

**Estancia Basin Regional Water Plan
Steering Committee Organizational Meeting**

April 14, 2016 9:30 – 11:30 am

**Administrative Offices of Torrance County
205 Ninth Street
Estancia, NM 87016**

Summary of Discussion

**Technical consultant: Amy Lewis
Interstate Stream Commission: Emily Geery**

Attendance sheet attached

Welcome and Introductions: Estancia Basin Water Planning Committee (EBWPC) vice-chair Rick Thompson welcomed Emily Geery from the ISC and contractor Amy Lewis to the EBWPC regular meeting. He invited their presentation on the regional water planning update process. Participants introduced themselves. EBWPC chair, John Jones, arrived shortly after the meeting began.

Johnny Romero from La Merced del Pueblo de Tajiue Land Grant said he learned about the water planning process from an ad in the newspaper and would like more time to review the plan and provide comments. Mr. Romero explained that there are four land grants in the Estancia Basin and they are all interested in water planning. John Perea, present at the meeting, is with the Torreon Land Grant. Amy said she would reach out the other land grants. Emily and Amy asked if a deadline of April 30 would allow enough time for comment and Mr. Romero agreed.

Emily and Amy thanked the region for their comments on the draft water plan submitted to Amy on March 11. Emily explained the process for reviewing the comments and making changes to the plan. ISC will prepare a memo to each region explaining which comments were addressed and how and if not, why. Emily appreciated the general comments and explained that they generated some discussion among the contractors and ISC staff. A summary of ISC's response to the general comments were provided in a handout.

Amy asked if the list of Projects, Programs and Policies (PPP) was complete or if any changes were needed. She also explained that the PPP list can be dynamic, can be updated as often as the EBWPC needs. The mechanism for updating the lists has not been established and it could be done by the EBWPC through a GoogleDoc or some other process. Chairman Jones is concerned about the myopic nature of the PPP list and the extra layer of bureaucracy that results from the need to have a project approved by the EBWPC and added to a PPP list before it can be funded. Chairman Jones said that he would prefer that the list only included types of projects and nothing specific. Emily and Amy explained the history and the potential usefulness of the lists. A project will not be denied funding if it is not on the PPP list, but it may score a few more points.

Amy asked for feedback on the draft Section 8 (Implementation of Strategies to Meet Future Demands), which was revised to include comments from March 11. Section 8 was developed primarily from the EBWPC 2010 Update and discussion with Dan McGregor. Chairman Jones questioned all of the detail on the CFRP projects in Table 8-1 (Summary of Actions Take to Address Water Resource Issues) and it was agreed that the information was interesting and would be moved to an appendix. Dee Tarr said that there are many more watershed projects beyond the CFRP, including Water Trust Board, State Forestry, Conservation Reserve Program, and USFS funded projects. Ms. Tarr said she would work with Amy to add detail to the new table of watershed projects. Table 8-1 should also include the water catchment project in Edgewood. Chairman Jones asked that categories be added to Table 8-2 (Key Collaborative Programs) and that the projects be less specific. For instance, under conservation Table 8-2 only included agricultural conservation and should include projects for residential and commercial conservation.

A draft of section 2 of the plan, the public involvement plan, originally prepared by Lucy Moore was edited to include additional meetings and other public outreach. Corrections to the Ad Hoc Committee were provided. Art Swenka provided Amy with a copy of the Press Release advertised on March 4.

Discussion:

Johnny Romero said he is worried about water being transferred out of the basin. It was noted that water is effectively transferred out of the basin when grain and alfalfa are shipped to other parts of the state. Mr. Romero is also concerned about the “use it or lose it” statute that does not encourage conservation. He has seen people pump their wells and let the water flow on the ground, just to keep their water right. He is also concerned about existing developments that are depleting the resource.

Steering Committee membership: Contractors reviewed the draft steering committee list with participants and the following changes were made: Dee Tarr is now the Claunch-Pinto SWCD member instead of J. Brian Greene. Brian Greene will remain on the EBWPC as an At Large member. Vanessa Chavez-Gutierrez, President of the Tajique Land Grant will be added to the Ad Hoc committee for regional water planning. Jose Maria Perea, President of the Torreon Land Grant should also be added. Amy will follow up with Dee Tarr regarding other land grants.

NEXT STEPS:

- **Amy will work with Dee Tarr to update Tables 8-1 and 8-2 and a new table for watershed projects to be put in an appendix**
- **Amy will send a revised Section 8 next week after the revised tables are complete**
- **Public Comments Due April 30, 2016**
- **EBWPC will meet in May to review public comments and Sections 2 and 8**
- **NEXT MEETING June 9, 2016 9:30 AM IN MORIARTY**

Summary prepared by Amy Lewis. Please contact her with any comments or corrections. amychilderslewis@earthlink.net or 505-982-0405

April 29, 2016

Comments To: Estancia Basin Water Planning Committee/ Hoc Committee/Interstate Stream Commission Regional Water Planting Program

Public Comment From: Gloria Lovato Zamora/Anna Nunez heirs and commissioners from La Merced del Manzano

Subject: Public Involvement on the Estancia Basin Region Water Plan Update

1. Comment:

When you use the phrases, on page 1 and 3 of the Estancia Basin Region Water Plan Update Draft Section 8, it states, “The EBWPC, composed of citizens representing major stakeholders, has met regularly and worked diligently to address the water supply issues in the region.”, “Stakeholders were asked to provide information of projects, programs, and or/policies (PPPs) that they wanted to see implemented.” Then again, on page 2 on Public Involvement in the Planning Process, it states, “As specified in the Updated regional Water Planning Handbook (NMISC, 2013,) the regional water plan update shall include participation of a representative group of stakeholders, referred to this document as a steering committee.”

We, La Merced del Manzano an entity, have never have been formally invited as a group of stakeholders to be a part of the planning. We are and have been the stakeholders of the watershed of La Merced del Manzano before county, state and federal laws were put in place.

2. Comment:

Throughout the period of Spanish settlement, 1500-1800 colonial officials generally adhered to the ordinances set out in the Laws of the Indies issued by Spanish crown as instructions governing the pacification, development, and permanent occupation of newly discovered lands, *the Ordenanzas de Descubrimiento, Nueva Poblacion de las Indias da por Felipe II en 1573*. Codified in 1681, the ordinances in the Laws of the Indies provided the framework for colonists and provincial governors to follow when selection sites for occupation and development, including the requirement to locate settlements in areas with abundant pasture land, forests to supply wood and building materials, lands with healthy and fertile soils for the cultivation and harvesting of crops, and above all, with “good and plentiful water supply for dirking and irrigation” (see Crouch, Garr and Mundigo, pp.8-9).

3. Comment:

The boundaries of the land grants were not predetermined according to any formal grid plan, and instead were established according to the natural contours of the land, resulting in irregular shapes highly adaptive to local topography, vegetation, soils, hydrology and micro basin climates.

Estancia Basin Water Planning Region

2. Public Involvement in the Planning Process

During the past two years, the regional steering committees, ISC, and consultants to the ISC have worked together to develop Regional Water Plan updates. The ISC assisted all the regions with outreach and communication to the public about water planning meetings – opportunities to learn about a region’s water issues and develop solutions.

The ISC launched the process by meeting in each of the 16 regions between February and August of 2014. The first meetings were initial outreach and communication about the ISC’s revised regional water planning update process. The first and second meetings laid out the ISC’s proposed process for developing steering committees and explanation of the ISC’s revised water planning method. Because the Estancia Basin WPC had a highly functional steering committee not seen anywhere else in the state, only a few ad hoc members were invited to flesh out the representation required by the Handbook as described below.

In 2015 and continuing into 2016, the ISC held at three facilitated meetings in each of the 16 regions over a short time frame (6 months). Over the past fiscal year, the ISC has continued to support this regional steering committee by attending three meetings to work on the water plan. The purpose of the 2016 round of meetings is to discuss the ISC prepared draft plan and receive comments and further develop their strategies for meeting future water challenges.

This is an outline of the public involvement section of the updated Regional Water Plan (RWP). The purpose of this section is to document the public involvement process that has taken place during the update of the RWPs. The ISC supported meetings that took place in the Estancia Basin region are:

- Meeting 1: Kick-off meeting April 17, 2014
- Meeting 2: Technical components of the regional water plan, presentation of data to the regions Feb 19, 2015
- Meeting 3: Describe process and gaps in steering committee: April 16, 2015
- Meeting 4: Discuss projects, programs, policies list June 18, 2015
- Meeting 5: Process for reviewing draft plan, public involvement. February 11, 2016
- Meeting 6: Receive comments on Section 8 and projects for regional collaboration April 14, 2016
- Meeting 7: Final comments on draft sections June 9, 2016

As specified in the *Updated Regional Water Planning Handbook* (NMISC, 2013), the regional water plan update shall include participation of a representative group of stakeholders, referred to in this document as a steering committee, to guide the public involvement during the update and to identify strategies for addressing water issues and needs in the region. This section documents the steering committee and public involvement process used in the update of the plan.

2.1 Identification of Regional Steering Committee Members and Stakeholders

The RWP Update Handbook (NMISC, 2013) specifies that the steering committee membership include representatives from multiple water user groups. Some of the categories may not be applicable to the specific region, and the regions could add other categories as appropriate to their specific region. The steering committee representation listed in the Handbook includes:

- Agricultural – surface water user
- Agricultural – groundwater user
- Municipal government
- Rural water provider
- Extractive industry
- Environmental interest
- County government
- Local (retail) business
- Tribal entity
- Watershed interest
- Federal agency
- Other groups as identified by the steering committee

The Estancia Basin Water Planning Committee has taken on the responsibility of developing the region's original water plan and updating it periodically. The EBWPC was formed by resolution of three county governments -- Bernalillo, Tarrant and Santa Fe – that have chosen to cooperate in the water planning effort. Because of its effectiveness and formality, EBWPC chose to add ad hoc steering committee members to its existing body in order to fulfill the requirements of the ISC updating process. The ad hoc steering committee members were recruited to fill certain categories that were not already filled by the EBWPC existing membership. Through the addition of these ad hoc members, the Estancia Basin Water Planning Committee established a representative steering committee, the members of which are listed in Table 2-1.

Table 2-1. Estancia Basin Water Planning Committee and Ad Hoc Steering Committee Members, Estancia Basin Water Planning Region

Water Use Group	Name	Organization / Representation
Agricultural – groundwater user	Gene Winn	Member Estancia Basin Water Planning Committee, USDA Extension Service, Program Director
	Ryan Schwebach	Schwebach Farms
	Rick Thompson	Estancia Basin Water Planning Committee
Agricultural – surface water user	Herman Salas	Torreón Acequia Association
County government	Linda Jaramillo County Clerk	Torrance County
	Steve Guestchow, Planning Director	Torrance County
	Dan McGregor, sec- treasurer EBWPC	Bernalillo County Hydrologist, Member, Estancia Basin Water Planning Committee
	Jerry Schoeppner	Santa Fe County Hydrologist,
Environmental interest	Ted Barela	Estancia Basin Resources Association
	Linda Felipe*	Estancia Basin Resources Association
	NA	
Extractive industry		
	John Perea	USDA, Farm Service Agency
Federal agency (technical support to the region)	Alan Warren	Forest Service , Range Management Specialist – Cibola National Forest
	Tom Perkins	State Land Office, Surface Resources Division, Member Estancia Basin Water Planning Committee

	Lawrence Crane	NM State Forestry
Local (retail) business	David Tixier	Magnum Steel Building Co., Member Estancia Basin Water Planning Committee
Municipal government	Ted Hart, Mayor*	City of Moriarty
	Steve Shepherd	Town of Edgewood
	Rita Loy Simmons	Edgewood town councilor
		Town of Estancia
	Cass Tyler, Sanitation Committee	Town of Willard
Rural water provider	George Immerwahr	Mountainair city councilor
	John Jones	Entranosa Water, Member Estancia Basin Water Planning Committee
Tribal (as applicable)	NA	
Watershed interest	Arthur Swenka	Edgewood Soil and Water Conservation District, Member Estancia Basin Water Planning Committee
	J. Brian Greene	Claunch-Pinto SWCD, Member Estancia Basin Water Planning Committee
Other groups as identified by the steering committee	Rita Loy Simmons	Member Estancia Basin Water Planning Committee
	Debbie Ortiz	Partnership for Healthy Torrance County
Former State Representative	Rhonda King	Estancia Moriarty Willard Torrance County Water Association
	Josh Lewis, intern	Claunch-Pinto SWCD
	[to be contacted]	Wind Farm developer
NM State Legislature	Ted Barela	State senator
Land Grant	John Perea	Torreon Land Grant

*not confirmed

The steering committee includes state and federal agency representatives who participate as technical resources to the region. These individuals are generally knowledgeable about water issues in the region and are involved with many of the projects, programs, and policies related to water management in the region. The list also includes non-profit groups who are involved in local water-related initiatives. The steering committee identified *John Jones* as the Chair. Although the steering committee acknowledged that subcommittees could be a useful means of enhancing the planning effort and ensuring implementation of the RWP, they chose not to form any subcommittees at this time.

In addition to the steering committee, the water planning effort included developing a list of stakeholders to facilitate outreach to individuals and entities interested in the water planning update; the list is on file with the ISC. Invitations to the meetings were e-mailed to this list. Steering committee members were asked to share information about the process with stakeholders in the region.

2.2 Description of the Public Involvement Process

The public involvement process was centered on developing a representative steering committee, informing the regions about the process for updating the RWPs, and revitalizing interest in regional water planning. All steering committee meetings were open to the public and interested stakeholders. Meetings were announced to the master stakeholder list by e-mail, and participation from all meeting attendees was encouraged. Steering committee members served as a conduit of information to others and through their own organizational communications with other agencies to encourage participation in the process.

2.2.1 Regional Water Plan Update Kick Off Meeting (Round 1)

An initial kick off meeting for the Regional Water Plan Update was held in the *Estancia Basin* region on *April 17, 2014*. In preparation for this meeting, *the Estancia Basin Water Planning Committee reviewed its membership for consistency with the ISC template*. Through research, communication with other water user group representatives in the region, contacting local organizations and entities, and making phone calls, additional interests were identified and added to the master stakeholder list. The meeting was announced through e-mails and by telephonic communication with the preliminary stakeholder list.

The purpose of the initial meeting was to present the regional water planning update process to the region and continue to conduct outreach *to enhance the existing EBWPC with ad hoc members to conform to the ISC template for representative groups*. Representatives from many of the water user groups attended the meeting and were instrumental in identifying other individuals as potential representatives for a particular group.

2.2.2 Presentation of the Technical Information to the Water Planning Region (Round 2)

A second meeting was held for the *Estancia Basin* region on *February 19, 2015*. The purpose of the meeting was to present the technical data compiled and synthesized for the region. The data presented included population and economic trends through a series of tables, the administrative water supply, the projected future water demand, and the gap between supply and demand for both normal and drought years. In addition, the presentation reaffirmed the development of a steering committee to guide the process as outlined in the RWP Handbook.

2.2.3 Development of the Public Involvement Process and List of Projects, Programs, and Policies in the Water Planning Region (Round 3)

Several meetings were held in the region to begin working with the steering committee on the public involvement process and on identifying the projects, programs, and policies the regions want to include in the regional water plan update, as well as continued refinement of the steering committee, and locations, dates, and times for future meetings. Several new people attended each meeting, and it was important to reaffirm the goals for the plan update and discuss the process and purpose for developing a list of future projects. Therefore, each of the Round 3 meetings included a brief review of the update process and timeline.

Meeting #3 -- Moriarty: The EBWPC and interested stakeholders met on April 16, 2015, in Moriarty to plan a way forward for meeting the three requirements before the committee. The group reviewed the update process, which was important for new people who had not attended meetings before, and the timeline for updating the RWP. Second, they continued to refine the ad hoc membership of the EBWPC and identified additional representatives of environmental and other interests named in the template. Third, they began the task of identifying the projects, programs, and policies they wanted to include in the regional water plan update. They received forms from Amy Lewis for entering the projects, programs and policies – both completed and anticipated. Finally, they agreed to review their existing Public Involvement Plan and update it if necessary. A date was set for the next meeting and a summary of the discussion was sent to the master stakeholder list with information about the next meeting—including agenda items and location, date, and time—and next steps.

Meeting # 4 – Estancia: The steering committee and interested stakeholders met in Estancia on June 18, 2015. In reviewing the membership of the steering committee, participants suggested additional names to fill unrepresented categories, including the State Legislature and land grants. The group reviewed the list of projects, programs and policies submitted by EBWPC members and collated by Amy Lewis. There was discussion about the advantages and disadvantages of including more specific projects to the list, for example items from the ICIP lists for each municipality. Steering committee members may continue to submit projects, programs and policies for another few days. They also reviewed the Public Involvement Plan template supplied

by the ISC and modified it to fit their situation. The group further discussed potential collaborative projects such as agriculture/acequia projects, water system regionalization/cooperation, monitoring/data collection, watershed restoration, drought contingency planning, municipal conservation and reuse, local and state water policy recommendations, endangered species projects, and water quality protection.

2.2.4 Public Involvement in *Estancia Basin* Water Planning Region in Fiscal Year 2015-2016 (Round 4)

During Round 4 meetings in the winter/spring of 2016, the steering committee continued to work with the technical contractor to develop a public involvement plan and the identification of the projects, programs, and policies to include in the plan and complete the two regional tasks (Sections 2 and 8 of the Updated Regional Water Plan). The ISC contractor is responsible for working with the steering committee to obtain the information necessary to draft both sections. The steering committee is not responsible for drafting the text of these sections; however, they provided much of the information included by the contractor in these sections of the plan. The outcome of the process in 2016 is the completed *Public Involvement in Planning Process* and *Implementation of Strategies to Meet Future Water Demand* sections.

The ISC contractor met with the Steering Committee three times between February and June 2016 to continue working on identifying projects, programs, and policies, preparing Section 8 on the past projects and future projects to address water supply issues, and addressing comments on the draft plan. The first meeting was held once the ISC has released a draft of the technical sections of the updated regional water plan.

- *Meeting #5 -- Moriarty: The EBWPC and interested stakeholders met on February 11, 2016, in Moriarty to discuss the process for commenting on the draft plan and developing the strategies for regional collaboration.*
- *Meeting # 6 – Estancia: The steering committee and interested stakeholders met in Estancia on April 14, 2016. The group reviewed the draft Section 8 submitted by Amy Lewis based on documentation provided in the 2010 Update and input from the steering committee.*
- *Meeting # 7 Moriarty*

2.2.5 Public Outreach

The regional water planning process will continue to be an open and inclusive process. Meeting invitations were sent to the entire stakeholder list as well as the steering committee members. The steering committee continued to keep all water planning meetings open to the general public

and to forward the invitation e-mails at their discretion. Generally, steering committee members ensure that other concerned or interested individuals receive the announcement and have communicated key contacts to add to the stakeholder list throughout the planning process. Because public outreach has been inclusive throughout the update process, members of the public who have an interest in water have either been invited directly or indirectly through the steering committee representative. The EBWPC advertised the comment period on the draft plan in the local newspaper and radio.

Estancia Basin Region Water Plan Update

Draft Section 8

Implementation of Strategies to Meet Future Demand

To address the balance and gap between supply and demand and to ensure that the region is prepared to address future water needs, the Estancia Basin considered a variety of strategies for meeting demand. As discussed in Sections 5 and 7, the water supply in the closed basin is declining in the most heavily pumped areas and improved management will require both a better understanding of the resources and flexibility not currently allowed by state water law. Thus, the Estancia Basin strategies are focused on acquiring information about the hydrogeology and stresses (pumping) on the aquifers for improved modeling and a pipeline to allow transfers of water as needed.

This Regional Water Plan Update is building on the original water plan and the 2010 Update, and as such is considering strategies that will enhance and update, rather than replace, the strategies identified in the accepted Water Plan and the 2010 Update. An assessment of the status of strategies from the previous regional water plan is included in Section 8.1. More recent strategies, including a comprehensive list of projects, programs, and policies, key collaborative projects, and recommendations for the State Water Plan are included in Section 8.2

8.1 Status of strategies for previous plans

Due to concerns about the declining water levels in the Estancia Basin, Torrance County initiated the Estancia Basin Water Planning Committee in 1993 through a tri-county MOU. The EBWPC, composed of citizens representing major stakeholders, has met regularly and worked diligently to address the water supply issues in the region. In 1999, the Estancia Basin Regional Water Plan included four major programs:

- 1) Management Programs
- 2) Conservation Programs
- 3) Water Development Programs
- 4) Water Quality Programs

Since the release of the Plan in 1999, the elements of each of the programs listed above have been implemented with varying degree of success as shown in Table 8-1. This summary is compiled from the detail provided in the 2010 Update and with input from the EBWRC.

The 2010 Update (EBWPC and HR) concluded that the primary concerns mentioned in the 1999 report remain unchanged and noted an increased interest in the development of brackish groundwater resources and preliminary studies and inquiries for development of two intra-basin pipelines. The 2010 Update utilized the current understanding of the water resources of the Estancia Basin along with the

political, cultural, social, and economic dynamics of the Estancia Basin to set its five-year priorities as follows:

- “1.) In order to promote the agricultural heritage of the basin, and because approximately 95% of the groundwater use in the basin is agricultural, it is imperative that the EBWPC investigate, promote, and encourage changes in farming techniques and facilitate the conversion from spray irrigation based practices to lower water use systems such as no-till, drip irrigation, and/or greenhouse based agriculture
- 2.) In order to protect and fully utilize existing proven water rights, EBWPC will promote and encourage public and/or private efforts for development of an intra-basin water pipeline to allow physical transfer of water within the basin.
- 3.) In order to understand the uncertainties associated with the planning process, EBWPC will investigate the magnitude and uncertainty of declared and appropriated “paper water” rights and determine the impact on the plan and water resources of the basin if such rights were converted to “wet water” pumping
- 4.) In order to be prudent with a limited resource and to fulfill its designated responsibilities, EBWPC will review and propose ordinances and policies for local governmental entities with respect to water conservation and increased efficiency of use.”

The Steering Committee reviewed each of the strategies and indicated that they are all still relevant, though some refocusing of efforts is recommended as discussed in Section 8.2. A summary of actions that have been completed to implement the strategies are shown on Table 8-1. To fully understand the water resource issues facing the region, the 2010 Update is available at:
http://www.ebwpc.org/PDFS/water_plan2010/Plan_Update_Final.pdf.

8.2 Strategies for Meeting Regional Water Needs

In addition to continuing with strategies from the previous plan, the Estancia Basin region discussed and compiled new project, program and policy information, identified key collaborative projects, and provided recommendations for the State Water Plan.

8.2.1 Comprehensive List of Projects, Programs and Policies

Stakeholders were asked to provide information of projects, programs, and/or policies (PPPs) that they wanted to see implemented. A summary of that information is included in Appendix A. The information in Appendix A was obtained primarily from a checklist of information that was explained and distributed at several open meetings, and was also emailed to all stakeholders that had expressed interest in the regional water planning process. Because some water projects were already identified through the ICIP process, those projects are also included in the PPP list. The information in the Appendix has not been

ranked or prioritized; it is an inclusive list of all of the projects, programs, and policies that regional stakeholders are interested in pursuing as of April 2016. The list will need to be updated each year or as needed to reflect the needs of the region. It includes projects both regional in nature and those that are specific to one system. The list identifies each PPP by category, including water and wastewater system infrastructure, water conservation, watershed management, flood prevention, water reuse, water rights, water quality, and others.

In the Estancia Basin Region, projects identified on the PPP list are primarily water system infrastructure, irrigation system upgrades, and watershed restoration projects.

8.2.2 Key Projects for Regional Collaboration

It is recognized that prioritizing projects for funding is done by each funding agency/program, based on their current criteria, and that projects are reviewed in comparison to projects from other parts of the State. Consequently, the regional water planning update program did not attempt to rank or prioritize projects that are identified in Appendix A. However, identifying larger regional collaborative projects is helpful to successful implementation of the regional plan. At the Estancia Basin Water Planning Committee meetings held in 2015 and 2016, and in numerous meeting held to develop and implement their 2010 Update, the group discussed projects that would have a larger regional or sub-regional impact and for which there is interest in collaboration to seek funding and for implementation.

Key collaborative projects identified by the EBWPC Committee and stakeholders are shown on Table 8-2 and listed below under the categories developed in the original water plan in 1999.

1) Management Programs

- Improved Groundwater Model-Improve understanding of resource through Basin Computer Model and GIS-the existing model severely underestimates drawdown southwest of Estancia, poor representation of the underlying formations, speculative estimates of pumping, should be updated to reflect most recent understanding of geology and structure.
- Water level Monitoring Program-Monitors water levels with transducers in 8 wells and quarterly manual measurements in 13 wells
- Water Banking- could be coupled with water conservation and or leasing programs to extend the life of the basin. This could include options to lease water rights as well as a tool to allow for water conservation without loss of water rights.

2) Conservation Programs

- Development of a water conservation program to implement the water conservation program statute. Develop criteria to enable water rights owners to execute a water conservation program to allow for long term management and protection of water rights.
- Agricultural Conservation-Reduce water use through alternative crops/irrigation methods
- Water Rights Metering-Install meters on all wells to quantify actual diversions and improve management of resources

3) Water Development Programs

- EMWT Pipeline-Transfer water leased through water bank to areas that need the water. This project can only be successful if water right sheltering can be done under an approved water conservation plan.
- Drill Exploratory Deep Wells-Hydrologic Investigations into other aquifers - deep wells with piezometers will provide better understanding of deeper resources and aquifer interaction and address ongoing concerns to recover capacity of senior water rights holders (see Section 8.2.3 Policies and Recommendations). Continue to explore brine resources below 2500 feet and evaluate potential impact on overlying fresh aquifer resources.
- Develop a collaborative program to facilitate senior water right holders deepening or replacing existing wells to recapture capacity. Develop criteria to allow for deepening or replacing wells in lower aquifers to recapture capacity of senior water right holders.
- Forest Restoration-Terrain and Vegetative Modification Program - concern with expansion of USFS wilderness and inability to effectively manage watershed due to lack of mechanized clearing.

4) Water Quality Programs

In order to move forward with implementing the key collaborative projects, additional technical, legal, financial, and political feasibility assessment may be required. A detailed feasibility assessment was beyond the scope and resources for this Regional Water Plan Update.

8.2.3 Key Program and Policy Recommendations

The legislation authorizing the state water plan was passed in 2003. This legislation requires that the state plan shall “integrate regional water plans into the state water plan as appropriate and consistent with state water plan policies and strategies” (§ 72-14-3.1(C) (10)). For future updates of the State Water Plan, ISC has asked the regions to provide recommendations for larger programs, and policies that would be implemented on a state level. These are distinct from the regional collaborative projects and PPPs listed in Appendix A, in that they would be implemented on a State, rather than a regional or system specific level. The State will consider the recommendations from all of the regions, in conjunction with State level goals, when updating the State Water Plan.

The EBWPC identified the following recommendation for state action:

- Allow flexibility for water banking and temporary transfers of water
- Require metering and reporting on all wells
- Improve groundwater model
- The projected demand and depletion numbers are based on limited number of metered wells, a limited number of measurement points, and “best available” data. Consequently, the projections are essentially a “best guess” with associated large uncertainties. This can only be

corrected with additional funding and staffing for basic data collection programs at the local, state, and/or federal level. Without such funding, little if any can be done to advance the state of knowledge of the basin's groundwater resources. Additionally, the NMOSE database indicates that there remains over 159,000 acre-feet per year of "permitted" water rights, although only a portion of those rights –approximately 61,000 acre-feet per year, are or have been put to use since 2005. Implementation or use of those unused and suspect permits, in part or in total, would put the Estancia Basin in a grave and potentially disastrous situation. Accordingly, NMOSE action to at least clarify the status of these unused permits, if not adjudicate such permits, is of critical importance. Such action is beyond the purview or regulatory authority of the EBWPC or County governments.

- OSE should expedite on-going efforts to cancel permits in which little or no beneficial use has been exercised
- When considering interbasin transfer applications, the OSE should be mindful of Senate Joint JM 17 (2008) considerations as well as local public welfare statements, criteria, and priorities.
- Educate title companies state wide on the need to file a change-of-ownership for real estate that includes a well

References

EnviroLogic, Inc. 2007

HydroResolutions, LLC. 2016. Evaluation of Groundwater Level Data from Estancia Basin Monitoring Wells. Prepared for East Torrance Soil and Water Conservation District. January 2016

DRAFT
Regional Water Planning Update
Projects, Programs, and Policies

Water Planning Region 13: Estancia Basin

Planning Region	Co	Regional or System Specific	Strategy Type	Strategy Approach	Subcategory	Project Name	Source of Project Information	Description	Project lead	Partners	Fiscal Year	Planning Phase	Cost	Need or reason for the project, program, or policy	Comments
13	Torrance/Santa Fe	R	PJ	Improve System Efficiency	Changes to Infrastructure	EMWT Pipeline	McGregor, 2015	Central pipeline to transfer water throughout the basin	EMWT Regional Water Association	Estancia, Willard, Moriarty and Torrance	FY16-21	conceptual design to construction	60-135M	Transfer water leased through water bank to areas that need the water	Very feasible, dependent on water leases and acquisition of right of way
13	Torrance/Santa Fe	R	PJ	Reduce Demand	Changes in Crops and Irrigation Methods	Agricultural Conservation	McGregor, 2015	Conservation focused on Agriculture	USDA	East Torrance SWCD & local farmers	FY16-18	Pilot project/implementation	\$ 200,000	Reduce water use through alternative crops/irrigation methods	Feasible
13	Torrance/Santa Fe	R	PM	Improve System Efficiency	Groundwater Modeling Studies	Improved Groundwater Model	McGregor, 2015	Basin Computer Model and GIS	OSE	EBWPC, Estancia, Torrance, Southern Santa Fe County		Discussion	\$ 50,000	Improve understanding of resource	Very feasible
13	Torrance/Santa Fe	R	PM	Increase Water Supply	Groundwater Investigation	Drill Deep Wells	McGregor, 2015	Hydrologic Investigations into other aquifers	EBWPC	East Torrance SWCD & Edgewood SWCD & OSE	FY16-18	Discussion	\$ 260,000	Drill deep wells with piezometers, better understanding of deeper resources and aquifer interaction	Very feasible
13	Torrance/Santa Fe	R	PJ	Protect Existing Supplies	Well field management: Install Meters	Water Rights Metering	McGregor, 2015	Install meters on all wells	OSE	EBWPC, SWCD, & Water Right holders	FY16-18	Discussion	\$ 500,000	Manage resource wisely	Very feasible
13	Torrance/Santa Fe	R	PJ	Improve System Efficiency	Water Banking	Water Banking	McGregor, 2015	Allow Farmers to lease rights when desirable	EMWT Regional Water Association	Estancia, Willard, Moriarty and Torrance & Farmers, Southern Santa	5-10 years (after pipeline in place)	Discussion	\$ 700,000	Allows farmers flexibility to lease	
13	Torrance/Santa Fe/Bernalillo	R	PJ	Protect Existing Supplies	Watershed Restoration	Forest Restoration	McGregor, 2015, ICIIP Project Summary	Terrain and Vegetative Modification Program	Claunch-Prilo SWCD	State Forestry, Private Land Owners	FY16-2021	Annual recurrence (ongoing)	\$600,000-900,000/ year	Reduce risk of high-intensity fire, improve health and enhance recharge	6,128,568 funded to date
13	Santa Fe	SS	PJ	Improve System Efficiency	Wastewater Reuse	Edgewood Wastewater Reuse	WTB 2015	Wastewater Re-Use System	Edgewood, Town of		FY16		\$1,089,570		
13	Santa Fe	SS	PJ	Protect Existing Supplies	Infrastructure Improvements to Wastewater	EDGEWOOD WASTEWATER SYSTEM IMPROVEMENTS	SB159	EDGEWOOD WASTEWATER SYSTEM IMPROVEMENTS	Edgewood, Town of		FY16		\$620,000		
13	Torrance	SS	PJ	Increase Water Supply	Drill new well	Estancia Supply Well	WTB 2015	drill new drinking well	Estancia, Town of		FY16		\$500,000		

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Regional Water Planning Update
Projects, Programs, and Policies

Water Planning Region 13: Estancia Basin

Planning Region	Co	Regional System Specific	Strategy Type	Strategy Approach	Subcategory	Project Name	Source of Project Information	Description	Project lead	Partners	Fiscal Year	Planning Phase	Cost	Need or reason for the project, program, or policy	Comments
13	Torrance-Bernalillo and SF	R	PM	Improve System Efficiency	Monitoring	Water level Monitoring Program	McGregor, 2015, ICIP Project Summary	Monitors water levels with transducers in 8 wells and quarterly manual measurements in 13 wells	East Torrance Soil and Water Conservation District	EBWPC, Estancia, Torrance, Southern Santa Fe County	FY16		\$ 95,000.00	Improve understanding of resource	
13	Torrance-Bernalillo and SF	R	PM	Improve System Efficiency	Monitoring	Water level Monitoring Program	McGregor, 2015, ICIP Project Summary	Monitors water levels with transducers in 8 wells and quarterly manual measurements in 13 wells	East Torrance Soil and Water Conservation District	EBWPC, Estancia, Torrance, Southern Santa Fe County	FY17		\$ 35,000.00	Improve understanding of resource	
13	Torrance-Bernalillo and SF	R	PM	Improve System Efficiency	Monitoring	Water level Monitoring Program	McGregor, 2015, ICIP Project Summary	Monitors water levels with transducers in 8 wells and quarterly manual measurements in 13 wells	East Torrance Soil and Water Conservation District	EBWPC, Estancia, Torrance, Southern Santa Fe County	FY18		\$ 35,000.00	Improve understanding of resource	
13	Torrance-Bernalillo and SF	R	PM	Improve System Efficiency	Monitoring	Water level Monitoring Program	McGregor, 2015, ICIP Project Summary	Monitors water levels with transducers in 8 wells and quarterly manual measurements in 13 wells	East Torrance Soil and Water Conservation District	EBWPC, Estancia, Torrance, Southern Santa Fe County	FY19		\$ 35,000.00	Improve understanding of resource	
13	Torrance-Bernalillo and SF	R	PM	Improve System Efficiency	Monitoring	Water level Monitoring Program	McGregor, 2015, ICIP Project Summary	Monitors water levels with transducers in 8 wells and quarterly manual measurements in 13 wells	East Torrance Soil and Water Conservation District	EBWPC, Estancia, Torrance, Southern Santa Fe County	FY20		\$ 60,000.00	Improve understanding of resource	
13	Guadalupe	SS	PJ	Protect Existing Supplies	Changes to Infrastructure	New Transmission Line to Encino	WTB 2015	Transmission line replacement to Encino	Vaughn, Town of	Encino	FY16		\$1,255,000	Pipeline is too small	
13	Torrance	R	PJ	Protect Existing Supplies	Storm water protection	Floodwater Detention Structure	ICIP, 2014	Storm water control	East Torrance Soil and Water Conservation District		FY16		\$ 3,110,000		
13	Torrance	R	PJ	Protect Existing Supplies	Storm water protection	Water Harvesting System	ICIP, 2014	Storm water control	East Torrance Soil and Water Conservation District		FY16		\$ 40,400.00		
13	Torrance	R	PJ	Protect Existing Supplies	Storm water protection	Water Harvesting System	ICIP, 2014	Storm water control	East Torrance Soil and Water Conservation District		FY17		\$ 30,400.00		
13	Torrance	R	PJ	Protect Existing Supplies	Storm water protection	Water Harvesting System	ICIP, 2014	Storm water control	East Torrance Soil and Water Conservation District		FY18		\$ 30,400.00		

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Regional Water Planning Update
Projects, Programs, and Policies
Water Planning Region 13: Estancia Basin

Planning Region	Co	Regional or System Specific	Strategy Type	Strategy Approach	Subcategory	Project Name	Source of Project Information	Description	Project lead	Partners	Fiscal Year	Planning Phase	Cost	Need or reason for the project, program, or policy	Comments
13	Torrance	R	PJ	Protect Existing Supplies	Storm water protection	Water Harvesting System	ICIP, 2014	Storm water control	East Torrance Soil and Water Conservation District		FY19		\$ 30,400.00		
13	Torrance	R	PJ	Protect Existing Supplies	Storm water protection	Water Harvesting System	ICIP, 2014	Storm water control	East Torrance Soil and Water Conservation District		FY20		\$ 120,400		
13	Torrance	SS	PJ	Protect Existing Supplies	Infrastructure Improvements	Encino Water System Improvement	SB159		Encino, Town of		FY16		\$10,000		
13	Torrance	SS	PJ	Reduce Demand	Metering	Estancia Water Meters	SB159	Meter residential customers for the town of Estancia	Estancia, Town of		FY16		\$30,000	Residential Customers are not metered for water use	
13	Torrance	SS	PJ	Protect Existing Supplies	Infrastructure Improvements	Moriarty Water System Improvements	SB159	Water Line Extension	Moriarty, Town of		FY16		\$330,000	Reach out to new customers	
13	Torrance	SS	PJ	Reduce Demand	Metering	Bulk Water Kiosk Station	SB159	Construct new metered station for selling treated effluent to road construction, oil & gas contractors	Moriarty, Town of		FY 17		\$35,000	No meter at station for contractors to purchase water	
13	Torrance	SS	PJ	Increase Water Supply	Drill new well	Willard Well and Water System	SB159	Drill new drinking well	Willard, Town of		FY16		\$65,000	Village has only one well, need to have a back up well.	

Table 8-1. Summary of Actions Taken to Address Water Resource Issues in the Estancia Basin Water Planning Region.
Page 1 of 4

Alternative	Instigator / Action Taken
<p>Category I: Management Programs</p> <p>Special Groundwater Management Area</p>	<ul style="list-style-type: none"> • In 2002 the NMOSE designated portion of the Estancia Basin as a Critical Management Area • In 2002 the NMOSE adopted new guidelines for the administration of the Estancia Underground Water Basin which closed the Estancia Basin to new Section 72-12-3 applications to appropriate water or the transfer of water rights into severely stressed areas; Limits Section 72-12-1 permits for household use to 0.5 acre-feet per year or less; Adopts detailed enforcement provisions to cancel water rights which have not been developed; Institutes water conservation provisions requiring water well metering and use of best technology practically available; and Coordination of water quality assessments with other state and federal agencies.
<p>Coordinate, Planning and Oversight</p>	<ul style="list-style-type: none"> • The Tri-County MOU continues to be the basis for the EBWPC as a basin-wide coordinating and oversight entity with funding of \$20,000 per County. • East Torrance Soil and Water Conservation District provides administrative support and Torrance County is the Financial agent • NMISC provided funding in 2006 and 2007 to support the Update and NM State Representative provided \$30,000. • The EBWPC has met every other month since 1999?
<p>Comprehensive Monitoring</p>	<ul style="list-style-type: none"> • Sandia National Labs (SNL) developed a comprehensive monitoring and hydrogeological characterization program that includes 1) defining the fresh/brackish water interface within the valley fill, 2) better understanding of the underlying aquifers beneath the valley fill and 3) identify recharge areas and find ways to enhance recharge. • Water quality and water level information in a variety of locations within the Estancia Basin are collected to expand on the information collected by the United States Geologic Survey (USGS). NMOSE has funded the USGS to measure water levels in approximately 57 wells within the Estancia Basin since the 1950s. EBWPC has retained HydroResolutions to monitor and evaluate groundwater level data from wells within the Estancia Basin. The most recent report (HydroResolutions, 2016) documents the data from continuous transducer-recorded data from ten wells and manual water-level measurements from 13 wells. To date, 14 wells have been subject to continuous monitoring for some period of time. • An investigation to measure and record precipitation and soil moisture at a location in the Cedar Crest area was designed to quantify the amount of water that makes it below the root zone of the native vegetation in both an open meadow-type area and in a pinon/juniper forested area. (EnviroLogic, Inc. 2007)

Table 8-1. Summary of Actions Taken to Address Water Resource Issues in the Estancia Basin Water Planning Region.
Page 2 of 4

Alternative	Instigator / Action Taken
Information and Education	<ul style="list-style-type: none"> • The East Torrance, Edgewood, and Claunuch/Pinto Soil & Water Conservation Districts as well as the National Resource Conservation Service hold many different types of informational and educational programs. Some of these programs include water fairs, rolling river presentations, and the testing of well water for water quality parameters. • Through the Edgewood SWCD and Water Trust Board funding, EnviroLogic, Inc. established the Estancia Basin water database (www.estanciabasinwater.com). This website contains both data and resources associated with Estancia Basin water and the relevant issues that are freely accessible by the public. However, the site has not been maintained since its creation nor has the information been verified or updated. Current environmental monitoring work is being conducted by SWCA.
Local Codes and Ordinances	<ul style="list-style-type: none"> • Bernalillo and Santa Fe Counties have initiated water conservation ordinances requiring the use of high efficient plumbing, water savings devices, xeriscaping, precipitation harvesting, and consideration of such elements during the design and permitting stages of development projects. Rebate programs are offered by Santa Fe and Bernalillo Counties. Some Santa Fe County ordinances address rebuild/retrofit issues • The EBWPC has recently become involved with Torrance County in reviewing subdivision applications at the preliminary plat stage to evaluate these applications with respect to the goals and programs of the EBWPC.
Category 2: Conservation Programs	
Audit and Budget	<ul style="list-style-type: none"> • . Audit and retrofit programs have been established and are active in both Santa Fe and Bernalillo Counties for residences • It has been recently suggested to the EBWPC that the Committee work with the counties to adopt ordinances requiring private utilities, Mutual/Domestic Water Authorities, and other such entities to perform audits or require audits as a condition of service for businesses. This is in the investigative stage at this point in time.
Plumbing and Retrofit	<ul style="list-style-type: none"> • Bernalillo and Santa Fe Counties and Edgewood SWCD have retrofit programs for residential customers.
Agricultural Efficiency	<ul style="list-style-type: none"> • The Low Energy Precision Application (LEPA) program was established by the Estancia Field Office of the Natural Resource Conservation Service. Spray irrigation systems were converted to LEPA systems, reducing evaporative losses which resulted in an estimated 11,000 ac-ft per year water savings with approximately 7,600 ac-ft in increased irrigation efficiency efforts.

Table 8-1. Summary of Actions Taken to Address Water Resource Issues in the Estancia Basin Water Planning Region.
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Alternative	Instigator / Action Taken
Metering	<ul style="list-style-type: none"> A metering program was developed and implemented on a voluntary basis but there has been no systematic reporting or use of the data. NMOSE now requires that new wells, wells undergoing repair or deepening, and domestic wells be metered. However, there is no systematic NMOSE program for ensuring reporting of metering data after the initial installation and reporting.
Watering Practices	<ul style="list-style-type: none"> Both Bernalillo and Santa Fe Counties have implemented water programs for businesses and residential use that restrict watering during mid-day when evaporation is highest.
Water Rights	<ul style="list-style-type: none"> EBWPC has outlined the components of a multifaceted program involving legislation, incentives, buyouts, leasing, and banking programs which are all critical to the success of any conservation effort in a largely rural area and to the success of the Plan. Until the basin is adjudicated, no progress can be made on managing water rights and the water resource.
Water Catchment Programs	<ul style="list-style-type: none"> Edgewood —Rooftop harvesting projects
Category III: Water Development Programs	
Cloud Seeding	<ul style="list-style-type: none"> Determined to be unfeasible
Terrain and Vegetation Modification	<ul style="list-style-type: none"> Terrain and vegetative modification programs, primarily of forest thinning projects along the eastern slope of the Manzano Mountains are ongoing (see Watershed Management Alternative below) resulted in 5,164 acres of treated forest. Estimated increase in water supply of 3,400 ac-ft through forest thinning projects
Undeclared Area Annex	<ul style="list-style-type: none"> Previous undeclared areas were annexed by NMOSE in 2006
Underground Investigation	<ul style="list-style-type: none"> The comprehensive monitoring program described above will help understand and manage the resource
Desalination/Brackish Water Development	<ul style="list-style-type: none"> In 2006, Great Basin Water proposed to develop a portion of the brackish water resources of the Estancia Basin in order to reduce the demand on the Valley Fill aquifer. EBWPC has several concerns with the development of this resource including: (1) potential for encroachment of brackish water on fresh water resources, (2) potential for cross-aquifer contamination, (3) the relative percentage utilization of fresh and brackish water resources, (4) the long-term sustainability of such supplies, (5) nature and disposal of the generated waste.
Category IV: Water Quality Programs	
Monitoring	<ul style="list-style-type: none"> See discussion above on implementation of Comprehensive Monitoring Program
Aquifer Protection	<ul style="list-style-type: none"> Bernalillo County filmed a public service announcement regarding the need to properly plug and abandon wells which aired on Govt TV-16. In Year 2005, Bernalillo County also adopted a new individual well ordinance that included new permitting and construction requirements.

Table 8-1. Summary of Actions Taken to Address Water Resource Issues in the Estancia Basin Water Planning Region.
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Alternative	Instigator / Action Taken
	<ul style="list-style-type: none"> • SNL developed an inventory of active and abandoned wells • The East Torrance, Edgewood, and Claunuch/Pinto Soil & Water Conservation Districts established a well plugging program funded through a grant received from the Soil & Water Conservation Commission. This program is inactive due to a lack of funding. Some well plugging and abandonment efforts are ongoing as part of the Estancia Watershed Health Monitoring Project being conducted by SWCA.
Septic Tank Remedial Program	<ul style="list-style-type: none"> • Bernalillo County updated the Wastewater Ordinance in Year 2007 and all systems must achieve full compliance by Year 2015
Sewer Systems	<ul style="list-style-type: none"> • Edgewood wastewater treatment system improvements funded by the legislature (SB159)
Septic Tank Effluent	<ul style="list-style-type: none"> • EBWPC educated County government on nitrate problem and need to address septic tank effluent
Watershed Management	<ul style="list-style-type: none"> • Eight USFS CFRP funded projects resulting in 2,350 acres treated (See App C TC-1 for details) • 10 WTB funded projects resulting in 4,063 acres treated • ___ state Forestry Funded projects resulting in 3,153 acres treated • USFS treated 10,035 acres • Pueblo of Isleta treated 1,661 acres • Other USFS Partners treated 2,649 acres

**Table 8-2. Key Collaborative Programs, Projects, and Policies
2016 Estancia Basin Regional Water Plan
Page 1 of 6**

Project Description	Project Lead	Project Partners	Probable Funding Source(s)	Cost Range	Major Implementation Issues
CATEGORY 1:MANAGEMENT PROGRAMS					
Improved Groundwater Model					
Revise existing administrative model to improve understanding of resource through Basin Computer Model and GIS	OSE	EBWPC, Estancia, Torrance, Southern Santa Fe County		> \$ 50,000	Requires OSE to implement, uncertain of their priorities. Also requires metering of wells.
Water Level Monitoring Program					
Support water level monitoring programs like the current project for monitoring water levels with transducers in 8 wells and quarterly manual measurements in 13 wells	East Torrance Soil and Water Conservation District	EBWPC, Estancia, Torrance, Southern Santa Fe County		\$35,000 – 60,000/year	Highly feasible, ongoing investigation to improve understanding of water resources
Water Banking					
This could include options to lease water rights as well as a tool to allow for water conservation without loss of water rights.	EMWT Regional Water Association	Estancia, Willard, Moriarty and Torrance & Farmers, Southern Santa Fe County		\$ 700,000	Feasible if water rights are metered and the central pipeline is developed.

**Table 8-2. Key Collaborative Programs, Projects, and Policies
2016 Estancia Basin Regional Water Plan**
Page 2 of 6

Project Description	Project Lead	Project Partners	Probable Funding Source(s)	Cost Range	Major Implementation Issues
CATEGORY 2: CONSERVATION PROGRAMS					
<i>Agricultural Conservation</i>					
Reduce water use through alternative crops/irrigation methods	USDA	East Torrance SWCD & local farmers		\$ 200,000	Impacts farmers' techniques: more uncertainty with different crops, operations are different, more unknowns. Lessen impact of decline in agricultural production.
<i>Water Rights Metering</i>					
Install meters on all wells to quantify actual diversions and improve management of resources	OSE	EBWPC, SWCD, & Water Right holders		\$ 500,000	Low feasibility because it needs to be part of OSE administrative guidelines. Would provide a sense of fairness, clarity with water rights for transfers or leases.
<i>Develop Water Conservation Program</i>					
Develop a water conservation program to implement the water conservation program statute with the purpose of enabling water right owners to conserve the resource without losing their water right.					Water rights must be put to beneficial use or they can be reduced. <i>Without a change in the current NMOSE "use it or lose it" policy, farmers will continue to pump the maximum amount allowable under their rights to ensure that there is no way that they can lose their water rights.</i>

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**Table 8-2. Key Collaborative Programs, Projects, and Policies
2016 Estancia Basin Regional Water Plan**

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Project Description	Project Lead	Project Partners	Probable Funding Source(s)	Cost Range	Major Implementation Issues
<i>Residential and Commercial Water Conservation</i>					
Develop water conservation programs to encourage water conservation, like roof-top harvesting	Edgewood Soil and Water Conservation District	Claunch-Pinto Soil and Water Conservation District	District Funding, WTB		

**Table 8-2. Key Collaborative Programs, Projects, and Policies
2016 Estancia Basin Regional Water Plan
Page 4 of 6**

Project Description	Project Lead	Project Partners	Probable Funding Source(s)	Cost Range	Major Implementation Issues
CATEGORY 3: WATER DEVELOPMENT PROGRAMS					
<i>Drill Exploratory Deep Wells</i>					
Hydrologic Investigations into other aquifers - deep wells with piezometers will provide better understanding of deeper resources and aquifer interaction	EBWPC	East Torrance SWCD & Edgewood SWCD & OSE		\$ 260,000	Very feasible. Could use deep wells for agriculture and save valley fill for domestic wells
<i>Forest Restoration</i>					
Reduce risk of high-intensity fire, improve health and enhance recharge, and minimize risk of destruction of homes and associated social disruption following catastrophic fires	Claunch-Pinto SWCD	Soil & Water Conservation Districts, State Forestry, Private Land Owners, USFS, NMED, NMF&WRI, Highlands University		\$600,000-900,000/ year	Public support for thinning, but concern about USFS designating watershed areas as Wilderness that may hamper efforts to restore forests.
<i>Develop Program for Deepening Wells</i>					
Develop a collaborative program to facilitate senior water right holders deepening or replacing wells to prior capacity					Need criteria to allow for deepening or replacing wells in lower aquifers

**Table 8-2. Key Collaborative Programs, Projects, and Policies
2016 Estancia Basin Regional Water Plan**
Page 5 of 6

Project Description	Project Lead	Project Partners	Probable Funding Source(s)	Cost Range	Major Implementation Issues
Watershed Monitoring					
The principal goals of the monitoring are to determine the effectiveness of standard forest thinning on soils, hydrology, water yield and quality, vegetation, and wildlife	Claunch-Pinto SWCD	State Forestry, USFS, NMED, NMF&WRI, Highlands University, NM Game and Fish, Pueblo of Isleta, SWCDs, Private Land Owners	WTB	\$159,000/year	
CATEGORY 4: INFRASTRUCTURE PROGRAMS					
<i>EMWT Pipeline</i>					
Pipeline(s) transecting the Estancia Basin to allow transfer of water leased through water bank to areas that need the water	EMWT Regional Water Association	Estancia, Willard, Moriarty and Torrance		60-135M	Very feasible, dependent on water leases and acquisition of right or way. Help farmers manage their resources and provide options, foster business investment, promotes lower/middle income housing stability (Domestic wells going dry, folks can't afford to drill). Spread the decline in water table, reduce localized stresses, allow water level recovery, and reduce potential for subsidence.

**Table 8-2. Key Collaborative Programs, Projects, and Policies
2016 Estancia Basin Regional Water Plan**
Page 6 of 6

Project Description	Project Lead	Project Partners	Probable Funding Source(s)	Cost Range	Major Implementation Issues
CATEGORY 5: WATER QUALITY PROGRAMS					
<i>Improve Wastewater Systems</i>					
Programs the address contamination of groundwater from septic tanks or other water quality concerns					
<i>Watershed Management</i>					
Reduce risk of high-intensity fire, improve health and enhance recharge, and minimize risk of destruction of homes and associated social disruption following catastrophic fires	Claunch-Pinto SWCD	State Forestry, USFS, NMED, NMF&WRI, Highlands University, SWCDs, Private Land Owners		\$600,000-900,000/ year	Public support for thinning, but concern about USFS designating watershed areas as Wilderness that may hamper efforts to restore forests.
<i>Watershed Monitoring</i>					
The principal goals of the monitoring are to determine the effectiveness of standard forest thinning on soils, hydrology, water yield and quality, vegetation, and wildlife	Claunch-Pinto SWCD	State Forestry, USFS, NMED, NMF&WRI, Highlands University, NM Game and Fish, Pueblo of Isleta, SWCDs, Private Land Owners	WTB	\$159,000/year	

Table C-1. Forest Restoration Projects in the Estancia Basin Water Planning Region

Lead Organization	Project Title	Partners	Total	Year	Purpose
Las Humanas	CFRP 43-01: Las Humanas Forest and Watershed Rehabilitation Fire Reduction.	USFS CFRP, Communities of Mountainair, Abo, Acholle, Punto de Agua, and the Torreón, Manzano, Torreón, and Tajiique Land Grants in the Manzano Mountains.	\$356,400	2001	Project expanded existing thinning crews to handle large volume forest restoration projects on the Cibola National Forest and develop economic opportunities for rural communities by expanding an existing value added post and viga peeling facility.
P&M Plastics	CFRP 21-02 Mountainair. Watershed Improvement, Job Creation, and the Utilization of Wildfire Thinning from Government Forest Land in New Mexico as a Raw Material for Value	USFS CFRP, Cibola National Forest	360,000	2002	Upgrade a composites production facility to produce signs and other products made from wood chips and recycled plastic. The design, purchase and installation of a large extruder, die, calendar roll/press system, and downstream processing equipment capable of producing a melt blended mixture of wood and plastic that can produce a 4 x 4 foot product will dramatically increase P&M Plastics's ability to use small diameter and invasive species.

Lead Organization	Project Title	Partners	Total	Year	Purpose
P&M Plastics. Mountain Air.	CFRP 02-05 Innovative Use of Small Diameter Material from the Thunderbird Forest Restoration Project Area of the Cibola National Forest.	USFS CFRP, Cibola National Forest Service Mountain Air Ranger District, Forest Guild, USDA Forest Service Forest Products Laboratory, The Nature Conservancy, the Pueblo of Isleta, Clauch Pinto Soil and Water Conservation District, and the Youth Conservation Corps. USDA	450,000	2005	Project treated 1,500-3,000 acres of Ponderosa Pine forest over three years on the Thunderbird project area of the Mountainair Ranger District on the Cibola National Forest to reduce the risk of catastrophic fire, and improve forest and watershed health and wildlife habitat. Funding used to purchase low impact logging and material handling equipment and to transport chipped ponderosa pine to a processing facility in Mountain Air, New Mexico.
Four Corners Institute	CFRP 22-08 Mountainair. Ojo Peak Crown Fire Restoration Planning Project: Developing a Plan for Restoring Post-Crown Fire Watershed Integrity	USFS CFRP, Mountainair Ranger District, Cibola National Forest, Zeedyk Ecological Consulting LLC, Clauch-Pinto Soil and Water Conservation District, Mountainair School System, Estrada Collaborative Resource Management, Crane Collaborations, Mexicano Land, Education and Conservation Trust, The Nature Conservancy, and the Town of Mountainair.	\$109,026.73	2008	To obtain NEPA clearance, develop a restoration plan to protect hydrologic features, revegetate stream banks, and replant trees on hillslopes for a 387 acre proposed site in the Cibola National Forest northeast of Mountainair, along a section of Ox Creek and its tributaries.

Lead Organization	Project Title	Partners	Total	Year	Purpose
Edgewood Soil & Water Conservation District	CFRP 26-14 Restoring Forest and Watershed Health and Functioning within a Multijurisdictional Ponderosa Pine/Pinon Juniper Landscape in the Manzano Mountains of New Mexico.	Pueblo of Isleta, US Forest Service Mountainair Ranger District, Forest Fitness, LLC SWCA Environmental Consultants: Estrada Consulting: Claunch-Pinto Soil and Water Conservation District: New Mexico Forest Industries Association: and The Nature Conservancy.	360,000	2014	Treat and restore 855 acres of pinon-juniper and ponderosa pine woodlands on a multijurisdictional landscape through mechanical and hand thinning in an area designated as a high to extreme fire risk in the East Mountain and Torrance County Community Wildfire Protection Plans.

Lead Organization	Project Title	Partners	Total	Year	Purpose
<p>La Merced del Manzano: Mountainair, Manzano Land Grant</p>	<p>CFRP 07-09:: Red Canyon Forest Restoration Project</p>	<p>Claunch-Pinto Soil and Water Conservation District, SWCA Environmental Consultants, U.S. Forest Service Mountainair Ranger District, Restoration Solutions, Crane Collaboration, The Nature Conservancy, New Mexico Forest Industry Association, Chilili Land Grant, La Merced del Manzano Youth Corp, New Mexico Land Grant Council, Estancia Basin Watershed Health, Restoration and Monitoring Steering Committee, Estrada Collaborative Resource Management, New Mexico Forest and Watershed Restoration Institute, New Mexico State University Mora Extension Agency, and Mount Taylor Millworks.</p>	<p>354,918</p>	<p>2009</p>	<p>Thin approximately 300 acres of NEPA cleared Ponderosa pine and mixed conifer stands in Red Canyon to reduce hazardous fuels and improve forest health.</p>

Lead Organization	Project Title	Partners	Total	Year	Purpose
Merced del Pueblo de Chilili	CFRP 08-09: Merced del Pueblo de Chilili Wildfire Fuels Reduction Collaborative Forest Restoration Project.	USFS CFRP, Cañon de Carnue Land Grant, Mexicano Land Education & Conservation Trust, Santa Clara Pueblo, and the Edgewood & Claunch-Pinto Soil and Water Conservation Districts, New Mexico Land Grant Council, New Mexico Wilderness Alliance, La Merced del Manzano Youth Conservation Corps	\$360,000	2009	Implement a 290 acre forest restoration project to reduce fuel loads from 196 basal feet per acre to approximately 60 basal feet per acre. to develop treatment and multiparty monitoring plans. Approximately 1,800 cords of fuel wood will result from the treatment which will be sold or donated to the community.
Claunch Pinto Soil and Water Conservation District	CFRP 06-09 Ojo Peak Post-wildfire Remediation and Monitoring Project	Zeedyk Ecological Consulting, Mexicano Lands Education and Conservation Trust, U.S. Forest Service Mountanair Ranger District, La Merced de Manzano, SWCA Environmental Consultants, Crane Collaborations, Estrada Collaborative Resource, New Mexico Forest Industry Association, La Merced del Manzano Youth Corps, Mountanair School District, The Nature Conservancy, New Mexico State University Mora Extension Agency, Natural Resources Conservation Service Plant Materials Center, New Mexico Forest & Watershed Institute, and Barksdale, Inc.	\$213,268	2009	Restore and monitor the efficacy of restoration efforts on 387 acres of Ponderosa pine and mixed conifer forest in the: Ox Canyon drainage, Mountanair Ranger District, Manzano Mountain Division, Cibola National Forest within the Ojo Peak fire perimeter of the Cibola National forest, which burned severely in the fall of 2007. The project used existing materials from the area to create erosion control structures and restore native vegetation.

Watershed Management

- Eight USFS CFRP funded projects resulting in 2,350 acres treated
- 10 WTB funded projects resulting in 4,063 acres treated
- 1 state Forestry Funded projects resulting in 3,153 acres treated
- USFS treated 10,035 acres
- Pueblo of Isleta treated 1,661 acres
- Other USFS Partners treated 2,649 acres
-

Commented [TD-NMN1]: I will have to do some further research to get the number of State Forestry Grants.