Environmental Protection Agency, Region 9
Drinking Water Tribal Set-Aside Grant
Project Proposal Form

Project Name	Hopi Arsenic Mitigation Project
Applicant Information	Tribe Submitting Proposal Hopi Did you receive Drinking Water Tribal Set-Aside money for this project this year? Yes Did you receive drinking water state revolving fund money for this project this year? No
Contact Information	Name Lionel Puhuyesva Title Water Resources Program Director Email [HYPERLINK "mailto:Lpuhuyesva@hopi.nsn.us"] Address PO Box 123 Kykotsmovi, AZ 86039 Fax Number 928-734-3609 Phone Number 928-734-3711
Service Area Information	Total Population Served 580 approx. Total number of connections 620 Number of meters 705 approx. Percent of connections metered 83% approx. Is billing based on meter readings? Only for the 125 connections served by the Sipaulovi Water Association Number of tribal people served by project(s) 3,175 approx. Number of non-tribal people served by project(s) 0 approx.
Water Utility Information	Project Location First Mesa of the Hopi Reservation Water System Owner First Mesa Consolidated Villages. Will the proposed project be owned by a different entity? No Is this a Public Water System? Yes If Yes: What is the Public Water System ID Number? 090400106 Is this a Community or non-Community Water System? Community Is this a For-Profit or Non-Profit Water System? Non-Profit Does this system have a certified water operator? No
Water Supply Information	How many storage tanks are connected to the system? 3 What is the capacity of each tank (in gallons)? 500k, 200k (proposed to 250k), 8.5k How many wells are connected to the system? 3 (2 in service) What is the maximum capacity of each well (in gpm)? 100, 100, 110 How many pressure zones are in the system? 4. Describe each pressure zone (i.e. which tanks are used for each zone). FMCV has one pressure zone at the top of the Mesa and three zones below the 500k gallon tank that are separated in order to prevent high pressures at homes resulting from significant elevation changes throughout the Villages Are there water outages? Yes If so, how often? Occasionally What is the reason for the outages? Power failure, which is frequent on the Hopi Reservation

Other Background Information	Describe any existing water conservation measures Well pump and tank level control utilized by some of the systems. Does the Tribe and/or water utility have a source or wellhead protection program? Yes Is the Tribe or system in the process of implementing one of the above programs? No Is the proposed project a consolidation project? No If so, how many systems will be consolidated?_____What are their populations?_____ What is the per capita, per day water consumption in gallons/person/day of treated water for the water system? Average of 58 GPCD for the four HAMP villages.
Project Need	Describe why this project is necessary The four village water systems of First and Second Mesa have been out of compliance with the arsenic rule since its implementation and are under EPA compliance plans to participate in the HAMP. The HAMP will provide an arsenic compliant source through the newly drilled Turquoise Trail Wells, each capable of 400+ GPM, and wholesale the Turquoise Trail water to the individual systems, which will then have no need to rely on their existing non-compliant source wells. The HAMP is considered to be the most cost effective and sustainable of the arsenic compliance solutions available, as documented in the HAMP Preliminary Engineering Report. Furthermore, the 200k gallon West Tank in Polacca is at the point of imminent failure with extensive emergency repairs having been made in 2009 as a result of severe oxidation.
Project Description	Description of Proposed Project A 255,000 gallon tank is proposed to replace the existing 200,000 gallon tank in approximately the same footprint. However, the proposed tank does not have sufficient capacity to provide the 477,480 gallons needed to meet ISO Needed Fire Flow, but it is irrelevant at this point since the existing distribution system is not designed to provide fire flow. Furthermore, the Keams Canyon BIA Agency provides suppression services to government entities only (i.e. IHS Hopi Health Care Center, Hopi Tribal Housing Authority, and First Mesa Day School), so there would be no significant change to services provided to any Indian homes if a tank sized for fire flows is provided. The primary HAMP components of this project are the provision of 2,450 feet of 8-inch water main with an altitude valve vault, and yard piping in order to create a transmission line for incoming water. The appurtenances required for the tank include: geotechnical evaluation, water sampling building, outlet meter vault, cathodic protection with power line extension that can also be used for a potential disinfection/fluoridation facility, and chain link fencing. Furthermore, the proposed work will also demolish the existing tank and properly abandon the site and yard piping following the installation of the proposed tank.
Project Cost	Estimated Total Project Cost $700,000.00 Cost Breakdown by Health Category: Health Category / Corresponding Project Component / Estimated. Component Cost / # Connections Benefiting / Population Served…... 1)_____ _____ $_____ _____ _____ 2)_____ _____ $_____ _____ _____ 3)_____ _____ $_____ _____ _____ 4)_____ _____ $_____ _____ _____
Committed Funding	Have other entities committed to contribute funding for this project? No. Have you applied for funding from other agencies? Tribal application to USDA is pending for the HAMP as a whole. The west tank scope has not been presented to any other agencies.
Project Status	Feasibility Study Complete? Yes If Yes, please attach Environmental Information Document Complete? Yes If Yes, please attach Design Complete No If Yes, please attach

Signature of Person Certifying this information is accurate_____

Title of Above Person_____ Date_____

HAMP SEGMENT D COST ESTIMATE

Schedule B: Construction

Item	Description	Quantity	Units	Units Cost	Total
1	8" Water Main, 235 PSI rated	2,450	LF	$ 40.00	$ 98,000.00
2	Altitude Valve and Vault	1	LS	$ 30,000.00	$ 30,000.00
3	West Tank Yard Piping	1	LS	$ 20,000.00	$ 20,000.00
4	Geotechnical Evaluation	1	LS	$ 8,500.00	$ 8,500.00
5	Water Sampling Building	1	LS	$ 12,000.00	$ 12,000.00
6	Outlet Meter Vault	1	LS	$ 20,000.00	$ 20,000.00
7	250,000 Gallon Water Storage Tank	250,000	GAL	$ 1.25	$ 312,500.00
8	Cathodic Protection	1	LS	$ 10,000.00	$ 10,000.00
9	Power Line Extension	1	LS	$ 18,000.00	$ 18,000.00
10	Chain Link Fence	1	LS	$ 11,000.00	$ 11,000.00
11	Demolish Existing 200,000 Storage Tank and Abandon Site	1	LS	$ 31,000.00	$ 31,000.00
				Construction Total:	**$ 571,000.00**

Planning & Design Total (Schedule A)		**$ -**		
Construction Total (Schedule B)		**$ 571,000.00**		
O&M Support Total (Schedule C)		**$ -**		
Contingency (Schedules A, B, & C)		**$ 28,550.00**	5.00%	
		Subtotal	**$ 599,550.00**	
TERO/Tribal Tax	0.5%	**$ 2,997.75**		
Tribal Procurement 1=YES, 0=NO	1			
Tribal Administrative Support Fee		**$ 14,988.75**	2.50%	max allowed
		Subtotal Tribal Fees	**$ 17,986.50**	
PROFESSIONAL FEES:				
IHS Engineering Program Support (EPS)		**$ 67,458.64**	11.25	max allow design %
		Subtotal Professional Fees	**$ 67,458.64**	linearly interpolated
IHS Project Technical Support Fee (PTS)		**$ 14,988.75**	2.50%	max allowed inspect
***EPS AND PTS TO BE SPLIT DIFFERENT IN IHS PROJECT SUMM**		**Subtotal PTS**	**$ 14,988.75**	
		Total Phase Cost	**$ 699,983.89**	
*PTS INCLUDES INSPECTION, EQUIPMENT USE, GSA VEHICLES, ETC.		**Rounded**	**$ 700,000.00**	