UTAH
NONPOINT SOURCE
POLLUTION MANAGEMENT PROGRAM

FISCAL YEAR 2008
ANNUAL REPORT

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Prepared by:

Utah Department of Environmental Quality
and
Utah Department of Agriculture and Food

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Cover Photo: Lake Blanchard, Henry's Fork drainage, north slope Uinta Mountains taken September 2007 by Ben Brown, Division of Water Quality.

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I. Introduction and Program Overview

A. Program Mission

The mission of the Utah Nonpoint Source Pollution Management Program is to support the environmental protection goals of the state as described in the Utah Administrative Code R317-2 in part to: 1) to conserve the waters of the state; 2) to protect, maintain, and improve the quality of the waters of the state for public water supplies, species protection and propagation and for other designated uses; and 3) to provide for the prevention, abatement and control of new or existing sources of polluted runoff. The Utah NPS Management Program works to achieve these goals by working in concert with numerous local, state and federal agencies and private parties pursuant to the Utah NPS Pollution Management Plan.

B. What is nonpoint source pollution?

Nonpoint source pollution refers to diffuse pollutants that are sometimes insignificant but when added together from an entire watershed can significantly impact water quality in streams and even have more cumulative impacts in lakes and reservoirs. Such NPS pollution is diffuse, generally not coming from a discrete point such as a pipe but results from land runoff, percolation, precipitation or atmospheric deposition. Rain and other forms of precipitation wash pollutants from the air and land and into our streams, lakes, reservoirs and groundwater. Such pollutants can include sediment, nutrients, pathogens (bacteria and viruses), toxic chemicals, pesticides, oil, grease, salt and heavy metals. In Utah our most common problems are sediment, nutrients, metals, salts and pathogens. These pollutants alter the chemical, physical and biological quality of the water and can impair their designated uses. Most assessment units (waterbodies) that are listed on the State's 2008 303(d) List of Impaired Waters are on the list because of nonpoint source pollution. Seemingly harmless or minor activities that disturb a watershed or pollute the water can have a cumulative effect. Some of the common sources of NPS pollution include various agricultural activities, natural sources, runoff from parking lots and streets and residential areas, mining and forestry operations, recreational activities, underground wastewater treatment systems, construction and stream/riparian habitat degradation and other forms of hydrologic modification.

C. NPS Program Highlights

The year FY-2008 ended with seven new projects contracted to the UDAF for some $661,285. The funding table at the end of this chapter lists all ten funded projects in FY-08. On-the-ground implementation projects are continuing in such watersheds as Middle Sevier River, San Pitch River, Bear River (Upper , Middle and Lower), and West Colorado River. New projects were funded at Scofield Reservoir, the Upper Strawberry River and in the Matt Warner/Pott Creek drainage. Due to changes in the local watershed coordinator the Pott Creek and Scofield projects are on hold awaiting further detailed designs.

The NPS Task Force with assistance primarily from the Utah Department of Agriculture and Food joined forces with the Zone Five of UACD as the host entity, and other supporting agencies to sponsor the 18th Annual Nonpoint Source Water Quality Conference held September 17, 18, and 19, 2008 in Cedar City, Utah. The theme of the conference was "Uniting for Watershed Health" and began with the Commission of Agriculture speaking on

the topic on locally led cooperative conservation and a plenary session called "Partnering for Watershed Health" with presentations by UDAF, BLM, NRCS and DEQ/DWQ. Other technical session topics ranged from pollution trading, implementing Utah AFO/CAFO Strategy, field drain study, developing a selenium standard in the Great Salt Lake, mercury in Utah, dissolved solids loading and transport in the Colorado Basin, nutrient cycling/management intensive grazing systems, monitoring BMP effectiveness, and TMDL studies and water quality in New Castle Reservoir. The conference included a one-day tour of watersheds to review catastrophic fire prevention and mitigation practices. The last day of the conference included a plenary panel devoted to the subject of developing nutrient criteria for Utah waters plus additional technical sessions.

The DWQ continues to strengthen statewide watershed planning groups at the local level. Some thirty local watershed committees are actively assisting and promoting TMDL development and implementation of watershed projects. Maintaining the continuity of local watershed coordinators is an issue for DWQ. Three coordinator left positions for other jobs and the recruitment is time-consuming. These positions were in the Upper Weber, Uinta Basin and San Pitch River Basins. The Utah Watershed Coordinating Council continues to meet 2 or 3 times per year to exchange information, provide training and promote the local ownership and development of TMDLs and watershed restoration plans. Fifteen to twenty watershed coordinators, including the occasional private chairpersons of local committees and a few agency support staff regularly attend the Council meetings. In 2007 and continuing in 2008 the DWQ and the Council became part of the grant proposal by Trees, Water and People to EPA and is receiving $100,000 of two years for several activities geared to strengthening the Council and respective local watershed coordinators and local watershed committees.

Significant resources from 319, EQIP and Congressional "earmark" funds continue to support the implementation of the Utah AFO/CAFO Strategy by the Utah Department of Agriculture and Food, the UACD, Utah Farm Bureau Federation, agriculture commodity groups and other state and federal partners. The Strategy is being revised by the AFO/CAFO Committee with DWQ taking the lead. Funding proposals were prepared by UACD and UFBF to the DWQ for support from SRF grant funds to implement the revised Strategy.

D. Program Needs and Issues for FY-2009

One new goal of DWQ and UDAF is to conduct a review of the 319 grant program and related institutional structure. A questionnaire will be used to gather information from landowners and agency staff. DWQ will continue to support TMDL development and implementation through the watershed approach in dealing with the NPS challenges in Utah. This program will to utilize the local delivery system of the Utah Conservation Districts, USU Extension and other entities such as counties and water conservancy districts to assist with planning and implementation to meet Total Maximum Daily Loads contained in their respective TMDL Plans and watershed-based implementation plans. This is being carried out through the establishment of more local watershed coordinators in priority watersheds where TMDLs have been approved by EPA and are being implemented. Two additional positions are partially funded with 319 funds at the Bear Lake Regional Commission and in Rich County to aid local ranchers develop riparian and upland grazing system that will reduce sediment loading to the Bear River and improve riparian corridors. The primary purpose of these ten local watershed coordinators is to facilitate, coordinate and report on the implementation of TMDL/watershed plans. They track and report progress to the UDAF on 319 projects in their watersheds. The DWQ has had to replace 3 local coordinators in the following basins: Upper Weber, San Pitch

and Uinta Basin. Recruitment is still underway in the Uinta Basin and the Upper Weber. The watershed coordinators in these areas all left for better paying natural resource positions with the Forest Service, NRCS and an oil company.

The coming year will see resources and efforts focused toward providing technical and financial assistance to potential CAFOs to correct unacceptable conditions. Planning and implementation efforts are coordinated by UACD and UFBF staff supported in part by 'congressional earmark' funding thru NRCS and CWA 319 funds. Funding will be available from DWQ's SRF NPS Financial Assistance Program in 2009 to implement the revised AFO/CAFO Strategy. Assistance to permitted operations (CAFOs) via a general permit from DEQ will continue through increased compliance activities. In 2008 and 2009, pursuant to new federal regulations and state rules, CAFOs will receive a new general permit with site-specific nutrient management plans. The AFO inventory and assessment was completed in April 2003. The inventory currently identifies 394 'Potential CAFOs' which have been the focus of intensive technical and financial support to correct unacceptable conditions through implementation of CNMPs and facility specific nutrient management plans. As of December 31, 2007, some 316 'Potential CAFOs' (80%) have completed implementation of their plans. The year before this figure was 258 indicating that some 58 produces completed implementing their plans during calendar year 2007.

The DEQ and UDAF have worked in FY-2008 and will continue in 2009 to improve program reporting especially relating to timely receipt, review and approval of 319 project final reports. Increased emphasis will also be devoted toward working with project sponsors to secure environmental results information in annual and final project reports. Efforts in FY-2009 will be focused on gathering all final project reports and closing the FY-2001 thru the FY-2004 Nonpoint Source Project Grants (Cooperative Agreements). The FY-1999 and FY-2000 Grant Agreements were closed in October and November 2008, respectively. Several NPS 319 Project Grants including FY-2001 thru FY-2004 are due to terminate on September 30, 2009. DEQ and UDAF are hopeful to close all of these in FY-2009 or early 2010.
DWQ NPS staff will continue working on updates to the NPS Program Management Plan related to urban/storm water and hydrologic modifications. These plans will not be completed until late 2008 and 2009 respectively because of other work assignments and priorities. Efforts are also underway to prepare an abandoned/inactive mine component to the Plan to be completed in 2009.

The DWQ is putting some increased emphasis on riparian and stream channel protection and enhancement through improved coordination with NRCS EQIP funds, Watershed Initiative Funds with DNR and perhaps with UDAF's new Grazing Improvement Program. Negotiations are ongoing with Division of Wildlife Resources regarding land acquisition and easements for the improvement of water quality and enhancement of fish habitat on Weber River, Beaver Creek a tributary to the Upper Weber and Scofield Reservoir or other priority areas jointly determined by DWQ and Division of Wildlife Resources (DWR). In 2008 nearly $950,000 was contracted with DWR for implementation of such riparian stream restorations and conservation easements. Some $608,000 was subsequently not used as such but was retained by DEQ for staffing and support needs to manage the program in light of falling revenue and state budget reductions. It is likely that nearly 340,000 of FY-07 funds will be used to assist Wildlife Resources with a significant riparian land purchase on the East Fork of the Sevier.

FY 2008 CWA SECTION 319 NONPOINT SOURCE FUNDING-UTAH

Project Allocation to Base and Incremental Funding

(Prepared 10-01-07)
(Final Revision Feb 1, 2008)

BASE FUNDS

	Project Title	Federal Amount	Required Match State or Local	DEQ Match	Total Funding
1.	Matt Warner/Pot Creek	$64,800	43,200		108,000
2.	Strawberry River/East Daniels	$61,600	41,067		102,667
3.	Upper Bear River	$30,000	20,000		50,000
4.	Watershed Coordinators Support	$85,485		56,990	142,475
	Sub-total Base	**$ 241,885**	**$ 104,267**	**$56,990**	**$ 403,142**

INCREMENTAL FUNDS

	Project Title	Federal Amount	Required Match State or Local	DEQ Match	Total Funding
4.	Watershed Coordinators Support	$314,515		209,677	524,192
5.	Lower Bear River TMDL Impl.	$32,100	21,400		53,500
6.	Middle Bear R TMDL Implem.	212,500	141,667		354,167
7.	Middle Sevier R TMDL Implem.	137,085	91,390		228,475
8.	San Pitch Watershed TMDL Impl	118,000	78,667		196,667
9.	Scofield Reservoir Riparian Re-veg	35,500	23,666		59,166
10.	West Colorado Watershed Improvement Project	70,000	46,666		116,666
	Sub-total Incremental	**$ 919,700**	**$ 403,456**	**$209,677**	**$1,532,833**

GRAND TOTAL	**$ 1,161,585**	**$507,723**	**$266,667**	**$1,935,975**

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II. Program Staffing and Support Update and Financial Summary

A. Background and Cumulative 319 Funding Distribution in Utah

The total CWA Section 319 allocation to Utah in FY 2008 was $1,785,585 as shown in Table 1 with Staffing and Support at $624,000 and $1,161,585 dedicated to ten projects. Table 1 also shows the distribution of those funds between DEQ and the Utah Department of Agriculture and Food. The Department of Agriculture and Food manages much of the program dealing with agriculture via an MOU and annual contracts with DEQ. Table 1 also illustrates the cumulative distribution of funds for program operation between DEQ (37%) and UDAF (63%). Table 2 describes the functional distribution of activities funded by the FY-08 project grant. As noted this year about 40% of projects project funds are supporting local technical assistance, management, coordination and planning to ten local watershed coordinators with only 1.1% supporting information and education outreach activities and products. For FY-08 nearly 60% was directed to BMP on-the-ground implementation projects in several watersheds including San Pitch River, West Colorado River, Middle Sevier River, and the Upper, Middle and Lower Bear River watersheds. NPS grant funds were also provided to a stream riparian improvement and grazing management project on the Upper Strawberry River.

B. Program Staffing and Support

Utah Department of Environmental Quality

DEQ, Division of Water Quality continues to devote about 5.5 FTEs to the NPS Pollution Management Program that are funded 60% with 319 funds and 40% state revenue. Those positions include the following: NPS Program Coordinator; Environmental Scientist responsible for assessing program effectiveness and reporting; one full time monitoring position; 1.4 FTE devoted to watershed planning and TMDL development; 0.5 FTE devoted to groundwater assessment and protection; two seasonal monitoring positions (0.5 FTE); and 0.35 FTEs supporting program management and administration.

A Summary of the major duties and responsibilities conducted by these positions are listed as follows:

- Monitor and assess state surface waters through collection of state wide fixed sites and intensive sites in basins for physical, chemical and biological information (Brown, Martin, Shaw);

- Conduct quality assurance/quality control procedures and necessary training of cooperative monitoring agency staff (Brown, Hultquist, Ostermiller);

- Conduct watershed planning and TMDL develop for 303(d) listed waters (Allred and Daly);
- Oversee and manage solicitation and review of 319 funded implementation projects to secure EPA approval (Reichert);

- Manage 319 grants and prepare and oversee 319 contracts for project implementation. (Reichert);

- Oversee and coordinate NPS program components for the agriculture, silviculture and hydrologic modification components of the program (Reichert);

- Monitor and evaluate the effectiveness of BMPs applied in major NPS project watersheds (Allred, Daly & Miller);

- Track and review mid-year and annual progress reports for individual projects/PIPs and transfer to UDAF for entry into GRTS (Reichert);

- Prepare annual report of the NPS Management Program (Reichert);

- Prepare annual program work plans for performance partnership agreement and staffing and support activities (Reichert);

- Review and revise, as necessary, management plans for program components such as urban runoff and mining (Reichert and DWQ management); and

- Manage and conduct specific ground water investigations supported by 319(h) funds (Damery).

NPS Program Coordinator carried out numerous activities including solicitation and review of new 319 projects for FY-2009, participated in project site visits and tours with EPA and other agencies, coordinated with BLM and Forest Service and assisted with annual coordination meeting, assumed major responsibility with project management and review and approval of project final reports for the FY-99 and FY-2000 grants. The watershed scientist, Miller, assessed lakes and reservoirs to determine beneficial use support and assisted with preparing 303(d) list for 2008. Significant resources had to be diverted to managing studies of beneficial use attainment for Farmington Bay and associated wetlands. This increased workload has caused continuing delays in preparing watershed evaluation reports.

Staff is also working on revising the hydrologic modification component of the State NPS Plan and also a new addendum to the Plan for urban storm water. The efforts will carry over into FY2009 and 2010. DWQ is completing the development of a mining component. A mining technical advisory committee was established to assist the State in this effort. A draft of the Plan was prepared by Steve Jensen with Salt Lake County Public Works Department. The draft Plan is being revised according to comments received in June 2005 and will be re-opened for public review and comment a second time in 2009. Once the Plan is approved by EPA, Section 319 funds may be utilized in the next few years to assist with clean up of abandoned mine contamination.

Section 319 funds allocated to staffing and support functions are also utilized to pay for laboratory support and report preparation in three areas. Funds are used to pay for laboratory analysis of water samples collected in the Little Bear River, Cub River, Chalk Creek, Otter Creek and Beaver River watersheds and other priority watersheds such as Upper Sevier, E. Fork Sevier, Fremont River, San Pitch River and Echo Creek as determined annually as part of the DWQ Monitoring Program. Phytoplankton samples are collected annually from selected lakes and reservoirs by

DWQ monitoring staff. The analysis of those samples and annual reports are paid for in part with 319 funds. Macroinvertebrate analysis and annual reports are also partially supported with 319 funds to provide information on selected watershed project areas noted above.

Utah Department of Agriculture and Food

The Utah Department of Agriculture and Food's (UDAF) Environmental Quality Section via contract with DEQ has management and statewide operational responsibility for the agriculture component of the NPS Program. Following is a brief description of the functions of members of the UDAF's Environmental Quality Section.

Roy Gunnell, UDAF, facilitates and assists with the development of the proposals and project implementation plans submitted by local watershed coordinators requesting cost-share assistance under the 319(h) grant program. He supervises the daily operation of the Environmental Quality Section and he also administers three fiscal year statewide AFO 319 grant project implementation plans. UDAF also continues to oversee the special earmark Congressional Appropriations for FY-2001 through 2008 which provide funds for both on-the-ground and technical assistance to support implementation of the AFO/CAFO Strategy. An additional Congressional earmark of $1,000,000 was received through USDA/NRCS to study air quality emissions from animal feeding operations. Monitoring is underway at an egg production facility in Northern Cache County.

Virginia Sligting is the Account Technician, and is responsible for preparing Nonpoint Source contracts and processing payment requests. She tracks all contract funding and transactions. She assists in the preparation of project implementation plans, reports, groundwater investigation results, yearly summary reports, NPS Task Force minutes, and special projects. She serves as a member of Utah's Annual Nonpoint Source Water Quality Conference planning committee, and also is responsible for all registration for this conference and the finances. She provides s support to the Environmental Quality Section in the following disciplines: contracts, groundwater; information/education, grazing improvement; range; and water quality.

Jack Wilbur has responsibilities for the NPS information and education efforts. He publishes an electronic copy of the Utah Watershed Review four times each year, produces NPS videos, assists DEQ with the state Adopt-a-Waterbody program, serves on EPA′s national I&E workgroup with EPA Headquarters, and writes related press releases, news articles, and assists SCDs with District NPS outreach. Jack is responsible for implementing the "Getting in Step" outreach program in Utah resulting from his work as co-chair of EPA's national I & E/Outreach workgroup. Workshops on 'Social Marketing' were held during throughout the year at various locations in Utah and the nation with emphasis on strengthening NPS project Information and Education outreach projects by targeting special interest/stakeholder groups to promote behavior change.
Wilbur coordinated the three small grants ($7,333.00 each) that were awarded to the Bear River/Cutler Reservoir Watershed, the Price River Watershed and the San Pitch Watershed. Wilbur helped the respective TMDL coordinators and watershed coordinators develop public opinion surveys for their watershed.

W. D. Robinson is the assistant section manager with duties of maintaining UDAFs GRTS responsibilities, collecting reports from the local project managers, providing technical assistance to stream projects, conducting project audits and inspections and serving on the River Basin Coordinating committee and the NPS Conference planning committee.

George Hopkin is the Division Director for the Conservation and Resource Management Division within the Utah Department of Agriculture and Food. The Division has programs which provide financial, informational and technical assistance to farmers and ranchers for conservation or resource improvement projects. He approves all payments for 319 reimbursement requests and prepares the yearly Section budget. He reports program progress to the Utah Soil Conservation Commission, makes site visits to the watershed projects and provides an annual inspection report. He serves on the AFO/CAFO Committee and various sub-committee assignments from the Utah Soil Conservation Commission, manages state implementation of the Bureau of Reclamation 'parallel' funds for the Colorado River Salinity Program and oversees UDAF groundwater monitoring program for private landowners.

C. Program Match Status

The 319(h) federal money received by the State requires a 40% non-federal match for both the staffing and support funds used by DEQ and UDAF and the dollars allocated for projects. Most of the match for projects is provided at the local level by individual producers /landowners.

There are several State programs which have been very helpful in generating match for the 319 projects. The Division of Wildlife Resources manages a couple of state general fund grant program (Habitat Council funds and Blue Ribbon Fishery program) designed strictly for the improvement of all habitat types on public and private lands. The Utah Conservation Commission manages an Agriculture Resource Development Loan Program, ARDL, which in recent years has been expanded to include water quality improvement purposes on farms and ranches. These state programs are tremendous assets to the improvement of water quality in this state. The relatively new Watershed Restoration Initiative Program through the Department of Natural Resources and the Grazing Improvement Program at the Utah Department of Agriculture and Food both provide state revenue to improve watershed upland and riparian areas throughout the state. Occasionally these programs provide match for 319 revenues in jointly funded projects.

The Department of Environmental Quality provides state revenue to match the staffing and support 319(h) funds that are part of the Performance Partnership Grant. The Utah Department of Agriculture and Food also provides state revenue to match the portion of those funds passed through via annual contract to UDAF. A summary of the non-federal match contributed by grant year for the FY-97 through FY-2008 Nonpoint Source 319 Grants is displayed in Table 3 below.

D. Memorandum of Understandings

The MOUs between the Department of Environmental Quality and the Forest Service and the Bureau of Land Management were executed in 1992. These MOUs have been reviewed and parties have agreed that they should be updated. The following entities have worked together throughout FY-08 and into '09 to revise and expand the MOU: Forest Service, Bureau of Land Management, National Park Service, Utah Department of Agriculture and Food, Division of Forestry, Fire and State Lands, and Department of Environmental Quality.

TABLE 1
NPS 319 GRANT CUMULATIVE DISTRIBUTION **Revised** Jan. 27, 2009
For FY-2008 and Total Grants Awarded (FY90-FY08)
Federal only

Fiscal Year	Total Grant Award	DEQ Portion	DEQ/UDAF Contract	UDAF Portion Admin/Mngt	UDAF Subcontr/Project
FY-2008	**Staffing & Support (PPG)** $624,000 (35%)	$372,990 – DEQ Base Staffing and Support DEQ Non- UDAF Contracts $14,040 Total = $387,030	$236,970 (S&S)	$236,970	- 0 -
	Projects Grant (65%) $1,161,585 Total = $1,785,585	DEQ - Project Contracts (2) $435,500 ($400,000 WCs) ($35,500 Scofield DWR) Total DEQ $822,530	UDAF Project Contracts (8) $726,085 Total UDAF = $963,055	- 0 -	$726,085
Cumulative Totals FY1990-2008	$28,008,681	$10,411,140 (37%) Total DEQ (In-house) Staffing and Support Portion $4,633,800 (44%) DEQ Non-UDAF Contracts $5,777,340 (56%)	$17,597,541 (63%)	$3,037,712 (17%)	$14,559,829 (83%)

Table 2. FY-2008 CWA 319 PROJECTS – ACTIVITY DESCRIPTION (prepared January 27, 2009)

	Projects (10)	Categories -- Base Funds					
	Title	**Implement BMPs**	**T.A./Coord. Planning/Mngt.**	**I & E**	**Surf&GW Assmt.**	**TMDL Dev.**	**Totals**
1.	Matt Warner/ Pott Creek	$64,800					$ 64,800
2.	Strawberry River/East Daniels	$58,500	$3,100				61,600
3.	Upper Bear River	$22,300	4,200	$3,500			30,000
4.	Watershed Coordinators Support		85,485				85,485
	Sub-totals Base	**$145,600**	**$92,785**	**$3,500**			**$ 241,885**
		Categories -- Incremental Funds					
4.	Watershed Coordinators Support		$314,515				$314,515
5.	Lower Bear River TMDL Impl.	$20,500	9,710	1,890			32,100
6.	Middle Bear River TMDL Impl.	181,750	28,950	1,800			212,500
7.	Middle Sevier River TMDL Impl.	129,035	6,850	1,200			137,085
8.	San Pitch Watershed TMDL Impl.	109,600	5,900	2,500			118,000
9.	Scofield Reservoir Riparian rehab	35,500					35,500
10.	W. Colorado R Wshd TMDL Impl	64,500	3,500	2,000			70,000
	Subtotals Incremental	**$ 540,885**	**$ 369,425**	**$ 9,390**			**$ 919,700**
	TOTALS	***$ 686,485***	***$ 462,210***	***$ 12,890***			***$ 1,161,585***
	Percent	**59.1%**	**39.8%**	**1.1%**			

Table 3. NPS 319 Project Grants – Matching Funds Summary as of September 30, 2008

Grant	Federal Grant Amount	Federal Grant Expenditures thru 9/30/08	Remaining Grant Balance As of 9/30/08	Match Required Against Federal Expend. To Date	Total Grant's Required Match	Total Match Documented	
319 NPS 97	$519,200	$519,200	$0	$346,133	$346,133	$346,133	We have sent in Final Report
319 NPS 98	$794,900	$794,900	$0	$529,934	$529,934	$529,934	We have sent in Final Report
319 NPS 99	$1,393,592	$1,393,592	$0	$929,061	$929,061	$929,061	We have sent in Final Report
319 NPS 00	$1,429,900	$1,418,114	$0	$953,267	$953,267	$961,062	We have sent in Final Report
319 NPS 01	$1,613,900	$1,445,241	$168,859	$963,494	$1,075,933	$1,103,046	
319 NPS 02	$1,627,708	$1,329,920	$297,788	$886,613	$1,085,138	$893,190	
319 NPS 03	$1,682,964	$1,220,627	$462,337	$813,751	$1,121,977	$954,693	
319 NPS 04	$1,480,230	$1,365,322	$114,908	$910,215	$986,819	$722,887	
319 NPS 05	$1,308,400	$801,423	$506,977	$534,282	$872,267	$235,569	
319 NPS 06	$1,219,600	$463,675	$755,925	$309,117	$859,733	$141,141	
319 NPS 07	$1,126,500	$87,611	$1,038,889	$58,407	$751,000	$51,032	
319 NPS 08	$1,161,585	$10,000	$1,151,585	$6,667	$774,390	$0	
Totals	$15,358,479	$10,849,625	$4,497,268	$7,240,941	$10,285,652	$6,867,748	

Prepared by DEQ Finance Jan. 12, 2009

III. Nonpoint Source 319 Project Status Summaries

A. Highlights of selected projects including watershed and demonstration projects, information and education projects and groundwater investigations. (See map below showing locations of many 319 project in relation to 303(d) listed waters.)

1. Watershed and Demonstration Projects (Example of Project Accomplishments)

Refer to the **Appendix** of this report to review selected **project fact sheets** for the following watershed: Beaver River, Chalk Creek, Cub River, East Canyon, Fremont River, Otter Creek, Rees Creek, San Pitch River, and Spanish Fork River. These fact sheets can be found on the DWQ web site at www.waterquality.utah.gov.

2. FY-08 Information and Education Activities Summary by Jack Wilbur

In 2008 the Utah Nonpoint Source statewide information and education program resumed the traditional format of the Utah Nonpoint Source Conference and started a new watershed outreach mini grant program, among other highlights.

The annual Utah NPS Conference was held in Cedar City for the first time in 12 years, and for the first time since 2005, the meetings returned to their original format, after hosting the National NPS Coordinators' meeting in 2006 and teaming up with the Bear River Symposium in 2007. The conference was attended by about 100 water quality professionals from throughout Utah. The event featured conference sessions all day Tuesday and Thursday afternoon, an awards barbecue on Tuesday night and a day-long watershed tour on Wednesday.

The Statewide I&E coordinator continued working with local watershed groups in FY 08, but with one new twist. Wilbur attended one of the three Watershed Coordinating Council (WCC) meetings (March). At that meeting, he announced a new mini grant program for watersheds, funded through USU Extension's Statewide I&E money. Wilbur coordinated the three small grants ($7,333.00 each) that were awarded to the Bear River/Cutler Reservoir Watershed, the Price River Watershed and the San Pitch Watershed. Wilbur helped the respective TMDL coordinators and watershed coordinators develop public opinion surveys for their watershed. By the end of 2008 the Price River survey was being conducted via the telephone by a Salt Lake City-based market research firm. The other two surveys were nearly ready to be conducted the same way. Once the surveys are complete, Wilbur will analyze the data and work with each watershed committee I&E needs and strategies, based on the target audience data.

Wilbur continued to work with the East Canyon Watershed I&E committee to research and implement social marketing and education campaigns designed to change behaviors among specific audience groups within the watershed. The first phase of the effort, targeting dog owners, continues to be in the implementation phase. A radio and print advertising campaign, "scoop it: it's what best friends do," ran in February and march 2008, and again October and November. In 2009, a campaign targeted storm water pollution in yards and neighborhoods with begin.

Wilbur continued his work as co-chair of the national States-EPA NPS Outreach Workgroup by conducting workshops and presentations to groups in several parts of the country, including Tennessee, New York and Connecticut, Maryland and Texas. He also spoke at a national conference in Seattle, WA. Additionally he continued to work with watershed groups within EPA's Region III as a special advisor to their social marketing assessment and implementation efforts.

This past year was a down year for Utah Watershed Review. In 2008, only three issues were published. This was due in part to the I&E Coordinator's busy travel schedule, large special assignments within his agency, and a loss of focus. Wilbur is working with State NPS Coordinators to develop ideas and stories for the coming year.

3. Ground Water Projects Summary and Status

The following table presents a listing of the 319(h) funded ground water investigations for 319 Project Grants for fiscal year FY-1997 through FY-2009. The table contains the project title, dollar amount, project description, status, contractor, etc.

1997 - 2009 UTAH 319 GROUND WATER PROJECTS – COMPREHENSIVE STATUS REPORT					
Project Title and 319(h) funds	**Contract #**	**Project Description**	**Status**	**Contract Period**	**Contractor**
1997 Ground Water Projects					
Septic Tank System Effects on Water Supplies in Central Virgin River Basin, Washington County, Utah $18,000	#98-0594	Amended contract on 10/25/04 to extend to new termination of 09/30/05.	Complete **and approved by U.S. EPA on 7/27/05 via E-mail from Kris Jensen. Approved by DWQ on 2-24-07**	New termination date of 09/30/05	Washington County Conservancy District
Water Quality Assessment and Ground Water Quality Classification for the Basin-Fill Aquifer in Cache Valley, Cache County,	#98-0423	Complete State Aquifer Classification process for Cache Valley Aquifer.	**Complete** and final report under review by U.S. EPA on 7/27/05 via E-mail from Kris Jensen. Approved by DWQ on 04-05-07 EPA concur 04-30-07	8/15/97 thru 8/14/01	Utah Geological Survey

1997 - 2009 UTAH 319 GROUND WATER PROJECTS – COMPREHENSIVE STATUS REPORT					
Project Title and 319(h) funds	**Contract #**	**Project Description**	**Status**	**Contract Period**	**Contractor**
Utah. $20,000					
1998 Ground Water Projects					
Development of Land-Use Strategies to Address Nitrate Contamination of Ground Water in the Sevier River Watershed. $15,000	#03-0157	Educate landowners about current levels of nutrients in their soils and proper methods to utilize their manure resources. Also educate the community on the results and recommendations from 1996 319 Sanpete Study	**Complete** Final Report submitted to U.S. EPA Gary Kleeman on 12/18/06 for approval review. **Final approval via e-mail on 08/21/07**	Contract amended with new termination date of 5/30/06	NACD
Development of Digital Spatial Layers on Support of A Water Watershed Approach to Water Quality Management $20,000	**#06-6055** USGS Agreement Amend #2 GW Elevation Mapping	Moved to FY-2000. This project was combined with FY-2000 project, $30,000 "Groundwater Quality in Utah", and the $20,000 subtracted from the FY-1998 grant.	**Complete as per 10/01/08 G. Kleeman e-mail** **Final report submitted to M Reichert on 10/18/07. Approved 10/02/08 by DWQ.** Received approval on revised PIP from Gary Kleeman on 12/06/06. 07 Annual report e-mailed 11/13/06.	Amending existing 03 USGS agreement. Amend #2, $50,000 total.	U.S.G.S.
1999 Ground Water Projects					
Determination of Ground Water Transport Rates, Annual Recharge, and Sources of	**#00-0827**	The project has three major components. The first component concerns determining the rate of recharge to	**Complete** 1/17/08 G. Kleeman E-mail Final report resubmitted to DEQ and EPA on 12/19/06	9/1/99 thru 6/15/03	College of Mines and earth Sciences, University of Utah

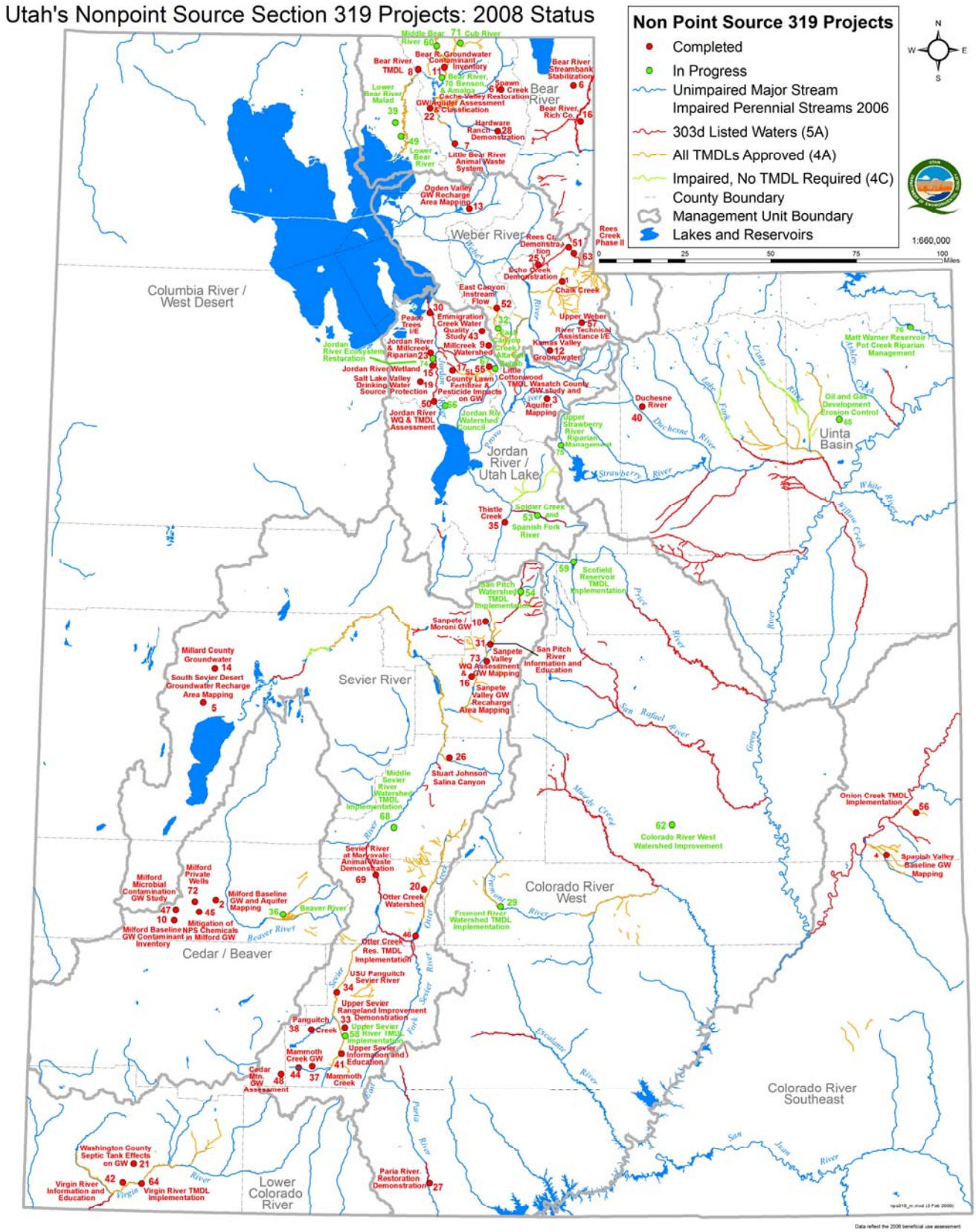
1997 - 2009 UTAH 319 GROUND WATER PROJECTS – COMPREHENSIVE STATUS REPORT					
Project Title and 319(h) funds	**Contract #**	**Project Description**	**Status**	**Contract Period**	**Contractor**
Microbial Contamination in the Milford Basin, Utah $48,000		the southern portion of the Milford Basin. The second component concerns determining rates of groundwater flow through the Milford Aquifer. The third component concerns DNA fingerprinting to determine potential sources of microbial contamination of wells in the aquifer. The third Component is condition upon the return of microbial contamination to wells in the Milford aquifer.	for final approval. Approved by DWQ on 10/3/08.		
*Septic Tank System Effects on Water Supplies in Eastern Box Elder County, Utah $24,000	**#06-6055** USGS Agreement Amend #1	Original project not implemented after several attempts with different cooperators. On 09/07/05 received approval from U.S. EPA to consolidate these monies with 01 Silver Creek left over monies to 03 USGS Monitoring project for 2006 calendar year monitoring.	**Not- Implemented** 2006 monitoring completed & monies expended. Consolidate these monies with 01 Silver Creek, $70,000, left over monies to 03 USGS Monitoring project for calendar 2006 monitoring.(Amend. #1 to Utah contract	Amendment #1 to State Agreement 0660550 6/30/05 to 07/01/11	USGS

1997 - 2009 UTAH 319 GROUND WATER PROJECTS – COMPREHENSIVE STATUS REPORT					
Project Title and 319(h) funds	**Contract #**	**Project Description**	**Status**	**Contract Period**	**Contractor**
Water-Quality Assessment and Mapping for the Shallow Unconfined Aquifer in Eastern Millard County, Utah, with emphasis on establishing base line water quality prior to large-scale land application of chicken manure $55,000	**#00-0448**	This study will produce maps showing water quality and the distribution of nitrate in wells in the shallow unconfined aquifer in eastern Millard County.	Complete as per 9/4/08 G. Kleeman e-mail M. Reichert resent via e-mailed final report for U.S. EPA review on 11/30/07. Approved by DWQ 9/9/08.	08/01/99 to 07/31/03	Utah Geological Survey
2000 Ground Water Projects					
Sources of Recharge and Vulnerability of ground Water to Non-point Source Nitrate Contamination in the Mammoth Creek Area, Iron and Garfield Counties $80,000	**#02-0838**	The project will provide a better understanding of the sources of recharge to the aquifers used to domestic supply in the Mammoth Creak area and will assesses the vulnerability of the aquifers to nitrate contamination	**Complete as per 10/21/08 G. Kleeman e-mail** **Approved by DWQ 10/23/08.** DRAFT Final Report Submitted 4/30/04 to EPA/WQ via e-mail and on 02/06/06	8/22/01 to 8/22/05	SWUPHD
Ground-Water Quality in Utah $30,000	**#06-6055**	The project will provide and update on the quality of water in the principal of aquifers (valley-	**Complete as per 10/01/08 G. Kleeman e-mail.** **Apprvd by DWQ on**	Amending existing 03 USGS agreement Amendment #2	U.S.G.S.

1997 - 2009 UTAH 319 GROUND WATER PROJECTS – COMPREHENSIVE STATUS REPORT					
Project Title and 319(h) funds	**Contract #**	**Project Description**	**Status**	**Contract Period**	**Contractor**
		fill, basin-fill, and consolidated rock) throughout the State of Utah and evaluate the potential impacts of various activities on water quality over time	**10/02/08.** Final report submitted to M Reichert on 10/18/07 Received approval on revised PIP from Gary Kleeman on 12/06/06. Combining these $30K monies with 98 Digital Map project for one project total $50K		
2001 Ground Water Projects					
Silver Creek Estates Ground Water Study, Summit Co., UT $95,000 ($70,000 remained unused)	DWQ In-house	To determine NPS impacts on Silver Creek	**Complete. Apprvd by DWQ 10/28/05.** Received U.S. EPA letter of approval on Nov 25, 2005. $70k remaining monies moved to 03 USGS Monitoring as part of amend #1, 2006 USGS Monitoring	none	DEQ, WQ
2002 Ground Water Projects					
Migration of Non-Point Source chemicals in Milford Area, Southwestern Utah $84,900	**#03-6159**	To build a gw model that can reliably predict the impact to wq from NPS of agricultural activities in the Milford Valley.	**Complete** DEQ will submit final report for review in spring of 2008. Final draft report received from contractor in 10/06.		BYU
2003 Ground Water Projects					
Assessment and Description of Groundwater Quality for	**#06-6055**		**Final report 95% complete, draft review submittal expected on 2/1/09.** Joint Funding	Agreement will also be amended #2 w/separate PIP of 98 & 00 monies on GW	USGS

1997 - 2009 UTAH 319 GROUND WATER PROJECTS – COMPREHENSIVE STATUS REPORT					
Project Title and 319(h) funds	**Contract #**	**Project Description**	**Status**	**Contract Period**	**Contractor**
Selected Locations in Utah $50,000 Amended with $94,000.			Agreement signed w/USGS. Sampling begun in fall of 05'/06. Project amended 01 Silver Crk. monies and 99 Box Elder monies.	elev. mapping project.	
Cedar Mountain Ground Water Monitoring FY03-FY06; An Addendum to the Mammoth / Duck Creek Ground Water Vulnerability Project, 2001-2003. $21,800	**#07-0800**	The project will provide a better understanding of the sources of recharge to the aquifers used to domestic supply in the Mammoth Creak area and will assesses the vulnerability of the aquifers to nitrate contamination	**Complete as per 10/21/08 G. Kleeman e-mail** **Approved by DWQ on 10-23-08**	07/01/06 to 06/30/10	SWUPHD
Determination of Bacterial Transport Rates, Annual Recharge, and Sources of Existing Microbial Contamination in the Milford Area, Utah. $82,000.00	**#06-6055**	2007 Statewide Ground Water Monitoring Network, 300 wells.	Contractor unable to implement original project. Augmented the FY03 USGS Monitoring project, contract 06-6055, with $82k, Amend #3 for 2007 monitoring.	USGS	

1997 - 2009 UTAH 319 GROUND WATER PROJECTS – COMPREHENSIVE STATUS REPORT					
Project Title and 319(h) funds	**Contract #**	**Project Description**	**Status**	**Contract Period**	**Contractor**
2004 Ground Water Projects					
No Ground Water projects submitted for EPA approval.					
2005 Ground Water Projects					
No Ground Water projects submitted for EPA approval.					
2006 Ground Water Projects					
CEDAR MOUNTAIN $21,800	***#07-0800***	The project will provide a better understanding of the sources of recharge to the aquifers used to domestic supply in the Mammoth Creak area and will assesses the vulnerability of the aquifers to nitrate contamination	**Complete as per 10/21/08 G. Kleeman e-mail** Final draft report submitted to M Reichert for review on 01/04/08 and 6/24/08. **Approved by DWQ on 10-23-08** Combined FY03 & FY06 totaling $43,600.	07/01/06 to 06/30/10	SWUPHD
2007 Ground Water Projects					
No Ground Water projects submitted for EPA approval.					
2008 Ground Water Projects					
No Ground Water projects submitted for EPA approval.					
2009 Ground Water Projects					
No Ground Water projects submitted for EPA approval.					


Utah's Nonpoint Source Section 319 Projects: 2008 Status
Non Point Source 319 Projects
Completed
In Progress
Unimpaired Major Stream
Impaired Perennial Streams 2006
303d Listed Waters (5A)
All TMDLs Approved (4A)
Impaired, No TMDL Required (4C)
County Boundary
Management Unit Boundary
Lakes and Reservoirs
1:660,000
Miles
Bear River
Weber River
Columbia River / West Desert
Jordan River / Utah Lake
Uinta Basin
Sevier River
Colorado River West
Cedar / Beaver
Colorado River Southeast
Lower Colorado River
Middle Bear River 60
71 Cub River
Bear R. Groundwater Contaminant Inventory
Bear River TMDL 8
11
Bear River, Amalga & Benson GW Quality Assessment & Classification
Shawn Creek 6
Cache Valley Restoration
Bear River Streambank Stabilization
6
Lower Bear River, Malad
39
22
Hardware Ranch 28 Demonstration
Bear River, Rich Co. 16
49
Lower Bear River
7
Little Bear River Animal Waste System
Ogden Valley GW Recharge Area Mapping
13
Rees Cr. Demonstration
51
Rees Creek Phase II
63
25
Echo Creek Demonstration
1
Chalk Creek
East Canyon Instream Flow
52
30
Peace Trees I/E
Emmigration Creek Water Quality Study 43
32
Beaver Canyon Creek Alta Cut Rehab
Upper Weber
57
River Technical Assistance I/E
Kamas Valley Groundwater
12
Jordan River Ecosystem Restoration
Jordan River & Millcreek Riparian 23
Millcreek Watershed
9
Jordan River Wetland
15
17
55
Little Cottonwood TMDL
Salt Lake Valley Drinking Water Source Protection
19
County Lawn Fertilizer & Pesticide Impacts on GW
Wasatch County GW study and Aquifer Mapping
3
50
56
Jordan River WQ & TMDL Assessment
Jordan Rv. Watershed Council
Upper Strawberry River Riparian Management
75
Duchesne River
40
Matt Warner Reservoir Pot Creek Riparian Management
76
Oil and Gas Development Erosion Control
45
Strawberry River
Thistle Creek
35
Soldier Creek and Spanish Fork River
53
Scofield Reservoir TMDL Implementation
59
San Pitch Watershed TMDL Implementation
54
Sanpete / Moroni GW
10
31
Sanpete Valley WQ Assessment & GW Mapping
73
16
Sanpete Valley GW Recharge Area Mapping
San Pitch River Information and Education
Millard County Groundwater
14
South Sevier Desert Groundwater Recharge Area Mapping
5
26
Stuart Johnson Salina Canyon
Middle Sevier River Watershed TMDL Implementation
68
Sevier River at Marysvale: Animal Waste Demonstration
69
20
Otter Creek Watershed
Milford Microbial Contamination GW Study
Milford Private Wells
72
2
47
45
10
Milford Baseline GW and Aquifer Mapping
36
Beaver River
Mitigation of NPS Chemicals in Milford GW
Milford Baseline GW Contaminant Inventory
Otter Creek Res. TMDL Implementation
46
USU Panguitch Sevier River
34
Upper Sevier Rangeland Improvement Demonstration
33
Panguitch Creek
38
Upper Sevier River TMDL Implementation
58
Upper Sevier Information and Education
41
Mammoth Creek GW
44
37
Mammoth Creek
Cedar Mtn. GW Assessment
48
Fremont River Watershed TMDL Implementation
29
62
Colorado River West Watershed Improvement
Onion Creek TMDL Implementation
56
4
Spanish Valley Baseline GW Mapping
Washington County Septic Tank Effects on GW
21
42
64
Virgin River Information and Education
Virgin River TMDL Implementation
Paria River Restoration Demonstration
27
Data reflect the 2006 beneficial use assessment

B. Grants Reporting and Tracking System (GRTS)

The Section 319(h) Grant Reporting and Tracking System is a national database developed by EPA to track projects and activities funded with CWA Section 319(h) funds. The primary purpose of the database is to track project accomplishments, funding information and environmental results using several nationally mandated information items that are reported to Congress annually. Information extracted from this system forms part of the justification to Congress for funding the Section 319 Program. EPA Region VIII uses GRTS to enable the States to electronically fulfill reporting requirements using the Project Evaluation Form and other attachment features in GRTS such as final reports, GIS maps or other project publications.

DEQ is the lead agency for administering the 319 Program. Because most of the project grants are agricultural related, much of the grant funds are passed through to UDAF. As a result, UDAF plays a critical role in maintaining the GRTS database. Essential training of UDAF staff in this system continued during FY-08 through attendance at national user group conference. UDAF will continue to maintain GRTS information for projects administered by UDAF. Also based on DWQ decisions and discussions with UDAF, entry of all project information including all reports will be performed by UDAF. DWQ will continue to oversee DWQ administered contracts including the tracking and review of all reports. Upon completion mid-year and annual progress reports will be forwarded to UDAF for entry into GRTS. Also as 319 Project Final Reports are completed and approved by DEQ with EPA concurrence, those reports are sent to UDAF for entry into the GRTS database.

Significant effort was devoted to stay current with entry of FY-08 mid-year and annual reports received from 319 project sponsors. DEQ and UDAF reported about 90% complete report entry (GRTS Compliance) on December 31, 2008. Below in part D is a summary and status of all 319 projects for grant years 1999 through 2008. The FY-99 and FY-2000 319 Project Grant agreements were completed and closed in late FY08 and early FY-09. Closure of those grants involved the review and approval and EPA concurrences of some 35 project final report.

C. 319 Project Status Summary Table (FY-2001 through FY-2008)

FY	#	Project Title	319$ Base	319$ Incr.	NPS Category Name	Grant #	Proj. Status	Contractor Name
2001	01	EQSilver Creek Estates Groundwater Study	$25,600.00	$0.00	Land DspslStrgeTrtmnt	998187010	Completed	utah dept. of enviro. qual.
2001	02	EQPeace Trees / NPS I and E	$11,200.00	$0.00	All Sources	998187010	Completed	utah federation for youth
2001	03	EQHardware Ranch Demonstration Project	$23,000.00	$0.00	Agriculture	998187010	Completed	ut div. wildl. resources
2001	04	USU Ext. Statewide NPS Pollution I and E (cont.)	$40,200.00	$0.00	All Sources	998187010	Completed	USU EXT/ NANCY MESNER
2001	05	Ag. WS Improvement Proj. - UFBF (cont.)	$91,900.00	$0.00	Agriculture	998187010	Completed	utah farm bureau federation
2001	06	AFO Manure Management	$281,150.00	$189,550.00	Animal Feeding Oper's	998187010	On Sched.	utah assoc. of cons. Districts
2001	07	Animal Waste Composting Demonstration	$50,000.00	$0.00	Animal Feeding Oper's	998187010	Completed	MORGAN SCD
2001	08	San Pitch River I and E	$5,000.00	$0.00	Agriculture	998187010	Completed	sanpete county extension
2001	09	Salina Creek WS - Stuart Johnson Demon. Proj.	$22,000.00	$0.00	Agriculture	998187010	Completed	sevier SCD
2001	10	Paria River Restoration	$13,000.00	$0.00	Agriculture	998187010	Completed	Cannonville town
2001	11	Fremont River WS I and E inc. Mack Morrell Proj.	$25,600.00	$0.00	Agriculture	998187010	Completed	Fremont River SCD
2001	12	USU Panguitch-Sevier River	$58,980.00	$0.00	Agriculture	998187010	On Sched.	USU EXT/Panguitch Farm
2001	13	Upper Sevier WS Range Imprvmnt Demo.-cont.	$13,770.00	$0.00	Agriculture	998187010	Completed	upper sevier SCD
2001	14	Upper Bear River (Rich Co.) Watershed (cont.)	$32,800.00	$0.00	Agriculture	998187010	On Sched.	Rich County local work group
2001	15	Thistle Crk WS - Span.Fork Riv. WS CRMP (cont.)	$0.00	$200,000.00	Agriculture	998187010	On Sched.	timp-nebo SCD
2001	16	Cub River Watershed CRMP (continuation)	$0.00	$150,000.00	Agriculture	998187010	On Sched.	Cache WG/ Cub riv strng cmt
2001	17	Little Logan Watershed of the Middle Bear River	$0.00	$46,550.00	Agriculture	998187010	Completed	Cache Co. Local Work Group
2001	18	Amalga-Benson/ Middle Bear River WS (cont.)	$0.00	$105,000.00	Agriculture	998187010	Completed	Cache WG/Amalga Benson
2001	19	Little Bear River Watershed Project (continuation)	$0.00	$69,000.00	Agriculture	998187010	On Sched.	Blacksmith Fork SCD
2001	20	Malad portion/ Lower Bear River WS (cont.)	$0.00	$105,000.00	Agriculture	998187010	Completed	Eastern Box Elder WG
2001	21	EQ East Canyon Watershed Stream Restoration	$0.00	$54,600.00	All Sources	998187010	Completed	East Cnyn H2O Qu. strng cmt
2002	01	AFO Manure Management (continuation)	$40,000.00	$60,000.00	Animal Feeding Oper's	998187020	On Sched.	utah assoc. of cons. districts
2002	02	Ag. WS Improvement Proj. - UFBF (cont.)	$95,600.00	$0.00	Agriculture	998187020	Completed	utah farm bureau federation
2002	03	Amalga-Benson / Middle Bear River WS (cont.)	$111,700.00	$0.00	Agriculture	998187020	On Sched.	Cache WG/Amalga Benson
2002	04	Beaver River Watershed Project (continuation)	$0.00	$200,000.00	Agriculture	998187020	On Sched.	Beaver SCD
2002	05	Chalk Creek Watershed Project (continuation)	$0.00	$175,000.00	Agriculture	998187020	On Sched.	summit SCD
2002	06	Cub River WS CRMP (cont.) - TMDL Impl.	$0.00	$148,700.00	Agriculture	998187020	On Sched.	Cache WG/ Cub riv strng cmt
2002	07	Upper Bear River (Rich Co.) Watershed (cont.)	$36,400.00	$0.00	Animal Feeding Oper's	998187020	Completed	Rich County local work group
2002	08	Fremont River, TMDL Proj. Impl. - (cont.)	$0.00	$100,000.00	Agriculture	998187020	Completed	Fremont River SCD
2002	09	EQForest H2O Qu. Guideline Mon. & Eval. Prog	$67,408.00	$0.00	Silviculture	998187020	On Sched.	UT Div-ForestryFire&StLands
2002	10	EQMigration of NPS Chemicals - Milford Area	$84,900.00	$0.00	Other NPS Pollution	998187020	On Sched.	BYU Civil & Env. Engin'ring
2002	11	Lower Bear River, TMDL Implementation Project	$111,700.00	$0.00	Agriculture	998187020	On Sched.	Eastern Box Elder WG
2002	12	EQOtter Creek Watershed TMDL Study	$70,000.00	$0.00	Other NPS Pollution	998187020	On Sched.	Utah Divi. of Water Quality
2002	13	Otter Creek Watershed Project (continuation)	$0.00	$40,000.00	Agriculture	998187020	Completed	PIUTE SCD
2002	14	USU Ext. Statewide NPS Pollution I and E (cont.)	$30,300.00	$0.00	All Sources	998187020	Completed	USU EXT/ NANCY MESNER
2002	15	EQ East Canyon Watershed Stream Restoration	$0.00	$156,000.00	Urban RO/Stormwater	998187020	On Sched.	Mtnland Assoc. of Gov.s
2002	16	AFO Inventory and Assessment (continuation)	$100,000.00	$0.00	All Sources	998187020	Completed	utah assoc. of cons. districts
2003	01	EQ Bear Riv Info Outreach-Coord of WQ Activities	$42,300.00	$0.00	Agriculture	998187030	On Sched.	Bear Lake Reg. Commission
2003	02	EQ Otter Creek Watershed TMDL Study	$0.00	$47,164.00	Agriculture	998187030	On Sched.	utah division of water quality

FY	#	Project Title	319$ Base	319$ Incr.	NPS Category Name	Grant #	Proj. Status	Contractor Name
2003	03	EQ Small Reservoir Flushing- Managing Impacts	$99,100.00	$0.00	Hydromodification	998187030	On Sched.	UTAH WATER RSRCH LAB.
2003	04	EQ Jordan River H2O Quality TMDL Assessment	$38,000.00	$0.00	Urban RO/Stormwater	998187030	Completed	salt lake county commission
2003	05	EQ Cedar Mountain Groundwater Monitoring	$21,800.00	$0.00	All Sources	998187030	Discontinued	utah dept. of enviro. qual.
2003	06	EQ Milford BasinGW BioEvaluation - cancelled	$0.00	$0.00	Agriculture	998187030		utah dept. of enviro. qual.
2003	07	EQ GW Qual. Slcted Loc.s, Assessment & Desc.	$245,000.00	$0.00	All Sources	998187030	On Sched.	utah division of water quality
2003	08	EQ TMDL Dev./ Impl. and WS Planning Proj.	$0.00	$174,800.00	All Sources	998187030	Completed	utah division of water quality
2003	09	EQ East Canyon Watershed Stream Restoration	$0.00	$175,000.00	Agriculture	998187030	Bhnd Schd.	utah division of water quality
2003	10	USU Ext. Statewide NPS Pollution I and E (cont.)	$43,000.00	$0.00	All Sources	998187030	Completed	USU EXT/ NANCY MESNER
2003	11	USU Extension Watershed I and E Modules	$42,500.00	$0.00	All Sources	998187030	Completed	USU EXT/Richard T. Koenig
2003	12	Ag. WS Improvement Proj. - UFBF (cont.)	$99,400.00	$0.00	Animal Feeding Oper's	998187030	Completed	utah farm bureau federation
2003	13	Utah Potential CAFO Technical Assistance Team	$55,500.00	$94,500.00	Animal Feeding Oper's	998187030	Completed	utah assoc. of cons. districts
2003	14	Upper Weber River Tech. Assistance/ IandE	$0.00	$40,933.00	All Sources	998187030	On Sched.	summit SCD
2003	15	Upper Sevier Watershed Community I and E	$0.00	$15,000.00	All Sources	998187030	On Sched.	upper sevier SCD
2003	16	Rees Creek Demo / Echo Creek WS Project	$37,467.00	$0.00	Agriculture	998187030	On Sched.	summit SCD
2003	17	Soldier Crk WS/ Span. Fork Riv. WS CRMP (cont.)	$0.00	$132,000.00	Agriculture	998187030	On Sched.	timp-nebo SCD
2003	18	San Pitch River WS Proj. - TMDL Impl.	$0.00	$113,300.00	Agriculture	998187030	On Sched.	SANPETE SCD
2003	19	EQ East Cnyn In-Stream Flow & Alt.s Study	$0.00	$75,000.00	All Sources	998187030	On Sched.	utah dept. of enviro. qual.
2003	20	EQ Utah Local WS Coordinating Council Support	$21,100.00	$0.00	All Sources	998187030	On Sched.	JEFF SALT
2003	21	EQ Little Cottonwood Creek	$0.00	$40,100.00	Historical Pollutants	998187030	Completed	salt lake county commission
2003	22	EQ Onion Creek Streambank Stability Demo. Proj.	$0.00	$30,000.00	Hydromodification	998187030	On Sched.	Grand County
2004	01	USU Ext. Statewide NPS Pollution I and E (cont.)	$39,230.00	$0.00	All Sources	998187040	On Sched.	USU EXT/ NANCY MESNER
2004	02	Ag. WS Improvement Proj. - UFBF (cont.)	$45,000.00	$0.00	Animal Feeding Oper's	998187040	Completed	utah farm bureau federation
2004	03	Utah Potential CAFO Tech.Assist. Team - (cont.)	$84,870.00	$65,130.00	Animal Feeding Oper's	998187040	On Sched.	utah assoc. of cons. districts
2004	04	AFO Manure Management - continuation	$199,400.00	$114,000.00	Animal Feeding Oper's	998187040	On Sched.	utah assoc. of cons. districts
2004	05	Fremont River TMDL Implementation – cont.	$0.00	$100,000.00	Agriculture	998187040	Completed	Fremont River SCD
2004	06	San Pitch River WS TMDL Impl. - (cont.)	$0.00	$200,000.00	Agriculture	998187040	On Sched.	SANPETE SCD
2004	07	Upper Sevier River WS TMDL Impl. (cont.)	$0.00	$294,600.00	Agriculture	998187040	On Sched.	upper sevier SCD
2004	08	Scofield Reservoir TMDL Implementation (cont.)	$0.00	$18,000.00	Agriculture	998187040	Completed	PRICE RIVER SCD
2004	09	EQ TMDL Dev./ Impl. and WS Planning Proj.	$192,000.00	$128,000.00	All Sources	998187040	Completed	utah dwq
2005	01	EQ Bear River Streambank Stabilization Proj.	$36,850.00	$0.00	Agriculture	998187050	On Sched.	Bear Lake Reg. Commission
2005	02	EQ TMDL Impl. & Wtrshd Plnning/W Coordinators	$68,750.00	$251,250.00	Agriculture	998187050	Completed	
2005	03	EQ Onion Creek TMDL Implementation	$0.00	$93,250.00	Other NPS Pollution	998187050	On Sched.	Grand County
2005	04	EQBear River Information and Education Outreach	$0.00	$41,600.00	All Sources	998187050	On Sched.	
2005	05	Ground Water Vulnerability to Pesticides - UDAF	$44,000.00	$0.00	Agriculture	998187050	Not Initiated	utah dept. of ag. & food
2005	06	Ag. WS Improvement Proj. - UFBF (cont.)	$47,500.00	$0.00	Animal Feeding Oper's	998187050	Completed	utah farm bureau federation
2005	07	Utah Potential CAFO Tech.Assist. Team - (cont.)	$150,000.00	$0.00	Animal Feeding Oper's	998187050	On Sched.	utah assoc. of cons. districts
2005	08	San Pitch River WS TMDL Impl. - (cont.)	$0.00	$225,000.00	Agriculture	998187050	On Sched.	SANPETE SCD
2005	09	Upper Sevier River WS TMDL Impl. (cont.)	$0.00	$225,000.00	Agriculture	998187050	On Sched.	upper sevier SCD
2005	10	Scofield Reservoir TMDL Implementation (cont.)	$0.00	$25,200.00	All Sources	998187050	On Sched.	PRICE RIVER SCD
2005	11	Fremont River WS TMDL Impl. - (cont.)	$0.00	$100,000.00	Agriculture	998187050	On Sched.	Fremont River SCD
2006	01	USU Ext. Statewide NPS Pollution I and E (cont.)	$35,420.00	$0.00	All Sources	998187060	On Sched.	USU Ext. / Nancy Mesner

FY	#	Project Title	319$ Base	319$ Incr.	NPS Category Name	Grant #	Proj. Status	Contractor Name
2006	02	Groundwater Vulnerability to Pesticides	$34,000.00	$0.00	Other NPS Pollution	998187060	Not Initiated	
2006	03	Rees Creek / Echo Creek WS Project – cont.	$40,200.00	$0.00	Agriculture	998187060	On Sched.	
2006	04	Fremont River WS TMDL Impl. - (cont.)	$0.00	$100,000.00	Agriculture	998187060	On Sched.	Fremont Riv WS St'ring Cmte
2006	05	San Pitch River WS TMDL Impl. - (cont.)	$0.00	$200,000.00	Agriculture	998187060	Not Initiated	
2006	06	Scofield Reservoir TMDL Implementation – cont.	$0.00	$20,200.00	Agriculture	998187060	On Sched.	San Rafael SCD
2006	07	Middle Bear River TMDL Implementation – cont.	$0.00	$37,500.00	Agriculture	998187060	On Sched.	Cache Co. Local Work Group
2006	08	West Colorado Watershed TMDL Implementation	$0.00	$70,000.00	Agriculture	998187060	On Sched.	Price-SnRf-Muddy WS Cncl
2006	09	Middle Sevier River WS TMDL Implementation	$0.00	$104,680.00	Agriculture	998187060	On Sched.	Sevier Conservation District
2006	10	Upper Bear River Streambank Stabilization	$34,000.00	$0.00	Agriculture	998187060	On Sched.	Bear Lake Reg. Commission
2006	11	Spawn Creek Bank Restoration	$34,000.00	$0.00	Agriculture	998187060	On Sched.	
2006	12	Cedar Mountain GW Monitoring	$21,800.00	$0.00	Other NPS Pollution	998187060	Completed	
2006	13	Local WS Coordinators (TMDL Impl./WS Planning)	$100,480.00	$287,320.00	Agriculture	998187060	On Sched.	UT Div. H20 Qu-TMDL Sect.
2006	14	Virgin River Watershed TMDL Implementation	$0.00	$100,000.00	Urban RO/Stormwater	998187060	On Sched.	Washington Co Cnsrvncy Dst
2007	01	USU Ext. Statewide NPS Pollution I and E (cont.)	$19,900.00	$0.00	All Sources	998187070	On Sched.	USU Ext. / Nancy Mesner
2007	02	Agricultural Watershed Improvement Project	$24,000.00	$0.00	All Sources	998187070	Not Initiated	Utah Farm Bureau Federation
2007	03	EQ Bear Riv Info Outreach-Coord of WQ Activities	$41,600.00	$0.00	All Sources	998187070	On Sched.	
2007	04	Jordan River Watershed Council Capacity Building	$35,350.00	$0.00	All Sources	998187070	On Sched.	
2007	05	Oil and Gas Sediment and Erosion Control	$6,000.00	$0.00	Resource Extraction	998187070	Not Initiated	UT Div. H20 Qu-TMDL Sect.
2007	06	Septage Treatment, Handling & Disposal Practices	$29,500.00	$0.00	All Sources	998187070	On Sched.	USU-UT H2O Res Lab-JSims
2007	07	Utah Local WS Coordinating Council Support	$30,000.00	$0.00	All Sources	998187070	Not Initiated	
2007	08	Utah Riparian Restoration & Cons. Easement Proj.	$20,450.00	$320,470.00	Hydromodification	998187070	On Sched.	UT Div. H20 Qu-TMDL Sect.
2007	09	Alta Fen Rehab (Implem. TMDL)	$0.00	$87,500.00	Resource Extraction	998187070	Not Initiated	Salt Lake Co-Steve Jensen
2007	10	Virgin River WS TMDL Implementation - cont.	$0.00	$33,730.00	Urban RO/Stormwater	998187070	On Sched.	Washington Co Cnsrvncy Dst
2007	11	Middle Sevier River WS TMDL Impl. - cont.	$0.00	$100,000.00	Agriculture	998187070	Not Initiated	Sevier Conservation District
2007	12	San Pitch River WS TMDL Impl. - (cont.)	$0.00	$153,000.00	Agriculture	998187070	Not Initiated	SanPete County SCD
2007	13	Upper Sevier River WS TMDL Impl. (cont.)	$0.00	$155,000.00	Agriculture	998187070	On Sched.	upper sevier SCD
2007	14	West Colorado River WS Improvement Project	$0.00	$70,000.00	Agriculture	998187070	On Sched.	Price-SnRf-Muddy WS Cncl
2008	01	Upper Bear River WS – FY2008	$30,000.00	$0.00	Agriculture	998187080	Not Initiated	Bear Lake Reg. Commission
2008	02	Middle Bear River TMDL Implementation – cont.	$0.00	$212,500.00	Agriculture	998187080	Not Initiated	Cache Co Local Work Group
2008	03	Lower Bear River, TMDL Implementation – cont.	$0.00	$32,100.00	Agriculture	998187080	Not Initiated	Eastern Box Elder Local WG
2008	04	Strawberry River TMDL Implementation	$61,600.00	$0.00	Agriculture	998187080	Not Initiated	Wasatch Co Cons'rvat'n Dist.
2008	05	San Pitch River WS TMDL Impl. - (cont.)	$0.00	$118,000.00	Agriculture	998187080	Not Initiated	SanPete County SCD
2008	06	Middle Sevier River WS TMDL Impl. - cont.	$0.00	$137,085.00	Agriculture	998187080	Not Initiated	Sevier Conservation District
2008	07	West Colorado River WS Improvement Project	$0.00	$70,000.00	Agriculture	998187080	Not Initiated	San Rafael Conservation Dist
2008	08	Matt Warner/Pot Creek	$64,800.00	$0.00	Agriculture	998187080	Not Initiated	Uintah SCD
2008	09	Scofield Reservoir Riparian Revegetation	$0.00	$35,500.00	Hydromodification	998187080	Not Initiated	Price River SCD
2008	10	Local WS Coordinators (TMDL Impl./WS Planning)	$85,485.00	$314,515.00	All Sources	998187080	On Sched.	UT Div. H20 Qu-TMDL Sect.

IV. Nonpoint Source Pollution Management Program (Update on Goals, Objectives and Tasks)

A. Status Report on Tasks in the Nonpoint Source Pollution Management Plan

The following objectives and tasks are contained in the upgraded NPS Pollution Management Plan approved by EPA on September 15, 2000. Following each task is a summary of actions and progress describing work efforts completed or in progress through the Fall of 2008 for each task.

Objective 1: Environmental Protection: The mission of the NPS Pollution Management Program and the Watershed Approach is to more effectively achieve Utah's environmental protection goals which are set out in part in Utah Administrative Code R317-2 as (1) to conserve waters of the state; (2) to protect, maintain, and improve the quality of waters of the state for public water supplies, species protection and propagation, and for other designated beneficial uses; and (3) to provide for the prevention, abatement, and control of new or existing sources of polluted runoff. To achieve these long term goals, the Division of Water Quality establishes the following schedule in conjunction with local, state and federal partners to identify, prioritize and restore the most serious water quality problems in the state; protect those waters known to be of the highest quality; and control major pollutants including TDS, sediments, nutrients, metals, BOD, pathogens and others.

Utah has committed to completing TMDLs for impaired waters on the 1998 303(d) list in about twelve years, or by 2010. In order to accomplish that goal, some 10 TMDL plans per year will be prepared. Multiple TMDL's will be completed in each plan, the exact number depending on the size of the watershed and the nature of the impairments. Implementation of each watershed Plan is estimated to take from five (5) to ten (10) years depending on size and complexity of the watershed. The goals for full implementation of the plans and projected achievement of beneficial use will occur between 2015 and 2020. The following tasks will be conducted to achieve the goals described above. (All tasks are numbered sequentially for easier reference). Also, more specific integrated goals and objectives with time frames will be developed in each watershed TMDL plan that will relate to maintaining high quality waters and restoring impaired beneficial uses.

Task 1. Develop statewide watershed/basin prioritization process and criteria for TMDL development by June 2001.

Status: **This task was completed with the criteria described as part of the FY-2002 and subsequent lists as submitted to EPA. The criteria included such factors as 1) severity of pollution, 2) UPDES permitting, 3) basin assessment and planning cycle, 4) existing water quality projects and activities within the watersheds, 5) economic and social impacts on communities, business and citizens, and 6) degree of public interest and support.**

Task 2. Work with local basin/watershed committees stakeholder to target BMPs through preparation of water quality management TMDL plans in watersheds now impaired as identified on 303(d) list and selected for improvement in the next 5 years. Prepare ten to twelve TMDL plans per year.

Status: **Please refer to the TMDL Schedule in Part X of this report. As of January 2009 we have received EPA approval on the TMDLs submitted for Newcastle Reservoir, Red Fleet Reservoir, Steinaker Reservoir, and Brough Reservoir. Several delisting and site specific criteria recommendations have also been proposed including Big East Lake, Chicken Creek, Lower Gooseberry Reservoir, Mill Hollow Reservoir, Ninemile Reservoir, Piute Reservoir, Recapture Creek Reservoir, Yankee Meadow Reservoir, Tony Grove Reservoir, and Manning Meadow Reservoir.**

Any waters listed will comply with EPA guidelines to complete TMDLs within a 13 year time frame. According to the current pace to complete TMDLs within their allotted time frame of 13 years since first listing, an average of 19 TMDLs will need to be completed by 2010. The Division anticipates completing 24 waterbody/pollutant combination TMDLs by the end of FY 2009.

Task 3. Complete at least two basin or watershed intensive survey/assessment reports each year. Provide report to basin/watershed steering committees and develop waterbody priorities and schedule for TMDL development within each basin.

Status: **Basin intensive monitoring surveys and assessments were completed for the Uinta Basin, the Sevier River, Cedar/Beaver and the Lower Colorado River Basins by DWQ staff and the results will be included in the 2008 Integrated Report. Fact sheets for previous Basin assessment reports have been posted on the division's WEB site at www.waterquality@utah.gov.**

Task 4. Complete development of TMDL plans for impaired water bodies according to schedule submitted to EPA Region VIII. Submit priority TMDL targeted water bodies to EPA every two years.

Status: **See statements under Task 2 above.**

Task 5. Conduct summary assessments of Utah's 10 major hydrologic basins every five years (1998, 2003, etc.)

Status: **Utah's year 2008 Integrated Report (IR) is nearly finished and ready for public notice at the time of this report. The IR will consist of three parts, the methods, 305(b) assessment and the impaired waters list. Comments received from EPA and others are nearly addressed and IR will be re-public noticed in mid-2009. Final submission to EPA will occur in mid-2009.**

Task 6. Prepare TMDL implementation report three (3) to five (5) years following approval of TMDL. Gather data to evaluate progress in achieving watershed restoration goals to reduce NPS pollution causes and restore beneficial uses. Ongoing.

Status: **Baseline water quality data and other biological information are being gathered in priority watersheds by DWQ on a 5-year rotation. Such data**

and information on stream morphometry, channel stability, riparian habitat, fishery populations and water quality will aid in documenting resource improvements and attainment of beneficial uses. Such information and data are included in final project reports as available. Final reports where completed major NPS watershed implementation projects including the Little Bear River, Chalk Creek, Otter Creek and Beaver River. Interim final reports were submitted for Cub River and Upper, Middle and Lower Bear River.

Task 7. Develop annual ground water work program that continues to enhance ground water protection in Utah. Incorporate into PPG as negotiated with EPA.

Status: This task is completed annually as part of the development of the Performance Partnership Agreement with EPA. An End-of-Year Report is also prepared and submitted to EPA in December of each year.

Task 8. Prepare an upgraded urban/storm water runoff component to the NPS Pollution Control Program. Complete by June 30, 2003. The upgrade will focus on education components and demonstration projects to evaluate best management practices and development of categorical urban and construction BMP manuals and guidance documents.

Status: A rough draft of the plan was prepared in 2005/2006 by the NPS coordinator but as not been reviewed by DWQ staff. No progress was made in FY-2008 to complete the storm water plan due to other program priorities.

Objective 2: Improve Program Efficiency: Implementing a Watershed Approach will streamline use of resources as roles are clarified and coordinated within and across programs and agencies. Redundancy in program activities is anticipated to be reduced or eliminated. Streamlining can also occur when resources are geographically focused. This goal will be accomplished through the formation of watershed steering committees coordinated or integrated with USDA/SCD Local Workgroups to achieve just one local advisory group per watershed area.

Task 9. Provide technical assistance and education in the formation of TMDL/Watershed advisory committees. (Ongoing).

Status: Division TMDL/Watershed Coordinators are currently providing technical assistance and support to the following local watershed committees:

Cub River*	Echo/Upper Weber*	Uinta River
Spring Creek*	East Canyon Ck*.	Upper Sevier River*
Little Bear River*	Jordan River*	Middle & Lower Sevier River*
Newton Creek	Little Cottonwood Ck*	San Pitch River*
Lower Bear River*	Provo River	Ashley Creek
Middle Bear River*	Spanish Fork*	Price R/San Rafael*
Upper Bear River*	Fremont River*	Millcreek/Onion Ck*
Weber River*	Virgin River*	Otter Ck*/E.Fk. Sevier*
Silver Creek	Beaver River*	Esclante/Paria River*

Strawberry Res.* Onion Creek*

Twenty-five (*) of the 35 watersheds are sponsors of current or proposed 319 projects.

Meetings of the UWCC were held in Richfield in March and November in Logan with a summer tour in Salt Lake County. Three local WCs left for permanent agency positions. DWQ has replaced one in the San Pitch River basin and 2 are in recruitment in the Upper Weber and in the Uinta Basin.

Task 10. Report annually the number of these TMDL/Watershed advisory groups that are formed each year and that are being actively supported.

Status: See Task 9. This is also reported annually in the PPA 'end-of-year' report.

Objective 3: Increase Program Effectiveness: Implementing a statewide watershed management approach for nonpoint source control will increase the effectiveness of water quality programs by increasing data reliability, improving assessments, facilitating meaningful selection of management priorities, fostering better TMDL implementation criteria, broadening input to management solutions, and enhancing continuity in management decisions and bringing all agencies' focus on established priority areas.

The State needs to further develop its watershed selection and prioritization methods for assessment and NPS project implementation.

Task 11. Develop a method to categorize the states water bodies or watersheds.

Status: This task was completed initially during the development of the Unified Watershed Assessment. State has chosen to continue using the 303(d) list to set priorities for TMDL development and implementation according to criteria described therein. (No change to this procedure warranted in FY-06)

Task 12. Delineate the water bodies/sub-watersheds and produce GIS coverages. (June 2001).

Status: The delineation of water bodies for Utah has been completed by RTI. The creation of numerous specific GIS maps is ongoing to support DWQ programs.

Task 13. Review water quality assessment data, 303(d) list, land use inventories in conjunction with local steering committees to set priorities within each basin according to basin specific criteria. (Ongoing).

Status: This activity is occurring in each of the watershed areas with impaired water bodies where TMDLs are currently being developed. Please refer to Part X.C. for a list of TMDLs in progress and location map. Basin specific priorities are determined during the TMDL development process as pollution load removals are allocated to various sources. Such information is contained in individual TMDL Plans as submitted to EPA.

Task 14. Produce GIS coverages identifying priority ratings for high, medium and low watershed restoration categories based on water quality. (June 2001).

Status: **This task will be postponed and may or may not be done pending further actions deemed necessary pursuant to new TMDL regulation and further guidance from EPA. Current selection criteria for watershed TMDL development is described in 303(d) list narrative and is reviewed every two years. The latest version was the year 2006 Integrated Report with 303(d) list submitted to EPA prior to April 1, 2006. The Draft 2008 IR was prepared for submission April 1, 2008. Extensive comments were received from EPA and others. DWQ is presently finalizing the report to re-public notice it in early 2009.**

Objective 4: Improve Public Participation: Implementing the Statewide Watershed Approach to deal with nonpoint source problems has increased public awareness of polluted run-off issues. Public input is incorporated into local management decisions on resource allocation and the establishment of water quality management plans and goals for specific watersheds as TMDLs are developed and implemented. Public input is also vital in identifying appropriate measures of success for use in documenting environmental improvements.

Task 15. A public involvement process will be carried out with the development of all watershed/TMDL plans. This process is currently underway and will continue. The process includes initial scoping issues and problem identification, data/results review, prioritization, source identification, goals development, allocation of load reductions and responsibility, review of draft and adoption of final TMDL plan. (Ongoing).

Status: **Local watershed committees as noted above in Task 9 are conducting this public involvement process in conjunction with DWQ staff in each of the watershed areas as TMDLs are developed. Public meetings regarding the proposed TMDLs and watershed tours are conducted at key steps in the process.**

Task 16. Information and education projects will continue to be funded by 319 funds. Projects are selected, reviewed and funded each year according to specific I&E criteria. Projects include statewide activities and projects designated to priority categories such as AFO/CAFO inventory and assessment, volunteer monitoring, TMDL development, and toward specific watershed areas such as the Bear River. (Ongoing).

Status: **Utah has maintained a very active I & E component to the NPS Program. About 2.9 million dollars have gone to I & E projects and functions since 1990 including a full time I & E coordinator at the Utah Department of Agriculture and Food. For a brief summary of current I & E activities, refer to Chapter III in this report. For FY-08, $12,890 or only 1.1% of the FY-08 funds are devoted to information/outreach activities in various watersheds. See Table 2 in Chapter II for a list of these I & E related projects.**

Task 17. By May 2001, review and revise as needed the Information and Education Strategy for the NPS Program to reflect closer program integration with the Watershed Approach and TMDL development and implementation.

Status: **Review of the existing strategy has begun. A committee was formed and has met to review strategy and direction. An outline of the strategy was prepared and comments received. A draft of the strategy was completed in 2007 and was not finished in 2008 due to competing work assignments at UDAF. The strategy is dynamic and implementation is ongoing.**

Task 18. Consider preparing 'public friendly' multi-purpose NPS program documents including summary of NPS Pollution Management Plan, WRASs and 319 Annual Program Report.

Status: **Efforts are focused on completing the FY-2008 annual program report. The direction of this task has changed slightly with no current plans to do a 'public friendly' summary of NPS Pollution Management Plan. The DEQ and UDAF have had some discussion regarding preparing a 'corporate style' annual report but no resources were devoted to it in 2008.**

Objective 5: Integrate, Review and Focus Statewide Management Programs: Focusing the management efforts of several programs in the same geographic priority area and coordinating them around a fixed schedule of activities within the watershed management cycle will help achieve an unprecedented level of integration among water quality programs. Furthermore, the structure will help federal agencies comply with Executive Order 12088 to integrate management efforts across federal, state, and local levels of government by providing a common point of reference and creating a common set of management priorities thus assuring that problems are not transferred between environmental media.

Task 19. Continue to foster program integration and interagency technical and financial assistance through active support and participation of locally led and empowered watershed committees and, including at the state level, the Utah Partners for Conservation and Development and the NPS Task Force. Complete revision of Task Force Charter pursuant to upgraded Management Program by December 2001.

Status: **To promote program integration and interagency technical and financial assistance for TMDL development and watershed planning, DWQ in concert with local watershed committees have formed the Utah Watershed Coordinating Council. (See Task 9 above.)**

The NPS Task Force is functioning according to the Charter. The UDAF, as chair, conducted three meetings during 2008. In 2009, the DEQ will assume the chairmanship of the Task Force. Minutes of the meetings are available upon request at UDAF who serves as staff support to the Task Force.

Task 20. By December 2000, establish a schedule with the Forest Service and Bureau of Land Management to review and revise Memorandum of Understanding to

address federal consistency. Consider adding the State Division of Forestry, Fire and State Lands to the MOU.

Status: **A small team composed of FS, BLS, UDAF, NPS, FFSL and DWQ worked on revising the MOU during calendar year 2008. The DRAFT is now complete and is be reviewed by agency management and legal staffs. The MOU should be completed in FY-2009.**

Task 21. Review and upgrade the Hydrologic Modification Component of the NPS Program by 2002 to include habitat modification. Integrate implementation of the revised plan into the TMDL/Watershed planning process.

Status: **No effort was devoted to this task during FY-2008 because of staff commitments to other projects such as the beneficial use assessment on Farmington Bay and their surrounding wetland complexes. A subcommittee of the Task Force co-chaired by DEQ and UDAF was formed to review the current plan and outline changes. Work on the plan addendum will continue in 2009 and will be coordinated closely with USU's 319 funded PIP related to studying and developing BMPs for the flushing of small reservoirs to minimize downstream water quality and fishery impacts. The study being conducted by the Utah Water Research Laboratory at USU is progressing and will continue into 2009. The findings and recommendations of that study will be incorporated into the revised NPS Plan for Hydrologic Modification.**

Objective 6: Improved Data Management: The more efficient collection, storage, analysis, and assessment of data to support watershed planning will improve DWQ's data management capabilities. The relationships between data and management decisions will be made more explicit through watershed management unit planning, compelling programs to improve quality assurance and quality control.

Task 22. Develop as part of the DWQ annual monitoring program strategy components related to NPS Program including ambient NPS monitoring and monitoring of specific watershed projects. Components of this strategy also include stream and lake assessment, permit compliance, ground water and WLA/TMDL development. Review and update the Division's Annual Program by June of each year.

Status: **This task was completed for FY-2008/2009. The DWQ's current monitoring program strategy is on DEQ/DWQ WEB site. (www.waterquality@utah.gov) In early 2007, the DWQ completed a long-term comprehensive monitoring strategy according to EPA guidance. In FY-2009 the DWQ plans to prepare a new comprehensive strategy based on evolving needs and priorities and national and Regional direction from EPA.**

Task 23. Assure annually that individual 319 projects and sponsors have adequately designed sampling and analyses plans to evaluate project success and document

water quality improvements. Prepare monitoring guidance for project sponsors. (Ongoing)

Status: **Individual project monitoring plans were reviewed and comments given to project sponsors. Written monitoring QAPP/SAP guidance was prepared in 2004. This guidance was used by DWQ watershed coordinators to aid 319 project sponsors. Assistance was provided to project sponsors in FY2008 to help prepare monitoring SAP/QAPPs and make revisions. All 319 projects that involve the gathering of environmental data have QAPPs.**

Task 24. Develop a website for water quality data by July 1, 2001.

Status: **This task has been completed. All of the water quality data collected by the Division is now accessible to the public via DWQ WEB site which provides a link to the EPA STORET data base. The DWQ water quality database also has an operation and reporting system called 'Blue Fish'. 'Blue Fish' enables all DWQ staff to access the database, retrieve and manipulate data to analyze and produce a variety of reports. The public has access to DWQ data through the EPA's STORET warehouse website.**

Task 25. WQ will continue to negotiate annual cooperative monitoring programs with Forest Service and BLM. Priority will be given to monitoring programs that develop information in support of the state's 305(b) Water Quality Assessment Program and on data needs to enhance development of TMDLs.

Status: **Cooperative programs executed for FY-2008 included Ashley N.F., Dixie N.F., Fishlake N.F., Manti-LaSal N.F., Uinta N.F., Wasatch-Cache N.F., ten BLM Field Offices, Canyon Lands National Park, Central Utah Water Conservancy District/Jordanelle Technical Advisory Committee, Salt Lake City and Davis County Health Department. Please refer to DEQ/DWQ WEB site (www.waterquality@utah.gov) for a copy of the Water Quality monitoring program.**

Task 26. Complete base GIS coverages and specific water quality information coverages for WMU and sub-watershed areas as requested for specific TMDL development. Coverages are created as requested by DWQ staff for basin reports and plans.

Status: **Numerous outputs have been produced on a continuous basis during the past year by the Division's GIS specialist. Outputs range from specialized maps for program staff in permits and GW to base maps for TMDLs and watershed-based plans and assessment maps for water quality reports (a listing of outputs/products is available if upon request). Numerous new and revised maps were completed to support the 2008 Integrated Report including lists of various categories of impaired waters.**

Objective 7: Improve Working Relationships at All Levels of Government and Private Sector: DWQ anticipates that coordinating management programs and activities around priority watersheds with a focus on TMDL development and implementation will lead to improved working relationships among a host of stakeholders. The WA framework facilitates cooperation

through planned outreach and stakeholder participation in watershed planning and management strategy development and implementation. Also, the watershed planning process and written watershed management plans with TMDLs for impaired waters provide points of reference for all participants.

Task 27. Annually, hold program coordination meetings with the Forest Service, BLM and NRCS. Review monitoring programs, implementation activities and priorities, and watershed assessment and planning functions related to TMDL development and NPS pollution control.

Status: **Task was completed. A meeting was held in Moab on February 21 and 22, 2008 with the Forest Service and BLM staff covering most of Utah. Issues and information discussed included monitoring programs, including protocols, QA/QC and reference sites, TMDL development activities, water quality standards, water quality assessment and 303(d) listed waters, mercury issues, 319 grant program, UDAF Grazing Improvement program and USDA/NRCS conservation funding. BLM and FS presented highlights of actions and projects occurring in their areas and development of TMDLs through an IGA with EPA. Follow-up actions resulting from the meeting included the scheduling of monitoring QA/QC training workshops, completion of cooperative monitoring programs and the scheduling of summer/fall site visits.**

Task 28. Continue to be an active partner in the Utah Partners for Conservation and Development. DEQ will serve as chairman of the Director's Council on a rotational basis.

Status: **DEQ continued to serve actively on the Utah Partners for Conservation and Development. Reports on DEQ/DWQ activities are made regularly at Partners meetings on topics such as the AFO/CAFO Strategy implementation, 303(d) list, TMDL development, Great Salt Lake selenium study and related issues and water quality standards. Input was provided to the UtahPCD on its ongoing mission and the development of a communications/outreach strategy.**

Task 29. Improve federal consistency with NPS Management Plan and state water quality goals by establishing an annual BMP audit process schedule with Forest Service, BLM and Division of Forestry, Fire and State Lands. (June 2001).

Status: **A one-day tour was conducted on August 13, 2008 with the Uinta-Wasatch-Cache National Forest to review BMPs associated with riparian protection project on American Fork River and campground renovation to minimize soil erosion and bank sloughing, fire re-habilitations projects and grazing management measures. See more detailed report in Chapter VIII.**

Task 30. Continue to provide water quality sampling training to other agencies such as Forest Service and BLM for sampling consistency.

Status: **This task is completed annually by the Monitoring Section. Training was provided to all agency personnel involved in conducting cooperative monitoring programs. An estimated fifty to sixty agency staff from mostly the BLM and Forest Service area and district offices were trained in FY-08. This function is to help assure quality of the database. Samples are not accepted by DWQ and State Health Lab unless they are collected by a trained individual. Training was also provided on DWQ bio-assessment methods.**

Task 31. Work with private sector to strengthen involvement in the NPS Management Program. Develop action plan by June 2001.

Status: **No changes to the NPS Task Force were deemed necessary in FY-08.**

Objective 8: Increased Accountability of Agency and Staff: The Watershed Approach (WA) Management/TMDL unit planning and implementation process is well defined with specific steps and performance objectives. Watershed management plans include development of TMDLs with implementation plans. The planning implementation process provides ample basis upon which DWQ management and the public can evaluate the performance of DWQ and partner agencies. A few of the major tasks from the Annual NPS workplan have been restated here to highlight management aspects of the program in support of the Watershed Approach.

Task 32. Work with 319 project sponsors to assure that mid-year and annual progress reports are submitted and loaded into GRTS.

Status: **Progress reporting decreased in 2008 due turnover in personnel and workload. According to UDAF and DEQ figures the overall completion rate is about 70% for entry of mid-year and annual reports into the GRTS database. In an effort to reduce reporting burden and frequency, only annual reports will be required in FY-09. Reimbursements will not be processed unless a project is current with submission of progress reports.**

Task 33. Provide assurance to EPA that GRTS is updated and current on semi-annual basis.

Status: **This activity continued to be a high priority for FY-2008 to keep GRTS updated and current for all projects. Upon receipt of progress reports, DEQ review the reports and forwards them to UDAF for entry into GRTS.**

Task 34. Submit 319 NPS Annual Report to EPA as negotiated.

Status: **Work on the FY-2008 Annual Report is progressing. The draft report or parts thereof will be sent to EPA for review by February 15, 2009. The 2007 Annual Report was finally posted on the DWQ web site at www.waterquality.utah.gov.**

Task 35. Conduct annual 319 project solicitation and review in timely manner.

Status: **The targeted project solicitation process went well during FY-2008 for 2009 projects. Project needs and funding levels were discussed with local watershed coordinators during March – May. The formal request for project submission**

was distributed May 30, 2008 with proposals due by August 1st. DWQ reviewed some 11 proposals totaling just over 1.6 million dollars. Eleven projects were selected for full and partial funding and presented to the NPS Task Force for comment. Review comments prepared by the state and EPA have been sent to project sponsors and all of the PIPs have been revised and returned to the state and EPA for final approval.

Task 36. Prioritize expenditure of 319 funds in priority watersheds with impaired waters or approved TMDLs.

Status: **Project evaluation criteria are used to target 319 funds toward 303(d) listed waters or those with approved TMDLs. For FY-2008 all eleven project proposals selected for funding were targeted completely or at least partially toward 303(d) waters or those with approved TMDLs. Thus, nearly the entire estimated amount of $1,126,500 was targeted toward achieving TMDLs**.

Task 37. Conduct a comprehensive NPS Program management review every five years beginning in January 2005.

Status: **This is a future task. The plan was upgraded in FY-2000 and approved by EPA on September 15, 2000. The DEQ is currently working on three plan addendums, one for urban storm water, a revision of the hydrologic modification management plan and a new component for abandoned and inactive mines. The storm water plan has been on hold due to other program demands. The mining component is targeted for draft in the spring of 2009 and the hydrologic modification plan revision for perhaps the spring of 2010.**

Task 38. Conduct a review of categorical BMPs and update as necessary every two years.

Status: **At this time, it is felt that agriculture BMP's are adequately described in USDA NRCS field office technical guides. Silvicultural practices are sufficiently covered in the Division of Forestry, Fire and State Lands, Forest Water Quality Guidelines and the Forest Service, Soil and Water Conservation Practices Manual. Practices for urban storm water have been compiled as part of the plan addendum. BMP's related to hydrologic modification will be reviewed as part of the plan revision during the next two years. The draft NPS Management Plan for Abandoned Mines contains a BMP section briefly describing and referencing currently acceptable mining related BMPs.**

Task 39. Conduct a 'final project review' at the closeout of each 319 project to determine what worked, what didn't, final disposition of all outputs and concluding recommendations.

Status: **Review meetings were held between DEQ and UDAF to discuss individual projects, set schedules for obtaining final reports and review progress obtaining, reviewing and approving final reports. At the end of FY-2008 the**

FY-99 grant was closed and in early FY2009, the FY-2000 grant was closed. A total of 35 project Final Reports were reviewed, comments rendered and addressed and final reports approved in order to successfully close the grants.

Task 40. DEQ and UDAF will work with project sponsors to produce annual project 'fact sheets' or bulletins which will summarize status and actions of each project.

Status: **A total of nine individual project "Fact Sheets" were written during 2008. This effort is being coordinated by USU Extension Service with assistance by UACD, UDAF and DWQ and under the 'Logo' for the UtahPCD, the Utah Partners of Conservation and Development. USU Extension printed and distributed the watershed fact-sheets. They may be viewed on the DWQ web site at www.waterquality.utah.gov.**

B. End-of-Year Report on the Performance Partnership Agreement-319 Staffing and Support Portion (Prepared December 2008).

The following work plan and annual status report was part of the FY-2008 End-of-Year Report for the DEQ/EPA Performance Partnership Agreement. This work plan constitutes a summary of TMDL development/watershed planning, water quality assessment and nonpoint source activities conducted by the Division of Water Quality. This work plan serves in part as the work plan for the CWA Section 319 Staffing and Support portion of the Performance Partnership Grant and the 604(b) Water Quality Management Planning Grant.

WATER QUALITY /WATERSHED PROTECTION AND MANAGEMENT

FY-08 PERFORMANCE PARTNERSHIP AGREEMENT
End-of-year Report – December 2008

WATER QUALITY MANAGEMENT/NONPOINT SOURCE

1. Maintain, develop and continue to implement the Nonpoint Source Program based on strong State and local institutional capabilities using the Watershed Approach in support of TMDL development. **WTR**

Measures:

a. Conduct 319 funding process in an effective and efficient manner according established milestones.

STATUS: The FY-08 funding cycle is complete. The grant was receive in May and contract and workplans were executed in October. Only one small PIP for $35,500 remains to be approved and contracted.

b. Update GRTS semi-annually by entering mid-year and annual report information according to July 1st and January 1st deadlines. (NPS Plan Task 33)

STATUS: Nearly all annual reports were received and sent to UDAF for GRTS entry. Four reports are pending and should be entered prior to Dec 31, 08.

c. Submission of NPS Annual Report by January 31 of each year.
STATUS: The annual report was completed and sent to EPA on Feb 4, 2008 and was posted on DWQ website at www.waterquality.utah.gov.

d. Complete revision of the NPS stormwater/urban run-off plan by May 1, 2008.
STATUS: The DWQ was unable to devote resources to this activity during the past year.

e. Complete the Abandoned and Inactive Mine component to the state's NPS Management Plan and submit to EPA for review by December 1, 2007.
STATUS: The TAC met and reviewed the draft plan including change made to the plan relative to comments receive two year ago on the first draft. Minor revisions to the plan were made by Salt Lake County based on a thorough review by BLM and the Forest Service. DWQ plans to re-public notice the Plan by February 09.

f. Participate with DWR through its Blue Ribbon Fishery program in the acquisition/protection of stream corridors.
STATUS: A conservation easement project is underway on Beaver Creek in Summit County. The DWQ plans to provide partial support using SRF NPS financial assistance revenue leveraged through Central Weber SID SRF loan. The site draft workplan prepared by Div. of Wildlife Resources and the conservation agreement and appraisal are handled by Utah Open Land.

g. Report non-319 funding in watershed protection and restoration projects in project annual and final reports. (NPS Plan Task 34)
STATUS: These data are gathered as available and are include in project final reports.

h. Report progress in implementing Utah AFO/CAFO Strategy through semi-annual reports to 'partners' and an annual progress summary report. (NPS Plan Task 34)
STATUS: Reports are made regularly at UtahPCD, Utah Conservation Commission and NPS Task Force meetings and the AFO/CAFO committee meetings. An annual progress report is included in the Annual NPS Program.

i. Obtain final project reports from project sponsors and coordinate with EPA to obtain concurrence for grant closure in a timely manner.
STATUS: The DEQ worked closely with UDAF, local project coordinators and EPA to recently(October and November) close the FY-1999 and the FY-2000 NPS Cooperative Agreements. Some 35 projects were completed, final reports written, reviewed and approved over the past three years.

j. Implement best management practices appropriately and effectively and achieve natural resource improvements for 319 NPS Watershed Projects. Obtain available information of reductions in nonpoint source loadings for sediments, nitrogen and phosphorus, and improvements in water quality. Report load reduction and water quality information in project annual reports (GRTS), final project reports and NPS Program annual report. (NPS Plan Tasks 2, 6, 36 & 40, **WQ9)**
STATUS: Load reductions from animal waste projects are reported using the UAFRRI model. Other simple empirical models are used by watershed coordinators to estimate load

reductions. Such data are included in mid-year, annual and final project reports for selected applicable projects.

k. Number of watershed-based plans and water miles or acres covered, supported under State NPS Management Programs since beginning of FY-2002 that have been developed and number of watershed-based plans are being implemented per information reported in GRTS. (**WQ-27)** **WTR**

STATUS: Some fifteen TMDL/watershed plans have been developed and are all being implemented.

l. Number of waterbodies identified by States (in 2000 or subsequent years) as being primarily nonpoint source (NPS)-impaired that are partially or fully restored. Target for FY-2008 is 2 watersheds. (**WQ10**)

STATUS: Report one additional watershed that is substantially implemented – Beaver River watershed in Beaver County.

m. Number of developed Watershed Plans and identify those in progress. (NPS Plan Task 4) WTR

STATUS: Fifteen watershed plans are developed and currently nine are being implemented including: Lower Bear, Middle Bear, Cub, East Canyon, San Pitch, Scofield, Upper Sevier, Fremont, and Beaver River.

n. Number of basin steering and technical advisory committees formed and functioning. (NPS Plan Tasks 9 & 10)

STATUS: Approximately 28 local watershed committees are organized and functioning with DWQ in the development and implementation of TMDLs.

o. Number of priority NPS watershed areas where EQIP funds are being used. Report allocation of EQIP funds to 303(d) waters and approved TMDL watersheds. (NPS Plan Task 34)

STATUS: Precise information is not available from NRCS according to 12 digit HUC level or other watershed specific basis. According to EQIP allocation/contracts by county for FY-2007 and estimates of approved TMDLs for those counties, approximately 40% of EQIP funds were spent in approved TMDLs.

p. Number of priority watershed coordinator positions developed and functioning according to contract work plans. (NPS Plan Task 9)

STATUS: Ten local watershed coordinator positions are in place and functioning with contracts with DWQ. Recruitment is underway in the Upper Weber and Uinta Basin to fill vacant positions.

V. Selected Watershed Implementations Actions and NPS Load Reduction Estimates

Following are selected summaries of Local Watershed Coordinator implementation activities and recent estimates of nonpoint source load reductions.

San Pitch River

The new coordinator for the San Pitch River has recently been trained on the application of STEPL and will be submitting load reduction estimates with the annual report due in July of 2009.

The following narrative summarizes the activities of the San Pitch River Watershed Coordinator.

The San Pitch Watershed Coordinator Position was filled on September 2, 2008. Effort was immediately centered on spending out old funds and getting engineering completed for projects that have been delayed.

Improve upland management practices to reduce sediment and nutrient runoff to the river and its tributaries: Richard Christensen installed 3392 feet of pipeline and two water troughs to implement pasture management in priority upland areas.

Improve pasture condition and management to reduce runoff and sources of salinity: There were two pasture improvement projects completed in priority areas:

(1) Terry Mahoney built 1650 feet of cross fencing for pasture management and completed 30 acres of pasture seeding.

(2) Flo Mitchell completed 33 acres of spraying undesirable weeds and 33 acres of tillage and planting for pasture improvement.

UACD Engineer has completed the final design for two stream improvement projects (Lazy JW Ranch and Gary Richards), and the stream alteration permits are in place. These stream projects are scheduled to be completed this coming field season. UACD Engineer is also working on completing the final design for Mower/Garlic irrigation project, and a complex irrigation system, including a reservoir, for the Seeley Group.

NRCS Engineer is completing the final design for two complex stream improvement projects (Ed Jessen/Guy Farley). These stream projects are scheduled to be completed this coming field season.

All of the FY 03 money has now been spent and the FY 03 projects are all completed to the extent the projects will be completed.

Funding Yr	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Compl.*	*Load Reduction*
2003	*$113,300*	*Sediment Nutrients*	*580-Stream Protection 4650 Feet*	*100%*	
			382-Fence 8778 Feet		
			430-Irrigation Pipeline 2639 Feet		
			614-Watering Facility 7 EA		
			356 Dike 61 CY		
			587 Structure For water Control 1 EA		
			516-Stock Water Pipeline 6092 Feet		
			516-Pumping Plant for water control 1 EA		
			442-Irrigation system 58 AC		
			512-Pasture Planting 1030 AC		
			550-Range Planting 240 AC		
			314-Brush Mgt. 150 AC		
			595-Pest Mgt. 33 AC		

			324-Deep Tillage 33 AC		
2004	*$200,000*	*Sediment* *Nutrients*	*580-Stream* *Protection* *1000 Feet*	*69%*	
			512-Pasture Planting 33 AC		
			042-Seeding *279 AC*		
			314-Brush Mgt. 326 AC		
			382-Fencing *5365 Feet*		
			430DD-Irrg. *Conveyance* *1185 Feet*		
			442-Irrigation *System 139 AC*		
			533-Pumping Plant 2 EA		
2005	*$225,000*	*Sediment* *Nutrients*	---	*1%*	
2006	*$200,000*	*Sediment* *Nutrients*		*0%*	
2007	*$153,000*	*Sediment* *Nutrients*		*0%*	
2008	*$118,000*	*Sediment* *Nutrients*		*0%*	

Middle and Lower Bear River

The Middle and Lower Bear River Watershed Coordinator has been in place for over a year and has proven to be an energetic and technically capable resource. The following narrative summarizes water quality activities he's working on.

Currently in the Bear River Watershed I am working to implement 3 projects that are related to water quality. One is the installation of a manure storage bunker, and establishment of a nutrient management plan. The other two are stream bank stabilization and riparian buffer projects. One of the stream bank projects is already in the implementation stage. Willows have been planted, and fencing from the river has begun. The other stream bank project has just recently received a design and implementation will commence in the spring after runoff subsides. The manure bunker and nutrient management plan is still waiting for a design for the bunker. The nutrient management plan has already been written.

I have helped land owners in Box Elder County submit applications for the 2009 EQIP funding year. We will know by Spring if they have received the money or not. If they are approved for funding then we will use 319 dollars as match.

I have also focused on education and outreach heavily in the watershed. These outreach activities include a large storm drain awareness project where I am working with Logan City to develop educational pamphlets, bill board signs, and label the storm drains throughout Cache County. We have also developed surveys that we will help us identify areas of educational needs in regards to water quality. Funding for these projects has been acquired from the Utah Watershed Coordinating Council, the Utah Department of Agriculture and Food, and Logan City.

Funding Yr	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Complete*	*Load Reduction*
2007	*EQIP-* *$26,121* *319-* *$13,060*	*DO/ phosphorous*	*Willow transplanting/ Steam channel stabilization/ Stream Bank fencing*	*75%*	*7.9 lbs/year of P* *41.3 lbs/year BOD* *11.2 tons/year Sediment* *(estimated with STEPL)*
2008	*EQIP-* *$52,273* *319-* *$31,364*	*DO/ phosphorous*	*Stream Bank Stabilization*	*30%*	*4.5 lbs/year P* *23.6 lbs/year BOD* *6.4 tons/ year Sediment* *(estimated with STEPL)*
2008	*EQIP-* *$59,743*	*DO/ phosphorous*	*Manure Storage and nutrient management*	*20%*	*327 lbs/year of P* *5824 lbs/year* *(estimated with*

			plan		*UAFRRI)*

Upper Bear River

The Upper Bear River Watershed Coordinator is a new position and he is actively engaged in implementation of high priority projects designed to reduce sediment and nutrient loading. The following narrative outlines current activities.

The Upper Bear River Watershed has made furthering progress towards water quality. During this reporting period Robert Hoffman has installed a water well on his 50 acre hay and beef operation that borders the Bear River. This project was planned to reduce erosion, sediment, and nutrient loading. The water well is part of a planned watering trough system that will exclude livestock from access to the Bear River. Information and education money was also used as part of the tracking for the Upper Bear River Project.

There are currently projects that are planned or being planned which will contribute to water quality in the watershed. Clark Willis is currently in the process of securing the property he owns on the southern end of Bear Lake along the Big Spring Creek for a conservation easement. With the completion of Clark Willis's project, it is a goal of his to continue managing his sheep ranch and small farm operations while allowing public access to the surrounding scenic landscape of the property he possesses. Clark is currently rebuilding his sheep handling facility and plans to build water troughs to facilitate the removal of the animals' direct access to Big Spring Creek. Other upland range projects are proposed that will focus on reducing the effects of erosion and degraded riparian zones from grazing livestock. The New Canyon Grazing Allotment will be committed to build 2.5 miles of new fence that is projected to improve grazing management and improve riparian zones. This allotment, along with 6 other grazing allotments, are planning to graze according to a scientifically structured grazing plan covering a 150,000 acre area. Almost all of the previously described projects have been planned according to NRCS specifications and technical assistance was provided from employees of NRCS, UACD and the Rich Conservation District. All described projects have been or will be funded through NRCS-EQIP, 319 Water Quality Money, and personal match dollars from the producers.

Funding Yr	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Complete*	*Load Reduction*
FY 08	*$1840.20*	*Sediment,* *Nutrient Loading*	*Off-site watering facilities*	*15%*	*No recordable reduction* *Because of project infancy.*
FY 01	*50.00*			*100% complete*	

West Colorado River Watershed

The West Colorado River Watershed Coordinator is a new hire but has benefited from working closely with the previous coordinator who has taken on new responsibilities in the same assigned area. The following narrative outlines current activities.

1. Scofield: Finalized 2004 Final Report (Contract # 051646 Job 604) and tallied quantitative information. The final report was sent to Amy Dickey, DWQ for review before submission. The roll away dumpster site was completed. The Scofield informational sign was installed. Funding and support for the Scofield Sign Project came from Gayla Williams (Carbon County) and Dave Lavanger (Carbon County Planning and Zone Coordinator). The design and approval was done by the Scofield Watershed Council. Manufacturing, fabrication and installation of the sign were performed by Sign Edge Inc. and Dave Lavanger. Updated the budgets and tracking for grants 2005-2006
2. Price River Enhancement: The SVAP for the Price River was completed. A 10 acre section of the price river has had riparian restoration work performed. Met with the proprietor for the golf course in Helper for Tamarisk and Russian Olive removal along another 7 acre section of the Price River. The head gates and canal sections of the Carbon and Wellington Canal run through the golf course, met with the Carbon Canal Board for project inclusion. Several logging companies have been contacted for price quotes. Implementation of riparian restoration will begin after the snow clears enough to perform an Archeological study of the project site. Attended meetings for enhancement discussion.
3. Electric Lake Mussel Situation: Attended the mussel meetings held by the Division of Wildlife Resources. Discussed various options of the Aquatic Invasive Species (AIS) Rapid Response Plan. Signed up to be on the committee that will assist in the writing and composing of the AIS plan.
4. 319 Grant Proposal: Assisted in the completion of the 2009 Grant Proposal. Submitted the final 2009 PIP after implementation of comments from the review team. Updated the budgets and tracking for grants 2006-2008.
5. San Rafael River: Attended the San Rafael River improvement meetings. Discussed various ways to improve habitat for various at risk fish in the lower river regions.
6. Weed Calendar: Assisted in the distribution of the 2009 calendars to local cities, agencies, county government offices and local individuals.
7. UPCD: Attended committee meetings, assisted in the approval of various projects influencing the Colorado River Watershed.
8. Carbon County Master Plan: Attended the Carbon County Master Plan Meeting to ensure that an emphasis on water quality issues was in the overall plan.
9. State Watershed Coordinator Council: Attended the meeting and training in Logan.
10. Division of Water Quality: Submitted annual reports and gave update to TMDL coordinator of activities.
11. Tamarisk Coalition: Attended the Tamarisk Coalition meeting in Moab.
12. Carbon Canal Analysis: Toured a section of the Carbon Canal that has problems with seepage. Attended the Price City Carbon Canal Analysis meeting that discussed various options associated with rectifying the problem. Researched options for piping the canal.

TABLE OF PROJECT ACCOMPLISHMENTS

	Funding Yr	Funding Amount (actual 319 spent)	Pollutant of Concern	BMPs	% Complete	Load Reduction
Scofield	2004	$25,869.09	Phosphorus	Solid Waste	100%	≈ 50 kg
	2006	Carbon County to fund on their property	Phosphorus	Grazing management	50%	≈ 500 kg
	2004, 2005, 2006	Carbon County has agreed to install at least one toilet	Phosphorus	Solid Waste	0%	
	2004, 2005, 2006	**Installed in 2008**	Phosphorus	I&E	100%	Yes
	2006	$255.49	Phosphorus	I&E	100%	Yes
	ongoing		Phosphorus	Monitoring	ongoing	N/A
West Colorado River	Through 2007 (on-farm)	$15,062,828 from EQIP, Basin States and private	TDS	Improved irrigation	65%	62,084 tons per year
	Through 2007	Part of costs listed above. Wellington & Carbon canals	TDS	Improved irrigation	50%	Part of tons listed above
	2007, 2008	**10 acre section complete. Another 7 acre section will soon be implemented.**	TDS	Stream restoration	One section complete. 4%	
	ongoing	Paid by Conservation District, Extension & UACD	TDS	I&E	100% 2 in 2008	
	ongoing	UPCD, GIP applications	TDS	Grazing management	20%	
	ongoing	Well owner to fund	TDS	Abandoned well management	5%	

Upper Sevier River Watershed

The Upper Sevier Watershed Coordinator has been in place for several years and he continues to achieve great success in implementing high priority projects throughout his assigned area in close coordination with the State Division of Wildlife Resources and other key partners.

Funding Yr	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Complete*	*Load Reduction*
2008	*$50,000.00* *funded through TWG program*	*Phosphorous* *Sediment*	*Instillation of several rock barbs and one rock vane to slow river flow through a high gradient straight stretch. Willow and veg planting as well. Riparian planting completed this fall.*	*100%* *Several large cut banks were sloped at a 2 to 1. this will reduce sediment input to the river system immensly*	*Phosphorous reduction will be 20 kg/yr Sediment reduction will be 200 tons/year*

2005	*$50,000.00*	*Phosphorous* *Sediment*	*Rest treated area from grazing for two years. High intense low term grazing thereafter.*	*90%* *All riparian work completed need to finish planting uplands and some trees and shrubs need to be planted.*	*Phosphorous reduction 45 kg/yr sediment reduction 170 tons/yr.*
2009	*$70,000.00*	*Phosphorous* *Sediment*	*Fence 5000 feet of river frontage to establish proper grazing practices.*	*20%* *Walked river with GPS unit, plan is complete have gotten landowner approval. Project will start fall 09*	*Phosphorous reduction 30 kg/yr sediment reduction 190 kg/yr.*
2008	*Unknown*	*Sediment control*	*2,500 acres of Pinion Juniper infested land was clear cut. This is the second phase of a three phase project.*	*100%*	
2007/08	*$14,200.00*	*Sediment* *Phosphorous*	*3,500 feet of stream vegetated and fenced. 900 bare root shrubs planted.*	*100%*	*Phosphorous reduction 35 kg/yr* *Sediment reduction 150 tons/yr*
2007	*$15,902.00*	*Sediment Phosphorous*	*Installation of 2,500 feet of riparian fencing. Bank sloping and re-vegetation on same stretch*	*100%*	*Phosphorous reduction 20 kg/yr Sediment reduction 50 tons/yr*
2008	*$225,000.00*	*Sediment Phosphorous*	*Implementation of water management BMPs. Installed 11,600 feet of underground pipe to convert from flood irrigation.*	*50% of the pipe and fittings are installed.*	

2008	*$60,677.00*	*Sediment Phosphorous*	*Installed 900 cubic yards of rock, 4,700 feet of fence, several bare root trees and shrubs. 3,500 feet of stream length improved.*	*100%*	*Sediment reduction is 150 tons/yr phosphorous 30 kg/yr*
2008	*300,000.00*	*Sediment Phosphorous*	*Installed 4,000 cubic yards of rock, 5 logging truck loads of logs, 5.5 miles of riparian fence. Vertical eroding banks sloped and re-vegetated. Project included 12 private landowners and covered 2.5 continuous miles.*	*50%*	*Sediment reduction 375 tons/yr Phosphorous 100 kg/yr*

Middle and Lower Sevier River Watershed

The Watershed Coordinator for the Middle and Lower Sevier River has been in place for a couple of years and has been very successful in obtaining landowner support and participation for water quality improvement projects. He will be focused in the coming year on completing the Watershed Management Plan for his assigned area that has been ongoing since he was hired.

7/1/08 to 9/30/08

Work on final stage of the WF Ranches-AFO project. All the corrals have been done previously. We are now working on the berm and channels in the corrals to stop any runoff from reaching the Sevier River. I completed the survey and with the help of Jan Crofts from NRCS the designs were done. The water line from Kendall's culinary system was run to the new concrete water troughs. A concrete pad was poured for each water trough to protect the area around the trough and each trough is equipped with automatic water control.

The helicopter fly over for the Sevier River was done September 10 & 11-08. The money to do this was received through NRCS with an earmark from congress. We have not received the pictures or CD's as of yet, but I feel they will really be valuable when we do receive them.

10/1/08 to 12/31/08

WF Ranches-AFO project was completed 11/10/08, and operating well. All pay vouchers were sent in. All BMP's were reported in Toolkit as required. The project really looks good and will greatly improve the nutrient loading to the Sevier River. Have pictures of project from beginning to end of construction.

The Photo's of the Sevier River Helicopter Flight are back. I am working with Lee Woolsey/NRCS to get them set up and organized so we can start doing an evaluation of them for future planning. The still photo's are really good and will show good detail on the river.

Table of Project Accomplishments

Funding Yr	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Complete*	*Load Reduction*
2006	*$5,071.50*	*TDS*	*Rock Barb. & Rip Rap, Willow plant*	*100%*	***N-168 lbs*** ***P-40 lbs*** ***Sed-43 ton***
2006	*$28,730.63*	*TDS*	*Rock Barb & Rip Rap, Willow plant*	*100 %*	***N-118 lbs*** ***P-46 lbs*** ***Sed-87 ton***
2006	*$33,062.72*	*TDS*	*Rock barb,Rip rap*	*100%*	***N-24 lbs*** ***P-9 lbs*** ***Sed-18 ton***
2006	*Actual cost* *$14,484.24*	*Nutrients*	*Corral Relocation, stock water lines, troughs & berm.*	*100*	***N-3,968 lbs*** ***P-1,907 lbs***

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VI. Program Capacity Building/Institutional Framework

A. Partnership Enhancement

Local Conservation Districts/Utah Association of Conservation Districts

Support and enhancement of Utah's 38 Conservation Districts (CDs) is a joint effort between the Utah Conservation Commission (UCC) working through the Utah Department of Agriculture and Food (UDAF) and the Utah Association of Conservation Districts (UACD). In Utah Legislative action the word soil was dropped from the title of this Commission and the districts since they are now involved with much more than soil issues. They, especially the local districts, are as concerned with water and other natural resource components as soil. This support and capacity building is coordinated at the state level through the UCC, on which UDEQ is a voting member and carried out with state level initiatives and district level training conducted mainly by UACD Zone Resource Coordinators, Education Specialist and staff of the UCC.

A significant effort continues by the CDs and UACD to implement Utah's AFO/CAFO Strategy. To date, ninety nine percent of Utah's AFOs have Nutrient Management Plans, and almost 85% have controlled the runoff coming from their feeding operations. Plans are underway to re-inventory and assess all AFOs and within 2000 feet of water, and all dairies to assure they: 1) implement their nutrient management plans, 2) understand the Utah permitting requirements, 3) comply with Utah's AFO strategy, and 4) maintain their facilities. UACD has a team of 10 certified conservation planners and 1 project coordinator that works on the Utah AFO/CAFO strategy.

Some CDs are also working very closely with UDEQ DWQ with the Watershed Coordinator programs to move TMDLs forward. Through a cooperative effort between UACD and UDEQ, the local conservation districts employ 5 Watershed Coordinators to help implement the TMDLs. Also, UACD tracks many of the agricultural related Section 319 watershed projects that are administered in Utah.

UACD continues to provide a water quality specialist with statewide responsibilities to assist the CDs with programs and projects to help Utah's private land managers improve water quality. He participates regularly in district, regional or state meetings with CD officials to help build their capacity in water quality activities. Water quality topics are often topics of discussion in CD

B. State Revolving Fund Nonpoint Source Financial Assistance Program (FY-08)

Eight loan applications were received in 2008 for SRF nonpoint source (NPS) loans. Four loans have been approved and funds have been dispersed or are pending project completion. (see table). Three applications were denied for funding after the determination was made that the projects did not have a sufficient water quality component. One loan was withdrawn when the producer could not afford to proceed with a project. All loan repayments are current and no delinquent loans have been reported by the Utah Division of Finance.

The Utah Legislature passed a bill in 2007 that provides NPS Grant funding that is now available for projects that have a significant water quality improvement component and address a critical water quality need. In addition to the eligibility requirements that were previously associated with loans,

grants can now be made for education and for pollutions studies. Changes to UAC R317-101 were approved in November 2007 by the Water Quality Board to include grant funding eligibility, criteria and other requirements. Ten grants were funded in FY 2008. The NPS loan and grant funds that were authorized in FY2008 totaled $984,168.63. (see tables).

Three municipal wastewater treatment projects that were funded with SRF point source loans, set aside funding for nonpoint source projects. South Valley Water Reclamation Facility (SVWRF) provided $2,000,000 for NPS projects along the Jordan River. Salt Lake County is working with SVWRF to utilize the funds for water quality improvement projects. South Utah Valley Municipal Water Association set aside $225,000. Part of the SUVMWA funds will be used for a study on Utah Lake to augment the TMDL. Central Weber Sewer Improvement District set aside 1,000,000 for NPS projects within its watershed.

Efforts to "market" the NPS Financial Assistance program through UACD zone coordinators are having greater success. UACD zone coordinators have been very helpful by providing on-the-ground assistance for land owners and individuals while assisting the Division of Water Quality staff to partner with potential loan recipients, to perform project inspections and help evaluate project eligibility and progress. In addition, the Utah Farm Bureau has provided assistance by promoting the NPS financial assistance program during their work with AFO owners and operators.

Presentations were made to the Utah Rural Water Association, Water Users Association and the Nonpoint Source Conference in 2008 to discuss the changes to the financial assistance programs.

Nonpoint Source Loan Projects 2008

Project No.	Loan amt.	county	authorization	Project description
N007	$47,320	Cache	10/07	Animal Waste Improvement – reduce nutrients and sediment in river by improving farm practices
N008	withdrawn ($41,600)	Cache	11/2008	Animal Waste Improvement – reduce nutrients and sediment in river by improving farm practices
N009	$20,800	Cache	2/08	Animal Waste Improvement – moved corrals from spring for reduction of phosphorus in Spring Creek watershed
N010	$75,745	Cache	6/08	Animal Waste Improvement – Dairy farm will concrete earthen corral, build manure bunker, and liquid store pit. EQIP funds have been applied for but not secured.
NPS Loan Total FY08	$143,865			

Nonpoint Source Grant Projects 2008

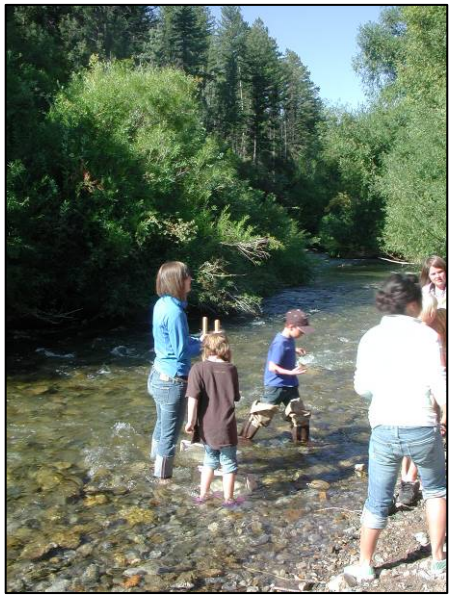
Project Name	Grant Amount	County/Area	Agreement Authorized	Project Description
Institute for Watershed Sciences	$47,890.63	Great Salt Lake	12/10/07	Farmington Bay Study – for the eventual development of water quality standards and classification.
North Davis County Sewer District	$150,000	Davis	12/20/07	GSL Selenium Study – for development of water quality standards in GSL.
Utah State University	$150,000	Davis	12/31/07	Wetland Discovery Point Building For the environmental education of students and researchers in northern Utah.
Gunnison Canal Co. Mayfield Canal Co.	$150,000	Sanpete	1/31/08	Planning Study – sediment control study to unify funding partners, identify sources and solutions
Wellington Canal Inc	$23,800	Carbon	1/24/08	Selenium Control – Price River TDS Canal Lining to reduce surface salts reducing salinity in Hayes Wash –Price River
Utah Envirothon	$3,300	All State	3/6/08	Environmental Education - Annual Competition for Hi School Students
Utah State University Extension	$33,813	Davis	4/14/08	Storm water studies and education – analyze storm water influent and discharge from ponds; provide storm water education to community
Kingston Irrigation Company	$150,000	Upper Sevier River Watershed	4/10/08	Total phosphorus & sediment reduction in East Fork of Sevier River by reducing irrigation return flows & open canals near corrals.
U.S. Geological Survey	$106,500	Flow gages in tributaries to the GSL	6/08	Installation, calibration and maintenance of several flow gages that are expected to provide data necessary for pollution loading models for the GSL.

National Park Service	$25,000	Washington	6/08	2 water quality sondes, flow meter and bacteria monitoring equipment & supplies for 1 year. Emphasis on Zion, Capitol Reef and Timpanogos Cave.
NPS Grant Total FY 2008	$840,303.63			

C. Cooperative Extension Nonpoint Source Information and Education Activities

Since 1991, USU Water Quality Extension has provided statewide NPS Information and Education (I&E) outreach activities, education materials and training to Utah citizens. The success of this program relies on active collaboration with our partners on the statewide NPS Task Force and others throughout the state. Although we target TMDL or 303(d) listed watersheds and waterbodies for our programming, the benefits are seen statewide.

Below is a brief discussion of some of the major program elements and recent accomplishments of USU Water Quality Extension's Statewide NPS I&E program during 2008. See www.extension.usu.edu/waterquality for many of the materials discussed below and more.



Water Quality Youth Education and Awareness Programs

USU Water Quality Extension strives to provide exceptional youth programming focusing on nonpoint source pollution, as well as a larger emphasis on watershed functions. We offer programs at summer camps, after schools clubs, formal classrooms, field days, water festivals and more.

Our activities cover streams, lakes and wetlands ecology and water quality, stressing the linkage between land uses and activities on land and water quality. Our programs are all correlated to the Utah State Core Curriculum to make them more applicable for teachers and whenever possible, we encourage teachers to take their students out in the field to experience the aquatic environment first hand. The majority of our activities and guides are compiled on our website (http://extension.usu.edu/waterquality/htm/educationalprograms).

During the 2008 calendar year:

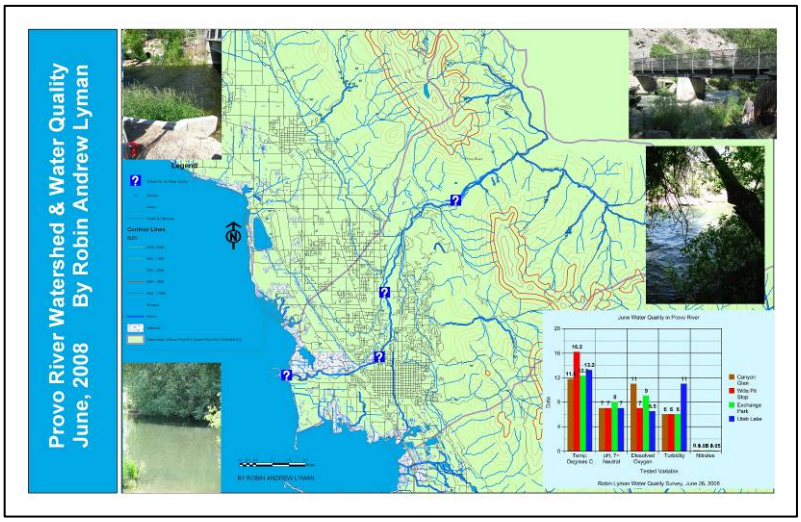
- we provided over 5,800 kids with hands-on water quality educational activities (at least an hour in length) through classroom visits, field days, and camps;
- we made over 2,600 additional informal contacts with kids at public events such as water fairs and natural resource festivals.

Materials and Training for Educators

During the 2008 calendar year, we conducted 15, one to two day workshops for educators, training 243 educators in water quality related lesson plans and curricula. We also reached many others through fairs and conventions. Our educator training is tailored to meet the needs of the audience. We continue to provide Stream Side Science workshops as well as Project WET workshops. We also offer several advanced workshops for teachers who are interested in learning more. In this way we can extend the knowledge of teachers who are already using our materials and also reach different teacher audiences.

Several of these advanced workshops are described below:

Wetland Wonders to Mountain Wilds is a unique Federal and State partnership linking agencies with schools to get kids in their watershed and relate water quality activities to the context of Utah's core curricular science standards. This program required two preparatory teacher workshops and we conducted the Advanced Macroinvertebrate Training workshop for 32 Box Elder teachers. These teachers and their students (all of Box Elder County's fourth graders) participated in two field trips, one to Hardware Ranch Wildlife Management area and the other to the Bear River Migratory Bird Refugee which involved hands-on water quality activities and monitoring for the students.



USU Water Quality Extension collaborates with the Utah Education Network to deliver *Community Project-Based GIS/GPS (CMaP) Trainings for Teachers,* a 5-day workshop on using GPS and GIS technology to address a community problem or concern. USU Water Quality Extension provides 2 days of watershed training, including a field day collecting water quality samples

throughout a watershed of concern. Participants then generate project maps that identify their watersheds and water bodies, water quality at different sites, potential non-point sources of pollution, and natural features of interest. The teachers take these techniques back to their classrooms, thus introducing their geography students to watershed and water quality concepts. According to one participant, this was a *"great class, the best I've ever done."*

Citizen Monitoring

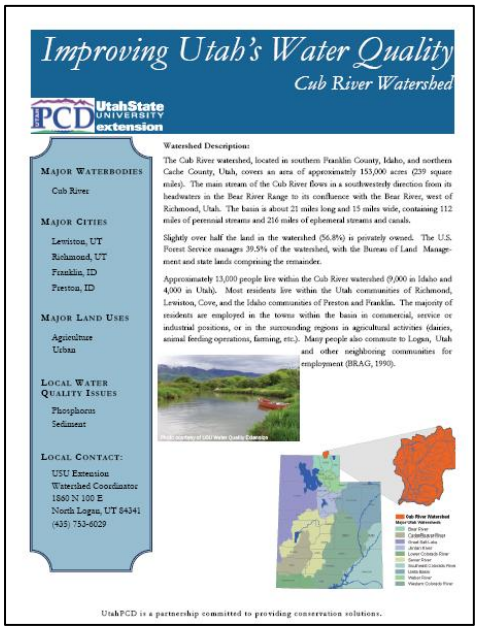
Stream, wetland, and lake monitoring techniques are effective means of educating citizens on watershed functions and water quality concepts. Formal and informal surveys of the participants of our programs indicate that the individuals remember these hands-on experiences, providing them with better means of understanding water quality concepts and also with a greater sense of stewardship for local waterbodies. We continue to provide resources and training to those interested in volunteer monitoring.

Through our Utah Lake Watch program, a total of 20 lakes and reservoirs throughout Utah were monitored by local citizens for water clarity through simple Secchi measurements throughout the spring and summer. At the completion of the monitoring season, we send a full report of our volunteer activities, including the collected data to the Division of Water Quality. We also provide each volunteer the report featuring their lake or reservoir which includes past data to show trends as well as information about the area. Feedback from the participants indicates that these reports give them a better sense of the importance of their work, and builds a better connection for them to their local environment.

Throughout 2008, we have been working with the Utah Division of Water Quality and Utah Watershed Coordinators to expand citizen monitoring programs, with the goal of educating volunteers and filling data gaps. During 2009, we plan to conduct a pilot study on the feasibility of using citizen monitors for E coli monitoring at beaches with potential bacterial contamination. If successful, this program could be transferable to a stream monitoring program as well.

Water Quality Tools for Local Watershed Groups

We worked with the Utah Watershed Coordinators to revise and update watershed fact sheets to be used in watershed outreach campaigns.


Improving Utah's Water Quality
Cub River Watershed

PCD UtahState UNIVERSITY extension

Major Waterbodies
Cub River

Major Cities
Lewiston, UT
Richmond, UT
Franklin, ID
Preston, ID

Major Land Uses
Agriculture
Urban

Local Water Quality Issues
Phosphorus
Sediment

Local Contact:
USU Extension
Watershed Coordinator
1860 N 100 E
North Logan, UT 84341
(435) 753-6029

Watershed Description:
The Cub River watershed, located in southern Franklin County, Idaho, and northern Cache County, Utah, covers an area of approximately 153,000 acres (239 square miles). The main stream of the Cub River flows in a southwesterly direction from its headwaters in the Bear River Range to its confluence with the Bear River, west of Richmond, Utah. The basin is about 21 miles long and 15 miles wide, containing 112 miles of perennial streams and 216 miles of ephemeral streams and canals.

Slightly over half the land in the watershed (56.8%) is privately owned. The U.S. Forest Service manages 39.5% of the watershed, with the Bureau of Land Management and state lands comprising the remainder.

Approximately 13,000 people live within the Cub River watershed (9,000 in Idaho and 4,000 in Utah). Most residents live within the Utah communities of Richmond, Lewiston, Cove, and the Idaho communities of Preston and Franklin. The majority of residents are employed in the towns within the basin in commercial, service or industrial positions, or in the surrounding regions in agricultural activities (dairies, animal feeding operations, farming, etc.). Many people also commute to Logan, Utah and other neighboring communities for employment (BRAG, 1990).

Photo courtesy of USU Water Quality Extension

Cub River Watershed
Major Utah Watersheds
Bear River
Cutler Reservoir/Bear
Great Salt Lake
Jordan River
Lower Colorado River
Sevier River
Upper Colorado/Green River
Little Basin
Weber River
Western Colorado River

UtahPCD is a partnership committed to providing conservation solutions.

To date, we have completed nine of these eleven factsheets for the following water bodies and their watersheds: Cub River, San Pitch River, Chalk Creek, East Canyon Creek, Rees Creek, Beaver River, Otter Creek, Fremont River, Spanish Fork River, Upper Bear River and Upper Sevier River. These fact sheets can be accessed from http://extension.usu.edu/htm/publications/by=category/category=93. The fact sheets contain general information about the watershed, as well as highlight a restoration project or "success story" from the watershed. Five hundred copies of each fact sheet were given to specific watershed coordinators for their outreach efforts. Other partners on this project included the Utah Association of Conservation

Districts, the Utah Division of Water Quality, and the Utah Partners for Conservation and Development.

Leveraged funding that expands the potential of EPA 319 grants:

In addition to NPS outreach provided by EPA 319 grants, USU Water Quality Extension obtains funding from other sources. Grants include an EPA Watershed Initiative Grant for the Bear River, a CSREES Conservation Effectiveness Grant, an NSF Test Bed Grant, and a USDA Section 406 6-state grant for outreach. Some outcomes of these projects include:

- ✓ An online watershed information system (www.bearriverinfo.org) provides data, information, maps, interpretive tools and other resources for the entire watershed. The web site serves as a model for other watersheds. The database structure and analytical tools developed for this website will be made available to other watersheds for use with their watershed specific information.
- ✓ An evaluation of the potential for water quality trading in the Bear River watershed. Currently, a trade is being explored by the Logan City Waste Water Treatment facility.
- ✓ A monitoring guide for watershed coordinators
- ✓ An evaluation of best practices in monitoring at a watershed scale.
- ✓ A watershed model that can be used to help identify critical areas for implementation.
- ✓ Septic and well protection videos and other educational materials.

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VII. Nonpoint Source Pollution Management Activities of Key Partner Agencies

This section presents a focused but key overview of nonpoint source pollution management activities in Utah during the past year. This is quite limited in the entire scope of such activities that effect NPS pollution control statewide. A few selected examples are presented in this Chapter 7 including Natural Resources Conservation Service, the Forest Service, Bureau of Land Management and summary of the Colorado River Salinity Control Program Basin States Parallel Program highlights for fiscal year 2007 administered by the Utah Department of Agriculture and Food (UDAF). Also included in this chapter is summary information on the Department of Natural Resources' Watershed Restoration Initiative program endorsed and supported by the Utah Partners for Conservation and Development and the Grazing Improvement Program administered by UDAF.

A. Natural Resources Conservation Service (NRCS)-Utah Highlight of Accomplishments in Nonpoint Source Pollution for Fiscal year 2008

NRCS employees work in partnership with land users to conserve natural resource on private lands. These employees are distributed among 26 field offices and 3 area offices that cover the state of Utah. These offices are managed by District Conservationists. NRCS employees along with Utah Association of Conservation District (UACD) employees report progress on activities in the USDA-NRCS system, which is the basis for the following information.

USDA-NRCS federal financial assistance of $20,794,031 in the form of direct cost share funds (EQIP, Ground & Surface Water, Salinity, WHIP) came to land owners and managers in Utah for FY2008. A considerable percentage directly benefited NPS AFO/CAFO concerns in Utah with 30 CNMP plans applied in FY2008.

During FY2008, customers were assisted through a combination of federal and state conservation programs. The tables and graphics below summarize the measures applied that may directly or indirectly impact non-point source pollutant concerns in Utah.

Programs	FY07 Allocation $	FY08 Obligations $
General EQIP	10,226,766	10,884,465
Ground/Surface	857,753	865,801
Salinity	7,825,466	7,447,202
Wildlife Habitat Incentives Program	335,043	1,596,563

EQIP Funding for Watershed Improvement

Landtype	2007 $	2008 $
Cropland/Hayland	1,300,000	2,618,741
Forestland	-0-	15,372
Pastureland	1,000,000	773,303

Rangeland	1,200,000	1,302,730
Riparian	360,000	396,325
Wildfire Rehabilitation	-0-	382,192
Dry Cropland	-0-	593,000

EQIP Funding break-down for resource concerns – 2007 and 2008

Resource Concern	2007 $	2008 $
Animal Waste	1,500,000	1,382,858
Native American Lands	350,000	26,988
Poultry Ammonia Reduction	1,100,000	1,448,160
Orchards Vineyards	300,000	350,372
Wildlife Individuals	400,000	317,897
Wildlife proposals	500,000	-0-
Navajo Nation, Small Acreage		38,192

Summary of Conservation Measures directly or indirectly associated with NPS benefits – FY2008

Performance by Program - Field Measures	Total	Multi-Progs.	AMA	CRP	CSP	CTA	CTA - GLCI	EQIP	EQIP - GSWC	GRP	RCD	WRP	WHIP
Conservation plans written (Ac.)	522,338			7,685		88,260	425,553					841	
Watershed or area-wide conservation plans developed (No.)	11										11		
Cropland with conservation applied to improve soil quality (Ac.)	82,901	10,726	482	1,402		41,441		48,034	2,268				
Land with conservation applied to improve water quality (Ac.)	400,407	17,835	410	3,845	1,966	38,098	117,415	243,670	2,048	301		841	9,648
CNMP written (No.)	0	0											
CNMP applied (No.)	30	0				9		21					
Land with conservation applied to improve irrigation efficiency (Ac.)	78,720	1,369	1,215			17,430	1,435	56,270	2,892			841	7
Grazing and forest land with conservation applied to protect and improve the resource base (Ac.)	578,662	27,632	21	31	2,542		209,277	387,625	2	301			6,495
Non-federal land with conservation applied to improve fish and wildlife habitat quality (Ac.)	69,260	0		2,291		18,053	44,059	2,967					1,891
Wetlands created, restored or enhanced (Ac.)	845	0										841	4
Land and water resources benefitted by RC&D projects (Ac.)	225,826	0									225,826		

AMA = Agricultural Management Assistance

CRP - Conservation Reserve Program

CSP- Conservation Security Program

CTA - Conservatio Technical Assistance'

CTA - "" Grazing Lands Conservation Initiative

EQIP = Enviornmental Quality Incentives Program

EQIP-GSWC= EQIP - Ground & Surface Water Conservation

GRP = Grasslands Reserve Program

RCD = Resource Conservation Development Council

WRP= Wetlands Reserve Program

WHIP= Wildlife Habitat Incentives Program

Report from NRCS – Performance Results System (PRS) – Report # 6.14 – January 13, 2009

B. Forest Service – Watershed Improvement and Water Quality Management Activities, Fiscal Year 2008 (October 2007 – September 2008)

Each year, Congress appropriates funding specifically dedicated towards maintaining and improving watershed conditions, including water quality. During the federal government fiscal year 2008, non-point source pollutant control resulted either directly from projects designed for soil and water improvement or indirectly resulting from project mitigation measures, such as prescribing and implementing best management practices. National Forest resource specialists, in narrative (below), provide summary descriptions of their efforts to improve watersheds condition and monitor water quality.

The Forest Service's Watershed Improvement Program delivers direct benefits to improved water and soil quality on National Forest System lands in Utah. During fiscal year 2008, National Forests in Utah completed 2,461 acres of watershed improvement (Table 1). This is a substantial increase from the previous year and is primarily due to new congressional appropriation to address damage due to fire and legacy roads. An additional 911 acres of watershed improvement were also completed using other appropriated funding sources (i.e., non-soil and water funds) and through partnerships.

Water quality monitoring programs include high elevation lake sampling, cooperative water quality sampling in conjunction with Utah DEQ, TMDL data collection, and Best Management Practices implementation and effectiveness evaluations. In August the Uinta-Wasatch-Cache National Forest hosted an interagency (Utah DEQ and FS) field review of water quality protection measures, watershed restoration activities, and a fire rehabilitation project. The annual water quality coordination meeting, including Forest Service, Utah DWQ, Bureau of Land Management and the National Park Service, occurred in Moab, UT on February 21-22, 2008. As a result of the meeting the agencies are working towards updating the existing water quality Memorandum of Understanding to outline the future of cooperative water quality management on federal lands in the State of Utah.

Table 1. Watershed Improvement Projects Completed on National Forest System lands in fiscal year 2008 (October 1, 2007 – September 30, 2008).

Forest	Acres Improved with Soil and Water Funds	S/W Funds Spent	Acres Improved with Other Funds & Partners*	Total Acres Improved
Ashley	1231	$232,153	0	1231
Dixie	330	$424,251	50	380
Fishlake	250	$244,586	76	326
M-L	420	$149,972	500	920
Uinta	169	$162,232	192	361
W-C	61	$152,885	93	154
Total	**2,461**	**$1,366,079**	**911**	**3,372**

* Acres improved with other funds include watershed improvement activities resulting from non-Soil and Watershed programs (other National Forest System funds) and external partnerships.

Ashley National Forest

The Ashley National Forest is involved in a variety of projects related to monitoring, improving, and maintaining water quality. In 2008, the following watershed improvement projects were completed.

Road Decommissioning

9 miles (27 acres) of unauthorized motorized routes were closed on the Ashley N.F. in 2008. Improvement work included closing access to the road and improving drainage for long term recovery of soil-hydrologic function. These projects are intended to improve water quality by reducing or eliminating motorized impacts in sensitive watershed areas.

Road Maintenance

350 miles of road were maintained, including grading, surfacing and drainage improvement (non watershed funds). Routine maintenance of the road system improves water quality by decreasing erosion and sedimentation.

Protection of riparian, wetland, and meadow areas

Various exclosures and fences protecting sensitive riparian and wetland areas were installed or maintained across the forest. The protection of these sites contributes to the overall water quality within a watershed. In particular, 4 acres of riparian and wetland resources were fenced along Government Creek, where a canal was converted to a pipeline. Vegetative recovery of the wet meadows and streambanks in this area has been excellent. In addition, several small wetlands and meadows have now been restored, as flows that were formerly diverted into the canal have been returned to their natural drainages.

Water and Air Quality Monitoring

The Ashley N.F. continued to participate in a cooperative monitoring program with the Utah Division of Water Quality. Water quality samples were collected monthly at 4 sites across the forest. In addition, water samples were collected at five high elevation lakes in the Uinta Mountains, as a part of a long-term air quality monitoring program. Data collected will be useful to analyze the effects of regional air quality on high mountain lakes.

Best Management Practices (BMP) Monitoring
The forest continued project level monitoring, including implementation and effectiveness monitoring of BMPs. Projects monitored in 2008 include oil and gas developments, range allotments, and the effects of wildfires on watershed condition and water quality.

High Lakes Stabilization
The soil and water program contributed to High Lakes Stabilization project, which is stabilizing high elevation reservoirs in the High Uintas Wilderness. The intent of this project is to restore the natural hydrologic regime and the associated aquatic and wetland habitats. Water quality will be improved and maintained by restoring these important ecosystem functions. In 2008, Brown Duck and Island reservoirs were stabilized in the Lake Fork drainage on the south slope of the Uinta Mountains.

Dixie National Forest
The Dixie National Forest accomplished several projects that improved water quality. These activities include road relocation, road decommissioning and dispersed camping management to protect meadows, riparian and wetland areas. These accomplishments are listed below.

Road Relocation – 0.5 mile of road within the Browse area of the Pine Valley Ranger District was moved out of a riparian area of Mill Creek, rerouted in an upland area, and the old road was put back to contour, ripped and seeded. This road relocation will assist in the protection of riparian impacts and Bonneville Cutthroat Trout habitat.

Road Decommissioning – Forest-wide, 8 miles of roads were decommissioned by blocking access, scarifying and reseeding the road surface. The majority of this work this year occurred in the Yankee Meadows area of the Cedar City Ranger District.

Protection of meadows, riparian and wetland areas – In order to protect sensitive hydrologic areas, 178 acres of meadow adjacent to Bowery Creek in the Yankee Meadows area of the Cedar City District were protected by the construction of dispersed recreation management sites. These have been hardened and barrier to define dispersed camping opportunities and to remove direct effects to the stream channel.

> The Forest continued its participation in the cooperative water quality monitoring with the State Division of Water Quality. In July, the sampling sites were moved to the Santa Clara River and Pinto Creek within the Pine Valley Ranger District. The forest is continuing project and forest level monitoring of fire impacts from wildfires, livestock grazing, and timber harvest.

Additional funding from the Legacy Road and Trails (CMLG) program was used on two projects that improved watershed health. A 2 mile route the most utilized ATV trail on the forest was rerouted and hardened to provide protection to the Duck Creek meadows. An additional 2 miles of road decommissioning was accomplished in Daves Hollow near Bryce Canyon City. Both of these projects were accomplished through Good Neighbor Agreements with Kane County and Bryce Canyon City respectively.

Fishlake National Forest
The Fishlake National Forest is focusing watershed improvement efforts on riparian condition assessment, and riparian restoration. In 2008, the Forest focused on assessing Fish Creek, a tributary stream to Clear Creek within the Middle Sevier Watershed. The results identified approximately 70

stream crossing within seven miles of stream that are affecting watershed condition and fisheries habitat. The current condition in the area has established a need to improve watershed conditions of Fish Creek by eliminating numerous ATV-users created crossings thereby improving water quality and aquatic habitat for Bonneville Cutthroat trout. Fish Creek will be stocked with Bonneville Cutthroat trout in the next year or so as part of the State recovery plan. Apart from the Fish Creek area, the Forest has closed and obliterated many miles of closed trails based on the Forest's new travel management plan, and will continue to implement the travel plan forest-wide to improve watershed conditions. More information about the new travel plan is available on the internet at http://www.fs.fed.us/r4/fishlake/projects/ohv.shtml

> The Forest continues its participation in the cooperative water quality monitoring with the State Division of Water Quality. In July, the sampling sites were moved from Pine, Indian, North Forth North, South Fork North, and South Creeks located on the Westside of the Tushar Mountain Range within the Beaver Ranger District to streams that are tributaries to Fish Lake, and Lake Creek below Fish Lake. The Fishlake has been sampling around the Forest in order to obtain some baseline data for major ranges within the Forest boundary. The Fishlake would like to move forward with water quality monitoring on tributary streams to Otter Creek and the Middle Sevier River in the next two years. After surveying these streams the Forest will then begin repeat sampling of streams in cooperation with the State. The Forest continued project-level and Forest wide monitoring of impacts from wildfires, livestock grazing, and riparian fencing.

In 2009, the Forest has funded and will implement projects that limit unauthorized ATV access in riparian areas to improve water quality of Barney Lake, habitat conditions around shores, and set up more defined recreation routes using barriers. According to the State, the Barney Lake area has important boreal toad habitat and an associated high risk of Boreal toad mortality by vehicles. Rehabilitation of compacted and unvegetated shoreline, unapproved routes, and dam is also planned in the Barney Lake area. The Forest also plans to improve the travel and recreation areas around Manning Meadow Reservoir by hardening or gravelling road surfaces, eliminating areas of bare soils within the drainage directly around the Reservoir, pullouts, and dispersed recreation areas. Manning Meadow has a TMDL completed and the Forest wants to improve the water quality of Manning Meadow Reservoir.

Manti-LaSal National Forest

Watershed Improvement - Much of the fiscal year 2008 accomplishment was tied to wildfires that occurred in 2006.

- The Lion Creek Fire (Moab Unit) was seeded through an interagency partnership project; 800 acres as a fiscal year 2007 accomplishment, and 500 acres as a fiscal year 2008 accomplishment.
- 420 acres of the Salt Creek Fire (San Pitch Unit) was fenced for watershed protection and protection of BAER treatments.

Watershed Protection – In fiscal year 2008, the Forest placed special emphasis on the problem of unauthorized/user-created OHV trails. This included training of additional Forest Protection Officers, additional patrols during high use periods such as July 4th and 24th and several hunting seasons, and the blocking of access points to unauthorized trails.

Groundwater and Groundwater Dependent Ecosystems Management – Through a contract, the Forest prototyped the inventory and characterization protocol for springs, spring brooks, and wetlands. The project area was Millers Flat on the Wasatch Plateau (Manti Unit). This area has a very high density and diversity of wetlands and use conflicts that threaten some of the area's wetlands.

Burned Area Assessment (BAER) – An assessment of the Porcupine Ranch Fire (Moab Unit) was completed in fiscal year 2008. Recommended emergency treatments will be completed early in fiscal year 2009.

Water Quality Monitoring - UCASE site characterization and macroinvertebrate sampling were completed at four baseline sites under the auspices of the 2007 MOU with DWQ. The UCASE protocol was also used at three additional sites to provide information about riparian and stream habitat conditions. The Forest did no chemical or physical water quality monitoring during fiscal year 2008.

Abandoned Mined Lands – A contract has been issued for final engineering design for the remediation of the King Edward Mine in Cottonwood Wash (Monticello Unit). Construction is expected to begin in 2009.

Uinta-Wasatch-Cache National Forest
A key administrative change occurred by combining the Uinta National Forest with the Wasatch-Cache NF. The change was intended to reduce overhead costs and thus lead to greater implementation of projects on the ground. Water quality samples and field data were collected on Lower Gooseberry Reservoir and Tony Grove Lake as part of the Utah Lakes TMDL study. Analysis is ongoing and the report is expected to be completed by the end of calendar year 2008.

Abandoned Mine Land Cleanup Program
Continued water quality and vegetation monitoring is ongoing at the American Fork Canyon mine and mill reclamation sites, conditions are unchanged since last reported in 2007. Two future projects are still planned: LaSal Creek uranium mines remediation (on mixed FS and BLM land, lead by the BLM) and King Edward Mine remediation in Cottonwood Wash near Blanding, Utah. The BLM lead site cleanup has not been initiated due to problems with the access roads. The FS-lead Cottonwood Wash site is planned for remediation during the summer of 2009.

Forest Service Burned Area Emergency Response (BAER) Program
In fiscal year 2008, the Forest Service spent over $160,000 of burned area emergency response funding to address post-wildfire effects in the State of Utah. The BAER program includes several activities that aim to protect or improve water quality after wildfire. For example, 179 acres were treated to address noxious weeds, 9 miles of road and 2 miles of trail improved to address increased runoff response, 3 miles of stream protected and 72 monitoring days completed. These treatments directly and indirectly address water quality, generally through reduction of erosion and reducing chemical and temperature alterations to water quality.

C. Utah Bureau of Land Management FY- 2008 Nonpoint Source Programs and Activities

The Bureau of Land Management (BLM) is mandated to protect the soil and water resources on the land that it manages; reduction of non-point source pollution is a key part of that effort. BLM is also

committed to reduce salt contributions to the Colorado River Basin from public lands. Progress in achieving these goals is made by planning and implementing actions designed to minimize impacts of resource use (e.g. recreation, energy development, grazing), protect and restore riparian areas, treat uplands to improve vegetation cover and reduce runoff and erosion. Best Management Practices (BMPs) for protection of soil and water resources are incorporated into the daily decisions and activities conducted by the eleven BLM Field Offices (FOs) throughout Utah. The agency manages approximately 23 million acres in the state.

Six field offices finalized long-range resource management planning efforts: Price, Vernal, Moab, Monticello, Richfield, and Kanab. These Resource Management Plans cover over 11 million acres in the state. In each plan, provisions are made to identify and incorporate water and soil protection measures and best management practices in all authorized activities. For example travel management decisions in these plans more than doubled the acres of areas restricted to designated routes and areas closed to OHV use from what was previously allowed. The number of areas open to cross country travel was reduced from over 5 million acres to less than 20,000 acres within the 6 planning areas. This change from open cross country travel to use of designated routes is expected to greatly reduce water and soil impacts associated with OHV recreation activities.

Five field offices continue to be actively involved in interagency and/or public watershed partnerships planning and/or implementing watershed improvement projects as follows:

- St. George Field Office - Virgin River Watershed Partnership
- Kanab Field Office - Upper Sevier Watershed Partnership
- Richfield Field Office - Middle Sevier Watershed Partnership
- Fillmore Field Office - Lower Sevier Watershed Partnership
- Price Field Office coordinates management of the Nine Mile Creek Watershed with the Nine Mile Canyon Coalition

Utah BLM continues to cooperate with the State Abandoned Mine Lands Program to implement the Utah Abandoned Mine Lands Statewide Strategy. Eighteen acres were treated in 2008 and assessments, inventory, and planning for remediation took place on several key sites in the LaSal Creek watershed near Moab.

Approximately 60,000 acres were treated in 2008 in BLM's cooperative effort with the State of Utah's Watershed Restoration Initiative. Over 1/3 of that was in focus areas on the Colorado Plateau, also aiding in our salinity reduction goals. Additionally BLM conducted land restoration treatments as part of its range management, emergency wildfire stabilization and longterm rehabilitation programs. Treatments included sagebrush restoration (Dixie- harrow and seeding), prescribed fire, wildlife and rangeland seeding, chemical treatment and seeding of cheatgrass dominated areas, and wetland and riparian restoration. Other priority projects include fuel reduction treatments around urban interface areas.

In 2008 more emphasis was placed on riparian projects aimed at improving bank stability and riparian habitat. These included tamarisk and Russian olive removal along several hundred miles of the Escalante, Colorado, and Green Rivers and their tributaries and Buckhorn Wash, which is a major tributary to the San Rafael River.

Grazing in upland and riparian areas is another potential source of non-point pollution from lands administered by the Bureau of Land Management. BLM is emphasizing completion of a backlog of

grazing permit renewals by the year 2009 and has committed significant resources towards this goal. Each renewal requires analysis of current range conditions and management and where necessary, recommends changes to improve conditions. BLM uses standard protocols to assess range conditions such as Rangeland Health Assessments, Riparian Proper Functioning Condition Assessments, Ecological Site Inventory, and other data-collection tools are used by the BLM. Approximately 165 allotments were assessed in 2008, over 100,000 acres had detailed ecological site inventory completed and nearly 389 miles of stream were assessed for proper functioning condition. BLM conducts water quality monitoring, in partnership with the Utah Division of Water Quality, to help determine the condition and quality of waters that we manage. Sampling was conducted on numerous creeks and ponds throughout the state. This information was used to identify changes necessary and make improvements; and 317 grazing permits were renewed.

In addition to the statewide efforts described above, some examples of specific projects by Utah BLM are given below:

Kane Creek Canyon, closure of illegal trails – Kane Creek is an intermittent stream in Grand County, in the Kane Creek Watershed (the Upper Colorado- Kane Springs sub-basin). A county dirt road (class D) is located in the canyon for miles. Over the last decade illegal trails have been established off the county road. Several of these trails were closed by the San Juan County Road Dept this summer, in coordination with the BLM Moab Field Office. Several other trails were fenced off by BLM staff. By closing these illegal trails, about 20 acres of saline soils located in the Kane Creek floodplain will be more protected and stable. The floodplain soils are moderately saline sediments (with soil salinity levels averaging 8-16 mmhos/cm).

Ten Mile Wash Culvert – Ten Mile Wash is an intermittent stream in western Grand County, in the Ten Mile Wash Watershed – a portion of the Green River sub-basin. A county dirt road (class D) is located in the floodplain of the wash for over 10 miles. A portion of the road failed years ago, due to a deep gully growing across the road. The gully is located in moderately saline sediments (with soil salinity levels averages 8-16 mmhos/cm). To bypass this gully, people would drive into the wash. The route in the wash is problematic, as it changes after every flood. Moab Field Office started coordinating with Grand County Road Department to repair this road segment in FY 2007. After discussions and field trips, Grand County purchased and installed the culvert in FY 2008. The road is now passable without driving into the wash at this spot. About one acre of moderately saline sediments will be more stable due to less travel in the floodplain. The culvert may reduce erosion of saline sediments from the gully.

Valley City stock pond rebuild project near Moab, Utah is located just east of Utah State Highway 191 and six miles south of Crescent of Junction, in T22S R 19E section 34. The dam runs parallel to and within 50 feet of an active railroad grade. After a major rainstorm in the fall of 2006 the dam failed, damaging the railroad grade and threatening the highway. Tons of accumulated saline sediments were released to the Ten Mile Canyon Watershed (part of the Green River sub-basin) during this event and following rain events. After an environmental analysis was completed, BLM staff rebuilt the failed section of the dam in May 2008. Vegetation on the dam was removed to reduce risk of future seeps and possible failures. A key structure was incorporated into the dam, which provides more stability and less chance of dam failure along the contact between the bedrock and dam structure. Sediments were removed from the reservoir, culverts were cleaned out, and the spillway was improved. Overall about 5 acres were treated. There is a new cooperative agreement with the grazing permittee, with specific requirements for dam inspection and annual maintenance. This ensures a

stable stockpond that will retain sediments onsite and protect the railroad grade and highway routes. (Photos below)

Factory Butte OHV-Soil Erosion Monitoring - Silt fences and other soil monitoring studies continued in the Factory Butte area. The purpose is to aid in understanding recreation impacts on the soil and water resources and make adjustments to management as necessary based on that information. 2008 completed phase 2 of the study and water quality monitoring is planned for 2009.

Dissolved-Solids Transport in Surface Water of the Muddy Creek Basin, Utah – this study, which was funded by BLM and the Basin States Funds (Salinity Forum) was completed by USGS and published and is available at http://pubs.usgs.gov/sir/2008/5001/

The Bureau of Land Management places a high priority on its responsibility to minimize non-point source pollution from its land management activities and will continue to work with its partners in other federal and state government agencies and the private sector to protect the waters of Utah.

D. Colorado River Salinity Control Program Basin Funds Program Report for Federal Fiscal Year 2008 - UDAF

The state of Utah participates in the Colorado River Salinity Control Program which was enacted by congress in June of 1974. This program is responsible for reducing TDS in the Colorado River to meet numeric criteria established by the basin states and EPA under the Clean Water Act. This program also assists the United States to stay in compliance with Minute 242 of the Mexican Water Treaty of 1944. The Salinity Control Act requires that United States Department of Agriculture and the Department of Interior control salinity in the Colorado River. The act also requires that the seven Colorado River basin states cost share in this program at thirty percent. These basin states cost share monies allocated to Utah are administered through the Utah Department of Agriculture and Food, and

for this report will be referred to Basin Fund Program (BFP). This report is a summary of Utah's BFP for the federal fiscal year 2008 ending September 31, 2008.

Since the programs inception in 1997 Utah has obligated over $8.8 million dollars of Basin Fund monies. These dollars have been used in two approved salinity control areas in Utah: Uintah Basin and Price-San Rafael River basins. Each year the dollars are allocated to the most cost effective projects where Bureau of Reclamation projects are completed or near completion. Cost effectiveness is determined by calculating each projects cost for each ton of salt removed. Utah has a very competitive cost per ton values for all areas (actual cost per ton values for each area 2008 are: $41 for Price-San Rafael and $116 for Uintah Basin. Local workgroups provide initial planning and input and help rank the projects.

In fiscal year 2008 the state received just over 2 million dollars. During this year the state with the assistance of NRCS obligated $1,542,800 in 45 contracts to improve irrigation efficiency. This will treat 100 new acres. Currently there are 79 active contracts at various stages of completion covering 2,328 acres. Since the inception of the program the state has entered in 201 contracts covering 10,136 acres. The program is preventing over 21,030 tons of salt from entering the Colorado River.

E. Utah's Watershed Restoration Initiative – Conducted by the Utah Department of Natural Resources in concert with the Utah Partners for Conservation and Development

The Watershed Restoration Initiative focuses on protecting and managing core values that are important for our present and future quality of life: water quality and yield, wildlife, and agriculture.

This is accomplished through the Utah Partners for Conservation and Development, a diverse group of state and federal agencies working together with non-governmental organizations, industry, local elected officials and stakeholders. Locally led teams identify conservation issues and develop plans to address local needs.

In fiscal year 2008 with support of $2.5 million from the Utah Legislature the Watershed Initiative has implemented over 120 rangeland and river restoration projects involving over 126,000 acres and 5 miles of river enhancements. Through the partnership effort funding from the Legislature has been successfully leveraged over 4 to 1 in on-the-ground projects. In addition, 258,560 acres of wildland fire rehabilitation work was completed through this same partnership.

The long-term results from this effort will be measured in the reduced cost of fighting wildfires, reduced soil loss from erosion, improved water quality and yield, improved wildlife populations, reduced risk of additional federal listing of species under the Endangered Species Act, improved agricultural production, and resistance to invasive exotic plant species.

F. Utah Grazing Improvement Program (GIP)

GIP was established by the 2006 Legislative session and was signed by the Governor. GIP enables the Utah Dept of Agriculture & Food (UDAF) to help ranchers communicate their concerns regarding grazing policies to the BLM, USFS, EPA, and other federal and state agencies. The GIP program has established five regional Grazing Boards and a State Grazing Board. GIP makes available cost-share

grants to ranchers for rangeland improvements such as, invasive plant species control, improvement of water quality and quantity, control of sage brush by replacement of high quality grasses forbs and shrubs, and increasing sage grouse habitat. Currently, work plans have been developed and selected for implementation activities related to grazing improvement. Efforts are in place to coordinate GIP funding with Section 319 funding. Two projects that currently coordinate the funds of 319 and GIP include work on the upper Strawberry River and the Bear River in Rich County.

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VIII. Federal Consistency Review Activities

During FY-2008, DEQ continued to use a combination of several approaches to work collaboratively with federal land management agencies and others to promote federal consistency with the state NPS Pollution Management Program. These approaches will be mentioned briefly along with last year's activities in that area.

One statewide approach is the Governor's Office of Planning and Budget's Resource Development Coordinating Committee (RDCC). DEQ/DWQ participates on this committee represented by DWQ Environmental Scientist who screens RDCC actions and comments as resources and responsibility allows. The Director of the Division of Conservation and Resources at the Utah Department of Agriculture and Food or his designee also attends the monthly meetings. The UDAF reviews all RDCC agenda actions and comments as appropriate. The RDCC serves as a state clearinghouse for all federal and state agency actions such as, but not limited to, BLM resource management plans, Forest Plans, project environmental assessments and environmental impact statements, land exchanges, major construction projects, permitting actions, Corps of Engineers 404 permits and stream alteration permits issued by the Division of Water Rights.

DEQ/DWQ screens federal and state actions that go through RDCC for potential water quality issues and comments as appropriate. Examples of such reviews last year included numerous 401 water quality certifications for 404 permits and reviews related to resource development and major highway projects. Both the DWQ RDCC actions coordinator and DWQ watershed coordinators, as requested screen the proposed activities for water quality impacts and prepare comments as appropriate.

The second general approach relates to ongoing program coordination and information exchange. A specific annual meeting is held each spring with BLM and Forest Service. In FY-2008 the meeting was held in Moab, Utah on February 21 and 22, 2008 with representatives of most Forests and BLM field offices. Presentations were made on the DWQ Monitoring program strategy, water quality standards, Nonpoint Source Program reporting and accountability, FY-08 (319) funding levels and projects, overview of water quality and 303(d) list and TMDL development activities. Cooperative monitoring proposals were requested and QA/QC training sessions were scheduled with DWQ Monitoring Chief. Each Forest and BLM resource area presented information on major projects, planning activities and watershed and riparian restoration activities. Information was presented to the FS and BLM regarding watershed TMDL development in each basin in the state by DWQ Watershed coordinators. They were encouraged to participate actively on local watershed committees formed to advise and assist DWQ in the development of TMDLs.

This local coordination and integration of watershed planning activities and priorities is the third approach and most important aspect of the states federal consistency strategies. By working jointly to inventory and assess the water quality and watershed health, to identify impaired conditions and causes, to develop plans to improve and protect water quality and related stream/riparian and upland watershed conditions will result in mutually acceptable management prescription and remedial measures to meet water quality standards/beneficial use designations and desired functioning conditions for watershed health. This is the preferred method to meet the federal consistency provisions of Section 319 of the Clean Water Act. Such collaborative efforts are working well in numerous watershed areas including the Fremont River, Virgin River, Upper Sevier River, the Middle Sevier River, Spanish Fork River, Beaver River and Strawberry Reservoir.

The Memorandum of Understanding between DEQ, the Forest Service and BLM was reviewed in FY-2008 and revised as appropriate to strengthen the working relationship especially in regard to TMDL development and implementation and cooperative monitoring programs. The Forest Service received direct 319 funding in FY-2006 to develop TMDLs for waters primarily on Forest Service lands in Utah. Several lake water quality assessments and TMDL evaluations were completed in 2008.

The final and fourth approach to assuring federal consistency with the State NPS Management Program is on-site visitation/project reviews. The DWQ has limited resources to maintain this activity, however, one field review visitation was made during FY-2008. The following trip report describes a one-day field tour to the Uinta, Wasatch/Cache National Forest in August 2008 during which stream restoration and land management actions were reviewed.

Water Quality Review Tour with Uinta – Wasatch – Cache National Forest

August 13, 2008

Participants:

Charlie Condrat – U.S. Forest Service
W.D. Robinson – Utah Department of Agriculture & Food
Sandy Wingert – Division of Water Quality
Mike Reichert – Division of Water Quality

Stop 1: Decommission Hydropower Station in American Fork Canyon

- Bio West, Darin Olsen, working with Forest Service to rehab, rebuild the channel. Used Rosgen methods V-notch weirs, but they were installed backwards. Stream had high spring flows but is remaining stable.
- Sites will be monitored by the Forest Service and repaired depending on risk to site. Some allowance is given for natural stream adjustments.

American Fork Canyon. Note large boulders along bank to provide stabilization.

American Fork Canyon. Note built up terrace to serve as a flood plain.

Stop 2: American Fork Canyon

Hydro power old dam site:

- Old dam was removed and the site reclaimed
- Some banks starting to unravel. Added bail to prevent erosion. The cobble bank should have been vegetated.
- Forest Service will monitor and fix the sites
- American Fork has become a Fee Use area
- This year has had a fee increase and the revenue goes toward improvement and maintenance of recreation sites.

Failing Banks.

Added bail

Stop 3: Recreation Site in American Fork Canyon

Reconstruction of recreation areas:

- Hardening of sites
- Improved picnic and campsites
- Some stream construction problems observed such as constricted stream channel
- Sites will have technical review next year with modifications as warranted
- Budget problems for Forest Service "Fire Borrowing" – budgets are impacted by fires. Funds are withdrawn from other program areas to support firefighting.

Lined river with boulders. Example of constricted stream channel.

USFS wanted to keep the public from approaching the river from all sides thus provided easy river access near campground and picnic areas.

Stop 4: American Fork River Above Tibble Fork Reservoir

- Trail construction project to cross the river and hang the trail on the hillside (difficult design). Wanted to move trail out of riparian zone.
- Also project will include construct a parking lot for trail access
- Purpose of project was to deal with dispersed recreation above Tibble Fork Reservoir.

Difficult terrain to build trail.

One of the proposed river crossings.

Stop 5: Cascade Springs Fire rehabilitation

- Cascade Fire occurred in 2003
- The restoration looks good
- Lots of reseeding was done plus natural re-growth

Stop 6: Trout Creek Just Above Strawberry Reservoir

- Sagebrush/range treatment area last year
- Use Dixie Harrow to tear the sage and prepare seed bed
- Site was not seeded but recovery appeared good
- Forest Service general philosophy is to not seed unless areas are critical for soil and water protection
- Often Forest Service partners with other agencies for seed such as the Division of Wildlife Resources
- Clyde Creek timber harvest road work with ultimate road closure. Currently doing timber harvest along road with cable extraction to road, then haul out timber. Road will be closed and rehabilitated after sale is complete.

Distinct boundary between reseeded and non-treated areas.

Stop 7: Strawberry River Just Above Reservoir

- Stream restoration by the Division of Wildlife Resources – j-hooks
- Lots of willows recovery
- Great fish populations were present
- Division of Wildlife Resources has done similar stream work up the drainage.

J-hook design.

Good varying physical habitat.

<u>Tour concluded at 2:30 p.m. and party returned to Salt Lake City.</u>

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IX. Summary of BMP Operation Maintenance Reviews

It is the contractual responsibility of the Utah Department of Agriculture and Food to conduct project site reviews annually of selected 319 funded agriculture water quality improvement projects and report the findings to the Department of Environmental Quality.

Several project in UZCD Zone 5 were reviewed as contracted in 2008 and the following written report was submitted to DEQ. **Part One** below describes this trip report prepared by UDAF.

PART ONE:

FY-2008 ANNUAL AUDIT AND PROJECT REVIEWS
Conducted by the UDAF

February 2008:

Roy Gunnell met with Tyce Palmer, Zone 5 coordinator, in February 2008. Project files were reviewed to ensure match tracking and BMP implementation progress was being documented. All work being performed was determined to be according to contract provisions.

PART TWO:

FY-2008 PROJECT REVIEWS CONDUCTED BY
DEQ, UDAF AND EPA

Annually NPS staffs from the DEQ/DWQ and UDAF join with EPA staff to conduct field reviews of selected 319 projects. Such a field review was conducted August 19 – 21, 2008. Following is a trip report prepared by the Utah NPS Coordinator, with photos provided by EPA for the tour of 319 and other USDA funded projects in northern Utah.

NPS PROJECT TOUR – 2008
EPA, DEQ, UDAF & UACD LOCAL PROJECT STAFF
August 19-21, 2008

Participants Include:

Ayn Schmit, U.S. EPA, Region 8
Gary Kleeman – U.S. EPA, Region 8
George Hopkin, Utah Department of Agriculture & Food
Roy Gunnell – Utah Department of Agriculture & Food
W.D. Robinson – Utah Department of Agriculture & Food
Jack Wilbur, Utah Department of Agriculture & Food

Ray Loveless, Utah Association of Conservation Districts
Leah Ann Lamb, Division of Water Quality
Kari Lundeen, Division of Water Quality
Jim Harris, Division of Water Quality
Mike Reichert – Division of Water Quality

DAY ONE
August 19, 2008

Stop 1: East Canyon Creek – Swaner Nature Preserve, Nell Larson

- Founded 1992 – 1200 acres conservation easements
- North of I-80, 450 acres and 2 miles of East Canyon Creek

- 850 acres South of I-80
- Few years' stream restoration, revetments (2006); 4,500 willows 2005
- Previous large sheep allotment and irrigated farm pasture
- I & E Outreach effort conducted by the East Canyon Committee with focus on proper dog waste management
- Limited public access is for organized groups
- Started intensive weed management program few years ago
- Observing some gradual improvement in some species
- County provided $30,000 for weed control
- Willow planting 90% success ratio this spring
- Planted with waterjet stinger

Stop 2: Blazzard Farm Conservation Easement – Wendy Fisher, Utah Open Lands

- Wendy gave packet on the East Side Preservation Committee, By laws, etc.
- Continued Ag operation is their emphasis
- Blazzard – cow calf operation
- Some concerns – concern with animal waste management will be addressed in Conservation Easement
- Appraiser looking at home site value and will be included in agreement
- 300 acre parcel of ground would be included in conservation easement

<u>Stop 3: Dee Waldron Ranch – Morgan (see photo above)</u>

Additional Participants:

Dee Waldron – Ranch Owner
Danny McBride - UACD
Kyle Jackson – USU Extension

- See handout for project description prepared by Danny McBride
- Composting manure for use on the ranch
- Add Gypsum to reduce the salt content in waste
- Huge increase crop production
- Apply at 15 tons/acre
- Supplement with commercial fertilizers
- New nutrient management plan is being written
- A new RMS is being written for total farm management plan
- 500 to 750 total AUMs
- ½ to 1/3 less commercial fertilizer is required to maintain optimal production at proper agronomic rates
- Project funded with EQIP, 319 and SRF funds

Stop 4: Wadeland Dairy – West Weber County (see photo above)

- Abandoned the dairy operation and converted to feeder operation
- Built curb wall to contain manure run-off
- Old corrals previously drained into the county drain and then to old Salt Creek which drains to the Great Salt Lake
- Very high water table
- Concrete pad has underground drains which pumps 50 gallons per minute
- Water is collected and pumped to the county drain
- Total project cost about $250,000
- Wadeland have a new CNMP prepared by UACD
- The UAFRRI shows significant reduction in TP, NO_3, and BOD – see handout

Stop 5: Pappy's Farm – Farr West

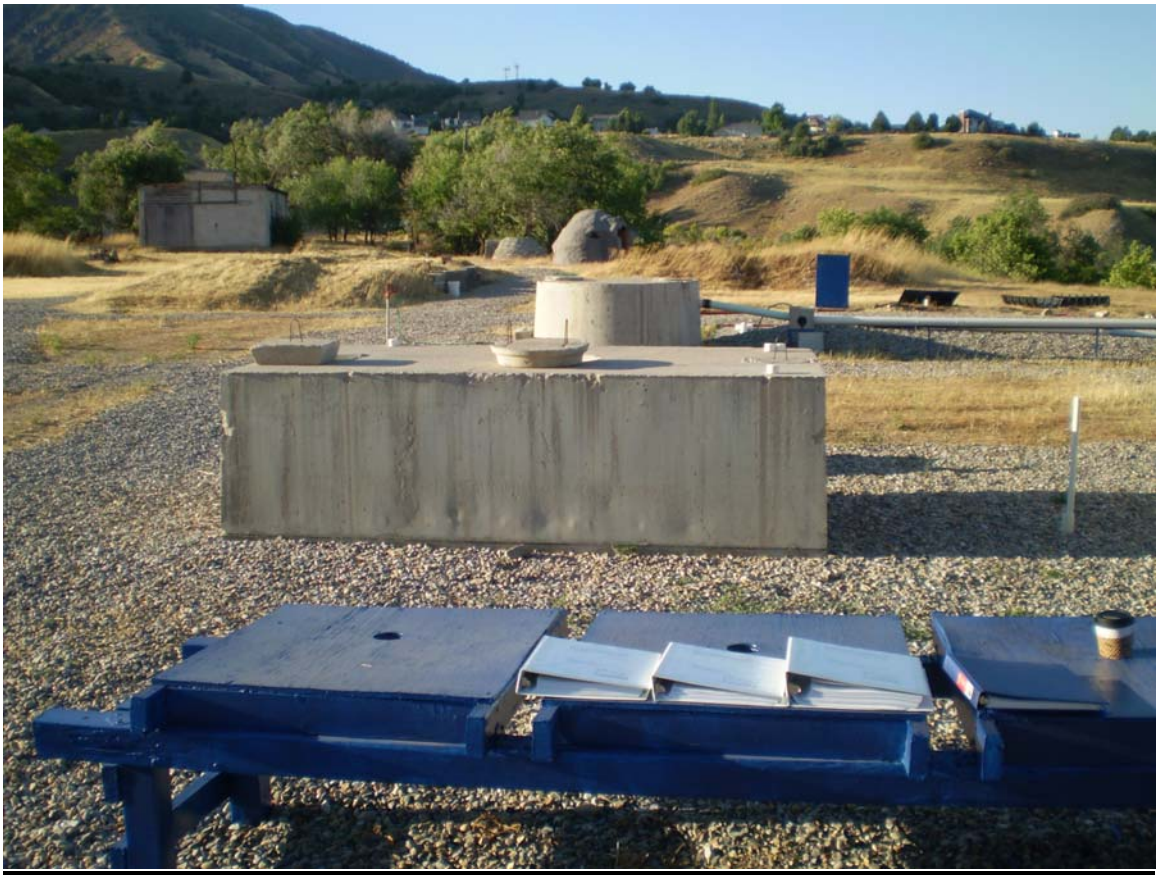
- Great producers - proactive
- Historically corrals and barn all drained to various ditches
- All corrals and barn water run-off are now collected and drain to a pit with overflow to underground sump and is pumped to pond

- Run-off water collected and is pumped to 2 acre pond – clay lined pond; 100% compaction
- CNMP is in place
- See UAFRRI data (on hand-out)
- Shed roof run-off go to underground gravel drains
- All construction was completed in December 2007
- The pond is 5 feet deep and is only filled about 2.5 feet
- Water has all evaporated from pond
- Project had about $90,000 319
- Total project about $400,000
- Also had EQIP and ARDL funds

DAY TWO
August 20, 2008

Day Two Additional Participants:

Dr. Judy Sims – Utah State University
Josh Hirschi – Utah State University



Stop 1: USU – Onsite Wastewater Treatment Disposal Demonstration Site – Dr. Judy Sims and Josh Hirschi

- Original DEQ 75k award for the demonstration site several years ago
- Training on-site certification
- Annual fee from state certification program
- Certification Rule has 3 levels of certification
- 18 workshops planned for this year
- All civil and public health engineers go through the training at USU
- $20,700 of CWA FY-05 104(b)(3) funds was provided for workshops and training materials

Stop 2: Nebo Creek, Cleave – Thayne Mickelson, Nathan Daugs

- Spring development
- And grazing management
- Plan development and implementation is in progress
- Move feed lot off the creek and develop up on the flatter terrain with water troughs
- Mix of EQIP and 319 funds used on project

Stop 3: Scott Trip Property – Jeff Barnes, NRCS

- Near Nebo Canyon
- Entire conservation plan for operation – 160 acres
- Used EQIP, CRP funds through FSA and 319
- Fenced the drainages and entire farm about 160 acres
- Needed off-site water development – 3 troughs flow from springs
- Allows for better grazing management
- Hay fields used for grazing in late summer and fall

Stop 4: Jay Ward Property on City Creek

- Piped the water through the feedlot
- EQIP $5,000
- 120 head on the operation
- 319 funds, $1,200

Stop 5: Rockhill Creamery, Pete Schropp & Jennifer Hines, Richmond

- Beautiful little hand crafted gourmet cheese making operation
- Six Brown Swiss cows, no artificial growth hormones used
- Very small, clean operation with no waste management issues

Stop 6: Grant Heurer Project in Elwood – (no photos)

- Developed from Elwood City water for corrals
- Previously watered by springs
- 20 foot cement walk around the corral
- Replacement heifers
- Water from corral drain to evaporation pond
- AMA funds plus about 30k 319
- Second corral – moved corral back off river and built 20′ wide cement pad next to feeding trough
- Installed water trough with city water
- Haul manure once/year
- Constructed small detention pond to contain run-off from corral
- Questions were raised regarding design of ponds
- Operation and waste management much improved from past practices

NPS PROJECT TOUR – 2008
EPA, DEQ, UDAF & UACD LOCAL PROJECT STAFF

DAY 3
August 21, 2008

Additional Participants:

Craig Poulson – Watershed Coordinator, Uinta Basin
Allen Ward – Division of Wildlife Resources
Justin - Division of Wildlife Resources

Stop 1: Strawberry River at Forest Service Visitor Center (See fact sheet prepared by Craig Poulsen, the Uinta Basin Watershed Coordinator)

- Stream restoration work performed jointly by the Division of Wildlife Resources and U.S. Forest Service

Stop 2: Strawberry River

- Recent rehab ongoing work
- Using log structures
- Some use of coconut fiber mats
- Off-site small ponds for sensitive toad species

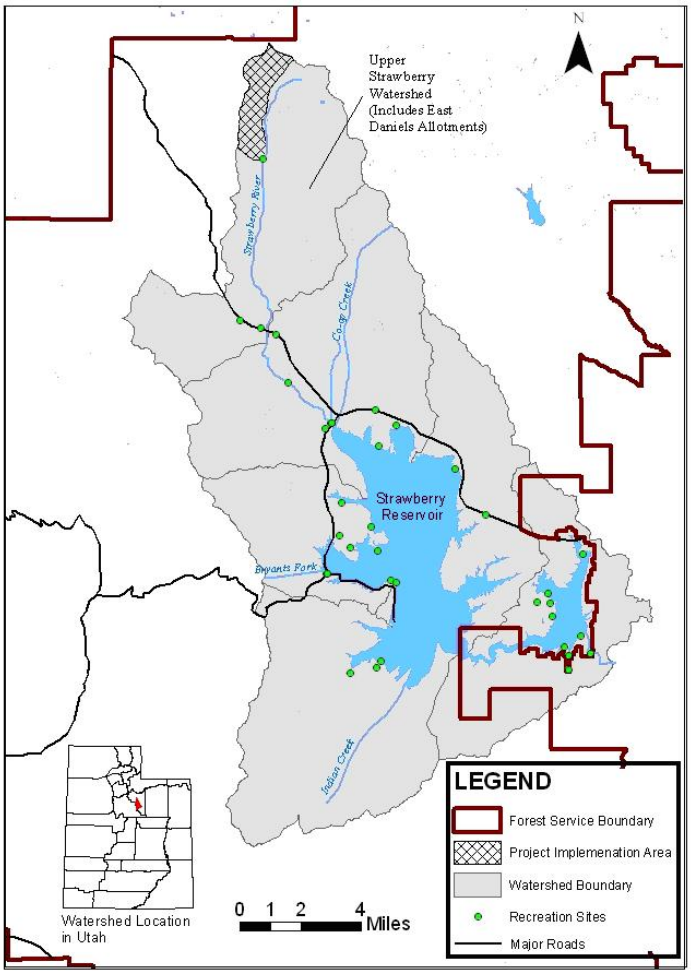
Strawberry Watershed Projects – fact-sheet prepared by Craig Poulsen, Watershed Coordinator

Background:

- Strawberry Reservoir is listed as impaired for High total phosphorus (TP) and low dissolved oxygen (DO).
- The Strawberry Reservoir TMDL was approved by EPA on 7-9-07.
- TMDL includs Best Management Practice (BMPs) to reduce the loading of TP and total suspended solids (TSS) to the Strawberry Reservoir from the Strawberry River.
- Strawberry River is the largest natural tributary to Strawberry Reservoir, and also the largest contributor of Sediment and TP.
- Headwaters area is classified as High Quality Category I water.

- Protection of these sensitive headwater areas is a priority for the US Forest Service, Utah Division of Water Quality, Utah Division of Wildlife Resources, and the Friends of Strawberry Valley (local watershed group) and their partners.
- Strawberry Reservoir supports a high quality cold water fishery.
- Strawberry valley is a very popular recreational destination for anglers, campers, boaters, ATVs, horseback groups, hikers, snowmobilers and others.
- Traditional use of range for agricultural grazing has been decreasing but is still ongoing.

Figure 1: Location of Project in Upper Strawberry Watershed



Strawberry River Restoration Project

Phased project that started approximately 5 years ago. Work has been undertaken to restore the riparian area to a natural system. Cut banks have been sloped back and revegitated with willow cuttings from local sources. Vanes have been installed to direct stream flow. Disturbed banks have been protected with root wads, brush revetments and coconut fiber netting to allow for vegetation establishment. Stream channel has been reconnected to the traditional floodplain to aid in transporting high flows.

This past spring was the first spring where there were high flows since the first phases of the project were completed. In the areas where the restoration had not taken place the flows were confined to the channel and the high velocities of water contributed to a large amount of erosion. In the areas where work had been completed the water was distributed out over the floodplain reducing water velocity and minimizing erosion. These areas came through in very good shape.

These projects have been overseen by the State Division of Wildlife Resources and paid for through various sportsman's dollars and state resources. We are currently working with the DWR to see if we can partner on other similar projects in the Strawberry watershed.

Important note: There has been no livestock grazing in the project areas since the early 1990's.

Strawberry Headwaters Protection Project

Located entirely on U.S. Forest Service land, this project is in an active livestock grazing permit.

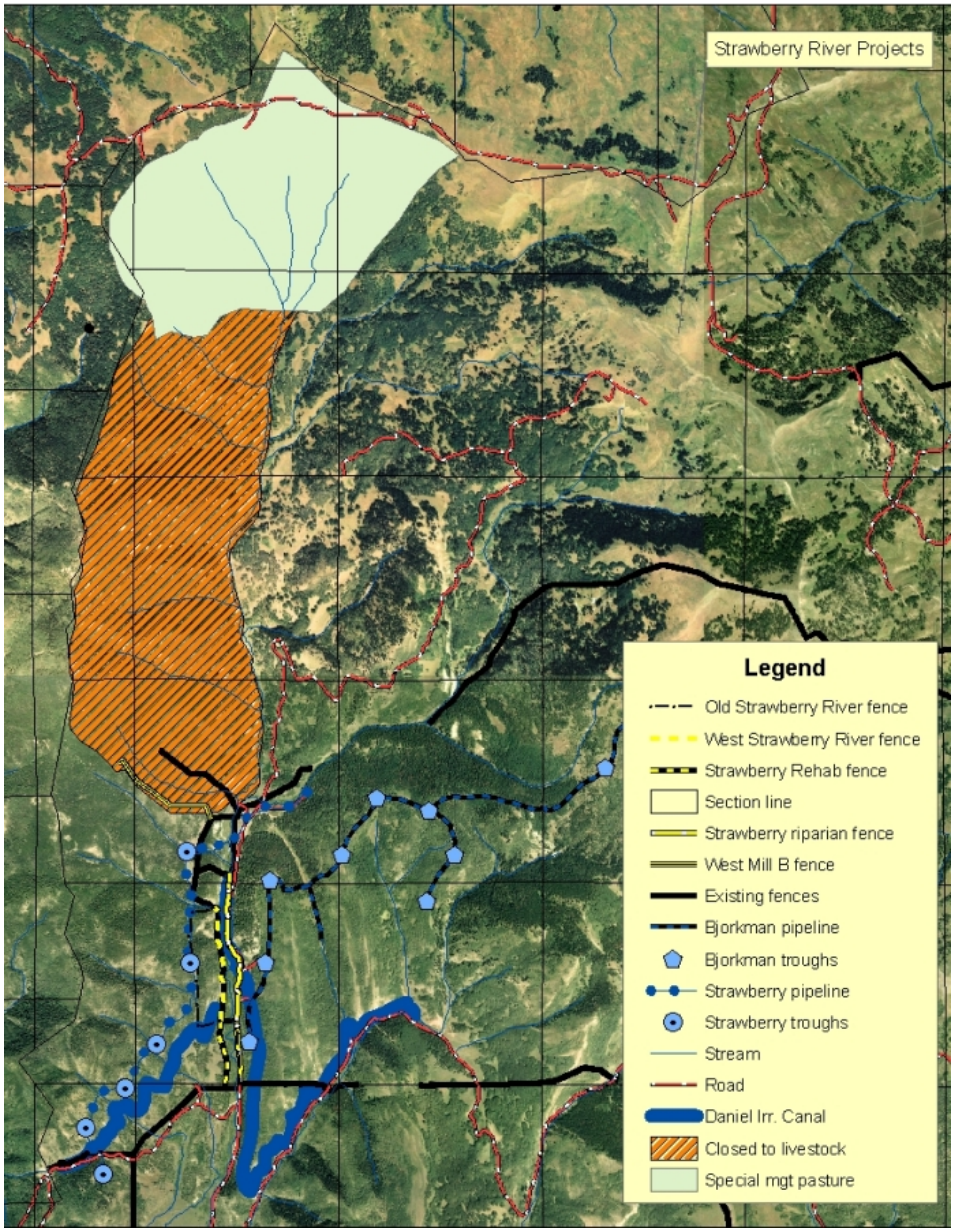
History

Early 1900's part of a common use allotment that used Daniels Canyon as a turnout every year, sheep migrated up to the allotment early each year, causing overgrazing on ridge tops and in Aspen dominated areas. This resulted in undesirable species like Tarweed and Western Cone Flower. Allotment was later converted to 2 sheep allotments with an on date of July 1. Rotational grazing has also helped reduce undesirables and improve range. The two allotments have since been combined into the Strawberry allotment. The Strawberry allotment was permitted for

1200 ewes with lambs from July 1 to 30 September.
Permit has recently been acquired by neighboring East Daniels allotment, 18,200ac, permitted for 935 cows with calves from June 21 to Sept 30. As part of the conversion from sheep to cattle an EIS was completed to determine BMP's for the area.
The EIS has designated the proposed fencing alternative to allow cattle grazing, but protect sensitive headwater areas.
Permitees have been very responsible, watching cattle, rotating as asked from pasture to pasture, removing livestock early if range conditions are poor, and changing permits in 1992 to take a 29% reduction to bring numbers in line with grazing capacity of allotment.

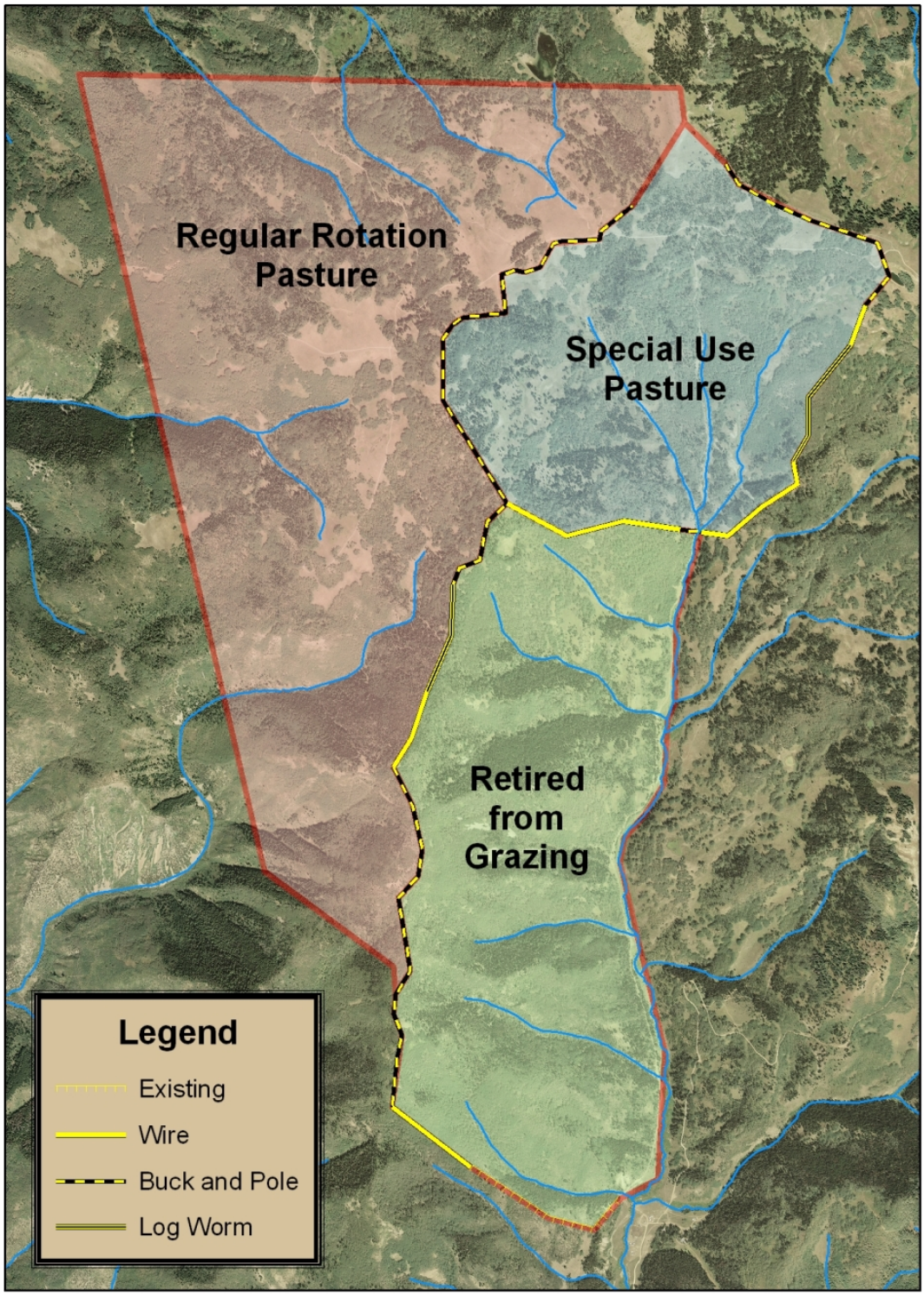
Over the last several years the forest service has worked with the permit holders to implement various fencing and livestock watering projects that have contributed to stream protection.

Figure:



This project will complete the work on the East Daniels Grazing Allotment and prevent cattle access for the length of the Strawberry River above the Reservoir with the exception of the Special Use Pasture at the extreme upper end where there will be limited grazing based on usage of key Riparian species.

Strawberry Allotment with Proposed Pasture Managment



Major concerns for the Strawberry Valley

- Recreation
- ATV and other off-road vehicle
- Expansion of summer homes
- Threat of Aquatic invasive species, specifically Quagga and Zebra mussels
- Invasive weeds
- Potential for Oil and Gas exploration
- Threatened and Endangered species, specifically Sage Grouse
- Maintaining current multiple uses

Stop 3 Emigration Canyon – (no photos)

Additional Participant:

Steve Jensen – Salt Lake County

- Urbanized watershed ~ 550 residences
- Five (5) historical studies
- 1972 First Study – City/County Health – doesn't have copy of report
- E-coli study
- 319 Study
- USGS tracer injunction study – quantify zones of inflow
- County report on all existing data on the report
- Upper 2/3 gaining stream
- Lower 1/3 is losing stream in the bottom of canyon
- Recent study e-coli investigation underway w/U of U and DWQ
- Document e-coli loads and spikes in lower end of canyon
- Most septic systems were built in 70′ and 80′
- Current study U of U Microbial Source Tracking
- Vast majority is shown to be human
- Emigration Improvement District
- Trouble shot certain homes
- Unincorporated County area
- If sewered, flow would go to SLC
- Then the City would need to annex it
- When reports/studies are finished in next few months, meetings will be held between County, City and stakeholders and canyon residents to determine course of action

X. Water Quality Programs/Activities Related to or Directly Affecting the NPS Management Program

Following is information on three programs which directly affect the NPS Pollution Management Program. They are as follows:

- Water Quality Standards
- Water Quality Assessment
- TMDL Development & Implementation

A. Water Quality Standards

During FY2006 and early in 2007 the DWQ staff conducted a partial Triennial Review of the water quality standards. Due to numerous comments and substantive input to proposed changes, the DWQ terminated rule actions and began a more intense collaborative process with many stakeholders to more thoroughly review the WQS and adopt changes. A "Water Quality Standards Stakeholders Workgroup" was established by DWQ in the last quarter of 2007. Staff of EPA Region VIII is also included in the workgroup. The issues for rule making that were discussed include rule making wording the following items: (1) triennial review; (2) total dissolved solids ; (3) primary and secondary contact recreation; (4) E. coli; and (5) antidegradation. Proposed changes were discussed and considered. These issues carried over into 2008. The Triennial Review was completed in the last quarter of 2008 with rule making being completed during the November of 2008. The revised standards were effective on January 12, 2009. Included in the Triennial was the establishment of a tissue based standard for selenium for shorebirds frequenting Great Salt Lake. This standard was a major effort over the last four years with collaboration from stakeholders and scientific guidance from a panel of nationally known scientific experts.

B. Water Quality Assessment

This program with resulting activities and reports forms the foundation for the nonpoint source planning and implementation efforts of the state. The 2008 Integrated Report was completed and sent to EPA. Water quality data from DWQ, USGS, Salt Lake City, and Salt Lake County were used in the assessment. Benthic macroinvertebrate data were used to do assessment using a RIVPACS model. This compares monitored sites against reference sites to determine if the benthic community at a monitored site is significantly different than that a reference sites. If they were, the assessment unit was listed as impaired. The 2008 Integrated Report was completed and sent out for public comment. Because of some of the comments, the assessment has been redone and it will be public noticed again in February, 2009.

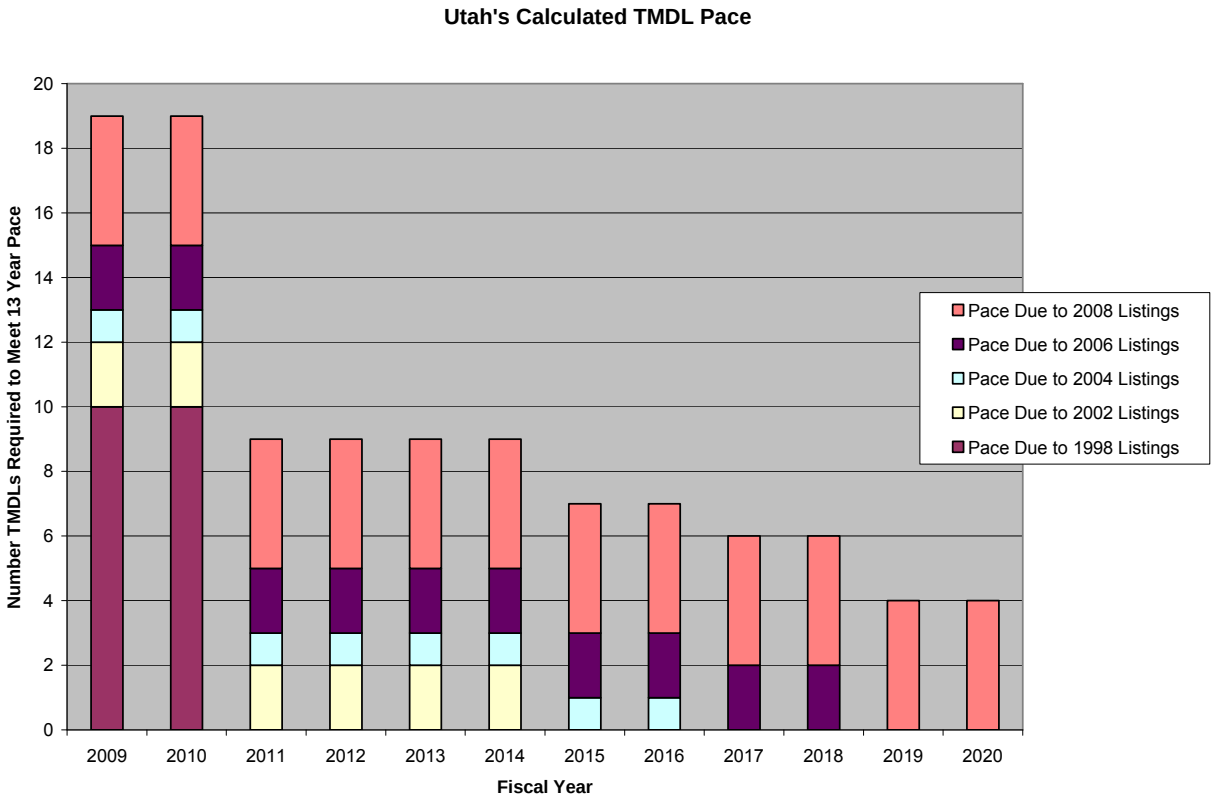
C. TMDL Development/Watershed Planning

As described in the upgraded NPS Pollution Management Plan for Utah completed in September 2000, the Watershed Approach and the development of TMDLs for Utah's impaired waters is the foundation of the NPS Pollution Management Program. To carry out watershed planning and TMDL development the TMDL/Watershed Section was formed in 1999 within the Division of Water Quality. The Watershed Approach is a common-sense program aimed at

improving the protection of Utah's surface and ground water resources. It provides the framework for developing and implementing TMDL plans to restore and protect the quality of Utah's water resources.

Waterbodies may be de-listed based on development of site specific criteria, evaluation of new data that demonstrates support, use attainability analysis which result in revisions to beneficial use designations, or completion of TMDLs.

Any waters listed will comply with EPA guidelines to complete TMDLs within a 13 year time frame. According to the current pace to complete TMDLs within their allotted time frame of 13 years since first listing, an average of 19 TMDLs will need to be completed by 2010. The Division anticipates completing 24 waterbody/pollutant combination TMDLs by the end of FY 2009.



As of January 2009 we have received EPA approval on the TMDLs submitted for Newcastle Reservoir, Red Fleet Reservoir, Steinaker Reservoir, and Brough Reservoir. Several delisting and site specific criteria recommendations have also been proposed including Big East Lake, Chicken Creek, Lower Gooseberry Reservoir, Mill Hollow Reservoir, Ninemile Reservoir, Piute Reservoir, Recapture Creek Reservoir, Yankee Meadow Reservoir, Tony Grove Reservoir, and Manning Meadow Reservoir.

TMDL Update/Overview

Carl Adams, TMDL Section Manager
Division of Water Quality
801-538-9215
carladams@utah.gov

APPENDIX

Watershed Fact-sheets/success stories – 2008. The following fact-sheets were published by USU Extension and the UtahPCD in cooperation with DWQ, the local watershed coordinators and respective stakeholders.

1) Beaver River Watershed
2) Chalk Creek Watershed
3) Cub River Watershed
4) East Canyon Creek Watershed
5) Fremont River Watershed
6) Otter Creek Watershed
7) Rees Creek Watershed
8) San Pitch River Watershed
9) Spanish Fork River Watershed

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Improving Utah's Water Quality

Beaver River Watershed

Major Waterbodies

Beaver River
Puffer Lake
Minersville Reservoir
Kents Lake
LaBaron Reservoir

Major Cities

Beaver City
Greenville
Adamsville
Manderfield

Major Land Uses

Agriculture

Local Water Quality Issues

Sediment
Total Phosphorus
Nitrogen loading
Erosion

Local Contact:

Beaver Conservation District
620 North Main Street
PO Box 640
Beaver, UT 84713
Phone: (435) 438-5092

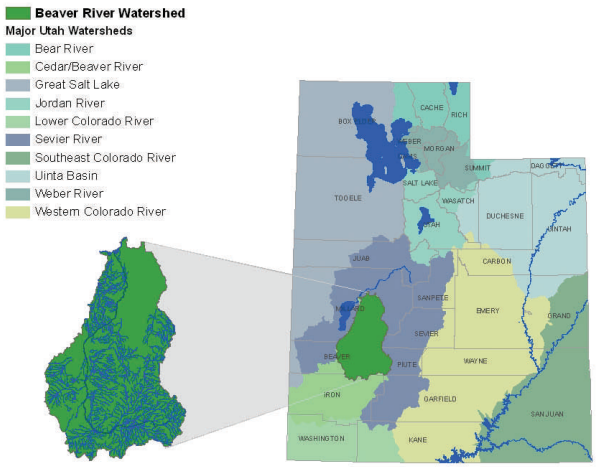
Watershed Description:

The Beaver River watershed encompasses approximately 320,000 acres with about 306,000 acres in Beaver County and 14,000 acres in Iron County. The watershed is encircled by the Tushar Mountains on the northeast and east, Circleville Mountains on the southeast, and the Mineral Mountains to the west.

The estimated total watershed population is approximately 3,500 people and is expected to experience a 2.6 percent population growth by the year 2020. There are about 170 farms in the watershed with an average area of 495 acres. Beaver City, the county seat, is the most populated town in the watershed with an estimated population of 3,000. Other communities in the watershed include Greenville, Adamsville, and Manderfield.

Photo courtesy of Beaver County Extension Office

Several nonpoint source water quality problems have been identified in the watershed. They include sedimentation, phosphorus and nitrogen loading, and eroding stream banks. These pollutants are causing a decrease in water quality in the Beaver River, its tributaries, and the Minersville Reservoir.



UtahPCD is a partnership committed to providing conservation solutions.

Beaver River Water Quality Improvement

Project Description:

Water quality improvement projects focusing on the Beaver River began in 1993 with the acquisition of an EPA 319 Grant. Since work began in 1993, 319 funds have helped over 23 landowners in the watershed improve water quality on their operations and have also helped leverage an additional $6.4 million dollars from other state and federal conservation programs for water quality improvement projects. In 2001, the watershed completed the development of the Beaver River Watershed Coordinated Resource Management Plan (CRMP) and Watershed Restoration Action Strategy. The CRMP identifies potential water quality limitations and establishes implementation strategies focused on improving water quality. The CRMP also provides additional leverage for water quality improvement project funding.

An initial summary of water quality results indicate that although there was a decline in the average annual total phosphorus concentrations, the pollution indicator value of 0.05 mg/L is exceeded in all samples. Results from this initial evaluation imply project implementation is having a positive effect on water quality but substantial work is required to achieve desired water quality end points.

Partners

Beaver River Soil Conservation District
Beaver River Watershed Steering Committee
Beaver County
Beaver City
Utah Division of Wildlife Resources
USU Cooperative Extension Service
Utah Department of Agriculture and Food
Utah Association of Conservation Districts
Utah Department of Environmental Quality
Utah State Trust Lands Administration
Utah Division of Parks & Recreation
Natural Resources Conservation Service
Bureau of Land Management
U.S. Environmental Protection Agency
U.S. Department of Agriculture Forest Service

Related Projects

Rangeland Restoration
Animal Waste Control Systems
Irrigation Run-Off Improvement Projects
Stream bank and Riparian Restoration Projects
Information and Education

For funding opportunities in the Beaver River Watershed, contact the Beaver Conservation District.

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.

Produced by USU Water Quality Extension, Utah Watershed Coordinating Council, Utah Association of Conservation Districts, and Utah Division of Water Quality.

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NR/WQ/2008-6

Improving Utah's Water Quality

Chalk Creek Watershed

UtahPCD UtahState UNIVERSITY extension

Major Waterbodies

- Echo Reservoir
- Weber River

Major Cities

- Coalville, UT
- Evanston, WY
- Ogden, UT

Major Land Uses

- Agriculture
- Oil
- Gas
- Coal Operations

Local Water Quality Issues

- Phosphorous
- Sediment
- Bank Erosion
- Loss of Riparian Vegetation and Aquatic Habitat

Local Contact:

USDA Service Center

30 Main Street
PO Box 526
Coalville, UT 84017-0437
Phone: (435) 336-5853

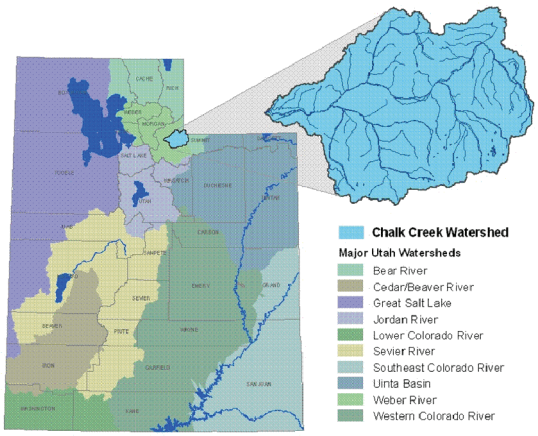
Watershed Description

The Chalk Creek watershed is located in Summit County 40 miles south of Ogden, Utah, and 4,000 acres of the watershed lies in Uinta County, Wyoming. The city of Coalville is located within the watershed on the western boundary at the point where Chalk Creek merges with the Weber River above Echo Reservoir. Chalk Creek receives water from three major tributaries: South Fork, Huff Creek, and East Fork.

The watershed encompasses 176,000 acres (275 square miles) and elevations range from 5,560 feet to over 10, 600 feet above sea level. Valley bottoms are relatively wide, supporting good quality pasture lands and the majority of the watershed is composed of mountainous rangeland.

The majority of the land within the watershed is privately owned, with a few exceptions, including 40 acres of BLM land and various small tracts of land adjacent to Echo Reservoir which are managed by the Weber Water Users and the Utah Division of Parks and Recreation. The land uses in Chalk Creek are as follows; 71% is mountain rangeland, 25% is woodland used for grazing, 2.5.% is pasture and hayland, 0.5% is urban, and 1% are oil and mining sites. The Chalk Creek watershed is a tributary to the Weber River system which provides municipal, industrial, agricultural, and recreational water to several thousand water users downstream.

Photo courtesy of the City of Coalville



Chalk Creek Water Quality Improvement

Project Description:

In 1991, the local soil conservation district, landowners, elected officials, water users, and resource managers engaged in the Chalk Creek Nonpoint Source Water Quality Project to address water quality impairments in the watershed. The primary goal of this project was to reduce bank erosion and sedimentation entering the creek. Best management practices (BMPs) were implemented to complete this goal. The practices included:

Chalk Creek Best Management Practices	
Brush Management	12,888 acres
Channel Vegetation	9,432 linear feet
Clearing and Snagging	340 feet
Critical Area Planting	4 acres
Pond	6 each
Fence	166,659 feet
Sprinkler Systems	1,024 acres
Drip Irrigation Systems	17 acres
Irrigation Water Management	1,041 acres
Use Exclusion	371 acres
Pasture and Hayland Management	206 acres
Stock Water Pipeline	5,585 feet
Prescribed Grazing	58,218 acres
Abandoned Mined Land Reconstruction	38 acres
Rangeland Planting	2,025 acres
Spring Developments	4 each
Streambank Protection	21,561 feet
Channel Stabilization	20 structures
Riparian Forest Buffer	13 acres
Livestock Watering Facility	9 each

The results of implementing BMPs in Chalk Creek included reducing total phosphorus, enhancing aquatic habitat, reducing sediment into the creek, and the finding of Bonneville cutthroat trout in the watershed.

Partners

Summit Soil Conservation District
Coalville City
Summit County
Chalk Creek Narrows Irrigation Company
Local hunting groups
Utah State University Extension
USDA Farm Service Agency
USDA Natural Resources Conservation Service
Utah Department of Agriculture and Food
Utah Department of Environmental Quality

Related Projects

Irrigation systems
Rangeland management
Pasture planting
Soil testing and training
Stream restoration
Outreach and education events
Water quality monitoring
Habitat evaluations

Funding

Total $4.1 million

For funding opportunities in the Chalk Creek Watershed, contact the Kamas Valley Conservation District.

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.

Produced by USU Water Quality Extension, Utah Watershed Coordinating Council, Utah Association of Conservation Districts, and Utah Division of Water Quality.

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NR/WQ/2008-5

Improving Utah's Water Quality

Cub River Watershed

Major Waterbodies

Cub River

Major Cities

Lewiston, UT
Richmond, UT
Franklin, ID
Preston, ID

Major Land Uses

Agriculture
Urban

Local Water Quality Issues

Phosphorus
Sediment

Local Contact:

USU Extension
Watershed Coordinator
1860 N 100 E
North Logan, UT 84341
(435) 753-6029

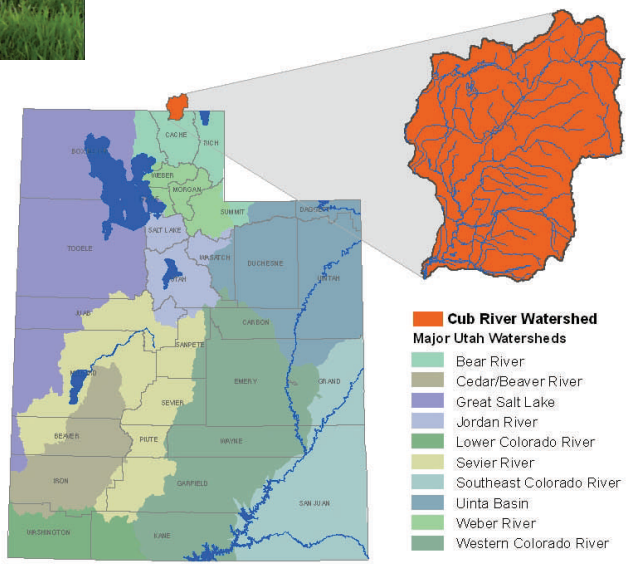
Watershed Description:

The Cub River watershed, located in southern Franklin County, Idaho, and northern Cache County, Utah, covers an area of approximately 153,000 acres (239 square miles). The main stream of the Cub River flows in a southwesterly direction from its headwaters in the Bear River Range to its confluence with the Bear River, west of Richmond, Utah. The basin is about 21 miles long and 15 miles wide, containing 112 miles of perennial streams and 216 miles of ephemeral streams and canals.

Slightly over half the land in the watershed (56.8%) is privately owned. The U.S. Forest Service manages 39.5% of the watershed, with the Bureau of Land Management and state lands comprising the remainder.

Approximately 13,000 people live within the Cub River watershed (9,000 in Idaho and 4,000 in Utah). Most residents live within the Utah communities of Richmond, Lewiston, Cove, and the Idaho communities of Preston and Franklin. The majority of residents are employed in the towns within the basin in commercial, service or industrial positions, or in the surrounding regions in agricultural activities (dairies, animal feeding operations, farming, etc.). Many people also commute to Logan, Utah and other neighboring communities for employment (BRAG, 1990).

Photo courtesy of USU Water Quality Extension



Cub River Water Quality Improvement

Project Description:

The Cub River water quality improvement project was launched in 1999 with the help of the North Cache Conservation District, Utah State University Water Quality Extension, Natural Resources Conservation Service, Utah Division of Water Quality, and local landowners. Projects focused on restoring stream corridors, re-contouring stream banks, installing in-stream structures, planting riparian vegetation to improve the river by filtering out pollutants, and improving wildlife habitat. Along with stream restoration projects, landowners voluntarily installed conservation practices that have helped improve the Cub River water quality and overall health of the watershed, including relocating animal feeding operations, implementing sprinkler irrigation systems, improving grazing management, installing riparian fences, and re-planting pastures. These practices help control erosion and reduce runoff of sediment and nutrients into the Cub River. For many landowners, participation in federal and state grant programs is possible thanks to the Utah Agriculture Resource Development Loan (ARDL) program. ARDL is a low interest loan used by landowners to pay their share of the cost of a project.

Partners

North Cache Conservation District
Utah Division of Water Quality
EPA
Utah State University Extension
Utah Division of Wildlife Resources
Natural Resources Conservation Service
Utah Association of Conservation Districts
Local landowners
Local irrigation companies

Related Projects

Irrigation systems
Range and pasture planting
Soil testing and training
Bear River Watershed Celebration
4th grade natural resources field day
Stream restoration
Animal feeding operation inventory
Animal feeding operation improvements
Wildlife habitat improvement

Funding

Total (through 2008) $1.9 million

For funding opportunities in the Cub River Watershed, contact the local Watershed Coordinator.

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.

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NR/WQ/2008-1

Improving Utah's Water Quality

East Canyon Watershed

UtahPCD UtahState UNIVERSITY extension

Major Waterbodies

East Canyon Creek

East Canyon Reservoir

Major Cities

Park City

Morgan City

Major Land Uses

Forested with livestock

Residential

Commercial

Recreation

Local Water Quality Issues

Elevated Nutrients

Low Dissolved Oxygen

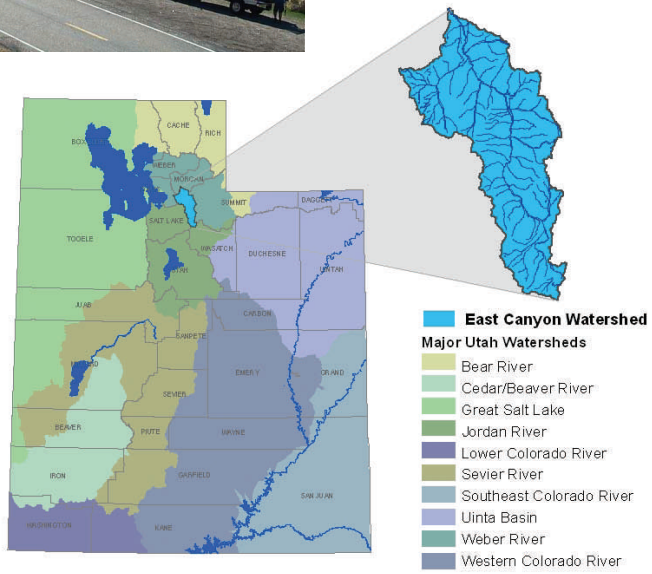
Local Contact:

USDA Service Center

30 Main Street
PO Box 526
Coalville, UT 84017-0437
Phone: (435) 336-5853

Watershed Description:

The East Canyon Creek Watershed is located in north central Utah, approximately 20 miles east of Salt Lake City, on the eastern slope of the Wasatch Mountains. The headwaters are located above Park City and the watershed drains 144 square miles of mountain terrain. The principal drainage channel of the upper part of the watershed is McLeod Creek, which turns into Kimball Creek and subsequently joins East Canyon Creek near Interstate 80. Flow from East Canyon Creek is impounded in the East Canyon Reservoir and finally joins the Weber River near Morgan, Utah. Over 75% of the watershed is forested with either active or inactive agriculture. Ski and golf resorts comprise 7% of land use, and residential and commercial development compose 6-10% (BioWest, 2000 and Stantec, 2003). The rapid development of the Upper East Canyon Watershed has resulted in a significant strain on the area's water resources.



UtahPCD is a partnership committed to providing conservation solutions.

East Canyon Water Quality Improvement

Project Description:

Beginning in spring of 2005 the Swaner Nature Preserve began implementation of a stream restoration project on East Canyon Creek. The main goals of this project are to stabilize eroding stream banks, restore riparian vegetation, and improve fish habitat over 5 years. Stream bank erosion can cause too much sediment to enter a waterway, which can affect the natural function of the stream or creek. As of January 2007, over 1100 feet of eroding stream banks have been stabilized using brush revetments. The revetments were in installed by volunteers and help to hold the eroding banks in place, preventing the sediment from washing into the water. The revetments in East Canyon Creek were constructed using recycled Christmas trees from the Park City area.

Riparian vegetation is being restored by planting various trees and shrubs along the creek. Approximately 760 trees and shrubs have been planted in the project area along with 1800 willow cutting transplants. The roots from the planted vegetation will help hold the soil in place, and provide habitat for wildlife that use the area.

To improve fish habitat, a cross vane structure has been constructed in the stream channel which improves habitat by creating a scour pool. Deep pools as well as riffles and runs are important features for many types of aquatic organisms, especially fish.

Partners

Kamas Valley Conservation District
Morgan City
Morgan County
Utah Division of Water Quality
EPA
Natural Resources Conservation Service
Utah State University Extension
Utah Division of Wildlife Resources
Utah Association of Conservation Districts
Utah Watershed Coordinating Council
Snyderville Basin Water Reclamation District
Park City Municipal Corporation
Summit County
US Fish and Wildlife Service
US Bureau of Reclamation
Trout Unlimited
Swaner Nature Preserve
Mountainland Association of Governments
Recycle Utah
Local landowners and volunteers

Related Projects

Water quality monitoring program for high school students
Annual Watershed Festival
Park City Mountain Resort Erosion Control and Gully Repair Project
Riparian fencing projects
Information and education outreach campaigns
Strom drain marketing projects
Stream restoration

For funding opportunities in the East Canyon Watershed, contact the Kamas Valley Conservation District.

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.

Produced by USU Water Quality Extension, Utah Watershed Coordinating Council, Utah Association of Conservation Districts, and Utah Division of Water Quality.

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NR/WQ/2008-3

Improving Utah's Water Quality

Fremont River Watershed

UtahPCD UtahState UNIVERSITY extension

Major Waterbodies

- Johnson Valley Reservoir
- Forsyth Reservoir
- Mill Meadow Reservoir
- Fish Lake
- Fremont River
- Dirty Devil River

Major Cities

- Loa
- Bicknell
- Torrey

Major Land Uses

- Agriculture
- Recreation
- Rangeland

Local Water Quality Issues

- Nutrients
- Sediment
- Stream bank erosion
- Salinity

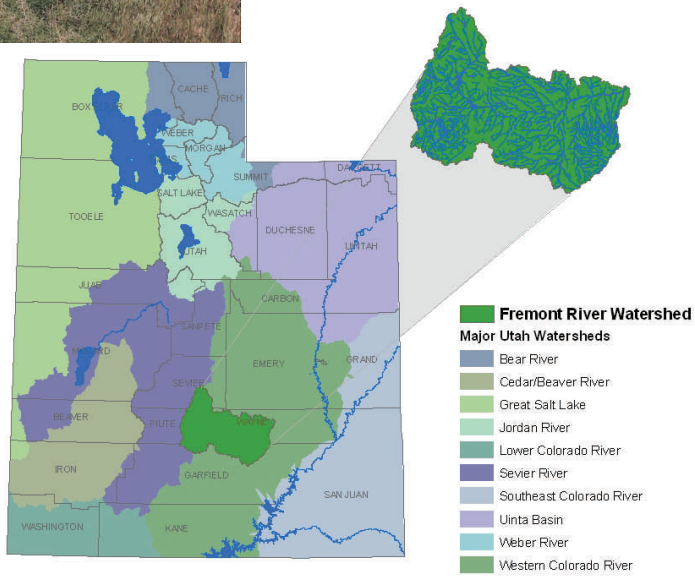
Local Contact:

Fremont River
Conservation District
Watershed Coordinator
340 North 600 East
Richfield, UT 84701
(435) 896-8566

Watershed Description:

The Fremont River watershed is located in Wayne County. The watershed headwaters, lakes, and streams are located in the Fish Lake National Forest, which includes the sixth highest mountain in Utah. The watershed is composed of high mountains and valleys.

The population of Wayne County is estimated to be 3,000 and the majority of the population works in agriculture industries. The primary land uses are associated with livestock production, including grazing. Approximately 5% of the land in Wayne County is privately owned, 12% is administered by the state of Utah, and 83% is administered by either the Bureau of Land Management, U.S. Forest Service, or the National Park Service. The watershed contains approximately 16,000 acres of irrigated lands, and 70,000 acres of private and state rangelands. The remaining acres are federally administered public lands. The watershed contains lands that are popular sightseeing sites due to their prehistoric ancestry. Other recreation activities include fishing, hunting, and camping.



Fremont River Water Quality Improvement

Project Description:

The Fremont River water quality improvement project was launched with the formation of a local steering committee to oversee the development of the "Fremont River Watershed Water Quality Management Plan." This plan was completed in March 2002. To date, 1.5 miles of stream have been restored with another 1.5 miles projected to be completed by spring 2009. These stream restoration projects focus on re-contouring stream banks, installing in-stream rock structures, and planting riparian vegetation to improve water quality. In addition to stream restoration, landowners have voluntarily installed many other conservation and best management practices such as the relocation of animal feeding operations, implementing sprinkler irrigation systems to eliminate irrigation return flows to the river, and riparian fencing. These practices help control erosion and reduce runoff of sediment and nutrients into the Fremont River.

Partners

Wayne County
Fremont River Conservation District
Local landowners
Utah Division of Water Quality
Utah State University Extension
Utah Association of Conservation Districts
Utah Dept of Ag and Food
Fishlake National Forest Service
Utah Division of Wildlife Resources
Natural Resources Conservation Service
Farm Service Agency
Environmental Protection Agency

Related Projects

Stream restoration
Range and pasture planting
Irrigation systems efficiency
Aquifer classification
Water quality monitoring programs

Funding

Total (through 2008) $750,000

For funding opportunities in the Fremont River Watershed, contact the Fremont River Conservation District.

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.

Produced by USU Water Quality Extension, Utah Watershed Coordinating Council, Utah Association of Conservation Districts, and Utah Division of Water Quality.

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NR/WQ/2008-10

Improving Utah's Water Quality

Otter Creek Watershed

Major Waterbodies

- Otter Creek
- Otter Creek Reservoir
- Boobe Hole Reservoir
- Koosharem Reservoir

Major Cities

- Koosharem

Major Land Uses

- Rangeland
- Forestry
- Agriculture

Local Water Quality Issues

- Sediment
- Nutrients
- Bank Erosion
- Coliform bacteria
- Turbidity

Local Contact:

Piute Conservation District

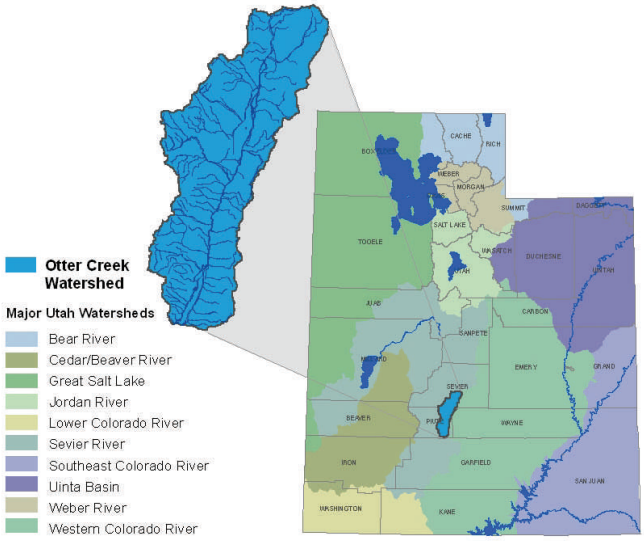
Watershed Coordinator

340 North 600 East,
Richfield, Utah 84701
(435) 896 6441 ext. 104

Watershed Description:

The Otter Creek Watershed encompasses 240,000 acres (375 sq mi) of rangeland, forest, irrigated pasture, irrigated cropland, meadow pasture, and small urban areas within Piute and Sevier counties. The watershed is about 39 miles long and 12 miles wide, and drains from north to south into Otter Creek Reservoir. Elevations range from 6,270 feet at Otter Creek Reservoir to over 11,600 feet above sea level at Mount Marvine. There are two other reservoirs located in the watershed; Boobe Hole and Koosharem. Climate in the watershed is temperate. Precipitation ranges from an average of 9.6 inches per year in the cropland areas to over 20 inches per year in the mountains.

There are approximately 240,000 acres the watershed; Forest Service 84,000 acres (35%), Bureau of Land Management 119,000 acres (50%), State of Utah 12,000 acres (5%), Tribal 778 acres (0.3%), private 24,000 acres (10%), of which 8,900 acres of private are irrigated land that includes alfalfa, small grains and pasture. Irrigated pastures are used for livestock grazing and the production of grass hay. Cattle, sheep, and horses are the major livestock produced in the watershed and are the major source of income.



Otter Creek Water Quality Improvement

Project Description:

In 1993, work began on the Otter Creek watershed restoration project. Improvement in range land, along with the installment of other management techniques has resulted in a less erosion, improved riparian plant condition, and improved water quality. A highlight of this project was the manner in which the partners effectively applied conservation and best management practices. Working with the local landowners, the Natural Resources Conservation Service, the Fishlake National Forest Service, the Bureau of Land Management, and the Utah Division of Wildlife Resources, we were able to implement brush management, range seeding, fencing, livestock water development, pipelines, watering troughs, stream bank and stream channel stabilization, irrigation water management, and more. These practices resulted in a decrease in nutrients and sediments which were previously entering the stream.

Partners

Piute Conservation District
Fremont River Conservation District
Local Landowners
Piute County
Utah Division of Water Quality
Utah Division of Wildlife Resources
Utah State University Extension
Natural Resources Conservation Service
U.S. Forest Service
Bureau of Land Management
Utah Association of Conservation Districts
Environmental Protection Agency

Related Projects

Stream restoration
Range and pasture planting
Irrigation systems efficiency
Aquifer classification
Water quality monitoring programs

Funding

Total	$2.1 million

For funding opportunities in the Otter Creek Watershed, contact the Piute Conservation District.

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.

Produced by USU Water Quality Extension, Utah Watershed Coordinating Council, Utah Association of Conservation Districts, and Utah Division of Water Quality.

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NR/WQ/2008-4

Improving Utah's Water Quality

Rees Creek Watershed

Major Waterbodies

Rees Creek

Nearest Cities

Coalville

Major Land Uses

Agriculture

Petroleum and Natural Gas Development

Recreation

Local Water Quality Issues

Sediment

Bank Erosion

Local Contact:

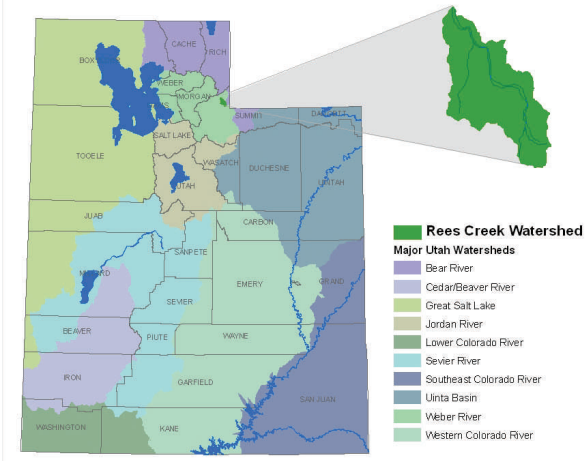
Summit Conservation District

Watershed Coordinator

30 Main St., PO Box 526
Coalville, UT 84017-0437
435-659-1449

Watershed Description:

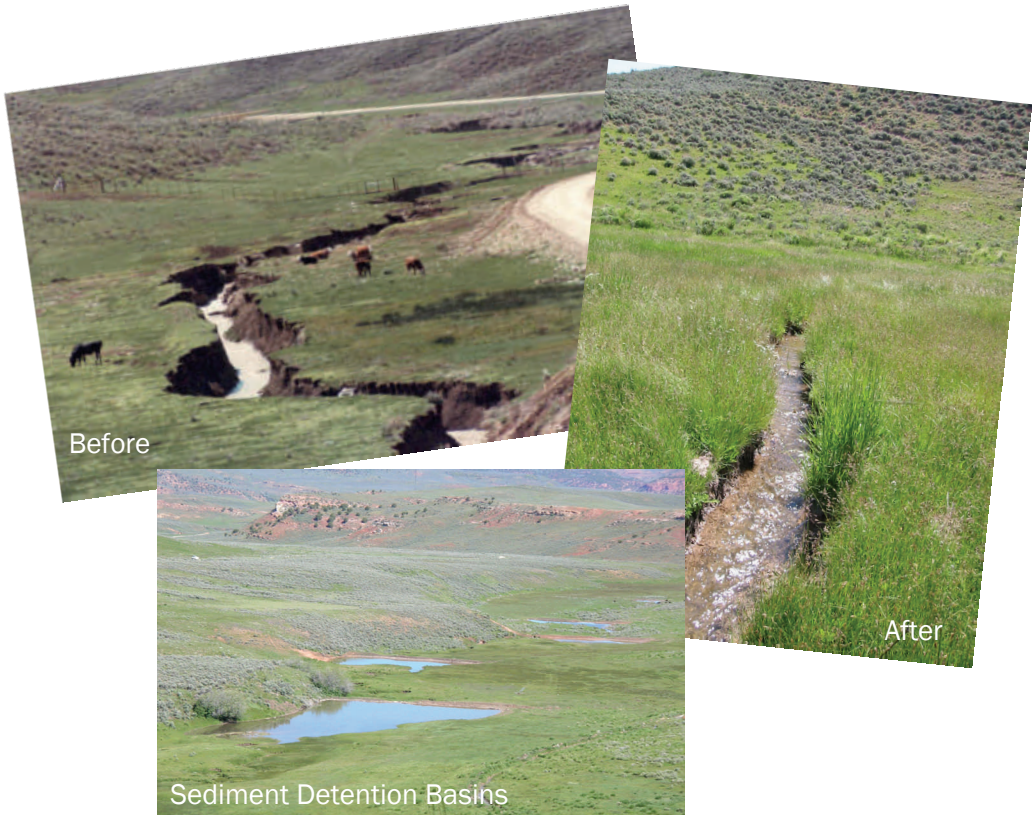
The Rees Creek sub-watershed lies near the top of the Echo Creek watershed, and southeast of the main stem of Echo Creek, encompassing 10,584 acres of land. Rees Creek flows northwest and joins Echo Creek just north of the I-80 Castle Rock exit. Ensign Ranches Corporation has managed all land within this watershed in private ownership since 1994. Agriculture, mainly livestock grazing, has been the primary land use in the Rees Creek watershed. Current agricultural use includes a summer cattle operation. Recently overall range conditions have improved because of a change in management. Lower meadow areas were once cultivated for hay but have reverted to pasture due to the inability to distribute water from Rees Creek because of the loss of irrigation diversion structures. Petroleum and natural gas extraction from this area of the over thrust belt has been ongoing for over 20 years. Numerous oil and gas well sites, and pumping stations exist in the upper portions of the watershed. In addition commercial hunting of big game species has become a significant source of revenue in recent years.



Rees Creek Water Quality Improvement

Project Description:

The Rees Creek Phase I and II projects have been implemented in an effort to reduce sediment loading in the Echo Creek Watershed, restore the hydrologic function of meadows in the Rees Creek Watershed, and improve woody vegetation along Rees Creek. Phase I of the project, implemented in 2004, consisted of constructing 7 sediment detention basins and approximately 8000 feet of new stream channel connecting the basins. Water quality data collected above and below the project site has shown decreases in Total Suspended Solids (TSS) ranging from 86-98%. Phase II of the project, implemented in 2007, consisted of the construction of four sediment detention structures. These structures have been designed to reduce stream flow velocities, catch sediments, and restore wet meadows in the lower watershed. Similar pollutant load reductions to those seen in Phase I of the Rees Creek Project are expected from the implementation of Phase II.



Partners

Ensign Ranches/Castle Rock Land and Livestock
Summit Conservation District
Utah Association of Conservation Districts
Utah Department of Agriculture and Food
Utah Department of Environmental Quality/Division of Water Quality
Weber Basin Water Conservancy District
Natural Resources Conservation Service
US Environmental Protection Agency

For funding opportunities in the Rees Creek Watershed, contact the Summit Conservation District.

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.

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Improving Utah's Water Quality

San Pitch River Watershed

Major Waterbodies

- San Pitch River
- Gunnison Reservoir
- Nine Mile Reservoir

Major Cities

- Manti
- Ephraim
- Mt. Pleasant

Major Land Uses

- Agriculture
- Urban

Local Water Quality Issues

- Salinity
- Temperature
- Phosphorus
- Bank Erosion

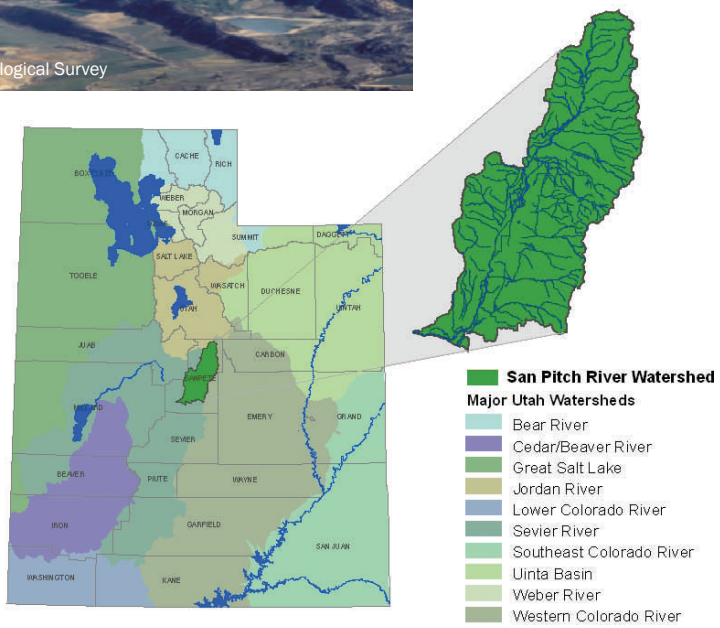
Local Contact:

Sanpete Conservation District
Watershed Coordinator
50 S. Main
Manti, UT 84642
(435) 835-4111

Watershed Description:

The San Pitch River Watershed located in the center of the state is almost entirely within Sanpete County. The San Pitch River runs from Milburn and flows into Gunnison Reservoir where it eventually drains into the Sevier River. The watershed is home to nearly 800 farms and the principal crops are alfalfa, small grains, and corn for silage. Livestock and poultry are the mainstays of Sanpete County agriculture where turkey production ranks in the top four counties in the nation. Water quality is important to both agriculture and urban users, and was the reason the San Pitch Watershed Stewardship Group was formed in 1999. Under its leadership, the Sanpete Conservation District and other natural resource partners including local landowners are implementing projects to improve Utah's water quality. Projects are based on the "San Pitch River Watershed Water Quality Management Plan" completed in January 2006.

Photo courtesy of Utah Geological Survey



San Pitch Water Quality Improvement

Project Description:

The San Pitch River water quality improvement project was launched in the summer of 2004 with the help of the Utah Division of Wildlife Resources and local landowners. To date, 2 miles of stream have been restored with 1.5 miles projected to be completed in the spring of 2008. The project is funded to restore 4,000 more feet of stream bank, which will be completed by 2009. This project focuses on restoring stream meanders, re-contouring stream banks, installing in-stream structures and planting riparian vegetation to improve water quality by filtering out pollutants, and improving wildlife habitat. Along with stream restoration, landowners have voluntarily installed conservation practices that have improved the San Pitch River and the overall health of the watershed. These have included relocating animal feeding operations, implementing sprinkler irrigation systems, grazing management, riparian fencing, and pasture planting, all which help control erosion and reduce runoff of sediment and nutrients into the San Pitch River.

Partners

- Sanpete County
- Sanpete Conservation District
- Local landowners
- Local irrigation companies
- Utah Division of Water Quality
- Utah Division of Water Resources
- Utah State University Extension
- Utah Association of Conservation Districts
- Utah Division of Wildlife Resources
- Natural Resources Conservation Service
- Environmental Protection Agency

Related Projects

- Irrigation systems
- Range and pasture planting
- Soil testing and training
- Farm management software
- 4th grade watershed education day
- 9th grade watershed education day
- Water quality monitoring education program
- Stream restoration
- Aquifer classification
- Source water protection plans

Funding

Total (through 2008) $3.9 million

For funding opportunities in the San Pitch Watershed, contact the San Pete Conservation District.

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.

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Improving Utah's Water Quality

Spanish Fork Watershed

Major Waterbodies

Thistle Creek
Nebo Creek

Major Cities

Birdseye
Thistle

Major Land Uses

Agriculture
Recreation

Local Water Quality Issues

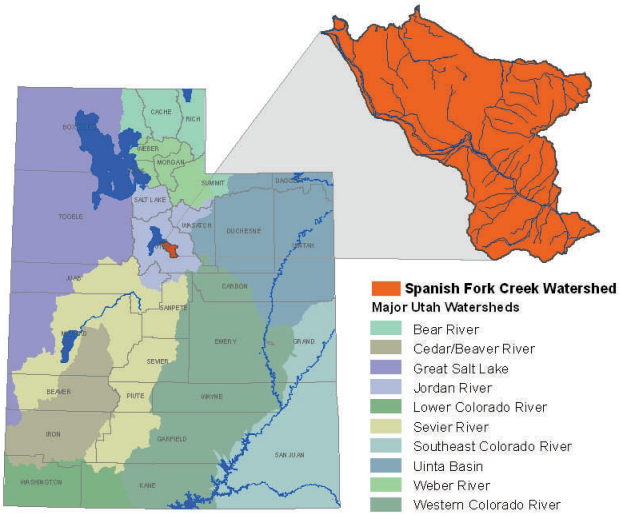
Temperature
Phosphorus
Bank Erosion

Local Contact:

Timp/Nebo Conservation District
302 E. 1860 S.
Provo, UT 84606
(801) 377-5580 ext. 32

Watershed Description:

Thistle Creek is one of six sub-watersheds in the Spanish Fork River watershed. This sub-watershed lies 21 miles southeast of Provo, Utah, in the Wasatch Mountains. Thistle Creek flows north along Highway 89, from Hilltop, 5 miles south of Indianola, to its junction with Soldier Creek, near the old Thistle town site. Twenty-one miles long and 19 miles wide, the sub-watershed encompasses 138,401 acres of multi-jurisdiction land. The majority of the sub-watershed falls within Utah County, with the southern one-third extending into Sanpete County, and less than 2,000 acres falling within Juab County. The elevation ranges from 10,500 feet at Santaquin Peak to 5,100 feet at Thistle Creek's confluence with Soldier Creek. The combination of steep slopes, shallow soils, and clay substrate make landslides more prevalent in this watershed. The Atepic soil series only encompasses 1.5% of the area, but, contributes substantial amount of sediment during storm events. There are 106 miles of perennial and 313 miles of intermittent streams in this sub-watershed, with Thistle Creek being the major water body. The average annual precipitation is 16 inches, with the majority coming between October and April. The growing season is from the end of May through mid-September. Hay is the dominant crop along the river bottoms and grazing is prevalent in the uplands. Wildlife species vary with the watershed having nine threatened, endangered, or sensitive species present.



Spanish Fork Water Quality Improvement

Project Description:

Projects in this watershed have focused on eight water quality issues: steam channel conditions, stream corridor and riparian conditions, rangeland and wildlife habitat conditions, noxious weed populations, agricultural land conditions, animal feedlots, recreation, and housing and urban development. Actual project work began in 1999 with upland juniper control and reseeding in several locations within the sub-watershed. This work has continued along Thistle Creek including stream channel stabilization, willow plantings, planting root wads, upland water development to divert livestock off the riparian areas, and the Division of Wildlife Resources has completed fish habitat assessments and population trends.
The Natural Resource Conservation Service has written several EQIP contracts with producers to control animal waste from running or leaching into Thistle Creek. A highlight of this project was the manner in which the partners effectively applied conservation and best management practices. These practices result in a decrease in nutrients and sediments which were previously entering the stream.

Partners

Utah County
Timp/Nebo Conservation District
Local landowners
Utah Division of Water Quality
Utah Division of Water Resources
Utah State University Extension
Utah Association of Conservation Districts
Utah Division of Wildlife Resources
Bureau of Reclamation
Natural Resources Conservation Service
Environmental Protection Agency
Utah Valley University
UDOT
U.S. Forest Service
Utah Department of Agriculture and Food

Related Projects

Irrigation systems efficiency
Range and pasture planting
Manure management; AFO/CAFO
Water quality monitoring
Stream stabilization
Chaining
Fencing
Willow planting
Creating rock jetties

Funding

Total (through 2008) $640,000

For funding opportunities in the Spanish Fork River Watershed, contact the Timp/Nebo Conservation District.

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.

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