

Water Sewer Master Plan Update (WSMPu)

kickoff public meeting



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

AGENDA

- Background & Purpose of the WSMFu
- Overview of current water / wastewater facilities & how they were developed
- Recommendations of last (2017) WSMFu
- Project activities since 2017 WSMFu
- Identify projects and priorities for the next planning period

NOME JOINT UTILITY SYSTEM

- Component unit of the City of Nome
 - Financially independent
 - NJUS annually provides \approx \$750k (\$250k PILOT + \$500k sales tax) to the City
 - Utility brings in sufficient revenue for routine M&O activities
 - Utility receipts are insufficient to support system expansion
- NJUS MISSION STATEMENT
 - *Providing reliable utility services to system rate payers efficiently and economically by prudently operating and maintaining system assets in a fiscally responsible manner.*

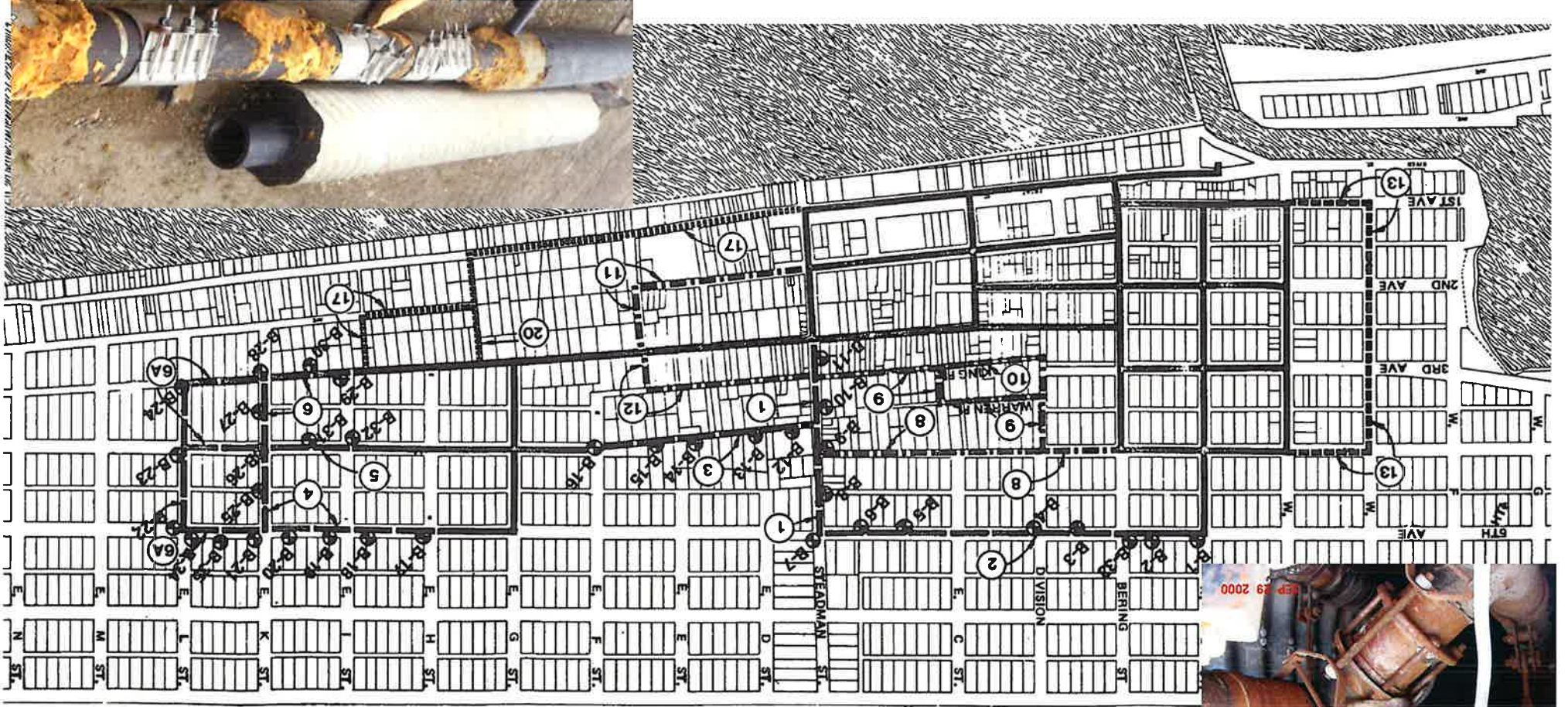
WSPMPu

- The value of water and wastewater systems
 - Public health
 - Convenience
 - Promotes denser developments
 - Fire protection
- Goals of the Water Sewer Master Plan update
 - Identify actions needed to maintain reliable service through rehabilitation or replacement of critical water and wastewater assets
 - Identify opportunities to incrementally grow water distribution and wastewater collection systems, ideally to fit a larger plan
 - Evaluate emerging EPA water quality regulations (PFAS, "enhanced lead & copper rule", lead service line inventory, etc.) for impacts to utility ops.

Water Sewer System Development

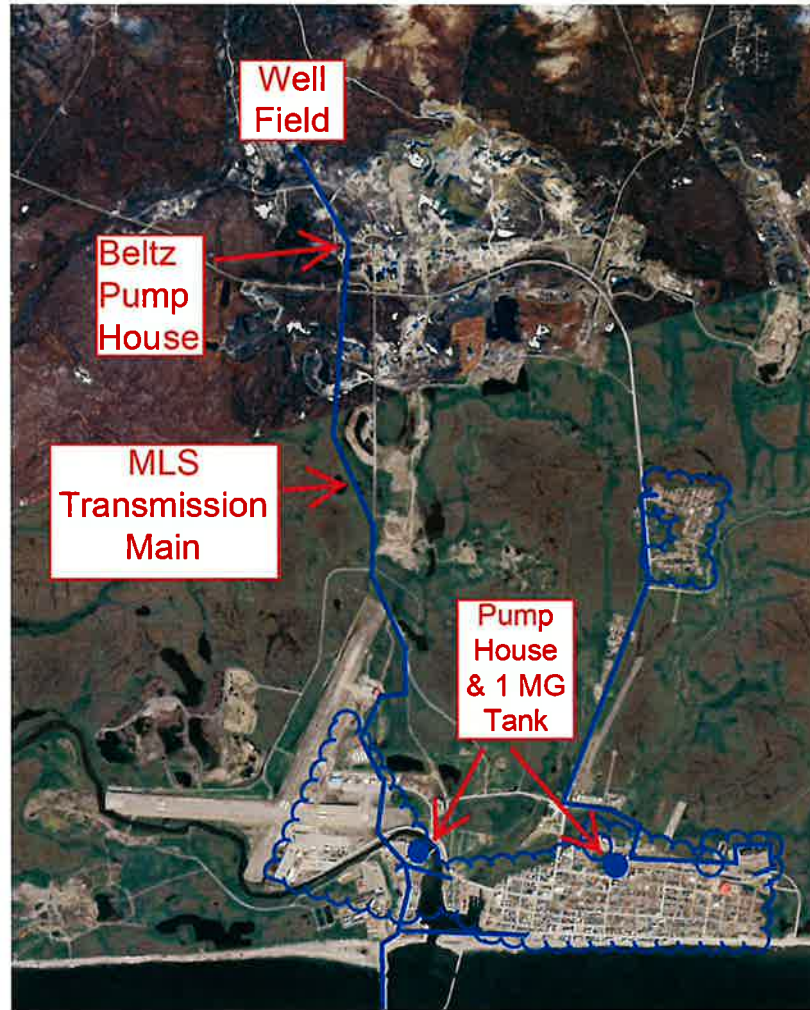
- Prior to the mid 1960's: water delivery & honey buckets
- Mid 1960's: wood utilidor construction began w/ GO Bond funding
- Early 1980's: wood utilidor replacement began w/ ADEC / USDA grants (w/ a small loan component) using Sclaircore W/S piping.
- Mid 1990's: Shifted from Sclaircore to an improved arctic pipe w/ a corrugated aluminum jacket and an enhanced HDPE resin
- 2000: MLS shifts to deep ground water wells
- Mid 2010's:
 - All utilidors & a portion of the Sclaircore replaced.
 - Grant funding ends.
 - The large scale construction program ends.



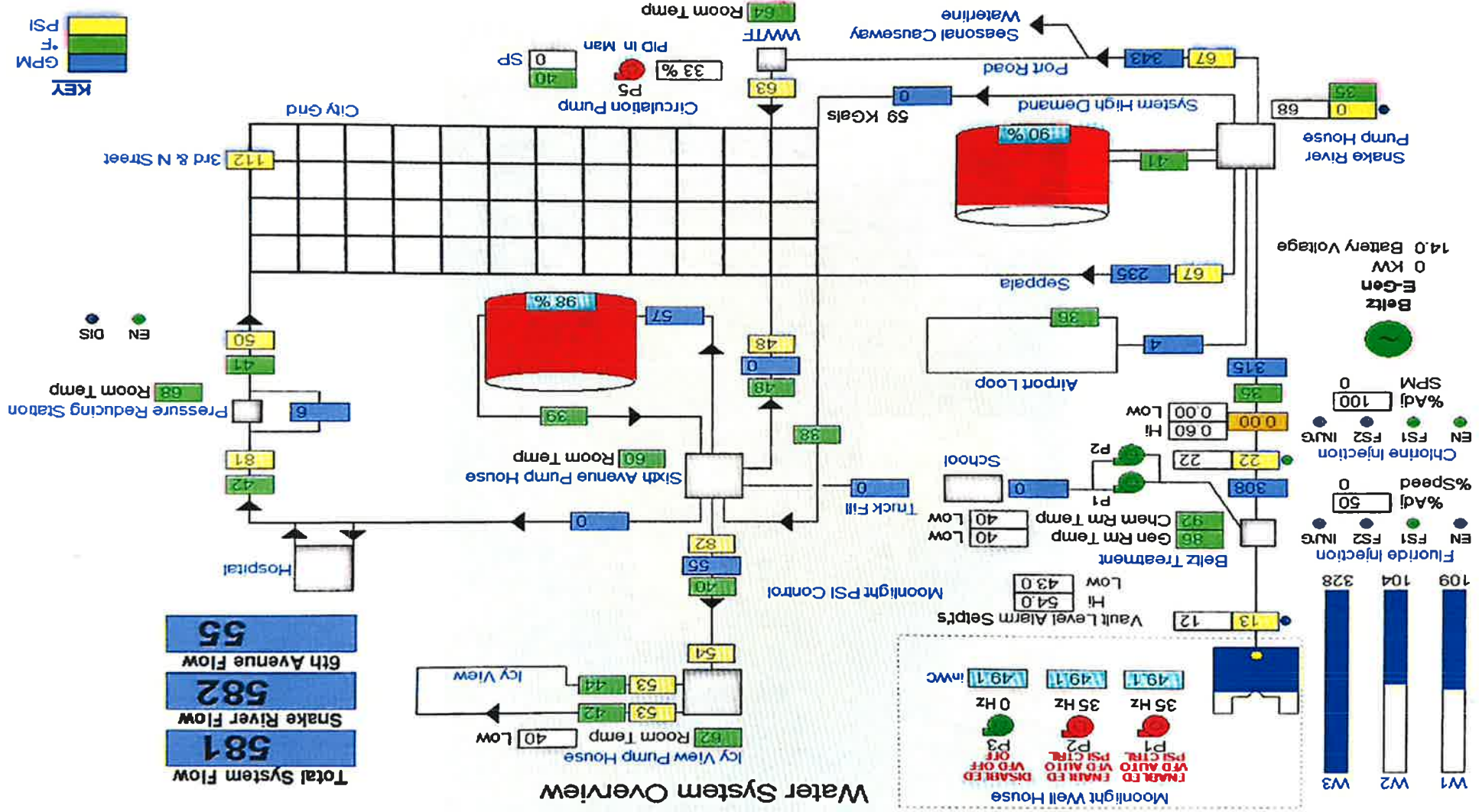


1976 Utilidor

Water System Overview



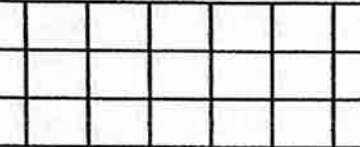
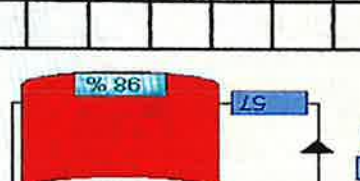
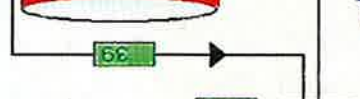
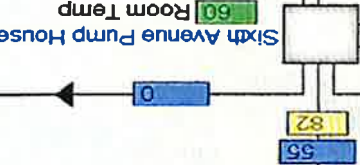
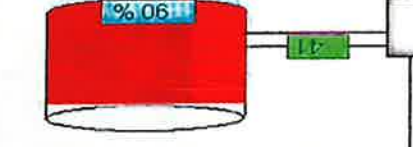
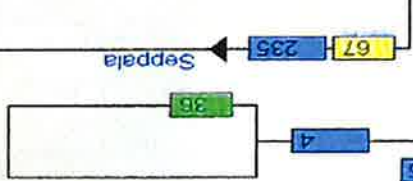
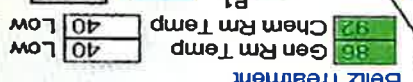
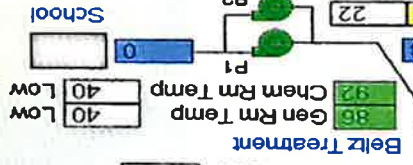
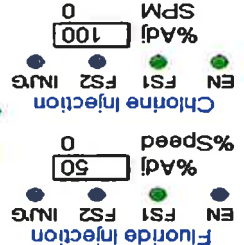
Water System Overview



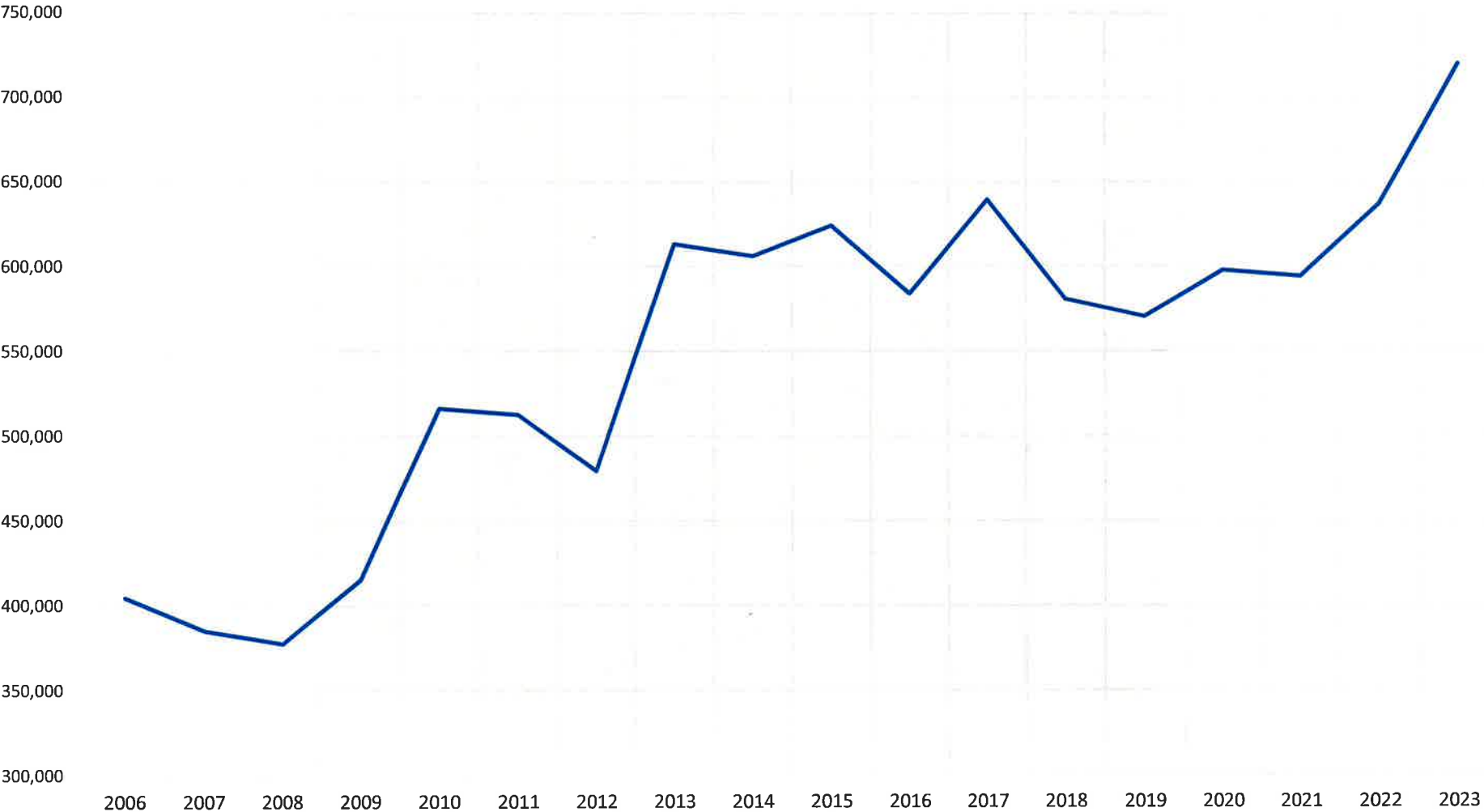
581	Total System Flow
582	Snake River Flow
55	6th Avenue Flow

Moonlight Well House

- PSI CTRL: ENAILED
- PSI CTRL: W/O AUTO
- PSI CTRL: DISABED
- 35 Hz
- 35 Hz
- 0 Hz
- 149.1 inWC
- 149.1
- 149.1



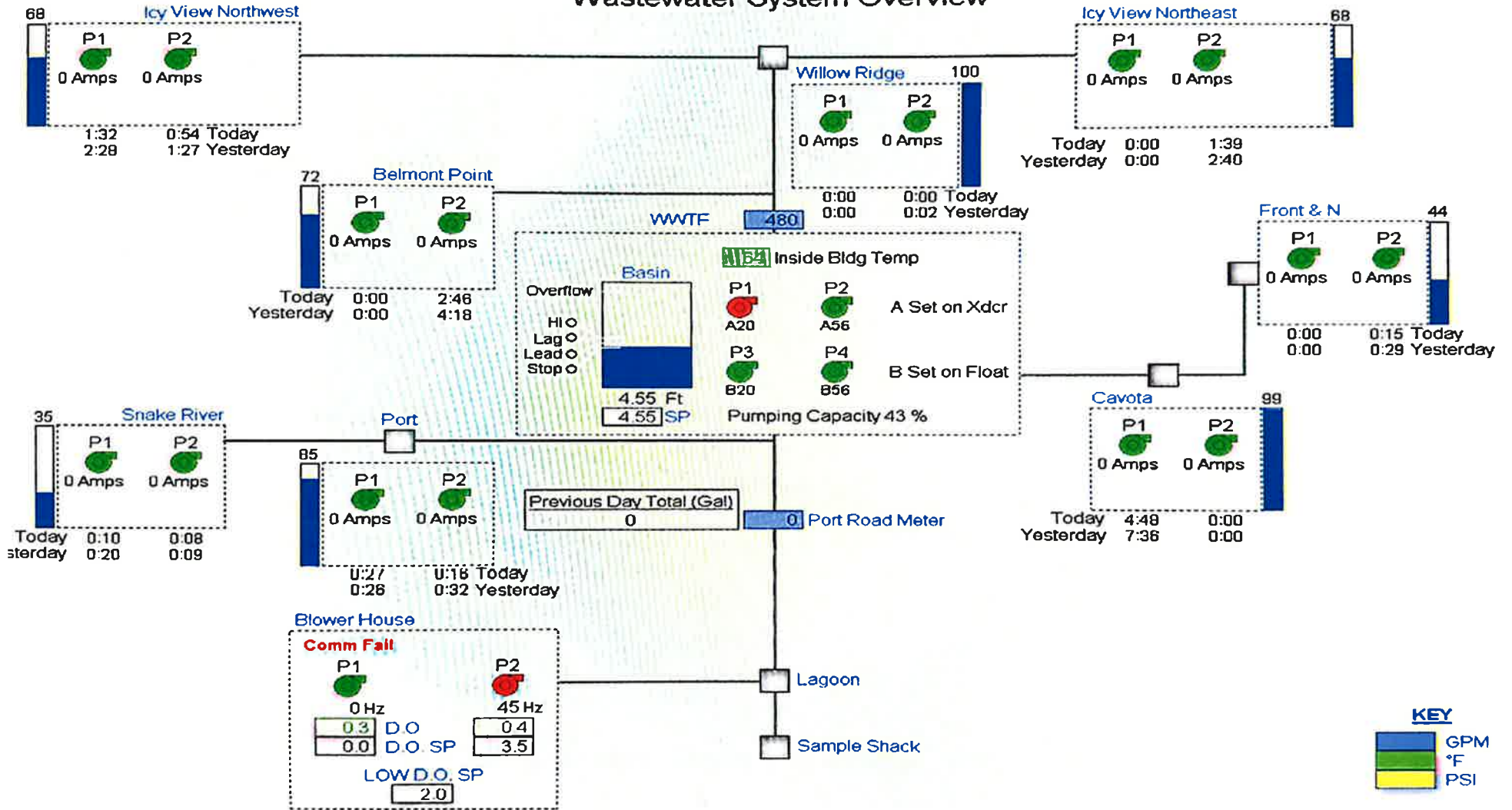
Moonlight Springs Water Production (gpd)



Wastewater System Overview



Wastewater System Overview



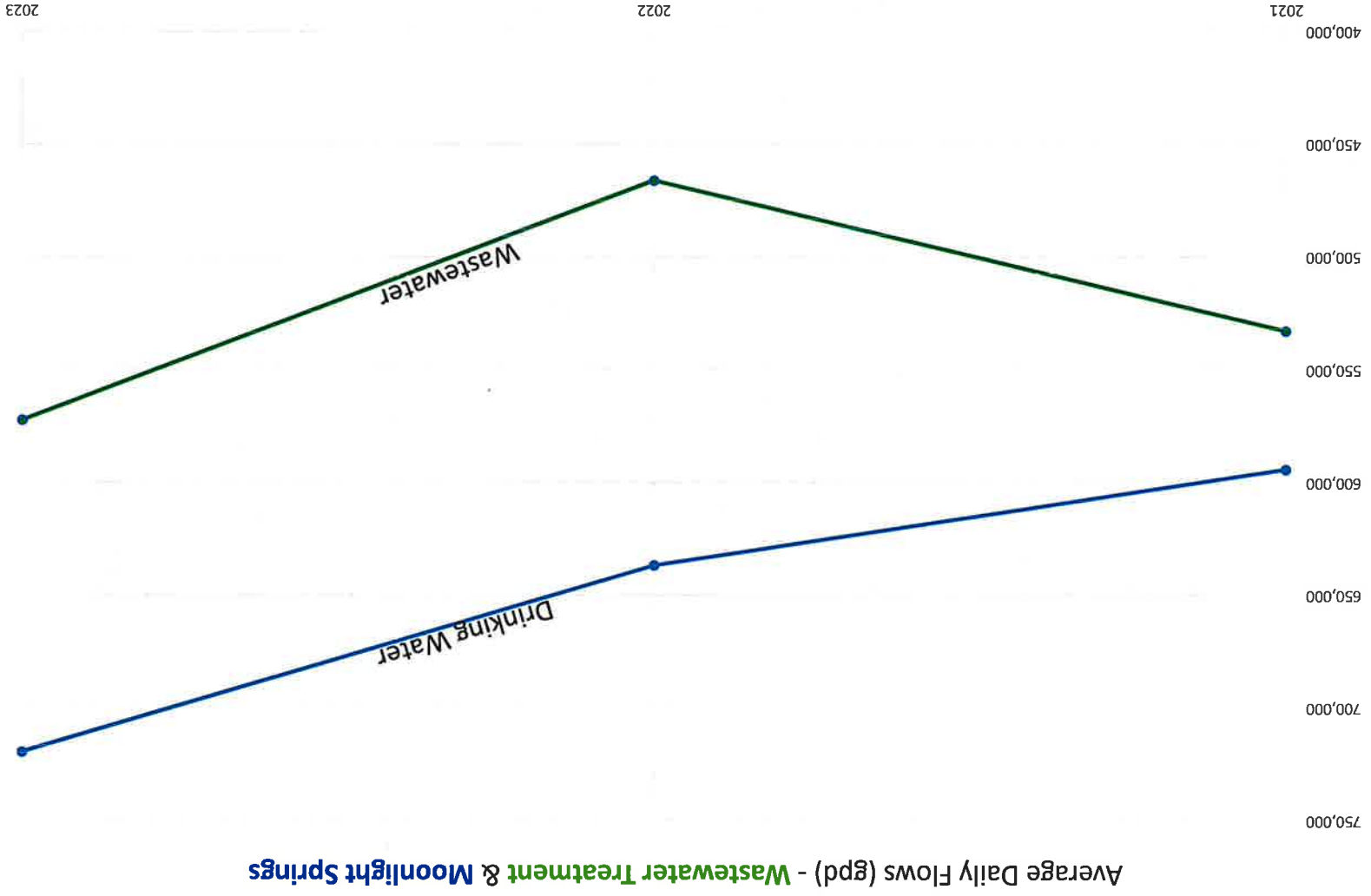
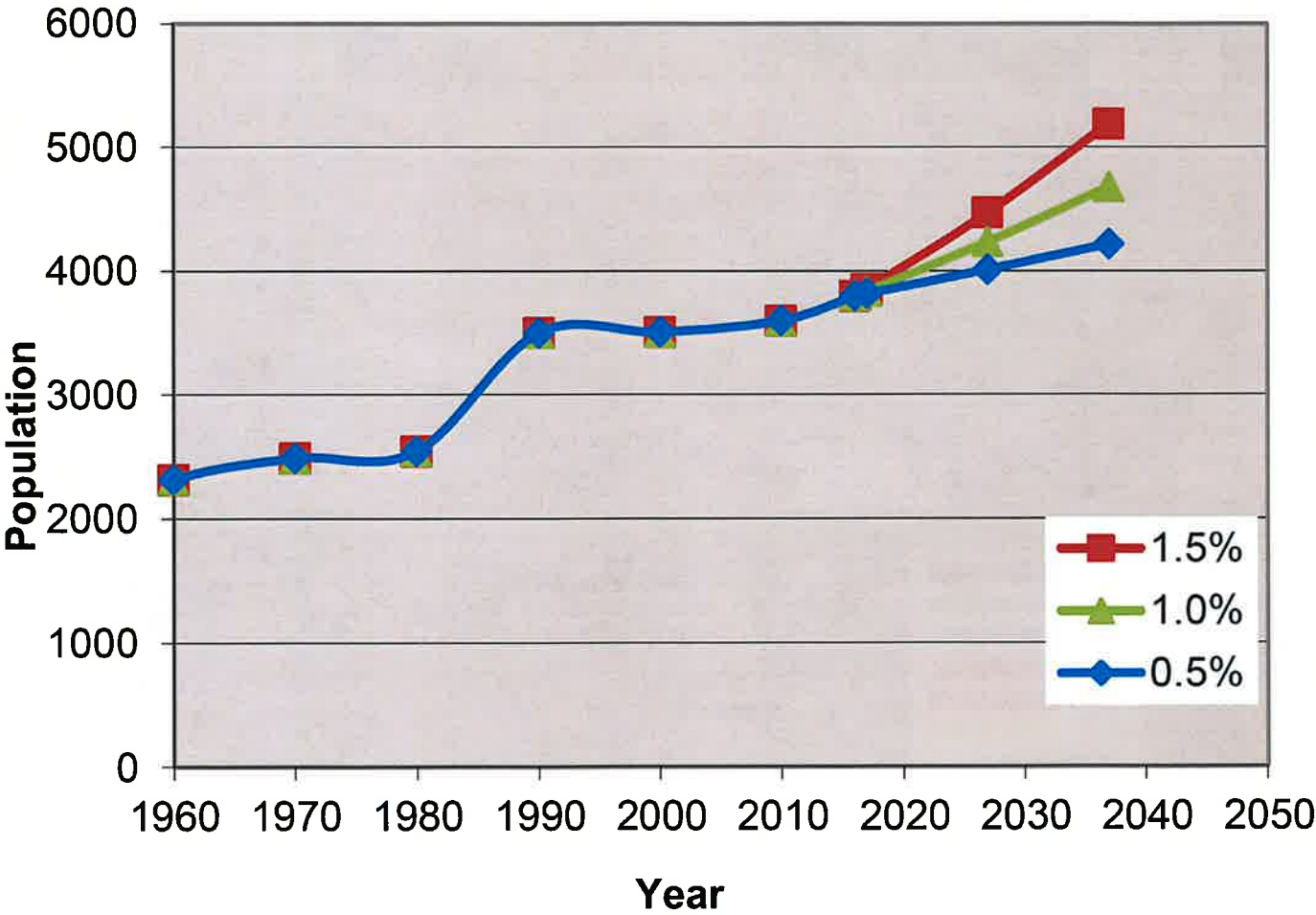
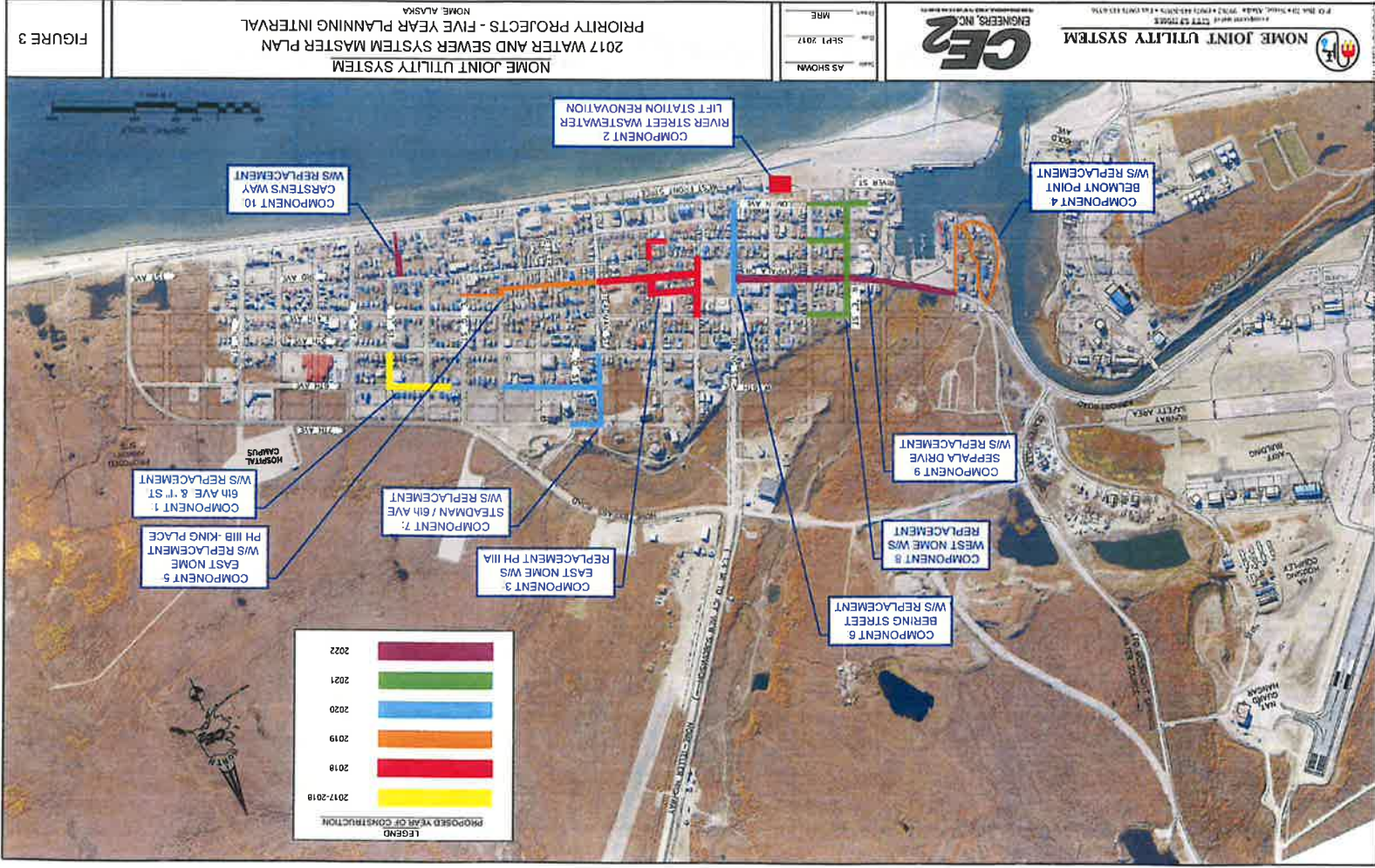


Chart 1: Nome Population Projections
(From 2017 WSMPu)



2017 WSMFPU Recommendations - \$58M



2017 WSMPu *Future Projects*

Project	Description
PD1	New Water Source Investigation and Testing: Drill and test new wells. Evaluate and design a new water transmission main and possible new water storage tank.
PD2	City Field/Icy View Circulation Loop Study: Perform an engineering study to evaluate options for a new transmission main, possibly routed to the east along City Field. This transmission main would provide increased flow capacity to Icy View and possible future development, and would also provide a secondary transmission main to supply water to downtown, and a means to provide freeze protection circulation flow. The options of installing water storage tank and pressurizing the loop should also be evaluated as a means of providing water service to additional areas.
PD3	Wastewater Treatment Enhancement including Additional Land Acquisition and Outfall inspection: It is anticipated that wastewater hydraulic loading and level of treatment will continue to increase. Having additional treatment area reserved will allow NJUS to continue to meet their wastewater treatment requirements.
PD4	Lester Bench/AMCC Water Expansion: Expansion of the water distribution system, including a smaller water storage and pumping station, to serve approximately 10 existing homes. The existing non-compliant low water service pressure (12-16 psi under normal flows with negative pressures during extreme moonlight water requirements) to AMCC would also be corrected with this project. Provision of pressurized water to AMCC would allow the elimination of the operation of the separate public water system.
PD5	Port of Nome Wastewater Improvements: In cooperation with the City and the Port of Nome, evaluate the potential impact to the wastewater collection and treatment systems of the proposals to accept ship's waste at the Nome Harbor and Causeway.
PD6	If DOT/PF advances a road improvement project for Front Street, this project will replace 2,800 LF of aging, direct-buried "Sclaircore" water and sewer main piping that was installed in the early 1980s. In addition, the gravity sewer main was placed at a much steeper grade than what was necessary and required a lift station at West Front Street and Steadman Street. If the 1,500 lineal feet of sewer main were re-graded from Bering Street to Steadman Street, the Steadman lift station could be removed. This would reduce energy consumption and lower operational and maintenance expenses.

Work Performed / Planned since 2017

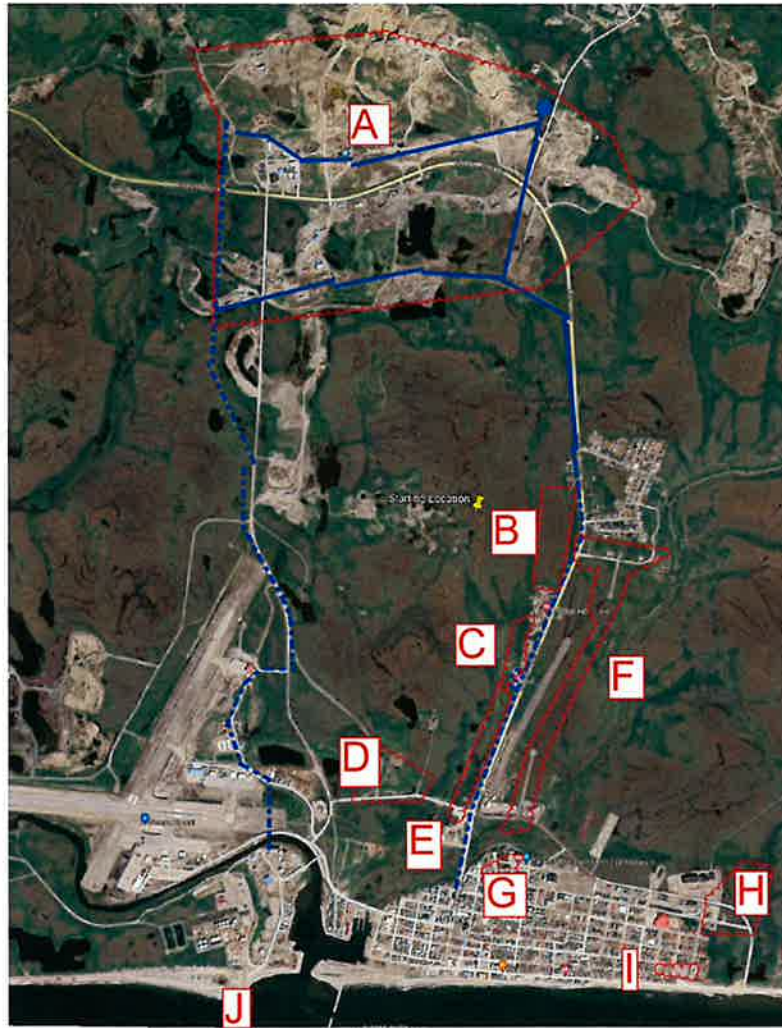


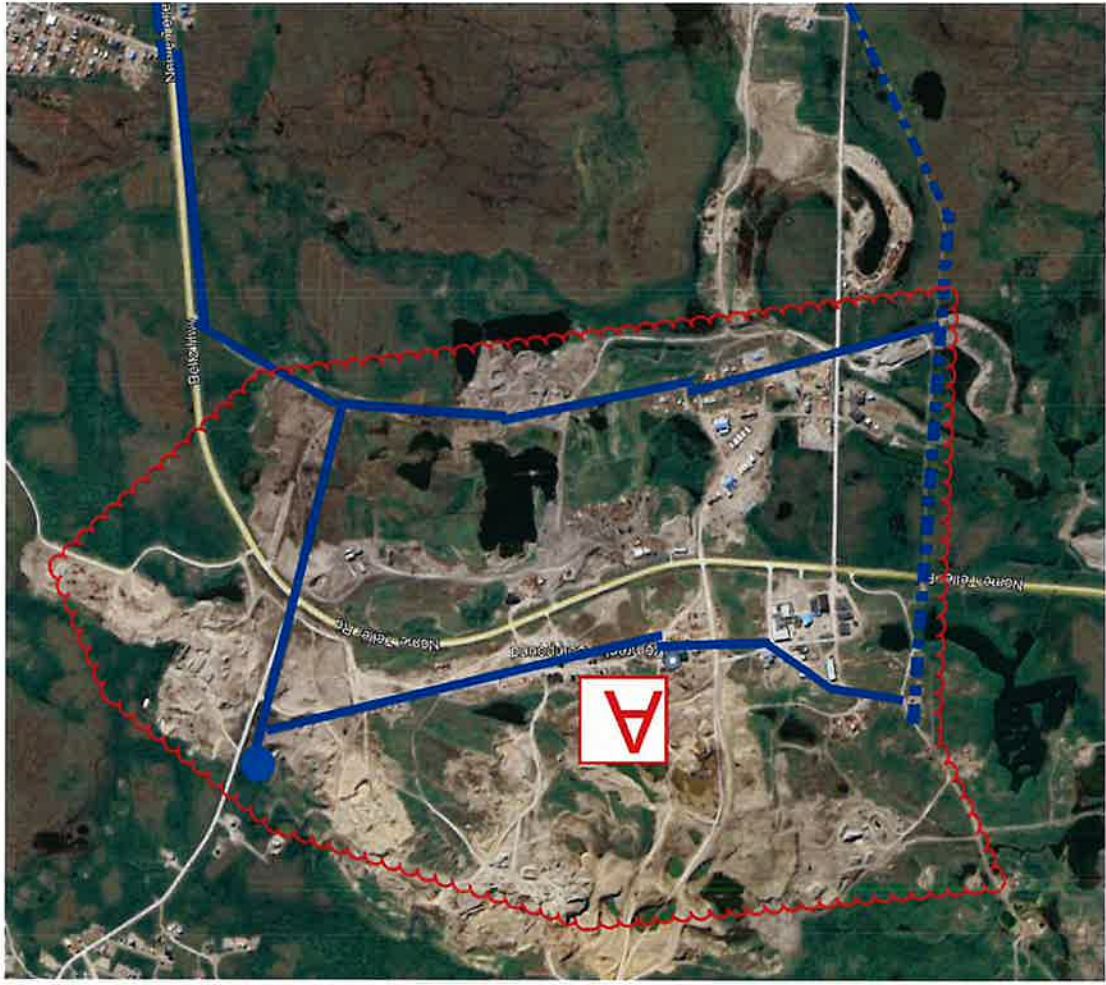
Senator Murkowski



KINC

Overview: Potential System Growth Areas





Potential Growth: Satellite Field, Lester Bench, Camp 5

Potential Growth: Icy View to GKA





Potential Growth: "Downtown Nome"



PORT OF NOME



ALASKA'S ARCTIC DEEP DRAFT PORT AT NOME



