Rio Grande Inter-Basin Roundtable
c/o San Luis Valley Water Conservancy District
415 San Juan Avenue
Alamosa, CO 81101
Telephone: (719) 589 – 2230
Email: slvwcdco1@qwestoffice.net

November 8, 2010

Mr. Michael King, Executive Director
Colorado Department of Natural Resources

Mr. Eric Hecox, Manager, Office of Interbasin Compact Negotiations
Colorado Department of Natural Resources

Mr. Todd Doherty, Intrastate Water Management & Development
Colorado Water Conservation Board

Reference: Manassa Land & Irrigation – Conejos North Branch – Water Conservation and Management

Gentlemen:

The Rio Grande Inter-Basin Roundtable (R.G.R.T) has determined that the single, most critical water issue confronting the Rio Grande Basin is the current unsustainable management of surface and ground water. The R.G.R.T. has made the decision that water activities that address this issue be favorably considered for funding from the Water Supply Reserve Account, SB 2005 -179 (WSRA Funds), providing the proposed water activities meet the SWSI findings for the Basin and the CWCB & IBCC Criteria and Guidelines for funding.

Total cost of the *Manassa Land & Irrigation – Conejos North Branch – Water Conservation and Management* (the Project) is $194,000.00. Of this amount, the R.G.R.T. is requesting authorization to distribute WSRA Funds pursuant to SB 2005 -179 of Rio Grande Basin Funds of $75,000.00 or 39% of the total Project cost of $194,000.00. The applicant, the Manassa Land and Irrigation Company (MLI), will provide $48,000.00 or 25%, and the NRCS will provide $61,000.00 of cash and $10,000.00 for in-kind engineering assistance, for a total of 36% of the total cost of the Project.

At the regular R.G.R.T meeting on October 12, 2010, members voted unanimously to request funding from SB 2005 - 179 – Rio Grande Basin Funds, for:

PROJECT AND AMOUNT REQUESTED	SOURCE SB 179
Manassa Land & Irrigation – Conejos North Branch – WATER CONSERVATION AND MANAGEMENT **$75,000.00**	BASIN

The Conejos River (Conejos) is a tributary to the upper Rio Grande, accounting for nearly 40% of Colorado's Rio Grande Compact obligation. At the point where the Conejos crosses state highway 285, 1-¼ miles north of Antonito, Colorado, there is a bifurcation, with a concrete diversion structure (locally known as "the Core") and a headgate system (Diversion Gates). The Core and Diversion Gates are owned and operated by the Manassa Land & Irrigation Company (MLI). This diversion system was replaced in 2009 / 2010, together with associated streambank stabilization, as the *Conejos River & North Branch Diversion & Stabilization Project,* for a total cost of is $481,700.00. This was partially funded by WSRA Rio Grande Basin Funds of $50,000.00 and Statewide Funds for $333,700.00, for a total of $383,700.00. This work has been completed and has met its expectations that include improved operation of the Core and Diversion Gates, the splitting of river flows to both channels of the river, and assisting in Colorado meeting its Rio Grande Compact obligations. The Core and Diversion Gates are owned and operated by the Manassa Land & Irrigation Company (MLI).

This Project, the *Manassa Land & Irrigation – Conejos North Branch – Water Conservation and Management,* will provide additional controls over the flows associated with the overall operation of the MLI.

Although the prior project cured deficiencies in the main channel of the Conejos at the point of the North Branch Diversion and eliminated many delivery problems for North Branch Water Users, it did not specifically addresses water management issues internal to the MLI irrigation system, where decades of channel and diversion instability have taken a heavy toll on the condition of the receiving slide headgates. Deterioration of the two principal 100-year-old headgates, Gate # 3 and Gate # 98, requires weekly and sometimes daily maintenance. In high flow regimes these slide headgates are clogged with floating debris and high sediment load. Several times a year MLI must use a backhoe to remove trash and clear out the ditches. In low flows, MLI must construct an earthen dam within its system in order to get its adjudicated water right, but this temporary patch job washes out when higher flow levels return, creating a constant maintenance problem. In addition, MLI has no measuring flumes, so it distributes water to its members on a time-per-share basis rather than using a quantified distribution system. The Rio Grande Basin's objectives include the increasing of irrigation efficiency and the measuring of irrigation flows and ground water recharge. With the prospect of future Groundwater Sub-district needs it is imperative for MLI to modernize its water distribution system and improve operational efficiency in order to meet the irrigation needs of 18,000 acres. Matching funds from MLI and NRCS will be used immediately, taking seasonal advantages to initiate the replacement of the Gate # 3. In the spring of 2011 the WSRA funds will be applied after Notice to Proceed to replace Gate # 98 and to install Parshall flumes on the five laterals in the system. These efforts will allow MLI to quantify flows within its system and to its members.

These measures will ensure a more uniform and efficient distribution of water, restore optimal performance of the irrigation system, help conserve and protect water resources, and improve MLI's ability to respond to current and future changing needs for water. This project will complement and support the prior completed improvements in the North Branch Diversion by reducing the propagation of maintenance issues for multiple ditch companies. The prevention of further deterioration at the receiving head gates will eliminate long-standing difficulties in obtaining decreed water rights and meeting priority calls, thus helping to meet Colorado's agricultural demands for a sustainable water supply. After more than five

generations, these repairs and upgrades will greatly improve irrigation efficiency, restoring full operational capacity to a system which is integral to the delivery of Colorado's compact obligations.

In Summary the Project will provide:

- Quantify flows within the MLI system for more uniform/efficient water distribution
- Conserve water and protect water resources, greatly improving irrigation efficiency
- Restore optimal performance of the irrigation system.
- Improve MLI's ability to respond to changing needs for water for 18,000 irrigated acres
- Reduce the burden of repeated and ineffective maintenance efforts and the propagation of these issues
- Restore full operational capacity to a system which has reached the end of its useful life
- Enable MLI to obtain decreed water rights and meet priority calls
- Help meet agricultural demands for a sustainable water supply by quantifying use/recharge
- Assist in meeting Rio Grande Compact obligations by ensuring only adjudicated water rights are diverted from the Conejos River.

The overall deliverables for the Project will include the replacement of two major headgates, and the installation of ten (10) measuring devices on laterals within the irrigation system. The work is scheduled for completion by the end of 2011.

Farmers, ranchers, and landowners in the affected area are contributing $48,000.00 or 25% toward this Project, demonstrating their support for the Project.

Letters of support for this Project have been received from Craig Cotten, Division Engineer, Colorado Division of Water Resources, and the Conejos Water Conservancy District.

By this letter, I am forwarding the application and supporting materials for the subject project. If you require additional information, please notify me accordingly.

Sincerely,

Mike Gibson
Chair, Rio Grande Inter-Basin Roundtable

Attachments (2)

cc: Manassa Land & Irrigation Company

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WATER RESOURCES

Bill Ritter, Jr.
Governor

Mike King
Executive Director

Dick Wolfe, P.E.
Director

Craig Cotten, P.E.
Division Engineer

November 8, 2010

Mr. Mike Gibson, Chairman
Rio Grande Interbasin Roundtable
415 San Juan Avenue
Alamosa, CO 81101

Re: Manassa Land and Irrigation Company Request for Funding

Dear Mike,

This letter is in support of the funding request of the Manassa Land and Irrigation Company to the Rio Grande Basin Roundtable and ultimately the Colorado Water Conservation Board to replace the two main headgates and install additional measuring devices on the Manassa Ditch system.

The Manassa Ditch is a senior ditch on the Conejos River system, holding a portion of the number 1 water right as well as other water rights. This ditch is located on the North Branch of the Conejos River near the town of Antonito. At the present time, the headgates for the Manassa System are dilapidated and in need of repair. The Manassa Ditch Company has great difficulty in receiving the water that they are entitled to at times due to the condition of their headgates. Further, the water users on the Manassa System may not currently receive their proper allotment of water because of non-existent measuring devices.

With the new headgates and measuring devices in place, the Manassa Ditch Company will be better able to quantify their water needs and to ensure that only adjudicated water rights are diverted from the river. This in turn will assist the Colorado Division of Water Resources to more efficiently administer water rights on the Conejos System, and to better administer the Rio Grande Compact.

The proper functioning of these diversion structures and the installation of additional measuring devices are important to both the Manassa Land and Irrigation Company and the State of Colorado to assure proper delivery of water to the correct water rights holders. I recommend the Rio Grande Roundtable and the Colorado Water Conservation Board support funding to conduct this work.

If you need further information regarding the impact of this proposal on Colorado's water administration please contact me at (719) 589-6683.

Sincerely,

Craig W. Cotten
Division Engineer
Colorado Division of Water Resources, Div. 3

COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT
GRANT APPLICATION FORM

Manassa Land & Irrigation: Conejos North Branch Water Conservation and Management	Rio Grande Basin Roundtable
Name of Water Activity/Project	**Approving Basin Roundtable**

$75,000		**Amount from Statewide Account**	-0-
Total Amount of Funds Requested		**Amount from Basin Account**	$75,000

Application Content

Instructions

To receive funding from the Water Supply Reserve Account (WSRA), a proposed water activity must be approved by the local Basin Roundtable AND the Colorado Water Conservation Board (CWCB). The process for Basin Roundtable consideration/approval is outlined in Attachment 1.

Once approved by the local Basin Roundtable, the applicant should submit this application, a detailed statement of work, detailed project budget, and project schedule to the CWCB staff by the application deadline.

The application deadlines are:

- Basin Account – 60 calendar days prior to the bi-monthly Board meeting
- Statewide Account – 60 calendar days prior to the September Board meeting

Board Meeting Dates	Basin Account Deadlines	Statewide Account Deadlines
July 20-21, 2010	May 21, 2010	n/a
September 21-22	July 23, 2010	July 23, 2010
November 16-17	September 17, 2010	n/a
January 2011	60 days prior	n/a
March 2011	60 days prior	n/a
May 2011	60 days prior	n/a
July 2011	60 days prior	n/a
September 2011	60 days prior	60 days prior

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: http://cwcb.state.co.us/IWMD.

The application, statement of work, budget, and schedule must be submitted in electronic format (Microsoft Word or text-enabled PDF are preferred) and can be emailed or mailed on a disk to:

Mr. Todd Doherty
Colorado Water Conservation Board
Water Supply Planning Section
WSRA Application
1580 Logan Street, Suite 200
Denver, CO 80203
Todd.Doherty@state.co.us

If you have questions or need additional assistance, please contact Todd Doherty of the Water Supply Planning Section at 303-866-3441 x3210 or todd.doherty@state.co.us.

Part A. - Description of the Applicant (Project Sponsor or Owner)

1. Applicant Name(s): Manassa Land and Irrigation Company

Mailing address: 318 Main Street
Manassa, CO 81141

Taxpayer ID#:

Email address: mnssclark@aim.com

Phone Numbers: Business: 719-843-5440

Home: 719-580-0844

Fax: 719-843-5440 (call)

2. Person to contact regarding this application if different from above:

Name: Jack Gilleland

Position/Title President

3. Eligible entities that may apply for grants from the WSRA include the following. What type of entity is the Applicant?

[ ] Public (Government) – municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities and the local entity should be the grant recipient. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.

[x] Public (Districts) – special, water and sanitation, conservancy, conservation, irrigation, or water activity enterprises.

[ ] Private Incorporated – mutual ditch companies, homeowners associations, corporations.

[ ] Private individuals, partnerships, and sole proprietors are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.

[ ] Non-governmental organizations – broadly defined as any organization that is not part of the government.

4. Provide a brief description of your organization

Manassa Land and Irrigation Company (MLI), was incorporated in 1903 as a 501(c) (12) company, one of the oldest mutual ditch companies on the Conejos River (Exhibit A), representing approximately 40 percent of all the number one priority water rights on the Conejos. MLI is the only incorporated ditch company and the largest water user on the North Branch of the Conejos. The company's 250 shareholders have 47,000 shares of outstanding stock, with assessments at $1.20 per share. North Branch water users irrigate 21,600 primary acres through approximately 40 miles of canals and laterals (18,000 MLI acres and 3,600 other acres) which divert through the North Branch Diversion structure. An additional 3,250 secondary acres, pertaining to the Richfield system, are also occasionally irrigated through this diversion. MLI's 5-member Board is composed entirely of stockholders. Assessments are used for the salary of one full-time ditch rider and a part-time administrative secretary, with the remainder for maintenance and operation. This portion of the Conejos River watershed has been farmed for more than five generations, with many of the earliest water rights dating back to the late 1800s and the founding of the State of Colorado. Census figures for 2000 show Conejos County population as 59% Hispanic, with 42% speaking Spanish. About 20% of MLI's shareholders are of Latino descent, with irrigation methods and land use patterns tracing back to small-scale fertile subsistence farming of the Spanish land grant system. Structures within the irrigation system are approximately 100 years old.

5. If the Contracting Entity is different then the Applicant (Project Sponsor or Owner) please describe the Contracting Entity here.

The Contracting Entity is the same as the Applicant.

6. Successful applicants will have to execute a contract with the CWCB prior to beginning work on the portion of the project funded by the WSRA grant. In order to expedite the contracting process the CWCB has established a standard contract with provisions the applicant must adhere to. A copy of this standard contract is included in Attachment 3. Please review this contract and check the appropriate box.

[x] The Applicant will be able to contract with the CWCB using the Standard Contract

[ ] The Applicant has reviewed the standard contract and has some questions/issues/concerns. Please be aware that any deviation from the standard contract could result in a significant delay between grant approval and the funds being available.

7. The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

There are no TABOR issues involved that might affect MLI or this project.

Part B. - Description of the Water Activity

1. Name of the Water Activity/Project:

   Manassa Land & Irrigation – Conejos North Branch Water Conservation and Management

2. What is the purpose of this grant application? (Please check all that apply.)

[ ] Environmental compliance and feasibility study

[ ] Technical Assistance regarding permitting, feasibility studies, and environmental compliance

[ ] Studies or analysis of structural, nonstructural, consumptive, nonconsumptive water needs, projects

Study or Analysis of:

- [ ] Structural project or activity
- [ ] Nonstructural project or activity
- [ ] Consumptive project or activity
- [ ] Nonconsumptive project or activity

[x] Structural and/ or nonstructural water project or activity

3. Please provide an overview/summary of the proposed water activity (no more than one page). Include a description of the overall water activity and specifically what the WSRA funding will be used for.

Background: In 2008 MLI was granted $383,700 of Water Supply Reserve Account (WSRA) funds on behalf of the eleven ditch companies constituting the North Branch Water Users. That project, the Conejos River & North Branch Diversion & Stabilization Project (the Stabilization project), consisted of installing J-hooks and constructing and installing a new core and headgates in the main channel of the Conejos. Completed in the spring of 2010, this work repaired the bifurcation, balanced the flows between the main channel and the North Branch of the Conejos, and replaced the 100-year-old concrete Core diversion structure and the system's 5 eight-foot wheel-and-stem Diversion Gates. The Stabilization Project met multiple consumptive and nonconsumptive needs and improved the Conejos River's ability to fulfill its Compact obligation to downstream states.

Water Management Issues: Although the Stabilization Project cured deficiencies in the main channel of the Conejos at the point of the North Branch Diversion and eliminated many delivery problems for North Branch Water Users, it did not specifically addresses water management issues internal to the MLI irrigation system, where decades of channel and diversion instability have taken a heavy toll on the condition of the receiving slide headgates. As shown on Exhibit E, deterioration of the two principal 100-year-old headgates, gate #3 and gate #98, requires weekly and sometimes daily maintenance. In high flow regimes these slide headgates are clogged with floating debris and high sediment load. Several times a year MLI must use a backhoe to remove trash and clear out the ditches. In low flows, MLI must construct an earthen dam within its system in order to get its adjudicated share, but this temporary patch job washes out when levels return, creating a constant maintenance problem. In addition, MLI has no measuring flumes, so it distributes water on a time-per-share basis rather than using a quantified distribution system. With Basin objectives to increase irrigating efficiency, and with sub-district imperatives to measure irrigation flows and ground water recharge, it is imperative for MLI to modernize its water distribution system and improve operational efficiency in order to meet the irrigation needs of 18,000 acres. Matching funds from MLI and NRCS will be used immediately, taking seasonal advantages to replace the #3 Headgate and Core, with WSRA funds applied after Notice to Proceed in the spring of 2011 to replace Headgate #98 and to install Parshall flumes on the five laterals in the system, enabling MLI to quantify flows within its system. (See Exhibit B).

These measures will ensure a more uniform and efficient distribution of water, restore optimal performance of the irrigation system, help conserve and protect water resources, and improve MLI's ability to respond to current and future changing needs for water. This project will complement and support recent improvements in the North Branch Diversion by reducing the propagation of maintenance issues for multiple ditch companies. By preventing further deterioration at the receiving head gates, MLI will eliminate long-standing difficulties in obtaining decreed water rights and meeting priority calls, thus helping to meet Colorado's agricultural demands for a sustainable water supply. After more than five generations, these repairs and upgrades will greatly improve irrigation efficiency, restoring full operational capacity to a system which is integral to the delivery of Colorado's compact obligations.

Part C. – Threshold and Evaluation Criteria

1. Describe how the water activity meets these **Threshold Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

   The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.[1]

   - This proposal is eligible for funding under Senate Bill 06-179 because 1) it is being submitted for approval to the Rio Grande Interbasin Roundtable pursuant to article 75 of title 37, C.R.S.. This water activity will take place in the Rio Grande Basin; 2) it meets the eligibility categories described below; and 3) this proposal is submitted for approved by the Rio Grande Interbasin Roundtable in conformity with criteria and guidelines jointly developed by the IBCC and CWCB.
   - This water activity meets the eligibility requirements as required in Part 2 of the criteria and guidelines as detailed above.
   - The water activity is consistent with Section 37-75-102 C.R.S. because this Project restores, repairs, and upgrades existing irrigation structures within the MLI system. This Project therefore does not supersede, abrogate, or otherwise impair the State's current system of allocating water within Colorado nor does it in any manner repeal or amend the existing water rights adjudication system. This Project does not affect the State Constitution's recognition of water rights as a private usufructuary property right nor is it intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. By repairing, restoring and stabilizing the MLI irrigation head gates and installing measuring weirs in five laterals, this Project extends the benefits accomplished in the previous Stabilization Project, thereby supporting Colorado's continuing ability to meet its Rio Grande Compact obligations.

[1] 37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the state constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. (2) The General Assembly affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This article shall not be implemented in any way that would diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This article shall not be construed to supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights. The General Assembly affirms that this article does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

a) The water activity underwent an evaluation and approval process and was approved by the Basin Roundtable (BRT) and the application includes a description of the results of the BRTs evaluation and approval of the activity. At a minimum, the description must include the level of agreement reached by the roundtable, including any minority opinion(s) if there was not general agreement for the activity. The description must also include reasons why general agreement was not reached (if it was not), including who opposed the activity and why they opposed it. Note- If this information is included in the letter from the roundtable chair simply reference that letter.

- This information is included in the letter from Chairman of the Rio Grande Basin Roundtable.

b) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.[2] The Basin Roundtable Chairs shall include in their approval letters for particular WSRA grant applications a description of how the water activity will assist in meeting the water supply needs identified in the basin roundtable's consumptive and/or non-consumptive needs assessments.

- The Basin Roundtable chair shall include this in his letter accompanying this proposal.

c) Matching Requirement: <u>For requests from the Statewide Fund</u>, the applicants is required to demonstrate a 20 percent (or greater) match of the request from the Statewide Account. Sources of matching funds include but are not limited to Basin Funds, in-kind services, funding from other sources, and/or direct cash match. Past expenditures directly related to the project may be considered as matching funds if the expenditures occurred within 9 months of the date the application was submitted to the CWCB. Please describe the source(s) of matching funds. (NOTE: These matching funds should also be reflected in your Detailed Budget in Part D of this application)

This proposal only seeks Rio Grande Basin funds. Nonetheless, MLI is contributing $48,000 of its own funds; NRCS is contributing $61,000 in cash, plus engineering services and site supervision valued at $10,000. Thus brings a matching amount of $119,000 or 61% of the total project cost of $194,000. The large MLI and NRCS contributions reflect shareholder commitment to the project and underscore the powerful conservation and water management objectives inherent in this final MLI project.

[2] 37-75-104 (2)(c). Using data and information from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the on-going Statewide Water Supply Initiative, develop a basin-wide consumptive and nonconsumptive water supply needs assessment, conduct an analysis of available unappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those unappropriated waters where appropriate. Basin Roundtables shall actively seek the input and advice of affected local governments, water providers, and other interested stakeholders and persons in establishing its needs assessment, and shall propose projects or methods for meeting those needs. Recommendations from this assessment shall be forwarded to the Interbasin Compact Committee and other basin roundtables for analysis and consideration after the General Assembly has approved the Interbasin Compact Charter.

2. For Applications that include a request for funds from the Statewide Account, describe how the water activity meets the **Evaluation Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

This proposal seeks funds only from the Rio Grande Basin Fund.

Part D. – Required Supporting Material

1. Water Rights, Availability, and Sustainability

This information is needed to assess the viability of the water project or activity. Please provide a description of the water supply source to be utilized, or the water body to be affected by, the water activity. This should include a description of applicable water rights and the name/location of water bodies affected by the water activity.

The Conejos rises at the Continental Divide in the San Juan Mountains and flows through Platoro Reservoir, continuing through Conejos County until it reaches the Rio Grande, 2 miles north of the settlement of Los Sauces. The North Branch Diversion of the Conejos is located at a bifurcation point approximately where the river crosses state highway 285, 1-¼ miles north of Antonito. The Conejos River has an annual average flow of 200,000 acre feet. Nearly 40% of Colorado's Rio Grande Compact obligation is met by the Conejos River, a tributary to the upper Rio Grande. The Rio Grande Compact requires an average of 45% of the Conejos' upper index, including transportation losses in getting the flow to Los Sauces and to the Conejos' lower gauge.

There are 42 ditch companies on the main and north channels of the Conejos. Twelve of these ditch companies rely upon the North Branch Diversion to irrigate a total of 22,204 acres, with excess flows returning to the main channel east of Manassa where they contribute to fulfilling Colorado's Rio Grande Compact obligation. Efficiencies to be gained in this project directly impact that return flow by quantifying, adjusting, and conserving the delivery of water throughout the 18,000 acres of the MLI system.

Water supply sources involved in or affected by the water activity include the storage facility of Platoro Reservoir and the Conejos River tributary to the Rio Grande. Water bodies affected by the water activity include surface water rights in priority on the Conejos system, recharge to the aquifers, return flows to the Conejos and the Rio Grande, and irrigation and water-use efficiency issues which directly impact downstream Rio Grande Compact water users. Water availability and sustainability are the primary issues addressed by this Project.

2. **Please provide a brief narrative of any related or relevant previous studies.**

The only available documentation relating to events leading up to the recently completed Stabilization Project are (1) a US Bureau of Reclamation study dated September, 1994, by Charles Caldwell, Civil Engineer; (2) A site survey and plan of the dam dated May, 1994 by the USBOR in Albuquerque; and (3) a report by hydraulics Engineer Joe Lyons and Civil Engineer Charles Caldwell, U.S. Bureau of Reclamation in Denver. These studies were cited in prior funding requests and are included for reference.

Common knowledge: The Conejos Water Conservancy District, NRCS, Conejos County Commissioners, and land owners have known about irrigation difficulties and problems within the MLI irrigation system and at the North Branch Diversion for many years. Formal and informal consultations have been held with the Colorado Division of Water Resources Division III staff, with the former Division III Engineers Steve Vandiver, Mike Sullivan, and recently with Craig Cotton.

NRCS design and oversight: Conejos Water Conservancy District has used NRCS in other river design projects in the past, including (1) The Freddy Velasquez project on the north bank of the Conejos at a place known as High Banks; (2) on the south side of the river at the recently completed WRSA Project ; (3) on the Richard Montoya project on the San Antonio; (4) on ditch 27 above highway 17 at Mogote; and (5) on the Aniceto Lucero project on the San Antonio downstream from the town of San Antonio. NRCS technical and funding assistance over the years has enabled Conejos water users, consisting of forty two ditch companies, together with the Conejos Water Conservancy District, to build local capacity. This in turn supports the Basin's objective of developing a grass-roots process for understanding the Basin's needs. MLI understands that NRCS' process also includes consultations with the Army Corps of Engineers.

On December 15, 2006, NRCS completed design work for the **"Romero Irrigation Canal Co. Plan for the Construction of Conejos River Rock Diversion and Streambank Protection."** Many elements of the Stabilization Project drew from that study, as it contains a utilities statement, owners' statements, a table of quantities, an aerial photography plan view, rock weir plan views, J-hook and rock weir details for the main Conejos River, sluice structure plans, and an operation and maintenance plan. NRCS has provided preliminary (not final) engineering drawings and technical plans for this project in sufficient detail to anticipate the scope of work and related costs, with final plans from NRCS anticipated prior to Notice to Commence.

3. Statement of Work, Detailed Budget, and Project Schedule

The statement of work will form the basis for the contract between the Applicant and the State of Colorado. In short, the Applicant is agreeing to undertake the work for the compensation outlined in the statement of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. Please note that costs incurred prior to execution of a contract or purchase order are not subject to reimbursement.

Please provide a detailed statement of work using the following template. Additional sections or modifications may be included as necessary. Please define all acronyms. If a grant is awarded an independent statement of work document will be required with correct page numbers.

(next page)

Statement of Work

WATER ACTIVITY NAME – Manassa Land & Irrigation – Conejos North Branch Water Conservation and Management

GRANT RECIPIENT – Manassa Land and Irrigation Company

FUNDING SOURCE – Water Supply Reserve Account, Rio Grande Basin Account

INTRODUCTION AND BACKGROUND
Provide a brief description of the project. (Please limit to no more than 200 words; this will be used to inform reviewers and the public about your proposal).

This project improves irrigation efficiency, reduces water loss, and refines the delivery of water by replacing two 100-year-old head gates and installing measuring weirs on five laterals of the Manassa Land and Irrigation (MLI) system. The recent Conejos Stabilization Project successfully eliminated channel instability on the Conejos North Branch diversion, repairing the Conejos bifurcation, balancing flows between the main channel and the North Branch, and reducing operational difficulties for MLI in obtaining its decreed water rights. However, with mounting pressure to account for water use and to maximize ground water recharge, MLI has no method to account for water loss or to quantify recharge or the delivery of water as it responds to priority calls for 18,000 primary acres. MLI seeks $75,000 of Basin funds to complete the modernization of the 100-year-old irrigation system, replacing the gate and adding a concrete core at Headgate #3, replacing Headgate #98, and adding Parshall flumes at the head and midway down each of five laterals. These measures will restore full operating capacity to an irrigation system which has served six generations of water users on the Conejos and which is integral to fulfilling Colorado's compact obligations.

OBJECTIVES
List the objectives of the project

(1) Quantify flows within the MLI system for more uniform/efficient water distribution
(2) Conserve water and protect water resources, greatly improving irrigation efficiency
(3) Restore optimal performance of the irrigation system.
(4) Improve MLI's ability to respond to changing needs for water for 18,000 irrigated acres
(5) Reduce the propagation of maintenance issues for multiple ditch companies
(6) Support recent improvements in the North Branch Diversion by meeting multiple objectives
(7) Reduce the burden of repeated and ineffective maintenance efforts
(8) Restore full operational capacity to a system which has reached the end of its useful life
(9) Enable MLI to obtain decreed water rights and meet priority calls
(10) Help meet agricultural demands for a sustainable water supply by quantifying use/recharge

TASKS
Provide a detailed description of each task using the following format

TASK 1 – Remove Core at Headgate #3

Description of Task

Mobilize two trackhoes, one with a thumb attachment and one with a jackhammer attachment and one dump truck
Remove #3 Core

Method/Procedure

Demolish existing #3 Core
Crush material and stockpile for use as rip-rap on the new structure
Put site to grade

Deliverable

Core at #3 Headgate has been removed and site has been graded

TASK 2 – Place Forms to Install Concrete on #3 Headgate

Description of Task

Place forms to install concrete

Method/Procedure

Contractor and 4 workers will construct framing for concrete in compliance with NRCS engineering specifications.

Deliverable

Ready to pour concrete formed structure on #3 Headgate

TASK 3 – Pour Concrete for Headgate #3

Description of Task

Pour Concrete for Headgate #3

Method/Procedure

27.92 cubic yards of concrete delivered to site
Contractor and 4 workers pour concrete for headgate
39.04 cubic yards of concrete delivered to site
Contractor and 4 workers pour concrete for core
Allow to cure for one week

Deliverable

Concrete structure is ready for installation of new Headgate #3

TASK 4 – Build and install radial gate for #3 diversion structure

Description of Task

Build radial gate for #3 diversion structure and install.

Method/Procedure

During winter months, Contractor will custom build 12'x4' radial gate conforming to NRCS specifications.

Prior to Spring of 2011, Contractor will install radial gate in #3 diversion structure.

Deliverable

Diversion #3 has been replaced and upgraded, enabling MLI to meet irrigation deliveries in priority.

TASK 5 – Remove #98 Headgate

Description of Task

Remove #98 Headgate

Method/Procedure

Mobilize two track hoes, one with thumb attachment and one with jackhammer attachment, and dump truck.
Demolish existing #98 Headgate
Crush material and stockpile for use as rip-rap on the new structure
Put site to grade

Deliverable

#98 Headgate has been removed and site has been graded

TASK 6 – Place Forms to Install Concrete at #98 Headgate

Description of Task

Place forms to install concrete at #98 Headgate

Method/Procedure

Contractor and 4 workers will construct framing for concrete in compliance with NRCS engineering specifications.

Deliverable

Ready to pour concrete formed structure at #98 Headgate

TASK 7 – Pour Concrete for Headgate #98

Description of Task

Pour Concrete for Headgate #98

Method/Procedure

27.92 cubic yards of concrete delivered to site

Contractor and 4 workers pour concrete for headgate into forms. Allow to cure for one week.

Deliverable

Concrete structure is ready for installation of new Headgate #98

TASK 8 –Build and install radial gate at Headgate #98

Description of Task

Build radial gate and install at Headgate #98 diversion structure

Method/Procedure

During winter months, Contractor will custom build 12'x4' radial gate conforming to NRCS specifications.

Prior to Spring of 2011, Contractor will install radial gate at #98 diversion structure.

Deliverable

Diversion #98 has been replaced and upgraded, enabling MLI to meet irrigation deliveries in priority.

TASK 9 – Custom build ten Parshall flume measuring weirs

Description of Task

Over winter, Contractor builds ten Parshall flumes in accordance with NRCS engineering specifications (Exhibit C).

Method/Procedure

Under NRCS supervision, Contractor constructs ten Parshall Flumes per specifications.
Four will measure 8' in width
Six will measure 5' in width

Deliverable

Ten measuring weirs are ready to install.

TASK 10 – Contractor installs Parshall flume measuring weirs on 5 laterals

Description of Task

Ten Parshall flumes will be installed at the head and midway down the length of five laterals.

Method/Procedure

In preparation for irrigation season, in spring of 2011, Contractor will install ten Parshall flume measuring weirs on each of five laterals, one at the head and one at the midpoint of each lateral.

The installation will start from the west and work eastward.

Deliverable

Ten Parshall flumes are installed, creating the ability to distribute water by measured volume, thus greatly increasing operational efficiency and enabling quantification of water use and recharge.

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

BUDGET

TASK		LABOR 8-hour man days	Additional Labor	Equipment and Other Direct Cost	MLI Funds	NRCS Funds	WSRA Funds	Total Project Costs
1	Remove # 3 Headgate	2		2 trackhoes, Dump truck	7,000.00			7,000.00
				Jackhammer, bucket				
2	Place forms to install # 3	7		trackhoe, front end loader	11,000.00			11,000.00
				$5,000.00 in rebar				
3	Pour concrete# 3	5		Dam 39.04 CY HG 27.92 CY	28,000.00			28,000.00
				truck with pump				
4	Build radial gate & install #3	8				22,000.00	6,000.00	28,000.00
5	Remove # 98	1	3 workers	2 trackhoes, dump truck			5,000.00	5,000.00
				jackhammer, bucket				
6	Place forms to install # 98	5	4 workers	trackhoe, front end loader			9,000.00	9,000.00
				$4,000.00 in rebar				
7	Pour concrete # 98	3	4 workers	27.92 cy cement			22,000.00	22,000.00
				truck with pump				
8	Build radial gate & install # 98	5		metal and labor			22,000.00	22,000.00
9	Build 10 measuring weirs	20		metal and labor	2,000.00	39,000.00		41,000.00
10	Install 10 weirs	10		trackhoe or backhoe			11,000.00	11,000.00
	Engineering/NRCS					10,000.00		10,000.00
	TOTAL				$48,000.00	$71,000.00	$75,000.00	$194,000.00

SCHEDULE

TASK / Season	Fall 2010	Winter 2010	Spring 2011	Winter 2011
	Matching $	Matching $	**Notice to Proceed**	
1 Remove #3 Headgate				
2 Place forms # 3				
3 Pour concrete # 3				
4 Build radial gate #3				
Install gate #3				
5 Remove # 98 Headgate				
6 Place forms # 98				
7 Pour concrete # 98				
8 Build radial gate #98				
Install gate #98				
9 Build 10 measuring weirs				
10 Install 10 measuring weirs				

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

The above statements are true to the best of my knowledge:

Signature of Applicant:

Print Applicant's Name:

Project Title:

Return this application to:

Mr. Todd Doherty
Intrastate Water Management and Development Section
COLORADO WATER CONSERVATION BOARD
1580 Logan Street, Suite 200
Denver, CO 80203

To submit applications by Email, send to: todd.doherty@state.co.us

Attachment 1
Reference Information

The following information is available via the internet. The reference information provides additional detail and background information.

Colorado Water Conservation Board (http://cwcb.state.co.us/)

Loan and Grant policies and information are available at – http://cwcb.state.co.us/Finance/

Interbasin Compact Committee and Basin Roundtables (http://ibcc.state.co.us/)

Interbasin Compact Committee By-laws and Charter (under Helpful Links section) –

http://ibcc.state.co.us/Basins/IBCC/

Legislation

House Bill 05-1177 - Also known as the Water for the 21st Century Act –

http://cwcbweblink.state.co.us/DocView.aspx?id=105662&searchhandle=28318

House Bill 06-1400 – Adopted the Interbasin Compact Committee Charter –

http://cwcbweblink.state.co.us/DocView.aspx?id=21291&searchhandle=12911

Senate Bill 06-179 – Created the Water Supply Reserve Account –

http://cwcbweblink.state.co.us/DocView.aspx?id=21379&searchhandle=12911

Statewide Water Supply Initiative

General Information – http://cwcb.state.co.us/IWMD/

Phase 1 Report – http://cwcb.state.co.us/IWMD/SWSITechnicalResources/SWSIPhaseIReport/

Attachment 2
Insurance Requirements

NOTE: The following insurance requirements taken from the standard contract apply to WSRA projects that exceed $25,000 in accordance with the policies of the State Controller's Office. Proof of insurance as stated below is necessary prior to the execution of a contract.

13. INSURANCE

Grantee and its Sub-grantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

A. **Grantee**

i. **Public Entities**

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee's liabilities under the GIA.

ii. **Non-Public Entities**

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in **§13(B)** with respect to sub-Grantees that are not "public entities".

B. **Sub-Grantees**

Grantee shall require each Grant with Sub-grantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. **Worker's Compensation**

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Sub-grantee employees acting within the course and scope of their employment.

ii. **General Liability**

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent Grantees, products and completed operations, blanket Grantual liability, personal injury, and advertising liability with minimum limits as follows: **(a)**$1,000,000 each occurrence; **(b)** $1,000,000 general aggregate; **(c)** $1,000,000 products and completed operations aggregate; and **(d)** $50,000 any one fire. If any aggregate limit is reduced below $1,000,000 because of claims made or paid, Sub-grantee shall immediately obtain additional insurance to restore the full aggregate limit and

furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of $1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Sub-grantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and the State by certified mail.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Sub-grantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

X. **Certificates**

Grantee and all Sub-grantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Sub-grantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any sub-grant, Grantee and each Sub-grantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this **§13**.

Attachment 3
Water Supply Reserve Account Standard Contract

NOTE: The following contract is required for WSRA projects that exceed $100,000. (Projects under this amount will normally be funded through a purchase order process.) Applicants are encouraged to review the standard contract to understand the terms and conditions required by the State in the event a WSRA grant is awarded. Significant changes to the standard contract require approval of the State Controller's Office and often prolong the contracting process.

It should also be noted that grant funds to be used for the purchase of real property (e.g. water rights, land, conservation easements, etc.) will require additional review and approval. In such cases applicants should expect the grant contracting process to take approximately 3 to 6 months from the date of CWCB approval.

Attachment 4
W-9 Form

NOTE: A completed W-9 form is required for all WSRA projects prior execution of a contract or purchase order. Please submit this form with the completed application.

Exhibit A

Location of Project

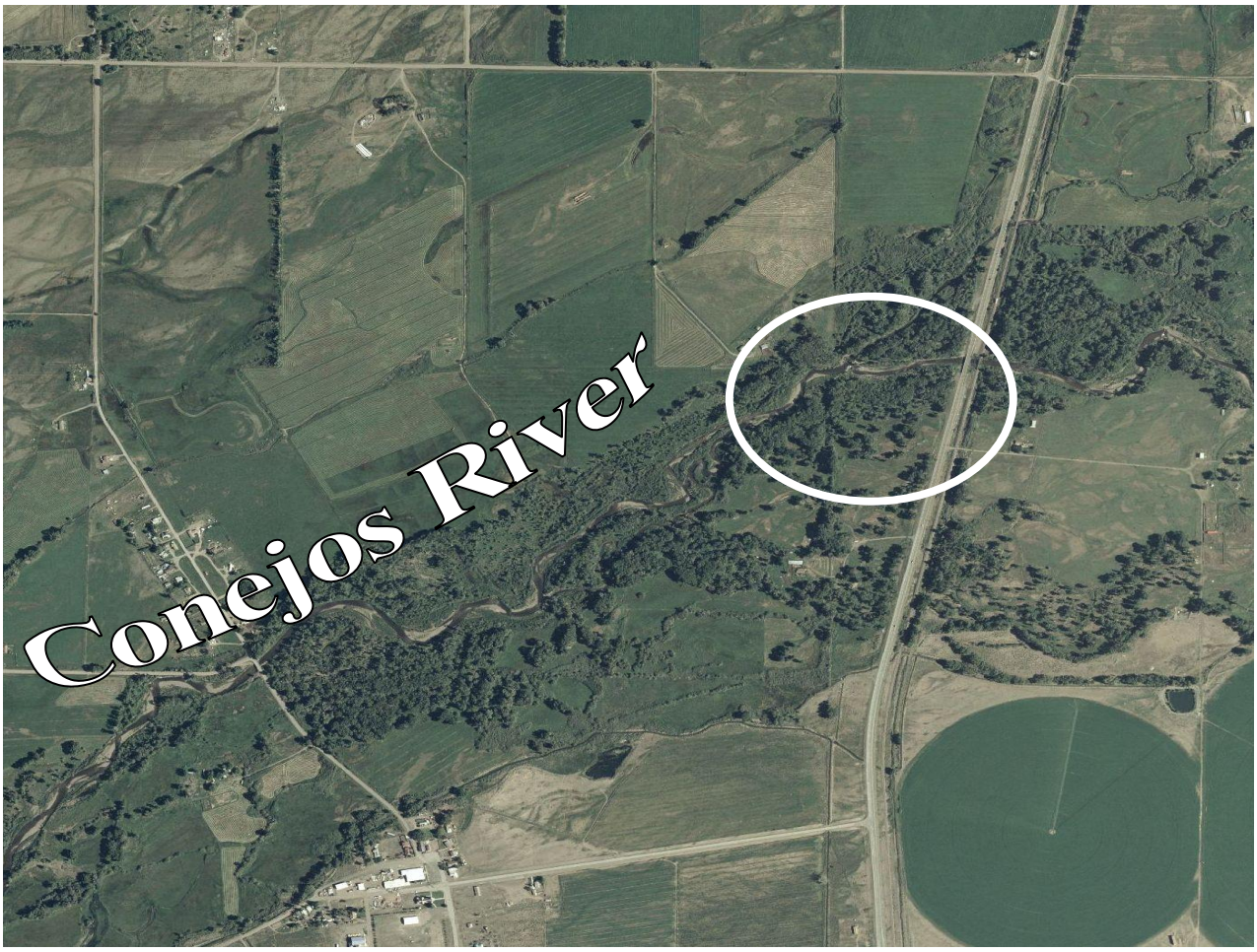


Exhibit B

Irrigation System

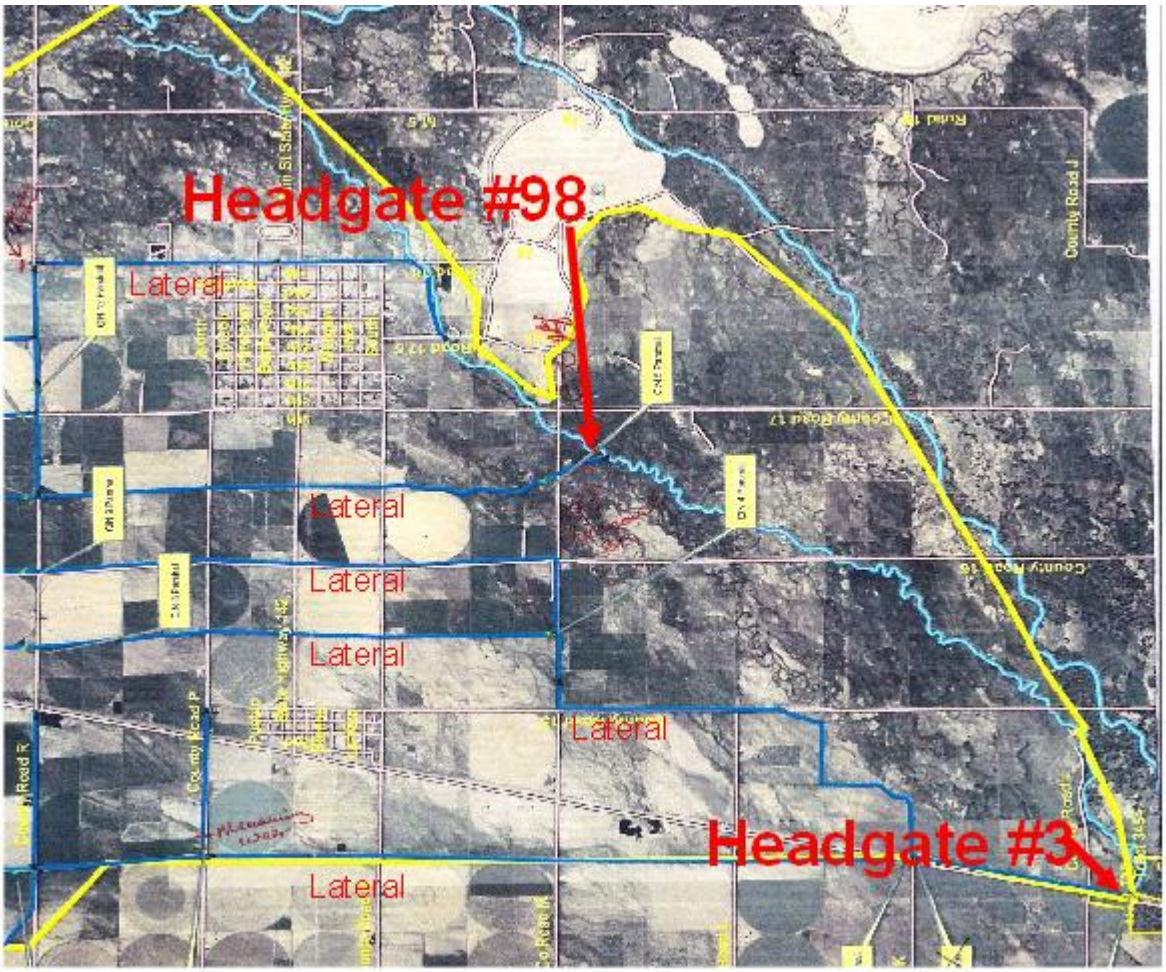
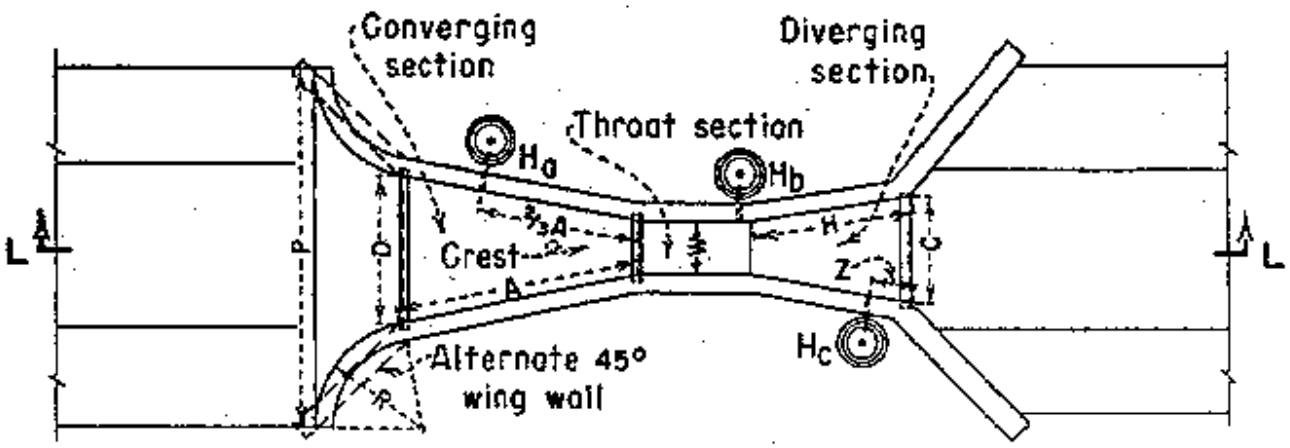


Exhibit C

Parshall flume Specifications



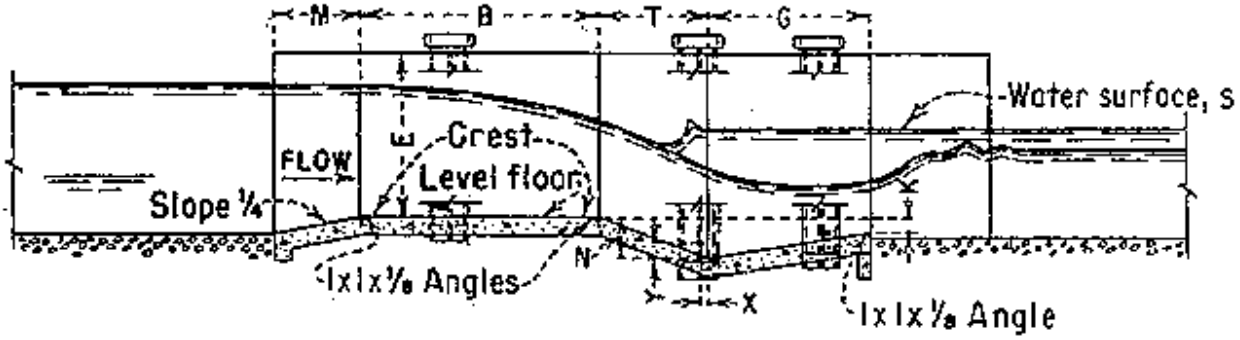


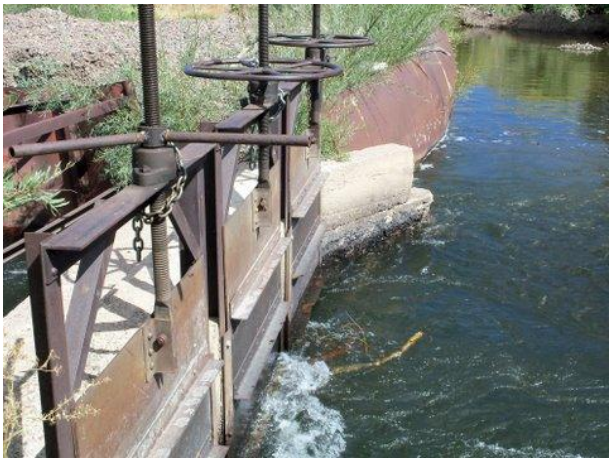
Exhibit D

Experimental Parshall flume

Manassa Land and Irrigation Company got a Parsall flume at an auction recently. This has convinced the members of the many advantages of quantifying the flows, knowing how much water is being wasted, and determining recharge. Modernizing the system is imperative to meet Rio Grande Basin objectives for efficient water management.

Exhibit E

Condition of 100-Year-Old Headgates and Laterals



Headgate #3

The Core is submerged and useless

Very poor control of flows

Headgate #98

Concrete is crumbling

Will not handle adjudicated flows

One of the Laterals in the system.

Water is delivered by time according to the share,

but if one ditch is narrow and the other is wide,

there is no way to quantify or regulate water use.