

RESOLUTION OF THE  
NAABIK'ÍYÁTI' COMMITTEE OF THE  
NAVAJO NATION COUNCIL

23rd NAVAJO NATION COUNCIL -- Second Year, 2016

AN ACTION

RELATING TO RESOURCES AND DEVELOPMENT, BUDGET AND FINANCE AND NAABIK'ÍYÁTI'; SUPPORTING NAVAJO NATION DIVISION OF NATURAL RESOURCES IN ITS GRANT APPLICATION FOR \$522,910.00 TO USDA-NATURAL RESOURCES CONSERVATION SERVICE (NRCS) ENVIRONMENTAL QUALITY INCENTIVES PROGRAM (EQIP); AND, APPROVING A WAIVER OF THE INDIRECT COST RATE

BE IT ENACTED:

Section One. Authority

- A. The Resources and Development Committee (RDC) is a standing committee of the Navajo Nation Council. It is empowered to oversee regulation of activities on Navajo Nation lands for disposition or acquisition of resources, surface disturbance, or alteration of natural state of the resource, including the enforcement and administration of applicable Navajo Nation and federal laws, regulations, guidelines, and administrative procedures in the development and use of resources as a good steward. 2 N.N.C. §§ 500 (A), 500 (C) (2).
- B. The Budget and Finance Committee is a standing committee of the Navajo Nation Council. It is empowered to "[a]uthorize, review, approve and accept agreements, including contracts and grants, between the Navajo Nation and any federal, state or regional authority upon the recommendation of the standing committee which has oversight of the division, department or program which has applied for the agreement, or upon recommendation of the Chapter." 2 N.N.C. §§ 300 (A), 301 (B) (15).

- C. The Naabik'íyáti' Committee is a standing committee of the Navajo Nation Council. Among other statutory powers, the committee has the delegated responsibility to "review and continually monitor the programs and activities of federal and state departments and to assist development of such programs designed to serve the Navajo People and the Navajo Nation through intergovernmental relationships between the Navajo Nation and such departments." 2 N.N.C. § 701 (A)(7). Regarding grants, the Naabik'íyáti' Committee negotiates indirect cost rates; and, it is authorized to waive such costs. 2 N.N.C. § 701(A)(10).

## Section Two. Findings

- A. The Division of Natural Resources is seeking a grant in the amount of \$522,910.00, from the United States. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Environmental Quality Incentives Program (EQIP). See attached Exhibit A, grant application and related documents. The purpose of the grant is to "address the resource concern of Inefficient Water Use on Irrigated Land. The [Gadii'ahi] pipe will facilitate the delivery of pressurized irrigation water to farm fields which will make sprinkler irrigation feasible in the Gadii'ahi Chapter. The pipeline will eliminate seepage and evaporation losses from the open canal and should help to improve irrigation water management and the installation of improved irrigation systems. With improved irrigation water management and irrigation systems, less water from the San Juan River will need to be diverted into the canal system thus helping to improve the river wildlife habitat, water quality, and water quantity." Conservation Plan, page 1 of 2 which is included Exhibit A, the grant application and related documents.
- B. The U.S. Department of Agriculture-Natural Resources Conservation Service, Environmental Quality Incentive Funds (EQIP) does not pay indirect costs under the EQIP program contracts. A letter dated May 17, 2016 from the USDA, Exhibit B, states that "NRCS does not pay indirect costs under the EQIP program contracts it enters into with program participants. The payment amounts are governed by EQIP statutory and regulatory authority. In particular, an EQIP payment is to compensate a participant for the costs for implementing conservation practices, including incurred

costs associated with planning design, materials, equipment, installation, labor, management, maintenance, or training; and income forgone by the producer." The citation is to 16 USC 3839aa-1(3) and 16 USC 3839aa-2(d). For this reason, the Navajo Division of Natural Resources requests a waiver of Indirect Costs with regard to this grant application.

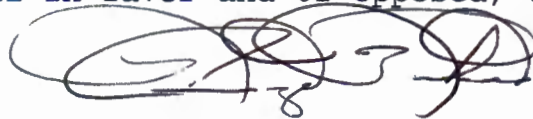
- C. The Naabik'íyáti' Committee of the Navajo Nation Council reviews and approves "the negotiation and setting of the Navajo Nation's indirect cost or administrative cost rate agreements with the cognizant federal agent." 2 N.N.C. §701(A)(10). The Naabik'íyáti' Committee may waive such costs when it determines it is in the best interests of the Navajo Nation and when the "division, department or program requesting the waiver demonstrates a statutory and/or regulatory requirement that limits the indirect cost or administrative cost rate available for a particular grant or contract, or ... [t]here is a showing of necessity and a commitment of available general funds by the division, department or program requesting the waiver which is available to offset the loss in indirect costs or administrative costs." 2 N.N.C. §701(A)(10)(a) and (b).
- D. The Navajo Nation continues to be concerned about the inadequate response from the United States Department of Agriculture as well as the federal Office of Management and Budget concerning the May 17, 2016 and September 1, 2016 letters. Specifically, the statutes and regulation cited by USDA lack specific language restricting recovering of indirect cost pursuant to the Navajo Nation's IDC agreement.
- E. The Navajo Nation recognizes that due to the short time period the Navajo Nation has to accept these funds, a waiver of IDC should be granted with the explicit reservation of any rights or claims that the Navajo Nation may have in recovering IDC for this agreement.
- F. It is in the best interest of the Navajo Nation to support the grant application of the Navajo Nation Division of Natural Resources to the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Environmental Quality Incentives Program (EQIP) and to approve a waiver of the indirect cost rate.

**Section Three. Supporting application and approving waiver of Indirect Cost Rate**

The Navajo Nation hereby supports the grant application of the Navajo Nation Division of Natural Resources to the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Environmental Quality Incentives Program (EQIP) in the amount of \$522,910.00 and approves a waiver of the indirect cost rate.

**CERTIFICATION**

I hereby certify that the foregoing resolution was duly considered by the Naabik'íyáti' Committee of the 23<sup>rd</sup> Navajo Nation Council at a duly called meeting in Window Rock, Navajo Nation (Arizona), at which a quorum was present and that the same was passed by a vote of 11 in favor and 02 opposed, this 2<sup>nd</sup> day of September 2016.



LoRenzo Bates, Chairperson  
Naabik'íyáti' Committee

Motion: Honorable Jonathan L. Hale  
Second: Honorable Benjamin Bennett

**SECTION 164 REVIEW FORM**Title of Document: USDA-NRCS EQIP, Gadii'ahi' Phase IV Contact Name: TALLMAN, DAVID D.Program/Division: DIVISION OF NATURAL RESOURCESEmail: david.tallman@gmail.com Phone Number: 928-729-4045, 4039

Division Director Approval for 164A: \_\_\_\_\_

**Check document category: only submit to category reviewers. Each reviewer has a maximum 7 working days,** except Business Regulatory Department which has 2 days, to review and determine whether the document(s) are sufficient or insufficient. If deemed insufficient, a memorandum explaining the insufficiency of the document(s) is required.

**Section 164(A) Final approval rests with Legislative Standing Committee(s) or Council**

| <input type="checkbox"/> | Statement of Policy or Positive Law:                                                                                                     |             | Sufficient               | Insufficient             |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|--------------------------|
|                          | 1. OAG: _____                                                                                                                            | Date: _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>IGA, Budget Resolutions, Budget Reallocations or amendments: (OMB and Controller sign ONLY if document expends or receives funds)</b> |             |                          |                          |
|                          | 1. OMB: _____                                                                                                                            | Date: _____ | <input type="checkbox"/> | <input type="checkbox"/> |
|                          | 2. OOC: _____                                                                                                                            | Date: _____ | <input type="checkbox"/> | <input type="checkbox"/> |
|                          | 3. OAG: _____                                                                                                                            | Date: _____ | <input type="checkbox"/> | <input type="checkbox"/> |

**Section 164(B) Final approval rests with the President of the Navajo Nation**

|                                     |                                                                                            |                      |                                     |                          |
|-------------------------------------|--------------------------------------------------------------------------------------------|----------------------|-------------------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <b>Grant/Funding Agreement or amendment:</b>                                               |                      |                                     |                          |
|                                     | 1. Division: <u>Long</u>                                                                   | Date: <u>5/24/16</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|                                     | 2. OMB: <u>CMS - See memo</u>                                                              | Date: <u>6/3/16</u>  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|                                     | 3. OOC: <u>See memo Valerie M Hubbard</u>                                                  | Date: <u>6/10/16</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|                                     | 4. OAG: <u>WBR</u>                                                                         | Date: <u>6/16/16</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>            | <b>Subcontract/Contract expending or receiving funds or amendment:</b>                     |                      |                                     |                          |
|                                     | 1. Division: _____                                                                         | Date: _____          | <input type="checkbox"/>            | <input type="checkbox"/> |
|                                     | 2. BRD: _____                                                                              | Date: _____          | <input type="checkbox"/>            | <input type="checkbox"/> |
|                                     | 3. OMB: _____                                                                              | Date: _____          | <input type="checkbox"/>            | <input type="checkbox"/> |
|                                     | 4. OOC: _____                                                                              | Date: _____          | <input type="checkbox"/>            | <input type="checkbox"/> |
|                                     | 5. OAG: _____                                                                              | Date: _____          | <input type="checkbox"/>            | <input type="checkbox"/> |
| <input type="checkbox"/>            | <b>Letter of Assurance/M.O.A./M.O.U./Other agreement not expending funds or amendment:</b> |                      |                                     |                          |
|                                     | 1. Division: _____                                                                         | Date: _____          | <input type="checkbox"/>            | <input type="checkbox"/> |
|                                     | 2. OAG: _____                                                                              | Date: _____          | <input type="checkbox"/>            | <input type="checkbox"/> |
| <input type="checkbox"/>            | <b>M.O.A. or Letter of Assurance expending or receiving funds or amendment:</b>            |                      |                                     |                          |
|                                     | 1. Division: _____                                                                         | Date: _____          | <input type="checkbox"/>            | <input type="checkbox"/> |
|                                     | 2. OMB: _____                                                                              | Date: _____          | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|                                     | 3. OOC: _____                                                                              | Date: <u>6/10</u>    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|                                     | 4. OAG: _____                                                                              | Date: _____          | <input type="checkbox"/>            | <input type="checkbox"/> |



# THE NAVAJO NATION

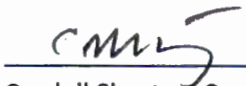
RUSSELL BEGAYE PRESIDENT  
JONATHAN NEZ VICE PRESIDENT

June 2, 2016

## MEMORNDUM

To: Program and 164 Reviewers

From:

  
Cordell Shortey, Contracting officer  
Grants and Contracts Section/OMB

Subject: 164 Document No. 006010 USDA-NRCS EQIP-Gadii'ahi' Phase IV

The subject document attached has been surnamed **sufficient** and comes with the following comments:

1. The subject document is a proposed contract with USDA-NRCS EQIP for funding in amt. of \$522,910. The initial Application for the subject Contract was electronically submitted by the program without first obtaining 2 NNC Sec. 164 (B) review as required by FY 2016 NN BIM Appendix L. Sec. V. A. and C. The hardcopy of the subject Application was later submitted for 164 reviews which was done "after-the-fact" but didn't complete the review process because of missing documents the funding agency failed to submit. However, according to the program, those documents were made part of this Contract. Pursuant to, E. O. 07-2013, for acceptance of award and entering into formal Contract, the NN President's signature is required.
2. The letter dated May 17, 2016 from the funding agency explicitly indicated that USDA NRSC will **not** pay indirect cost, pursuant to 16 USC 3839aa-1(3) and 16 USC 3839aa-2(d), including 7 CFR §1466.23, which statutorily limits payments to cost incurred in the actual implementation of the conservation practices is on which this decision was based. Program needs to handle issue on IDC pursuant to 2 NNC Sec. 701. A.10.

Contact our office at 928-871-6033, if you have any questions.

Attachment: 164(B) Review Document No. 6010 USDA-NRCS - Gadii'ahi' Phase IV.

Cc: file





# NAVAJO NATION DEPARTMENT OF JUSTICE

## DOCUMENT REVIEW REQUEST FORM



|                                                    |        |
|----------------------------------------------------|--------|
| DOJ                                                |        |
| 06-10-16 2:36pm                                    |        |
| DATE / TIME                                        |        |
| <input checked="" type="checkbox"/> 7 Day Deadline |        |
| DOC #:                                             | 006010 |
| SAS #:                                             |        |
| UNIT:                                              | NRW    |

☐ RESUBMITTAL

\*\*\* FOR NNDOJ USE ONLY - DO NOT CHANGE OR REVISE FORM. VARIATIONS OF THIS FORM WILL NOT BE ACCEPTED. \*\*\*

### CLIENT TO COMPLETE

DATE OF REQUEST: 6/10/16 ENTITY/DIVISION: DNR  
 CONTACT NAME: 928 206 6399 DEPARTMENT: DNR  
 PHONE NUMBER: David Tallman E-MAIL: david.tallman@gmail.com  
 TITLE OF DOCUMENT: 164-6010 USDA - NRCS Gadi'ahic' Phase IV

### DOJ SECRETARY TO COMPLETE

DATE/TIME IN UNIT: 06/10/16 REVIEWING ATTORNEY/ADVOCATE: Veronica  
2:47pm 06/21/16  
 DATE/TIME OUT OF UNIT: 06/16/16 11:50am EB

### DOJ ATTORNEY / ADVOCATE COMMENTS

legally sufficient. unclear with CGS/OMB recommendation #2  
regarding waiver of IDC.

|                      |             |                          |                       |
|----------------------|-------------|--------------------------|-----------------------|
| REVIEWED BY: (PRINT) | DATE / TIME | SURNAMED BY: (PRINT)     | DATE / TIME           |
|                      |             | <u>Veronica Blackhat</u> | <u>6/16/16 9:02am</u> |

DOJ Secretary Called: lift VM for David Tallman for Document Pick Up on 6/16/16 at 11:38am By: EB

PICKED UP BY: (PRINT) DATE / TIME:



THE NAVAJO NATION

RUSSELL BEGAYE PRESIDENT  
JONATHAN NEZ VICE-PRESIDENT

**MEMORANDUM**

June 10, 2016

TO : 164 Reviewers

FROM :   
Valerie M. Hubbard, Accounting Supervisor  
Contract Accounting, Office of the Controller

SUBJECT: USDA Natural Resource Conservation Service - EQIP Contract , 164 Document #6010

Our Office has reviewed and marked the document as "Sufficient" however one item needs to be addressed prior to the Contracts/Grants Section, OMB issuing a new FMIS company and business unit. A budget in NN format needs to be inserted for the amount of the award of \$522,910.

If there are any further questions, please contact our Office.

cc: file

**THE  
NAVAJO  
NATION**

**THE DIVISION OF NATURAL RESOURCES**

**MEMORANDUM**

**TO: ALL Department Managers  
Division of Natural Resources**

**FROM:**

  
Bidtah Becker, Division Director  
Division of Natural Resources

**SUBJECT: Delegation of Authority**

**DATE: January 12, 2016**

Please be advised that in the event that either I, Division Director of the Division of Natural Resources, or Ms. Evangeline Curley-Thomas, Deputy Director, Division of Natural Resources, are not in the office or otherwise unavailable, Mr. Robert O. Allan, Principal Attorney, Division of Natural Resources, shall be delegated authority as the Acting Division Director of the Division of Natural Resources. This is a standing delegation of authority until further notice.

Please cooperate with Mr. Allan in this standing delegation of authority. Should you have any questions, please contact me.

**ACKNOWLEDGED:**

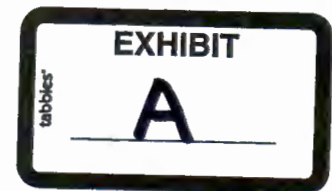


Evangeline Curley-Thomas, Deputy Director  
Division of Natural Resources

**ACKNOWLEDGED:**



Mr. Robert O. Allan, Principal Attorney  
Division of Natural Resources



U. S. DEPARTMENT OF AGRICULTURE  
Natural Resources Conservation Service (NRCS)  
On behalf of the  
Commodity Credit Corporation (CCC)

**APPENDIX TO FORM NRCS-CPA-1202  
CONSERVATION PROGRAM CONTRACT**

For  
**Environmental Quality Incentives Program (EQIP)  
Regional Conservation Partnership Program (RCPP)**  
(which is administered under and subject to EQIP regulations)

**1 PROGRAM ELIGIBILITY REQUIREMENTS**

- A** The Participant must complete and file Form AD-1026 Highly Erodible Land Conservation (HELC) and Wetland Conservation (WC) Certification or any successor form, and meet the requirements set forth therein, in accordance with Title XII of the Food Security Act of 1985, as amended. By signing this Conservation Program Contract (Contract), the Participant certifies that the Participant has completed and filed the AD-1026 and meets the payment eligibility requirements set forth in the Highly Erodible Land Conservation -Wetland Conservation (HELC-WC) provisions at 7 CFR part 12.
- B** The Participant must meet the requirements of, complete and file Form CCC-941 (Average Adjusted Gross Income (AGI) Certification and Consent to Disclosure of Tax Information) or any successor form. By signing this Contract, the Participant certifies that the Participant has met the requirements of, completed, and filed the applicable form. A person or legal entity shall not be eligible to receive any benefit during a crop, fiscal, or program year, as appropriate, if the person or legal entity does not meet the adjusted gross income (AGI) limitations established by Section 1001D of the Food Security Act of 1985, as amended, and implemented through regulations at 7 CFR part 1400. The amount of any payment or benefit shall be reduced by an amount that is commensurate with the direct and indirect ownership interest in the entity of each person or legal entity who has income in excess of the applicable limitation specified.
- C** The Participant must complete and file Form CCC-901 Member's Information, or its equivalent, if the Participant represents a business classified as a legal entity or joint operation by the U.S. Department of Agriculture (USDA) under 7CFR part 1400. The Farm Service Agency must be timely notified in writing of any changes to the member's information provided, including changes in membership due to death or otherwise as provided in 7 CFR part 1400.
- D** The Participant must have control of the land for the duration of this Contract. By signing this Contract, the Participant certifies that the Participant will control the land subject to this Contract for the term of this Contract and shall, upon request, provide evidence to the Commodity Credit Corporation (CCC) demonstrating that such Participant has control of the land for that period. Where applicable, the Natural Resources Conservation Service (NRCS) will consult with the U.S. Department of Interior, Bureau of Indian Affairs (BIA) to determine Tribal land eligibility.
- E** The Participant shall not be eligible for Contract payments for any of the following: (1) practices or activities that the participant is required to implement to

address non-compliance with the HELC and WC provisions at 7 CFR part 12 (AMA participants are not subject to HELC or WC provisions); (2) a non-land based structure that is not integral to a land based practice or activity; (3) practices and activities that were applied with financial assistance through any other USDA conservation program; (4) practices or activities that were initiated or implemented prior to contract obligation, unless a waiver was granted by the Chief prior to the practice or activity implementation; practices or activities that do not address an identified natural resource concern or result in conservation benefit; and (5) irrigation practices implemented for the purpose of water conservation or activities on land that does not meet applicable program irrigation history requirements.

- F** Land otherwise eligible for the covered conservation programs shall not be eligible if the land is subject to a deed or other restriction prohibiting the application of the conservation plan and associated practices, activities, or where a benefit has or will be obtained from a Federal, or State agency (including political subdivisions and entities thereof) in return for the Participant's agreement not to implement the conservation plan and associated practices and activities on the land during the same time as the land would be enrolled in this Contract. By applying for the program Contract, the Participant certifies as a condition for payment that no such restrictions apply to the subject land.
- G** The Participant is responsible for obtaining the authorities, permits, easements, or other approvals necessary for the implementation, operation, and maintenance of the conservation practices and activities in accordance with applicable laws and regulations. A Participant must comply with all laws and is responsible for all effects or actions resulting from the Participant's performance under this Contract.
- H** The Participant will obtain the landowner's signature on the Contract or provide to NRCS written authorization from the landowner that identifies the Participant has authority to install structural or vegetative practices. The landowner's signature on the Contract for purposes of authorizing such practices, does not qualify the landowner for program payments unless all other program participation and payment eligibility requirements are met, as determined by NRCS.
- I** The Participant must be an eligible producer as defined in 7 CFR part 1466 for EQIP.

## **2 OFFERS FROM APPLICANTS**

Form NRCS-CPA-1200, Conservation Program Contract Application executed by an eligible producer represents a request to enter into the program under the terms specified in this Contract Appendix.

## **3 AGREEMENT**

The Participant agrees to:

- (A) Enroll eligible land into the program for the period of time as specified on Form NRCS-CPA-1202 beginning on the date this Contract is executed by CCC;

- (B) Not start any financially assisted practice or activity or engage the reimbursable services of a certified Technical Service Provider (TSP) before this Contract is executed by CCC, unless a waiver is approved by the NRCS Chief. The Participant may submit a written request to waive this requirement for financially assisted practices;
- (C) Secure CCC funding for services obtained by the Participant from a certified TSP through contract development or contract modification with CCC before engaging the services of a TSP if CCC payment for TSP services is desired;
- (D) Apply or commence a financially-assisted practice or activity within the first 12 months from the date this Contract is executed by CCC unless a waiver is requested and approved by the NRCS Chief;
- (E) Establish or implement, to NRCS Standards and Specifications, conservation practices or activities described in this Contract as scheduled, to operate and maintain these practices or activities for the intended purpose and life span identified in this Contract, and to comply with the terms and conditions of this Contract and all applicable Federal, State, Tribal, and local laws. In cases where the land is transferred to new ownership or management during the contract period, the Participant must also ensure these responsibilities are transferred to subsequent owners or managers as provided herein;
- (F) Provide written notice to CCC within 60 days of any voluntary or involuntary loss of control of any acreage under the CPC. The notice must include the name of a new producer, and the new producer must be determined eligible by CCC and willing to accept the transfer of the contract's terms and conditions by completing Form NRCS-CPA-152 Conservation Program Contract Transfer Agreement. CCC will terminate the contract if timely notice is not provided, if an eligible producer is not identified in the notice or the new producer is not approved by CCC to accept the terms and conditions of the contract. Practices or activities are not eligible for payment if implemented after the loss of control of land by the participant and prior to approval by CCC of the transfer of the contract to an eligible new producer;
- (G) Share responsibility for ensuring that Form NRCS-CPA-1155, Conservation Plan or Schedule of Operations, is accurate and complete. CCC has no authority to compensate participants for practices and/or activities that are not in the Contract at the time of obligation;
- (H) Not undertake any action on land under the Participant's control which tends to defeat the purposes of the program or statute authority, as determined by CCC;
- (I) Discontinue work or practice implementation and notify CCC immediately if during the construction of any practice a previously unknown or unidentified endangered species, cultural, archeological, or historical site is encountered;
- (J) Provide receipts, as necessary, as proof of payments, and to maintain proof of payment documentation for three (3) years after the end of the Federal fiscal year in which the practice or activity was completed, and to present this

documentation to CCC within 30 days if selected for administrative compliance check;

- (K) Allow access to the land under Contract to the CCC representative or their agent, including NRCS or Technical Service Providers representing NRCS, for monitoring progress on this Contract. NRCS shall provide reasonable notification to the participant prior to entering the land under Contract;
  - (L) Supply records and information as required by CCC to determine compliance with the Contract and requirements of the program within 30 days of request;
  - (M) Develop and implement all practices identified in a comprehensive nutrient management plan (CNMP) in contracts associated with an Animal Feeding Operation (AFO) that include a waste storage or treatment facility; develop and implement all practices identified in a forest management plan (FMP) for all non-industrial private forestland (NIPF) subject to this Contract; and develop and carry-out and implement those conservation practices in the EQIP plan that are consistent with an organic system plan for contracts funded under the EQIP Organic Initiative (16 U.S.C. 3839aa-2(i)); and
  - (N) Accept applicable program contract and payment limits as found in 7 CFR part 1400 and program regulations at 7 CFR part 1466 for EQIP:
    - **EQIP** - payments made to a person or legal entity may not receive, directly or indirectly, financial assistance payments under EQIP that, in aggregate, exceed **\$450,000** for all contracts entered into under EQIP by the person or legal entity during the period of fiscal years **2014 through 2018**. No single EQIP contract with a person or legal entity may exceed a total obligation greater than \$450,000.
    - **EQIP-Organic** - Financial assistance payments funded under the EQIP Organic Initiative at 16 U.S.C. 3839aa-2(i) to a person or legal entity directly or indirectly, may not exceed in aggregate **\$20,000 per fiscal year or \$80,000 during any six-year period**.
- (a) The following items are applicable to all of the above listed programs:
- (i) Payments received in excess of these limits are improper payments and subject to immediate refund.
  - (ii) Annual and contract payment limitations may not be waived.
  - (iii) Split payments to avoid provisions of annual payment limitations are not allowed. When payment requests for satisfactorily completed practices exceed the annual or contract limitation for a person or legal entity, that portion that exceeds the limitation will not be deferred to the next fiscal year. The balance will be de-obligated and no provision for waiver to exceed the limitation is allowed.
  - (iv) Certification of completed practices will not be delayed or postponed to circumvent the annual payment limitations.

Indian tribes are not subject to these payment and contract limitations, but must certify that no Tribal member will receive a benefit in excess of these limitations.

#### **4 CONSERVATION PLAN**

By signing the Contract, the Participant agrees:

- (A) that the NRCS-CPA-1155, Conservation Plan or Schedule of Operations is hereby incorporated as a part of the Contract; and
- (B) to implement and maintain the practices and activities as identified and scheduled on Form NRCS-CPA-1155 and in compliance with Paragraph 6 of this Appendix—Operation and Maintenance of Conservation Practices.

#### **5 PAYMENTS**

- A** Subject to the availability of funds, CCC will make payment at the rate specified in this Contract after a determination by CCC that an eligible conservation practice or activity has been implemented in compliance with the conservation plan, and in accordance with appropriate NRCS standards and specifications. In order to receive payment, the Participant, upon technical certification of the completed practice or activity, must execute and file with CCC a Form NRCS-CPA-1245, Practice Approval and Payment Application, and if requested, any applicable receipts or invoices, as necessary. Except for reasons beyond the control of the Participant, failure of the Participant to report completion of practices or activities on Form NRCS-CPA-1245 during the contract period of performance will result in forfeiture of all rights to payment under this Contract.
- B** Payments will be issued based on the payment rate and the amount of the actual practice extent implemented, as documented on Form NRCS-CPA-1245. Form NRCS-CPA-1155, Plan/Schedule of Operations and Form NRCS-CPA-1156, Revision of Plan/Schedule of Operations or Modification of a Contract reflect the applicable payment rate(s) in effect for the fiscal year of Contract obligation. Payment rates reflect costs associated with implementation of the approved conservation practice but do not include potential costs associated with the operation and maintenance of practices, per Paragraph 6 of this Appendix. Costs associated with operation and maintenance of a practice for the intended lifespan are the responsibility of the Participant.
- C** In order to be reimbursed for technical services approved under this agreement and performed by a certified TSP hired by the Participant, a Participant must execute a request for payment on Form NRCS-CPA-1245. The Participant must also submit to CCC an invoice from the certified TSP for the work performed, as well as any documentation CCC may require in order to ensure that the technical services were carried out in accordance with NRCS requirements. It is the Participant's responsibility to ensure that the technical services obtained from a certified TSP hired by the Participant meet program requirements. CCC will not reimburse the Participant if the technical services provided by the TSP do not meet the program requirements. If CCC terminates this Contract as provided under Paragraph 11 of this Appendix, CCC may seek refund of any TSP payments made to the Participant.

- D** All payments received as part of a Contract are reported to the United States Internal Revenue Service (IRS). For information related to tax liabilities, it is recommended that the Participant consult with a tax accountant or refer to IRS publication 225 "Farmers Tax Guide" or successor IRS publications.
- E** Payments will only be issued for practices or activities that are completed within the contract period of performance and meet or exceed the practice standards described in the NRCS Standards and Specifications.
- F** Collection of amounts due from a Participant for improper payment or any other reason will follow procedures of 7 CFR part 1403. NRCS will notify the Participant and provide the reason for the collection and the amount owed. Unpaid debts accrue interest due to the CCC beginning 30 days after the billing date at the current value of funds rate published in the Federal Register by the United States Department of Treasury.
- G** Any Participant that will receive any share of a payment made for the implementation of this Contract must be a signatory on the Contract and eligible for such payment. Any Participant on the Contract may approve payment applications for the Contract unless signature authority is specifically not granted or assigned on the Contract form NRCS-CPA-1202 or NRCS-CPA-152.
- H** Any payment that has or will be received through another USDA program or from other sources must be disclosed to the NRCS Approving Official at the time a payment application, NRCS-CPA-1245, is submitted. NRCS may reduce payments to account for the funds received from other sources in accordance with program requirements.
- I** Historically underserved EQIP participants, as determined by CCC, may receive advance payments up to 50 percent of the amount needed to implement conservation practices for the purpose of purchasing "immediately needed" materials and services. The scheduled practice for which the advance is requested must have an NRCS approved practice design prior to issuance of the advance payment. If funds provided in advance are not expended during the 90-day period beginning on the date of receipt of the funds, the funds shall be returned to the CCC within a reasonable timeframe, as determined by CCC. Advanced payments will be subject to all terms and conditions including those identified in Paragraph 12 of this Appendix—Recovery of Costs.
- J** If a Participant receiving a Contract payment is indebted to another Federal agency and the outstanding debt has been referred to the Treasury Offset Payment System, the Contract payment due to the Participant will be reduced by Treasury for the amount owed the U. S. Government. Though the Participant will not be notified by NRCS that a payment offset has occurred, NRCS records will reflect full Contract payment to the Participant.
- K** Contract payments will not be delayed for practices completed while in non-compliance with the HELC-WC provisions or for the purpose of circumventing the payment eligibility requirements as set forth in 7 CFR part 12.

## 6 OPERATION AND MAINTENANCE OF CONSERVATION PRACTICES (Operation and Maintenance Agreement)

The Participant agrees to operate and maintain all conservation practices included within this Contract for the practice lifespan as listed on Form NRCS-CPA-1155, Conservation Plan or Schedule of Operations, and any subsequent practices resulting from revisions on Form NRCS-CPA-1156, Revision of Plan/Schedule of Operations or Modification of a Contract. This requirement also extends to those conservation practices installed before Contract execution, but included in the Contract because their maintenance is necessary to obtain the environmental benefits agreed upon in this Contract and reflected in the ranking process.

- A** The term Operation and Maintenance (O&M) as used in the Contract shall collectively include:
- **Operation:** The administration, management, and performance of non-maintenance activities necessary to keep a practice safe and functioning as planned;
  - **Maintenance:** The recurring activities necessary to retain or restore a practice in a safe and functioning condition, including, but not limited to, the management of vegetation, the repair or replacement of failed components or conservation practices, the prevention or treatment of deterioration, and the repair of damages caused by vandalism or negligence, but excluding damage caused by a local, state or nationally recognized natural disaster;
  - **Repair:** The actions to return a deteriorated, damaged, abandoned, or failed practice and/or component to an acceptable and functional condition; and
  - **Replacement:** The removal of a practice or component and installation of a similar, functional practice or component.
- B** The Participant is responsible for the O&M activities and acknowledges that these activities may require labor, funds, and management in order to ensure the appropriate program purposes are met.
- C** The Participant O&M responsibilities begin when the practice installation is completed, as determined by NRCS, and shall continue through the end of the practice lifespan.
- D** The Participant acknowledges that the "practice lifespan" is the time period in which the conservation practices are to be used and maintained for their intended purposes as defined by NRCS technical references and documented on either Forms NRCS-CPA-1155 or NRCS-CPA-1156.
- E** Specific O&M requirements for conservation practices covered within this Contract are defined in the conservation practice standard and are documented within the conservation plan narrative, Contract provision, and/or job sheet.
- F** The Participant acknowledges that conservation practices installed before the contract execution, but included in the Contract to obtain the environmental benefits agreed upon within the application ranking process, must be operated

and maintained as specified in the Contract and within this paragraph.

- G** The Participant agrees to the O&M requirements as listed within this Paragraph (6) and failure to carry-out the terms and conditions listed may result in CCC termination of this Contract. (Refer to Paragraph 11 of this Appendix—Contract Termination).

## **7 PROVISIONS RELATING TO TENANTS AND LANDLORDS**

No payment will be approved for the current year if CCC determines that any of the following conditions exist:

- (A) The landlord or operator has not given the tenants that have an interest in the agricultural operation covered by the Contract, or that have a lease that runs through the Contract term at the time of sign-up, an opportunity to participate in the benefits of the program.
- (B) The landlord or operator has adopted any other scheme or device for the purpose of depriving any tenant of any benefits to which such tenant would otherwise be entitled. If any such conditions occur or are discovered after payments have been made, all or any part of the payments, as determined by CCC, must be refunded according to Paragraph 5F of this Appendix and no further payments shall be made.

## **8 MISREPRESENTATION AND SCHEME OR DEVICE**

- A** A Participant who is determined to have erroneously represented any fact affecting a determination with respect to this Contract and the regulations applicable to this Contract, adopted any scheme or device which tends to defeat the purposes of this Contract, or made any fraudulent representation with respect to this Contract, will not be entitled to payments or any other benefits made under this Contract. The Participant must refund to CCC all payments received plus interest. In addition, CCC may terminate the Participant's interest in all conservation program contracts.
- B** CCC will charge interest on monies it determines to be due and owing to CCC under this Contract. Under debt collection procedures, unpaid bills accrue interest beginning 30 days after the billing date. The interest rate will be determined using the current value of funds rate, published annually in the Federal Register by the United States Department of Treasury.
- C** The provisions of this Paragraph of the Appendix shall be applicable in addition to any other criminal and civil fraud statutes.

## **9 CHANGES TO TERMS AND CONDITIONS OF THIS CONTRACT**

- A** CCC may unilaterally cancel this Contract when the implemented practice would cause adverse impacts to significant cultural and/or environmental resources without mitigation action unless CCC and the Participant modify this Contract to address such impacts.
- B** Subject to the availability of funds, CCC may adjust the amount of payment for a single contract item (practice or activity) by not more than five hundred dollars

(\$500) as the result of an increase in the number of units performed (quantity variation) by the Participant.

**C** The Participant and CCC may modify this Contract by mutual agreement when:

- (1) Both the Participant and CCC agree to this modification;
- (2) At the request of the Participant, and upon approval of CCC, the modification is consistent with the purposes of the program; and
- (3) A transfer of this Contract occurs, provided CCC approval is obtained, and an eligible transferee accepts all terms and responsibilities under this Contract including operation and maintenance of those practices already installed or to be installed.

**D** CCC uses a payment schedule to document estimated costs incurred and income foregone associated with practice implementation to justify the payment rates used in this Contract. Each payment schedule has a range of potential practice payment scenarios that represent the typical costs associated with implementation of a conservation practice under various site and related conditions. The payment rates incorporated into this Contract are based upon a practice payment scenario within the payment schedule that CCC determined best approximates the site conditions for this Contract. The Participant and CCC may modify this Contract by mutual agreement to substitute a different practice payment scenario upon which to base the payment rates used in this Contract provided that CCC determines, in its sole discretion that:

- (1) Substantive design changes are required prior to practice installation;
- (2) CCC determines that the proposed substitute scenario is within the existing payment schedule associated with this Contract and better approximates the site conditions as identified by the design changes;
- (3) There is sufficient difference in implementation requirements between the original payment scenario and the substitute payment scenario to increase or decrease the estimated practice payment by more than 10 percent;
- (4) Practice specifications are clearly documented in the practice narrative or substitute payment scenario description; and
- (5) The planned practice has not been implemented.

**E** All modifications that require CCC approval must be approved in writing by the authorized CCC official and the Participant or an individual granted signature authority through a valid Power of Attorney filed in the local Service Center. Any Participant on the Contract may approve modifications for the Contract on behalf of all participants unless such signature authority is specifically denied on the NRCS-CPA-1202.

## 10 CORRECTIONS

CCC reserves the right to correct all errors in entering data or the results of computations

in this Contract. If the Participant does not agree to such corrections, CCC shall terminate the Contract.

## 11 CONTRACT TERMINATION

- A If a Participant fails to carry-out the terms and conditions of this Contract, CCC may terminate this Contract. CCC may require the Participant to refund payments received under this Contract, or if not terminated, require the Participant to accept such adjustments in subsequent payments as are determined to be appropriate by CCC. Refunds shall be subject to the provisions in Paragraph 5F of this Appendix.
- B The CCC may terminate this Contract, in whole or in part, without liability, if CCC determines that continued operation of this Contract will result in the violation of a statute or regulation, or if CCC determines that termination would be in the public interest.
- C The Contract terminates upon death of the Participant unless the Participant appointed an executor or other estate representative to act on the Participant's behalf. The designated representative must provide written notice within 60 days of the participant's death to CCC or the contract will be terminated. The notice must include the name of a new producer, and the new producer must be determined eligible by CCC and willing to assume the contract terms and conditions. The contract must be transferred to either the estate per 7 CFR part 1400 or to an alternative eligible new producer by completing Form NRCS-CPA-152 Conservation Program Transfer Agreement. The transfer agreement is not in effect until approved by CCC.

## 12 RECOVERY OF COST

- A In the event a Participant violates the terms of this Contract, the Participant voluntarily terminates this Contract before any contractual payments have been made, or this Contract is terminated with cause by CCC, the CCC will incur substantial costs in administering this Contract which may not be possible to quantify with certainty. Therefore, in addition to the refund of payments as set forth in Paragraph 11 of this Appendix, the **Participant agrees to pay, at the time of termination, liquidated damages in an amount equal to 10 percent of the total financial assistance obligated to the Participant in this Contract,** at the time of obligation. This liquidated damages payment is for recovery of administrative costs and technical services and is not a penalty.
- B The Participant may be required by the CCC to refund all or a portion of any assistance earned under the program if the Participant sells or loses control of the land under this Contract and the new owner or transferee is not eligible for the program, or refuses to assume responsibility under the Contract.

## 13 PERIOD OF PERFORMANCE

This Contract is effective when signed by the Participant and executed by an authorized representative of CCC and shall have a term not to exceed 10 years from date of approval by CCC as indicated on the NRCS-CPA-1202 or NRCS CPA-1156. Except as otherwise provided for herein, this Contract may not be terminated or modified unless by mutual

agreement between the parties. Within the dates established by CCC, this Contract must be signed by all required Participants. In the event that a statute is enacted during the period of this Contract which would materially change the terms and conditions of this Contract, the CCC may require the Participant to elect between modifying this Contract consistent with the provisions of such statute or Contract termination.

## 14 GENERAL TERMS

- A** The regulations in 7 CFR part 1466 for EQIP and any other applicable regulations are incorporated, by reference, herein. In the event of a conflict between these regulations and the terms of this Appendix, the provisions of the regulations will prevail.
- B** This Contract shall be carried out in accordance with all applicable Federal statutes and regulations. Any ambiguities in this Contract and questions as to the validity of any of its specific provisions shall be resolved in favor of CCC so as to give maximum effect to the conservation purposes of this Contract.
- C** NRCS is administering this Contract on behalf of the CCC. Therefore, where this Contract refers to "CCC", NRCS may act on its behalf for the purposes of administering this Contract. When the term "Participant" is used in this Contract, it shall be construed to mean all Participants signing this Contract. Likewise, when the term "Applicant" is used in this Contract, it means all Applicants signing the program application.
- D** Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions (2 CFR part 417 and 2 CFR part 180, as applicable).
- (1) The Participant certifies to the best of the Participant's knowledge and belief, that the Participant and his or her principals:
- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  - (b) Have not within the three-year period preceding this agreement had a criminal conviction or civil judgment rendered against them for commission of fraud in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local government) contract, including violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses set forth above in Paragraph 14D(1)(b) of this certification; and
  - (d) Have not within the three-year period preceding this agreement had one or more public contracts (Federal, State or local) terminated for cause or default.

(2) If the Participant is unable to certify to any of the statements set forth in paragraph 14D (1), the Participant shall attach an explanation to this agreement. The Participant must notify CCC immediately if the circumstances supporting certification of any of such statements change or the Participant may incur additional liability or penalties in accordance with applicable law.

**E** This Contract is a financial assistance agreement, not a procurement contract. As such, it is **not subject to 5 CFR part 1315, Prompt Payment Act** and is governed by the terms set forth herein.

**F** The term "Contract" as used in this Appendix means the program documents, including: Conservation Program Contract, Form NRCS-CPA-1202 along with the—

- Appendix to Form NRCS-CPA-1202, Form NRCS-CPA-1202-CPC (Appendix);
- Conservation Plan Schedule of Operations, Form NRCS-CPA-1155;
- Revision of Plan/Schedule of Operations or Modification of a Contract, Form NRCS-CPA-1156; and
- Transfer Agreement, form NRCS-CPA-152 for the transferee(s).

The Contract shall set forth the terms and conditions for Conservation Program participation and receipt of Conservation Program payments.

**G** The term "Socially Disadvantaged" means an individual or entity who is a member of a socially disadvantaged group. For an entity, at least 50 percent ownership in the farm business must be held by socially disadvantaged individuals. A socially disadvantaged group is a group whose members have been subject to racial or ethnic prejudice because of their identity as members of a group without regard to their individual qualities. These groups consist of the following:

- American Indians or Alaskan Natives
- Asians
- Blacks or African Americans
- Native Hawaiians or other Pacific Islanders
- Hispanics.

Note: Gender alone is not a covered group for the purposes of NRCS conservation programs. The term "entities" reflects a broad interpretation to include partnerships, couples, legal entities, etc.

**H** "Indian Tribe" means any Indian Tribe, band, nation, pueblo, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.) which is recognized as eligible for special programs and services provided by the United States to Indians because of their status as Indians. Note: "Indian tribes recognized as eligible to receive services by the United States Bureau of Indian Affairs" is available through the United States Bureau of Indian Affairs.

**I** A Limited Resource Farmer or Rancher is a participant:

- With direct or indirect gross farm sales not more than the current indexed value in each of the previous two years, and
- Who has a total household income at or below the national poverty level for a family of four, or less than 50 percent of county median household income in each of the previous two years.

A legal entity or joint operation can be a Limited Resource Farmer or Rancher only if all individual members independently qualify. A Self-Determination Tool is available to the public and may be completed on-line or printed and completed hardcopy at:

<http://www.lrftool.sc.egov.usda.gov/> Participants who self-certify eligibility as a Limited Resource Farmer or Rancher may be requested to provide records to justify their claim. It is the responsibility of the participant to provide accurate data. False certifications are subject to criminal and civil fraud statutes.

**J** A Beginning Farmer or Rancher is a participant who:

- Has not operated a farm or ranch, or who has operated a farm or ranch for not more than 10 consecutive years. This requirement applies to all members of a legal entity, and
- Will materially and substantially participate in the operation of the farm or ranch.

In the case of a contract with an individual, individually or with the immediate family, material and substantial participation requires that the individual provide substantial day-to-day labor and management of the farm or ranch, consistent with the practices in the county or State where the farm is located.

In the case of a contract made with a legal entity, all members must materially and substantially participate in the operation of the farm or ranch. Material and substantial participation requires that the members provide some amount of the management, or labor and management necessary for day-to-day activities, such that if the members did not provide these inputs, operation of the farm or ranch would be seriously impaired.

Participants who self-certify eligibility as a Beginning Farmer or Rancher may be requested to provide records to justify their claim. It is the responsibility of the participant to provide accurate data. False certifications are subject to criminal and civil fraud statutes.

**K** The term "Veteran Farmer or Rancher" means a farmer or rancher who:

- Served in the active United States Army, Navy, Marine Corps, Air Force, and Coast Guard, including the reserve components thereof, and
- Was discharged or released from the service under conditions other than dishonorable and
- Has not operated a farm or ranch; or has operated a farm or ranch for not more than 10 consecutive years.

A legal entity or joint operation can be a Veteran Farmer or Rancher only if all individual members independently qualify. Participants who self-certify eligibility as a Veteran Farmer or Rancher may be requested to provide records to justify

their claim. It is the responsibility of the Participant to provide accurate data.

**L** The term "Historically Underserved" represents a participant meeting the criteria as set forth in Paragraph 14 (G) (H) (I) or (J) of this Appendix. In the case of a contract made with multiple participants, the Historically Underserved payment rates are applied to the contract only when 100 percent of the participants receiving a payment share are Historically Underserved, unless at least 50 percent of the participant payment shares are designated to Socially Disadvantaged participants, in which case the Historically Underserved payment rates apply to this Contract.

**M** The term "Participant" as used in this Appendix means a person, legal entity, joint operation, or Indian tribe that is a producer who has applied for participation in the program, has been selected as eligible for participation, and who has entered into this Contract as responsible for implementing its terms and conditions. The term "Participant" does not include a landowner who signs this Contract solely to authorize the establishment of structural or vegetative practices as identified herein, and such signature, in and of itself, does not authorize the landowner to receive a payment share under this Contract.

## **15 RIGHTS TO APPEAL AND REQUEST EQUITABLE RELIEF**

**A** The Participant may appeal an adverse decision under this Contract in accordance with the appeal procedures set forth at 7 CFR part 11, Subpart A, and part 614. Pending the resolution of an appeal, no payments shall be made under this agreement. Before a Participant seeks judicial review, the Participant must exhaust all appeal rights granted within these regulations.

**B** The Participant may also request equitable relief as provided at 7 U.S.C. 7996 and 7 CFR part 635 with the requirements of that provision.

## **16 EXAMINATION OF RECORDS**

**A** The Participant agrees to give the CCC, the Office of the Inspector General, or the Comptroller General, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to this Contract. The Participant agrees to retain all records related to this agreement for a period of three (3) years after completion of the terms of this agreement in accordance with the applicable Office of Management and Budget circular.

**B** The Participant authorizes CCC to obtain tax data from the Internal Revenue Service (IRS) for Adjusted Gross Income compliance verification purposes and the Participant will take all necessary actions required by the terms and conditions of the IRS disclosure laws so that CCC can obtain such data.

## **17 DRUG-FREE WORKPLACE (2 CFR part 182 and 2 CFR part 421)**

By signing this Contract, the Participant certifies that the Participant will comply with the requirements of 2 CFR part 182 and 2 CFR part 421. If it is later determined that the Participant knowingly rendered a false certification, or otherwise violates the requirements of the Drug-Free Workplace Act (Public Law 100-690, Title V, Subtitle D; 41 U.S.C. 701 et seq.; 2 CFR part 182 and 2 CFR part 421,) CCC, in addition to any other remedies available to CCC under this contract or in general to the United States, may take action authorized under the Drug-Free Workplace Act.

**18 CERTIFICATION REGARDING LOBBYING (2 CFR part 3018)  
(Applicable if this agreement exceeds \$100,000)**

The Participant certifies, to the best of the Participant's knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Participant, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement;
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress, in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions; and
- (3) The Participant shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including sub contracts, sub grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

**19 CERTIFICATION AND ASSURANCES REGARDING COMPLIANCE WITH PROVISIONS APPLICABLE TO FINANCIAL ASSISTANCE (See 2 CFR 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for federal awards)**

- A** As a condition of this Contract, the Participant certifies and assures that it is in compliance with and will comply in the course of the agreement with all applicable laws, regulations, Executive Orders and other generally applicable requirements, including those applicable to non-profit institutions, which are hereby incorporated into this Contract by reference, and such other regulatory and statutory provisions as are specifically set forth herein.
- B** Without limiting the general applicability of Paragraph 19A, the Participant, if it is a non-profit, further agrees to comply with the provisions of 2 CFR part 200 subpart D, including the contract provisions required at Appendix A. The following Participants by entering their signature acknowledge receipt of this Form NRCS-CPA-1202-CPC (Appendix) and agree to its terms and conditions thereof.

Further, if the undersigned are succeeding to an existing Contract, the undersigned agree and certify that no agreement exists or will be entered into between the undersigned, the previous owner and operator of the property, or mortgage holder that would, maintain or create an interest in the property for any previous Participant on this Contract for that property, or to receive payments under the contracts.

**20 CERTIFICATION AND ASSURANCES REGARDING COMPLIANCE WITH PROVISIONS APPLICABLE TO REQUIREMENTS FOR FEDERAL FUNDING ACCOUNTABILITY AND TRANSPARENCY ACT IMPLEMENTATION (See 2 CFR Part 25 and 2 CFR Part 170)**

- A** As a condition of this Contract, the Participant certifies and assures that, if it is an entity, that it is in compliance with and will comply in the course of the agreement with all requirements for entities, with some specific exceptions, to have Dun and Bradstreet Data Universal Numbering System (DUNS) numbers and maintain current registrations in the System for Award Management (SAM.gov) database as set out in Appendix A to 2 CFR Part 25 or any successor Federal contractor registration database.
- B** As a condition of this Contract, the Participant certifies and assures that, if it is an entity, that it is in compliance with and will comply in the course of the agreement with all requirements for entities, with some exception to report first-tier sub awards to an entity and executive salary compensation as set out in Appendix A to 2 CFR Part 170.

The following Participants by entering their signature acknowledge receipt of this Form NRCS-CPA-1202-CPC (Appendix) and agree to its terms and conditions thereof. Further, if the undersigned are succeeding to an existing Contract, the undersigned agree and certify that no agreement exists or will be entered into between the undersigned, the previous owner and operator of the property, or mortgage holder that would, maintain or create an interest in the property for any previous Participant on this Contract for that property, or to receive payments under the contracts.

By signing this document you acknowledge and agree that all the information provided is true and accurate on your behalf. Any false certifications made by Participants by signing this Appendix may subject the Participants to criminal and civil fraud statutes. You further acknowledge that you have read and accept all terms and conditions provided.

|                                                                                   |                     |
|-----------------------------------------------------------------------------------|---------------------|
|  | Date <u>6/18/16</u> |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |
| _____                                                                             | Date _____          |

USDA prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.)

To file a complaint of discrimination, complete, sign, and mail a program discrimination complaint form, available at any USDA office location or online at <http://www.ascr.usda.gov>, or write to:

USDA  
Office of the Assistant Secretary for Civil Rights  
1400 Independence Avenue, S.W.  
Washington, DC 20250-9410

Or call toll free at (866) 632-9992 (voice) to obtain additional information, the appropriate office or to request documents. Individuals who are deaf, hard of hearing, or have speech disabilities may contact USDA through the Federal Relay service at (800) 877-8339 or (800) 845-6136 (in Spanish). USDA is an equal opportunity provider, employer, and lender.

Persons with disabilities who require alternative means for communication of program information (e.g., Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

| US DEPARTMENT OF AGRICULTURE<br>NATURAL RESOURCES CONSERVATION SERVICE |                                            | CONSERVATION PLAN OR SCHEDULE OF OPERATIONS          |                                                          | NRCS-CPA-1155<br>02/2014 |  |
|------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------|----------------------------------------------------------|--------------------------|--|
| PARTICIPANT<br>NAVAJO NATION                                           | COUNTY AND STATE<br>SAN JUAN County, NM    | PROGRAM AND CONTRACT NUMBER<br>EQIP 2014 748C30160ZX | SUBACCOUNT<br>Navajo Nation Tribal Crop Projects<br>- SF |                          |  |
| LAND UNITS OR LEGAL DESCRIPTION<br><br>Farm: 3430 Tract(s): 3801.      | WATERSHED<br>Malpais Arroyo-San Juan River | ACRES<br>348                                         | EXPIRATION<br>DATE<br>4/30/2017                          |                          |  |

| Total Cost-Share or Payment by Year |           |  |  |  |  | Total<br>Contract<br>Payment |
|-------------------------------------|-----------|--|--|--|--|------------------------------|
| Year                                | 2016      |  |  |  |  |                              |
| Amount(\$)                          | \$522,910 |  |  |  |  | \$522,910                    |

NOTES: A. All items numbers on form NRCS-CPA-1155 must be carried out as part of this contract to prevent violation.  
 B. When established, the conservation practices identified by the numbered items must be maintained by the participant at no cost to the government.  
 C. All cost share rates are based on average cost (AC) with the following exceptions:  
     AA = Actual cost not to exceed average cost; AM = Actual cost not to exceed a specified maximum; PR = Payment rates.  
 D. By signing, the participant acknowledges receipt of this conservation plan including this form NRCS-CPA-1155 and agrees to comply with the terms and conditions here of.

| Certification of Participants                                                                                     |                 |
|-------------------------------------------------------------------------------------------------------------------|-----------------|
| Signature<br>NAVAJO NATION<br> | Date<br>6/18/16 |

| Signatures of Reviewing Officials                                                      |                                       |
|----------------------------------------------------------------------------------------|---------------------------------------|
| Designated Conservationist - Technical Adequacy Certification<br>Signature: GARY SMITH | NRCS Approving Official<br>Signature: |
| Date: 4/5/2016                                                                         | Date:                                 |

| US DEPARTMENT OF AGRICULTURE<br>NATURAL RESOURCES CONSERVATION SERVICE |                     | CONSERVATION PLAN OR SCHEDULE OF OPERATIONS |                                            | NRCS-CPA-1155<br>02/2014        |  |
|------------------------------------------------------------------------|---------------------|---------------------------------------------|--------------------------------------------|---------------------------------|--|
| PARTICIPANT                                                            | COUNTY AND STATE    | PROGRAM AND CONTRACT NUMBER                 | SUBACCOUNT                                 |                                 |  |
| NAVAJO NATION                                                          | SAN JUAN County, NM | EQUIP 2014 748C30160ZX                      | Navajo Nation Tribal Crop Projects<br>- SF |                                 |  |
| LAND UNITS OR LEGAL DESCRIPTION                                        |                     | WATERSHED<br>Malpais Arroyo-San Juan River  | ACRES<br>348                               | EXPIRATION<br>DATE<br>4/30/2017 |  |
| Farm:3430 Tract(s):3801.                                               |                     |                                             |                                            |                                 |  |

PRIVACY ACT

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C 522a). Furnishing this information is voluntary; however failure to furnish correct, complete information will result in the withholding or withdrawal of such technical or financial assistance. The information may be furnished to other USDA agencies, the Internal Revenue Service, the Department of Justice, or other state or federal law enforcement agencies, or in response to orders of a court, magistrate, or administrative tribunal.

This information collection is exempted from the Paperwork Reduction Act under 16 U.S.C. 3801 note and 16 U.S.C. 3846.

NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers. If you believe you experienced discrimination when obtaining services from USDA, participating in a USDA program, or participating in a program that receives financial assistance from USDA, you may file a complaint with USDA. Information about how to file a discrimination complaint is available from the Office of the Assistant Secretary for Civil Rights.

USDA prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.)

To file a complaint of discrimination, complete, sign and mail a program discrimination complaint form, available at any USDA office location or online at [www.ascr.usda.gov](http://www.ascr.usda.gov), or write to:

USDA  
Office of the Assistant Secretary for Civil Rights  
1400 Independence Avenue, S.W.  
Washington, DC 20250-9410

Or call toll free at (866) 632-9992 (voice) to obtain additional information, the appropriate office or to request documents. Individuals who are deaf, hard of hearing or have speech disabilities may contact USDA through the Federal Relay service at (800) 877-8339 or (800) 845-6136 (in Spanish). USDA is an equal opportunity provider, employer and lender.

Persons with disabilities who require alternative means for communication of program information (e.g., Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

| US DEPARTMENT OF AGRICULTURE<br>NATURAL RESOURCES CONSERVATION SERVICE |  | CONSERVATION PLAN OR SCHEDULE OF OPERATIONS |                                                      |                                                          | NRCS-CPA-1155<br>02/2014 |  |
|------------------------------------------------------------------------|--|---------------------------------------------|------------------------------------------------------|----------------------------------------------------------|--------------------------|--|
| PARTICIPANT<br>NAVAJO NATION                                           |  | COUNTY AND STATE<br>SAN JUAN County, NM     | PROGRAM AND CONTRACT NUMBER<br>EQIP 2014 748C30160ZX | SUBACCOUNT<br>Navajo Nation Tribal Crop Projects<br>- SF |                          |  |
| LAND UNITS OR LEGAL DESCRIPTION<br>Farm: 3430 Tract(s): 3801.          |  | WATERSHED<br>Malpais Arroyo-San Juan River  | ACRES<br>348                                         | EXPIRATION<br>DATE<br>4/30/2017                          |                          |  |

| Contract Item 1: Irrigation Pipeline(430)                                                                      |                                | Practice Lifespan: 20 years |                    | Status: Planned 2016   |                                                                 |
|----------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|--------------------|------------------------|-----------------------------------------------------------------|
| Install additional pipeline and appurtenances to convey water for application as part of an irrigation system. |                                |                             |                    |                        |                                                                 |
| Fields:<br>Tract: 3801 Fields: 2;                                                                              |                                |                             |                    |                        |                                                                 |
| Contract Item                                                                                                  | Planned Conservation Treatment | Planned Amount              | Unit Cost          | Cost Share Rate/Method | COMPLETION SCHEDULE AND ESTIMATED COST-SHARE OR PAYMENT BY YEAR |
| 1                                                                                                              | Irrigation Pipeline(430)       | 7400 ft                     |                    |                        |                                                                 |
| 1a                                                                                                             | HU-PVC Pipe >= 10 inch         | 210004 Pound                | \$2.4900/<br>Pound | PR <sup>1</sup>        |                                                                 |
|                                                                                                                |                                |                             |                    |                        | 2016 \$ 522,910                                                 |
|                                                                                                                |                                |                             |                    |                        | 522,910                                                         |
| Notes: <sup>1</sup> Payment rates define the unit cost rate of compensation to be received by the participant. |                                |                             |                    |                        |                                                                 |



SHIPROCK PROGRAM DELIVERY POINT  
N HWY 491, P. O. BOX 3393  
SHIPROCK, NM 87420  
(505) 368-4260

GARY SMITH  
DISTRICT CONSERVATIONIST

## Conservation Plan

NAVAJO NATION  
PO BOX 9000  
WINDOW ROCK, AZ 86515

### OBJECTIVE(S)

The Gadii'ahi Phase 4 pipeline is one project included in the 2011 CCPI proposal from the Navajo Nation to address the resource concern of Inefficient Water Use on Irrigated Land. The pipe will facilitate the delivery of pressurized irrigation water to farm fields which will make sprinkler irrigation feasible in the Gadii'ahi Chapter. The pipeline will eliminate seepage and evaporation losses from the open canal and should help to improve irrigation water management and the installation of improved irrigation systems. With improved irrigation water management and irrigation systems, less water from the San Juan River will need to be diverted into the canal system thus helping to improve the river wildlife habitat, water quality, and water quantity.

### Crop

Tract: 3801

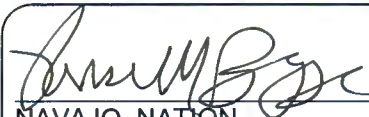
#### Irrigation Pipeline

Install additional pipeline and appurtenances to convey water for application as part of an irrigation system.

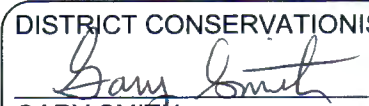
| Field  | Planned<br>Amount | Month | Year | Applied<br>Amount | Date |
|--------|-------------------|-------|------|-------------------|------|
| 2      | 7400 ft           | 11    | 2016 |                   |      |
| Total: | 7400 ft           |       |      |                   |      |

Install the planned Gadii'ahi Phase 4 underground irrigation pipeline. This pipeline will extend the existing system in the Gadii'ahi Chapter another 7400 feet and will serve an additional 348 acres.

#### CERTIFICATION OF PARTICIPANTS

 6/15/16  
NAVAJO NATION DATE

#### CERTIFICATION OF:

DISTRICT CONSERVATIONIST  
 2/10/16  
GARY SMITH DATE

#### PUBLIC BURDEN STATEMENT

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collections is 0578-0013. The time required to complete this information collection is estimated to average 45/0.75 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection information.

#### PRIVACY ACT

The above statements are made in accordance with the Privacy Act of 1974 (5 U.S.C 522a). Furnishing this information is voluntary; however failure to furnish correct, complete information will result in the withholding or withdrawal of such technical or financial assistance. The information may be furnished to other USDA agencies, the Internal Revenue Service, the Department of Justice, or other state or federal law enforcement agencies, or in response to orders of a court, magistrate, or administrative tribunal.

#### USDA NON-DISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers. If you believe you experienced discrimination when obtaining services from USDA, participating in a USDA program, or participating in a program that receives financial assistance from USDA, you may file a complaint with USDA. Information about how to file a discrimination complaint is available from the Office of the Assistant Secretary for Civil Rights. USDA prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) To file a complaint of discrimination, complete, sign, and mail a program discrimination complaint form, available at any USDA office location or online at [www.ascr.usda.gov](http://www.ascr.usda.gov), or write to:

USDA Office of the Assistant Secretary for Civil Rights

1400 Independence Avenue, SW.

Washington, DC 20250-9410

Or call toll free at (866) 632-9992 (voice) to obtain additional information, the appropriate office or to request documents. Individuals who are deaf, hard of hearing, or have speech disabilities may contact USDA through the Federal Relay service at (800) 877-8339 or (800) 845-6136 (in Spanish). USDA is an equal opportunity provider, employer, and lender. Persons with disabilities who require alternative means for communication of program information (e.g., Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

**NATURAL RESOURCES CONSERVATION SERVICE  
OPERATION AND MAINTENANCE PLAN  
ARIZONA**

**IRRIGATION PIPELINE  
(Ft.)**

**CODE 430**

Cooperator Navajo Nation Date April, 2016  
 Address Gadii'ahi Phase IV Pipeline - Gadii'ahi Chapter  
 Location: Section 36, 25 Township 31N Range 19 W Field No. 2  
 Northing \_\_\_\_\_ Easting \_\_\_\_\_ OR Longitude \_\_\_\_\_ Latitude \_\_\_\_\_  
 NRCS Field Office Shiprock County San Juan, NM

This conservation practice is an asset to your farm or ranch. This practice will need periodic operation and maintenance to maintain satisfactory performance. The life of this practice or system is at least 20 years. The life of this practice can be assured or extended by thorough and timely operation and maintenance.

**GENERAL RECOMMENDATIONS**

This practice will require you to perform periodic maintenance and may also require operational items to maintain satisfactory performance. Here are some recommendations to help you develop a good operation and maintenance program.

- ☐ Prevent surface ponding by grading to remove depressions.
- ☐ Limit livestock usage to periods that permit use without damage.
- ☐ If fences are installed, they shall be maintained to provide warning and/or prevent unauthorized human or livestock entry.
- ☐ Check to make sure all valves and air vents are set at the proper operating condition so they may provide protection to the pipeline.
- ☐ Maintain the design depth of cover over the pipeline and avoid any sub-soiling operation that may disturb the pipeline.
- ☐ Limit traffic over the pipeline to designated sections that were designed for traffic loads and avoid travel over pipelines by tillage equipment when the soil is saturated.
- ☐ Remove all foreign debris that hinders system operation.
- ☐ Drain the system and components in areas that are subject to freezing. If parts of the system cannot be drained, an anti-freeze solution shall be added.
- ☐ Allow the pipe to fill gradually when being put into use after shut down or draining.
- ☐ Periodically check and repair all valves, gates and regulators to the system requirements following the manufacturer's recommendations.
- ☐ Immediately repair any damage from vandalism, vehicles, rodents or livestock to any outlets and appurtenances.
- ☐ Checking coatings on fiberglass and plastic tanks and re-coating as needed to maintain effective ultraviolet resistance;
- ☐ Maintaining appurtenance features (valves, piping, floats, drains, fences, etc.) in functional and protected conditions;
- ☐ Eradicate or otherwise remove all rodents or burrowing animals that have or may potentially damage any part of the delivery or application facilities. Immediately repair any damage caused by their activity;
- ☐ Immediately repair any damage resulting from vandalism, vehicles, livestock or wildlife;

The practice lifespan is 20 years.

This image shows a full page of blank, lined paper. It features approximately 20 horizontal blue lines spaced evenly across the page, typical of standard notebook paper. The lines are thin and light blue, set against a plain white background. There is no handwriting or other markings on the page.

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD  
ARIZONA**

**IRRIGATION PIPELINE  
(Ft.)**

**CODE 430**

**DEFINITION**

A pipeline and appurtenances installed to convey water for storage or application, as part of an irrigation water system.

**PURPOSE**

This practice may be applied as part of a resource management system to achieve one or more of the following purposes:

Conveyance of water from a source of supply to an irrigation system or storage reservoir.

Reduce energy use.

Develop renewable energy systems (i.e., in-pipe hydropower).

**CONDITIONS WHERE PRACTICE APPLIES**

This standard applies to water conveyance and distribution pipelines installed above or below ground *restricted to pipelines less than 36 inch in diameter.*

This standard does not apply to multiple outlet irrigation system components (e.g., surface gated pipes, sprinkler lines, or micro irrigation tubing) *short pipes used in structures such as siphons, outlets from canals, outlets from water harvesting catchments and culverts under roadways.*

**CRITERIA**

*Conservation Practices shall be designed on an individual basis to meet site conditions and functional requirements. They shall be part of an approved and overall engineering plan for irrigation, drainage, wildlife, recreation, channel improvement, or similar purposes.*

*The owner is responsible for securing necessary permits and water rights, complying with all laws and regulations, and meeting legal requirements applicable to the installation, operation, and maintenance of this practice and associated structures.*

**General Criteria Applicable to All Purposes**

The water supply, quality, and rate of irrigation delivery for the area served by the pipeline shall be sufficient to make irrigation practical and feasible, for the crops to be grown and the irrigation water application methods to be used.

Pipelines shall be placed only in soils and environmental conditions suitable for the material type being selected. *Bedding and backfill requirements shall be site specific for the selected material type.*

Pipelines shall be designed to meet all service requirements such that *the* internal pressure, including hydraulic transients or static pressure at any point is less than the pressure rating of the pipe.

**Capacity.** Capacity shall be sufficient to convey the design delivery flow rate for the planned conservation practices.

Design capacity of the pipeline conveyance or distribution system for irrigation systems shall be sufficient to meet the requirements for efficient application based on one of the following:

- Adequate to meet the moisture demands (*peak consumptive use*) of all crops to be irrigated in the design area.
- Sufficient to meet the requirements of selected irrigation events during critical crop growth periods when less than full irrigation is planned.

- For special-purpose irrigation systems, sufficient to apply a specified amount of water to the design area in a specified operating period.

In computing the above capacity requirements, allowance must be made for reasonable water losses during application or use.

**Friction and Other Losses.** For design purposes, head loss for hydraulic grade line computations shall be computed using one of the following equations: Manning's, Hazen-Williams, or Darcy-Weisbach. Equation selection shall be based on the given flow conditions and the pipe materials used. Other head losses (also called minor losses) from change in velocity and direction of flow due to inlet type, valves, bends, enlargements or contractions can be significant and shall be evaluated as appropriate. For closed, pressurized systems, the hydraulic grade line for all pipelines shall be maintained above the top of the pipeline at all locations for all flows unless specifically designed for negative internal pressures.

**Flexible Conduit Design.** Flexible conduits such as plastic pipe, steel pipe, aluminum pipe, corrugated metal pipe, or ductile iron pipe, shall be designed using NRCS National Engineering Handbook (NEH) Part 636, Chapter 52, Structural Design of Flexible Conduits, and the following criteria:

**Smooth Wall Plastic Pipe.** When operating at design capacity, the full-pipe flow velocity should not exceed 5 feet per second in pipelines with valves or some other flow control appurtenances placed within the pipeline or at the downstream end. As a safety factor against surge, the working pressure at any point should not exceed 72 percent of the pressure rating of the pipe. If either of these limits is exceeded, special design consideration must be given to the flow conditions, and measures must be taken to adequately protect the pipeline against transient pressures.

**Corrugated or Profile Wall Plastic Pipe.** When operating at design capacity, the full-pipe flow velocity should not exceed 5 feet per second in pipelines with valves or some other flow control appurtenance placed within the pipeline or at the downstream end. As a safety factor against surge, the working pressure at any point should not exceed 72 percent of the pressure rating of the pipe. If the pipe is not pressure rated, the

maximum allowable pressure shall be 25 feet of head, or the maximum pressure as specified by the manufacturer for the pipe and connecting joints used.

**Smooth Wall Steel Pipe.** The specified maximum allowable pressure shall be determined using the hoop stress formula, limiting the allowable tensile stress to 50 percent of the yield-point stress for the material selected. Design stresses for commonly used steel and steel pipe are shown in the NEH Part 636, Chapter 52. *Minimum wall thickness shall meet the following criteria:*

| Diameter<br>(inches) | Wall Thickness<br>(gage) |
|----------------------|--------------------------|
| 4 through 12         | 14                       |
| 14 through 18        | 12                       |
| 20 through 24        | 10                       |
| 26 through 36        | 3/16                     |

**Corrugated Metal Pipe.** Maximum allowable pressure for the pipe shall be:

20 feet of head for annular and helical pipe with sealed seams and watertight coupling bands.

30 feet of head for helical pipe with welded seams, annular ends, and watertight couplings.

**Smooth Wall Aluminum Pipe.** The maximum allowable pressure of the pipe shall be determined using the hoop stress formula limiting the allowed tensile stress to 7,500 psi.

**Rigid Conduit Design.** Rigid conduits such as concrete pipe or plastic mortar pipe shall be designed using the following criteria:

**Non-reinforced Concrete Pipe with Mortar Joints.** The maximum allowable pressure for pipe with mortar joints shall not exceed one-fourth of the certified hydrostatic test pressure as determined by the test procedure described in ASTM C118. Nor shall they exceed the following:

| Diameter<br>(inches) | Maximum Allowable<br>Pressure (feet) |
|----------------------|--------------------------------------|
| 6 through 8          | 40                                   |
| 10 and greater       | 35                                   |

**Non-reinforced Concrete Pipe with Rubber Gasket Joints.** The maximum allowable pressure for non-reinforced concrete pipe with rubber gasket joints shall not exceed one-third the certified hydrostatic test pressure as determined by the test procedure described in ASTM C505.

Nor shall they exceed the following:

| Diameter<br>(inches) | Maximum Allowable<br>Pressure (feet) |
|----------------------|--------------------------------------|
| 6 through 12         | 50                                   |
| 15 through 18        | 40                                   |
| 21 and greater       | 30                                   |

**Cast-in-Place Concrete Pipe.** Maximum working pressure for cast-in-place concrete pipe shall be 15 feet above the centerline of pipe. Cast-in-place concrete pipe shall be used only in stable soils that are capable of being used as the outside form for approximately the bottom half of the conduit.

**Reinforced Concrete Pipe with Gasket Joints.** The maximum allowable pressure for reinforced concrete pipe with rubber gasket joints shall be not exceed the rated hydrostatic pressure for the specified pipe according to appropriate ASTM or AWWA standards.

**Reinforced Plastic Mortar Pipe.** The pipeline shall be designed to meet all service requirements without a static or working pressure at any point greater than the maximum allowable working pressure of the pipe used. The static or working pressure of pipelines open to the atmosphere shall include free board. The minimum acceptable pipe pressure rating shall be 50 psi.

**Support of Pipe.** Irrigation pipelines both below and above ground shall be supported, where needed, to provide stability against external and internal forces. Pipe support shall be designed using NEH Part 636, Chapter 52.

**Joints and Connections.** All connections shall be designed and constructed to withstand the pipeline working pressure without leakage and leave the inside of the pipeline free of any obstruction that would reduce capacity.

Permissible joint deflection shall be obtained from the manufacturer for the joint type and pipe material used.

For sloping steel pipe, expansion joints shall be placed adjacent to and downhill from anchors or thrust blocks.

For welded pipe joints, expansion joints shall be installed, as needed, to limit pipeline stresses to the allowable values.

For suspended pipelines, joints shall be designed for pipe loading including the water in the pipe, wind, ice, and the effects of thermal expansion and contraction.

Joints and connections for metal pipes should be of similar materials whenever possible. If dissimilar materials are used, the joints or connections shall be protected against galvanic corrosion.

**Depth of Cover.** Buried pipe shall be installed at sufficient depth below the ground surface to provide protection from hazards imposed by traffic loads, farming operations, freezing temperatures, or soil cracking, as applicable. *For protection from freezing, pipe shall be installed below the applicable frost depth. The minimum depth of cover shall be:*

| Pipeline Diameter<br>(inches) | Depth of Cover<br>(inches) |
|-------------------------------|----------------------------|
| ½ through 2-½                 | 18                         |
| 3 through 5                   | 24                         |
| 6 and greater                 | 30                         |

Pipelines shall have sufficient strength to withstand all external loads on the pipe for the given installation conditions. Appropriate live loads shall be used for the anticipated traffic conditions.

Where it is not possible to achieve sufficient cover or sufficient strength, a carrier (encasement) pipe or other mechanical measures shall be used. *Extra fill may be placed over the pipe (mounding) to provide the minimum depth of cover. In such cases the top width of the fill shall be no less than 6 feet and the side slopes no steeper than 6:1 (horizontal to vertical). The fill material shall be placed and compacted prior to trench excavation.*

**Pressure Reduction.** Pressure reduction shall be incorporated in circumstances such as head gain exceeding pressure loss by a significant amount, excessive line pressured for the type of irrigation system, or excessive static pressures.

**Inlets.** Inlets shall be of adequate size for the type of entrance condition to ensure design flow capacity without excessive head losses.

Provision shall be made to prevent the inflow of trash or other materials into the pipeline if these materials would be detrimental to the pipe capacity or performance of the irrigation application system.

For gravity flow inlets with square-edged or gated orifices, the nappe created by inflow at the orifice entrance shall be vented.

Water control structures, stands, Z-pipes and dog-legs are all acceptable inlet devices. Water control structures are commonly used for gravity flow pipelines, but do not account for removal of entrained air. Therefore, pipelines using these inlets must also meet the requirements listed under Vents.

**Check Valves and Backflow Prevention.** A check valve shall be installed between the pump discharge and the pipeline if detrimental backflow may occur. Check valves can cause extreme internal pressures, due to water hammer; if they close too fast as flow reversal occurs. "Non slam" type check valves or solenoid operated valves may be required.

Approved backflow prevention devices (chemigation valves) shall be used on all pipelines in which fertilizer, liquid manure, waste water, pesticides, acids, or other chemicals are added to the water supply and where back flow may contaminate the source water supply or groundwater.

**Valves and Other Appurtenances.** Pressure ratings of valves and other appurtenances shall equal or exceed the pipeline working pressure. When lever operated valves are used, an analysis shall be performed to evaluate potential surge/water hammer assuming an instantaneous valve closure.

**Stands Open to the Atmosphere.** Stands shall be used when water enters the pipeline to avoid entrapment of air; to prevent surge pressures and collapse because of vacuum failure; and to prevent pressure from exceeding the design working stress of the pipe. The stand shall be designed to:

- Allow a minimum of 1 foot of freeboard. The maximum height of the stand above the centerline of the mainline pipeline must not exceed the maximum working head of the pipe.

- Have the top of each stand at least 4 feet above the ground surface except for surface gravity inlets or where visibility is not a factor. Gravity inlets and stands shall be equipped with trash racks and covers.
- Have a downward water velocity in stands not in excess of 2 feet per second. The inside diameter of the stand shall not be less than the inside diameter of the pipeline.

The cross sectional area of stands may be reduced above a point 1 foot above the top of the upper inlet, but the reduced cross section shall not be such that it would produce an average velocity of more than 10 feet per second if the entire flow were discharging through it.

If the water velocity of an inlet pipe exceeds three times the velocity of the outlet, the centerline of the inlet shall have a minimum vertical offset from the centerline of the outlet at least equal to the sum of the diameters of the inlet and outlet pipes.

Stands shall be constructed of steel pipe or other approved material and be supported on a base adequate to support the stand and prevent movement or undue stress on the pipeline.

Sand traps, when combined with a stand, shall have a minimum inside dimension of 30 inches and shall be constructed so the bottom is at least 24 inches below the invert of the outlet pipeline. The downward velocity of flow of the water in a sand trap shall not exceed 0.25 feet per second. Suitable provisions shall be made for cleaning sand traps.

The dimensions of gate stands shall be adequate to accommodate the gate or gates required, and shall be large enough to make the gates accessible for repair.

The size of float valve stands shall be adequate to provide accessibility for maintenance.

Stands must be constructed in a manner to insure vibration from the pump discharge pipe is not carried to the stand.

Pressure-relief valves can be used as an alternative to stands open to the atmosphere. A pressure-relief valve shall serve the pressure-relief function of the open stand or vent for which it is an alternative.

**Stands Closed to the Atmosphere.** If pressure-relief valves and air-and-vacuum valves are used instead of open stands, all

requirements detailed in "Stands Open to the Atmosphere" shall apply except as modified below.

The inside diameter of the closed stand shall be equal to or greater than that of the pipeline for at least 1 foot above the top of the uppermost inlet of outlet pipe. To facilitate attaching the pressure-relief valve and the air-and-vacuum valve, the stand may be capped at this point, or if additional height is required, the stand may be extended to the desired elevation by using the same inside diameter or a reduced cross section. If a reduced section is used, the cross-sectional area shall be such that it would produce an average velocity of no more than 10 feet per second if the entire flow were discharged through it. If no vertical offset is required between the pump discharge pipe and the outlet pipeline and the discharge pipe is "dog-legged" below ground, the stand shall extend at least 1 foot above the highest part of the pump discharge pipe.

An acceptable alternative design for stands requiring no vertical inlet offset (when inlet velocity is less than three times that of the outletting pipeline) shall be:

- Construct the dog-leg section of the pump discharge pipe with the same nominal pipe diameter as that of the pipeline.
- Install the pressure-relief valve and the air-and-vacuum valve on top of the upper horizontal section of the dog-leg.

Pressure-relief and air-and-vacuum valves shall be installed on stands with the nominal size pipe required to fit the valves' threaded inlets.

**Surge Tanks and Air Chambers.** If surge tanks and/or air chambers are required for control of hydraulic transients or water column separation, they shall have adequate size to ensure the water volume needs of the pipeline are met without the tank/chamber being emptied, and that the required flow into the pipeline for the calculated pressure drop is met.

**Pressure Relief Valves.** A pressure relief (PR) valve shall be installed between the pump discharge and the pipeline if excessive pressure can build up when all valves or other components are closed. *Pressure-relief valves shall be installed on the discharge side of the check valve where a reversal of flow may occur and at the end of the pipeline if needed to*

*relieve surge at the end of the line.* If needed to protect the pipeline against pressure reducing valve malfunction or failure, PR valves shall be installed downstream of pressure reducing valves.

Manufacturers of PR valves marketed for use under this standard shall provide capacity tables that give the discharge capacities of the valves at the maximum permissible pressure and differential pressure settings. These tables shall be based on performance tests, and shall be the basis for acceptance of these valves and selection of the design pressure setting.

PR valves shall be set to open at a pressure as low as practical, but no greater than 5 psi *below* the pressure rating or maximum allowable pressure of the pipe. The valves shall have sufficient flow capacity to reduce the excessive pressures in the pipeline. In lieu of a detailed surge/pressure analysis, the minimum size of PR valve shall be ¼ inch nominal valve size per inch of the nominal pipeline diameter.

The pressure at which the valves start to open shall be marked on each PR valve. Adjustable PR valves shall be sealed or otherwise altered to prevent changing the adjustment from that marked on the valve.

**Air Release Valves.** Five types of air vents/valves commonly used on irrigation pipelines are continuous acting air release valves (CAV), vacuum-relief valves (VR), air release and vacuum relief valves (AV-VR), combination air valves (COMB), and open vents. Open vents are described in the "Vents" section of this standard.

If accumulation of air during operation may occur CAV shall be used to release air from the filled pipeline while under pressure. Normal orifice venting diameter is 1/16 to 3/8 inch.

VR valves shall be used for relief of vacuum pressures (i.e., negative pressures), *by allowing air to re-enter the pipeline* due to sudden gate or valve closure, pump shutoff, or drainage of the pipeline.

*AV-VR (air and vacuum or air-vent and vacuum relief) valves may be used for the same requirements described for VR valves. These valves shall also be used to release air from the pipeline on filling prior to the pipe being pressurized. They shall be used to alleviate flow restrictions, air locks, and water surging due to the presence of air within pipelines. AV-VR's are*

*not continuous acting as they do not allow further air release once the valve closes.*

COMB valves have the combined function of all three valves (CAV, VR, and AV-VR) in one body. COMB valves may be used for any of the conditions in which a CAV, VR, or AV-VR is required.

If needed to provide positive means for air escape during filling and air entry while emptying, an AV-VR, VR, or COMB valve shall be installed at all summits, upstream and downstream of all in line valves as needed, at the entrance, and at the end(s) of the pipelines. Such valves are needed at these locations if the pipeline is closed to the atmosphere. However, they may not be needed if other features of the pipe system, such as permanently located sprinkler nozzles or other unclosed service outlets, adequately vent the particular location during filling and emptying operations. The use of these system features must be analyzed for air flow rate and the proper use of such features described in the Operation and Maintenance plan. High points in the pipeline require a CAV unless an outlet is located at that point.

In addition to the locations described above, an AV-VR or COMB valve shall be located at changes of grade in downward direction of flow in excess of 10 degrees, to ensure adequate air release during filling. On long pipelines, additional AV-VR or COMB valves may be required to adequately vent the pipe during filling.

For air release, the AV-VR or COMB valve shall be sized to exhaust air from the pipeline at the rate needed to prevent operational problems with the pipeline, while maintaining the proper operation of the valve. For design purposes, the exhaust pressure differential shall be limited to 2 psi.

For vacuum relief, the AV-VR, VR, or COMB valves shall be sized for air entry into the pipeline, ensuring the pipeline does not collapse due to vacuum created during drainage of the pipeline. For design purposes, the vacuum pressure differential shall be limited to 5 psi.

If the required vacuum relief orifice diameter is significantly larger than the required air release orifice diameter, separate valves may be required to help eliminate excessive water hammer caused when the air is released too fast from the pipeline.

CAV or COMB valves shall be used as needed to permit air to escape while the line is at working pressure. Small orifices of these valve types shall be sized according to the design working pressure and venting requirements recommended by the valve manufacturer.

The location of the CAV or COMB valves shall be sufficient distance downstream from the introduction of air into the system (under pressure conditions) to allow the air to be collected at the top of the pipe. Under some circumstances (e.g., pumped system with low pressure or velocity) consideration should be given to installing vent chambers for CAV or COMB valves. The vent chamber should be constructed according to the requirements under the second criteria in the "Vents" section of this standard.

In lieu of a detailed design, for the corresponding pipe material below, the following size air valves shall be used:

For Plastic  $\leq 50$  psi -  $0.22 \times$  pipe diameter

For Plastic  $> 50$  psi -  $0.10 \times$  pipe diameter

For Metal -  $0.125 \times$  pipe diameter

For Concrete -  $0.125 \times$  pipe diameter

Manufacturers of air valves marketed for use under this standard shall provide dimensional data or a capacity table based on performance tests, which shall be the basis for selection and acceptance of these valves.

**Vents.** Venting must be designed into systems open to the atmosphere to provide for the removal and entry of air and protection from surge. The following criteria shall apply:

Vents shall have a minimum freeboard of 1 foot above the hydraulic gradeline at design capacity. The maximum height of the vent above the centerline of the pipeline must not exceed the maximum allowable working pressure of the pipe.

A vent chamber shall be constructed to intercept and/or capture air within the pipeline. The chamber shall intercept the circumference arc of 75 degrees at the top of the pipe (i.e., a vent chamber diameter of  $2/3$  the diameter of the pipeline). The chamber shall extend vertically at least one pipeline diameter up from the centerline of the pipeline. Above this elevation, the vent chamber may be reduced to minimum diameter of 2 inches.

When an AV-VR or COMB valve is used instead of a vent, the above requirements shall apply except that the reduced section shall be sized to meet the nominal pipe size required to fit the valve's threaded inlet. An acceptable alternative is to install the valve(s) in the side of a service outlet, provided that the service outlet riser is properly located and adequately sized. If both AV-VR and PR valves are required at the location, the 10 feet per second velocity criteria given under the "Stands Open to the Atmosphere" section of this standard, shall apply to the reduced section.

Vent chambers shall be installed on all open vents and closed vents with air valves, when the normal operating pressure of the pipe is 10 psi or less.

A vent shall be located at the downstream end of laterals, at summits in the line, and at points where the grade changes more than 10 degrees in a downward direction of flow.

**Outlets.** Appurtenances to deliver water from the pipe system to the field, ditch, reservoir, or surface pipe system, are known as outlets. Outlets shall have adequate capacity to deliver the required flow to:

- The hydraulic gradeline of a pipe or ditch,
- A point at least 6 inches above the field surface,
- The design surface elevation in a reservoir, or
- An individual sprinkler, lateral line, hydrant, or other device at the required operating pressure.

Outlets shall be designed to minimize erosion, physical damage, or deterioration due to exposure.

**Filling.** The pipe system shall have a means of controlling the filling of the pipeline to prevent entrapped air and excessive transient pressures.

Filling velocities greater than 1 foot per second in a closed to the atmosphere pipe system (i.e., all outlets closed) requires special evaluation and provisions to remove entrapped air and prevent transient pressures.

If filling at a low flow rate is not possible, the system shall be open to the atmosphere (outlets open) prior to pressurizing. The valves to the irrigation system components (gated pipe, wheel line, pivot, etc.) should be opened to release

entrapped air and minimize transient pressures in the system. The system shall be designed for air removal and excessive transient pressures that may develop at higher filling rate.

**Flushing.** If the sediment load in the water is significant, the pipeline shall have adequate velocity to ensure that sediment is moved through and flushed out of the pipeline.

If provisions are needed for flushing sediment or other foreign material, a suitable valve shall be installed at the distant end or low point of the pipeline.

**Draining.** Provisions shall be made for the complete removal of water from the pipeline by gravity or other means when:

- Freezing temperatures are a hazard.
- Draining is required by the pipe manufacturer.
- Draining of the pipeline is otherwise specified.

The water drained from pipelines shall not cause water quality, soil erosion, or safety problems upon release.

**Safe Discharge of Water.** Provisions shall be made for water being discharged from valves, especially air valves and pressure relief valves. Such valves shall be located such that flows are directed away from system operators, livestock, electrical equipment, and other control valves or hook-ups.

**Thrust Control.** Abrupt changes in pipeline grade, horizontal alignment, tees, or reduction in pipe size, normally require an anchor or thrust blocks to absorb pipeline axial thrust. Thrust control is typically needed at the end of the pipeline, and at in-line control valves.

The pipe manufacturer's recommendations for thrust control shall be followed. In absence of manufacturer's data, thrust blocks shall be designed using NEH Part 636, Chapter 52 or the following formula may be used:

$$A = \frac{98HD^2}{B} \times \sin\left(\frac{\alpha}{2}\right)$$

Where:

A = Area of thrust block required (sq.ft.)

H = Maximum working pressure (ft)

D = Inside diameter of pipe (ft)

B = Allowable soil bearing pressure (lb/ft<sup>2</sup>)

a = Deflection angle of pipe bend

Area of thrust blocks for valves, dead ends and tees shall be 0.65 times the area of block required for a 90° deflection angle of pipe bend.

If adequate soil tests are not available, the allowable soil bearing pressure (lb/ft<sup>2</sup>) may be estimated as shown below:

| Natural Soil Material                     | Depth of Cover to center of thrust block |           |           |
|-------------------------------------------|------------------------------------------|-----------|-----------|
|                                           | 2 to 3ft.                                | 3 to 4ft. | 4 to 5ft. |
| Sound Bedrock                             | 10,000                                   | 10,000    | 10,000    |
| Dense Sand, Gravel ( $\Phi=40^\circ$ )    | 1,800                                    | 2,400     | 3,000     |
| Dense/Course Sand ( $\Phi=35^\circ$ )     | 1,200                                    | 1,650     | 2,100     |
| Silt and Clay mixture ( $\Phi=25^\circ$ ) | 700                                      | 950       | 1,200     |
| Soft Clay and Organic ( $\Phi=25^\circ$ ) | 300                                      | 400       | 500       |

**Longitudinal Bending.** For plastic pipe, the allowable longitudinal bending for the pipeline shall be based on material type, diameter and the pressure rating, and shall be in accordance with industry standards, manufacturer's recommendation or as described in NEH Part 636 Chapter 52.

**Thermal Effects.** For plastic pipe, thermal effects must be properly factored into system design. Pressure ratings for pipes are normally based on a pipe temperature of 73.4°F. When operating temperature is higher the effective pressure rating of the pipe shall be reduced accordingly, as shown below:

| Temperature (°F) | PVC  | PE   |
|------------------|------|------|
| 73.4             | 1.00 | 1.00 |
| 80               | 0.88 | 0.92 |
| 90               | 0.75 | 0.81 |
| 100              | 0.62 | 0.70 |
| 110              | 0.50 | -    |
| 120              | 0.40 | -    |

|     |      |   |
|-----|------|---|
| 130 | 0.30 | - |
| 140 | 0.22 | - |

Note: To obtain the pipe's reduced pressure rating because of a water temperature greater than 73.4°F, multiply the normal pressure rating by the appropriate factor from table.

Values and procedures for pressure rating reduction shall follow information described in the NEH Part 636, Chapter 52 or as specified by the manufacturer.

**Physical Protection.** Steel pipe installed above ground shall be galvanized or shall be protected with a suitable protective paint coating, including a primer coat and a minimum of two final coats.

Plastic pipe installed above ground shall be resistant to ultraviolet light throughout the intended life of the pipe or measures taken to protect the pipe from damage due to ultraviolet light. The outlet, inlet or other portions (i.e., risers, vents) of PVC materials installed in above ground applications and subjected to long or short term exposure to ultraviolet (UV) radiation from sunlight shall be protected to prevent UV degradation.

Regardless of the method selected, manufacturer documentation or protection measures taken shall be clearly documented (i.e., manufacturer warranty/guarantee, construction notes/details, As-Built verification/certification) in the project file. Ultraviolet (UV) protection shall be by one or more of the following methods:

1. Pipe specially formulated with an UV stabilizer that will protect against solar degradation for a minimum of 10 years.
2. Apply Alkyd Enamel Paint, containing minimum 50-percent solids by volume, on approved pipe surfaces. The paint should provide 4-5 years protection against UV.
3. Apply a two-component, high gloss industrial type Acrylic Polyurethane Coating having a minimum of 50% solids by weight. This coating should provide greater than a 5-year protection.
4. Reflective swimming pool paint or water based latex paint will be used on approved pipe surface.

Surface preparation and application shall be per manufacturer recommendations.

All pipes shall be protected from hazards presented by traffic loads, farm operations, freezing temperatures, fire, thermal expansion and contraction. Reasonable measures shall be taken to protect the pipe from potential vandalism.

**Corrosion Protection.** All metal to metal fittings, such as risers, bends, tees, and reducers, should be of similar metals. If dissimilar metals are used, the fittings shall be protected against galvanic corrosion (e.g., separate dissimilar metals with rubber or plastic insulator).

Bolts used to join galvanized steel shall be galvanized; plastic coated, stainless steel, or otherwise protected to prevent galvanic corrosion. Bolts used to join aluminum, other than aluminum alloy bolts, must be plastic coated or otherwise protected to prevent galvanic corrosion.

Interior protective coatings shall be provided when the pH of the water falls outside the ranges shown in the following table.

| Material         | Water pH                       |
|------------------|--------------------------------|
| Aluminized Steel | Less than 5 or greater than 9  |
| Galvanized Steel | Less than 6 or greater than 10 |
| Aluminum Alloy   | Less than 4 or greater than 10 |

Unlined steel pipelines can experience corrosion from very pure water (e.g., snow melt). If the Langelier Saturation Index (LSI) is a greater negative number than -1, corrosion protection shall be provided.

To calculate the LSI, it is necessary to know the alkalinity (mg/l as CaCO<sub>3</sub>), the calcium hardness (mg/l Ca+2 as CaCO<sub>3</sub>), the total dissolved solids (mg/l TDS), the actual pH, and the temperature of the water (°C). These values are used in the following equations:

$$LSI = pH - pH_s$$

$$pH_s = (9.3 + A + B) - (C + D)$$

Where:

$$A = (\text{Log}_{10} [\text{TDS}] - 1) / 10$$

$$B = -13.12 \times \text{Log}_{10} (^\circ\text{C} + 273) + 34.55$$

$$C = \text{Log}_{10} [\text{Ca}^{+2} \text{ as CaCO}_3] - 0.4$$

$$D = \text{Log}_{10} [\text{alkalinity as CaCO}_3]$$

Galvanized steel pipe may be used when the soil resistivity is greater than 4000 ohm-cm.

Hot-dipped asphalt or polymeric-coated, galvanized steel pipe shall be provided if the soil resistivity along any part of the pipeline is between 3000 and 4000 ohm-cm. In addition to the above coatings, cathodic protection shall be provided for galvanized steel pipe if the soil resistivity is less than 3000 ohm-cm.

Aluminized steel pipe may be used when the soil resistivity is greater than 1500 ohm-cm and the soil pH is between 5 and 9.

Aluminum alloy pipe may be used when the soil resistivity is greater than 500 ohm-cm and the soil pH is between 4 and 10.

When cathodic protection is required, joints and connecting bands shall be electrically bridged to ensure continuous flow of current. A dielectric connection shall be placed between the pump and the pipeline and between pipes with different coatings.

The total current required, kind and number of anodes needed, and life expectancy for the cathodic protection shall be designed in accordance with NRCS Design Note 12, Control of Underground Corrosion.

*The following types of coatings shall be applied to pipes, threaded connections, fittings or other materials where water quality or corrosion is known:*

- Coal Tar paint meeting the requirements of AWWA C203, "Coal Tar Protective Coatings and Linings for Steel Water Pipeline – Enamel and Tape – Hot Applied" (Kippers-Bitumastic No. 300-M is an approved off the shelf product);
- Epoxy Paint meeting the requirements of AWWA C210, "Liquid-Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipelines" or AWWA C213, "Fusion-Bonded Epoxy Coating for Interior and Exterior of Steel Water Pipelines". The coating shall have a

minimum thickness of 10 mils (minimum 2 coats);

- Locally available product (Rust-oleum, High Performance, W9200 Potable Water Coating or equivalent) suitable for use in potable water.

Surface preparation and application shall be per manufacturer recommendations.

**Resistivity Measurement Requirements for Metal Pipe.** If risk of corrosion is "high" based on the Cooperative Soil Survey's Soil Features Report, soil-resistivity measurements shall be conducted to determine corrosion protection requirements. For this purpose, field resistivity measurements shall be made or samples for laboratory analysis shall be taken at least every 400 feet along the proposed pipeline and at points where a visible change in soil characteristics occurs. If adjacent readings differ markedly, additional measurements shall be taken to locate the point of change. Resistivity determinations shall be made at two or more depths in the soil profile at each sampling station; with the lowest depth at the stratum in which the pipe will be laid. The lowest value of soil resistivity found at each sampling station shall be used as the design value for that station.

After the pipe trench is excavated, a detailed soil resistivity survey shall be made as a verification of the final required cathodic protection. At this time, resistivity measurements shall be made in each exposed soil horizon at intervals not exceeding 200 feet. The lowest value of soil resistivity found at each sampling station shall be used as the design value for that station. If design values for adjacent stations differ significantly, additional intermediate measurements shall be made.

**Electric Fields.** An electric field can develop where a metal pipeline is installed adjacent to an existing metal pipeline. This situation can adversely affect the new pipeline. The new pipeline shall be adequately protected from this condition.

**Environmental Constraints for Aluminum Pipe.** Water quality shall be considered for aluminum pipeline installations. A copper content in excess of 0.02 ppm produces nodular pitting and rapid deterioration of the pipe if water is allowed to become stagnant. When the copper content exceeds this limit, the pipeline shall be designed to allow draining after each use.

Protection from corrosion shall be provided for aluminum pipe installed in contact with concrete.

**Environmental Constraints for Concrete Pipe.** Concrete pipelines shall not be installed on sites where the sulfate-salt concentration in the soil or soil water exceeds 1.0 percent. On sites where the sulfate concentration is more than 0.1 percent but not more than 1.0 percent, concrete pipe may be used only if the pipe is made with Type V or Type II cement, with tricalcium aluminate content not exceeding 5.5 percent.

**Testing.** *The pipeline shall be tested for pressure strength, leakage and proper functioning while the maximum working pressure is maintained. Underground pipelines shall be tested prior to placement of the final backfill, but partial backfill (shading) is necessary to stabilize the pipe, to protect the material from UV degradation (where applicable), and to minimize expansion and contraction variations due to temperature changes. Aboveground steel pipelines may be tested at any time after they are ready for operation.*

*The pipeline shall be filled with water, taking care to bleed air and prevent water hammer. When the line is full, all valves shall be closed and the line shall be brought up to full design working pressure. All joints shall then be carefully inspected for leakage and any visible leaks shall be repaired.*

*Testing shall demonstrate that the pipeline will function properly at design capacity, with no objectionable flow conditions (i.e. water hammer, surges, unsteady delivery of water, and damage to the pipeline, or detrimental discharge from control valves).*

#### **Additional Criteria Applicable to Reduce Energy Use**

Provide analysis to demonstrate reduction of energy use from practice implementation.

Reduction of energy use is calculated as average annual or seasonal energy reduction compared to previous operating conditions.

#### **Additional Criteria Applicable to Develop Renewable Energy Systems**

Renewable energy systems shall meet applicable design criteria in NRCS and/or industry standards, and shall be in accordance

with manufacturer's recommendations. Hydropower systems shall be designed, operated, and maintained in accordance with the Microhydropower Handbook, Sections 4 and 5, as appropriate.

**Investigations, Surveys and Design Criteria.**

*Documentation requirements will be as outlined below, in addition to the documentation requirements of the practice components used in the system.*

*Make a preliminary site assessment, investigation or reconnaissance to determine the complexity of the problem and/or site (see NEH Part 652 – Irrigation Guide, Chapter 6, Irrigation System Design and Chapter 7, Farm Distribution Components) and shall include the following:*

1. *Water source and pressure (if applicable), quality (debris and/or sediment load) and quantity.*
2. *Soil or geological investigation to determine soil conditions, properties (physical and chemical), depths and topography along proposed alignment to determine trench and bedding requirements, as needed. Documentation shall include the following, at a minimum:*
  - a. *Classification by the Unified Soil Classification System (SM, CL, etc.) and texture (silty sand, lean clay, etc.);*
  - b. *Locate borrow materials and/or disposal areas, if necessary.*
  - c. *Corrosion potential or conditions (metal pipe), resistivity readings or published data, if applicable.*
3. *Planned location, length, distribution, and type and size of outlets or turnouts.*
4. *Verify appropriate state or local laws for permitting and approval requirements and notify landowner of his/her responsibilities.*
5. *Verification or certification of used materials (if any).*

*To adequately plan and layout this practice, a detailed topographic survey is required, that adequately details:*

1. *Site topography, as needed to show the physical features of the site, including existing features/practices, ground elevations, location of any utilities or markers, etc.*
2. *Profile along the proposed centerline, including all control points, such as structure elevations, summits and low points, and critical field elevations which impact the*

*function and operation of the system, road crossings, drain points, etc.*

3. *Topographic map, as needed, to determine pipeline location, outlet/turnout locations, irrigation methods, etc.*
4. *All pertinent water surface elevations, including the water supply ditch/reservoir/well, check structures, high water marks, etc.*
5. *If applicable, a permanent benchmark(s) shall be set and described. Preferably, the elevations and coordinates should be based on a local (assumed) or coordinate system (State or grid) and clearly stated on the plan. Datum may be in the form of Northing and Easting coordinates or Longitude and Latitude.*

*The design of a practice is the application of Field Office Technical Guide practice standards, practical experience and judgment in the development of a solution to the problem or the objective. All computations and decisions made during the design of a practice are to be checked by another qualified individual and appropriate notations made. Design computations, calculations or analysis shall meet the following criteria:*

1. *Determine design capacity or flow based on peak consumptive crop use, irrigation application efficiency or method requirements, irrigation water quantity or availability.*
2. *Hydraulic data computations/analysis to determine system performance (friction/head loss; maximum, minimum and actual operating pressures; hydraulic and static grade lines; flow ranges; hydraulic transients, etc.).*
3. *Record all pipe sizing (material, number, diameter, pressure rating or wall thickness, location and quantities, depth of cover, markings) calculations with applicable references.*
4. *Irrigation appurtenance designs (location, size, pressure settings, capacity, head loss, published performance data, etc.)*
5. *Water measurement and/or structural design requirements, if any.*
6. *Prepare material and cost estimates, including pipe quantities, vegetative components, etc.*
7. *Subsidiary and applicable components shall be designed in accordance with applicable conservation practice standards (i.e., structures shall meet the requirements of*

*Conservation Practice 587, Structure for Water Control, etc.).*

**Installation and Basis of Acceptance.** *For construction that does not meet State, OSHA, or Tribal criteria or requirements where deficient construction materials were used, NRCS may consider a waiver request for approval of construction after it has received a signed and sealed construction and/or material exemption from a licensed engineer. Required exemption shall be for installation of materials that do not meet minimum quality criteria as found in applicable Standards, Specifications, ASTM's, AWWA standards, etc.*

*Contractors performing work under this practice shall abide by all Federal, State or Tribal laws or criteria, and must be licensed by the state board of technical registers where the work is being implemented.*

## CONSIDERATIONS

**Safety.** Pipelines may present a threat to the safety of people, during both installation and operation. Consider safety as follows:

Address trench safety in design and during construction.

Provide protection for people from inlets of pipelines and open stands.

Provide protection for people from water blowing from pressure-relief, air-release, and other valves.

Determine the existence or non-existence of underground utilities prior to construction.

**Economic.** Economics can be a major factor in pipeline design, as follows:

Select pipe based on lifetime energy requirements, as well as initial costs of materials.

Select pipe material based upon expected life of practice.

Consider hydropower applications as alternatives to use of pressure reduction valves or reduced pipe diameter to induce friction loss.

**Water Quality and Quantity.** The effects of an irrigation pipeline on water quality and quantity should be considered when designing an irrigation pipeline. Consider the effects:

On the water budget, especially on infiltration and evaporation,

On downstream flows or aquifers that would affect other water uses or users,

On potential use for irrigation management,

Of installing a pipeline in vegetation that may have been located next to the original conveyance,

Of installing the pipeline (replacing other types of conveyance) on channel erosion or the movement of sediment and soluble and sediment-attached substances carried by water,

On the movement of dissolved substances into the soil and on percolation below the root zone or to ground water recharge,

Of controlled water delivery on the temperatures of water resources that could cause undesirable effects on aquatic and wildlife communities,

On wetlands or water-related wildlife habitats, and

On the visual quality of water resources.

**Environment.** Base pipe material selection on exposure considerations (such as soil resistivity, pH, sunlight, and traffic). Soil texture, resistivity, pH, moisture content, redox potential and depth are important soil properties to be aware of for pipelines and in reducing soil limitations related to corrosivity, or packing of soil material. Refer to soil survey information of the area and on-site soil investigations should be considered during planning.

The Langelier Saturation Index and related indices may be a factor in determining type of material to use for a pipeline.

Pipelines installed below the ground surface should have a soil plan describing soil reconstruction of disturbed soil during and after pipeline installation so original soil productivity is restored after pipeline installation. Appropriate vegetation should be established to stabilize disturbed areas that will not be cropped.

**Flow Measurement.** *A water measurement device or structure (flow meter, ramp flume, weir, etc.) may be installed to manage water applications and for on-going evaluation of system performance. Manufacturer's recommendations or sound engineering guidance must be followed regarding size, placement, orientation, etc.*

## PLANS AND SPECIFICATIONS

Prepare plans and specifications for irrigation pipelines that describe the requirements for applying the practice will be guided by the *National Engineering Handbook, Part 650*, shall be in accordance with the *National Engineering Manual, Parts 541 and 542*, and shall be in keeping with and according to this standard. As a minimum the plans and specifications shall be prepared for each specific site and include the requirements for applying the practice to achieve its intended purpose. As a minimum this shall include the following:

- Project location map, including section, township and range, North arrow, cooperator/owner acknowledgement and certification signature blocks, engineering job class (cover sheet);
- References that the owner/cooperator are responsible for all permits, rights-of-way, easements and the contact, coordination and location determination of any existing utilities or clearances (buried utility disclaimer);
- If applicable, a map showing the location of the practice(s) or system in reference to a known or established benchmark or reference point with the location, description and elevation clearly shown. Topographical features and/or controls shall be shown, showing tie in with existing or other planned practices;
- Field surveys and notes, soil investigations or geologic soil boring locations and soil classifications, earthwork or material estimates/quantities (backfill material);
- A plan or system overview of the layout (water source, alignment, stationing, topographical features, reference to existing or proposed features or facilities, appurtenances, etc.) of the proposed pipeline, including pipe material, rating (pressure class), sizes (diameters), and flow rates; all system components, construction and installation criteria, including State and Federal [OSHA] safety requirements [safety features for trenches, if applicable];
- Plan and profile views of the proposed irrigation pipeline system and components (i.e., original ground surface; outlet, turnouts, and appurtenances; pipeline invert elevations and grades [slope], hydraulic grade lines; maximum static pressure/head; changes in pipe size and ratings; etc.);
- Location, size, type and pressure class for all system fittings and appurtenances (drains,

vents, valves, outlets, pressure relief, thrust blocks), including pipe joint requirements, depth of cover for each pipe diameter and pipe trench/backfill requirements, as required for proper system functionality;

- Structural details, as needed to show construction details
- Site specific construction notes, details or specifications that describe, in writing, the installation of the irrigation pipeline and components. Include the specification for pressure testing of the irrigation pipeline.
- Use *Arizona Construction and Material Specifications* for each item of work and material, as applicable and available. Additional specifications may need to be written to provide full material and installation instructions. Fill in blanks and add or delete items from the specifications to make them fit the job as needed.
- Disposal requirements for excess soil material, if applicable; and
- Vegetative establishment requirements, if any.

All designs completed by non-NRCS personnel shall meet minimum State licensing board requirements and NRCS requirements and criteria as outlined in the *General Manual*, the *National Engineering Manual* (including *Arizona Supplements*), and the *National Engineering Handbook*.

## OPERATION AND MAINTENANCE

An Operation and Maintenance (O&M) Plan shall be developed for each pipeline system installed. The plan should document needed actions to ensure that practices perform adequately throughout their expected life. These actions include normal repetitive activities in the application and use of the practice (operation), and the repair and upkeep of the practice (maintenance). The pipeline will be inspected periodically, protected and restored as needed.

O&M requirements shall be included as an identifiable part of the design. Depending on the scope of the project, this may be accomplished by brief statements in the plans and specifications, the conservation plan narrative, or as a separate O&M Plan.

Other aspects of O&M, such as draining procedures, marking crossing locations, valve operation to prevent pipe or appurtenant damage, appurtenance or pipe maintenance,

and recommended operating procedures, should be described as needed within the O&M Plan.

Monitoring of any cathodic protection systems shall be performed as specified in the O&M Plan.

A filling procedure shall be developed, which details allowable flow rates and appurtenance operation at the various phases of the filling process, required to assure safe filling of the pipeline. Flow measuring appurtenances such as flow meters or weirs, or other means (e.g., number of turns of a gate valve) should be used to determine the rate of flow into the pipeline system. This information shall be provided to the operator, and shall be incorporated into the Operation and Management Plan as appropriate.

*The Operation and Management Plan shall also address the following:*

- *Prevent surface ponding by grading to remove depressions.*
- *Limit livestock usage to periods that permit use without damage.*
- *If fences are installed, they shall be maintained to provide warning and/or prevent unauthorized human or livestock entry.*
- *Check to make sure all valves and air vents are set at the proper operating condition so they may provide protection to the pipeline.*
- *Maintain the design depth of cover over the pipeline and avoid any sub-soiling operation that may disturb the pipeline.*
- *Limit traffic over the pipeline to designated sections that were designed for traffic loads and avoid travel over pipelines by tillage equipment when the soil is saturated.*
- *Remove all foreign debris that hinders system operation.*

- *Drain the system and components in areas that are subject to freezing. If parts of the system cannot be drained, an anti-freeze solution shall be added.*
- *Allow the pipe to fill gradually when being put into use after shut down or draining.*
- *Periodically check and repair all valves, gates and regulators to the system requirements following the manufacturer's recommendations.*
- *Checking coatings on fiberglass and plastic tanks and re-coating as needed to maintain effective ultraviolet resistance;*
- *Maintaining appurtenance features (valves, piping, floats, drains, fences, etc.) in functional and protected conditions;*
- *Eradicate or otherwise remove all rodents or burrowing animals that have or may potentially damage any part of the delivery or application facilities. Immediately repair any damage caused by their activity;*
- *Immediately repair any damage resulting from vandalism, vehicles, livestock or wildlife;*

## REFERENCES

ASTM C118, Standard Specification for Irrigation Pipe for Irrigation or Drainage.

ASTM C505, Standard Specification for Nonreinforced Concrete Irrigation Pipe with Rubber Gasket Joints.

McKinney, J.D., et al. Microhydropower Handbook, IDO-10107, Volumes 1 & 2. U.S. Department of Energy, Idaho Operations Office.

USDA-NRCS, National Engineering Handbook, Part 636, Chapter 52, Structural Design of Flexible Conduits.

USDA-NRCS, Engineering Design Note 12, Control of Underground Corrosion.

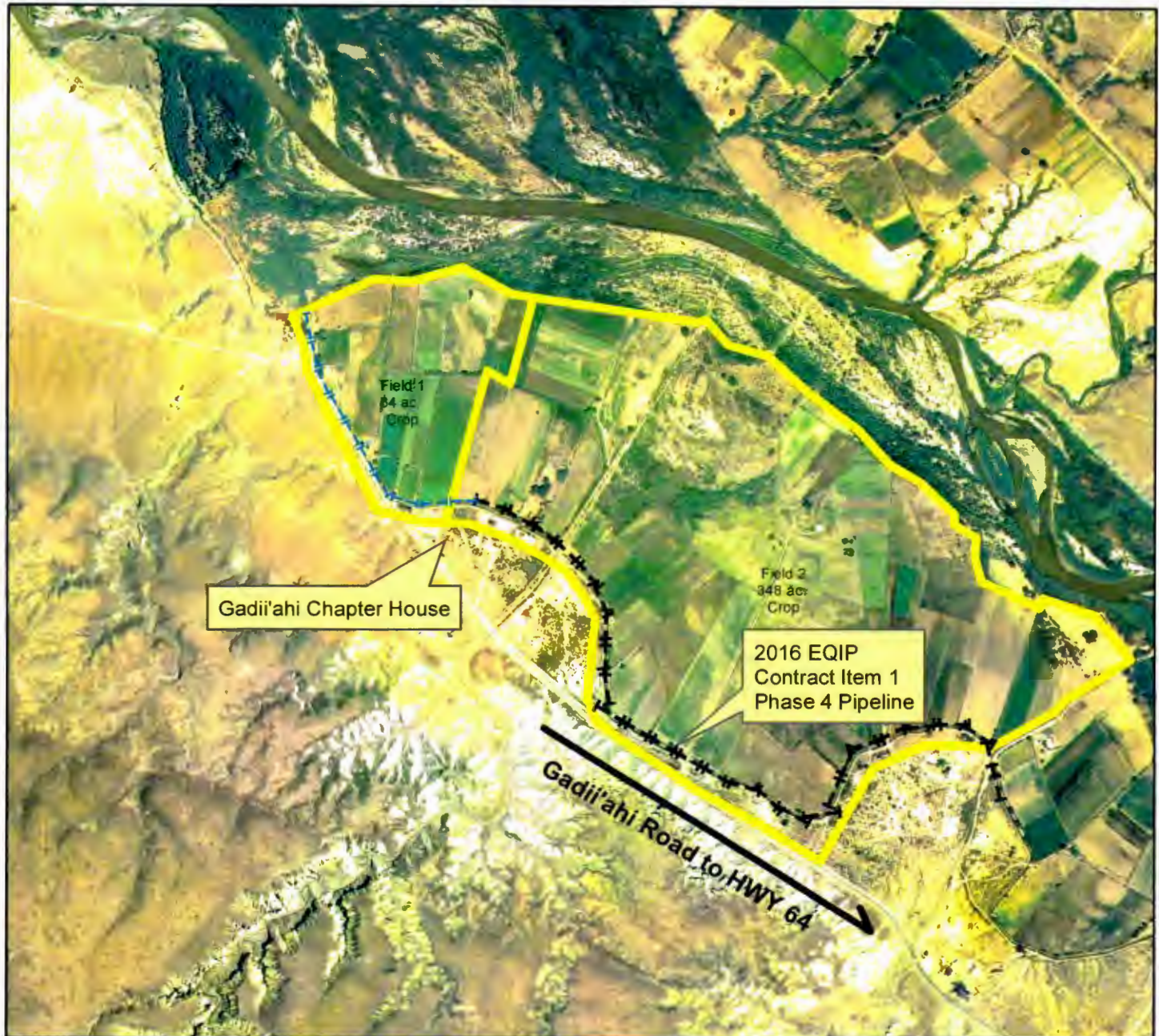
Conservation Plan Map  
Gadii'ahi Phase 4 Pipeline  
Gadii'ahi Chapter, Navajo Nation  
San Juan County, New Mexico

Date: 10/2015

Customer: Navajo Nation

District: SHIPROCK SOIL AND WATER CONSERVATION DISTRICT

Field Office: SHIPROCK PROGRAM DELIVERY POINT  
Agency: NRCS



Legend

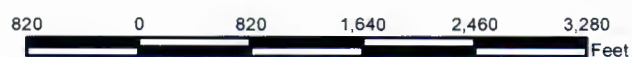
Practices (polylines)

Practice name

— Planned Phase 5 Pipeline

— Planned Phase 4 Pipeline

□ Consplan1



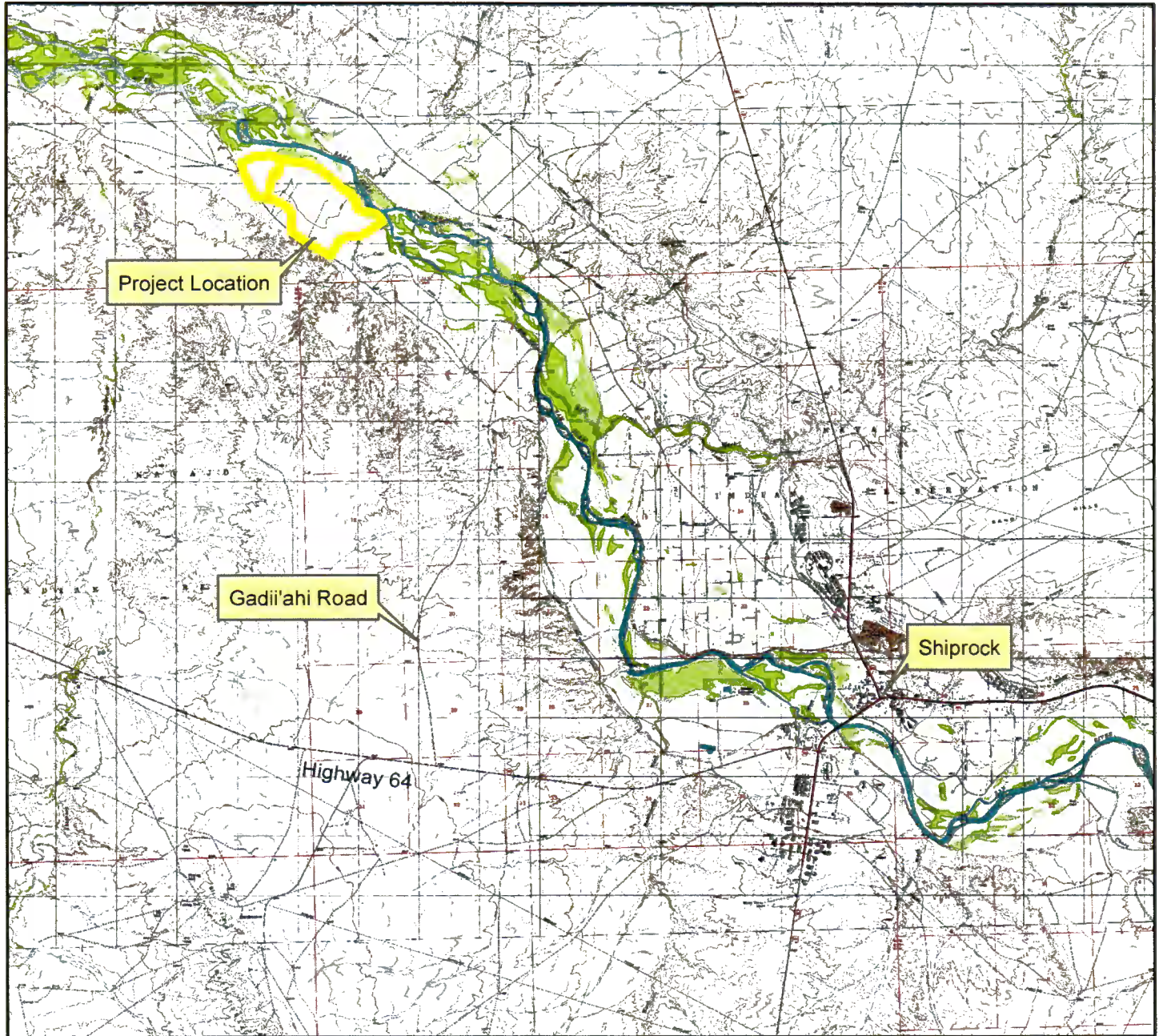
Location Map  
Gadii'ahi Phase 4 Pipeline  
Gadii'ahi Chapter, Navajo Nation  
San Juan County, New Mexico

Date: 10/2015

Customer: Navajo Nation

District: SHIPROCK SOIL AND WATER CONSERVATION DISTRICT

Field Office: SHIPROCK PROGRAM DELIVERY POINT  
Agency: NRCS



# Soils Map Gadii'ahi Phases 4 and 5 Pipeline

Date: 5/14/2013

Customer(s): NAVAJO NATION

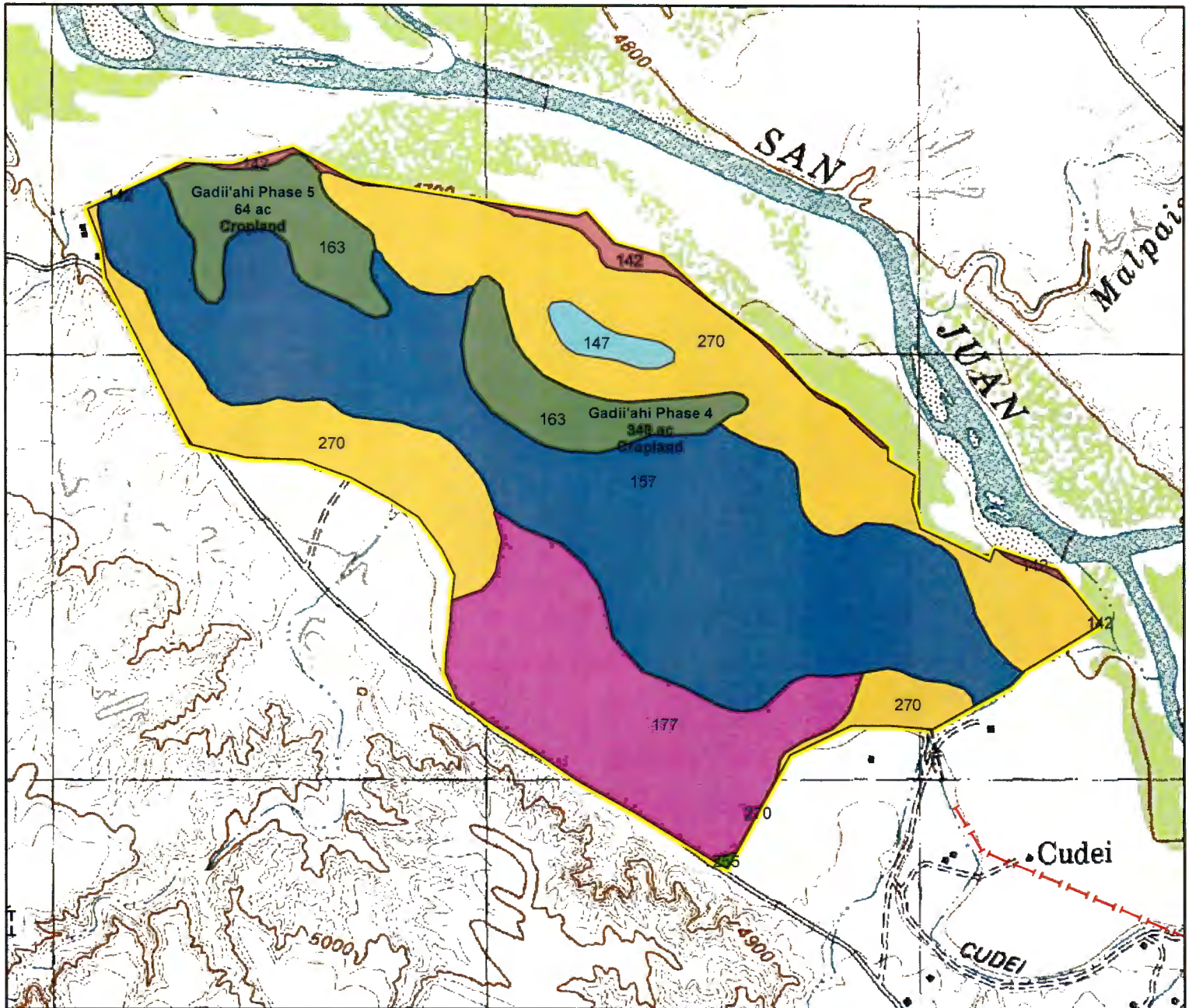
District: SHIPROCK SOIL AND WATER CONSERVATION DISTRICT

Field Office: SHIPROCK PROGRAM DELIVERY POINT

Agency: NRCS

Assisted By: GARY SMITH

State and County: NM, SAN JUAN



## Map Unit Name

- |                                                              |                                                  |
|--------------------------------------------------------------|--------------------------------------------------|
| Bebeevar-Walrees complex, 0 to 2 percent slopes              | Notal silty clay loam, 1 to 3 percent slopes     |
| Benally fine sandy loam, 1 to 5 percent slopes               | Werjo, saline-Werjo loams, 0 to 1 percent slopes |
| Blackston-Camac-Rock outcrop complex, 0 to 60 percent slopes | Werlog silty clay loam, 0 to 1 percent slopes    |
| Escavada sand, 0 to 1 percent slopes                         | Not rated or not available                       |
| Fruitland sandy clay loam, 1 to 3 percent slopes             |                                                  |

650 0 650 1,300 1,950 2,600  
Feet



## Map Unit Description

Shiprock Area, Parts of San Juan County, New Mexico and Apache County, Arizona

[Minor map unit components are excluded from this report]

Map unit: 102 - Blackston-Camac-Rock outcrop complex, 0 to 60 percent slopes

Component: Blackston (55%)

*The Blackston component makes up 55 percent of the map unit. Slopes are 0 to 2 percent. This component is on stream terraces, valleys. The parent material consists of stream alluvium derived from sandstone. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 0 percent. This component is in the R035XB267AZ Sandy Loam Upland 6-10" P.z. Limy, Gravelly ecological site. Nonirrigated land capability classification is 7c. Irrigated land capability classification is 4e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 13 percent. The soil has a very slightly saline horizon within 30 inches of the soil surface. The soil has a slightly sodic horizon within 30 inches of the soil surface.*

Component: Camac (20%)

*The Camac component makes up 20 percent of the map unit. Slopes are 15 to 60 percent. This component is on stream terraces, valleys. The parent material consists of slope alluvium derived from quartzite over residuum weathered from sandstone and shale. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 0 percent. This component is in the R035XB017NM Cobbly Slopes 6-10" ecological site. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 13 percent. The soil has a slightly saline horizon within 30 inches of the soil surface. The soil has a slightly sodic horizon within 30 inches of the soil surface.*

Component: Rock outcrop (15%)

*Generated brief soil descriptions are created for major soil components. The Rock outcrop is a miscellaneous area.*

Map unit: 142 - Bebeever-Walrees complex, 0 to 2 percent slopes

Component: Bebeever (60%)

*The Bebeever component makes up 60 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains, valleys. The parent material consists of stream alluvium derived from igneous and sedimentary rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 51 inches during May, June, July, August, September, October. Organic matter content in the surface horizon is about 0 percent. This component is in the R035XB273AZ Sandy Bottom 6-10" P.z. Perennial ecological site. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a very slightly saline horizon within 30 inches of the soil surface. The soil has a slightly sodic horizon within 30 inches of the soil surface.*

Component: Walrees (25%)

*The Walrees component makes up 25 percent of the map unit. Slopes are 0 to 1 percent. This component is on channels, channels. The parent material consists of stream alluvium derived from igneous and sedimentary rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 33 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R035XB269AZ Loamy Bottom 6-10" P.z. Perennial ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 4 percent. The soil has a slightly saline horizon within 30 inches of the soil surface. The soil has a slightly sodic horizon within 30 inches of the soil surface.*

## Map Unit Description

Shiprock Area, Parts of San Juan County, New Mexico and Apache County, Arizona

Map unit: 147 - Escavada sand, 0 to 1 percent slopes

Component: Escavada (85%)

*The Escavada component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on valleys, flood plains. The parent material consists of alluvium derived from sandstone. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 66 inches during January, February, March, April, May, June, November, December. Organic matter content in the surface horizon is about 0 percent. This component is in the R035XB028NM Sandy Bottom 6-10" ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 2 percent. The soil has a slightly sodic horizon within 30 inches of the soil surface.*

Map unit: 157 - Werjo, saline-Werjo loams, 0 to 1 percent slopes

Component: Werjo (50%)

*The Werjo component makes up 50 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains, valleys. The parent material consists of alluvium derived from sandstone and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 51 inches during May, June, July, August, September, October. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XB272AZ Loamy Bottom 6-10" P.z. Perennial, Saline ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 8 percent. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.*

Component: Werjo (35%)

*The Werjo component makes up 35 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains, valleys. The parent material consists of alluvium derived from sandstone and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 51 inches during May, June, July, August, September, October. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XB272AZ Loamy Bottom 6-10" P.z. Perennial, Saline ecological site. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 8 percent. The soil has a slightly saline horizon within 30 inches of the soil surface. The soil has a slightly sodic horizon within 30 inches of the soil surface.*

Map unit: 163 - Werlog silty clay loam, 0 to 1 percent slopes

Component: Werlog (85%)

*The Werlog component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on valleys, flood plains. The parent material consists of stream alluvium derived from sandstone and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is moderate. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 33 inches during May, June, July, August, September, October. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XB272AZ Loamy Bottom 6-10" P.z. Perennial, Saline ecological site. Nonirrigated land capability classification is 7c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 4 percent. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.*

Map unit: 177 - Notal silty clay loam, 1 to 3 percent slopes

Component: Notal (85%)

*The Notal component makes up 85 percent of the map unit. Slopes are 1 to 3 percent. This component is on fan remnants, valleys. The parent material consists of fan alluvium derived from shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches is*

## Map Unit Description

Shiprock Area, Parts of San Juan County, New Mexico and Apache County, Arizona

Map unit: 177 - Notal silty clay loam, 1 to 3 percent slopes

Component: Notal (85%)

*moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R035XB016NM Clay Loam Terrace (sodic) 7-10" ecological site. Nonirrigated land capability classification is 7c. Irrigated land capability classification is 3s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 8 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.*

Map unit: 255 - Benally fine sandy loam, 1 to 5 percent slopes

Component: Benally (80%)

*The Benally component makes up 80 percent of the map unit. Slopes are 1 to 5 percent. This component is on flood plains, valleys. The parent material consists of alluvium derived from sandstone and shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 0 percent. This component is in the R035XB022NM Loamy Upland Sodic ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 8 percent. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a strongly sodic horizon within 30 inches of the soil surface.*

Map unit: 270 - Fruitland sandy clay loam, 1 to 3 percent slopes

Component: Fruitland (85%)

*The Fruitland component makes up 85 percent of the map unit. Slopes are 1 to 3 percent. This component is on fan remnants, uplands. The parent material consists of fan alluvium derived from sandstone and siltstone. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R035XB021NM Loamy Upland 7-10 ecological site. Nonirrigated land capability classification is 7c. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 4 percent. The soil has a very slightly saline horizon within 30 inches of the soil surface. The soil has a slightly sodic horizon within 30 inches of the soil surface.*

## Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

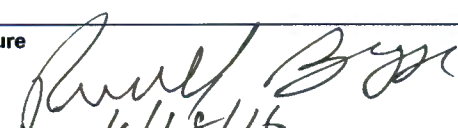
Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

## CONSERVATION PROGRAM CONTRACT

|                                                    |                                                                                                                                                                                                             |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Participant:</b><br>NAVAJO NATION               | <b>Program and Contract Number:</b><br>EQIP 2014 748C30160ZX                                                                                                                                                |
| <b>County and State:</b><br>SAN JUAN County, NM    | <b>Subaccount:</b><br>Navajo Nation Tribal Crop Projects - SF                                                                                                                                               |
| <b>Watershed:</b><br>Malpais Arroyo-San Juan River | This agreement is effective on the date signed by the Natural Resources Conservation Service obligating official unless specified otherwise in the applicable Appendix and extends through <b>4/30/2017</b> |

- The undersigned participants enter into this contract with the Natural Resources Conservation Service (NRCS) to implement and/or maintain specific conservation practices, as set forth in the Conservation Plan Schedule of Operations (NRCS-CPA-1155) on the property as identified on the plan map. In consideration for the implementation and/or maintenance of the practices, the NRCS will make payments to the participant(s) in the amount(s) described in the Schedule of Operations as outlined in the Appendix.
- This agreement is comprised of this Conservation Program Contract form NRCS-CPA-1202. The NRCS-CPA-1202 Appendix and the NRCS-CPA-1155 Plan Schedule of Operations and plan map are hereby fully incorporated into this document and are binding upon the participant(s). The NRCS-CPA-1155 may be modified through execution of a Modification form (NRCS-CPA-1156) by both NRCS and the participant and becomes a part of the contract when both parties have agreed to and signed the Modification.
- The participant(s) agree:
  - to implement and maintain conservation practices for the life of this agreement in compliance with the plan or schedule of operations and in accordance with the standards, specifications, and other special program criteria obtained from NRCS;
  - to forfeit further payments under this agreement and refund the United States, in amounts determined by NRCS, any payments received hereunder upon NRCS determination that participant(s) have violated the material terms of this agreement or accept such payment adjustments as NRCS may deem appropriate if NRCS decides that the participant's violation does not warrant termination of the agreement; and
  - to forfeit all rights to further payments under the agreement and refund to the United States, in amounts determined by NRCS, payments received hereunder if the subject land is transferred to a non-participant during the term of this agreement, unless the third party agrees to assume this agreement, and the NRCS consents to the modification.

### 4. CONTRACT PARTICIPANTS

|                                                                                                                                   |                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Name, Address, Telephone</b><br>NAVAJO NATION<br>PO BOX 9000<br>WINDOW ROCK, AZ 86515<br>(928) 755-5920                        | <b>SSN or TAX ID if applicable</b><br>*****2335<br><br><b>DUNS (non-individuals)</b><br>009001702            |
| <b>Signature</b><br><br><b>Date</b><br>4/18/16 | <b>Payment Shares</b><br>100.00%                                                                             |
| <b>Signature required for modifications</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                   | <b>Signature acceptable for payments</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

### 5. CONTRACT OBLIGATIONS

| 2016      |  |  |  |  |  |  |  |  |  | Total     |
|-----------|--|--|--|--|--|--|--|--|--|-----------|
| \$522,910 |  |  |  |  |  |  |  |  |  | \$522,910 |
|           |  |  |  |  |  |  |  |  |  | \$522,910 |

## CONSERVATION PROGRAM CONTRACT

|                                      |                                                              |
|--------------------------------------|--------------------------------------------------------------|
| <b>Participant:</b><br>NAVAJO NATION | <b>Program and Contract Number:</b><br>EQIP 2014 748C30160ZX |
|--------------------------------------|--------------------------------------------------------------|

### 6. NRCS APPROVING OFFICIALS

|                                                                                                                                                       |                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <b>Application Approval</b><br><br><b>GARY SMITH</b><br><b>USDA electronic signature; manual signature not required.</b><br><br><b>Date:</b> 4/5/2016 | <b>Contract Obligation</b><br><br><br><br><b>Date:</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|

#### PRIVACY ACT STATEMENT

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C 522a). Furnishing this information is voluntary; however failure to furnish correct, complete information will result in the withholding or withdrawal of such technical or financial assistance. The information may be furnished to other USDA agencies, the Internal Revenue Service, the Department of Justice, or other state or federal law enforcement agencies, or in response to orders of a court, magistrate, or administrative tribunal.

This information collection is exempted from the Paperwork Reduction Act under 16 U.S.C. 3801 note and 16 U.S.C. 3846.

#### NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers. If you believe you experienced discrimination when obtaining services from USDA, participating in a USDA program, or participating in a program that receives financial assistance from USDA, you may file a complaint with USDA. Information about how to file a discrimination complaint is available from the Office of the Assistant Secretary for Civil Rights.

USDA prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.)

To file a complaint of discrimination, complete, sign and mail a program discrimination complaint form, available at any USDA office location or online at [www.ascr.usda.gov](http://www.ascr.usda.gov), or write to:

USDA  
Office of the Assistant Secretary for Civil Rights  
1400 Independence Avenue, S.W.  
Washington, DC 20250-9410

Or call toll free at (866) 632-9992 (voice) to obtain additional information, the appropriate office or to request documents. Individuals who are deaf, hard of hearing or have speech disabilities may contact USDA through the Federal Relay service at (800) 877-8339 or (800) 845-6136 (in Spanish). USDA is an equal opportunity provider, employer and lender.

Persons with disabilities who require alternative means for communication of program information (e.g., Braille, large print, audiotope, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

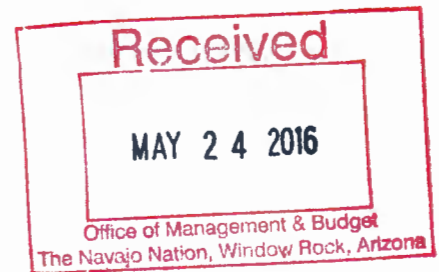


United States Department of Agriculture



**MAY 17 2016**

Russell Begaye  
President  
Navajo Nation  
Office of the President/Vice President  
Post Office Box 7440  
Window Rock, Arizona 86515



Dear President Begaye:

The NRCS has received an inquiry from the Navajo Nation regarding the use of Environmental Quality Incentive Funds (EQIP) to pay for indirect costs. The NRCS does not pay indirect costs under the EQIP program contracts it enters into with program participants. The payment amounts are governed by EQIP statutory and regulatory authority. In particular, an EQIP payment is to compensate a participant for the costs for implementing conservation practices, including incurred costs associated with planning, design, materials, equipment, installation, labor, management, maintenance, or training; and income forgone by the producer. *See, e.g.* 16 USC 3839aa-1(3) and 16 USC 3839aa-2(d).

More particularly, 7 CFR §1466.23 implements statutory authority and limits payments to cost incurred in the actual implementation of the conservation practice or estimated income forgone. The regulations describe the process and criteria by which the NRCS develops payment schedules that include these allowed costs. Indirect costs are not included in the items allowed to be considered in the development of a payment schedule upon which payment for the implementation of conservation practices is based.

Thus, by statute and regulation, the NRCS does not pay participating producers for indirect costs under EQIP, and they are not a basis for making a payment under a program contract. Hopefully this information is helpful in addressing your concerns; however, if you have any further questions, please contact Emily Fife, Assistant State Conservationist for Programs at (602) 280-8800 or via email at [Emily.Fife@az.usda.gov](mailto:Emily.Fife@az.usda.gov).

Sincerely,

KEISHA L. TATEM  
State Conservationist

Natural Resources Conservation Service  
230 N. First Avenue, Suite 509, Phoenix, Arizona 85003-1733  
Tel. (602) 280-8801 • Fax (855) 844-9178

*An Equal Opportunity Provider and Employer*

Russell Begaye, President  
Page 2

cc:

Ethel Branch, Attorney General, Navajo Nation Department of Justice, Window Rock,  
Arizona

Bidtah Becker, Executive Director, Navajo Nation Division of Natural Resources,  
Window Rock, Arizona

Jim Parris, Controller, Navajo Nation Division of Finance, Window Rock, Arizona

Domini Beyal, Executive Director, Navajo Nation Office of Management and Budget  
Window Rock, Arizona

Emily Fife, Assistant State Conservationist for Programs, NRCS, Phoenix, Arizona

Kendall B. Hicks, Assistant State Conservationist for Field Operations, NRCS, Flagstaff,  
Arizona

Richard Begay, Tribal Liaison, NRCS, Saint Michaels, Arizona

# NAVAJO NATION

RCS# 549

Naa'bik'iyati Committee

9/2/2016

05:39:55 PM

Amd# to Amd#

Legislation No. 0246-16:

PASSED

MOT Hale

Supporting the NN Division of  
Natural Resources Grant App.  
for \$522,910.00 to USDA...

SEC Bennett

**Yea : 11**

**Nay : 2**

**Not Voting : 11**

**Yea : 11**

Bennett

Daniels

Perry

Tso

Brown

Hale

Phelps

Witherspoon

Crotty

Jack

Smith

**Nay : 2**

Yazzie, P

Damon

**Not Voting : 11**

Bates

BeGaye, N

Pete

Tsosie

Begay, K

Chee

Shepherd

Yazzie

Begay, NM

Filfred

Slim