

Carolyn O'Neil, Administrator  
U.S. Department of Housing and Urban Development  
Southwest Office of Native American Programs, Region IX  
Phelps Dodge Building, Suite 600  
One North Central Avenue  
Phoenix, Arizona 85004

Dear Ms. O'Neil:

As provided for under Title I of the Housing and Community Development Act of 1974, as amended and in accordance with 24 CFR Part 1003, the Navajo Nation herewith submits the CDBG Application for Grant Year 2012 under the Indian Community Development Block Grant ('ICDBG').

The Navajo Nation appreciates the opportunity to submit the application for funding to serve low-moderate income Navajo families with the most needed infrastructure service.

Your favorable consideration is greatly appreciated. If you have any questions, please contact the Navajo Nation Community Development Block Grant Program within the Community Housing & Infrastructure Department at (928) 871-6539.

Sincerely,

**THE NAVAJO NATION**

A handwritten signature in black ink, appearing to read 'Ben Shelly'.

Ben Shelly, President

**Enclosure**

xc: Arbin Mitchell, Division Director, Division of Community Development  
Chavez John, Department Manager, Community Housing & Infrastructure Department/DCD  
James Adakai, Programs & Projects Specialist, Community Development Block Grant/CHID-DCD

100

100

100

100

100

**Navajo Nation FY-2012 ICDBG Grant Application**

**Ten (10) Public Facilities and Improvements**

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## **SECTION I.**

### **HUD Forms:**

- **Application for Federal Assistance (SF-424)**
- **Disclosure of Lobbying Activities**
- **Applicant/Recipient Disclosure/Update Report (HUD-2880)**
- **Certifications (HUD-4126)**
- **Certification for a Drug-Free Workplace (HUD-50070)**

### Application for Federal Assistance SF-424

**\* 1. Type of Submission:**

- Preapplication
- Application
- Changed/Corrected Application

**\* 2. Type of Application:**

- New
- Continuation
- Revision

\* If Revision, select appropriate letter(s):

\* Other (Specify):

**\* 3. Date Received:**

Completed by Grants.gov upon submission

**4. Applicant Identifier:**

**5a. Federal Entity Identifier:**

**5b. Federal Award Identifier:**

**State Use Only:**

**6. Date Received by State:**

**7. State Application Identifier:**

**B. APPLICANT INFORMATION:**

**\* a. Legal Name:**

THE NAVAJO NATION

**\* b. Employer/Taxpayer Identification Number (EIN/TIN):**

86-0092335

**\* c. Organizational DUNS:**

0090017020000

**d. Address:**

**\* Street1:**

P.O. Box 2365

**Street2:**

**\* City:**

Window Rock

**County/Parish:**

**\* State:**

AZ: Arizona

**Province:**

**\* Country:**

USA: UNITED STATES

**\* Zip / Postal Code:**

86515-2365

**e. Organizational Unit:**

**Department Name:**

COMM. DEV. BLOCK GRANT PROGRAM

**Division Name:**

COMMUNITY DEVELOPMENT

**f. Name and contact information of person to be contacted on matters involving this application:**

**Prefix:**

Mr.

**\* First Name:**

CHAVEZ

**Middle Name:**

**\* Last Name:**

JOHN

**Suffix:**

**Title:**

DEPARTMENT MANAGER

**Organizational Affiliation:**

NAVAJO NATION - COMMUNITY HOUSING & INFRASTRUCTURE DEPARTMENT

**\* Telephone Number:**

(928) 871-6539

**Fax Number:**

(928) 871-6684

**\* Email:**

chavez.john@nchid.org

**Application for Federal Assistance SF-424**

**\* 9. Type of Applicant 1: Select Applicant Type:**

I: Indian/Native American Tribal Government (Federally Recognized)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

\* Other (specify):

**\* 10. Name of Federal Agency:**

US Department of Housing and Urban Development

**11. Catalog of Federal Domestic Assistance Number:**

14.862

CFDA Title:

Indian Community Development Block Grant Program

**\* 12. Funding Opportunity Number:**

FR-5600-N-02

\* Title:

Community Development Block Grant Program for Indian Tribes and Alaska Native Villages (ICDBG)

**13. Competition Identification Number:**

ICDBG-02

Title:

**14. Areas Affected by Project (Cities, Counties, States, etc.):**

Add Attachment

Delete Attachment

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**\* 15. Descriptive Title of Applicant's Project:**

Ten (10) PUBLIC FACILITIES AND IMPROVEMENT PROJECTS ON THE NAVAJO INDIAN RESERVATION.  
(STATES OF ARIZONA, NEW MEXICO AND UTAH)

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

\* a. Applicant

AZ-001

b. Program/Project

AZ-001

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

\* a. Start Date:

\* b. End Date:

18. Estimated Funding (\$):

\* a. Federal

\* b. Applicant

\* c. State

\* d. Local

\* e. Other

\* f. Program Income

\* g. TOTAL

\* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?

a. This application was made available to the State under the Executive Order 12372 Process for review on

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

\* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)

Yes

No

provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. \*By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

\*\* I AGREE

\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

Mr.

\* First Name:

BEN

Middle Name:

\* Last Name:

SHELLY

Suffix:

\* Title:

PREIDENT

\* Telephone Number:

(928) 871-6539

Fax Number:

(928) 871-6684

\* Email:

admin@nrchid.org

\* Signature of Authorized Representative:

Completed By Grants.gov upon submission

\* Date Signed:

Completed By Grants.gov upon submission

Facsimile Transmittal

U. S. Department of Housing and Urban Development  
Office of Department Grants Management and Oversight

OMB Number: 2525-0118  
Expiration Date: 06/30/2011

1323966691 - 5846

Name of Document Transmitting: **FY'2012 NAVAJO NATION ICDBG APPLICATION**

1. Applicant Information:

Legal Name: **THE NAVAJO NATION**  
Address:  
Street1: **P.O. Box 2365**  
Street2:  
City: **Window Rock**  
County:  
State: **AZ: Arizona**  
Zip Code: **86515-2365** Country: **USA: UNITED STATES**

2. Catalog of Federal Domestic Assistance Number:

Organizational DUNS: **0090017020000** CFDA No.: **14.862**  
Title: **Indian Community Development Block Grant Program**  
Program Component:

3. Facsimile Contact Information:

Department: **COMM. DEV. BLOCK GRANT PROGRAM**  
Division: **COMMUNITY DEVELOPMENT**

4. Name and telephone number of person to be contacted on matters involving this facsimile.

Prefix: **Mr.** First Name: **JAMES**  
Middle Name:  
Last Name: **ADAKI**  
Suffix:  
Phone Number: **(928) 871-6539**  
Fax Number:

5. Email: **james.adaqi@nchid.org**

6. What is your Transmittal? (Check one box per fax)

a. Certification  b. Document  c. Match/Leverage Letter  d. Other

7. How many pages (including cover) are being faxed?

**DISCLOSURE OF LOBBYING ACTIVITIES**

Approved by OMB  
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

**1. Type of Federal Action:**  
 a contract  
 b grant  
 c cooperative agreement  
 d loan  
 e loan guarantee  
 f loan insurance

**2. Status of Federal Action:**  
 a bid/offer/procurement  
 b initial award  
 c post-award

**3. Report Type:**  
 a initial filing  
 b material change

**4. Name and Address of Reporting Entity:**  
 Name: THE NAVAJO NATION  
 Street 1: P.O. Box 2365  
 Street 2: Window Rock  
 State: AZ: Arizona  
 City: Window Rock  
 Zip: 86515-2365  
 Congressional District if known: \_\_\_\_\_

**5. If Reporting Entry in No. 4 is Subawardee, Enter Name and Address of Prime:**

**6. Federal Department/Agency:** U.S. DEPT. OF HOUSING & URBAN DEVELOPMENT  
**7. Federal Program Name/Description:** Indian Community Development Block Grant Program  
 CFDA Number, if applicable: \_\_\_\_\_  
 Award Amount, if known: \$ \_\_\_\_\_

**8. Federal Action Number, if known:** \_\_\_\_\_

**10. a. Name and Address of Lobbying Registrant:**  
 Prefix: N/A  
 First Name: \_\_\_\_\_  
 Middle Name: \_\_\_\_\_  
 Last Name: \_\_\_\_\_  
 Street 1: \_\_\_\_\_  
 Street 2: \_\_\_\_\_  
 City: \_\_\_\_\_  
 State: \_\_\_\_\_  
 Zip: \_\_\_\_\_

**b. Individual Performing Services (including address if different from No. 10a):**  
 Prefix: \_\_\_\_\_  
 First Name: \_\_\_\_\_  
 Middle Name: \_\_\_\_\_  
 Last Name: \_\_\_\_\_  
 Street 1: \_\_\_\_\_  
 Street 2: \_\_\_\_\_  
 City: \_\_\_\_\_  
 State: \_\_\_\_\_  
 Zip: \_\_\_\_\_

**11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the list above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.**

**Signature:** \_\_\_\_\_  
 Title: PRESIDENT  
 Telephone No.: (928) 871-6539  
 Date: 01/04/2012  
 Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)

**Applicant/Recipient  
Disclosure/Update Report**

U.S. Department of Housing  
and Urban Development

OMB Number: 2510-0011  
Expiration Date: 10/31/2012

Applicant/Recipient Information

\* Duns Number: 009001702000

\* Report Type: INITIAL

1. Applicant/Recipient Name, Address, and Phone (include area code):

\* Applicant Name:

THE NAVAJO NATION

\* Street1: P.O. Box 2365

Street2:

\* City: WINDOW ROCK

County:

\* State: AZ: Arizona

\* Zip Code: 86515-2365

\* Country: USA: UNITED STATES

\* Phone: (928) 871-6539

2. Social Security Number or Employer ID Number: 86-0092335

\* 3. HUD Program Name:

Indian Community Development Block Grant Program

\* 4. Amount of HUD Assistance Requested/Received: \$ 5,500,000.00

5. State the name and location (street address, City and State) of the project or activity:

\* Project Name: THE NAVAJO NATION

\* Street1: P.O. Box 2365

Street2:

\* City: WINDOW ROCK

County:

APACHE

\* State: AZ: Arizona

\* Zip Code: 86515-2365

\* Country: USA: UNITED STATES

**Part I Threshold Determinations**

\* 1. Are you applying for assistance for a specific project or activity? These terms do not include formula grants, such as public housing operating subsidy or CDBG block grants. (For further information see 24 CFR Sec. 4.3).

Yes  No

\* 2. Have you received or do you expect to receive assistance within the jurisdiction of the Department (HUD) involving the project or activity in this application, in excess of \$200,000 during this fiscal year (Oct. 1-Sep. 30)? For further information, see 24 CFR Sec. 4.9

Yes  No

If you answered "No" to either question 1 or 2, **Stop!** You do not need to complete the remainder of this form.  
**However,** you must sign the certification at the end of the report.

**Part II Other Government Assistance Provided or Requested / Expected Sources and Use of Funds.**

Such assistance includes, but is not limited to, any grant, loan, subsidy, guarantee, insurance, payment, credit, or tax benefit.

Department/State/Local Agency Name:

\* Government Agency Name:

Government Agency Address:

\* Street1:   
Street2:   
\* City:   
County:   
\* State:   
\* Zip Code:   
\* Country:

\* Type of Assistance:  \* Amount Requested/Provided: \$

\* Expected Uses of the Funds:

Department/State/Local Agency Name:

\* Government Agency Name:

Government Agency Address:

\* Street1:   
Street2:   
\* City:   
County:   
\* State:   
\* Zip Code:   
\* Country:

\* Type of Assistance:  \* Amount Requested/Provided: \$

\* Expected Uses of the Funds:

(Note: Use Additional pages if necessary.)

**Part III Interested Parties.** You must decide.

1. All developers, contractors, or consultants involved in the application for the assistance or in the planning, development, or implementation of the project or activity and

2. Any other person who has a financial interest in the project or activity for which the assistance is sought that exceeds \$50,000 or 10 percent of the assistance (whichever is lower).

\* Alphabetical list of all persons with a reportable financial interest in the project or activity (For individuals, give the last name first)

\* Social Security No. or Employee ID No.

\* Type of Participation in Project/Activity

\* Financial Interest in Project/Activity (\$ and %)

* Alphabetical list of all persons with a reportable financial interest in the project or activity (For individuals, give the last name first)	* Social Security No. or Employee ID No.	* Type of Participation in Project/Activity	* Financial Interest in Project/Activity (\$ and %)
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/> <input type="text"/> %
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/> <input type="text"/> %
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/> <input type="text"/> %
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/> <input type="text"/> %
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/> <input type="text"/> %

(Note: Use Additional pages if necessary.)

Add Attachment

Delete Attachment

View Attachment

**Certification**

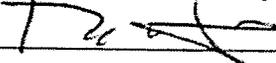
**Warning:** If you knowingly make a false statement on this form, you may be subject to civil or criminal penalties under Section 1001 of Title 18 of the United States Code. In addition, any person who knowingly and materially violates any required disclosures of information, including intentional non-disclosure, is subject to civil money penalty not to exceed \$10,000 for each violation.

I certify that this information is true and complete.

\* Signature:

\* Date: (mm/dd/yyyy)

Completed Upon Submission to Grants.gov



01/09/2012

# Certifications

Indian Community Development  
Block Grant (ICDBG)

U.S. Department of Housing  
and Urban Development  
Office of Public and Indian Housing

OMB Approval No. 2577-0191  
(exp. 10/31/2009)

Public reporting burden for this collection of information is estimated to average 40 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.

This collection of information requires that each eligible applicant submit information to enable HUD to select the best projects for funding during annual competitions for the ICDBG Program. The information will be used by HUD to determine whether applications meet minimum screening eligibility requirements and application submission requirements. Applicants provide general information about the project which is preliminary to the review of the applicant's response to the criteria for rating the application. The information is essential for HUD in monitoring grants to ensure that grantees are making proper use of Federal dollars. Responses to the collection are required by Section 105 of the Department of Housing and Urban Development Reform Act (P.L. 101-235) as amended by the Cranston-Gonzales National Affordable Housing Act of 1990. The information requested does not lend itself to confidentiality.

The grantee hereby certifies and assures that it will comply with the regulations, guidelines, and requirements with respect to the acceptance and use of Federal funds for this Federally-assisted program. Also, the grantee gives assurances and certifies with respect to the grant that:

- A. It possesses the legal authority to apply for the grant and execute the proposed program.
  - B. The governing body has duly authorized the filing of the application, including all understandings and assurances contained in the application and has directed and authorized the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.
  - C. It will comply with the HUD general administration requirements in 24 CFR Part 85.
  - D. It will comply with the requirements of Title II of Public Law 90-284 (25 USC 1301) (the Indian Civil Rights Act).
  - E. It will comply with the Indian preference provisions required in 24 CFR 1003.510.
  - F. It will establish written safeguards to prevent employees from using positions funded under the ICDBG programs for a purpose that is, or gives the appearance of being, motivated by private gain for themselves, their immediate family or business associates. Nothing in this certification should be construed as to limit employees from benefiting from program activities for which they would otherwise be eligible.
  - G. It will give HUD and the Comptroller General access and right to examine all books, records, papers, or documents related to the grant for a period of not less than three years after program completion or until resolution of any final audit findings.
  - H. Neither the applicant nor its principals are presently excluded from participation in any HUD programs, as required by 24 CFR part 24.
  - I. It will comply with the acquisition and relocation requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, implementing regulations at 49 CFR part 24 and the requirements of 24 CFR 1003.602.
  - J. The chief executive officer or other official of the applicant approved by HUD:
    - 1. Consents to assume the status of a responsible Federal official under the National Environmental Policy Act of 1969 insofar as the provisions of the Act apply to the applicant's proposed program pursuant to 24 CFR 1003.605.
  - 2. Is authorized and consents on behalf of the applicant and him/her self to accept the jurisdiction of the Federal courts for the purpose of enforcement of his/her responsibilities as such an official.
- Note:** Applicants for whom HUD has approved a claim of incapacity to accept the responsibilities of the Federal government for purposes of complying with the environmental review requirements of 24 CFR part 58 pursuant to 24 CFR 1003.605 need not include the provision of paragraph J in their assurance.
- K. It will comply with the requirements of Section 3 of the Housing and Urban Development Act of 1968 and the regulations in 24 CFR part 135 (Economic Opportunities for Low and Very Low Income Persons) to the maximum extent consistent with, but not in derogation of, compliance with Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 USC. 450e(b)).
  - L. It will comply with the requirements of the Fire Authorization Administration Act of 1992 (Pub.L. 102-522).
  - M. It will provide the drug-free workplace required by 24 CFR part 24, subpart F.
  - N. It will comply with 24 CFR, part 4, subpart A, showing full disclosure of all benefits of the project as collected by Form HUD-2880, Applicant/Recipient Disclosure Report.
  - O. Prior to submission of its application to HUD, the grantee has met the citizen participation requirements which includes following traditional means of member involvement, as required in 24 CFR 1003.604.
  - P. It will administer and enforce the labor standard requirements prescribed in 24 CFR 1003.603.
  - Q. The Program has been developed so that not less than 70 percent of the funds received under this grant will be used for activities that benefit low- and moderate-income persons.
- Note:** Applicants receiving Imminent Threat Grants need not include the provision of this paragraph in their assurance

Name (type or print)  
**BEN SHELLY**

Signature

Title

**PRESIDENT**

Date (mm/dd/yyyy)

**01/04/2010**

# Certification for a Drug-Free Workplace

U.S. Department of Housing and Urban Development

Applicant Name

THE NAVAJO NATION

Program/Activity Receiving Federal Grant Funding

INDIAN COMMUNITY DEVELOPMENT BLOCK GRANT

Acting on behalf of the above named Applicant as its Authorized Official, I make the following certifications and agreements to the Department of Housing and Urban Development (HUD) regarding the sites listed below:

I certify that the above named Applicant will or will continue to provide a drug-free workplace by:

a. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Applicant's workplace and specifying the actions that will be taken against employees for violation of such prohibition.

b. Establishing an on-going drug-free awareness program to inform employees ---

(1) The dangers of drug abuse in the workplace;

(2) The Applicant's policy of maintaining a drug-free workplace;

(3) Any available drug counseling, rehabilitation, and employee assistance programs; and

(4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

c. Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph a.;

d. Notifying the employee in the statement required by paragraph a. that, as a condition of employment under the grant, the employee will ---

(1) Abide by the terms of the statement; and

(2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

e. Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph d.(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer or other designee on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;

f. Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph d.(2), with respect to any employee who is so convicted ---

(1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

(2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;

g. Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs a. thru f.

2. **Sites for Work Performance.** The Applicant shall list (on separate pages) the site(s) for the performance of work done in connection with the HUD funding of the program/activity shown above: Place of Performance shall include the street address, city, county, State, and zip code. Identify each sheet with the Applicant name and address and the program/activity receiving grant funding.)

Check here  if there are workplaces on file that are not identified on the attached sheets.

I hereby certify that all the information stated herein, as well as any information provided in the accompaniment herewith, is true and accurate.

**Warning:** HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

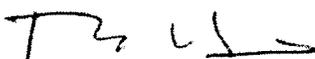
Name of Authorized Official

BEN SHELLY

Title

PRESIDENT

Signature



Date

01/04/2012

X

form HUD-50070 (3/98)  
ref. Handbooks 7417.1, 7475.1 & 7485.1 & .3

## **SECTION II.**

- **Introduction**
- **Administration**
- **Threshold & HUD Requirements**

## **INTRODUCTION**

### **FY-2012 ICDBG Application**

The Navajo Nation CDBG Program's objective is to promote and develop viable communities throughout the Navajo reservation. A viable community includes decent housing, a suitable living environment for its inhabitants and economic opportunities for persons of low and moderate incomes. The Navajo Nation is in desperate need of fulfilling this primary objective. The Nation's poverty level is at 42.90% and the unemployment rate is 11.20%, according to Census 2010. Many residents on the reservation live in rural areas; the isolated communities make economic growth and community development a slow process. The proposed program funds under FY-2012 Indian Community Development Block Grant (ICDBG) contain the Nation's most viable projects. Therefore, the project completion will make a tremendous impact on several families who are in desperate need of improving their living conditions, due to stifled economy and in financial despair.

FY-2012 application addresses ICDBG funding requirements and relevant documents that are outlined in the FY-2012 Notice of Funds Availability (NOFA) guide. The infrastructure activities contained herein were selected accordingly and are further explained in the enclosed package. The application content includes: Section 1. Required HUD forms: SF-424 Application for Federal Assistance, 2012 Applicant/Recipient Disclosure/Update Report Survey on Ensuring Equal Opportunity for Applicants: Section 2 is Introduction, Threshold Review and HUD requirements: Section 3 contains the Summary of the \$5.5 million application: Section 4 is the Community Development Statement: Section 5 is the Demographic Data Certification and Survey Forms: Section 6 has Navajo Nation Council Resolution; Section 7 is the Rating Factor 1, 2, 3, 4, and 5: and Section 8 includes the Appendixes.

The projects were well planned from conception to final closeout by the sub-recipient. The appropriate cooperating entities prepared the feasibility and cost estimate for the projects. All entities pledged their support, contribution and commitments. The leveraging commitments make these projects realistic in terms of project feasibility, cost effectiveness, joint-partnership among concerned entities, including productivity workmanship and deliver of quality service.

**ADMINISTRATION**  
**FY-2012 Application**

The Navajo Nation CDBG Program is located on the Navajo Nation Reservation in Window Rock, Arizona. The office is responsible for being a liaison between the Navajo Nation and the U.S. Department of Housing and Urban Development (DHUD/Southwest Office of Native American Programs (SWONAP) in Phoenix, Arizona. The Nations CDBG role is to promote the national objective of the Nation and DHUD Indian CDBG Programs. This includes administering the approved projects in accordance with all applicable regulations to achieve the intended purposes; reporting requirements, technical assistance to the Nation; and preparation and assessment of new grants and other administrative responsibilities.

The CDBG Program ensures efficiency in the program operations and assures successful completion of the projects. The Program has a staff of eight (8) full-time employees which includes: (1) Programs and Projects Specialist, (1) Construction Supervisor, (3) Field Supervisors, (1) Senior Office Specialist, (1) Office Assistant, (1) Accountant and (1) Temporary Administrative Assistant. The CDBG staff coordinates with other agencies such as utility firms, various local Chapters and Navajo Nation Departments for providing services and quality workmanship.

### **Compliance with Regulations, Guidelines and Requirements**

1. The Navajo Nation will comply with the regulations, guidelines and requirements with respect to the acceptance and the use of federal funds for this federally assisted program under the FY-2012 NOFA for ICDBG.
2. The chief executive officer, the Navajo Nation President as previously exercised, will provide consent to assume the status of a responsible federal official under the National Environmental Policy Act of 1969 so far as the provisions of the Act apply to the Nation's proposed program pursuant to 24 CFR.1003.605. Further, the Navajo Nation President is authorized and consents on behalf of the Nation's applicant and accepts the jurisdiction of the federal courts for the purpose of enforcement of his responsibilities as such an official.

### **Program-Related Threshold Requirements**

1. **Outstanding ICDBG Obligation.** The Navajo Nation does not have an outstanding ICDBG obligation to HUD that is in arrears, or has not agreed to a repayment schedule.
2. **Compliance with Fair Housing and Civil Rights Laws.** The Navajo Nation as a federally recognized Indian Tribe is subject to Civil Rights Threshold requirements of: Title II of the Civil Rights Act of 1964, known as the Indian Civil Rights Act; Section 109 of the Housing and Community Development Act of 1974 prohibitions against discrimination based on age, sex, religion and *disability*; the Age Discrimination Act of 1975; and Section 504 of the Rehabilitation Act of 1973. The Nation has no outstanding violations of these civil rights provisions at this time of application.

## **THRESHOLD AND HUD REQUIREMENTS**

### **I. COMPLIANCE WITH REGULATIONS, GUIDELINES & REQUIREMENTS: FY-2012 NOFA**

The Navajo Nation will comply with the Regulations, Guidelines and Requirements Applicable to all projects and provides assurance with respect to ICDBG grant activity.

*1. Legal Authority to Apply and Execute:*

The Nation possesses the legal authority to apply for the grant and execute the proposed program.

*2. Governing Body:*

The Nation, the Governing Body has authorized the filing of the application understandings, assurances, directed, authorized the identified person as an official representative in conjunction with the application and to provide additional information when required.

*3. General Administration Requirements:*

The Nation will comply with HUD general administration requirements in 24 CFR Part 85. Also, will comply with 24 CFR 1003 and OMB Circular A-85.

*4. Title II of Public Law, the Indian Civil Rights Act:*

The Nation will comply with the requirements of Title II of Public Law 90-284 (25 U.S.C. 1301), the Title II of Indian Civil Rights Act of 1964. Also, subject to Section 109 prohibitions against discrimination based on age, sex, religion and disability; the Age Discrimination Act of 1975; and Section 504 of the Rehabilitation Act of 1973.

*5. Indian Preference Provisions:*

The Nation will comply with the Indian preference required in 24 CFR 1003.510.

*6. Written Safeguards:*

The Nation will establish written safeguards for prevention of employees from using positions funded under the ICDBG programs for a purpose that is, or gives the appearance of being motivated by private gain for themselves, their immediate family or business associate.

*7. Exclusion from Participation:*

The Nation understands neither the applicant nor its principals are presently excluded from participation in any HUD programs, as required by 24 CFR part 24.

8. *Chief Executive Officer or other official of the Applicant Approved by HUD:*
- a. The Nation will consent to assume the status of a responsible Federal official under the National Environmental Policy Act of 1969 insofar as the provisions of the Act apply to the applicant's proposed program pursuant to 24 CFR 1003.605.
  - b. The Nation authorizes and consents on behalf of the applicant and him/herself to accept the jurisdiction of the Federal courts for the purpose of enforcement of his/her responsibilities as such an official. Further, the Nation will authorize by Navajo Nation Council resolution to designate any other program to approve their Environmental Review Records.

9. *Requirements of Section 3 of the Housing & Urban Development Act:*

The Nation will comply with the requirements of Section 3 of the Housing and Urban Development Act of 1968 and the regulations in 24 CFR part 135 (Economic Opportunities for Low and Very Low Income Persons) to the maximum extent consistent with, but not in derogation of, compliance with Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e(b)).

10. *Fire Authorization Administration Act:*

The Nation will comply with the requirements of the Fire Authorization Administration Act of 1992 (Pub. L. 102-522).

11. *Full Disclosure, Collected by Applicants/Recipient Disclosure Report:*

The Nation will comply with 24 CFR, part 4, subpart A, showing full disclosure of all benefits of the project as collected by Form HUD-2880, Applicant/Recipient Disclosure Report.

12. *Citizen Participation:*

Prior to application submission, the Nation, grantee, has met the citizen participation requirements which includes the following traditional means on member involvement, as required in 24 CFR 1003.604.

13. *Labor Standards:*

The Nation will administer and enforce the labor standards requirements prescribed in 24 CFR 1003.603.

14. *Project Developed for Low and Moderate Income Persons:*

The Nation developed project so that not less than 70 percent of the funds received under this grant will be used for activities that benefit low-and-moderate income persons.

15. *Executive Order 13202:*

The Nation will agree to comply with Executive Order 13202, "Preservation of Open Competition and Government Neutrality Towards Government Contractors' Labor Relations on Federal and Federally Funded Construction Projects", applies to projects funded under this NOFA.

**II. OTHER/HUD REQUIREMENTS AND PROCEDURES APPLICABLE:**

FY-2012 General Section NOFA

1. *Statutory and Regulatory Requirements:*

The Navajo Nation will comply with all statutory and regulatory requirements for which the Nation is seeking funds. Since 1976, the Navajo Nation has consistently complied with ICDBG regulations governing the CDBG program activities.

*Threshold Requirements:*

- a. The Nation understands that HUD will not consider an application from an ineligible applicant. The Nation is an eligible applicant.
- b. The Nation has obtained a DUNS number and will include the number in the Application for Federal Assistance submission.
- c. The Nation complies with all applicable fair housing and civil rights requirements in 24 CFR 5.105(a). Also, as a federally recognized Indian tribe, the Nation complies with the nondiscrimination provisions enumerated at 24 CFR 1000.12, as applicable.
- d. The Nation, as applicants subject to 24 CFR parts 84 and 85 have developed and maintained a written code of conduct and the Nation is also listed on the HUD code of conduct listing on the HUD website.
- e. The Nation, understands HUD's consistency with the purpose and intent of 31 U.S.C. 3720B and 28 U.S.C. 3201(e), and has no outstanding delinquent federal debt.
- f. The Nation understands HUD may arrange for a pre-award survey of the Nation's financial management system and it meets federal standards (24 CFR part 85.20).
- g. The Nation understands it is subject to a key individual name check review process and is also aware of the consequences of a significant adverse finding.
- h. The Nation is aware of false statements in an application is grounds for denial or termination of an award and possible punishment as provided in 18 U.S.C. 1001.
- i. The Nation understands the provisions of Section 319 of Public Law 101-121 (approved October 23, 1989) (31 U.S.C. 1352) (the Byrd Amendment), which prohibits grant recipients from using appropriated funds for lobbying the executive or legislative branches of the federal government.
- j. The Nation is in accordance with 24 CFR part 24 and is not presently debarred or suspended, or proposed to be debarred or suspended, from doing business with the federal government.

FY-2012 General Section NOFA

*Other Threshold Requirements:*

*Additional Nondiscrimination and Other Requirements:*

The Nation and its sub-recipients will comply with:

- a. Civil Rights Laws including Americans with Disabilities Act of 1990 (42 U.S.C. 1201 et seq.), the Age Discrimination Act of 1974 (42 U.S.C. 6101 et seq.), and Title IV of the Education Amendments Act of 1972 (U.S.C. 1681 et seq.)
- b. The duty to Affirmatively Further Fair Housing opportunities for classes protected under section 808(e)(5) of the Fair Housing Act.
- c. Economic Opportunities for Low-and Very Low-Income Persons. Over 80 percent of the proposed recipients for each are low and moderate income household.
- d. Ensuring the Participation of Small Businesses, Small Disadvantaged Businesses, and Women-Owned Businesses participate fully in contracting opportunities generated by HUD financial assistance.
- e. Real Property Acquisition and Relocation. Not applicable to Navajo Nation CDBG Office because the Nation receives funding only for infrastructure projects, which does not relate to any real property acquisition or relocation.
- f. Executive Order 13166, by seeking to provide access to program benefits and information to Limited English Proficiency (LEP)".
- g. Executive Order 13279, "Equal Protection of the Laws for Faith-Based and Community Organizations". Not applicable to Navajo Nation CDBG Program.
- h. Ensuring, when developing, procuring, maintaining, or using electronic and information technology (EIT), that the EIT allows, regardless of the type of medium, persons with disabilities to access and use information and data on a comparable basis as is made available to and used by persons without disabilities under section 508 of the Rehabilitation Act (Section 508).
- i. Procurement of Recovered. Not applicable to Navajo Nation CDBG Program.
- j. Participation in HUD-Sponsored Program Evaluation by cooperating with all HUD staff or contractors who perform HUD-funded research or evaluation studies.
- k. Executive Order 13202, "Preservation of Open Competition and Government Neutrality Towards Government Contractors" Labor Relations on Federal and

### **SECTION III.**

- **FY – 2012 ICDBG Application Summary**

**Navajo Nation Community Housing and Infrastructure Department**  
**Fiscal Year 2012 ICDBG Grant Application**  
**January 4, 2012**

		PROJECT INFORMATION					CONTRIBUTIONS				
No.	Pts.	CHAPTER	Project Name	TYPE	MILES	No. of Homes	HUD (CDBG)	CHAPTER	NTUA	EPA	SRP
1	96	Dennehotso	Tri-City	P/L	20.98	31	990,437		46,500		
2	100	Jeddito	Sitting Rock	P/L	2.82	17	145,834	43,233	25,500		
3	98	Forest Lake	Scattered	P/L	6.00	7	301,500	65,240	10,500		
4	98	Kayenta	Skeleton Mesa Phase II	P/L	9.36	19	525,277	102,211	28,500		
5	100	Wide Ruins	Tanner Springs Phase I	P/L	15.27	14	628,490	100,000	21,000		
6	90	Rock Point	Scattered	P/L	4.49	18	228,629	43,243	27,000		
7	100	Lechee	East Phase II	P/L	31.69	28	912,806		42,000		912,806
8	98	Coppermine	Scattered	P/L	6.11	7	299,737	66,721	10,500		
9	98	Cornfields	Navajo Station Phase II	P/L	2.60	3	172,160	40,000	4,500		
10	100	Shiprock	Shiprock Farm Area	S/L	7.10	90	522,121			1,889,000	
		<b>Total (Projects)</b>			108.40	234	4,726,991	460,648	216,000	1,889,000	912,806
		<b>Administration</b>					773,009				
		<b>TOTAL</b>					5,500,000				

NTUA = Navajo Tribal Utility Authority  
SRP = Salt River Project

EPA = U.S. Environmental Protection Agency  
CIO = Navajo Nation Capital Improvement Office

NAHASDA = Native American Housing and

#### **SECTION IV.**

- **Administration Budget**
- **Overall Cost Summary**
- **Justification for Administration Cost**
- **Indirect Cost Justification**

**COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) PROGRAM  
FISCAL YEAR 2012 CDBG GRANT**

<u>2000</u>	<u>PERSONNEL</u>	<u>Per Hour</u>	<u>Total Hours</u>			
						<b>\$ 467,855.14</b>
1102	Programs & Projects Specialist	\$23.14	2080	\$	48,131.20	
1103	Construction Supervisor	\$17.86	2080	\$	37,148.80	
1104	Field Supervisor	\$15.95	2080	\$	33,176.00	
1105	Senior Office Specialist	\$16.91	2080	\$	35,172.80	
1106	Office Assistant	\$12.00	2080	\$	24,960.00	
1107	Field Supervisor	\$15.95	2080	\$	33,176.00	
1109	Accountant	\$19.47	2080	\$	40,497.60	
1110	Field Supervisor	\$14.15	2080	\$	29,432.00	
2200	Salary Adjustment @ 3% COLA (\$281,694.40)			\$	8,450.83	
2310	Temporary Employees			\$	40,000.00	
2510	Overtime			\$	5,000.00	
2710	Regular Merit Pay			\$	5,000.00	
2900	Fringe Benefits:			\$	127,709.91	
	Permanent - \$281,694.40 x 41.25% =116,198.94					
	Temporary - \$40,000 x 9.75% =3,900					
	Salary Adjustment/Overtime/Merit Pay: 18,450.83 x 41.25% = 7,610.97					
<u>3000</u>	<u>TRAVEL EXPENSES</u>					<b>\$ 81,728.00</b>
	Assigned Vehicles			\$	18,120	
	1 - Class IX SUV: \$434 p/mo. X 12 mos. = \$5,208					
	Mileage: 1,000 mi. p/mo. X 12 mos. X .35 mi. = \$4,200					
	1 - Class III Pickup: \$416 p/mo. X 12 mos. = \$4,992					
	Mileage: 1,000 mi. p/mo. 12 mos. X .31 mi. = \$3,720					
3210	Vehicle Rental (Off Reserv)				5,000	
3230	Personal Travel Expenses				27,968	
	4 trips x 4 people x 4 days x \$123 p/day = \$7,872.					
	4 trips x 4 people x 4 days x \$137 p/day = \$8,768.					
	4 trips x 4 people x 4 days x \$177 p/day = \$11,328.					
3260	Vehicle Mileage Expenses				24,480	
	Use of Privately owned vehicle					
	4,000 mi. x 12 mos. X .51 p/mi. = \$24,480.					
3310	Charter Fares				6,160	
	4 trips x \$1,540 = \$6,160					
<u>4000</u>	<u>SUPPLIES</u>					<b>\$ 43,913.86</b>
4120	Office Supplies (Consumable)				13,914	
4200	Non-Captial Assets (Computers)				15,000	
4410	Operating Supplies				15,000	
	Postage and related expenses					
	Printing / Binding / Photocoping / Dues & Subscriptions					
<u>5000</u>	<u>LEASE / RENTAL / COMMUNICATIONS &amp; UTILITIES</u>					<b>\$ 25,000.00</b>
5160	Equipment Lease				5,000	
5310	Building / Space Rental				10,000	
5520	Telephone				5,000	
5570	Internet				5,000	

**COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) PROGRAM  
FISCAL YEAR 2012 CDBG GRANT**

<b>6000</b>	<b>REPAIR / MAINTENANCE</b>		\$ 15,000.00
6110	Equipment Supplies	5,000	
6130	Equipment Services	5,000	
6300	Technology - Software Support / License	5,000	
<b>7000</b>	<b>SPECIAL TRANSATIONS</b>		\$ 21,318.00
7410	Advertising / Promotion Expenses / Others	10,000	
7510	Training & Registration	9,000	
7710	Insurance Premiums		
	Property - Contents	100	
	Auto Physical @ \$97.13 p/y @ 2 ea.	194	
	Auto Liability @ \$161.90 p/y @ 2 ea.	324	
	Policy Payment (General Liability)	700	
	Deductible @ 2 vehs. @ \$500.00 ea.	1,000	
<b>8500</b>	<b>INFRASTRUCTURE PROJECTS</b>		<b>Project Total: \$ 4,726,991.00</b>
<b>9500</b>	<b>MATCHING AND INDIRECT COST</b>		\$ 118,194.00
9710	Indirect Cost Expense		
	\$5,500,000		
	<u>-4,726,991</u>		
	\$773,009		
	<u>1.1805</u>		
	654,815		
	773,009		
	<u>-654,815</u>		
	118,194		
		<b>Administration Total :</b>	<b>\$ 773,009.00</b>
		<b>GRAND TOTAL:</b>	<b>\$ 5,500,000.00</b>

# Cost Summary

Indian Community Development Block Grant (ICDBG)

U.S. Department of Housing and Urban Development  
Office of Public and Indian Housing

OMB Approval No. 2577-0191  
(exp. 2/29/2012)

See Instructions and Public Reporting Statement on back.

<b>1. Name of Applicant (as shown in Item 5, Standard Form 424)</b> <b>THE NAVAJO NATION</b>	<b>2. Application/Grant Number (to be assigned by HUD upon submission)</b>  
<b>3. Original</b> <input checked="" type="checkbox"/> (check here if this is the first submission to HUD) <b>Revision</b> <input type="checkbox"/> (check here if submitted with implementation schedule as part of pre-award requirements) <b>Amendment</b> <input type="checkbox"/> (check here if submitted after HUD approval of grant)	<b>Date (mm/dd/yyyy)</b> <b>01/04/2012</b>

4. Project Name & Project Category (see instructions on back) <b>a</b>	ICDBG Amount Requested for each activity <b>b</b>	Program Funds (in thousands of \$)	
		Other Source Amount for each activity <b>c</b>	Other Source of Other Funds for each activity <b>d</b>
Dennehotso Powerline Extension	\$ 990,437.00	\$ 274,721.00	NTUA & NAHASDA
Jeddito Powerline Extension	145,834.00	68,733.00	Chapter & NTUA
Forest Lake Powerline Extension	301,500.00	75,740.00	Chapter & NTUA
Kayenta Powerline Extension	525,277.00	130,711.00	Chapter & NTUA
Wide Ruins Powerline Extension	628,490.00	297,855.00	Chapter, CIO & NTUA
Rock Point Powerline Extension	228,629.00	70,243.00	Chapter & NTUA
LeChee Powerline Extension	912,806.00	954,806.00	NTUA & SRP
Coppermine Powerline Extension	299,737.00	77,221.00	Chapter & NTUA
Cornfields Powerline Extension	172,160.00	44,500.00	Chapter & NTUA
Shiprock Sewerline Upgrade	522,121.00	1,889,000.00	EPA
<b>5. Administration</b>			
a. General Management and Oversight	654,815.00		
b. Indirect Costs: Enter indirect costs to be charged to the program pursuant to a cost allocation plan.	118,194.00		
c. Audit: Enter estimated cost of Program share of A-133 audits.	0.00		
<b>Administration Total *</b>	773,009.00	0.00	
<b>6. Planning</b> The Project description must address the proposed use of these funds.			
<b>7. Technical Assistance</b> Enter total amount of ICDBG funds requested for technical assistance. **			
<b>8. Sub Total</b> Enter totals of columns b. and c.	\$ 5,500,000.00	\$ 3,883,530.00	
<b>9. Grand Total</b> Enter sum of column b. plus column c.			\$ 9,383,530.00

\* The total of items 5 and 6 cannot exceed 20% of the total ICDBG funds requested.

\*\* No more than 10% of ICDBG funds requested may be used for technical assistance. If funds are requested under this line item separate project description must accompany the application to describe the technical assistance the application intends to obtain. Only technical assistance costs associated with the development of a capacity to undertake a specific funded program activity are eligible (24 CFR 1003.206).

## **JUSTIFICATION FOR ADMINISTRATION COST**

### **Application for 2012 CDBG Grant**

The operation budget is based on anticipated expenses to cover twelve (12) months of program operation cost. This budget period is essential to ensure that adequate administrative funds are available to implement the approved projects. Although, the administration budget is only for 12 months, the duration of the projects are for twenty-four months. All ICDBG projects are implemented in a timely manner in accordance with the Implementation Schedule. If extensions are required, then appropriate documents will be submitted to HUD for proper approval. During project implementation stages, administrative costs are used to monitor project progress and compliance, and to ensure timely completion.

### **PERSONNEL**

There will be eight (8) full time positions: with one (1) managerial/compliance level; two (2) administrative/finance support (Senior Office Specialist and Accountant); two (2) technologies and reporting support; three (3) field staff in environmental and project monitoring. The Accountant position is needed to maintain an in-house account for all projects, to reconcile all accounts for reporting purposes and assist in the close out procedures of ICDBG projects. This task includes obtaining all source documentation for all expenses for projects and payroll. This position is needed to continue to expedite the close out process by ensuring all documents are made available for close outs. Temporary employee account is established to employ personnel during application preparation and to employ skilled labor to assist with specialized responsibilities. Field Supervisors are needed in the project locale to monitor projects on a daily basis.

### **FRINGE BENEFITS**

Attached is an itemized listing of fringe benefits rate of 41.25% for Full Time Employees and 9.75% for temporary employees. This rate is determined by the Navajo Nation and used in the FY-2012 Budget Instruction Manual.

### **TRAVEL EXPENSE**

Travel is necessary for the constant monitoring of projects and programs progress. This expense category includes vehicle lease and rental, mileage, meals and lodging for travel on and off the reservation. Also included are charter fares for trips to H.U.D. Regional office for the quarterly coordination meetings.

## **OPERATION AND SUPPLIES EXPENSES**

This category includes supplies, postage and photocopies for the day-to-day operation of the program. A majority of the expenses are for consumable supplies and include non-capital expenses such as computers, camera, etc.

## **REPAIRS AND MAINTENANCE**

This line item will be used for maintenance and services for office equipments, i.e. computers, fax machine, Xerox machine, printer, etc.

## **LEASE/COMMUNICATION/UTILITIES**

This will cover rental expenses for office equipment, i.e., Xerox, fax and other equipment needed to effectuate the program activities. This will also be used to pay for rental of meeting space and cover expenses for communication including telephones and internet access.

## **CONTRACTUAL SERVICES**

This expense is for the audit, which is conducted on a yearly basis for program purpose. The contractual services expenses will be used to hires a consultant to research and develop a plan to effectively provide services to the Navajo people.

## **SPECIAL TRANSACTIONS**

Included in this category are the expenses for advertising and promotion for outreach and education for program objectives. The program is also required to pay insurance premiums rate of \$0.64 to the Risk Management.

## **MATCHING and INDIRECT COST**

Indirect cost is applied to all administrative portions of non-tribal funds. The Navajo Nation is using at rate of 18.05%. See attached correspondence on indirect cost rate.

## **INFRASTRUCTURE**

This is the cost project listing for seven (10) infrastructure activities - (9) power line extensions and one (1) water line project. This is only the ICDBG share of the project costs (see attached project summary).

In summary, the budget is at the required 20 percent of the total grant request set by the NOFA. All rates used in the budget are in accordance with the Navajo Nation FY-2012 Budget Instruction Manuals.

**Indian Organizations  
Indirect Cost Negotiation Agreement**

EIN: 86-0092335

**Organisation:**

The Navajo Nation  
P.O. Box 646  
Window Rock, Arizona 86515

**Date:** April 12, 2010

**Report No(s):** 10-A-574

**Filing Ref.:**

**Filing Ref.:**  
**Last Negotiation Agreement**  
dated September 29, 2006

The indirect cost rate contained herein is for use on grants, contracts, and other agreements with the Federal Government to which Public Law 93-638 and 2 CFR 225 (OMB Circular A-87) apply, subject to the limitations contained in 25 CFR 900 and in Section II.A. of this agreement. The rate was negotiated by the U.S. Department of the Interior, National Business Center, and the subject organization in accordance with the authority contained in 2 CFR 225.

**Section I: Rate**

Type	Effective Period		Rate*	Locations	Applicable To
	From	To			
Fixed Carryforward	10/01/06	09/30/07	18.05%	All	All Programs

Note: As agreed to by the Nation in a letter dated August 8, 2006, the amortized amount of FYs 1996-2002 underrecovery carryforward to be applied annually to FYs 2007 through 2010 is \$8,987,895. In addition, the FYs 2008, 2009, and 2010 rate computations must also include the FYs 2005, 2006, and 2007 carryforward calculations, respectively.

\*Base: Total direct costs, less capital expenditures and passthrough funds. Passthrough funds are normally defined as major subcontracts, payments to participants, stipends to eligible recipients, and subgrants, all of which normally require minimal administrative effort.

Treatment of fringe benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs; fringe benefits applicable to indirect salaries and wages are treated as indirect costs.

**Section II: General**

Page 1 of 3

A. Limitations: Use of the rate contained in this agreement is subject to any applicable statutory limitations. Acceptance of the rate agreed to herein is predicated upon these conditions: (1) no costs other than those incurred by the subject organization were included in its indirect cost rate proposal, (2) all such costs are the legal obligations of the grantee/contractor, (3) similar types of costs have been accorded consistent treatment, and (4) the same costs that have been treated as indirect costs have not been claimed as direct costs (for example, supplies can be charged directly to a program or activity as long as these costs are not part of the supply costs included in the indirect cost pool for central administration).

- B. Audit:** All costs (direct and indirect, federal and non-federal) are subject to audit. Adjustments to amounts resulting from audit of the cost allocation plan or indirect cost rate proposal upon which the negotiation of this agreement was based will be compensated for in a subsequent negotiation agreement.
- C. Changes:** The rate contained in this agreement is based on the organizational structure and the accounting system in effect at the time the proposal was submitted. Changes in organizational structure, or changes in the method of accounting for costs that affect the amount of reimbursement resulting from use of the rate in this agreement, require the prior approval of the responsible negotiation agency. Failure to obtain such approval may result in subsequent audit disallowance.
- D. Provisional/Final Rates:** Within 6 months after year end, a final rate must be submitted based on actual costs. Billings and charges to contracts and grants must be adjusted if the final rate varies from the provisional rate. If the final rate is greater than the provisional rate and there are no funds available to cover the additional indirect costs, the organization may not recover all indirect costs. Conversely, if the final rate is less than the provisional rate, the organization will be required to pay back the difference to the funding agency.
- E. Fixed Carryforward Rate:** The fixed carryforward rate is based on an estimate of costs that will be incurred during the period for which the rate applies. When the actual costs for such period have been determined, an adjustment will be made to the rate for a future period, if necessary, to compensate for the difference between the costs used to establish the fixed rate and the actual costs.
- F. Agency Notification:** Copies of this document may be provided to other federal offices as a means of notifying them of the agreement contained herein.
- G. Record Keeping:** Organizations must maintain accounting records that demonstrate that each type of cost has been treated consistently either as a direct cost or an indirect cost. Records pertaining to the costs of program administration, such as salaries, travel, and related costs, should be kept on an annual basis.
- H. Reimbursement Ceilings:** Grantee/contractor program agreements providing for ceilings on indirect cost rates or reimbursement amounts are subject to the ceilings stipulated in the contract or grant agreements. If the ceiling rate is higher than the negotiated rate in Section I of this agreement, the negotiated rate will be used to determine the maximum allowable indirect cost.
- I. Use of Other Rates:** If any federal programs are reimbursing indirect costs to this grantee/contractor by a measure other than the approved rate in this agreement, the grantee/contractor should credit such costs to the affected programs, and the approved rate should be used to identify the maximum amount of indirect cost allocable to these programs.
- J. Central Service Costs:** Where central service costs are estimated for the calculation of indirect cost rates, adjustments will be made to reflect the difference between provisional and final amounts.
- K. Other:**
1. The purpose of an indirect cost rate is to facilitate the allocation and billing of indirect costs. Approval of the indirect cost rate does not mean that an organization can recover more than the actual costs of a particular program or activity.

2. Programs received or initiated by the organization subsequent to the negotiation of this agreement are subject to the approved indirect cost rate if the programs receive administrative support from the indirect cost pool. It should be noted that this could result in an adjustment to a future rate.

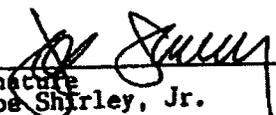
3. New indirect cost proposals are necessary to obtain approved indirect cost rates for future fiscal or calendar years. The proposals are due in our office 6 months prior to the beginning of the year to which the proposed rates will apply.

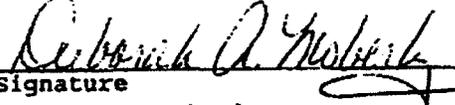
Section III: Acceptance

Listed below are the signatures of acceptance for this agreement:

By the Indian Organization:

By the Cognizant Federal Government Agency:

 /s/  
 Signature  
 Joe Shirley, Jr.  
 Name (Type or Print)  
 President, The Navajo Nation  
 Title  
 APR - 9 2010  
 Date

 /s/  
 Signature  
 Deborah A. Moberly  
 Name  
 Indirect Cost Coordinator  
 Indirect Cost Services  
 Title  
 U.S. Department of the Interior  
 National Business Center  
 Agency  
 Date April 12, 2010  
 Negotiated by Te Lam-Vi  
 Telephone (916) 566-7111

**SECTION V.**

- **Community Development Statement**
- **Affidavit of Publication**

## PUBLIC NOTICE

Community Housing and Infrastructure Department  
The Navajo Nation  
FY-2012 ICDBG Application

### COMMUNITY DEVELOPMENT STATEMENT

The Navajo Nation Community Development Block Grant (CDBG) herewith develops and posts its Community Development Statement according to the citizen participation requirements at 24 CFR 1003.604.

The Statement involves the community development needs and the application process to accomplish the Nation's objective of developing viable communities including decent housing, a suitable living environment and expanding economic opportunities, primarily for low and moderate income families, through securing Indian CDBG funding from the U.S. Department of Housing and Urban Development (HUD) and leveraging it with local resources.

The Navajo Nation is eligible to submit a ceiling amount of \$5.5 million per year as provided at 24 CFR 1003.100. Each project is screened, rated and ranked on a competitive basis according to threshold requirements, and acceptance criteria of HUD.

In the program application for Fiscal Year 2012, the Community Housing and Infrastructure Department included one waterline project and nine powerline projects to be recommended for funding consideration in the amount of \$5.5 million, which also includes the programs administrative cost.

The established rating committee, evaluated and rated the proposals according to the five components of selection criteria for Public Facilities and Improvements as set forth in 24 CFR 1003.303 and Notice of Funds Availability Guide. The five rating factors included: Capacity of Applicant (30 points); Need/Extent of the Problem (16 points); Soundness of Approach (36 points); Leveraging Resources (8 points) and Comprehensive & Coordination (10 points). The maximum number of accumulated points for all rating factors is 100.

The following *proposed* activities received maximum points and are potential projects for funding recommendation to HUD to address the Nation's Community Development needs:

<u>FY-2012 Projects</u>	<u>No. of Homes</u>	<u>ICDBG</u>
1. Dennehotso Powerline	31	833,241
2. Jeddito Powerline	17	158,165
3. Forest Lake Powerline	7	301,501
4. Kayenta Powerline	19	468,864
5. Wide Ruins	14	805,344
6. Rock Point Powerline	18	228,629
7. LeChee Powerline	28	912,805
8. Coppermine Powerline	7	297,170
9. Cornfields Powerline	3	172,160
10. Shiprock Waterline	91	522,121

Total Homes: 235

Total Project Cost:	4,700,000
Administrative Cost:	800,000
<b>Total:</b>	<b>5,500,000</b>

The application will be submitted to HUD within prescribed federal timeline and requirements. Information regarding scope of work, schedule, project cost, application process, and methods of implementing the proposed activities for FY-2012 grant application and your comments or questions is available at:

Community Housing and Infrastructure Department  
Division of Community Development  
Administration Building No. 2, 2<sup>nd</sup> Floor  
P.O. Box 2365  
Window Rock, Arizona 86515

# Affidavit of Publication

STATE OF NEW MEXICO )  
 ) SS  
 COUNTY OF MCKINLEY

REBECCA PAQUIN being duly sworn upon oath, deposes and says:

As LEGAL CLERK of The Independent, a newspaper published in and having a general circulation in McKinley County, New Mexico and in the City of Gallup, New Mexico and having a general circulation in Cibola County, New Mexico and in the City of Grants, New Mexico and having a general circulation in Apache County, Arizona and in the City of St. Johns and in the City of Window Rock, Arizona therein: that this affiant makes the affidavit based upon personal knowledge of the facts herein sworn to. That the publication, a copy of which is hereto attached was published in said newspaper during the period time of publication and said notice was published in the newspaper proper, and not in a supplement thereof, for One Time, the first publication being on the \_\_\_\_\_ day of \_\_\_\_\_, 2011, the second publication being on the \_\_\_\_\_ day of \_\_\_\_\_, 2011, the third publication being on the \_\_\_\_\_ day of \_\_\_\_\_, 2011.

and the last publication being on the \_\_\_\_\_ 19<sup>th</sup> day of \_\_\_\_\_ December, 2011. That such newspaper, in which such notice or advertisement was published, is now and has been at all times material hereto, duly qualified for such purpose, and to publish legal notices and advertisements within the meaning of Chapter 12, of the statutes of the State of New Mexico, 1941 compilation,

Rebecca Paquin  
 Affiant.

Sworn and Subscribed to before me this 20<sup>th</sup> day of December, A.D., 2011.

Crystal Kelley  
 Notary Public

My commission expires:  
June 25<sup>th</sup> 2014

LEGAL NOTICE  
 Window Rock - Apache County  
 Arizona

## PUBLIC NOTICE

Community Housing and Infrastructure Department  
 The Navajo Nation  
 FY-2012 ICDBG Application

## COMMUNITY DEVELOPMENT STATEMENT

The Navajo Nation Community Development Block Grant (CDBG) herewith develops and posts its Community Development Statement according to the citizen participation requirements at 24 CFR 1003.604.

The Statement involves the community development needs and the application process to accomplish the Nation's objective of developing viable communities including decent housing, a suitable living environment and expanding economic opportunities, primarily for low and moderate income families, through securing Indian CDBG funding from the U.S. Department of Housing and Urban Development (HUD) and leveraging it with local resources.

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The established rating committee, evaluated and rated the proposals according to the five components of selection criteria for Public Facilities and Improvements as set forth in 24 CFR 1003.303 and Notice of Funds Availability Guide. The five rating factors included: Capacity of Applicant (30 points); Need/Extent of the Problem (16 points); Soundness of Approach (36 points); Leveraging Resources (8 points) and Comprehensive & Coordination (10 points). The maximum number of accumulated points for all rating factors is 100.

The following proposed activities received maximum points and are potential projects for funding recommendation to HUD to address the Nation's Community Development needs:

FY-2012 - Project	No. of Homes	ICDBG
1. Deanehote Powerlines	31	833,241
2. Jeddito Powerlines	17	158,168
3. Forest Lake Powerlines	7	301,501
4. Kayenta Powerlines	19	468,864
5. Wide Ruins	14	885,344
6. Rock Point Powerlines	18	228,629
7. LeChee Powerlines	28	912,885
8. Coppermine Powerlines	7	297,170
9. Cornfield Powerlines	3	172,180
10. Shiprock Waterlines	91	522,121

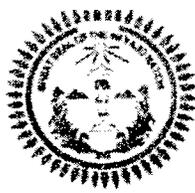
The application will be submitted to HUD within prescribed federal timeline and requirements. Information regarding scope of work, schedule, project cost, application process, and methods of implementing the proposed activities for FY-2012 grant application and your comments or questions is available at:

Community Housing and Infrastructure Department  
 Division of Community Development  
 Administration Building No. 2, 2nd Floor  
 P.O. Box 2365  
 Window Rock, Arizona 86515

Legal # 13106 Published in The Independent December 19, 2011.

## **SECTION VI.**

- **Survey & Demographic Data Statement Certification**
- **Sample Survey Forms**
- **CDBG Form B (Income Data)**



SURVEY AND DEMOGRAPHIC DATA STATEMENT  
Certification

FY-2012

Applicant: The Navajo Nation

Project: Ten (10) Navajo Nation Public Facilities and Improvement Projects

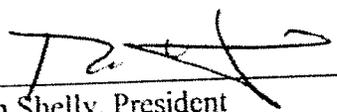
The following demographic data is submitted for purposes of evaluating our application to the Indian Community Development Block Grant Program. By submitting this information with the FY-2012 ICDBG Program Application, we are certifying all the following:

- Generally available, published data are substantially inaccurate or incomplete.
- Data provided have been collected systematically and are statistically reliable.
- Data provided are, to the greatest extent feasible, independently verifiable and data differentiate between reservation and BIA service area populations, when applicable.

In accordance with the FY-2012 NOFA, we have also submitted the following:

- Total number of Navajo persons benefiting from the Nation's proposed project activities is approximately 893 for (1) waterline and (9) powerline activities.
- Number of persons benefiting with low and moderate income are 763. (1) Waterline Project: 297; 9 Powerline projects: 466
- A 100% door-to-door survey method was used for 10 Public Facilities and Improvement Projects, (see attached Form B survey forms)
- A listing of income by households (see attached Form B survey forms) in accordance to HUD's suggested procedures for conducting a sample survey.

I hereby certify to the best of my knowledge the above information is true and correct.

  
\_\_\_\_\_  
Ben Shelly, President  
The Navajo Nation

01/04/2012  
\_\_\_\_\_  
Date

Pages 30-48  
Intentionally  
Omitted

**Navajo Nation  
Community Development Block Grant Program**

Income Survey #   1  

Date: 12/20/11

Interviewer: Harrison T. Jackson

Shiprock Chapter is applying for a Community Development Block Grant (CDBG) Powerline Extension Project. The project will provide a reliable powerline service for future community development. This project will benefit the 90 community households.

In order to consider applying for funds, we need you helping answering a few questions about the number of individuals living in your household and your income for the past 12 months. This information will be kept confidential.

1) How many individuals live in this household?   6  

2) What is the ethnic breakdown of family members?

- White \_\_\_\_\_
- Black \_\_\_\_\_
- Hispanic \_\_\_\_\_
- Native American or Alaskan Native   XX
- Asian or Pacific Islander \_\_\_\_\_
- Other \_\_\_\_\_

3) Was the total combined family income for the last 12 months above or below:

Family Size	1	2	3	4	5	<u>6</u>	7	8
Income Level	26,750	30,550	34,350	38,150	41,250	<u>\$19,800</u> 44,300	47,350	50,400

San Juan County, NM – 2012 HUD Income Limits

Above \_\_\_\_\_ Below   ✓  

I have no more questions. Thank you for your assistance.

LM!

**The Navajo Nation  
Community Development Block Grant (CDBG) Department  
CDBG Form B (Recipient Income and Data)**

Chapter: Shiprock

Prepared by: Harrison Todacheenie

Title: Program & Project Specialist

No.	Name of Recipient	VA	No. of Persons Living in Household	Type of House			No. of Years at Resident	Annual Income	Source of Income
				House	Hogan	Mobile Home			
1			6	X			30	19,000.00	T.A.N.F
2			5			X	20	50,000.00	Boiler Ma
3			7			X	37	27,000.00	Enviro.Te
4			5			X	37	47,724.00	Priv.Sect
5			4			X	20	25,000.00	NECA
6			1			X	60	2,700.00	S.S.
7			4			X	65	25,200.00	Retireme
8			7			X	35	20,400.00	Labore
9			2	X			45	19,200.00	Retireme
10			4	X			40	21,000.00	Labore
11			3			X	50	80,000.00	San Juan
12			6			X	25	25,000.00	Labore
13			4	X			60	19,200.00	Retireme
14			4	X			59	24,000.00	Retireme
15			8			X	25	28,000.00	Truck Dr
16			4	X			60	21,000.00	Retireme
17			4			X	20	33,280.00	NECA
18			3			X	40	24,000.00	B.H.F
19			2	X			41	50,000.00	P.N.M
20			3			X	15	26,000.00	Auto-Tec
21			2	X			38	30,000.00	Retirem
22			4			X	15	21,000.00	Admin.A
23			1	X			40	25,000.00	Retirem
24			1	X			40	14,400.00	Retirem
25			2			X	40	6,240.00	S.S.

**The Navajo Nation**  
**Community Development Block Grant (CDBG) Department**  
**CDBG Form B (Recipient Income and Data)**

Chapter: Shiprock

Prepared by: Harrison Todacheenie

Title: Program & Project Specialist

No.	Name of Recipient	VA	No. of Persons Living in Household	Type of House			No. of Years at Resident	Annual Income	Source Income
				House	Hogan	Mobile Home			
26			2	X			30	28,000.00	Retireme
27			6	X			49	15,073.00	Retireme
28			4			X	50	5,412.00	Retireme
29			1	X			60	13,332.00	Retireme
30			1			X	10	12,000.00	Employr
31			2	X			55	19,000.00	Retireme
32			5	X			30	32,240.00	P.H.S./I.H
33			4			X	20	12,000.00	Retireme
34			5			X	60	9,600.00	Retireme
35			8			X	30	78,000.00	A.P.S.
36			4			X	12	35,000.00	Health Tec
37			1			X	17	12,000.00	SSI/Disa
38			5	X			40	4,200.00	SSI/Disa
39			2			X	60	16,800.00	Labore
40			4	X			45	16,800.00	Labore
41			2	X			5	37,440.00	Electrici
42			3			X	40	9,864.00	Unemploy
43			2			X	10	15,500.00	Retireme
44			4			X	15	39,520.00	Welder
45			5		X		2	12,100.00	Casino
46			6	X			40	12,000.00	Retireme
47			4	X			40	10,000.00	Retireme
48			2			X	35	12,000.00	Retireme
49			2	X			30	7,800.00	Retireme
50			7	X			20	8,000.00	Self Emplo

**The Navajo Nation  
Community Development Block Grant (CDBG) Department  
CDBG Form B (Recipient Income and Data)**

Chapter: Shiprock

Prepared by: Harrison Todacheenie

Title: Program & Project Specialist

No.	Name of Recipient	VA	No. of Persons Living in Household	Type of House			No. of Years at Resident	Annual Income	Source of Income
				House	Hogan	Mobile Home			
51			2	X			50	8,400.00	S.S.
52			2			X	40	16,000.00	Retirem
53			4			X	20	21,000.00	Labor
54			5			X	30	15,000.00	Retirem
55			5			X	7	30,000.00	S.R.Cen
56			2	X			50	12,000.00	Retirem
57			2	X			45	18,500.00	Retirem
58			3			X	45	19,500.00	Retirem
59			4			X	20	21,000.00	Admi.As
60			3			X	20	37,440.00	Gas Cor
61			3	X			55	3,600.00	S.S.
62			4	X			25	17,500.00	Retirem
63			7			X	50	3,600.00	Retirem
64			3	X			67	31,200.00	Retirem
65			2	X		X	35	19,200.00	Retirem
66			6			X	15	23,952.00	Retirem
67			5			X	40	45,000.00	B.H.F
68			2	X			45	13,200.00	S.S.
69			4	X			50	16,640.00	Walma
70			3	X			70	3,600.00	S.S.
71			4	X			40	24,960.00	N.H.A
72			7			X	14	13,200.00	S.S.
73			4			X	50	24,000.00	C.C.S.
74			4	X			35	13,000.00	Retirem
75			6	X			45	19,000.00	N.T.U.A./



## **SECTION VII.**

### **Navajo Nation Resolution:**

- **Budget and Finance Committee**

RESOLUTION OF THE  
BUDGET AND FINANCE COMMITTEE  
OF THE NAVAJO NATION COUNCIL

22<sup>ND</sup> NAVAJO NATION COUNCIL - Second Year, 2012

AN ACTION

RELATING TO RESOURCES AND DEVELOPMENT AND BUDGET AND FINANCE; AUTHORIZING THE SUBMISSION OF FY 2012 INDIAN COMMUNITY DEVELOPMENT BLOCK GRANT APPLICATION IN THE AMOUNT OF \$5,500,000 TO BE SUBMITTED TO THE UNITED STATES DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT TO FUND TEN PUBLIC FACILITIES AND IMPROVEMENT PROJECTS; ACCEPTING THE GRANT IF AWARDED ON SUBSTANTIALLY THE SAME TERMS CONTAINED IN THE APPLICATION; AND CERTIFYING THAT THE NAVAJO NATION HAS MET THE CITIZEN PARTICIPATION REQUIREMENTS AT 24 CFR 1003.604 TO SUPPORT THE SUBMISSION OF THE FY 2012 INDIAN COMMUNITY DEVELOPMENT BLOCK GRANT APPLICATION

BE IT ENACTED:

1. The Navajo Nation hereby approves the submission of FY 2012 Indian Community Development Block Grant application to the U.S. Department of Housing and Urban Development in the amount of \$5,500,000 to serve ten infrastructure projects, as set forth in the documents attached hereto as Exhibit A.
2. The Navajo Nation hereby authorizes the acceptance of the grant if awarded on substantially the same terms as contained in the application.
3. The Navajo Nation hereby recognizes and accepts the affidavits of publication for the public hearings that were conducted by the Navajo Nation on October 12, 13 and 14, 2011 and posting of the Community Development Statement on December 19, 2011 in the local newspapers, attached as Exhibits B-1, B-2, B-3, and B-4, to meet the citizen participation requirements at 24 CFR 1003.604.
4. The Navajo Nation certifies that the 24 CFR 1003.604(a) Citizen Participation requirement has been satisfied by the Navajo Nation Division of Community Development in the following manner:

- a. Residents have been furnished with information concerning the amount of funds available for proposed community development activities and the range of eligible activities that may be undertaken; and
  - b. This has resulted in one or more meetings to obtain views of residents on community and housing needs. The meetings were held in ways and at times that allowed participation by residents; and
  - c. A community development statement was developed, published and posted to provide opportunities for residents to examine its content and to submit comments; and
  - d. Residents were afforded an opportunity to review and comment on the application performance on current activities.
5. The Navajo Nation certifies that the data contained in the grant application submitted by the Navajo Nation Division of Community Development:
- a. Has been collected systematically and is statistically reliable; and
  - b. Is, to the greatest extent feasible, independently verifiable.

#### CERTIFICATION

I hereby certify that the foregoing resolution was duly considered by the Budget and Finance Committee of the Navajo Nation Council at a duly called meeting held at Window Rock, Navajo Nation (Arizona), at which a quorum was present and that the same was passed by a vote of 3 in favor, 0 opposed, this 3<sup>rd</sup> day of January, 2012.



LoRenzo C. Bates, Chairperson  
Budget and Finance Committee

Motion: Mel R. Begay  
Second: Nelson S. BeGaye

## **SECTION VIII.**

### **Rating Factor 1 - Capacity:**

- **Navajo Nation CDBG Capacity**
- **NTUA Capacity**
- **I.H.S. Capacity**



## **RATING FACTOR I:**

## **CAPACITY OF THE APPLICANT**

### **1. Managerial, Technical and Administrative Capability**

#### **a) Managerial and Technical Staff**

The Navajo Nation's existing CDBG staff is directly involved in the administration and management of the previous ICDBG funds; each of the key staff has over 5 years of experience and managerial abilities to implement the proposed infrastructure activities of Water/Wastewater System and Powerline Extensions. The staff has technical knowledge, education/training and administrative capabilities to plan, manage, and implement the proposed activities in accordance to the Implementation Schedules under this application. The written summaries of specific qualifications and past relevant and successful experience of the key staff and their specific roles and responsibilities including their references are as follows:

**Chavez John, Department Director**, holds a Bachelors of Business Administration from Eastern New Mexico University in Portales, N.M. Mr. John has the knowledge and experience to carry out administrative, managerial and financial responsibilities of ICDBG funds with respect to implementing water/wastewater, powerline projects, and a community building facilities. Mr. John has served in the managerial/administrative capacity with the tribe for over 32 years and has accomplished his specific work activities toward completing several projects the area of community development, including water development, roads; land acquisition, community facility buildings including other infrastructure development and project planning. A significant example of John's accomplishment is he a key player in designing and establishing the Navajo Nation Office of Program Development in mid-1970s for grants management activities to successfully finance relevant infrastructure projects using external and local funds and resources. Under his leadership capacity, the Office of Program Development has established program functions for ICDBG, Capital Improvement, Community Planning, Transportation, and Design and Engineering programs.

The specific responsibilities of Mr. John, involves performing administrative and managerial work such as organizing, directing and coordinating specialized and complex functions of the program. Mr. John oversees program staff and provides general supervision to ensure that the administrative responsibilities of implementing projects, meeting the milestones of the proposed implementation schedules, logic models and submission of required reports; preparation and submission of Annual Status and Evaluation Reports, reviewing Federal Transaction are carried out accordingly. Finally, ensures that Financial and Close-out documents are successfully achieved and submitted within the original timeline.

Mr. John oversees the overall internal control of financial and program operations to ensure that the program complies with applicable HUD regulations relating to Environmental requirements at 24 CFR Part 58, Financial management requirements of OMB Circular A-87; Procurement and Contract Administration provisions at Part 85 and other grant administration requirements found at Part 1003, in the administration of ICDBG grant funds.

Further, he provides an overall grants management and evaluation including monitoring of projects, administration, project implementation and sub-recipients to ensure that ICDBG activities are in compliance within a budget and timeframe. This includes preparing administration cost estimates for proposed grant activities and administration budget in ICDBG application. He will schedule

coordination meetings with SWONAP and other sub-recipients to provide updates and address any unforeseen programmatic issues and concerns. He is also responsible for reviewing the organizational structure by evaluating the performance of the program and the staff. Also, will provide strategic planning to improve and streamline service delivery.

Mr. John will continue to carry out these functions to its full extent and work to complete the grant close out documents through the coordination of the Nation's Contract Accounting Office for the proposed projects. The tasks include providing complete information (HUD Form 425-Financial Status Report, Final Performance and Evaluation Report, Amounts and Source of Funds or Left-Over Funds) on close out activities to HUD upon completion of all projects and when all ICDBG cost incurred are paid within the required 90 days. Therefore, Mr. John has a successful, recent and relevant experience in implementing and completing waterline and powerline projects. He has administered along with his key staff (James Adakai and Benjamin Cowboy), the completion of 38 major infrastructure projects for a total amount of \$15.7 in CDBG funds within the past 5 years. These projects were completed within budget and according to an approved implementation schedule; and the intended purpose of these projects was achieved. During this 5 year period, a total of 759 low-moderate income households were served with water and powerline service. See page 124.

Mr. John's references are: Dyron Murphy, Architect, Dyron Murphy Architects, P.C, and Jackson Gibson, Community Service Coordinator, Smith Lake Chapter.

**James Adakai, Programs and Projects Specialist**, holds two Bachelor Degrees in Political Science and Sociology from the University of Utah, Salt Lake City, UT. Also, has completed two-year coursework in masters of Public Administration. Mr. Adakai worked for over 19 years in the Navajo CDBG Program, and two years in a city and county government community development and planning departments. His overall professional background in grants management and contract administration in the community development field includes his most recent, successful experience with the Navajo Nation CDBG program by implementing relevant projects productively. Mr. Adakai's specific accomplishments for completing relevant eligible multi-million dollar ICDBG assisted infrastructure activities for the past 19 years is illustrated in the Navajo Nation article dated May 23, 2011 on page 64. This historic article contains, projects completed successfully within the past 5 years under the program management and directorship of Mr. Adakai.

Mr. Adakai's specific roles on technical aspects of managerial responsibilities in executing the grant activities will include developing and executing contracts that will be entered into agreements with sub-recipients (Navajo Area Indian Health Services, Navajo Tribal Utility Authority) for the proposed projects in accordance with 24 CFR 1003 and Part 85. Mr. Adakai will provide assurance that the requirements and methods of Indian Preference are complied with; and perform technical responsibilities in contract monitoring, evaluation, project modification and reporting requirements to ensure overall quality control of all projects in accordance with the implementation schedule and logic model. Project planning and implementation activities will be coordinated closely with Indian Health Services (I.H.S.) and Navajo Tribal Utility Authority (NTUA) through periodic meetings and departmental correspondences for a successful completion of projects. Under the directive of the Program Supervisor, program staff also provides assistance with the program's financial management system with respect to maintaining accounting and program files to ensure established internal control procedures and program requirements are carried out accordingly. In performing this task, the program will comply with rules and regulations (24 CFR Part 1003, Part 85, HUD Handbook 1300.18, OMB

Circular A-87 and HUD Phoenix Office (ONAP) Technical Bulletin) for the financial administration of ICDBG funds and the Nation's activities under this application.

Mr. Adakai carries out administrative policies and procedures in accordance to tribal laws and applicable HUD rules and regulations for compliance and reporting purposes. He ensures project implementation schedules and environmental review records are monitored effectively, and reports any problems that may arise to the department for an immediate resolution.

Mr. Adakai's references are Roger G. Slape, Division Director, Sanitation Facilities Construction/Navajo Area Indian Health Service; and John O'Brien, Director, Planning Department, City of Sedona, Arizona. See attached Letter of Endorsement from Mr. Roger Slape for Mr. Adakai, which demonstrates his relevant, successful, recent experience for completing 7 major waterline projects, totaling \$18.1 million.

**Ben Cowboy, Construction Supervisor**, has worked in construction management and community development field for over 23 years and held various jobs in architectural and engineering offices, construction management with the Navajo Nation, private entities; and worked in several managerial/supervisory positions within the Navajo Housing Authority.

Mr. Cowboy is responsible for supervising the field operation function which involves reviewing all drawings, staking sheets, right of way, quad mapping, water and powerline layouts and designs for compliance purposes; and ensures homes are feasible and ready for service hookups. He oversees the planning and design development schematics, solicitations, and selection of an architect and award of construction contract, and documents for the proposed waterline and powerline activities. He assigns field staff to conduct home assessments, conduct pre-construction meetings and ensure prompt project completion and quality workmanship.

Mr. Cowboy's specific responsibilities include the overall technical aspects of construction management and project reporting system. His tasks will include close monitoring and periodic inspections to measure and assess progress in accordance with the implementation schedules and budgets, and to ensure proper and corrective actions are carried out when problems arises. Mr. Cowboy applies methods of an established reporting system to track project progress and ensures that Sub-recipients provide quarterly reports on projects activities. Mr. Cowboy's overall responsibilities and related activities are consistent to administer the proposed projects, effectively and successfully. Again, in the past 5 years, Mr. Cowboy's successful, relevant, recent professional experience, the program was able to complete 38 infrastructure projects using ICDBG funds in the amount of \$15.7 million to serve 799 low-moderate income families.

Mr. Cowboy's references are: Leon Shirley, Leon Shirley Architect LTD., Albuquerque, N.M., and Michael Chavez, Division Director of Housing Services, Zuni, N.M.

**Other program support staff** will provide the needed administrative support, and technical services in the administration of ICDBG project activities and related work load. All of the staff has the expertise and knowledge in their area of work in which they perform a teamwork effort to complete their assigned tasks. This identifies the relevant and successful experience of individual staff who is the team members and their individual accomplishments are herein described. Within the past 5 years, the key program staff has successfully completed relevant 38 projects for a total project cost of \$15.7 million. See attached copy of completed project list on pages 65-66. This demonstrate the staff has

extensive experience pertaining to specific activities being proposed and specific roles and responsibilities described in the application to undertake recent, relevant and successful project activities.

In addition, the Nation has documentation on the capacity and experience of the Sub-recipients, (NTUA & I.H.S.) will be directly involved for completing the projects. Attached are copies of I.H.S. and NTUA Capacity Letters on pages 76 and 125.

The above are specific managerial, technical and administrative roles and responsibilities of key personnel and the sub-recipients describing how they plan to handle the technical aspects of executing the proposed projects. The staff possesses the working knowledge of the guidelines and the tasks outlined above in order to successfully implement the proposed ICDBG activities in this application.

*The Nation has claimed 15 points under this category.*

#### **b) Project Implementation Plan and Program Evaluation**

The Nation has the ability to provide all aspect of project management, which is required to successfully implement the proposed activities. The Nation will coordinate with all parties who will be involved in the implementation process of the projects through conducting a Post Award Orientation. The chapter (local political government unit) staff, tribal department staff, and sub-recipients are required to attend this orientation. The purpose is to orientate concerned parties with the federal guidelines and regulations governing the project activities and to develop a working relationship with all involved. The steps in the Project Implementation Process, from the award letter to the close out of projects, will be explained to the participants to achieve the intended purpose of the application. See attached Project Implementation Flow Chart and Explanations of Implementation on pages 72-75.

A project management plan will be developed using the attached Project Implementation Schedule (Form 4125), which identifies each important steps and provides a target (benchmark) for ten (10) projects that are included in this application. The tracking system schedules are sufficiently detailed to the extent, which the project identifies, measures and evaluate the specific benchmarks of the projects for the purpose of enhancing community viability. The CDBG Office will use a Project Tracking System, as a tool to evaluate the progress of the project. The Implementation Schedule identifies the target dates for Environmental Review, Request for Release of Funds, Authority to Use Grant Funds, Notice to Proceed, Targeted Completion Date and Target Close out Date. Attached on page 67 is the projects' tracking report form and construction monitoring sheet to carry out the tracking system responsibilities. This Project Tracking System will be updated on a weekly basis to ensure quality control by identifying steps to make adjustments to the work plan if tasks are not completed within the time frame. The system will be on website to provide information back to the chapter, clients and sub-recipients. Additionally, the field staff will be required to make on-site project visits prior to construction to ensure all homes have been assessed for readiness; and bi-weekly on-site visits and periodic construction coordination meetings are conducted throughout the construction period to provide projects status report in each approved activities. A final inspection will be conducted for each project to ensure all parties agree to the completion of the project, services are provided to the clients and for compliance purposes.

Additionally, the Nation and Sub-grantees will develop a Memorandum of Agreement or Sub-grant Agreement in accordance to the specific terms and conditions as required completing the proposed

projects on a timely basis and within budget. Attached is a copy of the program's organizational chart on page 75, and also included in each project activity are implementation schedules and logic models outlining the estimated completion of all tasks associated with the proposed activities.

*The Nation has claimed 3 points under this category.*

**c) Financial Management**

The program, in coordination with the Navajo Division of Finance, has the capability of performing financial management activities. The Nation's financial management system will have effective control over ICDBG grant financial activities and will apply to each specific project in accordance to the requirements of 24 CFR part 85 and 24 part 1003. As outlined in sub factor (a) of the Capacity Factor, the work responsibilities of the administrative staff (Programs and Projects Specialist and Senior Office Specialist), describes the method and how the program performs their financial affairs. The Navajo CDBG Program is responsible for the administration of program funds, hence all financial transactions are initiated from this office. The Senior Office Specialist reviews the requests to ensure all goods and services are received or rendered. If the goods and services are not fulfilled, the vendor is notified of the shortcoming and to address the issue prior to processing of payment. If the request is in order, a receiving record is prepared and submitted for the Program Supervisor's approval. Once approval is obtained at the program level, the request is submitted to Office of the Controller (Office Services) where it is received, stamped and forwarded to Contract Accounting for review and concurrence. The Accountant at Contract Accounting Section reviews the submitted document for justification, if there are questions on the request it is then sent back and the issue is resolved with the CDBG Accountant. If justified, it is then submitted to accounts payable for payment. Once Accounts Payable Section issues a check, the Senior Office Specialist retrieves the check and mailed to vendor. For the purpose of accountability and ensuring timely reporting purposes, the CDBG Program Accountant will maintain an in-house accounting on all transactions. The Navajo Nation Office of the Controller, Contract Accounting Section is the official program that is authorized to maintain all accounts, reports all financial requirements (Form 425), conducts all draw-downs (LOCCS) and verify close outs of all federal accounts process dealing with finances. The Nation's most recent audit conducted does not identify any CDBG significant findings related to the financial management system. There is no other notification from the auditor of any other findings in the recent audit. SWONAP letter dated July 25, 2011 indicates that the Nation's financial management system complies with all applicable regulatory requirements including federal guidelines and regulations at: 24 CFR Part 85, 24 CFR Part 1003 and applicable HUD's regulatory requirements. OMB Circular A-87 and OMB Circular A-133.

*The Nation claimed 2 points under this category.*

**d) Procurement and Contract Management**

The Nation has the ability to perform procurement and contract administration procedures that are required in this application. The Nation's Procurement Code Policy will have effective procurement and contract control over the ICDBG grant activities and will apply to each specific project in accordance to 24 CFR Part 85 and 24 CFR Part 1003 requirements. SWONAP-HUD has a copy of the Navajo Nation Procurement Code to ensure compliance. The Program Senior Office Specialist and Programs/Projects Specialist are assigned to carry out administrative responsibilities of procurement and contract administration tasks in the method described herein.

The Navajo CDBG Program procures for all goods and services. To ensure check and balances, the following process is followed: The staff identifies the need for goods i.e. office supplies, furniture, office equipment, etc. and submits a request to the Program Supervisor for authorization to purchase. Once authorization is given, the Senior Office Specialist prepares a quotation sheet or material listing, the request for bids are faxed to various Indian and minority vendors, with a response time and date. Once the bids are received and reviewed, a bid tabulation sheet is prepared. The bid tabulation sheet is submitted to the Program Supervisor for review and approval. Once approval is obtained, a Purchase Requisition is prepared and approved by the Program Supervisor. The approved Purchase Requisition is submitted to Office of the Controller (clocked in by Office Services and referred to Contract Accounting for concurrence). Upon concurrence by Contract Accounting, the Purchase Requisition is submitted to the Purchasing Department. The Purchasing Department will issue a Purchase Order to the vendors.

All infrastructure activities are implemented on a sub-recipient basis and not on a competitive bidding basis. The powerline projects will be contracted to NTUA who has jurisdiction in the project area as outlined in the Sub-grant Agreement. NTUA is a Navajo Nation enterprise providing electrical services to majority of the Navajo reservation residents. The waterline project will be contracted to Indian Health Service for project construction through a Memorandum of Agreement. Both agreements will be processed in a similar manner. For instance, the following method is used in the development of a Sub-grant Agreement: NTUA provides an updated cost estimate to the CDBG Office. The CDBG Office reviews the cost estimate and prepares the finalized Sub-grant Agreement between NTUA and the Navajo Nation. The General Manager of NTUA signs the agreement. The CDBG Office prepares an Administrative Review Sheet for processing through Division of Community Development, Contracts and Grants, Office of the Controller, Department of Justice and Office of the President for signature. Once the President signs the Agreement, the Contracts Administration Office assigns a Contract Number. A Notice to Proceed is issued to NTUA containing the Contract Number and a copy of the Agreement. The CDBG Department informs the Sub-grantee that projects shall not commence until a Notice-to-Proceed is issued for the project by the CDBG Office. The Memorandum of Agreement is processed similarly with Indian Health Service for proposed waterline project.

The Nation has adopted and accepted to comply with HUD financial requirements as specified in Section 12 N.N.C. §264 of the Navajo Nation's Procurement Code, which meets the regulatory requirements of 24 CFR Part 85 and Part 1003. The Administrative Review process is explained in the attached Navajo Nation legislation on pages 128-131. Also, the Nation's most recent audit conducted for FY-2010 contained no findings related to HUD-funded programs. The subject audit contained an unqualified opinion on the financial statements. HUD programs were not determined to be major programs; therefore, the auditor offered no opinion on compliance over major programs. This application therefore addresses the Nation's realistic and achievable procurement and contract management system in executing and closing out the proposed ICBG activities in this application. SWOPNAP letter dated July 25, 2011 indicates Nation's procurement and contract management system complies with all applicable regulatory requirements.

*The Nation has claimed 2 points under this category.*

## **2. PAST PERFORMANCE**

**a) Satisfactory Progress in Meeting Time Frames Established in the HUD Approved Implementation Schedule.**

This Program has established consistency in meeting time frames according to the approved implementation schedules. All the Implementation Schedules are up-to-date and on schedule. The latest revised Implementation Schedule was approved by SWONAP in November 2011. The 2010 annual status report was submitted to HUD on November 10, 2011 which shows program progress, the number of projects completed and ongoing projects are on schedule.

All implementation schedules have been approved by SWONAP and are on schedule for the Nation's previous CDBG grants at the time of this application.

<u>Grant</u>	<u>Grant Project Status</u>
B-06	On Schedule/grant ends on 03/31/2011
B-07	On Schedule/grant ends on 06/30/2013
B-08	On Schedule/grant ends on 07/30/2012
B-09	On Schedule/grant ends on 10/31/2012
B-10	On Schedule/grant ends on 10/31/2012
B-11	On Schedule/grant ends on 01/31/2014

Therefore, the implementation schedules are current and not more than 90 days behind schedule in meeting the time frames.

*The Nation has claimed 3 points under this category.*

**b) Timely submission of reports including Annual Status Report, Evaluation Reports and Federal Transaction.**

The Department has provided the Annual Status, Evaluation Report and Federal Transaction Reports within the required deadline. The annual status report was submitted on November 10, 2011 and the Financial Transaction Reports were submitted for the past 12 months is timely. The most recent Financial Transaction Reports submitted are as follows:

<u>For Quarter Ending:</u>	<u>Submission Date:</u>
June 2011	July 12, 2011
September 2011	November 7, 2011
December 2010	January 31, 2011
March 2011	April 18, 2011

*The Nation has claimed 3 points under this category.*

**c) Timely Submission of Close-out Documents**

The submission of the close-out documents has been timely in compliance with the criteria for grant close-out requirements found at 24 CFR 1003.508. The Nation has been consistently making efforts toward timely submission and performing close outs of grants. The closeout documents for B-98, B-03 and B-04 were successfully closed: B-98 on April 5, 2011, B-04 on June 2, 2011. B-03 was submitted to HUD on April 28, 2011 and was closed out on June 02, 2011.

*The Nation has claimed 3 points under this category.*

**d) Timely Submission of Annual Audits**

Submission of the annual audits has been prompt and the Nation is in compliance with OMB Circular A-133 and its supplements. The 2010 audit is completed and has been submitted to go through Federal Audit Clearinghouse. In 2010 audit, only one finding was identified but was cleared by SWONAP on July 25, 2011.

*The Nation has claimed 3 points under this category.*

**e) Timely Resolution on Monitoring Findings and Controlled Audit Findings**

The Departments' ability to resolve and clear monitoring findings and controlled findings has been successful. The Nation had made concerted efforts to resolve findings and concerns regarding the most recent SWONAP's visit and review of the Nation's ICDBG Program. The Nation was able to provide satisfactory information to SWONAP in resolving the findings identified in SWONAP's monitoring report from previous fiscal years.

The Nation's action plan was submitted to HUD to clear the findings in 2010 report and latest correspondence between HUD and the Nation is dated July 25, 2011. The subsequent correspondence on SWONAP/Navajo Nation CDBG program coordination meeting on October 27, 2011, demonstrates the Nation clearing all monitoring findings successfully within the prescribed and HUD-granted target dates.

*The Nation has claimed 3 points under this category.*

**THE NATION HAS CLAIMED THE OVERALL MAXIMUM OF 30 POINTS FOR CAPACITY OF THE APPLICANT.**



## Community Development Block Grant closes out FY '03 and '04

WINDOW ROCK—Closing out a grant is a tedious process.

Nobody knows this fact more than James Adakai, senior programs and projects specialist for the Navajo Nation Community Development Block Grant. Adakai recently closed out two block grants and sent reports to the U.S. Department of Housing and Urban Development.

His workspace tells the tale of a man on a mission.

Adakai's horseshoe-shaped desk is clean, except for a computer, phone and two monstrous stacks of paperwork. A bookshelf in the corner is packed with 19 years of three-ring binders from CDBG grants dating back to 1992.

Arbin Mitchell, director of Navajo Nation Division of Community Development, said the goal of the division is to help Navajo communities become self-governing and to improve their standard of living for infrastructure growth.

"We are here to help the Navajo people," Mitchell said. "CDBG does a lot of work to that end."

Established in 1974, HUD's Indian Community Development Block Grant was created to help Indian tribes and Alaska Natives to meet their community development needs.

ICDBG is a competitive program and governed by strict federal guidelines where projects are rated on a 100-point scale to determine funding allocations. The Navajo Nation competes with 171 tribes in the southwest region.

Management of the ICDBG begins with the signing of the grant agreement and ends after the project has been completed and final project reports submitted and accepted. The management of existing grants is evaluated as part of the review process for future grant applications.

Eligible activities for block grants include public facilities and improvements, housing rehabilitation, and economic development.

"We were successful in the close out of FY 2003 and 2004, after using project savings to finance an additional four projects," Adakai said. "They were very small projects, under \$100,000 each, which really helped communities assist more families with needed infrastructure."



James Adakai, programs and projects specialist for Community Development Block Grant, said the FY 2003 and 2004 grants have been closed out. Adakai said the FY 2011 grant process is currently underway and CDBG is accepting applications through the June 15, 2011 deadline. (Photo by Rick Abasta)

Adakai filed a narrative report, close out agreement and final financial status report with the HUD Southwest Office of Native American Programs on April 28, 2011, for FY 2003 grant B-03-SR-04-0281.

The grant amount totaled \$4,345,947. Pursuant to the close out process, a check in the amount of \$11,463,51 was also submitted to HUD as a reimbursement for unused funds.

Program administration cost for the grant totaled \$580,138 and project cost amounted to \$3,765,809. The grant was originally for eight projects but was stretched to 11 with grant amendments added from cost savings.

Two waterline/wastewater disposal projects were funded, totaling \$2,584,798. CDBG worked with Indian Health Services to provide water services, indoor plumbing, septic tank and drainage field systems to 52 homes in the communities of Kayenta and Tofani Lake.

The grant also funded eight power line extension projects with Navajo Tribal Utility Authority and Jemez Mountain Electric Cooperative in the amount of

\$2,325,059 for 166 clients and an electrical line mileage of 90.1 miles.

The communities served were Coyote Canyon, Dilcon, Mexican Water, Sanostee, Sweetwater, Whitecone, Wide Ruins, and Tsaile/Wheatfields. Two power line projects were also completed as

**“We are here to help the Navajo people,” Mitchell said. “CDBG does a lot of work to that end.”**

**COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) DEPARTMENT  
PROJECTS SUCCESSFULLY COMPLETED WITHIN THE PAST FIVE YEARS**

<b>CDBG GRANT NO. B-09-SR-04-0281</b>		<b>NUMBER OF HOMES</b>	<b>TOTAL PROJECT AMOUNT</b>
1	Chinle Powerline Extension	14	294,107.21
2	Tonalea Powerline Extension	30	618,357.06
<b>Total Amount of CDBG Contracts:</b>			<b>\$ 912,464.27</b>

<b>CDBG GRANT NO. B-08-SR-04-0281</b>		<b>NUMBER OF HOMES</b>	<b>TOTAL PROJECT AMOUNT</b>
1	Chinle Powerline Extension	29	367,095.65
2	Dennehotso Powerline Extension	4	56,538.00
3	Indian Wells Powerline Extension	7	150,785.99
4	Kinlichee Powerline Extension	40	634,039.27
5	Tolani Lake-Leupp Powerline Extension	6	258,328.27
6	Inscription House Powerline Extension	22	327,329.00
7	Kaibeto Powerline Extension	29	1,008,929.00
8	Shonto Powerline Extension	23	394,221.95
9	Tsaile/Wheatfields Powerline Extension	12	295,385.00
10	Oljato Powerline Extension	27	477,440.64
11	Rock Point Powerline Extension	23	629,627.26
<b>Total Amount of CDBG Contracts:</b>			<b>\$ 4,599,720.03</b>

<b>CDBG GRANT NO. B-07-SR-04-0281</b>		<b>NUMBER OF HOMES</b>	<b>TOTAL PROJECT AMOUNT</b>
1	Cornfields Powerline Extension	30	819,778.69
2	Chilchinbeto Powerline Extension	16	338,341.48
3	Dennehotso Powerline Extension	11	330,052.00
4	Dilcon Powerline Extension	7	182,429.00
5	Inscription House Powerline Extension	20	322,756.00
6	Kinlichee Powerline Extension	16	138,094.80
7	Klagetoh Powerline Extension	5	74,347.00
8	Steamboat Powerline Extension	14	331,017.00
9	Mexican Water Powerline Extension	13	416,469.69
10	Rock Point Powerline Extension	31	711,817.00
<b>Total Amount of CDBG Contracts:</b>			<b>\$ 3,665,102.66</b>
<b>SUB-TOTAL (Page 1)</b>			<b>\$ 9,177,286.96</b>

**COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) DEPARTMENT  
PROJECTS SUCCESSFULLY COMPLETED WITHIN THE PAST FIVE YEARS**

<b>CDBG GRANT NO. B-06-SR-04-0281</b>		<b>NUMBER OF HOMES</b>	<b>TOTAL PROJECT AMOUNT</b>
1	Forest Lake Powerline Extension	26	482,863.67
2	Coppermine Powerline Extension	10	382,536.06
3	Bodaway/Gap Powerline Extension	16	438,154.76
4	Rock Point Powerline Extension	12	339,028.29
5	Mexican Water Powerline Extension	7	195,893.60
6	Oljato Powerline Extension	3	116,600.00
<b>Total Amount of CDBG Contracts:</b>			<b>\$ 1,955,076.38</b>

<b>CDBG GRANT NO. B-05-SR-04-0281</b>		<b>NUMBER OF HOMES</b>	<b>TOTAL PROJECT AMOUNT</b>
1	Lower Greasewood Powerline Extension	19	440,630.52
2	Mexican Water Powerline Extension	25	341,100.34
3	Rock Point Powerline Extension	5	115,620.30
4	Coppermine Powerline Extension	13	398,244.31
5	Red Valley Powerline Extension	6	85,529.56
6	Kayenta Powerline Extension	17	482,867.00
7	Indian Wells Powerline Extension	4	211,732.12
8	Littlewater Waterline Extension	57	740,500.00
9	Oljato Waterline Extension	132	1,800,000.00
<b>Total Amount of CDBG Contracts:</b>			<b>\$ 4,616,224.15</b>
<b>SUB-TOTAL (Page 2)</b>			<b>\$ 6,571,300.53</b>

<b>SUB-TOTAL (PAGE 1):</b>	<b>9,177,286.96</b>
<b>SUB-TOTAL (PAGE 2):</b>	<b>6,571,300.53</b>
<b>GRAND TOTAL:</b>	<b>\$ 15,748,587.49</b>

**COMMUNITY HOUSING & INFRASTRUCTURE DEPT  
DIVISION OF COMMUNITY DEVELOPMENT**

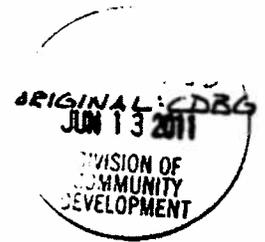
**PROJECT CONSTRUCTION MONITORING REPORT**

Date:	Time of Arrival:
Project Location:	Time of Departure:
Weather:	Project Type:
Purpose of Visit:	
Description of Work Being Perform :	
Number of Worker on Job:	Supervisor on-site:
Equipment on-site:	
Progress and/or Delay(s):	
Homes Visited:	
Follow up and Action to be Taken:	
Report Prepared by:	Date:



**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
SOUTHWEST OFFICE OF NATIVE AMERICAN PROGRAMS**

June 2, 2011



Honorable Ben Shelly,  
President  
The Navajo Nation  
P.O. Box 7440  
Window Rock, AZ 86515

Dear President Shelly:

**SUBJECT: Indian Community Development Block Grant (ICDBG) Program  
Grant Number B-03-SR-04-0281  
Closeout Subject to Audit**

A review has been completed of the Federal Financial Report (form SF-425), Closeout Agreement, and final Status and Evaluation Report for the subject grant. The review revealed grant activities were completed on August 31, 2010, and are consistent with the 2003 ICDBG application. Funds in the amount of \$11,463.51 were not expended and returned to HUD by check number 01342408 dated April 22, 2011, resulting in a final grant amount of \$4,334,483.49. The unused balance of \$11,463.51 will be cancelled.

Based on these actions, the grant is closed subject to the submission of an acceptable audit of all program funds. Records available to the Southwest Office of Native American Programs indicate grant expenditures in the amount of \$740,809.00 (\$752,273 less the repayment of \$11,463.51) have not been audited. The last audit report received and accepted by the Federal Audit Clearinghouse was for the period ended September 30, 2009. The Nation should ensure all remaining grant expenditures are included in the next regularly scheduled audit.

<b>Grant Amount:</b>		4,345,947
<b>FYE</b>	<b>Audited</b>	<b>Balance</b>
9/30/05	429,383.00	3,916,564.00
9/30/06	2,552,280.00	1,364,284.00
9/30/07	351,110.00	1,013,174.00
9/30/08	87,218.00	925,956.00
9/30/09	173,683.00	752,273.00
<<repayment>>	11,463.51	740,809.00
<b>Cumulative:</b>	3,605,138	

No further Federal Financial Reports (form SF-425) or Status and Evaluation Reports are required for this grant. The Nation is congratulated on the successful completion of project activities. If you have any questions, please contact Sarah Olson, Grants Management Specialist, at (602) 379-7233 or via email at [Sarah.D.Olson@hud.gov](mailto:Sarah.D.Olson@hud.gov).

Sincerely yours,

Rita H. Alejandro  
Lead Grants Management Specialist  
Grants Management Division



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
SOUTHWEST OFFICE OF NATIVE AMERICAN PROGRAMS

October 4, 2011

Honorable Ben Shelly  
President  
Navajo Nation  
PO Box 7440  
Window Rock, AZ 86515-7440

Dear President Shelly:

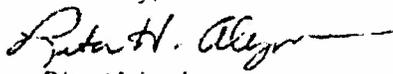
SUBJECT: Indian Community Development Block Grant (ICDBG) Program  
Grant Number: B-04-SR-04-028  
Project: 70.17 miles of power line and 20.8 miles of water line  
Final Closeout

On June 12, 2011, the subject grant was closed subject to submission of an acceptable audit of all grant funds. The Southwest Office of Native American Programs (SWONAP) has subsequently reviewed the audit report for the fiscal year ending September 30, 2010. No findings were established related to the operation of the ICDBG program; however, the reports reflect total audited expenditures in the amount of \$5,491,120, resulting in excess expenditures of \$120.00. Please note that there are no additional ICDBG funds available to cover the excess expenditures. Therefore, SWONAP records reflect total funds authorized and total funds disbursed from the Line of Credit Control System are in agreement and equal \$5,491,000.

FYE	Audited	Balance
9/30/06	484,476	5,006,524
9/30/07	1,764,642	3,241,882
9/30/08	1,069,605	2,172,277
9/30/09	1,834,532	337,745
9/30/10	337,865	120
Cumulative:	5,491,120	

Based on our review, final closeout of the grant is hereby approved effective the date of this letter. Final closeout does not preclude HUD from taking further action should subsequent information, including the cognizant agency's reports on the audits, disclose such actions are warranted. The tribe is further advised, in accordance with the regulations at 24 CFR 85.42 and 24 CFR 1003.505, grant records must be maintained for at least three years after the date of this letter.

SWONAP congratulates the Navajo Nation on the successful completion of this grant. If you have any questions, please contact Sarah Olson, Grants Management Specialist, at (602) 379-7233 or via email at [Sarah.D.Olson@hud.gov](mailto:Sarah.D.Olson@hud.gov).

Sincerely,  
  
Rita Alejandro  
Lead Grants Management Specialist  
Grants Management Division



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
SOUTHWEST OFFICE OF NATIVE AMERICAN PROGRAMS

July 25, 2011

Honorable Ben Shelly  
President  
Navajo Nation  
Post Office Box 9000  
Window Rock, AZ 86515

Dear President Shelly:

SUBJECT: Audit Report Number 10AZ028111 for the Fiscal Year Ended September 30, 2010

The Southwest Office of Native American Programs (SWONAP) has completed a review of the subject audit report. Based on the expended amounts identified on the Schedule of Expenditures and on form SF-SAC (Data Collection Form) submitted to the Federal Audit Clearinghouse (FAC), the Department of Interior (DOI) is the oversight agency for the audit. The report was received by SWONAP on July 18, 2011, and by the FAC on June 30, 2011. The FAC's website indicates that the reporting package is complete. Since SWONAP has not received any correspondence from DOI regarding the audit, our acceptance of the reports is conditioned upon any future determinations from DOI. For tracking purposes, SWONAP has assigned the subject report number. Please refer to this number in any correspondence regarding the audit.

The subject audit contains an adverse opinion on the financial statements and a **qualified** opinion on compliance on the HUD funded major programs. The report contained one finding directly related to HUD-funded programs. A Corrective Action Plan (CAP) was submitted with the audit report. Based on the CAP, the information below constitutes the management decision for the audit report in accordance with section 405 of OMB Circular A-133:

**Finding 10-06 – Reporting**

The auditor stated that in test sampling that the Navajo Nation (Nation) did not submit the quarterly federal cash transaction reports (SF 425) on a timely basis. In addition, the auditor indicated that required monthly progress reports due to the Navajo Housing Authority (NHA) and HUD's Section 3 (HUD-60002) due to HUD were not submitted.

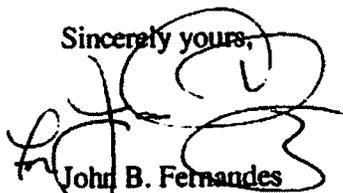
The monthly progress reports due to NHA are not a Federal requirement and SWONAP is not authorized to track the submission of these reports. The Nation should ensure that in the future all required reports are filed on a timely basis. At the current time, the Nation is current with all HUD required reporting (SF 425 and HUD 60002). Therefore, this finding is **closed** effective the date of this letter.

The processing of the audit report at this time does not preclude HUD from taking administrative action should subsequent information disclose that such actions are warranted.

HUD reserves the right to return the report based upon subsequent review of the independent auditor's work papers if such a review identifies significant deficiencies.

If there are any questions concerning the information in this letter, please contact Don Sam, Grants Evaluation Specialist, by telephone at (602) 379-7231 or by e-mail at Carl.D.Sam@hud.gov.

Sincerely yours,

A handwritten signature in black ink, appearing to read "John B. Fernandes". The signature is stylized and somewhat cursive, with a large loop at the end.

John B. Fernandes  
Director  
Grants Evaluation Division

**EXPLANATION OF IMPLEMENTATION FOR  
POWERLINE EXTENSIONS FROM GRANT AWARD TO CLOSE-OUT**

The Nation will sub-contract construction of the projects to Navajo Tribal Utility Authority (NTUA) through a Sub-grant Agreement. The projects will be administered and implemented in accordance with the terms and conditions of the Sub-grant Agreement and other applicable guidelines. The funds that the Nation has control over will be paid to the utility company in the manner outlined in the Sub-grant Agreement.

<u>Chapter</u>	<u>Sub-Recipients</u>
1. Dennehotso	NTUA
2. Jeddito	NTUA
3. Forest Lake	NTUA
4. Kayenta	NTUA
5. Wide Ruins	NTUA
6. Rock Point	NTUA
7. LeChee	NTUA
8. Coppermine	NTUA
9. Cornfields	NTUA

NTUA has exclusive jurisdiction to construct powerlines in the respective project areas and will also provide: all engineering design services, construction materials, work force, construction supervision and inspections; they also will provide in-kind contribution per customer for hookups. These projects will provide temporary employment to local Chapter members, who otherwise would be unemployed. The objective is to hire unemployed and low-income people to benefit from jobs and from economic opportunities through FY-2012 ICDBG grant. The number of jobs will depend on the project scope, weather, terrain and other factors.

The CDBG Department will have the primary responsibility of administering the projects by achieving the intended purpose such as: coordinating implementation activities, issuing notice-to-proceed for projects when pre-construction conditions are cleared, monitoring and inspecting construction, participating in pre-construction meetings, coordination activities among responsible parties to assure orderly progress, conducting post construction and final inspections with all concerned parties to assure the systems proper operation and is safe and free of any deficiencies.

***EXPLANATION OF IMPLEMENTATION FOR  
WASTEWATER UPGRADE FROM GRANT AWARD TO CLOSE-OUT***

The Nation will sub-contract construction of the projects to Navajo Area Indian Health Service (IHS) through a Sub-grant Agreement. The project will be administered and implemented in accordance with the terms and conditions of the Memorandum of Agreement, and other applicable guidelines. The funds that the Nation has control over will be paid to the utility company in the manner outlined in the Memorandum of Agreement.

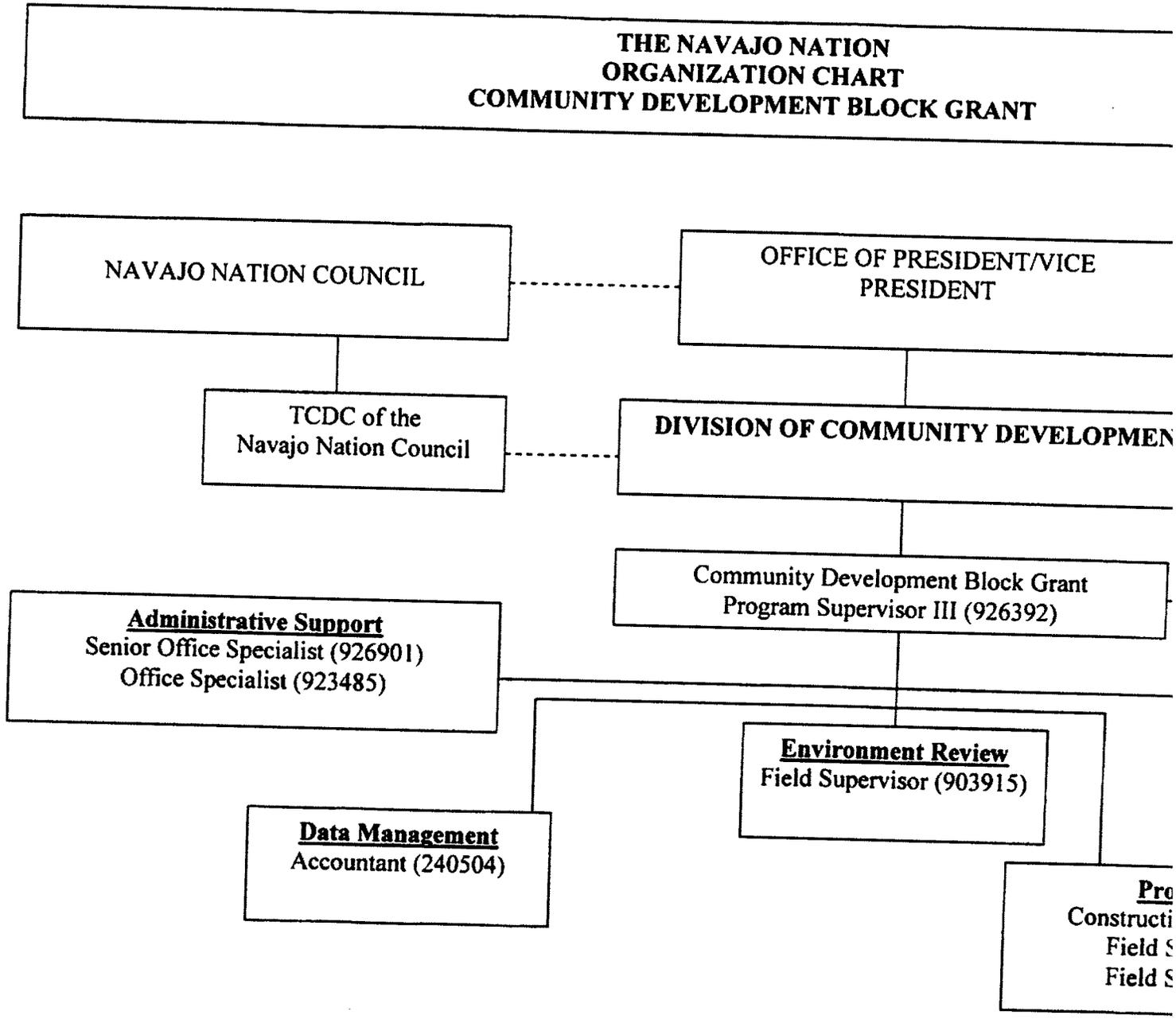
<u>Chapter</u>	<u>Sub-Recipients</u>
1. Shiprock	IHS

IHS provides engineering services, required water/wastewater construction materials and construction supervision for all facilities. IHS also provides plumbing services to assemble the units and testing to assure standards and code compliance.

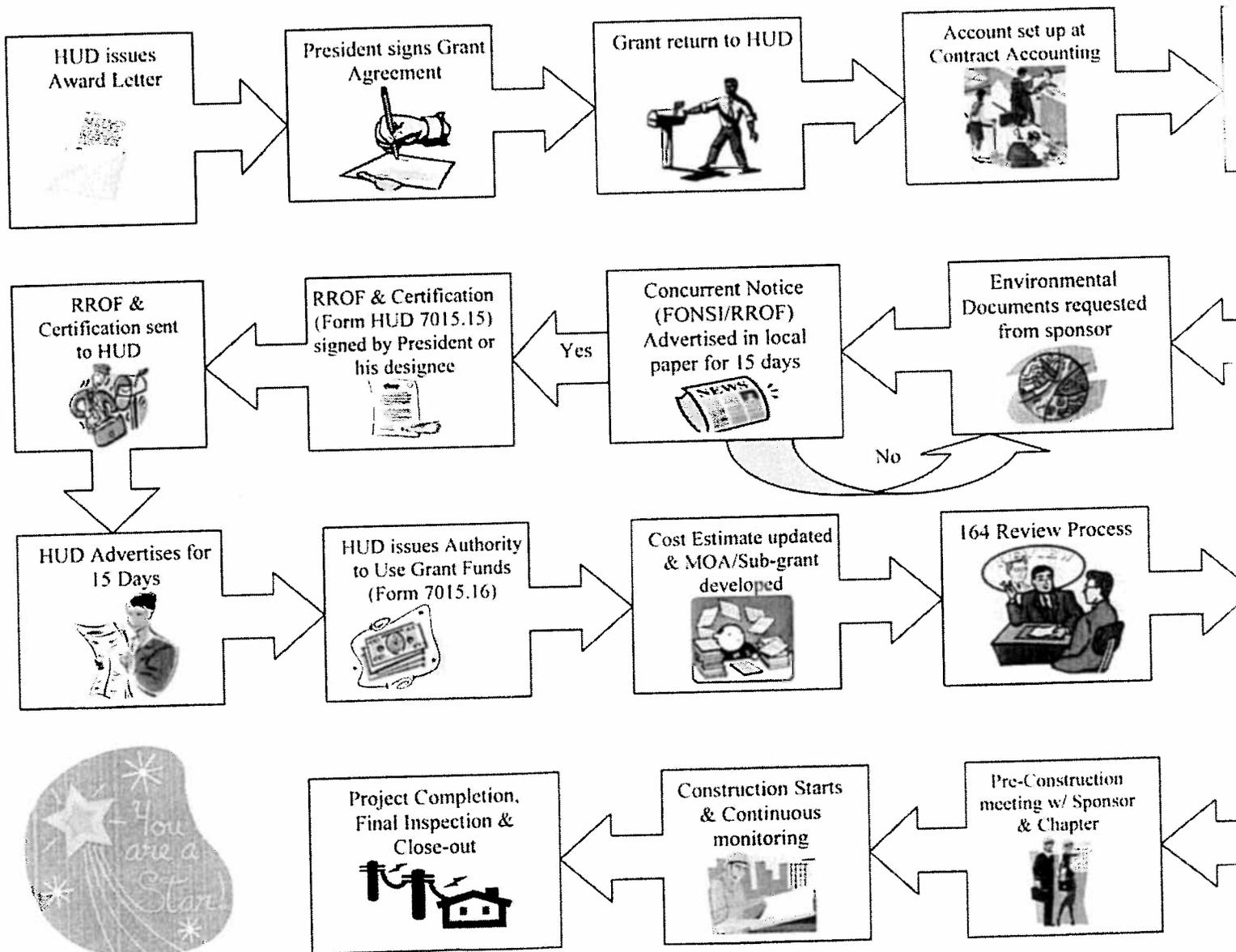
IHS retains Navajo Engineering Construction Authority (NECA), a construction enterprise of the Nation, to construct waterlines and to install facilities for wastewater system. NECA provides all the labor, equipment, standard materials and related services. IHS pays NECA for the total non-profit construction cost. The projects will provide temporary employment to local Chapter members who other wise would be unemployed. The number of jobs will depend on the project scope, weather, terrain and other factors. The project will provide temporary employment to local Chapter members who otherwise would be unemployed. The number of jobs will depend on the project scope, weather, terrain and other factors.

The CDBG Department will have the primary responsibility of administering the projects by achieving the intended purpose such as: coordinating implementation activities; issuing notice-to-proceed for projects when pre-construction conditions are cleared; monitoring and inspection construction; participating in pre-construction meetings, coordinating activities among responsible parties to assure orderly progress, conducting post construction and final inspections with all concerned parties to assure the systems proper operation and is safe and free of any deficiencies.

**THE NAVAJO NATION  
ORGANIZATION CHART  
COMMUNITY DEVELOPMENT BLOCK GRANT**



# CDBG PROJECT IMPLEMENTATION PROCESS





NAVAJO TRIBAL UTILITY AUTHORITY  
AN ENTERPRISE OF THE NAVAJO NATION

January 3, 2012

Mr. Chavez John, Manager  
Community Housing and Infrastructure Department  
The Navajo Nation  
P.O. Box 2365  
Window Rock, Arizona 86515

RE: FY-2012 ICDBG Application, Capacity Factor

Dear Mr. John:

As part of your requirements for the ICDBG Application, the Navajo Tribal Utility Authority (NTUA) is pleased to provide information on its capacity to fund and construct power line projects.

The NTUA is a utility owned by the Navajo Nation and operated within the guidelines set forth in its Plan of Operation that is part of the Navajo Nation Tribal Code. For power line construction, NTUA uses several sources. The funding sources are the NTUA general funds, loans from the Rural Utilities Services (a part of the United States Department of Agriculture), and Contributions-in-Aid to construction from individuals, and Federal and Navajo Nation Agencies such as the BIA, USIHS, CDBG and CIO.

The NTUA in the past 10 years has constructed, using internal personnel and contractors, over 2176 miles of power lines and added an average of 840 new electric customers to its systems each year. In year 2010, NTUA constructed 275 miles of power lines and added 615 new customers to its electrical system. All NTUA power line construction met, and in some cases exceeded, the Rural Utilities Services power line construction standards. NTUA construction personnel comprise of journeyman certified electric foremen and linemen, and apprentice linemen who perform their work under the direct supervision of journeyman linemen and foremen.

**Letter to Chavez John, Community Housing and Infrastructure Department**  
**RE: FY-2012 ICDBG Application, Capacity Factor**  
**January 3, 2012**  
**Page Two**

I hope this information is helpful to your application. Please feel free to call or come by my office if you need to discuss the above in more detail.

Sincerely,

**NAVAJO TRIBAL UTILITY AUTHORITY**



**Wally Chief, Manager**  
**Engineering and Technical Services Division**

Enclosure

**CC: Walter W. Haase, General Manager, NTUA**  
**Rex P. Kontz, Deputy General Manager, NTUA**  
**Jeremiah Ludlam, Electric Construction Department, NTUA**  
**Paula Holyan, Electric Construction Department, NTUA**  
**Ethelind Johns, Electric Construction Department, NTUA**



**NAVAJO TRIBAL UTILITY AUTHORITY**  
**(A Navajo Nation Enterprise)**

**Basic Financial Statements, including**  
**Supplemental Information by Type of Service**

**December 31, 2010 and 2009**

**(With Independent Auditors' Report Thereon)**



Pages 79-123  
Intentionally  
Omitted  
(Financial Info.)





Office of Environmental Health  
and Engineering

Navajo Area  
Indian Health Service  
P.O. Box 9020  
Window Rock, Arizona 86515-9020

December 29, 2011

Carolyn O'Neil, Administrator  
Southwest Office of Native American Programs  
Department of Housing and Urban Development  
One North Central Avenue, Suite 600  
Phoenix, Arizona 85004

RE: IHS Letter of Endorsement

Dear Ms. O'Neil:

This letter is written in appreciation of the Navajo Nation Community Development Block Grant (CDBG) Program and their work with the Navajo Area Indian Health Service (IHS) Division of Sanitation Facilities Construction (SFC). More specifically, this letter is to endorse the work of James Adakai, ICDBG Programs and Projects Specialist, and his successful technical, administrative and managerial skills for the many waterline construction projects in partnership with the IHS over the past five years.

The Navajo Nation CDBG and IHS-SFC programs have had a very good and successful working relationship for many years, thanks in a large part to the work of Mr. Adakai. In the last five years alone, CDBG and IHS have funded seven waterline construction projects totaling approximately \$18.1 million. Approximately 50% of this funding has come from CDBG. These contributions have played a critical part in leveraging matching funds from other sources, mainly IHS and the U.S. Environmental Protection Agency. Mr. Adakai's pivotal role in coordinating these projects has benefitted hundreds of Navajo homes that received water and other sanitation facilities for the very first time under these projects.

The SFC Program appreciates the support of Mr. Adakai and CDBG in these important projects. If you have any questions or need further specifics, you may contact Dave McDonnell or me at 928-871-5851.

Sincerely,

Roger G. Slape, P.E., Division Director  
Sanitation Facilities Construction

xc: File: C 924 CDBG  
Chrono/Reading





Office of Environmental Health  
and Engineering

Navajo Area  
Indian Health Service  
P.O. Box 9020  
Window Rock, Arizona 86515-9020

December 20, 2011

Chavez John, Director  
Navajo Nation  
Community Development Block Grant Program  
Box 2365  
Window Rock, AZ 86515

RE: IHS-DSFC Administrative Capacity

Dear Mr. John:

This letter addresses the administrative capacity of the Navajo Area Indian Health Service (IHS), Division of Sanitation Facilities Construction (DSFC) program, to assist you in your FY 2012 CDBG application.

In FY 2011 the Navajo Area DSFC program, under the authority of Public Law 86-121, funded 86 sanitation facilities construction projects worth over \$28 million (see attached). These projects will serve over 3,000 Navajo homes with water and sewer facilities, with approximately 800 of these homes receiving services for the first time. In our 50 years of administering and managing construction projects on the Navajo Reservation, the Navajo Area DSFC has funded and completed over 1,080 sanitation facility projects worth over \$890 million.

If you have any questions or need further specifics, you may contact Dave McDonnell or me at 928-871-5851.

Sincerely,

Roger G. Slape, P.E., Division Director  
Sanitation Facilities Construction

xc: James Adakai, NN CDBG  
Dave McDonnell, Chief TSS, NAIHS  
File: C 924 CDBG  
Thru: Chris Bradley, Deputy Director, DSFC  
Chrono/Reading

Navajo Area Indian Health Service  
 Division of Sanitation Facilities Construction  
 Projects Funded in FY 2011  
 Data: December 2011

Area	PDS Project Number	FY	Project Name	Estimated Homes	Estimated Total Cost
NA	NA11E35	2011	Oak Springs Summit W/L Extension	16	\$994,000.00
NA	NA11E36	2011	Chinle Scatt. Medical Referrals	38	\$868,000.00
NA	NA11E37	2011	Tuba City SU Scattered Housing	22	\$462,000.00
NA	NA11E38	2011	Kayenta SU Scattered	20	\$485,000.00
NA	NA11E39	2011	Winslow SU Scattered	20	\$398,000.00
NA	NA11E40	2011	FFO Scattered Housing VII	10	\$200,000.00
NA	NA11E41	2011	Sanostee Scattered	10	\$200,000.00
NA	NA11E43	2011	Teec Nos Pos Scattered II	3	\$143,000.00
NA	NA11E44	2011	Arizona Scattered Housing V	19	\$304,000.00
NA	NA11E45	2011	Shiprock East Scattered Housing X	40	\$534,000.00
NA	NA11E46	2011	Beclabito Jim Extension	5	\$270,000.00
NA	NA11E47	2011	New Mexico Scattered Housing V	10	\$150,000.00
NA	NA11E48	2011	Becenti North Phase 2,3 & 4	45	\$1,694,000.00
NA	NA11E49	2011	Gallup District Medical Referrals	35	\$650,000.00
NA	NA11E50	2011	Crownpoint SU Medical Referrals	20	\$400,000.00
NA	NA11E51	2011	NTUA Scattered Housing Project	35	\$980,000.00
NA	NA11E52	2011	Utah Scattered Housing V	27	\$459,000.00
NA	NA11N29	2011	Baca Scattered Phase 2 Z30	27	\$691,000.00
NA	NA11Q90	2011	Alamo - Apachito Springs Ext. Z31	5	\$60,000.00
NA	NA11R46	2011	Churchrock Peretti Canyon Scatt Z23	11	\$105,000.00
NA	NA11R47	2011	Pinedale Puerco River Scatt Z24	8	\$69,000.00
NA	NA11R48	2011	Shiprock to Sweetwater Phase 4	1920	\$2,236,000.00
NA	NA11R49	2011	Iyanbito Scattered Z32	3	\$35,000.00
NA	NA11R50	2011	Houck Community Scatt Z25	9	\$108,000.00
NA	NA11R51	2011	Thoreau Scattered Z26	9	\$102,000.00
NA	NA11R52	2011	Manuelito Tsayatoh Intertie Z27	50	\$341,000.00
NA	NA11R53	2011	Ramah Pinehill Area CDBG Z18 Z28	19	\$161,000.00
NA	NA11R54	2011	Bread Springs Scatt III Z29	8	\$118,000.00
NA	NA11R55	2011	Haystack North Z33	3	\$33,000.00
NA	NA11R56	2011	Teec Nos Pos Scattered (with Z34)	8	\$113,000.00
NA	NA11R57	2011	Canoncito Scattered Z35	5	\$52,000.00
NA	NA11R58	2011	Ramah Q65/D65/Y27/E28 Extns Z36	16	\$235,000.00
NA	NA11R59	2011	Twin Lakes Scattered Z37	11	\$189,000.00
NA	NA11R61	2011	Burnham Scattered II Z38	21	\$447,000.00
NA	NA11R62	2011	Cottonwood-Blue Gap Scatt Z39	34	\$556,000.00
NA	NA11R63	2011	Chilchiltah Scattered I Z40	16	\$274,000.00
NA	NA11R64	2011	Kaibeto Low Pressure Zone Z41	7	\$96,000.00
NA	NA11R65	2011	Kayenta West Skeleton Mesa Z42	44	\$913,000.00
NA	NA11R66	2011	Shonto Isolated Waterline Z43	30	\$673,000.00
NA	NA11R67	2011	Ramah Sunset Valley-Pinehill Z44	6	\$97,000.00
NA	NA11R68	2011	Whippoorwill Scattered Z45	15	\$189,000.00
NA	NA11R69	2011	KAIBETO SQUARE BUTTE EXT. PH1 Z4	52	\$1,165,000.00
NA	NA11R70	2011	Red Rock Scattered Z47	2	\$40,000.00
NA	NA11R71	2011	Tuba City Additional Water Source	1532	\$774,000.00
NA	NA11R72	2011	Rock Springs W/L Ext EPA Z21 Z48	13	\$56,000.00

NA	NA11R73	2011	Mexican Water Walker Ck EPA Z49 Z50	12	\$51,000.00
NA	NA11Y80	2011	Dennehotso Grswd/Baby Rks CDBG D12	0	\$1,000,000.00
NA	NA11Z18	2011	Ramah Pinehill Area R53 Z28 CDBG	19	\$1,267,000.00
NA	NA11Z21	2011	Rock Springs W/L Ext EPA R72 Z48	25	\$584,000.00
NA	NA11Z23	2011	Churchrock Peretti Canyon Scatt R46	11	\$62,000.00
NA	NA11Z24	2011	Pinedale Puerco River Scatt R47	8	\$54,000.00
NA	NA11Z25	2011	Houck Community Scatt R50	9	\$69,000.00
NA	NA11Z26	2011	Thoreau Scatt Extensions R51	9	\$68,000.00
NA	NA11Z27	2011	Manuelito Tsayatoh Intertie R52	6	\$37,000.00
NA	NA11Z28	2011	Ramah Pinehill Area (CDBG) R53 Z18	19	\$125,000.00
NA	NA11Z29	2011	Bread Springs Scattered III R54	8	\$65,538.00
NA	NA11Z30	2011	Baca Scattered Ph2 N29	27	\$186,000.00
NA	NA11Z31	2011	Alamo Apachito Springs Ext Q90	5	\$44,000.00
NA	NA11Z32	2011	Iyanbito Scattered R49	3	\$24,000.00
NA	NA11Z33	2011	Haystack North R55	3	\$28,000.00
NA	NA11Z34	2011	TeeNosPos Scattered (with R56)	8	\$68,000.00
NA	NA11Z35	2011	Canoncito Scattered R57	5	\$43,000.00
NA	NA11Z36	2011	Ramah Q65/D65/Y27/E28 Extension R58	16	\$105,000.00
NA	NA11Z37	2011	Twin Lakes Scattered R59	11	\$82,000.00
NA	NA11Z38	2011	Burnham Scattered II R61	23	\$133,000.00
NA	NA11Z39	2011	Cottonwood Blue Gap Scatt R62	34	\$354,000.00
NA	NA11Z40	2011	Chichiltah Scattered I R63	16	\$145,000.00
NA	NA11Z41	2011	Kaibeto Low Pressure Zone R64	4	\$44,000.00
NA	NA11Z42	2011	Kayenta West Skeleton Mesa R65	44	\$288,000.00
NA	NA11Z43	2011	Shonto Isolated Waterline Ext R66	30	\$244,000.00
NA	NA11Z44	2011	Sunset Valley Pinehill Area R67	6	\$48,000.00
NA	NA11Z45	2011	Whippoorwill Scattered R68	15	\$170,000.00
NA	NA11Z46	2011	Kaibeto Square Butte W/L Ext R69	51	\$328,000.00
NA	NA11Z47	2011	Red Rock Scattered R70	2	\$19,000.00
NA	NA11Z48	2011	Rock Springs W/L Ext R72 Z21	23	\$176,000.00
NA	NA11Z49	2011	Mexican Water Walker Ck R73 Z50	38	\$964,000.00
NA	NA11Z50	2011	Mexican Water Walker Ck R73 Z49	24	\$178,000.00
NA	NA11Z52	2011	Iyanbito Failed ST/DF EPA	18	\$179,000.00
NA	NA11Z53	2011	Kaibeto Sewerline Extension EPA	39	\$832,000.00
NA	NA11Z54	2011	NHA Mexican Water Sewer Lagn EPA	27	\$25,000.00
NA	NA11Z55	2011	Dilkon Bashas ShopCtr Sewer EPA	100	\$331,000.00
NA	NA11Z56	2011	St. Michaels Sewer Rehab EPA	5000	\$253,302.00
NA	NA11Z57	2011	Shonto White Post Mission Sewer EPA	15	\$252,000.00
NA	NA11Z58	2011	Shiprock SU Failed DF VI EPA	34	\$217,000.00
NA	NA11Z59	2011	O&M Training 2011	40000	\$122,000.00
NA	NA11Z60	2011	Fluoridation Support NTUA	40000	\$60,000.00
					\$28,443,840.00

**RESOLUTION OF THE  
NAVAJO NATION COUNCIL**

Adopting Amendments to the Navajo Nation Code, Title Two,  
Chapter 3, Legislative Branch, §§164, 165, 169, 181, 182,  
183, 185, 187, 188, 189, 190, 191, 192, 221, 222, 223, 225,  
and 285 and Chapter 5, Executive Branch, §1005

**WHEREAS:**

1. Pursuant to 2 N.N.C. §102 (A) and (C), the Navajo Nation Council is the governing body of the Navajo Nation and supervises all powers it delegates; and
2. By Resolution CD-68-89, the Navajo Nation Council enacted amendments to the Navajo Nation Code Title Two. Since December 1989, the Navajo Nation Council enacted several amendments to the Navajo Nation Code Title Two; and
3. The Office of the Speaker, Ethics and Rules Office, Office of Legislative Counsel and Office of Legislative Services, working with the Ethics and Rules Committee of the Navajo Nation Council, developed proposed amendments to the Navajo Nation Code Title Two and conducted several work sessions with said committee regarding the proposed Title Two amendments contained in Exhibit "A" of this resolution; and
4. By Resolution ERC-02-010, attached hereto as Exhibit "B", the Ethics and Rules Committee of the Navajo Nation Council determined that it is appropriate to amend the Navajo Nation Code as contained in Exhibit "A" to provide for an efficient Navajo government and enhance the relationship between the Legislative and Executive Branches of the Navajo government; and
5. On December 8, 1999, the Navajo Nation Department of Justice in a response to a request that it submit recommendations and an analysis of the Section 164 Review Process stated the following:

"[I]t is perhaps appropriate to divide the substance from the procedure. For example, the Title 2 amendments and the Council Resolution enacting those amendments, were designed to have the Legislative Branch and Committees focus on policy-making determinations, in essence, to be a legislative body that makes laws and sets policies. Ideally, if the Legislative Branch focused on these kinds of activities, then program administration would be left to the Executive Branch for carrying out those policies. However, what appears to happen frequently is that the Legislative Branch, due to the requirements of 2 N.N.C. §§ 164, 185 and 223, seems to become involved in what would ordinarily be considered program administration." (Page 2, paragraph 2)

The December 8, 1999 memorandum is attached hereto as Exhibit "C". The Navajo Department of Justice also recommended amendments to 2 N.N.C. §§ 164, 185, 222 and 223; and

6. On October 7-8, 2002, the Navajo Nation Council conducted a work session where the proposed Navajo Nation Code, Title Two, amendments were presented to members of the Navajo Nation Council. The members of the Navajo Nation Council that attended the work session raised several concerns and recommendations. On October 14, 2002, the Ethics and Rules Committee of the Navajo Nation Council, pursuant to its authority to carryout its purpose to provide fair, honest and an efficient government of the Navajo Nation, through review, recommendation and sponsorship of projects, legislation, rules and standards in furtherance of these ends, reviewed the concerns and recommendations and formulated amendments to the Navajo Nation Code, Title Two, Chapters 3 and 5. The amendments formulated by the Ethics and Rules Committee are incorporated into the attached Exhibit "A" legislation as they pertain to the legislative process and enactment of legislation; and

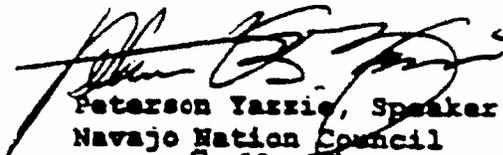
7. The Navajo Nation Council determines it is appropriate to amend Title Two of the Navajo Nation Code to enhance the efficiency of the Navajo Nation government as it pertains to the legislative process and enactment of legislation and program administrative matters.

**NOW THEREFORE BE IT RESOLVED THAT:**

1. The Navajo Nation Council hereby adopts amendments to the Navajo Nation Code, Title Two, Chapter 3, Legislative Branch, §§164, 165, 169, 181, 182, 183, 185, 187, 188, 189, 190, 191, 192, 221, 222, 223, 225, and 285 and Chapter 5, Executive Branch, §1005 as provided in the attached Exhibit "A".
2. The Navajo Nation Council further authorizes and directs that these amendments shall become effective on January 1, 2004.
3. The Navajo Nation Council hereby declares that the amendments enacted herein shall supercede all prior enactment of laws, rules and regulations; the Navajo Nation Council also hereby declares that all laws, rules and regulations shall be interpreted consistently with these amendments.
4. The Navajo Nation Council shall at its 2003 Fall Session review proposed amendments to the Procurement Code, the Local Governance Act and any other laws that may be impacted by these amendments.
5. The Office of Legislative Counsel shall codify these amendments in an appropriate format.

C E R T I F I C A T I O N

I hereby certify that the foregoing resolution was duly considered by the Navajo Nation Council at a duly called meeting at Window Rock, Navajo Nation (Arizona), at which a quorum was present and that same was passed by a vote of 63 in favor, 6 opposed and 1 abstained this 22<sup>nd</sup> day of July 2003.

  
Peterson Yaxxie, Speaker Pro Tem  
Navajo Nation Council  
7-30-03  
Date

Motion: Amos Johnson  
Second: Willie Tracey, Jr.

ACTION BY THE NAVAJO NATION PRESIDENT:

1. I hereby give notice that I will not veto the foregoing legislation, pursuant to 2 N.N.C. Section 1005 (C) (10), on this \_\_\_\_\_ day of \_\_\_\_\_ 2003.

\_\_\_\_\_  
Joe Shirley, President  
Navajo Nation

2. I hereby veto the foregoing legislation, pursuant to 2 N.N.C. Section 1005 (C) (10) this 8 day of AUGUST 2003 for the reason(s) expressed in the attached letter to the Speaker.

  
\_\_\_\_\_  
Joe Shirley, President  
Navajo Nation

## **SECTION IX.**

### **Rating Factors 2 – 3 – 4 - 5:**

- **Components Which Address Selection Criteria**
- **Needs Description**
- **Project Summary**
- **Implementation Schedule (HUD-4125)**
- **Cost Summary (HUD-4123)**
- **Logic Model (HUD-96010)**
- **Chapter Supporting Resolution**
- **Utility Cost Estimate/Feasibility Study**
- **Leverage Commitment**

Pages 143-329  
Intentionally  
Omitted



**SHIPROCK**  
*(Farm Area)*  
**Sewerline Upgrade**



## *Shiprock (Shiprock Farm Area) Wastewater Upgrade*

### **Rating Factors to Address Selection Criteria**

#### **A. CAPACITY OF THE APPLICANT**

The application identifies the overall proposed project management. See pages 56-131 of the application.

#### **B. NEED AND EXTENT OF THE PROBLEM**

1. This project meets the long-term community development need and addresses the documented problem by upgrading the wastewater system to (90) households in the Shiprock community. Quantitative documentation has been accumulated and demonstrates that the proposed project would meet an essential community development need by extending measurable outcomes that are critical to the viability of the community.

- Reduction in number of families living in substandard housing by providing reliable sanitary facilities and thereby improving each household condition to a livable standard. Thus, it will provide decent housing, a suitable living environment and will create economic opportunities for persons of low and moderate income for their families.
- Increased income resulting from employment generated by hiring temporary employment during the construction phase, and will provide those hired with training and work experience.
- Increased quality of life, due to services provide by the infrastructure facilities and thereby providing ling term benefits that included an economic growth and an improved living environment.
- Reduction of health-related hazards for said families will certainly eliminate unsafe and unsanitary wastewater systems.

The above justification demonstrates that project is critical to the viability of the community and the proposed activity address the community development need.

*The Nation has claimed 4 points under this category.*

2. The essential population that will benefit from this project is approximately 345 people. The CDBG Form B on pages 49-53 shows that 86% of the beneficiaries are low and moderate income. The Nation used the 100% door-to-door survey methodology for each household to collect the demographic data. Therefore, the neediest segment of the population will benefit, extensively and in accordance to ICDBG Program's primary objective outlined at 24 CRF 1003.2.

*The Nation has claimed 12 points under this category.*

#### **C. SOUNDNESS OF APPROACH**

The project addresses the quality and anticipated effectiveness of the proposed project outcomes in enhancing the community's viability and meeting the identified need. The project includes clear and sound measures of the outputs and outcomes for how the community's viability will be enhanced a described in Rating Factor. Also, for example, the project is described in detail and indicates why the Nation believes the project is most effective in addressing the identified need.

1. Two alternatives (listed below) were evaluated in the feasibility study to provide water distribution system in the project area. The alternative that best meets the concept of the most appropriate and cost effective approach that addresses the need and is selected and explained herein.

#### ALTERNATIVE I

Affected homes will continue using existing wastewater lines, which homes will have sewage discharges via leaks in pipes or line breaks, resulting in foul odor and high maintenance cost in repairs.

#### ALTERNATIVE II

This option would construct approximately 7.1 miles of 6", 4", 3" vacuum sewer line and 6" force main for (90) homes. This option has a lower unit cost than Alternative I. Alternative II is the most effective in addressing the identified need. This option is recommended to implement a wastewater system for the following reasons:

- Vacuum sewers use pressure differential to assist sewage movement, allowing shallow bury of pipe and even uphill transport of wastes.
- Vacuum sewer eliminates sewage discharges via leaks in piping and under continuous vacuum.
- Alternative II has a much lower overall cost and cost per home served than Alternative I.

IHS has used its existing resources and facilities to design and scale the recommended project. The enclosed project map plots the line layout in the shortest route possible for installation of the main water line and connecting the individual service line to the homes. The emphasis was to conserve construction cost including ease of maintenance and low cost of operation in meeting the current and projected future needs of the community.

The upgrade of the existing wastewater system will offer long-term solutions since the system has a life expectancy of at least 30 years, and will be economical over time. It will require minimal maintenance, which is readily available since the responsible firm, NTUA, is based on the Navajo Nation. The upgrade is the only true alternative due to stability, significant advantages and the long term beneficial impact on the health of the recipients.

Other factors which make the recommended alternative appropriate by enhancing viability and most cost efficient, includes:

- a. The upgrade wastewater system facilities are nationally regulated by EPA. Thus, the facilities will assure the interest of public health and safety. The facilities will also be constructed in accordance with the applicable codes, plans and specifications to minimize waste and poor workmanship.
- b. Two funding sources will share the cost of the project. This fulfills the efficient and effective use of funds. As detailed in the leveraging section, 78% of the total cost has been committed in non-CDBG funding source. The CDBG share of \$522,121 averages to \$5,801 per recipient.
- c. CDBG funds requested are for construction cost only. The scope of the project only involves "infrastructure" and it does not include bathroom addition or any housing construction component. All pre-construction activities are paid in full and completed as indicated in IHS

summary report. IHS therefore, has determined its feasibility to construct the facility within the 24-month period upon receipt of ICDBG grant award.

- d. IHS and the Nation have an extensive track record of delivering quality projects that serve the best interest of the Navajo People. They have made dramatic improvements in recent past to complete water line projects efficiently. This is a major advantage in future undertakings to deliver prompt services.
- e. The facilities will generate monetary returns through collection of customer service receipts. These revenues will in turn finance O/M of the system. Thus, the facility will be self-funded.

As previously explained, the wastewater system upgrade will be constructed by IHS (via NECA) and the respective monitoring, inspection and administrative tasks of the project will be performed by the CDBG Program by providing comprehensive oversight in the successful completion of the project.

The justification demonstrates the project is viable and cost effective appropriate the address the identified need and it addresses the anticipated cost saving due to innovative program design and construct methods.

*The Nation therefore claims 12 points under this category.*

2. There is quality, thoroughness and reasonableness in the proposed project budget. The cost estimate is broken down by line item and project activities for each proposed activity on page 329.

The IHS letter dated December 20, 2011 states the qualifications of the person who prepared the cost estimate, on page 365.

*The Nation therefore claims 9 points under this category.*

3. HUD Policy Priorities

The application addresses the goals of Job Creation/Employment and/or Sustainability, two of HUD's 2012 policy priorities, as described in Section 1.B.1. and 2. of the General Section. This involves the following:

- a. Policy Priority for Job Creation/Employment

The Nation will expand its economic opportunity for low-moderate income residents and will create better transportation access to the jobs that will be created. Partnering with federal agencies, local resources and private organizations in the project area will be the method to use providing economic opportunities. The temporary employment and long-term economic opportunities will be generated through federal financial assistance for the Indian Community Development Block Grant Program for the benefit of low-moderate income persons by way of providing temporary employment opportunities during the construction phase. This will certainly benefit low-moderate income families economically who ordinarily would not find immediate employment. Approximately, 15 to 20 temporary jobs will be developed as stated in the measurable outcomes. Further, by making powerline and waterline available in this rural community, it will promote and stimulate community based planning and implementation of future small business development activities. Small businesses would include arts and crafts, silversmith and jewelry making, food stand selling and commercial development to create jobs and income for low-moderate income families. Ultimately, this infrastructure project will

enhance the work plans of related transportation agencies like Navajo Division of Transportation, Bureau of Indian Affairs/Branch of Roads, Navajo Transit System, toward improving public roads and highways while creating jobs in this community.

b. Policy Priority for Sustainability

(1) The Nation, in coordination with Navajo Environmental Protection Agency and green initiative programs will support and promote an energy-efficient, green and health design features by retrofitting existing powerline utilities and water/wastewater systems. In this work plan, the Nation will also support energy-efficient for new construction of (10) infrastructure projects included in this application, at minimum which meets the standards for Energy Star that is equivalent to building new homes. Further, HUD policy priority for Sustainability and Navajo Nation energy codes will improve the quality of life for the distressed community of proposed beneficiaries by reducing health related hazards from lack of infrastructure and at the same time, making the community more viable by incorporating energy-efficiency measures in the design, construction and operation of the utility facilities by using recognized green rating standards that is beneficial to Navajo reservation's energy conservation districts.

(2) The Nation will promote universal design and feasibility in the buildings and communities beyond providing physical accessibility for persons with disabilities required by Federal accessibility standards. The Nation in the work plan will promote retrofitting or constructing housing, commercial facilities or community facilities in the project area in order to incorporate universal design and feasibility by persons with disabilities. In a economic distressed, rural community, the outcomes for the number of community or commercial facilities constructed or retrofitted to incorporate universal design and feasibility standards is very minimal. Perhaps, the average length of time for this type of development in each community to flourish is 20 to 30 years.

*The Nation claims 3 points under this category.*

4. After completion of the project, IHS will transfer (via Transfer Agreement) ownership of the wastewater facilities to the Nation. The individual on-site will be transferred to the homeowners, who will then assume the operation and maintenance (O/M) of their respective facilities.

The Nation will then transfer all O/M responsibilities of the facilities to the Navajo Tribal Utility Authority (NTUA). The attached letter dated January 4, 2012 on page 367 confirms that NTUA will be responsible for O/M costs. This letter also describes how NTUA will carry out the responsibilities included in its Operation & Maintenance (O&M) Plan with respect to maintenance, repairs, insurance, security and replacements. The letter provides a breakdown of annual expenses for maintenance of operation of this project and NTUA clearly indicates that it has adopted an O&M Plan. NTUA further confirms that it has the financial ability to pay for maintenance and operation costs of electric utility facilities within NTUA service area. See attached NTUA Financial Statements on pages 78-123.

IHS will provide orientation to the homeowners on water conservation, safety measures and maintenance. Once the system is in use, the CDBG Program will conduct periodic follow-up surveys to assure the services are used in years to come.

Since NTUA has successful tract record and is responsible for O/M for extensive water and sewer facilities throughout the Navajo Nation, and O/M Plan is not included in the application.

*The Nation has therefore claimed 12 points under this category.*

D. LEVERAGING

The Nation has secured non-CDBG funding source commitments of \$1,889,000. This is 78% of the total cost of \$2,411,121. The details of contributions are as follows and all pertinent documents to support the commitments are enclosed.

Environmental Protection Agency (EPA)	\$1,889,000
---------------------------------------	-------------

<b>Total Leveraging:</b>	<b>\$1,889,000</b>
--------------------------	--------------------

The non-CDBG funding sources commitment documents on page(s) 366.

*The Nation has claimed 8 points under this category.*

E. COMPREHENSIVE AND COORDINATION

1. The planning and implementation of the proposed activity reflects a coordinated, community-based process of identifying and addressing the community development needs including assisting beneficiaries and the program to achieve self-sufficiency and sustainability.

Attached on pages 320-321 , is the local-tribal community resolution stating the need and support of the proposed project as being part of a long-range community plan. The resolution shows active participation of local planning efforts to organize and coordinated the proposed activity through community meetings and working with participating agencies other than IHS and water/wastewater companies to realize the needed sources.

For example, the proposed activities are supported by the Nation's Local Governance Act (SGA), which promotes local autonomy and land use planning for the development of coordinated process in identifying needs and implementing projects while using local resources and other organizations such as Local Governance Support Agency, Capital Improvement Office, Four Corners Enterprise Community/USDA, Navajo Housing Authority/NAHASDA. These processes are already established including the Nation's 2005 Capital Improvement Plan and Budget to demonstrate the proposed activities are consistent and common goals are shared and working toward meeting comprehensive objectives in a holistic and comprehensive manner to achieve self-sufficiency and sustainability.

*The Nation has claimed 2 points under this category*

2. The following proponents identifies, measures and evaluates the specific benchmarks, outputs and outcomes and the goals of this project that enhances community viability:

Outputs

- A minimum of 15 to 202 temporary jobs will be created such as equipment operators and laborers. Such employment opportunities will be implemented during the construction phase of the project within a four to twelve (4-12) month period.
- An increase of business opportunities for making infrastructure available to local potential entrepreneurs and to encourage an incline in revenues for Navajo Tribal Utility Authority (NTUA) from increased customers, which allows the proposed project to be economical for operating and maintenance (O/M) costs.

- The projected activity is to serve (90) households to enhance, promote and develop a long-term viable community.

#### Outcomes

- Reduction in number of families living in substandard housing will be changed by providing reliable sanitary facilities and thereby improving each housing condition to a livable standard. Thus, it will provide decent housing, a suitable living environment and will create economic opportunities for persons of low and moderate income.
- Increased income resulting from employment generated by the infrastructure facilities and thereby providing long-term benefits that include an economic growth and an improved living environment.
- An increase of business opportunities for local potential entrepreneurs and to encourage an incline in revenues for Navajo Tribal Utility Authority (NTUA) from increased customers, which allows the proposed project to be economical for operating and maintenance costs.
- The projected activity is to serve (90) households to enhance, promote and develop a long-term viable community.

Attached is the Logic Model, form HUD-96010, to further describe the goals of measurable outputs and outcomes based on number of units and tasks the proposed activity entails. Logic Model also reflects the proposed accomplishments of the undertaking and post-completion of this activity and it addresses program evaluation requirements under Rating Factor for the application.

*The Nation has claimed 10 points under this category.*

THE NAVAJO NATION HAS CLAIMED AN OVERALL 100 POINTS FOR THIS PROJECT AND SEEKS A SIMILAR RATING BY HUD.

## *Shiprock (Shiprock Farm Area) Sewerline Upgrade*

### **Needs Description**

The targeted project area is located within the Shiprock Chapter. The target area of the community is in critical need of an adequate sanitary waste disposal facilities of (90) homes. The proposed project will construct the necessary infrastructure to fulfill the identified need.

The Shiprock Chapter is located approximately 28 miles West of Farmington, NM. According to the 2010 U.S. Census, the demographic data for the community includes: a total resident population of 9,126 people with 14.5% unemployment; and 37.3% below poverty level. The community consists of a chapter house, Pre-school, Senior Citizen Center and La Vida Mission Clinic. Many residents engage in ranching and arts & crafts as a mean of economic benefits.

According to the Chapter resolution of January 3, 2012, the water service to the project area is a major priority. The lack of safe water supplies and sanitary waste disposal facilities is a direct link to many health related problems. The issue of lack of water has its adverse effects besides sanitary issues, such as residents having to rely on hauling water to provide for their everyday needs. Residents who rely on hauled water find it difficult and may experience impassable roads due to weather or bad road conditions to travel.

The proposed project is lacking the needed funds, which has prolonged improvements and caused the construction cost to increase. Valuable efforts and resources have been expended in pursuit of realizing the immediate project need. It is the intention of the Navajo Nation to address this critical need be means of obtaining the external funds in order to assist with the necessary cost of the project. Otherwise, the problem will not be resolved. The impact will include: the continued deterioration of family living conditions, stifled development, loss of non-CDBG matching funds, increased project cost and other potential impacts as a results of the lack of water/wastewater system.

## *Shiprock (Shiprock Farm Area) Sewerline Upgrade*

### Project Summary

IHS will upgrade the existing Shiprock sewer line to the project area to serve (90) households in the Shiprock community. The 7.1 miles of sewer line upgrade will include:

1. Water Service and individual waste disposal system to all (90) households; and
2. Installation of 37,488 feet of sewer line.

The construction cost of this cooperative project was determined by IHS not to exceed \$2,411,121. This project will be implemented soon with the scope intact. Environmental Protection Agency (EPA) has pledged \$1,889,000 and CDBG will commit the remaining balance of \$522,121. The average cost per home is \$26,790. The locale, terrain, scope of the project, cost of materials, labor and overhead were among the variables considered to compute the project cost.

The project will be implemented jointly through a MOA between the Navajo Nation and IHS using methods described therein. IHS will administer the funds for sanitation facilities and provide: engineering and design services, construction materials, construction management, and inspection. Navajo Engineering Construction Authority (NECA) will be retained by IHS through subcontract agreement to construct the water facilities and installation of plumbing facilities. In addition, CDBG will contribute funds to NECA for the labor and equipment. Thereafter, NTUA will operate and maintain the system. The CDBG Program will oversee and provide: construction monitoring, required HUD reporting and administrative services; as appropriate and when necessary. The project will yield temporary jobs during construction, which will depend on the status, performance and progress of the work.

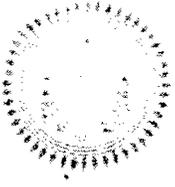
The following are among the many benefits the project will provide in the service are:

1. Allowing the project area to resolve its long standing water shortage problems by providing first time reliable, quality potable water and sanitary waste disposal system; and
2. Presenting long term benefits including community pride, economic boost and an improved living environment for the residents; and
3. Increased revenues for NTUA through the service of more customers, which will allow the system to economical for the operation and maintenance costs.

The project is near construction ready. The period is therefore in an excellent stage of being completed within the HUD required two-year period effective from the date of the grant award.







# Resolution of the Shiprock Chapter

SHIPROCK, NAVAJO NATION



## Resolution of the Shiprock Chapter

### Shiprock, Navajo Nation

APPROVING SHIPROCK CHAPTER FARM AREA WATER/WASTEWATER PROJECT REQUESTING FOR FUNDING FROM COMMUNITY DEVELOPMENT BLOCK GRANT THROUGH U. S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD) THAT IS IN COORDINATION WITH OFFICE OF THE ENVIRONMENTAL HEALTH.

**WHEREAS:**

1. The Shiprock Chapter of the Navajo Nation acts on this resolution pursuant to the authority conferred on the Chapter through Navajo Nation Code Title 26, Chapter 1, Section 1, B. Purpose, which states "Through adoption of this Act, the Navajo Nation Council delegates to Chapters governmental authority with respect to local matters consistent with Navajo law, including custom and tradition"; and
2. The Shiprock Chapter Governance has recognized the need to upgrade the water/wastewater systems within the community, the mesa farm area; and
3. The Shiprock Chapter is committed to supporting and participating in the process of its community in functions, activities as well as upgrading the living standards; and
4. The Shiprock Chapter is coordinating this water/wastewater project with Office Of Environmental Health to eliminate any ground contamination from the use of septic system; and
5. The Shiprock Chapter Government and it's community will be diverting all of it's waste disposal system to the community treatment; and
6. The Shiprock Chapter is in need of additional funds in the amount of \$522,121 to commence with the project for the first phase; and
7. This water/wastewater system will improve the safety and the livelihood of the general public as will as the new system; and

**NOW, THEREFORE, BE IT RESOLVED THAT:**

Approving Shiprock Chapter Farm Area Water/Wastewater Project requesting for funding from Community Development Block Grant through U. S. Department of Housing and Urban Development (HUD) that is in coordination with Office of Environmental Health.

Motioned by: Gary Jay

Seconded by: Larry Joe

CERTIFICATION

We, the undersigned hereby certify that the foregoing resolution was duly presented and considered at a duly called Chapter meeting, at which a quorum was present and that the same was approved by a vote of 41 in favor, 0 opposed and 0 abstention on this 03 day of January 2012.



William Lee, President



Donald Benally, Vice President

**FEASIBILITY STUDY  
COMMUNITY WATER SUPPLY AND WASTE DISPOSAL FACILITIES**

**Shiprock Farm Area Community Sewer – Phase 1**

**Shiprock Chapter, Navajo Nation  
San Juan County, New Mexico**

**Indian Health Service  
Project No. NA-04-X77**

**Public Law 86-121**

**U.S. Department of Health and Human Services  
Public Health Service  
Indian Health Service  
Office of Environmental Health and Engineering  
Division of Sanitation Facilities Construction  
Navajo Area Indian Health Service  
Window Rock, Arizona**

**December 2011**

**FEASIBILITY STUDY**  
**COMMUNITY WATER SUPPLY AND WASTE DISPOSAL FACILITIES**

**Shiprock Farm Area Community Sewer – Phase 1**

**Shiprock Chapter, Navajo Nation  
San Juan County, New Mexico**

**Indian Health Service  
Project No. NA-04-X77**

**Public Law 86-121**

**INTRODUCTION**

The Navajo Area Indian Health Service (IHS) has developed a sanitation deficiency project for this area called Shiprock Farm Area Community Sewer – Phase 1. This area is located in the North region of the Shiprock Chapter. See attached maps.

The Shiprock wastewater system (WWS) is operated by the Navajo Tribal Utility Authority (NTUA). The Shiprock WWS contains 25 to 30 miles of eight, fifteen, eighteen, and twenty-four-inch sewer main serving approximately 1,300 homes and 40 commercial establishments. The WWS contains one lift station. All waste is collected and treated at the Shiprock Wastewater Treatment Plant (WWTP), which is designed to handle 1.0 million gallons per day (MGD). The plant typically treats an average of 0.6 to 0.7 MGD.

The IHS proposed connecting homeowners to community sewer in the Farm Area of Shiprock because conditions such as a high water table make onsite wastewater unreliable. Gravity sewer, however, is not feasible in the Farm Area because of the high water table, existing utilities, unstable soil, flat topography, and right-of-way constraints. These factors make the construction of gravity sewer prohibitively expensive.

The most feasible alternative to gravity sewer for this project is a vacuum sewer. Vacuum sewers use pressure differential to assist sewage movement, allowing shallow bury of pipe and even uphill transport of wastes. Vacuum sewer eliminates sewage discharges via leaks in piping. Line breaks will not allow outflow because the collection system is under continuous vacuum. Any breaks will result in a vacuum loss that will be detected by operators and repaired. The ability to detect breaks and the fact that the system is completely sealed also mean that inflow and infiltration are eliminated.

IHS Project NA-04-X77 is Phase I of a four-phase Farm Area Sewer Project. The complete project will add approximately 20.3 miles of 8", 6", 4", and 3" vacuum sewer line, 240 valve pits, 3.7 miles of 6" force main, and 362 homes to the Shiprock WWS. Two vacuum/lift stations will be constructed, one on Phase I and one on Phase II. These stations will house both vacuum and sewage pumps. Vacuum pumps evacuate air in the piping system and move an air/water mixture to a collection tank in the station. From this tank, sewage pumps move the wastewater under the San Juan river via 6" HDPE force main to the WWTP.

IHS Project NA-04-X77 will add 6.1 miles of vacuum sewer line, 90 homes, 60 valve pits and one vacuum/lift station to the Shiprock WWS. One vacuum/lift station will be built under this phase.

The total cost for this project is estimated at \$3,357,000. The EPA has contributed \$1,889,000 under IHS Project NA-04-X77 for community wastewater facilities. The Shiprock Chapter submitted a grant proposal to the Navajo Nation Community Development Block Grant (CDBG) program for the balance of funds needed for the wastewater infrastructure facilities. The IHS will manage the construction of this project under the authority of P.L. 86-121.

### GENERAL INFORMATION

The community of Shiprock is located in northwestern New Mexico approximately thirty miles southeast of the Four Corners Monument (See attached maps). The community is among the largest on the Navajo Reservation with approximately 2400 homes and 8300 residents. The structural condition of the existing homes is generally good. Commercial and institutional establishments include Dine' College, the US Public Health Service Northern Navajo Medical Center hospital, several grocery and hardware stores, trading posts, and gas stations. Governmental and Tribal Offices include the Bureau of Indian Affairs, the NTUA Shiprock District Office, the Navajo Housing Authority (NHA) District Office, and the Navajo Engineering and Construction Authority (NECA). Power, natural gas, and water are provided by the NTUA.

Off-reservation employment opportunities exist in Farmington, Kirtland, Fruitland, and other nearby communities. In recent years, the Navajo people have been migrating into trading and service centers for employment, health services, and education. It is expected that the Shiprock community will continue to grow, as evidenced by the current expansion of Dine' College and the ongoing planning for additional commercial developments. The area has an estimated annual population growth rate of over 2%.

The elevation of the Shiprock ranges between 4,800 and 5180 feet above sea level. The San Juan River divides the community in half, with areas of irrigated farmland near the river and arid mesas above. The area is primarily Tribal Trust land. The area is semi-arid with yearly rainfall averaging approximately ten inches. Temperatures range from -30 F to 95 F, and frost penetration rarely exceeds forty inches. The annual evaporation is estimated at approximately fifty-eight inches. The soil in the area is residual shale with sandstone on or near the surface in 10% of the area, with alluvial material found in the lower reaches of the major washes.

### RECOMMENDED FACILITIES

#### Water Supply

No water supply facilities are proposed under this project.

#### Sewage Disposal

IHS Project NA-04-X77 Phase I will add 6.1 miles of 6", 4", and 3" vacuum sewer line, 90 homes, 60 valve pits, one vacuum/lift station, and 1 mile of 6" force main to the Shiprock WWTP. Community sewer will reduce the risk to health posed by the above-average number of failing septic systems in the Shiprock Farm Area. It will also improve the infrastructure in the area to better handle the high growth rate.

The proposed Shiprock Farm Area Community Sewer system will collect wastewater at a vacuum/lift station. From this station, the wastewater will be pumped via force main under the San Juan River. This will require horizontal directional drilling.

### Interior Plumbing

No interior plumbing facilities are proposed under this project.

### Solid Waste

No solid waste disposal facilities are proposed under this project.

### PARTICIPATION

The EPA has contributed \$1,889,000 through IHS Project NA-04-X77. CDBG funds in the amount of \$522,121 are being requested. A breakdown of the project costs is shown in Table II.

This project will be a cooperative effort of the Navajo Tribe, the Shiprock Chapter, the CDBG and the IHS. The IHS will provide engineering design services and construction supervision for all facilities proposed by this Feasibility Study, excluding bathroom additions.

The Navajo Nation, through its construction enterprise, the Navajo Engineering and Construction Authority (NECA), will provide all non-profit construction labor, equipment, standard materials, and related services to construct the water supply facilities. The IHS will make a monetary contribution to the NECA for the full amount of the nonprofit cost of construction performed by the NECA.

Sanitation facilities procured and constructed by the NECA with IHS contributed funds are at all times the property of the Navajo Tribe. The IHS will assist the Navajo Tribe in the preparation of a transfer document. This document will assign operation, maintenance, and repair responsibilities for the community facilities to the Navajo Tribal Utility Authority (NTUA), and transfer the NECA procured and constructed individual on-site facilities to the individual homeowner.

Upon completion of this project, ownership of sanitation facilities procured and/or constructed by the IHS, if any, will be transferred from the IHS, with ownership of community sanitation facilities being transferred to the Navajo Tribe and ownership of individual on-site facilities being transferred to the individual homeowner.

### OPERATION AND MAINTENANCE OF FACILITIES

Upon transfer, the Navajo Tribe will assign all operation and maintenance responsibilities for the new community facilities to the NTUA. Existing homes connected to the Shiprock community water system pay a monthly water service charge of approximately \$31 per month for a household using 300 gallons per day. NTUA's monthly sewer service charge is \$7.55 per month plus a volume charge of \$1.23 per 1000 gallons of water usage. The average of the water usage for the months of October, November, and December is used for determining the monthly sewer charges for subsequent months. For a typical Navajo household using 300 gallons per day, the monthly NTUA wastewater service charge will be about \$15.

Individual homeowners will be responsible for the O&M of the building sewer line from their home to the valve pit.

ENVIRONMENTAL REVIEW

An Environmental Review will be completed prior to construction in accordance with the requirements in the Division of Environmental Health's Environmental Review Manual.

INDIVIDUAL PROJECT PARTICIPANTS

Table I below lists the individual project participants.

Table I  
List of Individual Project Participants

Number	Name	Housing Type	First Service	Recommended Facilities			Plumbing Required	Bathroom Addition	Map Number
				Water	Sewer	Solid Waste			
E-1		NO	NO	YES	NO	NO	NO	1	
E-1		NO	NO	YES	NO	NO	NO	2	
E-1		NO	NO	YES	NO	NO	NO	3	
E-1		NO	NO	YES	NO	NO	NO	4	
E-1		NO	NO	YES	NO	NO	NO	6	
E-1		NO	NO	YES	NO	NO	NO	8	
E-1		NO	NO	YES	NO	NO	NO	11	
E-1		NO	NO	YES	NO	NO	NO	14	
E-1		NO	NO	YES	NO	NO	NO	15	
E-1		NO	NO	YES	NO	NO	NO	16	
E-1		NO	NO	YES	NO	NO	NO	19	
E-1		NO	NO	YES	NO	NO	NO	26	
E-1		NO	NO	YES	NO	NO	NO	27	
E-1		NO	NO	YES	NO	NO	NO	28	
E-1		NO	NO	YES	NO	NO	NO	29	
E-1		NO	NO	YES	NO	NO	NO	33	
E-1		NO	NO	YES	NO	NO	NO	34	
E-1		NO	NO	YES	NO	NO	NO	35	
E-1		NO	NO	YES	NO	NO	NO	36	
E-1		NO	NO	YES	NO	NO	NO	37	
E-1		NO	NO	YES	NO	NO	NO	38	
E-1		NO	NO	YES	NO	NO	NO	39	
E-1		NO	NO	YES	NO	NO	NO	40	
E-1		NO	NO	YES	NO	NO	NO	41	
E-1		NO	NO	YES	NO	NO	NO	43	
E-1		NO	NO	YES	NO	NO	NO	44	
E-1		NO	NO	YES	NO	NO	NO	45	
E-1		NO	NO	YES	NO	NO	NO	46	
E-1		NO	NO	YES	NO	NO	NO	47	

E-1	NO	NO	YES	NO	NO	NO	51
E-1	NO	NO	YES	NO	NO	NO	52
E-1	NO	NO	YES	NO	NO	NO	56
E-1	NO	NO	YES	NO	NO	NO	58
E-1	NO	NO	YES	NO	NO	NO	60
E-1	NO	NO	YES	NO	NO	NO	61
E-1	NO	NO	YES	NO	NO	NO	64
E-1	NO	NO	YES	NO	NO	NO	65
E-1	NO	NO	YES	NO	NO	NO	66
E-1	NO	NO	YES	NO	NO	NO	67
E-1	NO	NO	YES	NO	NO	NO	68
E-1	NO	NO	YES	NO	NO	NO	69
E-1	NO	NO	YES	NO	NO	NO	70
E-1	NO	NO	YES	NO	NO	NO	72
E-1	NO	NO	YES	NO	NO	NO	73
E-1	NO	NO	YES	NO	NO	NO	74
E-1	NO	NO	YES	NO	NO	NO	75
E-1	NO	NO	YES	NO	NO	NO	76
E-1	NO	NO	YES	NO	NO	NO	83
E-1	NO	NO	YES	NO	NO	NO	86
E-1	NO	NO	YES	NO	NO	NO	87
E-1	NO	NO	YES	NO	NO	NO	90
E-1	NO	NO	YES	NO	NO	NO	91
E-1	NO	NO	YES	NO	NO	NO	92
E-1	NO	NO	YES	NO	NO	NO	98
E-1	NO	NO	YES	NO	NO	NO	99
E-1	NO	NO	YES	NO	NO	NO	100
E-1	NO	NO	YES	NO	NO	NO	101
E-1	NO	NO	YES	NO	NO	NO	102
E-1	NO	NO	YES	NO	NO	NO	103
E-1	NO	NO	YES	NO	NO	NO	104
E-1	NO	NO	YES	NO	NO	NO	106
E-1	NO	NO	YES	NO	NO	NO	108
E-1	NO	NO	YES	NO	NO	NO	109
E-1	NO	NO	YES	NO	NO	NO	110
E-1	NO	NO	YES	NO	NO	NO	113
E-1	NO	NO	YES	NO	NO	NO	116
E-1	NO	NO	YES	NO	NO	NO	117
E-1	NO	NO	YES	NO	NO	NO	119
E-1	NO	NO	YES	NO	NO	NO	121
E-1	NO	NO	YES	NO	NO	NO	123
E-1	NO	NO	YES	NO	NO	NO	124
E-1	NO	NO	YES	NO	NO	NO	128
E-1	NO	NO	YES	NO	NO	NO	129

E-1	NO	NO	YES	NO	NO	NO	130
E-1	NO	NO	YES	NO	NO	NO	131
E-1	NO	NO	YES	NO	NO	NO	132
E-1	NO	NO	YES	NO	NO	NO	133
E-1	NO	NO	YES	NO	NO	NO	135
E-1	NO	NO	YES	NO	NO	NO	136
E-1	NO	NO	YES	NO	NO	NO	137
E-1	NO	NO	YES	NO	NO	NO	138
E-1	NO	NO	YES	NO	NO	NO	139
E-1	NO	NO	YES	NO	NO	NO	141
E-1	NO	NO	YES	NO	NO	NO	142
E-1	NO	NO	YES	NO	NO	NO	143
E-1	NO	NO	YES	NO	NO	NO	144
E-1	NO	NO	YES	NO	NO	NO	145
E-1	NO	NO	YES	NO	NO	NO	146
E-1	NO	NO	YES	NO	NO	NO	147
E-1	NO	NO	YES	NO	NO	NO	149

Notes: E-1 Existing Housing

**COST OF RECOMMENDED FACILITIES**

Table II shows the estimated cost for this proposed project.

**Table II  
Cost Estimate of Recommended Facilities**

NA-04-X77 Item	Quantity	Unit	Unit Cost	Total Cost
<b><u>SEWAGE DISPOSAL FACILITIES</u></b>				
ROW Survey	1	LS	13,400	13,400
Archaeological Clearance	1	LS	13,500	13,500
Storm Water Pollution Prevention	1	LS	20,200	20,200
Wash Crossing - Horizontal Directional Boring	600	LF	115	69,000
Electrical Power Extension	0.7	MI	90,000	63,000
Septic Tank (Abandonment)	90	EA	506	45,500
6" Vacuum Sewer Line	14,000	LF	23	322,000
6" Sewer Line Force Main	5,200	LF	19.40	100,880
Valve Pits	30	EA	4,400	132,000
Vacuum / Lift Station	1	EA	650,000	650,000
Sewer Service Line	6500	LF	12.40	80,600
NECA Mgmt. & Crew Support	1	LS	296,003	296,003
<b>TOTAL – SEWAGE DISPOSAL FACILITIES</b>				<b>1,806,083</b>
<b><u>COST SUMMARY</u></b>				
<b>TOTAL – SEWAGE DISPOSAL FACILITIES</b>			\$ 1,806,083	
Construction Subtotal			\$ 1,806,083	
+ 10% Contingencies			<u>180,608</u>	
Subtotal			\$ 1,986,691	
+ 15% Support Services			<u>298,004</u>	
Subtotal			\$ 2,284,695	
+ 4% Navajo Nation Tax on Construction Subtotal			72,243	
+ 3% Regulatory Review & Expenses on Construction Subtotal			<u>54,182</u>	
<b>TOTAL PROJECT COST</b>			\$ 2,411,121	
				<b>Percent</b>
EPA Contribution			\$ 1,889,000	78%
CDBG Funding Request			\$ 522,121	22%
<b>Total Overhead (Support Services, ROW Surveys, Reg. Reviews)</b>			<b>67,582</b>	

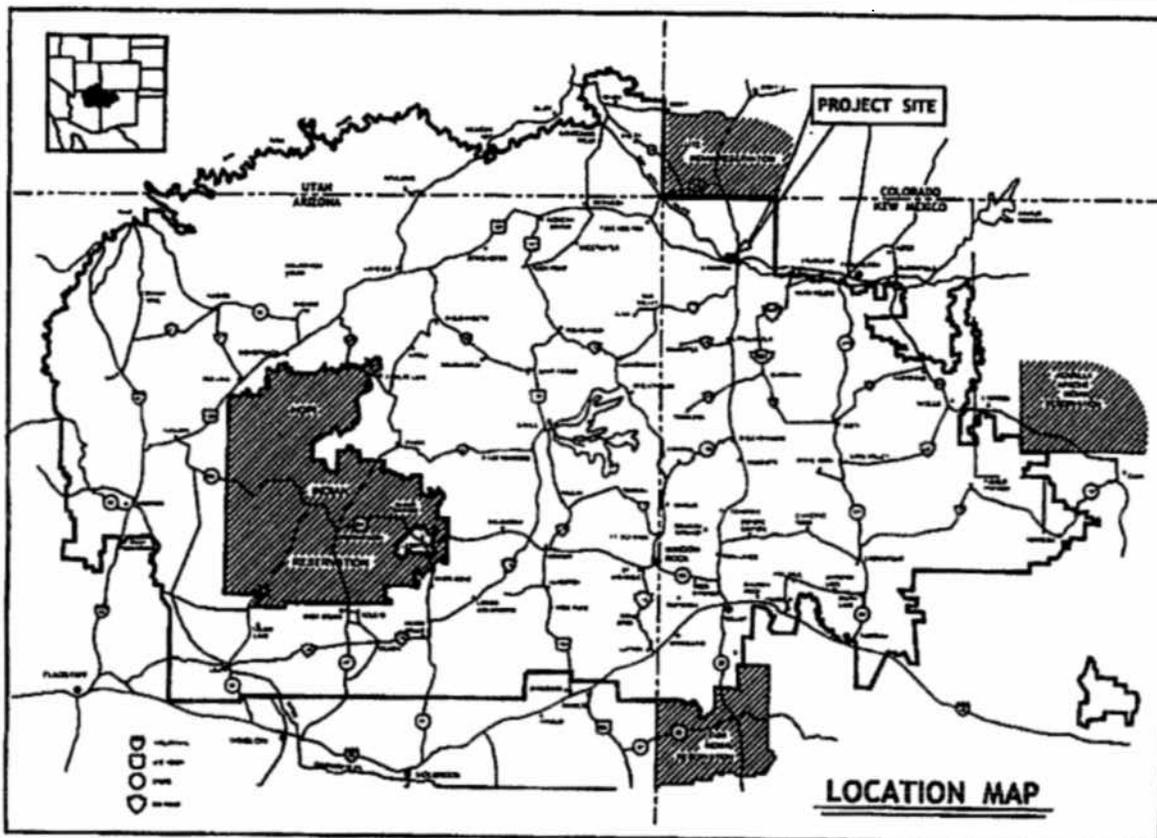
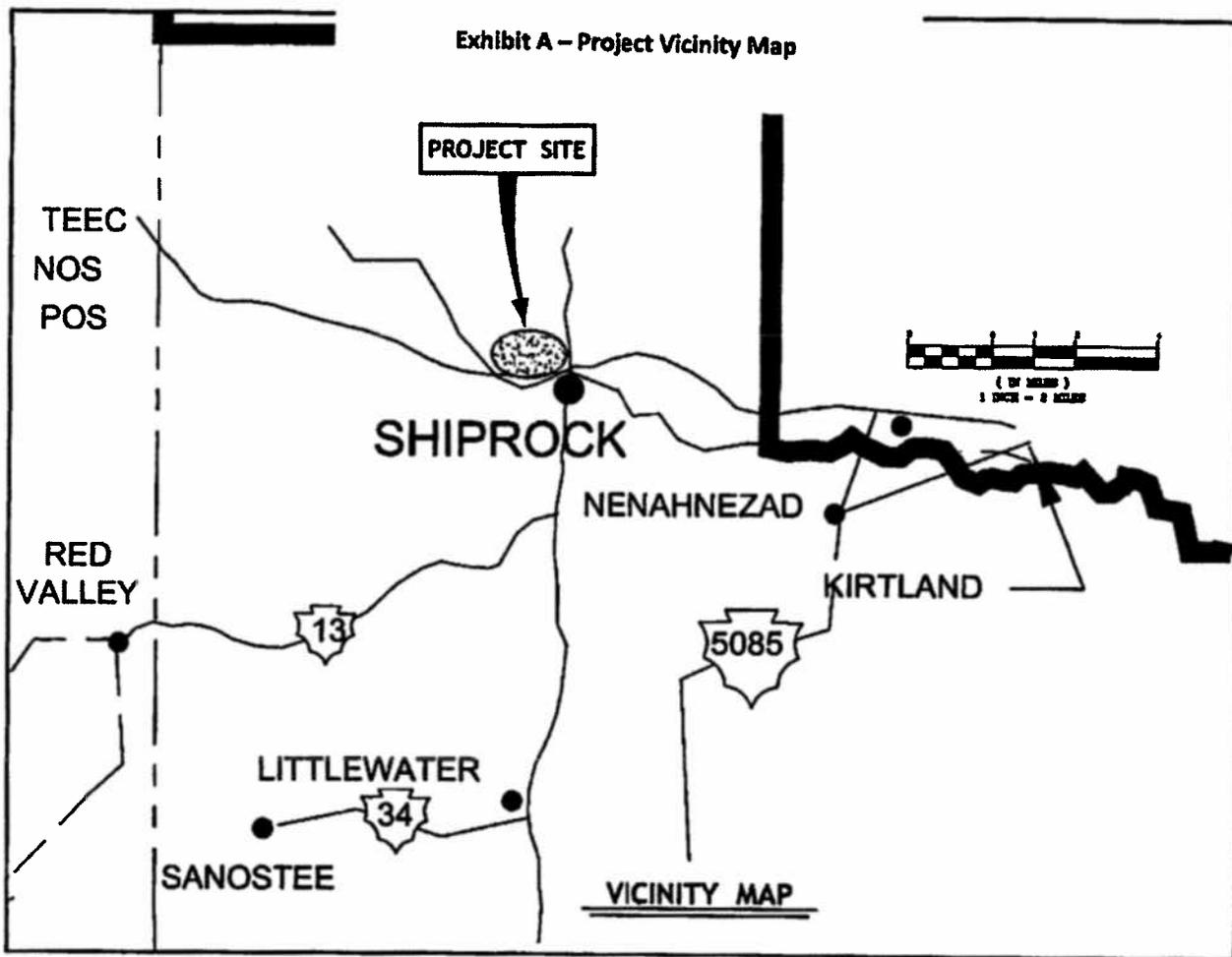
**PROJECT IMPLEMENTATION SCHEDULE**

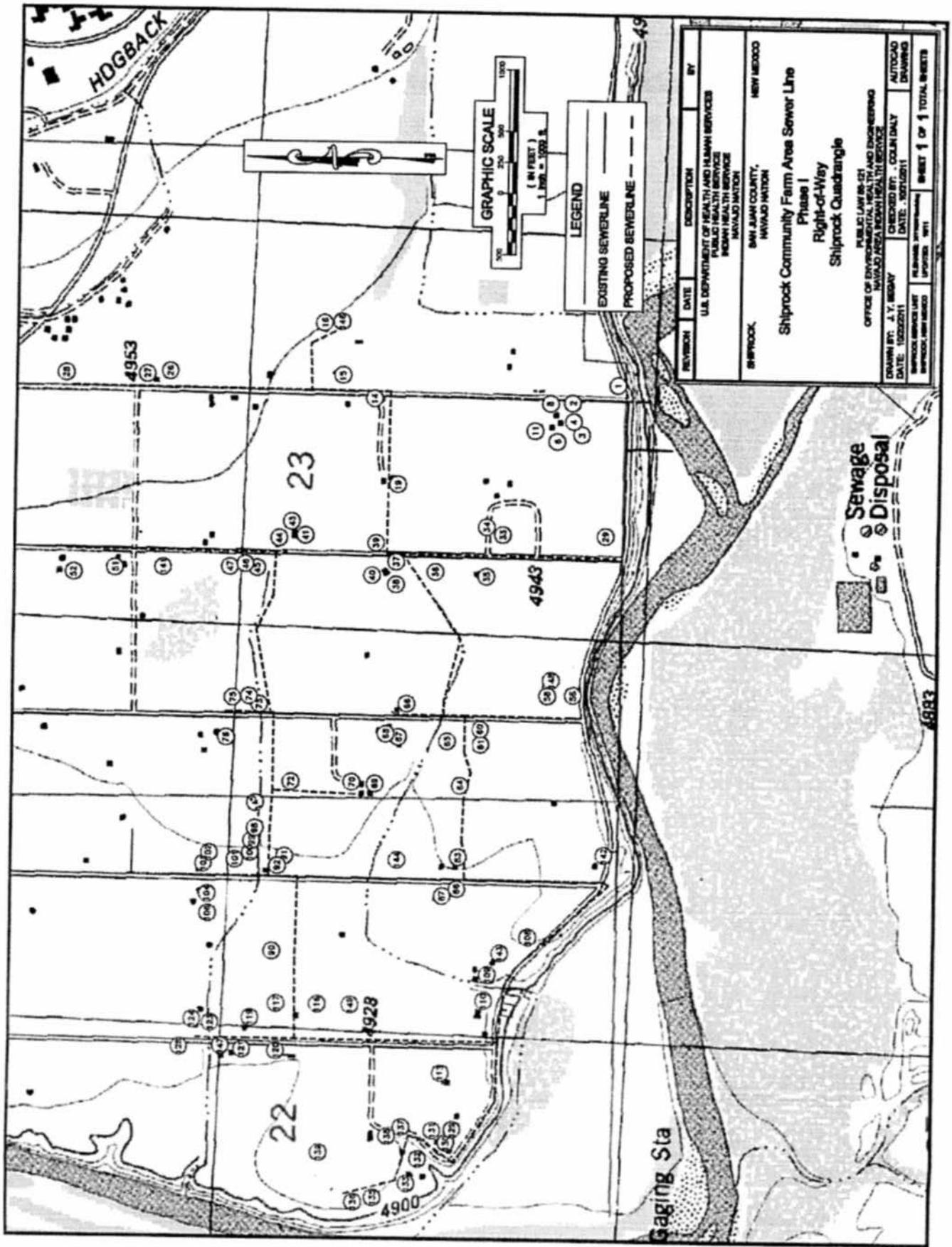
Table III shows target dates for completion of project stages.

**Table III**  
**Project Implementation Schedule**

<b>Task</b>	<b>Target Completion</b>	
Design	March	2012
R-O-W	March	2012
Construction Start	May	2012
Construction Completion	December	2012
As-Builts	February	2013
O&M Training	March	2013
Transfer	March	2013
Final Report	August	2013

Exhibit A - Project Vicinity Map





REVISION	DATE	DESCRIPTION	BY
		U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE NAVAJO NATION	
SHIPROCK		SAN JUAN COUNTY, NAVAJO NATION	NEW MEXICO
<b>Shiprock Community Farm Area Sewer Line</b> <b>Phase I</b> <b>Right-of-Way</b> <b>Shiprock Quadrangle</b>			
<small>PUBLIC LAW 86-21 OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA INDIAN HEALTH SERVICE</small>			
DRAWN BY: A. T. HEGAN	DATE: 10/28/81	CHECKED BY: COLIN DALY	AUTOCAD DRAWING
SHIPROCK SERVICE LINE	NAVAJO AREA INDIAN HEALTH SERVICE	DATE: 10/28/81	SHEET 1 OF 1 TOTAL SHEETS

**CONSTRUCTION PACKAGE**

**Shiprock Farm Area Community Sewer  
(Phase I)**

**NA-04-X77**

**Attached:**

- 1) Design Analysis**
- 2) Non-Standard Details**
- 3) Construction Layout Drawings**

**Draft I**

**Submitted:**

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**DESIGN ANALYSIS**

NA-04-X77

**Shiprock Farm Area A Community Sewer Line, Phase I**

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## DESIGN ANALYSIS

NA-04-X77

Shiprock Farm Area A Community Sewer Line, Phase I

Prepared by Colin Daly

October 2011

### INTRODUCTION

IHS project NA-04-X77 will add 6.1 miles of vacuum sewer line, 91 homes, 60 valve pits and one vacuum/lift station to the Shiprock Wastewater System (WWS). The project is located in Shiprock, NM between BIA Roads N546 ("Bluff Road") and N364 ("Farm Road"). This report discusses design considerations for the vacuum sewer line, valve pits, force main, and vacuum/lift station. It also evaluates whether the current WWS will be able to adequately accommodate the additional wastewater from the Farm Area A.

### Summary of Existing Facilities

In 1969, the Shiprock WWS was constructed by W. F. Turney and Associates. The initial system included a small collection system and a wastewater treatment plant (WWTP). Additional homes and sewer main were added to the WWS under many IHS Projects, including NA-68-954-TH, NA-70-527d, NA-71-901, NA-71-903, NA-71-909, NA-78-138, NA-79-213, NA-83-410(p), NA-83-745, NA-84-461, NA-86-498, NA-91-675, NA-00-B50, NA-02-X50, NA-02-X56, and NA-03-X65. The Shiprock WWS now contains 25 to 30 miles of eight, fifteen, eighteen, and twenty-four-inch sewer main serving approximately 1,300 homes and 40 commercial establishments.

The WWS has one lift station that collects wastewater from the North and East areas of the system and pumps the wastewater West under the San Juan River to the WWTP. This lift station contains two 645 gpm AMX446-280/8.3N Homa pumps and one 1180 gpm AMX646-360/21.5P Homa pump. The average flow through the lift station is 286 gpm and the peak design flow is estimated to be 869 gpm. The lift station is served by a backup diesel generator in case of power failure.

The Shiprock WWTP has been upgraded and improved numerous times since its construction in 1969. Some recent projects include NA-81-461 (Sludge Lift Pumps and Recirculation Pump), NA-91-675 (Engineering Report), NA-93-683 (Trickling Filter Arm Replacement and Dechlorination Facilities), NA-96-A54 (Biosolids Drying Beds), NA-94-847 (Aeration Basin and Secondary Clarifier), NA-96-A54 (Sludge Drying Beds) NA-98-857 (Anaerobic Digester and Biosolids Storage Bed), NA-00-876 (Headworks and UV Disinfection), and NA-02-X51 (Primary Clarifier and Biosolids Storage Bed). The WWTP currently consists of a mechanical bar screen, 2 grit troughs, 1 primary clarifier, 2 trickling filters, 1 aeration basin, 2 secondary clarifiers, UV disinfection, 2 anaerobic digesters, and sludge drying beds. The plant was designed to handle 1.0 MGD. The plant typically treats an average of 0.6 to 0.7 MGD.

### Selection of Vacuum Sewer

The IHS proposed connecting homeowners to community sewer in the Farm Area A of Shiprock because conditions such as a high water table make onsite wastewater unreliable. Gravity sewer, however, is not feasible in the Farm Area because of the high water table, existing utilities, unstable soil, flat topography, and right-of-way constraints. These factors make the construction of gravity sewer prohibitively expensive.

The most feasible alternative to gravity sewer for this project is vacuum sewer. Vacuum sewer uses pressure differential to assist sewage movement, allowing shallow bury of pipe and even uphill transport of wastes. This design analysis relies heavily on the 2008 AIRVAC Design Manual<sup>1</sup> for vacuum sewers created by AIRVAC, a vacuum sewer vendor.

Vacuum sewer eliminates sewage discharges via leaks in piping. Line breaks will not allow outflow because the collection system is under continuous vacuum. Any breaks will result in a vacuum loss that will be detected by operators and repaired. The ability to detect breaks and the fact that the system is completely sealed also mean that inflow and infiltration are eliminated.

**Proposed Additions Under Complete Project**

IHS Project NA-04-X77 is Phase I of a four-phase Farm Area A Sewer Project. The complete project will add approximately 20.3 miles of 8", 6", 4", and 3" vacuum sewer line, 240 valve pits, 3.7 miles of 6" force main, and 362 homes to the Shiprock WWS. 2 vacuum/lift stations will be constructed, one on Phase I and one on Phase II. These stations will house both vacuum and sewage pumps. Vacuum pumps evacuate air in the piping system and move an air/water mixture to a collection tank in the station. From this tank, sewage pumps move the wastewater under the San Juan river via 6" HDPE force main to the WWTP.

**Proposed Additions Under Phase I**

IHS Project NA-04-X77 will add 6.1 miles of vacuum sewer line, 91 homes, 60 valve pits and one vacuum/lift station to the Shiprock WWS. One vacuum/lift station will be built under this phase.

**VACUUM SEWER LINE**

**Average and Peak Flows**

From Navajo Tribal Utility Authority (NTUA) data, average water consumption per home was calculated.

Navajo Tribal Utility Authority 10/7/2010

SHIPROCK FARM AREA WATER REPORT				
Code	Homes	Total Yearly Gal/Year	Total Daily GPD	Daily per Home GPD/Home
263	139	8,260,710	22,632	163
264	134	8,306,780	22,758	170
265	130	7,891,047	21,619	166
<b>TOTAL</b>	<b>403</b>	<b>24,458,537</b>	<b>67,010</b>	<b>166</b>

\*Data from 09-30-2009 to 09-30-2010

The average consumption per home is 166 GPD. The 2000 US Census<sup>2</sup> reported an average of 3.73 individuals per home in Shiprock. This means the average person in Shiprock uses approximately 45 GPD. To add a margin of safety to the design, it will be assumed that each home has 4 people and that each person using 50 GPD. Average wastewater flow is thus 200 GPD/home, which is conservative considering that approximately 20% of water used is not returned as wastewater. Inflow and infiltration are not considered in vacuum sewers because of the closed nature of the system.

<sup>1</sup> 2008 AIRVAC Design Manual, AIRVAC, 4217 N. Old U.S. 31, PO Box 528, Rochester, Indiana 46975

<sup>2</sup> United States Census 2000; Extracted and formatted by LSR Innovations; November 2003

From existing home counts, a population was estimated by multiplying by 4. The future population in twenty years was then estimated using a population growth rate of 2.48%, as suggested by the US Bureau of Reclamation for the Navajo Nation.<sup>3</sup> From this future population, the Ten State Standards<sup>4</sup> were used to determine a peaking factor. This peaking factor is calculated by:

$$\frac{Q_{\text{peak}}}{Q_{\text{ave}}} = \frac{18 + \sqrt{P}}{4 + \sqrt{P}}$$

The peak hourly flow rates estimated for the South and North Station are shown in the table below.

SOUTH STATION		NORTH STATION	
Current # of Homes	119 homes	Current # of Homes	241 homes
Residents per home	4	Residents per home	4
Estimated population	476 people	Estimated population	964 people
Annual Growth Rate of Navajo Nation	2.48%	Annual Growth Rate of Navajo Nation	2.48%
Design period	20 years	Design period	20 years
Future Population	777	Future Population	1573
GPD/Person	50	GPD/Person	50
Qave GPD	38,847 GPD	Qave GPD	78,674 GPD
Qave gpm	27 gpm	Qave gpm	55 gpm
TSS* Peaking Factor	3.9	TSS* Peaking Factor	3.7
TSS* Peak Hourly Flow	104 gpm	TSS* Peak Hourly Flow	200 gpm

\* Ten State Standards

Two vacuum/lift stations will be necessary to collect wastewater from the entire project area. Because of the nature of the vacuum system, the collection tanks are under negative pressure. Instead of pumping from the lower and farther North Station to the South Station collection tank, the North Station and South Station will pump in parallel into the same force main. This means that the South Station will not have to pump the additional sewage from the North Station. However, it also means that both pumps will have to pump against significantly greater head loss when both pumps are operating. See the Sewage Pump Selection for a more detailed discussion of the sewage pumps.

### Type of Pipe

AIRVAC recommends that vacuum sewer lines be SDR 21 PVC. The majority of pipe will be buried between 3 and 5 feet, with the deepest pipe approaching 11 feet. An extensive analysis of SDR 35 pipe was performed to determine if it could be safely used in gravity sewer in the Farm Area A with bury depths up to 25 feet and high groundwater conditions. The SDR 35 was found sufficient to safely resist crushing failure, buckling failure, and maximum deflection if the pipe bedding material was adequately compacted. (See Appendix A) SDR 21 is stronger and thicker than SDR 35 and can be safely used for this application. AIRVAC recommends a double-lipped "Reiber style" gasket be used.

<sup>3</sup> Shiprock CDP Population Projection based on Annual Growth Rate for Navajo Nation being 2.48 percent (Navajo-Gallup Water Supply Project Planning Report and Final Environmental Impact Statement, US. Department of the Interior Bureau of Reclamation, July 2009)

<sup>4</sup>  $(Q_{\text{Peak Hourly}} / Q_{\text{Design Ave}}) = (18 + \sqrt{P}) / (4 + \sqrt{P})$ , where P = population in thousands. p. 10-6, Figure 1. Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, Recommended Standards for Wastewater Facilities ["Ten State Standards"], 2004 edition.

To protect against live loads, IHS standards specify at least 3 foot bury in roads and 2 foot bury elsewhere for PVC pipes. Pipe that must be installed shallower than this will be ductile iron (DI).

The AIRVAC 2008 Design Manual recommends schedule 40 fittings for sewers and service laterals with solvent weld connections or rubber ring gasket joints with properly shaped gaskets. These fittings should be used for directional changes as well as crossover connections from the service line to the main line. Tee fittings will not be used.

Building sewer lines connect the home plumbing to the valve pit. These lines will be 4" DMV schedule 40 pressure-rated PVC pipe.

### **Buoyancy**

To ensure that pipes will not float due to groundwater, all pipes with less than 2 feet of cover will be ductile iron, which will not float. According to The Plastic Pipe Institute, a very general rule of thumb is that buoyancy is not usually a problem with plastic pipe when it is buried more than 1.5 diameters deep in soil with at least 120 pcf saturated unit weight.<sup>5</sup>

### **Slope of Pipe**

Even with the additional energy supplied by the vacuum pumps, the vacuum sewer pipes have minimum slope requirements. Where the slope of the ground is greater than 0.2%, the pipe shall be laid at the same slope as the ground. Where the slope of the ground is less than 0.2%, the pipe shall be installed at a minimum slope of 0.2%. When the bury depth becomes too great, lifts can be used to bring the grade of the pipe higher.

Building sewer lines will transport wastes by gravity only at 2% or greater slope.

### **Size of Pipe**

Line A will serve 63 homes at total project completion and will have an estimated future peak flow of 57 gpm. Line B will eventually serve 83 homes and will have a future peak flow of 74 gpm. AIRVAC recommends a maximum of 38 gpm peak flow for 4" pipe and 105 gpm for 6" pipe. Both main lines will therefore be 6". Further evaluation of the pipe sizing is included in the following two sections, Static Loss and Friction Loss. For all branch lines and ends of lines less than 2000', 4" pipe will be used. For service laterals tying valve pits to branch or main lines, 3" pipe will be used. 3" lines will not exceed 300' in length. Each 3" line will only connect one valve pit to the main line.

Building sewer lines will be 4".

### **Static Losses**

The maximum permitted cumulative static lift allowed on any flow path is 13 feet. The path from the vacuum station along Line A to the end of Line A5 will require 9 feet of lift, the most lift for Branch A. This leaves 4 feet for three inch line lifts. The path from the vacuum station along Line B to the end of Line B5's future extension will require 10 feet, the most lift for Branch B. This allows 3 feet for three inch lifts.

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<sup>5</sup> p. 234, Handbook of Polyethylene Pipe, Second Edition, The Plastic Pipe Institute, [http://plasticpipe.org/publications/pe\\_handbook.html](http://plasticpipe.org/publications/pe_handbook.html)

### **Friction Losses**

The friction loss of each main and branch line was calculated based on the homes on that line and the cumulative peak flow. (See Appendix H) Even under peak flow, Line A will lose only 3.7 ft of head to friction and Line B will lose 4.6 ft. AIRVAC recommends that system friction loss not exceed 5 ft. The friction losses incurred using 6" and 4" pipe are for this system.

### **Isolation Valves**

AIRVAC recommends resilient-wedge gate valves be used at the beginning of each branch and on the mainline near branch connections. Valves should also be located between branches if they are spaced more than 1500 feet apart.

### **Other Recommendations**

AIRVAC recommends installing inert polyethylene location tape with a metallic core no deeper than 18" below ground above the vacuum lines to aid maintenance workers in quickly locating buried pipe.

AIRVAC suggests gauge taps just downstream of isolation valves for systems with limited operating resources so one operator can check system pressure while troubleshooting. However, NTUA has committed to sufficient staffing, so at least two trained individuals should be available for troubleshooting.

Cleanouts can be installed where line changes occur and at the end of vacuum mains. They are not recommended anywhere else.

## **VALVE PITS**

### **Location Requirements**

Valve pits will be considered to pose the same risk of contamination as septic tanks, although the constant vacuum lowers this risk. According to Navajo Nation EPA regulations<sup>6</sup>, septic tanks should be located at least 5 feet from houses, 10 feet from water lines, and 100 feet from streams and canals. Valve pits will meet these same separation requirements. Valve pits will be located out of the public roadway to prevent interference with road grading.

### **Other Requirements**

Valve pits will include an anti-buoyancy collar to prevent floating. Covers will be traffic rated and capable of H20 design loading.

## **VACUUM STATION**

### **Peak and Average Flows**

See "Peak and Average Flows" under Section III- Force Main.

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<sup>6</sup> p. 46, *Navajo Nation Domestic Wastewater Regulations (NNDWR)*, Navajo Nation Environmental Protection Agency, 2010

	Future Population	Average Flow (gpm)	Peak Flow (gpm)
SOUTH STATION	777	27	104

### Collection Tank

A welded collection tank made of ¼-in or thicker mild steel or stainless steel (Type 304 or 316) plates will collect wastewater from Zone 1 at the South Station. The tank will withstand a working pressure of 20 in. Hg vacuum and be tested to 28 in. Hg vacuum. The collection tank operating volume is based on pump cycle times during minimum and average flows.

$$V_o = 15 * Q_{min} * (Q_{dp} - Q_{min}) / Q_{dp}$$

- $V_o$  = Operating Volume (gal)
- $Q_{min}$  = Minimum Flow (gpm) =  $Q_a / 2$
- $Q_{dp}$  = Sewage Pump capacity (gpm)
- $V_{\alpha}$  = Collection Tank Size (gal)
- $V_o = 15 * 13.5 * (210 - 13.5) / 210 = 189$  gal.

The operating volume is calculated to be 189 gallons. However, the following sub-section, Sewage Pump Selection, explains that the pump will need to operate at 210 gpm to achieve adequate scouring velocity. With only 189 gallons, the pump will operate for less than 1 minute. It is recommended that the operating volume be increased to 630 gallons so that the pump can operate for a full three minutes.

$$V_{\alpha} = 3 * V_o + 400$$

- $V_{\alpha} = 3 * 189 + 400 = 2290$  gal

Choosing a 2,000 gallon tank will still allow 400 gallons for moisture separation and vacuum pump reserve volume with a safety factor of 2.5. Because the operating volume was increased to extend pumping time and is not based on actual inflow rate to the tank, this safety factor is deemed sufficient.

### Sewage Pump Selection

Under Phase I, Project NA-04-X77, one lift station will be installed at the South Station. The South Station will handle an estimated future population of 777 people and the estimated peak flow rate capacity needed is 104 gpm. NNEPA requires a minimum scouring velocity of 3 ft/s in force mains. To achieve this velocity in a 6" HDPE line, the pump will need to operate at 210 gpm. The scouring velocity dictates pump capacity in this case, and a 210 gpm will be used.

As mentioned in the Force Main Size of Pipe section, the Ten State Standards require only 2 ft/s through force mains. Reaching 2 ft/s in 6-inch SDR 11 HDPE pipe requires only 140 gpm and the head loss is cut in half compared to 3 ft/s. Adoption of this lower scouring velocity by NNEPA will significantly reduce the power consumed by sewage pumps.

The 6" force main will be 5,300 feet long. In order to account for the smaller diameter of the 800' of SDR 9 HDPE pipe under the San Juan River (see Force Main section for more information), 300 feet of equivalent length SDR 11 HDPE pipe will be added to the length used to calculate friction loss, for a total of 5,600 feet.

The WWTP has an elevation of 4,882'. The sewage pumps will be located approximately 8' below grade at 4,900' and will pump up to a maximum of 4,908' (ground surface). Because the receiving station is lower than the sewage pumps, a gooseneck will be installed at the WWTP to keep the force main full.

This design configuration is explained in greater detail in the Design sub-section of the Force Main section.

The total anticipated head is the sum of the major losses in the pipe, the minor losses in fittings (see Appendix E), the elevation difference, and an additional 23 feet to overcome the maximum vacuum in the collection tank. The following table summarizes these calculations.

South Station Sewage Pump Sizing	
Pump Station Elevation	4900 ft
Maximum force main height	4908 ft
Pipe Inner Diameter, dh	5.348 in
Roughness Coefficient, k	2.33E-05 ft
Kinematic Viscosity, $\nu$	1.22E-05 ft <sup>2</sup> /s
Force Main Length, L	5600 ft
Peak Hourly Flow	104 gpm
Pump Size (for 3 ft/s min), Q	210 gpm
Flow Velocity, u	3.00 fps
Friction Factor, f *	0.0182
Major Loss, Force Main Pipe	32.1 ft
Minor Loss, Force Main Fittings	0.2 ft
Minor Loss, Lift Station Fittings	0.9 ft
Vacuum Head Requirement	23.0 ft
Elevation Difference	8 ft
Total Head Requirement	64 ft
Horse Power	7.5 hp
Pump Efficiency	45 %

\* calculated with Swamee and Jain's explicit equation

The table above shows that the sewage pumps should be capable of 210 gpm at 64 ft of head to provide sufficient scouring velocity and overcome all head loss.

In the next phase of the Farm Area sewer project, a second vacuum station will be constructed, called the North Station. The North Station will also need to pump at 210 gpm to maintain scouring velocity. This means that when both pumps are on, the sewage South Station pumps installed on this project will need to contend with higher head. Because the flow from the North Station will provide the appropriate scouring velocity when both pumps are on, the flow from the South Station can be reduced to a maximum of 104 gpm to match the peak hourly flow. At 314 gpm, the total head required will be 100 feet for the South Station sewage pumps.

South Station Sewage Pump Sizing	
Pump Station Elevation	4900 ft
Maximum force main height	4908 ft
Pipe Inner Diameter, dh	5.348 in
Roughness Coefficient, k	2.33E-05 ft
Kinematic Viscosity, v	1.22E-05 ft <sup>2</sup> /s
Force Main Length, L	5600 ft
Peak Hourly Flow	104 gpm
Pump Size (for 3 ft/s min), Q	314 gpm
Flow Velocity, u	4.49 fps
Friction Factor, f *	0.0170
Major Loss, Force Main Pipe	67.1 ft
Minor Loss, Force Main Fittings	0.4 ft
Minor Loss, Lift Station Fittings	1.9 ft
Vacuum Head Requirement	23.0 ft
Elevation Difference	8 ft
Total Head Requirement	100 ft
Horse Power	20.0 hp
Pump Efficiency	40 %

\* calculated with Swamee and Jain's explicit equation

AIRVAC has suggested the installation of a variable frequency drive (VFD) capable of accommodating the instances when both stations are pumping at the same time. When only the South Station is pumping, the VFD will run the motor at 7.5 hp. When both stations are pumping, the VFD will run the motor at 20 hp. This will keep energy use at a minimum while accommodating instances where higher head is needed.

Dry-pit, horizontal sewage pumps are typically used in areas above the flood plain. The vacuum station will be located on a mesa well above the flood plain. Field observations on 7/15/2011 and 10/7/2011 indicate the groundwater table is typically at least 10 feet below the surface. The low risk of potential flooding does not warrant the more complicated maintenance requirements for submersible pumps.

The sewage pump recommended by AIRVAC to meet all of these design requirements is the Yeomans horizontal end-suction model 4312C-3D/3C sewage pump. See Appendix G for the pump curve. This pump is not self-priming and therefore requires an equalization line.

#### Sewage Pump Net Positive Suction Head (NPSH)

The NPSH required for the 4312C-3D/3C at 210 gpm and 65 feet of head is approximately 2.5 feet. (See Appendix G)

$$NPSHA = h_s + h_a - V_{max} - h_f - h_{vpa}$$

- NPSHA = Net Positive Suction Head Available
- $h_s$  = Required static head
- $h_a$  = Atmospheric pressure = 28.2 ft at S.T.P. and 5000 feet above sea level
- $V_{max}$  = Maximum collection tank vacuum = 22.6 ft at 20-in Hg
- $h_f$  = Head loss in pump intake = 0.04 feet
- $h_{vpa}$  = Vapor pressure of sewage = 0.78 feet at 70° F

$$0 + 28.2 - 22.6 - 0.04 - 0.78 = 4.78 \text{ feet.}$$

Safety Margin = NPSHA – NPSHR = 4.78 – 2.5 = 2.28 feet

**Vacuum Pump Selection**

According to the 2008 AIRVAC Design Manual, vacuum pumps should be sized based on A) Peak Flow and Line Length and B) Pipe Volume and Pump-Down Time, t.

A) The longest line of the South System will be 10,280 ft from the beginning of Line A to the end of Line A-7. For lines between 10,000 to 12,000 feet, the coefficient A is 9.

$$Q_{vp} = A * Q_{max} / 7.5 \text{ gal/ft}^3$$

- $Q_{vp}$  = Vacuum pump capacity required
- A = Longest line length coefficient = 9 for lines 10,000 to 12,000 feet long
- $Q_{max}$  = Peak design flow
- $Q_{vp} = 9 * 126 \text{ gpm} / 7.5 \text{ gal/ft}^3 = 151 \text{ cfm}$

With one pump on standby, two 170 cfm, 10 hp pump can be used according to condition A.

B) The total pipe volume is summed in the following table:

Line Lengths (ft) and Pipe Volume					
Line	3"	4"	6"	8"	10"
A	1843	9056	8194	1486	
B	2151	10210	9421	0	
C					
D					
Total Pipe Length	3994	19266	17615	1486	0
x ft <sup>3</sup> /lf	0.0547	0.0904	0.1959	0.3321	0.5095
Pipe Volume	218	1742	3451	494	0
Total Volume, Vp	= 5904 ft <sup>3</sup>		= 44165 gal		

The pump-down time, t, is calculated. t should be under 3 minutes and over 1 minute.

$$t = \frac{(.0454 \text{ cfm-min}) * [2/3V_p + (V_{ct} - V_o)] \text{gal}}{\text{gal} [n - 1] * Q_{vp} \text{ cfm}}$$

- $V_{ct}$  = Collection Tank Size (gal)
- $V_o$  = Operating Volume (gal)
- $Q_{vp}$  = Vacuum Pump Air Flow (cfm)
- n = Number of Vacuum Pumps  $\geq 2$

AIRVAC typically uses three pump sizes to standardize and simplify design:

Pump Capacity	Horsepower
170 cfm	10
305 cfm	15
455 cfm	25

Through trial and error, either three 15 hp, 305 cfm pumps (t = 2.2 min) or two 25 hp, 455 cfm pumps (t = 3.0 min) were found to satisfy the pump-down time requirements. Although the 15 hp pumps are slightly more efficient, two pumps will run each cycle, meaning each pump will run for 50% longer per day than the 25 hp pumps. Maintenance and replacement costs will be significantly reduced with two, rather than three, pumps.

Condition B is shown to govern vacuum pump capacity. Two Busch R5 0630, 25 hp, 455 cfm vacuum pumps will be used.

#### **Power Requirements**

The Yeomans 4312C-3D/3C sewage pump will have a 20 hp motor. It has a starting current of 00 A and a rated current of 00 A. It will operate at a frequency of 60 Hz with 3-phase, 460 V power.

The Busch R5 0630 vacuum pump will have a 25 hp motor. It has a starting current of 64 A and a rated current of 32 A. It will operate at a frequency of 60 Hz with 3-phase, 460 V power and rotate at 1170 RPM.

The utility will provide a portable diesel generator in case of power failure.

### **FORCE MAIN**

#### **Peak and Average Flows**

After the last phase of the project is complete, the entire Farm Area A will produce a peak design flow of 288 gpm. The average anticipated flow will then be 82 gpm. When the first phase is completed, Zone 1 will be contributing an average of 27 gpm to the lift station, with a peak flow of 104 gpm based on the Ten State Standards.

#### **Length of Pipe**

5,300 ft of force main will be required under Project NA-04-X77.

#### **Size of Pipe**

The NNEPA requires a minimum flow velocity of 3 ft/s in force mains to maintain adequate scouring.<sup>7</sup> To accommodate future flows through the force main, 6-inch SDR 11 HDPE pipe will be used. 6-inch pipe will require 210 gpm of flow for scouring velocity.

#### **Size of Pipe Under River**

Because drilling under the river is a costly endeavor, over-sizing the pipe to accommodate for long term growth was considered. The disadvantage to over-sizing the pipe under the river is that this section is the lowest and is most likely to accumulate solids. A larger pipe under the river necessitates the flow through the entire force main be increased significantly to maintain 3 ft/s scouring velocity in that section of pipe. If the population 2.48% growth figure is projected 50 years into the future, the peak flow with both pumps on will increase by 50% compared to the 20-year estimate, from 306 gpm to 599 gpm. Under these future conditions, the force main can be upsized to 8" SDR 11 HDPE to reduce friction loss. Installing 800 feet of 8" SDR 11 of HDPE pipe under the river will reduce the major friction loss by approximately 30 feet compared with 6" SDR 11 pipe, a 33% decrease. A smaller pump size and lower friction loss in the present outweighs the small future benefits in 50 years.

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<sup>7</sup> p. 28, NNDWR, NNEPA, 2010

## Design

The WWTP has an elevation of 4,882'. The sewage pumps will be located approximately 8' below grade at 4,900' and will pump up to a maximum of 4,908' (ground surface). Because the receiving station is approximately 18' lower than the beginning of line, the first 325 feet of the force main will drain by gravity. The rest of the force main is located beneath the WWTP and will remain full.

The empty section of pipe at the beginning of the force main will cause two problems. When the sewage pump turns on, it will pump the first 379 gallons against little to no head until the sewage reaches 4,882 ft. This will cause the pump to operate at a very high rpm that can damage the motor and pump. Additionally, the operating volume of the collection tank is only 221 gallons. A slug of this volume would not fill the empty pipe space before the pumps shut off. The wastewater would therefore flow by gravity only and would likely not attain the 3ft/s scouring velocity. Solids settling and clogging the force main would likely be a problem.

Two alternatives were considered to address this problem. The first alternative is to use a small sewage pump to evacuate the vacuum tank and pump the sewage out of the vacuum station basement. Such a pump would work against 23' of vacuum head in the tank and 8' of elevation head and could pump at low flows. The pump would not need to move the sewage at scouring velocity. The force main would fill incrementally with each pumping cycle. At the WWTP, a valve would be set to remain closed until more than 10 psi had built up. As the force main filled, the sewage would eventually begin to rise to the level vacuum station. This increase in elevation would increase the pressure at the outlet to a maximum of 10 psi (23 feet from outlet to just below highest point). At this point, the valve would open and the sewage would flow out. At 10 psi, a 6" pipe flowing by gravity could move the water at up to 2.5 ft/s. An 8" pipe, having less friction loss, would allow for the requisite 3ft/s.

The disadvantage of this alternative is that the adequate scouring velocity would only be sustained for approximately 30 seconds. After that, the velocity would drop below 2.5 ft/s. After 3 minutes, the flow would slow to 1 ft/s and soon would have negligible velocity. (See Appendix F) This may lead to problems with solids settling in the line. The regulating valve could be a source of operating and maintenance issues. Additionally, the pipe would need to be 8" in diameter. If the gravity flow was deemed insufficient and direct pumping was necessary, the pump would need to be much larger to generate 3 ft/s in an 8" line than a 6" line.

The second alternative is to install a gooseneck (or standpipe) at the WWTP with an elevation equal to the sewage pump elevation. This will prevent any of the force main from draining, keeping it full and ensuring the pump will operate on its pump curve and that adequate scouring velocity will be reached. The gooseneck can be located at the WWTP on the side of the Southern anaerobic digester.

The disadvantage of this alternative is that the pump will need to pump against an artificially created head of approximately 23 feet. The gooseneck could be a source of operating and maintenance issues.

The gooseneck installation offers the most straight-forward operation and maintenance, and is therefore preferred over the gravity flow with regulating valve. This alternative warrants consideration regarding the operating volume of the collection tank. Please see the Collection Tank and Sewage Pump Selection sub-sections of the Vacuum Station section for further discussion.

### Pressure Rating of Pipe

The South Station pump will typically produce a total dynamic head (TDH) of approximately 65 feet. However, when the North Station is constructed, the pump must be capable of delivering up to 420 gpm, with a TDH of 150 feet. Adding to this the 68 feet of head from the pump elevation to the elevation of the pipe below the river, the pipe must be able to handle 218 feet, or 94 psi. SDR 11 HDPE pipe (PE3408/3608) is capable of handling operating pressures up to 160 psi and will be used to safely handle this pressure.

A stronger SDR 9, 200psi HDPE pipe will be used for the 800 foot segment under the river because its thicker wall will provide greater strength while pulling back under the river. Cobbles in the soil can cause greatly increased friction, increasing normal stress on the pipe wall during pull-back.

### Surge Pressures

When the lift station pumps shut off, a column of the sewage will continue moving away from the check valve at the station but the velocity at the valve will suddenly become zero. This sudden change in velocity will propagate through the column of sewage as a pressure wave. This wave can cause high or low surge pressures that can damage pipes and equipment. A simple but conservative analysis of the force main was performed to determine if the selected pipe could withstand these surge pressures. It was not deemed necessary to use complex modeling to determine pressure wave effects.

Surge pressure,  $P_s$ , can be estimated using the theoretical wave velocity,  $a$ .<sup>8</sup>

$$a = 4660 / \sqrt{1 + (K_{bulk} / E_d) * (DR - 2)}$$

- $a$  = wave velocity (celerity), ft/sec
- $K_{bulk}$  = Bulk modulus of fluid at working temperature (typically 300,000 psi for water at 73° F)
- $E_d$  = Dynamic instantaneous effective modulus of pipe material (typically 150,000 psi for all PE pipe at 73° F)
- DR = Pipe dimension ratio
- Using SDR 11 HDPE,  $a = 4660 / \sqrt{1 + (300,000 / 100,000) * (11 - 2)} = 1069$  ft/sec

$$P_s = a * (\Delta V / 2.31g)$$

- $\Delta V$  = Sudden velocity change, ft/sec. It is anticipated that the lift station pumps will produce a maximum of 3.5 ft/s through the force main. Upon shut off, the velocity will abruptly change to 0 ft/s.
- $P_s = 1069$  ft/s \* (3.5 ft/s / (2.31 \* 32.2 ft/s<sup>2</sup>)) = 50 psi

For a reoccurring surge such as this one (occurring every time pump shuts off), the Plastic Pipe Institute allows a maximum permitted surge pressure of 1.5 x pressure rating – working pressure.<sup>9</sup> For this force main, that is 1.5 x 160 psi – 94 psi = 146 psi. 50 psi is well below the permitted surge pressure of 146 psi.

The pressure surge will also create a temporary vacuum in the system. The pipe was analyzed to determine whether it could withstand buckling pressure. The allowable buckling pressure is calculated by

$$P_{wc} = 5.65 / N * \sqrt{(R * B' * E' * E / (12 * (DR - 1)^3))}$$

<sup>8</sup> p. 164, Handbook of Polyethylene Pipe, Second Edition, The Plastic Pipe Institute, [http://plasticpipe.org/publications/pe\\_handbook.html](http://plasticpipe.org/publications/pe_handbook.html)

<sup>9</sup> p. 167, Handbook of Polyethylene Pipe

- $P_{wc}$  = allowable constrained buckling pressure, psi
  - $N$  = Safety factor = 2
  - $R$  = buoyancy reduction factor =  $1 - 0.33 * H_{gw} / H = 0.67$  if groundwater height,  $H_{gw}$ , equals depth of soil cover,  $H$
  - $B' = 1 / (4 * e^{(-0.065 * H)}) = 0.48$  at  $H = 10'$
  - $E'$  = soil reaction modulus, psi. Assume 1,000 psi for compacted backfill
  - $E$  = apparent modulus of elasticity = 27,000 psi for 100 year duration (PE3408/3608)<sup>10</sup>
  - $DR$  = Dimension Ratio = 11
  - $P_{wc} = 5.65 / 2 * \sqrt{(0.67 * 0.48 * 1000 * 27000 / (12 * (11 - 1)^3))} = 76$  psi
- $P_{ext}$  = external pressure =  $P_E + P_V$
- $P_E$  = earth pressure (prism load) = 140 pcf \* 10 ft = 1,400 psf = 9.7 psi
  - $P_V$  = vacuum pressure = 14.7 psi
  - $P_{ext} = 9.7 + 14.7 = 24.4$  psi

$P_{wc}$  is much greater than  $P_{ext}$ , so there should not be risk of buckling due to vacuum under constrained (buried) conditions.

Thermoplastic pipe may also buckle if subject to external pressure while unconstrained. This can occur if the pipe is subject to a vacuum where it is cased for utility crossings.

$$P_{wu} = (f_o * 2E) / (N_s * (1 - \mu^2)) * (1 / DR - 1)^3$$

- $P_{wu}$  = allowable unconstrained wall buckling pressure, psi
- $f_o$  = Ovality correction factor = 0.42 based on 7.5% allowable deflection
- $E$  = apparent modulus of elasticity of pipe material, psi = 125,000 psi<sup>11</sup>
- $N_s$  = Safety factor = 2.5
- $\mu$  = Poisson's ratio = 0.45 for PE pipe
- $DR$  = Dimension Ratio = 11
- $P_{wu} = (0.42 * 2 * 125,000) / (2.5 * (1 - 0.45^2)) * (1 / 11 - 1)^3 = 52.8$  psi

$$P_{ext} = P_V = 14.7 \text{ psi}$$

$P_{wu}$  is much greater than  $P_{ext}$ , so the pressure exerted by the vacuum is not sufficient to collapse the PE in an unconstrained situation, either.

It is also apparent that the greatest surge pressure of 50 psi plus the working pressure of 94 psi should be well within the strength of typical appurtenances such as plug valves, check valves, and air and vacuum release valves, which are specified to handle a minimum of 160 psi.

### Air and Vacuum Release Valves

Air and vacuum release valves (AVRVs) will be installed at all high points. The force main can fill up at a rate of 420 gpm, or 56 cubic feet per minute (cfm). This means that 56 cfm of air must escape from the air and vacuum release valves. However, the steepest slope on the force main line is about 13%. At this slope, the pipe can drain at:

$$Q = C / 21.27 * \sqrt{(S * D^5)} = 110 / 21.27 * \sqrt{(0.13 * 5.421^5)} = 128 \text{ cfm}$$

The vacuum condition governs the inlet sizing and 158 cfm of air entrance is needed. Assuming a minimum collapse pressure of HDPE of 5 psi (very conservative), the necessary inlet diameter, according to the Crispin AVR V Sizing Manual<sup>12</sup>, is 1". A 1" pressure sewer AVR V should be used.

<sup>10</sup> Table B.1.1, p. 99, Handbook of Polyethylene Pipe

<sup>11</sup> Table B.2.1, p. 101, Handbook of Polyethylene Pipe

<sup>12</sup> Sizing Manual: Sizing Air and Vacuum Valves," Crispin Valve, 600 Fowler Ave., Berwick, PA 18603, www.crispinvalve.com

## **EXISTING WASTEWATER COLLECTION/TREATMENT SYSTEM**

### **Capacity of WWTP**

Most estimates of the WWTP influent suggest less than 0.7 MGD. The addition of the entire Farm Area A will likely contribute an average of 0.12 MGD, even after 20 years of population growth, for a total of 0.82 MGD. The plant was designed to handle 1 MGD, so it will have sufficient capacity for the additional wastewater.

### **Tie-In to Existing System**

The force main from the Farm Area A will enter the collection system just upstream of the entrance works, inside the WWTP compound. A new, custom manhole will be created to join the force main to the existing 24" line.

### **Force Main Detention Time**

The vacuum collection tank and the 5,300 ft of force main will have a total detention time of 3.8 hours at an average flow of 27 gpm. This may result in a septic condition of the wastewater entering the WWTP. The vacuum system, however, does aerate the sewage during transport, which should extend the time before the sewage goes septic. Reducing the detention time by using a 4" pipe is not practical because future flows from the North Station will cause unacceptably high friction loss.

## APPENDIX A: Analysis of SDR 35 Pipe Under Deep Bury/High Groundwater Conditions

IHS design standards call for sewer lines to be SDR 35 PVC conforming to ASTM 3034. Long term deflection of pipes due to soil pressure when buried shall not exceed 7.5%. In this project, pipe will be buried up to 25 feet. [This refers to the original scope of work for NA-04-X77, which called for gravity sewers. The scope has been changed to use vacuum sewers.] Some areas will have high groundwater. General tables suggesting maximum bury depths do not account for groundwater. Therefore, the pipe has been analyzed for crushing failure, buckling failure, and maximum deflection. The water table is conservatively assumed to be at the ground surface. It should be noted that live loads do not have significant impact below 8 feet and were ignored in this analysis.

### Crushing Failure:

$$H = P_v / w = \sigma_c 2A / D_o w$$

- Using 8" SDR 35 pipe:  $D_o = 8.4"$  and cross sectional area normal to vertical load  $A = 0.24 \text{ in}^2/\text{in}$  of pipe
- $\sigma_c$  = Compressive stress. Assume a very conservative 2600 psi based on AASHTO 18.4.3.2.1 hydrostatic design basis, which is the minimum 50 year tensile strength for AASTHO M 278 and ASTM 679 with cell class ASTM D 1784, 12364C (Appendix B)
- $w$  = prism load, the weight of the column of soil and groundwater above the pipe. Assume saturated soil is 140 pcf.

$$H = (2,600 \text{ psi} * 2 * 0.24 \text{ in}^2/\text{in} * 144 \text{ psf/psi}) / (8.4 \text{ in} * 140 \text{ pcf}) = 152.8 \text{ ft}$$

The pipe can be buried very deep without risk of crushing failure. 4", 6", and 10" SDR 35 PVC pipe have similar bury depths for crushing failure. Crushing failure is not limiting.

### Buckling Failure:

$$H = P_b / w = 1.15 \sqrt{P_{cr} * E'} / w, \text{ where } P_{cr} = 2E / ((1 - \nu^2)(DR - 1)^3)$$

- Using SDR 35 pipe:  $DR = 35$ ,  $\nu = 0.38$ ,  $E = 400,000 \text{ psi}$
- $E'$  = Modulus of soil reaction (See Appendix C). Assuming a clay soil (Class IV) with only slight compaction (less than 85%), then  $E' = 200 \text{ psi}$
- So  $P_{cr} = 23.8 \text{ psi}$  and  $P_b = 79.3 \text{ psi}$ .  $w$  = prism load, the weight of the column of soil and groundwater above the pipe. Assume saturated soil is 140 pcf.

$$H = P_b / w = 79.3 \text{ psi} * 144 \text{ psf/psi} / 140 \text{ pcf} = 81.6 \text{ ft}$$

Even with poor soil and slight compaction, buckling failure will not be limiting.

### Maximum Deflection

$$H = P_e / w, \text{ where } P_e = \Delta(0.149 PS + 0.061E') / K$$

- $\Delta$ , maximum deflection (%) will be 7.5% as is acceptable for sewer pipe according to ASTM
- PS (pipe stiffness) should be specified at 46 psi
- K is bedding constant, set to most conservative at 0.110 for 0° bedding angle.
- For poor soil with slight compaction,  $E' = 200 \text{ psi}$  and  $H = 13.0 \text{ psi} * 144 \text{ psf/psi} / 140 \text{ pcf} = 13.4 \text{ ft}$

Maximum deflection is the limiting condition. Under these conditions, the pipe will reach unacceptable deflections at 13.4 ft. The most significant variable is  $E'$ , which can be increased with better soil and compaction.<sup>13</sup> All pipes will be bedded with imported Class II soil and compacted to 90-95% proctor. This will ensure  $E' = 1000 \text{ psi}$  and  $H = 47.6 \text{ feet}$ . This will provide a factor of safety of 1.9 at 25 feet burial depth.

SDR 35 PVC pipe can therefore be safely used for all sewer mains and sewer service lines on this project unless they are to be buried less than 3 feet in a road or less than 2 feet elsewhere. In this case, DI pipe should be used for extra strength.

Engineer: Colin Daly  
Date: June 2011

## APPENDIX B: Soil-Thermoplastic Pipe Interaction Systems

### AASHTO - SECTION 18 SOIL-THERMOPLASTIC PIPE INTERACTION SYSTEMS

#### 18.4.3.1 Polyethylene

##### 18.4.3.1.1 Smooth wall PE pipe requirements - ASTM 714

###### Mechanical Properties for Design

Initial		50 Year	
Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)	Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)
3,000	110,000	1,440	22,000

Minimum cell class, ASTM D 3350, 335434C  
Allowable long term strain = 5%

##### 18.4.3.1.2 Corrugated PE pipe requirements - AASHTO M 294

###### Mechanical Properties for Design

Initial		50 Year	
Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)	Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)
3,000	110,000	900	22,000

Minimum cell class, ASTM D 3350, 315412C  
Allowable long term strain = 5%

##### 18.4.3.1.3 Ribbed PE pipe requirements - AASHTO F 894

###### Mechanical Properties for Design

Initial		50 Year	
Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)	Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)
3,000	80,000	1,125	20,000

Minimum cell class, ASTM D 3350, 334433C  
Allowable long term strain = 5%

OR:

Initial		50 Year	
Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)	Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)
3,000	110,000	1,440	22,000

Minimum cell class, ASTM D 3350, 335434C  
Allowable long term strain = 5%

#### 18.4.3.2 Poly (Vinyl Chloride) (PVC)

##### 18.4.3.2.1 Smooth wall PVC pipe requirements - AASHTO M 278, ASTM F 679

###### Mechanical Properties for Design

Initial		50 Year	
Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)	Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)
7,000	400,000	3,700	140,000

Minimum cell class, ASTM D 1784, 12454C  
Allowable long term strain = 5%

OR:

Initial		50 Year	
Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)	Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)
6,000	440,000	2,600	158,400

Minimum cell class, ASTM D 1784, 12364C  
Allowable long term strain = 3.5%

##### 18.4.3.2.2 Ribbed PVC pipe requirements - ASTM F 794

###### Mechanical Properties for Design

Initial		50 Year	
Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)	Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)
7,000	400,000	3,700	140,000

Minimum cell class, ASTM D 1784, 12454C  
Allowable long term strain = 5%

OR:

Initial		50 Year	
Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)	Minimum Tensile Strength (psi)	Minimum Mod. of Elast. (psi)
6,000	440,000	2,600	158,400

Minimum cell class, ASTM D 1784, 12364C  
Allowable long term strain = 3.5%

## APPENDIX C: Average Values of Modulus of Soil Reaction, E'

Soil Classifications and E' Values are from the following table.

AVERAGE VALUES OF MODULUS OF SOIL REACTION, E' (for Initial Flexible Pipe Deflection)					
SOIL CLASS	SOIL TYPE (Unified Classification System <sup>a</sup> )	E' for Degree of Compaction of Pipe Zone Backfill (psi)			
		Loose	Slight <85% Proctor, <40% relative density	Moderate 85%-95% Proctor, 40%-70% relative density	High >95% Proctor, >70% relative density
Class V	Fine-grained Soils (LL>50) <sup>b</sup> Soils with medium to high plasticity CH, MH, CH-MH	No data available; consult a competent soils engineer; Otherwise use E' = 0			
Class IV	Fine-grained Soils (LL<50) Soils with medium to no plasticity CL, ML, ML-CL, with less than 25% coarse-grained particles	50	200	400	1,000
Class III	Fine-grained Soils (LL<50) Soils with medium to no plasticity CL, ML, ML-CL, with less than 25% coarse-grained particles Coarse-grained soils with Fines GM, GC, SM, SC <sup>c</sup> contains more than 12% fines	100	400	1,000	2,000
Class II	Coarse-grained Soils with Little or No Fines GW, GP, SW, SP <sup>c</sup> contains less than 12% fines	200	1,000	2,000	3,000
Class I	Crushed Rock	1,000	3,000	3,000	3,000
	Accuracy in Terms of Percentage Deflection <sup>d</sup>	±2	±2	±1	±0.5

<sup>a</sup>ASTM Designation D 2487, USBR Designation E-3

<sup>b</sup>LL = Liquid limit

<sup>c</sup>Or any borderline soil beginning with one of these symbols (i.e. GM-GC, GC-SC)

<sup>d</sup>For ± 1% accuracy and predicted deflection of 3%, actual deflection would be between 2% and 4%.

Note: Values applicable only for fills less than 50ft (15m). Table does not include any safety factor.  
For use in predicting initial deflections only; appropriate Deflection Lag Factor must be applied for long-term deflections. If bedding falls on the borderline between two compaction categories, select lower E' value or average the two values. Percentage Proctor based on laboratory maximum dry density from test standards using about 12,500 ft-lb/cu ft (598,000 J/m<sup>3</sup>) (ASTM D 698, AASHTO T-99, USBR Designation E-11). 1psi = 6.9kN/m<sup>2</sup>

SOURCE: "Soil Reaction for Buried Flexible Pipe" by Amster K. Howard, U.S. Bureau of Reclamation, Denver Colorado. Reprinted with permission from American Society of Civil Engineers Journal of Geotechnical Engineering Division, January 1977, pp. 33-43.

**APPENDIX D: Equivalent Length in Pipe Diameters**

Type	Equivalent Length in Pipe Diameters $L_e/D$
Globe valve—fully open	340
Angle valve—fully open	150
Gate valve—fully open	8
— $\frac{3}{4}$ open	35
— $\frac{1}{2}$ open	160
— $\frac{1}{4}$ open	900
Check valve—swing type	100
Check valve—ball type	150
Butterfly valve—fully open, 2–8 in	45
—10–14 in	35
—16–24 in	25
Foot valve—poppet disc type	420
Foot valve—hinged disc type	75
90° standard elbow	30
90° long radius elbow	20
90° street elbow	50
45° standard elbow	16
45° street elbow	26
Close return bend	50
Standard tee—with flow through run	20
—with flow through branch	60

Source: Crane Valves, Signal Hill, CA.

**APPENDIX E: Minor Losses**

Lift Station Fittings, Minor Losses	Count	Lequiv/D **	Lequiv, ft	Total Lequiv, ft
Elbow, 90	4	30	15.9	63.4
Dresser coupling	1	20	10.6	10.6
Check valve, ball	1	150	79.3	79.3
Gate valve	1	8	4.2	4.2
Cross, through branch*	1	100	52.8	52.8
Straight runs				30.0
*Based on L/D=60 for Tee			TOTAL	240.3
Diameter, in			Roughness (k),	1.50E-03
6.340 Steel or Iron			Head Loss (hl),	0.87

Force Main Fittings, Minor Losses	Count	Lequiv/D **	Lequiv, ft	Total Lequiv, ft
Elbow, 90	0	30	13.4	0.0
Elbow, 45	5	16	7.1	35.7
			TOTAL	35.7
Diameter, in			Roughness (k),	2.33E-05
5.348 HDPE			Head Loss (hl),	0.2

\*\* See Appendix D

## APPENDIX F: Time to Drain Force Main by Gravity

Project: NA-04-X77  
 Engineer: Colin Daly  
 Date: 10/17/2011

t (s)	f	v (ft/s)	Q (cfs)	dz (ft)	z (ft)
0	0.0171	3.0	0.8		23.0
10	0.0171	2.8	0.8	2.113	20.9
20	0.0173	2.7	0.7	2.013	18.9
30	0.0174	2.5	0.7	1.905	17.0
40	0.0176	2.4	0.6	1.797	15.2
50	0.0178	2.2	0.6	1.691	13.5
60	0.0181	2.1	0.6	1.585	11.9
70	0.0183	1.9	0.5	1.480	10.4
80	0.0186	1.8	0.5	1.376	9.0
90	0.0188	1.7	0.4	1.273	7.8
100	0.0192	1.5	0.4	1.171	6.6
110	0.0195	1.4	0.4	1.070	5.5
120	0.0199	1.2	0.3	0.971	4.6
130	0.0203	1.1	0.3	0.873	3.7
140	0.0209	1.0	0.3	0.776	2.9
150	0.0214	0.8	0.2	0.681	2.2
160	0.0222	0.7	0.2	0.588	1.6
170	0.0230	0.6	0.2	0.496	1.1
180	0.0241	0.5	0.1	0.407	0.7
190	0.0255	0.3	0.1	0.319	0.4
200	0.0276	0.2	0.1	0.233	0.2
210	0.0311	0.1	0.0	0.149	0.0

Pipe Inner Diameter, dh	6.963	in
Kinematic Viscosity, v	1.22E-05	ft <sup>2</sup> /s
Force Main Length, L	5600	ft
For for initial for 3 ft/s min, Q	355	gpm
Roughness Coefficient, k	2.33E-05	ft
Relative roughness	4.016E-05	
Flow Velocity, u	3.00	fps
H	23	

Length of pipe at: steepest slope	325	ft
	86	ft <sup>3</sup>
	0.268	ft of H/ft <sup>3</sup>
Gallons displaced	643	gal

Length of FM	5300	
Volume of FM	1402	ft <sup>3</sup>
	10483	gal
Average flow detention time	27	gpm
	6.5	hrs

Type of pipe	Inner Diameter
4" HDPE, 160 psi	3.633 in
4" HDPE, 200 psi	3.440 in
6" HDPE, 160 psi	5.348 in
6" HDPE, 200 psi	5.064 in
8" HDPE, 160 psi	6.963 in
8" HDPE, 200 psi	6.593 in

# APPENDIX G: Yeomans 4312C-3D/3C Pump Curve

Pump Data Sheet - Yeomans Pump, Aurora, IL



Company: AIRVAC, INC  
 Name: Denny Moss  
 Date: 10/5/2011  
 Selection: Shiprock\_preim2

Customer: IHS  
 Project: Shiprock, NM  
 Qty. of Pumps: 2  
 This graph indicates the South Vacuum Station pumping without a contribution from the North Station into the F.M. We will use the same impeller and operate at 1110 rpm.

**Pump:**  
 Model: 4312C-3D / 3C  
 Type: 6000  
 Synch speed: 1800 rpm  
 Curve ID No.: 3458A  
 Specific Speeds:

Speed: 1110 rpm  
 Dia: 11.375 in  
 Impeller ID No.: Y-4575  
 Ns: 1104  
 Nss: 7898  
 Suction: 4 in  
 Discharge: 4 in

**Search Criteria:**  
 Flow: 210 US gpm  
 Head: 132 ft  
**Fluid:**  
 Water  
 Density: 62.37 lb/ft<sup>3</sup>  
 Viscosity: 1.105 cP  
 NPSHa: ---  
**Motor:**

Temperature: 60 °F  
 Vapor pressure: 0.2563 psi a  
 Atm pressure: 14.7 psi a

**Dimensions:**

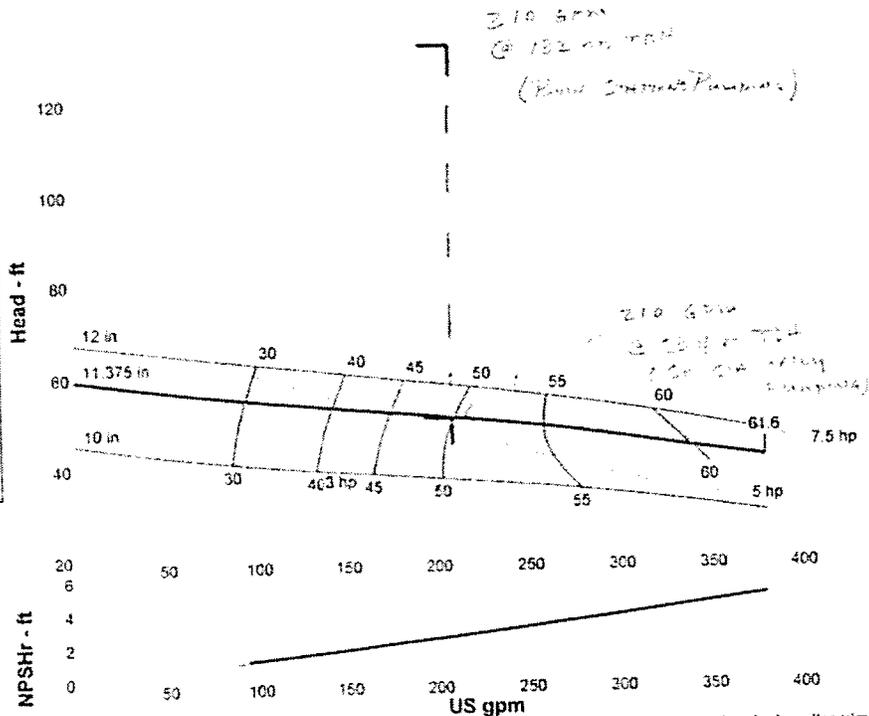
**Pump Limits:**

Temperature: 150 °F  
 Pressure: 75 psi g  
 Sphere size: 3 in

Power: ---  
 Eye area: ---

Standard: NEMA  
 Enclosure: TEFC  
 Sizing criteria: Max Power on Design Curve  
 Size: 7.5 hp Z5  
 Speed: 1800  
 Frame: 213T

--- Data Point ---	
Flow:	133.2 US gpm
Head:	53.1 ft
Eff:	38%
Power:	4.67 hp
NPSHr:	1.55 ft
--- Design Curve ---	
Shutoff head:	59.5 ft
Shutoff dP:	25.8 psi
Min flow:	---
BEP:	52% @ 379 US gpm
NOL power:	6.44 hp @ 379 US gpm
--- Max Curve ---	
Max power:	7.48 hp @ 379 US gpm



Default motor size is based upon max. power on the design curve plus a margin factor to allow for impeller trim variances that may occur to meet H.I. TDH requirements. Efficiencies and data are typical. Please contact the factory for guaranteed values. Use Bearing Frame #3C W/ Impeller Dia. Under 11"

**Performance Evaluation:**

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
282	1110	48.7	54	5.7	3.05
210	1110	50.4	50	5.35	2.49
168	1110	51.8	44	5	1.97
128	1110	53.4	37	4.61	1.48
84	1110	55.2	28	4.24	1.05

Yeomans Pump - PumpfinderPlus 10

Selected from catalog: YP\_main 60 Vers: 1

### APPENDIX H: Friction and Static Loss Calculations

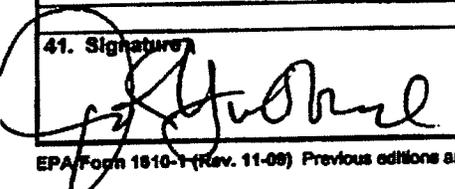
Avg. Flow	27 gpm	Growth rate:	0.0248	20 years	Flow per home	200 gpd =	0.14 gpm	C = 150				
Line Name	Begin Sta.	End Sta.	Line Length	Homes	Future Homes	Peaking factor	Q Mean	Q Acc.	Pipe Diameter	4" Frict 100'	Frict Loss Line	Volume
A	0	2643	2643	5	8.2	4.3	4.9	50.5	5.96	0.064809	1.713	512
A1	0	517	517	3	4.9	4.4	3.0	3.0	4.05	0.002259	0.012	46
A	2643	3994	1351	4	6.5	4.4	4.0	42.6	5.96	0.047297	0.639	262
A2	0	973	973	3	4.9	4.4	3.0	3.0	4.05	0.002259	0.022	87
A	3994	4169	175	1	1.6	4.4	1.0	35.7	5.96	0.034044	0.060	34
A3	0	393	393	3	4.9	4.4	3.0	3.0	4.05	0.002259	0.009	35
A	4169	5646	1477	2	3.3	4.4	2.0	31.7	5.96	0.027345	0.404	286
A4	0	1722	1722	5	8.2	4.3	4.9	4.9	4.05	0.005732	0.099	154
A	5646	7097	1451	4	6.5	4.4	4.0	24.8	5.96	0.017327	0.251	281
A5	0	1874	1874	7	11.4	4.3	6.9	6.9	4.05	0.010563	0.198	168
A	7097	7730	633	1	1.6	4.4	1.0	13.9	5.96	0.005989	0.038	123
A6	0	602	602	2	3.3	4.4	2.0	2.0	4.05	0.001077	0.006	54
A	7730	8440	710	0	0.0	4.5	0.0	10.9	5.96	0.003825	0.027	138
A7	0	684	684	0	0.0	4.5	0.0	6.9	4.05	0.010787	0.074	61
A7-1	0	875.45	875	3	4.9	4.4	3.0	3.0	4.05	0.002259	0.020	78
A7	684	1841.64	1158	4	6.5	4.4	4.0	4.0	4.05	0.003818	0.044	104
A	8440	9633	1193	2	3.3	4.4	2.0	4.0	4.05	0.003904	0.047	107
A8	0	258.53	259	1	1.6	4.4	1.0	1.0	4.05	0.000302	0.001	23
A	9633	9680	47	1	1.6	4.4	1.0	1.0	4.05	0.000302	0.000	4
B	0	267	267	0	0.0	4.5	0.0	68.1	5.96	0.112726	0.301	52
B1	0	2373.82	2374	10	16.3	4.3	9.7	9.7	4.05	0.02015	0.478	212
B	267	1923	1656	2	3.3	4.4	2.0	58.4	5.96	0.084779	1.404	321
B2	0	811.75	812	6	9.8	4.3	5.9	5.9	4.05	0.007985	0.065	73
B	1923	3236	1313	2	3.3	4.4	2.0	50.5	5.96	0.064812	0.851	254
B3	0	85	85	0	0.0	4.5	0.0	15.8	4.05	0.049592	0.042	8
B3-1	0	432.62	433	4	6.5	4.4	4.0	4.0	4.05	0.003818	0.017	39
B3	85	1116	1031	5	8.2	4.3	4.9	11.9	4.05	0.029119	0.300	92
B3-2	0	358	358	3	4.9	4.4	3.0	3.0	4.05	0.002259	0.008	32
B3	1116	1758	642	4	6.5	4.4	4.0	4.0	4.05	0.003818	0.025	57
B	3236	4175	939	2	3.3	4.4	2.0	32.7	5.96	0.028982	0.272	182
B4	0	755.12	755	3	4.9	4.4	3.0	3.0	4.05	0.002259	0.017	68
B	4175	4830	655	0	0.0	4.5	0.0	27.7	5.96	0.021354	0.140	127
B5	0	1053	1053	4	6.5	4.4	4.0	18.8	5.96	0.010456	0.110	204
B5-1	0	278.85	279	2	3.3	4.4	2.0	2.0	4.05	0.001077	0.003	25
B5-2	0	559.59	560	2	3.3	4.4	2.0	2.0	4.05	0.001077	0.006	50
B5	1053	2358	1305	3	4.9	4.4	3.0	10.9	4.05	0.024861	0.324	117
B5-3	0	602.38	602	4	6.5	4.4	4.0	4.0	4.05	0.003818	0.023	54
B5	2358	3018	660	4	6.5	4.4	4.0	4.0	4.05	0.003818	0.025	59
B	4830	6181	1351	0	0.0	4.5	0.0	8.9	5.96	0.002597	0.035	262
B6	0	91.69	92	3	4.9	4.4	3.0	3.0	4.05	0.002259	0.002	8
B	6181	7821	1640	6	9.8	4.3	5.9	5.9	4.05	0.007985	0.131	147
				120	195.9	TOTAL A	50.5			TOTAL A	3.7	4998
						TOTAL B	68.1			TOTAL B	4.6	

 <p>United States Environmental Protection Agency Washington, DC 20460</p> <p><b>Interagency Agreement/ Amendment</b></p> <p><b>Part 1 - General Information</b></p>	<b>1. EPA IA Identification Number</b> DW-75-95585701 - 2		<b>2. Funding Location by Region</b> EPA R9						
	<b>3. Other Agency IA ID Number (if known)</b> NA-04-X70; NA-04-X71; NA-04-X72; NA-04-X73; NA-04-X74; NA-04-X75; NA-04-X76; NA-04-X77; NA-04-X78; NA-04-X79; NA-04-X81.		<b>4. Awarding Office</b> IASSC West						
	<b>5. Type of Action</b> No Cost Amendment		<b>6. IA Specialist:</b> Mary Gutierrez 206-553-6058 gutierrez.mary@epa.gov						
<b>7. Name and Address of EPA Organization</b> US Environmental Protection Agency IASSC West 1200 Sixth Avenue, Suite 900, OMP-145 Seattle, WA 98101			<b>8. Name and Address of Other Agency</b> Department of Health & Human Services-Navajo IHS P.O. Box 9020, Hwy 264, NAIHS Complex Window Rock, AZ 86515						
<b>9. DUNS:</b> 029128894	<b>10. BETC:</b> DISB	<b>11. DUNS:</b> 120333802	<b>12. BETC:</b> COLL						
<b>13. Project Title and Description</b> Upgrading Wastewater Disposal Facilities - Navajo Nation Communities  The Communities of the Navajo Nation (See Project List) Will Be Served With Upgrading Wastewater Disposal Facilities.  This Amendment extends the Budget/Project period to 12/31/2012; changes the IA specialist to Mary P. Gutierrez; Other Agency Project Officer to Roger Slape and updates Terms and Conditions. The EPA funding amount and Scope of Work remains the same.									
<b>14. EPA Project Officer (Name, Address, Telephone Number)</b> Loretta Vanegas 75 Hawthorne Street, WTR-10 San Francisco, CA 94105 415-872-3433 E-Mail: vanegas.loretta@epa.gov FAX:		<b>15. Other Agency Project Officer (Name, Address, Telephone)</b> Roger Slape P.O. Box 9020, Hwy 264, NAIHS Complex Window Rock, AZ 86515 928-871-5857 E-Mail: roger.slape@ihs.gov FAX:							
<b>16. Project Period:</b> 09/30/2004 to 12/31/2012		<b>17. Budget Period:</b> 09/30/2004 to 12/31/2012							
<b>18. Scope of Work (See Attachment)</b> The Scope of Work remains the same.									
<b>19. Employer/Tax ID No.</b> 520852895		<b>20. CAGE No:</b> 347A4	<b>21. ALC:</b> 68-01-0727						
<b>22. Statutory Authority for Transfer of Funds and Interagency Agreement</b> Clean Water Act 516 (b) and (e)			<b>23. Other Agency Type</b> Federal Agency						
<b>24. Revised Reimbursable Funds and Direct Fund Cites (only complete if applicable)</b>									
	Previous Funding	This Action	Amended Total						
Revised Reimbursable (In-house)			0						
Direct Fund Cites (contractor)			0						
Total			0						
	Previous Amount	Amount This Action	Total Amount						
25. EPA Amount	\$5,458,200	\$0	\$5,458,200						
26. EPA In-Kind Amount			\$0						
27. Other Agency Amount			\$0						
28. Other Agency In-Kind Amount			\$0						
29. Total Project Cost	\$5,458,200		\$5,458,200						
<b>30. Fiscal Information</b>									
Treas. Symbol	DCN	FY	Appropriation	Budget Org	PRC	Object Class	Site/Project	Cost Org	Ob/De-Ob Amt

EPA Form 1610-1 (Rev. 11-99). Previous editions are obsolete.

Part II - Approved Budget				EPA IAG Identification Number DW-75-95565701 - 2
31. Budget Categories	Itemization of All Previous Actions	Itemization of This Action	In-Kind Itemization of This Action	Itemization of Total Project Cost to Date
(a) Personnel	\$0			\$0
(b) Fringe Benefits	\$0			\$0
(c) Travel	\$0			\$0
(d) Equipment	\$0			\$0
(e) Supplies	\$0			\$0
(f) Procurement / Assistance	\$5,459,200			\$5,459,200
(g) Construction	\$0			\$0
(h) Other	\$0			\$0
(i) Total Direct Charges	\$5,459,200	\$0	\$0	\$5,459,200
(j) Indirect Costs:	\$0	\$0	\$0	\$0
Charged - Amount				
Rate: %				
Base: \$				
Not Charged:				
Funds-Out: Not charged by Other Agency				
Estimate by other Agency				
Amount \$				
(k) Total (EPA Share 100.00 %) (Other Agency Share 0.00 %)	\$5,459,200	\$0	\$0	\$5,459,200
32. How was the IDC Base calculated?				
33. Is equipment authorized to be furnished by EPA or leased, purchased, or rented with EPA funds? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Identify all equipment costing \$1,000 or more) See Administrative Terms and Conditions				
34. Are any of these funds being used on extramural agreements? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Type of Extramural Agreement Cooperative Agreement				
Contractor/Recipient Name (if known)	Total Extramural Amount Under This Project		Percent Funded by EPA (if known)	
PL 88-121 MOA	5459200 Total \$ 5,459,200.00		100	
<b>Part III - Funding Methods and Billing Instructions</b>				
35. (Note: EPA Agency Location Code (ALC) - 68010727)				
<input checked="" type="checkbox"/> Disbursement Agreement	Request for repayment of actual costs must be itemized on SF 1080 and submitted to the Financial Management Office, Cincinnati, OH 45268-7002.			
<input type="checkbox"/> Repayment	<input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Upon Completion of Work			
<input checked="" type="checkbox"/> Advance	Only available for use by Federal agencies on working capital fund or with appropriate justification of need for this type of payment method. Unexpended funds at completion of work will be returned to EPA. Quarterly cost reports will be forwarded to the Financial Management Center, EPA, Cincinnati, OH 45268-7002.			
<input type="checkbox"/> Allocation Transfer-Out	Used to transfer obligational authority or transfer of function between Federal agencies. Must receive prior approval by the Office of Comptroller, Budget Division, Budget Formulation and Control Branch, EPA Hdqtrs. Forward appropriate reports to the Financial Reports and Analysis Branch, Financial Management Division, PM-226F, EPA, Washington, DC 20460.			
36. <input type="checkbox"/> Reimbursement Agreement <input type="checkbox"/> Repayment <input type="checkbox"/> Advance				
<input type="checkbox"/> Allocation Transfer-In				
Other Agency's Billing Address (Include ALC or Station Symbol Number)			Other Agency's Billing Instructions and Frequency	
			Quarterly	

EPA Form 1610-1 (Rev. 11-68). Previous editions are obsolete

<b>Part IV - Acceptance Conditions</b>		<b>EPA Identification Number</b>  DW-75-95565701 - 2
37. Terms and Conditions (See attached terms and conditions, Attachment B)		
<b>Part V - Offer and Acceptance</b>		
<p>Note: A) For Fund-out actions, the agreement/amendment must be signed by the other agency official in duplicate and one original returned to the Grants and IA Management Division for Headquarters agreements or to the appropriate EPA Regional IA administration office within 3 calendar weeks after receipt or within any extension of time that may be granted by EPA. The agreement/amendment must be forwarded to the address cited in item 29 after acceptance signature.</p> <p><del>Failure to return the properly executed document within the prescribed time may result in the withdrawal of offer by EPA. Any change to the agreement/amendment by the other agency after the document is signed by the EPA Award Official, which the Award Official determines to materially alter the agreement/amendment, shall void the agreement/amendment.</del></p> <p>B) For Funds-in actions, the other agency will initiate the action and forward two original agreements/amendments to the appropriate EPA program office for signature. The agreements/amendments will then be forwarded to the appropriate EPA IA administration office for signature on behalf of the EPA. EPA will return one original copy after acceptance returned to the other agency after acceptance.</p>		
<b>EPA IA Administration Office (for administrative assistance)</b>		<b>EPA Program Office (for technical assistance)</b>
<b>38. Organization/Address</b>  U.S. Environmental Protection Agency IASSC West 1200 Sixth Avenue, Suite 900, OMP-145 Seattle, WA 98101		<b>39. Organization/Address</b>  US Environmental Protection Agency R9 - Region 9 75 Hawthorne Street, WTR-10 San Francisco, CA 94105
<b>Award Official on Behalf of the Environment Protection Agency</b>		
<b>40. Digital signature applied by EPA Award Official   FOR Armina K. Nolan - Manager - Grants and Interagency Agreements Unit</b> Peter Murchie - AO delegate		<b>Date</b> 03/24/2011
<b>Authorizing Official on Behalf of the Other Agency</b>		
<b>41. Signature</b> 	<b>Typed Name and Title</b> John Hubbard, Jr., Area Director	<b>Date</b> 3/25/11

## **IA Terms and Conditions**

### **Interagency Agreement between the U.S. Environmental Protection Agency and the Indian Health Service for Upgrading Navajo Communities Wastewater Disposal Facilities**

#### **I. ADMINISTRATIVE TERMS AND CONDITIONS**

This Interagency Agreement (IA) provides for the coordination between the Environmental Protection Agency (EPA) Region 9 Clean Water Indian Set Aside (CWISA) Program and the Indian Health Service (IHS) Sanitation Facilities Construction Program. This IA applies to funds appropriated to the EPA under sections 518(b) and (e) of the Federal Water Pollution Control Act (the Clean Water Act), which the EPA intends to transfer to the IHS under this IA.

If the actual cost of providing the facilities is less than the amount in the Project Documents, the IHS Area Office and the EPA Region, in consultation with the Tribe, will coordinate the disposition of the remaining funds. The parties may decide to increase the scope or identify another project for funding, or the IHS may return the unused funds to the EPA. Any project changes agreed to by the parties must be reflected in the IA through an amendment prior to expiration of the IA and before allocating funds to a new project, unless the IHS decides to return the funds to the EPA. If the parties cannot come to agreement, the IHS will return the funds to the EPA.

Funds transferred by EPA to the IHS under this IA may only be used in agreements authorized by Indian Sanitation Facilities Act, 42 U.S.C. 2004a.

The IHS is approved to purchase equipment in accordance with its equipment management policies. The IHS will determine that the equipment is in the best interest of the government and is necessary for the performance of the projects under this IA. Disposition of the equipment will be subject to IHS equipment management policies or as specified in the Project Documents with no further accountability to EPA.

#### **A. Resolution of Disagreements**

Should disagreement arise concerning the interpretation of the provisions of this agreement, the dispute shall be resolved pursuant to the Business Rules for Intra-Governmental Transactions delineated in the Treasury Financial manual, Volume 1, Bulletin 2007-03, Section VII, Resolving Intra-governmental Disputes and Major Differences.

#### **B. Cost Collection upon Cancellation**

If the EPA cancels the order, the IHS is authorized to collect costs incurred prior to cancellation of the order plus termination costs, up to the total payment amount provided for under the agreement.

#### **C. IAs with Contracts or Procurement**

The IHS will use its administrative policies and procedures including those under the Buy Indian Act provisions for direct federal acquisition, to implement and execute projects funded under this IA.

#### **D. Fiscal and Project Reporting Requirements**

The IHS will update its Sanitation Tracking and Reporting System (STARS) quarterly and provide

a report in STARS that may be accessed by the EPA. The report will include at minimum, project-specific estimated expenditures and actual milestones achieved to date and will be available to the respective EPA Regional CWISA Program Coordinator and to the EPA Financial Management Center. The STARS will be updated by the 30th day following the end of a quarter, beginning with the first full reporting period after funds are received by the IHS.

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### **E. Audit Findings**

If an audit determines that any direct or indirect costs in a project funded under this IA are unallowable, the parties to this IA will be notified immediately following resolution of the audit and the IHS project account will be credited for ineligible costs.

## **II. PROGRAMMATIC TERMS AND CONDITIONS**

### **A. Authority and Purpose**

The activities under this IA are being executed by the EPA pursuant to sections 518(b) and (e) of the Federal Water Pollution Control Act (the Clean Water Act) 33 U.S.C. 1377(b) and (e). The services and facilities will be provided to the Tribe by the IHS under the authorities of the Transfer Act, 42 U.S.C. 2001; Indian Sanitation Facilities Act, 42 U.S.C. 2004a; and Title III of Indian Health Care Improvement Act, as amended, 25 U.S.C. 1632.

### **B. EPA Responsibilities**

1. The EPA Regional Office shall designate a representative to coordinate its participation in projects (Regional Program Coordinator). This representative shall formally advise the respective IHS Area Office of this designation.
2. As resources permit the EPA shall provide to the IHS and Tribes technical assistance as needed to successfully meet applicable program requirements.
3. The EPA Regional Office will ensure that the proposed projects are in accordance with the [Federal Water Pollution Control Act (the Clean Water Act), annual national guidance and the Clean Water Indian Set Aside Program Final Guidelines April 1989 and the Addendums.
4. EPA HQ will lead the development, in collaboration with IHS HQ, of an umbrella quality assurance plan for water samples collected at completion of facility construction. IHS HQ will have 60 calendar days to approve the jointly developed quality assurance plan, after that time the quality assurance plan will be considered final and will be signed by the EPA Office of Water Quality Assurance (OW QA) Officer
5. EPA is responsible for any distribution within the EPA of the final technical and financial report provided to the respective EPA Regional Program Coordinator after the construction phase completion.
6. The EPA will not be a signatory on any Project Summaries or Memorandums of Agreement.
7. Where appropriate, EPA Regions shall provide comments to IHS Area Offices on the design and planning documents associated with projects funded by the IA within 30 days of receiving said documents.
8. EPA Regions shall monitor construction progress with: data from the IHS database, discussions with the IHS Area Offices and field site visits as necessary to ensure the level of expended funds is reasonable given the reported milestone dates. The EPA will consult with the IHS Area Office quarterly to discuss project status.
9. The EPA Regions will participate in the final project inspection, as deemed necessary and resources permitting. At project completion, the EPA Region will review the final

technical and financial reports provided by the IHS Area Office and will initiate the necessary EPA close-out process.

10. The EPA Regions will acknowledge and respond to IHS Area invitations to participate in project activities within 10 days of receipt.

**C. IHS Responsibilities**

1. The IHS shall implement and execute projects funded under this IA using its administrative policies and procedures as described in the Indian Health Manual, Part 5, Chapter 2, Memorandum of Agreement.
2. Project Documents (Project Summary/ Memorandum of Agreement or Arrangement as described in 42 U.S.C. 2004a) will be developed by the IHS Area Office, in consultation with the respective Tribes and respective EPA Regional Office.
3. Unless otherwise stipulated in the project documents, the IHS shall be the lead agency in assuring compliance with the National Environmental Policy Act, the National Historic Preservation Act, and other applicable Federal requirements.
4. Quarterly progress reports will be available to EPA through the IHS STARS system as stated in I.D., Fiscal and Project Reporting Requirements. Should the need arise and if the agencies mutually agree, the report may be supplemented.
5. The EPA Regional Office shall be formally notified of and invited to participate in the conceptual design meeting, the final plans and specification review, and the final inspections for projects in which EPA funds are utilized. IHS shall notify the EPA at least 30 business days prior to these events to allow optimal participation. Notification will be by e-mail.
6. As applicable, upon completion of each project under this IA, all rights title and interest to the provided sanitation facilities shall be transferred to the Tribe or to a responsible entity identified by the Tribe in accordance with the Project Documents. Each respective IHS Area Office shall make such arrangements as they determine necessary for the ownership and operation and maintenance of the completed facilities.
7. For each project funded under this IA, a final technical and financial report shall be provided no later than 365 days after construction phase completion to the respective EPA Regional Program Coordinator. Electronic copies of the report shall be provided to the EPA representatives identified above in Fiscal Reporting Requirements.
8. The water sampling umbrella quality assurance plan (EPA Responsibility No. 4), developed jointly between EPA and IHS, will be implemented by IHS as applicable.
9. For an EPA funded project for a pilot water treatment study or for a specific hydraulic network model calibration, the IHS will prepare an individual project specific Quality Assurance Project Plan (QAPP) in accordance with EPA Guidance for Quality Assurance Project Plans (QA/G-5) (EPA 2001) which can be found at <http://www.epa.gov/QUALITY/qs-docs/r5-final.pdf>. The QAPP must be submitted for review and approval by the EPA OW QA Officer through the EPA IA Project Officer, who must approve the Quality Assurance procedures or standards in writing. EPA will have 60 calendar days to approve the QAPP submitted by IHS, after that time the QAPP will be considered final.

**D. Duration of Agreement**

This agreement shall continue in effect until IHS or EPA provides written notice of termination, or when all projects funded under this agreement are completed or are no longer needed for the purpose identified in the Project Documents. Any project funds that are obligated up to and on the date of termination will remain obligated to those projects. Notice shall be given to the other party at least 60 days in advance of a termination date.

**END OF INTERAGENCY AGREEMENT AMENDMENT**

**DW-75-95565701-2**



Office of Environmental Health  
and Engineering

Navajo Area  
Indian Health Service  
P.O. Box 9020  
Window Rock, Arizona 86515-9020

December 20, 2011

Chavez John, Director  
Navajo Nation  
Community Development Block Grant Program  
Box 2365  
Window Rock, AZ 86515

RE: Qualifications of Project Cost Estimator

Dear Mr. John:

The Navajo Area Indian Health Service (IHS) is pleased to provide information on the qualifications of the persons who are responsible for the construction cost estimates for the proposed sanitation facilities construction project for the Shiprock Farm Area Community Sewer (Phase I) project.

CAPT Jim Magnuson and Mr. Colin Daly are the engineers who prepared the cost estimates. CAPT Magnuson is the District Engineer for the Shiprock District of the IHS Navajo Area Division of Sanitation Facilities Construction. CAPT Magnuson has a Master's Degree in Civil Engineering, is a licensed Professional Engineer, and has worked for the Navajo Area IHS for over 14 years. Colin Daly, the engineer for the project, has passed the NCEES licensure exam for Professional Engineers, and has nearly 3-years of IHS experience.

If you have any questions you may contact Dave McDonnell or me at 928-871-5851.

Sincerely,

Roger G. Slape, P.E., Division Director  
Sanitation Facilities Construction

xc: James Adakai, NN CDBG  
Dave McDonnell, Chief TSS, NAIHS  
Jim Magnuson, District Engineer, Shiprock  
File: X77 CDBG



Office of Environmental Health  
and Engineering

Navajo Area  
Indian Health Service  
P.O. Box 9020  
Window Rock, Arizona 86515-9020

January 4, 2012

Chavez John, Director  
Navajo Nation  
Community Development Block Grant Program  
Box 2365  
Window Rock, AZ 86515

RE: IHS Letter of Commitment – Shiprock Farm Area Sewer Phase I

Dear Mr. John:

The Navajo Area Indian Health Service (IHS) provides the following commitment of funds for the following proposed sewer infrastructure construction project to support the Navajo Nation's Fiscal Year 2012 Application to HUD.

IHS Project #	Project Name	Homes	CDBG Funds	EPA Funds (X77)	Total Cost
NA-04-X77	Shiprock Farm Area Sewer Phase I	90	\$522,121	\$1,889,000	\$ 2,411,121

This project is construction ready and is scheduled to begin in calendar year 2012. If awarded, we hope to work with CDBG to expedite the approval process. If you have any questions, please contact David McDonnell or me at 928-871-5851.

Sincerely,

Roger G. Slape, P.E., Division Director  
Sanitation Facilities Construction

xc: James Adakai, NN CDBG  
Dave McDonnell, Chief TSS, NAIHS  
File: C 924 CDBG 2012  
Chrono



NAVAJO TRIBAL UTILITY AUTHORITY

AN ENTERPRISE OF THE NAVAJO NATION

January 4, 2012

Mr. Chavez John, Manager  
Community Housing and Infrastructure Department  
The Navajo Nation  
P.O. Box 2365  
Window Rock, Arizona 86515

RE: Statement of Commitment for Operation and Maintenance

Mr. John,

The Navajo Tribal Utility Authority (NTUA) hereby submits this Statement of Commitment to operate and maintain the Shiprock Farm Area Community Sewer - Phase 1. Shiprock Farm Area Community Sewer--Phase 1 will include 6.1 miles of vacuum sewer line, 60 valve pits, and one vacuum/lift station to lift the wastewater to the Shiprock Waste Water Treatment Plant (WWTP) to serve 90 existing homes. The total estimated flow rate from these 90 homes is 29,380 Gallons per day (GPD) @ 20 years. The Shiprock WWTP is operated by NTUA, which is designed to handle 1.0 million gallons per day (MGD). Currently the Shiprock WWTP has an average influent flow rate of 0.67 MGD. NTUA has determined that the existing Shiprock WWTP has sufficient capacity for additional waste water flow from the Shiprock Farm area Community Sewer--Phase 1.

NTUA is therefore committed to the operation and maintenance responsibilities of the 6.1 miles of vacuum sewer line, 60 valve pits, and one vacuum/lift station. NTUA has the financial capability to operate and maintain the facilities based upon revenues to be generated by the completed project.

Please see Table 1 for Three Year Historical Financial Data. The local NTUA Shiprock District office has the resources to provide operation and maintenance responsibilities of the Shiprock Farm Area Community Sewer-Phase 1. Individual homeowners will be responsible for the O&M of the sewer line from their home to the valve pit. If you have any question please call me at (928)729-6205.

Sincerely,

Wally Chief  
Engineering and Technical Services Division

Enclosure

CC: Rex Kontz, Office of the Deputy General Manager, NTUA  
Bruce McVicker, Office of the Deputy General Manager, NTUA  
Roger Slape, Navajo Indian Health Services  
Gregory Bahe, Civil Engineering Department, NTUA

Home Office: P.O. BOX 170 FT. DEFIANCE, AZ 86504 (928) 729-5721	KAYENTA P.O. BOX 37 KAYENTA, AZ 86033 (928) 697-3574	TUBA CITY P.O. BOX 398 TUBA CITY, AZ 86045 (928) 283-5421	SHIPROCK P.O. BOX 1749 SHIPROCK, NM 87420 (505) 368-4639	CHINLE P.O. BOX 549 CHINLE, AZ 86503 (928) 674-5470	FORT DEFIANCE P.O. BOX 587 FT. DEFIANCE, AZ 86504 (928) 729-5727	DILCON HC 63 BOX D WINSLOW, AZ 86047 (928) 657-3258	CROWNPOINT P.O. BOX 1825 CROWNPOINT, NM 87313 (505) 786-5566
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Letter to Chavez John, Community Housing and Infrastructure Department  
 RE: Statement of Commitment for Operation and Maintenance  
 January 4, 2012  
 Page Two

TABLE 1 : Three Year Historical Financial Data					
YEAR [1]		2007	2008	2009	Three-Year Average
Residential Service Connections		1,240	1,248	1,318	1,269
Residential Service Fees		\$ 206,915	\$ 334,624	\$ 224,586	\$ 255,375
Commercial Service Connections		138	142	139	140
Commercial Service Fees		\$ 168,837	\$ 51,195	\$ 163,143	\$ 127,725
Flat Rate Service Connections		-	1	1	1
Flat Rate Service Fees		\$ -	\$ 15	\$ 120	\$ 45
<b>TOTAL SERVICES</b>		1,378	1,391	1,458	1,409
<b>TOTAL REVENUE</b>		\$ 375,752	\$ 385,834	\$ 387,849	\$ 383,145
TYPICAL OPERATING EXPENSES	Personnel	\$ 318,504	\$ 489,639	\$ 409,101	\$ 405,748
	Utility	\$ 73,362	\$ 65,079	\$ 78,371	\$ 72,271
	Supplies	\$ 4,598	\$ 39,112	\$ 19,619	\$ 21,110
	Equipment	\$ 14,716	\$ 5,095	\$ (5,945)	\$ 4,622
	Services	\$ (160,259)	\$ (229,973)	\$ (178,649)	\$ (189,627)
	Vehicles	\$ 5,033	\$ (16,875)	\$ 2,984	\$ (2,953)
	Laboratory	\$ 914	\$ 26,432	\$ 9,114	\$ 12,153
	Miscellaneous	\$ 93	\$ 66,325	\$ 34,288	\$ 33,569
<b>SUB-TOTAL</b>		256,961	444,834	368,883	356,893



**Application for Federal Assistance SF-424**

\* 1. Type of Submission:

- Preapplication
- Application
- Changed/Corrected Application

\* 2. Type of Application:

- New
- Continuation
- Revision

\* If Revision, select appropriate letter(s):

\* Other (Specify):

\* 3. Date Received:

01/04/2012

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

**State Use Only:**

6. Date Received by State:

7. State Application Identifier:

**8. APPLICANT INFORMATION:**

\* a. Legal Name:

THE NAVAJO NATION

\* b. Employer/Taxpayer Identification Number (EIN/TIN):

86-0092335

\* c. Organizational DUNS:

0090017020000

**d. Address:**

\* Street1:

PO BOX 2365

Street2:

\* City:

WINDOW ROCK

County/Parish:

\* State:

AZ: Arizona

Province:

\* Country:

USA: UNITED STATES

\* Zip / Postal Code:

86515-2365

**e. Organizational Unit:**

Department Name:

COMM. DEV. BLOCK GRANT

Division Name:

COMMUNITY DEVELOPMENT

**f. Name and contact information of person to be contacted on matters involving this application:**

Prefix:

\* First Name:

CHAVEZ

Middle Name:

\* Last Name:

JOHN

Suffix:

Title:

Organizational Affiliation:

\* Telephone Number:

9288716539

Fax Number:

\* Email:

chavez\_john@nnchid.org

**Application for Federal Assistance SF-424**

**\* 9. Type of Applicant 1: Select Applicant Type:**

I: Indian/Native American Tribal Government (Federally Recognized)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

\* Other (specify):

**\* 10. Name of Federal Agency:**

US Department of Housing and Urban Development

**11. Catalog of Federal Domestic Assistance Number:**

14.862

CFDA Title:

Indian Community Development Block Grant Program

**\* 12. Funding Opportunity Number:**

FR-5600-N-02

\* Title:

Community Development Block Grant Program for Indian Tribes and Alaska Native Villages (ICDBG)

**13. Competition Identification Number:**

ICDBG-02

Title:

**14. Areas Affected by Project (Cities, Counties, States, etc.):**

[Add Attachment](#)

[Delete Attachment](#)

[View Attachment](#)

**\* 15. Descriptive Title of Applicant's Project:**

TEN (10) PUBLIC FACILITIES AND IMPROVEMENT PROJECTS WITHIN THE NAVAJO INDIAN RESERVATION.  
(ARIZONA, NEW MEXICO AND UTAH)

Attach supporting documents as specified in agency instructions.

[Add Attachments](#)

[Delete Attachments](#)

[View Attachments](#)

**Application for Federal Assistance SF-424**

**16. Congressional Districts Of:**

\* a. Applicant

b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

**17. Proposed Project:**

\* a. Start Date:

\* b. End Date:

**18. Estimated Funding (\$):**

* a. Federal	<input type="text" value="5,500,000.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="853,503.00"/>
* e. Other	<input type="text" value="3,030,027.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="9,383,530.00"/>

**\* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- a. This application was made available to the State under the Executive Order 12372 Process for review on
- b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- c. Program is not covered by E.O. 12372.

**\* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

Yes  No

If "Yes", provide explanation and attach

**21. \*By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

\*\* I AGREE

\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

**Authorized Representative:**

Prefix:  \* First Name:

Middle Name:

\* Last Name:

Suffix:

\* Title:

\* Telephone Number:  Fax Number:

\* Email:

\* Signature of Authorized Representative:  \* Date Signed:

# ATTACHMENTS FORM

**Instructions:** On this form, you will attach the various files that make up your grant application. Please consult with the appropriate Agency Guidelines for more information about each needed file. Please remember that any files you attach must be in the document format and named as specified in the Guidelines.

**Important:** Please attach your files in the proper sequence. See the appropriate Agency Guidelines for details.

1) Please attach Attachment 1	FY-12 Navajo ICDBG Applicatio	Add Attachment	Delete Attachment	View Attachment
2) Please attach Attachment 2		Add Attachment	Delete Attachment	View Attachment
3) Please attach Attachment 3		Add Attachment	Delete Attachment	View Attachment
4) Please attach Attachment 4		Add Attachment	Delete Attachment	View Attachment
5) Please attach Attachment 5		Add Attachment	Delete Attachment	View Attachment
6) Please attach Attachment 6		Add Attachment	Delete Attachment	View Attachment
7) Please attach Attachment 7		Add Attachment	Delete Attachment	View Attachment
8) Please attach Attachment 8		Add Attachment	Delete Attachment	View Attachment
9) Please attach Attachment 9		Add Attachment	Delete Attachment	View Attachment
10) Please attach Attachment 10		Add Attachment	Delete Attachment	View Attachment
11) Please attach Attachment 11		Add Attachment	Delete Attachment	View Attachment
12) Please attach Attachment 12		Add Attachment	Delete Attachment	View Attachment
13) Please attach Attachment 13		Add Attachment	Delete Attachment	View Attachment
14) Please attach Attachment 14		Add Attachment	Delete Attachment	View Attachment
15) Please attach Attachment 15		Add Attachment	Delete Attachment	View Attachment

**Applicant/Recipient  
Disclosure/Update Report**

U.S. Department of Housing  
and Urban Development

OMB Number: 2510-0011  
Expiration Date: 10/31/2012

**Applicant/Recipient Information**      \* Duns Number:       \* Report Type:

1. Applicant/Recipient Name, Address, and Phone (include area code):

\* Applicant Name:

\* Street1:

Street2:

\* City:

County:

\* State:

\* Zip Code:

\* Country:

\* Phone:

2. Social Security Number or Employer ID Number:

\* 3. HUD Program Name:

\* 4. Amount of HUD Assistance Requested/Received: \$

5. State the name and location (street address, City and State) of the project or activity:

\* Project Name:

\* Street1:

Street2:

\* City:

County:

\* State:

\* Zip Code:

\* Country:

**Part I Threshold Determinations**

\* 1. Are you applying for assistance for a specific project or activity? These terms do not include formula grants, such as public housing operating subsidy or CDBG block grants. (For further information see 24 CFR Sec. 4.3).

Yes       No

\* 2. Have you received or do you expect to receive assistance within the jurisdiction of the Department (HUD), involving the project or activity in this application, in excess of \$200,000 during this fiscal year (Oct. 1-Sep. 30)? For further information, see 24 CFR Sec. 4.9

Yes       No

If you answered " No " to either question 1 or 2, **Stop!** You do not need to complete the remainder of this form.

**However,** you must sign the certification at the end of the report.

**Part II Other Government Assistance Provided or Requested / Expected Sources and Use of Funds.**

Such assistance includes, but is not limited to, any grant, loan, subsidy, guarantee, insurance, payment, credit, or tax benefit.

Department/State/Local Agency Name:

\* Government Agency Name:

Government Agency Address:

\* Street1:

Street2:

\* City:

County:

\* State:

\* Zip Code:

\* Country:

\* Type of Assistance:

\* Amount Requested/Provided: \$

\* Expected Uses of the Funds:

Department/State/Local Agency Name:

\* Government Agency Name:

Government Agency Address:

\* Street1:

Street2:

\* City:

County:

\* State:

\* Zip Code:

\* Country:

\* Type of Assistance:

\* Amount Requested/Provided: \$

\* Expected Uses of the Funds:

(Note: Use Additional pages if necessary.)

Add Attachment

Delete Attachment

View Attachment

**Part III Interested Parties.** You must decide.

1. All developers, contractors, or consultants involved in the application for the assistance or in the planning, development, or implementation of the project or activity and

2. Any other person who has a financial interest in the project or activity for which the assistance is sought that exceeds \$50,000 or 10 percent of the assistance (whichever is lower).

\* Alphabetical list of all persons with a reportable financial interest in the project or activity (For individuals, give the last name first)

\* Social Security No. or Employee ID No.

\* Type of Participation in Project/Activity

\* Financial Interest in Project/Activity (\$ and %)

* Alphabetical list of all persons with a reportable financial interest in the project or activity (For individuals, give the last name first)	* Social Security No. or Employee ID No.	* Type of Participation in Project/Activity	* Financial Interest in Project/Activity (\$ and %)
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/> <input type="text"/> %
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/> <input type="text"/> %
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/> <input type="text"/> %
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/> <input type="text"/> %
<input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/> <input type="text"/> %

(Note: Use Additional pages if necessary.)

Add Attachment

Delete Attachment

View Attachment

**Certification**

**Warning:** If you knowingly make a false statement on this form, you may be subject to civil or criminal penalties under Section 1001 of Title 18 of the United States Code. In addition, any person who knowingly and materially violates any required disclosures of information, including intentional non-disclosure, is subject to civil money penalty not to exceed \$10,000 for each violation.

I certify that this information is true and complete.

\* Signature:

\* Date: (mm/dd/yyyy)

Patrick Dalgai

01/04/2012

Facsimile Transmittal

U. S. Department of Housing and Urban Development  
Office of Department Grants Management and Oversight

OMB Number: 2525-0118  
Expiration Date: 06/30/2011

1323966691-5846

Name of Document Transmittal: FY-2012 NAVAJO ICDBG APPLICATION

1. Applicant Information:

Legal Name: THE NAVAJO NATION

Address:

Street1: PO BOX 2365

Street2:

City: WINDOW ROCK

County:

State: AZ: Arizona

Zip Code: 86515-2365

Country: USA: UNITED STATES

2. Catalog of Federal Domestic Assistance Number:

Organizational DUNS: 0090017020000

CFDA No.: 14.862

Title: Indian Community Development Block Grant Program

Program Component:

3. Facsimile Contact information:

Department: COMM. DEV. BLOCK GRANT

Division: COMMUNITY DEVELOPMENT

4. Name and telephone number of person to be contacted on matters involving this facsimile.

Prefix: First Name: JAMES

Middle Name:

Last Name: ADAKAI

Suffix:

Phone Number: 928-871-6539

Fax Number:

5. Email: james\_adakai@nnchid.org

6. What is your Transmittal? (Check one box per fax)

a. Certification  b. Document  c. Match/Leverage Letter  d. Other

7. How many pages (including cover) are being faxed?

2

# DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

Approved by OMB  
0348-0046

### 1. \* Type of Federal Action:

- a. contract
- b. grant
- c. cooperative agreement
- d. loan
- e. loan guarantee
- f. loan insurance

### 2. \* Status of Federal Action:

- a. bid/offer/application
- b. initial award
- c. post-award

### 3. \* Report Type:

- a. initial filing
- b. material change

### 4. Name and Address of Reporting Entity:

Prime  SubAwardee

\* Name: THE NAVAJO NATION  
\* Street 1: PO BOX 2365 Street 2:  
\* City: WINDOW ROCK State: AZ: Arizona Zip: 86515-2365  
Congressional District, if known:

### 5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:

### 6. \* Federal Department/Agency:

US DEPT OF HOUSING AND URBAN DEVELOPMENT

### 7. \* Federal Program Name/Description:

Indian Community Development Block Grant Program

CFDA Number, if applicable: 14.862

### 8. Federal Action Number, if known:

### 9. Award Amount, if known:

\$

### 10. a. Name and Address of Lobbying Registrant:

Prefix \* First Name N/A Middle Name  
\* Last Name N/A Suffix  
\* Street 1 Street 2  
\* City State Zip

### b. Individual Performing Services (including address if different from No. 10a)

Prefix \* First Name N/A Middle Name  
\* Last Name N/A Suffix  
\* Street 1 Street 2  
\* City State Zip

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

\* Signature: Patrick Dalgai

\* Name: Prefix Mr. \* First Name BEN Middle Name  
\* Last Name SHELLY Suffix

Title: PRESIDENT Telephone No.: 928-871-6539 Date: 01/04/2012

Authorized for Local Reproduction  
Standard Form - LLL (Rev. 7-97)

