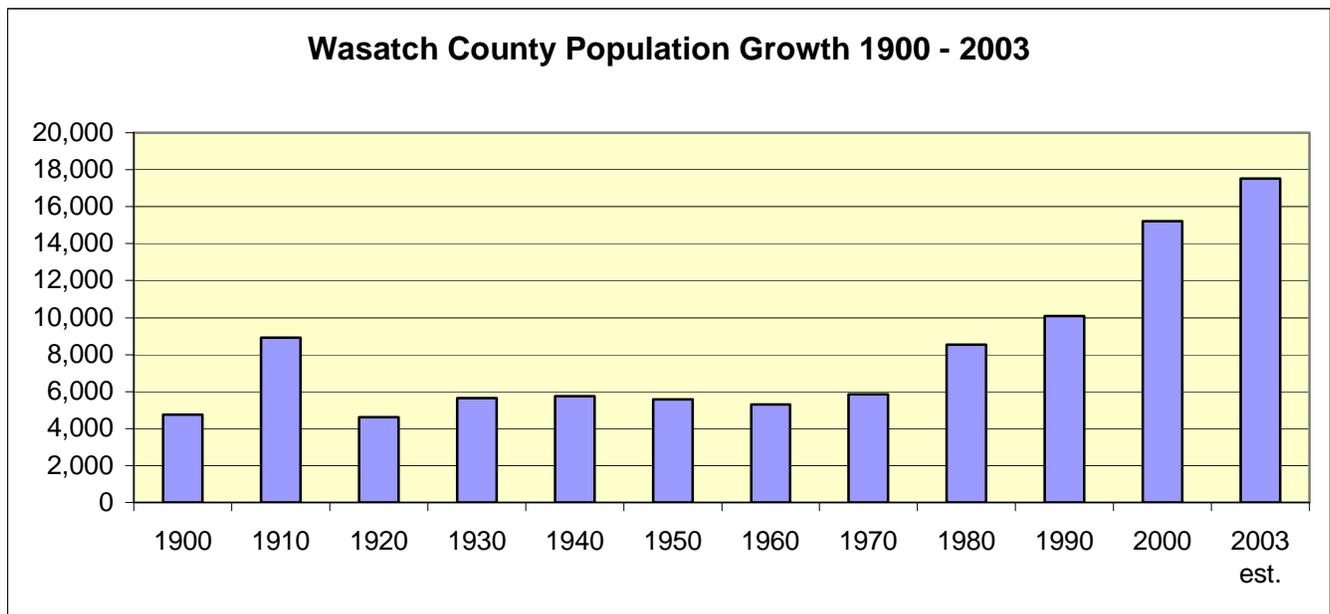
The Utah CWCS also prioritizes habitat categories based on several criteria important to the species of greatest conservation need. The top ten key habitats state-wide are (in order of priority):

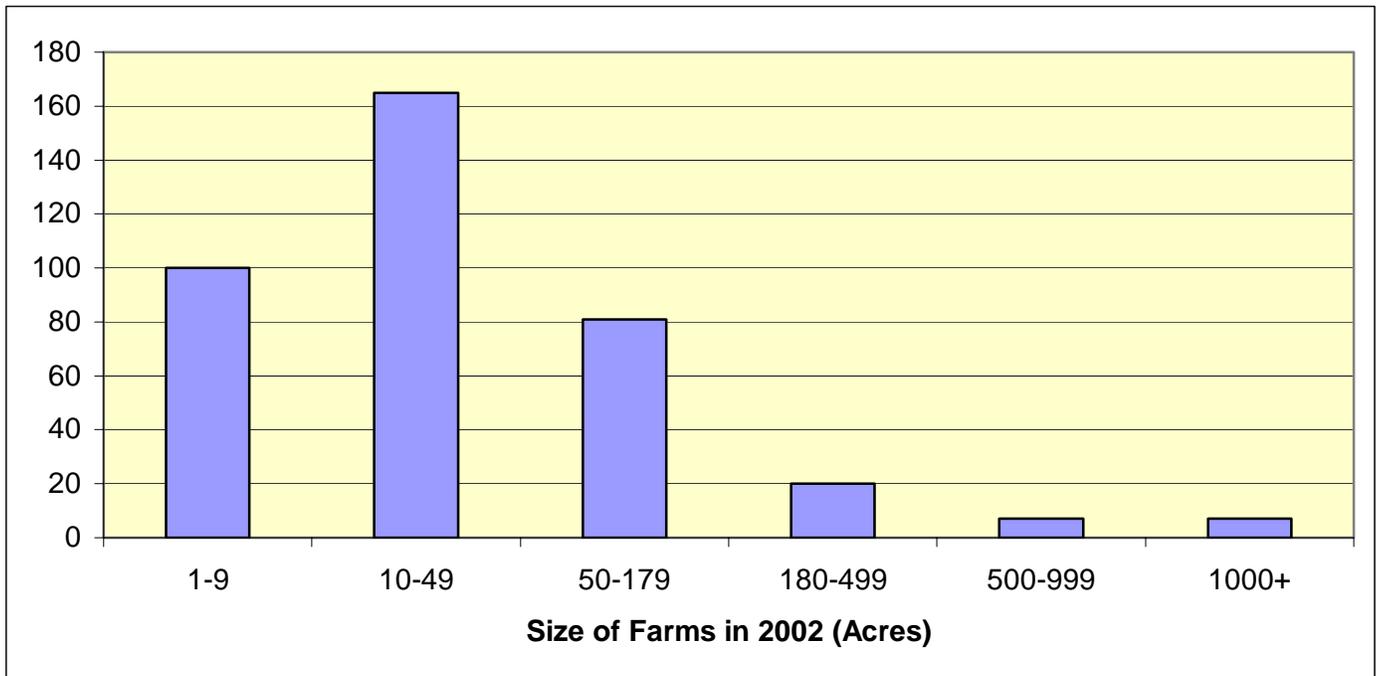
- 1) **Lowland Riparian** (riparian areas <5,500 ft elevation; principal vegetation: Fremont cottonwood and willow)
- 2) **Wetland** (marsh <5,500 ft elevation; principal vegetation: cattail, bulrush, and sedge)
- 3) **Mountain Riparian** (riparian areas >5,500 ft elevation; principal vegetation: narrowleaf cottonwood, willow, alder, birch and dogwood)
- 4) **Shrubsteppe** (shrubland at 2,500 - 11,500 ft elevation; principal vegetation: sagebrush and perennial grasses)
- 5) **Mountain Shrub** (deciduous shrubland at 3,300 - 9,800 ft elevation; principal vegetation: mountain mahogany, cliff rose, bitterbrush, serviceberry, etc.)
- 6) **Water - Logic** (open water; streams and rivers)
- 7) **Wet Meadow** (water saturated meadows at 3,300 - 9,800 ft elevation; principal vegetation: sedges, rushes, grasses and forbs)
- 8) **Grassland** (perennial and annual grasslands or herbaceous dry meadows at 2,200 - 9,000 ft elevation)
- 9) **Water - Lentic** (open water; lakes and reservoirs)
- 10) **Aspen** (deciduous aspen forest at 5,600 - 10,500 ft elevation)

**Resource Concerns – SOCIAL AND ECONOMIC**

Categories	Specific Resource Concern / Issue	Crop	Hay	Pasture	Grazed Range	Grazed Forest	Pasture Native/Naturalized	Wildlife	Watershed Protection	Forest	Headquarters	Urban	Recreation	Water	Mined	Natural Area
Social and Economic	Non-Traditional Landowners and Tenants															
	Urban Encroachment on Agricultural Land	X	X	X	X											
	Marketing of Resource Products															
	Innovation Needs			X												
	Non-Traditional Land Uses			X												
	Population Demographics, Changes and Trends												X			
	Special Considerations for Land Mangement (High State and Federal Percentage)	X	X	X	X	X	X	X	X	X			X	X		
	Active Resource Groups (CRMs, etc)															
	Full Time vs Part Time Agricultural Communities	X		X												
	Size of Operating Units	X		X	X											
	Land Removed from Production through Easements															
	Land Removed from Production through USDA Programs															
Other																

**Census and Social Data**





**Number of Farms:**

**Number of Operators:**

- Full-Time Operators: 159 (39 are women operated)
- Part-Time Operators: 221 (3 are women operated)

**Public Survey/Questionnaire Results:**

**List of Resource Concerns in Wasatch County  
Not Prioritized – 2005**

**Urban Development**

- Loss of Habitat
- Threat to Culinary Water Supply
- Water Pollution
- Preservation and Management of Open Space

**Threatened and Endangered Species**

- Spotted Frog
- Sage Grouse / loss of habitat

**Wetlands**

**Air Quality**

- Automobiles
- Wood Fire Places
- Development
- Industry

**Water Quality**

- Groundwater
  - Well-head protection
  - Septic tanks
  - Leaking underground storage tanks
  - Accidental oil spills
- Surface Water
  - Storm water
  - Stream bank erosion

**Noxious Weeds**

- Lack of funding
- Need for more information and education

**Mosquito Abatement**

**Wild Fire Preparation**

- Timber Lakes
- Oak Haven
- Brighton Estates
- Interlaken

**Recreation Concerns**

- ATV's
- OHV's

- Snowmobiles
- Boats
- Trails (lack of restrooms)
- Strawberry Reservoir (20% higher use than capacity)

## **GIS Availability**

- Wasatch County
  - Trails
  - Flood zones
  - Septic Tanks
  - Well-head
  - Groundwater classification
  - Private land ownership
  - Roads
  - Landslides
- Heber City
  - Utilities
  - Storm Water
- Wildlife Resources
  - Winter Habitat
- Midway City
  - Utilities
  - Irrigation
- Provo River Mitigation Commission

**RESOURCE INVENTORY – WASATCH COUNTY  
2005**

**3 = Percent of respondents stating that the Resource Concern should be addressed immediately**

**2 = Percent of respondents stating that the Resource Concern should be addressed in the future**

**1 = Percent of respondents stating that the Resource Concern is a minor concern or not a concern**

**0 = Percent of respondents having no thought or opinion**

<b>Resource Concern</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>
Soil Erosion on land or along stream channels	45	45	5	5
Soil Condition due to compaction or other changes	5	60	25	10
Soil contamination due to salts, chemicals or nutrients	10	40	35	15
Adequate water supply for desired uses	60	35	0	5
Available water is clean enough for desired uses	45	45	10	0
Groundwater quality and quantity	55	35	10	0
Storm runoff or flooding	40	45	5	10
Air Quality, including blowing dust, odors and other pollutants	10	65	20	5
Plant health, production and adequate quantities	20	40	30	10
Presence of invasive plants including noxious weeds	75	25	0	0
Wildfire hazard	45	40	15	0
Adequate food, water and cover available for livestock	5	65	30	10
Adequate food, water and cover available for wildlife	30	45	20	5
Wildlife species of special concern, including threatened & endangered	40	35	25	0
Loss of open space or agricultural lands	70	30	0	0
Urban/suburban growth	75	20	5	0
Adequate energy sources available	20	40	25	10
Recreation opportunities	20	35	40	5
Adequate support of historic/prehistoric resources	15	30	50	5
Adequate marketing for agricultural products	15	30	55	10

**Gender:** 80% Male  
20% Female

**Ethnicity:** 0% Hispanic, 0% Native American, 85% Caucasian, 0% Asian, 0% African American, 15% Other.

**Age:** 6% 18–24, 19% 25-38, 19% 39-50, 50% 51-65, 6% 65+

## Footnotes / Bibliography

1. General information about Wasatch County found in the Wasatch County General Plan, 2001-2016
2. Location and land ownership maps made using GIS shapefiles from the Automated Geographical Reference Center (AGRC), a Utah State Division of Information Technology. Website: <http://agrc.utah.gov/>
3. Land Use/Land Cover layer developed by the Utah Department of Water Resources. A polygon coverage containing water-related land-use for all 2003 agricultural areas of the state of Utah. Compiled from initial USGS 7.5 minute Digital Raster Graphic waterbodies, individual farming fields and associated areas are digitized from Digital Orthophotos, then surveyed for their land use, crop type, irrigation method, and associated attributes.
4. Prime and Unique farmlands derived from SURGO Soils Survey UT607 and Soil Data Viewer. Definitions of Prime and Unique farmlands from U.S. Geological Survey, [http://water.usgs.gov/eap/env\\_guide/farmland.html#HDR5](http://water.usgs.gov/eap/env_guide/farmland.html#HDR5)
5. Land Capability Classes derived from SURGO Soils Survey UT607 and Soil Data Viewer.
6. Tons of Soil Loss by Water Erosion data gathered from National Resource Inventory (NRI) data. Estimates from the 1997 NRI Database (revised December 2000) replace all previous reports and estimates. Comparisons made using data published for the 1982, 1987, or 1992 NRI may produce erroneous results. This is due to changes in statistical estimation protocols, and because all data collected prior to 1997 were simultaneously reviewed (edited) as 1997 NRI data were collected. In addition, this December 2000 revision of the 1997 NRI data updates information released in December 1999 and corrects a computer error discovered in March 2000. For more information: <http://www.nrcs.usda.gov/technical/NRI/>
7. Precipitation data was developed by the Oregon Climate Service at Oregon State University using average monthly or annual precipitation from 1960 to 1990. Publication date: 1998. Data was downloaded from the Resource Data Gateway, <http://dgateway-wb01.lighthouse.itc.nrcs.usda.gov/lighthouse>
8. Irrigated Adjudicated Water Rights obtained from the Utah Division of Water Rights.
9. Stream Flow data from USGS Utah Water Science Center Surface-water data found at <http://waterdata.usgs.gov/ut/nwis/sw>.
10. Stream length data calculated using ArcMap and 100k stream data from AGRC and 303d waters from the Utah Department of Environmental Quality.
11. Watershed information from Natural Resources Conservation Service Ogden Service Center Office staff.
12. The 2003 noxious weed list was obtained from the State of Utah Department of Food and Agriculture. For more information contact Steve Burningham, 801-538-7181 or visit their website at [http://ag.utah.gov/plantind/noxious\\_weeds.html](http://ag.utah.gov/plantind/noxious_weeds.html)

13. Wildlife information derived from the Utah Division of Wildlife Resources' Comprehensive Wildlife Conservation Strategy (CWCS) ( <http://wildlife.utah.gov/cwcs/> ) and from the Utah Conservation Data Center ( <http://dwrcdc.nr.utah.gov/ucdc/> ).
14. County population data from the U.S. Census Bureau, Utah Quick Facts, <http://quickfacts.census.gov/qfd/states/49000.html>
15. Farm information obtained from the National Agricultural Statistics Service, 2002 Census of Agriculture. <http://www.nass.usda.gov/census/census02/volume1/index2.htm>