UTAH
NONPOINT SOURCE
POLLUTION MANAGEMENT PROGRAM

FISCAL YEAR 2009
ANNUAL REPORT

January 2010

Prepared by:

Utah Department of Environmental Quality

and

Utah Department of Agriculture and Food

in cooperation with NPS Task Force

ACKNOWLEDGEMENTS

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Cover Photo: Stream restoration photos from Chalk Creek taken by Shane Green, with Natural Resources Conservation Service.

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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 when added together from an entire watershed can significantly impact water quality in streams and even have more cumulative impacts in lakes and reservoirs. Non point source (NPS) pollution is diffuse, generally not coming from a discrete point such as a pipe but as a result of 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 integrity 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, streets and residential areas, mining and forestry operations, recreational activities, underground wastewater treatment systems, construction, stream/riparian habitat degradation and other forms of hydrologic modification.

C. NPS Program Highlights

During FY-2009 six new projects were contracted to the UDAF for $480,430. The funding table at the end of this chapter lists all nine projects funded in FY-09. On-the-ground implementation projects are continuing in such watersheds as Middle and Upper Sevier River, Bear River (Lower and Upper), and West Colorado River. Revenue was also provided to USU Extension Service to continue the successful information education and outreach program reaching thousands of students and hundreds of teachers annually. New projects were funded with Salt Lake County for the Jordan River Ecosystem Restoration program and with the Utah Division of Forestry and Fire and State Lands for continued monitoring of the Forest Water Quality Guidelines. The DWQ also allocated $509,100 for the support of ten local watershed coordinators,

include one with the Bear Lake Regional Commission and in Rich County on the Upper Bear River Watershed.

The NPS Task Force with assistance from the Utah Department of Agriculture and Food joined forces with Zone 7 of UACD as the local host entity, and other supporting agencies to sponsor the 19th Annual Nonpoint Source Water Quality Conference held August 24-26, 2009 in Price, Utah. The theme of the conference was "Revival of Agriculture through Salinity Control and Nonpoint Source Management. The conference began with joint and separate meetings of the Utah Water Quality Board and the Utah Conservation Commission on Monday followed by the Plenary Session on Tuesday covering the Colorado River Salinity Control Program, the largest "TMDL" and implementation program to control salt loading to the Colorado River and delivery to Mexico. Three concurrent technical sessions were held on Tuesday afternoon followed by a tour of salinity control projects on Wednesday and a review of the Price River riparian restoration project.

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. Three new local watershed coordinators were hired in 2009 for the Upper Weber, the San Pitch River watershed and in the Uinta Basin. Training is ongoing and 319 project management and reporting has resumed well.

The Utah Watershed Coordinating Council (UWCC) continues to meet 3 times per year to exchange information, provide training and promote the local ownership and development of 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. The UWCC completed a separate grant with Trees, Water and People in which funding was provided to carry out mini-grants for watershed education and support for technical and outreach training for local coordinators.

Significant resources from 319, EQIP and Congressional "earmark" funds continue to support the implementation of the Utah AFO/CAFO Strategy led by the Utah Department of Agriculture and Food, UACD, Utah Farm Bureau Federation, agriculture commodity groups and other state and federal partners. The Strategy was 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. The work is proceeding to re-inventory all AFOs located within 2000 feet of water including all dairies. Technical assistance and education is ongoing to clean up non-compliant facilities. A separate report is compiled annually on the implementation status of the Strategy and submitted to DWQ, UDAF and EPA in February of each year.

D. Program Needs and Issues for FY-2010

A continuing objective of DWQ and UDAF is to conduct a review of the 319 grant program and related institutional structure. A questionnaire was used to gather

information from landowners and agency staff. The survey began in spring of 2009 and continued through January 2010. The I and E coordinator at UDAF is analyzing the results and will complete a report in March 2010. The DWQ intends to contract with a consultant to assess the current institutional structure and business plan and develop recommendations for any desired changes in the management and operation of the NPS/Watershed program.

DWQ will continue to support TMDL development and implementation through the watershed approach in dealing with the NPS challenges in Utah. This program utilizes 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 reports and watershed-based implementation plans. DWQ establishes 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 systems that will reduce sediment loading to the Bear River and small tributary streams 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 replaced 3 local coordinators in the following basins: Upper Weber, San Pitch and Uinta Basin. These new coordinators have been trained and are now implementing 319 on-the-ground projects, submitting required reports and carrying out education/outreach activities in their watershed.

The coming year will include continued 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 through NRCS and CWA SRF State funds. Funding is available from DWQ's SRF NPS Financial Assistance Program from 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 2009 and 2010, pursuant to new federal regulations and state rules, CAFOs will receive a new general permit with site-specific nutrient management plans. The original AFO inventory and assessment was completed in April 2003 and identified 394 'Potential CAFOs' which have been the focus of intensive technical and financial support to correct unacceptable conditions through implementation of facility specific nutrient management plans. As part of the new revised AFO/CAFO Strategy, all AFOs within 2000 feet of water are being re-inventoried including all dairy operations. Based on the new inventory, as of December 31, 2008, there are some 393 Potential CAFOs. Of this number of small and medium potential CAFOs, plans to correct unacceptable conditions have been developed for 98%, some 90% had implemented BMPs to control runoff, 86% had implemented their plans and 80% had been certified as being in full compliance.

The DEQ and UDAF have worked in FY-2009 and will continue in 2010 to improve program reporting especially relating to timely receipt, review and approval of 319 project final reports. Increased emphasis has been and will be continue to be devoted

toward working with project sponsors to secure environmental results information in annual and final project reports. The DWQ is sponsoring a workshop in February 2010 to train local watershed coordinators in the STEPL model and other tools to measure and report reductions in nonpoint source pollutants, sediment, phosphorus and nitrogen. Efforts in FY-2009 and 2010 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 terminated 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 2011 because of other work assignments and priorities. No progress was made in 2009 to complete the abandoned/inactive mine component to the Plan.

The DWQ is putting some increased emphasis on riparian and stream channel protection and enhancement through improved coordination with USDA EQIP funds, Watershed Initiative Funds with the Utah Department of Natural Resources and perhaps with UDAF's new Grazing Improvement Program. Negotiations were terminated 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). 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. The DWQ used $340,920 of FY-07 funds to assist Wildlife Resources with a significant riparian land purchase on the East Fork of the Sevier. The Division of Wildlife Resources and the Rocky Mountain Elk Foundation were significant contributors to the riparian corridor purchase. This action preserves an important section of Blue Ribbon trout stream on the East Fork of the Sevier River and a critical Elk migration corridor between two Elk and Deer habitat focus areas in Central Utah.

2009 Project Implementation Plans (PIPs) for CWA Section 319 Funding
(Prepared Apr 9, 2009: revised Aug 13, 2009))

Proposal Type & Title	Requested Amount	Base Funds Final Allocation
Information & Education (I & E) and T.A.		
1. Forest Water Quality Guidelines (FFSL)	$33,870	$33,870
2. USU NPS I & E Outreach (USU Ext)	33,500	33,500
3. TMDL Planning & Implementation – Local WCs*	132,330	132,330*
Sub Totals	**$199,700**	**$199,700**
Planning, Tech. Assist. and Implementation Funds		**Incremental**
3. TMDL Planning & Implementation – Local WCs*	$376,770	$376,770*
4. Jordan River Ecosystem Restoration	255,630	96,000 [1]
5. Lower Bear River Watershed TMDL Implem.	140,000	84,000
6. Upper Bear River Watershed TMDL Implem.	275,000	110,140
7. Middle Sevier River Watershed TMDL Implem.	133,925	60,000 [2]
8. Upper Sevier River Watershed TMDL Implem.	197,790	122,790
9. West Colorado Watershed TMDL Implem.	70,000	70,000
Sub Totals	**$1,449,115**	**$919,700**
Grand Total	**$1,648,815**	**$1,119,400**

1. Remainder to be funded by SRF Financial Assistance (South Valley)
2. Funding will be traded with FY-2008 funding to finish the Watershed Management Plan for the Middle and Lower Sevier River Basin.

* This workplan ($509,100) to support the DWQ's local watershed coordinators also includes the two PIPs submitted by the Bear Lake Regional Commission ($41,600) for the I & E and technical support for the Bear River Task Force and the Upper Bear River in Rich County for the Planning Coordinator through the UACD ($67,500).

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 2009 was $1,773,800 as shown in Table 1 with Staffing and Support at $654,400 and $1,119,400 dedicated to nine 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 (39%) and UDAF (61%). Table 2 describes the functional distribution of activities funded by the FY-09 project grant. As noted this year some 56% of project funds are supporting local technical assistance, management, coordination and planning to ten local watershed coordinators with 3% supporting information and education outreach activities and products. For FY-09 only 41% was directed to BMP on-the-ground implementation projects in several watersheds including Jordan River, West Colorado Watershed area (Price River), Middle and Upper Sevier River, and the Upper and Lower Bear River Watersheds. NPS grant funds were also provided to USU Extension Service to continue the excellent water quality/watershed education, training and outreach activities in priority watersheds across the state. Funding was also provided to the Division of Forestry, Fire and State Lands to continue monitoring the implement of forest water quality guidelines for another couple of years.

B. Program Staffing and Support

Utah Department of Environmental Quality

DEQ, Division of Water Quality continues to devote about 6.5 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; 2.4 FTEs devoted to watershed planning and TMDL development; 0.4 FTE devoted to groundwater assessment and protection; two seasonal monitoring positions (0.7 FTE); and nearly 1 FTE 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, Bartusek, 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, Daly, Arens, Dickey, Wingert);

- 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, Dickey);

- 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).

The NPS Program Coordinator carried out numerous activities including solicitation and review of new 319 projects for FY-2010, participated in project site visits and tours with EPA and other agencies, coordinated with BLM and Forest Service and assisted with an annual coordination meeting, assumed major responsibility with project management and review and approval of project final reports for the FY-01 and FY-04 grants.

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

agricultural 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. Final reports are being written and will be submitted to DWQ by the end of January 2010. 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. The project is under review and reports from Utah State University to the Division of Air Quality are pending.

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, 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 support to UDAF's 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 Adopt-a-Waterbody program, serves on EPA's national I&E workgroup with EPA Headquarters, and writes related press releases, news articles, and assists Conservation Districts with NPS outreach. Workshops on 'Social Marketing' were held throughout the year at various locations in Utah with emphasis on strengthening NPS project Information and Education outreach projects by targeting special interest/stakeholder groups to promote behavior change. Wilbur coordinated and is tracking the results of three small grants awarded to the Bear River/Cutler Reservoir Watershed, the Price River Watershed and the San Pitch Watershed. Wilbur continues to help the respective TMDL coordinators and watershed coordinators develop public opinion surveys for their watersheds.

W. D. Robinson is the assistant section manager with duties of maintaining UDAF's 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 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 Conservation Commission, manages state implementation of the Bureau of Reclamation 'parallel' funds for the Colorado River Salinity Program and oversees UDAF's groundwater monitoring program for private landowners. George retired in December 2009 and his duties and responsibilities, will be assumed by Kathleen Clarke, Deputy Commissioner.

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 and landowners. The DWQ has begun to provide State SRF funds as match to selected 319 projects to provide an additional incentive to implement BMPs.

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 programs (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 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 to UDAF via an annual contract. A summary of the non-federal match contributed by grant year for the FY-97 through FY-2009 Nonpoint Source 319 Grants is displayed in Table 3 below. As noted in the table insufficient match was documented for the FY-05 thru '08 grants. There is no shortage of state match, the proper documentation will be provided by mid-FY2010.

D. Memorandum of Understandings

The original 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 were revised in 2009. The following entities are now part of 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 DEQ – Division of Water Quality.

TABLE 1
NPS 319 GRANT CUMULATIVE DISTRIBUTION Revised Jan. 15, 2010
For FY-2009 and Total Grants Awarded (FY-1990 thru FY-2009)
Federal only

Fiscal Year	Total Grant Award	DEQ Portion	DEQ/UDAF Contract	UDAF Portion Admin/Mngt	UDAF Subcontr/Project
FY-2009	**Staffing & Support (PPG)** $654,400 (37%)	$410,360 – DEQ Base Staffing and Support DEQ Non- UDAF Contracts $14,040 Total = $424,400	$230,000 (S&S)	$230,000	- 0 -
	Projects Grant (63%) $1,119,400 Total = $1,773,800	DEQ - Project Contracts (3) $638,970 ($509,100 LWCs*) ($33,870 FFSL**) ($96,000 Jordan River) Total DEQ $1,063,370	UDAF Project Contracts (6) $480,430 Total UDAF = $710,430	- 0 -	$480,430 (Six Watershed Projects)
Cumulative Totals FY1990-2009	**$29,770,700**	**$11,474,510 (39%)** Total DEQ (In-house) Staffing and Support Portion **$5,058,200 (44%)** DEQ - Other Contracts **$6,416,310 (56%)**	**$18,296,190 (61%)**	**$3,267,710 (18%)**	**$15,028,480 (82%)**

*LWCs – LOCAL WATERSHED COORDINATORS
**FFSL – UTAH DIVISION OF FORESTRY, FIRE AND STATE LANDS

Figure 2. NPS Program Categorical Funding Distribution

Grand Total 1990-2009: $29,770,700

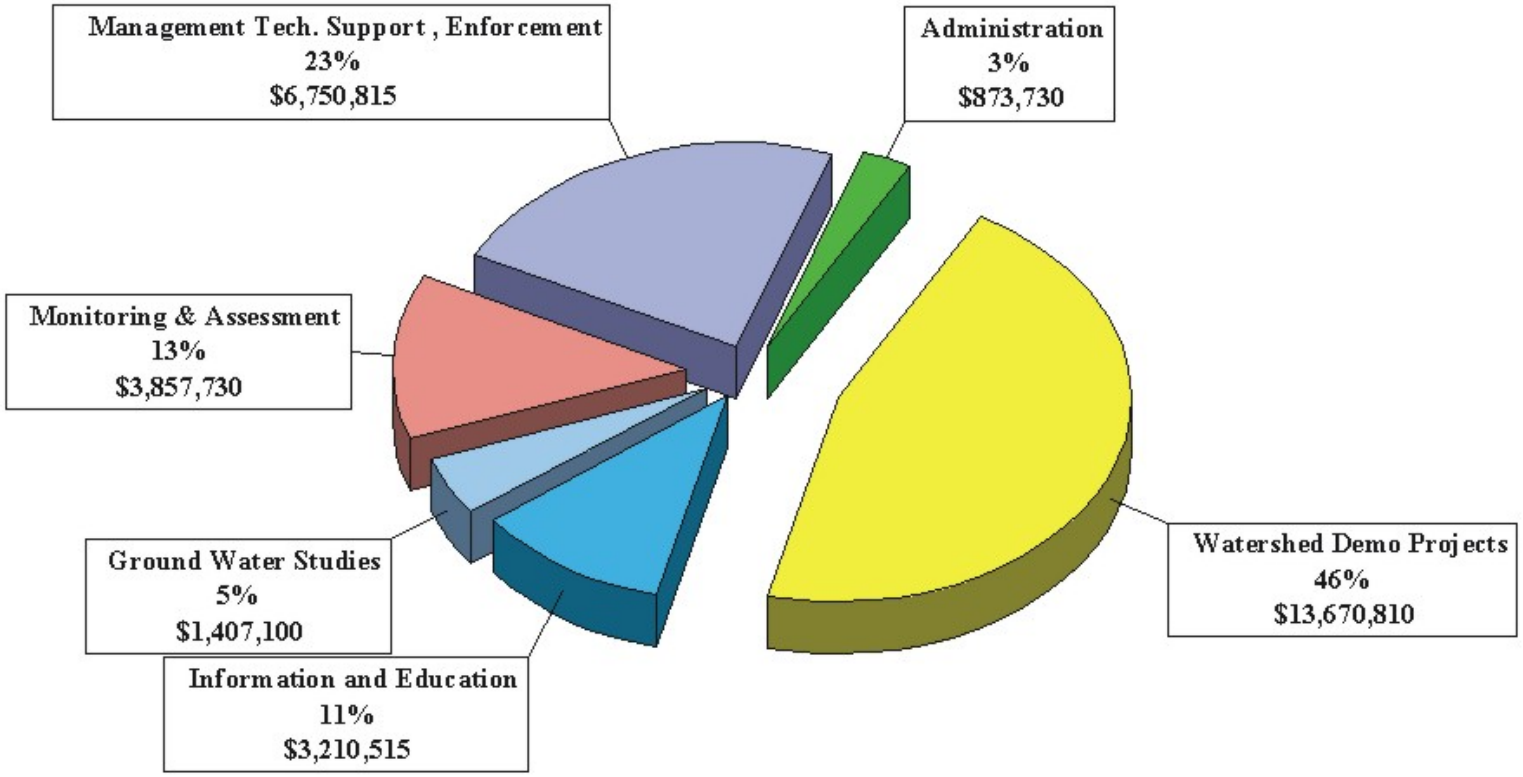


Table 2. FY-2009 CWA 319 PROJECTS – ACTIVITY DESCRIPTION (prepared January 15, 2010)							
	Projects (9)	**Categories -- Base Funds (federal)**					
	Title	**Implement BMPs**	**T.A./Coord. Planning/Mngt.**	**I & E**	**Surf&GW Assmt.**	**TMDL Dev.**	**Totals**
1.	Forest Water Quality Guid Monit		$33,870				$33,870
2.	USU NPS I&E Outreach			$33,500			$33,350
3.	Watershed Coordinators Support		$132,330				$132,330
	Sub-totals Base		**$166,200**	**$33,500**			**$ 199,700**
		Categories -- Incremental Funds (federal)					
3.	Watershed Coordinators Support		$376,770				$376,770
4.	Jordan River Ecosystem Rest.	$96,000					96,000
5.	Lower Bear River TMDL Impl.	74,100	8,400	1,500			84,000
6.	Upper Bear River TMDL Impl.	100,000	8,140	2,000			110,140
7.	Middle Sevier River TMDL Impl.		60,000				60,000
8.	Upper Sevier River TMDL Impl.	122,790					122,790
9.	W. Colorado R Wshd TMDL Impl	64,500	3,500	2,000			70,000
	Subtotals Incremental	**$457,390**	**456,810**	**5,500**			**$ 919,700**
	TOTALS	***$ 457,390***	***$ 623,010***	***$ 39,000***			***$ 1,119,400***
	Percent	**41%**	**56%**	**3%**			

Table 3. NPS 319 Project Grants – Grant Balances and Matching Funds Summary as of September 30, 2009

Grant	Federal Grant Amount	Federal Grant Expenditures thru 9/30/09	Remaining Grant Balance As of 9/30/09	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	$1,584,653	$29,247	$1,056,435	$1,075,933	$1,056,435	We are sending in Final Report
319 NPS 02	$1,627,708	$1,591,529	$36,179	$1,061,018	$1,085,138	$1,061,018	We are sending in Final Report
319 NPS 03	$1,682,964	$1,681,808	$1,156	$1,121,206	$1,121,977	$1,121,206	We are sending in Final Report
319 NPS 04	$1,480,230	$1,480,230	$0	$986,819	$986,819	$986,819	We are sending in Final Report
319 NPS 05	$1,308,400	$980,916	$327,484	$653,944	$872,267	$486,997	$166,947 needed for match
319 NPS 06	$1,219,600	$877,105	$342,495	$443,976	$859,733	$232,835	$211,141 needed for match
319 NPS 07	$1,126,500	$309,225	$817,275	$202,584	$751,000	$197,234	$5,350 needed for match
319 NPS 08	$1,161,585	$559,739	$601,846	$267,069	$774,390	$107,933	$159,136 needed for match
319 NPS 09	$1,119,400	$0	$1,119,400	$0	$746,267	$0	
Totals							

Prepared by DEQ Finance Jan. 13, 2010

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 projects in relation to impaired 303(d) listed waters.)

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

Selected **project fact sheets** for the following watershed are on line as noted below: 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. Several more will be worked on in 2010 including: Mill Creek, Lower Bear River, Middle Bear River, Provo River, Little Bear River (after CEAP is complete), Onion Creek and Virgin River.

2. FY-09 Information and Education Activities Summary by Jack Wilbur

In 2009 the Utah Nonpoint Source statewide information and education program continued to support the Utah Nonpoint Source Conference, continued publishing Utah Watershed Review and continued the watershed outreach mini grant program in three watersheds, among other highlights.

The annual Utah NPS Conference was held Price, Utah for the first time. The conference was attended by about 100 water quality professionals from throughout Utah. The event featured conference sessions all day Tuesday, an awards barbecue on Tuesday night and a day-long watershed tour of the Huntington-Cleveland Irrigation project and the Price River restoration on Wednesday.

The Statewide I&E coordinator continued working with local watershed groups in FY 09, including the three watersheds awarded outreach mini grant money from Utah State University, by way of Wilbur and UDAF. By the end of 2009 surveys had been conducted and results tabulated for the Price River, San Pitch and Cutler/lower Bear River watershed.

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 2009, and again October and November. In 2010, a campaign targeted storm water pollution in yards and neighborhoods will 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 Kentucky, New York and Texas. 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.

Utah Watershed Review was published four times in 2009. Due to in-state travel restrictions, Wilbur will have to rely more on watershed coordinators and statewide

representatives from other agencies to provide material to keep the publication vital and informative.

3. Ground Water Projects Summary and Status as of FY-09

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, Utah. $20,000	#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
1998 Ground Water Projects					
Development of Land-Use Strategies to Address Nitrate Contamination	#03-0157	Educate landowners about current levels of nutrients in their soils and proper methods to utilize	**Complete** Final Report submitted to U.S. EPA Gary Kleeman on 12/18/06 for approval review.	Contract amended with new termination date of 5/30/06	NACD

1997 - 2009 UTAH 319 GROUND WATER PROJECTS – COMPREHENSIVE STATUS REPORT					
Project Title and 319(h) funds	**Contract #**	**Project Description**	**Status**	**Contract Period**	**Contractor**
of Ground Water in the Sevier River Watershed. $15,000		their manure resources. Also educate the community on the results and recommendations from 1996 319 Sanpete Study	**Final approval via e-mail on 08/21/07**		
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 Microbial Contamination in the Milford Basin, Utah $48,000	**#00-0827**	The project has three major components. The first component concerns determining the rate of recharge to the southern portion of the Milford Basin. The second component concerns determining rates of groundwater flow through the	**Complete** 1/17/08 G. Kleeman E-mail **Final report resubmitted to DEQ and EPA on 12/19/06 for final approval.** **Approved by DWQ on 10/3/08.**	9/1/99 thru 6/15/03	College of Mines and earth Sciences, University of Utah

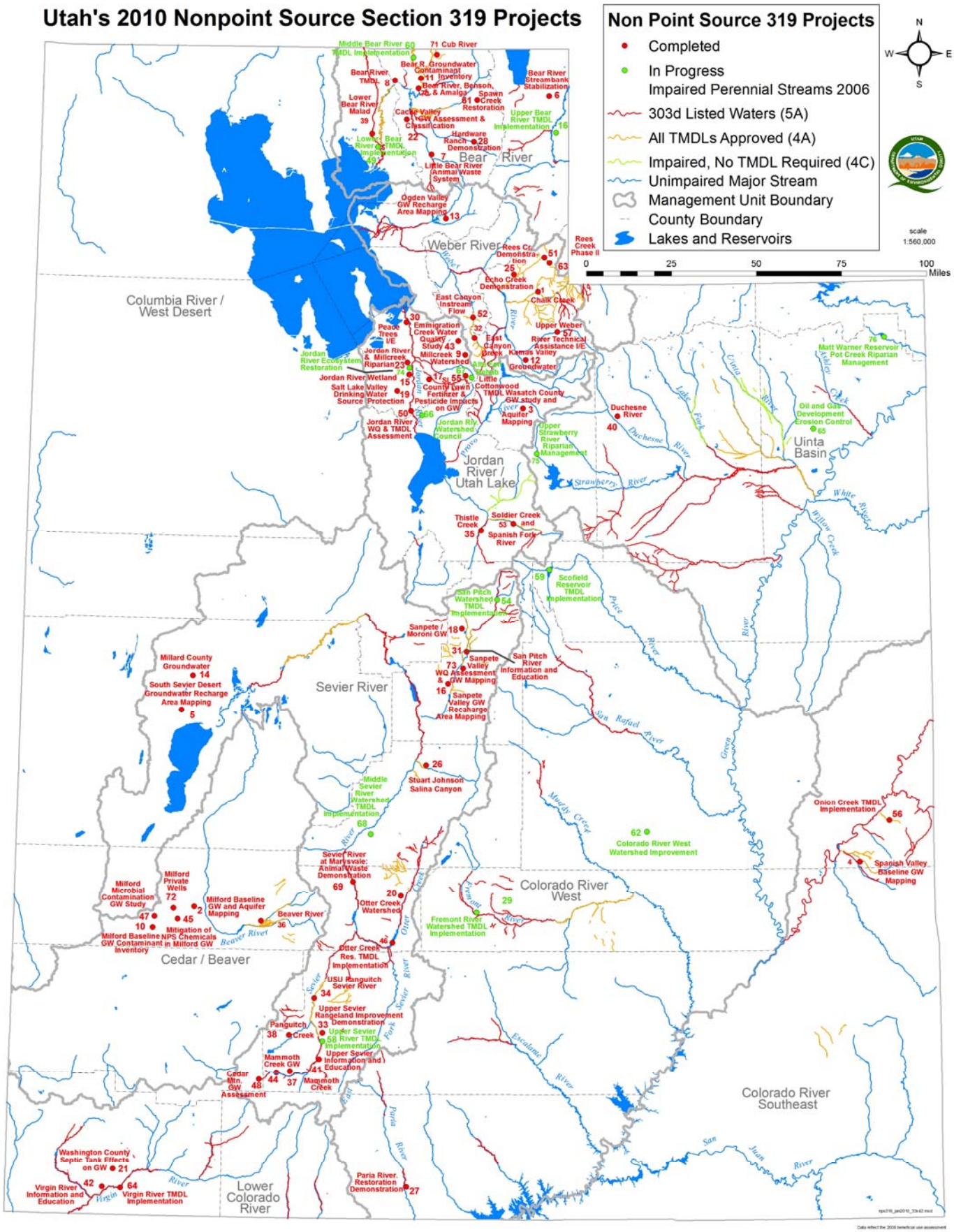
1997 - 2009 UTAH 319 GROUND WATER PROJECTS – COMPREHENSIVE STATUS REPORT					
Project Title and 319(h) funds	**Contract #**	**Project Description**	**Status**	**Contract Period**	**Contractor**
		Milford Aquifer. The third component concerns DNA fingerprinting to determine potential sources of microbial contamination of wells in the aquifer. The third Component is condition upon the return of microbial contamination to wells in the Milford aquifer.			
*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
Water-Quality Assessment and Mapping for the Shallow Unconfined Aquifer in Eastern	**#00-0448**	This study will produce maps showing water quality and the distribution of nitrate in wells in the shallow	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.	08/01/99 to 07/31/03	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**
Millard County, Utah, with emphasis on establishing base line water quality prior to large-scale land application of chicken manure $55,000		unconfined aquifer in eastern Millard County.	**Approved by DWQ 9/9/08.**		
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-fill, basin-fill, and consolidated rock) throughout the	**Complete as per 10/01/08 G. Kleeman e-mail.** **Apprvd by DWQ on 10/02/08.** Final report submitted to M Reichert 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**
		State of Utah and evaluate the potential impacts of various activities on water quality over time	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. **Final report sent to EPA 6/4/09 & reichert for concurrent review**		BYU
2003 Ground Water Projects					
Assessment and Description of	**#06-6055**		**Final report 95% complete, draft review submittal expected on 2/1/09.**	Agreement will also be amended #2 w/separate PIP	USGS

1997 - 2009 UTAH 319 GROUND WATER PROJECTS – COMPREHENSIVE STATUS REPORT					
Project Title and 319(h) funds	**Contract #**	**Project Description**	**Status**	**Contract Period**	**Contractor**
Groundwater Quality for Selected Locations in Utah $50,000 Amended with $94,000.			Joint Funding Agreement signed w/USGS. Sampling begun in fall of 05'/06. Project amended 01 Silver Crk. monies and 99 Box Elder monies.	of 98 & 00 monies on GW 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 2010 Nonpoint Source Section 319 Projects
Non Point Source 319 Projects
Completed
In Progress
Impaired Perennial Streams 2006
303d Listed Waters (5A)
All TMDLs Approved (4A)
Impaired, No TMDL Required (4C)
Unimpaired Major Stream
Management Unit Boundary
County Boundary
Lakes and Reservoirs
N
W
E
S
scale 1:560,000
0 25 50 75 100 Miles
Columbia River / West Desert
Bear River
Weber River
Jordan River / Utah Lake
Uinta Basin
Sevier River
Cedar / Beaver
Colorado River West
Colorado River Southeast
Lower Colorado River
Middle Bear River TMDL Implementation
71 Cub River
Bear R. Groundwater Contaminant Inventory
Bear River TMDL
Bear River, Benson, UT & Amalga
Bear River Streambank Stabilization
Spawn Creek Restoration
Lower Bear River Malad
Cache Valley GW Assessment & Classification
Upper Bear River TMDL Implementation
Hardware Ranch Demonstration
Lower Bear River TMDL Implementation
Little Bear River Animal Waste System
Ogden Valley GW Recharge Area Mapping
Rees Cr. Demonstration
Rees Creek Phase II
Echo Creek Demonstration
Chalk Creek
East Canyon Instream Flow
Emmigration Creek Water Quality Study
Peaks Trees I/E
Jordan River & Millcreek Riparian
Millcreek Watershed
East Canyon Creek
Upper Weber River Technical Assistance I/E
Kamas Valley Groundwater
Jordan River Ecosystem Restoration
Jordan River Wetland
Salt Lake Valley Drinking Water Source Protection
County Lawn Fertilizer & Pesticide Impacts on GW
Little Cottonwood TMDL Wasatch County GW study and Aquifer Mapping
Jordan River WQ & TMDL Assessment
Jordan Rv Watershed Council
Upper Strawberry River Riparian Management
Duchesne River
Oil and Gas Development Erosion Control
Matt Warner Reservoir Pot Creek Riparian Management
Thistle Creek
Soldier Creek and Spanish Fork River
Scofield Reservoir TMDL Implementation
San Pitch Watershed TMDL Implementation
Sanpete / Moroni GW
Sanpete Valley WQ Assessment & GW Mapping
San Pitch River Information and Education
Sanpete Valley GW Recharge Area Mapping
Millard County Groundwater
South Sevier Desert Groundwater Recharge Area Mapping
Stuart Johnson Salina Canyon
Middle Sevier River Watershed TMDL Implementation
Sevier River at Marysvale: Animal Waste Demonstration
Otter Creek Watershed
Otter Creek Res. TMDL Implementation
Milford Microbial Contamination GW Study
Milford Private Wells
Milford Baseline GW and Aquifer Mapping
Beaver River
Mitigation of NPS Chemicals in Milford GW
Milford Baseline GW Contaminant Inventory
USU Panguitch Sevier River
Upper Sevier Rangeland Improvement Demonstration
Panguitch Creek
Upper Sevier River TMDL Implementation
Upper Sevier Information and Education
Mammoth Creek GW
Mammoth Creek
Cedar Mtn. GW Assessment
Fremont River Watershed TMDL Implementation
Colorado River West Watershed Improvement
Onion Creek TMDL Implementation
Spanish Valley Baseline GW Mapping
Washington County Septic Tank Effects on GW
Virgin River Information and Education
Virgin River TMDL Implementation
Paria River Restoration Demonstration

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 progress, accomplishments, funding information and environmental results using several nationally mandated information items that are reported to Congress annually by EPA. 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-09 through attendance at national user group conference. UDAF will continue to maintain GRTS information for projects administered by UDAF. Also based on recent DWQ and UDAF discussions, 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.

DEQ and UDAF reported only about 43% complete for annual progress/evaluation report entry (GRTS Compliance) on December 31, 2009. Steps are being taken in 2010 to correct this situation. Below in part D is a summary and status of all 319 projects for grant years 2001 through 2009.

C. 319 Project Status Summary Table (FY-2001 through FY-2009)

FY	#	Project Title	319$ Base	319$ Incr.	NPS Category Name	Grant #	Proj. Status	Contractor Name
2001	1	EQSilver Creek Estates Groundwater Study	$25,600.00	$0.00	Land DspslStrgeTrtmnt	998187010	Completed	utah dept. of enviro. qual.
2001	2	EQPeace Trees / NPS I and E	$11,200.00	$0.00	All Sources	998187010	Completed	utah federation for youth
2001	3	EQHardware Ranch Demonstration Project	$23,000.00	$0.00	Agriculture	998187010	Completed	ut div. wildl. resources
2001	4	USU Ext. Statewide NPS Pollution I and E (cont.)	$40,200.00	$0.00	All Sources	998187010	Completed	USU EXT/ NANCY MESNER
2001	5	Ag. WS Improvement Proj. - UFBF (cont.)	$91,900.00	$0.00	Agriculture	998187010	Completed	utah farm bureau federation
2001	6	AFO Manure Management	$281,150.00	$189,550.00	Animal Feeding Oper's	998187010	On Sched.	utah assoc. of cons. Districts
2001	7	Animal Waste Composting Demonstration	$50,000.00	$0.00	Animal Feeding Oper's	998187010	Completed	MORGAN SCD
2001	8	San Pitch River I and E	$5,000.00	$0.00	Agriculture	998187010	Completed	sanpete county extension
2001	9	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	Completed	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	Completed	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	Completed	Cache Co. Local Work Group
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	Completed	Cache Co. Local Work Group
2001	20	Malad portion/ Lower Bear River WS (cont.)	$0.00	$105,000.00	Agriculture	998187010	Completed	Box Elder Local 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	1	AFO Manure Management (continuation)	$40,000.00	$60,000.00	Animal Feeding Oper's	998187020	On Sched.	utah assoc. of cons. districts
2002	2	Ag. WS Improvement Proj. - UFBF (cont.)	$95,600.00	$0.00	Agriculture	998187020	Completed	utah farm bureau federation
2002	3	Amalga-Benson / Middle Bear River WS (cont.)	$111,700.00	$0.00	Agriculture	998187020	Completed	Cache Co. Local Work Group
2002	4	Beaver River Watershed Project (continuation)	$0.00	$200,000.00	Agriculture	998187020	On Sched.	Beaver SCD
2002	5	Chalk Creek Watershed Project (continuation)	$0.00	$175,000.00	Agriculture	998187020	On Sched.	summit SCD
2002	6	Cub River WS CRMP (cont.) - TMDL Impl.	$0.00	$148,700.00	Agriculture	998187020	Completed	Cache Co. Local Work Group
2002	7	Upper Bear River (Rich Co.) Watershed (cont.)	$36,400.00	$0.00	Animal Feeding Oper's	998187020	Completed	Rich County local work group
2002	8	Fremont River, TMDL Proj. Impl. - (cont.)	$0.00	$100,000.00	Agriculture	998187020	Completed	Fremont River SCD
2002	9	EQForest H2O Qu. Guideline Mon. & Eval. Prog	$67,408.00	$0.00	Silviculture	998187020	Completed	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	Completed	Box Elder Local 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	Construction	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

FY	#	Project Title	319$ Base	319$ Incr.	NPS Category Name	Grant #	Proj. Status	Contractor Name
2003	1	EQ Bear Riv Info Outreach-Coord of WQ Activities	$42,300.00	$0.00	Agriculture	998187030	On Sched.	Bear Lake Reg. Commission
2003	2	EQ Otter Creek Watershed TMDL Study	$0.00	$47,164.00	Agriculture	998187030	On Sched.	utah division of water quality
2003	3	EQ Small Reservoir Flushing- Managing Impacts	$99,100.00	$0.00	Hydromodification	998187030	On Sched.	UTAH WATER RSRCH LAB.
2003	4	EQ Jordan River H2O Quality TMDL Assessment	$38,000.00	$0.00	Construction	998187030	Completed	salt lake county commission
2003	5	EQ Cedar Mountain Groundwater Monitoring	$21,800.00	$0.00	All Sources	998187030	Completed	utah dept. of enviro. qual.
2003	6	EQ Milford BasinGW BioEvaluation - cancelled	$0.00	$0.00	Agriculture	998187030	Discont'd	utah dept. of enviro. qual.
2003	7	EQ GW Qual. Slcted Loc.s, Assessment & Desc.	$245,000.00	$0.00	All Sources	998187030	On Sched.	utah division of water quality
2003	8	EQ TMDL Dev./ Impl. and WS Planning Proj.	$0.00	$174,800.00	All Sources	998187030	Completed	utah division of water quality
2003	9	EQ East Canyon Watershed Stream Restoration	$0.00	$175,000.00	Agriculture	998187030	Completed	Snyderville Bas H20Recl.Dist.
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	1	USU Ext. Statewide NPS Pollution I and E (cont.)	$39,230.00	$0.00	All Sources	998187040	Completed	USU EXT/ NANCY MESNER
2004	2	Ag. WS Improvement Proj. - UFBF (cont.)	$45,000.00	$0.00	Animal Feeding Oper's	998187040	Completed	Utah Farm Bureau Federation
2004	3	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	4	AFO Manure Management - continuation	$199,400.00	$114,000.00	Animal Feeding Oper's	998187040	On Sched.	utah assoc. of cons. districts
2004	5	Fremont River TMDL Implementation – cont.	$0.00	$100,000.00	Agriculture	998187040	Completed	Fremont River SCD
2004	6	San Pitch River WS TMDL Impl. - (cont.)	$0.00	$200,000.00	Agriculture	998187040	On Sched.	SANPETE SCD
2004	7	Upper Sevier River WS TMDL Impl. (cont.)	$0.00	$294,600.00	Agriculture	998187040	On Sched.	upper sevier SCD
2004	8	Scofield Reservoir TMDL Impl. (cont.)	$0.00	$18,000.00	Agriculture	998187040	Completed	PRICE RIVER SCD
2004	9	EQ TMDL Dev./ Impl. and WS Planning Proj.	$192,000.00	$128,000.00	All Sources	998187040	Completed	utah dwq
2005	1	EQ Bear River Streambank Stabilization Proj.	$36,850.00	$0.00	Agriculture	998187050	On Sched.	Bear Lake Reg. Commission
2005	2	EQ TMDL Impl. & Wtrshd Plnning/W Coordinators	$68,750.00	$251,250.00	Agriculture	998187050	Completed	
2005	3	EQ Onion Creek TMDL Implementation	$0.00	$93,250.00	Other NPS Pollution	998187050	On Sched.	Grand County
2005	4	EQBear River Information and Education Outreach	$0.00	$41,600.00	All Sources	998187050	On Sched.	
2005	5	Ground Water Vulnerability to Pesticides - UDAF	$44,000.00	$0.00	Agriculture	998187050	Not Initiated	utah dept. of ag. & food
2005	6	Ag. WS Improvement Proj. - UFBF (cont.)	$47,500.00	$0.00	Animal Feeding Oper's	998187050	Completed	utah farm bureau federation
2005	7	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	8	San Pitch River WS TMDL Impl. - (cont.)	$0.00	$225,000.00	Agriculture	998187050	On Sched.	SANPETE SCD

FY	#	Project Title	319$ Base	319$ Incr.	NPS Category Name	Grant #	Proj. Status	Contractor Name
2005	9	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	1	USU Ext. Statewide NPS Pollution I and E (cont.)	$35,420.00	$0.00	All Sources	998187060	On Sched.	USU Ext. / Nancy Mesner
2006	2	Groundwater Vulnerability to Pesticides	$34,000.00	$0.00	Other NPS Pollution	998187060	Not Initiated	
2006	3	Rees Creek / Echo Creek WS Project – cont.	$40,200.00	$0.00	Agriculture	998187060	On Sched.	
2006	4	Fremont River WS TMDL Impl. - (cont.)	$0.00	$100,000.00	Agriculture	998187060	On Sched.	Fremont Riv WS St'ring Cmte
2006	5	San Pitch River WS TMDL Impl. - (cont.)	$0.00	$200,000.00	Agriculture	998187060	Not Initiated	
2006	6	Scofield Reservoir TMDL Implementation – cont.	$0.00	$20,200.00	Agriculture	998187060	On Sched.	San Rafael SCD
2006	7	Middle Bear River TMDL Implementation – cont.	$0.00	$37,500.00	Agriculture	998187060	On Sched.	Cache Co. Local Work Group
2006	8	West Colorado Watershed TMDL Implementation	$0.00	$70,000.00	Agriculture	998187060	On Sched.	Price-SnRf-Muddy WS Cncl
2006	9	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	Other NPS Pollution	998187060	On Sched.	Washington Co Cnsrvncy Dst
2007	1	USU Ext. Statewide NPS Pollution I and E (cont.)	$19,900.00	$0.00	All Sources	998187070	On Sched.	USU Ext. / Nancy Mesner
2007	2	Agricultural Watershed Improvement Project	$24,000.00	$0.00	All Sources	998187070	Not Initiated	Utah Farm Bureau Federation
2007	3	EQ Bear Riv Info Outreach-Coord of WQ Activities	$41,600.00	$0.00	All Sources	998187070	On Sched.	
2007	4	Jordan River Watershed Council Capacity Building	$35,350.00	$0.00	All Sources	998187070	On Sched.	Salt Lake Co. Flood Control
2007	5	Oil and Gas Sediment and Erosion Control	$6,000.00	$0.00	Construction	998187070	Not Initiated	UT Div. H20 Qu-TMDL Sect.
2007	6	Septage Treatment, Handling & Disposal Practices	$29,500.00	$0.00	All Sources	998187070	On Sched.	USU-UT H2O Res Lab-JSims
2007	7	Utah Local WS Coordinating Council Support	$30,000.00	$0.00	All Sources	998187070	Not Initiated	
2007	8	Utah Riparian Restoration & Cons. Easement Proj.	$20,450.00	$320,470.00	Agriculture	998187070	On Sched.	UT Div. H20 Qu-TMDL Sect.
2007	9	Alta Fen Rehab (Implem. TMDL)	$0.00	$87,500.00	Resource Extraction	998187070	Not Initiated	Salt Lake Co. Flood Control
2007	10	Virgin River WS TMDL Implementation - cont.	$0.00	$33,730.00	Other NPS Pollution	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	1	Upper Bear River WS – FY2008	$30,000.00	$0.00	Agriculture	998187080	Not Initiated	Rich County local work group
2008	2	Middle Bear River TMDL Implementation – cont.	$0.00	$212,500.00	Agriculture	998187080	On Sched.	Cache Co. Local Work Group
2008	3	Lower Bear River, TMDL Implementation – cont.	$0.00	$32,100.00	Agriculture	998187080	Not Initiated	Northern Utah Cons. District
2008	4	Strawberry River TMDL Implementation	$61,600.00	$0.00	Agriculture	998187080	Not Initiated	Wasatch Co Cons'rvat'n Dist.
2008	5	San Pitch River WS TMDL Impl. - (cont.)	$0.00	$118,000.00	Agriculture	998187080	Not Initiated	SanPete County SCD
2008	6	Middle Sevier River WS TMDL Impl. - cont.	$0.00	$137,085.00	Agriculture	998187080	On Sched.	Sevier Conservation District
2008	7	West Colorado River WS Improvement Project	$0.00	$70,000.00	Agriculture	998187080	Not Initiated	San Rafael Conservation Dist

FY	#	Project Title	319$ Base	319$ Incr.	NPS Category Name	Grant #	Proj. Status	Contractor Name
2008	8	Matt Warner/Pot Creek	$64,800.00	$0.00	Agriculture	998187080	On Sched.	Dinosaurland RC&D
2008	9	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.
2009	1	Forest Water Quality Guidelines - Monitoring FY09	$33,870.00	$0.00	All Sources	998187090	On Sched.	UT Div-ForestryFire&StLands
2009	2	TMDL Dev. & Wtrshd Plnning(Local Coordinators)	$132,330.00	$376,770.00	All Sources	998187090	Not Initiated	UT Div. H20 Qu-TMDL Sect.
2009	3	Upper Jordan River Ecosystem Restoration FY09	$0.00	$96,000.00	Hydromodification	998187090	On Sched.	Salt Lake Co
2009	4	Lower Bear River TMDL Implementation - FY09	$0.00	$84,000.00	Agriculture	998187090	On Sched.	Northern Utah Cons. District
2009	5	Upper Bear River TMDL Implementation - FY09	$0.00	$110,140.00	Agriculture	998187090	On Sched.	Rich County Cons. District
2009	6	Middle Sevier River TMDL Implementation - FY09	$0.00	$60,000.00	Agriculture	998187090	On Sched.	
2009	7	Upper Sevier River TMDL Implementation - FY09	$0.00	$122,790.00	Agriculture	998187090	On Sched.	
2009	8	West Colorado WS TMDL Implementation - FY09	$0.00	$70,000.00	Animal Feeding Oper's	998187090	On Sched.	
2009	9	NPS I & E Outreach - USU Extension - FY09	$33,500.00	$0.00	All Sources	998187090	On Sched.	

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

A. Status Report on Tasks in the Nonpoint Source Pollution Management Plan (October 2000)

The following objectives and tasks are contained in the 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 2009 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. (See Chapter 10 in this report for an updated status of TMDL development and approval). 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 stakeholders 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: **In 2009 we completed TMDL studies for Cutler Reservoir, East Canyon Reservoir, East Canyon Creek and Echo Reservoir. These studies have not yet received formal EPA approval but we anticipate receiving approval for Cutler Reservoir and East Canyon Creek and East Canyon Reservoir in the near future. East Canyon Creek and Reservoir are revisions of previously approved TMDLs where significant improvement in water quality has been achieved through both point and non-point source controls. The Echo Reservoir TMDL submission was withdrawn to expand the study and incorporate Rockport Reservoir, a recently listed upstream waterbody.**

Other TMDL studies initiated or advanced in 2009 and nearing completion for submission in 2010 include Pariette Draw in the Uinta Basin, Red Creek Reservoir within the Dixie National Forest, Currant Creek in Utah County, and Emigration Creek in Salt Lake County.

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 Western and Southeast Colorado River Basins by DWQ staff and the results will be included in the 2010 Integrated Report. Fact sheets for previous Basin assessment reports have been posted on the division's web site at http://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 public noticed again in mid-2009. Final submission to EPA will occur in mid-2009. Submission of the final IR was delayed due to technical issues and will be submitted in March 2010 together with the 2010 IR.**

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 were completed for 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. Interim Project Final Reports are currently being prepared for the San Pitch River Watershed, Fremont River and Upper Sevier.**

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 has not been reviewed by DWQ staff. No progress was made in FY-2009 to complete the storm water plan due to other program priorities. In FY-09, the DWQ received a small ARRA 604(b) grant to help prepare a storm water management plan. A contract is in-place to prepare a plan by 2011.**

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 St George in March and in Richfield in November with a summer tour in Box Elder County and meeting at the Bear River Migratory Bird Refuge. All three vacant watershed coordinator positions are now staffed in the Upper Weber, Uinta Basin and San Pitch.

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 state's 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 was warranted in FY-09)

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. The National Hydrograghy Dataset was completed and adopted in Utah as the standard for delineating watersheds.

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 Chapter 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 regulations 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 3.3 million dollars have gone to I & E projects, programs and activities 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-09 some $39,000 or 3% of the FY-09 funds are devoted to information/outreach activities in various

watersheds and through USU Extension's excellent outreach activities to students, teacher training and Utah Lake Watch. 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 formally finished 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 the 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 2009.

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 DWQ, as chair, conducted three meetings during 2009. In 2009, the DEQ will continue 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. DWQ

in conjunction with the Task Force wished to update and revise the Charter in 2010 and has set up a group to prepare a new charter by June 2010. USU Extension Water Quality was asked to chair the group

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: **This task is now complete. A small team composed of FS, BLS, UDAF, NPS, FFSL and DWQ worked on revising the MOU during calendar year 2008 and 2009. The new MOU was completed and distributed to parties August 18, 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-2009 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 2010. The findings and recommendations of that study will be incorporated into the revised NPS Plan for Hydrologic Modification as priorities and resources allow.**

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-2009/2010. 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 and a BMP Monitoring Guide prepare by USU Extension in Utah and Wyoming was used by DWQ watershed coordinators to aid 319 project sponsors. Assistance was provided to project sponsors in FY2009 to help prepare monitoring SAP/QAPPs and make revisions for 2010 NPS 319 projects. 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-2009 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 and Salt Lake County Flood Control and Water Resources Division. Please refer to DWQ website at http://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 and 2010 Integrated Reports 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 Salt Lake City on February 18 and 19, 2009 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, function and priorities. For 2010 the chair of the UtahPCD will be the Director of State Institutional Trust Lands Administration (SITLA).

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 two-day tour was conducted on October 7 & 8, 2009 with the Ashley National Forest to review BMPs associated with riparian protection projects, campground renovation to minimize soil erosion and bank sloughing, and grazing management measures. See more detailed trip report in Chapter VIII of this report.**

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-09. 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-09. DWQ and the Task Force decided to prepare a new Charter as one action to revitalize the Task Force in 2010. Meetings will not be so full of reporting and be structured around substantive resource coordination and planning issues.**

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 2009 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 were required in FY-09 and also FY-10 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-2009 to keep GRTS updated and current for all projects. Upon receipt of progress reports, DEQ reviews the reports and forwards them to UDAF for entry into GRTS.

Task 34. Submit 319 NPS Annual Report to EPA by January 31st or as negotiated.

Status: Work on the FY-2009 Annual Report is progressing. The draft report or parts thereof will be sent to EPA for review by February 1, 2010. The 2008 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-2009 for 2010 projects. Project needs and funding levels were discussed with local watershed coordinators during March – May 2009. Some 25 pre-proposals were received. The formal request for project submission was distributed June 4, 2009 with proposals due by August 1st. DWQ reviewed some 16 proposals totaling just over $2.5 million. Sixteen 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-2009 all sixteen 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 $1,065,000 for 2010 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. With the receipt of some ARRA 604(b) funds a workplan and contract is in-place with the University of Utah to prepare a storm water/urban runoff plan. The mining component is targeted for draft in the spring of 2010 pending resource constraints and the hydrologic modification plan revision for perhaps the spring of 2012.

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 are held between DEQ and UDAF to discuss individual projects, set schedules for obtaining final reports and review progress obtaining, reviewing and approving final reports. DWQ and UDAF are working to close the FY-01 thru FY-04 NPS project grants, hopefully by the March – May 2010 timeframe.**

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. This effort is ongoing in 2009 and 2010. A draft of the Mill Creek (Salt Lake County) was completed. Several more are in various stages of work for 2010.**

B. End-of-Year Report on the Performance Partnership Agreement-319 Staffing and Support Portion (Prepared December 2009).

The following work plan and annual status report was part of the FY-2009 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.

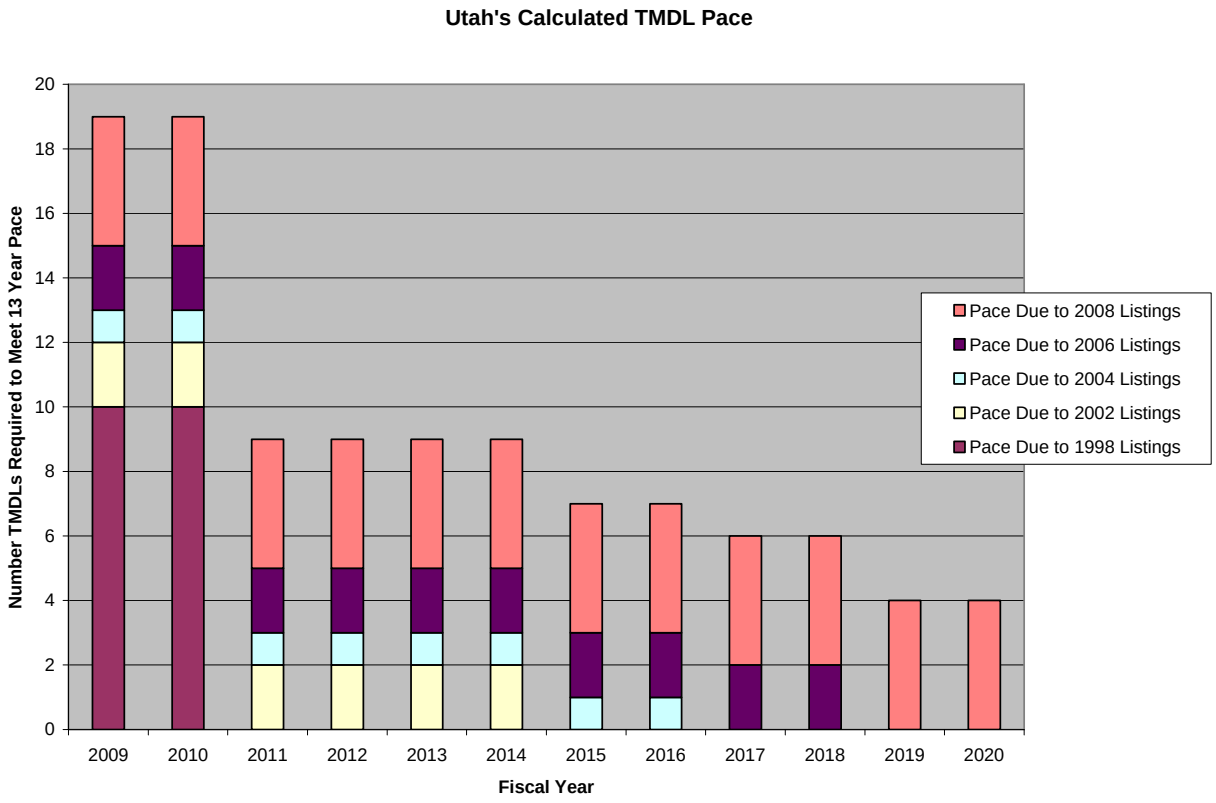
WATER QUALITY /WATERSHED PROTECTION AND MANAGEMENT
FY-09 PERFORMANCE PARTNERSHIP AGREEMENT
End-of-year Report – December 2009

TMDL/WATERSHED

1. Accomplish an effective program for completion and implementation of TMDLs.

   a. Complete and track scheduled TMDLs for listed waterbodies according to approved TMDL submission pace. (Semi-annual in May and November, Carl Adams) Any waters listed will comply with EPA guidelines to complete TMDLs within a 13 year time frame. **(WQ-8)**

STATUS: ***Based on a 13 year time frame to complete all TMDLs listed since 1998, 19 TMDLs need to be completed per year (see bar chart below). Based on the watershed approach we use for TMDL development and implementation in some years we have completed greater than 19 TMDLs per year and some we have completed less. Due to the increased complexity of TMDLs currently in progress within the more heavily populated watersheds of the state, the pace of TMDL submissions has decreased. However it should be noted that all waters listed in 1998 have or are in the process of having TMDL studies completed on them, therefore we anticipate meeting the 13 year deadline. Additionally, a comprehensive tracking tool for TMDLs and waterbody assessments has been provided by EPA that will assist in accurately reporting TMDL completion status.***



b. Incorporate into rule by reference all TMDLs approved by EPA within 120 days after notification. (Ongoing Carl Adams)

STATUS: ***All EPA approved TMDLs have been incorporated into Utah's water quality standards.***

2. Monitor implementation activities for completed TMDLs by establishing implementation milestones and tracking their completion. Tracking reports will be updated annually on January 15. (Carl Adams)

STATUS: ***TMDL implementation tracking is ongoing and has been included in DWQ TMDL coordinators' annual performance plans. Information on implementation activities is also provided from several sources including DWQ TMDL coordinators, local Watershed Coordinators, partner agencies such as the Dept. of Natural Resources via the Watershed Restoration Initiative and NRCS' EQIP program.***

3. Determine the number of waterbodies on the 2002 303(d) list that are either fully restored (**SP-10**), partially restored (**SP-11**) or have EPA approved TMDL, 4b, or 5m documents (**WQ-21**).

STATUS: ***Number of waterbodies on 2002 303(d) list fully restored (SP-10) = 57***
Number of waterbodies on 2002 303(d) list partially restored (SP-11) = 136
Number of waterbodies on 2002 303(d) list with EPA approved TMDL, 4b, or 5m documents (WQ-21) = 64

4. Maintain sound fiscal management of contracts by tracking contract amount, expenditures to date and availability of funds to meet contractual obligations via quarterly reports. (Ongoing Carl Adams & Stacy Carroll).

STATUS: ***Contract tracking is ongoing. Regular coordination between Carl and Stacy occurs to confirm remaining budget amounts to ensure sufficient funds are available to complete future work.***

5. Implement the watershed approach to effectively and efficiently support the development and implementation of TMDLs in Utah for impaired waters according to the approved 303(d) list**.** **WTR**

STATUS: ***Section Staff are actively implementing the watershed approach throughout the State in support of TMDL implementation and development activities. Examples of current planning and coordination efforts include the Jordan River Watershed coincident with the TMDL study currently in progress, in the East Canyon Creek watershed as part of TMDL implementation efforts there, and in the Middle Sevier River Watershed also associated with implementation of the TMDL.***

NONPOINT SOURCE PROGRAM MANAGEMENT

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 a review of the NPS Management Program jointly with key partners and stakeholders to improve the 319 funding process and strengthen overall program operation and management. (Jeff O)

Status: Task is partially complete. The first round was completed and reported results at joint meeting of Water Quality Board and Utah Conservation Commission. Response was good from NPS program staff around the state but response from landowners was insufficient to analyze. The 2nd round landowner survey is underway with results expected by March 2010.

   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: This task is ongoing and is behind schedule partially due to changes in local personnel. As of the end of December submission of annual progress/evaluation reports was at 43%. Steps are being taken by DEQ and UDAF to obtain all past-due reports. A new progress/evaluation form was developed by UDAF and is being used for all 319 Project Implementation Plans both at DEQ and UDAF.

   c. Submission of NPS Annual Report by January 31 of each year.

Status: This task was completed in 2009 with FY-2008 Annual Report sent to EPA on February 12, 2009. The FY-2009 Annual Report is on-schedule and should be completed by January 31, 2010.

   d. Continue revisions to the NPS stormwater/urban run-off plan as resources allow.

Status: A small amount of ARRA money was secured through 604(b) grant to prepare a storm water/urban run-off plan. The DWQ is negotiating a contract and workplan with the University of Utah to prepare a nonpoint source management plan for Utah.

   e. Complete the Abandoned and Inactive Mine component to the state's NPS Management Plan and submit to EPA for review by March 31, 2009.

Status: This task is behind schedule and will be worked on in 2010.

   f. Participate with DWR through its Blue Ribbon Fishery program in the acquisition/protection of stream corridors.

Status: A major success was achieved in July 2009 with the purchase of prime riparian corridor on the East Fork of the Sevier River by Utah Division of Wildlife Resources. Some $340,970 of CWA 319 funds assisted with the purchase via contract between DEQ and Division of Wildlife Resources.

g. Report non-319 funding in watershed protection and restoration projects in project annual and final reports. (NPS Plan Task 34)

Status: These data were gathered from NRC. Ffor EQIP expenditure in 2009, some $7,621,000 or 53% were obligated in contracts in watershed with impaired waters and (or) approved TMDLs.

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: This task is accounted for under the UPDES AFO/CAFO activities.

i. Obtain final project reports from project sponsors and coordinate with EPA to obtain concurrence for grant closure in a timely manner.

Status: The DWQ is working aggressively with local watershed coordinator and UACD staff to obtain all remaining 319 project final report for the FY-01,'02, '03, and '04 NPS Grants. Currently there are about 25 outstanding reports for the four grants that are yet to be received and approved.

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: This task is ongoing. Such information is included in project final reports, in annual project evaluation reports and to limited extent is summarized in NPS Program Annual Report.

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)

Status: For FY-2009 and additional two plans were completed, Cutler Reservoir/Middle Bear River TMDL and East Canyon Creek and Reservoir TMDL Plan, making a total of 17 watershed based/TMDL Plans prepared by DWQ and contractors.

l. Report the 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-2009 is 2 watersheds. (WQ10)

Status: The small watershed called Mill Creek above Salt Lake City fits this category and also the Rees Creek watershed a tributary to Echo Creek in Summit County could be considered substantially implemented.

m. Report the number of developed Watershed Plans and identify those in progress. (NPS Plan Task 4)

Status: Seventeen watershed plans are developed and currently twelve are being implemented including: Upper Bear River, Lower Bear, Middle Bear, Cub, East Canyon, San Pitch, Scofield Reservoir, Price River, Upper Sevier, East Fork Sevier River, Fremont, and Beaver River.

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

Status: Approximately 24 local watershed committees are organized and functioning with DWQ in the development and implementation of TMDLs. Local chairs and sponsors vary including counties, Conservation Districts and Water Districts.

o. Report the 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: These data have been requested from NRCS and will be reported in the 2009 NPS Program Annual Report.

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

Status: Eleven local watershed coordinator positions are in place and functioning with contracts with DWQ.

q. Update TMDL rules by including recently completed and EPA approved TMDLs (Carl Adams)

STATUS: All EPA approved TMDLs have been incorporated into Utah's water quality standards.

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V. Selected Watershed Implementations Actions and NPS Load Reduction Estimates

Following are summaries of Local Watershed Coordinator implementation activities and estimates of nonpoint source load reductions for fiscal year 2009.

Price/San Rafael River
Daniel R. Gunnell, West Colorado Watershed Coordinator

1. Scofield Reservoir: Informational sign has been placed at Scofield Reservoir. Dumpster project is complete! Carbon County paid for the asphalt and railing to complete the project. Mapped and identified Scofield landowners on streams entering the reservoir to begin restoration/rehabilitation work. Restroom facilities and a parking lot will soon be realized. DWR plans to begin stream rehabilitation work on Muddy Creek.
2. Price River Enhancement: Met with NRCS and CD representatives to encourage landowner contacts and sign-ups for federal programs. Completed an Archeological study on a two mile section of the Price River. An additional 2 miles of the Price River have been treated for invasive Russian olive and tamarisk. The Carbon Country Club agreed to allow cottonwood and willow harvesting from their premise.
3. Electric Lake: Obtained a UWCC grant for informational signage pertaining to the zebra mussel infestation at Electric Lake. The sign was designed with the assistance of NRCS and the DWR. Signs were installed by a group of volunteers as an earth day project.
4. County fair: set up booth on water quality for Carbon County fair; assisted with CWMA booth at Emery County fair.
5. Irrigation Water Management: conducted workshop as part of the Economic Development Summit and to assist landowners in water management. Personally met with landowners to help with specific water management issues. Planned, conducted and trained in 2 IWM workshops. 22 landowners attended. Assisted with an IWM Management grant with NRCS to do on-farm irrigation training and reporting.
6. River Network River Rally: On behalf of the UWCC, attended the Rally in Baltimore Maryland where various presentations were given on storm water, riparian work, stream rehabilitation, the Clean Water Act and Anti-degradation.
7. The mini grant from DWQ to conduct a survey of the community living in the Price River Watershed is being finalized with Jack Wilbur.
8. Assisting Carbon County with their master plan – watershed items.
9. AFO/CAFO – continue working with 1 landowner on projects that need to be completed. Assisted the farm bureau with the AFO/CAFO inventory.

Project Title	*Funding Yr*	*Funding Amount (actual 319 spent)*	*Pollutant of Concern*	*BMPs*	*% Complete*	*Load Reduction*
Scofield Res. PIP						
Waste Transfer Station	*2004*	*$25,869.09*	*Phosphorus*	*Solid Waste*	*100%*	*50 kg*
Grazing management	*2006*	*Carbon County to fund on their*	*Phosphorus*	*Grazing management*	*50%*	

		property. Also Spur Bay				
Parking, toilet, 2 waste bins	*2004, 2005, 2006*	*Carbon County has agreed to install at least one toilet*	*Phosphorus*	*Solid Waste*	*0%*	
West Colorado Watershed PIP						
Salinity control	*Through 2007 (on-farm)*	*$15,062,828 from EQIP, Basin States and private*	*TDS*	*Improved irrigation*	*50%*	*62,084 tons per year*
Reduce canal and later ditch seepage	*Through 2007*	*$35,700 Wellington & Carbon canals*	*TDS 378.75 tons*	*Improved irrigation*	*40%*	*In addition to tons listed above*
Stream bank, riparian restoration	*Ongoing*	*2 mile project $113,763 Price River Russian olive removal.*	*TDS*	*Stream restoration*	*2%*	*On going monitoring*
IWM workshops,	*ongoing*	*Paid by Conservation District, Extension & UACD*	*TDS*	*I&E*	*100% 2 workshops in 2007 and 2 workshop in 2008 2 workshops in 2009*	
Livestock and Wildlife mgt.	*ongoing*	*UPCD, GIP applications*	*TDS*	*Grazing management*	*10%*	

Jordan River

Marian L. Hubbard, Jordan River Watershed Coordinator

The Water Resource Planning and Restoration Program of Salt Lake County is currently engaged in several restoration and planning efforts.

Restoration Projects:

This year (2009), with the use of the SVWRF SRS Funds and County match funds, Salt Lake County is looking to construct an overland flow wetland complex for improvement of water quality in the 8600 South Storm Drain that discharges into the Jordan River. This is currently in the design phase with MWH Engineering.

With the use SVWRF SRF Funds, 319 Funds, and County match, restoration is planned for along 8600 south to 9000 South of the Jordan River. This is a continuation of the 206 Projects, therefore designs are completed and Right of Way (ROW) is almost finalized. Construction is planned to start Fall 2009.

In 2008, Salt Lake County received $1.5 million in grant funds from the EPA for a large-scale ecosystem restoration project along the Jordan River between 6400 South and 7800 South (East Bank)-approximately 7000 linear feet. This is part of the Bingham Junction Project; therefore Salt Lake County has been working collaboratively with EPA, DEQ, USGS, UTA, and Midvale City. Currently J.U.B. Engineering is developing the design and construction is planned for Fall 2009. It is anticipated that there will be enough funds for restoration on the West bank of the Jordan River in 2010.

In 2009, Salt Lake County partnered with Salt Lake City and received ARRA funds for Jordan River Restoration at 4 different sites between 561 South and 2100 South respectively to enhance water quality, restore bank stability, and reduce sediment load to the River. Salt Lake County also received ARRA funds for Jordan River restoration between 104th South and 132nd South.

June 2009, Salt Lake County revegetated, via RBI landscaping company, three Jordan River restoration sites.

Planning:
In August 2009, the Water Resources Planning and Restoration Program finalized the Water Quality Stewardship Plan (WaQSP) for Salt Lake County. The WaQSP identified 15 priority recommendations for this planning cycle, which Salt Lake County is in the process of implementing. These recommendations focus on water quality and quantity, and also restorations projects in the Salt Lake Countywide watershed. Furthermore, Salt Lake County continues an extensive public involvement and outreach effort. This includes the Salt Lake Countywide Watershed Symposium, the bi-annual Watershed Watch Newsletter, informational table events throughout the year, and the Jordan River Watershed Council. WaQSp planning implementation includes:

Watershed Water Quality Model (2009)- With the use of SVWRF SRS Funds and County match, the development of a computer based water quality model that will assist future watershed planning and implementation efforts throughout Salt Lake County. This is currently in the development phase with the help of Stantec Consulting.

Flow and Water Quality Data Collection (2009)- With the use SVWRF SRS Funds and County match, installation of 5 new flow and water quality monitoring stations (Bingham Creek, dry Creek, Midas Creek, Corner Canyon Creek, and Rose Creek) that will be used to calibrate the Watershed Water Quality Model and monitor watershed health. The gages are in the design and development phase.

Sample instream water quality during storm events (2009)- Collecting instream water quality data allows an assessment of stormwater impacts to receiving waters. A pilot sampling will be performed on Millcreek this year.

Macroinvertebrate Sampling (2009)-With the coordination and assistance of the Utah Division of Water Quality, sample sites throughout the Salt Lake Countywide Watershed to assess water quality.

Also, in conjunction with the WaQSP, Salt Lake County completed the Stream Function Index (SFI). The SFI is a monitoring tool to measure the effectiveness of implementation. It measures chemical, biological, physical, and social conditions of the watershed. The final report is anticipated to be out in August 2009.

Project Title	*Funding Yr*	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Complete*
JR Draper Restoration Project (11400 to 12300 South)	*2006-2009*	*$300,000*	TSS, TDS	*Grading, Protection, Irrigation, Mulching,*	*100*

				Re-veg	
JR Riverton Restoration Project (Riverton Wetland Park)	*2007-2009*	*$250,000*	TSS, TDS	*Grading, Protection, Irrigation, Re-veg*	*100*
JR Riverton Restoration Project (Oxbow Jail)	*2007-2009*	*$222,000*	TSS, TDS	*Grading, Protection, Irrigation, Re-veg*	*100*
2009 Salt Lake Countywide Water Quality Stewardship Plan (WaQSP)	*2006-2008*	*$698,470*	*TDS, DO, E. Coli, TSS, TP, TN, Temperature, Zinc, Copper*	*N/A*	*100*
SFI/EHI Assessments of streams and River within SLCo	*2007-2009*	*N/A*	*TDS, DO, E. Coli, TSS, TP, TN, Temp, Zinc, Copper*	N/A	*90*
Watershed Symposium	*2009*	*$17,000*	*TDS, DO, E. Coli, TSS, TP, TN, Temp, Zinc, Copper*	N/A	*75*
Development of Watershed Water Quality Model	*2009*	*$300,000*	*TDS, DO, TSS, TP, TN, Temperature*	*N/A*	*20*
Flow and Water Quality Data Collection Gages	*2009*	*$257,000*	Temperature, TDS, TSS, Nitrogen, Phosphorous, BOD, DO, Algal Growth, *Total or Fecal Coliform*	N/A	*10*
Jordan River-8600 South Constructed Wetlands	*2009*	*$795,410*	*TDS, DO, E. Coli, TSS, TP, TN, Temp, Zinc, Copper*	Constructed Wetland	*10*
Jordan River Restoration (8600 S. to 9000 S.)	*2009*	*$362,000*	*TSS, TDS*	Grading, Protection, Irrigation, Mulching, Re-veg	*15*
Bingham Junction Ecosystem Restoration	*2008-2010*	*$1,500,000*	*TSS, TDS, Arsenic, Lead*	Grading, Protection, Irrigation, Mulching, Re-veg	*20*
Salt Lake City-Jordan River Restoration (4 sites between 561 South and 2100 South)	*2009-2010*	*$577,500*	*TSS, TDS*	Grading, Protection, Irrigation, Mulching, Re-veg	*20*
Jordan River Restoration (3 sites between 104th South and 132nd South)	*2009-2010*	*$484,200*	*TSS, TDS*	Grading, Protection, Irrigation, Mulching, Re-veg	*20*
Sample instream water quality during	*2009-2010*	*$15,000*	*TDS, DO, E. Coli, TSS, TP,*	N/A	*5*

storm events			*TN, Temp, Zinc, Copper*		
Macroinvertebrate Sampling	*2009-2010*	*$26,000*	*TDS, DO, E. Coli, TSS, TP, TN, Temp, Zinc, Copper*	N/A	*20*

Upper Sevier River
Wallace S. Dodds, Upper Sevier Watershed Coordinator

Project Title	*Funding Yr*	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Complete*	*Load Reduction*
Old hatch Project	*2008*	*$50,000.00 funded through TWG program*	*Phosphorous Sediment*	*Installation 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*
Gleaves riparian restoration	*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.*
Heaton riparian project. Frog Pond bend	*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 tons/yr.*

BLM South Canyon five mile fuels reduction project Phase II	*2008*	*Unknown*	*Sediment control*	*2,500 acres of Piinion Juniper infested land was clear cut.This is the second phase of a three phase project.*	*100%*	
Upper Sevier Stream Enhancement #833	*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*
Robert Brown fish habitat project.	*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*
Kingston Irrigation company Pipeline	*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.*	
East Fork SR Enhancement #831	*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*
Project #833 East Fork SR Enhancement	*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*	*50%*	*Sediment reduction 375 tons/yr Phosphorous 100 kg/yr*

				included 12 private landowners and covered 2.5 continuous miles.		

Middle and Lower Sevier River
Lynn Koyle, Middle and Lower Sevier River Watershed Coordinator

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 reduce the nutrient loading to the Sevier River. Have pictures of project from beginning to end of construction.

The photos 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.

1/1/09 to 3/31/09
No river or riparian projects have been worked on this quarter. I have been working on getting things completed and ready to put out a Request for Proposal to finish writing and editing the Watershed Management Plan for the Lower and Middle Sevier River. The Request for Proposal was sent out March 2, 2009, with the proposals due back by March 13, 2009. We received 5 proposals. An evaluation form was filled out on each bidder by I and Carl Adams from Division of Water Quality. It was decided that the contract would be awarded to Cirrus Ecological Solutions from Logan, Ut. I am in the process of getting a contract signed and set up.
The photo's that were taken by helicopter are all back. I have been putting together an Index of the photo's from Piute Reservoir to the area South of Delta, Ut. We are in the process of putting together a team to do an evaluation of the Aerial Photo's to determine future Riparian and river work. It is planned to do this evaluation during the week July 6 to 10. Also I have started on an index for the Otter Creek drainage from Koosharem Reservoir to Otter Creek Reservoir.

4/1/09 to 6/30/09
We are getting real close to having the Watershed Management Plan completed. Cirrus Ecological Solutions from Logan, Ut. was awarded the contract for this program. We have had several meetings and phone conferences with them to get the information that is needed. I have sent out information surveys to get material for the plan, not a big response as of yet. The material they have put together so far looks like we will come out with a real good product.

The River bank restorations that were installed last year have healed really well. Also the work done on the animal feeding operation that was completed looks really good.

There are several river restoration projects planned for the near future, however the EQIP funds that many were planning on didn't materialize. We will have to go to other sources for funding to match the 319 funds, perhaps using the State SRF funding or ARDL loans.

All the map indexes for the still photos from the helicopter flight on the Sevier River have been completed to be used during the Sevier River evaluation that will take place during the week of July 6-10, 2009 by using the SVAP and PFC procedures.

A Match time ledger was developed to track time spent by the watershed cooperators to be used to match the 319 money.

Project Title	*Funding Yr*	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Complete*	*Load Reduction*
R.Porter Group	*2006*	*$5,071.50*	*TDS*	*Rock Barb. & Rip Rap, Willow plant*	*100%*	*N-168 lbs P-40 lbs Sed-43 ton*
C. Foreman	*2006*	*$28,730.63*	*TDS*	*Rock Barb & Rip Rap, Willow plant*	*100 %*	*N-118 lbs P-46 lbs Sed-87 ton*
D. Fautin	*2006*	*$33,062.72*	*TDS*	*Rock barb, Rip rap*	*100%*	*N-24 lbs P-9 lbs Sed-18 ton*
WF Farms	*2006*	*Actual cost $14,484.24*	*Nutrients*	*Corral Relocation, stock water lines, troughs & berm.*	*100%*	*N-3,968 lbs P-1,907 lbs*
Mgt.Plan	***2008***	***$51,790.00***	***Admin. Mgt. Plan***	***Complete Mgt. Plan for the Sevier River***	***65%***	***Admin***

Bear River

James D. Bowcutt, Middle and Lower Bear River Watershed Coordinator

Currently in the Bear River Watershed I am working to implement 6 projects that are related to water quality. These consist of 3 animal feeding Operations and 3 stream bank projects. I am also writing nutrient management plans for the three animal feeding operations. Of the 6 projects I am working on five of them have been funded by EQIP as well. I have several other Cooperators that are waiting for more funds to become available in the 2010 funding year

I have also focused on education and outreach heavily in the watershed. These outreach activities include storm drain awareness projects. We have placed over 800 storm drain markers throughout Cache County. We have conducted a water quality survey in Cache County and will begin an education outreach project with the remaining funds in the grant. I have also been working with several agencies to create natural resource field days in both Cache and Box Elder Counties. These field days will be used to educate local 4th graders about watersheds and other natural resources.

Project Title	*Funding Yr*	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Complete*	*Load Reduction*
Ropaleto Project	*2007*	*EQIP-$26,121*	*DO/ phosphorous*	*Willow transplanting/*	*75%*	*7.9 lbs/year of P 41.3 lbs/year BOD*

		319- $13,060		*Stream channel stabilization/ Stream Bank fencing*		*11.2 tons/year Sediment*
Kim Wilson	*2008*	*EQIP- $52,273* *319- $31,364*	*DO/ phosphorous*	*Stream Bank Stabilization*	*60%*	*4.5 lbs/year P* *23.6 lbs/year BOD* *6.4 tons/ year Sediment*
Robert Drollette	*2008*	*EQIP- $59,743*	*DO/ phosphorous*	*Manure Storage and nutrient management plan*	*40%*	*327 lbs/year of P* *5824 lbs/year*
Cold Water Ranch	2009	319- $25,170	DO/ Phosphorus	Riparian fencing	0%	8.4 lbs/year of P 12 tons/year sediment
Paul Parker	2009	EQIP- $185,137 319- $46,285	DO/ phosphorus	Manure management and storage	0%	4949 lbs/yr P 9202 lbs/yr BOD
Roy Andreasen	2009	EQIP- $17,148 319- $5,540	DO/ Phosophorus	Manure management and storage	0%	543 lbs/yr P 16,488 lbs/yr BOD

San Pitch River
Thomas H. Shore, San Pitch River Watershed Coordinator

April 1, 2009 to Dec 31, 2009
Improve pasture condition and management to reduce runoff and sources of salinity:

Cooperator completed drilling a well for water improvement and pasture management. He also installed a water trough.
Cooperator completed 12 acres of pasture seeding with introduced grasses and forbs for upland pasture management. He is in the process of completing cross fencing for cattle management.

Replace flood irrigation with efficient and effective irrigation practices and to reduce water usage and runoff from saline soils:

Cooperator installed a wheel-line and put 15.4 acres under sprinkler- irrigation immediately adjacent to the San Pitch River.
Cooperator completed their irrigation project on 15 acres. They replaced flood irrigation by installing risers and each installed a "Big Gun" irrigation system in their respective fields as specified in the plans completed by the UACD Engineer.

Graveyard Irrigation project has been approved by Utah Water Resources, engineering plans have been completed and stamped by the NRCS. Cooperator is in the process of getting bids for construction. He plans to have construction underway by the end of August 2009.

Improve the stability of stream channel and enhance the riparian corridor to reduce sediment loading to the river and its tributaries:

Watershed Coordinator submitted grant proposal for Non-Point source funds (State revolving fund) to supplement stream project. The first $50,000 was given the Sanpete Conservation District. Verbal commitment has been received from water quality for the next $100,000 increment.
Two stream projects have been designed by the UACD engineer (Bob Irons and Gary Richards respectively) and are scheduled to be completed this year.
Cooperator is in the process of getting bids for stream restoration on their stream project. NRCS is in the process of completing the final design. Phase I of this project is scheduled to be completed this year.

Inform and educate the public concerning non-point source pollution and improving water quality within the watershed:

Watershed Education Day was held on April 7, 2009 at Snow College for the North Sanpete and South Sanpete School Districts. This involved 18 presenters and a total of 418 fourth-grade students. At least one elementary principal from Gunnison Elementary attended for the entire day as well as some parents who were helping the teachers with the students.

Jan 1, 2009 to April 1, 2009

Improve pasture condition and management to reduce runoff and sources of salinity: Cooperator is in the process of drilling a well for a water improvement. Well driller has drilled 300 ft, but needs to drill a little bit further to get flowing water.
Replace flood irrigation with efficient and effective irrigation practices and to reduce water usage and runoff from saline soils: Watershed Coordinator and NRCS engineer completed on-the-ground survey for the Graveyard Irrigation project. Construction is scheduled to begin in the next couple of weeks.

Improve the stability of stream channel and enhance the riparian corridor to reduce sediment loading to the river and its tributaries: Watershed Coordinator submitted grant proposal for Non-Point source funds (State revolving fund) to supplement stream project. Verbal commitment from water quality for the first increment of funding requested.

Inform and educate the public concerning non-point source pollution and improving water quality within the watershed: Watershed Education Day is scheduled for April 7, 2009 at Snow College for the North Sanpete and South Sanpete School Districts. This involves 18 presenters and a total of 418 fourth-grade students that are scheduled to attend.

Watershed Group published a request for proposals and will meet on April 2, 2009 to allocate remaining grant funds to projects.
UACD Engineer has now completed plans for irrigation project. Project is scheduled to begin when weather breaks. UACD engineer is now in the process of completing engineering design for the Seeley irrigation project.

July 1, 2008 to December 31, 2008

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: Cooperator 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) Cooperator built 1650 feet of cross fencing for pasture management and completed 30 acres of pasture seeding.

(2) Cooperator 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, 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 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. 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.

Project Title	*Funding Yr*	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Compl.*
04-1264	*2003*	*$113,300*	*Sediment Nutrients*	*580-Stream Protection 4650 Feet*	*100%*
05-1645	*2004*	*$200,000*	*Sediment Nutrients*	*580-Stream Protection 1000 Feet*	*91%*
06-1025	*2005*	*$225,000*	*Sediment Nutrients*	*---*	*1%*
07-1031	*2006*	*$200,000*	*Sediment Nutrients*		*0%*
08-1217	*2007*	*$153,000*	*Sediment Nutrients*		*0%*
09-1060	*2008*	*$118,000*	*Sediment Nutrients*		*0%*

Upper Bear River
NAME: Taylor Payne, Upper Bear River Watershed Coordinator

The Upper Bear River Watershed has made furthering progress towards water quality. During this reporting period a Cooperator 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. A cooperator 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 this 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. He 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.

Project Title	*Funding Yr*	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Complete*	*Load Reduction*
Robert Hoffman	*FY 08*	*$1840.20*	*Sediment, Nutrient Loading*	*Off-site watering facilities*	*15%*	*No recordable reduction Because of project infancy.*
Contract #02-1675	*FY 01*	*50.00*			*100% complete*	

Uinta Basin

Chad McDonald, Uinta Basin Watershed Coordinator

I have been in this position since April 13, 2009 and hopefully I am making progress. I have rewritten and reassessed the Pot Creek, Matt Warner, and Calder Reservoir PIPs. This has involved finding new stakeholders and building relationships on trust not authority with some of the persons involved in this watershed. Consequently I had to make some sacrifices in order to move forward more effectively. The 2010 PIP for this same watershed has been completed. Unfortunately, due to turn over in this position local knowledge of the potential benefits of the 319 program are limited and skeptical. However, I am presently designing the Community Watershed Planning Program to focus on outreach with community leaders.

As my degree is in Watershed Management, I am continuing with technical training and assessment. I will be attending SVAP and a partnership building conference in the next couple of months. I am also reassessing the potential for establishing a basin wide watershed partnership as well as more active outreach strategies focused on field education. In the next year, I hope to expand watershed protection and restoration efforts to at least four sub sheds of the Uintah Basin. These include items such as:

- *Riparian restoration throughout the basin with a focus on Brush Creek;*
- *Tribal outreach within the Uintah River Basin to address salinity and invasive species;*
- *Upper Duchesne and Strawberry River basins to focus on fisheries restoration and*

Salinity;

- *And Pariette Draw for implementation of a selenium and boron TMDL with riparian restoration*

Project Title	*Funding Yr*	*Funding Amount*	*Pollutant of Concern*	*BMPs*	*% Complete*	*Load Reduction*
MWCR	*2008*	*$64,500*	*Phosphorous*	*yes*	*20*	

VI. Program Capacity Building/Institutional Framework

The following agency NPS activity reports illustrate the collaborative partnership with the nonpoint source program in Utah. Reports were provided by various members of the NPS Task Force as noted below.

A. Partnership Enhancement – through locally-led conservation

Utah Conservation Districts/Utah Association of Conservation Districts – Gordon Younker, UACD

Utah's conservation districts identify local resource needs and provide support to property owners/managers in obtaining the resources to addresses those needs. Utah CDs and UACD are working in partnership with the Utah Division of Water Quality and other state and federal agencies to implement Clean Water Act Section 319 nonpoint source pollution prevention projects throughout Utah.

Recent changes in Utah Code 17D Chapter 3 reaffirm and further enable CDs to conduct surveys, investigations, and research and devise and implement measures to address:

- Soil erosion, flood water, nonpoint source water pollution, flood control, water pollution, sediment damage, and watershed development or other degradations of a watershed or of property affecting a watershed.
- Development or restoration of range or forest lands or other natural resources, whether in private, state, or federal ownership.
- Publish and disseminate surveys, investigations and research.
- Make recommendations to land users on land-use practices.
- Acquire and maintain property, when necessary, to help ensure the conservation of natural resources.

Conservation planning, engineering, and GIS/GPS services are available from UACD. Further, CDs promote and fund educational activities for children including fairs, field days, and in-classroom presentations. They also offer scholarships to local high school students and sponsor teams participating in the Utah Envirothon and Nature High Camp.

UACD has an experienced water quality specialist and10 NRCS certified planners working at the local-level assisting Utah AFO owners/operators with voluntary compliance under the Utah Strategy. To date, 90% percent of Utah's AFOs have nutrient management plans, and almost 85% have controlled the runoff coming from their feeding operations. Most recently UACD is conducting a re-inventory of Utah AFOs to re-assess those within 2000 feet of water, and all dairies. The purpose is to assure owners/operators are implementing nutrient management plans, understand the Utah permitting requirements, understand what is expected to comply with Utah's AFO Strategy, and are maintaining their facilities.

CDs and UACD employ six local-level watershed coordinators that are under contract with the Division to assist in the development and implementation of TMDLs. Further, UACD is under contract with the Utah Department of Agriculture and Food to assist the Division and CDs with local administration, technical assistance, and to cost-sharing with cooperators implementing agricultural related projects.

UACD is an active member of the Utah Nonpoint Source Taskforce and represents the interests of Utah's CDs and their cooperators.

B. State Revolving Fund Nonpoint Source Financial Assistance Program (FY-09) – Shelly Andrews, DWQ

One loan application was approved in FY 2009 for SRF nonpoint source (NPS) loans. Funds have been dispersed and the project is complete. Three applications were denied for funding after the determination was made that the projects did not have a sufficient water quality component. 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 from the Hardship Grant Fund that is 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 water quality 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. Twenty-four grants were funded in FY 2009. The NPS loan and grant funds that were authorized in FY2009 totaled $999,781. (see table).

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 within the Jordan River Watershed. Salt Lake County is working with SVWRF to utilize the funds for water quality improvement projects and watershed hydrologic and pollutant loading models. South Utah Valley Municipal Water Association (SUVMWA) set aside $225,000. Part of the SUVMWA funds will be used for studies on Utah Lake to augment the TMDL. Central Weber Sewer Improvement District (CWSID) set aside $1,000,000 for NPS projects within its watershed. CWSID has funded a conservation easement along the upper Weber River and provided funding for a portion of the Ogden River Restoration.

Efforts to "market" the NPS Financial Assistance program through UACD zone coordinators have been successful. UACD zone coordinators, watershed coordinators, natural resources conservation districts, and the Utah Division of Wildlife Resources staff 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/grant 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. NPS Grants have been provided to the Utah Farm Bureau and the UACD for the Animal Feeding Operation Inventory effort.

As grants become increasingly the predominant funding mechanism, they are in high demand. The philosophy of the DWQ is to provide incentives to 319 grant recipients to move these projects forward. The DWQ has prepared a list of "targeted" watersheds that will be the focus for the NPS and the 319 awards. The hope is to have measurable water quality improvements within a watershed in a shorter timeframe.

Presentations were made to the Nonpoint Source Conference in 2009 to discuss the updates and changes to the financial assistance program. The presentation was well received by the audience.

Nonpoint Source Grant Projects FY 09

Recipient	Grant Amount	Waterbody or project	Authorization	Project Description
Wasatch County Provo River Watershed Council	$ 22,600	Wasatch County	7/2/08	Watershed education and community outreach. PRWC $14,500 inkind services.
Utah Farm Bureau	$145,000	State-wide	12/2/08	Implement AFO/CAFO strategy
Utah Assoc. Conservation Dist.	$150,000	State-wide	12/2/08	Implement AFO/CAFO strategy
Univ. of Utah	$ 58,564	Jordan River	2/5/09	Ongoing sediment study
Utah State Univ.	$ 51,925	State-wide	2/18/09	AFO workshops
Southwest Utah Public Health Dept	$ 50,000	Panquitch Lake	2/25/09	Information dev. Water quality study r/t septic systems
UT Div. Wildlife Resources	$ 10,000	Sevier River	3/3/09	Stream restoration, fencing
Harris Dairy	$ 33,418	Cub River	2/25/09	Manure Bunker, liquid storage ponds EQIP $65,765, 319 $85,300, ARDL 82,624
Gubler	$ 8,866	Beaver River	2/23/09	Pivot sprinkler to replace flood irrigation NRCS $17,460, 319 $11,526
Brown	$ 3,014	Beaver River	2/23/09	Pivot sprinkler to replace flood irrigation
Summit Land Conservancy	($32,000) Did not go through with project	Kimball Creek	2/18/09	Acquire land and dev conservation easemt
American Public Works Assoc.	$3,000	Stormwater	Pending	Training, web page
Wurtsbaugh	$62,754	Great Salt Lake	Pending	Nutrient study, algal studies in GSL, Farmington Bay
Division of Water Quality	$15,007	Consultant (Ross)	12/1/08	GSL Advisory council
		GSL		Ecosystem management paper
Division of Water Quality	$5,640	Consultant (Ross) amendment	4/22/09	GSL Advisory council
Division of Water Quality	$50,000	Great Salt Lake Advisory committee	3/16/09	facilitate Great Salt Lake Advisory Council meetings
Sanpete Conservation Dist.	$50,000	(Ross) San Pitch	3/19/09	Phase I-3320 ft. stream stabilization, 6640 ft. fencing. EQIP 52,246, 319 145,717, DWR 18,000, LO 14,000
Intermountain section AWWA	$5,000	Statewide	3/19/09	Water week education book
DEQ -Division of	$50,000	Statewide	4/20/09	Medication disposal

Water Quality				boxes (law enforcement offices)
Envirothon	$3,000	Statewide	4/20/09	Secondary environmental education
Sanpete Conservation District (Kingston Irrigation)	$7,093	East Fork Sevier	pending	Interest buy down for Kingston Irrigation Co. pressurized system.
San Rafael Conservation Dist	$58,000	Huntington Creek	5/7/09	Irrigation pressurized pipe
DEQ	$35,000	GSL		Lawrence Town Mercury Study
Duchesne Con Dist	$7,500	Pariette Draw Creek		Data collection for TMDL
Subtotal FY09	**$885,381**			

Nonpoint Source Loan Projects FY09

Project Name	Loan amount	Waterbody	Authorization	Project Description
Wayment N011	$114,400	Weber River	8/1/08 9/9/08	Animal Waste Improvement – Dairy farm, liquid storage ponds. NRCS $77,780; 319 $33,800
Subtotal FY09	**$114,400**			

NPS Financial Assistance (loan and grants) Subtotal FY 2009: $999,781
sa/nonpoint source loans/board memo 2009 (balance $219)

C. Cooperative Extension Water Quality - Nonpoint Source Information and Education Activities – Nancy Mesner and Laura Hines

Utah State University Water Quality Extension has been working with the Utah Nonpoint Source program since 1991. During this time, USU Extension has worked to develop and deliver NPS Information and Education (I&E) outreach activities and education materials that are used statewide. Collaboration with partners throughout the state reduces redundancy, improves efficiency and helps address emerging issues in nonpoint source information and education programming. We work with our partners to solicit input on the value of ongoing programs and efforts as well as looking for new approaches and needs. Although our programs and materials reach many audiences in Utah, we specifically consider the needs of the local watershed coordinators and their watershed groups when planning our efforts. Watersheds with current TMDL efforts or 303(d) listed waterbodies are a high priority. In addition, we continue to provide programs that target the specific needs of urban, suburban, and rural audiences.

The following paragraphs provide a summary of USU Water Quality Extension's Statewide NPS I&E program including the major

program elements and recent accomplishments during 2009. Visit our website at 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 continues to provide exceptional youth programming focusing on nonpoint source pollution, as well as a larger emphasis on watershed functions.

USU Water Quality Extension continues to provide age appropriate, hands-on and scientifically accurate activities to youth of all ages focusing on nonpoint source pollution as well as water quality and watershed functions. We offer programs at Utah Envirothon, 4-H summer camps, after school clubs, formal classrooms, field days, water festivals and more.

Our activities cover streams, lakes, and wetland ecology, and we strive to help youth better understand the link between their activities on land and water quality within their watersheds. We have been offering these programs for over 15 years and continue to receive positive feedback. All activities are reviewed intensively by educators, we continuously seek feedback on their value, and we modify and adjust the programs to stay current and to meet emerging needs in the state. All our activities are correlated to Utah K-12 core curriculum standards and are available as lesson plans on our web page: http://extension.usu.edu/waterquality/htm/educationalprograms.

During the 2009 calendar year:

- we provided hands-on water quality educational activities (at least an hour in length) to over 7,500 kids through classroom visits, field days, and camps;
- we also made over 1,400 additional informal contacts with kids at public events such as water fairs and natural resource festivals.

Materials and Training for Educators

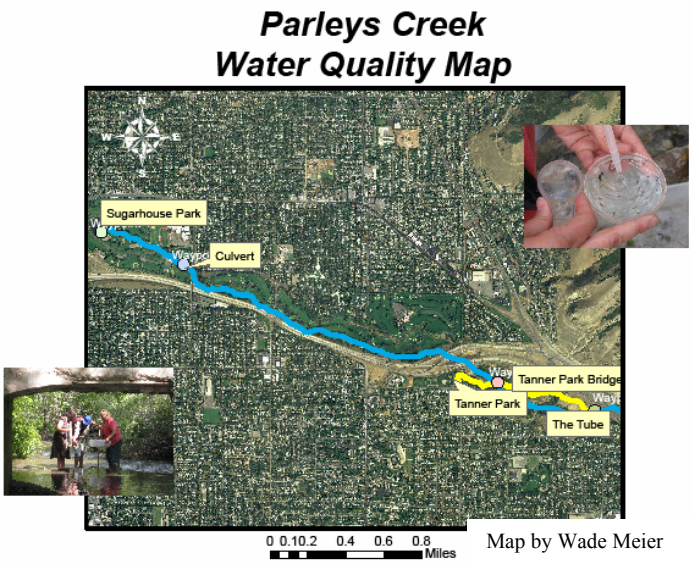
During the 2009 calendar year, 105 formal and non formal educators attended the seven workshops we held focusing on water quality monitoring and wetland monitoring, GIS/GPS mapping of a watershed, and general watershed functions and water quality. These workshops last one to two days and provide educators with the knowledge and tools to teach water quality activities in their classrooms and information and education programs.

This year we provided two workshops that focused entirely on our Stream Side Science curriculum and five other workshops that utilized our Stream Side Science lesson plans and activities. We continue to receive positive feedback from all educators attending these workshops.

A couple of the workshops are described in detail below:

Stream Side Science workshops use simple water monitoring techniques to teach science, geography, and math concepts. Workshop

participants receive eleven lesson plans correlated to the Utah State 9th grade Earth Systems core curriculum standards, an easy to follow monitoring manual that includes Utah specific background information and additional resources, hands-on training and monitoring techniques, and assistance with field activities and equipment. The educators really love the hands on training they receive at the Streamside Science workshops. These workshops continue to receive excellent feedback year after year.



Map by Wade Meier

USU Water Quality Extension collaborates with the Utah Education Network to deliver *Community Project-Based GIS/GPS (CMaP) Trainings for Teachers.* This is a five-day workshop using GPS and GIS technology to address a community problem or concern. USU Water Quality Extension provides two days of watershed training, including a field day monitoring water quality, including habitat information, water chemistry, and macroinvertebrates, throughout a watershed of concern. The field day starts in the headwaters of a watershed and continues monitoring at several locations downstream. The participants get the sense of how a stream changes throughout a watershed and how our land use activities impact water quality. Participants then generate project maps back in the classroom 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

Volunteer monitoring events are an effective outreach tool nationwide for NPS education, and increasing citizen understanding of the link between their actions on the land and the quality of their water.

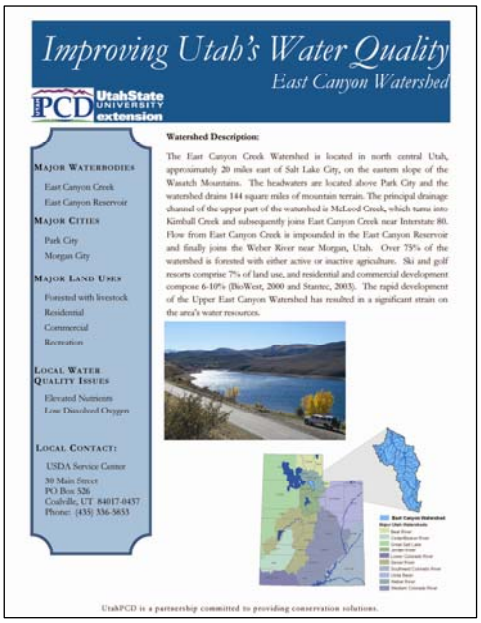
Our Utah Lake Watch (ULW) Program, a cooperative effort between USU, the Utah Division of Water Quality (DWQ), the U.S. Forest Service and many others, has been successful in part because it collects meaningful data. Data collected by our monitors are used by the DWQ for the lakes program. We compile the data at the end of the season and send a report along with the raw data to DWQ. We also send each participant a report about their individual lake, including comparison with past data, possible trends, and some information about lake water quality protection. We work with individual citizens but also with state parks and municipalities.

During the spring, summer, and fall of 2009, 14 citizen monitors measured water clarity using simple Secchi measurements at 15 sites on 12 lakes and reservoirs. In 2009 we also incorporated *E. coli* and total coliform monitoring into our citizen monitoring program through a pilot study. In cooperation with DWQ, we trained and certified the volunteers, provided them with the monitoring equipment they needed, and assured that their data are collected appropriately. Our initial assessment of this program suggests that this will be an effective way of expanding the ability of the state to scan many lakes for

possible *E. coli* contamination and will ultimately protect the health of swimmers and boaters throughout the state. USU Water Quality Extension trained 7 citizen monitors and 6 Water Quality Extension staff. A total of 24 lakes and reservoirs and 2 rivers were monitored for *E.coli* and total coliforms this year. Samples from three locations had high *E.coli* counts, which triggered additional monitoring. The data is being compiled and will be sent to DWQ along with a progress report.

Water Quality Tools for Local Watershed Groups

Water Quality Extension partnered with Dr. Karin Kettenring, a wetland scientist in the Watershed Sciences Department at Utah State University, to provide a wetland workshop for the Utah Watershed Coordinating Council. The workshop focused on wetland and riparian functions and the importance these systems have to water quality. The workshop took place at the Bear River Migratory Bird Refuge and was attended by over 25 watershed coordinators, TMDL coordinators, and others.



We also continued to work with the Utah Watershed Coordinating Council to revise and update watershed fact sheets to be used in watershed education and outreach efforts. 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.

To date, we have completed 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, and Spanish Fork River. These fact sheets can be accessed from http://extension.usu.edu/htm/publications/by=category/category=93. We are completing two more factsheets the Upper Bear River and the Upper Sevier River watersheds, and we are also gathering information for an additional twelve factsheets including the following watersheds: Middle Sevier River, Lower Bear River, Middle Bear River, Price River/San Rafael River, Scofield Reservoir, Provo River, Little Bear River, Onion Creek, Pack Creek, Mill Creek, Virgin River/Santa Clara, and Duchesne River.

Other funding sources that contribute to the potential and value of Utah's EPA's 319 outreach program:

In addition to NPS outreach provided by EPA 319 grants, USU Water Quality Extension obtains funding from other sources. This past year we have leveraged EPA 319 funding with funding from a USDA Section 406 regional water quality outreach grant. We are also utilizing outreach materials and tools developed from past EPA funding (Targeted Watershed Grant for the Bear River Watershed) and USDA_CSREES (Conservation Effectiveness Assessment Grant). Some of the products produced with these other funding sources include:

- ✓ An online watershed information system (www.bearriverinfo.org) that provides data, information, maps, interpretive tools and other resources for the entire watershed. The web site serves as a model for other watersheds and has been deconstructed into component parts so that other watersheds can import the code and populate it with their specific information;

- ✓ A guide and training opportunities on developing monitoring programs to identify impacts of best management practices;
- ✓ New approaches to more effective monitoring that captures the high degree of variability in western stream systems;
- ✓ Septic and well protection videos and other educational materials;
- ✓ Evaluation of K-12 water quality and watershed science educational materials and curricula.

D. Summary/Highlights of the Watershed Protection and Improvement Activities of Utah State University Extension for 2009 – Chuck Gay

Utah State University Extension delivers research-based educational and informational programs to Utahans that address agriculture, natural resources, community and economic development, 4-H and youth, and family, food, and nutrition. With USU Extension offices in 28 of Utah's 29 counties, programs are delivered via a variety of methods through a federal, state, and county partnership.

Dr. Rhonda Miller, Extension Nutrient Management Specialist has focused on educating producers on the new AFO/CAFO regulations. Twelve workshops, specifically for producers, were held around the state. Speakers presented information on the new regulations, the requirements for nutrient management plans, farm assessments, and funding sources. A brochure and a 16-page booklet outlining the new regulations were produced and have been distributed around the state to producers. A Producer's Website, which provides "one-stop" shopping for the producers, was created. This website provides information, in laymen's terms, on the regulations producers are likely to encounter. In addition, displays on the new regulations were developed, and this information has been presented at various commodity meetings.

The Utah Master Naturalist Program, an educational program coordinated by Utah State University Extension, received the 2009 Utah Environmental Education Program of the Year Award from the Utah Society for Environmental Education. Program coordinator Mark Larese-Casanova, an Extension environmental educator with the College of Natural Resources' Department of Watershed Sciences, accepted the award at the society's annual conference held Nov. 19-22 in Salt Lake City. Larese-Casanova began developing the program, which currently consists of two 40-hour modules, about three years ago. Nearly 80 students have participated in the Utah Watersheds and Utah Deserts modules and a third module, Utah Mountains, will be introduced in summer 2010. The program's participants include professionals – public and private school teachers and naturalists employed in the state's natural centers, zoos and state and national parks – along with their amateur counterparts who are often volunteers at similar sites. Based at USU's Utah Botanical Center in Kaysville, the program's modules are taught throughout the state and Larese-Casanova says he tries to spend more than 50 percent of instruction time in the field.

E. Utah's Forest Water Quality Guidelines – produced and monitored by the Division of Forestry, Fire, and State Lands – Mike Eriksson, DFFSL

Forest Water Quality Guidelines (FWQGs) have been developed to address non-point source pollution related to silvicultural activities for the State of Utah. The FWQGs are voluntary measures designed to protect forest, soil and water resources throughout the state where forest management activities occur. The Forest Water Quality Guidelines are part of the Non-Point Source Management Plan for Silvicultural Activities.

Properly applied, the implementation of the FWQGs can limit the type of non-point source pollution produced from timber harvesting activities, such as sediment from road construction, surface runoff, streambank protection and soil compaction.

The Utah Forest Practices Act (FPA) and rule provides the mechanism for the Division of Forestry, Fire, & State Lands to track and monitor non-federal forestry activities occurring in the state. Through statute, operators are required to register with the division and notify the division of the intent to conduct forestry activities. With the support of 319 funds the division has developed a database management system for registered operators and the notification process. Protocols for conducting FWQG monitoring have been developed for use by division service foresters, and continue to be refined in response to field application and feedback from division field foresters. A total of 64 FWQG monitoring audits have been conducted on state and private lands over a 7-year period.

Since monitoring began in 2002 one monitoring report has been published that covered the first five-year period. This report showed that Best Management Practices (BMP's) were applied 81% of the time and effective 80% of the time. These results are similar to monitoring reports in adjacent states and we feel that this is a good first step at behavior modification in terms of application and effectiveness of Utah's silviculture BMP's.

This past year an additional 10 sites were monitored throughout the state. Additionally a calibration audit was conducted to ensure that all site monitors are consistent in their monitoring efforts. No abnormalities were identified during the calibration audit, however the participants did suggest minor changes to the monitoring form in order to reduce redundancies in the monitoring process.

F. Salt Lake County Flood Control & Engineering Watershed Planning and Restoration Program – Marian Hubbard

Jordan River Watershed Protection and Improvement Activities

December 11, 2009

Restoration Projects

With the use of the SVWRF Funds and County match funds, Salt Lake County is looking to construct an overland flow wetland complex for improvement of water quality in the 8600 South Storm Drain that discharges into the Jordan River. MWH Engineering recently completed the preliminary design of alternatives and a detailed description of the recommended alternative.

With the use SVWRF Funds, 319 Funds, and County match, restoration is planned along 8600 South to 9000 South along the Jordan River. This is a continuation of the 206 Projects, therefore designs are completed and Right of Way (ROW) is being finalized. Construction is planned to start early 2010.

In 2008, Salt Lake County received $1.5 million in grant funds from the EPA for a large-scale ecosystem restoration project along the Jordan River between 6400 South and 7800 South (East Bank)-approximately 7000 linear feet. This is part of the Bingham Junction Project; therefore Salt Lake County has been working collaboratively with all partners involved: EPA, DEQ, USGS, UTA, and Midvale City. Currently J.U.B. Engineering is developing the preliminary design and revegetation plans. The draft designs are about 60% complete and scheduled to be reviewed by Salt Lake County on December 11th, 2009. Due to changes and additional tasks to the scope by EPA, construction is now planned for

Spring 2010. It is anticipated that there will be enough funds for restoration on the West bank of the Jordan River in 2010.

In 2009, Salt Lake County partnered with Salt Lake City and received ARRA funds for Jordan River restoration at 4 different sites between 561 South and 2100 South, respectively, to enhance water quality, restore bank stability, and reduce sediment load to the River. The project has been awarded and construction is planned to start in early 2010. Salt Lake County also received ARRA funds for Jordan River restoration between 104th South and 132nd South and construction began on December 7th, 2009.

In 2007, Salt Lake County received 319 Nonpoint Source funds to relocate, redesign, and reconstruct the Alta Wetland Fen. Currently there are issues as to where to place the Fen. This is the reason for the delay in the schedule. Salt Lake County and DWQ met on this matter on how best to proceed. However, Steven Jensen, who is on contract with Salt Lake County, advised to wait until spring and the snow melts to proceed.

June 2009, Salt Lake County revegetated, via RBI landscaping company, three Jordan River restoration sites from 2007: Roy Hardy Park, Oxbow Jail, and Draper.

Planning

In August 2008 the Water Resources Planning and Restoration Program finalized the 2009 Water Quality Stewardship Plan (WaQSP) for Salt Lake County. The WaQSP identified 15 priority recommendations for this planning cycle, which Salt Lake County is in the process of implementing. These recommendations focus on water quality and quantity, and also restorations projects in the Salt Lake Countywide watershed. Furthermore, Salt Lake County continues an extensive public involvement and outreach effort. This includes the Salt Lake Countywide Watershed Symposium, the bi-annual Watershed Watch Newsletter, informational table events throughout the year, and the Jordan River Watershed Council. WaQSP planning implementation includes:

Watershed Water Quality Model (2009-2010)- With the use of SVWRF Funds and County match, the development of a computer based water quality model that will assist future watershed planning and implementation efforts throughout Salt Lake County. This is currently in the development phase with the help of Stantec Consulting.

Flow and Water Quality Data Collection (2009-2010)- With the use of SVWRF Funds and County match, installation of 5 new flow and water quality monitoring stations (Bingham Creek, Dry Creek, Midas Creek, Corner Canyon Creek, and Rose Creek) that will be used to calibrate the Watershed Water Quality Model and monitor watershed health. The gages have been designed and construction has been completed on the structures for Dry Creek and Rose Creek

Sample instream water quality during storm events (2010)- Collecting instream water quality data allows an assessment of stormwater impacts to receiving waters. A pilot sampling is planned on Millcreek early 2010.

Macroinvertebrate Sampling (2009)-With the coordination and assistance of the Utah Division of Water Quality, sample sites throughout the Salt Lake Countywide Watershed to assess water quality. Sampling has been completed for all the selected sites, with the exception of site #73, which was dry. The samples will be sent to the Utah State University Water Quality Lab for analysis and results are anticipated in June 2010.

Also, in conjunction with the WaQSP, Salt Lake County completed the Stream Function Index (SFI). The SFI is a monitoring tool to measure the effectiveness of implementation. It measures chemical, biological, physical, and social conditions of the watershed. The final report and individual city reports are anticipated to be out early 2010.

Outfall Study-Salt Lake County is in the process of identifying and mapping all outfalls along the streams in the Salt Lake Countywide Watershed. Once all the streams have been walked, it is anticipated the canals in the County will be included in the study.

Emigration Creek 1900 E to 2100 E (2009-2010)-Along this stretch of Emigration Creek in Salt Lake City, the hydrology and geomorphology have been impacted by development creating bank instability and therefore bank erosion and degradation of water quality. Due to this and the involvement by the private property owners, Salt Lake County has asked Logan Simpson Design (LSD) to develop a holistic reach by reach conceptual plan for implementation by the property owners. LSD is also working with Salt Lake City and Bio-West to build upon their recent survey and designs. Salt Lake County is also in the process of looking for funding options for the property owners.

VII. Nonpoint Source Pollution Management Activities of Key State and Federal Partner Agencies

This section presents a focused 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, the National Park Service, the Bureau of Reclamation and summary of the Colorado River Salinity Control Program Basin States Parallel Program highlights for fiscal year 2009 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 2009 – Norm Evenstad

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.

A total of **$** 15,714,000 was obligated to land owners and managers in Utah during FY2009 *(EQIP, Salinity, WHIP)*. A considerable percentage directly benefited Non-Point Source AFO/CAFO concerns in Utah with 28 CNMP plans applied in FY2009.

During FY2009, 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	FY08 Allocation $	FY09 Obligations $
General EQIP	10,884,465	14,667,000
Ground/Surface	865,801	-0-
Salinity	7,447,202	6,400,000
Wildlife Habitat Incentives Program	1,596,563	610,000
Wetlands Reserve Program	-0-	-0-

Summary of Conservation Measures directly or indirectly associated with NPS benefits – FY2009

Report from NRCS – Performance Results System (PRS) – Report # 6.14 – December 2009

Performance by Program - Field Measures	Net Total Progress	Progress with Multiple Programs	AMA	Colorado River Basin Salinity Control	CRP	CSP	CTA-Gen.	EQIP	EQIP-Ground/Surface Water	GRP	RCD	WHIP
Conservation Plans Written (ac)	537,049	0			2,556		534,493					
Watershed/Area-wide conservation pland developed (Nol)	6	0					2				4	
Cropland with conservation applied to improve soil quality (Ac.)	56,579	6,286	338	82	508		29,739	29,701	2,420			78
Land with conservation applied to improve water quality (Ac)	374,991	10,233	1,149	82	920	310	216,150	147,576	2,476	3,632		12,929
CNMP written (No.)	1	0					1					
CNMP applied (No.)	28	0					5	23				
Land with conservation applied to improve irrigation efficiency (Ac)	45,947	1,836	3,344	154			17,765	23,576	2,944			
Grazing and forest land with conservation applied to protect and improve the resource base (Ac.)	459,579	19,521	1,762		244	3,203	202,892	250,139	49	3,632		17,180
Non-federal land with conservation applied to improve fish and wildlife habitat quality (Ac.)	55,988	0			234		48,196	7,402				157
Wetlands created, restored or enhanced (Ac.)	5	0						5				
Land and water resources benefitted by RC&D projects (Ac.)	10,789	0									10,789	

Table from NRCS – Performance Results System (PRS)- Report # 2.22 – Totals for Fiscal Year 2009 This report was generated on Tuesday, December 08, 2009. The report database was last updated on Monday, October 19, 2009 1:17 PM. Only practices entered by NRCS and partners during fiscal year 2009 are listed. Information relating to the specific conservation practices listed in the table can be found at the following weblink : http://www.nrcs.usda.gov/technical/Standards/nhcp.html

Summary Conservation Practices - FY2009	Planned	Applied
Amendments for the Treatment of Agricultural Waste (591) (ani unt)	11,633	10,379
Anionic Polyacrylamide (PAM) Erosion Control (450) (ac)	126	
Atmospheric Resource Quality Management (370) (ac)	25	1
Brush Management (314) (ac)	12,422	18,304
Channel Bank Vegetation (322) (ac)	2	5
Channel Stabilization (584) (ft)		40

Composting Facility (317) (no)	1	
Comprehensive Nutrient Management Plan (100) (no)	18	28
Conservation Cover (327) (ac)	3,992	378
Conservation Crop Rotation (328) (ac)	23,608	16,456
Conservation Power Plant (716) (no)	3	
Cover Crop (340) (ac)	559	15
Critical Area Planting (342) (ac)	4	6
Deep Tillage (324) (ac)	37	
Dike (356) (ft)	3,905	10,285
Diversion (362) (ft)	1,040	8,697
Fence (382) (ft)	469,482	438,573
Filter Strip (393) (ac)	1	13
Firebreak (394) (ft)	217,000	67,528
Forage Harvest Management (511) (ac)	8,725	8,600
Forest Slash Treatment (384) (ac)	96	51
Forest Stand Improvement (666) (ac)	188	
Fuel Break (383) (ac)	5	
Grade Stabilization Structure (410) (no)	4	3
Grassed Waterway (412) (ac)	3	78
Grazing Management Plan - Written (110) (no)	2	
Heavy Use Area Protection (561) (ac)	5	1
Hedgerow Planting (422) (ft)	1,200	
Irrigation Field Ditch (388) (ft)	1,000	
Irrigation Land Leveling (464) (ac)	2,073	591
Irrigation Regulating Reservoir (552) (no)	20	17
Irrigation System, Microirrigation (441) (ac)	101	120
Irrigation System, Sprinkler (442) (ac)	17,613	15,340
Irrigation System, Surface and Subsurface (443) (ac)	3,381	945
Irrigation Water Conveyance, Ditch and Canal Lining, Plain Concrete (428A) (ft)	8,063	3,024
Irrigation Water Conveyance, Pipeline, High-Pressure, Underground, Plastic (430DD) (ft)	431,489	529,282
Irrigation Water Conveyance, Pipeline, Low-Pressure, Underground, Plastic (430EE) (ft)	84,160	15,830
Irrigation Water Conveyance, Pipeline, Steel (430FF) (ft)	97	472
Irrigation Water Management (449) (ac)	33,144	22,253
Land Smoothing (466) (ac)	3	213
Mulching (484) (ac)	1	9
Nutrient Management (590) (ac)	28,786	15,981
Open Channel (582) (ft)	1,800	
Summary Conservation Practices - FY2009	**Planned**	**Applied**
Pasture and Hay Planting (512) (ac)	2,080	2,090
Pest Management (595) (ac)	70,367	47,761
Pipeline (516) (ft)	456,440	279,050
Pond (378) (no)	28	33
Pond Sealing or Lining, Bentonite Sealant (521C) (no)	1	6
Pond Sealing or Lining, Compacted Clay Treatment (521D) (no)	4	4
Pond Sealing or Lining, Flexible Membrane (521A) (no)	4	6
Prescribed Burning (338) (ac)	85	214
Prescribed Grazing (528) (ac)	148,798	236,079
Prescribed Grazing (528A) (ac)		1,383

Pumping Plant (533) (no)	236	108
Range Planting (550) (ac)	18,423	15,842
Residue and Tillage Management, Mulch Till (345) (ac)	800	5,445
Residue and Tillage Management, No-Till/Strip Till/Direct Seed (329) (ac)	211	569
Residue Management, Mulch Till (329B) (ac)		206
Residue Management, Seasonal (344) (ac)	10,601	9,221
Riparian Forest Buffer (391) (ac)	13	3
Riparian Herbaceous Cover (390) (ac)	20	2
Rock Barrier (555) (ft)		45
Roof Runoff Structure (558) (no)	1	
Sediment Basin (350) (no)	2	1
Solid/Liquid Waste Separation Facility (632) (no)	3	1
Spring Development (574) (no)	17	24
Stream Crossing (578) (no)	1	6
Stream Habitat Improvement and Management (395) (ac)	39	
Streambank and Shoreline Protection (580) (ft)	22,126	2,738
Structure for Water Control (587) (no)	389	539
TA Application (912) (no)	10	87
TA Check-Out (913) (no)	10	87
TA Design (911) (no)	10	28
Terrace (600) (ft)	212,418	168,658
Tree/Shrub Establishment (612) (ac)	144	1,678
Tree/Shrub Pruning (660) (ac)	22	
Tree/Shrub Site Preparation (490) (ac)	2	51
Upland Wildlife Habitat Management (645) (ac)	84,092	55,976
Vegetative Barrier (601) (ft)	700	
Waste Storage Facility (313) (no)	28	64
Waste Transfer (634) (no)	3	13
Waste Treatment Lagoon (359) (no)		3
Water and Sediment Control Basin (638) (no)		1
Water Harvesting Catchment (636) (no)	4	1
Water Well (642) (no)	20	14
Watering Facility (614) (no)	191	971
Well Water Testing (355) (no)		1
Wetland Creation (658) (ac)	2	
Wetland Enhancement (659) (ac)		5
Wetland Wildlife Habitat Management (644) (ac)	20	13
Wildlife Watering Facility (648) (no)		1
Windbreak/Shelterbelt Establishment (380) (ft)	19,775	15,764

B. Forest Service – Watershed Improvement and Water Quality Management Activities, Fiscal Year 2009 (October 2008 – September 2009) – Rick Hopson

Each year, Congress appropriates funding specifically dedicated towards maintaining and improving watershed conditions, including water quality. During the federal government fiscal year 2009, 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 2009, National Forests in Utah completed 1,199 acres of watershed improvement (Table 1). An additional 3,224 acres of watershed improvement were also completed using other appropriated funding sources (i.e., non-soil and water funds) and through partnerships for a total of 4,423 acres improved.

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.

Table 1. Watershed Improvement Projects Completed on National Forest System lands in fiscal year 2009 (October 1, 2008 – September 30, 2009).

Forest	Acres Improved with Soil and Water Funds	S/W Funds Spent	Acres Improved with Other Funds & Partners*	Total Acres Improved
Ashley	0	$222,989	551	551
Dixie	290	$305,000	350	640
Fishlake	821	$222,989	125	946
M-L	18	$191,133	1254	1272
U-W-C	70	$298,700	944	1014
Total	**1,199**	**$1,240,811**	**3,224**	**4,423**

* 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

Road Decommissioning *(Soil and Water $)*

These projects are intended to improve water quality by reducing or eliminating motorized impacts in sensitive watershed areas. 3 miles of route decommissioning was planned in the Cart Creek/Bowden Draw as an extension of work that had begun in the area the previous year. Funds were used to obtain the final Archeology clearances, but due to public sensitivity to the ongoing travel plan analysis it was decided to postpone the closures until 2010, after the Forest's new Travel Plan was signed.

Road Maintenance *(Engineering $)*

431 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 *(Multi-funded between Recreation, Range, Soil and Water and Engineering)*

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, 6 acres of riparian and wetland resources were fenced around Barker Spring, where hummocking and other grazing-related impacts were occurring. A strong vegetative recovery in the wet meadow and streambank within the first year of the fencing has been noted.

In the area of Big Park off of FS Rd 043 in the Ashley Creek Drainage, rock barriers were placed along the edge of the wet meadow to restore and protect 40 acres from further damage due to vehicle trespass. In the area of East Galloway draw in the Ashley Creek Drainage a system ATV trail was relocated out of a wet meadow to an area of rockier soils in the nearby timber. This was the second phase in a project that begun in 2008 where a section of the trail had been rerouted to correct damage occurring to a second meadow further downstream. In spring of 2010 restoration work is planned for the deep ruts present in the meadow. When work is completed approximately 10 acres of wet meadow will have been protected/restored.

Water and Air Quality Monitoring *(Soil and Water$)*
The Ashley N.F. continued to participate in a cooperative monitoring program with the Utah Division of Water Quality. Water quality chemistry samples were collected monthly at 2 sites on the forest. In addition, water samples were collected at seven 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. To track air quality over the winter, the Forest Service contracted USGS personnel to collect and analyze snow cores from two SNOTEL stations on the forest, at Grizzly Ridge in the Vernal District and Center Park on the Roosevelt District. This was the third year of winter sampling at these sites. The cores will be analyzed to track long term changes in air quality on the forest.

In the summer of 2009, macro-invertebrate samples were collected by the fisheries survey crew from 22 stations across the forest. The samples are used to obtain Biotic Condition Index and other water quality and habitat indices.

Best Management Practices (BMP) Monitoring *(Multi-funded)*
The forest continued project level monitoring, including implementation and effectiveness monitoring of BMPs. Projects monitored in 2009 include oil and gas developments, range allotments, timber projects, as well as portions of the Forest motorized travel system involved in the Travel Plan revision project.

High Lakes Stabilization *(Special High Lakes funded $)*
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 2009, work was completed on five lakes: Kidney Lake in Brown Duck Basin and Bluebell, Drift, Five Point and Superior Lakes in Garfield Basin. As a part of the project in Garfield Basin a diversion canal leading out of Superior Lake was closed and rehabilitated, restoring natural flows to both the formerly dewatered stream flowing out of Superior Lake and the artificially augmented stream draining Five Point Lake. By watershed reporting measures, 505 acres of stream and lakeshore habitat were restored from this project in 2009.

Fish Passage Projects *(Fisheries and Engineering $)*
In 2009 a culvert replacement was made on the FS Rd 110 crossing of Lynn Creek in the Whiterocks River drainage. The former culvert formed a barrier to fish passage and was replaced by a design which allowed for passage and more natural channel processes. This adds to the two culverts already replaced on the Forest due to fish passage issues: Elk Creek on the Flaming Gorge Reservoir in 2008, and Shotgun Draw in Timber Canyon/Avintaquin Drainage in 2007.

Dixie National Forest

Table Dixie. Watershed Improvement Projects Completed on National Forest System lands in fiscal year 2009 (October 1, 2008 – September 30, 2009).

Forest	Estimated Acres Improved with Soil and Water Funds	Estimated S/W Funds Spent	Estimated Acres Improved with Other Funds*	Total Acres Improved
Dixie	290	$305,000	$365,000	640

*Other acres improved include indirect improvements associated with post fire restoration funding, forest legacy projects, and all other National Forest System funds.

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

Road Relocation – 1.1 mile of roads within the Dead Lake area of the Cedar City Ranger District was placed under contract (through Stewardship Contracting) to be removed out of a riparian areas and rerouted in an upland area, and the old road will be placed back to contour, ripped and seeded. This road relocation will assist in the protection of riparian impacts and lake habitat.

Road Decommissioning – Forest-wide, 25 miles of roads were decommissioned by blocking access, scarifying and reseeding the road surface. The majority of this work this year occurred in the Duck Creek-Swains Creek area of the Cedar City Ranger District and on the Griffin Top of the Escalante Ranger district.

Protection of meadows, riparian and wetland areas associated with stream habitat improvement – In order to protect sensitive Colorado Cutthroat Trout habitat, the West Fork of Boulder Creek culvert of the Escalante Ranger District was removed and replaced with a bridge to remove direct effects to the stream channel and allow for full aquatic passage.

The Forest continued its participation in the cooperative water quality monitoring with the State Division of Water Quality. The Santa Clara River and Pinto Creek within the Pine Valley Ranger District are the two sites we are working on with cooperative monitoring. The forest is continuing project and forest level monitoring of fire impacts from wildfires, livestock grazing, and timber harvest.

Additional funding from the post fire restoration program (WFW3/NFN3) was used on six projects that improved watershed health. Two projects replaced burned out fences near riparian areas, two projects completed excessively eroded roads near stream corridors. Noxious weed treatment and seeding were also completed.

Fishlake National Forest

The total soil and water acres improved on the Fishlake was 946 acres. 125 acres of these acres were accomplished using partnerships.

The Fishlake National Forest is focusing on watershed improvement efforts. In 2009, the Forest focused on closing user created routes in Fish Creek, a tributary stream to Clear Creek within the Middle Sevier Watershed, and newly designated Wild and Scenic River. The conditions in the area established a need to improve watershed conditions of Fish Creek by eliminating numerous ATV-users created crossings and routes 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. These improvements occurred on every District.

In 2009, the Forest implement projects in partnership with the State 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 was completed in the Barney Lake area. The Forest also improved the travel and recreation areas around Manning Meadow Reservoir in Partnership with the State 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.

> The Forest continues its participation in the cooperative water quality monitoring with the State Division of Water Quality. In October, the sampling sites were moved from streams that are tributaries to Fish Lake, and Lake Creek below Fish Lake to Otter Creek-Daniels Canyon, Koosharem, Greenwich, and Box Creeks. 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 the Middle Sevier River in the next two years. After surveying these streams the Forest will then likely 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 improvements.

The Forest improved additional areas around a few springs, and lakes using wildlife and range monies to improve recreation access and wildlife habitat as well.

Manti-LaSal National Forest

- East Hop Creek Structure Maintenance: maintained livestock exclosure and 16 in-channel stabilization structures in a wet meadow/gully system (17 acres S&W funded).
- Bull Hollow Gully Plug Construction (1 acre S&W funded).
- Bear Creek Road Decommissioning (3 acres integrated).
- Porcupine Ranch Wildfire BAER and Restoration Projects (integrated):
    - Shrub Planting (30 acres),
    - Constructed exclosure around spring and wetland (1 acre),
    - Agricultural Straw and Wood Straw Mulching (204 acres),
    - Hand Seeding with help from Castle Valley Residents (20 acres).
- Closure of unauthorized OHV Trails across the Forest (1200 acres multifunded including S&W funds)

Uinta-Wasatch-Cache National Forest

The UWCNF accomplished several projects that improved soil and water quality conditions. Also, water quality monitoring was performed in various parts of the Forest. There were 70 acres accomplished with Soil and Water funds and 944 acres accomplished with other funds (external partnerships or integrated (non-soil and watershed program funds)) for a total of 1014 acres of soil and water improvement. These projects include obliterating and decommissioning roads, decommissioning unauthorized ATV trail, fencing low ground cover areas, stabilizing stream banks, mulching wildfire burned area, moving dispersed recreation sites that are located adjacent to streams, and improving vegetation ground cover.

As part of the American Recovery and Reinvestment Act of 2009 (ARRA), UWCNF performed road improvement work and bridge replacements in partnership with five counties. Aggregate material was put on 89 miles of road, 41.4 miles of which were in the watershed of Strawberry Reservoir, a TMDL listed water body in order to minimize erosion of the road surface. In the Logan River watershed, two bridges were replaced on Temple Fork and two bridges were replaced on the Logan River in Franklin Basin. The new bridge abutments were made wider in order to allow free flow of the channel and to open up the riparian area beneath the bridges.

The UWCNF participated in a cooperative monitoring program with the Utah Division of Water Quality and collected water samples at 12 baseline sample sites. A participating agreement was signed between the UWCNF and the Utah Department of Health for the purposes of analyzing water samples that were collected on range allotments. Water samples were collected and analyzed for bacteria at 24 range allotment stream sites. Results indicate that temperatures in the stream were within state standards. Over a period of a month during the grazing season, temperature dataloggers were installed on two streams within range allotments to determine the effectiveness of Range BMPs in minimizing the effects of diurnal changes in temperature. Results indicate that temperatures in the stream were within state standards.

The UWCNF monitored best management practices on the West Fork Blacks Fork Timber Sale.

Forest Service Burned Area Emergency Response (BAER) Program

In fiscal year 2009, the Forest Service spent over $40,777 of burned area emergency response funding to address post-wildfire effects in the State of Utah. Fires that had a BAER team included Horse Valley Fire (Dixie NF), Sawmill Fire (Fishlake NF), Lake Fork Fire (Manti La Sal NF) and Mill Flat Fire (Dixie NF). Horse Valley Fire was the only one of these were the treatments were implemented prior to the start of fiscal year 2010. The BAER program includes several activities that aim to protect or improve water quality after wildfire. For example the Horse Valley Fire BAER , road and trail were improved to address increased runoff response, 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- 2009 Nonpoint Source Programs and Activities – Lisa Bryant

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 1) planning and implementing actions designed to minimize impacts of resource use (e.g. recreation, energy development, grazing), 2) protect and restore riparian areas, 3) treat uplands to improve vegetation cover and reduce runoff and erosion, and 4) monitor soils and water quality. 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. Utah is committed to strengthening its hydrology program including riparian restoration effort, water quality, and groundwater protection. The BLM Utah State Office is currently hiring a full time hydrologist to lead the statewide program, and expects to have someone on board in early 2010.

1. Planning:

The six field offices with recently completed Resource Management Plans began steps to implement actions from the Records of Decision, including some watershed protection and travel management projects designed to reduce erosion. For example the Richfield Field Office and Henry Mountain Field Station has undertaken fencing, route closures, and signing to establish designated routes in the Factory Butte area to manage and reduce impacts from OHV use. The West Desert District (Salt Lake and Fillmore) have also been working to close illegal routes and provide signs and education identifying designated trails for use. Moab Field Office is fencing certain areas with known sensitive soils and conducting monitoring inside and outside the exclosures to evaluate wind and water erosion.
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

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 122 allotments were assessed in 2009, of which about 230,000 acres had detailed ecological site inventory or watershed assessment completed and nearly 390 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 325 grazing permits were renewed.

2. Riparian Restoration

The Vernal Field Office undertook a large scale riparian improvement project involving tamarisk and Russian olive removal and other associated restoration activities along the Green River as part of the American Recovery and Reinvestment Act. Implementation is expected to be completed in fall of 2010.

The Moab Field Office continued its successful Colorado Riparian Restoration work from the last several years, removing tamarisk and Russian olive along the Colorado River, providing fuel breaks near recreation areas, replanting willows and cottonwoods and improving riparian habitat. A monitoring study of treatment effectiveness was initiated last year and will continue to provide information to other land managers in the state working with riparian fuel reduction programs, especially in areas with active Tamarisk Beetle infestations.

In 2009 continued 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, which is a major tributary to the San Rafael River. The Price Field Office followed up on a highly successful tamarisk removal project from last year in the San Rafael Swell, treating resprouts and maintaining the improved riparian conditions.

3. Upland Treatments, Watershed Improvement

Utah BLM is in its sixth year of cooperative effort in implementing the Utah Watershed Restoration Initiative. This is a multi-agency Federal, State, and private partnership treating lands of various ownerships with an emphasis on watershed improvements and long-term habitat restoration. Approximately 35,100 acres of BLM lands were treated in 2009, although total treatment area including other Federal, State and private lands as part of the cooperative effort is more than triple that figure. Treatments include riparian restoration, tamarisk and Russian olive removal, sagebrush restoration (Dixie-harrow and seeding), removal of juniper through brushhog and hand thinning methods, wildlife and rangeland seeding, weed treatments and other similar projects. Treatments focused on reducing fuels and fire hazards included over 70,000 acres of sagebrush restoration (Dixie- harrow and seeding), prescribed fire, wildlife and rangeland seeding, chemical treatment and seeding of cheatgrass dominated areas.

For example, the Vernal Field Office has implemented several restoration projects to restore degraded rangelands. Cheatgrass dominated areas converted from native shrub and perennial grasslands through fires and drought were targeted for treatment. Nearly 1200 acres were treated with herbicide and reseeded with native and (and some soil stabilizing non-native species) to improve habitat and plant diversity. An additional 2000 acres was treated by hand and mechanical treatments to cut, scatter, and use prescribed fire to remove juniper slash, opening up areas for seeding and restoration of native grassland/shrub communities.

An additional 80,000 acres was monitored and treated for stabilization under the wildfire emergency stabilization program. This included continued efforts in the Milford Flat area to stabilize soils following one of the largest wildfires in the state's history several years ago. Several areas were reseeded. Deep plowing and chisel treatments were used to try and increase surface roughness and reduce wind erosion. Weed control efforts continued in order and enhance native plant establishment and protect seedings. The Big Pole Fire occurred mid-summer just west of Salt Lake City. Emergency stabilization treatments were implemented to address concerns regarding sediment buildup in local irrigation and water systems. Initial stabilization included drill seeding 2,475 acres, aerial seed & chain 9,808 acres and some weed treatments. Also soil stabilization structures (24 sediment control structures and 2.5 miles of straw waddles in major drainage's) were constructed to protect another 23,564 acres.

Several projects were initiated under the BLM Salinity Control Program to reduce erosion and salt contribution to the Colorado River System. For example, the BLM Moab Field Office was granted $30,000 in FY09 to reduce salinity loading by minimizing surface disturbance on highly to moderately

saline soils at 15 sites. Fencing off illegal OHV routes and playhills allows natural restoration to occur, reducing soil erosion and associated salinity contributions to the Colorado River.

OHV recreation in the Moab area has increased in recent years, as the entire Moab area is a national destination for motorized recreation. Travel off existing and designated routes adversely affects saline soils and vegetation. Accelerated water and wind erosion, soil compaction, loss of biotic soil crusts, rilling and gullying are the main impacts to soils from OHV activity. Once an illegal trail or playhill is created, surface disturbance tends to accelerate and expand in aerial extent as more people use the site.

Fifteen sites located in saline soils were fenced to assist in reclamation of illegal OHV trails. These sites ranged from small hill climbs to routes over one mile long.

The project closed almost 8 miles of illegal routes, eliminating about 20 acres of surface disturbance. The project sites were concentrated in several watersheds including the Kane Creek, Ten Mile Wash and Onion Creek watersheds.

"Ten Mile Wash near culvert"/Entrance to hill climb"

"Court house wash, closed to OHV use"

Most sites were fenced using 2-strand smooth wire and metal fence posts. These fences can be easily replaced if vandalized, and can be easily removed when the area is restored and OHV use is controlled. Other sites were closed with wooden posts, rock or log berms and/or signs.

Courthouse Wash, now closed to motorized vehicles.

4. Monitoring activities and research

Vernal Field Office entered into an agreement with the Uintah Basin Campus of Utah State University to repeat a water quality study first conducted in the late 1980's. The goal is to determine changes in trends in water quality in the Pariette wetlands and lower watershed, with particular emphasis on selenium and salinity.

A longterm study to determine impacts of OHV use to soil erosion and water quality was initiated in 2006. 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. The study has several areas of emphasis. In 2008, silt fences were installed to monitor erosion rates. These were part of paired

studies of disturbed and undisturbed sites. Additional rainfall simulation tests were also conducted. These studies continued in 2009 and entered a second phase in which data was collected to help determine the relationship between upland erosion and water quality. Equipment for water quality monitoring was installed in the Fremont River and several ephemeral drainages in the watershed. Water and soil/sediment samples were periodically collected for laboratory analysis. Work is continuing in 2010 and expected to be complete in 2011. Some unexpected interim findings include the role that wind erosion is playing in these landscapes to load ephemerals with sediment, which is then flushed into the river system during large storm events. Additional phases of the study will explore this aspect of wind/water erosion in Mancos shale and how that contributes to salinity loading in the Freemont and Colorado Rivers in future years.

Utah has had a long-term climate monitoring program. Data are used in project planning as well as for interpreting results from other monitoring data such as silt fences and sedimentation studies. Soil, Water, Air appropriated funding was used to implement crucial upgrades and maintenance of equipment. These upgrades were initiated in FY 2007 and will continue through 2011. In addition to updating, standardizing, and automating equipment, partnerships are being developed with local entities and the Utah State University (USU) climate center to use and manage the data. This data will be merged with other data sets and used in longer-term climate analyses and will be useful for interpreting vegetation trends and erosion studies. Due to staff shortages progress on this was slowed in 2009, but the addition of a new air specialist in late 2009 has renewed Utah's capability to put emphasis on this program.

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. National Park Service Water Quality Activities, Fiscal Year 2009 (October 2008 – September 2009) – Dave Thoma

This is the first year of reporting by National Park Units in Utah on the Nonpoint Source Pollution Management Program. Cooperative monitoring has been on-going for many years in some Utah parks, but was expanded in 2005 when the Northern Colorado Plateau Network (NCPN) Inventory and Monitoring Program began monitoring in all Parks with significant water resources. The National Park Service units in Utah work closely with the Utah Division of Water Quality to monitor water quality and mitigate non-point source impacts when noted. During fiscal year 2009 water quality in Utah National Parks was monitored at 36 sites on a monthly basis (Table 1).

Table 1. Water Quality monitoring sites in Utah National Parks in fiscal year 2009 (October 1, 2008 – September 30, 2009).

Park	Coop Sites Monitored by NPS	Other Sites Used by NPS in Reporting
Arches	1	4
Bryce Canyon	4	
Capitol Reef	4	8
Canyonlands	13	
Glen Canyon	3	20
Hovenweep	3	
Natural Bridges	3	

Timpanogos Cave	1	1
Zion	4	3
Total	**36**	**36**

Network Projects

- The first bi-annual report on water quality in Utah Parks was completed in 2008 for previous water years. It is available at: http://science.nature.nps.gov/im/units/ncpn/Link_Library/Web_Briefs/Springs_Brief_2009.pdf

- The National Park Service entered into an MOU that outlines participation in non-point source activities in Utah. Parties include the Division of Water Quality, US Forest Service, Bureau of Land Management and other state agencies that work together to share information and find solutions across boundaries that enable each agency to fulfill its mission while protecting water quality.

- An on-going analysis of stream geochemistry was initiated for 14 parks on the Colorado Plateau. That project was an international internship project conducted by Diego Esteve from Barcelona, Spain. The objective was to describe base-flow major ion chemistry and relate that to geologic strata in watersheds.

- A draft journal article was written titled "Measurement Sensitivity, Bias, and Minimum Detectable Difference for Field-Measured Parameters in Water Quality Monitoring Programs" It will be submitted to the Journal of Environmental Monitoring pending internal Park Service review.

- Springs and seeps monitoring was implemented in southwest Utah parks in 2007 to evaluate impacts along a disturbance gradient. This project is being conducted with the National Aquatic Monitoring Center. A brief report on the objectives of this project is available on-line at: http://science.nature.nps.gov/im/units/ncpn/Link_Library/Web_Briefs/Springs_Brief_2009.pdf

- Integrated monitoring of riparian vegetation, shallow ground water and channel morphology was initiated in Zion and Capitol Reef in 2009. A brief report on objectives of this project is available on-line at: http://science.nature.nps.gov/im/units/ncpn/Link_Library/Web_Briefs/Riparian_Brief_2009.pdf

- An aquatic invasive species prevention protocol was written and distributed widely. A short description of the issue is has been posted on-line at: http://science.nature.nps.gov/im/units/ncpn/Link_Library/Web_Briefs/AIS_Brief_2009.pdf

- A diurnal study of water chemical and physical parameters was initiated to help determine optimum sampling windows for CWA assessment. A summary has been posted on-line at: http://science.nature.nps.gov/im/units/ncpn/Link_Library/Web_Briefs/Water_Quality_Brief_2009.pdf

The following park summaries were written with input from park staff involved in many aspects of water quality monitoring including the cooperative program and special projects.

Arches National Park

Water Quality Monitoring

Most of the water quality monitoring sites in Arches are monitored monthly every third year, and were not monitored in 2009. The exception is the Salt Wash at Wolfe Ranch site, which is monitored monthly every year. It consistently exceeds standards for total dissolved solids and has high specific conductivity, due to natural geologic sources. Observations from site visits also note consistent turbidity with very fine grey sediment. Data from July 2007 - June 2008 and earlier visits to other sites in Arches NP do not indicate persistent water quality problems.

Special Projects

Monthly monitoring of spring flow in the western part of Arches National Park has continued and been ongoing since early 2001. A November 2009 visit by NPS-Water Resource Division helped resolve problems that had developed with measurement at one of the four springs measured each month. The monitoring supports ongoing (and now almost complete) efforts of the NPS – Water Resources Division with the state of Utah to designate water rights for Arches National Park. A report on the local aquifers associated with the springs was completed by the Utah Geological Survey in 2003. WRD will soon release a report on recent chemical/isotope studies to more definitively name the aquifer source(s) of the springs, which are in the Sevenmile Canyon and Courthouse Wash drainages. Designated water rights may result in certain limitations on groundwater usage in future developments that might occur west of the park on state and private lands.

Aquatic Macroinvertebrate Monitoring

In association with the Southeast Utah group water quality monitoring program, aquatic macroinvertebrates are monitored at each of the water quality sites in the yearly schedule three times: in March, June and September. Because the Salt Wash near Wolfe Ranch was the only Arches site on the schedule for 2009, it was monitored for macroinvertebrates in these three months. This semi-quantitative protocol, involving field IDs and approximate counts of individuals, was initiated in 1997.

Review of BLM Oil and Gas Leases

A team of BLM and NPS multi-disciplinary experts reviewed 77 oil and gas leases in southeast and south-central Utah in 2009. Some of the parcels are near national parks. Briefings and field reviews by the team resulted in their recommendation that eight parcels be removed from leasing due to critical resource values and/or the apparent lack of net benefit to be gained from leasing. One of these is a parcel just east of Arches National Park in the canyon of the Colorado River. Fifty-two of the remaining parcels were deferred for further review or until additional leasing stipulations or boundary adjustments can be drawn.

Pipeline Environmental Assessment

Early 2009 repair work on the high-pressure natural gas pipeline through the northern part of Arches National Park involved crossing Salt Wash with repair equipment (with a Corps of Engineers permit). In late 2009, an EA is in preparation for future potential repair activities along the pipeline. The EA will address water quality issues along with other issues.

Water Rights Meeting

Mary Moran and Inventory and Monitoring hydrotech Matt VanGrinsven attended a September 2009 informational meeting in Moab presented by the State of Utah Water Rights Division. The meeting addressed water rights associated with endangered fish species and other issues that may affect future

rights on the Colorado River (including through Canyonlands National Park), and the proposed federal reserved water rights for Arches National Park.

Uranium Tailings

The Southeast Utah Group Resource Management Division has been involved in negotiations and meetings with the Department of Energy and associates over the years involving the relocation of uranium mill tailings from the bank of the Colorado River and treatment of groundwater seeping from the pile towards the river. The tailings pile at Moab, Utah is just downstream of Arches National Park and upstream of Canyonlands National Park. After years of planning, relocation of the pile began in April, 2009. Groundwater pumping continues between the pile and the river.

Bryce Canyon National Park

Water Quality Monitoring

Monthly water quality monitoring site visits were conducted at the park boundary on Yellow Creek and Mossy Cave. Sheep Creek was added back to the sites routinely monitored after the headwaters burned in July 2009. Monthly monitoring visits indicate that Sheep Creek has consistently exceeded EPA standards for sulfate in drinking water, though no bacteria standards have been exceeded since summer 2007. Historically bacteria concentrations on Yellow Creek exceeded the secondary contact recreation standard due to cattle trespass. Fences were mended in 2008 and no significant water quality issues were noted in FY 2009.

Special projects

- An environmental assessment was initiated for replacement of approximately 20,000 ft of sewer line near park headquarters. The park is currently working with the Corps of Engineers on wetlands issues and with the Utah Department of Environmental Quality. Approximately half of the effluent produced is being lost though systematic line leakage. This is based on a combination of investigations of line condition and calculations on flow rates versus actual volume received at the lagoons. Project is currently scheduled for construction in 2011.
- Retaining walls were constructed along the Mossy Cave trail to maintain trail integrity and protect against erosion.

Canyonlands National Park

Water Quality Monitoring

Water quality monitoring was conducted in the Maze district at three sites and in the Needles District at five sites monthly from July 2008 to June 2009, except that the Maze sites were not visited in January and February when road conditions restricted access. These Canyonlands sites are monitored monthly every third year except for one site, Salt Creek near Crescent Arch in the Needles District, which is monitored every month of every year. Significantly, this site was found to be dry for several months in late 2008 and in 2009. Three sites on the Green River and Colorado River in Canyonlands were monitored six times in the 2009 river season. The two sites upstream of the park, one on each river, were each monitored three times.

The Salt Creek site near Crescent Arch, monitored since 1997, began to dry in fall 2008, likely due to dynamic and shifting flood sediments, groundwater levels, and vegetation changes. Weather data from the Needles Visitor Center shows that this area had the relatively driest 2008-2009 water year in the region, and this was reflected in that the Salt Creek site and pools nearby were all dry during five site visits in 2009. Salt Creek and two other Needles sites indicated high but short-lived E. coli counts in

2008, but no high E. coli counts resulted from 2009 site visits. Water quality data collected for the park's big rivers in 2009 is not yet available, but will be evaluated specifically for phosphorus, a parameter that has often exceeded water quality indication of impairment in the past. No indication of eutrophication was observed.

Aquatic Macroinvertebrate Monitoring

In association with the Southeast Utah group water quality monitoring program, aquatic macroinvertebrates are monitored at each of the non-river water quality sites in the yearly schedule three times: in March, June and September. Thus the Canyonlands sites were monitored in September of 2008, and March and June of 2009, and the Salt Creek near Crescent Arch site was also monitored in September of 2009. This semi-quantitative protocol, involving field IDs and approximate counts of individuals, was initiated in 1997.

Salt Creek USGS / NPS Research

A project was initiated in 2009 with the goal of developing better understanding of integrated physical, chemical and biological function in Salt Creek and how those functions are affected by visitor use. This will develop the frame work for science based management of the travel corridor in Salt Creek. As stated in the proposal, "the status of these systems is dependent on complex interactions among instream biological communities, riparian communities, hydrologic processes, stream physical / geomorphological characteristics, and upland watershed conditions. The ability to identify and model these associations is critical to a comprehensive understanding of watershed processes."

River Restoration

Preliminary discussions have occurred for a future large restoration effort on the Colorado and Green Rivers in Canyonlands National Park. Most related activities will not affect water quality. However, project planning will include research of herbicides and which have use restrictions near surface waters.

Review of BLM oil and gas leases

A team of BLM and NPS multi-disciplinary experts reviewed 77 oil and gas leases in southeast and south-central Utah in 2009. Some of the parcels are near national parks. Briefings and field reviews by the team resulted in their recommendation that eight parcels be removed from leasing due to critical resource values and/or the apparent lack of net benefit to be gained from leasing. Five of these are on the east side of, and visible from, Canyonlands National Park. Fifty-two of the remaining parcels were deferred for further review or until additional leasing stipulations or boundary adjustments can be drawn up.

Education

The NPS Southeast Utah Group Canyon Country Outdoor Education program takes all the first to sixth graders in the public schools of Grand and San Juan counties on science field trips relating to their grades' science core curriculum. The water cycle and water quality issues are presented to each fourth grader in the two counties through this program.

Capitol Reef National Park

Water Quality Monitoring

Monthly monitoring continued at 3 sites. No significant water quality issues were observed. In two years of sampling at Halls Creek, no persistent criteria violations were observed, indicating that water quality in Halls Creek is generally good. In 2002 a TMDL plan was completed after which the Fremont River was removed from 303(d) listing. The National Park Service participated in a watershed tour in

2008 that showcased improvements that should help mitigate nonpoint source pollution. New monitoring sites added at Pleasant Creek and Upper and Lower Sulphur Creek will be monitored in 2009 and 2010.

Special Projects

- Eleven acres of invasive weed treatment was accomplished in the Fremont River corridor by Lake Mead Exotic Plant Management Team and Capitol Reef employees and volunteers. Obtained a discharge permit associated with a reverse osmosis water treatment system
- Channel morphology surveys and riparian vegetation surveys were conducted at 3 reaches on the Fremont River
- Two sites on the Fremont River are being monitored monthly for bacteria.

Glen Canyon National Recreation Area

Water Quality Monitoring

During 2009, the Lake Powell Beach Monitoring Program at Glen Canyon National Recreation Area (NRA) sampled Lake Powell for *E. coli* to protect public health. 563 samples were collected from Lake Powell beaches. The National Park Service operates two state certified laboratories for sample processing. Lake Powell sanitary water quality in 2009 remained very good, with only rare and short-term contamination events, generally related to improper human waste disposal.

Monitoring of water quality parameters, nutrients, metals, and other constituents was conducted at over twenty sites throughout Lake Powell, including major inflows, the dam, and the tailwaters in cooperation with the Grand Canyon Monitoring and Research Center.

Other sites throughout the park including the Escalante River, Coyote Gulch, and a natural off-channel impoundment, were monitored for water quality parameters and constituents.

Grazing Management

Grazing is managed on nearly a million acres of land within Glen Canyon NRA. The Park, working closely with the Bureau of Land Management, has undertaken many water quality pollution abatement activities associated with grazing. During 2009, rangeland assessments were conducted on many allotments, springs and riparian areas were protected with fencing, fences to protect areas not grazed but accessible to livestock due to low lake levels were maintained, and the NPS has contributed to a new Rangeland Health Environmental Impact Statement for the Grand Staircase-Escalante National Monument.

Dreissenid Mussel Prevention

Zebra and quagga mussel prevention continued for the tenth year at Glen Canyon NRA. All vessels and equipment brought to Lake Powell were required to be screened for risk of spreading dreissenid mussels. Over 4500 watercraft were inspected and decontaminated or quarantined as necessary in 2009. Eleven watercraft were found to be harboring adult mussels. Over 300 citations were issued to visitors who failed to comply with the regulations. One citation, challenged in court, resulted in a $2500 judgment in the park's favor.

Riparian Restoration

Riparian restoration and invasive plant control efforts continued in 2009. Weeds, including Russian olive, tamarisk, ravenna grass, and others were removed from riparian areas including the San Juan River, the Escalante River, Rainbow Bridge National Monument, and the Colorado River below Glen

Canyon Dam. Glen Canyon is organizing and participating in the new Escalante River Watershed Partnership, which is focused on watershed level management of both public and private lands in the Escalante River watershed.

Special Projects

- Composting toilets were installed or replaced during 2009 in Coyote Gulch, which has experienced an increase in visitor used in recent years, and in the Lees Ferry stretch of Colorado River.
- Glen Canyon has begun work on an Off-Highway Vehicle Environmental Impact Statement addressing public use on Glen Canyon's many miles of backcountry roads.
- Funding was secured in 2009 for two large studies on Lake Powell that will begin in 2010. These studies, to be conducted in cooperation with the U.S. Geological Survey, will complete development of baseline data regarding hydrocarbon constituents and explore what contaminates are being accumulated in the sediment deltas of the San Juan and Escalante Rivers.
- Exploratory research on mercury concentrations in game fish tissues continued in cooperation with the State of Utah and the U.S. Geological Survey.

Hovenweep National Monument

Water Quality Monitoring

Water quality monitoring at the three sites in Hovenweep is conducted monthly every third year, and a cycle began in July of 2009. The Cajon pool was dry during July through October visits, but had water and was sampled in November 2009. This pool is probably largely a rain catchment pool, though some small seeps are visible in a nearby upstream cliff wall, and may contribute to the pool. When last sampled in 2006-2007, water quality standards for aquatic life were exceeded for aluminum occasionally at Cajon Spring, and for dissolved oxygen and phosphorus at both Square Tower Spring and Cajon Spring. Low levels of dissolved oxygen are not unexpected in slow-moving water and springs. Square Tower Spring has high specific conductance and sulfate levels that are thought to result from local geology.

Spring flow and pool height monitoring was conducted monthly starting in July of 2009, in conjunction with water quality monitoring. This water quantity monitoring includes three water quality sites (one in Colorado, two in Utah), and three additional sites (all three in Colorado). Since the initiation of the program in June 2004, the three pool heights have been measured from a fixed point, and flow has been measured at three additional sites. In July and August 2009 all of the springs and pools were as low as or lower than ever witnessed. These springs have subsequently risen through fall 2009 to previous levels or near-previous levels. These low flows and subsequent recovery were reported in two editions of the Southeast Utah Group Resource Management monthly newsletter.

Aquatic Macroinvertebrate Monitoring

In association with the Southeast Utah group water quality monitoring program, aquatic macroinvertebrates are monitored at each of the water quality sites in the yearly schedule three times: in March, June and September. Thus the Hovenweep sites were monitored in September of 2009. This semi-quantitative protocol, involving field IDs and approximate counts of individuals, was initiated in 1997.

Natural Bridges National Monument

Water Quality Monitoring

Water quality monitoring at the three sites in Natural Bridges is conducted monthly every third year, and a cycle began in July of 2009. One site, upstream of Sipapu Bridge in White Canyon, was dry in August and September for the first time observed in recent history, though a nearby pool had enough water to be sampled in its place. In the last sampling cycle in 2006-2007, available data have indicated occasional exceedances of aluminum and phosphorus standards for this site. No other notable impacts were observed during routine site visits in Natural Bridges.

Aquatic Macroinvertebrate Monitoring

In association with the Southeast Utah group water quality monitoring program, aquatic macroinvertebrates are monitored at each of the water quality sites in the yearly schedule three times: in March, June and September. Thus the Natural Bridges sites were monitored in September of 2009. This semi-quantitative protocol, involving field IDs and approximate counts of individuals, was initiated in 1997.

Timpanogos Cave National Monument

Water Quality Monitoring

Monthly water quality monitoring was initiated at two sites in Timpanogos cave in July 2008. One site is included in the cooperative agreement with Utah Division of Water Quality and another site is supported by Timpanogos cave with laboratory analysis conducted via contract.
The first six months of monitoring at two cave sites indicated no signs of water quality impairment.

Special Projects

- The Inventory and Monitoring Program built a custom tipping bucket with data logger that was installed below a dripping stalactite to measure flow rate.
- A project was funded to determine the above-cave watershed contributing area. The intent is to use this information in negotiating watershed protection above the cave.

Zion National Park

Water Quality Monitoring

Bacteria concentrations exceeded standards for primary contact recreation during summer months on the North Fork Virgin River which initiated a higher frequency of monitoring in summer 2009 to determine 30 day geometric means. The 30-day mean indicated a chronic source of pollution. Warnings were given to Narrows hikers and signage was posted at the Narrows trail head upstream from the park boundary. A watershed tour was conducted in November 2009 with support of the Utah Division of Water Quality to orient cooperators and stakeholders to the issue with subsequent meetings scheduled to resolve the issue. More intensive monitoring on the North Fork is planned in FY 2010.

North Creek in Zion continues to experience severe eutrophication in summer months since the 2006 Kolob fire that burned across 10% of the watershed. The cause of eutrophication may be due to elevated nitrogen levels and loss of canopy that provided shade. In 2007 a severe flash flood (with an estimated 20,000 year recurrence interval) dramatically altered channel morphology. The estimated flow was determined by USGS Cedar City office.

Previous monitoring indicated that the park's most common issues related to water quality were high total phosphorus concentrations in La Verkin Creek and the East Fork Virgin River. The source of phosphorus in these streams is not known, but could be naturally occurring. The Inventory and

Monitoring Program plans to install a continuous monitoring station on North Creek in 2010, to more closely track change associated with recovery from the 2006 fire.

Special Projects

- The North Fork Virgin River was reclassified from secondary contact recreation to primary contact recreation by the Water Board in 2009.
- Retreatment of 10,000 acres of the Kolob Fire (2006) with herbicide and seeding to encourage the recovery of native vegetation.
- Incorporation of construction BMPs in the design of the Reconstruction of the Zion - Mt. Carmel Highway, slated to begin in 2010.
- Active revegetation of all ground disturbances associated with park construction, maintenance and fire management.
- Streambank plantings in the vicinity of the Watchman Campground.
- Channel morphology surveys and riparian vegetation surveys were conducted at three reaches on the East Fork Virgin River.

E. US Bureau of Reclamation – water quality activities in 2009, Ben Radcliffe

The US Bureau of Reclamation funds irrigation improvement projects through the Colorado River Basinwide Salinity Control Program. Reclamation Salinity Program projects completed in 2009 include:

- Brough Pipeline: Located in western Uintah County, the Brough Pipeline connects the Ouray Park Pipeline to Brough Reservoir. This reservoir was previously filled using the 13 mile Ouray Valley Canal. That canal will now be used only one month each year for an estimated salt load reduction of 3,077 tons/year. This off-farm project was fully funded by the salinity program at $2,150,000.
- Steinaker Ditch: Located off Ashley Creek north of Vernal, this project replaced approximately 3 miles of open ditch with 1.7 miles of pipeline saving an estimated 130 tons/year of off-farm salt loading. This off-farm project received $135,000 of salinity program funding and anticipated the water users would contribute $311,000 for a total project cost of $446,000.
- Butcher Lateral: The Butcher Lateral Project is situated on the Carbon Canal at the Carbon/Emery County border. Approximately 14 miles of earthen ditches were replaced with a pipeline system with an estimated off-farm salt load reduction of 1,354 tons/year. This off-farm project was fully funded by the salinity program at $1,991,000.
- The Huntington-Cleveland Irrigation Company is continuing construction of their salinity control project in Emery County.

Reclamation awarded three additional projects in Utah this year using American Recovery and Reinvestment Act funding: The Peoples Canal near Manila, Utah ($7,200,000); the Red Cap Canal in Duchesne County ($2,500,000); and additional work in the Huntington-Cleveland area ($2,900,000). These projects are fully funded through the salinity program, and should be under construction early in 2010.

F. Colorado River Salinity Control Program
Basin Funds Program Report for Federal Fiscal Year 2009 – Mark Quilter, 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 2009 ending September 31, 2009.

Since the programs inception in 1997 Utah has obligated over $9.9 million dollars of Basin Fund monies. These dollars have been used in three approved salinity control areas in Utah: Manila-Washam, 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 averaging around $60 per ton for all contract in 2009. Local workgroups, chaired by Conservation Districts, provide initial planning and input and help rank the projects.

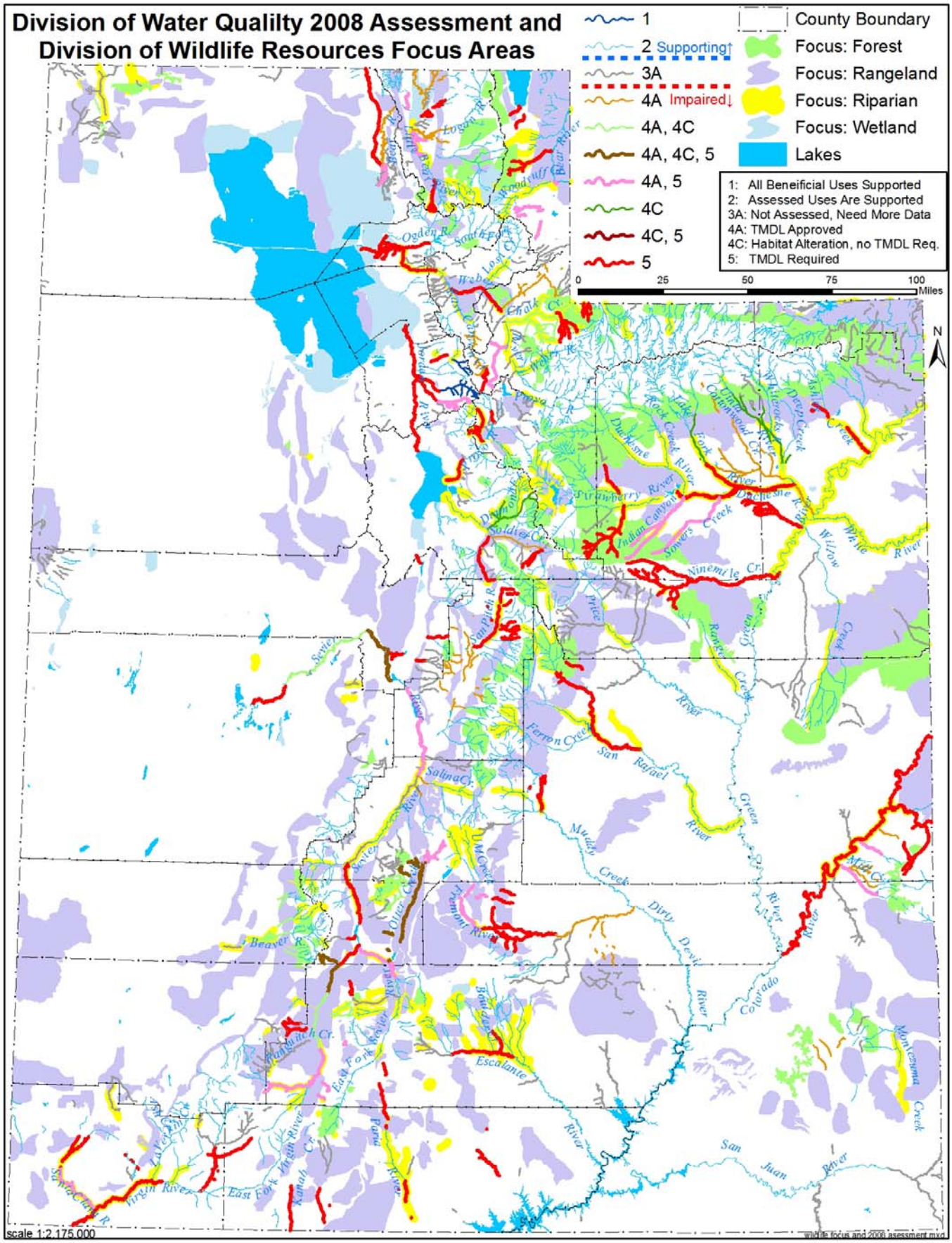
In fiscal year 2009 the state received just over 2 million dollars. During this year the state with the assistance of NRCS obligated $1,100,130 in 9 contracts to improve irrigation efficiency. This will treat 761 new acres. Currently there are 88 active contracts at various stages of completion covering 3,099 acres. Since the inception of the program the state has entered in 212 contracts covering 10,897 acres. The program is preventing annually over 24,810 tons of salt from entering the Colorado River.

G. Utah's Watershed Restoration Initiative – Conducted by the Utah Department of Natural Resources in concert with the Utah Partners for Conservation and Development – Update for 2009, Rory Reynolds, DNR

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 2009 with support of $2.5 million from the Utah Legislature the Watershed Initiative has implemented over 120 rangeland and river restoration projects involving over 136,011 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, 13,000 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. See below a map illustrating DNR wildlife focus areas in Utah over-laid on the DWQ 2008 water quality assessment inventory for the Integrated Report.


Division of Water Qualilty 2008 Assessment and Division of Wildlife Resources Focus Areas
1
2 Supporting↑
3A
4A Impaired↓
4A, 4C
4A, 4C, 5
4A, 5
4C
4C, 5
5
County Boundary
Focus: Forest
Focus: Rangeland
Focus: Riparian
Focus: Wetland
Lakes
1: All Beneficial Uses Supported
2: Assessed Uses Are Supported
3A: Not Assessed, Need More Data
4A: TMDL Approved
4C: Habitat Alteration, no TMDL Req.
5: TMDL Required
0 25 50 75 100 Miles
N
scale 1:2,175,000
wildlife focus and 2008 assessment.mxd

H. Utah Grazing Improvement Program (GIP) – 2009 update, Roy Gunnell, UDAF

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. Coordination of GIP funding with Section 319 funding is now underway. 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. The Rich County project is the Big Creek watershed, which is a tributary to the Bear River. This project has developed into a watershed wide project and is involving several state and federal agencies which are providing both financial and technical assistance.

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VIII. Federal Consistency Review Activities for FY-2009

During FY-2009, DEQ continued to use a combination of 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 a DWQ Environmental Scientist who screens RDCC actions and comments as resources and responsibility dictate. 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-2009 the meeting was held in Salt Lake City, Utah on February 18 and 19, 2009 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-09 (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 the 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 state's 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, designated beneficial uses 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 FY-09 and revised as appropriate to strengthen the working relationship especially in regard to TMDL development and implementation and cooperative monitoring programs. The National Park Service and the state Division of Forestry, Fire and State Lands became parties to the new MOU. The Forest Service received direct 319 funding from EPA 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 and approved by EPA.

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 was made during FY-2009. The following trip report describes a two-day field tour to the Ashley National Forest in October 2009 during which stream restoration and land management actions were reviewed.

Ashley National Forest Tour
October 6-7, 2009

Participants	**Organization Represented**
Rick Hopson	Region 4, Forest Service
Mark Muir	Ashley National Forest
Scott Hacking	Department of Environmental Quality, District Engineer
Chad McDonald	Uintah Basin Watershed Coordinator
Sandy Wingert	Division of Water Quality
Mike Reichert	Division of Water Quality

Day One – October 6, 2009 – Ashley National Forest Tour

Stop #1: Sowers Canyon at Forest Service Boundary

- Forest Service monitoring site; 3 (three) years of data
- Grazing, limited recreation
- Stream 2-3 cfs; perennial stream
- Issue is drill pad location on alluvial fans. Drill pad life varies but perhaps up to 30 years
- Older pads are "grandfathered" in and are not reclaimed
- Big companies generally do a good job of installation and reclamation
- Sowers Creek has limited fish species – no direct surface water connection to Duchesne River
- Gulling in the watershed is both natural and man induced
- Need both long term and storm event monitoring
- Stream has been sampled for three years.
- Road maintenance is an issue. The number of miles of O & G roads on Forest Service is overwhelming.
- Must look at entire watershed to deal with road and other issues like O & G drill pads.

Picture of Sowers Canyon

Picture of Sowers Canyon Creek

Road sloughing off into Sowers Canyon Creek

Stop #2: Old Drill Pad built on alluvial fan at mouth of drainage

- Drill pad was exploratory
- Well could be developed later. Now is an active site
- Part of drainage is draining directly onto the drill pad
- Forest Service is working with the Oil Company (Berry Petroleum) to construct a diversion channel around the pad.
- Pads don't generally have silt fences or berms because no wetland or stream near the pad
- Generally don't see runoff and sediment coming from pads
- More runoff sediment coming from road which is hydrologically connected to the stream

Drill pad built on alluvial fan

Stop #3: Drill pad located directly in mouth of canyon

- The pad creates a berm and the drainage in diverted around the pad
- The pad occupies about 90% of the canyon mouth
- Secondary berm was built to store topsoil and to catch runoff from pad.

Poorly located drill pad

Stop #4: **Pad and reserve pit built in mouth of drainage on Indian Land. Density of pads much greater on Indian Land than Forest Service**

Stop #5: **Big Drill Pad in Brundage Canyon**

- Newer pad on Forest Service land
- Pad covered the channel farther than is supposed to.
- 2 (two) more pads proposed up the valley
- One pad will fill about 80% of drainage
- Forest Service will require 100 year culvert in drainage as road is extending up the valley

Stop #6: **About 2:30 p.m., lunch at the end of the road atop Anthro Mountain overlooking Sowers Canyon to the West and Argyle Canyon to the South. Panoramic views in all directions, i.e. east toward the Green River and north toward the Uinta Mountains. See two photos below.**

Day Two – Ashley National Forest Tour
October 7, 2009

Participants	Organization Representing
Rick Hopson	Region 4, Forest Service
Mark Muir	Ashley National Forest
Chris Plunkett	Ashley National Forest
Chad McDonald	Uinta Basin Watershed Coordinator
Sandy Wingert	Division of Water Quality
Mike Reichert	Division of Water Quality

Stop #1: Barker Spring Rehabilitation along Highway 191 north of Vernal

- NEPA sufficiency reviews are done to revise and upgrade grazing allotment permits
- Gilbert Peak erosional surface
- Old EA 1993 identified need to rehabilitate the spring and riparian area
- Project was funded with forest range/watershed funds
- Purpose was to protect the riparian and archeology site (4-5 acre area).
- Exclosure fence built in fall of 2008 by Forest Service staff

Stop #2: Forest Road Closure on Highway 191

- Unauthorized road closure
- Range and watershed funding from Regional office
- Lots of problem areas identified with roads
- Recreation and engineering support closing the road
- Travel Plan on the Forest is nearly completed.
- Of the 5 (five) roads in the area, 3 (three) were closed by rock barriers
- DWQ suggested that the first couple hundred feet that are visible be recontoured and reseeded with native shrub and grass to visually remove the road

Stop #3: Cart Creek

- Road erosion problems due to heavy ATV use
- This road will be closed next year.
- Severe erosion occurring
- ½ mile ATV trails along Cart Creek
- This year new trail down the hill
- Example of high priority route closure
- Water bars will improve drainage
- Road will be blocked off.
- Suggest logs on hillside to help obliterate evidence of road
- Unauthorized travel is big issue on the Forest
- Cart Creek has Brook trout

Erosion problems due to ATV use

New unauthorized trail built down to Cart Creek in 2009

Original trail on left, new unauthorized trail on right

Cart Creek

Stop #4: Greens Draw Road Dispersed Recreation and ATV Use

- Dispersed camping
- System Route road crosses Greens Draw.
- Should be an integrated project
- Project would need NEPA review.
- Restored wet meadow area 2 (two) years ago Carex regrowth doing well.
- 15 (fifteen) small Carex gully plugs to disperse the water back across the meadow
- Cattle are trailed through the wet meadow once or twice a year.
- The ATV use causes more impact than livestock.

Ashley Forest system road crossing Greens Draw

Example of Carex gully plugs

Stop #5: Twins Park Wetland Restoration area on Red Cloud Loop Road

- In 2007, the canal was put in pipeline from Oak Parks Reservoir to Ashley Gorge.
- Springs and meadow have been restored.
- Small streams now flow over the pipeline and across the meadow.
- Roads in the meadows were closed by Recreation staff. This has enhanced recovery of the meadow.
- Dispersed camping is allowed only within 150 feet of Forest System roads.

Roads closed to protect meadow

Meadow recovering

Stop #6: **Exclosure on Government Creek along Red Cloud Road**

- Exclosure was built in 2007 in connection with the canal piping
- Long history of canal diverting flows from Oak Park Reservoir
- Canal would impact the creek channel widening channel because of high flow
- Area also gets lot of grazing pressure due to trailing route
- Fence is to be temporary until stream and riparian recover
- See effect of canal on widening of the stream
- Meadow stream incised over last 25 years….head cut moving upstream approaching the road
- Fencing the riparian is difficult due to archeology sites along Government Park Road.
- Head cuts aren't too common on the Ashley National Forest. Forest Service will try to stop using rock vane, filter fabric and carex plugs to improve riparian corridor and stop the head cut migration.

Government Creek Exclosure built in 2007

Head cut of Government Creek

Government Creek (Incised)

Mreichert\wp\Nonpoint Project Tours and Trips Forest Service and BLM\Ashley National Forest Tour 10-06-09

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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. W.D. Robinson with input from DEQ/DWQ developed a project review form for the purpose of standardizing BMP operation and maintenance reviews of projects. This form is under review and was used on trial basis during the State/EPA project tour in September 2009. The form, based on experience from that initial use, needs further modification which will make it available for use during the 2010 calendar year.

Projects in UACD Zones 4, 5 and 6 were reviewed in 2009 by UDAF. **Part One** below describes the trip reports prepared by UDAF.

PART ONE:

FY-2009 ANNUAL AUDIT AND PROJECT REVIEWS Conducted by the UDAF

February 2008:

Roy Gunnell met with David Pace, Zone 4 Coordinator and Roger Barton Zone 6 Coordinator in February and April 2009 respectively. Approximately 10% of the project files were reviewed to ensure match tracking and BMP implementation progress were being documented. Additionally, Mike Reichert, Thayne Mickelson and Roy Gunnell met with Monte Turner and Lynn Koyle from Zone 5 in March 2009 to review project files. All work performed along with match are being documented and signed off by the local zone and watershed coordinators. The on the ground work and match documentation are being accomplished as outlined under the existing contracts. With the use of the standardized project review form, anticipated for 2010, project reviews will be more uniform.

PART TWO:

XI.

NPS 319 Program Project Tour September 21-24, 2009

Participants	**Organization Representing**
Gary Kleeman	U.S. Environmental Protection Agency, Region 8
Carl Adams	Utah Division of Water Quality
Scott Daly	Utah Division of Water Quality
Mike Reichert	Utah Division of Water Quality
Roy Gunnell	Utah Department of Agriculture and Food
W.D. Robinson	Utah Department of Agriculture and Food

Day One – September 21, 2009 – Upper Sevier River Watershed Tour – Wally Dodds

Local Watershed representatives included the following:

Wally Dodds, Watershed Coordinator - Upper Sevier Conservation District
Tyce Palmer, UACD Zone Coordinator
Kevin Heaton, USU Extension Agent, Panguitch
Several Local ranchers and CD Supervisors

Stop #1: **Historical Site and Knapp weed. Group visited historic site of Asay Creek and learned about counties efforts to control Knapweed infestations.**

Stop #2: **Stan Beckstrom described Sevier River restoration projects near Hatch.**

- Riparian pasture was created with fencing

- Various BMPs were installed including J-Hooks, cross vanes, root wads, anchor logs to protect stream banks and create fish habitat.
- Total project cost was about $330,000 with funding sources including Targeted Watershed – EPA, Blue-Ribbon funds – DWR, Watershed Initiative – DNR, and Grand Canyon Trust and EPA 319 funds.
- Some re-vegetation already completed with more planned to stabilize banks and create shade

- Watering access point was built for cattle to water from stream.

Stop #3: **Kyle Stewart Project – Wally Dodd**

- Sevier River below Panguitch above the USU Extension Farm
- Stream restoration reach was about 0.2 mile long.
- Practices included the following:

  - Banks sloped back and will be re-vegetated
  - 27 vanes a J-Hook installed to control bank erosion

- 3 cross vanes installed to control grade and slow water velocities
- Some re-seeding complete with more willow planting next spring

- Project also includes installation of gated pipe to replace eroding ditches to prevent overland erosion to the river.
- Project funded with $90,000 319 funds transferred from Soldier Creek Watershed.

Stop #4: **Great lunch was provided by the Upper Sevier Conservation District and the Upper Sevier I & E Committee at Triple C.**

Stop #5: **Wally Dodd's Property on Sevier River just Northeast of Panguitch**

- Stream restoration project includes BMPs along about ½ mile stream

- Most banks were recontoured to 1 to 3 slope.
- Numerous J-Hooks installed to control and direct water flow to prevent further bank erosion
- Some cross vane also built to control bed degrading and direct flow from banks
- Stream features will improve fish habitat and minimize erosion of banks.

- Willow plantings looked great, very successful.
- Natural willow regeneration was also doing well….point bars covered with young willow sprouts.

- The entire large riparian pasture was fenced and no grazing will occur for at least 5 (five) years.
- During that time, willows and other riparian woody species will mature as well as sedges and other native riparian species.
- Funding for project came from Targeted Watershed Grant and 319.
- Cattle water access will be provided at limited location or perhaps some off-site water troughs.

Stop #6: Panguitch Lake

- Scott Daly briefed the group on development issues at Panguitch Lake Resort
    - Dredged fill operation at the Lake resulted in action by ACOE and the Division of Water Quality.
- New wastewater treatment facility……collection, pump-back treatment and underground disposal system is operational

Stop #7: Duck Creek Area

- Uncontrolled development
- Ongoing studies to document surface and ground water problems
- Sewer District has been organized
- A Facility plan was completed about a year ago but a preferred alternative has not been selected. The EA is also not yet completed.

End of Tour – Returned to Panguitch at 6:00 p.m.

Day 2 – September 22, 2009

Participants	Organizations Representing
Gary Kleeman	U.S. Environmental Protection Agency
Carl Adams	Utah Division of Water Quality
Scott Daly	Utah Division of Water Quality
Mike Reichert	Utah Division of Water Quality
Roy Gunnell	Utah Department of Agriculture and Food
W.D. Robinson	Utah Department of Agriculture and Food
Wally Dodds	Upper Sevier Conservation District
Stan Beckstrom	Utah Division of Wildlife Resources

East Fork of Sevier River – Wally Dodds and Stan Beckstom

Stop #1: John's Valley area East Fork Sevier River – Stan Beckstrom

- East Fork Sevier River diverted into Otter Reservoir drainage has high phosphorus geologic formations
- Major springs and wetland in bottom of valley 3 or 4 miles above Black Canyon form the start of East Fork Sevier River above confluence with Deer Creek.
- Division of Wildlife Resources owns parcels of land in Black Canyon.
- Stream projects start at the Old Mill at Osirus.

Stop #2: Black Canyon BLM and DWR site

- Channel and flood plain was rebuilt in 2003 and 2004. Leatherside Chub habitat is improving.
- Some restoration was blown out – repair work was done
- Uplands do need some work. Some over grazing on BLM by private landowners. Poor grazing management.
- Some 5 (five) cows on the WMA – UDWR working to remove them

- The landowner has come a long way in working with agencies.
- Conditions are improving slowly.

- Ranchers trail cattle down the road and stray cows get in the WMA.

Stop #3: Black and Westwood Property near Antimony along E. Fork Sevier River

- Planned project with 319 funds $130,000; combine with $80,000 SRF NPS funds.
- When this project is done, restoration work will be complete on the East Fork from Black Canyon to diversion to Otter Creek Reservoir.
- Will be a tough project. ….wet areas along stream…..equipment access is a problem
- Project will restore some old beaver dams
- Lots of eroding cut banks that will be re-sloped and vegetated

- About 1-1/2 miles stream length
- Banks will be layed back and revegetated
- Other structures will include J-hooks, cross vanes, root wades and plantings where needed. Lots of willows present along the river.
- Project will begin this fall and continue into next year.

Stop #4: **Neary Property on East Fork below Otter Creek**

- Projects covers 2.1 miles of river
- Targeted Watershed, NRCS, Habitat Council, Watershed Initiative, and 319 funds
- Riparian corridor was fenced partially
- UDWR acquired the property summer of 2009
- Very little grazing occurred; During past 2 years site was never was grazed.
- Major elk migration route between Monroe Mountain and Mount Dutton with winter range on east side

- Rocky Mountain Elk foundation contributed $100,000 to the purchase of the property bought by Utah Division of Wildlife Resources (UDWR).
- UDWR 6.5 miles of stream for public use
- Lots of logs were put in channel for fish habitat.

Stop #5: Oliviera Property on East Fork of Sevier River

- Lease grazing rights
- UDWR restored the reach. Restored lots of vertical eroding banks
- Minor grazing has occurred.
- Lots of log structures
- After October 1st, the flows are reduced to about 30 cfs
- Rock structures installed to deflect water and protect stream banks

Stop #6: Otter Creek Near Greenwich – Bagley Property; Kendel Bagley – UDWR working with NRCS to restore ranch upland and riparian area along Otter Creek

Additional Tour Participants	**Organization Representing**
Monte Turner	Project Coordinator/Planner, UACD
Amy Dickey	Division of Water Quality
Lynn Koyle	Middle & Lower Sevier Watershed Coordinator

- 330 acres
- Borders on BLM land to the south
- Family wants to improve upland property and stream corridor and reestablish flood plain.
- The project has GIP funds for fencing.
- Presently, Rabbit Brush dominates the site
- Historically, willows were the steam dominate riparian shrub.
- Want to better manage grazing and chemically treat Sage and Rabbit Brush.
- Will defer grazing the area for two seasons
- Carl Fleming, USFWS, will work on riparian areas to restore them over next couple of years.

Day Two cont. - Fremont River Project Tour – Monte Turner

Stop #7: **Maxfield Property on Fremont River**

- Stream work done in 2006

- Willows looking great
- Banks holding well…..rock barbs are still intact and performing well.

Stop #8: Alexis Property on Fremont River

- Lots of barbs installed on bends
- Entire stream reach was surveyed and logged w/GPS

- Project was designed by NRCS and UACD planners.
- No work was done during past 2 (two) years because depressed economy.
- The project will be finished next year

Stop #9: Fremont River Below Torrey, Kay Hickman Property

- 3 (three) of 4 (four) landowners participated in 1st round
- But now he's willing to cooperate

- Banks and toes were partially stablized
- Work was completed in 2007
- Some willow re-generation occurring naturally. Some planted willows have died.

Day Three – September 23, 2009

San Pitch River Watershed – Tom Shore

Participants	Organization Representing
Gary Kleeman	U.S. Environmental Protection Agency
Roy Gunnell	Utah Department of Agriculture and Food
W.D. Robinson	Utah Department of Agriculture and Food
Carl Adams	Utah Division of Water Quality
Scott Daly	Utah Division of Water Quality
Mike Reichert	Utah Division of Water Quality
Tom Shore	Local Watershed Coordinator, Sanpete CD
Brian Miller	NRCS, District Conservationist

Stop #1: Jim Cheney, Irrigation Project

- Conversion from flood to sprinklers and gated pipe
- Using Alfalfa risers to aid water distribution
- Formerly, fields were all flood irrigation with all tail water entering the river
- 15" pipe and lateral wheelines
- Land leveling and gated to be installed this fall
- $39,000 of 319 funds and $20,000 loan from the Division of Water Resources was part of the match plus landowner in-kind.

Stop #2 Scott Mower and Ross Terry – Stream Restoration Project

- Above bridge Ross Terry; below bridge Scott Mower property
- 4 (four) years ago $50,000
- DWR, USFWS, 319, NRCS, EQIP
- Removed old car bodies and concrete
- Land in family since 1902

- Fish habitat improvement – DWR pleased with results
- 1 (one) mile length of stream

- Laid back banks
- Fenced the corridor
- Installed Root wades
- Some rock barbs were installed to protect banks
- Coconut fiber matting
- Lots of willow planting – this stream reach looks fantastic! Fish numbers and biomass is increasing according to UDWR

ACTION ISSUE: **Can Landowner claim land removed from production as match? Ask for clarification from EPA**

Stop #3: **Ed Jesson, Irrigation Management Project**

- Two wheel-lines installed this spring replace flood irrigation
- Water comes from the M&M ditch to feed gravity operated wheel-lines
- New system prevents minimizes erosion from tail water enter stream
- Benefits to the rancher includes increased hay and grass production

Stop #4: **Jesson/Farley Stream Restoration**

Note fence line: ⬇

Stream was entirely to the left of the fence line:

- Floods of 1983 washed out bridge and ripped up the stream
- Phase One, Farley owns the east side and Jesson owns the west side
- NRCS designed the project
- Entire project will be fenced with off-site watering and livestock access points
- BMPs include root wades and willow planting
- Several sources of funds including ACOE mitigation money ($18,000)
- Phase two will include improvements for:
  SRF NPS $150,000
  $ 50,000 on Phase 1
  $100,000 on Phase 2

Stop #5: Forest Harvest Site on PacifiCorp Property Near Electric Lake

Additional Participants	**Organization Represented**
Mike Erikson	**Division of Forestry, Fire & State Lands**
Darce Guymon	**PacifiCorp, Huntington Plant**

- Goals PacifiCorp harvest site to combat beetle kill and
  - Maintain north facing slope with snow
  - Maintain scenic value of the watershed
  - Enhance Sub-alpine fir regenerate
- 78% mortality – beetle kill is major issue

- Reseeding of disturbed logging areas to avoid invasion of Musk Thistle
- Logging road rehabilitation was done

- Perimeters of trees along lake were left to enhance visual beauty
- Water bars control erosion
- Three different types of beetles have infested the trees
- Aspen regeneration is occurring in the beetle kill areas
- PacifiCorp owns 4,000 acres around Electric Lake

- 'Lop and scatter' method was employed
- Most problematic BMP issue is road relocation
- Generally, about 80% compliance rate with Forest Water Quality Guidelines

Day 4 – September 24, 2009 – Uinta Basin –Sandy Wingert, DWQ

Participants	Organization Representing
Carl Adams	Utah Division of Water Quality
Mike Reichert	Utah Division of Water Quality
Sandy Wingert	Utah Division of Water Quality
Gary Kleeman	EPA
WD Robinson	Utah Dept of Agriculture & Food

Stop 1: Matt Warner/ Calder Reservoir Area – Rasmussen and Hacking Property

- County apply gravel to roads – example of work around Reservoir (2-3 miles of road).
- Sedge and grass plantings done in May 2009 along Pot Creek
- County will upgrade the road and thus will require less maintenance.

Stop 2: Above Calder Reservoir

- Focus of gravel eroding areas around Calder Reservoir
- Road drainage improvement
- Wildlife Management area above Calder owned by Utah Division of Wildlife Resources
- Culverts will be replaced
- Road will be graveled around Calder Reservoir

Stop 3: **Calder Reservoir**

ACTION ITEM: **Butch Cassidy Ranchettes, Sundance Development stormwater staff request to check it out. Sandy has pictures and will talk to Mike George.**

- Access road area being reclaimed, revegetated and blocked off with boulders
- Road along Calder will be graveled
- Two small sediment detention ponds will be constructed to catch runoff from roads.

Stop 4: **Pariette′ Draw Wetland - BLM**

- Pariette′ Wetlands created by BLM in 1970's for wetland habitat.
- Road raised 10 feet and spill way built last year.

- BLM built sediment retention dam with 30 year life but only lasted 20 years. Spillway constructed of gabion baskets

- Beautiful wetland/waterfowl complex

- USU Professor in Vernal is planning a waterfowl selenium study
- BLM considering dredging but DWQ has raised questions regarding potential contaminate level in wetland sediments
- DWQ conducting study to gather data for boron, selenium and TDS
- Total of some 23 ponds are in the complex for a length of 20 miles
- Last stop was on overlook at lower end of complex about 1-1/2 miles from the Green River.

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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

The Division of Water Quality finished triennial review and the revised standards became effective on January 12, 2009. Included in the Triennial Review 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. The standards were submitted to EPA and there were two disapproval items dealing with antidegradation. During 2009 these and other issues were addressed and presented to the WQ Board for approval. In November 2009, the Board approved to go to rulemaking for these issues:

1. Three definitions in R317-1; Assimilative Capacity, Existing Use, and Great Salt Lake impounded wetlands.
2. Clarification of a Level I off-ramp.
3. Removal of the Level I de-minimus off-ramps (mathematical).
4. Inclusion of requirements of Division Water Quality for development of implementations procedures for Level II reviews.
5. Corrected geographical description of Farmington Bay.
6. Corrected mouth of Ivie Creek.

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 redone because of questions about the Great Salt Lake. Because of issues related to standards and the Great Salt Lake, the 2008 IR will not be sent to EPA until February 2010.

The 2010 Integrated Report will be finalized when the benthic macroinvertebrate data is assessed and the results included in the report. The public comment period should be in March, 2010.

C. TMDL Development/Watershed Planning

The Watershed Approach and the development of TMDLs for Utah's impaired waters is the foundation of the NPS Pollution Management Program. The Watershed Approach is focused on improving the quality of Utah's surface and ground water resources. It provides the framework for implementing TMDL plans to restore and protect the quality of Utah's water resources. Watershed planning and TMDL implementation efforts are taking place throughout the State with the technical assistance provided by local watershed coordinators situated within the Bear,

Weber, Jordan, Price/San Rafael, Duchesne, Upper Sevier, Middle Sevier and San Pitch River watersheds. Financial assistance for implementation of best management practices is primarily provided through EPA 319, USDA EQIP, and State NPS funds.

Water quality studies leading to the completion of TMDLs for impaired waters are also ongoing. Extraordinary efforts have been devoted in 2009 to the completion and continuation of TMDL studies that encompass a large proportion of the State's total population, namely Cutler Reservoir in Cache Valley and the Jordan River along the Wasatch Front. Due to the complexity of these watersheds and the significant economic implications arising from the TMDLs, the pace of TMDL submissions has declined temporarily. However by maintaining a high degree of scientific rigor and stakeholder involvement results in better implementation and ultimately more timely restoration of water quality.

In 2009 we completed TMDL studies for Cutler Reservoir, East Canyon Reservoir, East Canyon Creek and Echo Reservoir. These studies have not yet received formal EPA approval but we anticipate receiving approval for Cutler Reservoir and East Canyon Creek and East Canyon Reservoir in the near future. East Canyon Creek and Reservoir are revisions of previously approved TMDLs where significant improvement in water quality has been achieved through both point and non-point source controls. The Echo Reservoir TMDL submission was withdrawn to expand the study and incorporate Rockport Reservoir, a recently listed upstream waterbody.

Other TMDL studies initiated or advanced in 2009 and nearing completion for submission in 2010 include Pariette Draw in the Uinta Basin, Red Creek Reservoir within the Dixie National Forest, Currant Creek in Utah County, and Emigration Creek in Salt Lake County.

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