This resource assessment is designed to gather and display information specific to Cache 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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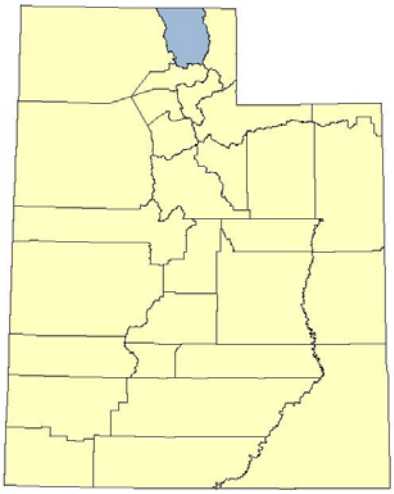
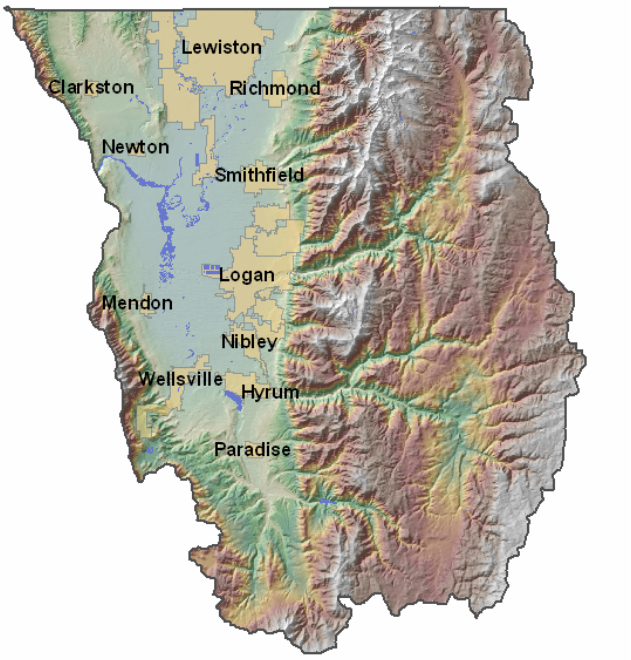
Resource Concerns - Soils
Resource Concerns - Water
Resource Concerns - Air, Plants, Animals
Resource Concerns - Social and Economic
Survey Results
Footnotes/Bibliography





Introduction

Cache County is located north of Salt Lake City and borders Idaho. Logan is centralized in the county and also home to Utah State University. Cache County is rich in agricultural production. In 2004, Cache County was fourth in the state of Utah in cash receipts from farming, according to the Utah Agriculture Statistics Service.

Beef and dairy operations are in abundance. Irrigation of cropland is necessary for sustained plant growth. Dryland farming and grazing is also noted as major agricultural businesses. Increased uses of public lands continue to pressure grazing rights. Specialty farming is occurring with a focus on niche markets. Land preservation and open space is increasing in concern among citizens of the valley.

Cache County consists of 1170 square miles, with a variety of land uses in production agriculture or used for grazing. Average low winter temperatures: 13.9 degrees; average high summer temperatures: 85.4 degrees; average precipitation: 16.58 inches. The average growing season for the region is 120-160 days.

Equal Opportunity Providers and Employers.

General Land Use Observations

Water Management
- Land uses are having an affect on water quality
- Rivers continue to be a concern with management of TMDL's

Rangeland
- Complications related to overgrazing include poor range condition, soil compaction and water quality issues.
- Control of noxious and invasive plants is an ever increasing problem.
- Management of forage and cover for wildlife habitats are of continued concern

Grass / Pasture / Hay Lands
- Irrigation water management is the most noted conservation resource concern.
- Complications related to overgrazing include poor pasture condition, soil compaction and water quality issues.
- Control of noxious and invasive plants is an ever increasing problem.

Animal Feeding Operations
- Nutrient management practices are being addressed. A concerted effort will continue to improve water quality and stream bank vegetation.
- Improved animal manure management and composting practices have increased.

Row & Perennial (orchards / nurseries) Crops
- Residue, nutrient, water, and pest management are needed to control erosion and to protect water quality.
- Soil fertility and irrigation water management are critical issues of concern for productivity.

Urban Development
- Increased population growth continues to increase pressure of housing development on agricultural land.
- Construction and development increase the need for storm water management

Resource Assessment Summary

Categories	Concern high, medium, or low	Description and Specific Location (quantify where possible)
Air		
Air Pollution	High	Valley wide concern, only in the winter during inversions.Particulate matter less than 10 micrometers in diameter (PM 10) Particulate matter less than 2.5 micrometers in diameter (PM 2.5)
Air QualityAFO's	Medium	Increasing attention is being focused here.
Regulatory Involvement	Low	
Agricultural		
Animal Waste	High	303(d) listed waters and associated TMDLs suggest that animal production is a contributor to the water impairment. Approximately 25 PCAFOs are still needing assistance.
Grazing	Medium	Grazing land health continues to be a resource concern due to its impacts on soil erosion, weed infestations, and wildlife habitat. On going watershed projects in the Little Bear have focused on reducing soil erosion and controlling the Medusahead Rye weed infestation. Increased pressure to limit grazing on public lands and the drought has stressed existing private grazing lands causing some declines in grazing land health and condition.

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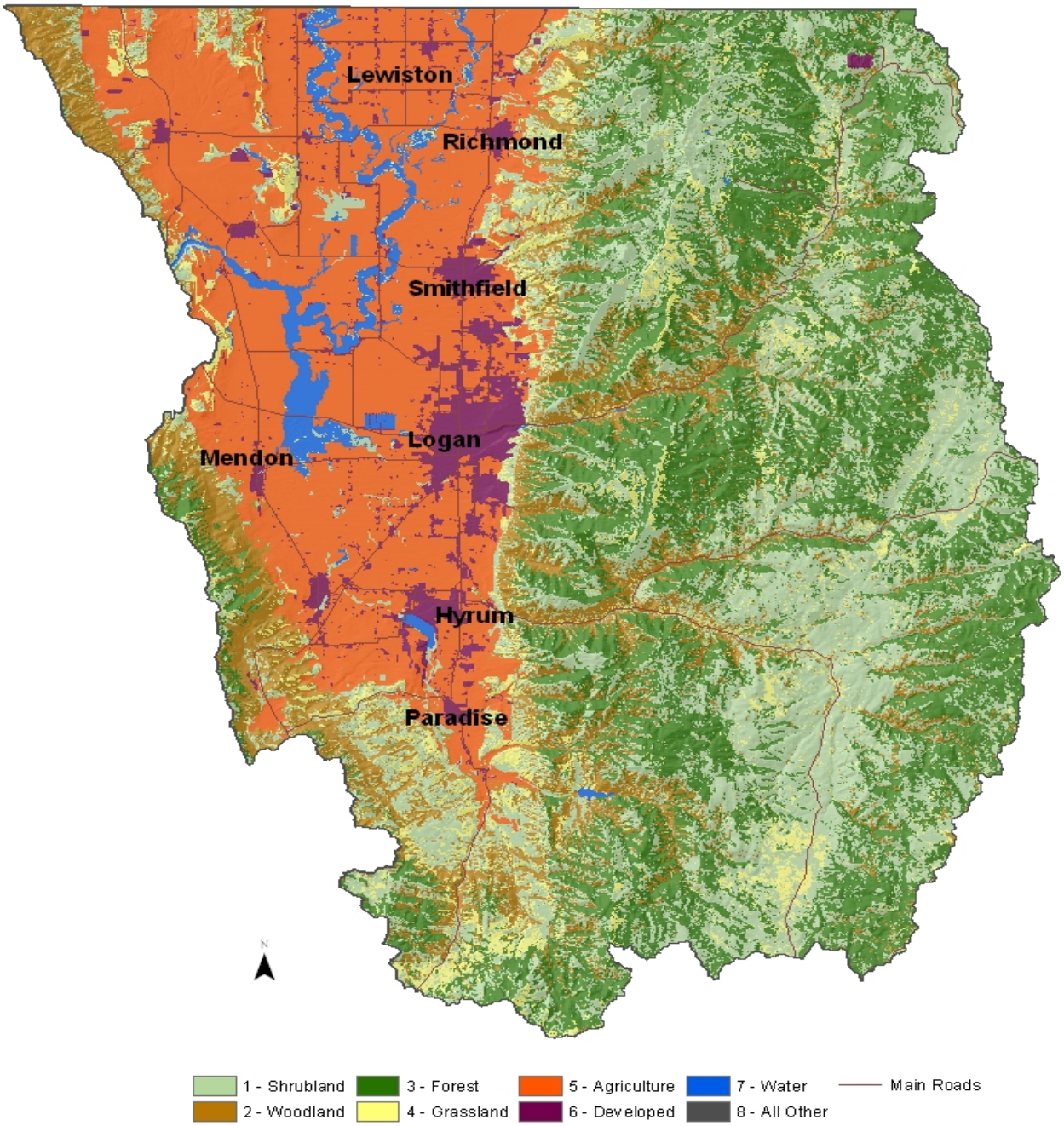
Categories	Concern high, medium, or low	Description and Specific Location (quantify where possible)
Agricultural		
Nutrient Management	High	Federal programs continue to focus on reducing and eliminating impacts from animal feeding operations. The USDA buffer initiative encourages creating and restoring important buffer areas along ponds, streams and other water bodies to reduce impacts from agricultural and other non-point pollution sources.
Preservation	High	Cache County has started to realize that continued growth and development is significantly reducing farm and ranch land. The Cache County Council has formed an Agricultural Advisory Board to provide input to the council on ag related issues. The County Council has adopted and approved a Land Evaluation Site Assessment (LESA) protocol to prioritize and evaluate applications for conservation easements within the county.
Productivity	Medium	Producers are exploring options to increase and maintain productivity including new varieties of round-up ready corn & alfalfa. Efforts are underway to include area dairys in organic milk production opportunities. Better education in irrigation water management and nutrient management is needed to improve cost to benefit ratios.
Protection	High	County Ag. producers continue to support Ag. protection legislation. Currently there are ___ acres signed in to ag. protection areas. Current trends indicate that Cache Co. is losing 600 + acres to conversion each year. Efforts are underway to develop the Cache County Land Trust to assist in encouraging conservation easements. Locally five conservation easements have been established under FRPP.
Sustainability	High-Medium	Faced with diminishing economic returns, higher costs and increased pressure to clean up non-point source pollution problems area producers are struggling to stay in business. Many single and family run operations are facing difficult decisions as to future viability and existence. Conflicts continue to occur at the ag/urban interface as population grows and ag land diminishes leaving many to question the future of agriculture in Cache County. The cost of implementing conservation practices even with government cost-share can pose economic hardship creating the need for more and cheaper alternative methods and practices to achieve overall conservation goals.
Genetics (seed)	Medium	A few producers are starting to experiment with round-up ready corn and alfalfa varieties.
Precision Agriculture	Medium-Low	Current technology is only minimally used.

Land Use		
Cultural Resource Conservation	Low	
Forestry	Low	
Grazing (Land Use)	Medium	Conflicts are increasing between the use of public land use for grazing and recreation and wildlife. Vegetation management is concern.
Open Space	Medium	
Pasture Management	Medium	
Recreation	High-Medium	Multiple user conflicts, recreational vehicle caused erosion and land access issues need resolution.
Urban Development	High	Storm water runoff disposal/utilization, watershed protection, land access and multiple use issues need resolution.
Wetlands	Medium	
Wildfire	Medium	
Pest Management		
Insect Pest Contol	Medium	
Plant Pest Control	High	Dyer's Woad and Scotch Thistle control/eradication is of extreme concern, as is weed control in general throughout the county. Enforcement of local statutes regarding private land user control of weeds is a concern.
Fungus Disiase Control	Medium	
Non-Chemical Pest Control Methods	High	The rapidly expanding urban population is concerned with the affect of plant and animal pest control chemicals on the human environment. There is a opportunity to address this need for public education (which could be addressed by the various conservation partners) (the role of biological and other non-chemical controls are of interest to the general populace of the valley).
Bees (conservation	High	Disease and paracite threats to the bee-keeping industry in Cache Valley will require application of the latest scientific data available.
West Nile Virus	High	Coupled with mosquito control, West Nile Virus threats are a new and real threat to human health throughout Cache Valley.
Weed and Pest Control	Very-High	See notes under "Non-Chemical Pest Control Methods" (above). Combined effect of plant and animal pest control by chemical usage is a concern of Valley residents.
Soil		
Erosion	High	Erosion control on adjacent cropland and grazing lands is another important area demanding attention.The following data identifies eroded or exposed streambanks in Cache County: Spring Creek 2864 ft. Cub River 71,942 ft. Bear River (Cutler to Benson) 103,376 ft. Bear River (Benson to Stateline) 127,064 ft.
Fertility	Medium	
Mined and Land Reclamation	Low	
Salinity	Low	
Soil Quality	High	Cache Valley is one of the most important farming counties in the state. Soil tilth, fertility and quality issues are a constant concern.

Wildfire Re-vegitation	High	Wildfires on steep slopes destoys vegetation leaving the soil vulnerable to soil erosion and loss of cover for wildlife.
Water		
Water Conservation (drought)	High	Cache County has experienced 6 years of below normal precipitation (1998 – 2004). Current water years are at 132% above normal suggesting that the area is returning to an average or above average water year. The impacts through the drought have been wells and springs drying up, local communities increasing water rates and searching for new culinary water sources, and irrigation companies trying to maintain peace among share holders as they distribute smaller volumes of water. Starting in 2002, cost-share assistance has been available for irrigation system improvements but demand has exceeded the financial assistance available.
Flooding	High	During the spring of 2005, large accumulation of snowpack, combined with heavy spring rains created complete soil saturation and runoff resulting in flooding .
Groundwater	High	Clean groundwater is a concern. Animal feeding operations and stormwater runoff are potential problems.
Irrigation Water Management	Very-High	As the demands on water present needs for population growth, demands are rapidly increasing for more efficient irrigation delivery systems. Increased irrigation efficency will increase productivity; therefore increasing agricultural sustainability.
Riparian Areas	Medium	
Storm Water Management	High-Medium	Effective storm water disposal/utilization methods need to be adopted by local communities in order to meet the rapid urbinization trends throughout most of Cache Valley.
Tile Drains	Medium	
Urban Water Conservation	High	Water usage and public awareness of the need to conserve water could decrease the usage of water by municipalities.
Water Availability	Very-High	Increased population has increased the demand for water. An effort to implement more efficient watering systems would increase the available water as demands continue to rise.
Water Rights	Very-High	Highly volatile issue with increasing pressure from urbanization and cities demands for additional water.
Water Quality	Very-High	Although large strides are being made to improve water quality, additional need exists to promote water quality issues.
Wildlife		
Biodiversity	Medium	
Fisheries	Medium	
Threatened and Endangered Species	Low	
Upland Game	Medium	
Wetlands	Medium	
Wildlife Habitats	High-Medium	As water quality decreases wildlife habitats are at increasing risk.

Land Cover


Lewiston
Richmond
Smithfield
Logan
Mendon
Hyrum
Paradise
N
1 - Shrubland
2 - Woodland
3 - Forest
4 - Grassland
5 - Agriculture
6 - Developed
7 - Water
8 - All Other
Main Roads

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Land Cover/Land Use

Land Cover/Land Use	Acres	%
Forest	100000.00	13%
Grain Crops	86950.00	12%
Conservation Reserve Program *a	21874.00	3%
Grass/Pasture/Haylands	126000.00	17%
Orchards/Vineyards	4960.00	1%
Row Crops	18850.00	3%
Shrub/Rangelands	276000.00	37%
Water	9000.00	1%
Wetlands	51000.00	7%
Developed	55500.00	7%
Cache County Totals *b	750134.00	100%

**a : Estimate from Farm Service Agency records and include CRP/CREP. *b : Totals may not add due to rounding and small unknown acreages.*

Special Considerations for Cache County:
Resource issues and concerns facing Cache County include the impacts from an extend **drought** (6 years), **water conservation**, improving and maintaining **water quality**, improving **grazingland health**, reducing the **conversion of ag land** to non-ag purposes, reducing water erosion on dry cropland, supporting and implementing **sustainable agricultural practices** amidst economic hardship, initiating and supporting **locally-led natural resource activities**, and coordinating and disseminating **technically sound conservation practice and program information** as the basis for making wise management decisions, and **civil rights compliance in program delivery**.

- **Drought & Water Conservation**

  Cache County has experienced 6 years of below normal precipitation (1998 – 2004). Current water years are at 132% above normal suggesting that the area is returning to an average or above average water year. The impacts through the drought have been wells and springs drying up, local communities increasing water rates and searching for new culinary water sources, and irrigation companies trying to maintain peace among share holders as they distribute smaller volumes of water. Starting in 2002, cost-share assistance has been available for irrigation system improvements but demand has exceeded the financial assistance available.

  Key Issues: Water Conservation, Improved Irrigation Water Management.

- **Water Quality**

  Federal programs continue to focus on reducing and eliminating impacts from animal feeding operations.

  The USDA buffer initiative encourages creating and restoring important buffer areas along ponds, streams and other water bodies to reduce impacts from agricultural and other non-point pollution sources.

  Erosion from degraded streambanks, adjacent cropland and grazing lands continue to contribute sediment to area water bodies.

  Key Issues: AFO/CAFO strategy, Riparian Restoration, Buffer Initiative, Soil Erosion, Watershed Planning.

- **Grazing Land Health**

  Grazing land health continues to be a resource concern due to its impacts on soil erosion, weed infestations, and wildlife habitat. On going watershed projects in the Little Bear have focused on reducing soil erosion and controlling the Medusahead Rye weed infestations. Increased pressure to limit grazing on public lands and the drought has stressed existing private grazing lands causing some declines in grazing land health and condition.

  Key Issues: Grazing Land Conservation Initiative (GLCI), Wildlife Resource's Critical Habitats in Cache Valley (Big Game, Sage & Sharp-tail Grouse, Wetlands)

- **Farm and Ranchland Protection**

  Cache County has started to realize that continued growth and development is significantly reducing farm and ranch land. The Cache County Council has formed an Agricultural Advisory Board to provide input to the council on ag related issues. The County Council has adopted and approved a Land Evaluation Site Assessment (LESA) protocol to prioritize and evaluate applications for conservation easements within the county. Current trends indicate that Cache Co. is losing 600 + acres to conversion each year. Efforts are underway to develop the Cache County Land Trust to assist in encouraging conservation easements.

  Locally five conservation easements have been established under FRPP and a sixth one is nearing completion.

  Key Issues: Matching funds for federal dollars, LESA implementation, and easement education.

- **Sustainable Agricultural Practices**

  Faced with diminishing economic returns, higher costs and increased pressure to clean up non-point source pollution problems area producers are struggling to stay in business. Many single and family run operations are facing difficult decisions as to future viability and existence. Conflicts continue to occur at the ag/urban interface as population grows and ag. land diminishes leaving many to question the future of agriculture in Cache County.

  The cost of implementing conservation practices even with government cost-share can pose economic hardship creating the need for more and cheaper alternative methods and practices to achieve overall conservation goals.

  Key Issues: Crop Productivity, Weed Control, Nutrient Management, Pest Management, Irrigation Water Management, Prescribed Grazing.

- **Locally-Led Natural Resource Activities**

  With increased emphasis on solving natural resource issues at the local level demand for help in assessing the size and scope of resource problems, creating viable alternatives, and identifying potential sources of funding has dramatically increased. Local groups struggle in the initial stages of organization and rely heavily on office staff to assist in moving things forward.

  Key Issues: Build Stronger Partnerships, Support Local Work Groups, Support Conservation Districts.

- **Conservation Practices and Program Information**

  Relying on traditional management and production practices, in many cases, is no longer sufficient to insure economic success in agriculture. Increasing numbers of producers are looking for alternative methods and products to maintain viability. Reliable information on traditional and non-traditional conservation practices and management techniques along with economically and socially acceptable alternatives continue to bring customers through the USDA Service Center doors.

  Soil Survey information and interpretation continues to dominate customer requests, while lots of confusion still abounds surrounding wetlands and who is responsible for what.

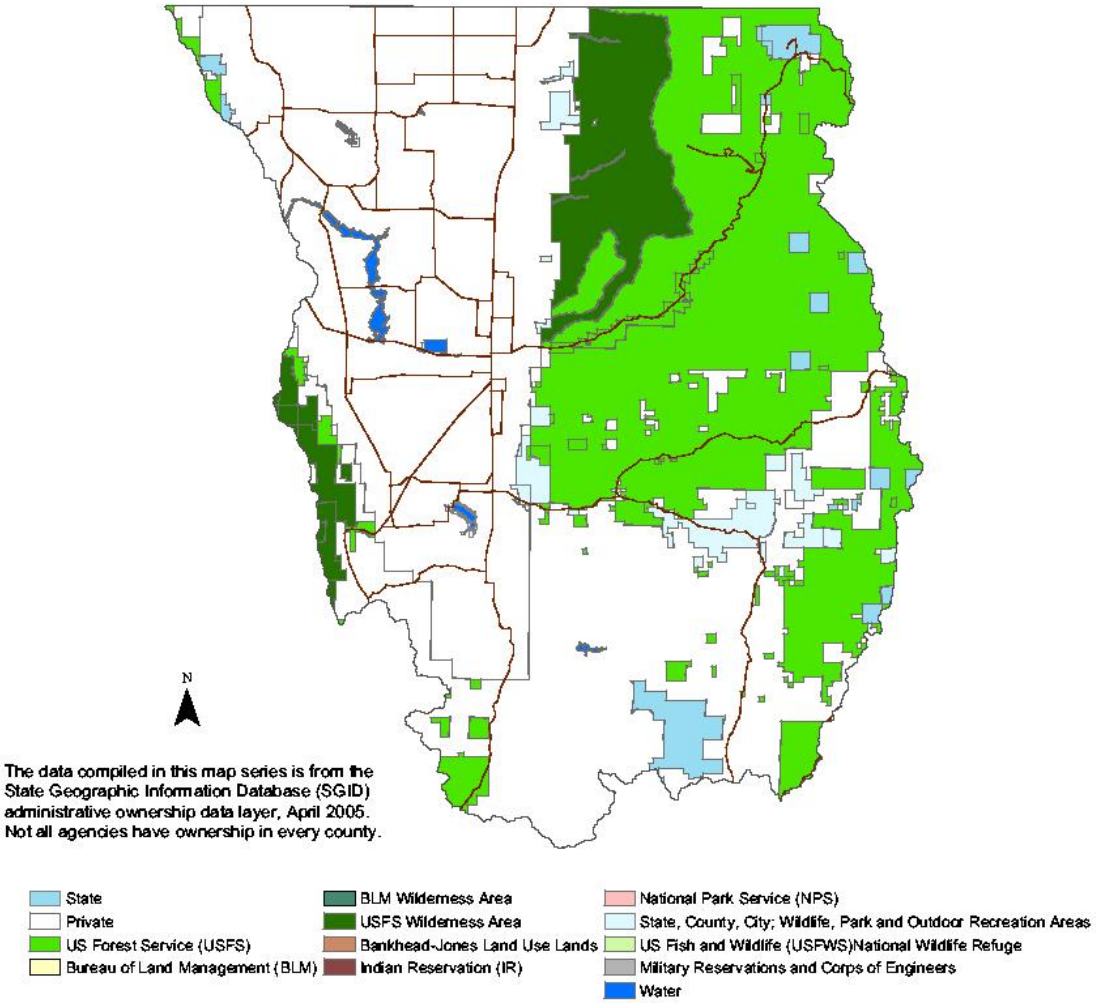
  Key Issues: Technology Transfer, One-on-One Assistance.

- **Civil Rights Compliance in Program Delivery**

  Cache County's population continues to grow and is estimated at near 100,000 people. With the increased growth has come a more diverse population. USDA requires compliance with civil rights rules in program delivery. Identifying landowners and potential program applicants who may fit into traditionally under served population groups is an ongoing challenge.

  Key Issues: Effective Use of Media, Identify minority and female landowners, Educate Staff, SCDs, and Public regarding USDA Civil Rights Responsibilities.

Land Ownership



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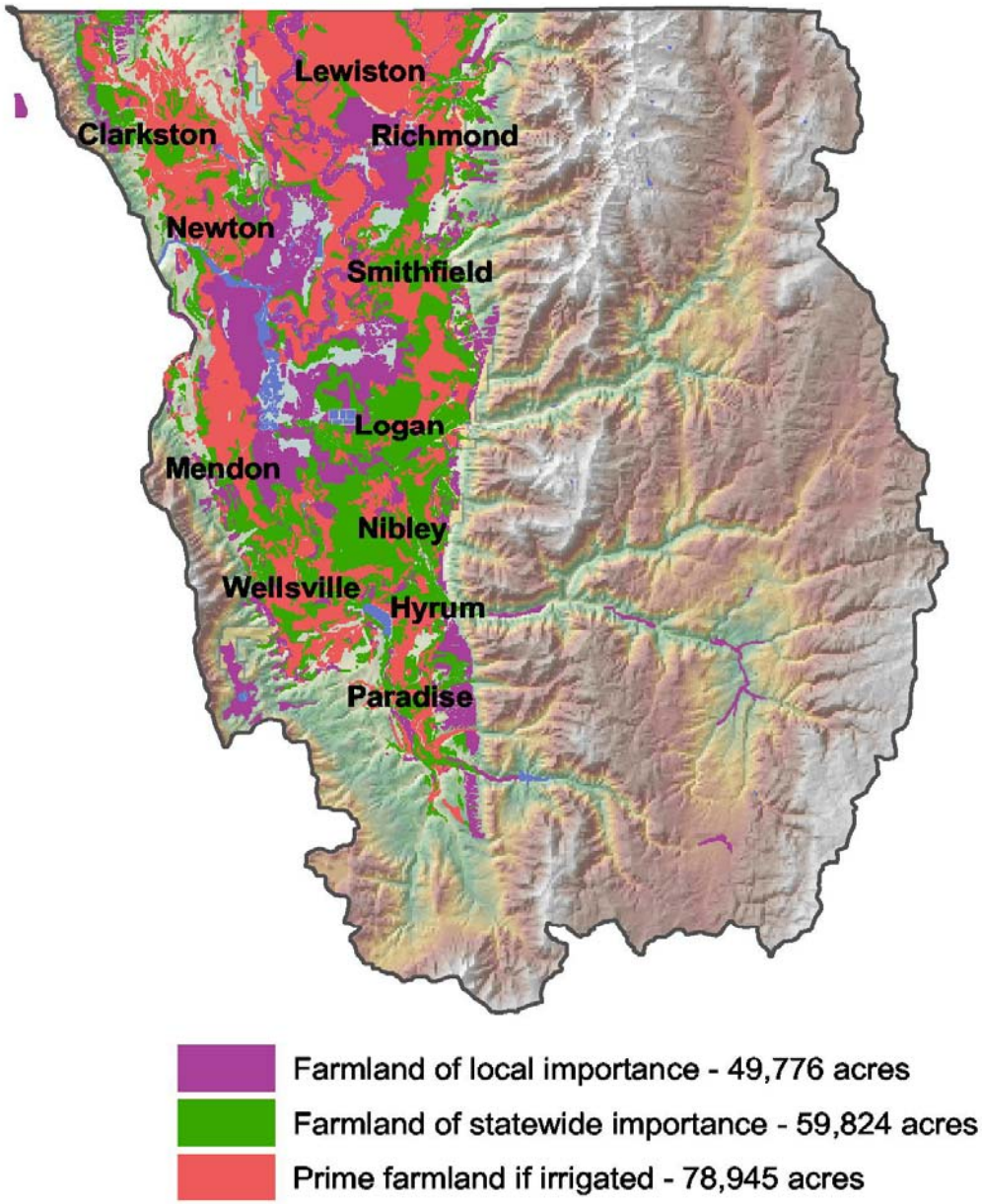
Prime & Unique Farm Land



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

land identified by state or local agencies for agricultural use, but not of national significance

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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	x														
	Wind															
	Ephemeral Gully															
	Classic Gully															
	Streambank	x	x	x	x											
	Shoreline	x	x	x	x											
	Irrigation-induced	x														
	Mass Movement															
	Road, roadsides and Construction Sites															
Soil Condition	Organic Matter Depletion	x														
	Rangeland Site Stability				x											
	Compaction	x		x												
	Subsidence															
	ContaminantsSalts and Other Chemicals	x		x												
	Contaminants: Animal Waste and Other OrganicsN	x	x	x												
	Contaminants: Animal Waste and Other OrganicsP	x	x	x												
	Contaminants: Animal Waste and Other OrganicsK															
	Contaminants : Commercial FertilizerN	x														
	Contaminants : Commercial FertilizerP	x	x													
	Contaminants : Commercial FertilizerK															
	ContaminantsResidual Pesticides															
	Damage from Sediment Deposition	x														

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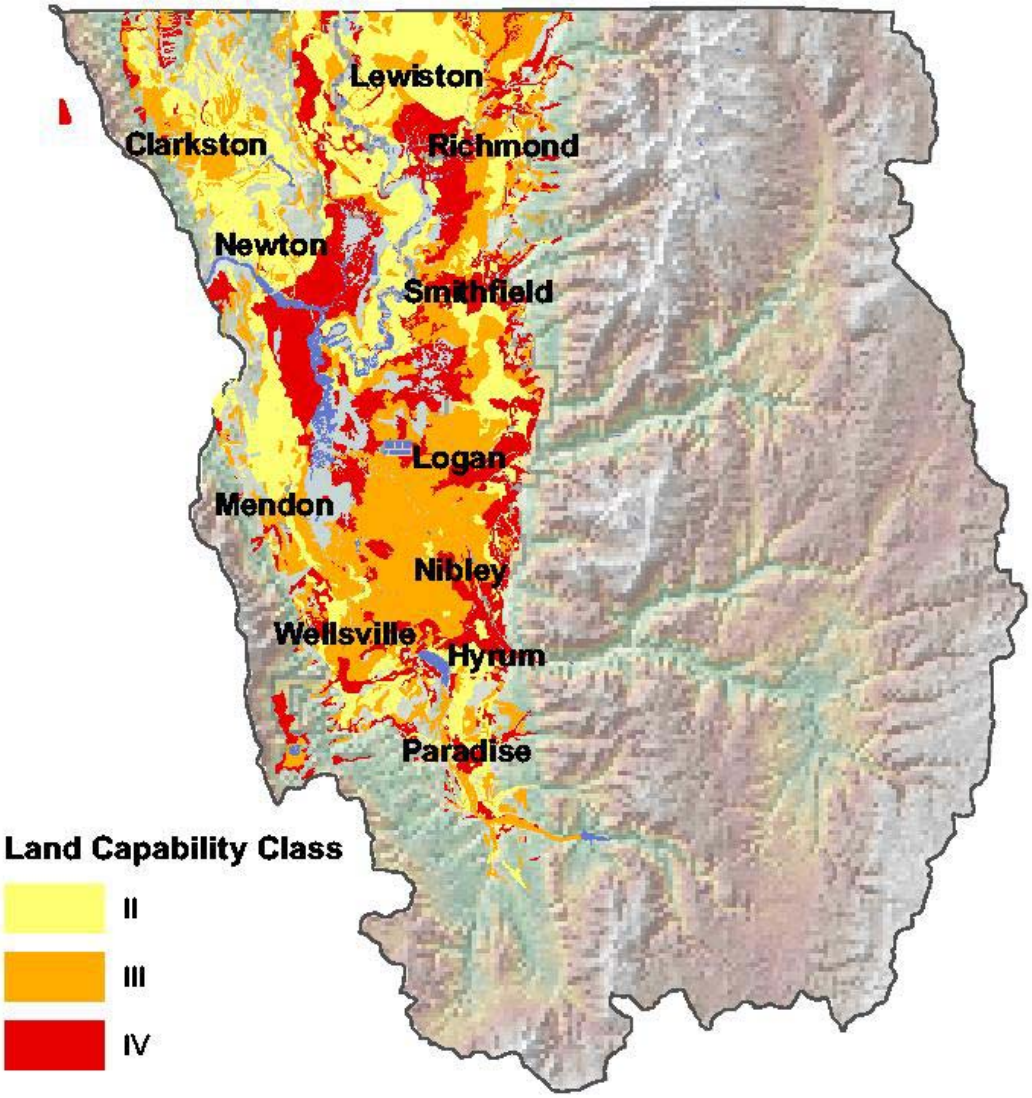
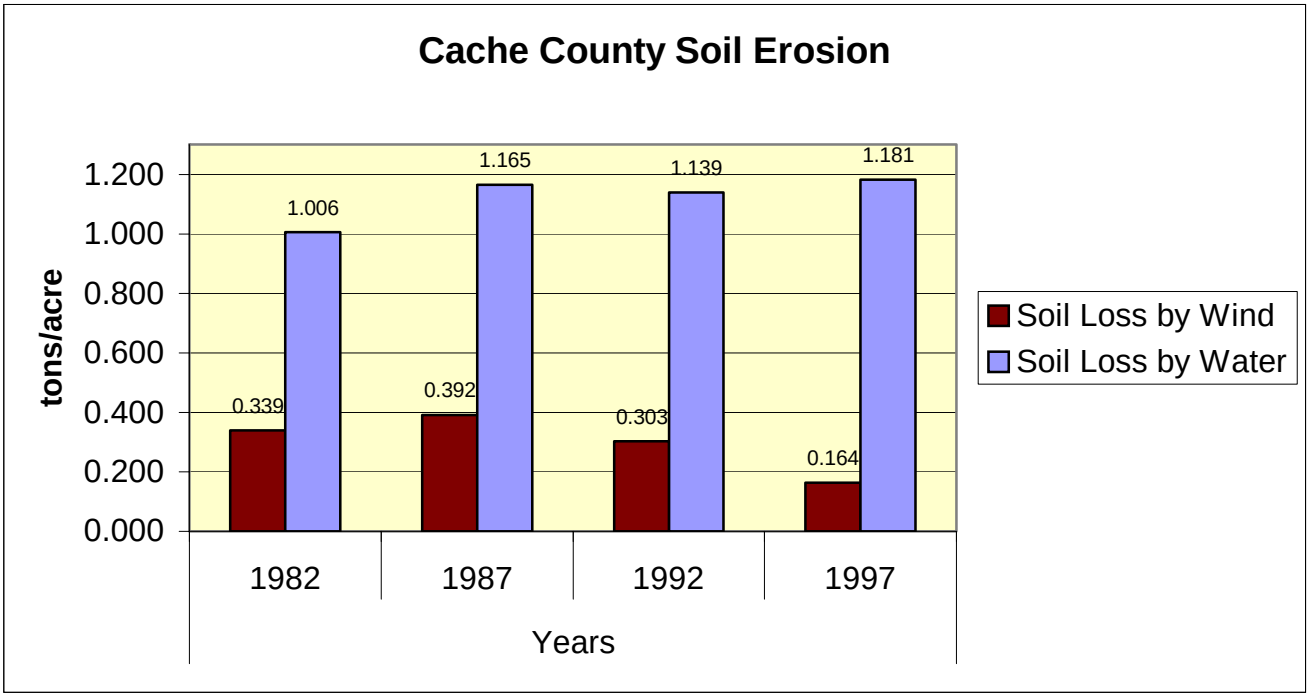
Land Capability Class on Cropland and Pastureland



		Acres	Percentage
Land Capability Class (Irrigated Cropland & Pastureland Only)	**I** - slight limitations	0	0%
	II - moderate limitations	63,870	36%
	III - severe limitations	66,202	37%
	IV - very severe limitations	48,585	27%
	V - no erosion hazard, but other limitations	0	0%
	VI - severe limitations, unsuited for cultivation, limited to pasture, range, forest	0	0%
	VII - very severe limitations, unsuited for cultivation, limited to grazing, forest, wildlife	0	0%
	VIII - misc areas have limitations, limited to recreation, wildlife, and water supply	0	0%

Soil Erosion on Cropland



- Wind erosion rates have declined from 1982 to 1997. A reduction of .175 tons/acre/year.
- Water Erosion shows an increase in erosion rate of .175 tons/acre/year.
- 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.

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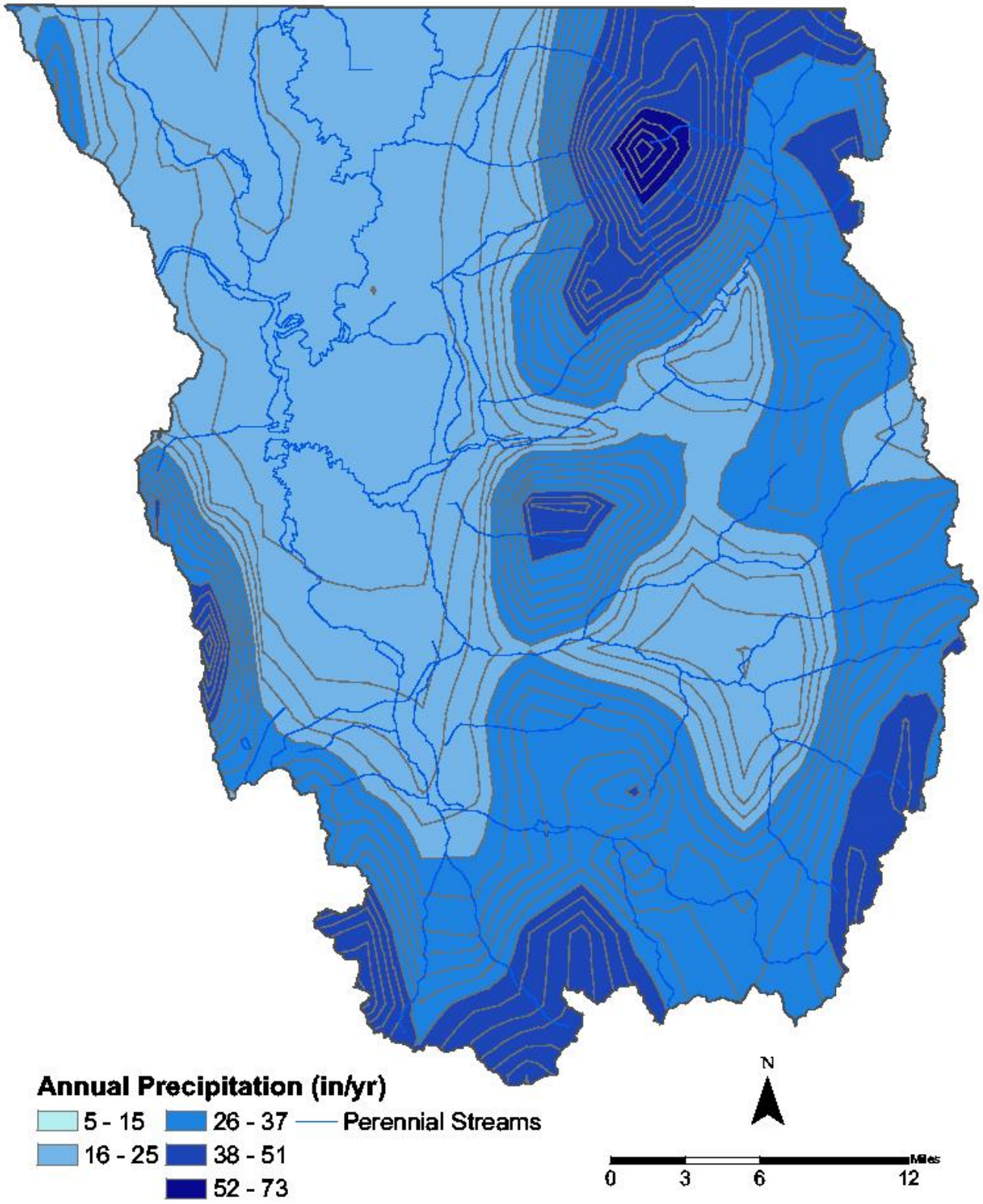
Resource Concerns – WATER

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															
	Excessive Seepage															
	Excessive Runoff, Flooding, or Ponding	X	X	X								X				
	Excessive Subsurface Water															
	Drifted Snow															
	Inadequate Outlets															
	Inefficient Water Use on Irrigated Land	X	X	X												
	Inefficient Water Use on Non-irrigated Land															
	Reduced Capacity of Conveyances by Sediment Deposition	X	X													
	Reduced Storage of Water Bodies by Sediment Accumulation	X	X	X				X	X				X	X		
	Aquifer Overdraft															
	Insufficient Flows in Watercourses	X	X	X	X			X					X			
Water Quality, Groundwater	Harmful Levels of Pesticides in Groundwater															
	Excessive Nutrients and Organics in Groundwater	X	X													
	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	X	X												
	Excessive Nutrients and Organics in Surface Water															
	Excessive Suspended Sediment and Turbidity in Surface Water	X	X	X				X					X			
	Excessive Salinity in Surface Water															
	Water Quality – Colorado River Excessive Salinity															
	Harmful Levels of Heavy Metals in Surface Water															
	Harmful Temperatures of Surface Water	X	X	X				X								
	Harmful Levels of Pathogens in Surface Water															
	Harmful Levels of Petroleum in Surface Water															

Precipitation and Streams



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		ACRES	ACRE-FEET
Irrigated Adjudicated Water Rights	All	219674.00	659022.00
	Total Irrigated Adjudicated Water Rights	219674.00	659022.00
Stream Flow Data	STREAM	MEAN	
	Bear River		
	Stateline	720	
	Smithfield	969	
	Logan River	234	
	Blacksmith Fork	129	
	Cub River	191	
	Spring Creek *	42	
	Little Bear River	77	
	*Spring Creek is a tributary of the Little Bear River		
		MILES	**PERCENT**
Stream Data	**Total Miles - Major (100K Hydro GIS Layer)**	1648.00	n/a
	303d (DEQ Water Quality Limited Streams)	502.00	30%

	Irrigation Efficiency:	**<40%**	**40 - 60%**	**>60%**
Percentage of Total Acreage	Cropland .	20%	30%	50%
	Pastureland	80%	10%	10%

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Watersheds & Total Maximum Daily Load (TMDL)

Watershed Projects, Plans, Studies and Assessments			
NRCS Watershed Projects		NRCS Watershed Plans, Studies & Assessments	
Name	Status	Name	Status
Little Bear	Active	Little Bear	Active
Lower Bear	Active	Lower Bear	Active
Cub River	Active	Cub River	Active
DEQ TMDL's		NRCS Comprehensive Nutrient Management Plans	
Name	Status	Number	Status
Lower Bear	EPA Approved - 1995	12	Planned
Little Bear	EPA Approved - 2002	63 since 2001	Implemented or being implemented
Spring Creek	EPA Approved - 2003		
Newton Reservoir	EPA Approved - 2004		

AFO/CAFO

Animal Feeding Operations (AFO)						
Animal Type	Dairy	Feed Lot (Cattle)	Poultry	Swine	Mink	Other
No. of Farms	107	116		5	8	31
No. of Animals						

Potential Confined Animal Feeding Operations (PCAFO)						
Animal Type	Dairy	Feed Lot (Cattle)	Poultry	Swine	Mink	Other
No. of Farms	38	37				8
No. of Animals						

Confined Animal Feeding Operations - Utah CAFO Permit					
Animal Type	Dairy	Feed Lot (Cattle)	Poultry	Swine	Other
No. of Permitted Farms	2	2	1		
No. of Permitted Animals					

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Resource Concerns – AIR, PLANTS, ANIMALS

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)										X	X				
	Particulate matter less than 2.5 micrometers in diameter (PM 2.5)										X	X				
	Excessive Ozone															
	Excessive Greenhouse Gas: CO2 (carbon dioxide)															
	Excessive Greenhouse Gas: N2O (nitrous oxide)															
	Excessive Greenhouse Gas: CH4 (methane)															
	Ammonia (NH3)										X					
	Chemical Drift															
	Objectionable Odors										X					
	Reduced Visibility															
	Undesirable Air Movement											X				
	Adverse Air Temperature															
Plant Suitability	Plants not adapted or suited			X	X											
Plant Condition	Plant Condition – Productivity, Health and Vigor			X	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											
	Forage Quality and Palatability			X	X											
	Plant Condition – Wildfire Hazard															
Fish and Wildlife	Inadequate Food															
	Inadequate Cover/Shelter	X														
	Inadequate Water															
	Inadequate Space	X														
	Habitat Fragmentation	X	X	X												
	Imbalance Among and Within Populations															
	Threatened and Endangered Species: Species Listed or Proposed for Listing under the Endangered Species Act															
Domestic Animals	Inadequate Quantities and Quality of Feed and Forage															
	Inadequate Shelter															
	Inadequate Stock Water				X											
	Stress and Mortality															

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Noxious Weeds

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 Cache County (2003): Goatsrue, Poison Hemlock, Puncture Vine

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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**
FEDERALLY-LISTED				
Endangered:	(None)			
Threatened:	Bald Eagle	Bird	Lowland Riparian	Agriculture
	Canada Lynx	Mammal	Sub-Alpine Conifer	Lodgepole Pine
	Brown (Grizzly) Bear (extirpated)	Mammal	Mixed Conifer	Mountain Shrub
Candidate:	Yellow-billed Cuckoo	Bird	Lowland Riparian	Agriculture
Proposed:	(None)			
STATE SENSITIVE				
Conservation Agreement Species:	Northern Goshawk	Bird	Mixed Conifer	Aspen
	Bonneville Cutthroat Trout	Fish	Water - Lotic	Mountain Riparian
	Bluehead Sucker	Fish	Water - Lotic	Mountain Riparian
Species of Concern:	American White Pelican	Bird	Water - Lentic	Wetland
	Black Swift	Bird	Lowland Riparian	Cliff
	Bobolink	Bird	Wet Meadow	Agriculture
	Burrowing Owl	Bird	High Desert Scrub	Grassland
	Deseret Mountainsnail	Mollusk	Mountain Shrub	Rock
	Ferruginous Hawk	Bird	Pinyon-Juniper	Shrubsteppe
	Fringed Myotis	Mammal	Northern Oak	Pinyon-Juniper
	Grasshopper Sparrow	Bird	Grassland	
	Greater Sage-grouse	Bird	Shrubsteppe	
	Lewis's Woodpecker	Bird	Ponderosa Pine	Lowland Riparian
	Long-billed Curlew	Bird	Grassland	Agriculture
	Lyrate Mountainsnail	Mollusk	Mountain Shrub	Rock
	Pygmy Rabbit	Mammal	Shrubsteppe	
	Sharp-tailed Grouse	Bird	Shrubsteppe	Grassland
	Short-eared Owl	Bird	Wetland	Grassland
	Three-toed Woodpecker	Bird	Sub-Alpine Conifer	Lodgepole Pine
	Townsend's Big-eared Bat	Mammal	Pinyon-Juniper	Mountain Shrub
	Western Red Bat	Mammal	Lowland Riparian	
	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 hey 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 - Lotic** (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)

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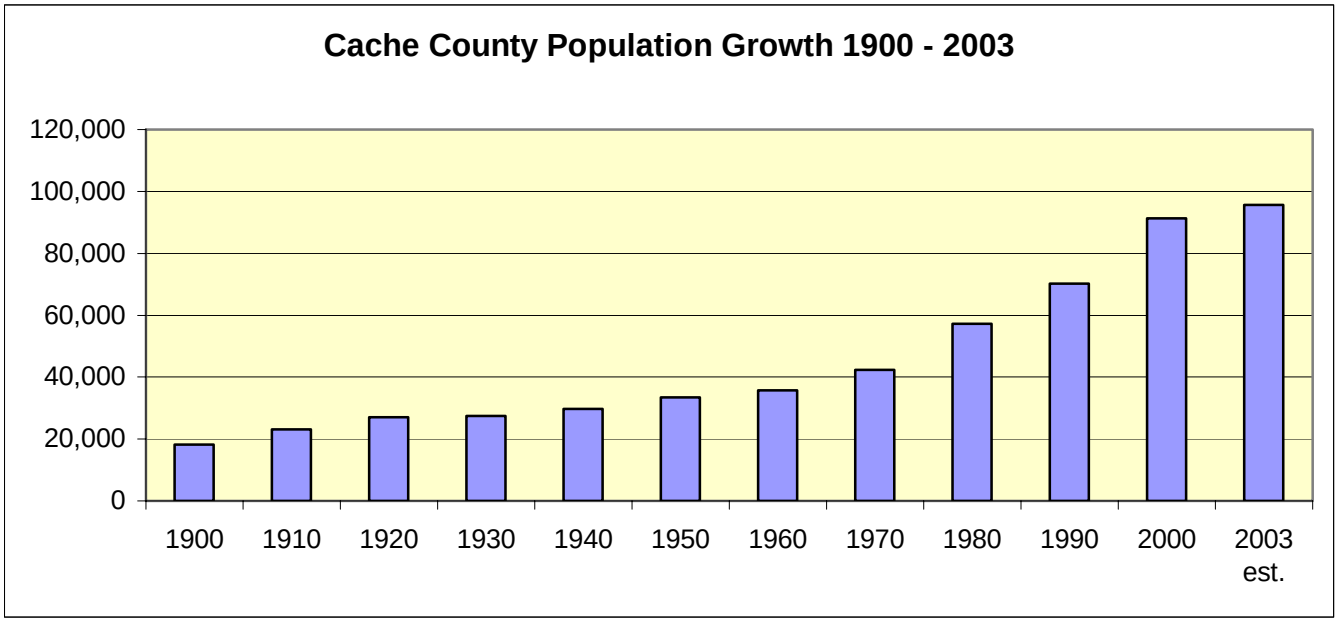
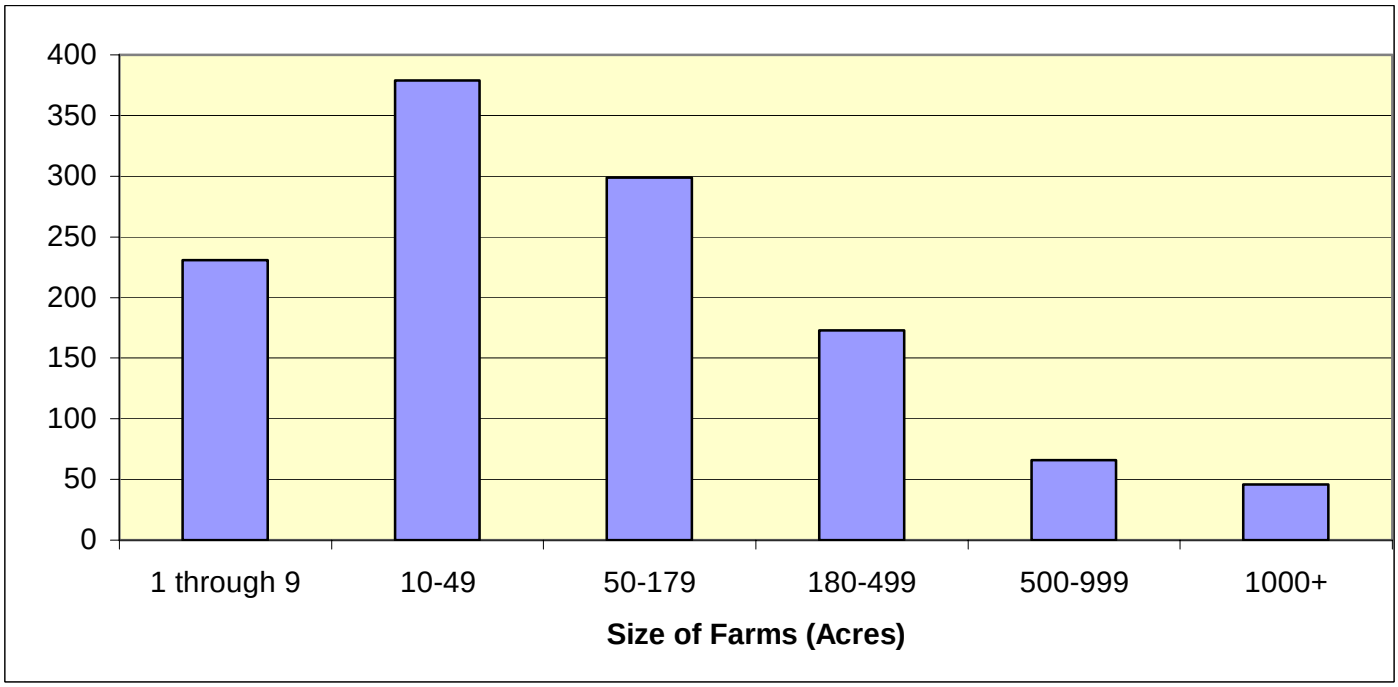
8) **Grassland** (perennial and annual grasslands or herbaceous dry meadows at 2,200 - 9,000 ft elevation)
9) **Water - Lentic** (open water; lakes and reservoirs)
10) **Aspen** (deciduous aspen forest at 5,600 - 10,500 ft elevation)

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	X	X	X	X											
	Urban Encroachment on Agricultural Land	X	X	X	X											
	Marketing of Resource Products															
	Innovation Needs															
	Non-Traditional Land Uses															
	Population Demographics, Changes and Trends															
	Special Considerations for Land Mangement (High State and Federal Percentage)															
	Active Resource Groups (CRMs, etc)													X		
	Full Time vs Part Time Agricultural Communities															
	Size of Operating Units															
	Land Removed from Production through Easments	X	X		X											
	Land Removed from Production through USDA Programs	X		X												
Other																

Census and Social Data





Number of Farms: 1,194

Number of Operators:

- Full-Time Operators: 543
- Part-Time Operators: 651

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Public Survey/Questionnaire Results:

Other Air Concerns:
None
Other Agricultural Concerns:
Animal waste on roadways
Management of small farms
Other Land Use Concerns:
4-wheelers *
Snowmobiling
Open space preservation
Protect watershed
Storm water run off
Hyrum dam
Limit motor vehicles on off roads
Multiple –use: bike/hiking paths
Plenty of recreation
Land access
Maintain open space
RV destruction of landscape erosion
Vehicle access for elderly
Indiscriminate private property use
Other Pest Management Concerns:
Dyers Woad *******
Scotch thistle **
Enforce weed control *
Field bird weed
Ceral leaf beetle
Bind weed
Goats rus
Cultivate herbicides and insecticides
Other Soil Concerns:
none
Other Water Concerns:
Best use of available water
Urban encroachment in flood plain
Cooperation of irrigation company with municipality
Municipal demand of ground water
Irrigation water
Develop secondary systems for subdivisions
Other Wildlife Concerns:

Where homes are being built *	Ducks	Pests
Cut down # of days for hunting	Elk	Sage game
Winter range consumed by houses	Morning glory	Winter feedings Upland game habitat
Pheasants	Sand hill cranes	
4-wheelers on designated roads	Deer	sharp tail grouse

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Footnotes / Bibliography

1. 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/

2. 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.

3. 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

4. Land Capability Classes derived from SURGO Soils Survey UT607 and Soil Data Viewer.

5. Precipitation data was developed by the Utah Climate Center at Utah State University using average monthly or annual precipitation http://www.climate.usu.edu

6. Irrigated Adjudicated Water Rights obtained from the Utah Division of Water Rights.

7. 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/

8. Stream Flow data from “Lower Bear River Water Quality Management Plan”; 1995, Ecosystems Research Institute, pg. 72

9. Stream length data calculated using ArcMap and 100k stream data from AGRC and 303d waters from the Utah Department of Environmental Quality.

10. 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

11. 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/).

12. County population data from the U.S. Census Bureau, Utah Quick Facts, http://quickfacts.census.gov/qfd/states/49000.html

13. Farm information obtained from the National Agricultural Statistics Service, 2002 Census of Agriculture. http://www.nass.usda.gov/census/census02/volume1/index2.htm