

From: [Bill Leighty](#)
To: [Borough Assembly](#)
Subject: Cruise ship tourism: econ analysis
Date: Wednesday, November 6, 2019 4:41:07 AM
Attachments: [CarryingCapacity-Juneau-FGS-EconAnal-25Apr19.xlsx](#)
[JEDC-Innovation-2019-REV-20Feb.pdf](#)
[ClimateCentral-FloodedFuture-2019CoastalDEMReport.pdf](#)
[AssemblyLetter-HollandCriterion-23Apr19.pdf](#)

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

Assemblymembers, 2 Nov 19 AM

Thank you for a new "visitor industry task force" advancing the conversation about Juneau's future as a visitor destination, especially in the context of the cruise ship industry's planned and announced increase in annual total passenger (pax) visits.

I hope to attend meetings of your new ad hoc group.

This is a very complex opportunity. If we play our cards right, we may be able to springboard from the cruise ship "carrying capacity" dilemma to imagining and building a more sustainable and attractive Juneau than we have pursued for the last few decades.

For example, could we supply all Juneau's "internal" energy (purchased within the Juneau economy) from hydro and other CO₂-emission-free renewables ? Not just the present electricity demand as we know it, but all energy, from all sources, for all purposes -- even marine and aviation ?

This would merely be consistent with humanity's urgent obligations:

- Near-total decarbonizing and de-GHG (greenhouse gas) of the total human enterprise; of all human activity
- Transforming the world's largest industry from ~ 85% fossil to ~ 100% renewables-source, CO₂-emission-free energy sources, as quickly as we prudently and profitably can: prudently, to avoid economic collapse; profitably, to attract the very large amount of necessary capital -- which will only flow to investments of attractive returns-to-risk ratio

I'm pleased that KTOO is also helping motivate the conversation. I have sent them the attachments, via the email below. Please consider this email's suggestions and resources for your use.

I sent similar emails and resources to Assemblymembers in Spring 2019, hoping to prime us to learn from the looming experiment of the ~ 1.3 million pax season. Please excuse my repetition. What did we learn from 2019 ?

Please see the attached memo, for link to the JEDC 2018 Innovation Summit, "Visitor products" panel, where John Binkley, CLIA Alaska, says Juneau has the right to decide how much cruise ship tourism it wants. Does that imply that CBJ, or others, can simply limit annual total pax and ship visits ?

Without this understanding, you have heard many appeals for "Assembly help". What may the Assembly do ? May anyone do ? How would we so limit cruise ship total pax, if we wished to ?

I imagine that commitments are in place for the 2020 season; we are now planning for 2021

and beyond.

We also need to capitalize upon Juneau's extraordinary "isostatic rebound" to offer a coastal community probably escaping sea level rise inundation for many decades beyond the abandoning of Lower 48 coastal regions. See below, the 2018 JEDC Innovation Summit presentation.

This frightening danger and opportunity may be upon us in a few decades. See "Flooded Future" attachment.

Thank you for your consideration.

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Revised 2 Nov 19

Jennifer,

Thank you for leading KTOO's new initiative, which I understand from the radio announcement has something to do with tourism impacts on Juneau's "carrying capacity" (CC).

Attached is my analysis on which I built some of my slides in my 2019 Innovation Summit presentation, and a .pdf of the presentation. I'll send you the .ppt file, if you wish.
<https://vimeo.com/318869809>

Jim Powell , Karla Hart, and others are planning a "Tourism Impact Conference" for Sept 2020. Have you talked with them ? Jim Powell <jim23powell@gmail.com>

Our first steps seem to be discovering and explaining to the Juneau public, visitor industry, and policy makers and decision makers: (you will find this case proposed in my lengthy Spring 2019 memo and in 2019 Innovation Summit presentation)

1. By what process is cruise ship docking access considered, allocated, scheduled, and priced ? Who are the decision makers ? What rights and obligations have the owners and administrators of those assets to make them available to those requesting docking and anchoring ?
2. By what process and powers may the CBJ, and perhaps State of Alaska and / or others, analyze, determine, and declare Juneau's "carrying capacity" (CC) as a daily and / or seasonal total limit on the number of passengers, vehicles, vessels, and other measures of access to and use of Juneau's assets, public and private ?
3. By what process and powers may the CBJ, and perhaps State of Alaska and / or others, require improvements in the shoreside infrastructure serving the visitor industry, to achieve

various objectives:

a. Reduce fossil fuel consumption by replacing extant ground, sea, and air transportation vessels with those energized by renewable-source, CO₂-emission-free sources, such as hydroelectricity

b. Increase Juneau's CC above its declared limit by conceiving, designing, building a new, renewable-energy-powered, ground transportation system based on either:

(1) Hydrogen-fueled Fuel Cell Hybrid Electric Buses (HFCHEB) or battery electric buses (BEV) capable of "platooning", i.e. operating as a "train" of autonomous, self-driving buses with very short separation between them

(2) Fixed-guideway System (FGS): light rail, streetcar, or hybrid of them; probably hydropower-sourced, hydrogen-fueled, rolling stock, to avoid track electrification

c. Use of the new ground transportation system by all people in Juneau: visitors, from any industry or access, for any reason, and residents, in all seasons

d. Full utilization of the shoreside transportation system assets, by transferring the seasonally-surplus assets -- buses and rolling stock -- to uses outside Juneau, via barge, I suppose

e. Voluntary significant reduction in private ownership of light duty vehicles (LDV's) -- cars, vans, SUV's, pickups -- with great savings in personal after-tax income, most of which flows from Juneau's economy to Outside.

For example, if one-third of Juneau's fleet of about 20,000 in-service LDV's were not needed, as a consequence of the public service of the new hydro-powered transit system, the aggregate annual savings in after-tax income for the people of Juneau would be about (7,000 vehicles) x (\$ 7,000 per vehicle, typical annual total cost of ownership and operation) = \$ 49 million per year.

4. The extraordinary opportunity and bargaining position enjoyed by the Community of Juneau, via its CBJ and other representatives and jurisdictions, to entice the cruise ship industry to build this new shoreside infrastructure as their investment, with their capital, allowing Juneau to significantly increase its declared CC. Of course, this assumes that CBJ has the jurisdiction to manage and enforce its side of the bargain. This would be a win-win-win for:

- Community of Juneau: citizens, economy, quality of life
- Cruise ship industry and its passengers (pax)
- Earth: climate and resources and biosphere, including humans

For example, if the Community of Juneau, via its CBJ, declared its cruise ship passenger annual carrying capacity (CC) to be 900,000 pax per year, and estimated Earth's carrying capacity for cruise ship pax to be even fewer, it could then:

- Also declare that a totally-hydroelectricity-powered shoreside visitor transportation system, of adequate extent and capacity, would enable CBJ to declare its CC as ~1.4 million annual pax, enforcing that limit thereafter
- Enable the cruise ship industry to bring another 500,000 annual pax to Juneau; if their average margin is \$ 500 / pax, that would be another \$ 250 million per year in margin -- which would be largely net income to the cruise ship companies
- Facilitate design, public acceptance, permitting and construction of the new hydro-powered shoreside transportation system, which might cost \$ 300 - 500 million

Consequently:

- The cruise ship industry would recover its investment in about two years and enjoy great returns thereafter
- Juneau would become even more attractive as a destination, for the novelty and comfort of its shoreside transportation system
- Since Alaska Airlines and other major carriers would benefit from this new hydropowered ground transport system, perhaps they would partner with the cruise ship industry in the investment
- Juneau citizens would save about \$ 49 million per year in personal after-tax income, and millions in unnecessary public infrastructure costs to accommodate private LDV's
- Juneau could increase its population density near the transit system stations, preparing to accommodate thousands of internally displaced persons (IDP's) fleeing sea level rise and other Lower 48 perils, as "Refuge Juneau", as presented in the Kate Troll & Bill Leighty "Innovation Short" at the 2018 JEDC Innovation Summit
<https://vimeo.com/287808196>
- Although our economy would not provide enough jobs for all of the IDP's, the wealthier ones would be able to buy or rent new homes
- By limiting access to Juneau to ~ 1.4 million summer season visitors, we are inevitably and justifiably acting as a monopoly. Limiting supply causes cruise prices to rise, increasing ship companies' profitability and pax expenditures within Juneau's economy as the pax demographic favors the wealthier.
- Some ships will need to skip Juneau, or not sail to SE AK at all, saving fuel and CO2 emission, probably favoring newer, cleaner, quieter, newer ships
- Many small transportation businesses will be forced from the market:
 - By the enforcement of rapid decarbonization of the shoreside transport system
 - By the unification of shoreside transportation in a single system
 - Unless and until they can afford to buy and operate new, CO2-emission-free equipment
- Juneau might be able to escape the degradation of the visitor experience that Maui, HI has suffered, yet somewhat avoided. See interview with Jim Coon, who I believe would be pleased to converse with us at any time, perhaps via phone or Skype, or during his Summer interlude at his Killisnoo home, Angoon
<https://vimeo.com/286103842>
- Juneau's cost of living, public and private, will probably be lower; causing it to be more competitive as Alaska's Capital City; more likely to remain so
- Juneau's aggregate and per capita CO2 emission "carbon footprint" will be lower, and smaller, as a result of implementing the win: win: win agreement with the visitor industry, especially the cruise ship sector, as proposed above.

This is a very complex situation, deserving the caring attention of Juneau's best analysts and planners and citizens. The stakes are high; the potential win: win: win benefits compelling.

Significant reduction in helicopter noise by limiting operation to "quiet technology" helicopters ("ships") is another, rather unrelated, matter worth pursuing. This would increase operator investment, thus capital costs, thus pax price, and would probably contract the industry.

This "quiet technology" regulation may be in place in Hawaii; I've not researched this.

Thank you for your consideration.

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