

MONITORING & EVALUATION REPORT--2007
LOWER GUNNISON UNIT
COLORADO RIVER SALINITY CONTROL PROJECT
USDA-NRCS



IWM MONITORING & EVALUATION REPORT

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M&E EXECUTIVE SUMMARY
HYDROSALINITY

Project: Lower Gunnison

- The project plan is to treat **135,000** acres with improved irrigation systems.
- To date, **51,594** acres have improved irrigation systems applied.
- The project plan is to reduce salt loading to the Colorado River system by **166,000** tons of salt.
- In FY 2007, salt loading has been reduced by **6,963** tons/year.
- The cumulative salt load reduction is **76,423** tons/year.

Cost effectiveness –

- The *planned* cost per ton of salt saved with prior year contracts is **\$56.49/ton**. This is based on the following formula:

FA + TA = Total Cost X Amortization Factor = Total amortized cost
Total amortized cost divided by total annual tons salt saved = Cost/Ton

FA is total dollars obligated in EQIP & Parallel Program (including wildlife).
TA is 67% of the FA (This number includes education and monitoring).
Amortization factor for 2007 is **.07007**

Hydro Salinity Monitoring & Evaluation Summary

2007

In the past various irrigation systems were monitored and evaluated with respect to their average seasonal efficiencies and overall average deep percolation reduction, which is one of the principle indicators of salinity.

The following is an analysis utilizing past summary base data to reflect overall deep percolation reduction, with respect to the various irrigation systems applied to date.

- Irrigation Systems Applied = **4,103 Acres**
- Unimproved acres treated = **51,594 Acres**
- Improved surface irrigation systems installed= **2,890 Acres**
- Irrigation water conveyance delivery/ gated pipe
Acres treated = **44,193 Acres**
Average Efficiency **48%**
- Sprinkler & Drip irrigation systems installed= **1,213 Acres**
(Includes Linear, Center Pivot, Side Roll, & Big Gun)
Acres treated= **7,641 Acres**
Average Efficiency= **78%**
- **Overall Deep Percolation Reduction= 27,237 Acres**
- **Overall Average systems efficiency= 59%**

LOWER GUNNISON IRRIGATION MONITORING & EVALUATION 2007 REPORT USDA & NRCS

Introduction

In 1990, the Natural Resources Conservation Service (NRCS) started applying improved irrigation systems and practices with cooperators in the Lower Gunnison Salinity Control Area, through the Colorado River Salinity Control Program including both EQIP and Basin Funding. All EQIP and Basin applications are ranked by a process that yields the most cost-effective projects on cost per ton of salt saved by increasing the irrigation systems water application efficiency.

In the past, the irrigation practices of several cooperators have been monitored with flow measuring equipment to evaluate the effectiveness and efficiency of the various irrigation systems in the reduction of deep percolation of irrigation water.

Due to the recommendations of the 2003 Monitoring & Evaluation Report, the monitoring efforts by NRCS were forestalled. The report stated that monitoring of irrigation events have been successful over the past several years and to continue further monitoring would only be redundant.

The contributing members of this report felt that future monitoring efforts should focus on the conversion of larger agricultural land tracts into smaller acreages and their potential impacts to Salinity and Selenium. This land conversion into smaller tracts is also increasing both the cost per ton of salt saved and the unit costs, per conservation practice installed.

Since employment of two Irrigation Water Management Specialists (IWM'S) in 2003, both IWM positions have assisted the Delta and Montrose Field Office's Staff in delivering the Salinity Program. The increased interest by landowners and producers by the Advanced Irrigation Technology of water efficient and energy saving irrigation systems has also increase the workload for both NRCS and IWM Staff. The IWM'S have set up field demonstrations, tours, and media events and have worked one on one with the producer projects to insure and promote their successful operation of contracted irrigation systems.

The IWM Program has made 337 Landowner Contract evaluations to date. Sharing the IWM specialists' valuable knowledge and management tools available onboard the Mobile Irrigation Laboratory with landowners and farm operators is a huge asset to the proper operation, understanding, and implementation of their installed irrigation systems and irrigation water management plans. A majority of the time, future IWM follow-up is requested. The IWM Program does a great job of doing public relations work with the producers and the much needed producer contract follow-up, for NRCS.

Landowners were implementing an IWM Plan with very little record keeping. Once irrigation water is turned into the canal system in the spring, water is rotated field to field depending on crop needs. Landowners do realize that the operation and maintenance of the irrigation system is their responsibility. No major maintenance problems were reported.

2007 Highlights & Accomplishments

The 2007 season was highlighted with IWM projects that included implementation of the new IWM Tool with 3 year paid IWM practice, and the maiden season of the Mobile Irrigation Laboratory (MIL).

The 1st season of use on the new paid IWM contracts was accomplished without any major problems. A smooth season of producer contacts resulted in the filing of the required irrigation records to NRCS Planners to achieve one year of certification of the practice. Cooperation and records were received from 100% of the contract participants. IWM Specialist performed the field contacts, assisted with problems through the irrigation season, and the forwarded the resulting records on to the planners to complete the certification process.

The other major highlight of the season was utilization and public awareness of the Mobile Irrigation Lab. To achieve effective use of the lab, its' capabilities were demonstrated to government staff and producers alike. In the field results are now available to producers from testing preformed with the equipment onboard the MIL covering irrigation and salinity management issues.

The predicted turnover of contracted practices to Advanced Irrigation Technology (AIT) has arrived to the area with opposing percentages of gated pipe last year to this and a similar revolution of sprinkler irrigation projects reflected in this season's percentage compared to last.

IWM Accomplishments include the following:

- Total Producer Contacts: 284
- Total IWM Requests: 131
- Follow-up Contacts: 130
- Paid IWM Contract Evaluations: 43
- Unpaid IWM Contract Evaluations: 36
- MIL Utilization: 103 contacts on 8898 acres

2007 Value of Irrigation Practice's Reviewed

BASIN:	\$422,504	13 contracts
EQIP:	\$2,926,635	66 contracts
TOTAL:	\$3,349,139	Cost share dollars on 3,950 acres

Recommendations for Future Irrigation Water Management Tasks

1. It is recommended that IWM Specialists provide the producer contact and assist with irrigation records in a cooperative effort with NRCS Staff to achieve a smooth progression of the IWM Planning Tool, and certification of the IWM practices. Insure the landowner/irrigators understanding of the IWM plan to provide the proper irrigation to crops of the appropriate amount of water at the proper time to achieve the best production at the highest application efficiency.
2. It is recommended that the Irrigation Water Management Specialists continue to a bias of concern in providing assistance to the landowners whose practices are in their **first season of use**, for the improved irrigation systems installed under the Salinity Program. Follow-up contacts should become progressively less for practices in their 2nd and 3rd contracted seasons of operation.
3. It is recommended that the IWM Specialist continue monitoring and evaluate the breakdown of larger farms and ranches into higher population smaller operations, with emphasis placed on maintaining the integrity and irrigation efficiency of the larger system by the multiple smaller systems. Development on land units of previously unirrigated acreage remains a concern that landscaping and septic systems do not add deep percolation from virgin soils containing high levels of salinity and selenium.
4. It is recommended the IWM Specialists provide input from field observations and producer comments on maturing irrigation conservation practices so that as those contracts expire they can competitively compete for new ranking in cost share contracts. This would allow these projects to improve to the newest irrigation technologies to meet NRCS irrigation standards and sustainable agriculture levels.
5. A random selection of projects funded under the Salinity Programs should continue to be evaluated for irrigation efficiency and operational maintenance of the designed practices. This is an opportunity to utilize the MIL on these visits to expand the producer awareness of what is available to them for assistance.
6. It is also recommended that through training and partnering with other skilled individuals IWM Specialists continue to provide a transmission link of the latest technology from outside the area to local producers. Offer technical assistance so that all irrigation systems are operated with understanding and at their highest potential efficiency. By providing this assistance and information help the Salinity Program excel above the original planned level of salinity reduction.

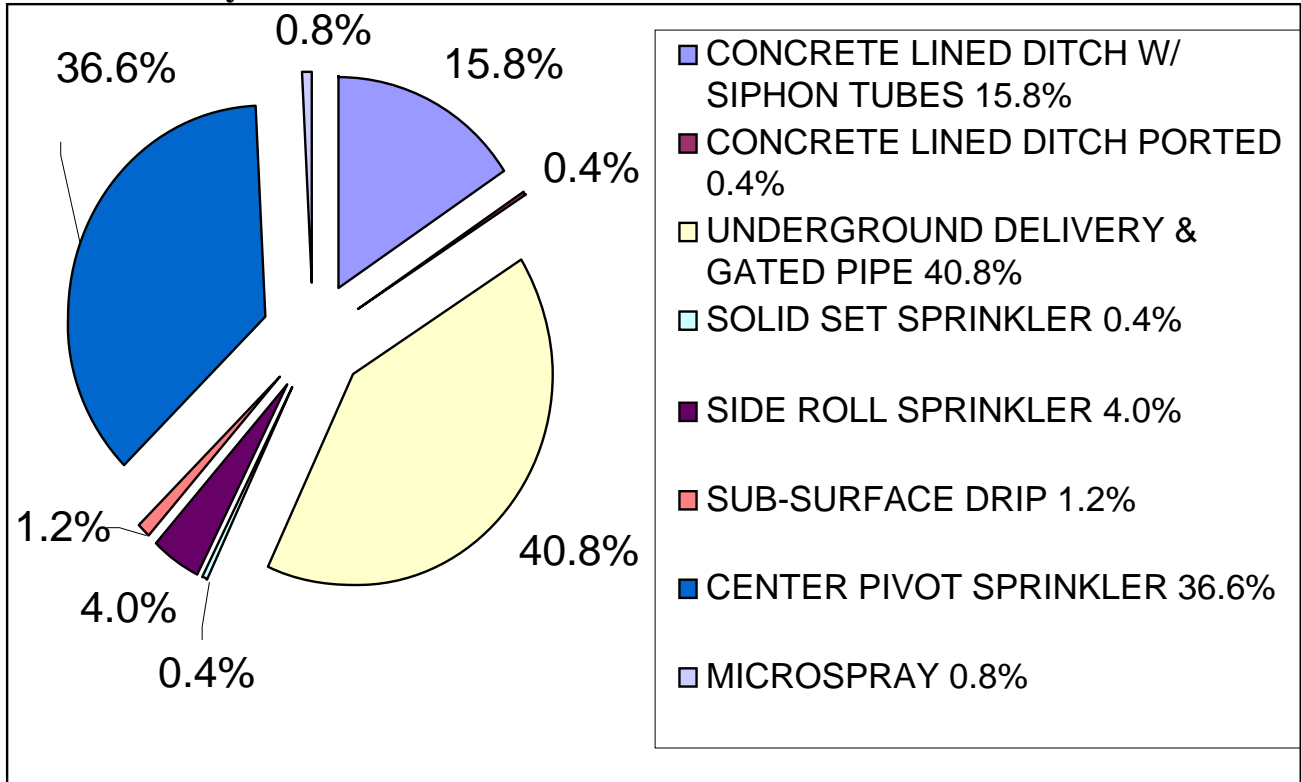
NRCS Irrigation Efficiency Standards for Evaluations

TYPE OF IRRIGATION SYSTEM	% OF MONITORED EFFICIENCY
Open ditch	35%
Open ditch w/ siphon tubes	40%
Concrete ditch w/siphon tubes	50%
Gated pipe	50%
Underground pipe & Gated pipe	50%
Underground pipe/Gated pipe/Surge	55%
Center Pivot Sprinkler	90%
Big Gun Sprinkler	70%
Side roll Sprinkler	75%
Micro spray	90%
Drip Irrigation	95%

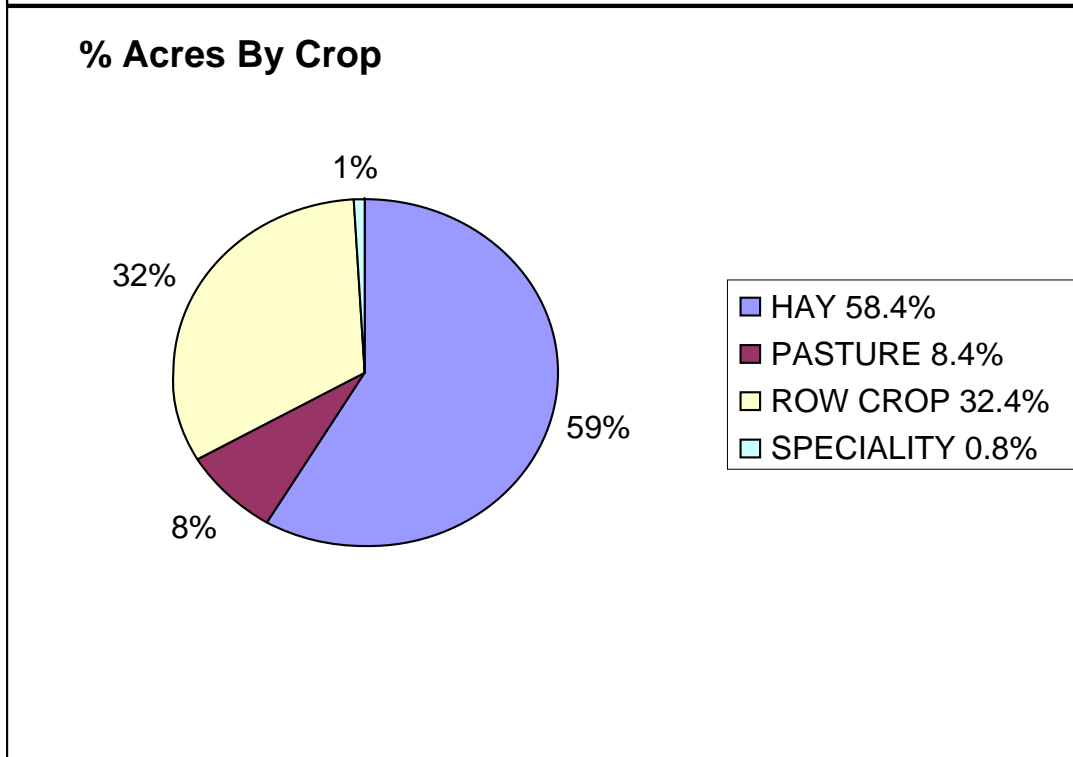
**2007 IWM STATUS REVIEW OF EVALUATED PRACTICES BY
ACREAGE / CROP TYPE / PRACTICE
Delta & Montrose Field Office's**

TYPE OF PRACTICE	HAY	PASTURE	ROW CROP	SPECIALTY CROPS	TOTAL ACRES	% BY PRACTICE
CONCRETE LINED DITCH W/ SIPHON TUBES	240		383		623	15.8%
CONCRETE LINED DITCH PORTED		15			15	0.4%
UNDERGROUND DELIVERY & GATED PIPE	994	316	302		1612	40.8%
SIDE ROLL SPRINKLER	159				159	4.0%
CENTER PIVOT SPRINKLER	914		532		1446	36.6%
SOLID SET SPRINKLER			15		15	0.4%
MICROSPRAY				30	30	0.8%
SUB-SURFACE DRIP SYSTEMS			50		50	1.2%
TOTAL ACRES REPRESENTED	2307	331	1282	30	3950	100%

% Acres By Practice



% Acres By Crop



2008 OUTLOOK

Ongoing assistance to producers to achieve IWM certification in contracts with paid IWM practices will require double the time invested by the IWM Specialist. A new construction season will add a new crop of projects in their 1st season of use to add to those from last year in their 2nd season. Second year contracts should not require the repeat visits requested last year, so that the same concentration can be applied to this years 1st season of use systems.

Field utilization of the Mobile Irrigation Lab will be expanded this coming season as a direct result of last years training afforded the IWM Specialists. Armed with knowledge and tools Specialists should be a new asset to the salinity area. Continuation of research projects started last year added to new projects this year will provide a broadening wealth of irrigation knowledge from irrigation water management and salinity management.

Irrigation technology continues to advance at a faster pace than can be transferred to the field. IWM Specialists through workshops, field days, tours, news articles, and technical references with the involvement of CSU Extension, Irrigation Equipment Suppliers, Conservation District Boards, and Irrigation Water Districts, can continue to bridge the gap between producers of Western Colorado and the latest advancement of irrigation technology around the world.

Higher production costs from rising prices of fuel, fertilizer, seed, equipment, and technology is dictating that producers become efficient consumers of water and energy. Efficient water application, reduced tillage, and other methods that incorporate efficient use of water and energy resources deserve to be advocated, publicized, and incorporated into project ranking considerations. We are approaching the day when only the efficient will survive in agriculture.

Monitoring of projects in O&M phase of contracts can be combined with MIL visits to achieve dual benefits. The continued reduction of large parcels of land into small puts an additional importance on these visits to maintain good water management that ensures water quantity and quality for all users. IWM contact with producers operating systems covered by this phase are generally appreciated by the co-operator, but also fills the communication gap between producer and NRCS, Conservation Districts, and Basin States.

M&E EXECUTIVE SUMMARY – WILDLIFE - 2007

Lower Gunnison Unit

Acres of Wildlife Habitat Applied

	Cumulative Acres 2006	Cumulative Acres 2007	Net Change for 2007
Upland	536	401.3	-134.7
Wetland	240	218.7	-21.3

Wetland Data

Cumulative acres impacted year 2006	Cumulative acres impacted year 2007	NET AREM Unit change 2006	Net AREM Unit change 2007	Net change for 2007
No Data	No Data	No Data	No Data	No Data

Funding for Wildlife Habitat

% of total funds spent on wildlife through 2006	% of total funds spent on wildlife through 2007
2%	2%
% of total funds contracted on wildlife through 2006	% of total funds contracted for wildlife through 2007
4%	4%

Two Wildlife Incentives Program (WHIP) contracts and 1 Wetland Reserve program (WRP) contract have contributed over \$26,151 to wildlife benefiting practices in the unit that are within the Lower Uncompahgre salinity area, improving 17.9 acres of upland and 12.5 acres of wetland habitat.

WILDLIFE
2007 MONITORING & EVALUATION REPORT
LOWER GUNNISON EQIP PRIORITY AREA

HISTORY:

Salinity control work by NRCS has gone through 4 different phases. The first was under the Colorado River Salinity Control program from 1984-1995. Phase 2 was called interim-EQIP and lasted for only fiscal year 1996. The third phase from 1997 to 2007 is funded under the EQIP Program which has included funds from the Basin States Parallel Program. The first three phases are covered by the same NEPA process and documents that report **replacement of wildlife values foregone (mitigation) and impacts to wildlife will be accounted using a value system**. NRCS chose to use the Habitat Evaluation Procedure (HEP) developed by the U.S. Fish and Wildlife Service for tracking “on farm” changes in wildlife habitat values. Six species models were chosen to represent different aspects of wildlife habitat in the unit that may be impacted by the project. Pheasant was chosen to represent habitat diversity, edge effect and edge habitat. Yellow warbler represents cottonwood-willow and other woody habitat associated with irrigation ditches and tail water. Mallard breeding habitat represents shallow wetlands and nesting habitat surrounding these wetlands. Mallard –winter habitat represents winter roosting areas (large water bodies and ice free water) and management of crop residues. Meadow vole represents sedge-rush wet meadows often associated with leaky ditches and inefficient irrigation. Marsh wren represents cattail- bulrush (robust emergent) wetlands and the screech owl is associated with groups of large deciduous trees. The models are custom models that underwent peer review and were developed explicitly for this project with the assistance of USFWS. Changes in wetland values are supposed to be tracked using the Avian Richness Evaluation Method (AREM) developed by Paul Adamus under contract with the Environmental Protection Agency (EPA). Refer to the 1994 Monitoring and Evaluation Plan for the Lower Gunnison Unit for details on monitoring methods used under the Colorado River Salinity Control Program.

The fourth phase from 2007 to present is still funded under EQIP and Basin States Parallel Program; however habitat replacement goals are now 2% of the acres treated for salinity rather than replacement of habitat values forgone using the Habitat Evaluation Procedure (HEP) as a habitat quality measurement. The U.S. Fish and Wildlife Service concurred with this decision to change habitat replacement tracking from habitat values to acres. It is estimated NRCS has reached approximately 50% of their salinity treatment goals, and 620 acres of wildlife habitat replacement have been applied and still exist. By the time 100% of NRCS’s salinity treatment goals are achieved it is projected that approximately 1250 acres of wildlife habitat replacement acres will be applied and still existing. A key issue with the U.S. Fish and Wildlife Service is that credited mitigation acres must be on the ground and functioning as habitat replacement when the salinity project is complete. Some loss of wildlife habitat will take place as operation and maintenance agreements expire and land uses change in the Valley. To account for the loss, it is likely NRCS will need to apply more habitat replacement acres than the goal amount. NRCS biologist will visit all habitat replacement projects every 3 years and adjust credited acres to what is actually on the ground and functioning. Acres lost for whatever reason will be removed from the credited replacement acres. Depending on how many acres are treated for salinity, it is estimated that the habitat replacement goal will be between 1400 and 2000 acres.

METHODS

HEP is very labor intensive. Through 1995 habitat was evaluated and a HEP analysis was completed on more than 70% of all contracted acres before and after application of salinity control practices. Reductions in staff made this method unfeasible. To make the workload more manageable a statistical analysis of HEP data collected through 1998 was conducted to determine adequate sample size needed to calculate mean habitat suitability indexes (HSI) with 95% confidence the calculated mean is within + or - .1 of the real mean. HSI's are indexes ranging from 0 to 1.0 of the habitat value for selected wildlife species.

The indexes are calculated using measurements of various habitat variables that are identified in habitat models (See 1994 Lower Gunnison Unit Monitoring and Evaluation Plan for complete details of the HEP procedure used). In 1999 and 2000 additional data was collected, desired sample sizes were achieved, and mean HSI values were calculated. The mean HSI for species models for 6 wildlife species were calculated for 2 separate categories; operating units not applying wildlife practices and operating units applying wildlife. In 2003 the Colorado State Program Manager ordered all WHIP and WRP contracts that had been applied in the salinity area to be counted for habitat replacement. These contracts were entered into the spreadsheet as plans with wildlife and plans applying wildlife. These indexes were then multiplied with the average acres of habitat found on the operating units for each wildlife species to obtain Habitat Units Values (HUV's). To estimate project impacts HUV's were calculated both before and after project application. Analysis of data in 2001 indicated additional inventories are needed for yellow warbler and marsh wren to obtain the desired confidence levels. Those were completed this year and are included in the data analysis.

In 2004 and again in 2006, NRCS biologists reviewed results of the previous year's HEP analysis and discovered some errors in how conservation plans without wildlife practices were being compared to plans with wildlife practices. The errors in the spread sheet were rectified which resulted in large changes in Habitat Unit Values credited to the project. NRCS biologist looked at the new calculations with much scrutiny and determined the new calculation methods were the correct way to account for changes in Habitat Unit Values.

A spread sheet was developed to track additional information that may be useful in evaluating the project in reference to wildlife habitat and mitigation goals. Data such as wetland values, number of contracts planning and/or applying wildlife practices, acres of land managed for wildlife, and dollars spent on wildlife were recorded. The data was then analyzed to determine effectiveness of wildlife habitat replacement efforts.

Applications for financial assistance were awarded funding through ranking processes. The processes varied from 1996-2006 but incentives for applying wildlife habitat were included in all of them. In 1996 Interim-EQIP wildlife practices were prioritized the same as they were under the Colorado River Salinity Program. Under this system, applicants planning to apply wildlife practices received 3 to 5 extra points out of a possible 46. In 1997 ranking systems began to include cost-benefit computations and wildlife practices were given 2 extra points/acre not to exceed 10 total points. Wildlife practices are relatively expensive and with the cost benefit computations and 10 point maximum many wildlife practices were not being funded. In an attempt to increase wildlife funding ranking points were increased in 1998, to 6 points/acre with a 30 point maximum for wetland habitat and 4 points/acre with a 20 point maximum for upland habitat. In 1999 the Montrose field office again increased points awarded for wildlife habitat development to 30 points/acre with a maximum of 150 points for either upland or wetland habitat. Delta created a sub fund of \$37,800 to be spent only on wildlife habitat development. Wildlife applications were ranked using the system developed for the Wildlife Habitat Incentives Program. If money was left in the wildlife sub-fund it was transferred to salt control funds.

In 2000 Montrose used the same ranking they did in 1999. In 2000 sub-funds were no longer allowed so Delta changed their ranking to 10 points/acre for upland or wetland habitat with a maximum of 50 points.

Ranking procedures remained unchanged in 2003, but in 2004 a new ranking procedure using the habitat evaluation index change from existing condition to planned condition was used. Also in 2004, a separate EQIP fund for wildlife habitat projects in salinity areas was set up by the NRCS State Office.

In 2004, managers of the Basin States Parallel Program (BSPP) were approached to assist with funding wildlife projects to offset salinity project impacts. The forum that oversees the program agreed. Projects are selected through an RFP process. Proposals are ranked and selected by an inter-agency committee with representatives from the Colorado Division of Wildlife, U.S. Fish and Wildlife Service, Bureau of Reclamation, Colorado State Land Board, and NRCS. The committee also decides which Salinity Control Area (McElmo, Lower Gunnison or Grand Valley) will be credited with habitat replacement by these projects. Many of the BSPP projects are considerably larger than those funded through NRCS programs. The committee decided to not include large BSPP projects in the indexing system described above, but instead, add HUV's derived from these large projects directly to the HUV's calculated with the indexes. Prior to development of the RFP process, 3 wildlife projects were funded with the BSPP. An RFP was requested in the spring of 2004 and again in the spring of 2007. To date the BSPP program has funded 11 wildlife projects totaling \$301,233.00.

In 2007 the method for crediting habitat replacement was changed from habitat values to acres (see history section). Data bases and spread sheets have been developed to track the data shown in the table s in the results sections. These are updated annually for this monitoring and evaluation report. Additionally, every 3 years an NRCS biologist will visit all habitat replacement acres to determine if they still exist and function as habitat acres. Acres that cease to exist and/or function as habitat acres will be subtracted from the credited acres.

RESULTS

CRSCP contracts are all now completed so there will be no further changes for those figures. The data totals for CRSCP does not include canceled contracts. The totals and percentages are for contract dollars actually obligated. Since 1989 the data indicates \$1,636,050 which represents 4% of the total obligated funds (\$38,811,063) in the Lower Gunnison Unit have been contracted for installing wildlife practices (Table 1). To date, approximately 45% of the wildlife funds and 2% of the total funds have been spent on wildlife. \$902,235 of obligated wildlife money has not been spent to date due to practices deleted or not yet installed. All contracts are completed to date for contracts through 1999. These years show real dollars spent and actual acres installed. From 2000 to present, less than 100% of contracts have been completed and represent planned cost-share dollars. Twenty-four percent of all contracts developed since 1989 have at least 1 wildlife practice planned for application and **18% have applied at least 1 wildlife practice** (Table 2).

Table 1: Money obligated and spent on wildlife practices.

OFFICE	YEAR	TOTAL CONTRACT DOLLARS	PLANNED WILDLIFE CONTRACT DOLLARS	APPLIED WILDLIFE CONTRACT DOLLARS	PERCENT PLANNED TO SPEND ON WILDLIFE	PERCENT OF WILDLIFE DOLLARS SPENT TO-DATE:	PERCENT OF TOTAL DOLLARS SPENT ON WILDLIFE TO-DATE
Montrose		\$2,476,057	\$318,193	\$171,315	13%	54%	7%
Delta		\$6,608,486	\$194,373	\$135,266	3%	70%	2%
CRSCP	1989-1995	\$9,084,543	\$512,566	\$306,581	6%	60%	3%
EQIP							
MONTROSE							
	1996	\$718,898	\$45,536	\$33,922	6%	74%	5%
	1997	\$460,390	\$9,825	\$3,988	2%	41%	1%
	1998	\$419,012	\$5,051	\$3,411	1%	68%	1%
	1999	\$306,934	\$18,400	\$13,132	6%	71%	4%
	2000	\$337,995	\$34,557	\$16,606	10%	48%	5%
	2001	\$431,425	\$43,268	\$28,342	10%	66%	7%
	2002	\$699,016	\$59,228	\$14,610	8%	25%	2%
	2003	\$1,846,066	\$38,711	\$12,343	2%	32%	1%
	2004	\$2,329,289	\$157,248	\$30,789	7%	20%	1%
	2005	\$1,817,593	\$35,981	\$6,958	2%	19%	0%
	2006	\$1,441,954	\$43,465	\$5,561	3%	13%	0%
	2007	\$989,599	\$53,130	\$10,784	5%	20%	1%
	BSPP	\$1,639,159	\$70,454	\$3,797	4%	5%	0%
	SUBTOTAL	\$15,913,347	\$933,047	\$355,558	6%	38%	2%
DELTA							
	1996	\$719,698	\$23,701	\$5,734	3%	24%	1%
	1997	\$159,132	\$0	\$0	0%	0%	0%
	1998	\$147,205	\$2,997	\$456	2%	15%	0%
	1999	\$611,404	\$75,509	\$61,129	11%	81%	9%
	2000	\$361,383	\$1,254	\$672	0%	54%	0%
	2001	\$383,757	\$0	\$0	0%	0%	0%
	2002	\$889,229	\$25	\$0	0%	0%	0%
	2003	\$1,861,248	\$28,976	\$28,272	2%	98%	2%
	2004	\$1,914,619	\$10,925	\$2,336	1%	21%	0%
	2005	\$1,834,053	\$22,383	\$4,056	1%	18%	0%
	2006	\$2,483,869	\$2,275	\$1,258	0%	45%	0%
	2007	\$1,749,417	\$109,306	\$0	6%	0%	0%
	BSPP	\$3,174,215	\$508,630	\$139,079	7%	60%	4%
	SUBTOTAL	\$22,897,716	\$703,003	\$378,257	4%	54%	2%
BOTH 1996-2007	TOTAL -	\$29,726,520	\$1,123,484	\$427,234	4%	38%	1%
	Total -ALL	\$38,811,063	\$1,636,050	\$733,815	4%	45%	2%

Table 2. Number and percent of contracts planning and/or applying wildlife practices.

OFFICE	YEAR	TOTAL # OF CONTRACTS	# OF CONTRACTS WITH PLANNED WILDLIFE PRACTICES	PERCENT CONTRACTS WITH PLANNED WILDLIFE PRACTICES	# OF CONTRACTS WITH APPLIED WILDLIFE PRACTICES	PERCENT OF WILDLIFE CONTRACTS WITH APPLIED WILDLIFE PRACTICES	PERCENT OF ALL CONTRACTS THAT HAVE APPLIED WILDLIFE PRACTICES
Montrose		78	64	86%	59	92%	76%
Delta		181	59	33%	33	56%	18%
CRSCP	1989-1995	259	123	45%	92	75%	36%
MONTROSE	1996	35	31	89%	25	81%	71%
	1997	63	13	21%	8	62%	13%
	1998	38	7	18%	4	57%	11%
	1999	22	6	27%	5	83%	23%
	2000	26	16	62%	8	50%	31%
	2001	24	17	71%	11	65%	46%
	2002	40	10	25%	4	40%	10%
	2003	18	7	39%	3	43%	17%
	2004	61	7	11%	3	43%	5%
	2005	50	3	6%	2	67%	4%
	2006	52	6	12%	1	17%	2%
	2007	22	3	14%	2	67%	9%
BSPP	1997-2007	75	7	9%	4	57%	5%
	SUBTOTAL	526	133	25%	80	60%	15%
DELTA	1996	26	8	31%	5	63%	19%
	1997	23	2	9%	2	100%	9%
	1998	7	1	14%	1	100%	14%
	1999	38	9	24%	9	100%	24%
	2000	18	1	6%	1	100%	6%
	2001	17	0	0%	0	0%	0%
	2002	30	1	3%	0	0%	0%
	2003	22	4	18%	4	100%	19%
	2004	58	2	3%	0	0%	0%
	2005	40	2	5%	1	50%	4%
	2006	41	1	2%	0	0%	0%
	2007	27	1	4%	0	0%	0%
BSPP	1997-2007	72	4	6%	2	50%	6%
	SUBTOTAL	419	36	9%	25	69%	6%
BOTH - 1996-2006	TOTAL	945	169	18%	122	72%	13%
	Total -ALL	1204	292	24%	214	73%	18%

Table 3 outlines the acres of habitat management planned and applied. Approximately 498 acres of wetland habitat and 1420 acres of upland habitat have planned management practices. Habitat management practices have been applied to 248 acres of wetland and 437 acres of upland habitat. To date, 50% of planned wetland management and 31% of planned upland management practices have been applied. There were no reported wetland impacts positive or negative.

Table 3. Acres of wildlife habitat management planned and applied and wetland impacts.

OFFICE	YEAR	ACRES OF WETLAND HABITAT PLANNED	ACRES OF WETLAND HABITAT APPLIED	% OF PLANNED WETLAND ACRES APPLIED	ACRES OF UPLAND HABITAT PLANNED	ACRES OF UPLAND HABITAT APPLIED	% OF PLANNED UPLAND ACRES APPLIED	ACRES OF WETLANDS IMPACTED	WETLAND VALUE BEFORE	WETLAND VALUE AFTER
Montrose		129.8	97.4	75%	180	108.9	61%	No Data	No Data	No Data
Delta		70.5	29.1	41%	136.2	35.3	26%	No Data	No Data	No Data
CRSCP	1989-95	200.3	126.5	63%	316.2	144.2	46%			
MONTROSE	1996	17.5	12.9	74%	29.2	23.2	79%			
	1997	14.1	13.1	93%	31.5	27.3	87%			
	1998	3.5	1.5	43%	4.4	3.2	73%			
	1999	16.1	12.5	78%	6.0	5.8	97%			
	2000	10.8	9.0	83%	41.6	9.6	23%			
	2001	7.2	6.8	94%	48.9	36.9	75%			
	2002	7.2	3.0	42%	13.3	8.5	64%			
	2003	23.7	2.0	8%	23.0	9.0	39%			
	2004	16.5	5.3	32%	136.0	61.6	45%			
	2005	8.5	4.0	47%	13.5	6.0	44%			
	2006	2.8	0	0%	28.3	0	0%			
	2007	2.0	0	0%	30.0	0	0%			
	BSPP	31.9	6.0	19%	37.4	2.0	5%			
	SUB TOTAL	161.8	76.1	47%	443.1	193.1	44%	No Data	No Data	No Data
DELTA	1996	21.0	7.0	33%	61.2	8.5	14%	4	1.4	3.0
	1997	15.7	0	0%	66.7	0	0%	2	1.8	1.9
	1998	5.4	0	0%	15.8	4.2	27%	1	.6	1.6
	1999	8.5	3.0	35%	26.0	5.7	22%	1	1.1	1.2
	2000	0	0	0%	11.2	0	0%			
	2001	0	0	0%	0	0	0%			
	2002	0.5	0	0%	6.5	0	0%			
	2003	2.0	2.0	100%	35.7	25.7	72%			
	2004	3.9	0	0%	1.8	0.1	0%	3.9	1.65	
	2005	1.0	0	0%	19	0	1%			
	2006	0	0	0%	1.3	0	0%			
	2007	7.0	0	0%	36.9	0	0%			
	BSPP	27.6	4.1	15%	252.1	19.8	8%			
	SUB TOTAL	135.5	45.2	33%	670.4	99.3	15%	No Data	No Data	No Data
BOTH-1996-2006	TOTAL	297.3	121.3	41%	1103.5	292.4	26%			
ALL	TOTAL	497.6	247.8	50%	1419.7	436.6	31%			

Discussion & Conclusion:

The habitat replacement goal is 2% of the acres treated for salinity. To date 51,649 acres have been treated with salinity practices. To be concurrent with project application, 1,033 acres of habitat replacement should currently be on the ground and functioning. To date 620 acres of habitat replacement are applied on the ground and functioning. The project is currently at approximately 60% of the habitat replacement goals. In 2007 NRCS biologist field checked all acres that had been reported as habitat replacement. The inventory resulted in a reduction of acres consider habitat replacement from 776 acres in 2006 to 620 acres in 2007. Urban development, changes in management and changes in land ownership are major reasons that some acres no longer met habitat replacement criteria and were removed from the accounting system. NRCS is currently 413 acres below habitat replacement goals. To be concurrent with salinity project implementation, NRCS will need to place higher priority on habitat replacement. Acres of habitat management and impacts to wetlands have also been tracked as other indicators of impacts. Wetland value data is missing. This tracking responsibility has been overlooked and needs to be addressed by management.

In addition to the wildlife practices planned and applied with EQIP priority funds, several wildlife benefiting projects were funded with Wildlife Habitat Incentives Program (WHIP) and Wetland Reserve Program (WRP) funds in the priority area. Since 1996, two WHIP contracts and 1 WRP contract totaling over \$26,151 have been completed benefiting 17.9 acres of upland wildlife habitat and 12.5 acres of wetland wildlife habitat in the priority area.