



**Title 9 Major Use Permit No.: 109-03-21**  
**Date of Issue: May 25, 2021**  
**Permit Expires: December 31, 2023**

**Permit Issued By:**

Northwest Arctic Borough  
Planning Department  
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**Permittee:**

City of Kiana  
ATTN: Eli Cyrus, Administrator  
PO Box 150  
Kiana, AK 99786  
Tel 907.475.2136  
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**Permittee Contact Information:**

Alaska Native Tribal Health Consortium  
ATTN: Scott Prevatte  
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**Project Description:**

The City of Kiana (CITY), in conjunction with the Alaska Native Tribal Health Consortium (ANTHC), plans to perform maintenance upgrades to the existing water treatment plant in the community of Kiana (“Sewer or water utility” is a Major Use in a Village Zone). Upgrades to the water treatment system will include installing new components within the water treatment plant building and the addition of a 3,000-gallon tank. This project will use a pre-oxidation and a filtration process and improve water quality. The project is expected to start June 1, 2021 and be completed by December 31, 2022.

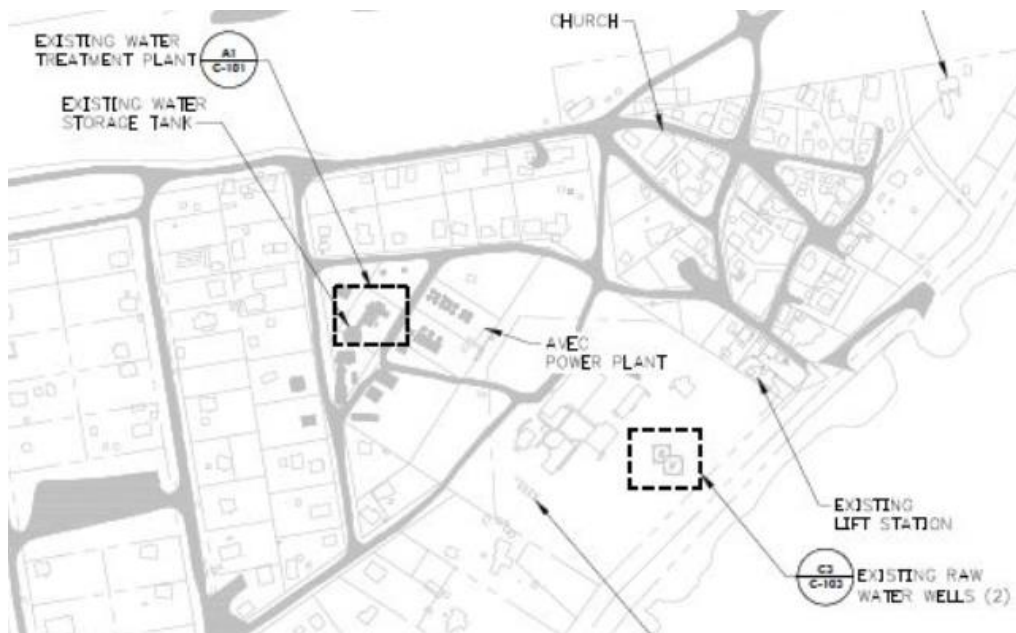
Specific details of the project are contained in the permit application (21-02-109) submitted by CITY to the Borough Planning Department. The application and supporting documents are incorporated into the Borough’s administrative record. Project Activities are summarized below.

**Project Location:**

The project is located within the community of Kiana at the Water Treatment Plant (WTP) and two existing water wells. The WTP and water wells are located at Township 18 North, Range 8 East, Section 9, Kateel River Meridian, USGS Map Selawik D-3.

The City of Kiana is the landowner. The WTP is located at Lot 3 & 4, Block 12, Plat 73-57, US Survey 4269. The water wells are located at Lot 7, Block 4, US Survey 4269.

The project is located in the Village District.



**Figure 1. Water Treatment Plan and Water Wells locations in Kiana**



### **Water or Sewer Utility:**

The existing water treatment process is not effective for removing manganese concentrations. This project will use a pre-oxidation and a pyrolusite filtration process that was pilot tested on-site in Kiana in November 2016 and August 2017.

Upgrades to the water treatment system will include installing new components within the water treatment plant building. New additions include two 4-foot diameter pressure filters with Filox media, a potassium permanganate injection port, a chlorine injection port, an air scour unit, a backwash pump, and associated piping and controls.

A new 3,000 gallon (13-ft long by 6-ft diameter) buried insulated backwash equalization tank with sewer system connection and heat trace will be installed adjacent to the existing water treatment plant. Filter backwashing is recommended every 1-2 days and will generate approximately 3,000 gallons of backwash water, if both filters are backwashed. The backwash water will discharge to the existing sewer main connected to the sewage lagoon. Up to 100 cubic yards of imported gravel material will be used as bedding for the tank and pipe connection. The material source is anticipated to be material purchased locally from the NANA Native Regional Corporation's existing gravel pit.

Additionally, the well pumps for the two community drinking water wells will be replaced.

Within the existing Water Treatment Plant building:

- Two 4-foot diameter pressure filters with Filox media
- Potassium permanganate injection
- Chlorine injection (for distribution system)
- Backwash pump
- Air scour
- Process piping
- Instrumentation and controls

Adjacent to the Water Treatment Plant building:

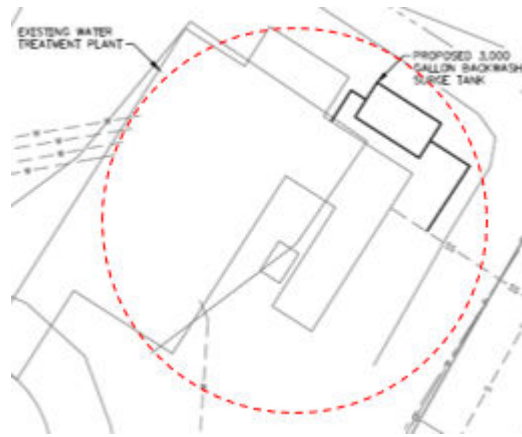
- 3,000 gallon buried insulated backwash equalization tank with sewer system connection and heat trace

At the two community wells located about 30 feet apart near the Kobuk River:

- Replacement well pumps



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**Figure 2. Surge tank location**

**Permit Authorization and Documentation:**

The City of Kiana submitted a Title 9 Zoning Permit Application (21-02-109) to perform maintenance upgrades to the water treatment plant in the community of Kiana in a Village Zone on March 16, 2021. On April 6, 2021 the Borough Planning Department deemed the application was complete.

Permit fees totaled to \$150.00. The applicant requested a waiver of fees. The Planning Director did not grant this request. The applicant owes \$150 for this permit fee.

The Planning Director has the authority to permit “Sewer and water utility” in a Village Zone by Major Use Permit, pursuant to NABC 9.12.020. A 20-day public comment period started on April 28, 2021. There were no public comments for this project.

**Permit Terms and Conditions:**

1. The City of Kiana (CITY) shall comply with the terms of the permission, permits and/or agreements granted by the federal government, State of Alaska, NANA Regional Corporation, Northwest Arctic Borough and other applicable agencies.
2. CITY shall comply with any and all applicable local, Borough, state and federal laws. Failure to abide by any part of this permit, or violations of any pertinent Borough ordinances or state or federal law or regulation, will be considered grounds for revocation of the permit or denial of future permit requests and may result in issuance of fines or other penalties. This provision applies to all persons working under the authority of this permit.



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3. The Permittee is responsible for ensuring that all employees, contractors, sub-contractors, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of this permit.
4. CITY is subject to all penalties and civil actions pursuant to NABC 9.08.240 for violation of the permit conditions and stipulations prescribed herein.
5. Uses permitted shall cease upon the discovery of archaeological, prehistoric, historic or cultural resources during the construction activities, and CITY shall immediately contact both the Planning Director at the NAB Planning Department and Alaska State Historic Preservation Office to determine the conditions to continue.
6. During and after project activities, the permittee must conduct activities in a manner to maintain natural drainage patterns, watershed protection, and permafrost stability, to prevent runoff and erosion into water supplies and to minimize alteration of vegetation.
7. The permittee shall ensure fire safety and emergency access necessary for fire and emergency apparatus and police protection.
8. All project activities shall utilize measures to minimize noise and nuisance affecting surrounding residential properties including excessive noise, fumes, odors, glare, smoke, vibration, dust, litter, interference in any telephone, radio or television receivers, and/or significant line voltage fluctuation.
9. Any development by the project in floodplains and shoreline areas are to be constructed to minimize loss of life or property due to riverine flooding, icing, and stream bank erosion.
10. The Borough recognizes that this area within **Kiana** is a low flood hazard area, but may be subject to flooding which may result in the loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the health, safety and general welfare of Kiana residents. The Borough has adopted the necessary regulations of the Federal Emergency Management Agency (FEMA) to enable its communities and residents to participate in the National Flood Insurance Program (NFIP). See NABC 9.25.020.O.

To promote the public health, safety and general welfare by minimizing flood damage and loss and promoting access to disaster relief, the following conditions must be met:

- a. Encourage protection of land uses vulnerable to floods, including public facilities and utilities that serve such uses, against flood damage at the time of initial construction or substantial improvement.



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Ensure that those persons who occupy areas of special flood hazards assume responsibility for occupying such flood hazard areas.

- b. All new construction and substantial improvements shall meet the following general standards, as applicable:
  1. **Anchoring.** All new construction and substantial improvements shall be designed, modified, constructed and adequately anchored to prevent flotation, collapse or lateral movement of the structure; all manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement.
  2. **Construction Materials and Methods.** All new construction and substantial improvements shall be constructed with materials and utilize equipment resistant to flood damage and use methods and practices that minimize flood damage, including waterproofing, watertight construction, use of substantially impermeable materials and other construction techniques.
  3. **Water and Sewer Utilities.** All new and replacement water supply and sewage systems shall be designed and constructed to minimize or eliminate infiltration of floodwaters into the system and discharge from the systems into floodwaters. Sewage lift station electrical panels shall be elevated above flood areas.
  4. **Public Utilities.** All new or replacement public utilities such as gas, electric and telephone systems shall be designed or constructed to eliminate disruptions due to flooding and associated hazards.
11. Project equipment/vehicle servicing and fueling operations are prohibited within 100 feet of any surface water body, including any rivers, drainage channels, sloughs and lakes. Equipment and vehicles are to be maintained to eliminate or minimize any fuel spills and fluid leaks. Equipment and vehicles must be monitored prior to use for hydraulic leaks. If equipment is in continuous use, it shall be inspected daily for hydraulic leaks. Project equipment shall not be abandoned.
12. CITY shall immediately notify the Borough (at least within 24 hours) of any change in the project plans and seek modification of the permit. CITY shall suspend uses until approval is given by the Planning Director/Title 9 Administrator. If the proposed action(s) constitutes an emergency, CITY shall comply with NABC 9.16.040 for emergency actions and shall make reasonable efforts to conduct modified uses in a manner that avoids or minimizes significant harm to the environment, consistent with the need to protect property and human life.
13. Access by Borough personnel and their agents. Authorized personnel and/or their agents of the Northwest Arctic Borough when on official business and displaying proper identification shall be allowed access to the site without interference. Borough personnel and/or agents may conduct scheduled or unscheduled inspections or tests to determine compliance with this permit or respond to emergency situations. The Borough may



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inspect the properties up to 5-years after the permit expires for compliance checking and inspections.

14. At the completion of the project, the permittee shall file a written report with the Borough Planning Department describing the following:
  - a. A complete report of any fuel or other hazardous substances discharges and clean-up activities completed,
  - b. Other matters as reasonably required by the Administrator/NAB Planning Director.
15. This permit will expire December 31, 2023, unless revoked by the Title 9 Administrator and/or CITY.

### **Permit Approval**

#### **NORTHWEST ARCTIC BOROUGH**

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Eva Harvey, Planning Director/Title 9 Administrator

Date: May 25, 2021

CC: Kiana IRA Council, NANA Regional Corporation, Maniilaq Association, NIHA, Alaska Native Tribal Health Consortium, AVEC

Posted at: [www.nwabor.org](http://www.nwabor.org)