

CITY AND BOROUGH OF SITKA

Meeting Agenda Sustainability Commission

Officers: Chair Katie Riley, Vice Chair Aurora Taylor, Secretary Erik de Jong

Members: Elizabeth Bagley, Lilli Garza, Gerry Hope

Staff Liaison: Bri Gabel, Sustainability Coordinator

Assembly Liaison: Kevin Mosher

Monday, May 6, 2024

6:00 PM

Harrigan Centennial Hall

I. CALL TO ORDER AND ROLL CALL

II. CONSIDERATION OF THE AGENDA

III. CONSIDERATION OF THE MINUTES

Approve the April 1, 2024 minutes.

IV. PERSONS TO BE HEARD (*not to exceed 3 minutes on topics off the agenda*)

V. SPECIAL REPORTS

VI. UNFINISHED BUSINESS

VII. NEW BUSINESS

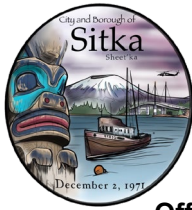
- A. Approve the Tongass Forest Management Plan Revision Comments Draft Letter
- B. Discussion/Direction/Decision on Community Greenhouse Gas Emissions Inventory Scopes
- C. Discussion/Direction/Decision on Sitka Community Renewable Energy Strategy April and May Deliverables

VIII. PERSONS TO BE HEARD (*not to exceed 3 minutes on topics on or off the agenda*)

IX. REPORTS (*Staff, Chair, Assembly, Commissioners*)

X. SET NEXT MEETING DATE AND AGENDA

XI. ADJOURNMENT



CITY AND BOROUGH OF SITKA

Meeting Minutes Sustainability Commission

Officers: Chair Katie Riley, Vice Chair Aurora Taylor, Secretary Erik de Jong

Members: Elizabeth Bagley, Lilli Garza, Gerry Hope

Staff Liaison: Bri Gabel, Sustainability Coordinator

Assembly Liaison: Kevin Mosher

Monday, April 1, 2024

6:00 P.M.

Harrigan Centennial Hall

I. CALL TO ORDER AND ROLL CALL

Chair Riley called the meeting to order at approximately 6:00 P.M.

Present: Elizabeth Bagley (arrived at 6:20 P.M.), Lilli Garza, Gerry Hope, Erik de Jong, Katie Riley, Aurora Taylor, Kevin Mosher (Assembly Liaison)

Absent: None

Staff: Bri Gabel (Sustainability Coordinator), Mike Schmetzer (Interim Electric Utility Director), Mike Stenberg (Maintenance & Operations Superintendent)

Public: None

II. CONSIDERATION OF THE AGENDA

No changes.

III. CONSIDERATION OF THE MINUTES

Approve the March 4, 2024 minutes

Taylor moved to approve the March 4, 2024 minutes.

Motion PASSED 4-0 by voice vote. Hope abstained as he had not yet been appointed by the Assembly.

IV. PERSONS TO BE HEARD (not to exceed 3 minutes on topics off the agenda)

None.

V. REPORTS

Staff: Gabel summarized an article on the emotional signatures of climate policy support recently published in PLOS Climate.

Chair: Riley welcomed Commissioner Hope and gave a short update on the Tongass Land Use Management Plan

Commissioners: Taylor reported that there were open seats on the Federal Subsistence Board.

VI. UNFINISHED BUSINESS

A. Updates and Next Steps From Working Groups

Commissioners updated new Commissioner Hope on the current working groups and their purpose. Gabel outlined the challenges of coordinating with the Sitka Community Renewable Energy Strategy

(SCRES) working groups and proposed a repeatable monthly work schedule that allowed Commissioners more freedom to opt-in to upcoming work based on their interests and reduced the reliance on working groups for the technical team to make progress. The Commission discussed the proposed working schedule and agreed to pilot the working schedule for the next 3 months and dissolved the Public Engagement and Energy Education SCRES working group.

Working groups were rearranged as follows:

Municipal Solid Waste Strategizing: Bagley and Taylor

Municipal Electric Vehicle Support: Hope and Riley

VII. NEW BUSINESS

B. Recommendation for the Use of the Energy Efficiency and Conservation Block Grant (EECBG) Funds

Gabel introduced the program and explained that CBS had been allocated \$75,300 through the EECBG program to support energy efficiency and conservation or fossil fuel reduction. She presented a shortlist compiled through internal CBS staff suggestions, discussions, and capacity, existing capital needs, and feasibility of execution with the allocated amount.

Commissioners discussed various scenarios to maximize the impact of the funds and asked clarifying questions to present CBS staff.

Hope moved to recommend \$65,000 of EECBG funds to support revitalizing the recycling center and the remaining \$10,300 are used for level 2 chargers for the municipal fleet.

Motion PASSED 6-0 by voice vote.

C. Approve Sitka Community Renewable Energy Strategy (SCRES) Energy Education Modules

Gabel introduced the concept map for the energy education component of the SCRES and explained its purpose as a guiding document for the technical team as they began to develop materials that could be used to support the modules. She requested feedback on the module topics, key questions, and supporting materials proposed.

The Commission asked questions regarding how the concept map would be utilized. Garza requested that the personal benefit of the energy education and why it matters be highlighted as a key question in various modules. Riley requested energy financing, specifically the debt accrued during the Blue Lake Expansion Project be emphasized. Bagley inquired how these materials linked to delivery methods and stressed that the method of delivery may influence the message. Hope summarized a variety of previous studies about hydroelectric expansion in Sitka and inquired how they might inform some of the proposed supporting materials.

After Commission discussion, the following energy education modules were:

- | | |
|-------------------------------|---------------------------------------|
| 1. Sitka's Energy Today | 5. Self Sufficiency and Independence |
| 2. Sitka's Energy History | 6. Energy Efficiency and Conservation |
| 3. Reliability and Resilience | 7. Sitka's Energy Options |
| 4. Energy Economics | 8. Sitka's Energy Future |

Taylor moved to approve the SCRES education modules as written below above.

Motion PASSED 6-0 by voice vote.

Gabel informed the Commission that the SCRES technical team would next be drafting learning objectives to measure the success of the upcoming education sessions.

D. Amend Bylaws Article IV: Meetings Section E: Order of Business

Gabel introduced the drafted bylaws amendment as requested through Commission discussion at the March 3rd meeting to streamline future meetings in regard to the agenda and reports.

Taylor moved to amend the Sustainability Commission Bylaws, Article 4 "Meetings", Section E "Order of Business", to add sections 5 "Special Reports" and 9 "Reports".

Motion PASSED 6-0 by voice vote.

VIII. PERSONS TO BE HEARD *(not to exceed 3 minutes on topics on or off the agenda)*

None.

IX. SET NEXT MEETING DATE AND AGENDA

The next meeting was scheduled for May 6, 2024 at 6:00 P.M., Harrigan Centennial Hall.

X. ADJOURNMENT

Chair Riley moved to adjourn the meeting.

Seeing no objection, the meeting ADJOURNED at approximately 8:34 P.M.

Minutes By: Erik de Jong, Secretary



CITY AND BOROUGH OF SITKA

A COAST GUARD CITY

MEMORANDUM

To: Sustainability Commission Members
From: Katie Riley, Chair
Date: May 3, 2024
Subject: **Tongass Forest Management Plan Revision Comments Draft Letter**

Background

The U.S. Forest Service recently announced that they would be initiating a revision of the Tongass National Forest Land Management Plan, beginning with an assessment of current trends and conditions on the Tongass National Forest. The Tongass plan governs management activities and priorities of the agency on the Tongass National Forest. The current plan was last revised in 1997, over 27 years ago. Many of the conditions and trends of use have changed on the Tongass National Forest over the past 27 years, and this plan revision is an opportunity to shift the management paradigm to one that is focused on the economic, ecological, social, and cultural sustainability of the region and the communities within it. The assessment is the first phase in the revision process and will occur from April 2024 - January 2025. After the draft assessment is published in 2025, there will be an opportunity for entities and members of the public to comment on the draft and the proposed need for change. Following this comment period, the revision process is expected to start and last 3-4 years, from approximately 2025 - 2028.

Sitka, along with many other communities across the region, heavily depends on the Tongass National Forest and the diverse ecosystems and resources it supports for local food security, economic livelihoods, to support traditional and customary uses and cultural heritage, along with the general health and wellbeing of our community that is provided through access to natural spaces, solitude, and recreation opportunities. The U.S. Forest Service is the predominant land manager in the region with the responsibility to manage the Tongass National Forest for the benefit of current and future generations. Due to the outsized role that the Tongass plays in the lives and livelihoods of current and future residents of Sitka, it is important that the community of Sitka ensures that its priorities are reflected and voiced throughout this process. The Commission can encourage others in Sitka to provide their thoughts and insights for this process through leading by example.

Analysis

These comments are a starting point to represent a broad overview of how the residents and community at large interact with and depend on the Tongass National Forest. They are not meant to be exhaustive, and the commission may choose to add additional information that it considers pertinent. This is the first opportunity of many to provide feedback and local insight

into the process. Considering the importance of the health and vitality of the Tongass National Forest to local residents, it is important to provide some insights at the start of this process.

Recommendation

Consider approving the comments as written or amending them to include any more relevant feedback for the Forest Service.

Next Steps

Upon Commission approval, the acting chair will sign and then the Staff Liaison will route the letter to the City Administrator for approval and signature. The final letter will be submitted to the U.S. Forest Service by May 15th with the following documents attached:

- City of Sitka Comprehensive Plan
 - City of Sitka Strategic Plan (2023-2028)
 - CBS Sustainability Commission Work Plan (2024-2025)
-

POSSIBLE MOTION(S)

I MOVE TO approve the Tongass Forest Management Plan Revision Comment Letter as written.

If changes are requested, amend the main motion:

I MOVE TO amend line(s) # to add/reword/remove, etc.

1 **Re: City and Borough of Sitka's Sustainability Commission Tongass Forest Plan**
2 **Revision Comments**

3

4 To the Tongass National Forest Revision Planning Team:

5

6 These comments for the Tongass National Forest Assessment Process have been prepared by
7 the City and Borough of Sitka's Sustainability Commission. The purpose of the Sustainability
8 Commission is to work towards catalyzing a healthy community now and in the future by proposing
9 solutions to environmental, social, and economic concerns of the City and Borough of Sitka
10 (CBS), its partners, and community members. The Commission acts as an advisory body to the
11 Assembly on issues pertaining to reduction in use of fossil fuels and development of local
12 renewable energy resources, responsible use of natural resources, food security enhancement,
13 and robust and healthy local ecosystems and natural communities, among other issues.

14

15 The Commission is aware that the U.S. Forest Service is starting a revision of the Tongass
16 National Forest Land Management Plan, which has not been wholly revised since 1997. The
17 health, vitality, and management of the Tongass National Forest is of utmost importance to the
18 cultural, social, ecological, and economic sustainability of the community of Sitka. Local residents
19 rely on the surrounding lands and waters that fall under the management responsibilities of the
20 U.S. Forest Service to meet local food security needs, mitigate the impacts of climate change,
21 provide clean drinking water and air, provide all our local renewable hydropower energy, support
22 economic opportunities including fisheries and tourism operations, contribute to a high quality of
23 life through provision of abundant recreation settings and opportunities to access the natural
24 world, and to maintain the productivity of ecosystems and resources that are the backbone of the
25 culture and heritage of Sitka's first residents, the Tlingit people, for over 10,000 years. Sitka has
26 an extremely strong reliance on the natural resources and processes of the forest, along with

27 many other communities and Tribal nations within the region. Therefore, this assessment and
28 revision process are of critical importance to our community. We are grateful for the opportunity
29 to comment on priorities and aspects of use that impact the Sitka Community Use Area and local
30 residents.

31 The areas surrounding Sitka were heavily impacted by the pulp mill era from the late 1950s until
32 the mill closed in 1992. The mill closure had a large economic impact on our community, although
33 we were fortunate to come out with a diversified economy that relied on salmon and fish
34 populations to support a strong commercial fishing sector, a growing tourism industry, many small
35 businesses and healthcare operations. Many areas that were clearcut by the pulp mills are
36 recovering and are covered by various stages of second growth. Many of these areas were not
37 thinned and contain very thick brush that is extremely hard to navigate for hunters and deer alike,
38 whereas other second growth stands are some of the earliest that will be ready for harvest and
39 provide the opportunity for a small timber industry that harvests and does value added processing
40 of second growth wood. Other economic conditions that have changed are the growth in tourism.
41 Tourism is experiencing exponential growth in Sitka and Southeast Alaska right now. It is a
42 challenge to balance the impacts and benefits of tourism in a small community like Sitka. The
43 Tongass National Forest provides many opportunities for businesses to showcase the natural
44 beauty of Alaska to a variety of clientele. Finding a balance between commercial access and local
45 use will be critical for a successful plan.

46
47 The impacts of climate change to local ecosystems and resources continues to be of paramount
48 concern to residents of Sitka. Climate change impacts are felt in an outsized manner in Sitka and
49 Alaska as a whole. Extreme weather events have led to increased occurrences of both landslides
50 and drought-like conditions. Climate change is impacting the availability, health, and size of
51 marine resources that residents depend on for food security and economic opportunity. The role
52 that the forest plays in sequestering carbon and providing large tracts of intact habitat for species

53 like salmon and deer to adapt and evolve are both important climate benefits of the forest. We
54 hope to provide some context on assessment topics that are important to Sitka residents and the
55 Sitka Community Use Area. These comments are not meant to be exhaustive but rather indicate
56 community priorities in particular areas.

57

58 **Subsistence and traditional ways of life**

59 Sitka is designated as a rural community and the ability to practice subsistence harvest is of
60 paramount importance for local residents to fill their freezers. It is also important to recognize the
61 cultural heritage of the tradition of subsistence to the Tlingit people that have resided in this area
62 for over 10,000 years, relying on and stewarding the natural environment and resources it
63 provides. Sitka residents harvest a wide variety of subsistence resources that are directly or
64 indirectly impacted by management of the Tongass N.F., including Sitka blacktail deer, all five
65 species of Pacific salmon that spawn in the lakes, rivers and streams of the Tongass, mountain
66 goats, other seafood like halibut, herring, black cod, and rockfish, intertidal resources including
67 clams, cockles, seaweed, wild plants including berries, mushrooms, fiddleheads, and Devil's club.
68 Redoubt Falls is arguably one of the most important subsistence harvest locations for Sitkans,
69 and contains a weir that is managed by the Forest Service which provides the ability for adaptive
70 management and allows for more subsistence harvest opportunities in years of abundance. The
71 continued management of Redoubt Falls in accordance with the 1982 management plan and
72 especially the adaptive management 'triggers' that provide more subsistence opportunity are very
73 important to the community of Sitka.

74

75 **Recreation settings, opportunities, access and scenic character**

76 Sitkans quality of life is greatly enhanced by the amount of trails, cabins, and recreation
77 opportunities that are managed and maintained by the US Forest Service. The public use cabins
78 around Sitka are heavily utilized; the most heavily utilized is the Starrigavan cabin which is

79 currently our only road accessible public use cabin. Local recreation infrastructure of cabins and
80 trails are used by Sitka locals and visitors to access hunting and fishing grounds, increase health
81 benefits and access to natural spaces, support small businesses and economic opportunities like
82 guided hikes, and more. The scenic character of Sitka is a main draw for the tourism industry,
83 and it is important to balance maintaining this scenic character as other economic development
84 opportunities are considered.

85

86 **Climate change and carbon stocks**

87 As previously mentioned, climate change is extremely important to Sitka residents. Local
88 advocacy to take climate action is why the Sustainability Commission exists. The integrity of the
89 Tongass to local climate adaptation and mitigation efforts is critical.

90

91 **Cultural/historical resources and uses and areas of tribal importance**

92 The Tongass N.F. is the traditional homelands of the Tlingit, Haida and Tsimshian people. The
93 entire forest is important to the Tribes and Indigenous peoples of the Tongass that have used this
94 landscape to support the development of their cultures and communities for over 10,000 years.
95 We encourage the Forest Service to engage deeply with the Sitka Tribe of Alaska (STA) to
96 understand and document the importance of this place, its natural processes, and the vast
97 resources it supports to the Tlingit people. We also encourage the Forest Service to continue
98 actively partnering with the Tribe to support co-stewardship efforts, especially for important
99 subsistence resources and cultural use sites within the City and Borough limits like Klag Bay and
100 Redoubt Bay, and through mechanisms like working with STA's Kayaani Commission.

101

102 **Multiple uses and infrastructure**

103 The City of Sitka Borough extends across a large portion of Chichagof Island and encompasses
104 important multiple use infrastructure, including at False Island and Corner Bay. This infrastructure,
105 including roads and public use docks supports access to recreation opportunities and small

106 businesses. It is a priority to maintain this infrastructure so that local operators can continue to
107 rely on it.

108
109 Sitka obtains 99.9% of our electricity from locally generated renewable, fish-friendly hydropower
110 via the Blue Lake and Green Lake dams. These dams and other utility corridors are located within
111 the Sitka Ranger District of the Tongass National Forest. Maintaining these hydropower resources
112 and associated infrastructure is a critical priority for the community of Sitka.

113

114 **Tourism and commercial use**

115 Sitka is experiencing a tourism boom along with other communities in Southeast Alaska. It is
116 important to balance tourism and commercial operations with local use in the Sitka area. This
117 includes assessing which areas are extremely important for local use, and considering restrictions
118 for commercial access to those areas. Likewise, it is important to identify which areas are suitable
119 for commercial access and tourism use and communicate this rationale to the community of
120 Sitka.

121 **Geologic hazards**

122 Sitka experienced a devastating landslide in 2015 that killed three members of our community
123 and damaged homes and roads. Taking precautions to prevent further devastation is extremely
124 important to the community of Sitka, both through taking action to reduce the impacts of climate
125 change, and increasing local awareness of the nature of these natural disasters and their
126 occurrence so that people can safely interact with the landscapes around them.

127

128 **Co-stewardship and traditional ecological knowledge**

129 The Sitka Tribe of Alaska is a leader in co-stewardship efforts with the Forest Service in the Sitka
130 Community Use Area. It is important to document the variety of co-stewardship efforts that the
131 Tribe is engaging in and support this collaboration, while building capacity for increased co-
132 stewardship efforts.

133

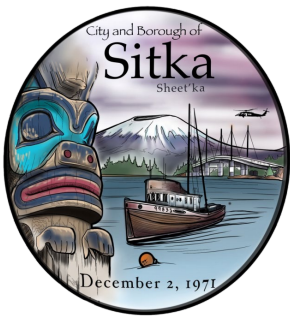
134 The Sitka Tribe of Alaska and its associated entities, including the Kayaani Commission, have a
135 vast repository of traditional ecological knowledge that has been cultivated and refined through a
136 long history of living in place and stewarding these resources. We encourage the Forest Service
137 to respectfully engage with the Tribe and Tribal citizens to incorporate traditional ecological
138 knowledge into the plan revision process.

139

140 There are also other advisory bodies in Sitka, such as the Sitka Fish and Game Advisory
141 Committee, that contain vast repositories of local knowledge. The Sitka Advisory Committee
142 should be approached to advise on the trends and conditions of local resources.

143

144 Much of the Sitka Ranger District area is characterized by large tracts of intact habitat that support
145 healthy populations of flora and fauna that local Sitka residents depend on for subsistence
146 harvest, economic opportunities, and cultural heritage. The ability to live in close proximity and
147 dependence upon the natural environment is why many citizens of Sitka choose to reside here.
148 Thus, maintaining the health and vitality of these areas is extremely important to Sitka residents
149 for local culture and economy. We hope that the Forest Service will continue to engage with the
150 community of Sitka to understand local priorities as they shift their management paradigm. We
151 thank the agency for the opportunity to comment on these important issues.



CITY AND BOROUGH OF SITKA

A COAST GUARD CITY

MEMORANDUM

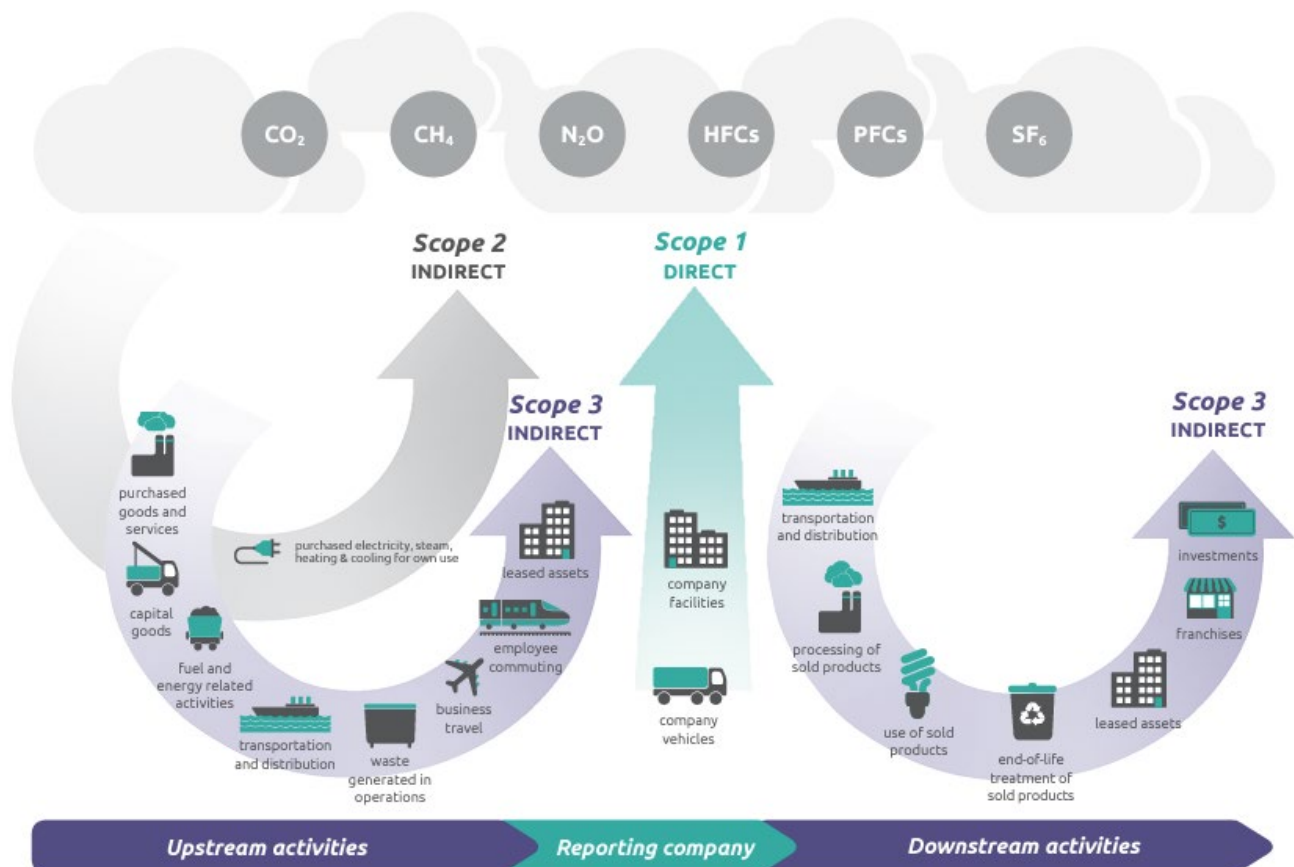
To: Sustainability Commission Members
From: Bri Gabel, Sustainability Coordinator
Date: May 3, 2024
Subject: Discussion/Direction/Decision on Greenhouse Gas Emission Inventory Scopes

Background

As part of the Sitka Community Renewable Energy Strategy, a community-wide greenhouse gas (GHG) emissions inventory is included. GHG inventories are often conducted by specific organizations and/or locations using aggregated, scaled, and/or modeled data to estimate the greenhouse gases emitted in a given timeframe, typically annually.

GHG emissions are divided into three scopes: scope one, direct emissions, scope two, indirect emissions related to energy, and scope 3, all other indirect emissions.

Overview of GHG Protocol Scopes and Emissions Across the Value Chain



Source: WRI/WBSCD Corporate Value Chain (Scope 3) Accounting and Reporting Standard, pg.5 (PDF).

Analysis

Sitka has unique challenges in conducting a GHG emissions inventory as both an island and a microgrid with 100% renewable electricity. Because of these two factors, Sitka can be considered ahead in many areas of the energy transition, such as electricity generation, but is still far more reliant on aspects such as shipping, that fall squarely in scope three, for the supply of goods and foods, or with waste, air travel, and tourism. This has made developing methodologies to capture emissions from scope three sources that can be correctly scaled and/or defined in a way that supports decision making particularly challenging.

Next Steps

To help the technical team identify potential data sources and provide suggestions on how to best utilize the requested scope three sources in the final community GHG emissions inventory, the following schedule has been drafted. Due to the complexity and overlap of these sources, it has been suggested that the Commission draft objectives of what these emissions numbers should be used for in the SCRES to help guide the technical team in drafting proposed methodology.

The following proposed schedule is intended for discussions regarding specific scope three sources to be treated as deliverables so they can be integrated into the monthly SCRES work cycle.

Proposed Scope 3 Schedule

May 6 th	Review of emission scope sources: recycling, waste, shipping, air travel, and cruise ships. Approve scope 1 methodology Review draft objectives for recycling and solid waste Approve scope 3 objectives and methodology- solid waste and recycling
↕	Develop objectives for additional scope 3 emission sources
June 3 rd	Approve objectives for scope 3 emission sources
↕	Discussion about additional scope 3 methodology
July 1 st	Approve methodology for additional scope 3 sources

To facilitate discussion, Commissioner de Jong has drafted objectives for recycling and solid waste:

1. Calculate an emission factor for Sitka's unique waste stream that combines the EPA standard value for waste processing and transportation of waste.
2. Differentiate between landfilled solid waste and recyclable waste emission factors.

Objectives 1 and 2 will facilitate:

3. Establishing a GHG emissions reduction goal related to waste.
4. Identifying actions for the community and City to reduce emissions and meet reduction goal.

Recommendation

Approve the proposed methodology for scope one.

Discuss/review/approve draft recycling and waste objectives.

Give direction on additional scope three emission source objectives.

POSSIBLE MOTION(S)

I MOVE TO approve the methodology for the scope one emission sources as proposed by the Pacific Northwest National Labs.

I MOVE TO approve the objectives for recycling and solid waste emissions as written.

If changes are requested, amend the main motion:

I MOVE TO amend objective # to add/reword/remove, etc.

I MOVE TO approve the methodology for the scope three: recycling and solid waste emission sources as proposed by the Pacific Northwest National Labs.

GHG Emission Inventory and Analyses Discussion



Monday, May 6, 2024
Sitka City Commission Meeting

This document 1) provides updates to Sitka’s GHG inventory effort, 2) provides discussion on assumptions and methodology to address more challenging aspects of the inventory and any additional GHG analyses, and 3) lays out potential ways the GHG inventory and additional analyses can be used.

GHG Inventory Data Update

The GHG emissions inventory will be an easily updatable Excel-based tool that can use various input values to generate Sitka’s annual GHG emissions. Results will be displayed in metric tons of CO₂e (MTCO₂e), which is a standard GHG reporting metric. This tool has already been populated to test the calculations and logic, and the most recent values were used when available. However, the data source for combustion fuels is from 2021. These values can be updated when more recent data becomes available.

Emissions are calculated by multiplying a quantify of the emissions source by their corresponding emission factor. The table below shows the emissions categories included in the tool along with the available data source, most recent year of data available, and corresponding emission factor. Some categories (i.e., shipping, air travel, and cruise ships) require further discussion, which is included later in this document.

Scope*	Emission Source	Data source	Most recent year	Emission Factors
1	Gasoline	5-year cargo report	2021	EPA; motor gasoline
1	Distillate Fuel Oil	5-year cargo report	2021	EPA; distillate fuel oil #2
1	Kerosene	5-year cargo report	2021	EPA; kerosene
1	Residual Fuel Oil	5-year cargo report	2021	EPA; average residual fuel # 5 and #6
1	Electricity – Diesel Backup	Electricity generation data	2023	EPA; diesel
1	Wastewater	WWTP BOD data	2023	TBD
2	N/A	N/A	N/A	N/A
3	Waste	Republic Services, City of Sitka’s Solid Waste data	2023	EPA; Mixed MSW
1,3	Recycling	Recycling data	2023	EPA: Mixed Recyclables and Mixed Metals
3	Shipping	TBD	TBD	
3	Air Travel	TBD	TBD	
3	Cruise Ships	TBD	TBD	

GHG Emission Inventory and Analyses Discussion



DECISION POINT: Should PNNL continue with this methodology for scope 1 emissions?

Proposed Methods and Discussions for Emission Source Categories

Waste and Recycling Emissions

Waste and most of the recycling in Sitka is shipped to Washington, therefore, making it scope 3 emissions. For most municipalities, waste is included in their inventories and counted as scope 1 emissions, since it occurs within their jurisdiction. Waste and recycling emissions can easily be calculated by multiplying the tons of waste or recycled material by their corresponding EPA emission factor. There is some recycling that occurs in Sitka, which is considered scope 1. We recommend including waste and recycling emissions in the inventory because they are a direct result of Sitka's consumption.

DECISION POINT: Should PNNL continue with including waste emissions in the inventory?

Electricity generation

Most of Sitka's electricity is generated by hydropower, which has no emissions associated with the power generation. Diesel backup generation is sometimes needed, which has emissions associated with it. However, fugitive emissions may be associated with hydropower generation.

- **PROPOSED SCOPE:** We are exploring emissions related to the methane released from hydropower dam operation, from the release of methane trapped underwater from decomposition of logs. This will not be included in the electricity generation component of the GHG inventory because the emissions are not associated with the actual generation of electricity, but are rather a fugitive emission from the electricity generating process. These are also associated with land use, which is not often included in inventories. We can determine if this should be included in the inventory after further research.

Gasoline, Distillate Fuel Oil, Kerosene, and Residual Fuel Oil Emissions

Distillate Fuel Oil means various forms of fuel oil, such as diesel or forms of heating oil. Disaggregating the combustion fuels into smaller categories (such as by end use like boats, cars, and building heating) is challenging and requires many assumptions since the data provided is just by fuel, not by end use. We are brainstorming methods to make this data more granular for analysis, such as using building models, survey data, and boat/car registry data. Making this more granular can help inform the community of where their emissions are specifically coming from.

- **PROPOSED METHOD:** To disaggregate the data into boat and car energy consumption, we could use the existing boat and car registrations and assume their associated miles traveled and fuel efficiency. For fishing boats, this will be based on existing work completed by the Alaska Longline Fishermen's Association, which has energy profiles for different vessels. We can use community surveys to estimate individual's annual boat and car usage.

GHG Emission Inventory and Analyses Discussion



- **PROPOSED METHOD:** To estimate fuel usage for heating residential and commercial buildings, we can analyze the heating load in Sitka, Alaska using building energy models and make assumptions of the electric, fuel oil, and wood heating used in Sitka. We could survey the community questions about their home fuel usage and equipment used for heating (e.g.: electric vs fuel oil vs wood).

Air Travel Emissions

- **DISCUSSION:** Calculating emissions related to air travel is challenging because planes are not refueled in Sitka. Air travel is sometimes, but not always included in community GHG emission inventories. There's also concern with double counting (such as capturing emissions from those who are just on a layover in Sitka). We can do a distance-based method or a number of flights-based method, where we count the flights that land in Sitka, and connect to the average amount of jet fuel usage.

Shipping Emissions

- **PROPOSED SCOPE:** We recommend not including shipping in the Sitka GHG inventory, but consider it in an additional GHG emissions analysis since it can still be useful to understand the overall emissions impact from living on an island, such as Sitka. Shipping are frequently not included in community GHG emission inventories, since they are scope 3.
- **POTENTIAL METHOD:** Calculating emissions related to shipping is challenging because we do not have the fuel associated with all the shipments traveling to and from Sitka or a detailed understanding of the percentage of cargo offloaded at different ports. We can calculate shipping emissions by using the distance-based method, which multiplies the total tons of shipped (which can be acquired through the 2021 Cargo Report) and multiply it by the averaged distance of shipments traveled, multiplied by the marine travel emission factor from the EPA. To determine distance calculations, we can make an assumption on distance traveled, such as just those from Seattle.

Cruise ships Emissions

- **PROPOSED SCOPE:** Cruise ships should not be included in GHG inventory because they are not related to the direct operation of the city or its residents. Similar to ground vehicles (in places that are not islands), they pass through a city without having ties to it. However, we recognize that they contribute significantly to Sitka's economy. We recommend not including it in the GHG inventory but using it in an additional GHG analysis, especially for energy education purposes. This can help answer questions such as "What are the impacts of cruise ships on emissions and how does that compare to Sitka's GHG emissions?"
- In addition, per the commission meeting in November, we plan to analyze the seasonal impacts of cruise ships on Sitka, showing how cruise ships could increase community emissions when docked. This would include values such as increased fuel consumption and waste generation by local businesses when the cruise ships are docked. This would NOT include the fuel being burned by cruise ships themselves.

GHG Emission Inventory and Analyses Discussion



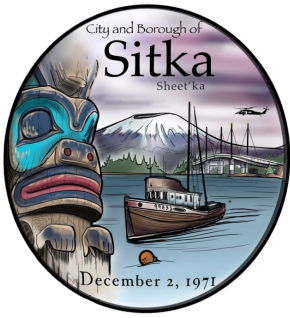
DISCUSSION POINT: What are your thoughts on the proposed scope and methodology? Are there alternative data source suggestions? Do you agree with the proposed scope?

Additional GHG Emissions Analysis

In addition to the shipping and cruise ships emissions analyses described above, the GHG inventory data can be used in the energy education modules to inform how different scenarios impact emissions. We can also conduct further analysis to help answer these questions and allow for informed decision making:

1. How does Sitka's GHG emissions compare to other small communities? How does it compare to communities without hydro? This could be both a qualitative and/or quantitative analysis. This would be for educational benefits.
2. How does an individual person's GHG impact in Sitka compare to an average person in the continental US? How does the GHG emissions impact of a single person in Sitka compare to their community in Sitka with a different lifestyle? (Ex: one that travels once a year vs one that travels five times a year)
 - o The point is to NOT point fingers at different lifestyles or focus on the fact that individual people's actions can solve anything, but potentially provide deeper insight into the emissions impact of the community of people in Sitka.

DISCUSSION POINT: What are your thoughts on these analyses? Should these analyses be included or not?



CITY AND BOROUGH OF SITKA

A COAST GUARD CITY

MEMORANDUM

To: Sustainability Commission Members
From: Bri Gabel, Sustainability Coordinator
Date: May 3, 2024
Subject: Discussion/Direction/Decision on Sitka Community Renewable Energy Strategy April and May Deliverables

Background

At the April 1st, 2024 meeting, the Sustainability Commission agreed to pilot the following working schedule to allow Commissioners more flexibility to engage with specific deliverables they deem of personal interest or importance while allowing the technical team enough autonomy to continue developing materials at a pace that will ensure the educational component of the SCRES is delivered promptly and efficiently.

Analysis

So far, this schedule has worked as planned. The proposed work for April has largely been completed and is ready for Commission review and approval.

April Work Status

Ready for approval:

- Learning objectives for education modules

Input requested:

- Community engagement methods
- Learning session topics, potential presenters, and dissemination method(s)

Continuing into May:

- Draft materials for Module 1: Sitka's Energy Today

Recommendation

- Approve the learning objectives for the educational modules.
- Provide input on the engagement methods, primarily suggestions around any missing community groups or organizations. Suggest individuals with more specific energy knowledge within a community group who has not yet been identified.
- Provide input on additional learning session topics, proposed collaborator and/or dissemination method.

Proposed Work in May

- Continue developing materials for Module 1: Sitka’s Energy Today
 - Start drafting materials for Module 2: Sitka’s Energy History
 - Plan Commission scenarios work session for June meeting
 - Plan “Energy Week” (July 8-12) Parks and Rec Camp collaboration
 - Brainstorm “low effort” engagement strategies for SCRES
-

POSSIBLE MOTION(S)

I MOVE TO approve the learning objectives for the SCRES education modules as written.

If changes are requested, amend the main motion:

I MOVE TO amend learning objective(s) #.# to add/reword/remove, etc.

Proposed Working Schedule for SCRES Development

There are 3 options for involvement in each deliverable. If a Commissioner chooses option 1 or 2, they may request a work session be held for that item if they feel more work is needed from the Commission and tech team to have it ready for approval at the next meeting this request should be made as soon as possible. The request is contingent on Commissioner availability. If Commissioners do not choose an option, they material will default to option 3.

	M	T	W	Th	F
1 st	Sustainability Commission Regular Meeting 6 PM	Bri sends Sustainability Commission follow up email with summary of upcoming work	Deadline for Commissioners to opt into upcoming materials.	SCRES Tech Team Check-In	1 or 2: Bri connects Commissioners and tech team members
	Approve SCRES materials from previous month/give direction on materials as needed	Options: 1. Collaborate 1-on-1 with tech team 2. Provide feedback on 50% draft 3. Provide feedback on final draft at next commission meeting Commissioners that do not indicate their option will assume option 3 as default.		Bri notifies tech team of Commissioner choice selection	
	Bri presents drafts of materials to be worked on for the next month				
2 nd				SCRES Tech Team Check-In	
	1. Collaboration window for Commissioners and tech team			2. Draft materials due for Commissioners	
	2. Tech team prepares materials for Commissioner review				
3 rd				SCRES Tech Team Check-In	
				2. Commissioner feedback due	
	1. Collaboration window for Commissioners and tech team			12 PM Deadline to request work session	
	2. Commissioner feedback window				
4 th	Optional Work Session as Needed			SCRES Tech Team Check-In	Bri sends out upcoming regular meeting packet
	1, 2, or 3. Tech team incorporates feedback and finalizes materials for approval			Deadline for materials for Commission approval/review	

Blue: Commission actions | **Orange:** technical team actions | **Green:** Bri Actions

SCRES Energy Education Modules

No.	Module Topic	Key Question
1	Sitka's Energy Today	What is a grid and how does it work?
		What is unique about Sitka's grid?
		How much electricity does Sitka have?
		What is Sitka's energy usage today?
		What are the benefits/how does it impact me?
Objectives		Participants will be able to...
	1.1	list the 3 major components of the grid
	1.2	compare islanded and interconnected grids
	1.3	summarize how much energy Sitka currently uses
	1.4	identify which how their electricity use compares to the "average"
2	Sitka's Energy History	How has Sitka's energy needs changed over time?
		How have these needs changed the grid?
		How does historical approach inform future energy choices?
Objectives		Participants will be able to...
	2.1	compare Sitka's energy needs today to 15, 30, 100 years ago
	2.2	Apply these comparisons to how the grid has changed
	2.3	critique the historical approach
3	Reliability and Resilience	What is the current state of the infrastructure?
		What are the strengths and weaknesses of, threats to, and opportunities for Sitka's grid?
		What are the ways to increase reliability and resilience?
Objectives		Participants will be able to...
	3.1	categorize aspects of electric infrastructure based on their vulnerability.
	3.2	identify strengths and weaknesses of, threats to, and opportunities of Sitka's grid
	3.3	recommend mitigations for identified weaknesses or threats
	3.4	prioritize ways to increase reliability and resilience
4	Energy Economics	How are rates determined/ what impacts the cost of electricity?
		How does the debt from the Blue Lake dam work?
		What does that debt mean for the future?
		How can the cost of electricity be reduced?
Objectives		Participants will be able to...
	4.1	list the different aspects that impact the cost of electricity
	4.2	interpret breakdown of Sitka's infrastructure/blue lake dam debt
	4.3	hypothesize ways to reduce the cost of electricity
	4.4	argue the pros and cons of their hypotheses
5	Self Sufficiency and Independence	How do we balance generation and distribution?
		How does investment in the grid translate to self-sufficiency and independence?
		What are the social, cultural, and environmental impacts associated with new infrastructure?
		What are the benefits/how does it impact me?
Objectives		Participants will be able to...
	5.1	describe the relationship between balance of generation and distribution
	5.2	evaluate how investments into the grid bolster self-sufficiency and independence
	5.3	critique current and potential infrastructure based on impact

SCRES Energy Education Modules

6	Energy Efficiency and Conservation	How do everyday energy choices influence Sitka's energy future?
		Who plays what roles in energy efficiency and conservation?
		What is the role of policy in energy and conservation?
		What are the benefits/how does it impact me?
Objectives		Participants will be able to...
	6.1	estimate their energy usage
	6.2	create a list of personal actions to lower energy usage
	6.3	distinguish between roles in energy uses
	6.4	propose policies that help reduce energy usage
7	Sitka's Energy Options	What options does Sitka have to increase generation? (ETIPP 1)
		What are the strengths and weaknesses of each type?
		Which types are best suited for Sitka and why?
		Objectives
	7.1	list major sources of renewable energy in sitka
	7.2	analyze pros and cons of each source
	7.3	prioritize preferred sources, justify their prioritization
8	Sitka's Energy Future	Where do we want to go?
		How will we get there?
		What are the benefits/how does it impact me?
		Objectives
	8.1	Not yet developed

Outcomes from the SCRES Logic Model

The Community Will:

Knowledge

- Know where Sitka's electricity comes from
- Understand Sitka's energy is used
- Know how electricity rates are determined
- Understand how their rates compare across AK, USA, and globally
- Know what options Sitka has for renewable expansion (ETIPP1)
- Understand energy debt, how it financed, where it comes/came from

Attitudes

- Understand why energy matters
- See electricity as a valuable resource that should be conserved
- Support CBS and the Commission in their efforts on renewable energy

Skills

- Have the tools and confidence to participate in collective decision-making about energy
- Learn how to engage in the public process
- Setting a personal energy budget

Behavior

- Will electrify more to reduce fossil fuel use
- Use electric energy more efficiently

Proposed SCRES Engagement Methods

May 2024

This is a working document; information is subject to change; dates are estimates only.

Workshops Deep dive presentations either in-person or virtual	Module	Online (week of)	In-person
	Sitka's Energy Today	5/6	Fall
	Historical Energy	5/28	
	Reliability & Resilience	6/17	
	Sitka's Energy Options (ETIPP 1)	7/8	
	Energy Economics	7/29	
	Self Sufficiency and Independence	8/19	
	Energy Efficiency & Conservation	9/9	
	Sitka's Energy Future	9/30	

Focus Group Discussions- Groups of community experts around a specific topic. Discussions focus on developing SCRES scenarios through their specific perspective. <i>Informing scenarios/shaping scenarios</i>	Community Groups	Date
	Sustainability Commission	June
	City Staff	
	Sitka Tribe of Alaska	
	Recreation	
	Fishing	
	Conservation	
	Transportation	
	Food Security	
	Economic Development	
	Teachers and Students	
	Emergency Response/Healthcare	
	Tourism	

One-on-One Discussions	Interviewee	Sector/Topic
<i>Conversation start</i>	Mim McConnell previous Mayor	Blue Lake Expansion Project
<i>Gathering perspectives on status quo</i>	Dean Orbison Blue Lake Project Manager	Blue Lake Expansion Project
<i>Introducing to the project</i>	Melissa Haley CBS Finance Director	Financing of Blue Lake
<i>Gauge interest in larger focus group</i>	Amy Ainslie Planning Director, CBS	Housing
<i>Gather preliminary information for scenarios</i>	Gerry Hope Transportation Director, STA	Public Transportation
	Linda Behnken Exec. Director, ALFA	Fishing and Boats
	Chandler O'Connell Community Catalyst, SCS	Current Energy Efficiency Efforts in the Community
	Callie Simmons, Public Health Student, UAF	Food Security

Proposed Learning Sessions			
Topic	Potential Collaborator	Medium(s)	Date(s)
IRA Deep Dive	Sitka Conservation Society		
GHG Inventories	REAP		
Water as an Energy User	Public Works		
Heat Pumps	AK Heat Smart/SCS		
Tourism & Energy	Tourism Manager, CBJ/ Visit Sitka		
Emergency Preparedness	Fire Dept		
Renewable Energy Impacts on Salmon	SSSC		

Feedback	
	Community Scoping Survey
	Workshop Feedback

All Community Stakeholders/Organizations	
Sustainability Commission	Seamart/Market Center
Other City Departments	AC Lakeside
Sitka Tribe of Alaska	Restaurants/Food trucks/caterers
Sitka Conservation Society	Commercial fishermen
Alaska Longline Fishermen's Association	Silver Bay Seafoods
Spruce Root	SEARHC
Transition Sitka	Visit Sitka
Sitka Sound Science Center	
Sitka School District	
Sitka Local Food's Network	
Coast Guard	
Chamber of Commerce	
Sitka Trail Works	