

ANTHC Diomedede Water and Sewer ePER Trip Report

February 14-16, 2023

Agnew::Beck Consulting | Role: Community Engagement Lead

Visiting Project Team

The visiting Project Team included:

- Agnew::Beck staff: Shelly Wade, Curtis Fincher
- DOWL staff: Cara Shonsey, Maya Wharton
- ANTHC staff: Chris Cronick, Derek Hancey
- NSH Corporation staff: Shyler Johnson



Tuesday: February 14, 2023

The project team landed in Diomedede about 2:30 pm and were greeted at the helipad by the Mayor

and a few other residents. We were shown to our lodging in the school gym and an adjacent woodshop. It took several trips to carry the group's luggage and boxed water into the school.

Shelly and Cara left to purchase door prizes within the community (tokens to the washeteria and coupons for fuel oil), while Maya and Curtis began to set up for that night's community meeting. The team had brought approximately 70 sandwiches from the Subway in Nome, fresh vegetables and fruit, and door prizes, such as wool socks and hats.

Shelly and Cara returned and helped finish setting up for the meeting and tailoring the layout to their presentation needs shortly before the first attendees began to arrive at 6:00 pm. Upon entering the gym, attendees came to a table with an attendance sheet, a sign-up for the raffle to be held later that night, a stapled packet with an overview of the project (that included a brief description of each alternative), and agendas for the evening.

Two other nearby tables had signup sheets for home visits and a 24" x 36" satellite image of Diomedede with every house numbered. These tables were manned by Curtis and Maya. Approximately 15 individuals signed up for scheduled home visits by pointing to their homes on the map. Others helped identify which houses in the community were abandoned (12 in total).

Beyond these two tables, an 8'x5' square was taped out on the floor next to a sign that read "Approximate Bathroom Size (Alternative 2): would this fit inside your home?". Visitors were

The Project Team arrives in Diomedede. Photo: Agnew::Beck Consulting.

encouraged to step inside the taped rectangle and visualize whether this rectangle would fit inside their homes. A few individuals noted wryly that it would take up half of their house.

Shelly invited the mayor to bless the food, which he did. Shelly suggested the meal begin with elders in the community, who the mayor invited up to get food. Once the elders had their food, remaining attendees visited the food tables and then sat with their food in a large horseshoe shape facing Shelly and Cara and three posters. These posters were 24" x 36", but some older attendees had trouble seeing them. It was also difficult for some older visitors to hear Shelly and Cara without amplification. (In a team debrief, it was agreed that for future community meetings, posters should be at least 36" x 48", larger sizes of the stapled packets of information should be available for elders (11X17), and the project team should bring a small portable PA system.) The three posters showed:

1. a diagram of where water/sewer utility lines would potentially run through Diomedede for Alternative 2,
2. a diagram of where water/sewer utility lines would potentially run through Diomedede and the satellite stations for Alternative 3, and
3. an inverted pyramid schematic demonstrating level of wastewater service from honey buckets (level 1) to fully piped sewer (level 5). (The team plans to simplify this graphic for future use.)

Shelly kicked off the presentation by thanking the community for hosting the visiting project team and describing in plain and easily understood language that the project team was there to listen to the hopes and concerns Diomedede residents have about the water and wastewater alternatives, as well as ask whether the community has any initial preferences among the four alternatives to be included in the Preliminary Engineering Report (PER). She then listed each of these alternatives and described them in lay terms.

The community was so engaged in the topic and there were so many questions, that it proved difficult to get through the presentation in the manner/order of topics that Shelly and Cara had discussed beforehand. Shelly and Cara responded flexibly and allowed the community to determine the flow of the meeting in an organic way. Meeting attendees preferred to dialogue about the options rather than be presented to. As the questions grew more technical, Shelly handed off the meeting to Cara.

Answering these questions in a large-group format constituted the majority of the 1.5-hour information session. The community was thorough and incisive in the questions they asked; there were little to no



Map of numbered Diomedede homes. Photo: Agnew::Beck Consulting.

off-topic or irrelevant questions. While it was difficult to extract a single message or theme from the many questions asked, a few topics were recurring. These were:

- Obvious hopefulness about the project, particularly Alternative 2 (the fully piped option).
- Skepticism about the project to the effect of, “We’ve been promised/heard this before,” and “I’ll believe it when I see it”.
- Questions about whether expanding homes to accommodate the bathroom would be a legal/permissible use of funds.
- Questions about the prerequisites of homes (built to code, etc.) to qualify for funding.
- Questions about operations and maintenance (O&M) costs of approximately \$240 per month for Alternative 2. It was clarified that this was the total projected cost, not in addition to the anticipated \$125 per month cost for water once the water treatment plant upgrades have been completed.
- Significant concerns and skepticism about the source of water for a fully piped system. The widespread belief in the room appeared to be that there was not enough water on the island to support unregulated access to running water in the home.
 - Residents asked about reverse osmosis of seawater as a potential solution. Cara explained that this was not a feasible solution. (Upon further discussion with ANTHC after the community meeting, reverse osmosis was later described as a feasible solution in the tri-organization meeting held the next day).
- Questions about where the pipes would go and how to prevent them from obstructing walkways around the village.

Cara fielded these questions clearly and directly; she also reinforced the estimated monthly cost to the resident associated with each alternative. Shelly occasionally chimed in to clarify a specific engineering point or term that was not obvious to the audience or to keep the flow of the meeting progressing. Derek Hancey of ANTHC fielded a few specific questions about what constituted permissible uses of ANTHC funds for a First-Service project. Overall, there did not appear to be a firm grasp of Alternative 3 (satellite systems) by the residents. Cara referenced the example of a community that used a four-



Diomedede Community Meeting. Photo: Agnew::Beck Consulting.

wheeler as a vacuum truck, then qualified that by saying “I know that wouldn’t work here.” More specifics from DOWL and/or ANTHC about how Alternative 3 would work in Diomedes are important for any subsequent community outreach. After the visit, Cara suggested bringing a detachable hose and box to concretely demonstrate how the system would function; Agnew::Beck staff agrees that this would be a highly effective way to communicate the design of this alternative.

Eventually the question-and-answer portion of the meeting was terminated in favor of answering questions one-on-one after the meeting. The questions did not appear to be slowing down (particularly from a few individuals) while many others in the crowd (including children) were growing somewhat restless, and it was beginning to difficult to hear as people milled about.

Shelly segued to raffling off door-prizes, which included warm socks, hats, balaclavas, gloves, fuel coupons, and washeteria tokens. Shelly and Cara encouraged visitors to sign up for home visits before leaving and said the visiting team members would be available to answer any outstanding questions. The meeting was concluded, and Shelly, Cara and Derek continued to answer questions for the next 15-20 minutes. Maya and Curtis signed up a few more residents for home visits. Residents exited from the gym at approximately 9:30 pm.

The meeting was attended by 22 adults or approximately one-third of Diomedes’s total population of about 80 people. Community leaders and school staff that observed the meeting commented that the meeting was well attended.

The project team gathered to eat dinner, line out the plan for the following day and consolidate notes from the evening. It was mentioned that one resident told a project team member that 70 percent of the community was on welfare and would not be able to pay \$240 per month in utility bills. Several residents had spoken to individual project team members stating that the proposed new water tank location pictured in that evening’s diagrams were not optimal. Several residents had also expressed concern about the ability of any hard-piped sewer infrastructure to withstand the movement of the hillside on which Diomedes sits.



Diomedes. Photo: Agnew::Beck Consulting.

It became clear during this debrief that several additional projects are coming to Diomedes in the next 3-5 years in addition to the water and sewer service project: upgrading and renovating the water treatment plant, increasing the elevation the helipad by four feet, creating a sea wall to establish/improve a harbor, upgrade/replacement of the bulk fuel tanks, repairing the glycol line along

the below ground portion of the water transmission line and repairing the pipe and gabion wall along the above ground portion of the transmission line, upgrading the washeteria, improving the boardwalks to allow for water and sewer pipes beneath them, the installation of separating toilets in community member's homes, and 12-15 new/remodeled houses. Continued agency and contractor coordination among these different projects will be critical to avoid problems, such as:

- Plumbing fixtures installed in the remodeled/newly built homes could lead to disappointment if the ePER process does not land on Alternative 2 or Alternative 3.
- The water treatment plant's new tank is sized for current consumption, not for providing piped water to houses, which would increase water consumption.

When asked, Frances Ozenna (Tribal Administrator) said that she and Ahna Ozenna (City Administrator) are coordinating among these projects.

This meeting was concluded at 10:00 pm.

Wednesday: February 15, 2023

Curtis left the gym at 8:30 am to post signs around town advertising project information and home visits. The full team met with Frances Ozenna (Tribal Administrator) from 9:00 am – 12 noon in the school gym to discuss the project and the City's revenue streams, expenses, various operations, upcoming projects, and ability to pay for the O&M costs and necessary staff positions associated with the project. The number of unfilled job postings (12) seen around town was noted as disconcerting during this meeting. The mayor stopped in for part of this meeting and (although he described Diomedes as hard-working at the community engagement meeting the night before) commented that Covid relief funding has damaged everyone's work ethic in Diomedes. He also explained that the Tribe currently assists families with paying for utilities as needed. It was unclear what process was used to determine eligibility for this subsidy.

Frances reported that Kawerak and/or NSEDC would pay for two years of utility bills for the proposed upgrades to the water treatment plant to allow the community a buffer while adjusting to the new system. It was unclear to Agnew::Beck if Frances sharing of this information influenced residents' willingness to provisionally agree to ~\$240/month for piped water/sewer, in that they might not have actually believed they would actually have to pay for it themselves. Relatedly, Frances had cautioned the project team to be "careful" during the community meeting to not talk about costs too much. There are unresolved questions here regarding the community's ability to pay this amount vs. their attested willingness to pay which Agnew::Beck recommends be explored during a future site visit. A survey question such as "would you be willing to pay \$240/mo for piped water/sewer *if you received no subsidies/economic assistance*" might have resulted in different answers than "would you be willing to pay \$240/mo for piped/sewer" (which is what the project team actually asked, and received mostly "yes" responses to).

Other important details mentioned or discussed during this meeting included:

- NSHC does not pay the City for the clinic's water use. There is a water line that runs up to the clinic from the Water Treatment plant.

- The school is currently the only paying utility recipient for water at \$2,400 per month.
- The City has a haul system in place for honey bucket waste. NSEDC pays \$60,000 per year to fund a staff position to carry the waste onto the ice and dump it. Frances said it would be a mess if everybody was dumping their own waste.

As the meeting with Frances was ending, Cara received word via satellite nReach that 60 knot winds were anticipated for Friday, and the team would have to be pulled from Diomede on Thursday (the following day). The team divided into three teams of two to conduct home visits more quickly given the new timeline. The project team discussed an example of a questionnaire that Chris Cronick had brought and agreed to modify them to include only the eight highest-priority questions for time and relevance.



Visiting Diomede homes. Photo: Agnew::Beck Consulting.

The various teams left the school and began their home visits. Those homes that had previously agreed to and scheduled home visits were visited first. This group was quickly exhausted. At 2:00 pm, all two-person teams but Maya and Curtis left to attend the leadership meeting at the IRA building. Maya and Curtis continued to survey homes, knocking on doors and cold-querying individuals in the general store and around town. A handful of individuals declined the visits, but for the

most part, people were willing to allow the project team to conduct the home visits. As the leadership meeting ended at 5:00 pm, the full team rejoined the home visits. By 7:00pm that night, every house in Diomede had been either visited or queried.

The team knocked on the doors of all occupied homes. The team visited a total of 19 houses (estimated to house approximately 55 people) in which a resident allowed the team into the home and discussed water and sewer service. All individuals who agreed to home visits also consented to having pictures of the inside and outside of their homes taken. Twenty residents declined a home interview or were not home. Prior to the survey, 12 houses were identified as having no occupants. The project team estimated there to be a total of approximately 50 structures designated as residences (occupied or unoccupied). While the surveys and associated notes capture a more detailed picture of these interactions, a few recurring themes stand out:

- Almost everyone agreed that piped water/sewer would make their life easier.
- A handful of individuals are content with how they currently handle water/wastewater and are not interested in any improvements. They suggested that they would opt out of any

improvements if such improvements do occur but are unopposed to those improvements happening because other people would like them.

- Almost everyone thinks the existing city water is of very poor quality. Several referred to it as “poison.” Many who are able carry and melt snow rather than hauling water from the washeteria due to this belief.
- Concern about the plastic in the ocean affecting sea life from the current honey bucket waste dumping.
- There was a wide range of hauled water usage per home, from 5 gallons to 50 gallons per week.
- Most people suggested they would find space for a 5’x8’ bathroom if they were provided piped water and sewer; this size bathroom appeared as though it would fit in the same space where honey buckets were already located in most homes (entryway/mudroom of the house).
- Many mentioned that their homes are tilting downhill, that the hillside is eroding, and questioned how this would affect the longevity of sewer pipes.
- Many were skeptical about their neighbors’ ability to afford \$240 per month in utility fees but said they themselves could afford it. A few individuals said they could not afford it and would therefore not opt in.
- Many brought up the scarcity of water on the island.
- Most were skeptical yet hopeful about the project coming to fruition.

From 2:00 – 5:00 pm, the project team (except for Maya and Curtis) attended the leadership meeting held at the IRA building. Residents present at this meeting were: Ann Soolook, JoAnn Kaningok, Edwin Kiminock, Ernest Iyapana, Frances Ozenna, Robert Larsen, Edward Soolook, Robert F. Soolook Jr., Steven Ahkinga, Samantha Ozenna, Carla Ahkinga, and Ahna Ozenna. Representation from the Tribe, City and Village council were present at the meeting. Ahna Ozenna recorded the official meeting minutes¹.

After some discussion, the leaders asked the project team to leave the room so they could discuss the options among themselves. When the project team returned, the leadership announced that they had voted to proceed with further investigation of Alternative 2 (piped water and sewer), as this alternative best aligns with the community’s needs and values. It was communicated by Cara at this point that all options are still on the table and will be investigated through the ePER process. That said, leadership made it clear that their preference was for Alternative 2 and that the preliminary estimate cost of \$240 per month per residence was not a hurdle that the community could not overcome.

The council was not in favor of Alternative 3 (satellite system) due to concerns of too much O&M and the potential for sewer spills/contamination. This reluctance could be due in part to unclear communication about what exactly this alternative would look like. Agnew::Beck strongly recommends clarifications and improvements to the illustrative images and schematics explaining this alternative.

¹ A copy of the leadership meeting minutes was not available at the time of this report because Diomedes phone and internet service were not working and the information could not be sent. A copy of the minutes will be requested and can be provided at a later date if deemed necessary.

The council was not in favor of Alternative 4 (PASS) because this is believed to be a marginal improvement from the existing system, and the biggest complaint from residents is hauling water and waste up and down the hill, which PASS would not solve.

Samantha Ozenna, the Tribal Chief, was concerned about when the project team would be coming back. She communicated that other teams have come to Diomedes in the past, completed planning exercises, and did not follow up with the community, nor adequately inform the community about what the next steps were or the reason for those plans never being implemented. Sam made it clear that she hopes this project goes through to construction and that the project team would return to Diomedes to



Diomedes Water Treatment Plant. Photo: Agnew::Beck Consulting.

communicate progress and plans summer 2023.² Cara and Shelly confirmed to Sam that they would be returning at some point when the project had progressed further. Agnew::Beck recommends that the next opportunity to return to Diomedes include sharing the results of home visit surveys with community leadership. This is important information that, given the compressed schedule the team was operating on, the project team did not have time to compile and share with leadership while there.

Much of the conversation at the leadership meeting focused on the current water treatment plant. Reverse osmosis to supplement the island's limited water sources was discussed in depth; Edward Soolook (the power plant operator) offered many of his thoughts on the subject, including the location of an additional water tank located south of the community.

When the leadership meeting was finished, the project team reconvened with Maya and Curtis and helped finish all outstanding home visits and surveys. At 7:30 pm, after finishing the home visits and eating a quick dinner, the project team held another meeting to

discuss the plan for tomorrow and what they had learned during the day. By this point, a full picture of the project seemed to have coalesced and significant new pieces of information (other planned related projects, lack of maintenance on related assets, community finances, etc.) were no longer emerging.

Thursday: February 16, 2023

Frances came by the school at 9:00 am with cookies, ready for another meeting. During this meeting, she spoke of Diomedes, its history and future more broadly, with less focus on this specific project. She noted that the Tribe is moving forward with washeteria improvements; neither ANTHC funding nor

² Robert Larsen, Water Plant Operator, communicated a similar sentiment to the project team the following day, asking the team if they would be coming back and when that might be.

assistance are requested for the project. Frances expressed a desire for self-sufficiency and that the community should be doing what is within its abilities, which includes the washeteria project. She said that only two-thirds of the community uses the washeteria. She also noted that treated water cannot be used for fermenting walrus intestine, referencing a continued need for snow and water hauling.

At a resident's request, a last-minute home visit was conducted by Shelly and Curtis for a house that was uninhabited and had therefore been skipped the previous day. A polar bear was spotted on the ice in front of town, and two men from town went out to hunt it (it got away), which provided some brief excitement for both the project team and the villagers. The project team's extra food was given away to a resident who, during home visits, had appeared to be in need. The team was picked up at the helipad a little after 12:00 pm and safely delivered to Nome by 2:00 pm.



Polar bear. Photo: Agnew::Beck Consulting.