

RESOLUTION OF THE  
RESOURCES AND DEVELOPMENT COMMITTEE  
Of the 23rd Navajo Nation Council---Second Year 2016

AN ACTION

RELATING TO RESOURCES AND DEVELOPMENT; SUPPORTING LEUPP CHAPTER'S GRANT APPLICATION TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 9 FOR THE DRINKING WATER TRIBAL SET-ASIDE FUNDS FOR LEUPP CHAPTER'S PHASE II WEST WATERLINE EXTENSION

WHEREAS:

A. The Resources and Development Committee (RDC) is a standing committee of the Navajo Nation Council and exercises oversight authority over water. 2 N.N.C. § 500 (C).

B. The United States Environmental Protection Agency (EPA) announced an invitation to tribes to apply for Drinking Water Tribal Set-Aside (DWTSA) funds for drinking water infrastructure projects that address high priority public health risks, attached hereto as **Exhibit A**.

C. The DWTSA program provides funding for tribes within Region 9 (California, Nevada, and Arizona) for public drinking water system infrastructure.

D. The funds are through direct grants to tribes or interagency agreements within the Indian Health Service.

E. Approximately \$6.5 million of Fiscal Year 2017 funds may be available.

F. The EPA has provided a full announcement, guidance on how to apply and project proposal forms at [www.epa.gov/region09/funding/dwtsa.html](http://www.epa.gov/region09/funding/dwtsa.html).

G. The Leupp Chapter has completed their project summary with the Indian Health Service, attached hereto as **Exhibit B**.

H. It is in the best interest of the Navajo Nation to support the grant application to the United States Environmental Protection Agency Region 9 for the Drinking Water Tribal Set-Aside funds to assist in the completion of Leupp Chapter's Phase II West Waterline Extension.

**NOW THEREFORE BE IT RESOLVED THAT:**

The Navajo Nation hereby supports grant application to the United States Environmental Protection Agency Region 9 for the Drinking Water Tribal Set-Aside funds for Leupp Chapter's Phase II West Waterline Extension, attached hereto as **Exhibit B**.

**CERTIFICATION**

I, hereby, certify that the foregoing resolution was duly considered by the Resources and Development Committee of the 23<sup>rd</sup> Navajo Nation Council at a duly called meeting at Kayenta Township Conference Room, Kayenta (Navajo Nation) Arizona, at which quorum was present and the same was passed by a vote of 3 in favor, 0 opposed, 1 abstained this 1<sup>st</sup> day of November, 2016.

A handwritten signature in black ink, appearing to read 'Alton Joe Shepherd', is written over the typed name.

Alton Joe Shepherd, Chairperson  
Resources and Development Committee  
Of the 23<sup>rd</sup> Navajo Nation Council

Main Motion: Honorable Leonard Pete  
Second: Honorable Benjamin Bennett

**Environmental Protection Agency, Region 9  
Drinking Water Tribal Set-Aside Grant**

**Project Proposal Form**

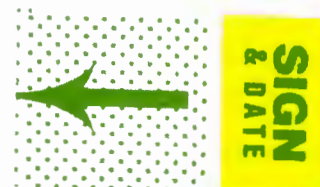
**Directions: See Section IV.B of the Guidelines**

<b>Project Name</b>	<b>West Leupp Waterline Extension Phase 2</b>
<b>Applicant Information</b>	Tribe Submitting Proposal: <u>Navajo Nation</u> Did you receive Drinking Water Tribal Set-Aside money for this project this year? <u>No</u> Did you receive drinking water state revolving fund money for this project this year? <u>No</u>
<b>Contact Information</b>	Name: <u>Roger Slape, PE</u> Title: <u>Director, Div. Sanitation Facilities Construction</u> Email: <u>roger.slape@ihs.gov</u> Address: <u>Navajo Area IHS, PO Box 9020</u> Fax Number: <u>(928) 871-1462</u> <u>Window Rock, AZ 86515</u> Phone Number: <u>(928) 871-5857</u>
<b>Service Area Information</b> (Dist. 5 CWS PWSID# NN0403033)	Total Population Served: <u>Approx. 2,043</u> Total number of connections: <u>532 (residential)</u> Number of meters: <u>532</u> Percent of connections metered: <u>100%</u> Is billing based on meter readings?: <u>Yes</u> Number of tribal people served by project(s): <u>100%</u> Number of non-tribal people served by project(s): <u>0%</u>
<b>Water Utility Information</b>	Project Location: <u>Leupp, Arizona (Navajo Nation)</u> Water System Owner: <u>Navajo Tribal Utility Authority (NTUA)</u> Will the proposed project be owned by a different entity? If yes, please explain: <u>No</u> Is this a Public Water System? <u>Yes</u> If Yes: What is the Public Water System ID Number? <u>NN0403033</u> Is this a Community or non-Community Water System? <u>Community</u> Is this a For-Profit or Non-Profit Water System? <u>Non-Profit</u> Does this system have a certified water operator? <u>Yes</u>
<b>Water Supply Information</b>	How many storage tanks are connected to the system? <u>9 (District 5 water system)</u> What is the capacity of each tank (in gallons)? <u>Birdsprings Tanks (2) - 200,000 Gal</u> <u>Ives Mesa Tanks (2) - 105,000 Gal Tolani Lk Tanks (2) - 55,000 Gal</u> <u>Newberry Tank - 100,000 Gal Leupp Tanks (2) - 52,000 Gal</u> How many wells are connected to the system? <u>3 wells</u> What is the maximum capacity of each well (in gpm)? <u>5T-505 = 160 GPM</u> <u>5T-510 = 120 GPM 5T-547 = 500 GPM (NTUA primary well)</u> How many pressure zones are in the system? <u>3 zones</u> Describe each pressure zone (i.e. which tanks are used for each zone). <u>Tolani Lake Booster pumps to Newberry Tank (96 GPM); Birdsprings Booster pumps to Ives Mesa Tanks (56 GPM).</u> Are there water outages? <u>No</u> If so, how often? <u>N/A</u>

Other Background Information	<p>Describe any existing water conservation measures: <u>NTUA's Public Relations conducts community training on water. NTUA also provides tips on their web site <a href="http://www.ntua.com/customerservice.html">http://www.ntua.com/customerservice.html</a></u></p> <p>Does the Tribe and/or water utility have a source or wellhead protection program? <u>Yes</u></p> <p>Is the Tribe or system in the process of implementing one of the above programs? <u>Yes</u></p> <p>Is the proposed project a consolidation project? <u>No, an extension project.</u> If so, how many systems will be consolidated? <u>N/A</u> What are their populations? <u>N/A</u></p> <p>What is the per capita, per day water consumption in gallons/person/day of treated water for the water system? <u>Design 200 gal/house/day</u></p>																									
Project Need	<p>Describe why this project is necessary: <u>Phase 2 will supply piped water to approximately 30 homes west of Leupp that do not have water. These homes haul water from various sources, both regulated and non-regulated. There are unregulated livestock wells in this area that have uranium contamination levels exceeding the MCL of 30 ppb. This proposal is for Phase 2 that will provide the water infrastructure needed beyond Phase 1, the project funded in FY 2016 by EPA (\$1.51 million under NA-16-XM8, 1A# DW-075-95904501-0) and Navajo Nation (\$2 million under Sihasin) to provide water service to 36 homes.</u></p>																									
Project Description	<p>Description of Proposed Project: <u>This Phase 2 project proposes to extend the existing Leupp (District 5) community water system operated by NTUA further west beyond Phase 1 to serve 30 Navajo homes with safe regulated water. Phase 2 proposes to construct approximately 7.9 miles of waterline, 2-miles of 3-phase power, one booster station, 200,000 gallons of water storage, and 30 water service connections. The construction project proposes to combine EPA funds with Navajo Nation tribal funds for the Phase 2 water line. The Navajo Nation proposes to contribute \$1.1 million to the construction project.</u></p>																									
Project Cost	<p>Estimated Total Project Cost: <b>\$3,892,000</b> (Note: Minimum of \$200,000 is needed for Feasibility.)</p> <p>Cost Breakdown by Health Category:</p> <table border="1"> <thead> <tr> <th>Health Category</th><th>Corresponding Project Component</th><th>Estimated Component Cost</th><th># Connections Benefiting</th><th>Population Served.....</th></tr> </thead> <tbody> <tr> <td>1) <u>7B</u></td><td><u>Waterline Extension - EPA</u></td><td><u>\$2,792,000</u></td><td><u>30</u></td><td><u>150</u></td></tr> <tr> <td>2) <u>7B</u></td><td><u>Waterline Extension - Tribe</u></td><td><u>\$1,100,000</u></td><td></td><td></td></tr> <tr> <td>3) _____</td><td>_____</td><td>\$ _____</td><td>_____</td><td>_____</td></tr> <tr> <td>4) _____</td><td>_____</td><td>\$ _____</td><td>_____</td><td>_____</td></tr> </tbody> </table>	Health Category	Corresponding Project Component	Estimated Component Cost	# Connections Benefiting	Population Served.....	1) <u>7B</u>	<u>Waterline Extension - EPA</u>	<u>\$2,792,000</u>	<u>30</u>	<u>150</u>	2) <u>7B</u>	<u>Waterline Extension - Tribe</u>	<u>\$1,100,000</u>			3) _____	_____	\$ _____	_____	_____	4) _____	_____	\$ _____	_____	_____
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4) _____	_____	\$ _____	_____	_____																						
Committed Funding	<p>Have other entities committed to contribute funding for this project? <u>Yes.</u></p> <p>If so, describe commitment: <u>Navajo Nation commitment of \$1.1 million for construction only, Council Delegate Walter Phelps.</u></p> <p>Have you applied for funding from other agencies? <u>No</u></p> <p>If so, which agencies? _____</p>																									
Project Status	<table> <tr> <td>Feasibility Study Complete?</td> <td>Yes</td> <td><input checked="" type="checkbox"/> No</td> <td>If Yes, please attach</td> </tr> <tr> <td>Environmental Information Document Complete?</td> <td>Yes</td> <td><input checked="" type="checkbox"/> No</td> <td>If Yes, please attach</td> </tr> <tr> <td>Design Complete</td> <td>Yes</td> <td><input checked="" type="checkbox"/> No</td> <td>If Yes, please attach</td> </tr> </table>	Feasibility Study Complete?	Yes	<input checked="" type="checkbox"/> No	If Yes, please attach	Environmental Information Document Complete?	Yes	<input checked="" type="checkbox"/> No	If Yes, please attach	Design Complete	Yes	<input checked="" type="checkbox"/> No	If Yes, please attach													
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Signature of Person Certifying this information is accurate \_\_\_\_\_

Title of Above Person: Director, Division of Sanitation Facilities Construction, NAIHS Date \_\_\_\_\_





Printed: 10/27/2016 02:20PM  
(Mountain)

## STARS

Printed By: McDonnell David

## SDS Narrative

<b>Project/Phase Name:</b> WEST LEUPP PH2 WL EXT		<b>Econ Feasible:</b> N	<b>Override Feasibility:</b> N
<b>Community:</b> LEUPP	<b>Number:</b> AZ03108-1603	<b>Reportable Project?</b> Yes	
<b>Priority:</b> 214			
<b>District:</b> TUBA CITY	<b>Tribe:</b> NAVAJO TRIBE OF ARIZONA, NEW MEXICO AND ...	<b>Engineering Only:</b> No <b>Engineer:</b> Gore Kevin	
<b>Field Office:</b> Winslow	<b>Reservation:</b> Navajo		
<b>EPA Region:</b> 09	<b>Self-Gov.:</b> IHS Direct Service		
<b>Created:</b> 05/20/2007	<b>Last Update:</b> 10/27/2016 by McDonnell David	<b>Reviewed:</b> Yes (last updated 10/27/2016 by McDonnell David) <b>Ready to Fund:</b> No (last updated Unknown by Unknown)	

## OM Systems:

Select Systems

System	System Type	Organization	EPA #	Score
8088262107--DIST 5 NTUA CWS - LEUPP	Water	NAVAJO TRIBAL UTILITY AUTHORITY	NN0403033	16

## Area-Defined Fields

Chapter: 047 - LEUPP

Planning Funds (\$ only):

Planning Project (3 digit):

DEFICIENCY LEVEL: 5

## RATING SCORES

Health Impact: 22

Capital Cost: -20 Suggested: -20

Tribal: 0

Deficiency: 18

O & M Capability: 16

Other Considerations: 0

Previous Service: 3

Contribution: 0

Total Score: 39

## HOMES

## COSTS and Unit Costs (U.C.)

Service	Eligible	Inelig.	Total	Service	IHS Cost	U. C.	Eligible Cost	U. C.	Allow. U. C.	Contrib.	Inelig. Cost	Total Cost
Water	30	0	30	Water:	3,892,300	129,743	3,892,300	129,743	47,000			3,892,300
Sewer	21	0	21	Sewer:	484,700	23,081	484,700	23,081	47,000			484,700
Solid	0	0	0	Solid:	0	0	0	0	0			0
O&M	0	0	0	O & M:	0	N/A	0	N/A	N/A			0
Proj. Homes	30	0	30	Total:	\$ 4,377,000	\$ 152,824	\$ 4,377,000	\$ 152,824	\$ 94,000	\$ 0	\$ 0	\$ 4,377,000

Special Requirements: none

## EXISTING DEFICIENCIES:

**Water:** 21 HOMES WITH NO WATER SYSTEMS, 9 HOMES WITH CISTERN SYSTEMS.

**Sewer:** 21 HOMES WITH PIT PRIVIES, 9 HOMES WITH OLD AND UNDERSIZED SEPTIC SYSTEMS.

**Sol. Wst.:** NONE

**O & M:** NONE

## PROPOSED FACILITIES:

**Water:** ~7.9 MILES OF WATERLINE, 2-MILES 3-PHASE POWER, BOOSTER STATION, AND 200,000-GAL TANK TO SERVE 30 HOMES.

**Sewer:** ONSITE SEPTIC SYSTEMS FOR 21 HOMES. 9 OF 30 HOMES WITH EXISTING SEPTIC SYSTEMS WILL NEED AN UPGRADE.

**Sol. Wst.:** None

**O & M:** NTUA

## Report Criteria

Dataset: Current Data  
SDS Project: AZ03108-1603



## SDS# AZ03108-1603 WEST LEUPP EXT PH 2

House Number	Name	Chapter	Medical Referral	Dwelling Type	First Service	Needs					Has			Comments
						Water	Sewer	SW	Bathroom Addition	Plumbing	Electric	Cistern	HSL	
5103	Allen/Maize Jones	LP	YES	E-1	YES	Y	N	N	N	N	Y	Y	N	E16
5033	Bradley Jones	LP	NO	E-1	YES	Y	Y	N	NO	N	YES	N	N	HSE: YELLOW
5035	Emerson Thompson	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	YES	Y	N	MH: YELLOW
5036	Carlos Paddock	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	YES	Y	N	MH: GRAY
5037	Rick Nelson	LP	NO	E-1	YES	Y	Y	N	NO	N	YES	N	N	HSE: BROWN
5038	Claudia McCabe	LP	YES	E-1	YES	Y	Y	N	NO	N	YES	N	N	HSE: RED, CISTERN??NA-88-602
5039	Jackie McCabe	LP	YES	E-1	YES	Y	Y	N	NO	Y	YES	Y	N	HSE: PINK, CISTERN??NA-80-253, 04-X72
5040	Micheal Worker	LP	NO	E-1	YES	Y	Y	N	NO	N	YES	N	N	HSE: BROWN, ONHIR LEE WORKER, NA-80-253
5041	Zoe Worker	LP	YES	E-1	YES	Y	Y	N	NO	Y	YES	Y	Y	HSE: BROWN
5042	Evelyn Paddock	LP	YES	E-1(M)	YES	Y	Y	N	NO	N	YES	Y	N	MH: BEIGE, NA-87-975, GRAVEL
5043	Kristy Foster	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	YES	N	N	MH: BROWN
5044	Roland Foster	LP	NO	E-1	YES	Y	N	N	NO	N	YES	Y	N	HSE: GREEN
5045	Marietta Redhair	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	YES	N	N	MH: LOG
5046	Marietta Redhair	LP	NO	E-1(H)	YES	Y	Y	N	Y	Y	YES	NO	N	HOGAN: BROWN
5047	Elta Bob	LP	NO	E-1	YES	Y	Y	N	NO	N	YES	Y	N	HSE: PINK, ONHIR, NA-87-975W, Gravel
5048	Jasper Russel	LP	NO	E-1(H)	YES	Y	Y	N	NO	N	NO	N	N	HOGAN: BLUE, NTUA Project?
5049	Valinda Foster	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	YES	N	N	MH BROWN
5050	Emerrey Joe	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	NO	N	N	MH ORANGE
5053	Darlene Russel	LP	NO	E-1	YES	Y	Y	N	NO	N	NO	N	N	HSE: PINK,, FOLDER GONE
5052	Tom Foster	LP	YES	E-1	YES	Y	N	N	NO	N	YES	Y	N	HSE BROWN, NA-03-C41, 3@96'
5051	Arlinda Adame	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	YES	N	N	MH BROWN
5055	Robert Foster	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	YES	N	N	HSE: PURPLE
5054	Lerenda Foster	LP	NO	E-1	YES	Y	Y	N	NO	N	YES	N	N	HSE: BROWN
5198	Tyrone Foster	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	NO	N	N	MH: BROWN, NOT ON GOOGLE
5078	Lillie Cody	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	NO	N	N	MH WHITE
5079	Leonard Cody	LP	NO	E-1	YES	Y	Y	N	NO	N	YES	N	N	HSE: BROWN
5080	Nelly Cody	LP	NO	E-1	YES	Y	Y	N	Y	Y	YES	N	N	HSE: CEMENT
5268	Elliott Luther	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	NO	N	N	MH WHITE
5079	Jack Cody Jr.	LP	NO	E-1	YES	Y	N	N	NO	N	NO	Y	N	VA HOUSE, NA-16-F37
5080	Cheryl Abuentiz	LP	NO	E-1(M)	YES	Y	Y	N	NO	N	NO	N	N	MH WHITE



## NECA COST ACCOUNTING ESTIMATING SHEET

PROJECT NO. SDS AZ03108-1603  
 DESCRIPTION West Leupp Ph. 2 Ext.  
 NO. OF HOMES 30

Overhead rate = 55%  
 Burden Rate = 23%  
 Pension Rate = 2%

JCA REVISION DATE = 10-May-16  
 LAST REVISED BY = Jeff Allen  
 INFLATION RATE = 3%  
 PROJECT JCA DATE = 27-Oct-16

PAY ITEM	COST CODE	COST TYPE	DESCRIPTION	U/M	QUANTITY	UNIT COST	TOTAL COST BY COST TYPE	TOTAL COST BY COST CODE
010	0010	E	LINEAL SURVEY & DRAFTING	LF	41499	\$0.11	\$4,564.89	
010	0010	L				\$0.11	\$4,564.89	
010	0010	R					\$0.00	
010	0010	T				\$0.01	\$394.24	\$9,524.02
010	0050	R	ARCH CLEARANCE	AC	188		\$0.00	
010	0050	S				\$100.00	\$18,800.00	\$18,800.00
010	0060	R	ENDANGERED SPECIES SURVEY	LS	1	\$5,000.00	\$5,000.00	\$5,000.00
010	0070	E	STORMWATER POLLUTION PREVENTION	LS	1	\$138.20	\$138.20	
010	0070	I				\$165.11	\$165.11	
010	0070	L				\$375.26	\$375.26	
010	0070	M				\$871.43	\$871.43	\$1,550.00
020	0200	E	2-INCH WATERLINE (COMPLETE)	LF	4365	\$1.86	\$8,118.90	
020	0200	I				\$0.80	\$3,476.29	
020	0200	L				\$1.81	\$7,900.65	
020	0200	M				\$1.60	\$6,984.00	
020	0200	S					\$0.00	\$26,479.84
060	0600	E	6-INCH WATERLINE (COMPLETE)	LF	36334	\$1.44	\$52,320.96	
060	0600	I				\$0.65	\$23,617.10	
060	0600	L				\$1.48	\$53,774.32	
060	0600	M				\$3.65	\$132,619.10	
060	0600	S					\$0.00	\$262,331.48
114	1140	E	PIPELINE CROSSING	EA	1	\$5,700.00	\$5,700.00	
114	1140	I				\$2,288.00	\$2,288.00	
114	1140	L				\$5,200.00	\$5,200.00	
114	1140	M	(200 ft gas crossing)			\$200.00	\$200.00	
114	1140	S					\$0.00	\$13,388.00
115	1150	E	WASH CROSSING - OPEN CUT	LF	200	\$4.99	\$998.00	
115	1150	I				\$2.82	\$564.08	
115	1150	L				\$6.41	\$1,282.00	
115	1150	M				\$34.89	\$6,978.00	
115	1150	S					\$0.00	\$9,822.08
118	1180	E	ROAD CROSSING - OPEN-CUT	LF	200	\$9.17	\$1,834.00	
118	1180	I				\$3.30	\$660.88	
118	1180	L				\$7.51	\$1,502.00	
118	1180	M				\$28.63	\$5,726.00	
118	1180	S					\$0.00	\$9,722.88
120	1200	E	ROAD CROSSING - BORING - AUGER	LF	200	\$14.42	\$2,884.00	
120	1200	I				\$6.13	\$1,225.84	
120	1200	L				\$13.93	\$2,786.00	
120	1200	M				\$30.00	\$6,000.00	
120	1200	S					\$0.00	\$12,895.84
122	1220	E	ROCK EXCAVATION WATER	LF	34500	\$8.60	\$296,700.00	
122	1220	I				\$2.76	\$95,178.60	
122	1220	L				\$6.27	\$216,315.00	
122	1220	M				\$2.87	\$99,015.00	
122	1220	S					\$0.00	\$707,208.60
400	4000	E	1-INCH HOUSE SERVICE	EA	30	\$295.75	\$8,872.50	
400	4000	I				\$122.62	\$3,678.71	
400	4000	L				\$278.69	\$8,360.70	
400	4000	M				\$715.55	\$21,466.50	
400	4000	S					\$0.00	\$42,378.41
450	4500	E	PLUMBING FACILITIES - COMPLETE	EA	5	\$857.04	\$4,285.20	
450	4500	I				\$773.37	\$3,866.85	
450	4500	L				\$1,757.66	\$8,788.30	
450	4500	M				\$1,990.03	\$9,950.15	
450	4500	S					\$0.00	\$26,890.50
490	4900	R	ELECTRICAL POWER EXTENSION	MI	2		\$0.00	
490	4900	S				\$162,500.00	\$325,000.00	\$325,000.00
500	5000	E	BOOSTER STATION - COMPLETE	LS	1	\$11,670.18	\$11,670.18	
500	5000	I				\$5,694.36	\$5,694.36	
500	5000	L				\$12,941.73	\$12,941.73	
500	5000	M				\$77,834.90	\$77,834.90	



500	5000	S					\$0.00	\$108,141.17
600	6000	E	WATER TANK - AT-GRADE, COMPLETE	GAL	200000	\$1.14	\$228,000.00	
600	6000	I				\$0.43	\$86,240.00	
600	6000	L				\$0.98	\$196,000.00	
600	6000	M				\$1.20	\$240,000.00	
600	6000	S					\$0.00	\$750,240.00
650	6500	S	TANK PAINTING INSPECTION	LS	1	\$24,000.00	\$24,000.00	\$24,000.00
680	6800	E	ELECTRICAL & TELEMETRIC CONTROLS	LS	1		\$0.00	
680	6800	I				\$0.00	\$0.00	
680	6800	L					\$0.00	
680	6800	R					\$0.00	
680	6800	M					\$0.00	
680	6800	S				\$60,000.00	\$60,000.00	\$60,000.00
700	7000	E	SEPTIC TANK	EA	27	\$394.76	\$10,658.52	
700	7000	I				\$180.68	\$4,878.28	
700	7000	L				\$410.63	\$11,087.01	
700	7000	M				\$946.62	\$25,558.74	
700	7000	S					\$0.00	\$52,182.55
700	7015	E	INFILTRATOR DRAINFIELD	LF	8100	\$2.83	\$22,923.00	
700	7015	I				\$1.27	\$10,264.32	
700	7015	L				\$2.88	\$23,328.00	
700	7015	M				\$5.57	\$45,117.00	
700	7015	S					\$0.00	\$101,632.32
780	7880	E	INDIVIDUAL LAGOON CONSTRUCTION -	EA	5	\$8,786.69	\$43,933.45	
780	7880	I	COMPLETE			\$2,711.17	\$13,555.87	
780	7880	L				\$6,161.76	\$30,808.80	
780	7880	M				\$2,557.36	\$12,786.80	\$101,084.92
900	9001	E	BUNK VAN	WK	54	\$150.00	\$8,100	\$8,100.00
900	9002	T	SMALL TOOLS AND SUPPLIES	WK	54	\$310.00	\$16,740	
900	9002	S					\$0	\$16,740.00
900	9003	E	SET UP CAMP	EA	2	\$1,290.33	\$2,581	
900	9003	I				\$550.00	\$1,100	
900	9003	L				\$1,250.00	\$2,500	\$6,180.66
900	9007	V	TRAVEL AND RELATED EXP.	WK	54	\$205.00	\$11,070	\$11,070.00
900	9009	E	MOBILIZATION (ALL JOBS) Each Piece of	LD	26	\$914.00	\$23,764	
900	9009	I	Equipment Varies			\$81.64	\$2,123	
900	9009	L	Should be about 6-8% of Equipment Costs			\$185.55	\$4,824	\$30,710.99
900	9012	E	JOB SUPERVISION (UTILITIES)	WK	54	\$673.00	\$36,342	
900	9012	I				\$528.32	\$28,529	
900	9012	L				\$1,200.72	\$64,839	\$129,709.99
900	9014	E	JOB SUPERVISION (STOR. TANK)	WK	5	\$1,903.47	\$9,517	
900	9014	I				\$546.84	\$2,734	
900	9014	L				\$1,242.81	\$6,214	\$18,465.58
900	9015	I	TIMEKEEPER	WK	54	\$243.03	\$13,124	
900	9015	L				\$552.35	\$29,827	\$42,950.74
900	9016	E	SECURITY	WK	54	\$333.19	\$17,992	
900	9016	I				\$528.98	\$28,565	
900	9016	L				\$1,202.23	\$64,920	\$111,477.66
900	9017	E	TRANSPORTATION	LD	22	\$887.00	\$19,514	
900	9017	I	Should be about 6-8% of Material Costs			\$81.84	\$1,800	
900	9017	L				\$186.00	\$4,092	\$25,406.48
900	9020	R	PORTA-POTTY	WK	54	\$275.00	\$14,850	\$14,850.00
900	9021	R	TRASH DUMPSTER	LD	14	\$525.00	\$7,350	\$7,350.00
900	9060	E	ENVIRONMENTAL CLEANUP	JB	1	\$200.00	\$200	
900	9060	I				\$184.80	\$185	
900	9060	L				\$420.00	\$420	
900	9060	R					\$0	
900	9060	M				\$1,000.00	\$1,000	\$1,804.80
900	9070	E	EQUIPMENT STANDBY	HR	80	\$20.00	\$1,600	\$1,600.00
900	9075	B	INCENTIVES	JB	1	\$19,066.28	\$19,066	\$19,066.28
900	9080	F	MANAGEMENT FEE	MO	13	\$8,873.98	\$115,362	\$115,361.79
900	9850	O	NECA OVERHEAD	JB	1	\$333,514.38	\$333,514	\$333,514.38
900	9090	W	WAREHOUSE FEE	MO	13	\$1,936.60	\$25,176	\$25,175.77

TOTAL PROJECT COST= \$3,254,293.35

TOTAL NECA COST= \$2,826,493.35

INDIRECTS AS % OF NECA DIRECT COSTS= 0.2616

INDIRECTS AS % OF TOTAL PROJECT COSTS= 0.1801

FIRST ADVANCE = \$707,000

SECOND ADVANCE= \$419,000

# SUMMARY

Water Supply		\$2,932,722
A. Materials	\$1,035,445.08	
B. Labor	\$1,377,927.74	
C. NECA Mgt & Crew Support	\$519,348.83	
Liquid Waste Disposal		\$321,572
A. Materials	\$83,462.54	
B. Labor	\$171,437.26	
C. NECA Mgt & Crew Support	\$66,671.90	
Solid Waste Disposal		\$0
A. Materials	\$0.00	
B. Labor	\$0.00	
C. NECA Mgt & Crew Support	\$0.00	
TOTAL		\$3,254,293
+10% Contingencies		\$325,429
		\$3,579,723
+15% Support Services		\$536,958
		\$4,116,681
Navajo Nation Tax		\$162,715
Navajo Regulatory Review		\$97,629
TOTAL		\$4,377,025
ROUND TO NEAREST \$1,000		\$4,377,000
COST PER HOUSE		\$145,900.00



PROJECT SUMMARY

COMMUNITY WATER SUPPLY FACILITIES  
West Leupp Waterline Extension Phase 1

Leupp Chapter,  
Navajo Nation

Coconino County,  
Arizona

Indian Health Service  
Project No.  
NA-16-XM8 & NA-17-W04

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

June 2016



PROJECT SUMMARY  
COMMUNITY WATER SUPPLY FACILITIES  
West Leupp Waterline Extension Phase 1

Leupp Chapter, Navajo Nation  
Coconino County, Arizona

Indian Health Service  
Project No.  
NA-16-XM8 & NA-17-W04  
Public Law 86-121

INTRODUCTION

The Leupp Chapter of the Navajo Nation submitted project proposal dated May 5, 2016 requesting that the Navajo Area Indian Health Service (IHS) assist with the construction of water supply and waste disposal facilities to Navajo families in the Winslow Service Unit.

Projects NA-16-XM8 and NA-17-W04 will provide water facilities under Public Law 86-121 to Navajo homes in Leupp Chapter in the Winslow Service Unit area of the Navajo Area Indian Health Service (IHS). A comprehensive review of the Winslow Homeowner Database identified 34 homes in the chapter of Leupp that met requirements.

This Project Summary recommends the installation of 34 individual water services at identified homes.

Funding for 34 new or like-new project homes will be provided by Environmental Protection Agency (EPA) Safe Drinking Water Act Funds under project NA-16-XM8 for the amount of \$1,510,000 and by Navajo Nation Sihasin Funds under project NA-17-W04 for the amount of \$2,000,000. Projects NA-16-XM8 and NA-17-W04 will provide \$3,510,000 (\$103,235 per home). All funds will be managed by the IHS under the authority of Public Law 86-121.

GENERAL INFORMATION

Leupp is a small, unincorporated community consisting of a chapter house, preschools, primary school, and NHA housing developments. Leupp is located approximately 20 miles north of Interstate 40 on State Route 99. This chapter is in the southwestern portion of the Navajo Indian Reservation.

The topography in the project area consist of numerous volcanic mesas, sedimentary rock mesas, and alluvial valleys. Soil horizons in the area are generally sandy clay with occasional sandstone and basalt outcroppings. Vegetation in the project area consists primarily of bitter brush, sagebrush, piñon, and juniper trees. Various cacti and grasses common to the northeastern Arizona high desert plateau are also found here. Elevations in the area range from 4,500 to 6,000 feet above sea level, and annual precipitation averages eight inches.

The income for most families living in the area comes from producing various traditional handicrafts, sheep and cattle ranching. Some residents are employed by local schools or various agencies of the federal and local governments. The cities of Winslow, Holbrook, and Flagstaff do offer a source of work for those able to commute.

The structural condition of the existing homes on this project ranges from below average wooden structures, to good conventional frame and mobile homes. Growth potential for this area is considered average for the Navajo Indian Reservation.

## EXISTING SANITATION FACILITIES

### District 5 Regional Water System

The District 5 regional water system serves the chapters of Birdsprings, Leupp and Tolani Lake. The IHS constructed this large regional water system to deliver potable water to meet the needs of the people in this area. The District 5 water system is operated and maintained by the Navajo Tribal Utility Authority (NTUA). Multiple IHS projects funded the various portions of the regional water system including: NA-65-347b, NA-73-928, NA-74-542a, NA-75-562, NA-77-194, NA-79-232, NA-80-217, NA-80-253, NA-86-418, NA-87-975, NA-88-602W, NA-89-448, NA-91-648, NA-91-673, NA-92-773, NA-92-785, NA-93-A38W, NA-93-A20, NA-95-697, NA-98-B01, NA-00-N09, NA-00-B44, NA-01-B81, NA-02-C04, NA-02-B97, NA-03-C39, NA-04-C64, NA-05-B47, NA-06-D23, NA-06-Q06, NA-06-X91, NA-07-D43, NA-09-D96, NA-10-E16, NA-11-E39, NA-12-E61, and NA-13-E84.

Water production for the District 5 system comes from three wells near Leupp, Arizona: well 5T-505, well 5T-510 (manually operated only), and well 5T-547. Combined, the wells produce 302 gpm. Radio telemetry between wells 5T-505 & 5T-547 and the Birdsprings storage tanks (two 100,000-gallon tanks) controls the water level in these tanks. The Ives Mesa tanks (one 60,000-gallon tank and one 45,000-gallon tank) are filled by the Birdsprings booster pump, drawing water from the Birdsprings tanks. The booster pump is controlled by radio telemetry from the Ives Mesa tanks.

The Tolani Lake booster tanks are also fed from the Birdsprings tanks. The Tolani Lake booster pumps operate in lead/lag fashion by the radio telemetry signal received from the Newberry Mesa tank (100,000-gallon tank). The Newberry Mesa tank provides storage for the homes in the Tolani Lake Chapter area.

There are also two 26,000 gallon tanks in Leupp that are gravity fed from the Birdsprings tanks with water level controlled by an altitude valve. These tanks insure the Leupp area has water available in the immediate area, and in the event the waterline from the Birdsprings tank is out of service.

### Sewage Disposal

Densely populated communities in District 5 are served with their own community sewer lagoons. Homes not served by community sewer systems utilize individual on-site wastewater disposal systems composed of septic tanks and drainfields. Disposal systems of this type are typical of IHS installations in the District 5 areas. Homes in the area not yet served by IHS typically use pit privies.

### Solid Waste Disposal

The District 5 area residents of Leupp, Birdsprings, and Tolani Lake use a transfer station located in Leupp that is operated and maintained by the Coconino County. Tolani Lake Chapter residents can also pay to use a Chapter operated waste container at the chapter house.

### Plumbing

Homes in this area generally do not have interior plumbing installed. Homeowners tend to request assistance from tribal and federal programs to complete their indoor plumbing.

## RECOMMENDED SANITATION FACILITIES

### Water Supply

This Project Summary recommends the installation of approximately 76,735 feet of 6-inch, 4-inch, and 2-inch PVC water line to connect 34 homes to the District 5 regional water system.

Other alternatives for supplying water to each home were considered during project development. Supplying water with either community water service connections or the installation of individual cistern systems are the only practical alternatives available. From a public health and user convenience standpoint, supplying piped water via a regulated public water system is superior to an individual water hauling and cistern system. The construction costs and distances to connect 34 of these project homes to a public water system are technically feasible and within the allowable budget for this project. Therefore, community water service connections were chosen as the best method to provide water to those homes.

### Sewage Disposal

These projects do not provide funding for waste disposal facilities. The IHS plans to submit an SDS project to provide additional funding to install the onsite sewage disposal facilities in order to complete this project.

### Plumbing Facilities

Eight homes do not have adequate plumbing. 4 homes will need bathroom additions, to be provided by others, to accommodate prefabricated plumbing "long walls". Long walls provide a common wall containing 3/4-inch water supply piping and 3-inch drain, waste, and vent piping; they also provide for the hanging and connection of bathroom fixtures on one side and a kitchen sink on the other. The bathroom fixtures include a bathtub, toilet, and lavatory. The double basin kitchen sink is provided with a 66-inch long sink cabinet. The IHS will provide a water heater, if the homeowner desires, with the energy option of either electricity or propane gas.

If at the start of construction bathroom additions are not built and ready at the project homes, the IHS will then offer the homeowner two options. First, a "short wall" can be installed inside the existing home. Short wall fixtures include a toilet, lavatory, and a single basin kitchen sink with a 42-inch long cabinet and water heater option. If the homeowner objects to the short wall option, a kitchen sink (only) can be placed inside the home to at least provide potable water to the family. Both long and short walls will require finish carpentry materials and labor not supplied by the IHS. This carpentry work is considered as a homeowner responsibility and an in-kind contribution to the project.

### Solid Waste

No solid waste disposal facilities are recommended for this project.



## PARTICIPATION

The EPA, through Safe Drinking Water Act Funds, will make a contribution of \$1,510,000. The Navajo Nation, through Sihasin Funds, will make a contribution of \$2,000,000. Total contribution will equal \$3,510,000 for the full cost of NA-16-XM8 and NA-17-W04. A breakdown of project costs is shown in Table II.

The project will be a cooperative effort of the EPA, the Navajo Nation, the participating District 5 & 7 Chapters, the IHS, and the homeowners. The IHS will provide engineering design services, special construction materials, and construction supervision for all facilities proposed by the Project Summary. The IHS will also secure all required archaeological clearances and rights-of-way necessary for the construction, operation, maintenance, repair, and replacement of the facilities.

The Navajo Nation, through its construction enterprise, the Navajo Engineering and Construction Authority (NECA), will provide all labor, equipment, standard materials, and related services to construct water supply and waste disposal facilities. The IHS will make a monetary contribution to the NECA for the full amount of the non-profit 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 Nation. The IHS will assist the Navajo Nation in the preparation of a transfer document. This document will assign operation, maintenance, and repair responsibilities for the community facilities to the NTUA, and transfer individual on-site facilities to the individual homeowners. The individual chapters and/or individual homeowners will be responsible for the construction of all bathroom additions.

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

## OPERATION AND MAINTENANCE OF FACILITIES

Upon transfer of the community water supply facilities, the Navajo Tribe will assign the operation and maintenance (O&M) responsibilities for these facilities to the Navajo Tribal Utility Authority (NTUA). Individual homeowners will pay a monthly NTUA charge for water service. The NTUA monthly charge for residential water service consists of an \$8.89 service charge plus a usage charge of \$3.51 per 1,000 gallons for the first 3,000 gallons and \$5.44 per 1,000 gallons thereafter. For a typical Navajo household using 250 gallons per day, the monthly NTUA water service charges would be about \$44 plus tax. Homeowners will also be required to pay to the NTUA a \$10 non-refundable connection fee for initial water service and \$25 refundable fee to establish an account, if applicable.

Individual homeowners will be responsible for the operation and maintenance of individual facilities located on the homesite, including the water serviceline beyond the water meter, the entire septic tank and drainfield system, and the individual cistern system where installed. It is recommended that the homeowners receiving septic tank systems have their septic tank pumped every 2-4 years or as necessary. There are several commercial pumpers available in Chinle, Holbrook, Winslow, and Flagstaff, Arizona. Costs for septic tank pumping service range from \$250-\$450, depending on the location of the homes and the number of tanks to be pumped.

ENVIRONMENTAL REVIEW

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

SANITATION DEFICIENCIES

The West Leupp Phase 1 Extension project addresses the water and sewer deficiencies for thirty-four homes as listed under SDS# AZ03108-1602. Construction of this project will reduce 34 homes from a level 5 to level 1 deficiency, fulfilling the scope of the work defined in this SDS.

INDIVIDUAL PROJECT PARTICIPANTS

Table I below, lists the individual project participants and their respective information.

Table I  
List of Individual Project Participants  
NA-16-XM8 & NA-17-W04

Map No.	Homeowner	Chapter	House Type	First Service	Recommended Facilities			Bathroom	
					Water	Sewer	SW	Addition Required	Plumbing Required
1	Roberta Franklin	Leupp	E-1*	YES	YES	NO	NO	NO	NO
2	James L. Begay	Leupp	E-1(M)*	YES	YES	YES	NO	NO	NO
3	Mary Lou Chee	Leupp	E-1	YES	YES	YES	NO	NO	NO
4	Betty Lou Begay	Leupp	E-1(M)	YES	YES	YES	NO	NO	NO
5	Randy Chee	Leupp	E-1(M)	YES	YES	YES	NO	NO	NO
6	Shirley Ann Begay	Leupp	E-1(H)	YES	YES	YES	NO	YES	YES
7	Shirley Edd	Leupp	E-1	YES	YES	YES	NO	NO	NO
8	Samuel Edd	Leupp	E-1	YES	YES	YES	NO	YES	YES
9	Richard Edd	Leupp	E-1	YES	YES	YES	NO	YES	YES
10	Emerson Begay	Leupp	E-1	YES	YES	YES	NO	NO	YES
11	Yvonne Riggs	Leupp	E-1	YES	YES	YES	NO	NO	NO
12	Robert Chee	Leupp	E-1	YES	YES	YES	NO	NO	NO
13	Mearle/Sharon David	Leupp	E-1	YES	YES	YES	NO	NO	YES
14	Lucy David	Leupp	E-1	YES	YES	NO	NO	NO	NO
15	Merrill David	Leupp	E-1*	YES	YES	YES	NO	NO	NO
16	Marlene Granger	Leupp	E-1	YES	YES	NO	NO	NO	NO
17	Fredia Granger	Leupp	E-1	YES	YES	YES	NO	NO	NO
18	Caroline Yazzie	Leupp	E-1	YES	YES	YES	NO	NO	NO
19	Elaine Yazzie	Leupp	E-1(H)*	YES	YES	NO	NO	NO	NO
20	Wilbert Riggs	Leupp	E-1(M)*	YES	YES	YES	NO	NO	NO
21	Helen George	Leupp	E-1*	YES	YES	YES	NO	NO	YES
22	Roger/Susie Deschinnie	Leupp	E-1	YES	YES	NO	NO	NO	NO
23	Maxine Tsiniginnie	Leupp	E-1	YES	YES	YES	NO	NO	YES
24	Victoria Tsiniginnie	Leupp	E-1	YES	YES	YES	NO	NO	NO

Continued

Table I - continued  
List of Individual Project Participants  
 NA-16-XM8 & NA-17-W04

25	Elmer Fowler	Leupp	E-1(M)	YES	YES	YES	NO	NO	NO
26	Gary Jensen	Leupp	E-1(M)	YES	YES	YES	NO	NO	NO
27	Bertha Jensen	Leupp	E-1*	YES	YES	YES	NO	NO	NO
28	Eddie Foster	Leupp	E-1*	YES	YES	NO	NO	NO	NO
29	Roslyn Foster	Leupp	E-1(M)	YES	YES	YES	NO	NO	NO
30	Henry Monroe	Leupp	E-1	YES	YES	YES	NO	NO	NO
31	Delores McCabe	Leupp	E-1*	YES	YES	NO	NO	NO	NO
32	Brian Kelly	Leupp	E-1(H)	YES	YES	YES	NO	YES	YES
33	Burton Kelly	Leupp	E-1*	YES	YES	NO	NO	NO	NO
34	Nellie Ann Kelly	Leupp	E-1(M)	YES	YES	YES	NO	NO	NO

NOTES: E-1 existing housing; (M) Mobile Home; (H) Hogan; \* Medical Referral  
 Sewer facilities

### COST OF RECOMMENDED FACILITIES

Table II provide cost estimates of the facilities recommended in this Project Summary.

Table II  
Estimated Cost of Recommended Facilities  
 NA-16-XM8 & NA-17-W04

Item	Quantity	Unit	Unit Cost	Total Cost
<u>WATER SUPPLY FACILITIES</u>				
Surveying and Drafting	76,735	LF	\$0.26	\$19,951
Archaeology Clearance	1	LS	25,000.00	25,000
Endangered Species Survey	1	LS	5,000.00	5,000
Stormwater Pollution Prevention	1	LS	2,750.00	2,750
2-inch PVC Waterline	8,695	LF	8.00	69,560
4-inch PVC Waterline	20,140	LF	10.00	201,400
6-inch PVC Waterline	45,100	LF	12.00	541,200
Pipeline Crossing	5	EA	11,100.00	55,500
Wash Crossing, Open Cut	1,200	LF	40.00	48,000
Road Crossing, Bore	600	LF	45.00	27,000
Rock Excavation, Water Line	24,290	LF	17.25	419,003
Pressure Reducing Valve	1	EA	4,670.00	4,670
1-inch House Service	34	EA	1,325.00	45,050
Electric Power Extension	0.7	MI	225,000.00	157,500
Booster Station, Complete	1	LS	59,500.00	59,500
Water Tank (125,000 Gal), Complete	2	EA	350,500.00	701,000
Electrical and Telemetric Controls	1	LS	60,000.00	60,000
NECA Mgmt., Trans, & Support	1	LS	456,400.00	456,400
<b>Total Water Supply Facilities</b>				<b>\$2,898,484</b>

Continued



Table II  
Estimated Cost of Recommended Facilities  
 NA-16-XM8 & NA-17-W04

Total Water Supply Facilities	\$2,898,484
+5% Contingencies	144,924
+2.5% Administration	72,462
+5% Navajo Sales Tax	144,924
+8.6% Planning and Design	<u>249,270</u>
Total Project Cost	\$3,510,064
Total Project Cost (Rounded)	\$3,510,000
Total Cost per Home (\$3,510,000/34)	\$103,235
Total Overhead (Surveying/Drafting, Admin., Planning/Design)	\$341,683
NA-16-XM8, EPA Overhead Share =	\$146,992
NA-17-W04, Navajo Nation Overhead Share =	\$194,691

#### FUNDING SUMMARY

EPA Funds, Project NA-16-XM8	\$1,510,000
Navajo Nation Funds (Sihasin), Project NA-17-W04	<u>\$2,000,000</u>
TOTAL, Projects NA-16-XM8 and NA-17-W04	<u>\$3,510,000</u>

#### PROJECT IMPLEMENTATION SCHEDULE

Table III shows target dates for completion of various project stages.

Table III  
Project Implementation Schedule  
 NA-16-XM8 & NA-17-W04

Task	Target Completion	
Right of Way	April	2018
Design	August	2018
Construction Start	October	2018
Construction End	May	2020
As-Built	July	2020
Operation & Maintenance Training	August	2020
Transfer	September	2020
Final Report	May	2021

PROJECT SUMMARY  
COMMUNITY WATER SUPPLY FACILITIES  
West Leupp Waterline Extension Phase 1

Leupp Chapter, Navajo Nation  
Coconino County, Arizona

Indian Health Service  
Project No.  
NA-16-XM8 & NA-17-W04

Public Law 86-121

PREPARED BY:

\_\_\_\_\_  
Kevin Gore  
Field Engineer, Division of Sanitation  
Facilities Construction  
Winslow Service Unit

\_\_\_\_\_  
Date

REVIEWED BY:

\_\_\_\_\_  
Michael Koehmstedt, P.E.  
District Engineer, DSFC  
Winslow Service Unit

\_\_\_\_\_  
Date

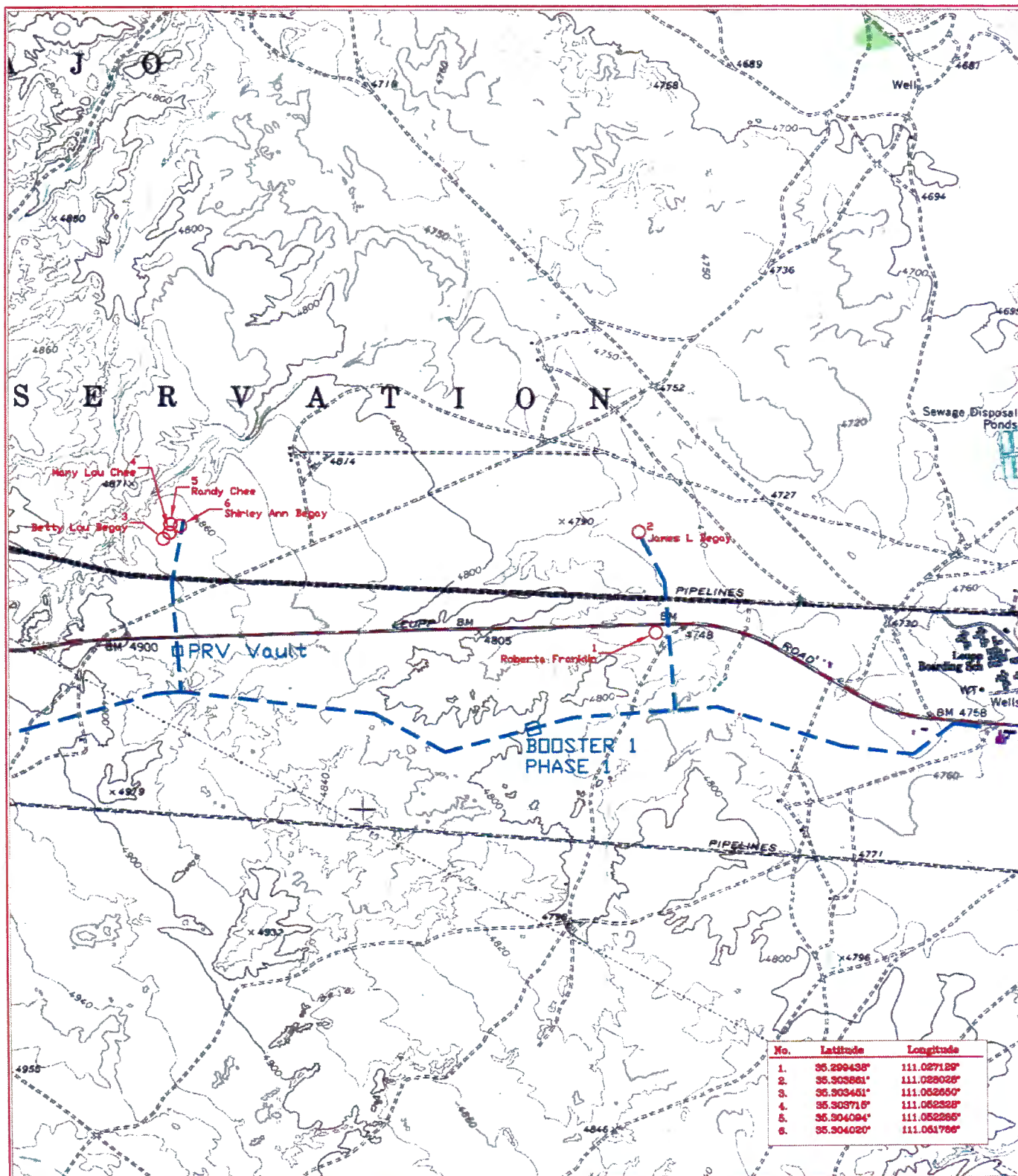
APPROVED BY:

\_\_\_\_\_  
Roger G. Slape, P.E.  
Director, DSFC, Office of Environmental  
Health and Engineering, Navajo Area  
Indian Health Service

\_\_\_\_\_  
Date

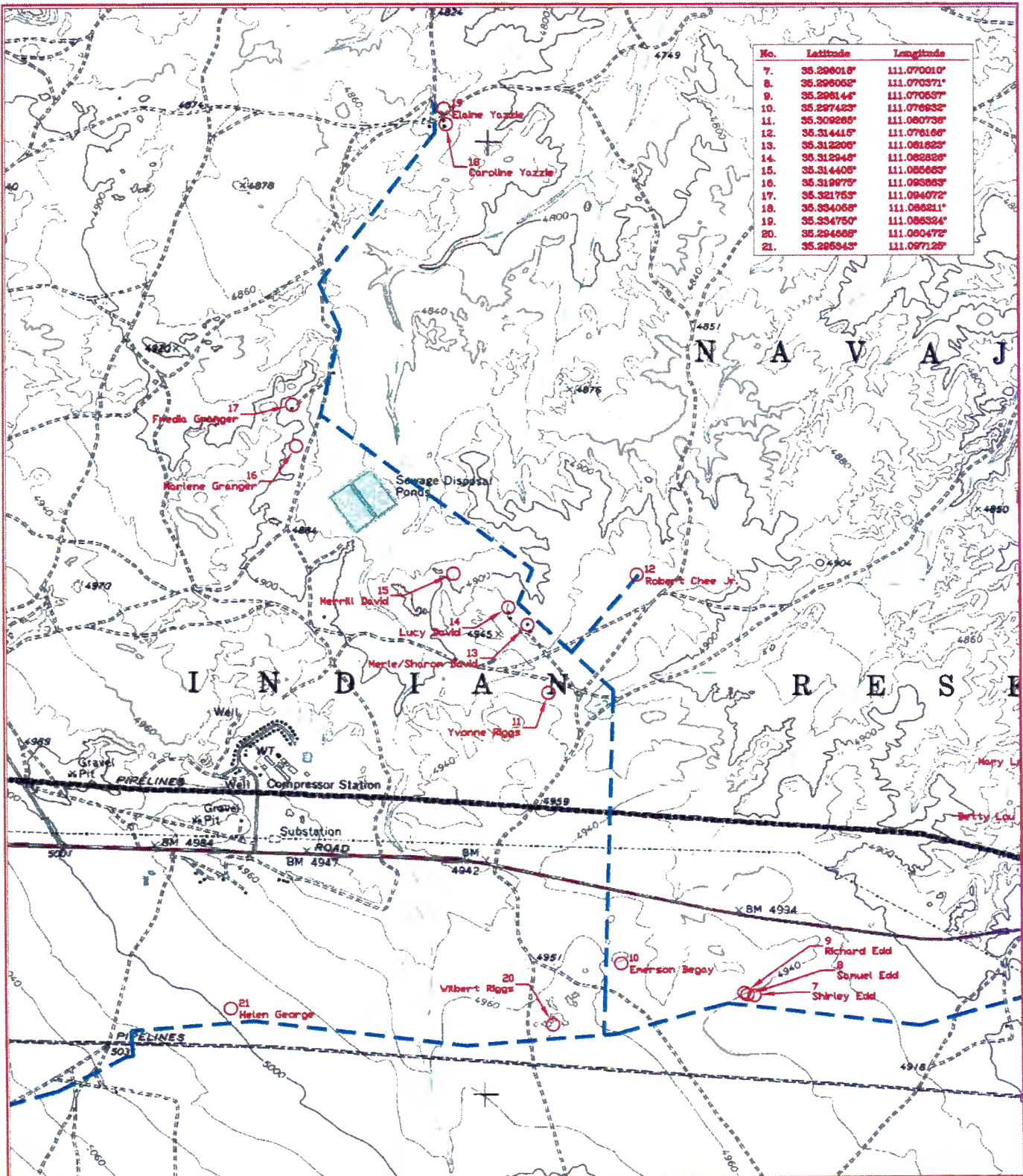






<p>GRAPHIC SCALE (IN FEET) SCALE: 1"=2000'</p>		<p><b>LEGEND</b></p> <p>GRAND FALLS SE, ARIZONA</p> <p>35015-W11100/7.5</p> <p>1000</p> <p>DMA 5704 I SE-SE22S Y606</p>	<p>DEPARTMENT OF HEALTH AND HUMAN SERVICES U.S. PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE</p>
<p>DESIGNED BY: KC DATE: 05/2016</p>	<p>CHECKED BY: KC DATE: 05/2016</p>		<p>WINSLOW</p> <p>NAVAJO NATION</p> <p>ARIZONA</p> <p><b>WINSLOW SU</b></p> <p><b>WEST LEUPP WL EXT PH 1</b></p> <p><b>IHS PROJ. NO. NA-16-XM8/W04</b></p>

OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING



No.	Latitude	Longitude
7.	35.296018°	111.070010°
8.	35.296062°	111.070371°
9.	35.296144°	111.070597°
10.	35.297423°	111.070632°
11.	35.309285°	111.060738°
12.	35.314415°	111.070168°
13.	35.312205°	111.061823°
14.	35.312948°	111.062828°
15.	35.314405°	111.062653°
16.	35.319975°	111.062853°
17.	35.321753°	111.064072°
18.	35.334058°	111.063211°
19.	35.334750°	111.06324°
20.	35.294658°	111.060472°
21.	35.285943°	111.067128°



GRAPHIC SCALE  
(IN FEET)  
SCALE: 1"=2000'

DRAWN BY: KG  
DATE: 05/2016

CHECKED BY: KG  
DATE: 05/2016

SHEET NO. 2 OF 3



#### LEGEND

GRAND FALLS SE, ARIZONA  
N0516-W11100/7.5  
1000  
DMA 3704 1 SE-SERIES 7080

OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING

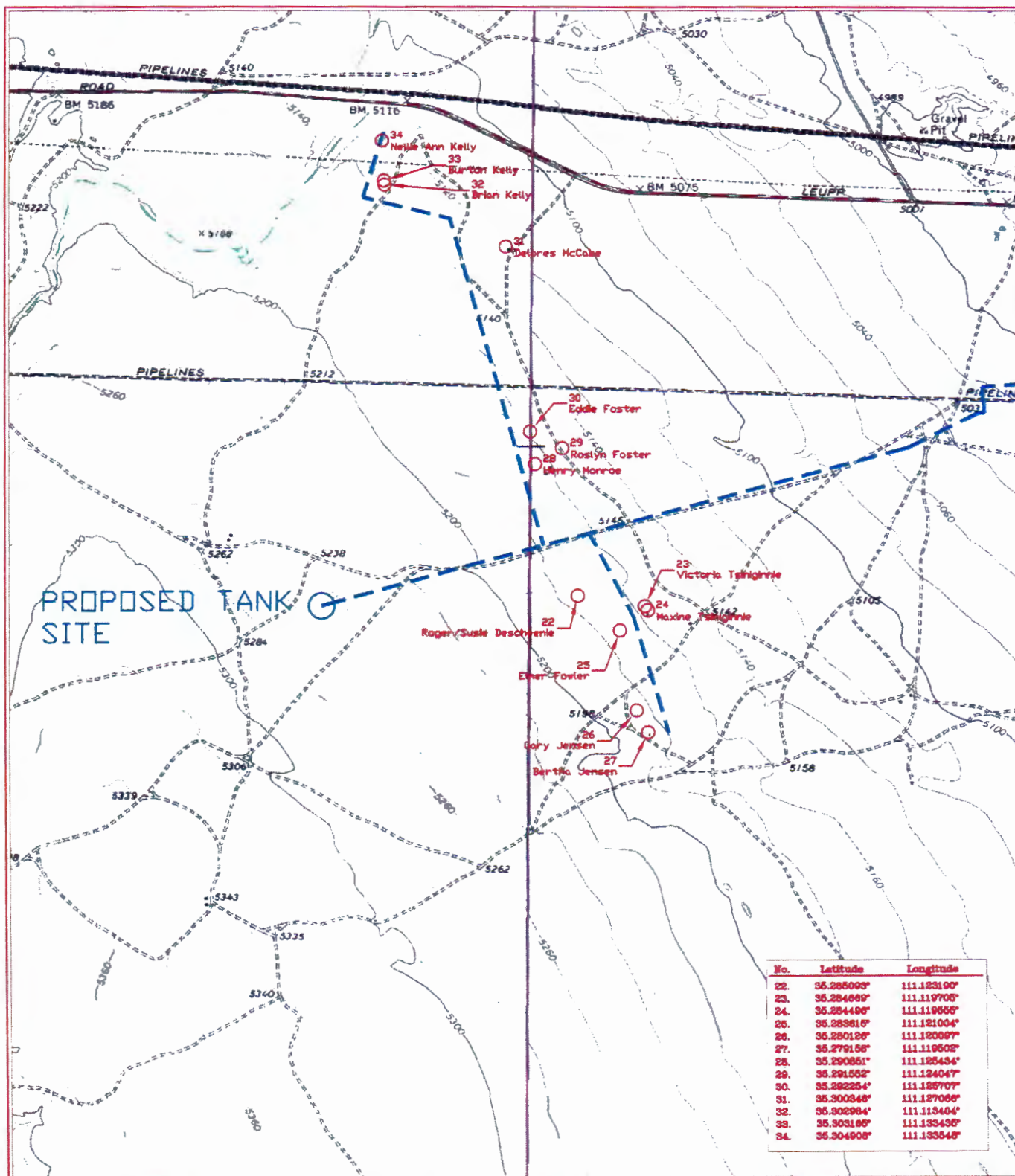
DEPARTMENT OF HEALTH AND HUMAN SERVICES  
U.S. PUBLIC HEALTH SERVICE  
INDIAN HEALTH SERVICE

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IHS PROJ. NO. NA-16-XM8/W04





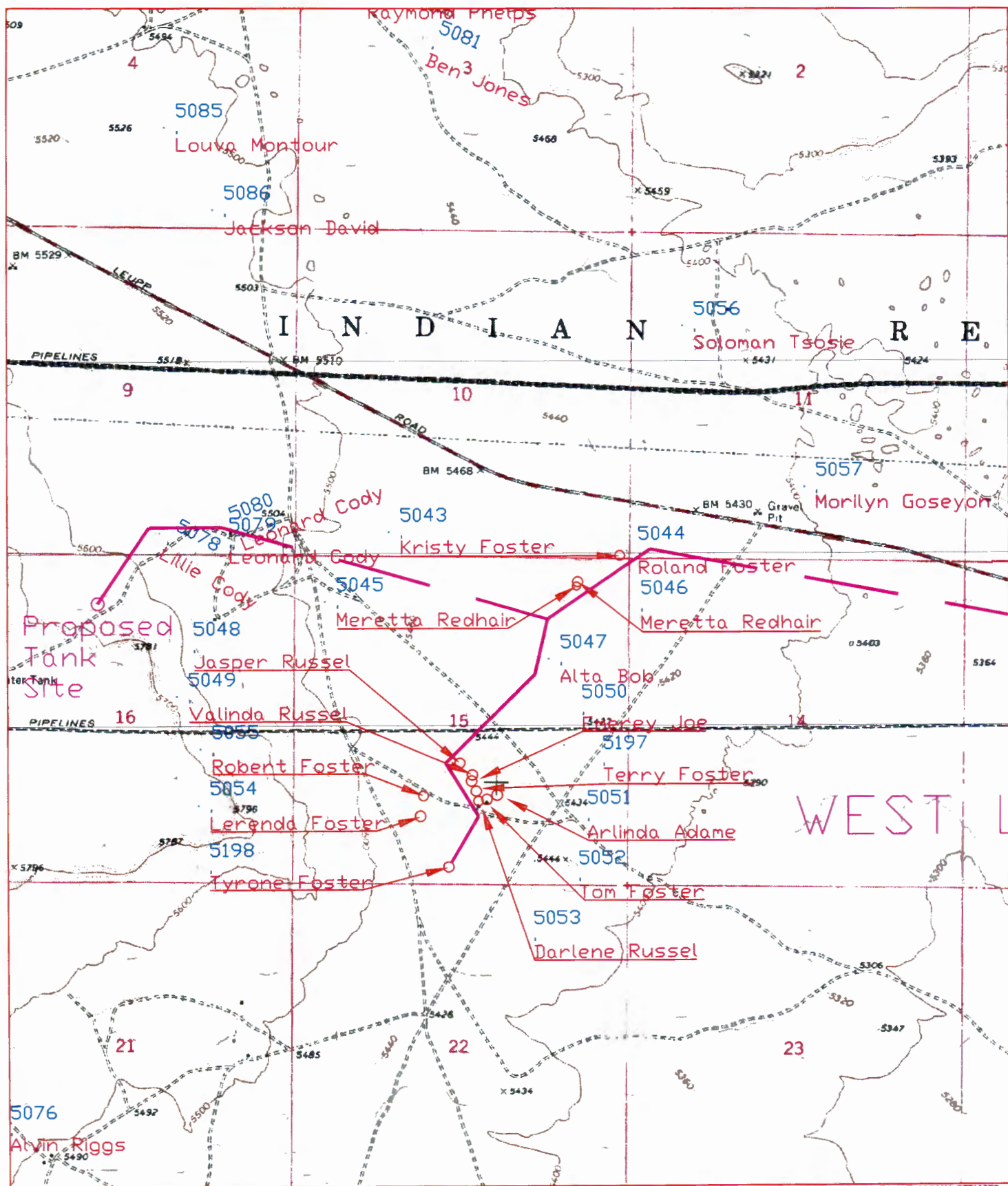
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SHEET NO. 3 OF 3

OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING





GRAPHIC SCALE  
(IN FEET)

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DATE: 06/2013

CHECKED BY: KG  
DATE: 06/2013

SHEET NO. 2 OF 2

### LEGEND

GRAND FALLS SW, ARIZONA

MSB16-W11107.8/7.8

1000

AMS 5764 1 SW-SERIES 7806

OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
U.S. PUBLIC HEALTH SERVICE  
INDIAN HEALTH SERVICE

WINSLOW NAVAJO NATION ARIZONA

WINSLOW SU

WEST LEUPP WL EXT PH 2

IHS SDS PROJ. NO. AZ0138-1604

Design Analysis  
Summary of Additional Home  
District 5 Community Water System

DATE: 5/5/2016

Chapter	Zone	No. Homes per Project							Existing	Total
		NA-08-Q97	NA-12-E61	NA-13-E84	NA-14-T40	NA-15-F15	NA-16-F37	NA-16-XM8/W04		
Leupp / Birdsprings	A	6	0	5	0	5	1	34	427	478
Tolani Lake	B	0	5	2	0	1	0	0	217	225
Ives Mesa	C	1	2	0	12	1	1	0	114	131
Total:		7	7	7	12	7	2	34	758	834

**NAVAJO WATER SYSTEM DESIGN ANALYSIS**

DATE: May-16 SYSTEM: District 5  
 Electrical Power Available: 480 Volts &

PRESS. ZONE: All  
3 Phase

PROJECT NO. NA-16-XM8/W04  
 Supplier: NTUA

**EXISTING SYSTEM****Water Production**

FROM OPERATING UTILITY

Daily Total Usage						GPD
Less Daily Demand of School & Business						GPD
Daily Domestic Water Usage						GPD
NO. of Services		Average Service Usage				GPHD

## IF ACTUAL USAGE RATES UNAVAILABLE

No. of Homes	758	X	200	GPHD=	151,600	GPHD
No. of Students						
Elementary	520	X	20	GPSD=	10,400	GPD
Public School	310	X	40	GPSD=	12,400	GPD
Business	0	X	750	GPBD=	0	GPD
TOTAL:					174,400	GPD

**Water Storage**

Total Storage Volume	510,000	GAL
Less Fireflow Reserve (from operating utility)	0	GAL
Total Useable Storage	510,000	GAL
Days of Storage	2.92	DAYS

TANKS	BS #1	100,000 LP #1	25,000 Ives M #1	60,000
	BS #2	100,000 LP #2	25,000 Ives M #2	45,000
	Newberry	100,000 TL #1	30,000 TL #2	25,000
	Total	510,000		

Water Source: Type of Supply

Three wells in the Leupp Area.**EXISTING WELL & BOOSTER PUMP DATA FROM OPERATING UTILITY**

Well No.	Casing Diam. (in)	Depth (ft)	SWL (ft)	Max. Well Yield	pumping Level	Present Pump & Pumping Level	TDH	HP
5T-505	10	425	137	160	GPM @ 154 Ft.	160 GPM @ N/A Ft.	274	25
5T-510	13	464	98	120	GPM @ 105 Ft.	not used GPM @ Not used Ft.	264	10
5T-547	13	670	133	500	GPM @ 144 Ft.	165 GPM @ 137 Ft.	449	25
Total				780	GPM	325 GPM		

Other sources, capability, and current production:

TOLANI LAKE BOOSTER (TO NEWBERRY TANK) - 96 GPM; BIRDSRINGS BOOSTER (TO IVES MESA TANKS) 56 GPM. 5T-510 is offline because the pump is not properly sized for current sytem hydraulics and it is not currently needed.

Average Daily Pumping Cycle

174,400 gal/day

325

GPM

=

pumping rate periods  
8.94 Hr.**Water Distribution** (Range of Pressure of Existing Homes)

System Pressure

Maximum (static)  
 Minimum (dynamic)

60 psi  
 13 psi

Location: NumerousLocation: Homes to the southeast of the Leupp tanks.

Location of known Pressure Problems: None at this time.



# NAVAJO WATER SYSTEM DESIGN ANALYSIS

Page 2 OF 8

DATE: May-16 SYSTEM: District 5 PRESS. ZONE: All PROJECT NO. NA-16-XM8/W04

## ADDITIONS TO SYSTEM UNDER PROPOSED PROJECT

### Water Production

No. of Additional Homes	(NA-08-Q97)	7	x	200	GPHD	=	1,400	GPD
No. of Additional Homes	(NA-12-E61)	7	x	200	GPHD	=	1,400	GPD
No. of Additional Homes	(NA-13-E84)	7	x	200	GPHD	=	1,400	GPD
No. of Additional Homes	(NA-14-T40)	12	x	200	GPHD	=	2,400	GPD
No. of Additional Homes	(NA-15-F15)	7	x	200	GPHD	=	1,400	GPD
No. of Additional Homes	(NA-16-F37)	2	x	200	GPHD	=	400	GPD
No. of Additional Homes	(NA-16-XM1/W04)	34	x	200	GPHD	=	6,800	GPD

No. of Additional School Students								
Elementary		0	x	20	GPSD	=	0	GPD
High School		0	x	40	GPSD	=	0	GPD
Boarding School		0	x	60	GPSD	=	0	GPD
Total Additional Water Usage							15,200	GPD
Present Usage (Use 200 GPDH minimum)							174,400	GPD
Total Usage after Project Completion							189,600	GPD

### Water Storage (Additional Required?)

Total Storage Required After Project Completion		295,800 Gal
Total Existing Storage (See Page 1 for listing of tanks)		510,000 Gal
Existing Storage Adequate?	/ X / Yes / / No	

If No:

Total storage required (based on "Future Water Usage" below)	Gal
Total existing useable storage	Gal
Additional storage required/proposed	Gal

### Water Source (Additional Required?)

Total Capacity needed for average flow conditions after project completion	189,600 / 12 Hr/ 60	263	GPM
Total Present Pump Capacity		325	GPM
	additional source needed for Avg	0	GPM
Present Pump Capacity Adequate	/ X / Yes / / No		

If No: (and source adequate):  
then a new pump required:

Well #	ip and Pumping Level	GPM @	Ft.	TDH	HP
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Other:

Present Source Adequate	/ X / Yes / / No
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If No:

Source capability required (based on Future Water Usage" below)	GPD/12 / 60=	GPM
Present Source with New Well Capability		GPM
Additional Source Required Using Future Growth		GPM

### Water Distribution After Project Completion (Range of pressure at homes after additions)

System Pressure			
Maximum (static)	60	psi	Location: Numerous
Minimum (dynamic)	25	psi	Location: Numerous

Location of

### Estimated Population Growth for Sizing Major Improvements if Required

Growth Factor within next	years.		
Present Water Usage (Includes proposed project)			GPD
Future Water Usage	Houses	Businesses	GPD
		Total	GPD

ITEMS NEEDED TO UPGRADE SYSTEM: NONE

# **NAVAJO WATER SYSTEM DESIGN ANALYSIS**

Page 3 OF 8

DATE: May-16 SYSTEM: District 5 PRESS. ZONE: Zone A PROJECT NO. NA-16-XM8/W04  
 Electrical Power Available: 480 Volts & 3 Phase Supplier: NTUA

## **EXISTING SYSTEM**

### **Water Production**

FROM OPERATING UTILITY	Daily Total Usage	GPD
	Less Daily Demand of School & Business	GPD
	Daily Domestic Water Usage	GPD
	NO. of Services	Average Service Usage
		GPHD

### **IF ACTUAL USAGE RATES UNAVAILABLE**

No. of Homes	427	X	200	GPHD=	85,400	GPHD
No. of Students						
Elementary	450	X	20	GPSD=	9,000	GPD
Public School	310	X	40	GPSD=	12,400	GPD
Business	0	X	750	GPBD=	0	GPD
TOTAL:					106,800	GPD

### **Water Storage**

Total Storage Volume	305,000	GAL
Less Fireflow Reserve (from operating utility)	0	GAL
Total Useable Storage	305,000	GAL
Days of Storage	2.86	DAYS

TANKS	BS #1	100,000	LP #1	25,000
	BS #2	100,000	LP#2	25,000
	TL #1	30,000	TL #2	25,000
	Total	305,000		

Water Source: Type of Supply Three wells in Leupp area.

## **EXISTING WELL & BOOSTER PUMP DATA FROM OPERATING UTILITY**

Well No.	Casing Diam. (in)	Depth (ft)	SWL (ft)	Max. Well Yield	pumping Level	Present Pump & Pumping Level	TDH	HP
5T-505	10	425	137	80	GPM @ 154 Ft.	160 GPM @ N/A Ft.	274	25
5T-510	13	464	98	80	GPM @ 105 Ft.	not used GPM @ Not used Ft.	264	10
5T-547	13	670	133	300	GPM @ 144 Ft.	165 GPM @ 137 Ft.	449	25
Total				460	GPM	325 GPM		

Other sources, capability, and current production: Current production of wells are shown above. 5T-547 @ 165 gpm and 5T-505 @ 160 gpm.

<b>Average Daily Pumping Cycle</b>	106,800 gal/day	325	GPM	=	pumping rate periods 5.48 Hr.
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### **Water Distribution** (Range of Pressure of Existing Homes)

System Pressure					
Maximum (static)	60	psi	Location:	<u>Numerous</u>	
Minimum (dynamic)	13	psi	Location:	<u>Homes near Leupp tanks</u>	

Location of known Pressure Problems: None

# NAVAJO WATER SYSTEM DESIGN ANALYSIS

Page 4 OF 8

DATE: May-16 SYSTEM: District 5 PRESS. ZONE: Zone A PROJECT NO. NA-16-XM8/W04

## ADDITIONS TO SYSTEM UNDER PROPOSED PROJECT

### Water Production

No. of Additional Homes	(NA-08-Q97)	6	x	200	GPHD	=	1,200	GPD
No. of Additional Homes	(NA-13-E84)	5	x	200	GPHD	=	1,000	GPD
No. of Additional Homes	(NA-15-F15)	5	x	200	GPHD	=	1,000	GPD
No. of Additional Homes	(NA-16-F37)	1	x	200	GPHD	=	200	GPD
No. of Additional Homes	(NA-16-XM8/W04)	34	x	200	GPHD	=	6,800	GPD
No. of Additional School Students								
Elementary		0	x	20	GPSD	=	0	GPD
High School		0	x	40	GPSD	=	0	GPD
Boarding School		0	x	60	GPSD	=	0	GPD
Total Additional Water Usage							10,200	GPD
Present Usage (Use 200 GPDH minimum)							106,800	GPD
Total Usage after Project Completion							117,000	GPD

### Water Storage (Additional Required?)

Total Storage Required After Project Completion 175,500 Gal  
 Total Existing Storage (See Page 1 for listing of tanks) 305,000 Gal  
 Existing Storage Adequate? / X / Yes / / No

If No:

Total storage required (based on "Future Water Usage" below) Gal  
 Total existing useable storage Gal  
 Additional storage required/proposed Gal

### Water Source (Additional Required?)

Total Capacity needed for average flow conditions after project completion 117,000 / 12 Hr / 60 163 GPM  
 Total Present Pump Capacity 325 GPM  
 additional source needed for Avg 0 GPM  
 Present Pump Capacity Adequate / X / Yes / / No

If No: (and source adequate):  
 then a new pump required:

Well # p and Pumping Level  
 GPM @ Ft., TDH HP

Other:

Present Source Adequate / X / Yes / / No

If No:

Source capability required (based on Future Water Usage" below) GPD/12 / 60= GPM  
 Present Source with New Well Capability GPM  
 Additional Source Required Using Future Growth GPM

### Water Distribution After Project Completion (Range of pressure at homes after additions)

System Pressure  
 Maximum (static) 60 psi Location: Numerous  
 Minimum (dynamic) 13 psi Location: Homes near Leupp tanks

Location of

### Estimated Population Growth for Sizing Major Improvements if Required

Growth Factor within next years.  
 Present Water Usage (Includes proposed project)  
 Future Water Usage Houses Businesses Total GPD  
 GPD  
 GPD

ITEMS NEEDED TO UPGRADE SYSTEM: NONE



**NAVAJO WATER SYSTEM DESIGN ANALYSIS**

DATE: May-16 SYSTEM: District 5 PRESS. ZONE: ZONE B PROJECT NO. NA-16-XM8/W04  
 Electrical Power Available: 480 Volts & 3 Phase Supplier: NTUA

**EXISTING SYSTEM****Water Production**

FROM OPERATING UTILITY

Daily Total Usage						GPD
Less Daily Demand of School & Business						GPD
Daily Domestic Water Usage						GPD
NO. of Services		Average Service Usage				GPHD

IF ACTUAL USAGE RATES UNAVAILABLE

No. of Homes	217	X	200	GPHD=	43,400	GPHD
No. of Students						
Elementary	70	X	20	GPSD=	1,400	GPD
Public School		X	40	GPSD=	0	GPD
Business	0	X	750	GPBD=	0	GPD
TOTAL:					44,800	GPD

**Water Storage**

Total Storage Volume	100,000	GAL
Less Fireflow Reserve (from operating utility)	0	GAL
Total Useable Storage	100,000	GAL
Days of Storage	2.23	DAYS

TANKS Newberry 100,000  
 Total 100,000

**Water Source:** Type of Supply

Booster pumps with pitless units

**EXISTING WELL & BOOSTER PUMP DATA FROM OPERATING UTILITY**

Booster	Pump Make	Model	No.	Stages	Motor Make	Motor Size (HP)	Power Volts	Max Amps	Pumping Rate (gpm)	TDH
TL	Grundfos	80S75-8		N/A	Franklin	7.5	230	25	62	342
TL	Grundfos	80S75-8		N/A	Franklin	7.5	230	25	62	342
Total									62	GPM

**Average Daily Pumping Cycle**

44,800 gal/day

62

GPM

=

pumping rate periods  
12.04 Hr.**Water Distribution** (Range of Pressure of Existing Homes)

System Pressure

Maximum (static)	60	psi	Location: Numerous
Minimum (dynamic)	25	psi	Location: Numerous

Location of known Pressure Problems: None

**NAVAJO WATER SYSTEM DESIGN ANALYSIS**

Page 6 OF 8

**DATE:** May-16 **SYSTEM:** District 5 **PRESS. ZONE:** ZONE B **PROJECT NO.** NA-16-XM8/W04

**ADDITIONS TO SYSTEM UNDER PROPOSED PROJECT**

**Water Production**

No. of Additional Homes	(NA-12-E61)	5	x	200	GPHD	=	1,000	GPD
No. of Additional Homes	(NA-13-E84)	2	x	200	GPHD	=	400	GPD
No. of Additional Homes	(NA-15-E15)	1	x	200	GPHD	=	200	GPD
No. of Additional Homes		0	x	200	GPHD	=	0	GPD
No. of Additional School Students								
Elementary		0	x	20	GPSD	=	0	GPD
High School		0	x	40	GPSD	=	0	GPD
Boarding School		0	x	60	GPSD	=	0	GPD
Total Additional Water Usage							1,600	GPD
Present Usage (Use 200 GPDH minimum)							44,800	GPD
Total Usage after Project Completion							46,400	GPD

**Water Storage (Additional Required?)**

Total Storage Required After Project Completion		69,600 Gal
Total Existing Storage (See Page 1 for listing of tanks)		100,000 Gal
Existing Storage Adequate?	/ X /	Yes / / No

If No:

Total storage required (based on "Future Water Usage" below)		Gal
Total existing useable storage		100,000 Gal
Additional storage required/proposed		Gal

**Water Source (Additional Required?)**

Total Capacity needed for average flow conditions after project completion	46,400 /12 Hr/ 60	84	GPM
Total Present Pump Capacity		62	GPM
	additional source needed for Avg	2	GPM
Present Pump Capacity Adequate	/ /	Yes / X /	No

If No: (and source adequate):  
then a new pump required:

Well #	New Pump and Pumping Level			
	GPM @	Ft.	TDH	HP

Other: \_\_\_\_\_

Present Source Adequate	/ /	Yes / X /	No
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If No:

Source capability required (based on Future Water Usage" below)	GPD/ 12 / 60=		GPM
Present Source with New Well Capability		62	GPM
Additional Source Required Using Future Growth			GPM

**Water Distribution After Project Completion (Range of pressure at homes after additions)**

<b>System Pressure</b>			
Maximum (static)	80	psi	Location: <u>Numerous</u>
Minimum (dynamic)	25	psi	Location: <u>Numerous</u>

Location of known Pressure Problems: None

**Estimated Population Growth for Sizing Major Improvements if Required**

Growth Factor within next	20	years.			
Present Water Usage (Includes proposed project)				46,400	GPD
Future Water Usage	Houses	0	Businesses		GPD
			<b>Total</b>		GPD

ITEMS NEEDED TO UPGRADE SYSTEM: Need to look at upgrading TL Boosters

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## NAVAJO WATER SYSTEM DESIGN ANALYSIS

DATE: May-16 SYSTEM: District 5 PRESS. ZONE: ZONE C PROJECT NO. NA-16-XM8/W04  
 Electrical Power Available: 480 Volts & 3 Phase Supplier: NTUA

### EXISTING SYSTEM

#### Water Production

FROM OPERATING UTILITY

Daily Total Usage	GPD
Less Daily Demand of School & Business	GPD
Daily Domestic Water Usage	GPD
NO. of Services                      Average Service Usage	GPHD

IF ACTUAL USAGE RATES UNAVAILABLE

No. of Homes	114	X	200	GPHD=	22,800	GPHD
No. of Students						
PUSD	0	X	20	GPSD=	0	GPD
Public School		X	40	GPSD=	0	GPD
Business	0	X	750	GPBD=	0	GPD
TOTAL:					22,800	GPD

#### Water Storage

Total Storage Volume	105,000	GAL
Less Fireflow Reserve (from operating utility)	0	GAL
Total Useable Storage	105,000	GAL
Days of Storage	4.61	DAYS

TANKS	Ives M #1	60,000
	Ives M #2	45,000
	Total	105,000

Water Source: Type of Supply

DEEP WELLS flowing

#### EXISTING WELL & BOOSTER PUMP DATA FROM OPERATING UTILITY

Booster	Pump Make	Model	No.	Stages	Motor Make	Motor	Power Volts	Max Amps	Pumping Rate	TDH
BS #1	REDA			N/A	Franklin	5	230		30	350
BS #2	REDA			N/A	Franklin	5	230		30	350
Total								30	GPM	

Note:

Average Daily Pumping Cycle	22,800 gal/day	30	GPM	=	pumping rate periods 12.67 Hr.
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#### Water Distribution (Range of Pressure of Existing Homes)

System Pressure					
Maximum (static)	65	psi	Location:	<u>Numerous near PRV #3</u>	
Minimum (dynamic)	20	psi	Location:	<u>Numerous near the Ives Mesa tanks</u>	

Location of known Pressure Problems: None.



**NAVAJO WATER SYSTEM DESIGN ANALYSIS**

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8 OF

8

DATE: May-16 SYSTEM: District 5 PRESS. ZONE: ZONE C PROJECT NO. NA-16-XM8/W04

**ADDITIONS TO SYSTEM UNDER PROPOSED PROJECT**

**Water Production**

No. of Additional Homes	(NA-08-Q97)	1	x	200	GPHD	=	200	GPD
No. of Additional Homes	(NA-12-E61)	2	x	200	GPHD	=	400	GPD
No. of Additional Homes	(NA-14-T40)	12	x	200	GPHD	=	2,400	GPD
No. of Additional Homes	(NA-15-F15)	1	x	200	GPHD	=	200	GPD
No. of Additional Homes	(NA-16-F37)	1	x	200	GPHD	=	200	GPD
No. of Additional School Students		0	x	20	GPSD	=	0	GPD
Elementary		0	x	40	GPSD	=	0	GPD
High School		0	x	60	GPSD	=	0	GPD
Boarding School								
							3,400	GPD
Total Additional Water Usage							22,800	GPD
Present Usage (Use 200 GPDH minimum)							26,200	GPD
Total Usage after Project Completion								

**Water Storage (Additional Required?)**

Total Storage Required After Project Completion 39,300 Gal  
 Total Existing Storage (See Page 1 for listing of tar / X / Yes / / No 105,000 Gal  
 Existing Storage Adequate?

If No:

Total storage required (based on "Future Water Usage" below) Gal  
 Total existing useable storage Gal  
 Additional storage required/proposed Gal

**Water Source (Additional Required?)**

26,200 / 12 Hr / 60 36 GPM  
 Total Capacity needed for average flow conditions after project completion 30 GPM  
 Total Present Pump Capacity additional source needed for Avg 6 GPM

Present Pump Capacity Adequate

Well # \_\_\_\_\_ p and Pumping Level \_\_\_\_\_  
 GPM @ \_\_\_\_\_ Ft.,

If No: (and source adequate):  
 then a new pump required:

Other: \_\_\_\_\_

Present Source Adequate

If No: GPD / 12 / 60 = 30 GPM  
 Source capability required (based on Future Water Usage" below) 30 GPM  
 Present Source with New Well Capability GPM  
 Additional Source Required Using Future Growth

**Water Distribution After Project Completion (Range of pressure at homes after additions)**

System Pressure 65 psi Location: Numerous near PRV #3  
 Maximum (static) 20 psi Location: Numerous near the Ives Mesa tanks  
 Minimum (dynamic)

Location of known Pressure Problems: None. Pressures for Birdsprings North (Q97) will be about 20-25 PSI for Min Dynamic

**Estimated Population Growth for Sizing Major Improvements if Required**

20 years.  
 Growth Factor within next 26,200 GPD  
 Present Water Usage (Includes proposed project) Houses 0 Businesses GPD  
 Future Water Usage Total GPD



## THE NAVAJO NATION

RUSSELL BEGAYE **PRESIDENT**  
JONATHAN NEZ **VICE PRESIDENT**

March 10, 2016

Emmanuelle Rapicavoli  
DWTSA Navajo Program Coordinator  
U.S. Environmental Protection Agency, Region 9  
Drinking Water Protection Section (WTR-3-2)  
75 Hawthorne Street  
San Francisco, California 94105

**RE: Navajo Nation Commitment of Funds**

Ms. Rapicavoli:

This letter is in response to your December 15, 2015 letter informing the Navajo Nation of projects eligible for FY 2016 Drinking Water Tribal Set-Aside (DWTSA) funding. On behalf of the Navajo Nation, we are pleased that two of the projects submitted rank very competitively for EPA funding.

The Navajo Nation is aware that both of these projects require a matching contribution to leverage the necessary EPA-DWTSA funds. The Nation is still committed to funding these projects in the amounts shown below.

<u>Project Number</u>	<u>Project Name</u>	<u>NN Commitment</u>	<u>EPA Funding</u>
DWTSA 16-11	Rock Point West Waterline Ext.	\$2,000,000	\$2,200,000
DWTSA 16-12	West Leupp Waterline Ext. Ph1	\$2,000,000	\$1,510,000

Furthermore, I understand these funds will only address the drinking water needs of 98 Navajo families that currently do not have piped water in the home. Our commitment will further leverage the necessary funds from both EPA Clean Water Indian Set-Aside and the Indian Health Service for the sewer and plumbing costs for these projects.

The Navajo Nation supports this effort and hopes to see these very important projects become a reality.

Respectfully,

THE NAVAJO NATION

Russell Begaye, *President*

Jonathan Nez, *Vice President*

xc: Rex Kontz, Deputy General Manager, NTUA, PO Box 170, Ft. Defiance, AZ  
Ronnie Ben, Environmental Program Director, NNEPA, Window Rock, AZ  
Roger G. Slape, Dir. DSFC, Navajo Area IHS, PO Box 9020, Window Rock, AZ.



Printed: 04/20/2016 09:56AM (Mountain)

## STARS

Printed By: McDonnell David

## SDS Narrative

Project/Phase Name: WEST LEUPP PH2 WL EXT		Econ Feasible: N	Override Feasibility: N
Community: LEUPP	Number: AZ03108-1603	Funding Plan: Included	
	Priority: 170		
District: TUBA CITY	Tribe: NAVAJO TRIBE OF ARIZONA, NEW MEXICO AND ...	Engineering Only: No	Engineer: Gore Kevin
Field Office: Winslow	Reservation: Navajo		
EPA Region: 09	Self-Gov.: Unspecified	Reviewed: Pending (last updated Unknown by Unknown)	
Created: 05/20/2007	Last Update: 02/26/2016 by Gore, Kevin	Ready to Fund: No (last updated Unknown by Unknown)	

## OM Systems:

Select Systems

System	System Type	Organization	EPA #	Score
8088262107--DIST 5 NTUA CWS - LEUPP	Water	NAVAJO TRIBAL UTILITY AUTHORITY	NN0403033	16

## Area-Defined Fields

Chapter: 047 - LEUPP

Planning Funds (\$ only):

Planning Project (3 digit):

DEFICIENCY LEVEL: 5

## RATING SCORES

Health Impact: 22

Deficiency: 18

Previous Service: 4

Capital Cost: -20 Suggested: -20

O &amp; M Capability: 16

Contribution: 0

Tribal: 0

Other Considerations: 0

Total Score: 40

## HOMES

## COSTS and Unit Costs (U.C.)

Service	Eligible	Inelig.	Total	Service	IHS Cost	U. C.	Eligible Cost	U. C.	Allow. U. C.	Contrib.	Inelig. Cost	Total Cost
Water	27	0	27	Water:	2,917,107	108,041	2,917,107	108,041	47,000			2,917,107
Sewer	27	0	27	Sewer:	324,918	12,034	324,918	12,034	47,000			324,918
Solid	0	0	0	Solid:	0	0	0	0	0			0
O&M	0	0	0	O & M:	0	N/A	0	N/A	N/A			0
Proj. Homes	27	0	27	Total:	\$ 3,242,025	\$ 120,075	\$ 3,242,025	\$ 120,075	\$ 94,000	\$ 0	\$ 0	\$ 3,242,025

Special Requirements: none

## EXISTING DEFICIENCIES:

Water: 18 HOMES WITH NO WATER SYSTEMS, 9 HOMES WITH CISTERN SYSTEMS.

Sewer: 18 HOMES WITH PIT PRIVIES, 9 HOMES WITH SEPTIC SYSTEMS.

Sol. Wst.: NONE

O &amp; M: NONE

## PROPOSED FACILITIES:

Water: ~6.8 MILES OF WATERLINE, BOOSTER STATION, AND TANK TO SERVE 27 HOMES.

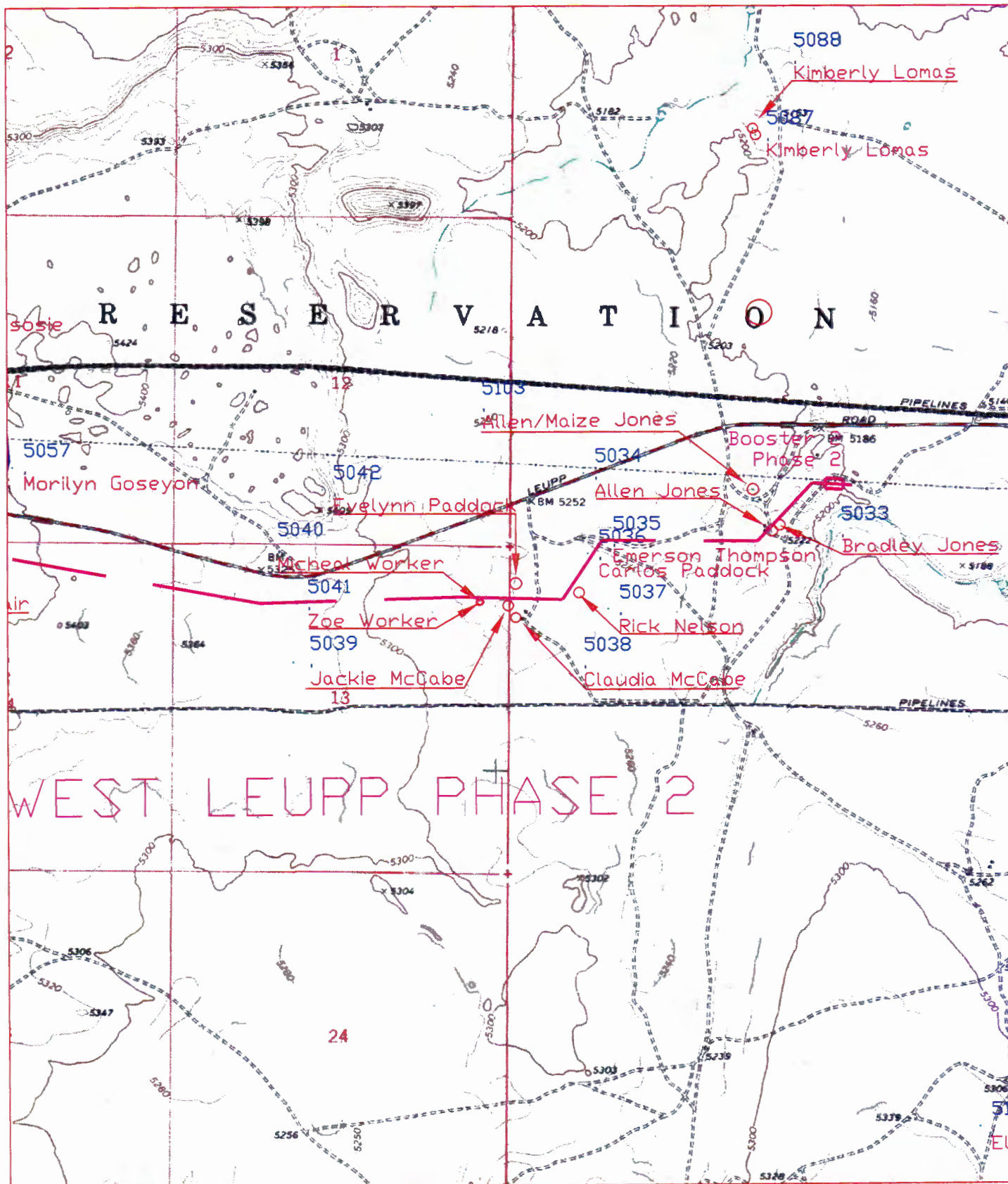
Sewer: ONSITE SEPTIC SYSTEMS FOR 24 HOMES. 6 OF 24 HOMES WITH EXISTING SEPTIC SYSTEMS WILL NEED AN UPGRADE.

Sol. Wst.: None

O &amp; M: NTUA

## Report Criteria

Dataset: Current Data  
 SDS Project: AZ03108-1603  
 Funding Plan: All  
 Sorted By: SDS Project Number



<p>1000 0 1000 2000 4000</p> <p>GRAPHIC SCALE (IN FEET)</p> <p>SCALE: 1"=2000'</p>		<p><b>LEGEND</b></p> <p>GRAND FALLS SW, ARIZONA</p> <p>W3016-W1107.5/7.5</p> <p>1989</p> <p>AMS 9764 I SW-SERIES V008</p>		<p>DEPARTMENT OF HEALTH AND HUMAN SERVICES U.S. PUBLIC HEALTH SERVICE INDIAN HEALTH SERVICE</p> <p>WINSLOW NAVAJO NATION ARIZONA</p> <p>WINSLOW SU</p> <p>WEST LEUPP WL EXT PH 2</p> <p>IHS SDS PROJ. NO. AZ0138-1604</p>	
<p>DRAWN BY: KG DATE: 08/2013</p>		<p>CHECKED BY: KG DATE: 08/2013</p>		<p>SHEET NO. 1 OF 2</p>	
<p>OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING</p>					

Printed: 04/20/2016 09:40AM (Mountain)

STARS

Printed By: McDonnell David

## SDS Narrative

<b>Project/Phase Name:</b> LEUPP SAN FRANCISCO WASH EXT.D5		<b>Econ Feasible:</b> N	<b>Override Feasibility:</b> N
<b>Community:</b> LEUPP	<b>Number:</b> AZ03108-1102	<b>Funding Plan:</b> Included	
<b>Priority:</b> 607			
<b>District:</b> TUBA CITY	<b>Tribe:</b> NAVAJO TRIBE OF ARIZONA, NEW MEXICO AND ...	<b>Engineering Only:</b> No <b>Engineer:</b> Gore Kevin	
<b>Field Office:</b> Winslow	<b>Reservation:</b> Navajo		
<b>EPA Region:</b> 09	<b>Self-Gov.:</b> IHS Direct Service	<b>Reviewed:</b> Pending (last updated Unknown by Unknown)	
<b>Created:</b> 07/28/1999	<b>Last Update:</b> 07/27/2015 by Koehmstedt Mick	<b>Ready to Fund:</b> No (last updated Unknown by Unknown)	

## OM Systems:

Select Systems

None selected

## Area-Defined Fields

Chapter: 047 - LEUPP

Planning Funds (\$ only):

Planning Project (3 digit):

DEFICIENCY LEVEL: 2

## RATING SCORES

Health Impact: 15

Deficiency: 6

Previous Service: 0

Capital Cost: -20 Suggested: -20

O &amp; M Capability: 0

Contribution: 0

Tribal: 0

Other Considerations: 0

Total Score: 1

## HOMES

## COSTS and Unit Costs (U.C.)

Service	Eligible	Inelig.	Total	Service	IHS Cost	U. C.	Eligible Cost	U. C.	Allow. U. C.	Contrib.	Inelig. Cost	Total Cost
Water	21	0	21	Water:	2,202,002	104,857	2,202,002	104,857	18,800			2,202,002
Sewer	0	0	0	Sewer:	0	0	0	0	18,800			0
Solid	0	0	0	Solid:	0	0	0	0	9,400			0
O&M	0	0	0	O & M:	0	N/A	0	N/A	N/A			0
Proj. Homes	21	0	21	Total:	\$ 2,202,002	\$ 104,857	\$ 2,202,002	\$ 104,857	\$ 94,000	\$ 0	\$ 0	\$ 2,202,002

Special Requirements: none

## EXISTING DEFICIENCIES:

Water: CISTERNS.  
 Sewer: ST/DF SYSTEMS.  
 Sol. Wst.: OPEN DUMPS.  
 O & M: NTUA OPERATES WATER SYSTEM.

## PROPOSED FACILITIES:

Water: ~16.9-MILE EXTENSION SOUTHWEST OFF THE LEUPP WEST PH2 EXT. 1.3 HOMES/MILE. WEST LEUPP PHASE 2 HAS TO BE CONSTRUCTED FIRST.  
 Sewer: NONE.  
 Sol. Wst.: NONE.  
 O & M: NONE.

## Report Criteria

Dataset: Current Data  
 SDS Project: AZ03108-1102  
 Funding Plan: All  
 Sorted By: SDS Project Number



