West Anchorage Snow Disposal

DRAFT Site Selection Study

August 2020

Executive Summary

The Municipality of Anchorage (MOA) Project Management and Engineering (PM&E) Department have identified the need for a long-term, reliable solution to snow disposal for West Anchorage. This site selection study summarizes the process to identify a new snow disposal site, public involvement, site options, site screening criteria, and the reasoning behind the proposed site selection.

The snow disposal site that currently serves West Anchorage is located on land owned by the State of Alaska and managed by the Ted Stevens Anchorage International Airport. Snow storage needs often surpass site storage capabilities. Options to increase the existing site are not available. In addition, site improvements are necessary to meet current water quality standards. In order to make these improvements, MOA and PM&E need a long-term lease for the site. Due to future plans for the site, however, a long-term lease or purchase option is not available.

Based on research of existing MOA snow disposal sites, published regulatory legislation, guidance documents, and conversations with managers and operators at the Maintenance and Operations and PM&E departments, three initial criteria were set for selection of a new snow disposal site. Based on these criteria, the site must be:

- A minimum of 10 acres of unused land, and ideally at least 15 acres;
- Located within the West Anchorage Snow Disposal Service Area; and
- Located on undeveloped, vacant land.

Nineteen sites within the West Anchorage Snow Disposal Area were found to meet these three basic criteria. Once these sites were identified, the following criteria were used to narrow the possible sites to those feasible for snow disposal:

- Located to allow 24-hour-per day, 7 days a week hauling;
- Zoned in an area that will allow snow disposal;
- Provides site access along larger collector or arterial roads; and
- Available for long-term lease, purchase, or otherwise available for permanent use.

In addition to the initial site selection criteria, the following additional factors were considered in the final site selection evaluation:

- Receiving water capacity for snow melt runoff
- Impacts on neighborhoods and surrounding residential areas
- Impacts on wetlands
- Impacts on park lands
- Permitting requirements

After the secondary site evaluation, two primary sites were identified for further examination: Site 5 (Connor's Bog Site), and Site 9 (Strawberry Bog Site).

MOA conducted robust public outreach to engage, inform, and gather comments from the public about the Connor's Bog and Strawberry Bog sites as well as the site selection process. Comments from the public centered on adhering to zoning to minimize impacts to residential areas, as well as the visual and hydrological impacts of snow disposal.

After analysis of all factors, Site 5: Connor's Bog Site was determined to most closely meet the snow disposal site criteria for the future West Anchorage Snow Disposal location. Analysis findings included:

- The Connor's Bog Site would have minimal impacts on residents and neighbors, which allows for 24-hour, 7 days a week operation. This criteria is the most important aspect required for an effective snow disposal site in West Anchorage.
- Estimated additional cost of day-restricted operations is $240,000 per year over the cost of unrestricted operations.
- Both sites met many of the criteria for selection: adequately sized, available for use, and adequate receiving water for snow melt runoff.
- Both sites would be located within Class A wetlands, so an extensive permitting effort is expected, and compensatory mitigation would be required for both sites.
- In contrast, the Strawberry Bog Site would be located near an existing and growing residential area. In addition, truck routes to the Strawberry Bog Site may have to be through a residential area. The proximity to neighborhoods and access routes could require some operational restrictions on the Strawberry Bog Site, which would make it less desirable for snow disposal use.

In conclusion, after detailed site analysis and public feedback, a new site at Connor's Bog has been preliminarily identified as the most ideal new snow disposal site.

The Conner's Bog site features minimal impacts to residential areas, operational advantages, suitability for storing snow and handling melt water, and fitness based on other factors. The site will be subject to stringent permitting process and standards.

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Acronyms and Abbreviations

AMC	Anchorage Municipal Code
AWWU	Anchorage Water and Wastewater Utility
CWA	Clean Water Act
DOT&PF	Alaska Department of Transportation and Public Facilities
M&O	Maintenance and Operations
MOA	Municipality of Anchorage
PLI	public lands and institutional (zoning)
PM&E	Project Management and Engineering
TR	transition (zoning)
TSAIA	Ted Stevens Anchorage International Airport

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1. Introduction

The Municipality of Anchorage (MOA) Maintenance and Operations (M&O) Department maintains a majority of the streets throughout the Anchorage Bowl. A major maintenance activity is the removal and disposal of snow from these streets. Snow removed from streets is deposited in one of eight snow disposal sites. The Project Management and Engineering (PM&E) Department (PM&E) has identified a need to replace the Northwood Snow Disposal Site (Northwood Site) that currently serves the West Anchorage snow service area. PM&E is administering the West Anchorage Snow Disposal Project and has contracted HDR to perform a site selection study to identify potential sites that meet M&O's needs for snow disposal.

The Northwood Site is located on State of Alaska-owned land controlled by Ted Stevens Anchorage International Airport (TSAIA) adjacent to the M&O Kloep Station maintenance facility south of International Airport Road on Northwood Drive. The Northwood Site serves most of the western portion of the Anchorage Bowl. Figure 1 shows the boundaries of the West Anchorage Snow Service Area (Service Area) as provided by M&O. M&O is responsible for snow collection on most neighborhood and collector streets within the area shown in red in Figure 1. Larger arterial roads such as Dimond Boulevard, Minnesota Drive, Jewel Lake Road, and International Airport Road are maintained by the State of Alaska Department of Transportation and Public Facilities (DOT&PF). In some years when there is a significant snowfall, Anchorage School District schools may also use the Northwood location for depositing snow.

The MOA currently rents the Northwood Site from TSAIA on a year-to-year basis. Because of increasingly stringent water quality regulations, PM&E has identified a number of improvements to the Northwood Site that are necessary for the long-term operation of the site. In order to make these improvements, the MOA must purchase or negotiate a long-term lease for the property. Unfortunately, the lands containing the Northwood Site have been identified as part of the long-term needs of TSAIA, which precludes the permanent use of the site by the MOA. In the past, the MOA and TSAIA have attempted to negotiate a land swap to allow for permanent use by the Municipality for snow disposal. However, no agreement that was mutually beneficial for both entities has been reached as of June 2020. MOA PM&E and M&O began the process to identify the best alternative location for snow disposal in West Anchorage. This study is the summary of that process.

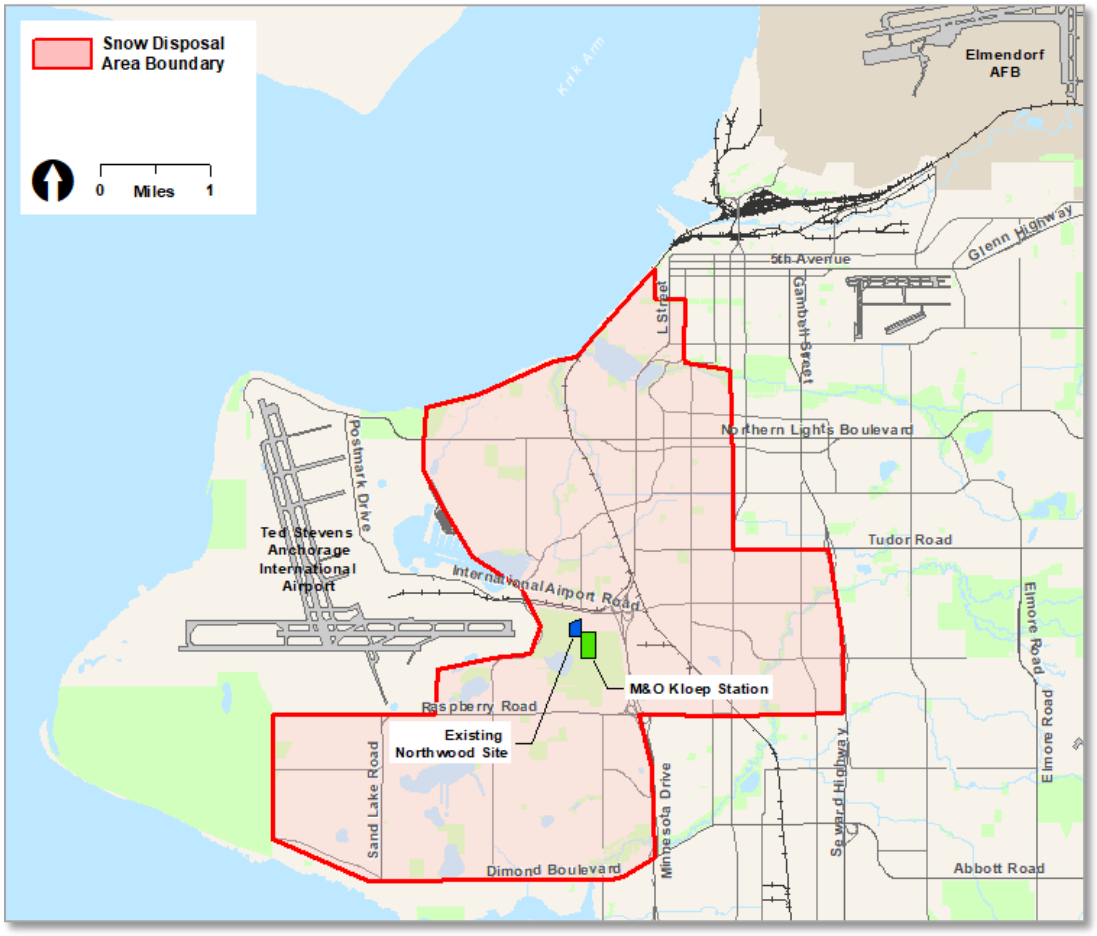


Figure 1. West Side Snow Disposal Service Area

2. Background

To guide the site selection, background information was gathered on the status of snow disposal sites in Anchorage, recent snow hauling data from all snow disposal sites, detailed haul data from the Northwood Site, snowfall records, regulatory and guidance documents, and interviews with M&O and PM&E staff. This information was used to determine the priority site characteristics for a snow disposal site and develop criteria for the conceptual replacement design.

2.1 Snow Haul to the Existing Northwood Snow Disposal Site

The existing Northwood Site contains 9–12.5 usable acres depending on TSAIA's needs for the site and the annual lease agreement. The West Anchorage service area is a 14.4 square miles (Figure 1). The Northwood Site currently accepts approximately 20 percent of all the snow gathered from MOA-maintained streets in the Anchorage Bowl. Conversations with M&O staff have indicated that the 12.5 acres at the current site is insufficient for the current snow disposal collection area, and 9 acres is inadequate even in low snow years. During the 2019–2020 snowfall season, with a 9-acre lease and 115 percent of normal snow fall, M&O was forced to truck West Anchorage snow to other sites. This resulted in additional trucking costs, snow hauling delays, and additional snow left on the sides streets and in the middle of cul-de-sacs.

In an average snow year, approximately 10,500 truckloads of snow are brought to the Northwood Site. At the extreme, (2011–2012 had 175 percent of the average snowfall), approximately 18,500 truckloads went to the Northwood Site. The resultant snow pile was 40 feet high, 10 feet higher than the design height limitation dictated by water quality parameters. The result is shown in Figure 2. See Appendix A for snowfall records from 2004 to 2020 and the calculations for snow truckloads delivered to the Northwood Site.

Figure 2. Northwood Site in 2011–2012

2.2 Neighboring Snow Disposal Sites

The Northwood Site service area is bounded on the south and east by five other snow service areas, shown in Figure 3: Commercial Drive, Sitka Street, Tudor Road, Spruce Street, and C Street Site. All of these adjacent sites are already at or near capacity. This means that a loss or reduction in snow disposal capacity in West Anchorage cannot be adsorbed by any of the adjacent sites. A replacement site for West Anchorage would need to have capacity similar to or greater than the Northwood Site in order to effectively meet West Anchorage's snow disposal needs.

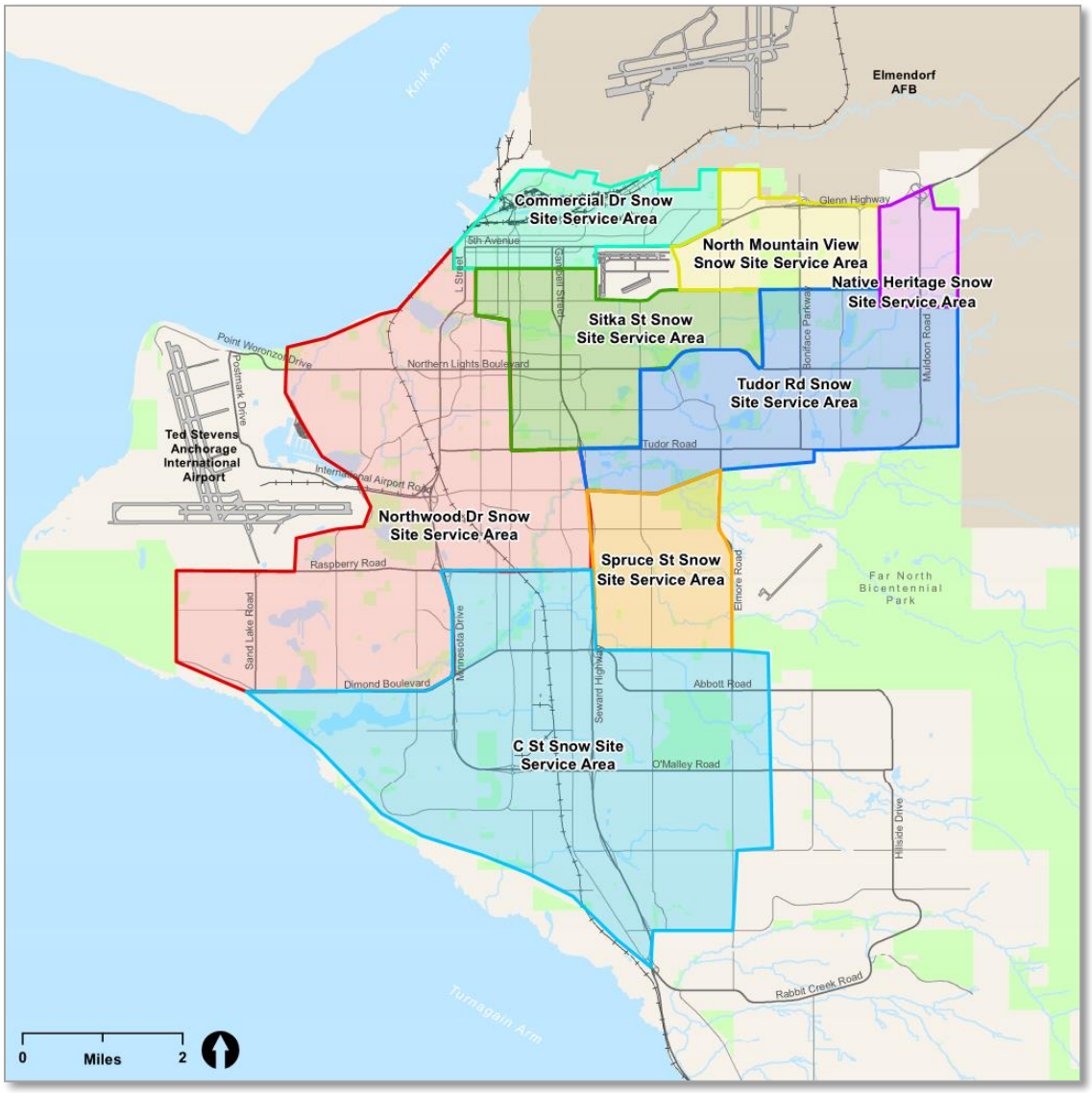


Figure 3. Anchorage Snow Disposal Service Areas

2.3 Site Design and Selection Guidance Documents

Anchorage Municipal Code (AMC) Title 21, Land Use Planning, sets criteria for public facility site selection in general and for snow disposal sites in specific. Section 21.03.140 governs public facility site selection, and snow disposal sites are identified as public facilities in Section 21.03.140B.1.f. Snow disposal site standards are found in Section 21.05.060E.8. New snow disposal sites must conform to these regulations or seek waivers.

In addition to Title 21, snow disposal requirements are governed by the *2017 Anchorage Stormwater Manual* published by the Watershed Management Services. Additional documentation for management of snow disposal can be found in the *Anchorage Street Deicer and Snow Disposal: 2003 Best Management Practices Guidance*, the *2013 Evaluation of Anchorage Snow Disposal Sites*, the *Anchorage Storm Water Treatment in Wetlands: 2001 Progress Report*, and other related publications from the MOA, State of Alaska, and research institutions. These documents guide both the site selection process and the design of snow sites. A list of documents used for reference and guidance in the site selection, design, and conceptual layout, with brief notes on the information provided, is included in Appendix B.

2.4 Site Characteristics and Site Requirements

Important characteristics and site requirements are determined based on population growth expectations, M&O operational needs, public input, regulatory legislation, and guidance documents. The primary guiding characteristics for site selection are location, size, zoning, operational flexibility, access, and availability.

2.4.1 Site Location

Based on conversations with PM&E and M&O, and the analysis of adjacent snow disposal sites discussed above, the site should be located within the Service Area.

2.4.2 Operational Flexibility

M&O and PM&E emphasized the importance of 24/7 operations, especially in the West Anchorage Snow Disposal Service Area. Municipal sites with operational restrictions are difficult to use during periods of high snowfall, when night operations are limited because of noise impacts on adjacent neighborhoods. A lack of operational flexibility will hinder M&O's ability to move snow efficiently and is considered a major flaw of any potential new site. Night operations are preferable for hauling snow off main roads, as there is less traffic on the roads. This allows plows, rotaries, and trucks to operate with additional safety and efficiency. Night operations are more efficient for two reasons. The primary reason is the difficulty of closing off traffic to allow the use of rotary and haul equipment in the roadway. The other reason is that heavy day time traffic results in slower haul speeds and longer truck cycle times. Night operations are approximately 50 percent more efficient than daytime operations and many major streets can only be hauled at night. As part of the cost analysis that accompanied the selection process, it was estimated that a site with day only operations restriction would require the rerouting of 55-60% of haul loads to a location with

unrestricted operations. An equivalent number of loads would have to be rerouted from an adjacent snow site during day operations to balance snow storage capacity. The estimated cost of this redistribution of hauled loads is approximately $240,000 per year. This additional annual cost will have a serious impact on the Municipality's ability to clear snow and maintain transportation function.

2.4.3 Site Size

Based on the analysis of other Anchorage snow disposal sites, a full area replacement for the Northwood Site is desirable. Parcels of at least 15 acres are most desirable. Parcels smaller than 15 acres were considered, if adjacent parcels could be combined to reach a total of 15 acres. The 15-acre size leaves adequate area for access roads, berms, water quality structures, screening, and property line setbacks.

2.4.4 Site Zoning

The site must have appropriate zoning for a snow disposal site per Title 21. Many zoning districts allow snow disposal use with conditional use permitting or rezoning, and preference is given to properties where re-zoning or exemptions are not necessary. Sites zoned for industrial, commercial, and public lands and institutional (PLI) use and transition zoning (TR) are preferred over residentially zoned areas.

2.4.5 Site Access

Snow disposal generates a large volume of heavy truck traffic. Close access to collector roadways or higher classification is necessary for operation of the site. Lengthy access routes through residential or sound-sensitive areas need to be avoided for public safety and to minimize neighborhood impacts.

2.4.6 Site Availability and Acquisition

Any proposed site must be available for use by the MOA. MOA-owned properties are generally preferable over privately owned sites, as there is no direct site acquisition cost. While MOA-owned sites may also have value for alternative uses, some have lower suitability for other uses that include buildings or other facilities requiring foundations. Sites reserved for future use or with anticipated acquisition issues should be avoided.

3. Site Selection Process

The site selection process used the desired characteristics discussed above to identify possible snow disposal sites in West Anchorage. The first step in the process was to identify large vacant land parcels within the West Anchorage service area. Once an inventory was developed for initial site identification, each site was evaluated based on desired site characteristics to define the most suitable sites for further analysis. These sites were then evaluated at a deeper level, and a site recommendation was made based on the relative merits and risks of each site.

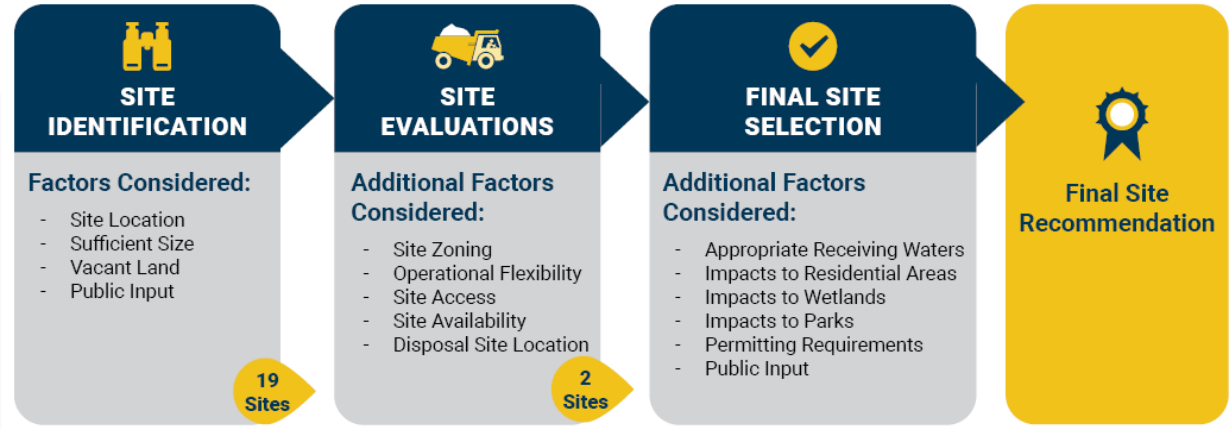


Figure 4. Site Selection Process

3.1 Public Outreach Efforts

The project team used a variety of outreach methods to engage and inform the public regarding the West Anchorage Snow Disposal Project and to obtain feedback on the site selection process. Several opportunities for the public to provide input and feedback were provided as part of the selection process. An online open house with an opportunity to chat live with the project team was held to solicit and identity potential public concerns. Postcards were mailed to residents in the West Anchorage area notifying them of the opportunity to participate in the process. The public submitted comments by phone, email, during Community Council meetings, through the online open house, and during the virtual public meeting. Comments received focused on zoning guidelines and the site's aesthetic and environmental/hydrological impacts.

The Public Outreach Summary (Appendix C) includes a description of public outreach tools, implemented outreach strategies, outreach results, and comments received. This public input was taken into consideration during the development of site selection criteria and evaluation.

3.2 Potential Site Identification

Possible snow disposal sites were selected using the MOA Geographic Information System database by comparing available, undeveloped parcels within the snow disposal collection area with the site size and location requirements discussed in Section 2.4. A first round of 19 sites met the

initial screening criteria. Figure 5 shows the locations and site numbers of these 19 initial sites. A full list of these sites is included in Appendix D.

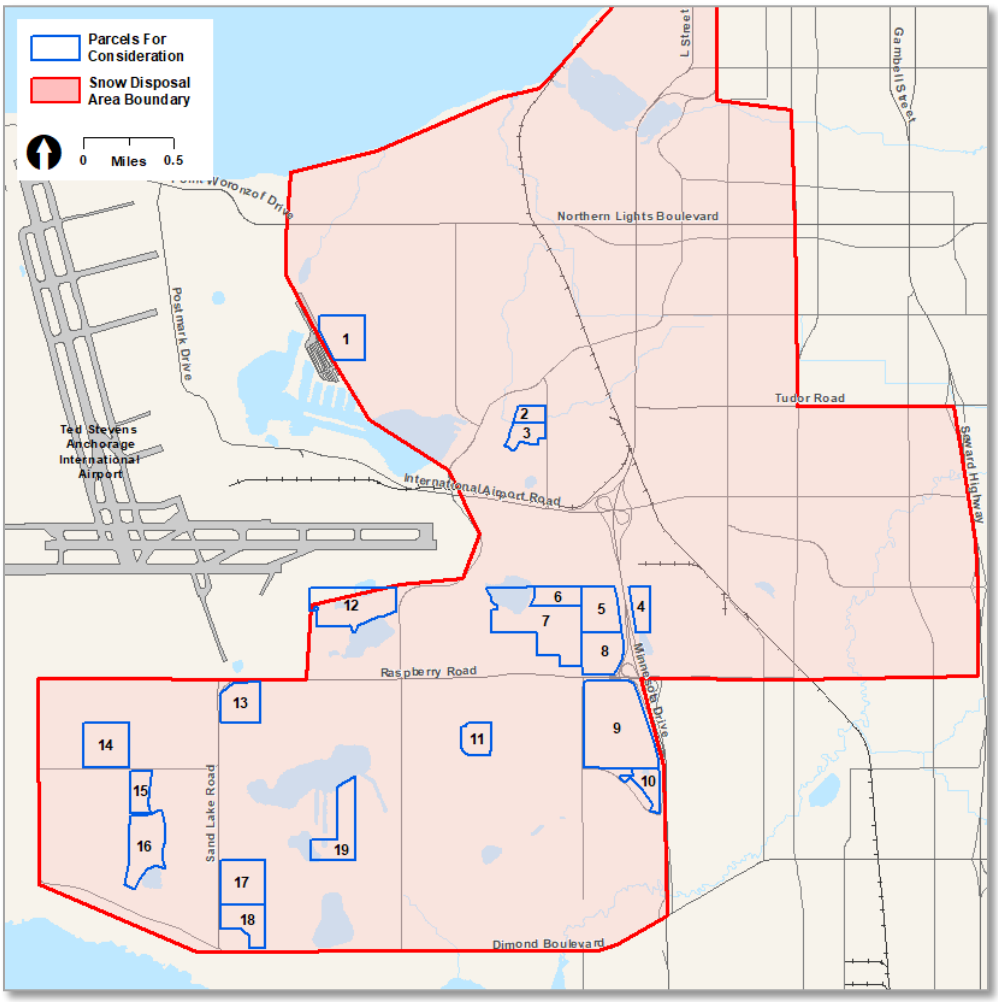


Figure 5. Initial Parcels Identified for Consideration

3.3 Initial Site Evaluation

After the initial identification, the 19 sites were further evaluated against four desired characteristics. Each site was given a rating of 1–3 for each characteristic:

- **1** = site was unacceptable for this characteristic
- **2** = site was neutral for this characteristic
- **3** = site was preferable for this characteristic

Sites with a rating of 1 for any of the four characteristics described below were eliminated from consideration.

- **Site Zoning**: Appropriate zoning for the subject lot and surrounding lots. Residentially zoned lots received a rating of 1. Sites that would likely require a conditional use permit received a rating of 2. Lots with no restrictions were given a rating of 3.
- **Operational Flexibility**: Ability to operate 24 hours a day. Sites that were certain to have operational restrictions were rated as 1. Sites that had some risk of operational restrictions being put in place were rated as 2. Sites that would likely have zero operational restrictions were rated as 3. This parameter was guided to some extent by the results of public outreach feedback.
- **Site Access**: Access to collector or arterial roads. Sites with access routes that travel extensively through residential neighborhoods received a rating of 1. Sites with some access to collector or arterial roads were rated as 2. Sites that had good access to collector or arterial roads were given a rating of 3.
- **Site Availability**: Site owned by the Municipality or suitable for purchase or lease with no stated future plans for the parcel. Undeveloped parcels that appear to have current uses such as gravel pits or storage yards, or had similar contractual concerns as the existing Northwood site received a rating of 1. Sites with some existing usage or that may have difficulty obtaining a lease or purchase were rated as 2. Sites with limited to no existing usage received a rating of 3.

Table 1 displays the results of the initial evaluation of the 19 parcels.

Table 1. Initial Site Evaluation Matrix

Site	Owner	Site Size (acres)	Zoning	Site Zoning	Operational Flexibility	Site Access	Site Availability	Reason For Elimination
1	State of Alaska - TSAIA	35.7	TR	2	3	1	1	Restricted Access
2	Universal Financing Corp	10.0	R-3 SL	1	1	2	2	Zoning Restrictions
3	MOA	15.1	R-1	1	1	2	2	Zoning Restrictions
4	Chugach Electric	15.4	TR	2	3	3	1	Site Unavailable
5	MOA MOA 5501	32.0	TR	2	3	3	3	
6	MOA MOA 5501	17.3	TR	2	3	2	3	
7	MOA Heritage Land Bank	86.8	PLI	2	3	2	2	
8	MOA Heritage Land Bank	31.8	PLI	2	3	2	3	
9	MOA Heritage Land Bank	108.9	PLI	2	2	3	3	
10	MOA Heritage Land Bank	15.4	R-4	1	1	2	2	Zoning Restrictions
11	MOA MOA 5501	18.1	PLI	2	1	1	1	Operational Issues
12	State of Alaska - TSAIA	57.2	PLI	2	2	2	1	Site Unavailable
13	State of Alaska - TSAIA	29.3	PLI	2	2	2	1	Site Unavailable
14	Opal Investments	38.5	R-1	1	1	2	2	Zoning Restrictions
15	MOA - Parks & Rec	16.5	R-2A SL	1	1	1	2	Zoning Restrictions
16	MOA School District	41.8	R-2A SL	1	1	1	1	Zoning Restrictions
17	Anchorage Sand & Gravel	39.0	R-1A	1	2	3	2	Zoning Restrictions
18	Anchorage Sand & Gravel	26.9	R-1A	1	2	3	2	Zoning Restrictions
19	MOA Heritage Land Bank	38.8	R-1	1	1	1	1	Zoning Restrictions

Legend:	Unacceptable Characteristics	Neutral Characteristics	Preferable Characteristics

Note: PLI = public lands and institutional; R = residential; TR = transition

3.4 Secondary Site Evaluation

After the initial site evaluation, five sites (Sites 5, 6, 7, 8, and 9) were identified for secondary evaluation. These five sites are all located west of Minnesota Drive on either side of Raspberry Road. Sites 5 through 8 are parcels within the Connor's Bog area and Site 9 is located in the Strawberry Bog area (Figure 6).

Sites 6 and 7 were eliminated from consideration due to the large number of official and social trails branching off of the Anchorage Water and Wastewater Utility (AWWU) sewer easement trail used as the main thoroughfare through Connor's Bog Park. The majority of the recreational use of Connor's Bog Park is on the easement trail and to the south and west of the trail. Development of either of these two sites would have a large impact on both the recreational users of Connors Bog and the wildlife in Connor's Lake. The sewer easement bisects Site 8, and the geometry of the lot and location of the easement within the lot would make access to a snow disposal area and security of the site difficult. Of the sites located within the Connors Bog area, a snow disposal site located at Site 5 is clearly the preferred option. Site 5 has little recreational traffic, offers straightforward site

access through the M&O Kloep Station complex, and could be easily secured from unauthorized entry.

The elimination of Sites 6, 7, and 8 left two sites for analysis and evaluation:

- Site 5: Connor's Bog Site
- Site 9: Strawberry Bog Site

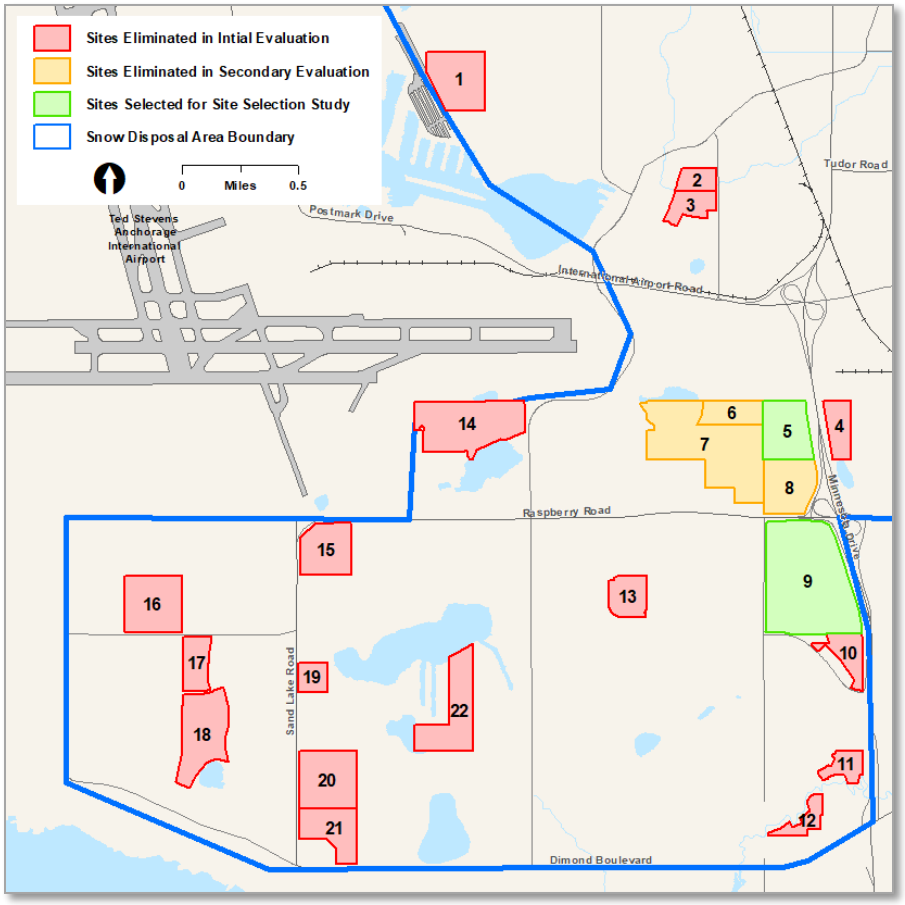


Figure 6. Final Site Evaluation Results

3.5 Final Site Selection

In order to make a final site selection recommendation for a replacement West Anchorage snow disposal site, a thorough evaluation of the two remaining sites was performed that covered in more detail the factors considered in the initial evaluation: site zoning, operational flexibility, site access, and site availability (see Section 3.3).

In addition to these four factors, five others were added to the final evaluation based on the public outreach feedback described in Section 3.1. The additional factors are described below.

- **Access to Appropriate Receiving Waters.** Snow disposal sites generate significant snow melt runoff that needs to be processed and disposed of into an appropriate receiving water. Any site selected for consideration should be able to receive a large amount of snow melt discharge. Sites should be avoided where snow melt runoff could raise water tables, impact existing infrastructure, or be deposited in areas that containing closed lakes or wetland systems unable to retain large amounts of water.
- **Potential Impacts to Neighborhoods and Residential Areas.** Snow disposal sites can have potential impacts to residents that include noise from snow dump trucks and machinery, nighttime glare from site lighting, air quality from dust, and visual impacts of the actual snow mounds and displaced trash. Some of these impacts can be mitigated with natural or constructed landscape buffers. Sites with numerous residents in proximity or trucking routes that pass through residential neighborhoods should be avoided to the maximum extent possible.
- **Potential Impacts to Wetlands.** Both potential sites are within mapped wetlands in the *Anchorage Wetlands Management Plan*. Both sites contain significant amounts of Class "A" wetlands. Class A wetlands perform at least two significant wetland functions. The *Wetlands Management Plan* states that "'A' wetlands are considered most valuable in an undisturbed state, as most uses or activities, especially those requiring fill, negatively impact known wetland functions." Class A wetlands are not to be altered or otherwise disturbed in any manner, except for projects that are in the public interest. The permitting process must show that snow disposal is in the public interest.
- **Impacts to Park Land Use and Park Designations.** Sites located in designated park land would require approval from the Parks and Recreation Commission for construction. Construction that limits current common park usage should be avoided.
- **Permitting Requirements.** Development of a snow disposal site requires extensive permitting from local, state, and, likely, national entities. Sites should have a clear path forward through permitting to be viable.

The following sections include an evaluation of the two remaining sites based on the above criteria. Conceptual layouts of snow disposal facilities on each site are also presented. Results and a summary of the comparison are provided in Section 4.

Conceptual designs were based on research of guidance documents and desired site characteristics. These conceptual layouts ensured that the sites have sufficient area and orientation for effective snow disposal. The layouts were developed using site area footprints for snow storage, water quality structures, access routes, required screening, and operations areas. They depict potential siting within the bounds of the individual parcels and are shown as concepts for planning purposes only. All are subject to further refinement based on delineation of wetlands, utility conflicts, traffic flow analysis, visual screening, and public input.

The Connor's Bog Site and the Strawberry Bog Site would both require the construction of a new snow disposal site of similar size with similar necessary wetlands mitigation. The total construction costs for both sites would be roughly similar. As both sites are on MOA-owned parcels, there would be no site acquisition costs. Since the total project costs for both sites would be similar, acquisition, development, and operational costs, although considered, were not included in the evaluation below.

3.5.1 Site 5 – Connor's Bog Site

This site is located south of Javier De La Vega Park and west of Minnesota Drive. The land is owned by the MOA and currently managed by the Parks and Recreation Department. The total parcel size is 32 acres located in Class A wetlands. The precise location of this site would have few constraints because MOA owns all adjacent parcels. The snow disposal pad would may be best located at the north end of the parcel where the elevation is slightly higher than at the south end, and access is directly from the adjacent M&O Kloep Station facilities. Development would involve construction of a fill pad, improvements to the access road to separate snow haul truck traffic from the existing operations areas, a perimeter berm, fencing, and water quality structures. Melt water would be discharged into the wetlands of Connor's Bog and Connor's Lake. Figure 7 shows a conceptual layout for Site 5. Details of the selection parameters are described here:

Site Access

Access to the site would be off International Airport Road, a designated expressway, and through the existing M&O Kloep Station facility. This is identical to the access route for the existing Northwood Site. Access to Site 5 would require an extension of the access road beyond the Kloep Station facility and would require to separation of snow hauling traffic from the Kloep Station activities. No access issues arise with the development of Site 5 and no change to the existing traffic flow is anticipated.

Zoning

This site is zoned within the TR district. This designation was initially developed in the 1960s as the unrestricted zoning district for parcels that were not expected to be developed in the near future. Development of Anchorage has filled in areas previously thought to be undevelopable and many of these lands have been rezoned over time. Parcels zoned TR as of January 1, 2014, are subject to the land use regulations in effect prior to the 2014 Title 21 rewrite until they become rezoned. As part of Connor's Bog, this site, although zoned as TR, is managed by the Parks and Recreation Department. The development of a snow disposal site in a TR-zoned parcel is allowed as a permitted use (AMC

21.40.240 of the old code). Should a rezone of this area occur, this land would likely be zoned within a PLI district, similar to the parcels to the south (Site 8), west (Site 7), and north (De La Vega Park). The development of a snow disposal site on a PLI-zoned land is allowed as a conditional use (AMC 21.05.010). Snow disposal sites, regardless of zoning district, must undergo a public facility site selection review (AMC 21.03.140).

In TR zoning districts, there is no height restriction for snow disposal. For PLI-zoned parcels, the maximum height is 45 feet (AMC 21.06.020.C). Conditional use standards for snow disposal sites set the maximum height of snow piles at 35 feet when within 500 feet of a residential district (AMC 21.05.060.E.8.b.II.B). As there are no residential areas within 500 feet of the proposed site location, this additional restriction does not apply. Based on past records of snowfall and snow disposal in West Anchorage, it is unlikely that a properly sized snow disposal site would exceed 35 feet of height in most snow years.

The parcel is large enough compared to the necessary site layout that any setback requirements (AMC 21.05.060.E.8.b.II.C) should not be an issue.

Operational Flexibility

Access to Site 5 is the same as access to the existing Northwood Site. As the new site is farther from residential areas or other noise-sensitive areas, it is unlikely that additional operational restrictions would be put in place on the site. This would allow for 24-hour operations, as are currently allowed at the Northwood Site.

Site Availability

This site is on land owned by the Municipality with relatively low public use. The land is not dedicated park land but is currently managed by the Parks and Recreation Department, which has been receptive to its utilization as a snow disposal site.

Access to Appropriate Receiving Waters

Snow melt from a snow disposal site at Site 5 would be retained within the watershed of Connor's Lake. Melt water would travel through several culverts under the AWWU sewer main easement and into Connor's Lake. Connor's Lake currently receives the melt water from the existing site and is sufficiently sized to receive melt water from a new site.

Potential Impacts to Neighborhoods and Residential Areas

Access to Site 5 would be similar to access to the existing Northwood Site, with some additional routing through the Kloep Station facility. The additional route would be on service roads with no public traffic. Fencing would be necessary to limit pedestrian access to the disposal site both from Connor's Bog off-leash dog area and Javier De La Vega Park, and exposure of the public to noise or other nuisances would be similar to the present condition. There would be no change in existing traffic patterns during snow disposal, and there would be limited increased exposure of the public to noise or other nuisance.

Potential Impacts to Wetlands

Site 5 is located in mapped Class A wetlands and would require wetlands mitigation. The pad development, access road, perimeter berm, and water quality structures may require approximately 17.3 acres of fill in Class A wetlands. Class A wetlands are the highest value wetlands within the MOA (see Section 3.5).

The primary wetland functions and values that would be impacted at this site include floodwater retention, nutrient retention and transport, wildlife and fish habitat, and recreation. Connor's Bog provides a significant source of floodwater storage and water quality filtering in West Anchorage. This freshwater wetland and lake complex also provides an important habitat oasis in an otherwise urban landscape. The diversity of plant life at the site provides habitat for small mammals, moose, and many species of migratory birds. At least 83 species of birds have been recorded in the area, including nesting Pacific loons.

Impacts to Park Land Use and Park Designations

While Site 5 would be located on land managed by the Parks and Recreation Department, the site is not designated park land. Adjacent to Site 5 is Javier De La Vega Park, which hosts soccer and baseball games during summer, along with other park uses. Visual impacts to users of Javier De La Vega Park and drivers along Minnesota Drive would be partially mitigated by an existing and project-installed buffer of trees to block the sightlines of the remnant melting snow. Javier De La Vega Park sees lower use in winter, so dumping and hauling activities would have minimal impacts on park users during that season.

Site visits after winter snowfall events suggest that the northeast corner of Connor's Bog has lighter use compared to the areas west of the AWWU corridor. Summer use is minimal due to the lack of trails and spongy wetland footing. In summary, the mitigation proposals with the Parks and Recreation Department would reduce petty crime and have a positive impact on the users of Connor's Bog, and impacts on users of Javier De La Vega Park would be limited.

Permitting Requirements

The Connor's Bog Site is not located on designated park land and would not require Parks and Recreation Department approval. Development of this site would require a Municipal Conditional Use Permit, including waivers from several snow disposal site Design Criteria. This site would also require a Clean Water Act (CWA) Section 404 Permit from the U.S. Army Corps of Engineers, CWA Section 401 certification, a Stormwater Discharge Permit from Alaska Department of Environmental Conservation, a sign-off from PM&E Watershed Services, fill and grade permits, and utility agreements. These permits will require significant effort, but all should be obtainable.

Site Summary

Site 5: Connor's Bog Site is a very desirable snow disposal site. It meets most of the criteria for a snow disposal site and has few drawbacks. The site would have low to no impact on residents and neighbors, is sufficiently sized and available for use, will have no operational restrictions, and has

adequate receiving waters. The only concerns pertaining to the Connor's Bog Site are the required wetlands fill and mitigation requirements due to its location on Class A wetlands Figure 7 shows a conceptual design drawing of the Connor's Bog Site.

Figure 7. Site 5: Connor's Bog Site Conceptual Design

3.5.2 Site 9 – Strawberry Bog Site

This site is located south of Raspberry Road and between Northwood Street and Minnesota Drive. It is owned by the MOA and managed by Heritage Land Bank. The total parcel size is 109 acres and consists mostly of Class A wetlands. Similar to Site 5, this site would involve the construction of a fill pad, perimeter berm, fencing, water quality structures, and a new access road. Figure 8 shows a conceptual layout for the site.

Site Access

Access would be from Northwood Drive south of Raspberry Road. All routes to the snow disposal site from the north could be made on collector and arterial routes. Traffic flow to the site may necessitate access from Strawberry Road exit off Minnesota Drive. Strawberry Road is a designated collector route and would require improvement prior to use as access to a snow disposal site. Development of this site will result in a significant change in the amount and flow of traffic in the neighborhood. The entrance to the site would be controlled with fencing and gates to restrict public access.

Zoning

Site 9 is zoned PLI, which allows snow disposal sites as a conditional use (AMC 21.05.010). Similar to Site 5, this site would require conditional use approval and public facility site selection plan approval (AMC 21.03.140). The site is bordered on the west by Northwood Street, which has areas of residential and business-zoned properties to the west. Land use is a mix of business, large apartment complexes, and single family and duplex homes. The placement of the snow disposal site would be outside of the 500-foot separation from residential districts. This would allow for no height restrictions from conditional use zoning regulations for snow disposal sites (AMC 21.05.060.E.8.b.II.B), but the site would be subject to the 45-foot limitation of PLI zoned parcels (AMC 21.06.020.C). As with Site 5, it is unlikely that the height of the snow pile would reach 35 feet.

As with Site 5, the site is large enough that there will be no issues with setback requirements (AMC 21.05.060.E.8.b.II.C).

Operational Flexibility

Due to the proximity to both the residential development on the west side of Northwood Drive and potential trucking routes through a noise-sensitive residential area, as discussed below, operational restrictions may be placed on a snow disposal site at Site 9. The site could be restricted to daytime operations only, which is common at other municipal snow sites in residential settings. This would necessitate trucking night-hauled snow from larger arterial streets to the C Street Site and a similar volume of day-removed snow back to the Strawberry Bog Site. This process would vastly increase the trucking cost and restrict the operational flexibility needed for efficient snow management by M&O.

Site Availability

Site 9 is located on Municipality-owned land outside of any designated park. There is low utilization of the Strawberry Bog area due to lack of trails and wetlands. The site is available to use for a snow disposal site with the correct conditional use permits.

Access to Appropriate Receiving Waters

Snow melt from a snow disposal site at Site 9 would be retained within the watershed of Strawberry Lake. Comparison of historical satellite imagery from the 1950s to the present show that Strawberry Lake has decreased in size over time. Melt water from a snow disposal site at Site 9 could replenish the lake levels. Strawberry Lake eventually discharges into the Campbell Creek drainage. Site 9 has sufficient receiving waters for a snow disposal site.

Potential Impact to Neighborhoods and Residential Areas

The development of Site 9 would result in a major change to the traffic flow and volume in the area. Traffic flow to the site would have the highest impact on the high-density residential lots on the north end of Northwood Drive. More lots along Northwood Drive are slated for development in the future. Should traffic need to be routed through the Strawberry Road exit, trucks would travel through an established residential neighborhood and would have direct impacts on a large segment of residential properties fronting this route on the west. Large volumes of truck traffic and the noise from snow disposal operations would impact these residential neighborhoods no matter the direction of access. Installation of berms and landscaping trees may partially reduce noise and visual impacts on these neighborhoods, but public feedback indicates that this is a major concern.

Potential Impact to Wetlands

As with Site 5, Site 9 is also located in mapped Class A wetlands and would require wetland mitigation. The conceptual layout is similar to the Site 5 layout. The pad development, access road, perimeter berm, and water quality structures may require a total of 17.4 acres of fill in Class A wetlands. Class A wetlands are the highest value wetlands within the MOA (see Section 3.5).

Strawberry Bog and Connor's Bog are part of the same bog system, and therefore many of the potential impacts on wetland functions and values at the Site 9 would be similar to those at Site 5. The primary wetland functions and services that would be impacted at this site include flood water retention, nutrient retention and transport, wildlife and fish habitat, and recreation. The Strawberry Bog freshwater wetland and lake complex also provides important wildlife habitat in an otherwise urban landscape. The diversity of plant life at the site provides habitat for small mammals, moose, and many species of migratory birds.

Impacts to Park Land Use and Park Designations

This undesignated open land in Strawberry Bog has low use compared to Connor's Bog and other, more developed parks. The southern part of the parcel around Strawberry Lake has an ad hoc

network of boggy routes used by the local residents. These would be largely unaffected by the snow site. Development of Site 9 would have little to no impact on park land use or park designations.

Permitting Requirements

The Strawberry Bog area is not designated park land and would not require approval from the Parks and Recreation Commission. Development of this parcel would require a Municipal Conditional Use Permit to include waivers from several snow disposal site design criteria. This site would also require a CWA Section 404 Permit from the U.S. Army Corps of Engineers, a Stormwater Discharge Permit from the Alaska Department of Environmental Conservation, a sign off from PM&E Watershed Services, fill and grade permits, and utility agreements. These permits would require significant effort, but all should be obtainable.

Site Summary

Site 9: Strawberry Bog Site is a moderately desirable snow disposal site. It meets some of the site selection criteria for a snow disposal site. The Strawberry Bog Site would be located on land that is sufficiently sized and available for use, it does not impact existing park use, and it has adequate receiving waters. However, there are several major concerns with respect to access and neighborhood impacts of the site. The site would be located near existing and growing residential areas, and access may have to be through a residential neighborhood. Operational restrictions, such as a restriction on night time operation, could be put in place due to this proximity. Any restrictions that do not allow for 24/7 operation would make this an undesirable snow disposal site. The site is also located on Class A wetlands, which would require additional fill and mitigation requirements. Figure 8 shows a conceptual design drawing of the Strawberry Bog Site.

Figure 8. Site 9: Strawberry Bog Site Conceptual Design

4. Site Selection Recommendations

Due to its limited overall impact on the community, Site 5 (Connor's Bog Site) is recommended. Both Site 5 and Site 9 are located in Class A wetlands and would require significant permitting efforts. Comments from public involvement efforts indicate that Site 5 is generally the preferred site, compared to Site 9.

Development of a snow disposal site on Site 9 (Strawberry Bog Site) would have significant community impacts on residential neighborhoods from traffic and noise associated with normal snow disposal operations. Development of Site 5 would not change the existing traffic flow for neighbors and would provide benefits for local park users in the form of mitigation efforts in the Connor's Bog Dog Park parking area.

Hearings with the MOA Planning and Zoning Commission would be required for approval of the site selection and for site plan review and conditional use permitting. A CWA Section 404 Permit from the U.S. Army Corps of Engineers would be required for the placement of fill in wetlands.

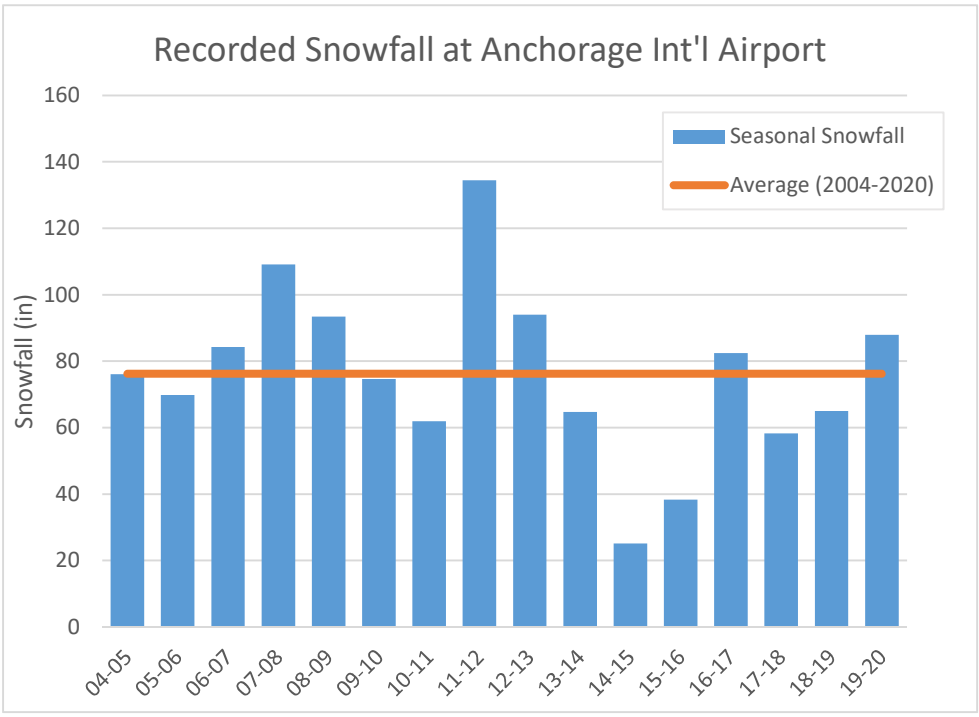
Table 2 provides a comparison summary of the two sites for each evaluation factor, with green symbolizing desirable, yellow symbolizing neutral, and red symbolizing undesirable characteristics.

Table 2. Final Site Selection Recommendations Comparison Table

Evaluation Factor	Site 5: Connor's Bog Site	Site 9: Strawberry Bog Site
Site Size	32.0 acres	108.96 acres
Site Access	International Airport Road (Expressway) through MOA Kloep Station	Off Northwood Drive (Arterial Road)
Zoning	TR – Transition	PLI – Public Lands and Institutions
Owner	MOA	MOA Heritage Land Bank
Acquisition Cost	None	None
Operational Flexibility	Likely no restrictions on operation	Likely restrictions on nighttime operations
Receiving Waters	Connor's Bog and Lake	Strawberry Bog and Lake
Neighborhood Impacts	None or reduced from existing	High impact on adjacent residential areas to the west and south
Wetlands Impacts	Extensive Class A wetlands	Extensive Class A wetlands
Park Land Impacts	Designated park land, but low utilization; parking improvements planned	No park land impacts
Permitting Requirements	Extensive permitting due to wetlands and park land designation	Extensive permitting due to wetlands
Legend	**Undesirable Characteristics**	**Neutral Characteristics** / **Desirable Characteristics**

Appendix A:
Historical Anchorage Snowfall and Normalized Snow Truckload Calculations

Season	Snowfall (inches)
19-20	87.9
18-19	65.0
17-18	58.3
16-17	82.4
15-16	38.3
14-15	25.1
13-14	64.7
12-13	94.0
11-12	134.5
10-11	61.9
09-10	74.6
08-09	93.4
07-08	109.1
06-07	84.3
05-06	69.8
04-05	76.1
Average	**76.2**



Normalization of Snow TruckLoads Calculations	
Average Snowfall (inches)	76.2
2018-19 Snowfall (inches)	65.0
2018-19 % of Average	85%
2018-19 Snow Truckloads delivered to Northwood	8,879
Snow Truckloads Normalized to Average Year	10,411

Appendix B:
Selection of Snow Disposal Site Guidance Documents and General Relevant Contents

Document: Section 21 Title 21
Author/Source: Municipality of Anchorage
Outline of public facility site selection process Snow disposal site regulations Waiver process outline
Document: 2017 Anchorage Stormwater Manual
Author/Source: Municipality of Anchorage PM&E
Melt water discharge profile Site selection criteria
Document: Anchorage Street Deicer and Snow Disposal 2003 Best Management Practices Guidance
Author/Source: Watershed Management Program - WMP CPg02001
Documentation of management of snow disposal sites
Document: 2013 Evaluation of Anchorage Snow Disposal Sites
Author/Source: Watershed Management Program - WMP APr14002
V-Swale design guidance General site design guidance
Document: Anchorage Storm Water Treatment in Wetlands: 2001 Progress Report
Author/Source: Watershed Management Program - WMP APr01002
Wetlands status in Anchorage Potential benefits of snow melt water into wetlands
Document: Urban and Highway Snowmelt: Minimizing the Impact on Receiving Water
Author/Source: Water Environment Research Foundation: Project 94-IRM-2
Estimation of metals and salts in melt water discharge Evaluation of toxic effects of these contaniment
Document: Effects of Snow Dump Meltwater on Adjacent Black Spruce Bog Vegetation
Author/Source: Alaska Pacific University - Kristen Hansen
Effect of melt water from snow disposal sites on adjacent vegetation
Document: Proposed Eagle River Snow Disposal Site: Preliminary Review
Author/Source: Watershed Management Program
Snow disposal site characteristics and impacts Contaminent characterization of snow disposal melt water General melt water discharge volumes and impacts
Document: Synthesis of Best Management Practices for Snow Storage Areas
Author/Source: Alaska DOT&PF Research & Technology Transfer
General best practices around the state for snow disposal
Document: The Anchorage Debit-Credit Method
Author/Source: Heather Dean, April 2011 – USACOE, EPA, US Fish & Wildlife, MOA
Procedure for determining development debits and compensatory mitigation credits

Appendix C:
Public Outreach Summary

Public Outreach Summary

Municipality of Anchorage

West Anchorage Snow Disposal Site

Anchorage, Alaska
April 12, 2020

Table of Contents

Attachments

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Introduction

This public outreach summary is used for tracking and documentation of public involvement activities. It outlines the public involvement strategies and tactics used to engage the public on the Snow Disposal Project. The summary includes a description of the outreach strategies implemented, the tools used for implementation, and the results of the public outreach.

Overview of Public Involvement Activities

The project team conducted a variety of public outreach tactics to engage and inform the public on the Snow Disposal Project.

Public Open House

On Tuesday, March 24, 2020, the Snow Disposal project team hosted the opening of an online interactive, self-guided public open house on the project website that was available through Friday, April 24, 2020. The online open house consisted of a total of eight sections that outlined project information and one section that included ways to comment on the project. The purpose of the event was to inform the public of the Snow Disposal Project and receive feedback on site selection criteria and potential locations to be considered.

Attendance

A total of 35 visitors attended the virtual meeting between the hours of 4:30pm and 6:30pm with 8 people participating in a live online chat with Project team members on March 24, 2020. Since the Virtual Meeting, the Project website has been viewed 137 times.

Advertising

The online public open house was advertised in the following ways:

- Meeting information on the project website: www.westanchoragesnow.com
- Postcard mailer to residents near the project area (total of 4,139) (Attachment A)
- An advertisement in the *Anchorage Daily News* (Attachment B)
- Presentations at the Turnagain and Sandlake Community Council Meetings
- A press release sent out by PM&E (Attachment C)
- Postings to nextdoor.com
- Flyers posted around the project area (Attachment D)

Attachment A

Postcard

West Anchorage Snow Disposal Project

Online Open House & Virtual Public Meeting

Online Open House	Virtual Public Meeting
March 24 - April 24, 2020	Tuesday, March 24, 2020 from 4:30-6:30 pm

www.westanchoragesnow.com

West Anchorage
Snow Disposal Project
2525 C Street, Suite 500
Anchorage, Alaska 99503

West Anchorage Snow Disposal Project

Online Open House March 24 - April 24, 2020	Virtual Public Meeting Tuesday, March 24, 2020 from 4:30-6:30 pm

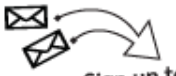
Visit westanchoragesnow.com

The Municipality of Anchorage is collecting information on potential locations for the placement of snow removed from West Anchorage streets during winter. Snow disposal location criteria and public feedback will be considered as part of a site selection process.

You are invited to attend an Online Open House to learn about the project and provide your feedback on site selection criteria and potential locations to be considered.

If you have any questions, please contact the project public involvement lead, Josie Wilson, at (907) 644-2030 or Josie.wilson@hdrinc.com.

Stay in-the-know



Sign up to receive email updates on our website at **www.westanchoragesnow.com**

Project Management and Engineering No. 19-01

Attachment B

Advertisement in the Anchorage Daily News

West Anchorage Snow Disposal Project

ONLINE MEETING DETAILS

Online Open House

Tuesday, March 24, 2020 | 4:30 pm – 6:30 pm

www.westanchoragesnow.com

The Municipality of Anchorage is collecting information on potential locations for the placement of snow removed from West Anchorage streets during winter. Snow disposal location criteria and public feedback will be considered as part of a site selection process.

You are invited to attend a Public Open House to learn about the project and provide your feedback on site selection criteria and potential locations to be considered.

Visit **westanchoragesnow.com** for project information or to submit comments. **Comment period from March 24 to April 24, 2020.**

If you have any questions, you may contact Josie Wilson at 907 644-2030.

Project Management and Engineering No. 19-01

Attachment C

Press Release

Municipality of Anchorage

Ethan Berkowitz, Mayor

Project Management & Engineering Department

FOR IMMEDIATE RELEASE
March 24, 2020

Municipality of Anchorage Goes "Virtual" for Project Management and Engineering Public Meeting for the West Anchorage Snow Disposal Project

The Municipality of Anchorage Project Management & Engineering Office is hosting an online open house and virtual public meeting for the West Anchorage Snow Disposal Site project. The public is invited to attend and participate in the virtual meeting on Tuesday, March 24 from 4:30-6:30 p.m. by visiting the project website: www.westanchoragesnow.com.

ANCHORAGE – In response to the "Hunker Down" order (EO-03) and guidance to avoid social gatherings, the Municipality of Anchorage shifted a previously planned in-person public meeting for the West Anchorage Snow Disposal Site Project to an online open house format with a live-chat virtual meeting.

The project team is offering a virtual meeting through a live-chat feature on the website on **Tuesday, March 24, 2020 from 4:30-6:30pm**. The Online Open House will be available **March 24 through April 24, 2020** for participants to learn about the project and to leave comments. Members of the public can visit the project website at www.westanchoragesnow.com and then chat online with project team members during the virtual meeting, similar to a traditional public meeting.

The Municipality of Anchorage is collecting information on potential locations for the placement of snow removed from West Anchorage streets during winter. The project is in the information-gathering phase and the public is invited to learn about the project and to provide feedback on the site selection requirements for a future potential site as part of the site selection study.

Please join the project team at 4:30pm on Tuesday, March 24 online at www.westanchoragesnow.com to interact with the project team, to learn about the project, and to provide feedback on site selection criteria for potential locations for the West Anchorage Snow Disposal Site Project.

All public comments received during the live chat and through the website will be considered by the project team. The public can also submit comments via email or mail by April 24, 2020 to info@westanchoragesnow.com or by visiting the project website at www.westanchoragesnow.com. People may also sign up for the project distribution list to have project updates sent right to their inbox.

# # #

Media contact: Chelsea Ward-Waller, 907.575.8583, chelsea.ww@anchorageak.gov

About Municipality of Anchorage (MOA) Project Management & Engineering Department (PM&E)

PM&E designs and builds public works projects that provide a safe, convenient, and efficient transportation network throughout Anchorage. Voter-approved bonds fund the majority of these projects, which include sidewalks, transit facilities, roads, trails, drainage, and other public facilities that support Municipal Maintenance and Operations.

Attachment D

Project Flyer

West Anchorage Snow Disposal Project

Project Management and Engineering No. 19-01

Please Join Us!

Online Open House

Tuesday
March 24, 2020 from
4:30 to 6:30

visit:
westanchoragesnow.com

The Municipality of Anchorage is collecting information on potential locations for the placement of snow removed from West Anchorage streets during winter. Snow disposal location criteria and public feedback will be considered as part of a site selection process.

You are invited to attend a Public Open House to learn about the project and provide your feedback on site selection criteria and potential locations to be considered.

Visit www.westanchoragesnow.com for project information or to submit comments.

Comment period from March 24 to April 24, 2020.
If you have any questions, contact Josie Wilson at (907) 644-2030.

Attachment E

Comment Log

West Anchorage Snow Disposal Project Comment Log

Comment Number	Date	Comment Type	Commenter	Contact Information	Organization	Comment	Response Date	Responded By	Response
1	3/6/2020	In Person - Turnagain Community Council	John Johansen		AIA - Manager of engineering, environmental, and planning	Opinions on “why” this project is happening - meeting minutes reflect when he was speaking and his questions. Seretary will provide minutes.			
2	3/17/2020	Email - website	Frank Rast	frast@gci.net	Public	Hello Josie I am quite interested in this project as I have been lobbying for years to get the Northwood Snow dump leased at a more reasonable rate. I realize that keeping that site is a dead end. It would be nice if the public got a little more background on this rather than the “does not meet contracting requirements” description on the website. I understand that literally an act of congress would be required to lease the Northwood Site at a reasonable rate. Very unfortunate because the MOA taxpayers actually own the airport through the State. I understand that Northwood and Raspberry is the likely site and it is unfortunate that a HLB property listed as a future neighborhood town center will now be a snow dump. What a scenic welcome site for visitors traveling down Minnesota Drive on their way to Kenai. Similar to the snow dumps lining the Seward Highway. This site also has potential for development as affordable R2-M Housing. A developer across the street just got approval for the R2-M height variance. Looking at a snow dump instead of the Chugach Mountains will not help his development I hate to say this but the AS&G Fill site would be an option if the trucking costs are not too high and the airspace was cleared with FAA and the Airport. The fill site is 300 feet down at the end of my block on Seacliff. I really don’t want to look at a snow dump for 6 months out of the year, but this may be a better community option than Northwood and Raspberry. I will be asking Sara and Mia if they can contact Senator’s Murkowski and Sullivan to see if a more reasonable lease can be provided at the current Northwood site. Thanks in advance for considering my comments. Frank Rast			Hi Frank, Thank you for your comment. The project team is taking it into consideration as part of the site selection study. In this process the city is considering the long term lease of the existing site but development costs are high even to retrofit it for current water quality standards. These development costs would be lost at the end of the lease unless a more permanent land agreement can be reached. We are sensitive to the impacts on current and potential residents. It is understood that the Raspberry site will potentially have more of these impacts and that will be factored into the selection process. The project team has looked into the AS&G site and found that financially, it is not a viable option. Due to the distance, trucking costs would greatly increase and since MOA does not own the land there would be purchasing costs to overcome. We appreciate your involvement on the project and will keep you posted with the progress. Sincerely,
3	3/23/2020	Phone and Email	Judy See	happygardenerak@gmail.com	Public	Hello - I live in SW Anchorage - 1 block over from Dimond HS track. We r a swamp in this area. Our house has 2 sump pumps. When Arlene Street was recently redone, a semi truck got stuck in the muck. In the easement behind our homes the electric box has been tipped over for years. Each spring our phone service is not usable for a few days due to high water. The returning fowl swim in these flooded areas. PLEASE do NOT even consider this area for snow dumping - should there be any room. Thank you for reading this request. Sincerely, Judy See	3/23/2020	Josie Wilson	Judy called the PI team before sending her email. Email does not need to be responded to. She just wanted her comment for the record.
4a	3/24/2020	Virtual Meeting	*Name not given*	alarquier@gmail.com	Public	Hello. Are the two potential sites shown on the webpage the only potential sites under consideration/that meet the criteria?	3/24/2020	Julie Makela	Hi! This is Julie Makela, Project Administrator. Those are the two potential sites at this point that we believe meet the criteria. We are open to considering other sites suggested by the public.
4b						Also, one of the several reasons the existing site no longer is viable is because it would need improvements to meet water quality standards. What improvements would need to be made to a new site to make either of them compliant with WQ standards?	3/24/2020	Julie Makela	Both of the potential sites would have to be fully upgraded to current snow disposal regulatory standards. The potential sites are large enough to have the WQ features necessary to meet water quality standards. One of the features would be settling ponds and periodic water quality monitoring.
5a	3/24/2020	Virtual Meeting	Margaret Auth	authrm@gci.net	Spendard Community Roadhouse - Member of the Executive Committee	I am most interested in keeping snow dumps away from residential neighborhoods. As someone who has lived near the current snow dump, I live near Northwood Elementary, I would like to say that the sounds from the trucks can be very loud and not just where they dump the snow. They also sometimes illegally use their air brakes on International. There's a reason it's illegal to use them in the city, but still, they do. . I do know there is a need for the snow dump as my husband was the chair of the Spenard Community Council and I know this has been an issue for the Muni for years because the land is State owned.	3/24/2020	Josie Wilson	Thank you for your comment. This is Josie, the public involvement lead. I am sorry to hear that. I appreciate you taking the time to provide your comments and feedback. We will add this comment to our public feedback. Thanks Margaret! Would it be okay if we got back to you on your question about the the design of the potential site and minimization of contamination?
5b						I also have a question: Because this will hopefully be a better planned snow dump than that currently used, will the Muni line the area to minimize contamination? I feel I have made all the comments I need to make at this time. I thank you for taking the time to do this presentation. I would appreciate more information on the design when you can get that information to me.			
6a						Just reread Connor's Bog "Advantages" list; not sure additional access to that area is necessarily a good thing. Connors Lake supports nesting loons as well as other bird and wildlife habitat. Current access seems to be adequate for those who enjoy this area. Improvements to the parking area off Jewel Lake would be interesting to see if those amenities would be viewed by users of the area as an acceptable trade off for loss of some of the parkland.	3/24/2020	Josie Wilson and Bill Spencer	We have several project team members online. Your questions are wonderful. We will answer as many as we can. We are also tracking all of these comments as part of the public involvement outreach. So, if we need to get back to you on a few of the questions, we will.
6b						This is Cathy Gleason, Turnagain CC President. I have several questions: 1) What zoning district/s would allow this proposed snow disposal facility?	3/24/2020	Bill Spencer	1)I will have to check on the specific zoning requirements for snow disposal sites, it is my understanding that these two parcels meet the required zoning criteria.

6c						2) Is the Municipality open to a rezoning process, if needed, to choose the best location?	3/24/2020	Bill Spencer	2) the Muni is open to rezoning if that is needed to use the best location
6d						3) What kind of Muni and Federal permitting would be required for a snow disposal facility?	3/24/2020	Bill Spencer	3)I believe the project will need a conditional use permit for the site, if we choose the site in Connors we will need approval from the Parks and Rec commission. Also needed will be a wetlands fill permit from the Army Corp of Engineers.
6e	3/24/2020	Virtual Meeting	Cathy Gleason	cathy.gleasontcc@yahoo.ocm	Turnagain Community Council - President	4) Is the Connors Bog site dedicated parkland? If not, how close is the site to dedicated parkland and the portion of the park located on Airport property?	3/24/2020	Bill Spencer	4) yes I believe the north east corner of the bog is dedicated park land, currently lightly used
6f						5) Has the Strawberry Bog site been used as wetland mitigation for previous wetland fill projects elsewhere in Anchorage? 6) Is there any Conservation Easement designation on the Strawberry or Connors Bog sites? 7) Has the Heritage Land Bank identified either of the sites to be used as part of a Muni wetland mitigation bank?	3/24/2020	Bill Spencer	5,6,7) HLB has indicated that the answer to all of these is no.
6g						8) Based on the locations along Minnesota Dr. of both identified sites, visual mitigation would be needed at either site, so they would not be seen from the road. Any other land use proposed for dedicated park land would required a vote of the people to undedicate it.	3/24/2020	Bill Spencer and Julie Makela	8) We will maintain as much of the existing treeline as possible and then augment with berms and landscaping. Hi Cathy! It's Julie Makela, Project Administrator. You are correct there are municipal codes regarding dedicated parkland. I don't have the exact code in front of me but the code does allow for other muniicapl use of dedicated parkland. If the Connors Bog is our prefered alternative, we will need to get Parks and Rec commission approval, Planning and Zoning commission approval and Assembly approval. We can follow up later with the exact code that allows for other municipal use of dedicated parkland.
							4/7/2020	Josie Wilson	AMC 25.10.080.C is the code that lays out the steps for other municipal use of dedicated park land
6h						Either of the two sites identified include wetlands, hydrology impacts to adjacent remaining, undisturbed wetlands as well as surrounding upland areas would need to be looked at as well. Just reread Connor's Bog "Advantages" list; not sure additional access to that area is necessarily a good thing. Connors Lake supports nesting loons as well as other bird and wildlife habitat. Current access seems to be adequate for those who enjoy this area. Improvements to the parking area off Jewel Lake would be interesting to see if those amenities would be viewed by users of the area as an acceptable trade off for loss of some of the parkland. Many thanks to all of you for making the best of the situation we find our city in right now! I really appreciate your prompt responses and look forward to participating as the project moves forward. Signing off — it's dinner time!	3/24/2020	Josie Wilson and Bill Spencer	Josie Wilson: Hi Cathy, you have a very good point. Some of the +/- were from an operational point of view and not an impact point of view. You bring up a good point. I'll take that down as a note and look into it. Thank you for your suggestion. Bill Spencer: We will be looking closely at environmental impacts as we move forward. Many of the water quality parameters can be overcome with design of appropriate treatment. Hydrology impacts can be both negative and positive and we will look at those impacts as well.
7	3/24/2020	Virtual Meeting	Chris Conlon	chrisconlon168@gmail.com	Public	How about a cement pad with waste heat from the power plant across the highway piped underground just melted as the mountain grows. Then put a greenhouse on it and grow food during the rest of the year. Would you return current site back to recreation space? Ball fields, dog agility park etc?	3/24/2020	Josie Wilson, Bill Spencer, and Julie Makela	Now that is a creative idea, not sure my scope includes looking at that option but now you have my imagination going. We would have to see how the the BTUs penciled out and of course the melt water would just run off the pad and freeze creating a massive glacier. The heated greenhouse also has promise, we had hot house tomatoes in Kenai from the old diesel plant in the 60s. The current snow disposal site is owned by the airport. We currently rent the property on a short term basis. We're unsure of the airport's long term use plans are. The airport and muni were unable to reach an agreement on the land swap. All of the land around the airport is valuable to all parties. We will be taking all of the public comments from the virtual meeting today and creating a follow up communication and including the comments as part of the public record.
8	3/24/2020	Virtual Meeting	Al	honeywell444@gmail.com	Public	What site locations meet your stated needs? Are both sites on city property? Are you desiring an Pkwy access for the Strawberry site? How do you desire to access the Strawberry site? Your map is useless, because of the chat page overlap. Perhaps you will consider a actual meeting with readable maps.	3/24/2020	Josie Wilson, Melinda Tsu	We have two potential sites identified at this stage.We call these two sites: Strawberry Bog and Connor's Bog. Hello Al,Size of 14 acres or more of vacant land Centrally located to the current West Anchorage snow removal operations area to minimize haul times Allowance for 24/7 operations Allowance for operational lighting and sounds Minimized impacts to residents Economically viable development and operations cost Access from a collector roadway or higher roadway classification Able to be permitted for intended use (zoned appropriately). Yes, both sites are owned by the Municipality. The Connor's Bog site is Parks use and the Strawberry Bog site does not have any departmental use currently defined. Based on our concept look at the Strawberry site, there are restrictions for making an access off of Raspberry. The access would come off of Northwood Street south of Raspberry
9	3/24/2020	Virtual Meeting	Jacki Armstrong			In my opinion the proposed Connor's Bog site appears to have fewer, and lesser, downsides-in particular the traffic impact. I do not however I ride my bike by the current snow dump several times a week and the traffic issue is re. Connor's Bog vs. Strawberry is significant. Access from International is, in my opinion, safer and less disruptive than would be Raspberry.	3/24/2020	Melinda Tsu	This is Melinda Tsu, Project Manager. We will add your feedback to all of our collected comments. Do you use the Connor's Bog area recreationally? We've looked at a concept access route to the Connor's Bog site and it would be off of the current access from International and Northwood St. For the Strawberry Bog site access would come off of Northwood south of Raspberry Road. In fact, there are restrictions to allow access off of Raspberry so the access would come off of Northwood, which would be a new impact. Your comments are noted and we appreciate this type of feedback on potential impacts to the public.
10	3/24/2020	Virtual Meeting	Joe Sanks	joe.sanks@awwu.biz	AWWU	Hello all, AWWU here. Simple question. Both proposed site locations are near AWWU sewers. Access to the sewer mains will not be compromised? No encroachment into the sewer easement?	3/24/2020	Julie Makela, Josie Wilson,	Hi Joe! It's Julie Makela. We haven't looked too in detail to site details for either of the potential sites. As always we will work with AWWU on protecting facilities.

Appendix D:
Parcels Considered For Site Selection

Site Number	Parcel ID	Legal Description	Owner	Square Footage	Acres	Zoning
1	N/A	N/A East of Lake Hood Runway 14/32	State of Alaska - TSAIA	1,553,010	35.7	TR
2	010-244-28	Boettcher TR 3	Universal Financing Corp	434,009	10.0	R-3 SL
3	010-244-02	T13N R4W SEC 35 Parcel 10	MOA	656,483	15.1	R-1
4	012-571-02	T12N R4W SEC 1 W2NE4NW4	Chugach Electric Association	670,824	15.4	TR
5	012-571-01	T12N R4W SEC 1 NW4NW4 PTN	MOA MOA 5501	1,393,484	32.0	TR
6	012-041-07	Connors Lake TR B	MOA MOA 5501	751,410	17.3	TR
7	012-041-06	Connors Lake TR A1	MOA Heritage Land Bank	3,781,879	86.8	PLI
8	012-581-13	Raspberry Road Muni Land Sel LT 1 ASLS 97-10	MOA Heritage Land Bank	1,386,950	31.8	PLI
9	012-591-07	Raspberry Road Muni Land Sel LT 2 ASLS 97-10	MOA Heritage Land Bank	4,745,426	108.9	PLI
10	012-553-03	Strawberry Meadows TR G-1D	MOA Heritage Land Bank	671,875	15.4	R-4
11	012-151-59	Gladys Wood Park Tr 1	MOA MOA 5501	787,656	18.1	PLI
12	011-011-45	N/A - Area North of Delong Lake	State of Alaska - TSAIA	2,491,634	57.2	PLI
13	011-061-02	Sand Lake School Site TR A	State of Alaska - TSAIA	1,277,615	29.3	PLI
14	011-052-03	T12N R4W SEC 4 LT 8	Opal Investments	1,676,400	38.5	R-1
15	011-313-02	Westpark School Addition TR 7A	MOA - Parks & Rec	719,782	16.5	R-2A SL
16	011-321-73	Southwest Anchorage School Site TR 1	MOA School District	1,822,527	41.8	R-2A SL
17	011-162-42	Lancaster TR A	Anchorage Sand & Gravel Co	1,699,711	39.0	R-1A
18	011-201-92	Polen Park TR 1	Anchorage Sand & Gravel Co	1,170,181	26.9	R-1A
19	011-142-45	Mike Beirne Tr C	MOA Heritage Land Bank	1,689,431	38.8	R-1