Mayor John Handeland

Manager William Glenn Steckman

Clerk Bryant Hammond



Nome Common Council
Jerald Brown
Mark Johnson
Doug Johnson
Adam Martinson
Jennifer Reader
Meghan Sigvanna Topkok

102 Division St. • P.O. Box 281 Nome, Alaska 99762 (907) 443-6663 Fax (907) 443-5349

## **MEMORANDUM**

Date: December 10, 2020

To: Nome Common Council & Glenn Steckman, City Manager

From: Nickie Crowe, Acting Finance Director

Subject: Request to Use NSEDC CBS COVID 9 for NJUS Streetlight Safety

**Enhancements** 

On April 27, 2020, the City Council passed R-20-04-03, which designated the FY2020 NSEDC Community Benefit Share Special Distribution of \$100,000.00 to support local measures related to COVID-19.

Finance submitted the NJUS Streetlight Safety Enhancements Project to NSEDC for an approved use of the COVID 19 distribution of funds. NSEDC granted approval and further noted that this project fits into the budget passed by the City Council via Resolution R-20-04-3.

This memo requests the approval of \$100,000.00 to Nome Joint Utility System for Streetlight Safety Enhancements.



## **City of Nome**

PO BOX 281 Nome, AK 99762

Telephone: (907) 443-6663 Fax: (907) 443-5349

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								Contact Person: John Handeland
				Administration	Bill To:	City of Nome - Accounts Payable 102 Division Street P.O. Box 281 Nome, AK 99762		
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All deliveries must be F.O.B destination unless otherwise specified above.					Approved By (Department Head):		Date:	
2. Order is to be in accordance with prices, delivery and specifications above.					Authorized Signature			

Purchase Order P.O. Number 22151

(City Manager):

Date:

(Purchase Order Number must be listed on all invoices, correspondences, shipping papers and packages. <u>Invoices</u>

5. Packing list must accompany all merchancise delivered on this order.

4. The City of Nome reserves the right to cancel this order if goods are not shipped as directed.

3. Notify us immediately if you are unable to ship as specified.

a component unit of CITY OF NOME

P.O. Box 70 • Nome, Alaska 99762 • (907) 443-NJUS • Fax (907) 443-6336

October 25, 2020

To: City Manager

From: Utility Manager

Re: Streetlight Safety Enhancements - CARES Funding Suggestion/Request

NJUS is suggesting the City of Nome allocate \$98,400 in CARES Funding to the Utility to allow for the immediate replacement of 215 street lights (60%) that are underperforming. Rationale, history and justification follow. Should the City Administration and City Council determine sufficient funding is available to replace 100% of the fixtures (360 lights), the total funding required is \$163,400.

In a region where there are significant hours of darkness (at the most extreme, nearly 20 of 24 hours of the day) during the most severe time of the year, providing adequate artificial light is a significant health and safety consideration for the people of our community.

- The current situation relating to Covid-19 is altering work schedules, affecting enrollment in school (where parents are opting for home school and kids are doing recess in the streets), and resulting large group congregation of our homeless population.
- A large portion of our population does not own or operate vehicles, relying on their feet or a taxicab to get to school, to work and to other services and necessities. (Due to Covid-19 concerns, we lost one taxi company.)
- Annual snowfall shrinks the widths of streets, and without sidewalks, inadequate light
  endangers pedestrians who end up walking in traffic lanes. Winter is renowned for
  windy conditions, resulting in blowing snow that further impact lines of sight of drivers
  and those walking alike.
- Seasonal Affective Disorder (SAD) is most common during late fall or early winter and for most sufferers, it goes away when light returns during spring or summer. This type of of depression can affect mood, sleep, appetite, and energy levels, taking a toll on all aspects of one's life from relationships and social life to work, school, and a personal sense of self-worth. Light is a therapy for treatment, in addition to medications and psychotherapy. (We don't expect folks to treat themselves by standing under streetlights, but it does reduce the amount of darkness to which a sufferer is exposed.)
- The entire population would be well served by immediate streetlight safety enhancements.

The City and NJUS have long partnered on insuring there is safety lighting present on streets within the community. There are approximately 360 streetlights. Of these, the energy cost for 265 is paid for by the City and 95 along state roads are paid for by DOT. The lights on the

NJUS is an equal opportunity provider and employer

Providing reliable utility services to system rate payers efficiently and economically by prudently operating and maintaining system assets in a fiscally responsible manner

RE: Streetlight Safety Enhancements October 25, 2020 Page 2.

City's account are eligible and receive power cost equalization (PCE), whereas the State is not PCE-eligible. NJUS has been responsible for maintaining the lights.

In 2011, NJUS changed out the majority (270) of high pressure sodium (HPS) street light fixtures (emitting a "yellow" light) within Nome to the more energy efficient light emitting diode (LED) fixtures (that have a "white" light). The LEDs do have a more concentrated down-beam, so light does not dissipate as far, but the operational cost is one-third of that of a HPS. Because of the changed light pattern, there have been supplemental fixtures added in some locations, in high traffic areas and around school bus stops, to improve light cast.

The initial cost reduction effort to switch out fixtures was possible using NSEDC community benefit share funds (100K), a City general fund contribution (\$45K), and NJUS funds (\$20K). The labor and equipment utilization involved was covered by NJUS in its normal annual line maintenance program. In the ensuing nine-year period, NJUS has expended \$6-10K annually in labor for maintenance, and also has systematically procured additional or replacement fixtures totaling \$95K.

LED output diminishes with time. If the fixtures do not fail first (generally due to faulty drivers/LED components), they are ready for replacement when their light output drops to 30% of initial brightness. As the greater hours of darkness crept up on us this fall, NJUS staff used a light meter to confirm that lumen depreciation has become an issue with older LED street lights. We have now used our reserve inventory to replace some, but there remain 200+ that are not longer producing optimal light based on the energy being consumed.

LED technology has also evolved with time. It is visually noticeable the additional light produced by fixtures procured more recently vs. earlier generation models. Besides increased light output, the cost has also dropped with technological improvements.

Of the 360 lights being operated, NJUS estimates at least 60% (215 lights) currently underperforming and require replacement (cost \$98,400). As the original generation we purchased offered a 10-year warranty (and were estimated to have the same operational life), 60% have performed close to expectations. The remaining 40% will continue to degrade and eminently fail. NJUS could embark on changing them out this winter as well, which would add \$65K to the project. If not included, as noted they will further lose effectiveness; hopefully they can then be phased in over 2-3 years, but very likely not longer.