

PROJECT SUMMARY

CCWS 438 WATER MAIN REPLACEMENT

SENECA NATION OF INDIANS
CATTARAUGUS TERRITORY
CATTARAUGUS, CHAUTAUQUA, AND ERIE COUNTIES, NEW YORK

PUBLIC LAW 86-121

PROJECT NS-22-RQ1

August 2022



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

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REFERENCES and DESIGN STANDARDS

“Criteria for the Sanitation Facilities Construction Program”, June 1999, version 1.01, 3/13/03. Office of Environmental Health and Engineering, Division of Sanitation Facilities Construction, Indian Health Service.

http://www.dsfc.ihs.gov/Documents/Criteria_June_1999.cfm

“Sanitation Facilities Construction Policy 1115 - Criteria for Sanitation Facilities Construction”, March 1998, Nashville Area Indian Health Service.

“Recommended Standards for Water Works”, 2012 edition, Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers.

“National Primary Drinking Water Regulations”, Environmental Protection Agency,

<http://water.epa.gov/drink/contaminants/index.cfm>.

“Drinking Water from Household Wells”, Environmental Protection Agency,

http://www.epa.gov/privatewells/pdfs/household_wells.pdf.

1.0 Introduction

The Seneca Nation of Indians (Nation) submitted a Project Proposal dated July 13, 2021, requesting assistance under Public Law 86-121 from the Indian Health Service (IHS) in serving homes with necessary sanitation facilities (Appendix A). This Project Summary proposes a project to serve 1,038 homes and 78 administrative buildings and businesses with upgraded water facilities. All of these homes are classified as *existing homes* in accordance with IHS eligibility criteria. The total cost of this project is estimated to be :

This project, titled “CCWS 438 Water Main Replacement” and designated Project NS-22-RQ1, will administer in funding by the Infrastructure, Investment, and Jobs Act, 2021 (IIJA) from the IHS. An additional in Tribal funds will be utilized by the Nation for this project. The combined project funds are intended to be used to replace and install 58,000 feet of 10-in C900 DR14 PVC water main, 71,000 feet of 8-in C900 DR14 PVC water main, 3,000 feet of water service lines, and associated valves, hydrants, and connections in order to improve the reliability and serviceability of the community water system on the Cattaraugus Territory. Through evaluation and water modeling, the water system was identified to have major leakage from unidentified sources in excess of 20% of the total daily water produced by the system (DL3). The Nation worked with IHS to pursue federal funding by listing the proposed project in the FY 2022 IHS Sanitation Deficiency System (SDS).

2.0 General Information

The Seneca Nation of Indians Cattaraugus Territory includes over 1,400 Indian homes as well as approximately 100 non-residential buildings such as tribal government offices or small commercial operations. The Cattaraugus Reservation is served by the Cattaraugus Community Water System (CCWS). The water system was constructed in the early 1990’s. Its primary water source is the Erie County Water Authority (ECWA) which originates from Lake Erie, and is treated by the ECWA at their Sturgeon Point Water Treatment Facility in Derby, New York. The secondary water source for the system are the Richardson Road wells near the Village of Gowanda. Together, these supplies provide more than 350,000 gpd into the system. More information about the existing water system, the needs documented, and alternatives considered can be found in the Project Engineering Report titled “Cattaraugus 438 Water Main Replacement Project”, developed by IHS in July 2021 and attached to this document in Appendix C.

2.1 Existing Water Supply and Fluoridation

Over 99 percent of the homes on the Cattaraugus Territory receive their water supply from the Nation’s community water system. Federally and Nation funded water projects have provided over 1000 residential water service lines. The sources for the Nation’s community water system are a metered connection with the adjacent Erie County Water Authority (ECWA) and two large production community wells at Richardson Road. A water study performed in 2020-2021 indicate that the Nation’s average water usage is 352,000 GPD. A few homes still utilize individual water well

systems. A complete description of the existing water system can be found in Appendix C.

The community water supply for the Cattaraugus Territory is fluoridated.

2.2 Operation and Maintenance

The Nation's utilities department provides all operations and maintenance for the CCWS. The Nation employs certified operators to ensure compliance of water quality standards and provides for new operators to become certified.

3.0 Need for the Project

A water model produced for the system (Appendix C) showed an estimated water loss of approximately 74% throughout the Cattaraugus Water System. This level of water loss can be attributed to a variety of different factors and issues within the water system. One concern is the thin walled water pipe and high operating pressure of the water system. Leakage from pipe joints that are out of round, cracks, and breaks are considered a major source of water leakage within the system.

Water loss in excess of 20% of the total daily flow for the system (DL3) can potentially cause cross connection issues with groundwater, thus allowing for contamination of the water system if negative pressures are experienced. In conjunction with the low chlorine residuals noted in the water modeling report, this can be a potential health hazard affecting the whole community water system. Due to a lack of isolation valves, locations of leaks and breaks, these water main leaks can result in outages to a large population of the Nation, boil water notices, and loss of fire protection. More information regarding the basis for the project is outlined in Appendix C

4.0 Proposed Project

The proposed project involves installation 58,000 feet of 10-inch C900 DR14 PVC water main, 71,000 feet of 8-inch C900 DR14 PVC water main, 3,000 feet of water service lines, and associated valves, hydrants, and connections. This will include installation of one pump station and loop to provide redundant supply lines for the territory.

4.1 Scope of Work

The proposed project will consist of installing 24,500 feet of new 8" C900 DR14 water main between Buffalo Road and Van Vleck Road, upgrading Buffalo, Van Vleck and Burning Springs Road water mains to 8" (22,500 feet) and replacing 58,500 feet of 10" diameter SDR 21 PVC with 10" diameter C900 DR14 PVC, 24,000 feet of 8" diameter SDR 21 PVC with 8" diameter C900 DR14. 162 new gate valves and 118 fire hydrants, 12 air release valves, one pump station, and electrical upgrades would be installed along the roadways. All service connections would be reconnected along with 10 new service connections and laterals. Seven (7) new blow

off/flushing hydrants, SCADA upgrades, and equipment for the utility department would also be installed/purchased with this project. Installation of water meters in zones and pressure management techniques will be evaluated so that leaks can be detected and reported early to also reduce overall water loss.

4.2 Training Operation and Maintenance

This project will create a minimal amount of additional O&M requirements due to the maintenance of a new booster pump/PRV station and valves for the utility department. O&M of the existing facilities should decrease in cost and provide less burden to the utilities department as a result of the proposed improvements. This will provide improved service to the residents and compliance with recommended standards. As the system is not changing substantially in how it is routinely operated, the O&M requirements should be well within the capacity of the utilities department.

4.3 Schedule of Homes to be Served

There are a total of 1,038 existing homes and 78 non-home buildings. These homes are classified as either E1, H3, or H5 homes. Non-home buildings are classified as E2.

*Legend:

Home Type

- E1 - Existing Homes (Like New)
- E2 - Existing Non-Residential Units
- E3 - Existing Non-Indian Homes

Home Type

- H1 - HUD Housing (new)
- H2 - BIA Housing (new)
- H3 - Tribal Housing (new)
- H4 - State or Remote Housing (New)
- H5 - Other Housing (New)
- H6 - HUD - BIA Housing (New)
- H7 - HUD Block Grant (CDBG)

5.0 Project Management Plan

5.1 Stakeholders

Role	Stakeholders		
	IHS	Nation	Consultant
Funding Agency	X		
Project Manager		X	
Project Engineer	X	X	X
Construction Inspection	X	X	
Procurement Agent		X	
Final Owner		X	

5.2 Procurement Plan

Tribal Procurement – Nation
 Tribal Force Account – Nation

5.3 Design Plan

Preliminary Engineering Report – IHS
Environmental Review and Determination – Nation, IHS
Final Design and Construction Package – IHS, Nation, Nation Consultant
Final Review of Design – Nation, IHS
As-built Drawings – Contractor, Nation
Final Report – IHS

5.4 Inspection Plan

Daily on-site inspections – Nation
Milestone/Periodic inspections – Nation, IHS
Final Acceptance of facilities – Nation, IHS

5.5 Change of Scope Control Plan

Any significant deviations from the path laid out in this Project Summary will necessitate an amendment be executed to this document. Changes in funding, responsibilities of the parties, or the procurement method will also require the execution of an amendment to the Memorandum of Agreement for this project.

5.6 Project Milestone Schedule

<i>Milestone Event</i>	<i>Target Date</i>
1. Planning Phase	
Project Summary Completed	20 August 2022
Memorandum of Agreement Executed	1 September 2022
Environmental Review Document Completed	1 February 2023
Environmental Determination Issued	28 February 2023
2. Design Phase	
Design Initiated	1 February 2023
Design Completed	1 July 2024
Procurement Package Completed	1 July 2024
Procurement Action Initiated	1 August 2024
3. Construction Phase	
Construction Started	1 December 2024
Construction Completed	31 December 2025
4. Closeout Phase	
As-Built Completed	15 January 2026
Final Inspection Completed	15 January 2026
O&M (Homeowner) Training Completed	14 March 2026
Closeout Letter Issued	31 August 2026
Final Report Completed	31 December 2026

The expected duration of the first phase of this project, from execution of the Memorandum of Agreement to construction completion is estimated at 3 years and 3 months or 3.25 years.

6.0 Environmental Review

A review of the possible effects on the environment, as required by the National Environmental Policy Act (NEPA) and related environmental legislation, executive orders, and regulations, will be completed for this project. The majority of this project is to replace existing water mains within the right-of-way. A portion of this project is anticipated to construct in previously undisturbed areas which will be reviewed by both IHS and the Nation for impacts related to NEPA concerns. A possible Phase I environmental assessment may be needed. It is anticipated that this review will indicate that the project meets the criteria for NEPA categorical exclusions for the IHS, as submitted to the Council on Environmental Quality. Further, the requirements of related legislation, executive orders, and regulations will be met. However, if any condition contrary to the results of this review is discovered at any time during the course of this project, further action will be taken to ensure that this project causes no significant impact on the environment.

No funds for construction activities will be released until the Environmental Review and associated determination is made.

7.0 Budget

7.1 Detailed Cost Estimate

CONSTRUCTION		
<u>DESCRIPTION</u>	<u>QTY</u>	<u>UNIT</u>
10" C900 DR14 PVC	58500	LF
10" Gate Valves	92	EA
8" C900 DR14 PVC	71000	LF
8" Gate Valves	70	EA
2" Water Service Line	3000	LF
Zone Metering	4	LS
Air/Vacuum Release Valve and Pit	12	EA
Fire Hydrants: Flags, pipe, valve, fittings, bedding	118	EA
Connection to Existing Service Laterals	401	EA
Service Laterals	10	EA
Connection to Existing Distribution System	25	EA
Electrical	1	LS
Booster Station	1	EA
Stormwater, Erosion Control	4	LS
Blow Off Hydrant	7	EA
Equipment for Utility Dept.	1	LS
Well Abandonment	10	EA
Pavement Repair	3250	LF
Restoration	4	LS
SCADA Upgrades	1	LS
Bypass Costs	1	LS
		—
		—
SEE NOTE 1:	16%	_lr

SEE NOTE 2:

SEE NOTE 3: 8%

Subtotal of project (IHS Eligible Costs)
Total Ineligible Project Costs
Consultant Support

TOTAL PROJECT COSTS

*Note 1: Ineligible Costs are based on estimated or metered water usage for ineligible buildings and homes.

**Note 2: The Administrative Fee is based on a sliding scale of construction costs performed under tribal procurement and do not apply to force account. The estimated amount may change due to this. This will not affect the obligation to the Tribe.

***Note 3: The IHS Technical Support amount will be retained by IHS and used to provide technician related direct support for this project. Up to 50% of PTS may be expended under tribal procurement for Technical Support related tasks. Support related tasks primarily include personnel and travel costs for site evaluation, drafting, surveys, and construction inspection.

7.2 Funding Source(s)

The estimated funding for the project is shown below.

IHS IJJA Funding

Nation Funding

Total Funds Dedicated to the Project