HAMMOND CONSERVANCY DISTRICT WATER MANAGEMENT PLAN

2009 UPDATE

Prepared for the

Hammond Conservancy District Bloomfield, New Mexico

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LIST OF ACRONYMS AND ABBREVIATIONS

2002 Plan The original "Hammond Conservancy District Water Management Plan"

District Hammond Conservancy District
HCD Hammond Conservancy District

NMSU New Mexico State University

NRCS Natural Resources Conservation Service

O&M Operation and Maintenance

RC&D Resource Conservation and Development

Update This report updating the 2002 Plan

USBR United States Bureau of Reclamation

WRCC Western Regional Climate Center

EXECUTIVE SUMMARY

Hammond Conservancy District continues to be highly committed to the effective and efficient use of its water resources. This Update to the original 2002 "Hammond Conservancy District Water Management Plan," is designed to assess progress made toward implementing water management and efficiency measures in that Plan, to consider new and emerging issues, and compile an updated list of continuing and new measures. The District has implemented several of the measures adopted in the 2002 Plan as seen in the table below.

Measure	Tasks Completed	Comments	Suggested Follow-up
1. Technology Survey	Administered in March 2006. Thirty returned, analyzed, and results posted on website.	Low response due to lack of incentives, but probably a representative sample.	No further follow-up warranted.
2A. Technology Brochure	Equipment maintenance and repair info posted on new website.	Equipment maintenance and repair seen as highest priority since most parcels are sprinkler applicated.	Have hardcopy of website info available as needed.
2B. Technology Training	HCD participated in San Juan County Irrigation Workshop in 2007.	HCD believes informal training and web outreach most feasible.	Promote attendance at area workshops, and concentrate on web and informal venues for training.
2C. Consultation Visits	Eight consultations done and reported on HCD website.	Demand was low, but findings valuable as outreach to other irrigators.	Low demand is expected, so will reinstate in future if demand rises.
3. In-Service Training	HCD participated in San Juan County Irrigation Workshop in 2007.	HCD did not see producing their own workshops feasible or highly needed.	Conduct Water Masters School when turnover in water masters warrants. As in 2B, promote attendance at area workshops, and concentrate on website and informal venues for training.
4. New Irrigator Orientation	Not completed.	Need was not clear for formal workshops.	Ensure orientation info is on website and available in hardcopy. As above, promote attendance at area workshops, and concentrate on website and informal venues for training.
5A. Promote Water Management Bank	Water Bank is made available to all in the District.	Little use and not seen as useful in a shortage situation.	Continue to make it available, but low usage expected unless conditions change.
6A. Review Ditchriders Procedures	Data access has helped recordkeeping, but automation has not been a high priority.	Age of equipment makes automation difficult.	Only routine review of procedures needed at this point until equipment is upgraded.

6B. Test Alternative	Not tested.	District expected too	Keep under consideration.
Schedules for		little interest to warrant	
Ditchriders		the cost.	
6C. Consolidate	New software purchased		Completed.
Accounting	has streamlined		
Software	recordkeeping.		
7. Develop Initial	A "Shortage Sharing"	This agreement does	A plan for dealing with delivery
Water Shortage	agreement has been	not address shortages	shortages within the District and
Plan	developed with other San	within the District.	overall diversion shortages is
	Juan River Users.		needed.
8. Request	Delayed while files and	Maps and files nearly	Plan to request of USBR.
Reclassification	parcel maps were being	ready.	_
and Reallocation	upgraded.		

One of the most significant advances in the District's efficiency efforts since the 2002 Plan has been the addition of a comprehensive website for outreach to District irrigators. With this tool in hand, the Hammond District is well positioned to continue to encourage and facilitate the adoption of more efficient technologies and water management practices.

The dry winter of 2002 and the development of the "Shortage Sharing Agreement" with neighboring San Juan River water users has heightened concern over water supplies. Considerable uncertainty and volatility in several areas — energy costs, drought and climate change, adjudication of the San Juan River, and economic conditions — require forward thinking and preparation, which is the focus of several additional adopted measures included in this Update.

Adopted Measures

Measure 1 — **Website Educational Outreach:** The HCD website will be maintained, priority information posted, and its use by irrigators strongly encouraged.

Measure 2 — Workshop Training: The District will promote participation in training workshops aimed at improving water management skills and efficient water use.

Measure 3 — **Documentation of Technical Assistance and Training:** Records will be kept of technical assistance rendered, workshops attended, new irrigators oriented, educational materials

developed, and informal training offered in order to demonstrate and track water efficiency efforts by the District.

Measure 4 — Promotion of Water Management Bank: The District will continue to make the Water Management Bank available to District irrigators and ensure they know how to use it and how it can benefit them.

Measure 5 — Testing of Alternative Schedules for Ditchriders: The District will annually monitor irrigator willingness, need for more precise deliveries, and personnel needs to determine whether to test a 12 hour water delivery system.

Measure 6 — Water Delivery Plan: The District will develop a plan to address problems in delivering water to all users during high demand periods, especially on the East and West Highlines.

Measure 7 — Preparation for Incentive Pricing: The District will begin preparations so that they can readily move toward an incentive pricing structure if needed in the future.

Measure 8 — **Water Shortage Plan:** The District will incorporate into their strategic planning process proactive planning for any possible significant curtailment of deliveries to the District, resulting from drought, the "Shortage Sharing Agreement," legal actions, or a combination of these factors.

Measure 9 — Reclassification and Reallocation: Once parcel maps and files are in order, the District will consider when to request the USBR to initiate reclassification and reallocation.

Measure 10 — Annual Review of Plan: The District will review progress and any needed modifications to the Adopted Measures in this Updated Plan on an annual basis and document this review.

A full explanation of these adopted measures can be found in the full report, along with a plan for implementation.

INTRODUCTION

Objective of this Update:

This Update to the original "Hammond Conservancy District Water Management Plan," completed in December 2002 is referred to as the "2002 Plan" in this report. The Update is designed to meet a USBR requirement that such plans be updated every five years. This update is not meant to replace the 2002 Plan, nor to repeat much of the background included in the original report. Rather, this Update is designed to:

- 1. Evaluate the progress toward the implementation of the water management and efficiency measures adopted in the 2002 Plan.
- 2. Assess new conditions and issues facing the District and its irrigators.
- 3. Develop a new set of measures based on an analysis of 1 and 2 above.

Preparation of this Update:

The preparation of this Update included:

- Discussions and interviews, in person and via telephone and e-mail with Manager Teresa Lane, O&M Supervisor Ken Griner, and Board Secretary/Treasurer Dan Smeal.
- Review of District documents and web site.
- Review of Water Management Plans from other districts and reports from USBR and other agencies and sources.

How to Use this Update:

This Update must be used in conjunction with the original 2002 Report which provides District data, issues, and the process and reasoning for the adopted measures. The full 2002 Plan is available in hardcopy at the District Offices and online at:

http://www.hammondcon.org/watermanagementPLAN.html

NEW CONDITIONS AND ISSUES SINCE THE 2002 PLAN

This section is designed to assess what new conditions and issues have arisen since the 2002 Plan was written in order to inform the development of the new list of water management and efficiency measures adopted in this Update.

What has not changed much: Many conditions affecting the District's water management have not changed significantly (see Appendix 1 for the latest 2009 Regulations for Water Users). No major changes in the canals, equipment, or operation have occurred. Land irrigated, methods of irrigation, and crops have remained mostly the same. Diversions from the San Juan River have remained relatively constant during this time as indicated in the table below:

Year	San Juan River Diversions (acre-feet)
2000	29,460
2001	29,042
2002	31,144
2003	26,795
2004	26,705
2005	28,012
2006	26,350
2007	25,664
2008	26,660

New HCD website: One of the most significant changes inside the District has been the launching of the District's website in 2006: < http://www.hammondcon.org> This comprehensive website, described later in this report, has greatly increased the educational outreach of the District to its irrigators.

A Dry 2002 Winter: A significant drought affected the District in 2002. The 2002 winter precipitation at the Bloomfield 3SE climate station for Dec, Jan, and Feb was the lowest on record since 1892 (www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?nm1063), with similar conditions in the source

regions for Navajo Reservoir. This resulted in a delay in the start of irrigation by approximately two weeks in order to cope with the overall reduction in diversions from the San Juan River.

Shortage Sharing Agreement: Discussions with neighboring San Juan River water users led to the development of a "Shortage Sharing Agreement." This document is designed to define a "shortage" in water supply and then to allocate the shortfall to the parties to the agreement according to a set of specified conditions.

Uncertainty and volatility: A number of external factors affecting the District have shown increased rates of change and a heightened sense of urgency since the 2002 Plan was compiled. One or more of the following factors may well increase the incentives for irrigators to use their water more efficiently, and make the implementation of efficiency improvements more cost-effective. For this reason, several of the measures adopted in this plan are partly in preparation for these emerging issues.

- Energy prices, specifically for petroleum fuels, have increased and then dropped dramatically. The general price increase since 2002 and the recent volatility in prices has already, and most likely will increasingly affect 1) District costs for the pump station operation and for vehicle use, and 2) the cost to irrigators of pumping for delivery and for pressurization for sprinklers. Any pumps not operating efficiently and any water pumped and pressurized unnecessarily will increase the burden of operating energy costs.
- **Drought and climate variations:** The dry year of 2002-03 underscores the vulnerability of the District's San Juan River water supply. Projections of anticipated climate change indicate a general warming and increased variability in precipitation between now and midcentury. Compounding effects of increased evapotranspiration and of changes in the snowpack affecting run-off regimes, reservoir operations, and potential shortages in diversions will likely be a challenge.
- **Financial volatility:** The current financial crisis is taxing the ability of farmers and organizations such as the District to meet expectations in revenue, investment returns, and

the ability to meet bills. Governmental budget allocations for agencies such as USBR, NRCS, Extension, NMSU — all of whom provide assistance to the District and its irrigators — are likely to be uncertain for the near future.

• San Juan River Adjudication: The process of reassessing water rights on the San Juan River creates considerable uncertainty for those who depend on the river. While this is a long-term legal process, the focus on the river segment near the District may be coming soon.

PROGRESS ON MEASURES ADOPTED IN 2002 PLAN

In this section, each of the 2002 Adopted Water Management Measures is reviewed in terms of original rationale for adoption, progress made to date, and suitability — if not already completed — for continued implementation as a measure in this Updated Plan.

Measure 1 — Irrigation Technology Survey

From the 2002 Plan:

Rationale: Without a good knowledge of what technologies are currently in use in the Hammond District, it is hard to know exactly what improvements are needed. At present only the number of acres under sprinkler and drip irrigation is included in the annual crop reports. Obtaining good baseline data on the current state could also allow the District to monitor and evaluate progress toward an improved state. (HCD, 2002, p. 47)

Measure 1 — Irrigation Technology Survey: A survey will be conducted to determine the type and state of irrigation application equipment being used at present on each parcel in the District. Due to the potential for improvements on small parcels, an attempt will be made to survey all parcels. The survey will seek the following information:

- The type of technology (eg. sideroll, drip, gun, emitter type, nozzle type, etc.).
- Its age and state of repair (to the extent possible).
- The relative amount of leakage.
- The crops and area of land served.
- Other pertinent data.

The survey will be accomplished in three steps:

- A mailing will make all irrigators aware of the voluntary survey and request that they mail back their information.
- District staff will contact those who did not mail in their survey data, and ask if they could arrange a farm visit to gather the data. Visits could be conducted by staff or students or others hired by the District, who would be introduced to the irrigators before beginning the survey visits.
- Data on any remaining parcels could be sought during the irrigation consultations described in Measure 2C.

Depending on how many surveys are accomplished by mail, most of the irrigators could be surveyed in 2 to 3 years. The District will consider how to incorporate data

on changes in irrigators' technologies into annual crop and water reports, so that data will remain current. (HCD, 2002, p. 61)

Implementation & Discussion: A survey was mailed to HCD irrigators during March 2006 that requested type of irrigation used, crop types, and irrigated acres (see Appendix 2). Thirty responses were received, covering 480 acres, and not surprisingly indicating sideroll irrigation of alfalfa as the most common application and crop type. Follow-up requests for information went to those who had consultation visits (see Measure 2C below). Results are explained on the HCD website at: http://www.hammondcon.org/FinalReporttoBOR.html

The District did not feel that asking irrigators the state of repair of the irrigation equipment and leakage rates would yield very accurate results, so that was not included. Personal follow-up by the District to those not responding was not considered feasible due to staff resources since there are several hundred accounts (890 in 2009), and discussions of a cash incentive was not considered favorably. Gathering data using the annual crop and water reports is not an option since these reports are not required by USBR any more. Expectations are low of receiving significantly more responses in any subsequent survey unless there is an incentive for irrigators to respond.

<u>Measure 2A — Irrigation Technology Brochure:</u>

From the 2002 Plan:

Rationale for Outreach Measures, 2A, B, & C: Once the state of the irrigation technologies is known, irrigation technology experts in the region can be consulted to determine what technological improvements are most feasible for improved water application in the District. Better application technologies can provide more uniform and controlled application rates and less waste which can improve crop yields, reduce runoff and deep percolation problems, and reduce water waste. The brochure option could ensure that all irrigators know of their options, while the workshop, tour, and consultation options could provide much more detailed guidance for a smaller number of irrigators in selecting the best technologies for their particular situations. (HCD, 2002, p. 48)

Measure 2A — **Irrigation Technology Brochure**: The District will consult with local irrigation specialists including Extension, NRCS, USBR, the NMSU Ag

Science Center, and others to review the Irrigation Technologies Survey data and identify the most feasible and productive improvements appropriate for the District's irrigators. Special attention will be given to systems best for small parcels that are becoming more common in the District. Improvements will consist of:

- New application systems (such as drip irrigation for example).
- Renovations of existing systems (such as new types of sprinkler nozzles).
- Maintenance (such as replacement of worn sprinkler nozzles).
- Leak repair and reduction technologies (gaskets, etc.).
- Soil moisture sensing equipment.

A brochure will be produced describing the selected available technologies, sources of technical assistance, and possible sources of financial assistance. This brochure will be distributed to each irrigator in the District. (HCD, 2002, p. 62)

Implementation & Discussion: A major advance in the District's outreach to irrigators was implemented in 2006 when their new website was launched: < http://www.hammondcon.org> A multi-faceted site with District news, events, weather data, management advice, and links was established largely with Dan Smeal's input.

Most of the management information to be included in the proposed brochure is on the website in three sections: 1) under the "Water Management" link, 2) in the January 2009 HCD Newsletter, and 3) more extensively in the link to the report to USBR on the irrigation systems audits (Measure 2C below), at: http://www.hammondcon.org/FinalReporttoBOR.html>

The water management content focused on the priority needs of maintenance and repair of existing equipment. The District feels it can readily produce a hardcopy handout or brochure for those who are not inclined or able to use the Internet. The District would like to 1) maintain and expand the website, and 2) obtain needed software if needed to input new information to the website more directly. The focus would remain however on the priorities of water management and equipment repair and maintenance.

<u>Measure 2B — Irrigation Technologies Training:</u>

From the 2002 Plan:

Rationale for Outreach Measures, 2A, B, & C: See Measure 2A above.

Measure 2B — Irrigation Technologies Training: The District will provide irrigation technology training annually (as part of the annual workshops described in Measure 3 below) to provide interested irrigators with more in-depth exposure to the technological options available to them. Local specialists from Extension, NRCS, USBR, and NMSU will conduct the trainings which may include tours to see examples of the new technologies on farms in the District and perhaps at the NMSU Ag Science Center. (HCD, 2002, p. 63)

Implementation & Discussion: A San Juan County Irrigation Management Workshop was conducted in 2007 by San Juan County Extension. See Appendix 3 for the agenda. Dan Smeal helped as a presenter and 50-100 were reported to have attended, but this was not a District workshop. See further discussion in Measure 3 below.

Measure 2C — Irrigation Consultation Visits:

From the 2002 Plan:

Rationale for Outreach Measures, 2A, B, & C: See Measure 2A above.

Measure 2C — Irrigation Consultation Visits: The District will seek funding or in-kind assistance from USBR, NRCS, Extension, and other groups in order to offer free consultation visits by irrigation specialists to evaluate the technologies, scheduling, and crop management techniques used by irrigators, and suggest any needed improvements. Sometimes called "audits," these visits will be voluntary, and will help meet the objectives of the "Technology Assessment" and "In-Service Training" measures (Measures 1 and 3). (HCD, 2002, p. 63)

Implementation & Discussion: Eight comprehensive consultations were performed by Dan Smeal, a Certified Irrigation Designer and Auditor, with the assistance of a summer intern. A USBR Field

Services grant to the District helped defray the costs of the intern and equipment. According to Mr. Smeal, "typical problems that reduced efficiencies were; worn and malfunctioning sprinklers and nozzles, mismatched nozzle sizes, lower than optimal water pressures, poor crop stands, low soil fertility, gophers, etc." An extensive report on these consultations is on the District's website at: http://hammondcon.org/FinalReporttoBOR.html

This report includes:

- A description of the methods used to analyze system performance.
- A summary of results.
- Equations used in calculating water distribution indices.
- Soil analyses.
- Assessments of field conditions.
- Recommendations on equipment repair and maintenance.
- Recommendations on irrigation scheduling.

Only a few irrigators volunteered for this free service, yet Dan Smeal believes that the results of these audits are quite representative of the 5-20 acre parcels common throughout the District, but not the small garden and orchard plots. Dan is willing to train someone to perform consultations in the future, but funds would be needed, and it is unclear that without new incentives, that there would be much demand. If demand rises in the future, the District will consider offering these consultations again.

Measure 3 — In-Service Training Workshops

From the 2002 Plan:

Rationale: Just as important, or perhaps more important, as having the best available irrigation technologies is for irrigators to have the latest information on how to best manage irrigation water supplies. Closely related, but often overlooked is information on best crop management practices for optimum utilization of irrigation supplies and for achieving the best crop yields. (HCD, 2002, p. 50)

Measure 3 — In-Service Training Workshops: In-service training will focus on an Annual Irrigation Workshop relying on local NRCS, Extension, NMSU, and other specialists using a combination of workshop sessions and tours to accomplish the training. Topics will include:

- Irrigation scheduling.
- Soil moisture determinations.
- Appropriate crop and variety selection.
- Crop management for optimum water use and yield.
- Pasture and grazing management for efficient water use.
- Irrigation technologies training (Measure 2B).

Rather than presenting a textbook approach to all possible management options, the District will work with presenters to address the most appropriate and feasible options specifically suited to the Hammond District. Dan Smeal and other staff of the NMSU Ag Science Center have a wealth of site-specific information and assistance to offer including irrigation scheduling programs and knowledge of moisture monitoring equipment that the District could loan to irrigators.

In addition to the Annual Workshop, the following measures will provide additional in-service training:

- Personalized, on-farm training will occur as needed during the "Irrigation Consultation Visits" under Measure 2C.
- The District will actively publicize the annual "Four Corners Irrigation Workshop," and the Farmington Ag Science Center's "Open House" functions.
- The District will encourage attendance at its "Water Master School" each season
- The District will sponsor the appropriate staff attendance at outside workshops related to O & M procedures.
- The District will consider sources of funds to support the attendance at area workshops by District irrigators in the future. (HCD, 2002, p. 63)

Implementation & Discussion: As mentioned in 2B above, the District did not hold its own irrigation workshop, but helped with one sponsored by San Juan County Extension including a presentation by Dan Smeal. This workshop did cover crop consumptive use, and water management. The District helped make brochures available and advertised it on the HCD website. A Water Masters School was not held since March 2001. Consultation visits did include irrigator education. Ditchrider Ken Griner did attend a USBR Water Management Workshop in Denver on February 5-8, 2007. HCD covered his travel expenses and time.

As mentioned earlier, the District believes that much of the training occurs quite effectively in an informal manner, and plans to continue the website outreach. The need for the training for Water Masters is clearly linked to turnover of Water Masters, so that will be considered in future plans.

Measure 4 — New Irrigator Orientation Sessions

From the 2002 Plan:

Rationale: Several of the issues raised by District irrigators relate to the inexperience, either real or perceived, of new landowners in using their water in the Hammond District. This inexperience may stem from being unfamiliar with the specific conditions and procedures of Hammond, and perhaps a lack of experience in irrigation in general. Since many of the new irrigators have smaller areas to irrigate, better knowledge may address some of the issues raised about these small parcels. To allow better use of Hammond irrigation supplies, and to reduce any disagreements that may arise with new landowners, a proactive orientation process is suggested. (HCD, 2002, p. 51)

Measure 4 — New Irrigator Orientation Sessions: The District will strongly encourage any landowner new to the District in the past 5 years to attend an orientation session, and new irrigators to attend a session after they arrive. In the case of subdivisions, the landowners themselves will be oriented, not just the water masters. In particular, the following items will be included:

- Hammond policies.
- Irrigation techniques and suggestions specific to the Hammond District, including operation of CHO turnouts.
- Best technologies and water and crop management for small parcels.
- Special session for those with no irrigation experience.
- Tips for managing water for part-time farmers with day jobs elsewhere.

An orientation booklet will be developed by District staff and local irrigation specialists for new landowners to take home for reference. With this as a guide, District staff (Business Manager for policies, and the O&M Manager for practices) with help from other experienced irrigators, will present the orientation sessions with help from local specialists as needed. Orientation sessions will be held annually before the beginning of the irrigation season. New irrigators will be encouraged to attend the orientation in the Spring after they arrive, but will receive the orientation booklet upon arrival. (HCD, 2002, p. 64)

Implementation and Discussion: Orientation sessions were not held and a booklet was not prepared. However, District Business manager and ditchriders provided the orientation informally and report that this system has worked well. Much of the information needed by new irrigators is on the website as well, and this information could be compiled into a hardcopy as needed. Workshops put on by other partners can be promoted also.

Measure 5A — Promote Efficiency with the Water Management Bank

From the 2002 Plan:

Rationale: (Not relevant to this particular measure)

Measure 5A — Promote Efficiency with the Water Management Bank: The District will promote the use of the Water Management Bank as a means of rewarding efficient irrigators. District customers will be asked to provide feedback on use of the Bank, and any impediments to using the Bank will be explored and rectified if at all possible. (HCD, 2002, p. 65)

Implementation and Discussion: The Water Bank option remains available to District irrigators, but only 3 or 4 are reported to use it. Reasons cited are that 1) it isn't very useful in a shortage situation, 2) it can't be relied upon, and 3) most irrigators use all their water and have sufficient supply. Low participation is expected to continue unless conditions change.

Measure 6A — Review Ditchriders Procedures

From the 2002 Plan:

Rationale: With the Ditchriders being central to effective and efficient water management, those duties must be reviewed frequently. Some concerns were raised about water being "delivered" (or made available) in the morning and not being taken until commuters arrive home after work. The high cost of perhaps adding two additional personnel for afternoon deliveries, has led to a consideration of how automation and remote data access could bring improvements in the effectiveness and efficiency of water deliveries.

Dataloggers have been installed recently at four spill locations, and plans are underway to provide remote data access and automation for the Armenta spill gate and canal gate, and the Sullivan spill gate. If remote access to the other three spill dataloggers is accomplished, and if automation is installed for the main diversion, there may be a decided improvement in the ditchriders use of time and the District's use of water.

The District is interested, however, in also testing the feasibility of a 12-hour delivery schedule to determine its cost-effectiveness. This would be limited to a small number of convenient parcels for testing purposes. (HCD, 2002, p. 54)

Measure 6A — **Review Ditchriders Procedures**: The District will monitor the effect on the ditchrider's effectiveness as each of the data access and automation improvements are made. In turn, the findings will be used to plan future technology improvements. The amount of avoidable spills, effectiveness of meeting delivery requests, feedback from irrigators, and job satisfaction of the ditchrider will be monitored. Comparisons will be made between the cost-effectiveness of adding more personnel and adding data access and automation. Reports will be prepared each Fall. (HCD, 2002, p. 65)

Implementation and Discussion: The data access upgrades have yielded much better recordkeeping, but due to the age of some of the diversion and check structure equipment, the automation that was envisioned was not feasible. However, District staff feels that the automation is not a high priority at this time. A related development is the GIS mapping of all ditch structures by Durango RC&D which has helped the staff considerably. Until equipment is upgraded, only routine reviews of ditchriders procedures are needed.

Measure 6B — Test Alternative Schedules for Ditchriders

From the 2002 Plan:

Rationale: See measure 6A above.

Measure 6B — Test Alternative Schedules for Ditchriders: Irrigators will be asked in a mailing if they would be interested in participating in a pilot project to test a 12-hour delivery schedule rather than the current 24-hour schedule. Staggered shifts for the ditchriders will be considered as well. Results will be evaluated along with the data access and automation findings for future refinement of the delivery scheduling. A report will be prepared on the results of the test. (HCD, 2002, p. 65)

Implementation and Discussion: This was not implemented since the District did not sense any significant willingness from irrigators to try the 12 hour delivery system due to a lack of any incentive to do so. At present, the labor and cost increases required are considered too high to justify. This will be kept under consideration.

<u>Measure 6C — Consolidate District Accounting Software</u>

From the 2002 Plan:

Rationale: In addition, improvements to the accounting procedures are called for. At present, three separate software packages are used by District staff to monitor water use, land ownership, and financials. A consolidated software program that would monitor all these data would improve the accuracy, cross referencing, and reporting processes. (HCD, 2002, p. 54)

Measure 6C — Consolidate District Accounting Software: The District will consider purchasing the software package (from Rim Roc Computing) identified by District staff that has the ability to monitor water use, parcel ownership, and finances. The USBR will be asked to assist in its purchase, which is approximately \$10-12,000 including training and one year of technical assistance. (HCD, 2002, p. 66)

Implementation and Discussion: The software was purchased and has been very helpful in making recordkeeping much easier and more accurate.

<u>Measure 7 — Develop an Initial Water Shortage Plan</u>

From the 2002 Plan:

Rationale: With storage rights in Navajo Reservoir, the chances of a drought-induced shortage are considered small — as recent history has shown. In addition, any drought would have to be rather protracted in order to significantly deplete the Reservoir. For this reason, a surprise drought — one resulting from a lack of precipitation in one season — is unlikely.

However, the combination of a less-than-normal snowpack and competing demands on the San Juan River water from other water rights holders and environmental needs may result in shortfalls in years to come. In addition, very temporary situations may occur in near-normal years when irrigators demand more than can be supplied in any given day. For these reasons, it would be wise for the District to develop the outlines of a Water Shortage Plan to meet immediate needs, and which may be developed more fully as indications of future supply conditions become more clear. (HCD, 2002, p. 55)

Measure 7 — Develop an Initial Water Shortage Plan: The District will start discussion of a plan. This plan may include specific measures to address temporary periods when daily demands exceed the District's ability to supply, the relative implications of reduced deliveries on different crops and operations, and an outline of the measures that could be developed over time to address longer term potential shortages in the San Juan River supply. (HCD, 2002, p. 66)

Implementation and Discussion: A "Shortage Sharing" plan has been agreed upon by water users on the San Juan River in New Mexico, including the Hammond District. This agreement defines a procedure for a "Shortage Determination" and for sharing of water under those circumstances. This is a step forward in being ready to deal with shortages affecting the whole river.

What remains is the need to be able to deal with getting sufficient water to all irrigators on any given day, i.e., an internal delivery shortage situation. It is reported that some irrigators continue to divert even after their needs are met, and in conjunction with some other factors such as weeds impeding water flow, it is difficult to get needed water to some irrigators. This is especially a problem on the East and West Highlines. At times, the ditchriders find it difficult to persuade irrigators to stop diverting when their needs have been met. A need is seen for clearly explaining the authority for the ditchrider in these situations, for a water delivery plan, and for a plan to deal with a District-wide shortage. Discussions to rectify these problems have begun between the Highline irrigators and the HCD Board.

<u>Measure 8 — Request Reclassification and Reallocation</u>

From the 2002 Plan:

Rationale: It has been several years since a reclassification of irrigable lands, and a reallocation of water has been performed. The last reclassification was in 1995, and the last reallocation of project water was in 1985. As more and more homes and

roads are being built, some lands to which water is currently allocated cannot be irrigated. The District would like to have that water reallocated to other irrigable Class A land. Since the project is acreage-limited, the USBR must perform these functions. (HCD, 2002, p. 56)

Measure 8 — Request Reclassification and Reallocation: The District will request USBR to undertake a reclassification and reallocation on the Hammond District as soon as possible, and set up a procedure for performing these activities on a regular basis in the future. In preparation for reclassification, the District will request that USBR assist them in ensuring that the current classified land parcels are accurately entered on an electronic GIS system. (HCD, 2002, p. 66)

Implementation and Discussion: This has not been requested of USBR since District Staff feels that the files and parcel maps are not currently suitable. A USBR grant was received to get the parcel files in order, and there has been a delay in resolving some of the map data. Once this is completed the District would be in a position to request action by USBR.

Summary of Progress on Measures in 2002 Plan

Measure	Tasks Completed	Comments	Suggested Follow-up
1. Technology Survey	Administered in March 2006. Thirty returned, analyzed, and results posted on website.	Low response due to lack of incentives, but probably a representative sample.	No further follow-up warranted.
2A. Technology Brochure	Equipment maintenance and repair info posted on new website.	Equipment maintenance and repair seen as highest priority since most parcels are sprinkler irrigated.	Have hardcopy of website info available as needed.
2B. Technology Training	HCD participated in San Juan County Irrigation Workshop in 2007.	HCD believes informal training and web outreach most feasible.	Promote attendance at area workshops, and concentrate on web and informal venues for training.
2C. Consultation Visits	Eight consultations done and reported on HCD website.	Demand was low, but findings valuable as outreach to other irrigators.	Low demand is expected, so will reinstate in future if demand rises.
3. In-Service Training	HCD participated in San Juan County Irrigation Workshop in 2007.	HCD did not see producing their own workshops feasible or highly needed.	Conduct Water Masters School when turnover in water masters warrants. As in 2B, promote attendance at area workshops, and concentrate on website and informal venues for training.
4. New Irrigator Orientation	Not completed.	Need was not clear for formal workshops.	Ensure orientation info is on website and available in hardcopy. As above, promote attendance at area workshops, and concentrate on website and informal venues for training.
5A. Promote Water Management Bank	Water Bank is made available to all in the District.	Little use and not seen as useful in a shortage situation.	Continue to make it available, but low usage expected unless conditions change.
6A. Review Ditchriders Procedures	Data access has helped recordkeeping, but automation has not been a high priority.	Age of equipment makes automation difficult.	Only routine review of procedures needed at this point until equipment is upgraded.
6B. Test Alternative Schedules for Ditchriders	Not tested.	District expected too little interest to warrant the cost.	Keep under consideration.
6C. Consolidate Accounting Software	New software purchased has streamlined recordkeeping.		Completed.
7. Develop Initial Water Shortage Plan	A "Shortage Sharing" agreement has been developed with other San Juan River Users.	This agreement does not address shortages within the District.	A plan for dealing with delivery shortages within the District and overall diversion shortages is needed.
8. Request Reclassification and Reallocation	Delayed while files and parcel maps were being upgraded.	Maps and files nearly ready.	Plan to request of USBR.

ADOPTED MEASURES

Measure 1 — Website Educational Outreach

Rationale: The District has developed a comprehensive website to help meet the needs of its irrigators for irrigation management and efficiency information. To engage users and to continue to bring them the latest available information, the website must be maintained and new content added. Since some irrigators do not use the internet, hardcopies of key items should be available.

Measure 1 — Website Educational Outreach: The HCD website will be maintained, priority information posted, and its use by irrigators strongly encouraged.

- a) Hardcopies of key items on the website will be available at the District office for those not able or willing to access the website.
- b) Irrigation equipment maintenance and repair, and efficient water management will be priority items.
- c) Orientation materials for new irrigators and those new to the District will be maintained on the website, and new irrigators will be directed to them. A hardcopy will be available.
- d) Water efficiency features to be added as Newsletter features will include items such as:
 - Illustrations of costs and water savings from nozzle maintenance and repair.
 - Examples of energy savings from pump upgrades and maintenance, and from piping for gravity pressurization.
 - Savings potentials from converting to pivot or drip systems where appropriate.
 - Home water efficiency including landscape water savings.
 - Productivity and profitability increases from good water management.
- e) A Technical Assistance and Training page will explain what technical assistance and training workshops are available to the irrigator from the District and other agencies such as Extension, NMSU, NRCS, etc., and how to access that assistance.
- f) Irrigators will be encouraged to visit the website regularly by:
 - Reminders of web address on water order cards, the annual billing, etc.
 - Posting of new items on a regular basis.
 - Possibly offering on-line ordering of water in the future.

Measure 2 — Workshop Training

Rationale: The costs of the District offering workshops by itself do not seem reasonable since agencies in the area already provide such training opportunities. District resources can best go to help plan, publicize, and participate in these workshops put on by others. Offering of Water Masters School workshops will be considered as turnover in Water Masters warrants, but are not seen as needed on an annual basis.

Measure 2 — Workshop Training: The District will promote participation in training workshops aimed at improving water management skills and efficient water use.

- a) Work with area groups such as San Juan County Extension, USBR, NMSU Ag Science Center, and others to plan, publicize, and encourage District irrigator participation in irrigation workshops.
- b) Hold Water Masters Schools in conjunction with USBR and others as often as turnover in water masters warrants.
- c) Send District staff to in-service trainings on a regular basis as needed.

Measure 3 — Documentation of Technical Assistance and Training

Rationale: The District offers technical assistance in a wide variety of ways, and it needs to be able to document this assistance so that those outside the District and the District itself are aware of these efforts. These records will help the District in its annual review of progress toward implementing these measures, and will allow updates to this plan to be made more efficiently.

Measure 3 — Documentation of Technical Assistance and Training: Records will be kept of technical assistance rendered, workshops attended, new irrigators oriented, educational materials developed, and informal training offered in order to demonstrate and track water efficiency efforts by the District.

- a) Keep a file of records of as much of the technical assistance rendered as possible, such as:
 - Workshop agendas, attendance lists, and promotions.
 - Web materials made into hardcopies and numbers distributed.
 - Trainings attended by District staff.
 - Copies of any technical assistance materials retired from the website.
 - Educational materials distributed.
 - Equipment loaned out such as catch cans, rain gauges, etc.
- b) Since so much technical assistance is offered on an informal basis in conversations between staff and irrigators, any records or notes as to the subject matter of such assistance would help monitor needs and document that assistance.

<u>Measure 4 — Promotion of Water Management Bank</u>

Rationale: The Water Bank continues to offer some flexibility to irrigators, and although its use is low, the District should continue to offer this option and expect that its use may increase as conditions change in the future. This is a continuation of Measure 5A from the 2002 Plan.

Measure 4 — Promotion of Water Management Bank: The District will continue to make the Water Management Bank available to District irrigators and ensure they know how to use it and how it can benefit them.

<u>Measure 5 — Testing of Alternative Schedules for Ditchriders</u>

Rationale: The 2002 Plan (Measure 6B) called for testing of a 12-hour delivery schedule to more finely tune deliveries and reduce waste, but the labor costs and expectation of low interest on the part of irrigators prevented the District from performing this test. The District is still hesitant to pursue this course of action, but should review it annually to determine if changing conditions

warrant reconsideration. If costs of energy for pumping, water prices, or shortages increase, there may be a greater need for more precise delivery schedules.

Measure 5 — Testing of Alternative Schedules for Ditchriders: The District will annually monitor irrigator willingness, need for more precise deliveries, and personnel needs to determine whether to test a 12 hour water delivery system.

Measure 6 — Water Delivery Plan

Rationale: Even without a shortage of water available to the District, it can be difficult to meet all demands on any given day. This is a particular issue at times on the East and West Highlines. Several factors may be involved including weeds and other flow impediments and irrigators taking (or ordering) more water than needed on a given day. The Board is currently working to ensure irrigators do stop diverting when their needs are met. This plan could also help in cases where water supplies to the District as a whole are curtailed.

Measure 6 — Water Delivery Plan: The District will develop a plan to address problems in delivering water to all users during high demand periods, especially on the East and West Highlines.

- a) Issues such as greater authority for ditchriders to control diversions and developing incentives for irrigators to divert only that water needed will be considered.
- b) Alternative scheduling of diversions by irrigators on problem sections of the ditch will be reviewed if necessary.
- c) Provisions for delivery scheduling in the case of a possible District-wide shortage could be included.

Measure 7 — Preparation for Incentive Pricing

Rationale: The District does not feel that the time is right to change the pricing structure due to financial uncertainties, and the administrative resources involved in multiple annual billings for over 800 accounts. They are aware that a pricing structure that in part is directly related to the actual amount of water used may well be needed in the future. It is recommended that preparations be made now so that the implementation of such a pricing structure could be made smoothly and quickly as conditions warrant.

Measure 7 — Preparation for Incentive Pricing: The District will begin preparations so that they can readily move toward an incentive pricing structure if needed in the future.

In its simplest form, incentive pricing would involve at least part of the water bill being linked to the actual amount of water used rather than a fixed fee. These preparations should be reviewed annually and are fully explained in the USBR "Incentive Pricing Handbook for Agricultural Water Districts" and include:

- a) An accurate recordkeeping system adequate to track water use.
- b) Water measurement systems adequate to detail water use.
- c) Long-term budget projections to form the basis for setting appropriate rates.
- d) Ability to deliver water more precisely as irrigators refine their needs.
- e) Capacity of irrigators to use water more efficiently as the incentives become apparent.
- f) Education of irrigators about how incentive pricing works and why it can help them and the District.

Measure 8 — Water Shortage Plan

Rationale: At present, the District is able to keep within their allotted diversions and to generally meet all needs of its irrigators. A Water Delivery Plan has been suggested to address any problems of meeting irrigator demands even with no curtailment of supply to the District. With uncertainties

facing the District including a possible protracted drought which could cause shortages through the "Shortage Sharing Agreement," and other possible water rights issues on the San Juan River, a plan is needed.

Measure 8 — Water Shortage Plan: The District will incorporate into their strategic planning process proactive planning for any possible significant curtailment of deliveries to the District, resulting from drought, the "Shortage Sharing Agreement," legal actions, or a combination of these factors.

Issues to be considered include:

- a) Water pricing structures needed to protect revenues, to treat irrigators fairly, and to promote efficient use.
- b) Alternating delivery schedule options.
- c) Structural and equipment changes needed.
- d) Early and late season soil moisture replenishment.

Measure 9 — Reclassification and Reallocation

Rationale: The files and parcel maps issues that made requesting reclassification and reallocation not possible under this measure in the 2002 Plan (Measure 8), are nearly addressed, so the District can now consider when to initiate discussions with USBR. As stated in the 2002 Plan, "it has been several years since a reclassification of irrigable lands, and a reallocation of water has been performed. The last reclassification was in 1995, and the last reallocation of project water was in 1985. As more and more homes and roads are being built, some lands to which water is currently allocated cannot be irrigated. The District would like to have that water reallocated to other irrigable Class A land. Since the project is acreage-limited, the USBR must perform these functions."

Measure 9 — Reclassification and Reallocation: Once parcel maps and files are in order, the District will consider when to request the USBR to initiate reclassification and reallocation.

The District will decide, when the files and maps are in order, when to approach the USBR to initiate discussions on the funding and process required. An estimate of the possible benefits to the District of reclassification and reallocation may help inform this decision.

Measure 10 — Annual Review of Plan

Rationale: Without a scheduled annual review of the Plan, it is likely that other critical issues will divert attention from implementation of these measures. If an annual review is done, records kept of those discussions, and files maintained as in Measure 3, this Plan will be a working effective Plan and any future updates can be prepared very easily.

Measure 10 — Annual Review of Plan: The District will review progress and any needed modifications to the Adopted Measures in this Updated Plan on an annual basis and document this review.

The District should:

- a) Specify a monthly meeting for this annual review.
- b) Inform the irrigators of this discussion so they can attend.
- c) Have materials prepared for that review.
- d) Document the discussions and incorporate any changes into the plan as an addendum inserted into the document.
- e) Link implementation decisions and needs to the annual budget-making process.

Implementation of Adopted Measures

	Measure	Cost Considerations	Timing	Priority
1.	Website Educational Outreach	May need new software. Dan Smeal's time?	Continue	High
2.	Workshop Training	Include in budget projected costs of sending staff to workshops.	Continue	High
3.	Documentation of Technical Assistance and Training		Start now.	High
4.	Promotion of Water Management Bank		Continue	High
5.	Testing of Alternative Schedules for Ditchriders	Considerable labor costs most likely involved.	When conditions warrant.	Under consideration
6.	Water Delivery Plan		Start now.	High
7.	Preparation for Incentive Pricing		Start now	High
8.	Water Shortage Plan		Start now.	High
9.	Reclassification and Reallocation	Would require USBR funding.	Consider when files and maps ready	High
10.	Annual Review of Plan		Annually at November Board meeting.	High

MONITORING, EVALUATION, AND UPDATING

This has been incorporated into Adopted Measure 10, above.

CONCLUSION

Hammond Conservancy District continues to be highly committed to the effective and efficient use of its water resources. It has implemented several of the measures adopted in the 2002 "Hammond Conservancy District Water Management Plan." One of the most significant advances in the District's efficiency efforts since the 2002 Plan has been the addition of a comprehensive website for outreach to District irrigators. With this tool in hand, the Hammond District is well positioned to continue to encourage and facilitate the adoption of more efficient technologies and water management practices. Considerable uncertainty and volatility in several areas — energy costs, drought and climate change, adjudication of the San Juan River, and economic conditions — require forward thinking and preparation, which is the focus of several additional adopted measures included in this Update.

APPENDICES

- 1. 2009 Regulations for Water Users
- 2. 2006 Irrigation Survey
- 3. 2007 Four Corners Irrigation Workshop

Appendix 1:

HAMMOND CONSERVANCY DISTRICT

790 CR 4990 BLOOMFIELD, NM 87413 505-632-3043 320-9068, 320-9441, 320-1112(Cell)

Email: hcd@peoplepc.com Website: www.hammondcon.org

2009 REGULATIONS FOR WATER USERS

We would like to take this opportunity to thank all landowners who cooperated in keeping the gates open the past two seasons on the canal right of way. Opening and closing gates is very time consuming for O&M personnel and we would ask that you do the same again this year.

IRRIGATION SEASON:

Water is scheduled for distribution in the District from approximately April 15 through October 15.

OFFICE HOURS:

The District will maintain an office at 790 CR 4990, Bloomfield; all records will be kept there. Office hours are Tuesday and Thursday 8:00 am - 4:00 pm. Landowners may call the office during these hours. In case of emergency please call 320-9068, 320-9441 or 330-1112. Water orders will <u>not</u> be accepted from the telephone.

ACCOUNT CHARGE, ASSESSMENT, AND WATER CHARGE:

The annual account charge is \$80.00 per landowner. All District landowners with Class "A" serviced land must pay \$19.00 per acre for water whether it is used or not. The annual Class "A" assessment is \$12.50 per acre on serviced land. The billing for the account charge, water and assessment is enclosed. The water, account charge and any balance forward on the 2009 billing is due by April 1, 2009 and the assessment is due by September 1, 2009. In 2010 the rate increases will be account charge \$85.00, water \$20.00 per acre and assessment \$13.00 per acre.

PAYMENTS:

Please pay by check or money order to Hammond Conservancy District, 790 CR 4990, Bloomfield, NM 87413. The Board of Directors has authority under state law to levy fees as necessary for maintenance of the canal system. Water users who are delinquent will not receive water and may be

subject to legal action. Your cooperation will be appreciated.

WATER ORDERS AND MANAGEMENT:

Water delivered to Class "A" land must be measured in order to facilitate accurate and equitable distribution and accounting of water within the District. New Mexico statutes require that water be paid for in advance of use. Water is measured in cubic feet of water per second of time (CFS) or often referred to as second feet. One CFS for twelve (12) hours is one acre-foot; one CFS for twenty four (24) hours is two acre-feet. Water is delivered for a 24-hour period and should be put to beneficial use for a 24-hour period. Water over seasonal allotment will not be delivered.

WATER ORDER CARDS MUST BE IN THE CARD BOX BY 8:00 AM FOR WATER TO BE DELIVERED THE FOLLOWING DAY (24 HOUR NOTICE). We must have a signed card for every order. Water orders will not be accepted for Sundays, Memorial Day, Independence Day, or Labor Day. Water users should include turnout number on water order cards. The District will provide a water delivery record at the end of the irrigation season upon request.

<u>Unauthorized pumping or siphoning of water</u> from canals for any purpose is considered illegal use of project water and will not be allowed. In the State of New Mexico, Conservancy Districts have powers available by law to enforce rules and regulations that have been adopted (73-14-49 to 73-14-53 NMSA 1978). Pumps or siphons on the canal will be removed to the District Office, unless an

official license agreement is on file at Hammond. Please contact the office for further information on rules and regulations regarding this policy.

The Board reserves the right to stop water delivery to any water user for improper distribution of water to ineligible land or for any unauthorized use of water (water which was not ordered). It is difficult to administer and execute the District's Water Management Plan with unauthorized use of water.

The District will not allow the use of check boards or any other obstructions in the canals or head gates that alter the flow of water, with the exception of use by District personnel. Any person or public corporation willfully failing to comply with this regulation shall be liable for any damages to project works, which may be a result of their own negligence or misuse of the works.

Every water user is responsible for the proper use of water ordered and for its return to the river; to let water run onto a neighbor may cause hard feelings, damage, and/or legal action. Water should not be ordered if it will not be put to beneficial use. Excessive runoff causes soil erosion and potential water quality problems and is not in the best interest of the District. Water cannot be shut off and allowed to back up into and perhaps overload and overflow the canal.

All landowners having fish in irrigation ponds or ponds that are fed by project water, please notify the district by letter.

CANALS ARE NOT TO BE USED FOR BATHING, SWIMMING, BOATING, OR ANY OTHER RECREATIONAL PURPOSE. Any such activity is a trespass. Persons who engage in such activity are subject to maximum penalty allowed by law.

The District will not be held liable for livestock injured or lost in canals or on the canal right of way.

RECLAMATION REFORM ACT (RRA):

All landholders (owner, part-owner, or lessees) of 240 acres or more within any or all reclamation projects west wide, are required to file RRA forms. All necessary reporting forms must be on file prior

to delivery of water from project facilities.

RIGHT OF WAYS:

The operation and maintenance road along the canal is not a public right-of-way. The landowner has the right and authority to prevent anyone from trespassing except the Hammond Conservancy District, Department of Interior, and Bureau of Reclamation personnel in the performance of duties and inspections. Each water user must have access to a head gate. If other than the landowner has a need to use the O&M road, an agreement with the landowner must be made. All gates across the O&M road must be free-swinging. This is the road that ditch riders travel to service the canal. Gates should be left open during irrigation season whenever possible. In the event that gates are locked, please provide District personnel a key. All crossings that have not been approved by the Board of Directors, with an agreement secured, will be removed from the right-of-way.

SUBDIVISIONS OR PIPELINE SYSTEMS:

Four or more landowners using the same distribution line will be recognized as a "subdivision" or pipeline system. The group must organize, choose a name and appoint a water master. The Water master shall be responsible for placing all water orders, collecting all individual landowner charges and mailing total charges to the District. There will be no water turned out the head gates until 100 percent of all the individual landowner charges are paid in full.

Should Class "A" land be subdivided, it is the responsibility of the landowner to provide further distribution of water through existing head gates. The District will install no additional head gates for this purpose. A water distribution plan is required for transfers, splits or any gifting of land.

HEAD GATE POLICY:

The head gate policy addresses several issues, one of which allows for new head gate installations upon formal Board approval. If approved the landowner would bear the full expense of the head gate and installation costs as determined by the Board. The landowner must provide a signed work

order and prepayment is required. Installations would be completed by District personnel or a Board designated party.

WATER BANK:

A water bank is essentially a water management system, which allows distribution of water within the District by moving water from areas where it is not being used to areas of need. A water bank provides the mechanism to quantify water rights and track the use of water. It is a simple concept and will not affect the rights or responsibilities of landowners within the District. Water may be banked in one to five year increments. For more information on leasing water contact the District office. In the event of a water shortage or severe drought, the water bank may not be available for that season.

WATER TRANSFERS:

Water may neither be resold nor used for any purpose other than agricultural irrigation, nor transferred from a parcel of Class "A" land to another parcel of Class "A" unserviced land without consent of the Board. Water is appropriated to land by classification and is to be used only on land specified as Class "A" land and designated to receive project water. The District has a permanent and temporary water transfer policy; for additional information contact the District Office.

DEED TRANSFER FEE:

Effective December 1, 2005 is a Deed Transfer Fee of \$750.00 per transfer for conveyances of any real property with an allotment of project water within

the District boundaries. Payment is required prior to the release of project water from Hammond Conservancy District canals by the District for the benefit of said transferred lands. As of February 2007 the District will allow an exemption of the deed transfer fee on deed transfers for an immediate member of a landowner's family. Immediate members of family would include spouse, children, grandchildren or parents only.

2009 BOARD ELECTION:

On October 6, 2009 an election will be held to fill Position 2 currently held by Dan Smeal and Position 3 currently held by Russell Smith. Notices will be posted prior to the election. Any qualified elector who desires to become a candidate for election as a Director shall, at least forty days prior to the election, file written Notice of Candidacy, which shall state name, residence and the position for which he/she is a candidate, with the Secretary of the Board of Directors. Notice of Candidacy must be signed by 20 qualified elector residents within the District. Required forms will be available at the District Office.

BOARD OF DIRECTOR MEETINGS:

The Hammond Conservancy District Board of Directors meets the first Thursday of each month at the Hammond District Office at 7:30 pm. If the monthly business meeting falls on a holiday, the meeting will be rescheduled for the next Thursday. All landowners and interested persons are welcome to attend.

HAMMOND BOARD OF DIRECTORS:

R. Russell Smith, President Dan Smeal, Sec-Treas George W. Riley III, Director Kent Roberts, Director Alan Vaughn, Director

OPERATING PERSONNEL:

Ken Griner, O&M Supervisor Larry Chavez, Ditch rider David Bonawitz, Ditch rider Teresa Lane, Manager

PLEASE VISIT THE DISTRICT WEBSITE: www.hammondcon.org

Appendix 2:

HAMMOND CONSERVANCY DISTRICT 790 CR 4990 Bloomfield, NM 87413 505-632-3043

March 15, 2006

The Hammond Conservancy District (HCD) is committed to the responsible management of our most precious natural resource...water. In 2002, to demonstrate this commitment, the HCD prepared a Water Management Plan. Thanks to a grant provided by the U.S. Bureau of Reclamation's Water Conservation Program, the HCD has secured funding to begin implementing the plan.

Two primary components of the plan are education and irrigation assessment. As part of the educational component, the HCD will be developing a web site to provide valuable irrigation and farm management information to all district irrigators. Details will be sent to all members within the next few months.

To assist the district in accomplishing the objectives of the irrigation assessment component of the plan, we are asking for volunteer landowners that will allow us to conduct on-farm evaluations of irrigation systems and farming techniques. These free-of-charge assessments (or audits) will be provided as an educational service and are designed to benefit you, the irrigator. Assessments may include soil analyses, pumping plant evaluations, irrigation system efficiency and uniformity checks, crop management assessments, etc.

The volunteer landowner will receive a report of the assessment along with suggestions on how irrigation management systems/techniques might be modified to improve irrigation efficiencies. The information gained from the assessments will be used for educational purposes only. Volunteers will not be obligated in any way and no commitments are required. While a general summary may be prepared by the HCD, volunteers will remain anonymous and specific land parcels will not be identified.

As members of the HCD, your cooperation is essential to achieving the plan's objectives and we hope you will take advantage of this free, valuable service. By demonstrating that our district is committed to wise water and farm management, our water rights will remain secure.

Whether or not you would like to volunteer for the assessments, we ask that you please fill out the short survey on the reverse side of this letter and return to the HCD headquarters at: 790 CR 4990, Bloomfield, NM 87413.

If you'd like to volunteer, please provide your contact information or call 632-3043 for details.

Hammond Conservancy District Landowner (Irrigator) Survey

- How much total acreage do you plan on irrigating during the 2006 season?
- What crops do you plan on growing (please list approximate acreage or square footage of each, if possible, and include gardens, trees, turf, etc.)?
- By what means will you irrigate these crops (flood, sprinkler, drip, etc.)?
- What specific type of system will you use (side-roll or wheel move, hand-move or solid set, center pivot, etc.)?

Стор	Acreage or Area in sq. feet	Irrigation Method (flood, sprinkler, drip, etc.)	System Type (sideroll, hand move, center pivot, big gun, etc.)

V. L	
Volunteers: Please provide your contact information:	
NAME:	
PHONE:	
EMAIL:	

Thank you very much for your cooperation!



Appendix 3: Four Corners Irrigation Workshop Program





Day 1: May 2, 2007 – Farmington Civic Center

8:00 – 8:45 am	Registration
8:45 – 9:00 am	Welcome and Introductions – Gary Hathorn, Program Director NMSU SJC Cooperative Extension Service
9:00 – 9:45 am	Russian Olive/Salt Cedar Control – Dr. Keith Duncan, NMSU Extension Brush Specialist
9:45 – 10:30 am	"The Year of Water" Legislative Update – Cecilia Abeyta, Director, Legislative Affairs, Farm Bureau
10:30 – 11:00 am	Break
11:00 – 12:00 pm	1975 San Juan Basin Adjudication - Bruce Frederick, New Mexico State Engineer's Office
12:00 – 1:00 pm	Lunch
	Moderator - Mick O'Neil, Superintendent NMSU Agriculture Science Center
1:00 – 1:45 pm	Irrigation Scheduling, Rudy Garcia, Natural Resources Conservation Service, Irrigation Specialist
1:45 – 2:30 pm	Navajo Water Settlement – John Whipple- Interstate Streams Commission
2:30 – 2:45 pm	Break
2:45 – 3:30 pm	Consumptive Water Use of Crops – Dan Smeal, NMSU ASC
3:30 – 4:00 pm	Cost Share Programs with NRCS – Allen Maez, District Conservationist

	Day 2: May 3, 2007 - Field Trip
8:00 – 8:15 am	Arrival and bus boarding- McGee Park
8:30 – 9:00 am	PhaseAble Enabler - Three Phase to Single Phase Pumping - Jack Moore Farm- Bloomfield
9:30 – 10:00 am	Main Canal and Pumping Station
10:30 – 11:00 am	NAPI Headquarters Meeting Room, NIIP Project Presentation
11:30 – 12:30 pm	Lunch - NMSU ASC - Farmington
12:30 – 2:00 pm	Demonstrations on Irrigation Scheduling and Drip Irrigation
2:45 pm	Arrive, McGee Park

NM STATE UNIVERSITY

Four Corners Irrigation Workshop

May 2 - 3, 2007





Farmington Civic Center

The Four Corners Irrigation workshop is sponsored by San Juan County Extension Service, New Mexico State University, Ag Science Center at Farmington, San Juan County Soil and Water Board, San Juan County Farm and Livestock Bureau, Natural Resource Conservation Service and the Bureau of Reclamation.

Due to a grant through the Bureau of Reclamation, there is no charge for the workshop, meals, or transportation. In order to plan meals and transportation, you must preregister prior to April 25, 2007.

See schedule listed on the back.

New Mexico State University is an equal opportunity/affirmative action employer and educator. NMSU and the U.S. Department of Agriculture cooperating.

F	If you are an individual with a disability who is in need of an auxiliary aid or service, please contact Gary Hathorn, Extension Agent at 505-334-9496 at least 48 hours prior to program.

Four Corner's Irrigation Workshop Registration May 2-3, 2007 Due by April 25, 2007

Name	Phone	
Mailing Address		
	ess, city, state, zip code)	
Day 1, May 2, 2007 – Farn	ington Civic Center.	
Day 2, May 3, 2007 – McC	ee Park-NAPI-NMSU	
Number Attending		
Return to: San Juan County Extension Service	, 213A South Oliver Drive, Aztec, New Mexico 8	7410