

**ASSEMBLY STANDING COMMITTEE
PUBLIC WORKS AND FACILITIES COMMITTEE
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

April 12, 2021 12:00 PM

Virtual - Zoom Meeting

Regular Meeting To participate in the meeting please follow the link below, or connect via telephone using one of the numbers listed below. <https://juneau.zoom.us/j/91849897300> Or iPhone one-tap : US: +16699006833,,91849897300# or +12532158782,,91849897300# Or Telephone: Dial(for higher quality, dial a number based on your current location): US: +1 669 900 6833 or +1 253 215 8782 or +1 346 248 7799 or +1 929 436 2866 or +1 301 715 8592 or +1 312 626 6799 Webinar ID: 918 4989 7300

I. CALL TO ORDER

II. APPROVAL OF MINUTES

- A. Regular Meeting Minutes - March 15, 2021 - (Postponed to next meeting.)

III. PUBLIC PARTICIPATION OF NON-AGENDA ITEMS

(Not to exceed a total of 10 minutes nor more than 2 minutes for any individual).

IV. ITEMS FOR ACTION

- A. Calhoun Reconstruction- Planning Commission Notice of Recommendation

V. INFORMATION ITEMS

- A. Solid Waste Follow-up from 3-15-21 Meeting

- 1. Solid Waste Follow-up from 3-15-21 Meeting
 - 2. Juneau Solid Waste Factsheet - JCOS Update Report

- B. Juneau International Airport Float Pond Improvements, Phase 2 Project

- C. Public Electric Vehicle (EV) Charging Infrastructure CIP - Strategy Update

VI. UPDATE ON PWFC ACTION ITEMS TO ADVANCE 2021 ASSEMBLY GOALS

- A. Energy Reduction and Sustainability

- B. 4-12-21 Update on PWFC Action Items for 2021 Assembly Goals

VII. CONTRACTS DIVISION ACTIVITY REPORT

- A. March 11, 2021 to April 6, 2021

VIII. NEXT MEETING DATE

- A. May 10, 2021

IX. ADJOURNMENT

ADA accommodations available upon request: Please contact the Clerk's office 36 hours prior to any meeting so arrangements can be made for closed captioning or sign language interpreter services depending on the meeting format. The Clerk's office telephone number is 586-5278, TDD 586-5351, e-mail: city.clerk@juneau.org



MEMORANDUM

DATE: April 8, 2021

TO: Chair Hale and CBJ Public Works and Facilities Committee

FROM: John Bohan, Chief CIP Engineer

SUBJECT: Calhoun Reconstruction - Planning Commission Notice of Recommendation

The Planning Commission reviewed the Calhoun Reconstruction project at their March 9th meeting and recommended approval of the project with recommendations. The Assembly reviewed this recommendation on April 22 and forwarded the decision to this Committee to work on the implementation details.

The design elements outlined in their recommendations will be included in the project and are highlighted in the attached documents:

- Planning Commission Notice of Recommendation (NOR) with Alternative numbers identified
- The attached Design Alternatives Study Matrix
- The Area Map with Alternative numbers identified

The only recommendation in the NOR that was contrary to the design engineer's traffic safety recommendations was to continue to allow right turns off Goldbelt Avenue. The right turn from Goldbelt is a blind corner and requires a vehicle to cross into oncoming traffic lane to execute the sharp right hand turn of almost 180 degrees (153 degrees). Residents who live on Goldbelt testified how critical the ability to make a right turn was for their departure from the neighborhood without having to drive through downtown. The blind right turn is currently allowed, and a traffic mirror helps the turning vehicle see if there are vehicles approaching from the blind side. This turning movement is not one of the most significant safety issues within the Calhoun project.

Right of Way Acquisition

The Planning Commission expressed a strong desire to acquire additional ROW wherever possible to widen sidewalks in the 80-foot section where they are under 5 feet in width. This is a goal of the project as any additional space in the limited corridor will greatly improve our ability to work within the ROW. We have reached out to impacted property owners and have confirmation that one property owner is unwilling to provide an encroachment onto their property. We will provide updates as we receive further details.

Underground Utilities (Telecommunication and Power)

The NOR also requested the Assembly direct staff to work with the neighborhood on the possibility of burying the utilities. There are many factors that make buried utilities complicated and very expensive on Calhoun. Furthermore, determining if the City can finance the improvement (either through a Capital

Improvement by Consent process or Local Improvement District) will require deliberation by the Assembly and Legal.

Given the complicated nature of this request, staff is looking for direction from the Committee on the Planning Commission's recommendation. If the committee would like to explore underground utilities further, staff can return at the next meeting with additional information.

Actions Requested:

Staff requests the following actions on the Planning Commission recommendations:

- Provide comment and confirmation of the design alternatives as recommended.
- Provide direction on the PC's recommendation to allow the blind corner right turn from Goldbelt, which is contrary to the design professional's recommendation.
- Provide direction on the PC's recommendation regarding the undergrounding of utilities.



Planning Commission

(907) 586-0715
PC_Comments@juneau.org
www.juneau.org/plancomm
155 S. Seward Street • Juneau, AK 99801

PLANNING COMMISSION NOTICE OF RECOMMENDATION

Date: March 11, 2021
File No.: CSP2020 0011

City and Borough of Juneau
CBJ Assembly Members
155 S Seward Street
Juneau, AK 99801

Proposal: Planning Commission recommendation to the City and Borough Assembly regarding complete street and underground utility maintenance (and replacements as necessary) for Calhoun Avenue

Property Address: Calhoun Avenue

ROW name: Calhoun Avenue

Parcel Code No.: Not Applicable

Hearing Date: March 9, 2021

The Planning Commission, at its regular public meeting on March 9, 2021, recommended that the Assembly **APPROVE** CSP2020 0011 regarding complete street and underground utility maintenance (and replacements as necessary) for Calhoun Avenue,

- As described in the project description and drawings submitted with the application; and
- Incorporating recommendations proposed by ProHNS and the supplemental Design Alternatives Study Matrix and Area Map:

- ☒ #1 Consistent and narrow traffic lanes.
- ☒ #2 Raising sidewalk elevation above the road.
- ☒ #5 Colored crosswalk.
- ☒ #6 Concrete curb at the rock walls.

City and Borough of Juneau
CBJ Assembly
File No.: CSP2020 0011
March 11, 2021
Page 2 of 3

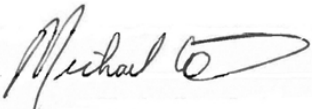
- #7 ○ Traffic striping.
 - #11 ○ Thickened-edge sidewalk.
 - #14 ○ Reconfiguration of the West Eighth Street intersection.
 - #15 ○ Widened sidewalks.
 - #16 ○ Traffic signage.
 - #17 ○ Updated street lighting.
 - #18 ○ Painted markings.
 - #9 ○ Easement and right-of-way acquisition if able.
- ❖ The consultant engineer recommended against right turns off of Goldbelt Avenue; the Planning Commission recommends right turns be allowed to continue.
 - ❖ Additionally, the Planning Commission recommended that the Assembly direct staff to work with the neighborhood on possibility of burying the utilities.

Attachments: January 5, 2021 memorandum from Irene Gallion, Community Development, to the CBJ Planning Commission regarding CSP2020 0011.

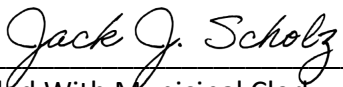
March 5, 2021 memorandum from Irene Gallion, Community Development, to the CBJ Planning Commission regarding "Revised materials and recommendation," including:

- March 5, 2021 memo from Lucas Chambers, P.E., ProHNS
- Decision and Design Alternatives Study Matrix
- Project Area Map

This Notice of Recommendation constitutes a recommendation of the CBJ Planning Commission to the City and Borough Assembly. Decisions to recommend an action are not appealable, even if the recommendation is procedurally required as a prerequisite to some other decision, according to the provisions of CBJ 01.50.020(b).



Michael LeVine, Chair
Planning Commission



Filed #6 Municipal Clerk

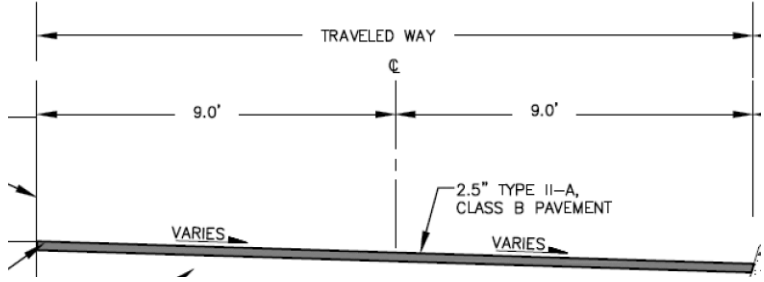
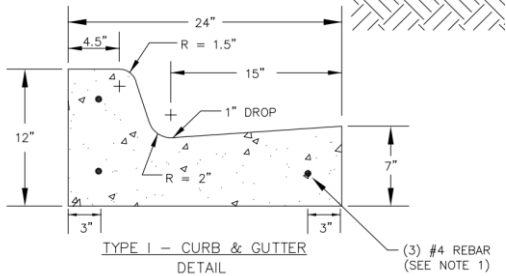
March 12, 2021

Date

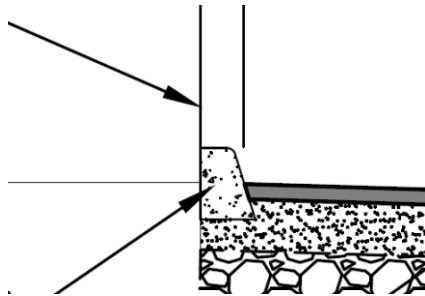
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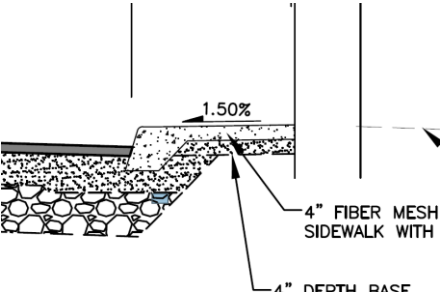
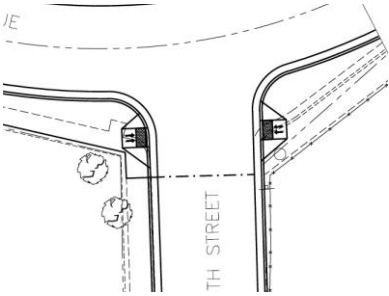
Decision and Design Alternatives Study Matrix– Calhoun Avenue Reconstruction

#	Categories	Method	Description	Advantages	Disadvantages	Cost Increase	Graphic
1	Traffic Calming Geometric Constraint Pedestrian Safety	Consistent and narrow traffic lanes	Reduced lane width between Capitol Avenue and W. 7 th Street to 9' lanes.	- Provides consistency through the corridor. - Narrowing traffic lanes is an identified method of traffic calming. - Reduced vehicle speeds and increased safety. - Additional space for pedestrian facilities (except at locations of limited ROW/geometric constraint).	- Areas with limited ROW/geometric constraint force narrow sidewalks. - Not compatible with the use of curb and gutter due to geometric constraint.		
2	Traffic Calming Pedestrian Safety	Raising sidewalk elevation above road	Install standard 6" curb and gutter on Calhoun Ave, north of Goldbelt Avenue and south of W. 8 th Street.	- Provides 6" high barrier between vehicles and pedestrians. - Provides visual barrier that roadway is narrower	Doesn't allow local neighbors to park on the lower existing sidewalk of roadway when off street parking is full.		
3	Traffic Calming Pedestrian Safety	Raising sidewalk elevation above road	Raise sidewalks to 9" above road grade along entire Calhoun project corridor	- Provides 9" high barrier between vehicles and pedestrians. - Provides visual barrier that roadway is narrower	- Doesn't allow local neighbors to park on the lower existing sidewalk of roadway when off street parking is full. - Non-standard curb height increases tripping hazard - Vehicle strike could redirect it into oncoming traffic.	\$	
4	Traffic Calming Pedestrian Safety	Raised Crosswalks	Install raised crosswalks across Calhoun Avenue	- Raised crosswalks are an identified method of traffic calming. - Enhances crosswalk visibility. - Makes crossing easier for pedestrians.	- Creates a maintenance issue for snow removal. - Requires additional consideration to ensure roadway drainage. - Reduces comfort of ride for vehicles and bicycles. - Potential traffic risk for low clearance/long wheelbase vehicles. - Increased construction and maintenance cost compared to standard crosswalks. - Not standard for use in collector streets.	\$	
5	Traffic Calming Pedestrian Safety	Colored Crosswalks	Install colored sidewalks at Cope Park Rd, Capital Avenue, 825 Calhoun Avenue, W. 8 th Street and Governors House	- Colored traffic crossings are an identified method of traffic calming. - enhance crosswalk visibility.	- Reduced effectiveness in winter conditions. - Increased construction cost compared to standard crosswalks.	\$	

Decision and Design Alternatives Study Matrix– Calhoun Avenue Reconstruction

#	Categories	Method	Description	Advantages	Disadvantages	Cost Increase	Graphic
6	Traffic Calming Pedestrian Safety	Concrete Curb at Wall	Install concrete curb along existing stone retaining walls	•Visually narrows the road reducing traffic speed. •Protects existing stone walls. •Reduces wall maintenance.	•Requires additional horizontal space which is limited in areas.	\$\$	
7	Traffic Calming	Traffic Striping	Maintain double yellow traffic striping through corridor, no centerline striping at intersections	•Painted traffic markings are an identified method of traffic calming. •Delineates lanes for vehicular safety. •Enhance crosswalk visibility. •Provides visuals for vehicles, pedestrians and bicyclists increasing safety.	•Reduced effectiveness in winter conditions. •Increased construction and maintenance cost.	\$	
8	Traffic Calming	Stop Controlled Intersection	Three way stop controlled intersection at Calhoun Avenue and W. 8th Street	•Would require vehicles to stop at intersection slowing traffic and limiting speeds around the existing blind corner.	•Potential conflicts with sidewalk locations due to limited ROW. •If perceived as unwarranted, may not be followed by vehicles. •Not warranted by MUTCD. •Unwarranted stop signs create liability for accidents.	Installing a traffic control device contrary to industry standards exposes CBJ to increased liability for any accidents or injury caused by the traffic control device.	
9	Geometric Constraint	Easements/ROW acquisition	Use easements or acquire ROW at geometric constraint location at 230 W. 8th Street and 826 Calhoun to relocate a section of the existing stone wall	•Increased pedestrian safety. •Increased vehicular safety. •Allows for 5' wide sidewalks at choke point with accommodation of 9' AASHTO travel lanes with or without curb and gutter.	•Requires acquisition of private property. •Significantly increased construction cost. •Increase in project timeline. •Requires all property owners to agree to ROW widening in order to be effective.	\$\$\$\$\$	
10	Geometric Constraint	Wall removal and replacement – Easements/ROW acquisition	Remove existing stone retaining wall below 825 Calhoun avenue and 214 W 8th Street and replace with new wall that is set back from road	•Increased pedestrian safety. •Increased vehicular safety.	•Requires acquisition of private property. •Increased design cost. •Significantly increased construction cost. •Increase in project timeline. •Access required to 825 Calhoun Avenue. •Construction may not be possible due to location of existing home foundations. •Moving walls back far enough to achieve desired corridor width would likely require acquisition of homes above retaining walls.	\$\$\$\$\$	

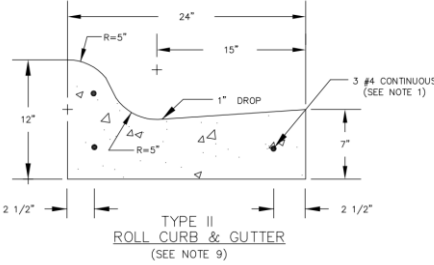
Decision and Design Alternatives Study Matrix– Calhoun Avenue Reconstruction

#	Categories	Method	Description	Advantages	Disadvantages	Cost Increase	Graphic
11	Geometric Constraint	Thickened Edge Sidewalk	Install thickened edge sidewalk on the west side of Calhoun Ave, between Goldbelt Ave and W. 8 th Street.	- Allows for more lane width and more sidewalk width by removing curb and gutter. - Allows roadway width to meet AASHTO minimum recommendations.	- Loss of gutter reduces offset/protection of pedestrians from vehicles. - potential maintenance issues with water flowing against joint - requires specialized bicycle safe drainage.	\$\$	
12	Traffic Safety	Eliminate Blind Corner	Eliminate north turn off of Goldbelt onto Calhoun Avenue	- Removes blind turn at steep slope. - Increased vehicular safety.	- Reroutes additional traffic south on Calhoun and down W.8th Street. - Increases route driving distance for residents on Goldbelt to access cope park/flats.	\$	
13	Traffic Safety Pedestrian Safety	Provide Loading Zone	Include Loading Parking and Loading Zone in W. 9 th Street ROW	- Allows on-street parking for residents. - Provides loading/unloading zone for residents, deliveries, etc. - Leaves sidewalk open for pedestrian use.	- Loading zone limits available residential parking within undeveloped right-of-way. - Disrupts neighborhood parking pattern.	\$\$	
14	Traffic Safety Pedestrian Safety	Reconfigure Intersection	Add curb "bulb out" at intersection of Calhoun Avenue and West 8 th . Relocate fire hydrant to the south side of West 8 th	- Increases vehicle sight distance turning onto Calhoun from W. 8th St on. - Provides widened sidewalk and alternative location for FH on W. 8th that would still facilitate ADA access. - Provides ADA access from W. 8th sidewalk onto the Calhoun sidewalk. - Takes advantage of wider sidewalk on South side of W 8th St. - Traffic calming due to reduced lane width.		\$\$\$	
15	Pedestrian safety	Widen Sidewalks	Widen sidewalks, minimize the locations where sidewalks are narrower than 5' wide	- Increase pedestrian safety. - Improves walkability of corridor.	Geometric constraints limit ability to achieve this option without removing curb/gutter, a ROW acquisition, non AASHTO compliant road width, etc.	\$\$	

Decision and Design Alternatives Study Matrix-- Calhoun Avenue Reconstruction

#	Categories	Method	Description	Advantages	Disadvantages	Cost Increase	Graphic
16	Pedestrian safety Bicycle Safety Traffic Calming	Traffic Signage	Traffic signage (vehicle, pedestrian and bicycle). Such as "Pedestrian Crossing", "Bicycles may use full lane", "Slow", "Road Narrows" on Calhoun Avenue.	•Traffic signage is an identified method of traffic calming. •Provides visuals for vehicles, pedestrians and bicyclists increasing safety.	•Potential conflicts with sidewalk locations due to limited ROW. Sing posts limit walk ability.	\$\$	
17	Pedestrian safety	Update Street Lighting	Update existing street lighting to newer, brighter, larger coverage area LED street lights	•Provides improved visuals for vehicles and pedestrians in low light conditions.	•Limited locations for light poles - additional poles would create potential conflicts with sidewalk locations due to ROW Limitations. •Adds light pollution inside local residences.	\$\$\$	
18	Bicycle Safety	Traffic Painting	Traffic striping, "Sharrows" on Calhoun Avenue both lanes.	•Provides visuals for vehicles and bicyclists increasing safety. •Reinforces legitimacy of bicycle traffic on the street. •Requires no additional street space. •Reduces the incidence of sidewalk riding. •Reduces the incidence of wrong-way bicycling.	•Reduced effectiveness in winter conditions •Increased maintenance cost. •Promotes Calhoun Avenue (collector street) as a bicycle corridor.	\$\$	
19	Bicycle Safety	Uphill bike lane	Bike lane in uphill direction between Capitol Ave and Goldbelt Avenue intersection	•Allows bicycles traveling uphill at slower speeds a separate lane. •Increased bicycle safety •Allows vehicles to maintain normal traffic speed traveling uphill. •Narrows perceived road corridor resulting in traffic calming.	•Reduced effectiveness in winter conditions. •Increased maintenance cost. •Promotes Calhoun Avenue (collector street) as a bicycle corridor. •Negatively effects geometric road layout, effecting the right turn ability off Goldbelt Avenue.	\$\$\$	
20	Bicycle Safety	Bike passing/waiting zone	Create a bike passing pullout/zone at corner near W. 8th St to allow bikes to pull off road and allow vehicles to pass	•Increased bicycle safety. •Allows vehicles to safely pass bicycles.	•Requires additional signage to inform bicyclists and vehicles. •Only available on one side at one location on entire corridor. •Create maintenance issues.	\$\$	

Decision and Design Alternatives Study Matrix– Calhoun Avenue Reconstruction

#	Categories	Method	Description	Advantages	Disadvantages	Cost Increase	Graphic
21	Bicycle Safety	Bike passing/waiting zone	Stripe the excess (after 18' roadway) paved area at corner near W. 8 th St and Governors Mansion to allow bike refuge location.	•Increased bicycle safety. •Allows vehicles to safely pass bicycles.	•Requires additional signage to inform bicyclists and vehicles. •Only available on one side at one location on entire corridor.	\$	
22	Bicycle Safety	Advisory Bike Lanes	Remove centerline striping and create shared direction center lane with advisory bike lanes on either side	•Allows for bicycle travel in both directions along Calhoun Avenue. •Reduces the incidence of sidewalk riding.	•Reduced effectiveness in winter conditions. •Requires additional horizontal width, which is limited by geometric constraints. •Experimental method requires use approval per MUTCD and FHWA. •Poor sight distance is not recommended for advisory bike lane use. •Not intended for use on a collector roadway. •Not intended for a street that is used by trucks and busses.	\$	
23	Vehicle Safety	Alternate Curb Types	Install rolled curbs on uphill sidewalk between Goldbelt and W. 9 th ROW	•Allows bicycles to mount curb more easily. •Provides a temporary loading location for residents and delivery services.	•Encourages vehicles and bicycles to use a pedestrian facility.	\$\$	
24	Pedestrian Safety	Separation Bollards	Install bollards at curb to provide a physical barrier between pedestrians and vehicles	• Provides physical separation between pedestrians and vehicles	•Would take up space in the sidewalk that is already geometrically constrained. •Decreases safety for bicyclists and vehicles.	\$\$\$	
25	Bicycle Safety	Green Queue Lanes	Install painted (green) bicycle queue lanes/locations to delineate bicycle refuge locations	•Increased bicycle safety. •Allows vehicles to safely pass bicycles.	•Requires additional signage to inform bicyclists and vehicles. •Only available on one side at one location on entire corridor. •Geometric constraint doesn't allow for standard dimensions of queue lanes.	\$	

Decision and Design Alternatives Study Matrix-- Calhoun Avenue Reconstruction

#	Categories	Method	Description	Advantages	Disadvantages	Cost Increase	Graphic
26	Pedestrian Safety	Flashing Traffic Signage	Flashing crosswalk/pedestrian crossing/road narrows signs	•Traffic signage is an identified method of traffic calming. •Provides visuals for vehicles, pedestrians and bicyclists increasing safety.	•Potential conflicts with sidewalk locations due to limited ROW. Sing posts limit walk ability. •Potential bedrock trenching for electrical components.	\$\$\$	

Assumptions/exclusions:

One-way option not included per direction from CBJ assembly.

Realignment of existing concrete retaining wall across from W. 8th Street (STA 17+00 to 19+00) not considered, cost exceeds project budget and construction may not be possible given existing homes above the wall.

Cost Increase Key:

- \$ <\$1,000
- \$\$ \$1,000 -\$10,000
- \$\$\$ \$10,000 -\$50,000
- \$\$\$\$ \$50,000 -\$100,000
- \$\$\$\$\$ >\$100,000

Recommendation Key:

- Recommended
- Conditionally Recommended
- Not Recommended

Resources:

- FHWA Course on Bicycle and Pedestrian Transportation - Traffic Calming
- Portland Bicycle Plan - Bikeway Design - Best Practices
- NACTO - Urban Bikeway Design Guide - Shared Lane Markings
- NACTO - Urban Bikeway Design Guide - Bike Route Wayfinding Signage and Markings System
- Multi-way Stops – The Research Shows the MUTCD is Correct
- ALTA – Advisory Bike Lanes in North America



Engineering & Public Works Department
155 South Seward Street
Juneau, Alaska 99801
Telephone: 586-0800 Facsimile: 463-2606

DATE: 2/25/15

TO: Jesse Kiehl, Chair Assembly Lands Committee

FROM: Rorie Watt, P.E., Director

SUBJECT: Landfill Planning Update

At the COW on 1/26, the Assembly asked for an update on prior CBJ efforts regarding the planning for a second solid waste landfill. I have also been asked whether or not this study is germane to consideration of the proposed Hidden Valley Subdivision, and for that reason I am including this information in the Lands Committee packet.

In 1993 CBJ commissioned the attached report. I did not find any evidence indicating that the report had been adopted by the Assembly, and the possible landfill sites were not given a formal designation in the CBJ's Land Management Plan. Further refinement of the siting of a future landfill was not pursued. The report identified two potential landfill sites in Lemon Creek, referred to as upper (#3) and lower (#2)

Since this report was written, a number of changes have occurred that likely affect the Community's thinking about a future landfill.

Gravel Mining: In the 90's, it was anticipated that once the gravel resource in the Costco/Home Depot area was exhausted that the upper (#3) Lemon Creek site would be a good place to start a new gravel mining operation. This location is accessible by haul road, and gravel mining would not be inconsistent with a possible future land fill site. However in around 2000, CBJ faced many problems with the storage of impounded cars and built a bridge across Lemon Creek, built the CBJ impound lot adjacent to the jail and began mining gravel behind the jail (similar to site #2). The bridge and the gravel mining at the lower site perhaps alter the relative merits of the two sites, increasing the favorability the lower site.

City Land Planning:

Lands near the jail have been considered for residential development as part of the Switzer Creek development study areas. Some of these lands are near to the lower #2 landfill site. Additional residential development in this area would obviously reduce the attractiveness of the lower site as a landfill.

Solid Waste Planning:

In the 2007 WIH plan, recommendations were made to continue using the Waste Management landfill. The draft plan made no recommendation about resuming planning for a

future land fill site, presumably because it was not as high a priority as other solid waste planning activities.

Summary:

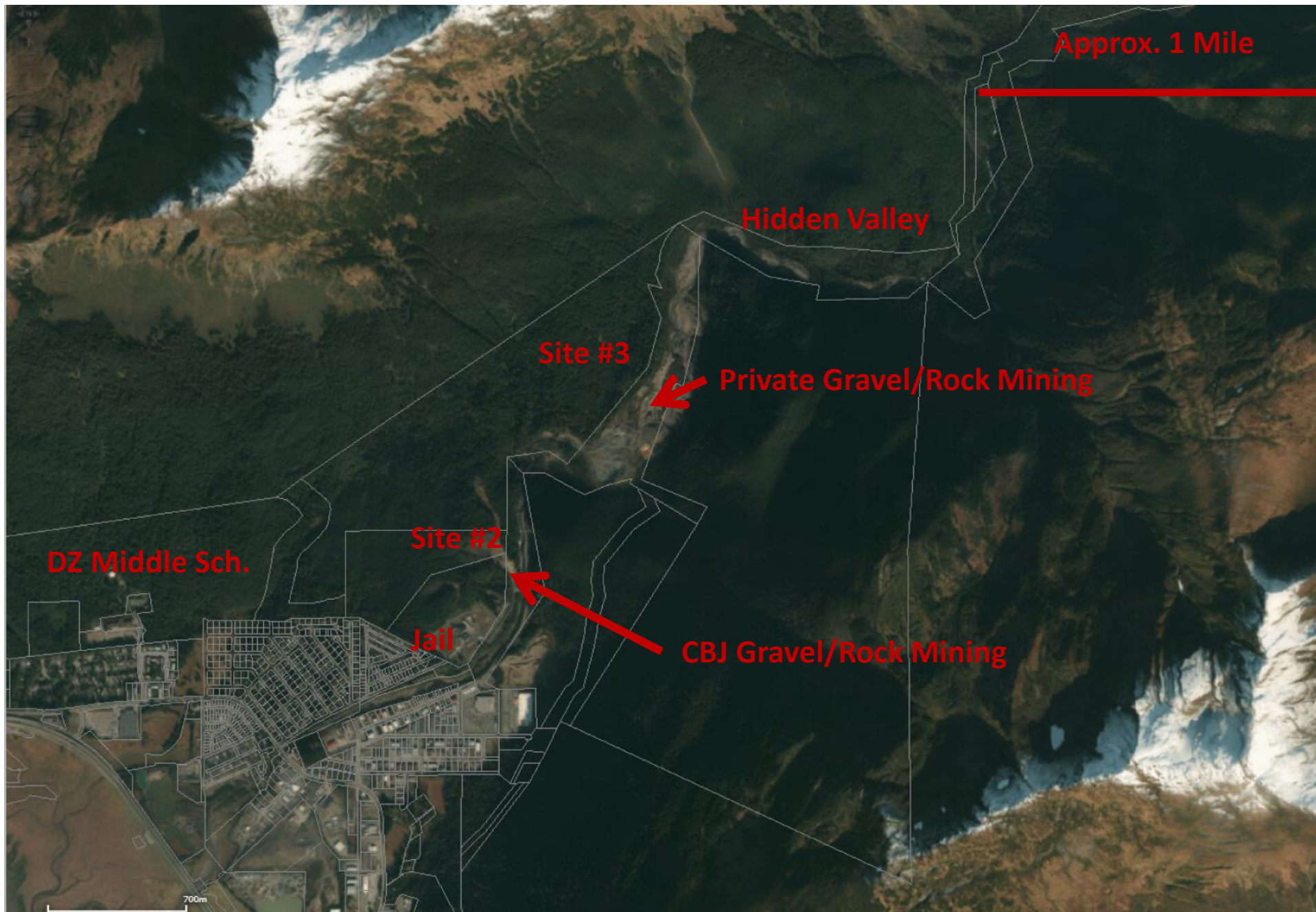
Tonight, the Lands Committee is considering issues with the proposed Hidden Valley property, and needs to understand the import of the attached report. It is possible that a modern day planning effort would select the upper Lemon Creek site as the location of a future municipal landfill, but it remains far from a confirmed conclusion for the following reasons:

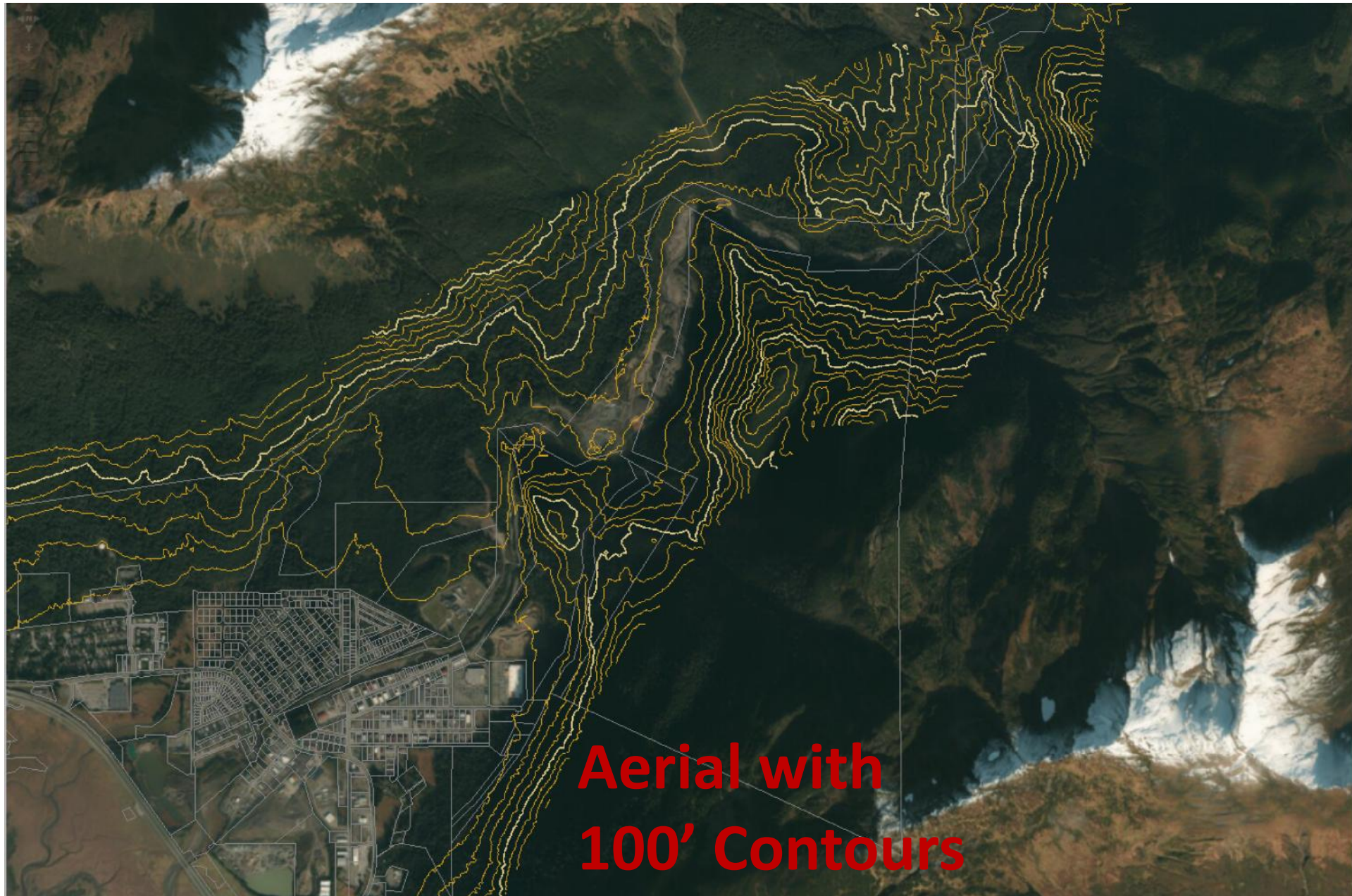
1. Currently, there is no public access through the existing gravel mining and rock quarrying areas. The route is long and not publicly maintained, upgrading to an appropriate road standard would be very costly.
2. Explosives used for construction activities are currently stored along the access route.
3. Millions of yards of sand and gravel would have to be mined from the upper Lemon Creek site (note that this also true for the lower site), representing more than a decade and perhaps several decades of gravel mining.
4. Landfill permitting issues remain unknown.
5. Landfill construction costs remain unknown.
6. Other landfill sites may prove more favorable.
7. Transport of MSW out of town may prove more favorable, local landfilling may eventually be restricted to construction and demolition waste.

Attached to this memorandum are some graphical images of the land parcels discussed. Property lines are overlaid on the aerial photos and are not exactly accurate, but are sufficiently accurate for this discussion.



Lemon Creek Aerial + Approx. Property Lines





**Aerial with
100' Contours**



Switzer Creek Lands Study Areas



**Juneau Commission
on Sustainability**

(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/sustainability
155 S. Seward Street • Juneau, AK 99801

To: Mayor Weldon & Assembly Members
From: Gretchen Keiser, Chair, JCOS 
Date: March 12, 2021
Subject: JCOS Report: Juneau Solid Waste Factsheet

The Juneau Commission on Sustainability submits the *Juneau Solid Waste Fact Sheet* which presents information on the history and current situation of the Juneau community's handling of solid waste. The report also presents recommendations on actions the Assembly can take to tackle waste reduction and waste diversion, and to optimize current landfilling and other waste-handling options. The report is attached and is summarized below.

Current Situation. Juneau generates about 30,000 tons/year of solid waste - roughly equivalent to 1,875 lbs./person annually. Most of it is hauled and disposed of in the Capital Disposal Landfill in Lemon Creek - Juneau's primary disposal site since at least the 1960s. Two private companies handle the solid waste; Alaska Waste is the trash hauler and Waste Management owns and operates the landfill. Hazardous household wastes, junk vehicles and minimal amounts of recyclables are diverted and shipped south under the RecycleWorks program of the City & Borough of Juneau. A strong, pungent and pervasive odor emanates from the landfill due to bacterial decomposition of organic materials (food waste, yard debris, paper and wood products). Methane, a major component of the resulting landfill gas, is flared off and is a potent greenhouse gas contributing to climate change. At current disposal volumes, the landfill is projected to be full in about 20 years.

The overarching waste management issues facing Juneau are:

- 1) controlling the waste stream into the landfill (to buy the community time and begin to address the landfill odor); and
- 2) developing a future alternative timed to replace the current landfill when it reaches its capacity.

Recommendations. Improving waste management will require education, planning, and action. JCOS recommends that the Assembly:

- 1) Conduct an assessment of earlier CBJ documents on solid waste. Update information as needed. Look at current practices in other cities, and explore partnerships with other agencies, non-profits, and entrepreneurs.
- 2) Adopt a Zero Waste plan, also known as a Resource Recovery plan, which focuses on the CBJ's ability to address waste reduction and waste diversion (reuse, recycling, and composting). Develop clear timelines and action steps. Public education is a key component to change the "throw away" cultural mindset toward a more sustainable community approach that prevents waste and reuses resources where possible.
- 3) Initiate work on a new CBJ landfill site.
- 4) Seek funding to support investigations, planning and site preparations.

The JCOS report's information and conclusions support many of the Assembly members' comments and concerns expressed at its 2/22/21 Committee of the Whole meeting:

- A need for current data on the costs of various options and waste composition, updating the Juneau Solid Waste Management Strategy (2008).
- Information on current waste handling technology, recycling costs-benefits, municipal-scale waste diversion.
- Clarification on CBJ's capability and legal authority to take broader actions on waste diversion and waste reduction, within the current framework of regulated private landfill owner (ADEC permit) and private trash hauler (RCA certificate).
- Encouragement for private sector opportunities in waste diversion.

The Juneau Commission on Sustainability is willing to assist the City in its efforts. JCOS intends to convene sustainability sessions on aspects of the community's solid waste situation to provide public education on what is working and what isn't, what other communities are doing, and the actions households and businesses can take to help address the challenges. JCOS will post information on its website and Facebook page, and can help facilitate public surveys or comments. JCOS can also help research options and opportunities as well as participate in scoping contracts or planning efforts.

Every Juneau resident and business generates waste. Time is on our side if the community acts, but inaction won't make the solid waste challenges go away. The community is at a pivotal point in determining its solid waste future. CBJ can either choose to continue to rely on outside interests and export, or it can build the economy through encouraging resource recovery on a local level.

Attachment: Juneau Solid Waste Fact Sheet

Juneau Solid Waste Fact Sheet and Recommendations for a Course of Actions

by the City and Borough of Juneau Assembly

History, Current Situation, and the Future

Juneau Commission on Sustainability, March 2021

It is well known that Juneau faces solid waste challenges: a smelly, rapidly filling landfill along a main highway, surrounded by homes and business, and recycling markets hundreds of miles away. Much has been discussed and done about the issue over the last three decades, but much has also been put on the back burner. **The hard truth about solid waste is that**

- 1. The landfill is approaching the end of its useful life, and**
- 2. There is no active strategic or tactical planning underway to propose cost-effective alternatives for waste management.**

Every person and business in Juneau create trash, so the entire community without exception will be affected by the landfill closure. By addressing these challenges now, the City and Borough of Juneau (CBJ) can assure that our current waste-handling system is being used to its greatest potential and that solid waste management will smoothly transition to a new system when the existing landfill is no longer viable.

Concern about Juneau's solid waste problems and options is not new. Efforts to extend the useful life of the landfill go back at least 30 years, and the create [Comprehensive Plan of 2013](#) has a section on waste management (see Appendix A) to guide CBJ's actions:

It is in the long-term interest of all people in Juneau to minimize waste disposal and to recycle used materials as a part of local efforts to conserve natural resources. Recycling, where appropriate, will lead to the more efficient and economical use of resources and will lessen the impact on the environment by decreasing the need for the disposal of materials. It is recognized that since Juneau is located far from major recycling markets, it may not be energy efficient to recycle some classes of materials at the present time. Therefore, reduced resource use and careful purchasing practices are especially important. **Direct, immediate or short-term costs should not be the sole consideration for CBJ government support of programs and policies for waste reduction, reuse and recycling. Instead, related indirect, future, or long-term costs should also be considered, such as the costs of landfill operation, closure, and post-closure.** (p 202, emphasis added)

The intent of this document is to provide background information for the Assembly, CBJ staff, and the community so Juneau can begin to take steps toward gaining control over its solid waste future. **This document will provide information on the underlying solid waste factors confronting Juneau and recommend a course of action to the City and Borough of Juneau (CBJ) Assembly.**

Please see Appendices for the details on these subjects:

Appendix A - 2013 Juneau Comprehensive Plan, as pertains to Municipal Solid Waste (MSW)

Appendix B - Juneau Climate Action and Implementation Plan, as pertains to MSW, p 52-55

Appendix C - How is Municipal Solid Waste Managed in Juneau?

Appendix D - What is CBJ's Involvement in Solid Waste Management?

Appendix E - What's the History of Juneau's Solid Waste Management?

Appendix F - How Well is Juneau Doing in its Effort to Improve MSW Disposal and Diversion?

Appendix G - Adopting a Zero Waste Plan

Appendix H - Preparing for the Inevitable Closing of the Landfill

Appendix I - Funding Options

Appendix J - Additional Resources

Why is Solid Waste Management a Growing Concern in Juneau?

1. **Landfill stink** - It is no secret that the landfill stink has been a considerable point of community contention. Juneau Empire opinion pieces and articles, KTOO and KINY coverage, and social media show that complaints and concerns from community members are pervasive. Our landfill, centrally located in the Lemon Creek area, subjects nearly all residents and visitors to a sometimes-overpowering stench.
2. **Greenhouse gas (GHG) emissions** - The anaerobic decay of organics--food scraps, paper and wood products, and yard debris--in a landfill produces landfill gas (LFG). According to the [EPA](#), LFG is composed of roughly 50 percent methane (the primary component of natural gas), 50 percent carbon dioxide (CO₂) and a small amount of other organic compounds. Methane is a potent greenhouse gas 28 to 36 times more damaging than CO₂ at trapping heat in the atmosphere over a 100-year period.
3. **Landfill lifespan** - The CBJ 2008 Solid Waste Management Strategy, now 13 years old, indicates a 25-to-30-year life, or a 2034 - 2039 closure of the privately owned and operated landfill. According to Capitol Disposal Landfill's (CDL) permit issued by the Alaska Department of Environmental Conservation (ADEC), it accepts approximately 30,000 tons of waste per year. Based on that waste acceptance rate, CDL can continue to operate until 2046, although their plan indicates that a two percent annual increase in disposal volume would reduce the landfill's life by 7-9 years. Notably, the cruise industry's 2019 additions to the landfill of [1,534 tons](#) accounted for five percent of the CDL's total annual tonnage.

4. **Long term control and costs** - CBJ does not own the landfill. While it may have the legal authority to limit what goes in the landfill, CBJ does not have solid waste ordinances restricting what can and cannot be landfilled. Under these circumstances, it is difficult to increase waste diversion of materials that hasten the end of the current landfill's lifespan. Waste Management (WM, the parent company of Capitol Disposal Landfill, which owns 293 active landfills and 346 transfer stations in North America) is not necessarily motivated to extend the useful life of the landfill nor is it incentivized to support the community values of recycling or waste reduction. The corporation appropriately serves their profit maximization strategies and their shareholders.

How Can CBJ Improve Waste Management in the Community?

The above problems are related. What goes in a landfill determines the lifespan of that landfill, how bad a landfill smells, and the amount of greenhouse gases a landfill produces. This interrelationship simplifies the analysis of Juneau's solid waste management. The issues of landfill smell and GHG emissions can be seen as subordinate to the two major waste management issues facing the community:

1. **Controlling the waste stream into the current landfill (which can be done by owning the new landfill and/or through ordinance) and**
2. **Developing a future alternative that will replace the current landfill when it reaches its capacity.**

Improving waste management in the community will require education, planning, and action. To get started, the CBJ Assembly could/should direct staff to:

1. **Conduct a formal assessment**, starting with a literature review of CBJ documents related to solid waste, including studies, reports, memos, plans, and ordinances. Gather current data on costs, practices, and technology, using examples from other communities, such as Whitehorse Yukon Territory, which is similarly populated and isolated. Look to Anchorage for examples of how it manages its municipality-owned landfill and how it has expanded recycling programs beyond exporting commodities to the Lower 48. Explore partnerships with various entities, including JEDC, Southeast Conference, Native corporations, UAS, the State of Alaska, institutions, non-profits, and entrepreneurs.
2. **Adopt a Zero Waste¹ Plan** (or Resource Recovery Plan) to establish a clear timeline and action steps. Consider a backward-planning sequence so the community can work backward from a waste reduction goal and then identify all requirements and processes needed to accomplish this goal by a proposed goal completion date. This would also include exerting some control over the waste stream and possibly creating an industrial park reserved for recycling, composting, and reuse facilities. The process of creating the

¹ "Zero-Waste" is a paradigm of waste management based on the principles of waste prevention that encourages the redesign of resource life cycles so that all products are reused. It is a long-range goal to divert 90% of materials from landfilling/incineration. It does not mean there is no waste. Many municipalities and corporations are switching to this model.

plan would involve both community input and education, and progress toward the goals should be publicized and publicly available in an easy-to-update, real-time online dashboard. See Appendix G for details.

3. **Initiate planning for a new CBJ landfill.** This process would thoroughly explore options, requirements, and costs for a new city-owned landfill and can be expected to take several years. The process would follow the steps outlined in the Solid Waste Management Plan of 2008 and would take into consideration Not-In-My Backyard (NIMBY) opposition and updated neighborhood Area Plans. By owning the future landfill CBJ will finally have the opportunity to control the waste stream. See Appendix H for details.
4. **Seek funding.** Investigate opportunities for and apply for federal, state, and other funding to defray costs, and enact waste surcharges now to generate an investment reserve fund that will be used to defray future capital costs. Engage with stakeholders to work with State legislators to develop grant and low-cost loan programs to spur private development in this sector of the local and regional economy. See Appendix I for details.

These four tasks will help CBJ address both immediate and long-term solid waste management shortcomings and ensure a better future for the community. Controlling the waste stream now will extend the life of the current landfill and allow for community education and action that will build a multi-faceted system of waste reduction and resource recovery. Planning for and launching a city-owned landfill in the future will guarantee that the community's sustainability goals and values are achieved, while creating local jobs. By having control of the waste stream CBJ will ensure that the future landfill's space is used economically and only for materials that cannot otherwise be recovered. The community is at a pivotal point in determining its solid waste future. CBJ can either choose to continue to rely on outside interests and export, or it can build the economy through encouraging resource recovery on a local level.

Appendix A

2013 Juneau Comprehensive Plan, as pertains to MSW. p 202-206.

“Waste Management

Management of solid and household hazardous waste is an essential community service. Assurance that waste management, including disposal, occurs in an aesthetic, safe, convenient, cost-effective, and environmentally sound manner is critical to protect the health, safety, and environment for our citizens. Local government typically provides solid waste management services, directly with its own personnel, indirectly with one or more contractors, or through a combination of both public and private service provision. In Juneau, curbside pickup of solid waste and recyclables as well as landfill operations are conducted entirely by the private sector, while source separated drop-off recycling, household hazardous waste collection and disposal, and junked vehicle disposal are currently conducted by private firms. Plans for future waste management in Juneau call for developing a single household hazardous waste collection facility that is open to the public on a more regular basis than is currently available, as well as drop boxes for recycling and other changes that will make recycling more accessible to Juneau residents.

Heightened concern about the negative environmental impacts of solid waste landfills have resulted in more stringent federal standards for siting, operating, closing, remediating, and monitoring of landfills. This has resulted in greater care and costs in managing existing landfills and constructing new ones. Nationwide, there is an emphasis on developing integrated waste management systems in which waste reduction, reuse and recycling are preferred over traditional waste disposal options of incineration and landfilling. This is the approach pursued by the CBJ in the preparation of the *Final Solid Waste Management Strategy for the City and Borough of Juneau* in 2007 and the Solid Waste Management Program Implementation of 2009. Of particular concern by the public are programs that address waste stream reduction and curbside pick-up of recyclable material. In 2012, curbside pickup of recyclable materials was initiated by the private sector. This program will certainly affect the solid waste stream in Juneau, but the full impact of this new service will need to be evaluated over time.

Waste Reduction, Reuse and Recycling

It is in the long-term interest of all people in Juneau to minimize waste disposal and to recycle used materials as a part of local efforts to conserve natural resources. Recycling, where appropriate, will lead to the more efficient and economical use of resources and will lessen the impact on the environment by decreasing the need for the disposal of materials. It is recognized that since Juneau is located far from major recycling markets, it may not be energy efficient to recycle some classes of materials at the present time. Therefore, reduced resource use and careful purchasing practices are especially important. Direct, immediate or short-term costs should not be the sole consideration for CBJ government support of programs and policies for waste reduction, reuse and recycling. Instead, related indirect, future, or long-term costs should also be considered, such as the costs of landfill operation, closure, and post-closure. The CBJ government understands that effective efforts towards materials conservation, reuse, and recycling, as well as energy conservation, necessarily involve close and on-going communication, coordination, and cooperation between the public, private and non-profit sectors. While some programs may not be cost effective in Juneau alone, the CBJ government could work with regional entities such as the Southeast Regional Solid Waste Authority, that are currently developing plans for a central facility for the region. It would also benefit the Juneau community for the CBJ government to work with other local and regional entities to develop inter-local agreements to increase volumes of recyclables shipped to markets.

POLICY 12.4. TO FACILITATE THE REDUCTION OF WASTE MATERIALS GENERATED AND DISPOSED BY HOUSEHOLDS AND BUSINESSES THROUGH PROMOTION OF AN AGGRESSIVE SOLID WASTE DIVERSION PROGRAM INCLUDING ACTIVITIES FACILITATING WASTE PREVENTION, REUSE AND RECYCLING.

Development Guideline

12.4 - DG1 When reviewing building or use permits for major residential and non-residential developments, ensure that the design of the project incorporates adequate space and facilities in appropriate locations to facilitate separation of recyclable waste materials and access for the pick-up and transfer of those materials to appropriate recycling centers.

Implementing Actions

12.4 - IA1 12.4 - IA2

12.4 - IA3 12.4 - IA4

12.4 - IA5 12.4 – IA6

Implement the *Final Solid Waste Management Strategy for the City and Borough of Juneau*, as adopted on November 29, 2007 and amended January 7, 2008.

Require companies that do business with the CBJ to implement waste reduction and recycling Best Management Practices (BMPs); these BMPs should be required as qualifications for CBJ purchasing procedures.

Create incentives for businesses that implement a waste reduction plan.

Consider community service programs, including halfway house correctional programs, as potential human resources for recycling and waste reduction efforts, such as for the sorting of recyclables at a recycling center.

Facilitate identification and permitting of a “stump dump” landfill site for near-term use by residential and non-residential builders.

Work with the cruise industry and other industries creating large amounts of solid waste to reduce the amount of waste entering Juneau’s landfill and to increase the amount of solid waste that is recycled.

POLICY 12.5. TO PROMOTE EFFICIENT, SAFE, CONVENIENT, COST—EFFECTIVE AND ENVIRONMENTALLY—SOUND METHODS FOR THE DISPOSAL OF SOLID AND HAZARDOUS WASTE.

Development Guideline

12.5 - DG1 When reviewing building or use permits for the areas around the candidate landfill sites identified in the October 1993 *Technical Reconnaissance Study for New Landfill Site Selection*, be cognizant of the on- and off-site impacts that could be generated by landfill operations at those sites.

Implementing Actions

12.5 - IA1 12.5 - IA2

12.5 - IA3

Implement the *Final Solid Waste Management Strategy for the City and Borough of Juneau*, as adopted on November 29, 2007 and amended January 7, 2008.

Identify on the Comprehensive Plan Land Use Maps new locations suitable for burial of human and animal remains in a way that does not consume large land areas. Such new sites may include crematoria and publicly-accessible places to honor loved ones with plaques and similar features, rather than the location of buried remains or stored ashes.

Work with regional organizations to develop a regional solid waste authority to deal with solid waste issues region-wide.

TO ENCOURAGE WASTE REDUCTION, REUSE AND RECYCLING ACTIVITIES THAT HAVE Implementing Actions

12.6 - IA1 Implement the *Final Solid Waste Management Strategy for the City and Borough of Juneau*, as adopted on November 29, 2007 and amended January 7, 2008.

12.6 - IA2 Coordinate/cooperate with villages, towns, municipalities, private companies and non-profit organizations within the region on solid waste management programs.

Hazardous Materials

Federal law requires information-sharing regarding extremely hazardous material. This law is known as the Emergency Planning and Community Right-to-Know Act. It is intended to encourage and support emergency planning efforts at the state and local level and to provide communities with information concerning potential chemical hazards. In addition, the federal government is required to identify and investigate potentially hazardous waste sites within the community and enforce cleanup if the existing materials are considered hazardous.

In the early 1990's, municipalities were required to take responsibility for household hazardous wastes. In September of 1992, an assessment for disposal of household hazardous wastes was added to the city's utility bills. At present, the household hazardous waste disposal program offers seven collection events annually, with plans for expansion of the service to three days each week under negotiation.

There is clearly a local responsibility to be aware of the location, nature, and potential effects of hazardous materials and to minimize the possibility of injury, death and property damage from the inappropriate storage, use, disposal, or release of such materials.

POLICY 12.7. TO ASSIST IN THE IDENTIFICATION AND MITIGATION OF IMPACTS ASSOCIATED WITH HAZARDOUS MATERIALS.

Standard Operating Procedures

12.7 - SOP1 Cooperate with state and federal agencies in the investigation of hazardous waste sites.

POLICY 12.6. POSITIVE ECONOMIC AND/OR ENVIRONMENTAL BENEFITS.

12.7 - SOP2 Working in conjunction with enforcement agencies such as the federal Drug Enforcement Agency (DEA), the Alaska State Troopers, and the Juneau Police Department, provide managed hazardous and pharmaceutical waste disposal opportunities.

12.7 - SOP3 Provide information to the public regarding managed hazardous waste disposal opportunities.

Development Guideline

12.7 - DG1 When applicable, require safe, alternative (off-site) siting of more than a weekly supply of hazardous materials for businesses, and/or a Best Management Plan with appropriate mitigation measures in the event of a failure of these measures when approving permits for new development.

Implementing Actions

12.7 - IA1

12.7 - IA2

Collect, map on the GIS system, and assess data on the type, amount and location of hazardous materials in the community. This information is to be made available to emergency service personnel for use in developing proper care and storage Best Management Practices for each hazardous materials user, and in planning and implementing an emergency response program for each site.

Consider adopting an ordinance to control the transportation of explosives and ammunition through congested areas of the borough, particularly downtown Juneau, and to limit the time during which such materials may be transported in order to minimize the risk to visitors to and residents of Juneau posed by such materials.

Litter and Junk

The general CBJ government activity of devising and enforcing rules against litter and inappropriate stockpiling of junk has been gathered under the program name “Junk Busters.” The program embraces the efforts of the Community Development Department, the Police Department and work by associated contractors and organizations. Television, radio and newspaper advertisements have been developed to promote understanding of litter laws, encourage participation toward solving litter-related problems, and to let the public know what to do if there is a problem. A Junk Busters hotline was established in 1994 that provides three services: Submittal of litter and junk complaints 24 hours a day; a recorded message about current recycling opportunities available in the community; and recorded information about household hazardous waste and waste oil disposal.

Litter Free, Inc. is a non-profit organization with a broad spectrum of volunteers from the community. The CBJ Assembly has provided them with financial support to aid their efforts toward coordinating volunteer and non-profit organization cleanups of public areas in borough. In addition, the CBJ government assists in the annual spring cleanup sponsored by Litter Free, Inc.

Another component of the Junk Busters program addresses illegal dumping. Illegal dumping on public land is reported to CBJ, usually through either the Juneau Police Department or the Parks & Recreation Department, and an investigation of violators is initiated. If investigators are unable to find the culprits or unable to get them to clean up, and when all other methods have failed, CBJ agencies clean up the

property and, if the violation occurs on private property, recovers the cost through a property tax lien. In 2012, the Parks & Recreation Department began using video surveillance cameras at popular dump sites to assist in identifying dumpers and holding them accountable for their actions.

Success in these efforts can be defined in two stages. The first is evidenced by the large amounts of refuse being gathered and properly disposed represents the cleanup of both current and long-standing litter and junk problems. The second is demonstrated by a history of steadily reduced amounts of material that has to be gathered, indicating that the community is making progress toward the goal of preventing litter and junk in the first place.

POLICY 12.8. TO CARRY OUT AND IMPROVE PROGRAMS THAT WILL BOTH REDUCE AND ELIMINATE LITTERING AND ACCUMULATION OF JUNK WITHIN THE BOROUGH AS WELL AS CLEAN UP SUCH MATERIAL WHEN IT IS FOUND.

Standard Operating Procedures

12.8 - SOP1 Support a marine cleanup program, including community awareness to discourage use of disposable plastics. Assist the commercial fishing industry in establishing a fishing net recycling program.

12.8 - SOP2 Support non-profit, anti-litter organizations such as Litter Free, Inc. to organize and coordinate community clean up events and standard operating procedures.

12.8 - SOP3 Update and improve litter and zoning ordinances that will result in improved community appearance.

12.8 - SOP4 Provide information to the public regarding recycling opportunities and the use of recycled or recyclable materials such as cloth shopping bags instead of plastic ones.

Implementing Actions

12.8 - IA1 12.8 - IA2 12.8 - IA3

12.8 - IA4

The CBJ should implement the *Final Solid Waste Management Strategy for the City and Borough of Juneau*, as adopted on November 29, 2007 and amended January 7, 2008.

Revise the Land Use Code to limit the number of unlicensed or inoperative vehicles allowed on residential property.

Investigate, with the business community, a cost-effective method for disposal of recyclable materials.

Evaluate the need to provide additional facilities for waste oil disposal.”

Appendix B

2011 Juneau Climate Action and Implementation Plan (p 52-55)

“Goal U-5: Reduce GHG emissions and energy use from solid waste processing.

Nationwide, manufacturing accounts for 23% of the total energy use (Shuford, et al., 2010). Nearly all the goods purchased in Juneau are produced outside of the community's boundaries. GHG emissions associated with this production and transportation to Juneau are not included in the emissions inventories.

Traditionally, solid waste reduction involves a three-part approach: reducing, reusing, and recycling. Reduction is the most important step; buying and using fewer unneeded products, selecting products that use less packaging, and choosing durable rather than disposable items lessen a community's solid waste processing burden. Reuse involves such measures as donating used goods to charity and maintaining and repairing rather than replacing broken items. After these waste-reducing measures are achieved there will still be high volumes of solid waste, a large portion of which should be recycled.

Reducing the amount of goods that are consumed in our community will reduce the energy used to both manufacture goods and transport those goods to Juneau, and, ultimately, landfill volumes will be lowered, resulting in decreased GHG emissions from the off-gassing of landfill- produced methane.

In the average residence, compostables can account for up to 40% of solid waste by weight. Composting residential waste, fish waste, sewage sludge, and wood waste could also reduce the solid waste entering Juneau's landfill that adds to its GHG emissions.

Juneau's landfill, which is operated by Waste Management Inc., is located in the Lemon Creek drainage. The community produces an average of 33,000 tons of waste annually, with approximately 75% of it coming from residential or commercial sources and 25% from construction and demolition debris. Just over 2,000 tons of aluminum, steel, glass, plastics (#1

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and #2), paper, and corrugated cardboard were recycled at the Waste Management recycling center in 2010.

Expanding local capacity to process recycled materials has the potential to reduce GHG emissions. As noted above, when less waste enters the landfill, less methane is released. Currently, recyclables must be transported by barge to the Lower 48 for processing. Local processing of this material would decrease recycling costs, as well as GHG emissions associated with barge transport.

Local government has direct control over the amount of waste generation and recycling undertaken in its buildings and at other facilities. Many buildings have adequate recycling facilities and good rates of diversion, while others do not.

Local governments, businesses, and individuals can make a difference in GHG emissions through purchasing goods that have been manufactured using methods that produce fewer GHGs, use less packaging, are more durable, are manufactured nearby, and can be reused or recycled.

Strategy U5-A. Reduce the amount of solid waste generated in Juneau	
Short-Term Actions	Responsible Party
Mount a campaign to educate residents about the importance of waste reduction. Campaign could encourage use of reusable bags, coffee cups, and plastic water bottles.	CBJ government/ Community
Promote the utilization of reuse and repair businesses in outreach to businesses and residents.	CBJ government
Work with businesses to reduce/eliminate use of disposable containers or increase use of compostable containers if composting facilities are provided.	CBJ government
Discourage use of single-use plastic bags.	CBJ government/ Community

Strategy U5-B. Reduce waste associated with local government facilities and operations	
Short-Term Actions	Responsible Party
Work with CBJ departments to identify strategies for increasing recycling at Borough facilities.	CBJ government/ Friends of Recycling
Complete an audit of waste from various departments and use results to make changes that will reduce waste.	CBJ government

Increase reuse of surplus items. Use freecycle or other giveaway processes for non-salable surplus items.	CBJ government
Consider updating procurement policies to promote purchasing of fewer disposable and more durable items.	CBJ government
Adopt a sustainable procurement policy that seeks to procure all supplies, services, maintenance, construction, and architect-engineer services in a manner that promotes increased energy efficiency and reduced GHG emissions.	CBJ government

Strategy U5-C. Increase the rate of recycling in Juneau and expand capacity to process recycled material

Short-Term Actions	Responsible Party
Educate the public about opportunities for waste reduction and recycling.	CBJ government/ Friends of Recycling/ Waste Contractor
Make recycling a condition of permits issued by local government for special use and festivals and other events. Increase awareness around best practices and resources for waste reduction at events.	CBJ government/ Community
Support efforts to increase recycling in public spaces such as the airport and Centennial Hall.	CBJ government
Target commercial operations and institutions to increase participation in waste reduction and recycling efforts.	CBJ government/ Friends of Recycling
Keep clothing and fabric out of the landfill by encouraging residents to recycle clothes. Consider innovative options for cloth recycling.	CBJ government/ Community
Place recycling collection bins in neighborhoods throughout the community, e.g., at schools, shopping centers, or publicly-owned buildings.	CBJ/Recycling Contractor
Add a free store or take-it-or-leave-it location at the landfill where reusable items can be dropped off and picked up.	CBJ government/Waste Contractor
Extend recycling contract from 3 years to 10 years to allow bidder to invest in new infrastructure, increase space, etc.	CBJ government
Implement a curb-side recycling service in Juneau.	CBJ government/ Recycling Contractor
Encourage businesses to use “deconstruction” services when undertaking demolition and renovation projects, including selective dismantlement of building components for reuse and recycling.	CBJ government

Strategy U5-D. Develop a municipal composting system

Short-Term Actions	Responsible Party
Research and develop a municipal composting facility in a central location. Consider composting sewage sludge, fish waste, brewery waste, wood scraps, yard waste, and household compostables, drawing on the composting experiences of other communities in the region, e.g., Gustavus, Haines, and Whitehorse.	CBJ government
Long-Term Actions	Responsible Party
Consider the feasibility of developing a commercial biomass recovery facility that could accept various biomass waste streams such as sewage sludge, landscape/tree residue, waste/recycled paper and cardboard, and cooking grease, for energy recovery.	CBJ government

Long-Term Actions	Responsible Party
Increase capacity of the recycling center and expand the types of items that are recycled, especially plastics.	CBJ government/ Recycling Contractor
Support local efforts to recycle paper or glass. Update the recycling contract to require contractor to use recyclables locally where possible.	CBJ government/ Recycling Contractor
Support a Re-Build facility where construction materials can be salvaged and recycled. Could include construction materials, glass jars, etc. CBJ could donate land or provide an old warehouse or provide land for a building or use a portion of an existing warehouse.	CBJ/Community Partners

Strategy U5-E. Consider a waste-to-energy system for Juneau

Long-Term Actions	Responsible Party
Consider the economic feasibility of developing a waste-to-energy facility in Juneau.	CBJ government/Waste contractor

Appendix C

How is Municipal Solid Waste (MSW) Managed in Juneau?

The major players in MSW management are:

- **Capitol Disposal Landfill (CDL)** operates Juneau's landfill under an ADEC solid waste permit. The current permit expired in December 2020, and permits are renewed in 5-year increments. Locally, CDL charges a tipping fee for users based on either volume, weight, or count, depending on the contents of the load. Basic rates range from \$40 for a 6' truck bed load to \$0.09 a pound for trailer loads. In [2020 national tipping fees](#) averaged \$53.72 per ton, while in the Pacific region the average was \$72.03 per ton. However, Juneau's tipping fee of \$180 per ton is 235% above the national average. The landfill and CDL rates are not regulated by the Regulatory Commission of Alaska (RCA).
- **Alaska Waste** is the local trash hauler for both residential and commercial Municipal Solid Waste, and residential recycling. It is an Alaskan corporation that serves 14 communities and is not related to CDL or Waste Management Inc. Rates for trash service range from \$27.53/month for weekly service of a 48-gallon bin to \$40.62/month for service of a 96-gallon bear-proof cart, plus cart rental fees. Bi-weekly, co-mingled recycling rates range from \$9.84-\$14.76/month. The RCA regulates trash collection service and rates in Alaska under a certificate for public convenience and necessity that requires the certificate holder to provide services. Alaska Waste holds the only trash collection certificate allowed by the RCA for Juneau. Recyclables collection is not regulated by the RCA. Alaska Waste uses the CBJ-owned recycle baler (located at CDL) to prepare recycling for shipping out of Juneau.
- **Skookum Sales & Recycling** is a Juneau-based company that collects metal of all kinds and ships them out of Juneau for recycling. CBJ also contracts with Skookum to run the junk vehicle program. Their rates range from \$5 per carload to \$150 per dump truck load. The junk vehicle rate is \$472/vehicle, but the CBJ junk vehicle program, funded out of the City's general fund, covers that fee for Juneau-registered vehicles.
- **Juneau Composts LLC** is a Juneau-based company that collects residential and commercial food scraps, yard debris, and other organics for recycling locally. It collected 112 tons of food scraps in 2020 and many tons of yard debris. It charges \$17-\$25 per month for weekly curbside residential service and \$7-\$40 per load for yard debris. Commercial rates vary.
- **RecycleWorks** is a CBJ program operated under the CBJ Engineering & Public Works and Engineering (E&PW) Department. They manage contracts for collecting and shipping recyclables for export. More detail in Appendix D.

Appendix D

What is CBJ's involvement in solid waste management?

As previously noted, the CBJ does not own, manage, control, or issue permits for the landfill, trash collection, or recycling. The CBJ neither directly spends money on, nor gets revenue from, trash disposal services, with the exception that CBJ staff services city-owned public trash receptacles and pays a tipping fee for that disposal at the landfill.

Although the CBJ does not manage solid waste as a bundled trash and recycle public service paid for under property taxes or utility bills, CBJ does contract for some recycling services. The RecycleWorks program, under the CBJ Engineering & Public Works and Engineering (E&PW) Department, does not regulate nor require trash and recycling service for businesses or residences but does operate with local tax money.

The CBJ E&PW Department pays for the following recycling contracts with private companies using tax dollars:

Household Hazardous Waste (HHW) with Clean Harbors Co, located CDL	\$351,000 FY20
HHW shipping with Samson Tug and Barge	\$143,000 FY21
Junk Vehicle Program with Channel Construction, the parent company of Skookum Sales & Recycling.	\$340,000 FY21
Internal recycling collection with RockDog Recycling	\$30,000 FY21
E-waste Recycling.	\$100,000 FY21
Recycle Center processing and building use w/Waste Management at CDL.	\$540,000 FY21

A CBJ model, based on a 2006 Kodiak waste characterization study, estimated that 23,800 tons of MSW was produced annually and that about 60% by weight was recyclable. (Note that composting is a form of recycling). See the figure and table below from p 20-21 of the Solid Waste Management Strategy of 2008. Without a current waste characterization study the community has no firm data regarding the type and volume of materials that currently go into the landfill. While CBJ has data on material diverted for recycling through its RecycleWorks program, there is no firm data on what is diverted by all sources of recycling (including home composting and private recyclers not contracted through CBJ.)

Figure 4

Overall Composition of CBJ Disposed Waste

Based on 2006 Data

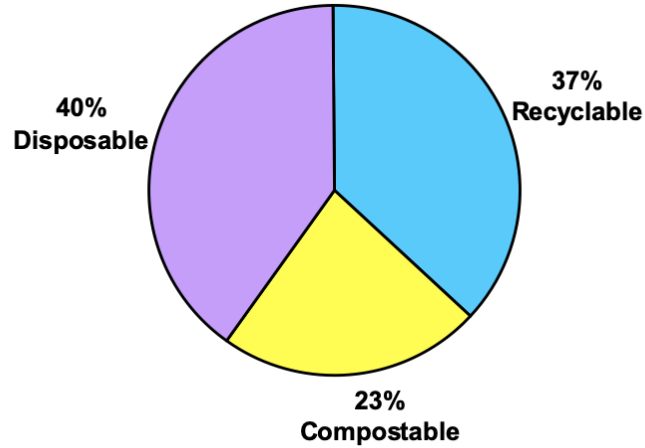


Table 4: Composition Model for CBJ Disposed Municipal Solid Waste

Material Categories and Types		Percentage by Weight	Tons (Calendar Year 2006)
Paper		34.3%	8,168.55
	Newspaper**	4.9%	1,166.94
	White / Mixed Paper**	3.0%	714.45
	Office Paper**	2.7%	643.01
	Magazine / Books / Mail**	4.2%	1,000.23
	Cardboard**	12.6%	3,000.69
	Other Paper	6.9%	1,643.24
Plastics		5.6%	1,333.64
	Recyclable**	1.9%	452.49
	Film	1.8%	428.67
	Other	1.9%	452.49
Glass		4.4%	1,047.86
Metals**		7.7%	1,835.49
	Aluminum Cans	0.8%	190.52
	Tin Cans	1.0%	238.15
	Other Metals	5.9%	1,406.82
Diapers		1.5%	357.23
Food Waste***		11.9%	2,843.99
Yard Waste***		3.4%	803.27
Lumber & Wood***		7.5%	1,779.92
Electronic Waste		1.1%	262.97
Batteries		0.1%	23.82
Other		22.5%	5,358.38
Total		100.0%	23,815.10
Notes:			
** Recyclable Materials – tons			8,813.29
% of waste stream by weight			37.0%
*** Compostable Materials – tons			5,417.18
% of waste stream by weight			22.8%

CDL states that landfill numbers have been flat at 30,000 tons a year for many years. CBJ's recycling program handles around 1,800 tons annually, which is just 6% of CDL's estimated annual landfill tonnage. Not included in these figures is the tonnage of recyclables collected by private entities not contracting with RecycleWorks.

Since the landfill is unlined, CDL's ADEC permit does not require them to control, sample, or manage leachate. As approved by the CBJ, the liquid from the collection system is directly discharged into the public sewer system for treatment and disposal, which does put pressure on the Mendenhall wastewater facility and its ability to maintain compliance with its ADEC wastewater permit. CBJ Engineering and Public Works Department is currently working to assess and address commercial and significant industrial users of the public wastewater facility.

The conditions under which the commodity recycling contracts were developed have changed dramatically over the years. When the Solid Waste Management Strategy of 2008 was conducted, as well as the Solid Waste Action Plan of 2015, the commodities market for recyclables was high. In 2018 China announced the [SWARD policy](#), which overnight caused the commodities market to crash, and left nowhere for recyclables to go. According to CBJ RecycleWorks, aluminum and cardboard are currently the only two commodities that bring in revenue.

In 2016 there was a revenue sharing agreement between CBJ and WM to incentivize WM to increase recycling. Even though revenues were high, the expenses exceed revenues. Ms. Elfers, then manager of the RecycleWorks program, stated that "If the programs continue to be successful and grow, and the community and the Assembly continue to value their impacts, we will have the following options: 1. Increased fees, 2. Scaled-back programs, 3. Consolidation of programs at one location may allow for cost savings." At that time, she noted that CBJ RecycleWorks received revenues primarily from a \$4 monthly fee on utility bills and a \$22 annual fee for Motor Vehicle Registration, which were set in 2003-2004. If the commodity recycling program was not financially sustainable at the time when commodity revenues were high, it is likely that the numbers are worse off now.

Ordinance 2019-40 repealed the \$4 fee as of January 2020, and the DMV vehicle registration revenues were directed to the CBJ Fleet/Streets division beginning in FY2021. RecycleWorks funding was shifted from an enterprise fee-based program to a general-funded program in FY2020. In FY2020 the contract for WM to receive and bale all recyclables was \$256,500, the shipping was \$149,161, and revenue generated was \$39,930, for a total program cost of \$365,731.

Below is a breakdown of recycled materials collected in FY2020:

Material	Tons Collected in FY2020
Tin	17.47
Paper	459.41
Cardboard	826.3
Plastic	55.91
Aluminum	19.99
Glass	299.36 (this is crushed and used in landfill operations. Not technically diverted)
Total	1,379.08 excluding glass 1,678.44 including glass

In FY2021, the WM contract is budgeted for \$540,000, but the actual cost will depend on several factors: the amount of material collected, shipping costs, revenues for materials sold, and expenses for materials disposed of. There is a fixed “operating fee” of \$27,000 per month, \$10,500 of which covers the cost of the new building over the next 10 years. It is worth reviewing whether the continuation of a commodity-based recycling program is the most effective use of funding intended to divert materials from the landfill.

Without taking into account CBJ staff time for day-to-day operations in FY2020, CBJ paid \$365,730 for diverting 1,678 tons of material from the landfill. The price per ton of diversion was \$265.20/ton excluding glass, and \$217.90/ton if glass is included. Dividing the total cost by total pounds, comes to \$0.11-\$0.13 per pound. With the additional building fee of \$126,000/yr., the rate will likely be closer to \$0.15-\$0.17/pound. This rough number can be valuable in assessing the financial prospects of other types of landfill diversion, including source-reduction, reuse, and local recycling.

Appendix E

What's the History of Juneau's Solid Waste Management?

- In the 1960s, Juneau's current landfill began operation with the Tonsgaard family under the business name of Channel Sanitation.
- In 1985 Channel Sanitation installed a garbage incinerator.
- In 1992 a CBJ study analyzed [municipal ownership of the landfill and collection services](#). It found that ownership was in the city's best interest so it could control the waste stream. **The city did not purchase the landfill, gain collection rights, or gain control of the waste stream.**
- In 1993 the idea of a new landfill was assessed and [locations were evaluated](#). **The city did not follow up on the recommendations.**
- In 1999, the landfill was sold to Waste Management, dba Capital Disposal Landfill which continued to operate the incinerator until 2004. Due to costs of required environmental upgrades, the incinerator was decommissioned in 2004, and MSW again went into the landfill.
- In 2007-2008 CBJ prepared a [Solid Waste Management Strategy](#). The executive summary states:

“The original Request for Proposals (RFP) issued by the CBJ...stated the Strategy should address methods of achieving Juneau's commitment to integrated solid waste management practices as expressed in the Comprehensive Plan and Assembly Resolution 1433 (March 19, 1990). Those practices are, in order of priority:

 - Waste reduction,
 - Recovery / recycling of resources,
 - Recovery / recycling of heat or electricity from waste incineration,
 - Treatment and processing of waste to reduce volume,
 - Waste incineration, and,
 - Landfilling in an environmentally sound manner”
- In 2007 [Southeast Conference](#) conducted a study on [a regional Southeast landfill](#). Juneau produces about one-half of the waste stream of SE Alaska (based on population). Regional interest was high, but it was deemed infeasible without the commitment of Juneau's waste stream.
- In 2009 the CBJ Assembly initiated a plasma arc Feasibility Study on Plasma Arc Gasification and Waste to Energy Options. The project was deemed infeasible by Waste Management.

- In 2015, CBJ created a [Solid Waste Action Plan](#) which included branding RecycleWorks as a program to divert materials from the landfill, and developing contracts to execute programs. A drop-box recycle program provided the community with 24-hour access to receptacles for glass, cardboard, and paper recycling. No measurable increases in recycling resulted from the containers, and contamination with regular garbage was an issue, so the program was halted in 2020.
- In 2016 the CBJ and Cedar Grove LLC (based in Seattle) performed a Municipal Compost Feasibility Assessment. The city unsuccessfully attempted to purchase a new property for this in 2017. Permission to lease a site at CDL for composting was secured through 2018 CBJ Ordinance 2018-37.
- In 2018 - 2019 CBJ adopted Ordinances 2018-37 and 2019-13, which outlined Waste Management as the recycling contractor at CDL for a 30-year term.

Appendix F

How Well is Juneau Doing in its Effort to Improve MSW Disposal and Diversion?

- The CBJ efforts regarding Household Hazardous Waste have been successful with a high level of HHW recovery, which avoids pollution and takes stress off the CBJ wastewater utility. However, the program has little tangible effect on the volume of material diverted from the landfill.
- Juneau improved from a 4% recycle rate in 2006 to a 6% recycle rate in 2019. CBJ does not have any targeted diversion goals, so direction is not focused. Many progressive communities have significantly higher recycle rates and clear, ambitious goals. For example, Whitehorse, Yukon Territory, recycles 33 % of waste and has a goal of zero waste (90% diversion) by 2040.
- Despite a CBJ 2008 solid waste study, Juneau has made little progress regarding landfilling and reusing our waste stream resources wisely. While a drop-off recycling program, a HHW program, and curbside recycling program have been established, these programs are insufficient to forestall the inevitable filling of Juneau’s sole landfill.
- The CBJ has accumulated many reports and studies declaring a general concern with MSW. However, goals have been vague and disjointed and action steps lacking. The CBJ has taken few steps to develop a robust and comprehensive MSW system that is compatible with Juneau’s community values outlined in the [Comprehensive Plan](#) and that is in sync with the modern resource-recovery/circular-economy approach of the current times.
- Juneau’s multi-decade waste management problems are made difficult by a complex web of conflicting interests - a private landfill owner, a private refuse collector, and public (CBJ) recycling efforts. Each entity has different goals, objectives, and motives that are not aligned with each other and may not be aligned with community values. The CBJ, as a Home Rule municipality in Alaska, however, has the ability to establish controls that: 1) reduce waste (i.e., eliminate certain commodities used by the community, such as single-use plastic bottles, utensils, food containers, bags); and 2) divert food, yard, and construction wastes from the landfill.

Appendix G

Adopting a Zero Waste Plan

In order to come up with a percent diversion goal, CBJ will need the data from its formal solid waste assessment and will need to engage stakeholders. The level of control CBJ chooses to enact will determine what levels can be achieved.

CBJ does not place restrictions on what is landfilled, so anything other than hazardous waste is allowed to be landfilled. With control of the waste stream CBJ could mandate certain types of recycling by rejecting them or charging additional fees for them at the landfill. It could also implement a tighter pay-as-you-throw price structure, which incentivizes generators to produce less waste. If trash and recycle service was bundled into taxes, there could be a low baseline trash volume and a high baseline recycle volume so that those who generate excessive trash would have to pay additional fees. Contamination education and fines would need to be part of the equation. Controlled waste streams and actions to focus on are:

Restrict the landfilling of organics. (~35% of waste stream by weight) More than 20 states have banned yard debris from landfills, which tends to be an easy category for municipalities to regulate and is an easy diversion to extend landfill life. This type of diversion would require increased composting infrastructure and could be developed by the private sector. Five states have banned landfilling food scraps, though it is a much more involved action that requires strategic, incremental implementation. This action would also help increase local food production as called for in the Juneau Climate Action Plan. (p 62)

Redirect Construction and Demolition (C&D) debris. (~23% of waste stream by weight) C&D debris includes many different types of material. Wood, metal, plastic, insulation, drywall etc. After gathering stakeholder input, a process could be established for sorting material on job sites so it can be directed for recycling. A C&D recycling facility could be developed by the private sector.

Restrict the use of single-use plastics. Many municipalities have various types of banned single-use plastics. The European Union and Canada both have nation-wide bans. While these items are a relatively small portion of the waste stream, they are significant sources of litter. More importantly, they are “low-hanging fruit” to be used as an education tool to create a cultural mind-shift around solid waste. Restricted materials typically include plastic bags, cutlery, straws, and Styrofoam food service ware. These items are generally replaced by reusables or compostables.

Redirect usable goods. Items which are still usable should be rerouted. A robust network of thrift stores, consignment shops, repair and upcycle shops, agencies seeking donations, and people wanting used goods can prevent unwanted items from becoming waste.

Can the CBJ control the waste stream?

Past CBJ documents state that CBJ could not control the waste stream because they do not own the landfill. But many states, counties, and municipalities regulate the waste stream without owning landfills or collection rights. A key point of consideration is that hauling recyclables is not regulated by the RCA, so items deemed as *resources* instead of *MSW* could be hauled by any number of companies. The city could theoretically control a portion of the waste stream by providing incentives for the private sector to develop resource recovery models that coordinate alongside the landfill model. Examples of this could include developing contracts with service providers, providing access to land and equipment, running education campaigns, and providing tax incentives for those who reduce their waste. Even if CDL did not enforce waste stream controls, if Juneau has alternatives to landfilling, they would be used.

Additionally or alternatively, legislators could enable regulatory changes and spur resource-recovery economic development. While broad, state-wide legislation on solid waste may seem unlikely due to the vastly different conditions across the state, it should be noted that the Alaska Department of Environmental Conservation (ADEC) has different classes of landfill permits. It could be possible to make changes to Class Three Landfill regulations without affecting landfills in rural communities. In terms of economic development, many states provide grants to catalyze sustainable businesses. See Appendix I for examples.

Until recent years, commodity markets for recyclables made recycling financially attractive to waste management companies. When China declined to buy recyclables from the United States starting in 2018, prices fell to the point that most recycling became no longer profitable. When the cost of recycling cannot be recovered, a profit-making company has incentive to reclassify recyclables as waste and add them to landfills. Community values may dictate that recycling should occur for reasons other than profit, however. Moreover, many raw materials from the waste stream can be economically recovered to make value-added products with public-private partnerships. Locally-owned, locally operated, waste recovery programs create new jobs, diversify the economy, and create a more sustainable community that keeps dollars circulating locally.

Encouraging the retention of MSW in the community has multiple benefits. One benefit has social and environmental justice ties. By keeping Juneau's MSW in the region instead of shipping it to outside communities, we build our own reliance rather than degrade the environment and lives of others. Exporting trash is not a problem unique to Juneau or even Alaska. New York City ships waste to many states, including South Carolina. It is a matter of which communities are desperate enough for money to accept waste from other communities. There is evidence to show that a disproportionate number of landfills are in low-income neighborhoods and communities of color. If and when those communities say no to "outside" trash, like China did with recycling in 2018, what would CBJ do then? Exporting fosters an "out-of-sight-out-of-mind" mentality that disincentivizes waste reduction and recycling. If residents are forced to see or smell their own waste, they will be more inspired to act in ways that mitigate or prevent the problems.

Appendix H

Preparing for the inevitable closing of the landfill

A concerted effort to reduce/divert waste may extend the life of the landfill, but the evaluation of alternatives should begin soon. Permitting, planning, and construction will take many years. Strategic plans and actions now will prevent panic in 2039.

Why should we begin planning for an alternative to the current landfill?

When the landfill closes, the most likely “no action” scenario is to operate a transfer station where Juneau trash is collected, packaged, and shipped “Down South.” Juneau prides itself on being a progressively more sustainable community. Shipping Juneau trash via barge and train to landfills located in Eastern Washington is not only a move away from sustainability, but it would also put Juneau in a precarious situation. Concerns include:

1. Increased transportation and handling costs (and their effect on waste disposal costs);
2. Increased use of fossil fuels required to transport waste and the associated greenhouse gas (GHG) emissions;
3. The willingness or unwillingness of other states and the Canadian government to allow Juneau to transport waste through their territory or use their landfills as dumping grounds long-term; and
4. The Out-of-Sight-Out-of-Mind aspect of distant disposal may discourage finding a sustainable solution to Juneau’s waste problem.

If the Assembly/community deems the above “no action” scenario as unacceptable, then planning should begin soon. Identifying land and addressing ownership, land preparation, and permitting issues could take many years. Appendix C of the 2008 SWMP plan (p 77) has details on the process and requirements for opening a new landfill.

What are the options for a replacement landfill?

There are several paths to a replacement landfill:

1. The CBJ plays no role other than encouraging the private sector to purchase land and set up a new private landfill. This option does not address the issue of controlling the waste stream.
2. CBJ identifies land and establishes a new landfill, alone or in cooperation with private sector partners.

3. CBJ teams up with other SE communities and participates in a regional landfill. Options under this scenario range from allowing other communities to use a CBJ-owned landfill to transporting Juneau's waste to a regional landfill elsewhere. The Southeast Conference has taken some steps on this, but work was halted because Juneau, whose waste was critical to the project, was not ready to participate. Shipping charges would need to be reevaluated.

What about Incineration or Waste-to-Energy (WTE) Instead of Landfilling?

While incineration and WTE alternatives may seem like attractive methods of making waste “disappear,” they would be a step in the wrong direction. WTE plants require a consistent volume of material, so waste reduction and recycling become disincentivized. Incinerators are also incredibly bad polluters. To make the same amount of energy as a coal power plant, trash incinerators release 28 times as much dioxin than coal, 2.5 times as much carbon dioxide (CO₂), twice as much carbon monoxide, three times as much nitrogen oxides (NO_x), 6-14 times as much mercury, nearly six times as much lead and 70% more sulfur dioxides. Considering Juneau prides itself on clean and inexpensive hydropower energy, something “dirtier” than coal should not be considered. In addition, incineration does not eliminate the need for a landfill since 15-25% of weight of incoming trash remains as toxic ash, which requires disposal. [Waste to Energy International](#) provides consulting, full development cycle, equipment supply, construction supervision and commissioning of waste-to-energy (WTE), the hydro, wind, and solar power plants. A quick [online quote](#) calculation from them shows that a facility to handle Juneau's 30,000 tons of trash per year would cost \$32.8 million dollars and would operate at a cost of \$1095 per ton.

What Can CBJ do to Start the Landfill Planning Process?

The planning process must identify concrete goals so city staff, residents, and businesses have clear expectations of how the city wants to handle MSW. Education is key to setting goals. “Recycle” is in the common lexicon, but many people do not really know what that means in today's world. People need to be educated on the entire waste hierarchy, the circular economy, and also have easy access to information on the specifics of Juneau's programs. A shift in mindset from “waste management” to “waste reduction and resource recovery” can make the efforts seem more appealing both socially and economically.

A new landfill requires extensive planning and permitting. The steps, basic requirements, and preliminary cost estimates were compiled in Appendix C (p77) 2008 SWMP and could serve as a starting point. It states that the general steps for opening and operating a landfill include:

- Site Selection
- Solid Waste Management Plan
- Land Use Permit Application
- Waste Disposal Permit Application

- Fatal Flaw Analysis
- Site Characterization and Hydrogeologic Report
- Design Report
- Design Drawings
- Construction Quality Control and Quality Assurance (QC/QA) Plan
- Plan of Operation
- Closure, Post-closure Plan and Financial Assurance Plan
- Related Permitting Requirements
- Construction Documents
- Construction, Construction Management and QC/QA

Table 1: Preliminary Costs Estimates
Permitting, Design, Construction for New CBJ Landfill
- 4 – Acre Lined Cell -

PROCESS ELEMENT	LOW \$ ESTIMATE	HIGH \$ ESTIMATE
Permit Costs (A through E)		
A/ Preliminary Site Selection Process	25,000	50,000
B/ Prepare Solid Waste Management Plan	85,000	200,000
C/ Prepare Land Use Permit Application	150,000	700,000
D/ Prepare Waste Disposal Permit Application	395,000	850,000
E/ Related Permit Applications	50,000	400,000
Build Costs (F through J)		
F/ Landfill Construction Documents	50,000	105,000
G/ Leachate Treatment System Construction Documents	60,000	120,000
H/ Other Infrastructure Construction Documents	30,000	60,000
I/ Cell Construction (4 – acre lined cell)	3,500,000	7,000,000
J/ Construction Management & Monitoring	140,000	285,000
K/ Leachate Treatment System Construction	500,000	2,000,000
TOTAL	\$4,985,000	\$11,770,000

Appendix I

Funding

- One potential funding source is the federal [Save Our Seas 2.0 Act](#) (co-sponsored by Dan Sullivan), which is marked to provide funding to prevent plastic pollution.
- The Alaska Department of Environmental Conservation has a [Funding Resource Guide](#), which lists federal and state grants applicable to solid waste all in one place. It is not all-inclusive, but it is a good starting point.
- The [Grants.gov](#) database is can easily be searched for solid waste.
- Some states have grant and low-cost loan programs to spur private development in the solid waste sector as a way to boost regional economies, maximize resource use, and save money long-term. Examples of private sector support programs include:
 - The [Colorado Dept of Health and Environment](#) offers a grant program called the Recycling Resources Economic Opportunity (RREO) Program. It provides funding that promotes economic development through the management of materials that would otherwise be landfilled. Funds are available to support recycling, composting, anaerobic digestion, source reduction, and beneficial use/reuse. The assortment of projects funded is really wide-ranging, as seen with a few examples below.

Project	Award
Waste Reduction Wood Grinder Project	\$161,675
Creating Construction Materials from Food and Beverage Cartons	\$1,545,820
Building Mattress Recycling Capacity	\$298,310
Food Donation Program Expansion	\$20,313
Waste Wood Conversion to Biochar	\$352,645
● Bear-Proof Compost Carts and Dumpsters Project	\$120,000

- Another program of theirs, called Front Range Waste Diversion (FRWD, or “forward”), provides grants and technical assistance for communities to increase recycling, composting, and waste reduction. Several funded projects include:

Project	Award
Wompost: to provide food and yard waste recycling bins in Aurora.	\$158,185
Town of Erie: to relocate Erie's recycling center and add cardboard and organic waste, and to complete a zero-waste policy assessment which responds to the town's Sustainability Master Plan.	\$247,078
Scraps: to expand yard waste collections in Edgewater, Arvada, and Wheat Ridge.	\$76,908.42

- Similarly, but on a smaller scale, the Maine Department of Environmental Protection has a [Solid Waste Diversion Grant Program](#) for recycling and organics management projects statewide. These projects are targeted to divert waste from disposal by expanding composting and recycling opportunities and to help businesses, institutions, and municipalities address solid waste management challenges. In 2020 \$129,627.75 was used to fund 7 projects.

CBJ and the State of Alaska could work on similar programs to catalyze sustainable economic development and reduce landfill burden and costs. Offering grants along with RFPs could spur new and existing private companies to develop waste reduction and recovery services. The return-on-investment might work out better on things like this compared to continuing the commodity market recycling regiment that CBJ tax money already funds.

Appendix J

Source Documents and Additional Resources

Links to CBJ Documents and Studies:

CBJ 2016 Municipal Composting Feasibility Assessment (not published online)

[CBJ 2015 Solid Waste Action Plan Update](#)

[CBJ 2011 Climate Action and Implementation Plan](#)

[CBJ 2013 Comprehensive Plan](#)

[CBJ 2008 SWMS Executive Summary](#)

[CBJ 2008 Solid Waste Management Strategy](#)

[CBJ 1993 Technical Reconnaissance Study for New Landfill Site Selection](#)

[CBJ 1983 Solid Waste Management Study](#) (calls for planning a new landfill on CBJ land in Lemon Creek.)

Additional Resources:

[CBJ Recycleworks](#)

Whitehorse [2013 Solid Waste Action Plan](#)

Anchorage [2019 Climate Action Plan](#) (p52-57 relates to MSW)

Anchorage private C&D facility [Central Recycling Services](#)

Economic benefits of Zero Waste - [Ecocycle Solutions](#)

Tool kits for plastic pollution legislation/action - [Break Free from Plastic](#)

Paper on [Designing and Implementing Organics Waste Bans and Mandatory Organics Recycling Laws](#)

Example legislation and policies for organics bans - [Institute for Local Self-Reliance](#)

Compost Economic and Environmental impacts [infographic](#)

Capitol Disposal's 2015 [Closure, Post-Closure, and Financial Assurance Plan](#)



MEMORANDUM

DATE: April 12, 2021

TO: Chair Hale and CBJ Public Works and Facilities Committee

FROM: Katie Koester, Engineering & Public Works Director

SUBJECT: Solid Waste Follow up from 3.15.21 Meeting

At the March 15 PWFC meeting the committee discussed solid waste in the context of Assembly goal 5d. "Develop solid waste strategy including plans to increase recycling and deal with abandoned/junked vehicles." Specific topics included shipping waste, data on Recycleworks, and incineration. Copy and paste this URL into your browser to see this information <https://packet.cbjak.org/CoverSheet.aspx?ItemID=9753&MeetingID=1470>. The committee came to the conclusion they would like to spend more time talking about to following:

- 1) Explore an alternative location for a new landfill
- 2) Continue to look into what diverting waste from the landfill looks like
- 3) Get an idea of the potential cost of shipping waste
- 4) Invite JCOS to present on their findings on solid waste, "Juneau Solid Waste Fact Sheet and Recommendations for Course of Actions"

The purpose of this memo is to provide additional information on the above topics and stimulate committee discussion. It is not the intention that this memo answer all your questions, but rather keeps this important conversation alive. Please feel free to comment additional information or topics you would like to address as the Committee looks at this complicated issue.

1) Explore an alternative location for a new landfill

The attached memo from then Engineering Director Watt from 2015 talks about the challenges and next steps of alternative land fill sites.

2) Continue to explore diverting waste from the landfill and what that looks like

Diverting waste from the landfill could take the form of increasing recycling efforts, municipal investment in composting, incineration of organics in a waste to heat recovery system, and strategies to reduce the overall waste produced in Juneau. If there is appetite for any of these options, CIP funds could be dedicated to a project to explore the feasibility and cost benefits of a preferred alternative including implementation of a pilot project.

3) Get an idea of the potential cost of shipping waste

We reached out to Sitka who provided a very rough estimate of \$160/ton for disposal of waste to the lower 48, which does not include collection or preparing for shipment. This is the closest estimate we have been able to obtain for what it could cost to ship from Juneau. According to

Waste Management, they process 30,000 tons of waste a year, 23,000 of which is municipal solid waste (MSW) - the remainder is construction debris. Rough math says shipping and landfilling down south just the MSW waste would cost \$3.7m annually. Because this estimate does not provide total processing cost, it is difficult to compare apples to apples, but it does give some frame of reference.

Other numbers to help contextualize what it could cost Juneau to ship waste:

- In 2017 Petersburg's total cost to process and ship their waste was \$346/ton.
- CBJ currently pays on average \$110 to \$125 a ton to ship recycling, adjusted monthly for fuel surcharge. Keep in mind that cost is just for shipping and excludes collection and disposal.
- When CBJ was shipping sludge to the landfill in Oregon, it cost \$250/ton which included transport by rail, truck and barge, fuel surcharge and surcharge, landfilling and an additional fee for special waste disposal due to the nature of the waste (\$32/ton)
- Waste Management's current tipping fee is \$180/ton

The graphic bellow was developed by Michelle Elfers to put some context around the value of diverting waste in a 2017 presentation to the Finance Committee.

Estimated Cost to Community for Future Waste Disposal Scenarios:



*Please keep in mind, numbers are from 2017

Recommendation: Informational only. Provide direction to staff on potential next steps after hearing presentation from JCOS.

Enc:

2.25.15 Memo: Landfill Planning Update



1873 Shell Simmons Dr., Suite 200, Juneau, AK 99801 / (907) 789-7821

TO: Katie Koester, Director, Engineering & Public Works

FROM: Patty Wahto, Airport Manager *p wahto*

DATE: April 5, 2021

RE: Juneau International Airport Float Pond Improvements Phase 2 Project

General

The Airport has one capital improvement project currently in design development for bidding and award over the next few months. In 2017, the Airport began design on its Float Pond Improvements project which would replace the water valve and actuator to control water levels, as well as improve the south float pond road and south pond embankment for erosion control. During design, it was decided to divide the work into two phases due to costs. Phase 1 completed the valve actuator, leaving the south float pond road and south embankment for a future project.

Project Summary/Funding:

Float Pond Improvements Phase 2: Construct South Float Pond Access Road Improvements

\$1.73M: This project will raise, regrade and pave the current south float pond road, extend culverts into the float pond to help with area drainage, armor rock slope of south pond embankment, reset existing gangways and install wave erosion mitigation along the south pond embankment. This project will also look at extending electrical service to the valve actuator installed in the first phase, pending FAA approval and funding. The project is eligible for FAA AIP grant funding, currently estimated to be \$1.62M (FFY21). Local match funds of \$110K will be provided through Airport Passenger Facility Charges (PFCs) to meet the full budget needs. Appropriations to be requested upon bid award and grant issuance. This project is anticipated to be completed in a single construction season. In accordance with CBJ policy, this project does not require a Project Labor Agreement.

MEMORANDUM

DATE: April 8, 2021

TO: Chair Hale and CBJ Public Works and Facilities Committee

FROM: Katie Koester, Engineering & Public Works Director

SUBJECT: Public Electric Vehicle (EV) Charging Infrastructure CIP - Strategy Update

In December of 2020, the PWFC was provided an overview of the goals of the CIP “Area wide EV Charging Station” and plans to develop a strategy for meaningful and cost effective allocation of those funds for installation of additional chargers to best meet the public’s needs. Since this meeting, staff has continued researching the issue and has met with other CBJ departments, Devon Kibby (Alaska Electric Vehicle Association), and the Juneau Commission on Sustainability to solicit input and discussion.

EV Charging in Other Communities

There are two general classes of EV chargers discussed in this memo: Level 2 and Level 3. Level 2 chargers have lower capital and operating costs, relatively simple maintenance requirements, but charge vehicles at a much slower rate. Level 3 chargers have higher capital and operating costs, relatively complex maintenance needs, but can provide a faster charge.

Our research has included looking into how other local governments work to increase EV adoption through addressing range anxiety and garage orphans. By far the most common solution is installing free-to-use level 2 chargers in public facility parking lots or garages. This route offers the least resistance to increasing charger access. Less common is charging a fee for use of a level 2 charger in parking lots or garages because of the administrative costs and rules governing the ability to sell electricity without being classified as an electric utility. In areas where a government operates chargers and charges fees, they tend to operate both level 3 and level 2 chargers; these are typically larger communities with the means and desire to maintain more comprehensive charging networks.

In most areas researched, chargers are not installed to service on-street parking. On-street charger installation is complicated by space needs, a lack of suitable installation sites, installation and site prep costs, snow plowing and weather considerations, and parking regulation and enforcement. There are examples of successful implementation of on-street charging infrastructure in Canada where a private company works with municipalities to install and maintain a charging network. However, examples of governments running on-street charging networks are even more rare; a pilot program in Berkeley that allowed residents to install chargers on-street near their homes has been extended, while a similar program in Philadelphia was halted due to the complexities of running the program and political pushback related to EV owners receiving perceived preferential parking rights.

There are successful examples of grant programs from governments and utility companies to private entities incentivizing both level 2 and level 3 charger installations. These typically work toward a goal of strategically placing level 3 chargers across the road system to minimize the average distance from a fast charger. Improving level 3 charger access could have similar EV adoption impacts for garage orphans as installing level 2 on-street chargers in or near residential areas. This approach, sometimes called the gas station model, appears to be effective and is becoming more common.

Proposed Strategy for Allocation of CIP funds on an Annual Basis

The selection of charger type and location is complicated by both technological and social constraints. Despite Juneau being a leader in per capita ownership of EVs, we are still in the early adopters stage of acceptance of this technology and our situation is not profitable enough to attract a third party supplier of EV charging infrastructure to install and maintain the equipment. Additionally, the simple and cost effective Level II chargers will offer less utility in the future as EV owners shift to longer battery-life vehicles. Despite these and other challenges, there is still a public need for more charging infrastructure that we believe can be met with careful planning.

In order to get the most utility out of this project, we propose hiring an EV Consultant to Develop an Inventory of Potential Public Charging Sites. This will help us make informed choices about (a) where to install chargers and (b) what type of charger to install, some initial research is required. Factors to consider for each potential location include:

- a. proximity to a suitable electrical service,
- b. relative cost associated with the installation of a charger,
- c. existing or potential for protection from the elements,
- d. current and potential parking management at this location,
- e. convenience of and utility to the public, and
- f. what public needs will be met through this installation.

Establishing this inventory prior to installation of a suite of chargers will provide a more accurate picture of how to increase coverage within a set budget. In addition, this inventory will be invaluable when applying for grant funds (for both the CBJ and other non-profit groups such as Alaska Electric Vehicle Association, AEVA) as many solicitations request detailed information on how the funds are intended to be used up front. The inventory should be updated periodically and take into account the “EV environment” in Juneau/regionally such as market trends, status of demand charge tariffs, coordination with JCOS and other relevant groups).

Other items to consider: An inventory will be a great starting place to the CIP project “Area wide EV Charging Stations” and allow CBJ to strategically install charging stations where they will have the most impact. However, there are other factors to keep in mind as CBJ develops a long-range strategy to promote EV adoption including:

- Maintenance of chargers. Volunteers maintain the current charging infrastructure. A more robust maintenance plan needs to be developed
- Review of Development codes to require charging infrastructure for multi-family housing
- Develop a better understanding of challenges and potential solutions to on-street charging

Recommendation: Provide input to staff on proposed action items:

- 1) Develop a scope of work and hire a consultant with electric vehicle and charging infrastructure expertise to perform inventory
- 2) Solicit input from JCOS on scope of work and timing of public engagement/survey questions on EV locations and public need
- 3) Evaluate entering into an extended contract (3-years) to facilitate updating and tracking the inventory as time, needs, and technology change.



TO: Michelle Hale, Chair Public Works and Facilities Committee
FROM: Nate Abbott, Building Maintenance Supervisor, Parks and Recreation Department
DATE: April 8, 2021
RE: Energy Reduction and Sustainability

On November 23rd the Assembly adopted new goals; several of these goals had energy reduction and sustainability components to them. Facilities Maintenance, in collaboration with the Engineering Division, are making some great strides to accomplish these goals. Below is an outline of current efforts that relate to Assembly Goals 3A, 3F and 5A as well as some next steps for achieving the Assembly goals.

- Assembly Goals
 - 3A Maintain Assembly focus on deferred maintenance including BRH and JSD.
 - 3F Examine life cycle and life cycle costs of CBJ facilities including city hall.
 - 5A Develop strategy to measure, track and reduce CBJ energy consumption.

Current Efforts

- Lighting-FM is upgrading all CBJ Facilities to LED lighting. We assess existing facility lighting use, age of lighting, costs of upgrades, feasibility of performing upgrades in house or contracting out, and ROI. After lighting upgrades have been completed, we track electrical usage to insure energy reduction has met expectations.
 - Current projects
 - Treadwell Arena (Completed)
 - Marine Parking Garage (95% Complete)
 - Downtown Library (95% Complete)
 - 4 Fire Stations (Completed) Douglas Fire/Library (75% Complete)
 - Mayflower Building (Montessori School) (Completed)
 - Future Projects
 - JPD (construction pending funding)
 - Dimond Park Aquatic Center (design/construction pending funding)
 - Mt Jumbo Shop (construction pending funding)
 - Douglas Shop (construction pending funding)
 - Public Works Joint Use Facility (construction pending funding)

- **Building Control Systems-** FM is assessing current building control systems and recommending replacement of obsolete systems. Newer control systems allow greater flexibility in control sequencing, scheduling, and user interface. When new control systems go through design particular attention is given to energy efficient improvements such as installing Variable Frequency Drives (VFD), updating control sequences, implementing demand controlled ventilation, and scheduling.
 - **Current Upgrades**
 - JPD (80% complete)
 - Downtown Library (95% complete)
 - **Future Projects**
 - Douglas Library/Fire Station (In Design)
 - Consolidated Public Works (In Design)
 - Treadwell Arena (In Design)
 - Downtown Fire Station (In Design)
 - Glacier Fire Station (In Design)
- **HVAC Systems-** FM is assessing and recommending replacement of aging building HVAC components, assessing systems for minor adjustments such as installing interlock switches when exterior doors are left open, and performing preventative maintenance such as gas flue analyzation to insure that systems are running at peak performance. During the design of the HVAC systems replacements, energy efficiency is considered in both the selected technology and maintenance requirements for the new system.
 - **Current Projects**
 - Downtown Fire Station (In Design)
 - Glacier Fire Station (In Design)
 - Eagle Valley Center (In Design)

Recommendations for increased effectiveness in achieving Assembly goals.

- **Perform Building Energy Use Benchmarking-** Benchmarking means measuring a building's energy use and then comparing it to the average for similar buildings. This allows CBJ to better understand a facilities energy performance, and helps identify opportunities to cut energy waste. This is already happening on a small scale when life cycle costs analysis are performed on HVAC/control projects. Benchmarking should be an ongoing process to ensure buildings are continually performing as expected. Using a purpose built software such as EnergyCap will make implementation and ongoing maintenance easier and will also assist with accomplishing some of the below recommendations.
- **Track Energy Usage** on an ongoing basis and convert usage into common units so energy usage can easily be compared between different energy sources. Tracking usage can be done many ways but it is recommended to look for a purpose built software that allows for automatic data integration. Currently CBJ enters a fair amount of this information into Lawson so creating links between Lawson and a new software could be possible. CBJ should also explore collaborating with local utility companies such as AELP to look for ways to automatically integrate data where possible. Tracking energy usage also has the benefit of helping to identify when building systems are not functioning correctly. For example, if an air damper is not functioning correctly, more air is conditioned than needed. Timely data entry is

important to correct energy usage issues. It is important to decouple energy usage from energy costs, as costs are not always a direct indication of usage. A program that focuses on reduced energy usage will likely result in reduced energy costs. Typically, the tracking of energy usage is a component of the benchmarking software listed above.

- Explore installation of whole facility energy meters. Installing whole facility energy meters and integrating them into building control systems allows for almost real time views of energy usage. This assists with identifying and taking immediate action when systems are malfunctioning. For example you can set alarms for increased usage, develop trend reports that show energy usage over days, weeks, months, or years. This can be considered a component of Tracking Energy Usage on an ongoing basis.
- Monitor energy usage before and after the project design phase to improve energy usage and to insure design/estimated energy usage matches the actual usage. Analyze any discrepancies and identify the root cause if estimates do not match real life. Then adjust future projects. Monitoring can be coupled with the above-mentioned software.
- Monitor maintenance costs before and after energy improvements to ensure that costs are reduced and life cycle costs are accurate.
- Look for energy efficient projects that focus on automating tasks and reduce energy consumption without the need for human intervention. For example, do not rely on human intervention to control lights and instead focus on automatic lighting control. Similarly, do not rely on human intervention to perform heating setbacks and instead implement programming that does it automatically or ties the heating system to building occupancy sensors. This is already being accomplished on a larger scale through our Deferred Maintenance prioritization (see attached) but there is room for smaller scale improvements within our facilities. Examples of this include installing interlocks on shop door heaters that do not allow the heaters to run when the overhead doors are open and installing lighting occupancy sensors in areas that are not constantly occupied.

In conclusion, the Facilities Maintenance Division and the Engineering Division are working in many areas to improve energy efficiency and sustainability and we have identified areas for improvement. Most of the above recommendations can be implemented in the Facilities Maintenance Division as we are the boots on the ground and have the day-to-day knowledge of how facilities are operating.

Treadwell Ice Arena Energy Usage/Greenhouse Gas Emissions

Significant Events

FY20 LED Lighting Upgrade took place over summer

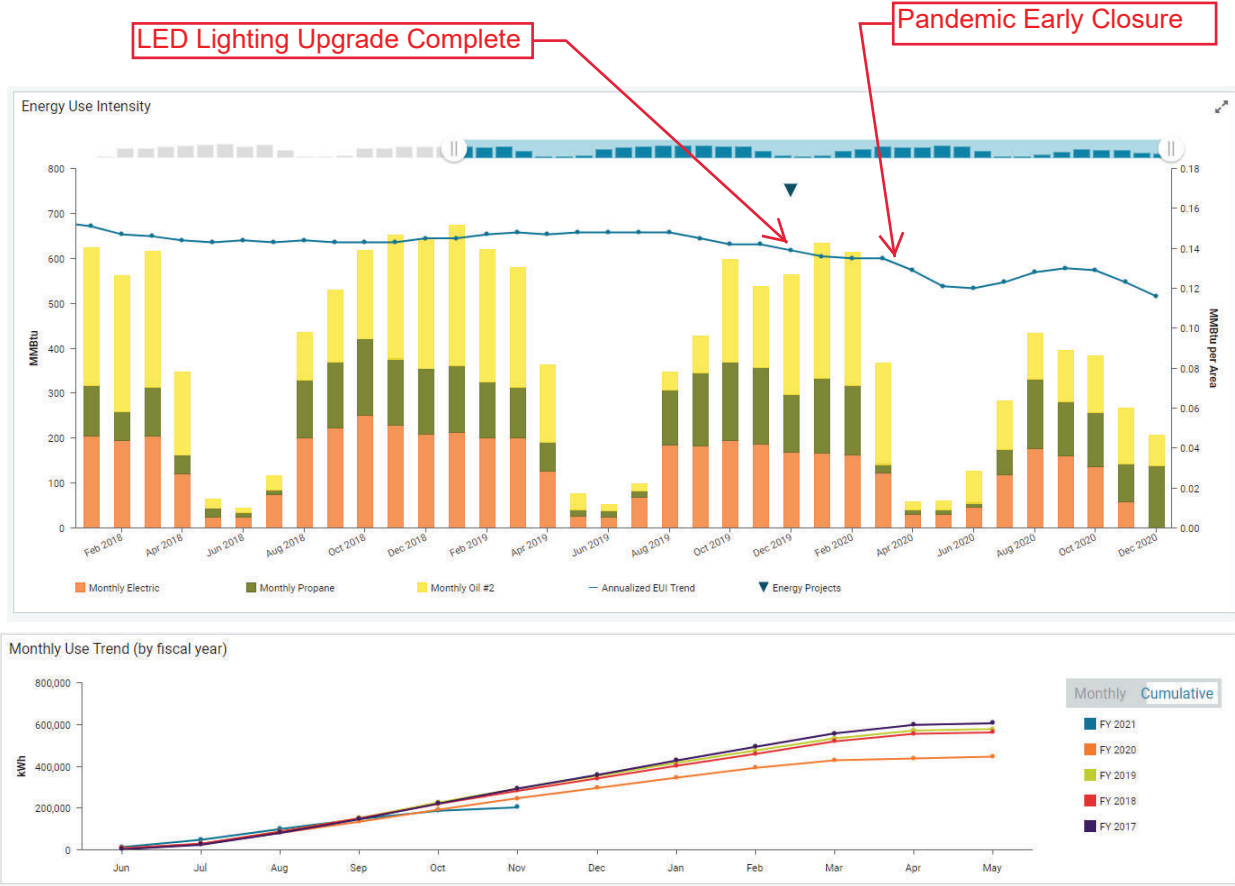
FY20 Pandemic shutdown early in march

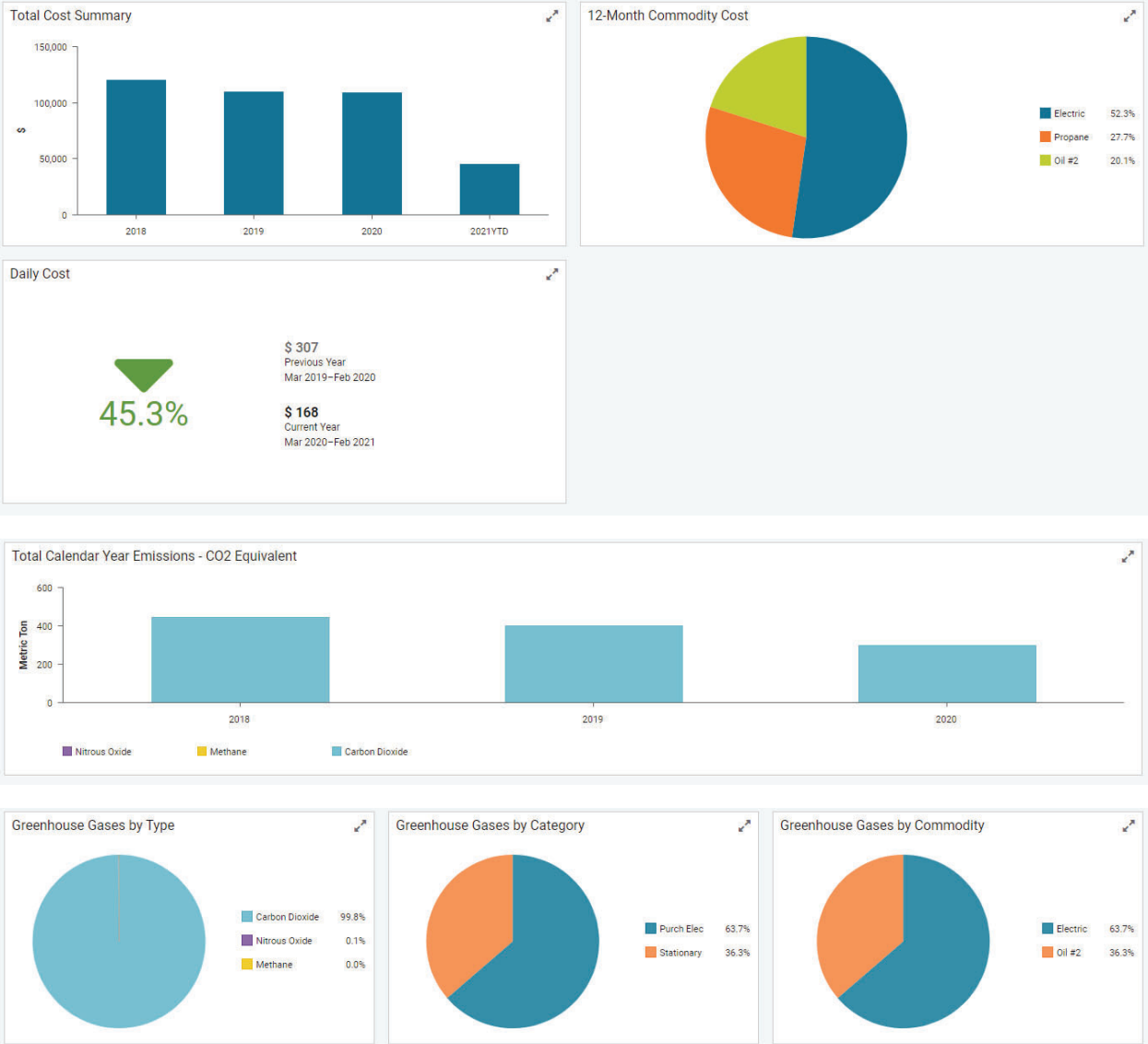
FY21 Pandemic erratic operating schedule.

FY21 Started Ice Plant Early

Notes

Estimate LED lighting upgrade has saved 100,000 kwh annually and reduced our demand charge by 20KW. This is roughly a savings of \$ \$5,735 in kwh costs and \$3100 in demand charges for a total annual savings of roughly \$9,000. Total costs of lighting upgrade is about \$20,000. Important note about startup and demand charges.





Important note on Emissions charts: EnergyCap Provides the regional eGrid emissions factors for GHG so the above emissions for electricity are not accurate for our location. EnergyCap is planning to allow for custom emissions factors in a 2021 Q4 software update. The above is for example purposes only.

Deferred Maintenance Priority Ranking Scoring

Project Name

Department

Date

Category	Points Available	Points Awarded
Emergency	10	
Exceeded Expected Life		
0-2	1	
3-4	2	
5-6	3	
7-9	4	
10+	5	
Energy Savings		
Windows	1	
Siding	2	
Roof	4	
HVAC	4	
LED	5	
Life Safety/Code Deficiency		
Grandfathered	1	
HVAC	2	
HAZMAT	3	
ADA	4	
Structure	5	
Protection of Structure		
Nuisance	1	
Impacts Finishes	2	
Impacts Use	3	
Harmful to Exterior Envelope	4	
Harmful to Structure	5	
Functional Improvement		
For Occupants	1	
Maintenance Reduction - LOW	2	
For Users	3	
Maintenance Reduction - HIGH	4	
For Users and Occupants	5	
Total		0

4.12.21 Update on PWFC Action Items for 2021 Assembly Goals

Assembly Goal	Action Item	4.12.21 Progress Report
<u>3a. Maintain Assembly focus on deferred maintenance including BRH and JSD;</u> Responsibility: Assembly, Manager's Office, E&PW, all operating departments with facilities Notes: Short-term	1. Bond package funds many maintenance projects, including JSD	4.12.21: Memo presented to PWFC from Building Maintenance on ongoing efforts to promote this goal and potential next steps.
	2. BRH deferred maintenance efforts supported by Assembly with annual appropriation and staff	3.12.21: CBJ Engineering has ten active BRH projects; advertising is open for project manager staff
	3. Communicate through the CIP process how energy efficiency and costs savings over the life of the project are taken into consideration as project criteria	3.12.21: See 3.15.21 CIP memo on how energy efficiency will be included in the future as selection criteria at Department and Manager's office level. Memo also speaks to how energy efficiency is taken into consideration when designing a project and selecting preferred alternatives
<u>3f. Examine life cycle costs of CBJ facilities including city hall.</u> Responsibility: Assembly, Manager's Office, E&PW Notes: Short term	1. Update internal working document on deferred maintenance for CBJ facilities (excluding BRH and JSD) and present to committee	4.12.21: Memo presented to PWFC from Building Maintenance on ongoing efforts to promote this goal and potential next steps.

Assembly Goal	Action Item	4.12.21 Progress Report
<u>5a. Develop strategy to measure, track and reduce CBJ energy consumption.</u> Responsibility: Assembly, Manager's Office, E&PW Notes: Short term	1. Measure/track: Develop a dashboard using procurement data on how much fuel/ electricity CBJ uses	3.12.21; Developing dashboard on energy data for fuel, fuel oil and electricity consumption borough wide. Will incorporate this information as part of an Annual Report on Sustainability delivered after completion of the Fiscal Year
	2. Analyze past energy consumption and track future consumption of one or two facilities that are scheduled for energy efficiency improvements with the recently passed bond package to be able to demonstrate the savings and impact	3.12.21: Selecting 2 energy efficiency projects funded in the recent bond package to track over time and highlight. Results will be included in Sustainability Annual Report
<u>5b. Make a long term plan to achieve reliance on 80% renewable energy sources by 2045</u> Responsibility: Assembly, Manager's Office, E&PW Notes: Short term	1. Task JCOS with developing a strategy to examine community wide energy use and report back to the committee with a request for proposal for some level of technical assistance	4.12.21: Memo presented to PWFC from Building Maintenance on ongoing efforts to promote this goal and potential next steps.
<u>5c. Develop climate change adaptation plan</u> Responsibility: Assembly, Manager's Office Notes: Short term	1. Have committee review revisions to the <u>2007 Juneau Climate Change Report</u> due out spring of 2021 that identifies climate hazards, impact of hazards and mitigation measures. Task JCOS with community outreach and education on report	4.12.21: Updated timeline and working title. Presentation to PWFC anticipated in June, working title of draft is "Juneau's Changing Environment: Predictions and Responses to Climate Change"
<u>5d. Develop solid waste strategy including plans to increase recycling and deal with abandoned/junked vehicles.</u> Responsibility: Assembly, Manager's Office, E&PW, JPD Notes: Long term	1. Update to the Committee of the Whole on current solid waste situation in Juneau, history of CBJ research and analysis of the issue, and potential next steps	4.12.21: Memo on follow up questions from last meeting presented to PWFC. Presentation from JCOS on "Juneau Solid Waste Fact Sheet and Recommendations for Course of Actions"



MEMORANDUM

TO: Katie Koester
Engineering & Public Works Director

FROM: Greg Smith
Contract Administrator

Date: April 7, 2021

SUBJECT: Contracts Division Activity
March 11, 2021, to April 6, 2021

Current Bids – Construction Projects >\$50,000

BE21-177	CCFR Wide Vehicle Exhaust System Replacement	Estimate \$540,000.00, 3 bids received. Low bidder Island Contractors, \$572,930. Award in progress.
BE21-159	JNU Fire Alarm Upgrade	Estimate \$272,000, two bids received on 3/16/21. Low bidder Johnson Controls Fire Protection, \$297,523. Award pending JNU Board approval.
BE21-092	University Drive Lighting Upgrade	Estimate 257,950. 4 bids received on 03/02/21, Low bidder Ever Electric, \$245,000.00. Award in progress.
BE21-169	BRH ASU1 Glycol Conversion	Estimate \$136,000 2 bids received 03/09/21. 1 bid deemed non-responsive. Schmolck Mechanical awarded the contract, \$238,800.
BE21-149	BRH Behavioral Health Facility	Estimate 7.75 Million, bids received on 03/16/21. One bid received. Dawson Construction \$8,459,200. Award in progress.
BE21-189	Sayeik Gastineau Elementary School Roof Replacement	Estimate \$1.25 million, 3 bids received on 03/18/21. Award in progress to Earhart Roofing Company, \$861,750.
BE21-144	Rainforest Recovery Center Exterior Upgrade	Estimate \$511,000, four bids received on 4/6/21. Award in progress to Island Contractors, \$403,476.
BE21-236	Auke Bay School Water Damage Repair	Estimate \$240,000, bids due on 4/21/21.

Current RFP's – Services

RFP E21-163	Design and CA for Treadwell Ice Arena, Consolidated Public Works & Douglas Fire Station/Library - HVAC Controls Upgrades	3 proposals received, contract negotiations underway with Alaska Energy Engineering
(C2) RFP E21-217	Centennial Hall Expansion Concept Study	Two proposals received on 3/11/21. NTP issued to NWA on 3/26/21, \$50,000.
RFP E21-213	CA&I Services for Delta Drive Reconstruction	Three proposals received on 3/16/21. NTP issued to PDC on 4/6/21, \$104,220.
RFP E21-233	Term Contract for Painting Services	Proposals due on 4/15/21.
RFP E21-234	Term Contract for Plumbing Services	Proposals due on 4/15/21.

Contracts Division Activity
March 11, 2021, to April 6, 2021

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Other Projects – Professional Services – Contracts, Amendments & MR's >\$20,000

PA 1 to E20-139(NWA)	CBJ Lynn Canal Fire Station Roof Replacement	In progress, fee estimate \$25,110.40
PA 12 to E18-224	BRH Emergency Dept COVID Ventilation Improvements Design & CA	NTP issued to Wilson Engineering on 3/25/21, \$89,213.
Am 8 to E14-129	Design for Gruening Park Lift Station Relocation	NTP issued to DOWL on 3/31/21, \$29,625.

Term Contracts for Electrical Services (>\$20,000)

PA 1 to E21-166(AB)	BRH TVS Upgrades	NTP issued to Anderson Brothers on 3/30/21, \$48,000.
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Term Contracts for Small Civil & Utility Construction Services (>\$20,000)

PA 7 to E19-192(A)	MR E21-221 Thane Warehouse Fuel Cleanup	Arete Construction, \$200,000.
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Construction Change Orders (>\$20,000)

CO 1 to BE20-187	JNU Sand Shed Demolition	3/16/21, \$36,384.40
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MR E20-139 – Term Contract for Professional Services. This solicitation is open for a three-year period. Consultants continue to submit proposals. Contracts are in progress and underway.

Key for Abbreviations and Acronyms

A	Amendment to PA or Professional Services Contract
CA	Contract Administration
CO	Change Order to construction contract or RFQ
MR	Modification Request – for exceptions to competitive procurement procedures
NTE	Not-to-exceed
NTP	Notice to Proceed
PA	Project Agreement - to either term contracts or utility agreements
RFP	Request for Proposals, solicitation for professional services
RFQ	Request for Quotes (for construction projects <\$50,000)
RSA	Reimbursable Services Agreement
SA	Supplemental Agreement