

DRAFT

PLAN-OF-STUDY FOR FEASIBILITY REPORT AND ENVIRONMENTAL ASSESSMENT OF THE SANTEE SIOUX RESERVATION MR&I WATER SUPPLY SYSTEM (November 15, 2005)

PURPOSE AND SCOPE -

- I. **PURPOSE OF THE STUDY** - Public Law 108-204, Sec. 125 authorizes a “...feasibility study to determine the most feasible method of developing a safe and adequate municipal, rural, and industrial water treatment and distribution system to meet the needs of the Santee Sioux Tribe of Nebraska that could serve the tribal community and adjacent communities and incorporate population growth and economic development activities for a period of 40 years.”
- II. **THE PLAN-OF-STUDY** - This Plan-of-Study (POS) describes the tasks and activities to be accomplished and the schedule of deliverables for preparing a feasibility-level Feasibility Report/Environmental Assessment (FR/EA) of a municipal, rural, and industrial (MR&I) water treatment and distribution system. The POS includes the scope of work that will be used to allocate funds, identify the deliverables, measure project performance, and manage the schedule for completion/submission of those deliverables.

To ensure that the rights of sovereign tribal governments are fully respected, all activities associated with this study between the Santee Sioux Nation and Reclamation will be conducted in accordance with the General Protocol Memorandum of Agreement, signed by the Santee Sioux Tribal Chairman and the Nebraska-Kansas Area Manager on September 25, 1998.

- III. **DEFINITION OF THE STUDY AREA** -The service area for the study will be the reservation of the Santee Sioux Nation and the Village of Niobrara.
- IV. **STUDY GOALS AND OBJECTIVES** - The study goals and objectives are:
 - a. To identify opportunities, problems, planning objectives, and constraints related to determining the most feasible method of developing a safe and adequate water supply system that will meet the needs of the Reservation and the Village of Niobrara for 40 years into the future, taking into account projected population growth and economic development.
 - b. To evaluate alternatives as described in Needs Assessment, MR&I Water System, Santee Indian Reservation, Nebraska (Reclamation and Santee Sioux Nation 2004) and any alternatives identified during public scoping and select the most reasonable alternatives for the detailed feasibility-study outlined herein. The alternatives that are forwarded for further study (Screened Alternatives) will be those that best address the opportunities, problems, planning objectives, and constraints related to developing a safe and adequate water supply system that will meet the needs of the

DRAFT

Reservation.

- c. To follow all federal, tribal, and state laws, regulations, and guidelines for the development of a safe and adequate MR&I water supply.
- d. To follow the Commissioner's Indian Trust Asset Policy insuring that all activities will be carried out in a manner which protects Indian Trust Assets and will avoid adverse impacts whenever possible.
- e. To develop and evaluate the Screened Alternatives according to (WRS 1983) Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&Gs), Reclamation policy, the National Environmental Policy Act (NEPA), and other applicable Federal laws and regulations.
- f. To provide feasibility-level (pre-construction) cost estimates for the construction and operation, maintenance, and repair (OM&R) of each of the Screened Alternatives.
- g. To prepare a Feasibility Report and Environmental Assessment that document and evaluate the Screened Alternatives and a recommended alternative for submission to Congress for project authorization.

V. STUDY ASSUMPTIONS / CONSTRAINTS - The following assumptions and constraints will be taken into account in identifying and evaluating the Screened Alternatives:

- a. The Study will be based on existing information as appropriate. The primary reference document for the Study will be Needs Assessment, MR&I Water System, Santee Indian Reservation, Nebraska (Reclamation and Santee Sioux Nation 2004). The level of detail will be the minimum engineering and related technical analyses needed to develop reliable cost estimates and schedules for the Screened Alternatives with reasonable contingency factors.
- b. The FR/EA will address the same alternatives. Both reports need to be developed in concert with one another so that alternatives can be modified to minimize potential impacts to the environment.
- c. Significant gaps in the existing data that will affect the evaluation of an alternative will be identified. Proposed methods to obtain that data will be presented for approval.
- d. The planning horizon will be year 2050. This date reflects the authorizing legislation requirements of evaluating demands 40 years into future, and a target feasibility study completion date of 2007.
- e. Municipal and industrial (M&I) water supply demands for the study area will be developed to accommodate the best estimates of population growth and reasonable economic development to year 2050. Demands for stock watering and lawn and garden irrigation will be included; demands for commercial, agriculture-related irrigation will not be included.
- f. Water supply demands developed in this study, in collaboration with the Tribe, are not intended to be used in any way or form as a limit for potential future Tribal water rights negotiations with the State of Nebraska.

DRAFT

- g. System capacity for fire-flows will only be evaluated if the infrastructure already exists in a community. New fire-flow infrastructure and capacity will not be included. Fire Protection currently exists throughout the Santee Village.
- h. Without project conditions (the No Action alternative) will be determined for year 2050; i.e. what the most probable conditions will be if no action is taken and no alternative is implemented.
- i. Funding constraints - Reclamation received \$269,000 of the authorized \$500,000 in FY04 and no additional funds in FY05. Reclamation will use the FY04 funds to undertake the study and prepare the FR/EA. If the remainder of the authorized funds are appropriated, they will be used to complete the study.

VI. PLANNING AND DESIGN PROCESSES - The study will be conducted in conformity with (WRC 1983) Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&Gs) and the Reclamation Manual and Instructions governing feasibility studies and environmental assessments and other applicable Federal laws and regulations. Feasibility level designs of all project facilities shall in principle follow TSC Technical Memorandum and Design Activities of the Reclamation Manual, as deemed appropriate.

VII. STUDY ALTERNATIVES - Six alternatives were identified in Needs Assessment, MR&I Water System, Santee Indian Reservation, Nebraska (Reclamation and the Santee Sioux Nation 2004). Additional alternatives may be considered as a result of the scoping meeting:

- 1) Installation of a Well Field in the Southeast Corner of the Reservation
- 2) Tribal Surface Water Treatment Plant at Bazile Creek
- 3) Tribal Surface Water Treatment Plant at the Missouri River
- 4) Tribal Groundwater Treatment Plant at Bazile Creek
- 5) Connection to the Cedar-Knox Rural Water System
- 6) Connection to the West Knox Rural Water System

These alternatives or any other appropriate alternatives will be evaluated and from them one or more alternatives will be selected for a more comprehensive evaluation in this feasibility-level study. Cost estimates, study topics, tasks, deliverables, and milestones will be adjusted after the screening process is complete. In addition, the study shall evaluate a Future Without (No Action) alternative. This alternative will address conditions if a water system is not constructed.

Evaluations will take into account Tribal concerns identified in the Needs Assessment. These concerns include:

- Sedimentation and deteriorating conditions at the Bazile Creek well field
- Poor water quality and well yields on eastern portions of the Reservation

DRAFT

- Pesticide contamination of potable water sources
- Treatment and storage capabilities of the current water system
- Viability of a Reservation-wide water supply and distribution system

VIII. RELATED PLANS AND STUDIES INCLUDE -

- B&E Engineering, Inc.: “*Water Resource Inventory, Santee Indian Reservation*” (Phase I, 1978, and Phase II, 1981)
- U.S. Department of the Interior, USGS 1995 “*Physical Characteristics and Water-Resources Appraisal of the Santee Indian Reservation in Northeastern Nebraska.*”
- Santee Sioux Nation “*Baseline Assessment of Water Quality on the Santee Sioux Reservation 1996-1997 and Framework for Tribal Water Quality Management Plan,*”
- Santee Sioux Nation “*Assessment of Water Quality on the Santee Sioux Reservation May 1998 - March 1999 and Tribal Water Quality Management Plan,*” Santee Sioux Nation of Nebraska Open File Report WR070101
- Santee Sioux Nation “*Hydrogeologic Assessment of the Bazile Creek Wellfield and the Potential Southeast Well Field.*” Santee Sioux Nation of Nebraska Open File Report WR071203
- U.S. Army Corps of Engineers “*Niobrara and Missouri Rivers, South Dakota and Nebraska, Sediment Strategies, Section 905(B) (WRDA 86) Analysis, Reconnaissance Report*”, November, 2001.
- U.S. Army Corps of Engineers “*Final Report, Missouri River, Fort Randall Dam to Gavins Point Dam and Ponca Creek Aggradation Assessment*”, June, 1998.

STUDY TOPICS, TASKS, DELIVERABLES, AND MILESTONES

The study will address the following topics and associated tasks. In addressing these topics, future conditions with and without alternatives will be considered. The list of tasks associated with each topic is not exhaustive. The information and data contained in the Needs Assessment, MR&I Water System, Santee Indian Reservation, Nebraska (Reclamation and Santee Sioux Nation, 2004) will be utilized when accomplishing the study tasks when appropriate.

I. MR&I Water Demands – TSC (D-8270, D-8520)

1. Update population projections for service areas to the 2050 planning horizon.
2. Perform economics development analysis for the 2050 planning horizon to obtain reasonable future demands.
3. Determine present and future domestic and commercial requirements.
4. Establish per capita consumption for average daily and peak daily needs.
5. Evaluate the regional impacts from increased wastewater production.

DRAFT

II. Surface Water Resources – TSC (D-8520)

1. Participate in screening of alternatives.
2. Describe the current surface water resources.
3. Develop and describe future without conditions (no action alternative) for surface water resources.
4. Develop present and future available water supply at alternative sites, including Lewis and Clark Reservoir and Bazile Creek.
 - Compile gauged historic stream flow data.
 - Extrapolate discharge at desired diversion locations if no measuring stations are located nearby.
 - Develop flow frequency curves.
5. Evaluate river hydraulics and sedimentation rates in Lewis & Clark Reservoir with respect to impacts on potential surface water intake structure designs and sites.
6. Compile water quality data at diversion sites, and define potential sources that may impact the water supply at diversion sites.
7. Evaluate possible flood hazards for treatment plant and intake.
8. Evaluate impacts of the Screened Alternatives on the surface water resources.

III. Ground Water Resources – TSC (D-8520)

1. Describe the ground water resources.
2. Develop and describe future without conditions (no action alternative) for ground water resources.
3. Review and summarize ground-water quantity and quality of Missouri River and Bazile Creek alluvial aquifers.
4. Review and summarize ground-water quantity and quality of aquifer in southeast portion of Reservation.
5. Review and summarize existing geo-hydrologic reports and well logs.
6. Compile historic well records to evaluate water-level trends to the planning horizon.
7. Evaluate potential sources of contaminants that may impact the ground water supply.
8. Tabulate and review existing ground-water diversions that may be impacted by any ground-water supply alternatives.
9. Evaluate impacts of the Screened Alternatives on groundwater.

IV. Water Treatment Engineering and Design – TSC (D-8230)

1. Field Trip/On-Site meeting
2. Participate in screening of alternatives
3. Feasibility Level Design (assumes 1 treatment alternative)
4. Prepare descriptions of treatment for Feasibility Report with Impacts to the Environment
5. Develop request for and assist in obtaining Design Data for water treatment

V. Distribution System Engineering and Design – TSC (D-8140)

1. Describe and evaluate current, existing water delivery systems.

DRAFT

2. Review geologic reports/maps and, if necessary, perform cursory field survey to determine system rights-of-way for the Screened Alternatives.
3. Prepare maps/drawings showing locations of potential hookups and rights-of-way for the distribution systems of the Screened Alternatives
4. Perform hydraulic analyses of distribution systems for the Screened Alternatives.
5. Prepare feasibility level plans of system layout and components for the Screened Alternatives, including quantity and cost estimates.
6. Develop OM&R cost estimates for the Screened Alternatives.
7. Evaluate impacts of the Screened Alternatives on the affected environment.

VI. Socioeconomics Studies – TSC (D-8270)

1. Describe affected environment (including agriculture and recreation)
2. Evaluate the economic feasibility of the Screened Alternatives, including a National Economic Development (NED) evaluation using P&G guidelines
3. Perform a regional economic impacts analysis using P&Gs as general guidance.
4. Evaluate the financial resources available locally to pay for construction of the project and O&M.
5. Identify potential sources of funding and cost sharing arrangements.

VII. Environmental Studies – NKAO (NK-100)

1. NEPA
 - a. Determine if there is a need for additional data, i.e. water quality, wildlife, aquatic, etc. If additional data is required, proposals to obtain the data will be presented for approval.
 - b. Conduct a literature search for information and data to be used in the preparation of the environmental assessment portion of the report.
 - c. Obtain a list of threatened and/or endangered species that may occur in the study area from the U.S. Fish and Wildlife Service (Service).
 - d. Prepare a draft biological assessment (BA) for Reclamation to transmit to the Service for review and comment.
 - e. Develop project purpose and need statement for incorporation into the EA.
 - f. Refine and screen alternatives with respect to environmental impacts.
 - g. Transmit description of purpose and need statement, no action alternative, and recommended alternative to the Service for their use in development of the coordination act report.
 - h. Incorporate Service's comments and mitigation recommendations into the EA.
2. Fish and Wildlife - FWS
 - a. Use description of the proposed study area and project to conduct a literature search for existing wildlife and aquatic data.
 - b. Describe fish and wildlife resources and impacts the no action and recommended alternative will have on those resources.
 - c. Identify and describe mitigation and/or enhancement to offset environmental impacts.

DRAFT

- d. Prepare a draft Fish and Wildlife Coordination Act (FWCA) report and transmit to Reclamation for review and comment.
 - e. Prepare final FWCA report.
 - f. Review Reclamation's BA and either concur with findings in BA or issue a draft and final biological opinion (BO).
3. Cultural Resources - NKAO (NK-310)
- a. Describe affected environment
 - b. Conduct Class I cultural resources survey of the proposed study area (a literature and archival search that includes appropriate Federal, Tribal, state, and local agencies, interested persons, and record repositories)
 - c. Evaluate all identified cultural resources with respect to their eligibility for inclusion in the National Register of Historic Places
 - d. Analyze the impacts of the alternatives to cultural resources

VIII. Public Involvement – Tribe, NKAO (NK-100)

1. Conduct public scoping meetings to identify issues for formulation of the alternatives; these will be incorporated into the FR/EA as appropriate.
 - A. Conduct a survey in the study area to determine interest in connecting to a MR&I system and quantify their anticipated usage by categories (domestic, stock watering, landscape watering, etc.).

IX. Technical Reports Writing – TSC (D-8011)

1. Develop all team drafts and finals of the PR/EA. Several stages of the report include a team draft PR/EA, an administrative draft PR/EA, a public review draft PR/EA, and a final draft PR/EA. The drafts will be provided to the Tribe and Niobrara for their review. A final PR/EA will be provided to the Tribe and Niobrara.
2. Technical specialists will prepare draft reports for their respective subject areas and submit to the technical reports writer for consolidation.
3. Tribe and Niobrara will review and provide comments to Reclamation's technical reports writer on all drafts of the PR/EA.
4. Tasks for technical reports writer:
 - Prepares team draft and administrative draft of PR/EA report.
 - Receives comments from reviewers and incorporates into report.
 - Prepares draft PR/EA for public review.
 - Categorizes public comments and distributes to respective team members.
 - Revises draft PR/EA to final for administrative review.
 - Receives administrative comments and revises report.

X. Quality Review – GPRO

1. Identify specialists independent of the study team to review all draft PR/EA reports to assess their adequacy in meeting the study objectives, goals, and

DRAFT

constraints.

XI. Design Data Collection – NKAO

1. Study specialists will identify data needs to perform study tasks. Data needs will be presented to NKAO for collection and compilation, and transmittal back to study specialists.

DELIVERABLES

The deliverables for this study will be a Feasibility Report/Environmental Assessment that conforms with the format of the Integrated Planning Report/NEPA Document, a copy of which is attached. The following is the outline/table of contents for that document:

Outline for the Feasibility Report/Environmental Assessment

Summary*

- 1.0 Summary Introduction
- 2.0 Map
- 3.0 Major Conclusions and Findings
- 4.0 Areas of Controversy
- 5.0 Unresolved Issues
- 6.0 Summary of Public Involvement And Agency Consultation Program

1.0 Introduction *

- 1.1 Study Authority
- 1.2 Purpose and Scope
- 1.3 Location of the Study Area
- 1.4 Prior Reports and Existing Projects
- 1.5 History, Planning Process and Report Organization

2.0 Need For and Objectives of Action *

- 2.1 Problems and Opportunities
- 2.2 Public Concerns
- 2.3 National Objectives
- 2.4 Planning Objectives
- 2.5 Planning Constraints

3.0 Alternatives*

- 3.1 Plan Formulation Summary
- 3.2 Alternatives
- 3.3 Comparison of Alternatives
- 3.4 Recommended Plan
- 3.5 Implementation

DRAFT

4.0 Affected Environment*

5.0 Environmental Consequences*

- 5.1 Environmental Evaluation Methodology
- 5.2 Significant Effects on Resources

6.0 Public Involvement, Review and Consultation*

- 6.1 Public Involvement Program
- 6.2 Institutional Involvement
- 6.3 Additional Required Coordination
- 6.4 Report Recipients
- 6.5 Public Views and Responses

7.0 List of Preparers*

8.0 Index*

9.0 List of Appendices*

10.0 List of Attachments*

* Required for NEPA compliance

MILESTONES AND SCHEDULE OF DELIVERABLES

<u>Milestone</u>	<u>Date</u>
Quarter 1, FY 2006	
Study Phase 1:	
Study start – team meeting	Aug 1, 2005
Hold public scoping meetings	Aug 25, 2005
Begin data collection needed for screening - TSC to work with NKAO on data needs	Oct 3, 2005
Begin economic analysis - TSC – D-8270 (Steve Piper)	Oct 3, 2005
Develop criteria for Tribal survey document - TSC (Piper), Tribe, and NKAO	Oct 3, 2005
Begin screening process: - Define all alternatives for screening - Define screening criteria and screening process - Joint: TSC, Tribe, NKAO, Niobrara	Oct 11, 2005

DRAFT

Develop “Future Without” Condition - TSC – D-8270 (Piper)	Dec 2, 2005
Prepare map and population estimates - TSC – D-8270 (Piper)	Dec 30, 2005
Quarters 2-4, FY 2006	
Begin water demand analysis - D-8520 (Joe Lyons)	Jan 2, 2006
- Complete screening of alternatives for feasibility-level analyses - Joint: TSC, Tribe, NKAO, Niobrara	January 13, 2006
Begin Preparing screening report - TSC – D-8011 (Patty Gillespie)	January 17, 2006
Begin water source determination analysis - D-8520 (Joe Lyons – surface water) - D-8520 (Bob Talbot – ground water)	Jan 27, 2006
Begin preliminary layout of the distribution system - D-8140 (Chou Cha)	March 31, 2006
Begin water distribution system design and layout - D-8140 (Chou Cha)	March 31, 2006
Begin water treatment assessment - D-8230 (Bob Jurenka)	Jun 1, 2006
Study Phase 2: Development of FR/EA (dependent on available funding)	
Continue engineering design - D-8140 (Chou Cha and others)	Oct 1, 2006
Continue water treatment design -D-8230 (Bob Jurenka and others)	Oct 1, 2006
Initiate environmental analyses for EA	Oct 1, 2006
Prepare draft FR/EA for team review	Feb 1, 2007
Prepare draft FR/EA for public review	Mar 1, 2007
Release draft to public (90-day review)	Mar 15, 2007
Team response to public comments	June 30, 2007
Prepare draft FR for independent quality review	July 17, 2007
Begin Administrative review of draft FR/EA/FONSI	Aug 1, 2007
Publish final FR/EA/FONSI	Sept 18, 2007

DRAFT

FEASIBILITY TEAM ROSTER

Organization/Function	Name/Title	Address	Phone/e-mail
D-8140 / Engineering Lead / Water Conveyance	Chou Cha / Civil Engineer *	Bldg 67, Denver Federal Center, Denver, CO	303-445-3129 / CCHA@do.usbr.gov
D-8230 / Water Treatment and Engineering	Bob Jurenka/Engineer *	Bldg 67, Denver Federal Center, Denver, CO	303-445-2254 / BJURENKA@do.usbr.gov
D-8520 / Water Supply, Use, and Conservation	Joseph Lyons/Engineer *	Bldg 67, Denver Federal Center, Denver, CO	303-445-2531 / JLYONS@do.usbr.gov
D-8520 / Ground Water	Robert Talbot / Geologist	Bldg 67, Denver Federal Center, Denver, CO	303-445-2518 / RTALBOT@do.usbr.gov
D-8270 / Economics	Steven Piper / Economist *	Bldg 67, Denver Federal Center, Denver, CO	303-445-2736 / SPIPER@do.usbr.gov
D-8580 / TSC Team Lead	Del Holz /ResourceManager	Bldg 67, Denver Federal Center, Denver, CO	303-445-2703 / DHOLZ@do.usbr.gov
NK-300 / Tribal Liaison – Coordination, Service Agreements, Funding	Mike Kube / ResourceManager *	Nebraska-Kansas Area Office, Grand Island, NE	308-389-5321 MKUBE@gp.usbr.gov
NK-100 / Biology - Environment	Jill Manring / Natural Resources Specialist *	Nebraska-Kansas Area Office, Grand Island, NE	308-389-5328/ JMANRING@gp.usbr.gov
NK-310 / Cultural Resources	Bill Chada / Archaeologist	Nebraska-Kansas Area Office, Grand Island, NE	308-389-5320 / bchada@gp.usbr.gov
NK-100 / Public Involvement	Judy O'Sullivan	Nebraska-Kansas Area Office, Grand Island, NE	308-389-5327 / JOSULLIVAN@gp.usbr.gov
D-8011/ Technical Reports Writing	Patty Gillespie	Bldg 67, Denver Federal Center, Denver, CO	303-445-2580 / PGILLESPIE@do.usbr.gov
GP-4600 / Study Team Lead	Mark Phillips / Geologist *	Great Plains Regional Office, Billings, MT	406-247-7743 / mphilips@gp.usbr.gov
Santee Sioux / Tribal Environmental Head	Felix Kitto *	Santee Sioux Nation	402-857-3338 santeewetlands@yahoo.com
Santee Sioux / Tribal Steering Committee Lead	Lee Ickes *	Santee Sioux Nation, Santee, NE	402-857-2772 leeickes2003@yahoo.com
Santee Sioux Consultant / Water Quality	Dr. Ralph Davis*	University of Arkansas, Fayetteville	479-575-4515
Village of Niobrara / Study Representative	Robert Olsen	Village Clerk	402-857-3404

*Screening Team Member

DRAFT

PROJECT MANAGEMENT TEAM ROSTER

1. Mark Phillips, GP-4600
2. Mike Kube, NK-300
3. Lee Ickes, Santee Sioux
4. Del Holz, D-8580 Administrative Lead (Marlene Johnson, Assistant)

DECISION MAKING MANAGEMENT TEAM

1. GP Regional Director
2. NKAO Area Manager
3. Santee Sioux Tribal Chairperson

Attachment A – Estimated Study Costs by Phases

Note: Feasibility study is split into two phases to accommodate the present funding situation. Phase 1 of study will target producing the planning report component. Phase 2 of study will target preparation of Environmental Assessment study component and final review.

Study Primary Task	Task Component	Participant	Phase 1 Staff Days	Phase 2 Staff Days	Total Staff Day Estimate	Cost Basis per Staff Day	Phase 1 Task Costs	Phase 2 Task Costs	Total Costs	
A. MR&I Water Demands	Economics (Demands)	D8270 Lvl - 3	10	0	10	\$888	\$8,880	\$0	\$8,880	
	Collection of on-reservation water demands for residences, landscape irrigation, livestock, etc.	Tribe			-	-	\$0	\$0	\$0	
Task Sub-Totals					10		\$8,880	\$0	\$8,880	
B. Surface and Ground Water Resources	Sedimentation and River Hydraulics	D8540 Lvl - 3	14	0	14	\$888	\$12,432	\$0	\$12,432	
	Surface and Ground Water Availability / Characterization / Aquifer Tests and Evaluation	D8520 Lvl - 2	33	5	38	\$752	\$24,816	\$3,760	\$28,576	
		D8520 Lvl - 3	30	5	35	\$888	\$26,640	\$4,440	\$31,080	
		D8520 Non-Labor			-	-	\$3,000	\$0	\$3,000	
		Tribe			-	-	\$0	\$0	\$0	
	Task under review --- Compile GW water rights data that may be impacted by alternatives. Prepare section for PR/EA	Tribe			-	-	\$0	\$0	\$0	
	Laboratory Analyses of Water Samples for Treatment Design. 3 sampling events of SW and GW sources @ \$1000 per analyses = 2*3*\$1000	TSC - Local Laboratory			-	-	\$6,000	\$0	\$6,000	
	Task dependent on study results --- At one site, drill, install and develop test wells (test pumping well, monitoring wells, test pumps) [may use local contract driller]	D8520, Contract Driller			-	-	\$20,000	\$0	\$20,000	
Task Sub-Totals				87		\$92,888	\$8,200	\$101,088		
C. Design Data Collection	Collection of various design data needed by TSC for analyses	NKAO			-	-	\$5,000	\$0	\$5,000	
Task Sub-Totals				0		\$5,000	\$0	\$5,000		
D&E. Distribution System and Water Treatment Engineering and Design	Structural and Architectural	D8120 Lvl - 2		23	23	\$752	\$0	\$17,296	\$17,296	
		D8120 Lvl - 3		11	11	\$888	\$0	\$9,768	\$9,768	
	Water Conveyance	D8140 Lvl - 2		66	16	82	\$752	\$49,632	\$12,032	\$61,664
		D8140 Lvl - 3		13	4	17	\$888	\$11,544	\$3,552	\$15,096
		D8140 Non-Labor				-	-	\$3,000	\$0	\$3,000
	Cost Estimating	D8170 Lvl - 2			10	10	\$752	\$0	\$7,520	\$7,520
		D8170 Lvl - 3			2	2	\$888	\$0	\$1,776	\$1,776
	Water Treatment and Research (assuming two alternatives taken to Feasibility)	D8230 Lvl - 2		11	19	30	\$752	\$8,272	\$14,288	\$22,560
		D8230 Lvl - 3		10	5	15	\$888	\$8,880	\$4,440	\$13,320
		D8230 Non-Labor				-	-	\$11,000	\$0	\$11,000
	Task under review --- Under Tribal contract, obtain water quality samples and analyze for two alternative sites (Dr. Ralph Davis). Administrator of contract.	Dr. Ralph Davis				-	-	\$0	\$0	\$0
		Tribe - Data Collect				-	-	\$0	\$0	\$0
		Tribe - Cont. Adm.				-	-	\$0	\$0	\$0
	Engineering Geology --- may require drilling at structure locations for subsurface stability. (drilling cost estimated by mphilips 7/15/05)	D8320 Lvl - 2			10	10	\$752	\$0	\$7,520	\$7,520
		D8320 Lvl - 3			2	2	\$888	\$0	\$1,776	\$1,776
	Mechanical Equipment	Drilling - NKAO						\$5,000	\$0	\$5,000
		D8410 Lvl - 2			2	2	\$752	\$0	\$1,504	\$1,504
Hydraulic Equipment	D8410 Lvl - 3			3	3	\$888	\$0	\$2,664	\$2,664	
	D8420 Lvl - 2			5	5	\$752	\$0	\$3,760	\$3,760	
Electrical Design	D8420 Lvl - 3			4	4	\$888	\$0	\$3,552	\$3,552	
	D8430 Lvl - 2			6	6	\$752	\$0	\$4,512	\$4,512	
	D8430 Lvl - 3			3	3	\$888	\$0	\$2,664	\$2,664	
Task Sub-Totals				225		\$97,328	\$98,624	\$195,952		
F. Socioeconomics	Describe affected environment, evaluate economic feasibility, economic impacts, and ability to pay, etc.	D8270 Lvl - 3	25	0	25	\$888	\$22,200	\$0	\$22,200	
	Obtain economics development information from Tribe.	D8270 Non-Labor			-	-	\$2,000	\$0	\$2,000	
Task Sub-Totals				25		\$24,200	\$0	\$24,200		

Attachment A – Estimated Study Costs by Phases (continued)

G. Environmental Studies	NEPA and bulk preparation of EA	NK100, GPRO		25	25	\$650	\$0	\$16,250	\$16,250	
		NK100 Non-Labor			-	-	-	\$0	\$1,000	\$1,000
	Fish & Wildlife Coordination Report: Phase 1- Initiate discussions with Service, Phase 2 - Service prepares coordination report.	NK100	2	3	5	\$550	\$1,100	\$1,650	\$2,750	
		F&W Service			-	-	-	\$1,500	\$13,500	\$15,000
		NK100 Non-Labor			-	-	-	\$0	\$0	\$0
	Cultural Resources	NK500	5		5	\$550	\$2,750	\$0	\$2,750	
Tribe				-	-	-	\$0	\$0	\$0	
NK500 Non-Labor				-	-	-	\$1,000	\$0	\$1,000	
Task Sub-Totals				35		\$6,350	\$32,400	\$38,750		
H. Public Involvement	Public Scoping Meeting, Survey of Reservation population to determine interest in system connection and demand estimates.	Tribe - Scoping Meeting			-	-	\$0	\$0	\$0	
		Tribe - Reservation Survey			-	-	\$0	\$0	\$0	
		NK100	3		3	\$550	\$1,650	\$0	\$1,650	
		GP4500	3		3	\$650	\$1,950	\$0	\$1,950	
		GP4500 Non-Labor			-	-	-	\$1,500	\$0	\$1,500
		NK100 Non-Labor			-	-	-	\$1,000	\$0	\$1,000
Task Sub-Totals				6		\$6,100	\$0	\$6,100		
I. Technical Writing	Study Tasks and Report Review	D8011 - Lvl 1		20	20	\$520	\$0	\$10,400	\$10,400	
		D8011 - Lvl 2	15	35	50	\$752	\$11,280	\$26,320	\$37,600	
		Tribe			-	-	\$0	\$0	\$0	
		D8011 Non-Labor			-	-	-	\$750	\$750	\$1,500
Task Sub-Totals				70		\$12,030	\$37,470	\$49,500		
J. Project Management	Study Tasks and Report Review	GP4500	20	18	38	\$650	\$13,000	\$11,700	\$24,700	
		GP4500 Non-Labor			-	-	\$1,500	\$1,500	\$3,000	
		NK100	15	15	30	\$550	\$8,250	\$8,250	\$16,500	
		NK100 Non-Labor			-	-	\$1,000	\$1,000	\$2,000	
		D8580 Lvl - 2	15	5	20	\$752	\$11,280	\$3,760	\$15,040	
		D8580 Non-Labor			-	-	\$750	\$750	\$1,500	
Task Sub-Totals				88		\$35,780	\$26,960	\$62,740		
K. Quality Review Team	Review PR/EA reports to assess adequacy in meeting study objectives, goals, and constraints. Regional Office processing to Commissioner, Division chiefs review and approval.	GP4000,GP2000, NK100	0	10	10	\$750	\$0	\$7,500	\$7,500	
Task Sub-Totals				10		\$0	\$7,500	\$7,500		
Project Totals				556		\$288,556	\$211,154	\$499,710		
Totals by Office						GPRO	\$17,950	\$26,950	\$44,900	
						NKAO	\$26,750	\$21,900	\$48,650	
						TSC	\$242,356	\$148,804	\$391,160	
						F&WS	\$1,500	\$13,500	\$15,000	