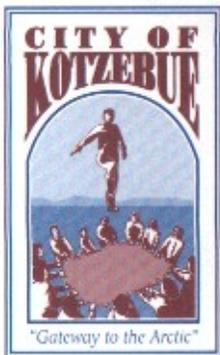


ENVIRONMENTAL REPORT

KOTZEBUE WATER TREATMENT PLANT IMPROVEMENT



Prepared for:



City of Kotzebue
P.O. Box 46
Kotzebue, Alaska 99752



USDA - RD
800 W. Evergreen, Suite 201
Palmer, Alaska 99645

Prepared by:



9101 Vanguard Drive
Anchorage, AK 99507

JUNE 2011

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Prepared for:

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P. O. Box 46
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Prepared by:

R&M Consultants, Inc.

9101 Vanguard Drive
Anchorage, Alaska 99507

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TABLE OF CONTENTS

TABLE OF CONTENTS	i
LIST OF APPENDICES	ii
1.0 PURPOSE OF AND NEED FOR ACTION	1
1.1 Project Description (Proposed Action)	1
1.2 Purpose of and Need for the Proposal.....	2
1.2.1 No Action Alternative.....	3
2.0 ALTERNATIVES TO THE PROPOSED ACTION	4
2.1 Site Alternative	4
2.2 Water Treatment Alternatives.....	4
2.2.1 Conventional Filtration - Enhanced Coagulation (Packaged Water Treatment).....	4
2.2.2 Direct Filtration – Pressure Filters.....	5
2.2.3 Ion Exchange (MIEX and Conventional or Direct Filtration).....	5
2.2.4 Alternate Water Source (Sea Water – Shallow Well/Reverse Osmosis)....	6
3.0 AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES	7
3.1 Land Use	7
3.1.1 Affected Environment.....	7
3.1.2 Environmental Consequences.....	7
3.1.3 Mitigation.....	7
3.2 Floodplains.....	8
3.2.1 Affected Environment.....	8
3.2.2 Environmental Consequences.....	8
3.2.3 Mitigation.....	8
3.3 Wetlands	8
3.3.1 Affected Environment.....	8
3.3.2 Environmental Consequences.....	9
3.3.3 Mitigation.....	9
3.4 Historic Properties	9
3.4.1 Affected Environment.....	9
3.4.2 Environmental Consequences.....	10
3.4.3 Mitigation.....	10
3.5 Biological Resources	10
3.5.1 Threatened and Endangered Species	10
3.5.1.1 Affected Environment.....	10
3.5.1.2 Environmental Consequences.....	11
3.5.1.3 Mitigation.....	11
3.5.2 Fish and Wildlife.....	11
3.5.2.1 Affected Environment.....	11
3.5.2.2 Environmental Consequences.....	12
3.5.2.3 Mitigation.....	12

3.5.3	Vegetation	12
3.5.3.1	Affected Environment.....	12
3.5.3.2	Environmental Consequences.....	12
3.5.3.3	Mitigation.....	12
3.6	Water Quality Issues	12
3.6.1	Affected Environment.....	12
3.6.2	Environmental Consequences.....	13
3.6.3	Mitigation.....	13
3.7	Coastal Resources	13
3.7.1	Affected Environment.....	13
3.7.2	Environmental Consequences.....	15
3.7.3	Mitigation.....	15
3.8	Socio-Economic/Environmental Justice Issues	15
3.8.1	Affected Environment.....	15
3.8.2	Environmental Consequences.....	16
3.8.3	Mitigation.....	16
3.9	Miscellaneous Issues.....	16
3.9.1	Air Quality	16
3.9.1.1	Affected Environment.....	16
3.9.1.2	Environmental Consequences.....	17
3.9.1.3	Mitigation.....	17
3.9.2	Environmental Contamination	17
3.9.2.1	Affected Environment.....	17
3.9.2.2	Environmental Consequences.....	17
3.9.2.3	Mitigation.....	18
3.9.3	Noise	18
3.9.3.1	Affected Environment.....	18
3.9.3.2	Environmental Consequences.....	18
3.9.3.3	Mitigation.....	18
3.10	Resource Categories Excluded from Detailed Evaluation.....	19
3.10.1	Important Farmland	19
3.10.2	Formally Classified Lands	19
3.10.3	Visual Aesthetics (Historic Properties).....	19
4.0	SUMMARY OF MITIGATION	20
5.0	CORRESPONDENCE	21
6.0	LIST OF PREPARERS	22
7.0	REFERENCES	23

LIST OF APPENDICES

Appendix A: Figures.....	2 Pages
Appendix B: Scoping.....	17 Pages
Appendix C: Section 106 Consultation.....	22 Pages
Appendix D: Hazardous Contamination Assessment.....	14 Pages

1.0 PURPOSE OF AND NEED FOR ACTION

1.1 Project Description (Proposed Action)

The City of Kotzebue (Kotzebue) proposes to design and construct a new water treatment plant to serve the municipal potable water needs of Kotzebue, Alaska. Figures A-1 and A-2 (Appendix A) display a general location and vicinity map and a project area map, respectively. A Preliminary Engineering Report (PER) and Environmental Report (ER) for this Proposed Action are being prepared under a preplanning and development grant from the United States Department of Agriculture – Rural Development (USDA-RD), with a matching grant from the Alaska Department of Environmental Conservation (ADEC).

The municipal water system services nearly all of Kotzebue. Water sources for Kotzebue are Devil's Lake (primary) and Vortac Lake (secondary). Both lakes are natural, although the capacity of Vortac Lake was enhanced with a man-made dam, and the impoundment of Devil's Lake has been increased by drainage diversions. Water from both lakes requires significantly more treatment in the warmer months of the year due to increased organic material in the water. After treatment, water is stored in two 1.5-million gallon insulated steel water reservoirs for distribution and fire reserve (Figure A-2). Most residences and businesses receive water via a piped distribution system, though some entities receive hauled water via the city's water delivery truck.

The new water treatment plant would be located on municipal property in a new building adjacent to the existing water treatment plant and reservoirs, within the boundary labeled "Project Area" on Figure A-2. The new building would be a single-story structure, designed to house the necessary water treatment equipment. It might also include - as funding allows - administrative areas for employees, a conference room, and storage areas for equipment, supplies, and the water delivery truck.

Potential water treatment methods were evaluated in the associated PER (GV Jones/R&M, 2011). The PER recommends a new water treatment plant utilizing membrane filtration with spiral-wound nanofilters in conjunction with a microfiltration (or ultrafiltration) membrane. This treatment configuration is simple to operate and relatively stable because the addition of chemicals is not required. Normal operation is fully automatic and controlled by a microprocessor. Membrane filtration treatment systems for removal of organics have been very effective in producing high-quality drinking water in Alaska under a variety of source water and operating conditions. Further details on this preferred treatment option are provided in the PER.

The Proposed Action would include the construction of the plant and installation of the water treatment equipment, as well as new exterior yard piping to connect the raw water source line to the new plant and to connect the exterior pipe network to the six existing circulating water main loops. New circulation and pressure pumps would then be installed for the water distribution system, and the existing water treatment plant would be decommissioned and demolished.

Two critical elements of the Proposed Action are maintaining water treatment and delivery to the existing distribution system during construction, and minimizing disruption during switchover to the new treatment system. The building structure would be sized to accommodate the circulating water system pumps and pressure system. This would allow construction of the water treatment process to be completed while maintaining operation of the existing treatment plant, and would allow startup and testing prior to water production. Following commissioning of the new water plant, the existing plant would be decommissioned. Water service would be provided through the six existing water main loops.

Construction would likely take place within the next few years, once this document and the PER have been approved by USDA-RD and ADEC and construction funding has been secured.

1.2 Purpose of and Need for the Proposal

The need for the Proposed Action is to alleviate the deficiencies and inefficiencies of the current water treatment system and water treatment plant. The existing municipal potable water treatment facility is challenged to consistently produce quality finished water. It operates on cold, low alkalinity surface water from Devil's and Vortac Lakes, which is subject to variable concentrations of organics and events of excessive turbidity, especially during seasonal snowmelt and lake turnover events. Existing treatment infrastructure consists of older, conventional filtration equipment configured primarily for turbidity reduction, with processes for improving taste and odor. It is not efficient in the removal of dissolved organics, which contributes to deteriorating treated water quality in the storage and distribution system.

The existing water treatment plant has been upgraded and expanded since initial staged construction took place in the early 1970s. Over time, the space allocated for the water main loop circulation pumps and piping, along with instrumentation and controls, has become extremely congested, making maintaining and servicing equipment very difficult. In addition, the existing treatment equipment is located in buildings that do not provide adequate access for operation and maintenance of pumping and treatment infrastructure. The number of circulation loops has increased, resulting in crowded conditions which limit the ability to install new equipment such as dedicated fire pumps. Minor to significant structural issues have been identified within the existing water treatment buildings, making them a weak component of the municipal water system.

Continued operation of the existing facility may degrade the overall quality of service and pose health and safety concerns to local residents. The Kotzebue city water system is non-compliant with current water quality and treatment requirements for disinfection by-products, as set forth in Chapter 18 Alaska Administrative Code, Section 80 (18 AAC 80). The occurrence of disinfectant by-products above the maximum contaminant level indicates that water treatment improvements are needed in order for the drinking water to be in compliance with 18 AAC 80. Regulatory requirements are detailed in the PER (GV Jones, 2010).

Growing from the need for the Proposed Action are the following objectives, which collectively comprise the project purpose. The new water treatment plant would be constructed to:

- Accommodate a more efficient and cost-effective water treatment method,
- Facilitate maintenance and operation of the new water treatment system,
- Accommodate future population growth, and
- Comply with state and federal standards.

1.2.1 No Action Alternative

Under the No Action alternative, the existing Kotzebue water system would continue to operate under its current configuration. The previously identified deficiencies and inefficiencies of the current water treatment system and water treatment plant would continue to challenge Kotzebue and its plant operators. Treated water would still be susceptible to deteriorated quality within the storage and distribution systems. The existing buildings comprising the water treatment plant would remain a weak point in the municipal water system.

If No Action is taken, the purpose and need for the Proposed Action would not be fulfilled.

2.0 ALTERNATIVES TO THE PROPOSED ACTION

2.1 Site Alternative

One alternative site location to that described in Section 1.1 was originally considered for the new water treatment plant. The alternative site was located approximately 400 feet southwest of the existing water treatment plant (Figure A-2). It contains a small pond surrounded by vegetation, in addition to previously disturbed uplands. Areas of vehicle/equipment storage and parking are adjacent to the site.

This alternative was eliminated from further evaluation for the following reasons.

- Development of this area would require the placement of fill in the pond and removal of the surrounding vegetation.
- The distance from this location to the existing water treatment plant would make tying in the new plant to the existing water main distribution loops more costly and would likely incur more environmental effects.
- This location is much further away from the existing treatment building than the Project Area for the Proposed Action.

2.2 Water Treatment Alternatives

Five surface water treatment alternatives (including the Proposed Action) were evaluated in the PER. The primary treatment criteria included turbidity removal, color removal, and pathogen inactivation. All five alternatives could reasonably be expected to provide sufficient quantities of drinking water for current and future (20-year) demands while complying with drinking water quality standards. Capital and operational costs for the five alternatives were developed with information provided by equipment manufacturers. Additionally, a non-monetary scoring system was developed to rank the alternatives. The Proposed Action is based on the outcome of this analysis. The four water treatment alternatives eliminated from further consideration are discussed in the following sections.

2.2.1 Conventional Filtration - Enhanced Coagulation (Packaged Water Treatment)

Conventional filtration systems treat water by passing it through granular media filters to remove particulate contaminants. They use pre-treatment chemicals (coagulants) such as iron or aluminum salts, or polymers, added to the source water. The mixture is slowly stirred to induce suspended material to aggregate forming larger, heavier particles known as floc. Sedimentation removes some of the floc by gravity separation; water then passes through filters to remove the remaining particles. The chemical addition destabilizes the particles' surface charge, allowing them to combine and readily form floc and also attach to the filter media.

A conventional filtration treatment process for Kotzebue would consist of chemical addition and mixing with in-line static mixers, flocculation, sedimentation, and filtration, followed by post-treatment for corrosion control, chlorine addition, and fluoride addition.

This treatment process is limited to relatively high source water quality. Events of elevated source water turbidity or color would result in short filter life spans, requiring more frequent backwashing and medium replacement. Backwashing involves reversing and increasing the flow of water to flush out accumulated debris and particles. The process might not be completely effective in removal of a sufficient percentage of organics to result in disinfection by-products below the regulated limit.

2.2.2 Direct Filtration – Pressure Filters

Direct or in-line filtration is a process similar to conventional filtration, but the flocculation and sedimentation steps are eliminated. A chemical coagulant is added to the source water and mixed to induce particle formation. As with conventional filtration, chemical addition serves to de-stabilize the particles to allow them to aggregate to form larger particles and promote adherence to the filter media. Direct filtration allows for the use of pressure filters in which the filter media is enclosed in a pressure-rated vessel which can operate under higher pressures during the treatment process. As such, it offers an economical advantage over conventional filtration in terms of capital cost and operating expense. Direct filtration is appropriate for systems with high source water quality and relatively consistent source water characteristics.

A two-stage direct filtration is a modification of the direct filtration process intended to extend the viability of direct filtration to poorer source water quality conditions or where water quality has seasonal variability. The first stage is used as an initial pre-treatment filter for the oxidation and removal of iron and manganese, followed by a second stage which is used for turbidity and color removal.

This treatment process might not be completely effective in the removal of a sufficient percentage of organics to result in disinfection by-products below the regulated limit. The process is relatively inflexible under changing source water conditions; high concentrations of solids results in more frequent backwashing and lower production rates.

2.2.3 Ion Exchange (MIEX and Conventional or Direct Filtration)

Natural organic matter can be removed from water by utilizing an ion exchange reaction. One proprietary process – known as MIEX – uses a continuously stirred reactor vessel to exchange portions of the dissolved organic content with the resin. Resin is fed to a gravity separator where it is recovered, regenerated, and returned to the raw water at the head of the process. In the separator, the fine resin beads magnetically combine into rapidly settling particles, allowing for high resin recovery. The ion exchange process is normally combined with conventional or direct filtration to remove turbidity and other particulate matter.

The media is regenerated with a brine solution, which eventually must be disposed of. This may be an issue for Kotzebue as the current filter backwash is to the city sewer system and to a brine wastewater lagoon. Recent regulatory decisions at other locations have limited brine discharges from water plants and required specific permits and separate disposal practices for brine wastes. Furthermore, there is a limited amount of

practical operating experience with cold, arctic water sources. Shipping, regeneration, and replacement of the resin would be expensive and potentially difficult.

2.2.4 Alternate Water Source (Sea Water – Shallow Well/Reverse Osmosis)

Desalination of seawater is commonly achieved by either thermal distillation (removal of salt by heating) or membrane filtration. Thermal distillation is commonly deployed where waste heat or abundant inexpensive energy is available. Membrane desalination of water uses reverse osmosis membranes.

Utilizing this water treatment system in Kotzebue would require spiral wound membranes. Pretreatment for the process could be provided with natural seabed filtration using wells as an intake structure. This process requires membrane filtration at high pressure. The amount of pressure is related to the salinity of the source water. For Kotzebue, salt water dilution with Noatak River water would further reduce process energy requirements.

Disadvantages of this type of system for Kotzebue include the uncertainty of developing the water source due to occurrence of permafrost, historical offshore disposal of community wastes, and the relatively low recovery rate requiring a relatively large array of membranes. This treatment process and its potential environmental effects would have to be analyzed under a separate environmental document, as the footprint for this treatment process would differ from the one proposed in this ER.

3.0 AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

3.1 Land Use

3.1.1 Affected Environment

The City of Kotzebue is located within the Northwest Arctic Borough. The Borough has designated the following primary zoning districts: Village, General Conservation, Resource Development, Transportation Corridor, Subsistence Conservation, Commercial Recreation. Kotzebue is located within a Village zoning district (NWAB, 2010). Although part of the Northwest Arctic Borough, Kotzebue has platting, zoning, and land use responsibilities and authority under its own ordinances.

The zoning chapter of the Kotzebue Municipal Code designates three use districts: general, commercial, and industrial. The project is located within the industrial district which promotes industrial and commercial establishments, transportation facilities, power plants, public maintenance yards, water storage, and sewage treatment facilities (KMC 17.24.020). Proposed upgrades and construction would occur on municipal property adjacent to the existing facilities. The Proposed Action is consistent with local land use as it would be located adjacent to the existing facility within the same municipal property boundary.

3.1.2 Environmental Consequences

Direct and Indirect Impacts

The Proposed Action is consistent with the various zoning designations. The Proposed Action would not adversely affect land use within the City of Kotzebue. Construction of the new water treatment plant adjacent to the existing facility would minimize the need to expand industrial/municipal infrastructure beyond the existing property boundary.

Based on the above analysis, the Proposed Action would not affect land use in the vicinity of the project.

Cumulative Impacts

Construction of the new water treatment plant at the proposed location would result in a long term facility capable of accommodating future population growth. Cumulative impacts – such as property acquisition needed for future water treatment expansion projects – would be avoided with construction of the Proposed Action.

3.1.3 Mitigation

There are no identified impacts, therefore mitigation is not proposed. A development permit from the City of Kotzebue would be acquired prior to construction.

3.2 Floodplains

3.2.1 Affected Environment

Historical floods along the coastal areas near Kotzebue were reported in 1963, 1965, 1982, 1986, and 1990. Storm-driven waves were the primary cause of these floods. Despite a regular occurrence of floods, the flood hazard for the Kotzebue area is considered low. Shallow water and offshore sandbars have minimized damage from flooding to localized beachfront erosion (Dorava and Brekken, 1995). The proposed Project Area is located approximately 0.20 miles from the shore.

The City of Kotzebue participates in the National Flood Insurance Program and detailed flood mapping is available from the Federal Emergency Management Agency (FEMA, 1983). Flood-prone areas are divided into three categories: Zone A - areas within the 100-year flood plain, Zone B - areas located between the 100-year and 500-year flood plains, and Zone C - areas with minimal flooding. The Project Area is located within Zone C.

3.2.2 Environmental Consequences

Direct and Indirect Impacts

The Proposed Action has been sited outside of the local 100-year and 500-year floodplains thus avoiding effects on the floodplains. The Proposed Action is consistent with Executive Order 11988.

Cumulative Impacts

The Proposed Action would not contribute to floodplain effects incurred by other reasonably foreseeable actions.

3.2.3 Mitigation

There are no identified impacts, therefore mitigation is not proposed.

3.3 Wetlands

3.3.1 Affected Environment

According to the existing National Wetlands Inventory, the Project Area is mapped as uplands (USFWS, 2010a). The nearest known waterbody or wetland is a small, unmapped pond located approximately 400 feet southwest of the existing water treatment plant. The remaining undeveloped areas within the municipal property boundary are previously disturbed uplands. Further wetland delineation for the Project Area is not planned.

3.3.2 Environmental Consequences

Direct and Indirect Impacts

The site for the Proposed Action is located on uplands. No wetlands or other waters of the U.S. would be affected. The Proposed Action avoids effects on wetlands and other waters of the U.S. and is therefore consistent with Executive Order 11990.

Cumulative Impacts

The Proposed Action would not contribute to wetland impacts incurred by other reasonably foreseeable actions.

3.3.3 Mitigation

There are no identified impacts, therefore mitigation is not proposed.

3.4 Historic Properties

3.4.1 Affected Environment

The modern city of Kotzebue was established as a permanent village when a reindeer station was located here in 1897. The current town site rests upon a series of beach ridges with the remains of earlier, seasonal habitation. Historical and archaeological sites are common throughout the developed areas of the city, and are presumed to exist within the undeveloped areas as well (AHRS, 2010).

The new water treatment plant has been sited on previously disturbed ground on property designated for municipal use. During the original construction of the water treatment facility in the 1970s, a water distribution loop (Uptown Loop) was constructed beneath the proposed Project Area. This portion of the loop was abandoned once construction of the new loop was completed in 2005. Prior to 2004, the proposed Project Area was a brushy, ponded area. During construction of the new water tank in 2004-2005, the site was filled to provide an adjacent storage area for construction materials and pipes. It is currently being utilized as a storage area for connex units.

For consultation and research purposes, an Area of Potential Effect (APE) was established to delineate the project area in terms of potential effects on historical and archaeological resources. The APE encompasses the approximately 6-acre municipal property boundary on which the existing water treatment plant is located and where the new facility would be sited (Figure A-2).

The Proposed Action is located within the Kotzebue Archaeological District (KTZ-36) which encompasses the entirety of modern Kotzebue and the spit (AHRS, 2010 and Kotzebue, 2006). This district is eligible for inclusion in the National Register of Historic Places (NRHP) and contains historic, prehistoric, and human remains. No other discrete archaeological or historical sites are known to be located within the APE.

Consultation with the State Historic Preservation Office (SHPO), the Native Village of Kotzebue, Kikiktagruk Inupiat Corporation (KIC), and NANA Regional Corporation was initiated in August 2010. KIC responded with support for the project in a letter dated 2 September 2010. No other responses to the initial of consultation letters were received. Findings letters were distributed to the entities listed above on 3 December 2010. A concurrence with the finding of “No Historic Properties Affected” was received from the SHPO on 28 December 2010. A record of the Section 106 consultation is included in Appendix C.

3.4.2 Environmental Consequences

Direct and Indirect Impacts

Although the Proposed Action is located within a historical district, the project would not have an adverse effect on the characteristics that qualify it for inclusion in the NRHP. Based on current research and the SHPO’s concurrence with a finding of “No Historic Properties Affected”, the Proposed Action is not anticipated to have direct or indirect effects on cultural, historical, and archaeological resources located within the APE.

Cumulative Impacts

The Proposed Action would not contribute to cumulative effects on cultural or historical resources incurred by other reasonably foreseeable actions.

3.4.3 Mitigation

Should cultural, archaeological, or historical resources be encountered during the course of any construction activity, work would cease immediately and the SHPO would be contacted. The SHPO has advised that construction monitoring by an archaeologist is not warranted.

3.5 Biological Resources

3.5.1 Threatened and Endangered Species

3.5.1.1 Affected Environment

The United States Fish and Wildlife Service (USFWS) and the Alaska Department of Fish and Game (ADF&G) websites were reviewed to determine if any federally-listed threatened or endangered species exist in the vicinity of the project. The spectacled eider, the Alaska breeding population of Steller’s eider, and the polar bear are listed as threatened species under the Endangered Species Act (ESA); they may occur in the Kotzebue area (USFWS, 2010b and ADF&G 2010a). As a result, informal consultation with the USFWS under Section 7 of the ESA was initiated. Stellar’s and spectacled eiders occur in the region at very low densities and are not thought to breed in the Kotzebue area. The Proposed Action is not located within designated habitat for these species. Although polar bears may occur in the project area, very few are observed in the Kotzebue area.

The project is located within the proposed polar bear critical habitat (Appendix B, USFWS Correspondence, 9-30-2010).

3.5.1.2 Environmental Consequences

Direct and Indirect Impacts

Informal consultation under Section 7 of the ESA was initiated to determine the potential for the Proposed Action to impact threatened or endangered species or their designated critical habitat. The Proposed Action is not likely to adversely affect listed species, or designated or proposed critical habitat (Appendix B, USFWS Correspondence, 9-30-2010). Due to the high level of disturbance within and adjacent to the Project Area, these species are unlikely to occur here, thus minimizing potential effects. The Proposed Action would occur outside of designated spectacled and Steller's eider critical habitat, thus no direct or indirect effects are anticipated. In their letter dated 30 September 2010, the USFWS stated that the Proposed Action is not likely to adversely affect proposed polar bear critical habitat, primarily because the Project Area is already developed and there would not be a decrease in the value of habitat for polar bears as a result of the Proposed Action.

Cumulative Impacts

The Proposed Action would not contribute to threatened and endangered species effects incurred by other reasonably foreseeable actions.

3.5.1.3 Mitigation

There are no identified impacts, therefore mitigation is not proposed. Mitigation is not being proposed as no effects on listed species are anticipated. The USFWS would be notified should any of the above mentioned species be observed within the vicinity of the project during construction.

3.5.2 Fish and Wildlife

3.5.2.1 Affected Environment

There are no anadromous or resident fish streams within the Project Area or the surrounding Baldwin Peninsula (ADF&G, 2010b).

The Project Area consists primarily of existing utility buildings and supporting facilities. Very little wildlife habitat (vegetation, wetlands, rivers, lakes, etc.) is available to local species within the Project Area.

Trees and/or cliffs suitable for eagle nesting are generally not located in the Kotzebue area. There are no known eagle nests in the project vicinity. Although bald eagles are not considered endangered or threatened under the Endangered Species Act in the State of Alaska, they still benefit from the protection of the Bald Eagle Protection Act and the Migratory Bird Treaty Act.

3.5.2.2 Environmental Consequences

Direct and Indirect Impacts

No effects on local fish and wildlife are anticipated.

Cumulative Impacts

The Proposed Action would not contribute to cumulative effects on fish and wildlife incurred by other reasonably foreseeable actions.

3.5.2.3 Mitigation

There are no identified impacts, therefore mitigation is not proposed.

3.5.3 Vegetation

3.5.3.1 Affected Environment

The predominant vegetation type for Kotzebue and the Baldwin Peninsula is moist coastal tundra. In undeveloped areas, ground cover consists primarily of grass tussocks, sedges, and dwarf shrubs; very few trees grow in this region, other than along the Noatak and Kobuk River drainages (Georgette and Loon, 1993). The Project Area consists entirely of previously disturbed uplands with no notable vegetation.

3.5.3.2 Environmental Consequences

Direct and Indirect Impacts

The Proposed Action would not require clearing or grubbing of vegetation. No direct or indirect effects on vegetation are anticipated as a result of the Proposed Action.

Cumulative Impacts

The Proposed Action would not contribute cumulatively to other effects on vegetation incurred by other reasonably foreseeable actions.

3.5.3.3 Mitigation

There are no identified impacts, therefore mitigation is not proposed.

3.6 Water Quality

3.6.1 Affected Environment

No lakes or rivers are present within the immediate vicinity of the water treatment plant. A small pond (less than 0.25 acres) is located approximately 400 feet southwest of the existing water treatment plant. Kotzebue Sound is located approximately 0.2 miles north of the Project Area; Swan Lake is located approximately 0.2 miles south of the Project Area. Devil's Lake, approximately 2.5 miles southeast of the city center, supplies water

for the public water system; Vortac Lake provides a secondary water supply but is not used on a regular basis.

Wastewater from the existing water treatment plant drains to the city sewer system which ultimately discharges to the wastewater lagoon.

3.6.2 Environmental Consequences

Direct and Indirect Impacts

The Proposed Action is limited to the Project Area for the new water treatment plant (Figure A-2) and does not include plans to alter facilities at the Vortac Lake and Devil's Lake water sources. No wetlands or waterbodies are located within or adjacent to the Project Area. The Proposed Action is not anticipated to impact Kotzebue Sound or Swan Lake. Erosion control measures would be implemented during construction to prevent the transportation of sediment beyond the immediate construction site. As such, no adverse direct or indirect effects on water quality are anticipated as a result of the Proposed Action.

Upon project completion, the water treatment plant would produce a consistently higher quality of potable water thus resulting in a positive effect on water quality.

The city sewer system would continue to treat wastewater generated by the new water treatment plant. Effects are not anticipated on the quantity and quality of the wastewater generated by the new water treatment plant.

Cumulative Impacts

Most of the water and sewer utilities that serve the City of Kotzebue were constructed in the 1970's. Although some facilities have been modernized, budgetary constraints have prevented a comprehensive upgrade to the aging systems. The Proposed Action is one of several Kotzebue water and sewer improvement projects identified by the City (LCG, 2009). All projects would cumulatively result in positive effects on water quality. The Proposed Action would not contribute to cumulative adverse effects on water quality incurred by other reasonably foreseeable actions.

3.6.3 Mitigation

In order to avoid and minimize adverse effects on water quality, temporary erosion control and stabilization measures would be used during construction to prevent the erosion of soils and transportation of sediment beyond the immediate construction site.

3.7 Coastal Resources

3.7.1 Affected Environment

The entire Project Area for the Proposed Action is located within the Northwest Arctic Borough coastal zone management district, as designated by the Alaska Coastal Management Program (ADNR, 2010). The original Northwest Arctic Borough Coastal

Management Plan was approved by The Alaska Coastal Policy Council in 1986. The plan was revised in 1998 to include the area annexed by the Northwest Arctic Borough. The plan is currently being revised but the revision is not currently in effect. Enforceable policies from the 1998 plan were referred to for the following analysis.

Enforceable Policies (EPs) of the Northwest Arctic Borough (NAB) Coastal Management Plan that are applicable to this area of the borough include:

EP 6.3.3 Habitat and Biological Resource Protection (9. Upland Habitats)

Subject uses shall avoid significant adverse impacts to important habitat in upland areas, including: avoiding its loss; maintaining natural drainage patterns, surface water quality, and natural groundwater recharge areas; preventing runoff and erosion; and minimizing the alteration of vegetation which may result in decreased biological productivity.

EP 6.3.4 Historic, Prehistoric, and Archaeological Resources (1. Maximum Protection Required)

Subject uses shall avoid significant adverse impacts to historic, prehistoric, or archaeological resources, whether previously identified or newly discovered.

EP 6.3.5 Air, Land, and Water Quality (1. Hazardous and Toxic Materials and Substances and Petroleum)

Subject uses shall minimize the risk of significant adverse impacts to coastal resources due to the storage, handling, cleanup, and disposal of hazardous and toxic materials and substances, petroleum, and petroleum products.

EP 6.3.5 Air, Land, and Water Quality (2. Erosion)

Subject uses shall minimize soil erosion.

EP 6.3.10 Transportation and Utilities (1. Planning Process)

The state and federal governments should provide the NAB, affected village councils and residents, and local landowners the opportunity to participate in the planning process with regard to all major transportation and utility facilities proposed in the NAB coastal area.

EP 6.3.10 Transportation and Utilities (2. Minimize Impacts)

Transportation and utility routes and facilities shall be sited, designed, constructed, and operated to minimize significant adverse impacts to biological resources, subsistence use areas, and cultural characteristics.

EP 6.3.10 Transportation and Utilities (3. Migratory Passage)

Transportation and utility routes and facilities shall be sited, designed, constructed, and operated to minimize significant adverse impacts to the efficient passage and movement of fish and wildlife.

3.7.2 Environmental Consequences

Direct and Indirect Impacts

There are seven enforceable policies of the NAB Coastal Management Plan against which the Proposed Action can be assessed. The enforceable policies listed above have no stipulations that bear on the Proposed Action. The Proposed Action would conform to and be consistent with the enforceable policies as stated. Adverse effects on coastal resources are not anticipated as a result of the Proposed Action.

A formal Coastal Consistency Determination would be initiated by submitting a Coastal Project Questionnaire and Certification Statement to the Department of Natural Resources Division of Coastal and Ocean Management prior to construction.

Cumulative Impacts

The Proposed Action would not contribute to effects on coastal resources incurred by other reasonably foreseeable actions.

3.7.3 Mitigation

A Coastal Project Questionnaire and Certification Statement would be submitted to the Department of Natural Resources Division of Coastal and Ocean Management prior to construction.

3.8 Socio-Economics/Environmental Justice

3.8.1 Affected Environment

The area occupied by the modern City of Kotzebue is traditionally known as Kikiktagruk; it has been occupied by Inupiat Eskimos for at least 600 years (ADCCED, 2010). The Native Village of Kotzebue is a federally recognized tribe. The City of Kotzebue was formally established in 1958. The 2009 population estimate for Kotzebue was 3,150 (USCB, 2010). The population has steadily increased since census recording activities began in 1880. Approximately 77% of the local population is Alaska Native.

Kotzebue is the service and transportation hub for all villages in the northwest region. The city is located near the confluence of three major river drainages, making it the transfer point between ocean and inland shipping (ADCCED, 2010). The local population is employed by a variety of government (federal, state, and local) and private entities. A majority of residents engage in subsistence harvesting of moose, caribou, waterfowl, marine mammals, fish, berries, etc. to augment their income. The median household income for residents of Kotzebue was \$58,068 in 2000 and 13.1% of the population of Kotzebue are living below the poverty level (USCB, 2000).

The municipal water system services nearly all of Kotzebue. Most residences and businesses receive water via a piped distribution system, though some entities receive hauled water via the city's water delivery truck.

3.8.2 Environmental Consequences

Direct and Indirect Impacts

The Proposed Action would have a positive, direct impact on the quality of water distributed to the residents of Kotzebue, thus resulting in positive indirect health effects for those served. The new water treatment plant would operate more efficiently and cost effectively. During construction of the new plant, a positive socio-economic impact would result from increased revenue to local support businesses (e.g. food and lodging).

Regardless of race, residents would be equally impacted as a result of the improved municipal water supply. The Proposed Action would not have a disproportionately high and adverse human health or environmental effect on minority or low-income populations. The Proposed Action is consistent with EO 12898.

Cumulative Impacts

The Proposed Action would not result in adverse cumulative effects when accounting for other reasonably foreseeable actions. There would be positive, cumulative socio-economic effects as the city water system improves through the other water system upgrade projects.

The Proposed Action would not contribute to a cumulative adverse effect on minority or low-income populations.

3.8.3 Mitigation

There are no identified impacts, therefore mitigation is not proposed.

3.9 Miscellaneous

3.9.1 Air Quality

3.9.1.1 Affected Environment

The Clean Air Act (CAA) authorizes the Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS). Based on measured ambient data for certain criteria pollutants, the EPA designates all areas of the United States as having air quality either better than (attainment) or worse than (nonattainment) the NAAQS. The CAA requires each state to develop a State Implementation Plan (SIP) which serves as its primary mechanism for ensuring that the NAAQS are achieved and maintained within that state. Alaska implements regulations, based on federal standards, to control sources of criteria pollutants. The six criteria pollutants are ozone, carbon monoxide (CO), nitrogen oxide, sulfur dioxide, inhalable particulate matter (PM10), and lead. CO and PM10 are specific pollutants of concern for Alaskan communities. The CAA stipulates that federal actions in nonattainment and maintenance areas may not hinder future attainment with the NAAQS and conformance to the applicable SIP.

The City of Kotzebue is not located within an air quality maintenance area or nonattainment area.

3.9.1.2 Environmental Consequences

Direct and Indirect Impacts

Air quality effects directly and indirectly resulting from the Proposed Action are considered negligible and temporary. Air quality may temporarily be affected by dust and exhaust from heavy equipment working during construction.

Cumulative Impacts

Effects on air quality are anticipated to be negligible and temporary. No cumulative effects on air quality are expected within the city of Kotzebue.

3.9.1.3 Mitigation

Abatement methods such as watering the surface areas and appropriate and timely equipment maintenance would be employed as needed to minimize air quality effects.

3.9.2 Environmental Contamination

3.9.2.1 Affected Environment

The Project Area is not known to be contaminated. A preliminary search of the ADEC contaminated sites database in July 2010 revealed several open sites with environmental contamination within the City of Kotzebue. The ADEC file numbers for contaminated sites located within one quarter mile of the Project Area are: 410.38.008, 410.38.024, 410.38.011, and 410.38.009. A location map for these sites and individual case files are included in Appendix D, Hazardous Contamination Assessment.

3.9.2.2 Environmental Consequences

Direct and Indirect Impacts

Based upon readily available information, the proposed water treatment plant improvement has a low potential for encountering petroleum or hazardous materials contamination.

While the potential for encountering additional undocumented hazardous materials or petroleum contamination always exists, it is anticipated that the proposed project may be conducted without further Phase I or Phase II environmental investigation. If the existing water treatment plant is to be demolished, further studies are recommended to determine the presence of lead-based paint, asbestos containing material, and other potentially hazardous materials (Appendix D, Hazardous Contamination Assessment).

Cumulative Impacts

The Proposed Action is not anticipated to have any cumulative effects related to environmental contamination.

3.9.2.3 Mitigation

Should petroleum contamination or hazardous materials be encountered during construction, ADEC would be contacted to discuss any corrective action.

3.9.3 Noise

3.9.3.1 Affected Environment

Noise is usually defined as unwanted sound, and it is recognized as an environmental pollutant. Noise can produce physiological or psychological damage and/or interfere with communication, work, rest recreation, and sleep. In wildlife, it can interrupt normal use of habitat and migration patterns.

The Proposed Action has been sited within the city center on municipal property which is currently reserved for public works facilities. Adjacent land uses consist of the following public facilities: fire department, police department, Chukchi Campus, and public library.

3.9.3.2 Environmental Consequences

Direct and Indirect Impacts

Temporary noise effects would occur during construction of the new water treatment plant.

Cumulative Impacts

Given the short construction season in Kotzebue, there is the possibility for several construction projects to occur at the same time within the general vicinity. This could contribute to increased cumulative noise effects on a temporary basis.

3.9.3.3 Mitigation

Construction activities may be limited to certain times and days in accordance with local noise ordinances, if applicable.

3.10 Resource Categories Excluded from Detailed Evaluation

3.10.1 Important Farmland

Prime and important farmland includes all land that is defined as prime, unique, or farmlands of statewide or local importance. No such designated farmlands occur within the Kotzebue area (USDA-NRCS, 2010). There would be no adverse effects on these resources, and therefore no mitigation is proposed.

3.10.2 Formally Classified Lands

A review of the Alaska Department of Fish and Game's online list of State of Alaska Refuges, Critical Habitat Areas, or Sanctuaries found that there are no state lands designated as such within the project vicinity (ADF&G, 2010c). There are no National Wildlife Refuges located within or adjacent to the Project Area. The nearest refuge, Selawik National Wildlife Refuge, is located across Hotham Sound over 20 miles east of the Project Area (USFWS, 2010c). Based upon a review of the National Park Service website, no National Parks, Preserves, Monuments exist in the Project Area (NPS, 2010). Cape Krusenstern National Monument is located across Kotzebue Sound to the north. Additionally, no Wild and Scenic Rivers exist in the Project Area (NWSR, 2010). The Noatak River, also across Kotzebue Sound to the north, is the closest federally designated Wild and Scenic River.

The Proposed Action would not adversely affect formally classified lands; no mitigation is proposed.

3.10.3 Visual Aesthetics (Historic Properties)

The Proposed Action is consistent with the existing surrounding structures and would not have an adverse visual effect on historic properties.

4.0 SUMMARY OF MITIGATION

ENVIRONMENTAL RESOURCE	MITIGATION
3.1 Land Use	A City of Kotzebue building permit would be submitted to ensure consistency with local development.
3.2 Floodplains	None.
3.3 Wetlands	None.
3.4 Historic Properties	Should cultural, archaeological, or historical resources be encountered during the course of any construction activity, work would cease immediately and the SHPO would be contacted.
3.5 Biological Resources: Threatened and Endangered Species, Fish and Wildlife, and Vegetation	<p><u>Threatened and Endangered Species:</u> The USFWS would be notified should any of the species mentioned in Section 3.5.1 be observed within the vicinity of the project.</p> <p><u>Fish and Wildlife:</u> None.</p> <p><u>Vegetation:</u> None.</p>
3.6 Water Quality	None.
3.7 Coastal Resources	A Coastal Project Questionnaire and Certification Statement would be submitted to the Department of Natural Resources Division of Coastal and Ocean Management prior to construction.
3.8 Socio-Economics/Environmental Justice	None.
3.9 Miscellaneous: Air Quality, Environmental Contamination, Noise	<p><u>Air Quality:</u> Abatement methods such as watering the surface areas and appropriate and timely equipment maintenance would be employed as needed to minimize air quality effects.</p> <p><u>Environmental Contamination:</u> Should petroleum contamination or hazardous materials be encountered during construction, ADEC would be contacted to discuss any corrective action.</p> <p><u>Noise:</u> Construction activities may be limited to certain times and days in accordance with local noise ordinances, if applicable.</p>

5.0 CORRESPONDENCE

Correspondence efforts for the Proposed Action were initiated in August 2010. Scoping materials were sent to applicable federal, state, and local agencies on 30 August 2010. Responses were received from ADF&G, City of Kotzebue, the Division of Ocean and Coastal Management, and the USFWS. There are no outstanding agency issues regarding the Proposed Action. A copy of the scoping letter and agency responses are included in their entirety in Appendix B.

Section 106 Consultation was initiated with the SHPO, the Native Village of Kotzebue, KIC, and NANA Regional Corporation in August 2010. KIC responded with support for the project; no other responses to the initiation of consultation letters were received. USDA distributed findings letters to the same tribal entities on 3 December 2010. A concurrence with the finding of “No Historic Properties Affected” was received from the SHPO on 28 December 2010. All Section 106 correspondence is included in Appendix C.

6.0 LIST OF PREPARERS

Project Management and Review: Kevin J. Pendergast, C.P.G. (R&M Consultants, Inc.)

Environmental Report: Kristi M. McLean, LEED AP (R&M Consultants, Inc.)

Engineering Analysis and Review: Lee Blumell, P.E. (R&M Consultants, Inc.)

Graphics: Patrick Hewlett (R&M Consultants, Inc.)

Document Production: Jessica Koloski (R&M Consultants, Inc.)

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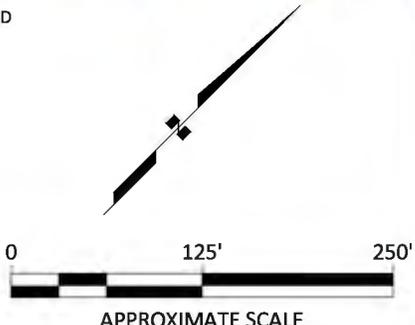
APPENDIX A:

FIGURES

Location and Vicinity Map.....	A-1
Project Area.....	A-2



- - - - - MUNICIPAL PROPERTY BOUNDARY AND AREA OF POTENTIAL EFFECT
 PROJECT AREA



KOTZEBUE WATER TREATMENT PLANT UPGRADE
KOTZEBUE, ALASKA

T17N, R18W, SEC 3
 KOTZEBUE D-2
 KATEEL RIVER MERIDIAN

PROJECT AREA

MAY 2011 FIGURE A-2

APPENDIX B:

SCOPING



R&M CONSULTANTS, INC.
9101 Vanguard Drive, Anchorage, Alaska 99507

(907) 522-1707, FAX (907) 522-3403, www.rmconsult.com

30 August 2010

R&M Project No. 1664.01

Recipient Title
Affiliated Agency/Organization
Address
City, State ZIP

RE: Scoping Comments Request

Project: Kotzebue Water Treatment Plant Upgrade
Kotzebue, Alaska

Dear Recipient:

The City of Kotzebue (Kotzebue) is soliciting comments and information on the following proposed action to design and construct a new water treatment plant to better serve municipal potable water needs in Kotzebue, Alaska. A Preliminary Engineering Report (PER) and an Environmental Report (ER) for the proposed action are being prepared under a preplanning and development grant from the United States Department of Agriculture-Rural Development (USDA-RD), with a matching grant from the Alaska Department of Environmental Conservation-Division of Water (ADEC). The project is located in Township 17N, Range 18W, Section 3, Kateel River Meridian, USGS Quadrangle Kotzebue D-2 (Figure 1). The ER will assess any potential environmental impacts associated with the proposed action. The comments of your organization are requested to aid in this analysis.

Purpose and Need

The need for the proposed action is to alleviate the deficiencies and inefficiencies of the current water treatment system and water treatment plant. The existing municipal potable water treatment facility is challenged to consistently produce quality finished water. It operates on cold, low alkalinity surface water from Devil's and Vortac Lakes, which is subject to variable concentrations of organics and events of excessive turbidity, especially during seasonal snowmelt and lake turnover events. Existing treatment infrastructure consists of older, conventional filtration equipment configured primarily for turbidity reduction, with processes for improving taste and odor. It is not efficient in the removal of dissolved organics, which contributes to deteriorating treated water quality in the storage and distribution system. In addition, the existing treatment equipment is located in buildings that do not provide adequate access for operation and maintenance of

pumping and treatment infrastructure. Minor to significant structural issues have been identified within the existing water treatment buildings, making them a weak component of the municipal water system.

Proposed Action

The municipal water system services nearly all of Kotzebue. Most residences and businesses receive water via a piped distribution system, though some entities receive hauled water via the city's water delivery truck.

Water sources for Kotzebue currently are Devil's Lake (primary) and Vortac Lake (secondary). Water from both lakes requires significantly more treatment in the warm months of the year due to increased organics in the water. After treatment, water is stored in two 1.5-million gallon insulated steel reservoirs for distribution and fire reserve. Potential water treatment methods are being evaluated in the PER.

The new water treatment plant would be located on municipal property in a new building adjacent to or near the existing water treatment plant and reservoirs. Two potential site alternatives are shown on Figure 2. The new building would likely be a single-story structure, designed to house the necessary water treatment equipment and chemicals. The new facility may also include, as funding allows, administrative areas for employees, a conference room, and storage areas for equipment, supplies, and the water delivery truck.

A critical element of the proposed action is maintaining water treatment and delivery to the existing distribution system during construction and minimizing disruption during switchover to the new treatment system.

Construction would likely take place within the next few years, once the preliminary engineering and environmental reports have been approved by USDA-RD and ADEC and construction funding has been secured.

Environmental Documentation

No significant environmental impacts are anticipated from the proposed action. To ensure that all factors are considered in the development of the environmental document, your comments are requested no later than 30 days after the date of this letter. Provided in Attachment A are preliminary research results to assist you in identifying aspects of the project that may be of interest to your agency or organization.

Recipient
30 August 2010
Page 3 of 3

If you have any questions on the environmental effects or engineering aspects of the proposed project, please contact me directly at the letterhead address, by phone at 907.646.9682 or via email at kpendergast@rmconsult.com.

Sincerely,

R&M CONSULTANTS, INC.

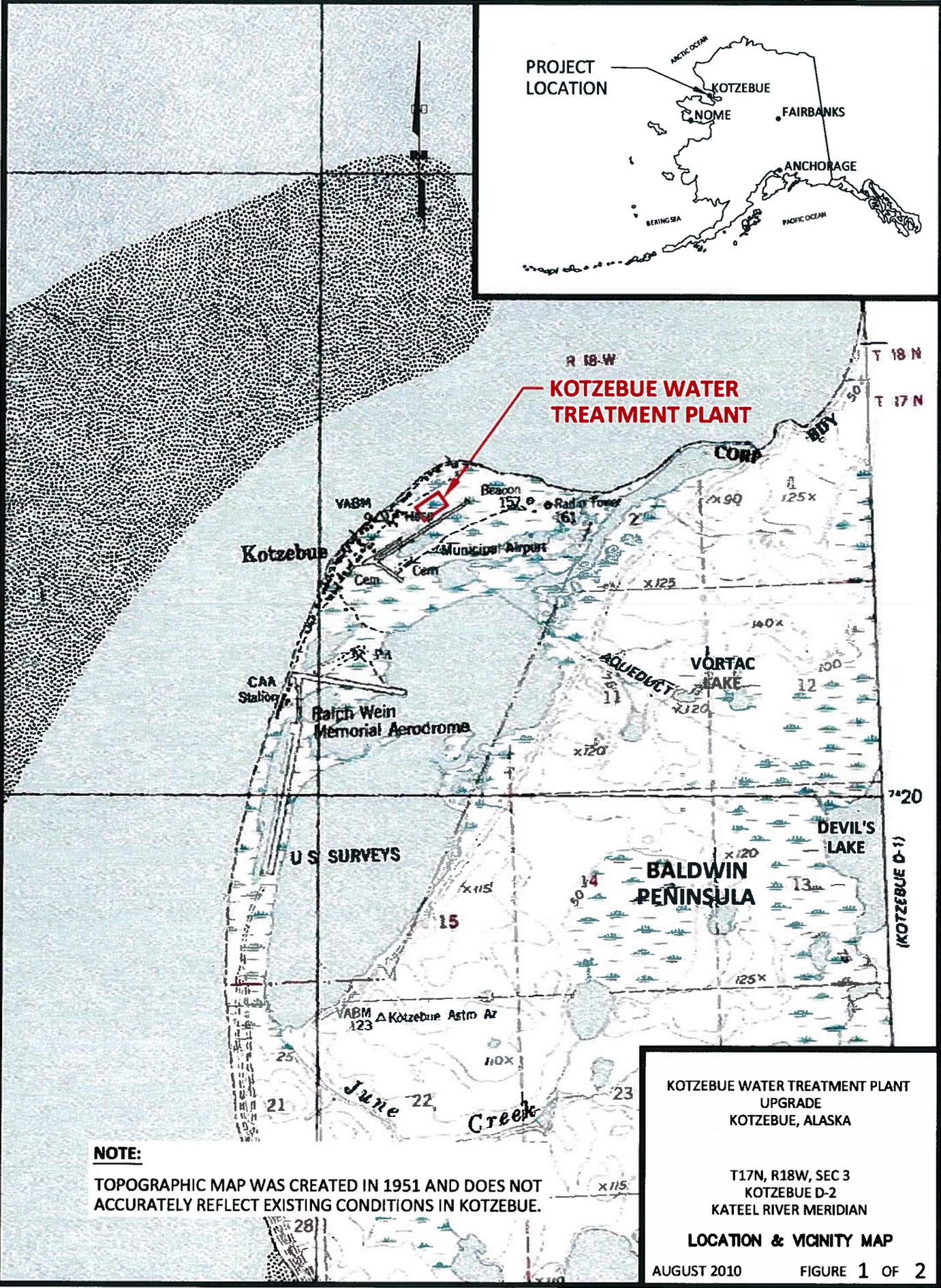
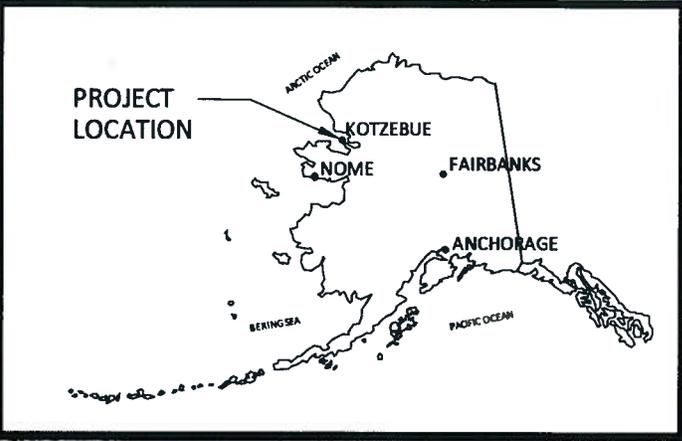


Kevin J. Pendergast, C.P.G.
Senior Geologist – Environmental Specialist

cc: Derek Martin, City of Kotzebue
Tasha Deardorff, USDA Rural Development
Mike Lewis, ADEC Municipal Grants and Loans
Other recipients (Mailing List attached)

Attachments:

- Figure 1: Location and Vicinity Map
- Figure 2: Project Area
- Attachment A: Preliminary Research Results
- Scoping Mailing List



NOTE:
 TOPOGRAPHIC MAP WAS CREATED IN 1951 AND DOES NOT ACCURATELY REFLECT EXISTING CONDITIONS IN KOTZEBUE.

KOTZEBUE WATER TREATMENT PLANT UPGRADE
 KOTZEBUE, ALASKA

T17N, R18W, SEC 3
 KOTZEBUE D-2
 KATEEL RIVER MERIDIAN

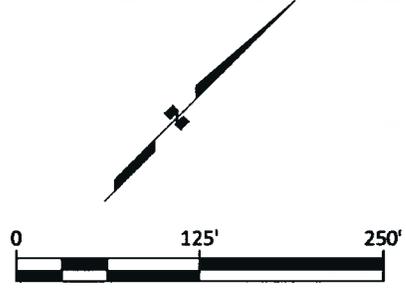
LOCATION & VICINITY MAP

AUGUST 2010 FIGURE 1 OF 2

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----- MUNICIPAL BOUNDARY
 SITE ALTERNATIVE BOUNDARY



**KOTZEBUE WATER TREATMENT PLANT
 UPGRADE
 KOTZEBUE, ALASKA**

T17N, R18W, SEC 3
 KOTZEBUE D-2
 KATEEL RIVER MERIDIAN

PROJECT AREA

ATTACHMENT A

Preliminary Research Results Kotzebue Water Treatment Plant Upgrade

Land Use: The proposed upgrades and construction would occur on available land adjacent to or near the existing facilities. The project area is located on municipal property reserved for public works facilities. The proposed action is consistent with the current use of this property. Although part of the Northwest Arctic Borough, Kotzebue has platting, zoning, and land use responsibilities and authority under its own ordinances. Coordination with the municipality will ensure consistency with local land use planning.

State Refuges, Critical Habitat Areas, and Sanctuaries: A review of the Alaska Department of Fish and Game's (ADF&G) online lists of State of Alaska Refuges, Critical Habitat Areas, and Sanctuaries found that there are no state lands designated as such in the project vicinity.

National Wildlife Refuges: There are no National Wildlife Refuges located within or adjacent to the project area. The nearest refuge, Selawik National Wildlife Refuge, is located across Hotham Sound, over 20 miles east of the project area.

National Parks, Preserves, Monuments, and Wild and Scenic Rivers: Based upon a review of the National Park Service website, no National Parks, Preserves, Monuments or Wild and Scenic Rivers exist in the project area. Cape Krusenstern National Monument is located across Kotzebue Sound to the north. The Noatak River, also across Kotzebue Sound to the north, is a federally designated Wild and Scenic River.

Floodplain Management [Executive Order 11988]: The City of Kotzebue participates in the National Flood Insurance Program and detailed flood mapping from the Federal Emergency Management Agency is available (Flood Insurance Rate Map 0200590011B). Flood prone areas are divided into three categories: Zone A - areas within the 100-year flood plain, Zone B - areas located between the 100-year and 500-year flood plains, and Zone C - areas with minimal flooding. The project area is located within Zone C.

Wetlands [Executive Order 11990]: According to the existing National Wetlands Inventory, the project area is mapped as uplands. There is a small, unmapped pond located approximately 350 feet southwest of the existing water treatment plant. The remaining, undeveloped areas within the municipal boundary are previously disturbed uplands.

Historical and Cultural Resources: The Alaska Heritage Resource Survey (AHRS) was reviewed to determine the proximity of the project area to any known archaeological or historical sites and/or districts. The area of potential effect (APE) lies within two archaeological districts (KTZ-1 and KTZ-36) which encompass the entirety of modern Kotzebue and the spit. No other previously discovered sites are located within the APE. Consultation with the State Historic Preservation Office and local tribal entities is being initiated.

Fish and Wildlife: A search of the ADF&G's online "Anadromous Fish Distribution" database revealed there are no anadromous or resident fish streams within the project area or the surrounding Baldwin Peninsula.

The project area consists primarily of existing utility buildings and supporting facilities. As a result, wildlife habitat (vegetation, wetlands, rivers, lakes, etc.) available to local species within the project area is minimal.

Threatened and Endangered Species: The USFWS and ADF&G websites were reviewed to determine if any federally threatened or endangered species exist in the project area. The spectacled eider, the Alaska breeding population of Steller's eider, and the polar bear may occur in the Kotzebue area during periods of migration. However, suitable habitat and/or foraging opportunities do not occur within the project area.

Eagle Nests: Trees and/or cliffs suitable for eagle nesting are generally not located in the Kotzebue area. There are no known eagle nests in the project vicinity. Although bald eagles are not considered endangered or threatened under the Endangered Species Act in the State of Alaska, they still benefit from the protection of the Bald Eagle Protection Act and the Migratory Bird Treaty Act.

Water Body Involvement: No lakes or rivers are present within the immediate vicinity of the water treatment plant. A small pond (less than 0.25 acres) is located approximately 350 feet southwest of the existing water treatment plant. Kotzebue Sound is located approximately 0.2 miles north of the project area; Swan Lake is located approximately 0.2 miles south of the project area. The proposed action is not anticipated to impact Kotzebue Sound or Swan Lake. Devil's Lake, approximately 2.5 miles southeast of the city center, supplies water for the public water system; Vortac Lake provides a back-up water supply but is not used on a regular basis. The proposed action would not alter facilities at these water sources.

Coastal Zone Management: The proposed project is located within the Northwest Arctic Borough coastal zone management district as designated by the Alaska Coastal Management Program. A Coastal Project Questionnaire and Certification Statement will be submitted to the Department of Natural Resources Division of Coastal and Ocean Management.

Contaminated Sites, Spills and Underground Storage Tanks: The project area is not known to be contaminated. A preliminary search of the ADEC contaminated sites database in July 2010 revealed several open sites with environmental contamination within the City of Kotzebue. The contaminated sites located within one quarter mile of the project area are:

- ADEC File #410.38.008: This active site is located approximately 0.25 miles directly north of the project area. An estimated 100,000 to 200,000 gallons of diesel fuel was released to the subsurface between 1950 and 1980. Current monitoring is underway.
- ADEC File #410.38.024: This active site is located approximately 0.2 miles southeast of the project area. Approximately 300 gallons of diesel fuel were released from an aboveground heating oil tank on 12 February 2008. Initial cleanup efforts were completed and ongoing monitoring activities continue.

- ADEC File #410.38.011: This active site is located approximately 0.25 miles southeast of the project area. In 1999, approximately 900 gallons of fuel from a home heating oil tank was released to the surface after falling ice severed a fuel line.
- ADEC File #410.38.009: This closed site is located approximately 0.25 miles southeast of the project area. An estimated 500 gallons of heating oil spilled at a residence in 1998. The site was conditionally closed with institutional controls on 20 April 2007.

Construction Impacts: A temporary degradation of air quality may occur from the increased airborne particulate levels and emissions from heavy equipment and dust during construction activities. Using abatement methods such as watering surface areas and appropriate and timely equipment maintenance will minimize these impacts. There will be a temporary increase in noise during construction due to the use of heavy equipment. Temporary erosion control and stabilization measures [Best Management Practices (BMPs)] will be used during construction to prevent and mitigate erosion of soils and sedimentation of nearby lands and waterbodies.

Since the water treatment plant services the majority of the community, maintaining service during construction is essential. The existing system will continue operation while the new treatment plant is brought on line, possibly using a phased approach.

**KOTZEBUE WATER TREATMENT PLANT UPGRADE
SCOPING MAILING LIST**

Mr. Steve Bainbridge
Alaska Department of Environmental Conservation
610 University Avenue
Fairbanks, AK 99701
steve.bainbridge@alaska.gov

Mr. Jeff Hadley
City of Kotzebue
P.O. Box 46
Kotzebue, AK 99752
pwwdir@otz.net

Mr. William Ashton
Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, AK 99501
william.ashton@alaska.gov

Mr. Eugene Smith
City of Kotzebue
P.O. Box 46
Kotzebue, AK 99752
esmith@maniilaq.org

Mr. James Weise
Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, AK 99501
james.weise@alaska.gov

Mr. Rick Hohnbaum
City of Kotzebue
P.O. Box 46
Kotzebue, AK 99752
rhohnbaum@kotzebue.org

Mr. Greg Magee
Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, AK 99501
greg.magee@alaska.gov

Mr. Derek Martin
City of Kotzebue
P.O. Box 46
Kotzebue, AK 99752
kotchzengs@otz.net

Mr. Mike Lewis
Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, AK 99501
mike.lewis@alaska.gov

Mr. Dick Mylius
Alaska Department of Natural Resources
550 W. 7th Ave., Suite 1070
Anchorage, AK 99501-3579
dick.mylius@alaska.gov

Mr. Robert McLean
Alaska Department of Fish and Game
1300 College Road
Fairbanks, AK 99701
mac.mclean@alaska.gov

Ms. Christine Ballard
Alaska Department of Natural Resources
550 West 7th Avenue, Suite 705
Anchorage, AK 99501
christine.ballard@alaska.gov

Ms. Shelly Jacobson
U.S. Bureau of Land Management
Central Yukon Field Office
1150 University Avenue
Fairbanks, AK 99709
shelly_jacobson@blm.gov

Ms. Heather Dean
USEPA Region 10, Alaska Operations
222 West 7th Avenue, Box 19
Federal Building Room 537
Anchorage, AK 99513-7588
dean.heather@epa.gov

Mr. Ian Erlich
Maniilaq Association
P.O. Box 256
Kotzebue, AK 99752
ierlich@maniilaq.org

Mr. Tom Ukallaysaaq Okleasik
Northwest Arctic Borough
P.O. Box 1110
Kotzebue, AK 99752
tokleasik@nwabor.org

Ms. Siikauraq Martha Whiting
Northwest Arctic Borough
P.O. Box 1110
Kotzebue, AK 99752
mwhiting@nwabor.org

Ms. Sue Masica
U.S. National Park Service
240 West 5th Avenue, Room 114
Anchorage, AK 99501
sue_masica@nps.gov

Ms. Judith Bittner *
State Historic Preservation Officer
Alaska Department of Natural Resources
550 W. 7th Avenue, Suite 1310
Anchorage, AK 99501-3565
judy.bittner@alaska.gov

Ms. Christy Everett
United States Army Corps of Engineers
Fairbanks Field Office
2175 University Avenue, Suite 201E
Fairbanks, AK 99709-4910
christy.a.everett@usace.army.mil

Ms. Mary Azelton
United States Army Corps of Engineers
P.O. Box 6898
Elmendorf AFB, AK 99506-0898
mary.t.azelton@usace.army.mil

Ms. Tasha Deardorff
USDA – Rural Development
510 L Street, Suite 401
Anchorage, AK 99501
tasha.deardorff@ak.usda.gov

Mr. Timothy Krug
USDA – Rural Development
801 West Evergreen Avenue, Suite 202
Palmer, AK 99646
timothy.krug@ak.usda.gov

Mr. Ted Swem
United States Fish & Wildlife Service
Endangered Species Branch
101 – 12th Avenue, Room 110
Fairbanks, AK 99701
ted_swem@fws.gov

Representative Reggie Joule
PO Box 673
Kotzebue, AK 99752
representative_reggie_joule@legis.state.ak.us

Senator Donny Olson
716 West 4th Avenue, Suite 560
Anchorage, AK 99501-2133
senator_donny_olson@legis.state.ak.us

Mr. Guy Adams *
Native Village of Kotzebue
P.O. Box 296
Kotzebue, AK 99752
info@kotzebueira.org

Ms. Marie Greene *
NANA Regional Corporation
P.O. Box 49
Kotzebue, AK 99752
marie.greene@nana.com

Mr. Timothy Schuerch *
Kikiktagruk Inupiat Corporation
P.O. Box 1050
Kotzebue, AK 99752

*Did not receive copy of scoping letter; Section 106 Initiation of Consultation Letters sent separately

From: Kevin Pendergast
Sent: Friday, September 03, 2010 5:10 PM
To: McLean, Robert F (DFG)
Subject: RE: Kotzebue Water Treatment Plant Upgrade; No. 1664.01

Good afternoon Mac-
Thank you for your response.

Regards,
Kevin Pendergast

Kevin J. Pendergast, C.P.G.
Senior Geologist-Environmental Specialist



9101 Vanguard Drive
Anchorage, AK 99507
907.646.9682 Direct
907.522.3403 Fax
www.rmconsult.com

From: McLean, Robert F (DFG) [mailto:mac.mclean@alaska.gov]
Sent: Friday, September 03, 2010 2:09 PM
To: Kevin Pendergast
Cc: McLean, Robert F (DFG)
Subject: Kotzebue Water Treatment Plant Upgrade; No. 1664.01

ADF&G-Habitat has reviewed your August 30, 2010 scoping request for the proposed design and construction of a new water treatment plant in Kotzebue, AK. We have reviewed the Environmental Report and have no new information or recommendations to offer at this time.

Thank you for the opportunity to comment.

From: John Rae [mailto:pwdir@otz.net]

Sent: Wednesday, September 08, 2010 3:41 PM

To: Kevin Pendergast

Cc: 'Randy Walker'

Subject: Kotzebue Water Treatment Plant UpGrade RE: Scoping Comments Request

Kevin:

I have received your letter, Scoping Comments dated Aug.30 2010.

Jeff Hadley is no longer with the City of Kotzebue and I John Rae, have replaced the Public Works Dir. position.

The Water Treatment Plant Supervisor Randy Walker and I have reviewed your letter, requesting Scoping Comments, and have no issues or concerns at this time.

Because this is a new position for me, I would invite any communications in the interest of this project.

Sincerely,
John Rae

JOHN RAE, PUBLIC WORKS DIRECTOR
CITY OF KOTZEBUE
P.O. Box 46
KOTZEBUE, ALASKA 99752

(907) 442-5201 Direct
(907) 995-2587 Cell
(907) 442-2155 Fax

pwdir@otz.net Work Email

From: Ballard, Christine A (DNR) [mailto:christine.ballard@alaska.gov]
Sent: Friday, September 10, 2010 10:34 AM
To: Kevin Pendergast
Subject: Scoping Received for Kotzebue Water Treatment Plant Upgrade

Good Morning Mr. Pendergast,

Thank you for the opportunity to comment on the above referenced project. The location of the proposed [PROJECT/ACTION] lies within the coastal zone boundaries of the State of Alaska and the Northwest Arctic Borough Coastal District. The Department of Natural Resources, Division of Coastal & Ocean Management requests the submission of a completed Coastal Project Questionnaire/Certification Statement and Project Evaluation when project design work has progressed to the point where **R&M** is ready to submit applications for appropriate state and/or federal permits. A determination as to the status of the project with regard to potential requirements for a coordinated ACMP review through this office will be made at that time. The Questionnaire can be found on our web site at www.alaskacoast.state.ak.us . Once ready for the permitting process, you may email it to dnr.dcompaanc@alaska.gov .

Thank you and please feel free to contact me at (907) 269-7478 with any questions.

Christine Ballard

Project Review Assistant
DNR, Division of Coastal & Ocean Management
phone: (907) 269-7478, fax: (907) 269-3981
christine.ballard@alaska.gov



From: Shannon_Torrence@fws.gov [mailto:Shannon_Torrence@fws.gov]
Sent: Thursday, September 23, 2010 2:05 PM
To: Kevin Pendergast
Cc: Ted_Swem@fws.gov
Subject: Kotzebue water treatment plant, Project no. 1664.01

Mr. Pendergast,

I wanted to let you know that the FWS received your scoping letter and that we are working on a few comments. We are also going to go ahead and do a section 7 consultation on this project so that you will not need to come back to us later. Don't hesitate to call if you have any questions.

Sincerely,

Shannon Torrence, PhD
Endangered Species Biologist
101 12th Ave. Rm. 110
Fairbanks, AK 99701
907-455-1871 work
907-456-0208 fax
shannon_torrence@fws.gov



United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Fairbanks Fish and Wildlife Field Office
101 12th Avenue, Room 110
Fairbanks, Alaska 99701
September 30, 2010



Mr. Kevin Pendergast.
R & M Consultants, Inc.
9101 Vanguard Dr.
Anchorage, AK 99507

Re: Scoping comments and section
7 consultation under the
Endangered Species Act for
Kotzebue Water Treatment
Plant Upgrades

Dear Mr. Pendergast:

Thank you for your letter, dated August 30, 2010, regarding upgrades to the proposed water treatment plant in Kotzebue. This letter addresses project effects on endangered and threatened species, and designated critical habitats pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act).

THE PROPOSED ACTION

Based on your letter, we understand that the City of Kotzebue plans to construct a new water treatment plant in one of two locations on municipal property near the existing treatment plant. Construction would begin within the next few years once environmental reports are approved by the U.S. Department of Agriculture -- Rural Development and the Alaska Department of Environmental Conservation -- Division of Water.

EFFECTS OF THE ACTION ON LISTED SPECIES

Project effects on Steller's and spectacled eiders

The Service listed the spectacled eider (*Somateria fisheri*) on May 10, 1993 (58 FR 27474) and the Alaska-breeding Steller's eider (*Polysticta stelleri*) as threatened on June 11, 1997 (62 FR 31748). Steller's and spectacled eiders can occur in the project area. However, they are not thought to breed in the Kotzebue area, and occur in the region at very low densities. They are unlikely to occur in the immediate vicinity of the water treatment plant because the area experiences a high level of disturbance. Thus, we expect the proposed activities are not likely to adversely affect these species.

Project effects on Steller's and spectacled eider critical habitat

The Service designated critical habitat for spectacled eiders on February 6, 2001 (66 FR 9146) and on February 2, 2001 (66 FR 8850) for Alaska-breeding Steller's eiders. The proposed project will not take place in or near spectacled or Steller's eider critical habitat. Therefore, proposed activities will not affect critical habitat.

Project effects on polar bears

On May 15, 2008, the polar bear (*Ursus maritimus*) was listed as a threatened (73 FR 28212). Polar bears can occur in the project area. However, few polar bears are observed in the Kotzebue area. Therefore, we expect that the project is not likely to adversely affect polar bears.

Project effects on proposed polar bear critical habitat

The project area is within proposed polar bear critical habitat (74 FR 28212). Because the area is already developed, we can identify no mechanism through which the proposed project will decrease the value of the habitat for polar bears. Therefore, the proposed activities are not likely to adversely affect proposed bear critical habitat.

Summary

The Service concludes the proposed project is not likely to adversely affect listed species, or designated or proposed critical habitat. Therefore, preparation of a Biological Assessment or further consultation under section 7 of the Act regarding construction of a water treatment plant is not necessary at this time. Thank you for the opportunity to comment on this project. If you need further assistance, please contact Shannon Torrence at (907) 455-1871.

Sincerely,



for Ted Swem
Endangered Species Branch Chief

LITERATURE CITED

- U.S. Fish and Wildlife Service. 1993. Threatened status for the Alaska breeding population of the spectacled eider; final rule. Federal Register 58(88): 27474-27480.
- _____. 1997. Threatened Status for the Alaska breeding population of the Steller's eider. Federal Register 62(112): 31748- 31757.
- _____. 2001a. Final determination of critical habitat for the Alaska-breeding population of Steller's eider. Federal Register 66(23): 8850-8884.
- _____. 2001b. Final determination of critical habitat for the spectacled eider. Federal Register 66(25): 9146-9185.
- _____. 2008. Determination of threatened status for the polar bear (*Ursus maritimus*) throughout its range; final rule. Federal Register 73(95): 28212-28303.

_____. 2009. Designation of critical habitat for the polar bear (*Ursus maritimus*) in the United States; proposed rule. Federal Register 74(208): 56058-56086.

APPENDIX C:
SECTION 106 CONSULTATION



R&M CONSULTANTS, INC.
9101 Vanguard Drive, Anchorage, Alaska 99507

(907) 522-1707, FAX (907) 522-3403, www.rmconsult.com

30 August 2010

R&M Project No. 1664.01

Ms. Judith Bittner
State Historic Preservation Officer
Alaska Department Of Natural Resources
550 W. 7th Avenue, Suite 1310
Anchorage, AK 99501-3565

Subject: Initiation of Section 106 Review Process

Project: Kotzebue Water Treatment Plant Upgrades
Kotzebue, Alaska

Dear Ms. Bittner,

The City of Kotzebue has applied to the USDA Rural Development for federal financial assistance and has been authorized by that Agency to initiate the consultation process required under Section 106 of the National Historic Preservation Act (NHPA) (see attached authorization). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties.

You have been identified as a possible consulting party under 36 CFR Part 800, Section 800.2(c). Therefore, we provide you with the attached information (Attachment A) regarding the proposed project and respectfully request your comments with regard to the potential for the project to impact historic properties. Specifically, we would appreciate any comments you may have on the following issues:

- The proposed project;
- The described area of potential effects (APE);
- The potential effects of the undertaking on any historic property we have thus far identified;
- Information on other historic properties which might be present and could be affected by the proposed project, including properties which have religious or cultural significance to one or more Indian Tribes;
- Any additional parties we should consider consulting; and
- Any other comments or information related to historic preservation which you believe might be relevant to the Section 106 review.

Please be as specific as you can with any comments or information. Since this review is time-sensitive and must adhere to the provisions in 36 CFR Part 800, we request that you submit comments within 30 days from receipt of this letter.

Recipient
30 August 2010
Page 2 of 2

If you have any questions regarding this letter please contact me directly at the letterhead address or at 907.646.9682 or kpendergast@rmconsult.com; or you may contact Rural Development directly by calling Tasha Deardorff at 907.271.2424 ext: 118 or by email at tasha.deardorff@ak.usda.gov.

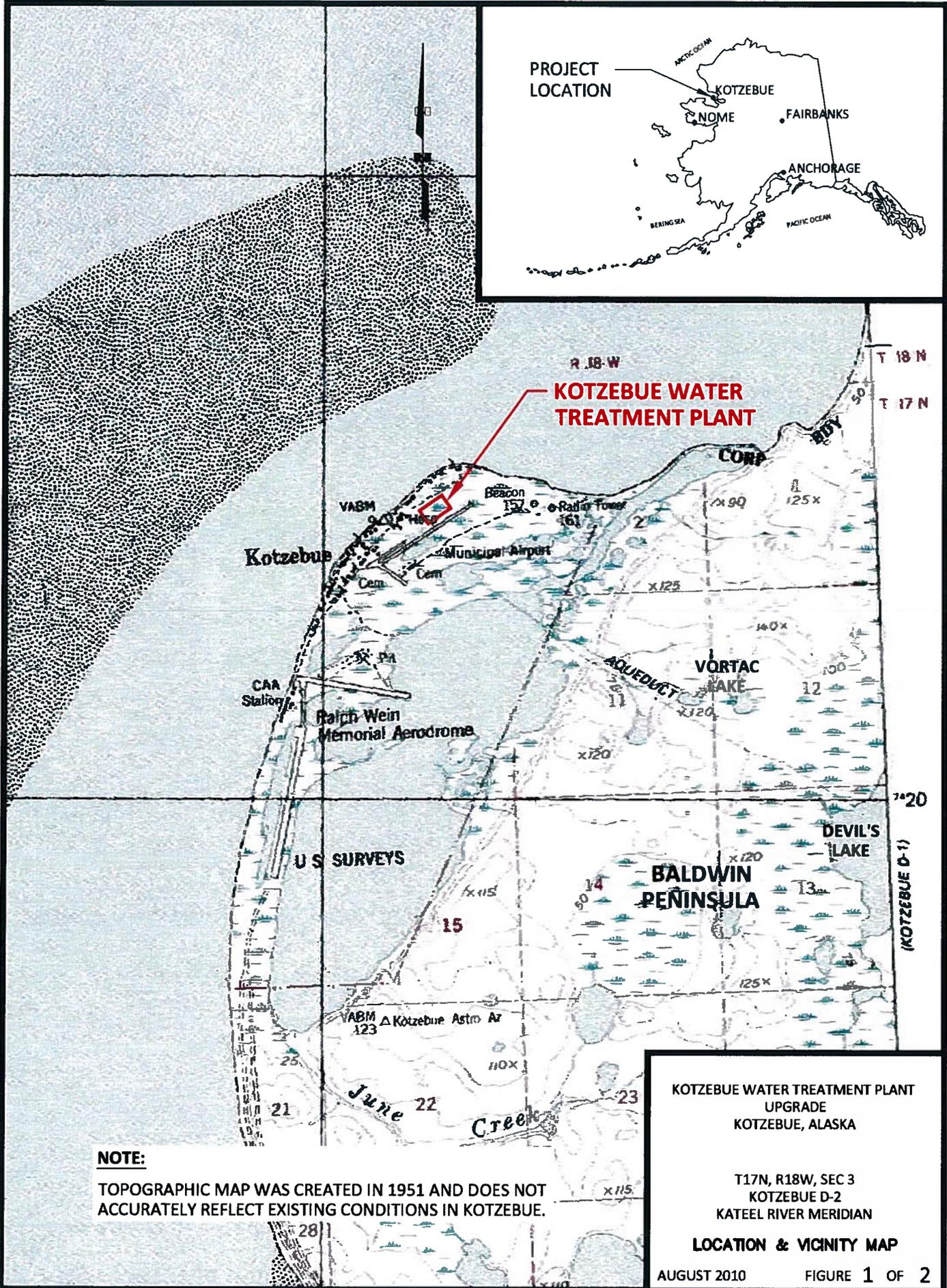
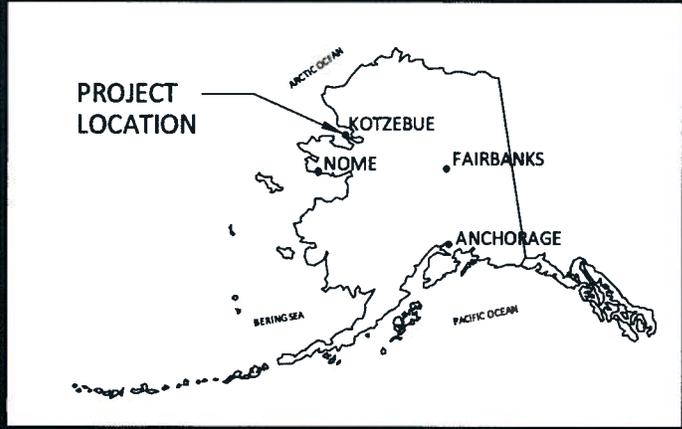
Sincerely,
R&M CONSULTANTS, INC.



Kevin J. Pendergast, C.P.G.
Senior Geologist – Environmental Specialist

cc: Derek Martin, City of Kotzebue
Tasha Deardorff, USDA Rural Development
Mike Lewis, ADEC Municipal Grants and Loans

Attachments: - Figure 1: Location and Vicinity Map
- Figure 2: Area of Potential Effect
- Attachment A: Supporting Documentation
- Attachment B: Section 106 Consultation Authorization and Instructions to Applicant



NOTE:

TOPOGRAPHIC MAP WAS CREATED IN 1951 AND DOES NOT ACCURATELY REFLECT EXISTING CONDITIONS IN KOTZEBUE.

KOTZEBUE WATER TREATMENT PLANT UPGRADE
KOTZEBUE, ALASKA

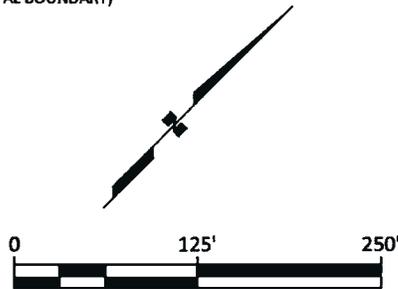
T17N, R18W, SEC 3
 KOTZEBUE D-2
 KATEEL RIVER MERIDIAN

LOCATION & VICINITY MAP

AUGUST 2010 FIGURE 1 OF 2



----- AREA OF POTENTIAL EFFECT (MUNICIPAL BOUNDARY)
..... SITE ALTERNATIVE BOUNDARY



**KOTZEBUE WATER TREATMENT PLANT
UPGRADE
KOTZEBUE, ALASKA**

T17N, R18W, SEC 3
KOTZEBUE D-2
KATEEL RIVER MERIDIAN

AREA OF POTENTIAL EFFECT

AUGUST 2010

FIGURE 2 OF 2

Attachment A: Supporting Documentation

Project Description

The City of Kotzebue (Kotzebue) is proposing the following action to design and construct a new water treatment plant to better serve municipal potable water needs in Kotzebue, Alaska. A Preliminary Engineering Report (PER) and an Environmental Report (ER) for the proposed action are being prepared under a preplanning and development grant from the United States Department of Agriculture-Rural Development, with a matching grant from the Alaska Department of Environmental Conservation-Division of Water. The project is located in Township 17N, Range 18W, Section 3, Kateel River Meridian, USGS Quadrangle Kotzebue D-2 (Figure 1). The ER will assess any potential environmental impacts associated with the proposed action.

The municipal water system services nearly all of Kotzebue. Most residences and businesses receive water via a piped distribution system, though some entities receive hauled water via the city's water delivery truck.

Water sources for Kotzebue currently are Devil's Lake (primary) and Vortac Lake (secondary). Water from both lakes requires significantly more treatment in the warm months of the year due to increased organics in the water. After treatment, water is stored in two 1.5-million gallon insulated steel reservoirs for distribution and fire reserve. Potential water treatment methods are also being evaluated in the PER.

The new water treatment plant would be located on municipal property in a new building adjacent to or near the existing water treatment plant and reservoirs. Two potential site alternatives are shown on Figure 2. A majority of the undeveloped property consists of previously disturbed uplands with minimal vegetation. There is a small pond (less than 0.25 acres) located approximately 350 feet southwest of the existing water treatment plant. Property acquisition is not required for construction of the new facility. Adjacent land uses consist of the following public facilities: fire department, police department, Chukchi Campus, and public library.

The new building would likely be a single-story structure greater designed to house the necessary water treatment equipment and chemicals. The new facility may also include, as funding allows, administrative areas for employees, a conference room, and storage areas for equipment, supplies, and the water delivery truck. The extent of excavation required for construction of the new water treatment plant is currently unknown. There is a possibility that pilings or thermosyphons may be used for the building foundation.

Area of Potential Effect (APE)

The preliminary area of potential effect (APE) encompasses the approximately 6-acre municipal property boundary on which the existing water treatment plant is located. This property is reserved for public works facilities. Two potential site alternatives for the new building are included in the APE and depicted in Figure 2. The full property has been included in the APE as

temporary (noise, dust, etc.) or indirect impacts (visual impacts) could occur within this boundary.

Cultural Resource Identification

The northern portion of Kotzebue spit surrounding the existing water treatment facility was researched for known archaeological and historical resources. The National Register of Historic Places (NRHP) and the Alaska Heritage Resources Survey databases were reviewed to determine the proximity of known resources to the project area. The proposed action lies within two relatively large historical districts: Kotzebue (KTZ-1) and the Kotzebue Archaeological District (KTZ-36). The boundaries of these districts have not been formally delineated but generally include the entire Kotzebue spit. Both of these districts are eligible for inclusion in the NRHP and contain historic, prehistoric, and human remains. No other discrete archaeological or historical sites are known to be located within the APE, or within 0.25 miles of the APE.

Consultation

Letters initiating consultation have been sent to the Native Village of Kotzebue, State Historic Preservation Office, Kikiktagruk Inupiat Corporation, and NANA Regional Corporation.



United States Department of Agriculture
Rural Development
Alaska USDA Service Center

Attachment B

Section 106 Consultation Authorization and Instructions to Applicant

DATE: July 20, 2010

TO: Derek Martin
City of Kotzebue

Kevin Pendergast
R&M Consultants

FROM: Tasha Deardorff
USDA Rural Development
510 L Street, Suite 410
Anchorage, AK 99501

SUBJECT: Initiating Consultations under the Section 106 Process

In order for Rural Development to make a decision on a construction application, an environmental review must first be completed. Among other items, this environmental review includes an analysis of the potential for your proposed project to impact sites that are listed or eligible for listing on the National Register of Historic Places. This analysis is required by Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations located at 36 CFR Part 800. NHPA requires Rural Development to work closely with the State Historic Preservation Office (SHPO), Tribes, and other consulting parties to take into account the effects of your project on historic properties and to attempt to find ways to avoid, minimize, or mitigate adverse effects, to the extent practicable.

Receipt of this letter from Rural Development authorizes you to initiate consultation under the Section 106 process. Please proceed as follows:

1. Review the attached letter (Attachment 1) and the required supporting documentation (Attachment 2).
2. Your Rural Development representative will:
 - Answer any questions you have about completing the letter and the supporting documentation;
 - Assist you in a preliminary description of the area of potential effects* (APE);
 - Assist you in developing a preliminary list of the consulting parties.

800 West Evergreen • Suite 201 • Palmer, AK 99645
Phone: (907) 761-7705 • Fax: (907) 761-7783 • TDD: (907) 761-7786

Committed to the future of rural communities.

"USDA is an equal opportunity provider, employer and lender."
To file a complaint of discrimination write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W.,
Washington, DC 20250-9410 or call (800)795-3272 (voice) or (202) 720-6382 (TDD).

3. Send the completed letter (Attachment 1) and the supporting documentation (contained in Attachment 2) to each of the consulting parties on the list (retain a dated copy of each letter for your records).
4. Include a copy of this Authorization/Instructions document with your letter to the SHPO and/or THPO.
5. Allow 30 days for receipt of comments. Incorporate any comments received into the environmental information/report (depending on Rural Development program) being prepared as part of your application to Rural Development, and attach copies of each letter you sent out and comments received to the environmental information/report.

The initiation of consultation is the first step in the Section 106 process. This authorization permits you, as an applicant (or, by proxy, the applicant's consultant), to initiate this consultation process and to assist Rural Development in collecting and evaluating information to facilitate timely compliance with Section 106 requirements. Rural Development remains legally responsible for making all formal determinations and findings under the Section 106 process.

Please be aware that some proposals require the services of a professional consultant. For example, an archeological survey may be needed before the Section 106 process can be concluded. Your Rural Development representative can provide you further guidance, if there is a need for such services. As an applicant, you are still responsible for the requirements of this letter, even though you have hired a consultant to assist you.

This authorization to initiate consultation under the Section 106 process does **not** constitute Rural Development approval of your request for financial assistance. All costs incurred by the applicant in compliance with the Section 106 process are incurred at the applicant's risk.

Note: Do **not** take any actions which might have an adverse effect on historic property or cultural resources until the Section 106 review process is completed. Section 110(k) of the National Historic Preservation Act **may prohibit** federal agencies from providing federal financial assistance to any applicant who "... with intent to avoid the requirements of Section 106, has intentionally significantly adversely affected a historic property..."

Please contact your RD Alaska's state environmental coordinator, Tim Krug, at 907-761-7777 or by email at timothy.krug@ak.usda.gov if should you have any questions.

* The area of potential effects (APE) is defined by 36 CFR Part 800, Section 800.16(d) as follows: "Area of potential effects means the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking."



R&M CONSULTANTS, INC.
9101 Vanguard Drive, Anchorage, Alaska 99507

(907) 522-1707, FAX (907) 522-3403, www.rmconsult.com

30 August 2010

R&M Project No. 1664.01

Mr. Guy Adams
Native Village of Kotzebue
P.O. Box 296
Kotzebue, AK 99752

Subject: Initiation of Section 106 Review Process

Project: Kotzebue Water Treatment Plant Upgrades
Kotzebue, Alaska

Dear Mr. Adams,

The City of Kotzebue has applied to the USDA Rural Development for federal financial assistance and has been authorized by that Agency to initiate the consultation process required under Section 106 of the National Historic Preservation Act (NHPA) (see attached authorization). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties.

You have been identified as a possible consulting party under 36 CFR Part 800, Section 800.2(c). Therefore, we provide you with the attached information (Attachment A) regarding the proposed project and respectfully request your comments with regard to the potential for the project to impact historic properties. Specifically, we would appreciate any comments you may have on the following issues:

- The proposed project;
- The described area of potential effects (APE);
- The potential effects of the undertaking on any historic property we have thus far identified;
- Information on other historic properties which might be present and could be affected by the proposed project, including properties which have religious or cultural significance to one or more Indian Tribes;
- Any additional parties we should consider consulting; and
- Any other comments or information related to historic preservation which you believe might be relevant to the Section 106 review.

Please be as specific as you can with any comments or information. Since this review is time-sensitive and must adhere to the provisions in 36 CFR Part 800, we request that you submit comments within 30 days from receipt of this letter.

Recipient
30 August 2010
Page 2 of 2

If you have any questions regarding this letter please contact me directly at the letterhead address or at 907.646.9682 or kpendergast@rmconsult.com; or you may contact Rural Development directly by calling Tasha Deardorff at 907.271.2424 ext: 118 or by email at tasha.deardorff@ak.usda.gov.

Sincerely,
R&M CONSULTANTS, INC.



Kevin J. Pendergast, C.P.G.
Senior Geologist – Environmental Specialist

cc: Derek Martin, City of Kotzebue
Tasha Deardorff, USDA Rural Development
Mike Lewis, ADEC Municipal Grants and Loans

Attachments: - Figure 1: Location and Vicinity Map
- Figure 2: Area of Potential Effect
- Attachment A: Supporting Documentation
- Attachment B: Section 106 Consultation Authorization and Instructions to Applicant



R&M CONSULTANTS, INC.
9101 Vanguard Drive, Anchorage, Alaska 99507

(907) 522-1707, FAX (907) 522-3403, www.rmconsult.com

30 August 2010

R&M Project No. 1664.01

Ms. Marie Greene
NANA Regional Corporation
P.O. Box 49
Kotzebue, AK 99752

Subject: Initiation of Section 106 Review Process

Project: Kotzebue Water Treatment Plant Upgrades
Kotzebue, Alaska

Dear Ms. Greene,

The City of Kotzebue has applied to the USDA Rural Development for federal financial assistance and has been authorized by that Agency to initiate the consultation process required under Section 106 of the National Historic Preservation Act (NHPA) (see attached authorization). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties.

You have been identified as a possible consulting party under 36 CFR Part 800, Section 800.2(c). Therefore, we provide you with the attached information (Attachment A) regarding the proposed project and respectfully request your comments with regard to the potential for the project to impact historic properties. Specifically, we would appreciate any comments you may have on the following issues:

- The proposed project;
- The described area of potential effects (APE);
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- Information on other historic properties which might be present and could be affected by the proposed project, including properties which have religious or cultural significance to one or more Indian Tribes;
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- Any other comments or information related to historic preservation which you believe might be relevant to the Section 106 review.

Please be as specific as you can with any comments or information. Since this review is time-sensitive and must adhere to the provisions in 36 CFR Part 800, we request that you submit comments within 30 days from receipt of this letter.

Recipient
30 August 2010
Page 2 of 2

If you have any questions regarding this letter please contact me directly at the letterhead address or at 907.646.9682 or kpendergast@rmconsult.com; or you may contact Rural Development directly by calling Tasha Deardorff at 907.271.2424 ext: 118 or by email at tasha.deardorff@ak.usda.gov.

Sincerely,
R&M CONSULTANTS, INC.



Kevin J. Pendergast, C.P.G.
Senior Geologist – Environmental Specialist

cc: Derek Martin, City of Kotzebue
Tasha Deardorff, USDA Rural Development
Mike Lewis, ADEC Municipal Grants and Loans

Attachments: - Figure 1: Location and Vicinity Map
- Figure 2: Area of Potential Effect
- Attachment A: Supporting Documentation
- Attachment B: Section 106 Consultation Authorization and Instructions to Applicant



R&M CONSULTANTS, INC.
9101 Vanguard Drive, Anchorage, Alaska 99507

(907) 522-1707, FAX (907) 522-3403, www.rmconsult.com

30 August 2010

R&M Project No. 1664.01

Mr. Timothy Schuerch
Kikiktagruk Inupiat Corporation
P.O. Box 1050
Kotzebue, AK 99752

Subject: Initiation of Section 106 Review Process

Project: Kotzebue Water Treatment Plant Upgrades
Kotzebue, Alaska

Dear Mr. Schuerch,

The City of Kotzebue has applied to the USDA Rural Development for federal financial assistance and has been authorized by that Agency to initiate the consultation process required under Section 106 of the National Historic Preservation Act (NHPA) (see attached authorization). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties.

You have been identified as a possible consulting party under 36 CFR Part 800, Section 800.2(c). Therefore, we provide you with the attached information (Attachment A) regarding the proposed project and respectfully request your comments with regard to the potential for the project to impact historic properties. Specifically, we would appreciate any comments you may have on the following issues:

- The proposed project;
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- Any additional parties we should consider consulting; and
- Any other comments or information related to historic preservation which you believe might be relevant to the Section 106 review.

Please be as specific as you can with any comments or information. Since this review is time-sensitive and must adhere to the provisions in 36 CFR Part 800, we request that you submit comments within 30 days from receipt of this letter.

Recipient
30 August 2010
Page 2 of 2

If you have any questions regarding this letter please contact me directly at the letterhead address or at 907.646.9682 or kpendergast@rmconsult.com; or you may contact Rural Development directly by calling Tasha Deardorff at 907.271.2424 ext: 118 or by email at tasha.deardorff@ak.usda.gov.

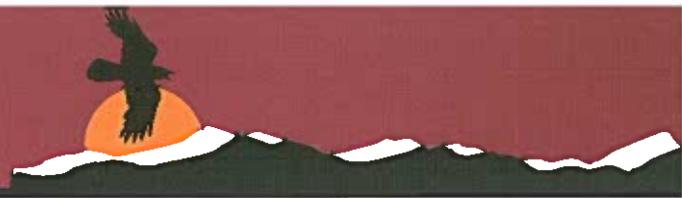
Sincerely,
R&M CONSULTANTS, INC.



Kevin J. Pendergast, C.P.G.
Senior Geologist – Environmental Specialist

cc: Derek Martin, City of Kotzebue
Tasha Deardorff, USDA Rural Development
Mike Lewis, ADEC Municipal Grants and Loans

Attachments: - Figure 1: Location and Vicinity Map
- Figure 2: Area of Potential Effect
- Attachment A: Supporting Documentation
- Attachment B: Section 106 Consultation Authorization and Instructions to Applicant



KIKIKTAGRUK INUPIAT CORPORATION 373A Second Avenue • P.O. Box 1050 • Kotzebue, Alaska 99752
(907) 442-3165 • Fax (907) 442-2165

September 2, 2010

Mr. Kevin J. Pendergast
R&M Consultants, Inc.
9101 Vanguard Drive
Anchorage, Alaska 99507

Dear Mr. Pendergast,

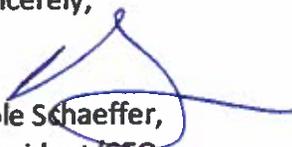
This letter is in reference the Initiation of Section 106 Review Process for the City of Kotzebue's proposed Water Treatment Plant Upgrades for Kotzebue, Alaska.

Kikiktagruk Inupiat Corporation(KIC)is in support of the City of Kotzebue's efforts to make improvements to our water treatment plant to better serve our community. Health and safety within our community is very important to KIC.

The two proposed sites for the new facility are within the City of Kotzebue's existing water and sewer complex which is well maintained. There seem to no evidence of any prehistoric or historic properties, or anything of cultural significance within these two sites; therefore, there will be no impact to these properties during the construction of this project.

If you should have any questions in regards to this project, please call me at 907-442-3165.

Sincerely,


Cole Schaeffer,
President/CEO
Kikiktagruk Inupiat Corporation

cc: Derek Martin, City of Kotzebue

RECEIVED

SEP 07 2010

R&M CONSULTANTS, INC.

From: Krauthoefer, Tracie A (DNR) [mailto:tracie.krauthoefer@alaska.gov]
Sent: Thursday, September 30, 2010 4:41 PM
To: Kevin Pendergast; Deardorff, Tasha - Palmer, AK
Subject: Kotzebue Water Treatment Plant Upgrades

Kevin and Tasha,

I just wanted to give you a quick heads up for the Kotzebue project, since we won't have time to respond with a formal letter to your initiation letter. The proposed project is located in an archaeologically sensitive area (as you noted in your letter), thus we would probably recommend further investigation (literature review) and likely monitoring.

Let me know if you have any questions and we look forward to further consultation on this project

Thanks!

Tracie

Tracie Krauthoefer
Archaeologist, Review and Compliance
Alaska State Historic Preservation Office / Office of History and Archaeology
550 W 7th Ave, Ste 1310, Anchorage Alaska 99501-3565
907-269-8722 Phone 907-269-8908 Fax
tracie.krauthoefer@alaska.gov



**United States Department of Agriculture
Rural Development
Alaska USDA Service Center**

December 3, 2010

Ms. Judith Bittner
State Historic Preservation Officer
Alaska Department of Natural Resources
550 W. 7th Avenue, Suite 1310
Anchorage, AK 99501-3565

**SUBJECT: Kotzebue Water Treatment Plant
Finding of No Historic Properties Affected**

Dear Ms. Bittner:

The City of Kotzebue (Kotzebue) is proposing to design and construct a new water treatment plant to better serve municipal potable water needs in Kotzebue, Alaska. The proposed project is located in Township 17N, Range 18W, Section 3, Kateel River Meridian, USGS Quadrangle Kotzebue D-2 (Figure 1). A Preliminary Engineering Report and an Environmental Report for the proposed action are being prepared under a preplanning and development grant from the United States Department of Agriculture – Rural Development (USDA-RD), with a matching grant from the Alaska Department of Environmental Conservation - Division of Water.

Pursuant to 36 CFR 800.4(d)(1), implementing regulations of Section 106 of the National Historic Preservation Act, the USDA finds that no historic properties would be affected by the proposed project.

Project Description

The new water treatment plant would be located on municipal property in a new building adjacent to the existing water treatment plant and reservoirs. The new building would likely be a single-story structure designed to house the necessary water treatment equipment and chemicals. The new facility may also include, as funding allows, administrative areas for employees, a conference room, and storage areas for equipment, supplies, and the water delivery truck. The extent of excavation required for construction of the new water treatment plant is currently unknown. There is a possibility that pilings or thermosiphons may be used for the building foundation.

Area of Potential Effect (APE)

The APE encompasses the approximately 6-acre municipal property boundary within which the existing water treatment plant is located (Figure 2). This property is reserved for public works facilities. The full property has been included in the APE as temporary (noise, dust, etc.) or indirect impacts (visual impacts) could occur within this boundary.

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Washington, DC 20250-9410 or call: (800) 795-3272 (voice) or (202) 726-8882 (TDD).

Cultural Resource Identification

The northern portion of the Kotzebue spit surrounding the existing water treatment facility was researched for known archaeological and historical resources. The National Register of Historic Places (NRHP) and the Alaska Heritage Resources Survey databases were reviewed to determine the proximity of known resources to the project area. As previously stated in the initiation of consultation letters, the proposed action was originally thought to lie within two relatively large historical districts: Kotzebue (KTZ-1) and the Kotzebue Archaeological District (KTZ-36). However, further research shows that the proposed action is only located within KTZ-36 (Memorandum of Agreement, Kotzebue Water and Sewer System Improvement Project, Appendix C Site Location Report and Monitoring Plan, 2005). This district is eligible for inclusion in the NRHP and contains historic, prehistoric, and human remains. No other discrete archaeological or historical sites are known to be located within the APE.

Finding of Effect

The new water treatment plant has been sited on previously disturbed ground on property designated for municipal use. During the original construction of the water treatment facility in the 1970s, a water distribution loop (Uptown Loop) was constructed below the proposed site. This portion of the loop was abandoned once construction of the new loop was completed in 2005. Prior to 2004, the proposed site was a brushy, ponded area. During construction of the new water tank in 2004-2005, the site was filled to provide an adjacent storage area for construction materials and pipes.

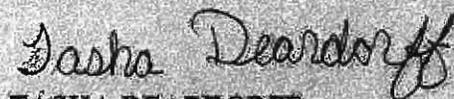
Verbal coordination with the SHPO has been ongoing since distribution of the initiation of consultation letters (August 30, 2010). The resulting opinion is that the proposed project would have no effect on historic properties or districts within the immediate vicinity and that monitoring during construction would not be necessary.

Although the proposed action is located within a historical district, the project would not have an adverse effect on the characteristics that qualify it for inclusion in the NRHP. Furthermore, based on historical disturbance to the site, the likelihood of encountering unknown cultural or historical resources is considered low.

Pursuant to 36 CFR 800.4(d)(1), implementing regulations of Section 106 of the National Historic Preservation Act, the USDA-RD finds that no historic properties would be affected by the proposed project. Your concurrence with this finding is respectfully requested.

If you have questions or need further information regarding the proposed project, please don't hesitate to contact the undersigned at 907-271-2424 extension 118.

Sincerely,



TASHA DEARDORFF
RAVG Specialist

Enclosures:

- Figure 1: Location and Vicinity Map
- Figure 2: Area of Potential Effect

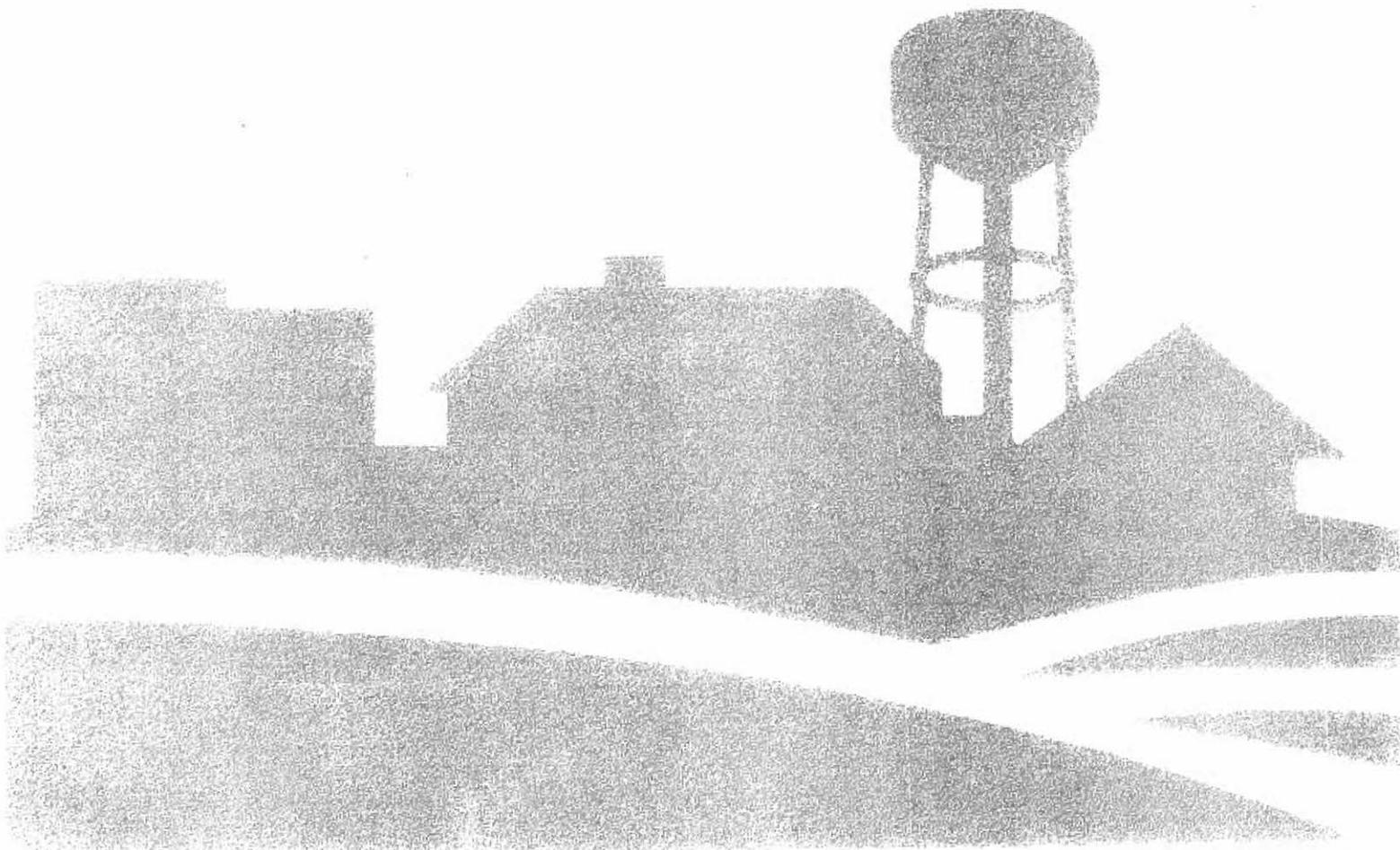
DISTRIBUTION LIST:

Mr. Cole Schaeffer
President/CEO
Kikiktagruk Inupiat Corporation
P.O. Box 1050
Kotzebue, Alaska 99752

Mr. Guy Adams
Native Village of Kotzebue
P.O. Box 296
Kotzebue, Alaska 99752

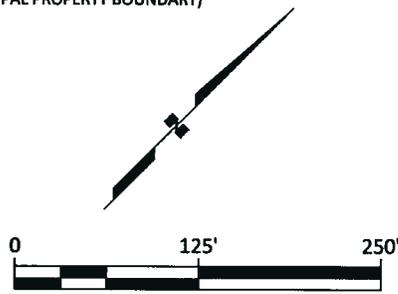
Ms. Marie Greene
NANA Regional Corporation
P.O. Box 49
Kotzebue, Alaska 99752

Mr. Derek Martin
City of Kotzebue
P.O. Box 46
Kotzebue, Alaska 99752





- AREA OF POTENTIAL EFFECT (MUNICIPAL PROPERTY BOUNDARY)
- PROJECT AREA



**KOTZEBUE WATER TREATMENT PLANT
 UPGRADE
 KOTZEBUE, ALASKA**

T17N, R18W, SEC 3
 KOTZEBUE D-2
 KATEEL RIVER MERIDIAN

AREA OF POTENTIAL EFFECT

OCTOBER 2010 FIGURE 2 OF 2



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 OHA

December 3, 2010

Ms. Judith Bittner
 State Historic Preservation Officer
 Alaska Department of Natural Resources
 550 W. 7th Avenue, Suite 1310
 Anchorage, AK 99501-3565

No Historic Properties Affected
 Alaska State Historic Preservation Officer
 Date: 12/28/10
 File No. 3130-12 RD
 TK

SUBJECT: Kotzebue Water Treatment Plant
 Finding of No Historic Properties Affected

Dear Ms. Bittner:

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APPENDIX D:
HAZARDOUS CONTAMINATION ASSESSMENT

Memorandum

To: Kevin Pendergast, C.P.G.

From: Kristi McLean, LEED AP

Subject: Kotzebue Water Treatment Plant Upgrades
Kotzebue, Alaska
Hazardous Contamination Assessment

Date: 11 August 2010

Project #: 1664.01

This document provides a file review-level Hazardous Contamination Assessment for the proposed Water Treatment Plant Upgrade project in Kotzebue, Alaska. The intent of this document is to identify any areas within or adjacent to the subject property that may be contaminated with petroleum or hazardous materials.

Existing Site Conditions

The subject property is located in Township 17N, Range 18W, Section 3, Kateel River Meridian, USGS Quadrangle Kotzebue D-2. The property consists of municipal land available for development near the existing water treatment plant. The site for the new water treatment plant is located east of the water reservoirs on previously disturbed uplands with little to no vegetation. The nearest known waterbody or wetland is a small pond located approximately 350 feet southwest of the existing water treatment plant.

Agency File Review

The subject property is not known to be contaminated. A preliminary search of the Alaska Department of Environmental Conservation (ADEC) Contaminated Sites Program Database shows five areas of known contamination within 0.25 miles of the subject property (see attached map). They have been summarized as follows:

- ADEC File #410.38.008: This active site is located approximately 0.25 miles directly north of the subject property. An estimated 100,000 to 200,000 gallons of diesel fuel was released to the subsurface between 1950 and 1980. Current monitoring is underway.
- ADEC File #410.38.025: This active site is located approximately 0.2 miles northwest of the subject property. This site is directly associated with ADEC File #410.38.008 and was recently added to the database to track groundwater conditions and contaminant migration potentially related to the new sea wall construction.

Memo to: Kevin Pendergast, C.P.G.

From: Kristi McLean, LEED AP

Date: 11 August 2010

Page 2

- ADEC File #410.38.024: This active site is located approximately 0.2 miles southeast of the subject property. Approximately 300 gallons of diesel fuel were released from an aboveground heating oil tank on 12 February 2008. Initial cleanup efforts were completed and ongoing monitoring activities continue.
- ADEC File #410.38.011: This active site is located approximately 0.25 miles southeast of the subject property. In 1999, approximately 900 gallons of fuel from a home heating oil tank was released to the surface after falling ice severed a fuel line.
- ADEC File #410.38.009: This site is located approximately 0.25 miles southeast of the subject property. An estimated 500 gallons of heating oil spilled at a residence in 1998. The site was conditionally closed with institutional controls on 20 April 2007.

A review of the ADEC Underground Storage Tank (UST) Database indicates that there are 15 registered UST facilities/owners in Kotzebue, two of which are located southwest of the water treatment facility (see attached map).

A review of the ADEC Spills Database revealed a number of reported product spills, which in each case were relatively minor and require no further regulatory action. None of the reported spills appear to have occurred within the project vicinity.

A review of historical aerial photographs was not conducted for this assessment.

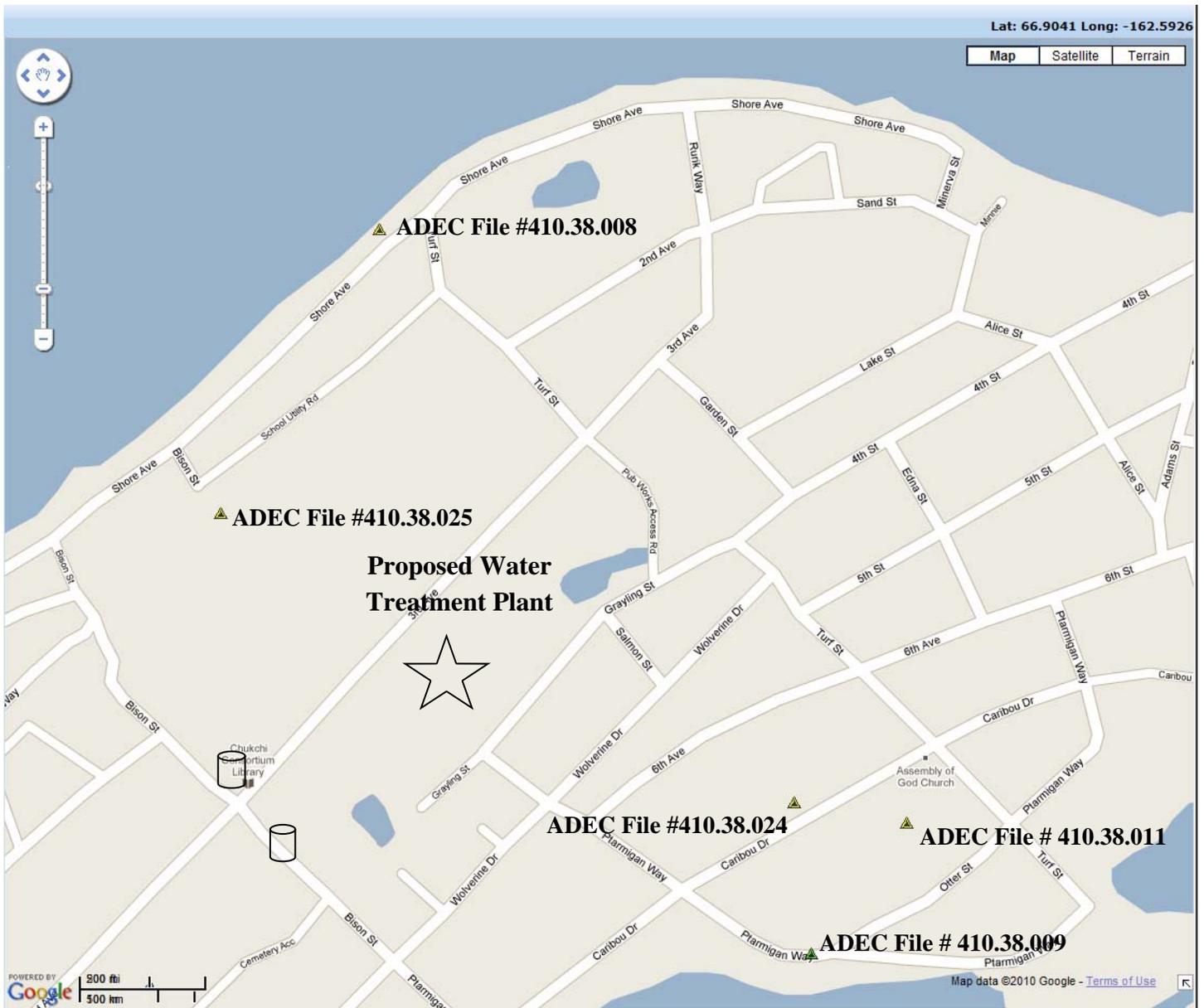
Potential for Encountering Contamination

Based upon readily available information, the proposed water treatment plant upgrade project has a low potential for encountering petroleum or hazardous materials contamination.

While the potential for encountering additional undocumented hazardous materials or petroleum contamination always exists, it is anticipated that the proposed project may be conducted without further Phase I or Phase II environmental investigation. If the existing water treatment plant is to be demolished, further studies are recommended to determine the potential presence of lead-based paint, asbestos containing material, or other potentially hazardous materials.

Map of Contaminated Sites and Underground Storage Tanks

(Source: ADEC Database)



Open Site



Cleanup Complete with Institutional Controls



Underground Storage Tank

Alaska Department of Environmental Conservation

Contaminated Sites Database

Cleanup Chronology Report for
City of Kotzebue

File Number	410.38.008	Hazard ID	394
SiteName	City of Kotzebue	Staff	Jim Fish - 9074512117
Address 1	Baldwin Peninsula	Status	Active
Address 2	Kotzebue Sound	Landowner	City of Kotzebue
City/State/Zip	Kotzebue, AK 99752		
Latitude	66.903333	Meridian	Kateel River
Longitude	-162.585417	Range	018
Section	3	Township	017

Problem/Comments

Historical spill of #1 diesel occurred over time from 1950 to 1980. Estimated 100,000 to 200,000 gallons spilled underground in an area up to 10 acres. ADEC was alerted when fuel was discovered seeping into the elementary school basement in 1980. Source undetermined and likely from multiple sources. Top three suspected sources are 1) a ruptured tank at the bulk tank farm in the 1950's 2) the former distribution line from the bulk tank farm to the Kotzebue school and the former Public Health Service Hospital and 3) the tank farm located at the school consisting of ASTs, USTs and various piping systems. An estimated 40,000 gallons of fuel was recovered by several contractors and private individuals between 1980 and 1984. LNAPL noted on the GW between 2 and 6 inches in 1986. In 1988 high snowfall created a visible seep of oil along the beach and sheen was noted on the Kotzebue Sound. ADEC installed a barrier along 400 plus feet of the beach to prevent oil migration into Kotzebue Sound. 20,000 to 40,000 gallons of recoverable fuel was estimated to remain underneath Kotzebue in 1986. Groundwater at this site is suprapermafrost and under the influence of tides. Years of high snow melt create hydrogeologic conditions favorable for fuel transport via groundwater. Natural soils underneath Kotzebue are heavily disturbed, making prediction of flow pathways and seepage areas difficult. Various thaw bulbs and transport corridors were identified in the 1986 hydrogeology study. Cross reference file 410.02.001. Former staff J. Janssen. LUST Trust # 87-3-2-0-344-1 This site is associated with Hazard ID 25558, IHS Kotzebue Former Hospital - School Pipeline Release (file 410.38.025), which will be used to track further developments with the pipeline release. Hazard ID 394, the City of Kotzebue (file 410.38.008) record documents the site history and will be used for tracking pore water and groundwater conditions, and possibly contaminant migration due to the new sea wall under construction.

Action Date	Action	Description	DEC Staff
10/24/1980	Update or Other Action	(Old R:Base Action Code = F - Site Treatment, Soil/H2O). Installation of oil recovery equipment in sump in the basement of the elementary school and collection of fuel.	No Longer Assigned,
01/01/1981	Update or Other Action	(Old R:Base Action Code = F - Site Treatment, Soil/H2O). Oil recovery from 6 wells and installation of 2 additional wells by Lomond Construction from 1981 to 1983.	No Longer Assigned,
08/31/1981	Update or Other Action	(Old R:Base Action Code = F - Site Treatment, Soil/H2O). Ben Lomond, Inc. contracted to pump oil using sumps. Ceased collection sometime in 1983.	No Longer Assigned,
09/01/1981	Update or Other Action	(Old R:Base Action Code = F - Site Treatment, Soil/H2O). Installation of 6 plywood collection sump boxes and 10 monitoring wells. Party responsible for action unknown.	No Longer Assigned,
09/09/1981	Update or Other Action	(Old R:Base Action Code = FI - Field Inspection (General)). C. Pearson investigated collection sumps on 9/9/91, 9/2/82, 11/23/82, and 12/28/82.	No Longer Assigned,
10/01/1984	Update or Other Action	(Old R:Base Action Code = F - Site Treatment, Soil/H2O). ADEC contracted to reactivate sump collection operations. Recovery minimal. Approximately 40,000 total gallons recovered (since 1980) by fall of 1984.	No Longer Assigned,

10/01/1984	Update or Other Action	(Old R:Base Action Code = SI - Site Investigation). Investigation of spill by Dewey Moore in October 1984.	No Longer Assigned,
01/01/1986	Update or Other Action	(Old R:Base Action Code = FI - Field Inspection (General)). Line testing performed by Dewey Moore detected leakage. Line abandoned.	No Longer Assigned,
09/01/1986	Update or Other Action	(Old R:Base Action Code = SI - Site Investigation). Installation of 9 recovery wells and 25 monitoring wells during fall of 1986. No oil recovery performed.	No Longer Assigned,
08/03/1988	Interim Removal Action Approved	(Old R:Base Action Code = SC - Site Control (Emergency Response)). Shannon and Wilson installed a 435-foot long barrier along the beach to prevent migration of oil into Kotzebue Sound. Barrier installation was completed 9/11/88. Report dated June 1989.	No Longer Assigned,
08/03/1988	Update or Other Action	(Old R:Base Action Code = F - Site Treatment, Soil/H2O). Shannon and Wilson installed thirty combination recovery and monitoring wells. Data obtained regarding extent of oil contamination and product thickness. 203 gallons of oil were recovered in 1988. Report dated June 1989.	No Longer Assigned,
07/24/1989	Site Characterization Report Approved	(Old R:Base Action Code = SI - Site Investigation). Shannon and Wilson Phase II Recommendations and Recovery 1989 Field Season, Underground Oil Spill, Kotzebue, Alaska. Study involved installation of culvert, collection of additional data on oil thickness, monitoring effectiveness of beach barrier, fingerprinting of oil, an inventory of tanks and lines in Kotzebue, and vapor monitoring in buildings. Report dated May 1990 and sent to ADEC on 5/16/90.	No Longer Assigned,
07/24/1989	Update or Other Action	(Old R:Base Action Code = F - Site Treatment, Soil/H2O). Shannon and Wilson installed perforated culvert in Second Avenue as a oil recovery collection gallery. Minimal accumulation of oil prevented effective recovery. Report dated May 1990 and sent to ADEC on 5/16/90.	No Longer Assigned,
11/28/1990	Site Ranked Using the AHRM	Initial ranking.	No Longer Assigned,
01/25/1994	Site Added to Database	#1 diesel.	No Longer Assigned,
06/20/1994	Update or Other Action	(Old R:Base Action Code = RPL2 - Site Information Request Letter). Sent PRP-CS Database Notification Letter to RP requesting update and more environmental information concerning contaminated site.	Peterson, Jeff
03/06/2001	Update or Other Action	File number updated from 410.02.001 to 410.38.008.	Read, Mitzi
01/13/2004	Update or Other Action	Project management transfer to Wanstall file review. Update priority ranking: Population density changed from 5 to 8; Site Access changed from 0 to 3 (school on-site, contamination partially controlled).	Wanstall, Bruce
03/25/2004	Update or Other Action	Approval sent by email for transport of contaminated soil from screened from soil borings advanced at the high school (USS 2083 Tract 4) for lined and covered storage at the secure City of Kotzebue Bale-Fill site, Cell #1.	Wanstall, Bruce
10/22/2004	Proposed Plan	Solid Waste Program is in agreement with CS plan to allow auger cuttings with minor weathered petroleum contamination to be used at the city landfill as capping material for common refuse. Once placed as landfill cap, DEC must be notified prior to moving the soil.	Wanstall, Bruce
01/10/2005	Update or Other Action	File transferred to Fairbanks office for project management shift to regional staff.	Wanstall, Bruce
04/12/2007	Update or Other Action	Updated problem statement to better reflect administrative file.	Oelkers, Shannon
07/27/2007	Update or Other Action	Site transferred from Oelkers to Frechione.	Oelkers, Shannon
06/02/2008	Update or Other Action	Staff changed to Farris	Farris, Ann
06/02/2008	Update or Other Action	Staff changed to Farris	Farris, Ann

06/04/2008	Exposure Tracking Model Ranking	Initial ranking with ETM completed.	Cardona- Marek, Tamara
08/12/2008	Update or Other Action	Responsible party changed to Chevron.	Cardona- Marek, Tamara
08/14/2008	Update or Other Action	Received call from Arcadis (Chevron consultant). Chevron would like to be present if any work is done related to the removal of the recovery trench and vapor intrusion assessment of the school.	Cardona- Marek, Tamara
12/18/2008	Update or Other Action	ADEC hired a consultant to investigate the status of the remaining contamination in the Elementary School/ Former Hospital area. Porewater samples were collected along the beach parallel to 2nd Ave and soil gas samples were collected along the perimeter of the Elementary School . Porewater samples indicate that petroleum contaminants are reaching the Kotzebue sound with TPH above the water quality standards and DRO and some BTEX above cleanup levels for groundwater. Soil gas along the school perimeter is below screening levels for BTEX, however a vapor probe installed about 200 ft northeast of the Ferguson Building detected volatile contaminants above screening levels. Additional investigation and mitigation is needed.	Cardona- Marek, Tamara
03/13/2009	Meeting or Teleconference Held	ADEC discussed with Chevron the PRP status during a conference call held on 3/3/09. Chevron continues to be listed as a responsible party, however, ADEC has requested assistance from the Dept. of Law to determine who are the potentially responsible parties for this site.	Cardona- Marek, Tamara
05/15/2009	Meeting or Teleconference Held	DEC met with Shanon and Wilson to further discuss the DOT project along Front St. in Kotzebue. Items discussed during meeting included: - recent DOT amendment to final plan (new amendment includes specs on what procedure to follow if contaminated soils are encountered) - backfill material that will be used on the sheet pile (material has been described as porous, therefore allowing for the lateral movement of water) - sheet pile material was described as being "almost" impermeable (water is expected to flow along the ends of the pile) It was determined that remaining data gaps need to be identified as well as alternatives to fill those gaps, if it is determined to be necessary. Among the data gaps discussed were: - Hydrology – normal flow of water throughout the beach will change due to the sheet pile wall being installed by DOT, but is unclear exactly how it will change the flow or how this will affect contaminant transport? -What is the current contaminant distribution along the shoreline? What is the mass of contaminants to be treated? Since all of the pore water samples exceeded water quality standards, the full extent of contamination entering Kotzebue Sound is unknown. Additionally there may be other sources of contamination besides the old pipeline leak further southwest along the shoreline. The data gaps are an issue for the consideration of mitigation alternatives. However, the timeline to interface with DOT's project is relatively short. DEC suggested that the contractor consider installing a pilot-scale treatment system while DOT is doing construction with the goal of treating the known contamination and testing the recommended remediation alternative. The results of the pilot -scale system could be used to design a larger scale system later or be used in conjunction with another treatment system, but would take advantage of DOT's schedule, initiate some treatment to improve the situation, and help fill some of the data gaps. The cost effectiveness and benefits of a pilot scale study will be considered as part of the feasibility study . The monitoring wells specs and number of wells needs to be provided to DOT. It was decided that a well every 200 ft along the 4000 ft sheet pile was a reasonable distribution. This would total 20-21 monitoring wells.	Cardona- Marek, Tamara
06/17/2009	Update or Other Action	ADEC continues to discuss with the Department of Law potential responsible parties. DOL is searching for information regarding who maintained the pipeline that supplied fuel to the school and hospital. Chevron has been requested to provide additional information on the property.	Cardona- Marek, Tamara
06/18/2009	Update or Other Action	ADEC received from Shannon and Wilson a report summarizing existing data gaps identified during the development of the feasibility study.	Cardona- Marek, Tamara

02/16/2010	Update or Other Action	Changed DEC project manager from Tamara Cardona-Marek to James Fish.	Wiegers, Janice
05/25/2010	Update or Other Action	Workplan for soil characterization and handling during storm drain and manhole installations (as part of the ADOT/PF Shore Avenue improvements) approved 5/25/10. Test pits will identify contaminated soil (above migration to groundwater cleanup level) at manhole/storm drain installation locations, and be used determine fate of excavated soils. Report will be submitted to DEC by Qualified Person. Depth to groundwater will be noted if encountered.	Fish, Jim
07/09/2010	Report or Workplan Review - Other	Draft test pit and DRO/RRO/GRO sample analysis received from consultant for Prime Contractor of ADOT/PF sheet pile and manhole installations. Reviewed and concurred with contaminated vs. clean soil location determinations & soil handling requirements for contractor.	Fish, Jim
09/13/2010	Update or Other Action	This site is associated with Hazard ID 25558, IHS Kotzebue Former Hospital - School Pipeline Release (file 410.38.025), which will be used to track further developments with the pipeline release. Hazard ID 394, the City of Kotzebue (file 410.38.008) record documents the site history and will be used for tracking pore water and groundwater conditions, and possibly contaminant migration due to the new sea wall under construction.	Read, Mitzi

Alaska Department of Environmental Conservation

Contaminated Sites Database

Cleanup Chronology Report for IHS Kotzebue Former Hospital - School Pipeline Release

File Number	410.38.025	Hazard ID	25558
SiteName	IHS Kotzebue Former Hospital - School Pipeline Release	Staff	Kim DeRuyter - 9074512752
Address 1	Between Third Avenue and Kotzebue Sound; Tracts 1 & 4 USS 2083	Status	Active
Address 2		Landowner	Indian Health Service
City/State/Zip	Kotzebue, AK 99752		
Latitude	66.901100	Meridian	Kateel River
Longitude	-162.588600	Range	18
Section	3	Township	17

Problem/Comments Historical spill of #1 diesel occurred over time from 1950 to 1980. Estimated 100,000 to 200,000 gallons spilled underground in an area up to 10 acres. ADEC was alerted when fuel was discovered seeping into the elementary school basement in 1980. Source undetermined and likely from multiple sources. The suspected sources are 1) a ruptured tank at the bulk tank farm in the 1950's 2) the former distribution line from the bulk tank farm to the Kotzebue school and the former Public Health Service Hospital and 3) the tank farm located at the school consisting of ASTs, USTs, and various piping systems. An estimated 40,000 gallons of fuel was recovered by several contractors and private individuals between 1980 and 1984. LNAPL noted on the ground water between 2 and 6 inches in 1986. In 1988 high snowfall created a visible seep of oil along the beach and sheen was noted on the Kotzebue Sound. ADEC installed a barrier along 400 plus feet of the beach to prevent oil migration into Kotzebue Sound. 20,000 to 40,000 gallons of recoverable fuel was estimated to remain underneath Kotzebue in 1986. This site is associated with Hazard ID 394, City of Kotzebue (file 410.38.008). The City of Kotzebue record documents the site history and will be used for tracking pore water and groundwater conditions, and possibly contaminant migration near the new sea wall currently under construction. Hazard ID 25558, IHS Kotzebue Former Hospital - School Pipeline Release will track further developments with the pipeline release.

Action Date	Action	Description	DEC Staff
12/24/2009	Potentially Responsible Party/State Interest Letter	A PRP letter was sent to the Indian Health Service. During the initial response to the release, the area of heaviest contamination was near the Former Hospital bulk above ground storage tanks. During a follow up meeting, IHS responded to the PRP letter by stating that other entities shared the responsibility for the release.	DeRuyter, Kim
05/17/2010	Update or Other Action	Freedom of Information Act request letters sent to BIA and IHS.	DeRuyter, Kim
06/23/2010	Meeting or Teleconference Held	Staff traveled to Kotzebue to discuss the historic fuel spill with Maniilaq, KIC, and the City.	DeRuyter, Kim
08/10/2010	Potentially Responsible Party/State Interest Letter	A PRP letter was sent to BIA, as they owned all of the property during the 50's when the local residents state that the first began pulling oil out of shallow wells adjacent to the school/Former Hospital land holdings, and they also owned the school property through the mid 70's. To date, BIA as not responded to the PRP letter.	DeRuyter, Kim
09/02/2010	Meeting or Teleconference Held	Staff conducted a teleconference with members of the Northwest Arctic School District, to discuss the historic school spill and the schools involvement.	DeRuyter, Kim
09/07/2010	Update or Other Action	A meeting announcement was sent to all of the PRPs. The meeting is scheduled for Oct 13, 2010 in Kotzebue.	DeRuyter, Kim

09/13/2010	Site Added to Database	A new site has been added to the database. This site has been pulled out of the City of Kotzebue.	Read, Mitzi
09/13/2010	Update or Other Action	This site is associated with Hazard ID 394, City of Kotzebue (file 410.38.008). The City of Kotzebue record documents the site history and will be used for tracking pore water and groundwater conditions, and possibly contaminant migration due to the new sea wall under construction. Hazard ID 25558, IHS Kotzebue Former Hospital - School Pipeline Release will track further site characterization and potential remedial efforts associated with the historic releases on the School and Former Hospital properties.	Read, Mitzi
09/13/2010	Exposure Tracking Model Ranking	Initial ranking with ETM completed for source area id: 78949 name: IHS Kotzebue Former Hospital - School Pipeline Release	DeRuyter, Kim

Alaska Department of Environmental Conservation

Contaminated Sites Database

Cleanup Chronology Report for Maniilaq Association Family Crisis Center - Kotzebue

File Number	410.38.024	Hazard ID	25371
SiteName	Maniilaq Association Family Crisis Center - Kotzebue	Staff	Jim Fish - 9074512117
Address 1	Caribou Drive	Status	Active
Address 2		Landowner	Maniilaq Association
City/State/Zip	Kotzebue, AK 99752		
Latitude	66.898832	Meridian	Kateel River
Longitude	-162.577131	Range	18
Section	3	Township	17

Problem/Comments On 2/12/08 ~300 gallons of diesel fuel were released from an aboveground heating oil tank at the Maniilaq Association Family Crisis Center (aka Women's Shelter), because of a broken 1/2 inch steel fuel line due to differential settling of the building and tank. Initial cleanup efforts were conducted by RP without the assistance of an environmental consultant. Contaminated soil was excavated and bagged at off-site location (Senior Center on Wolverine Drive: 66.898189 -162.582370, WGS84). DRO and GRO remain above cleanup levels.

Action Date	Action	Description	DEC Staff
03/03/2009	Spill Transferred from Prevention and Emergency Response Program	Site transferred by PERP staff John Ebel. Spill no. 08389904301; spill date = 2/12/08; quantity = ~300 gallons; substance = diesel; PERP file no. 410.02.031.	Read, Mitzi
03/09/2009	Site Added to Database	A new site has been added to the database	Read, Mitzi
03/09/2009	Exposure Tracking Model Ranking	Initial ranking with ETM completed for source area id: 78733 name: ~300-gallon Release - AHOT Fuel Line	Read, Mitzi
02/16/2010	Update or Other Action	Changed DEC project manager from Tamara Cardona-Marek to James Fish.	Wieggers, Janice
06/16/2010	Report or Workplan Review - Other	PERP approved a workplan for consultant to screen and sample 27 super-sacs of excavated soil from the spill, to determine suitability for landfill acceptance.	Fish, Jim
06/23/2010	Report or Workplan Review - Other	Reviewed PERP-approved work plan for super-sac soil screening; will coordinate with consultant on progress.	Fish, Jim

Alaska Department of Environmental Conservation

Contaminated Sites Database

Cleanup Chronology Report for
Residence - 1004 Otter Street

File Number	410.38.011	Hazard ID	3252
SiteName	Residence - 1004 Otter Street	Staff	Jim Fish - 9074512117
Address 1	1004 Otter Street	Status	Active
Address 2	Baldwin Peninsula	Landowner	Zachares, William and Camille
City/State/Zip	Kotzebue, AK 99752		
Latitude	66.899333	Meridian	Kateel River
Longitude	-162.572056	Range	018
Section		Township	017

Problem/Comments

Ice falling from the roof of the residence at 1004 Otter Street severed a fuel line connected to one of two 500 gallon HHOT. Estimated spill of 900 gallons at residence where puddled free product, stained soil and stressed vegetation observed by ADEC staff. Much of the fuel found its way to a pond next to the residence. City workers dewatered the fuel from the pond into Swan Lake. Property overlies the old dump site for the former native hospital so potential for possible buried debris limited soil sampling to shallow soil depth. Property consists of sand and gravel pad with the dwelling constructed on wood piling. Bounded on the north by Otter Street, east by a playground, south and west by a shallow pond. Village spill response included use of sorbents at the on-site pond but was then improperly dewatered into adjacent Swan Lake. Fish kills occurred along Swan Lake in the fall of 1998 and spring of 1999. ADF&G has collected samples to determine the cause of death. Spill number 99389913801 PERP file number 410.02.032 Spill date 5/18/99

Action Date	Action	Description	DEC Staff
06/18/1999	Update or Other Action	Letters of State Interest sent to the RPs from Tom DeRuyter (PERP).	Williams, Deborah
07/24/2001	Site Added to Database	Heating oil.	Wanstall, Bruce
07/24/2001	Site Ranked Using the AHRM	Preliminary ranking.	Wanstall, Bruce
12/04/2006	Update or Other Action	Per project manager request updated site name.	Uzzell, Wendy
04/18/2007	Update or Other Action	Reviewed file and updated database. No corrective action or site characterization has occurred since the initial spill response in 1999. There was much confusion about the responsible parties at this site. The release occurred after foreclosure when the property was held by the National Bank of Alaska and the Alaska Housing Finance Corporation. The site has since been sold 'as is' into private ownership.	Oelkers, Shannon
04/19/2007	Update or Other Action	Current property owner is the Maniilaq Health Center, PO BOX 256, Kotzebue, AK 99752. The residence is a multi-family six-plex.	Oelkers, Shannon
07/27/2007	Update or Other Action	Site transferred from Oelkers to Farris.	Oelkers, Shannon
05/22/2008	Exposure Tracking Model Ranking	Initial ranking with ETM completed.	Farris, Ann

06/11/2008	Update or Other Action	Lat-long updated after visit to Kotzebue.	Cardona- Marek, Tamara
07/28/2008	Update or Other Action	Sent letter to last RP on file requesting status update.	Cardona- Marek, Tamara
08/04/2008	Update or Other Action	Received call from previous RP on file (Zachares). Property was sold to Maniilaq Association several years ago.	Cardona- Marek, Tamara
01/27/2009	Update or Other Action	Received call from Maniilaq Association. They will send a letter responding to our request and intend to do site assessment this summer.	Cardona- Marek, Tamara

Alaska Department of Environmental Conservation

Contaminated Sites Database

Cleanup Chronology Report for
Residence - 698 Otter Street

File Number	410.38.009	Hazard ID	3695
SiteName	Residence - 698 Otter Street	Staff	Bill O'Connell - 9072693057
Address 1	698 Otter Street	Status	Cleanup Complete - Institutional Controls
Address 2	Baldwin Peninsula	Landowner	
City/State/Zip	Kotzebue, AK 99752		
Latitude	66.898306	Meridian	Kateel River
Longitude	-162.573972	Range	018
Section		Township	017

Problem/Comments Estimated 500 gallon heating oil spill at Kotzebue residence in 1998. Site characterization showed up to 6,300 mg/kg diesel range organics and 0.095 mg/kg benzene remained on-site, located directly beneath the above ground storage tank. The property overlies the old dump site for the former native hospital - potential for possible buried medical debris limited soil sampling to shallow soil depth and restricted possible cleanup methods. Village spill response included use of sorbents at the on-site pond. Fish kills were noted along nearby Swan Lake in the fall of 1998 and spring of 1999. The pond at 698 Otter Street was dewatered into Swan Lake in the spring of 1999. ADF&G collected samples from the killed fish to determine the cause of death. Results were inconclusive due to the quality of the sample; however, the fish had not been exposed to toxins over long periods of time. Given the timeline for the spill and the fish kills at Swan Lake it is unlikely that this spill was directly related to the fish kills. It is more likely that the dewatering practices of the City of Kotzebue were responsible. Property consists of sand and gravel pad with the dwelling constructed on wood piling. Bounded on the north by Otter Street, east by a playground, south and west by a shallow pond. Spill number 99389921301 PERP file number 410.02.033 Spill date 8/1/1998

Action Date	Action	Description	DEC Staff
03/22/2001	Site Added to Database	Heating oil spill. Transfer from PERP.	Wanstall, Bruce
03/22/2001	Site Ranked Using the AHRM	Preliminary ranking based on PERP staff site inspection report. Benzene detected in stained surface soils.	Wanstall, Bruce
11/13/2006	Update or Other Action	Report from State Dept. of Fish and Game, dated January 2000 discussed results of the analysis of six fish killed in Swan Lake (the lagoon behind Kotzebue). These fish were held too long prior to submission for analysis to determine if any damage was due to short term exposure to toxic substances. The report states that the fish were killed quickly as no abnormalities were observed consistent with long term exposure to toxic substances.	Oelkers, Shannon
01/11/2007	Update or Other Action	Changed file name from AHFC Properties - 698 Otter Street TO Residence - 698 Otter Street to better reflect site ownership.	Oelkers, Shannon
04/20/2007	Conditional Closure Approved	Based on the information provided to date, ADEC has determined that the corrective actions employed at the 698 Otter Street residence have been effective in stopping the release of the contamination into the environment and identifying the nature and extent of contamination remaining at the site. The contamination remaining beneath the fuel storage tank and the residence does not pose an unacceptable risk to human health or the environment provided site specific conditions and/or controls are attached to the property.	Oelkers, Shannon
04/20/2007	Institutional Control	ADEC will require no further remedial action subject to the following conditions: 1. A Notice of Environmental Contamination will be listed on the ADEC Database identifying the nature and extent of contamination remaining on site.	Oelkers, Shannon

	Record Established	2. In accordance with 18 AAC 75.325(i), ADEC approval must be obtained prior to removal and/or disposal of soil or groundwater from this site to an off-site location. It is recommended that the fuel storage tank (and all associated piping) be maintained and inspected annually to ensure future leaks and/or releases do not occur. Site closure (without conditions) can be achieved when soil sampling confirms that all soil meets the most stringent 18 AAC 75.341 Method Two, migration to groundwater, Under 40 Inch Zone, cleanup levels.	
09/17/2007	Update or Other Action	Updated staff assigned to Bill O'Connell.	Lager, Hannah